

PROPOSAL FORM
BALTIMORE COUNTY
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
TOWSON, MARYLAND

Division of Construction Contracts Administration



Contract Number 24084 SX0
SEWER DESIGN PROJECT
Richlyn Manor Force Main
Perry Hall – District 11c5
Workday Number PROJ-1000060

CONTRACT BASED ON SEPTEMBER 2023
STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS
AND STANDARD DETAILS FOR CONSTRUCTION

Bidders Information

A pre-bid meeting will be held on Wednesday, June 3, 2026 at 10:00 a.m. EST via WebEx. *Phone-In* (Audio Only) 1-415-655-0001, Meeting Number 2306 221 6494##.

Video Conference go to <https://signin.webex.com/join> Meeting Number 2306 221 6494, Password **7WcvMg5yHV7**, for Webex link go to:

www.baltimorecountymd.gov/departments/public-works/engineering/contracts/current-solicitations

Last day for questions will be Friday, June 12, 2026 at 4:00 p.m. EST. Questions should be emailed to Zachary Davis at zdavis@baltimorecountymd.gov, and copy Barbara Wentworth at bwentworth@baltimorecountymd.gov and Amy Bley abley1@baltimorecountymd.gov.

Baltimore County Prevailing Wage and Local Hiring Affidavit, Wage Rates & Requirements **see pages 360-367(Contract Disclosure):** *“Wage rates that are in effect as of the contract solicitation date will be the wage rates through the duration of the project”*

MBE/WBE Requirements & Forms **see pages 368-382**

THIS PROPOSAL FORM INCLUDES AND INCORPORATES ALL DOCUMENTS AND INFORMATION REFLECTED, LISTED, AND/OR REFERENCED IN THIS TABLE OF CONTENTS, AND ALL SUCH DOCUMENTS AND INFORMATION ARE PART OF AND INCORPORATED INTO THE CONTRACT DOCUMENTS.

TABLE OF CONTENTS

<u>Section Number</u>	<u>SECTION NAME</u>	<u>Page Number</u>
	Title Page (cover)	1
	Table of Contents	2
I.	INFORMATION FOR BIDDERS	3-6
II.	SPECIAL PROVISIONS	7-213
III.	PERMITS	214
	Environmental Agreement	215-216
	Stormwater Management Variance	217
	MDE Authorization of Application	218-220
	Stormwater Pollution Prevention Plan (SWPPP)	221-294
	NPDES	295-337
	MDE Construction Permit	338-341
	Roadside Tree Permit	342-347
IV.	PROPOSAL (This section to be completed at time of bid)	348
	Description of Work	349
	Description of Items & Schedule of Prices	350-552
	Proposal Affidavit	353-358
	Bid Bond	359
	Baltimore County Prevailing Wage and Local Hiring Affidavit, Wage Rates and Requirements.....	360-367
	MBE/WBE Requirements and Forms	368-382
V.	POST AWARD DOCUMENTS (This Section to be completed by successful bidder after award)	383
	Contract Agreement	384-386
	Performance Bond	387
	Payment Bond	388
	Insurance Documents	389

SECTION I

INFORMATION FOR BIDDERS

ELECTRONIC SUBMITTAL PROCESS

To be considered, Bids (Section IV – Proposal) shall be received by the bid closing date and time to the following email address dpwbid@baltimorecountymd.gov. The contract number and company name should be referenced in the Subject Line of the email. Bids may not be submitted by any other means. Bids that are mailed or otherwise delivered to the Purchasing Division (including emails which indicate links to locations where the bid may be downloaded) and/or emails sent to any other Baltimore County email address will not be accepted.

Late Bids will not be considered. Bidders are strongly encouraged not to wait until the last minute to submit bids. The time stated on the auto-receipt (described below) will be definitive of the time of receipt. Bids received after the deadline will not be accepted. Bidders are advised that the County cannot receive email attachments greater in size than twenty-five (25) megabytes and this size limitation may be further reduced by requirements of the Bidder's email provider which are beyond the control of the County. Bidder should consider separating any large bid attachment into multiple parts and emailing each part separately. In such case, Bidder will note that each email is *1 of 2, 2 of 2*, etc. Multiple part bids will not be considered unless all parts are received by the bid closing date and time.

After submitting a Bid to dpwbid@baltimorecountymd.gov, and upon successful receipt by the County thereof, Bidder will receive an auto-receipt email. This receipt is proof that the bid has been received by the Division of Construction Contracts Administration and should be retained for Bidder's records. In the case of a bid submitted in multiple parts as described above, an auto-receipt email will be generated for each part. The County has no obligation to consider any Bid for which an auto-receipt was not generated.

As with any system, power outages or technology problems may arise that are outside of the County's control and could affect your submission. The County will not be held accountable for such issues that may delay the transmission of any Bid.

NOTE: Electronic copy of the Bid Bond will be accepted at bid opening. The apparent low bidder is required to submit the original Bid Bond within ten (10) days after the bid opening to the Division of Construction Contracts Administration, 111 West Chesapeake Avenue, Room 300B, Towson, Maryland 21204.

INSTRUCTIONS AND SPECIFICATIONS

Refer to the enclosed proposal sheets for quantities to be bid upon. All proposals submitted on the attached form must give the price in clear figures for each item of the proposed work and be signed by the bidder with his name and address. Bidders must not change any item in the proposal for which a price has been stipulated by the County. Any change will cause rejection of the proposal.

NOTE: STATEMENT UNDER OATH FORM TO ACCOMPANY BID as per Baltimore County Purchasing Act 65-98, Section 15-94 and 15-95 which requires that the enclosed affidavit (see Proposal Affidavit pages in Section IV) be completed and submitted as part of the sealed bid.

Proposals made on any other than the attached form will not be considered. All papers included in, bound thereto, or attached to the Proposal Form are necessary parts thereof and shall not be detached, separated, or altered in their intent.

Changes in the phraseology of the proposal, additions, or limiting provisions will render the proposal informal or void and may cause its rejection.

All right is hereby reserved by the Purchasing Agent to reject any or all proposals and to waive formalities and technicalities as the interest of the County may require.

No successful bidder may withdraw his bid within **NINETY (90)** days after the opening thereof.

The successful bidder will be required to be bonded to Baltimore County, Maryland to the sum of One Hundred per Cent (100%) of the amount of his proposal or proposals according to the form of bond hereto attached for projects in excess of \$25,000.00.

This Proposal must be accompanied by a Bid Bond in an amount of 5% of the bid, the exact amount to be determined by the difference between the low bid and the next lowest bid if two or more bids are received, or 5% of the bid if one bid is received. This guarantees payment of the amount thus determined in case of a default in any matter specified as required before award or in any matter resulting in failure to execute and deliver an Agreement, together with Payment and Performance Bonds, after award. The Bid Bond must be in the form accompanying the Proposal executed by a Surety licensed in the State of Maryland. The Surety must be currently rated “B” or better by the A. M. Best Company, and the bid must be in an amount less than, or equal to, the underwriting limitation contained in Department of Treasury Circular 570 as amended at the time of the underwriting.

All work to be performed under this contract shall be done under strict compliance with Baltimore County Department of Public Works and Transportation September 2023 Standard Specifications for Construction and Materials and Standard Details for Construction and any and all proposed revisions thereto as of the date of advertisement and copies of which are available on the County’s website at www.baltimorecountymd.gov/departments/public-works/standards, and all of which are made a part hereof and incorporated herein (collectively, the “Specifications”).

If the bidder to whom an award is made shall fail to execute the contract and bond hereto attached and as herein provided, the award may be annulled and the contract awarded to the lowest responsible bidder who has consented to a time extension, and such bidder shall fulfill every stipulation embraced herein as if he were the original party to whom the award was made, or the Purchasing Agent may reject all of the bids as the interest of the County may require.

The Bid Bond of the three lowest bidders is deemed to be effective until the execution and delivery of the Contract Agreement, together with Payment and Performance Bonds for projects in excess of \$25,000.00 or until rejection of all bids, whereupon Surety is deemed relieved of all further obligations under the bid bonds provided.

Bidders must examine the drawings and specifications carefully and must make a personal examination of the location and nature of the proposed work. In case doubt shall arise as to the meaning or intent of anything shown on the drawings or comprised in the specification, inquiry shall be made of the Director of Public Works and Transportation at least five (5) days prior to the date of

bid opening. The submission of the Proposal shall indicate that the bidder thoroughly understands the drawings and the terms of the Specifications.

To better ensure fair competition and to permit a determination of the lowest bidder, unresponsive bids or bids obviously unbalanced may be rejected by the Purchasing Agent.

Bidders are required to fill out the total price column and total their proposals so that the result of the bidding, barring possible arithmetical errors, will be known at once. Any errors in computations will be corrected by the Engineer when the proposals are canvassed. Where the unit price and the total price are at variance, the unit price will prevail.

Bidders must be prepared to complete the work within the time stated in the proposal.

NOTE: ONLY CONTRACTORS FORMALLY PRE-QUALIFIED WITHIN THE ADVERTISED WORK CLASSIFICATION BY THE DIRECTOR OF PUBLIC WORKS AND TRANSPORTATION OF BALTIMORE COUNTY 10 CALENDAR DAYS PRIOR TO BID OPENING WILL BE ELIGIBLE TO SUBMIT BIDS.

Contracts for work under this proposal will obligate the contractors and subcontractors not to discriminate in employment practices. Bidders must, if requested, submit a compliance report concerning their employment practices and policies in order to maintain their eligibility to receive the award of the contract. Successful bidders must be prepared to comply in all respects with the Contract Provisions regarding nondiscrimination.

Baltimore County has adopted a Minority Business Enterprise (MBE) program and Women's Business Enterprise (WBE) Program. The percentage of participation applies to the contract amount awarded to the Contractor. Qualified minority subcontractors are those certified as being a Minority Business Enterprise by the following:

1. Maryland Department of Transportation Certification Committee (MDOT)
2. City of Baltimore, Minority Business Certification Council

Projects funded by the Federal Highway Administration are limited to the certification listed under #1 (MDOT).

More detailed information regarding the County's MBE/WBE Program can be obtained from the County MBE Office, telephone (410) 887-3407. See Executive Order dated December 6, 2022. MBE/WBE Participation Summary and Forms A, B, C, D and E enclosed in this proposal booklet.

NOTE: If you do not complete and submit the enclosed forms with your bid or offer to the County, the County may, in its sole discretion, deem your bid or offer **NON-RESPONSIVE** and accordingly the **COUNTY WILL NOT CONSIDER YOU FOR CONTRACT AWARD.**

The County reserves the right to require the low bidder to produce evidence indicating that the company's financial condition is equal to, or better than, that enjoyed by the company at the time of prequalification. This additional information may be in the form of a financial statement or other evidence satisfactory to the Office of Budget and Finance.

Bidders' attention is directed to the requirement that a permit must be obtained from the Baltimore County Bureau of Highways and Bureau of Traffic Engineering prior to cutting any County

road for the purpose of obtaining sub-surface soils information, and permission must be obtained from the State Highways Administration prior to making any openings in a State road.

Under no circumstances shall a bidder enter upon any property outside a County or State road for the purpose of securing sub-surface soils information until permission is received from the property owner. The fact that the County has obtained a utility easement does not give the bidder the right to enter upon the property.

Prevailing index price of asphalt cement/ton \$800.00

INCLEMENT WEATHER POLICY: If Baltimore County General Government Offices are open or open with liberal leave the day the bids are due, the bids are due as stated in the bid documents (date and time). **ONLY** when the Baltimore County General Government Offices are **OFFICIALLY CLOSED** the day the bids are due, the bid date will be postponed and an Addendum will be issued the next business (or next day buildings are officially open) day the county offices are open with the new bid date and time.

BID TABULATIONS: All bid tabulations will be confidential until after final award, at which time the total bid amounts for all bidders, as well as the complete bid tabulations for the top three (3) bidders, can be inspected by others when requested in writing pursuant to the Maryland Public Information Act.

ALTERNATIVE SOURCES OF CONTRACT BONDS: In the event your company is unable to qualify for bonding through a traditional commercial surety company, you may qualify for the required bonds through the State of Maryland, Department of Commerce (DOC). The **Maryland Small Business Development Financing Authority (MSBDFA, pronounced Mis-Bid-Fa)**, an agency of DOC, operates a Surety Bond Program designed to assist small businesses, based in Maryland, that are unable to obtain adequate bonding on reasonable terms in the commercial marketplace. MSBDFA provides bid, payment and performance bonds for contracts funded by government agencies, regulated utilities and private entities. The penal sums of the bonds are limited to the aggregate amount of \$2,500,000 and companies may pre-qualify for multiple bonds within pre-approved terms and conditions. MSBDFA also provides lines of credit, term loans and loan guarantees to help qualified businesses purchase equipment and real property, make improvements to leased property, refinance existing debt and assist them with their working capital needs. For more information on how to apply, you may contact: Meridian Management Group, Inc. (MMG), (the Program's Manager), 826 E. Baltimore Street, Baltimore, Maryland 21202, Telephone: (410) 333-4270. Or visit their website at www.mmcapitalgroup.com for information, applications and a checklist of required documents and reports that must accompany the application.

SECTION II

SPECIAL PROVISIONS

MAINTENANCE BOND

Per the Baltimore County Department of Public Works and Transportation September 2023 Standard Specifications for Construction and Materials, Section GP – 4.10 (C) states, the contractor is required to post a maintenance bond in the amount of five (5) percent of the total cost of the contract or withhold five (5) percent retainage for two (2) years from the date of Final Acceptance.

BALTIMORE COUNTY, MARYLAND

BOND NO. _____

CONTRACT NO. _____

MAINTENANCE BOND

THIS MAINTENANCE BOND is entered into on this _____ day of _____, 20____, by and between _____ as principal ("Principal") and _____, a business entity that is authorized to transact business in the State of Maryland and is organized and existing under the laws of the State of _____, as surety ("Surety"), are held and firmly bound unto Baltimore County, Maryland, a body corporate and politic of the State of Maryland ("County"), as Obligee.

WHEREAS, the above-named Principal has entered into a written contract known as Contract Number _____ dated _____, 20____ with Obligee for _____ (the "Agreement"), the terms of which are hereby incorporated by reference; and

WHEREAS, Principal has completed construction under the Agreement; and

WHEREAS, the Agreement includes a warranty on the quality of the Work performed that runs for a period of two (2) years from the date of the County’s final acceptance and that runs for two (2) additional years beyond the repair date if any repair is done during the warranty period; and

WHEREAS, Principal is required to cause this instrument to be executed and delivered to Obligee as security for maintenance during the warranty period in an amount equal to 5% of the total value of the Contract.

NOW, THEREFORE, the Principal and Surety are held and firmly bound unto the Obligee in the sum of \$ _____ Dollars (\$ _____), lawful money of the United States of America, for the payment of which sum of money the Principal and Surety do bind themselves and their personal representatives, legal representatives, successors, and assigns, jointly and severally, firmly by this maintenance bond.

The conditions of this bond are as follows:

1. The Principal shall, for a period of two (2) years from and after the date of completion and acceptance of same by Obligee, replace all defects arising in the Work, whether resulting from defective materials, equipment, design furnished or workmanship. After such period, this obligation shall be null and void; otherwise it shall remain in full force and effect.

2. In the event of a default on the part of the Principal that may be the subject of a claim under this bond, Obligees shall mail, by certified mail, to Surety at the address listed below, a written statement that a claim is being made under the bond and, with substantial accuracy, the amount of the claim. Surety shall have no obligation to Obligees under this bond until the notice of claim is mailed.
3. When the Obligees has satisfied the condition of Paragraph 2 that a notice of claim be mailed, the Surety shall promptly and at the Surety's expense send an answer to Obligees within 30 days after the date of the claim. The answer shall state the amounts that are undisputed and the basis for challenging any amounts that are disputed. The answer shall be accompanied by payment (or arrangements for immediate payment) of any undisputed amounts.
4. Surety expressly waives any right to receive notice of extensions of time or alterations or modifications to the Agreement that may be granted by Obligees and agreed upon by Principal, and any such extensions, alterations, or modifications shall not affect the obligation of the Surety under this bond.
5. This bond is a specialty governed by the twelve-year statute of limitations period set forth in the Annotated Code of Maryland Courts and Judicial Proceedings §5-102.

WITNESS OR ATTEST:

(Principal – Contractor Name)

By: _____

Type Name: _____

Type Title: _____

Date: _____

(Surety)

By: _____

Type Name: _____

Type Title: _____

Type Address: _____

Date: _____

**U.S. Environmental Protection Agency (EPA)
National Pollutant Discharge Elimination System (NPDES)**

CONTRACTOR'S RESPONSIBILITIES

For all County contracts with a "total disturbance" of one (1) acre or more, as that term is defined by the Maryland Department of the Environment (MDE), the County will make application on behalf of the Contractor to MDE for the NPDES permit.

At the contract pre-construction meeting, or such other time as the County deems advisable, the County will provide the Contractor with (a) the NPDES permit, (b) a NPDES Transfer of Authorization Form, (c) a NPDES Notice of Termination Form, and (d) a copy of the NPDES permit requirements. The Contractor shall read and review these documents completely, including, but not limited to, Part IV of the NPDES permit outlining the requirements for monitoring, record keeping, and reporting.

The Contractor shall sign and return the NPDES Transfer of Authorization Form to the County within two (2) calendar days of receipt. **Failure to do so may result in a breach of the contract, in the County's sole discretion, and enforcement of all rights and remedies available to the County.**

Upon full and final completion of the contract, as determined by the County, the Contractor shall complete and submit the NPDES Notice of Termination Form to MDE and provide a copy to the County. **Failure to do so may result in a breach of the contract, in the County's sole discretion, and enforcement of all rights and remedies available to the County.**

Any costs or expenses to comply with the NPDES permit, and any related MDE or EPA regulations, shall not be a separate pay item under the contract but shall be included by the Contractor in the "Other Items" portion of its bid. **No additional compensation to the Contractor shall be considered or provided by the County with regards to the NPDES permit or the related requirements.**



Bid Submission

SPECIAL PROVISIONS

Richlyn Manor Force Main
PROJ # J-10000060

Submitted to:
Baltimore County Department of Public Works and Transportation



THIS PAGE INTENTIONALLY LEFT BLANK

RICHLYN MANOR FORCE MAIN
PROJ. # J-10000060

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION

TABLE OF CONTENTS

SPECIAL PROVISIONS

PAGE
NUMBER

SP 1 – GENERAL REQUIREMENTS

SP 1 - 1	General	SP-1
SP 1 - 2	Location and Description of Work	SP-1
SP 1 - 3	Contract Documents – Design Intent	SP-1
SP 1 - 4	Environmental Protection	SP-2
SP 1 - 5	Support and/or Protection of Existing Utilities	SP-5
SP 1 - 6	Support of Excavation	SP-5
SP 1 - 7	Dewatering, Drainage and Pumping	SP-6
SP 1 - 8	Pressure Testing Force Main Sewer Pipe	SP-7
SP 1 - 9	Maintenance of Traffic	SP-7
SP 1 - 10	Steel Plating and Solid Sheeting	SP-8
SP 1 - 11	Submittals	SP-8
SP 1 - 12	Equal Or Approved Equal	SP-15
SP 1 - 13	As-Built Drawings	SP-16
SP 1 - 14	Operation and Maintenance Manuals	SP-16
SP 1 - 15	Force Majeure and Damages	SP-19
SP 1 - 16	Progress Schedule	SP-20
SP 1 - 17	Preservation and Restoration of Property	SP-21
SP 1 - 18	Site Video	SP-21
SP 1 - 19	Guarantee	SP-21
SP 1 - 20	Labor Standards and Anti-Kickback Regulations	SP-22
SP 1 - 21	O.S.H.A. Standards and Safety	SP-22
SP 1 - 22	Progress Meetings	SP-22
SP 1 - 23	Temporary Services	SP-22

SP 2 – CATEGORY 100 – PRELIMINARY

SP 2 - 1	Section 109 - Fixed Price Contingent Items	SP-25
----------	--	-------

SP 3 – CATEGORY 200 – GRADING

SP 3 - 1	Section 205 - Test Pit Excavation	SP-29
----------	-----------------------------------	-------

SP 4 – CATEGORY 300 – DRAINAGE AND UTILITY CONSTRUCTION

SP 4 - 1	Section 300 - General Requirements	SP-31
SP 4 - 2	Section 308 - Erosion and Sediment Control	SP-35
SP 4 - 3	Section 359 - Abandonment of Water Mains and Water Appurtenances	SP-37

SPECIAL PROVISIONS

		<u>PAGE</u> <u>NUMBER</u>
SP 4 – 4	Section 361 – Sanitary Sewers and Sanitary Sewer House Connections	SP-39
SP 4 – 5	Section 363 - Sanitary Sewer Force Mains	SP-41

SP 5 – CATEGORY 900 – MATERIALS

SP 5 - 1	Section 905 - Pipe	SP-43
SP 5 - 2	Section 905.07.03 - Sanitary Sewer Valves	SP-45

SP 6 – TECHNICAL SPECIFICATIONS

SP 6 - 1	Section 02240 - Dewatering	SP-51
SP 6 - 2	Section 02737 - Manhole Rehabilitation	SP-55
SP 6 - 3	Section 03410 - Precast Structural Concrete	SP-75
SP 6 - 4	Section 09900 - Painting	SP-81

SP 7 – BID ITEMS

SP 7 - 1	Measurement and Payment	SP-91
ITEM 1	Clearing and Grubbing	SP-91
ITEM 2	Maintenance of Traffic	SP-92
ITEM 3	Mobilization	SP-92
ITEM 4	Erosion and Sediment Control	SP-92
ITEM 5	10” DIP Class 54 Pipe and Fittings	SP-92
ITEM 6	12” PVC SDR-35 Pipe and Fittings	SP-93
ITEM 7	Combination Air/Vacuum Relief Valves and Vaults	SP-93
ITEM 8	Dewatering Valves and Vaults	SP-94
ITEM 9	Precast Sanitary Manholes – 48 IN.	SP-94
ITEM 10	Sanitary Heavy Traffic Manhole Frame and Cover – 24 IN.	SP-94
ITEM 11	Manhole Rehabilitation – 48 IN.	SP-95
ITEM 12	GAB for Maintenance of Traffic, Stage 1	SP-95
ITEM 13	Hot Mix Asphalt for Stage 1 Maintenance of Traffic	SP-95
ITEM 14	Hot Mix Asphalt for Stage 2 Maintenance of Traffic	SP-95
ITEM 15	Concrete Driveway Repairs	SP-96
ITEM 16	Concrete Curb and Gutter Replacement	SP-96
ITEM 17	Asphalt Curb Replacement	SP-96
ITEM 18	Turfgrass Establishment	SP-96
ITEM 19	Fixed Price Contingent Item – Temporary Traffic Signs	SP-97
ITEM 20	Fixed Price Contingent Item – Test Pit Excavation / Conventional Excavation Methods	SP-97
ITEM 21	Fixed Price Contingent Item – Test Pit Excavation (Vacuum)	SP-97
ITEM 22	Fixed Price Contingent Item – Class 3 Excavation / Select Backfill – Proper Disposal of Unsuitable Material	SP-98
ITEM 23	Fixed Price Contingent Item – Borrow for Backfilling Trenches – Proper Disposal of Unsuitable Material	SP-98
ITEM 24	Fixed Price Contingent Item – Mix No. 1 Concrete	SP-98
ITEM 25	Contingent Item – Asphalt Driveway Repairs	SP-98

SPECIAL PROVISIONS

		<u>PAGE NUMBER</u>
ITEM 26	Contingent Item – Geotextile Class SE	SP-99
ITEM 27	Contingent Item – Geotextile Class ST	SP-99
ITEM 28	Contingent Item – Geotextile Soil Reinforcement Fabric (Mirafi 500X)	SP-99
ITEM 29	Contingent Item – 6” Utility Underdrain	SP-99
ITEM 30	Contingent Item – Flowable Fill Utility Cuts	SP-100
ITEM 31	Contingent Item – #2 Stone Sediment Control	SP-100
ITEM 32	Contingent Item – Calcium Chloride	SP-100
ITEM 33	Contingent Item – Class 2 Excavation Sediment Control	SP-100
ITEM 34	Contingent Item – Super Silt Fence	SP-100
ITEM 35	Contingent Item – Silt Fence on Pavement	SP-101
ITEM 36	Contingent Item – Inlet Protection	SP-101
ITEM 37	Contingent Item – Adjusting and Replacing Fences, Shrubs, Trees, Hedges, etc.	SP-101

APPENDIX A

Appendix A – Geotechnical Report	SP-103
----------------------------------	--------

THIS PAGE INTENTIONALLY LEFT BLANK

SP 1 - GENERAL REQUIREMENTS

SP 1-1 GENERAL

- A. The Special provisions are hereby made a part of the Contract. In case of any conflict with the latest version of the “Standard Specifications, General Provisions,” these Special Provisions shall govern.
- B. All work to be performed under this Contract shall be done in strict compliance with the latest version of the Baltimore County Standard Specifications for Construction and Materials.

SP 1 – 2 LOCATION AND DESCRIPTION OF WORK

- A. Work includes the construction of approximately 4,450 feet of 10-inch ductile iron pipe (DIP) force main and 250 feet of 12” DIP gravity sewer in the Perry Hall area of Baltimore County. The force main will extend from the proposed Richlyn Manor Sanitary Pumping Station located at 9950 Richlyn Drive, Perry Hall, MD. The force main is to be located within Richlyn Drive before continuing onto Forge Road where it will terminate at a new gravity manhole prior to discharging into MH No. 69669 located east of Gunforge Road.
- B. The work to be done under this Contract includes furnishing all labor, tools, materials and equipment and performing all work required for the construction of the Richlyn Manor Sanitary Force Main complete in place, and ready to operate. Work shall consist of trench excavation, support of excavation and dewatering, off-site disposal of all excavated material, furnishing and installing force main piping and appurtenances, precast manholes, precast valve vaults, valves, manhole lining system, backfill, asphalt pavement restoration, maintenance and traffic, and erosion and sediment control.
- C. Construction shall only take place between 9am – 3pm.

SP 1 – 3 CONTRACT DOCUMENTS - DESIGN INTENT

- A. The latest version of the Baltimore County Department of Public Works Standard Specifications for Construction and Materials and the Standard Details for Construction, as amended, of either Baltimore County or the State Highway Administration, insofar as the same may be applicable except as modified herein and are hereby made a part of the Contract and these Special Provisions.
- B. Contract Drawings to be followed for this Contract shall be those approved drawings on file at the office of the Engineer. The Contract Drawings contain information as to amount, location, dimension and detail of the work to be performed in accordance with the Specifications. No deviation shall be permitted from the Contract Drawings and Specifications unless authorized in writing by the Engineer. Deviation by the Contractor from the Contract Documents without the Engineer’s prior written approval shall be at the Contractor’s risk and expense, including the expense of removal and restoration if so ordered.

- C. Any discrepancies found between the Drawings and Specifications or any inconsistencies in the Drawings or Specifications shall be immediately reported to the Engineer, in writing, who shall promptly correct such inconsistencies or ambiguities in writing. Where conflicts arise, the more durable, high quality (i.e. more expensive, as judged solely by the Engineer) component shall be utilized, and assumed to be part of the base bid, unless such alternate has been agreed to in writing by the Owner prior to submission of bids. Work done by the Contractor after his discovery of such discrepancies, inconsistencies or ambiguities prior to corrections directed by the Engineer shall be done at the Contractor's risk. In the case of discrepancy or omission, the Engineer will determine the intent of the design in issuing clarifying or corrective instructions.
- D. In order to fulfill the requirements of the Contract, conformance is required with both the Contract Drawings and Specifications. The Contractor is not released from responsibility for performing work called for in the Contract Drawings but not in the Specifications or vice versa; mention of work in either part is sufficient to include it under the Contract. In all cases, the decision of the Engineer will be final.
- E. It is the intent of the Drawings and Specifications to provide the Contractor with such information and instructions as may be necessary to complete this contract and to provide a complete and workable installation. The Contractor shall perform all work in accordance with the lines, grades, cross sections and dimensions shown on the plans. The Contractor shall furnish, unless otherwise provided in these plans and specifications, all materials, implements, machinery, equipment, tools, supplies, transportation and labor necessary for the prosecution and completion of the work. All materials and equipment installed as part of the permanent installation shall be new.
- F. Completeness: Any apparatus, appliance, material or work not shown on the drawings but mentioned in the specifications, or vice-versa, or any incidental accessories necessary to make the work complete and perfect in all respects and ready for operation, even if not particularly specified, shall be provided by the Contractor without additional expense to the County.
- G. Schematics may not be shown to scale on drawings, but the work shown on the schematic shall be provided by the Contractor without additional cost to the County.
- H. Adequacy: With submission of bid, the Contractor shall give written notice to the Engineer of any materials or apparatus believed inadequate or unsuitable; in violation of laws, ordinances, rules or regulations of Authorities having jurisdiction; and any necessary items of work omitted. In the absence of such written notice, it shall be understood that the Contractor has included the cost of all required items in his/her proposal and that he/she will be responsible for the approved satisfactory functioning of the entire system without extra compensation.

SP 1 – 4 ENVIRONMENTAL PROTECTION

The Contractor, and its subcontractors, in the performance of this Contract, shall comply with all applicable Federal, State and local laws and regulations concerning environmental pollution

control and abatement as well as the specific requirements stated elsewhere in the Contract Documents.

The Contractor shall take all precautions necessary in order to avoid pollution of water in adjacent watercourses or water storage areas, including wells.

All earthwork, equipment movement, control of water in excavations and other operations which may create silting, shall be conducted in a manner to keep water pollution to an absolute minimum.

Water used during the Contract work which has become polluted with oil, harmful or objectionable chemicals, sewage or other pollutants, shall be disposed of in a manner that will not affect nearby waters and land. The Contractor shall not, under any circumstances, discharge pollutants into any watercourse.

The Contractor shall take all precautions necessary in order to avoid noise and air pollution during the course of the Contract.

The Contractor shall maintain all work areas free from dust which would contribute to air pollution. Approved temporary methods of stabilization consisting of sprinkling, chemical treatment, or similar methods will be permitted to control dust. Sprinkling, where used, must be repeated at such intervals as to keep all parts of the disturbed area at least damp at all times. Dust control shall be performed as the work proceeds and whenever the dust nuisance or hazard occurs. The use of road oils and waste oils to control dust is prohibited.

The Contractor shall keep clean all streets, driveways and sidewalks affected by his operations. Trucks hauling excavated materials, cement, sand, stone, or other loose materials from or to the site shall be tight so that no spillage will occur. Before trucks start away from the site, their loads shall be carefully trimmed to prevent spillage.

The Contractor shall provide all labor, materials, equipment and services necessary for, and incidental to, the complete and satisfactory application of temporary sediment control measures throughout the time of the Contract as specified herein. In order to prevent and to provide for abatement and control of any environmental pollution arising from the construction activities of the Contractor and his subcontractors in the performance of the Contract, the Contractor and his subcontractors shall comply with all applicable Federal, State and local laws and regulations concerning environmental pollution control and abatement.

It shall be the Contractor's responsibility to adhere to the "Standards and Specifications for Soil Erosion and Sediment Control in Developing Areas" as approved and adopted by the State of Maryland, Department of Water Resources, an agency of the Department of Natural Resources; and furthermore, the Contractor also shall adhere to the provisions of the Standard Specifications, Section 308, and any revisions thereof or additions thereto and all sections referred to therein.

The Contractor shall notify the County's Project Engineer indicating the source of all borrow material and the disposal site for excess material. The Contractor shall be responsible for obtaining sediment control permits from the appropriate agency for off-site disposal of excess material.

Surface drainage from cuts and fills within the construction limits, whether or not completed, and from borrow and waste disposal areas shall, if turbidity producing materials are present, be held in suitable sedimentation ponds or shall be graded to control erosion within acceptable limits. Temporary erosion and sediment control measures, such as berms, dikes, silt fences, drains or sedimentation basins, if required to meet the above standards, shall be provided and maintained until permanent drainage and erosion control facilities are completed and operative. The area of bare soil exposed at any one time by construction operations shall be held to a minimum. Fills and waste areas shall be constructed by selective placement of materials to eliminate silts or clays on the surface that will erode and contaminate adjacent rivers, streams, lakes, or ponds. Further protection of any excavation storage area, waste area, or fill area shall be provided by the Contractor by the installation and maintenance of a silt fence, as shown on the Contract Drawings, around the down slope perimeter of such areas.

The cost for any excavation and/or fill and incidentals involved in connection with the construction of erosion, sediment and pollution control devices required on this project shall be included in the prices bid in the Contract.

In general, the Contractor shall erect sediment control devices prior to beginning any other earthwork under the Contract. Areas through which vehicular access to and from the site will be gained shall be stabilized by the Contractor in accordance with the Standard for Stabilized Construction Entrance. Swales, ditches, stockpiles of earth and topsoil and other cleared or graded areas shall be temporarily stabilized with seed and mulch. All areas disturbed by the Contractor shall be seeded and sodded to the satisfaction of the Engineer.

Temporary Drainage

The Contractor shall conduct their work in such a manner that the efficiency of the existing surface drainage and pipe storm drain system will not be diminished.

The Contractor shall keep all drainage and water courses unobstructed, or provide equal courses effectively placed, to prevent accumulations of surface water.

Stream Flow Protection

The dewatering or pumping out of trenches, utility line structures, or newly excavated areas directly into a stream which causes turbidity and/or erosion of stream banks will be prohibited. The Contractor shall make use of sediment traps, filters or other methods as stated in "Erosion and Sediment Control Provisions", included in Section 308 of the Standard Specifications and Materials for Construction. The restrictions contained herein shall be strictly enforced, and the Contractor is cautioned to make every effort possible to comply with these regulations and shall conduct their operations in such a manner to keep to an absolute minimum the amount of sedimentation introduced into any stream.

Upon completion of the project and after such devices have served their purpose, such devices shall be removed from the project by the Contractor at their own expense.

The Contractor shall not allow the site of the work to become littered with trash and waste materials but shall maintain the site in a neat and orderly condition throughout the period of the work. Cleaning up, including the restoration of areas of construction, shall proceed as quickly as is practicable after the construction is completed in any given area. This period, between construction completion and final cleanup, normally shall not exceed two (2) weeks.

Within ten (10) days after completion of the work and before final acceptance, the Contractor shall, without charge, tear down and remove all temporary structures built by him, remove all rubbish of all kinds from any ground which he has occupied, and shall leave the work site in a clean and orderly condition.

If at any time during the course of the work, the cleanup operation in any given area should become delinquent in the opinion of the Engineer, he may order that construction be stopped until such delinquent cleanup is completed.

The Contractor shall not be entitled to any additional compensation or extension of time of completion should such stoppage of construction be ordered by the Engineer.

Burning will be allowed only if approved in writing by the Fire Marshal and authorized in writing by the Engineer. The specific time, location and manner of burning shall be subject to the approval of the Engineer. Fires shall be confined to a closed vessel, guarded at all times, and shall be under constant surveillance until they have burned out or have been extinguished. All burning shall be so thorough that the materials will be reduced to ashes.

SP 1 – 5 SUPPORT AND/OR PROTECTION OF EXISTING UTILITIES

- A. The Contractor shall support all existing utilities within the excavation.
- B. Contractor shall submit the proposed method of support to the Engineer for approval.
- C. All work, materials, labor, etc. to support and/or protect existing utilities is considered incidental to the force main installation. No separate payment will be made for the exposing, supporting and/or protecting existing utilities.

SP 1 – 6 SUPPORT OF EXCAVATION

- A. The Contractor shall provide temporary support of excavation for all excavations.
- B. Excavation support and protection plans are a delegated design that is the Contractor's responsibility and shall be submitted for review as detailed shop drawings. Detailed shop drawings shall include detailed drawings, design calculations, and a comprehensive engineering analysis which shall be designed and sealed by a Professional Engineer registered in the State of Maryland who is experienced in the design of earth retaining structures. Submittal shall include the following information:
 - 1. Design assumptions, analysis, calculations, and information on the Contractor's proposed method of installation and removal of all support of excavation systems.

2. Maximum design load to be carried by the support of excavation system members and include the impact of live loads and groundwater.
 3. Detailed support of excavation drawings showing all pertinent dimensions, spacing, and relationships among the components of the support of excavation systems. Include construction sequence and scheduling.
 4. Bracing methods.
 5. Detailed sequence of construction and bracing removal.
 6. Detailed drawings and descriptions of the method to be used by the Contractor to monitor the support of excavation system, adjacent utilities and utility support systems, and ground/structure movements.
- C. Temporary support of excavation systems can consist of but are not limited to, tight driven steel sheet piling, soldier piles with timber or concrete lagging, wooden sheeting and shoring, proprietary support systems, and/or ground modification methods. The method(s) selected by the Contractor shall provide for stable excavation sides and satisfy all federal, state, and local safety regulations.
- D. The Contractor shall cut off all bracing and sheeting where bracing and sheeting interferes with appurtenance structures and the contractor is responsible for removing all excess material from the site.
- E. All work, materials, labor, etc. associated with the furnishing, installation, and removal of support of excavation systems is considered incidental to the force main installation and no additional payment will be made.

SP 1 – 7 DEWATERING, DRAINAGE AND PUMPING

- A. The Contractor shall submit for approval their proposed procedure for any dewatering. The Contractor shall design, furnish, install, maintain, and operate all necessary dewatering equipment and structures at the Contractor's expense.
- B. The Contractor shall design their dewatering system to ensure that trenches remain open and conform to OSHA standards for safety. Disposal of drainage water from dewatering devices shall be accomplished in a manner that conforms to Maryland Standards and Specifications for Soil Erosion.
- C. The Contractor shall design their dewatering system so that the dewatering is localized to the construction area. The Contractor shall be responsible for all damage and shall assume all expense for any buildings, structures, walls, poles, etc., that are affected by the dewatering.

SP 1 – 8 PRESSURE TESTING FORCE MAIN SEWER PIPE

- A. The Contractor shall pressure test all proposed force main sewer pipe. The Contractor shall furnish all equipment, personnel, etc., to conduct this test in accordance with the procedures outlined 351.03.10 per the Standard County Specifications with the following amendments:
1. Chlorination is not required for testing sewer force mains after installation of the pipe.
- B. The Contractor shall furnish all material and labor required for tests, and the cost thereof will be included in the prices bid for furnishing and laying force main pipes.

SP 1 – 9 MAINTENANCE OF TRAFFIC

- A. Since no other means of access is available a single lane of traffic must be maintained at all times.
- B. All existing driveway access must be maintained at all times.

The contractor is to be responsible for the fabrication, installation and maintenance of all traffic control devices. Said devices shall be in accordance with the Manual on Uniform Traffic Control Devices. Also, the contractor may be required to furnish additional signs should conditions warrant. Regarding the control of traffic through work areas, Part 6 “Temporary Traffic Control” of The Manual on Uniform Traffic Control Devices (Latest Edition) shall be utilized.

Once the contractor has received their notice to proceed, the Division of Traffic Engineering will inventory the existing permanent traffic control devices throughout the construction area. Should it be necessary for any devices to be removed by the contractor, his personnel, or their sub-contractor during construction, the contractor shall be responsible for the safe storage of these devices. Should they become damaged, defaced, lost, etc., the contractor will be billed for replacement of these permanent devices. The contractor will also be responsible for the re-installation of any permanent devices removed during construction.

The Lump Sum Bid for “Maintenance of Traffic” shall, in addition to the requirements stated above and in Section 104, including furnishing, erecting, moving, maintaining, barricades (including TYPE III barricades), traffic barrels, lights, etc., during construction. Also included shall be the cost of flagman and arrow boards.

The price bid for “Temporary Traffic Signs” shall, in addition to the requirements stated in Section 104.08, included furnishing, erecting, moving and/or relocating, maintaining, replacing as needed, removal and disposal of all temporary traffic signs needed during construction. Signs will be paid for once following their initial approved installation. This will apply to all temporary traffic signs, including signs mounted on portable supports for temporary conditions, as described in Section 104.08.03.

SP 1 – 10 STEEL PLATING AND SOLID SHEETING

- A. If steel plates are used, they shall be used to cover open trenches in roadways during non-working hours. The cost for this work, material, labor, etc., shall be included in the lump sum price for Maintenance of Traffic.
- B. If steel plates are used, solid sheeting and shoring shall be used for the limits of the steel plating. The cost for this work, material, labor, etc., shall be included in the unit price bid for sanitary sewer pipe.

SP 1 – 11 SUBMITTALS

- A. Ten (10) days after notice to proceed, the Contractor shall submit a submittal schedule listing as near as practicable by specification section number, all submittals required and approximate date submittal will be forwarded.
- B. Submittals shall be provided in proper sequence and time with due regard to the time required for the review approval and transmittal as per the approved project schedule. The Contractor shall submit a list of anticipated submittals. Submittals shall be listed by specification number. If a specification has multiple materials, pieces of equipment, etc. the Contractor shall explicitly indicate the different items intended to be submitted for each submittal. Anticipated submittal lists only listing specification name and numbers will not be accepted.
- C. Submittals are generally defined as all drawings, diagrams, illustrations, catalog cut sheets, product data sheets, brochures, schedules, bills of material, and other data, certified correct for construction, which are prepared by the Contractor, their subcontractors, suppliers or distributors, or equipment fabricators or manufacturers, and which illustrate the manufacture, fabrication, construction, installation of the work, or a portion thereof.
- D. The Contractor's attention is specifically directed to the fact that working drawings are required, and shall be submitted, for each and every element of the work including, but not limited to, excavation support systems, dewatering systems, precast concrete structures, piping, valves, maintenance of traffic, erosion and sediment control systems, and all other shop drawings which may be necessary, in the opinion of the Engineer, to comply with the all-inclusive intent of this requirement.
- E. Each submittal shall be assigned a sequential number; Submittal No. 1, 2, 3, 4, etc. for purposes of easy identification, and shall retain its assigned number, with appropriate subscript, on required resubmissions. Changing manufacturers or models during the course of the submittal process shall not be cause for assigning a new submittal number. Once an item of work has been assigned a submittal number, that item of work shall retain the same number for the duration of the project. The following stamp shall be affixed to each submittal and appropriately completed.

CHECKED AND APPROVED FOR SUBMISSION (CONTRACTOR'S NAME) JOB _____ CONTRACT NO. _____ DATE _____ BY _____ SUBMITTAL NUMBER _____ ITEM _____ CONTRACT REFERENCES: SPECIFICATION _____ DRAWING _____
--

Resubmittals shall be labeled with the letter "R" followed by the number of the resubmission. Example: The Contractor's tenth submittal, being resubmitted for the first time shall be numbered Submittal No. 10R1, resubmitted for the second time shall be numbered Submittal No. 10R2, etc.

F. All shop drawings shall be in conformity with the Contract Drawings and Special Provisions. All shop drawings except diagrams, illustrations, brochures and schedules shall be to appropriate scale, but in no case smaller than 1/4" = 1'-0", and shall give all dimensions required for manufacture, fabrication, assembly, installation and incorporation in the work. All shop drawings shall be complete, accurate and distinct, and shall show outline and section views, details, kinds of materials to be used, the kind of machine work and finish to be applied, and the installed locations of the said materials, equipment, accessories, appurtenances and related items. Shop drawings showing field assembly of piping systems shall incorporate sufficient views, sections, plans and elevations to show each and every fitting, specialty, and item of equipment, including locations and spacing of hangers and supports. Piping systems 2-inches in diameter and smaller may be shown as a single line. Equipment and specialties installed within and/or connected to piping systems shall be cross referenced to equipment and specialty shop drawings by submittal identification number, manufacturer name, and catalog or model number. Such cross reference data may be shown at each individual equipment or specialty item on the system assembly drawing or, at the Contractor's option, may be incorporated in a coded bill of materials prepared integral with, and as part of, the applicable shop drawing.

G. Certification of Materials and Installations:

1. The Contractor shall furnish certification from each manufacturer, or from an approved testing laboratory, that all material used in the work is in accordance with these and all referenced specifications.
2. Upon completion of the work, and before acceptance by the County, the Contractor shall furnish the County with a certificate from each of the manufacturers that the equipment and material furnished by him has been erected and installed in a satisfactory manner and is ready for continuous service and operation.

3. Machinery and equipment for which manufacturer certification is specified will not be accepted, nor payment made therefore, without such certification. The Engineer reserves the right, however, to reject such certification when in his judgment, equipment and materials have been improperly installed or show evidence of unsatisfactory operation.
4. Certification shall be provided using the following forms.

EQUIPMENT CERTIFICATION FORM

BALTIMORE COUNTY
RICHLYN MANOR FORCE MAIN

Reference:
THE UNDERSIGNED HEREBY ATTESTS THAT HE HAS EXAMINED ALL THE REFERENCED PROJECT DRAWINGS AND SPECIFICATIONS AND HEREBY WARRANTS AND CERTIFIES THAT THE EQUIPMENT, COMPONENT, OR SYSTEM HE PROPOSES TO FURNISH AND DELIVER MEETS OR EXCEEDS CONTRACT SPECIFICATIONS, IS SUITABLE FOR ITS INTENDED PURPOSE AND INSTALLATION, AND WILL PROVIDE SATISFACTORY PERFORMANCE AT THE DESIGN CRITERIA SPECIFIED. THIS WARRANTY SHALL BE IN ADDITION TO AND NOT IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED.

EQUIPMENT: _____

MANUFACTURER: _____

Name: _____

Address: _____

By:	_____	_____
	(Typed Name and Title)	(SEAL)
	_____	_____
	(Signature)	(Date)

NOTE: Equipment Warranty and Certification must be signed by a Principal Person (President, Vice President, etc.) of the equipment manufacturer. In the event that the manufacturer is not the Supplier, then a Principal Person of the Supplier must also sign this form.

SUPPLIER:

Name: _____

Address: _____

By:	_____	_____
	(Typed Name and Title)	(SEAL)
	_____	_____
	(Signature)	(Date)

- H. All shop drawings shall be 11-inches by 17-inches in size with a 1 ½-inch binding margin on left hand side of sheet. The Contractor may incorporate one (1) or more small drawings on prints 22-inches by 34-inches in size. Diagrams, illustrations, brochures, schedules, and other data may be prepared and executed, complete, on sheets measuring 8 ½-inches by 11-inches. Shop drawings submitted other than as specified herein will be returned for resubmittal without being reviewed.
- I. After checking and verifying all field measurements, the Contractor shall submit to the Engineer, for approval, a minimum of ten (10) copies of all submittals, which shall have been checked by and stamped with the approval of the Contractor and identified as shown herein. The information shown on the submittals shall be complete with respect to dimensions, design criteria, materials of construction and other requirements as specified or shown in the Contract Documents to enable the Engineer to review the information as required. All submittals covering related items of equipment or integrated systems of equipment shall be submitted at the same time in order that their complete operation can be adequately reviewed. Submittals which are incomplete will be returned to the Contractor without review. At the time of each submission, the Contractor shall call to the Engineer's attention, in writing, any deviations that the submittals may have from the requirements of the Contract Documents. Submittals which include proposed alternate materials, equipment, etc. shall follow the procedures outlined in "Equal or Approved Equal" described herein or they will be returned without review.
- J. The Engineer will check submittals with reasonable promptness, but the checking and approval shall be only for conformance with the design concept of the project and for compliance with the information given in the Contract Documents. The approval of a separate item as such shall not indicate approval of the assembly in which the item functions. The Contractor shall make any corrections required by the Engineer and shall resubmit the required number of corrected copies of each submittal until approved. The Contractor shall direct specific attention to revisions called for by the Engineer on previous submissions and shall provide written responses to provided comments.
- K. It is the Contractor's responsibility to make all modifications and/or corrections, and/or to cause such modifications and/or corrections to be made by their subcontractors, suppliers, distributors, equipment fabricators and/or manufacturers, as may be required by the Engineer in an accurate, complete, and timely fashion.
- L. The Engineer's approval of submittals shall not relieve the Contractor from their responsibility for any deviations from the requirements of the Contract Documents unless the Contractor has in writing called the Engineer's attention to such deviations at the time of submission and the Engineer has given written approval to the specific deviation, nor shall any approval by the Engineer relieve the Contractor from responsibility for errors or omissions in the submittals. Submittals shall be submitted with sufficient time provided for checking, return to the Contractor, and/or resubmission as required. The words "APPROVED" or "APPROVED AS NOTED" or words of similar import placed by the Engineer on a submittal means that all items and details of the submittal are fully approved with the exception of those items or details that are specifically marked for further action.

When the submission is marked "RESUBMIT" it means that the material or product can probably fulfill the intent of the plans and specifications but that enough questions or comments have arisen to require a corrected or updated submission. If the material submitted represents a product that is totally unsatisfactory and probably will not under any circumstances meet contract requirements, it will be marked "REJECTED" and will not be reconsidered by the Engineer. The withholding of an approval by the Engineer of any submittal in its entirety, including required certifications, shall under no circumstances constitute a basis for delay in arranging for and proceeding with the manufacturing, fabricating, delivering and installing, in accordance with the Contract, of those items or details in such submittals which may have been approved.

- M. Upon submittal approval, the Contractor shall provide five (5) hard copies of the final, approved submittals; three (3) copies to the County and two (2) copies to the Engineer. In addition, the Contractor shall provide an electronic copy of all approved submittals to the County and Engineer in Portable Document Format (PDF). Final hard copies and PDFs shall be submitted within 20 calendar days of Contractor receiving approval.
- N. The Contractor's attention is specifically directed to the fact that no work shall be fabricated, nor equipment or materials ordered, nor any construction performed, prior to approval by the Engineer of submittals applicable thereto.

Construction performed in violation of this requirement will be neither approved nor certified for payment until applicable submittals have been approved. If the Engineer so directs, the Contractor shall disassemble, raze, and remove any such construction performed prior to approval by the Engineer of submittals applicable thereto, and the Contractor will be allowed neither additional compensation nor extension of Contract time thereto.

If the Contractor orders or causes to be ordered or delivered any equipment, machinery or materials in violations of this requirement, he/she does so at his/her own risk, and such equipment, machinery or materials shall neither be installed in the work nor stored on the site of the work. If, after submission and review of applicable submittals, the Engineer determines that any such equipment, machinery or materials do not meet the requirements of the Contract Documents, such equipment, machinery or materials will be rejected, and the Contractor will be allowed neither additional compensation nor extension of time therefore.

The Contractor's attention is specifically and especially directed to the fact that because manufacturer's standards and procedures are subject to unilateral changes over which the County has no control, the stipulations herein are applicable, and will be enforced, even for those elements of equipment, machinery, and/or materials which may be specified by manufacturer and model or catalog number in the Contract Documents.

All work, labor, materials, etc. associated with providing submittals is considered incidental to the project and no separate payment will be made.

SP 1 – 12 EQUAL OR APPROVED EQUAL

- A. Where any article is specified by a proprietary name, trade name, and/or name of manufacturer, with or without the addition of such expressions as “or equal”, it is to be understood that the article named or the equal thereof, is intended, subject to the approval of the Engineer as to the quality thereof, and it is distinctly understood that (1) the Engineer is to use his own judgment in determining, from time to time, whether or not any article proposed to be substituted is the equal of any article so specified; (2) that the decision of the Engineer on all such questions of equality shall be final, and (3) that in the event of any adverse decision by the Engineer, no claim of any sort shall be made or allowed against the Engineer or the County.
- B. An offer of any article or material by the Contractor for an article or material specified, will raise the presumption that it is for the purpose of saving money. If, in such a case, the article or material is approved, the County shall be given a credit as follows: The difference in the net cost to the Contractor of the article or material submitted and the price at which the Contractor could have obtained the lowest priced article or material specified. For convenience in checking the credit, if any, the Contractor shall submit these figures in writing when the offer is made and no article or materials will be considered without such figures.
- C. If the County approves a substituted item, the Contractor will not be entitled to any additional compensation.
- D. The use of brand names is not intended to unduly restrict competition or to be exclusionary or discriminatory as to requirements other than those based upon performance or other salient requirements of procurement, and when so used, the specified features of the named brand, which must be met, are clearly specified.
- E. The Contractor shall submit a point-by-point comparison list comparing the named product with the proposed substitution product to determine whether or not the proposed product is “equal”.
- F. If the Contractor proposes to substitute materials or equipment as "equals" to those specified, it shall be the Contractor's responsibility to furnish complete, specific, detailed information from the manufacturer or supplier of the material or equipment it proposes to furnish, in which the requirements of the Contract Documents are shown to be met or exceeded, within twenty one (21) calendar days after Notice to Proceed. This submission by the Contractor shall include, without limitation, a point-by-point comparison of the specification requirements and, if a model number is listed, the published features of the named model, with the material or equipment proposed to be furnished. This comparison will include actual bid day pricing for the "or equal" substitution and specified equipment. The full burden of responsibility for furnishing this information is with the Contractor. If, in the County's or Engineer's sole discretion, incomplete or irrelevant data is submitted by the Contractor to comply with this requirement, the data shall be returned to the Contractor and the request for approval of the substitution shall be denied. The Contractor accepts all

responsibility for any delay, costs, and changes that result from the "or equal" approved process, regardless of outcome.

- G. All work, labor, materials, etc. associated with providing information to preparing and providing sufficient information to the Engineer for considering "or equal products" is considered incidental to the project and no separate payment will be made.

SP 1 – 13 AS-BUILT DRAWINGS

- A. The Contractor shall keep one copy of all Contract Documents, including shop drawings, at the site, in good order, and annotated to show all changes made during the construction process. These as-built drawings shall clearly indicate the actual locations, including elevations of all fittings, bends, restrained joints, valves, vaults, buttresses, existing utilities, as measured from two fixed surface structures. These as-built drawings shall be available to the Engineer, and shall be delivered to the Engineer upon completion of the project. If the Contractor fails to maintain the as-built drawings as required herein, final payment with respect to the Contract as a whole will be withheld until proper as-built drawings have been furnished to the Engineer, or the County may, at its option, Contract for independent correction of shop drawings to as-built conditions, and the cost of such contracted services will be deducted from monies retained under the provisions of the Contract Documents.
- B. The Contractor shall furnish, in quadruplicate, 1/4-inch per foot minimum scale charts of all piping plans, profiles, and arrangements, as approved, giving the number and location of all fittings, bends, restrained joints, valves, vaults, buttresses, and connections to other pipes or structures. One set of corrected and approved "Mylar" reproducible copies shall be delivered to the Engineer. The contractor shall also provide one copy of the final as-built shop drawings. All shop drawings and schematics shall be 22-inches by 34-inches in size.
- C. In order to maintain an accurate set of as-built drawings, the Contractor shall meet with the County Inspector monthly to review the status of as-built drawings. The Contractor is responsible for clearly indicating all changes on the drawings. As-built updates shall be provided at each progress meeting.
- D. All work, labor, materials, etc. associated with providing as-built drawings is considered incidental to the project and no separate payment will be made.

SP 1 – 14 OPERATION AND MAINTENANCE MANUALS

- A. Upon completion of the work, and at least twenty days prior to the date set for final acceptance, the Contractor shall furnish for the Engineer's review, three (3) sets of Operation and Maintenance Manuals for any valves, or other equipment or machinery that requires operation or maintenance.

Manuals shall include operating and maintenance information for all items of equipment installed. Data shall consist of catalogs, brochures, bulletins, charts, schedules, shop

drawings corrected to as-built conditions describing location, operation, maintenance, lubrication, operating weight, and other information necessary for the Engineer to establish an effective operating and maintenance program. All information provided shall be of the most current publications and literature supplied by the Manufacturers. Outdated or irrelevant information will not be accepted. Multiple items listed on a single page, which are not relevant, shall be clearly crossed out. The following data shall also be Included:

1. Title page giving project number, name and location of project shall be incorporated at the front of each volume, followed by a table of contents. This information shall be printed on the Contractor's company letterhead and inserted inside clear plastic sleeves.
2. Two unique 8-inch by 10-inch color photographs of each piece of equipment in place. Each Photograph shall be provided on photo quality paper and inserted into a clear plastic sleeve. Photos of equipment shall be taken at an orientation such that the permanent equipment marker is visible. When this is not practical, a temporary identification marker shall be provided and included in the photo for each piece of equipment.
3. An Equipment Warranty section shall be inserted. Section shall include a master log sheet stating equipment type, manufacturer's name, supplier's name, warranty length, and start and end dates. Copies of all warranties shall be included for quick reference.
4. Literature and cutsheets for inclusion shall be printed double sided.
5. "Name Plate" data of all equipment.
6. Approved shop drawings, including required certifications.
7. Manufacturers' cut sheets and dimension drawings of each piece of equipment, and details of all replacement parts.
8. Manufacturers' installation, operation and lubrication instructions for all items.
9. Manufacturer's certifications for specified equipment.
10. A list of all local manufacturers' representatives.
11. Complete parts list with parts assembly drawing (by exploded view), names and addresses of spare parts suppliers, recommended list of spare parts to be kept "in stock" and sample order forms for ordering spare parts. Lead time required for ordering parts shall be estimated and provided.
12. Instructions with easily understood schematics or diagrams for disassembling and assembling the equipment for overhaul or repair.

13. Detailed written procedures for all modes of operation including any precautions for personal safety or for prevention of damage to the item.
 14. Section dividers shall be provided, with labels that are non-removable. Dividers shall also be inserted into individual sections separating the approved shop drawings from the manufacturer's operation and maintenance material. In sections that incorporate multiple pieces of equipment, dividers shall be inserted between each.
 15. Preventive maintenance measures and their frequency shall be listed in tabular form. A troubleshooting chart containing symptoms, probable cause, and remedies shall be included. A lubricating schedule listing equipment (parts), frequency and lubricant (including equivalent major brand lubricants) shall be provided.
 16. Section dividers shall be provided, with labels that are non-removable.
- B. Operation and Maintenance information shall be bound in loose leaf 3-ring binders with black plastic-coated covers. Binders shall be 4-inch thick maximum, high quality, turned edge construction with piano metal hinges and rings that stay closed and not allow pages to fall out. Binders shall be heavy-duty 3-ring binders with hinged spines for 3-inch binders and 4-inch binders as manufactured by Bindertek, or approved equal. Binders shall be organized sequentially with section dividers for each applicable specification section as listed in the Special Provisions table of contents. With each Operation and Maintenance submission, the Contractor shall provide electronic PDF version of the manual.
- C. Shop drawings 11-inches by 17-inches in size shall be folded to approximately 11-inches by 8-1/2 inches with drawing title box exposed along either edge. Drawings descriptive of a single item of equipment shall be grouped together. All drawings shall be inserted into a clear plastic sleeve.
- D. All shop drawings included in the binders shall be those copies previously submitted for review and approval and shall bear the Engineer's stamp of approval and comments as originally noted thereon.
- E. Subsequent to the Engineer's approval of the Operation and Maintenance Manuals, the Contractor shall submit four (4) complete sets of manuals for distribution by the Engineer. In addition, the Contractor shall submit two (2) CD's, each containing an electronic copy of the entire Operation and Maintenance Manuals as a Portable Document Format (PDF) file. CD's shall contain individual files for each specification section, matching the section dividers of the Operation and Maintenance Manuals.
- F. Final inspection and/or beneficial occupancy will positively not be undertaken until approved Operation and Maintenance Manuals have been submitted and approved. Partial approvals will not be made.
- G. All work, labor, materials, etc. associated with operation and maintenance manuals is considered incidental to the project and no separate payment will be made.

SP 1 – 15 FORCE MAJEURE AND DAMAGES

- A. “Force Majeure” means, for the purposes of this Contract, an event arising from causes beyond the control of the Contractor and County which delays or prevents the performance of any obligation under this contract. Unanticipated or changed financial circumstances of the Contractor shall not, in any event, be considered a Force Majeure event.
- B. The Contractor shall file written notice to the County within fifteen (15) calendar days after the Force Majeure event is known or should have been known to the Contractor, whichever is earlier. The Contractor’s written notice shall include, but not be limited to, a description of the event and an explanation of the reasons for the delay, the anticipated duration of the delay, all actions taken or to be taken to prevent or mitigate the delay or the effect of the delay, the timetable by which those measures will be implemented, whether the Contractor claims that the delay should be excused as a Force Majeure event, and the Contractor’s rationale for attributing such delay to a Force Majeure event if the Contractor intends to assert such a claim. Furthermore, the Contractor is required to state what steps are being taken to ensure completion and shall supply any and all documentation available to show what steps have already been taken. Contractor shall also comply with all other County statutes, regulations and requirements in connection with any such matter.
- C. If a delay of performance is, or was, caused, in the sole discretion of the County, by a Force Majeure event, the time for performance of the construction shall be extended for a period to compensate for the delay resulting from such event. Extensions of a completion date based on a particular event shall not automatically extend any other completion date under this Contract. The Contractor will make a showing of proof by a preponderance of the evidence that the Force Majeure event was the cause of the delay in performance for each requirement or completion date for which an extension is sought. In the event of a dispute regarding application of this Special Provision to a delay in performance, the Contractor shall comply with all County statutes, regulations, and requirements and shall have the burden of proving by preponderance of the evidence that the delay is, or was, caused by a Force Majeure event, and that the amount of additional time requested is necessary to compensate for that event.
- D. The Contractor is also notified that copies of any reports, plans, permits, and documents related to this Contract shall be maintained for a period of 5 years from the date of Notice of Award.
- E. The Contractor understands that TIME IS OF THE ESSENCE UNDER THIS CONTRACT. In the event the Contractor fails to achieve Final Completion and Final Acceptance (as defined in the Specifications) as required by this Contract then the Contractor shall pay the County the sum of One Thousand Five Hundred Dollars (\$1,500.00) for each Calendar Day (Day 1-30) after the expiration of the Contract Period, and Two Thousand Dollars (\$2,000.00) for each Calendar Day (Day 31 through 60) after the expiration of the Contract Period, and Two Thousand Seven Hundred and Fifty Dollars (\$2,750.00) for each Calendar Day (Day 61 and thereafter) thereafter until the Contractor achieves Final Completion and Final Acceptance of the Project. The Contractor agrees that:

1. These Liquidated Damages are a reasonable estimate of the County's damages solely due to the public's loss of use of the Project during the delay period and are not a penalty.
2. It is very difficult, if not impossible, to accurately measure the damages to the County due to the public's loss of use of the Project during the delay period.
3. Notwithstanding GP 8.09 of the Baltimore County Standard Specification for the Construction, in addition to the damages due to the public's loss of use of the Project during the delay period, the County is likely to incur additional direct costs during the delay period, including but not limited to, costs for construction management, consultants, architectural services, office trailer and supplies, utilities, County employees' time, County vehicles, and such other costs that the County will incur to continue administration of the construction and the Contract during the delay period, all of which will be monitored by the County, and if so required by the County, The Contractor shall pay such actual damages incurred during the delay period. THE PARTIES HERETO UNDERSTAND AND AGREE THAT CONTRACTOR'S OBLIGATION TO PAY THE COUNTY FOR ACTUAL DAMAGES DURING THE DELAY PERIOD SHALL BE IN ADDITION TO THE CONTRACTOR'S OBLIGATION TO PAY THE LIQUIDATED DAMAGES DUE TO THE PUBLIC'S LOSS OF USE OF THE PROJECT.
4. The County shall have the right, but not the obligation, to deduct the Liquidated Damages due to the public's loss of use of the Project, and the County's actual costs and costs to continue administration of the construction and the Contract, from any monies due or any monies that may become due to the Contractor.

SP 1 – 16 PROGRESS SCHEDULE

- A. In order to determine the amount of the monthly estimate, the successful Contractor shall furnish a complete breakdown of his total bid and the number of working days necessary to complete the work. The Contractor shall furnish this information within three (3) days after being requested. The breakdown will, in general, follow the outline of the specification items. Upon approval by the Engineer, the breakdown shall be the basis for calculating the amount of monthly estimates specified in Section GP-9.03 of the Standard Specifications.
- B. In order to provide a definite basis for determining job progress, a construction schedule shall be prepared by the Contractor at no additional cost to the County and be submitted to the County within 10 days of the Notice to Proceed. Following review and approval by the Engineer, the approved schedule shall become part of the Contract Documents and shall constitute the basis for determining satisfactory progress of the work. The time of project completion shall be included in the Contractor's Construction Schedule.

INSERT: The following paragraph after paragraph (a).(4) in Section GP-8.04 Progress Schedule Requirements of the latest version of the Standard Specifications for Construction and Materials:

- (5) All work, labor, materials, etc. associated with preparing and providing schedules is considered incidental to the project and no separate payment will be made.

SP 1 – 17 PRESERVATION AND RESTORATION OF PROPERTY

The Contractor's attention is directed to Section GP-7.11 of the Standard Specifications which defines their responsibility for restoration of all public and private property affected by the prosecution of work

SP 1 – 18 SITE VIDEO

The Contractor shall video tape the entire construction route prior to construction and shall provide two (2) copies of the video to the Chief, Construction Contracts Administration Division. Cost of the video will not be a pay item but must be included in other items bid, and no additional compensation to the Contractor will be considered.

SP 1 – 19 GUARANTEE

The Contractor shall guarantee all materials and equipment furnished and work performed for a period of one (1) year from the date of final acceptance. The Contractor warrants and guarantees that the completed work is free from all defects due to faulty materials, equipment and workmanship and is in every way fit for the use intended, including but not necessarily limited to, the following:

Against all faulty or imperfect materials and equipment, subsidence of fill, backfill and embankment, vegetative stabilization and against all imperfect, careless and/or unskilled workmanship.

That all structures and equipment designed to hold or convey water or prevent the entrance of water shall be watertight and leakproof at every point in accordance with their intended use.

No use or acceptance by the County of any part of the work, nor failure to use same, nor any repairs, adjustments, corrections or replacements made by the County due to the Contractor's failure to comply with any of his Contract obligations, or other corrections made by the County shall modify in any way the guarantee obligations of the Contractor under the Contract Documents.

The Contractor shall promptly make corrections as necessary by reason of such defects, including damage to other parts of the work resulting from such defects. The Contractor agrees to replace with proper workmanship, materials and equipment, and to correct and repair without cost to the County, any work which does not operate satisfactorily nor performs as specified, does not conform to the Contract Documents or is otherwise improper or imperfect. Exceptions will be made only for damage resulting from direct negligence of County personnel

or that due to normal wear and tear. In the event the Contractor fails to properly perform such repairs or corrections or other work made necessary by such defects, the County may do so and shall charge the Contractor for costs incurred.

SP 1 – 20 LABOR STANDARDS AND ANTI-KICKBACK REGULATIONS

The Contractor and all subcontractors will be required to comply with:

1. The regulations of the Secretary of Labor made pursuant to the Davis-Bacon Act of May 3, 1931, and the Anti-Kickback Act of June 13, 1934.
2. The stipulations and provisions issued by the Secretary of Health, Education and Welfare in Labor Standards (Federal Water Pollution Control Act Amendment of 1961).
3. The Contract Work Hours Standard Act, Title 1, of the Work Hours Act of 1962 (72 Stat. 357-60).

SP 1 – 21 O.S.H.A. STANDARDS AND SAFETY

1. The Contractor shall comply with the U.S. Department of Labor, Safety, and Health Regulations for Construction promulgated under the Occupational Safety and Health Act of 1970 (Public Law 91-596) and under Section 107 of the Contract Work Hours and Safety Standards Act (Public Law 91-54).
2. Nothing in the Occupational Safety and Health Act of 1970 shall be constructed to supersede or in any manner affect any workmen's compensation law or to enlarge or diminish or affect in any manner the common law or statutory rights, duties, or liabilities of employees arising out of or in the course of employment.
3. The Contractor shall comply with all regulations and requirements of the Maryland Occupational Safety and Health Administration (MOSHA).
4. Precaution shall be exercised at all times for the protection of persons (including employees) and property. The safety provisions of applicable laws and building and construction codes shall be observed.

SP 1 – 22 PROGRESS MEETINGS

Project progress meetings will be held monthly to review the progress and schedule of the work. The Contractor shall make their field superintendent available for said progress meetings and to meet the Engineer on-site.

SP 1 – 23 TEMPORARY SERVICES

1. The Contractor shall provide for the sole use by the resident Engineers and Inspectors, an equipped, air conditioned, ventilated, lighted, and heated field office. The equipped field office shall include telephone service comprised of two phone

lines; one dedicated to voice and the other dedicated to a fax machine. The type of field office to be provided shall be Office Type Number 3 as specified in Section 103 of the Standard Specifications and further subject to the approval of the Engineer. The resident Engineer's office shall be a separate entity from any field office the Contractor intends to supply for his own use. The field office shall have indoor plumbing with a fully functioning restroom that is connected to public water and sewer. A temporary portable chemical toilet is not acceptable. If the field office cannot be connected to public water and sewer, connection to a well septic system is acceptable. Otherwise, the Contractor shall provide a pressurized (minimum 20 psi) water tank and a holding tank for sewage, in order to make the indoor restroom fully functional. The field office shall be set up, furnished and functional within 30 days of receipt of notice to proceed and shall remain so for the entire duration of the contract. Upon completion of the work, the resident Engineer's office shall be removed from the site by the Contractor and the site cleaned up and left in a neat, acceptable condition. If there is insufficient space to locate the field office on the County's property at the project site, the Contractor shall be responsible for securing offsite office space equal or great than that offered by a Type 3 trailer that is suitable to the County.

END OF SECTION

THIS PAGE INTENTIONALLY LEFT BLANK

**SP 2 – CATEGORY 100
 PRELIMINARY**

SP 2-1 – SECTION 109 – FIXED PRICE CONTINGENT ITEMS

109.01 DESCRIPTION.

INSERT: The following after Table 109.1 Fixed Price Contingent Items:

Table 109.2 Other Contract Contingencies

Item	Description	Quantity	Measure	Price
899241	ASPHALT DRIVEWAY REPAIRS	50	TON	
Write-in	GEOTEXTILE CLASS SE	7,800	SY	
Write-in	GEOTEXTILE CLASS ST	1,450	SY	
899230	GEOTEXTILE SOIL REINFORCEMENT FABRIC (MIRAFI 500X)	575	SY	
800110	6" UTILITY UNDERDRAIN	20	LF	
301112	FLOWABLE FILL UTILITY CUTS	150	CY	
388062	#2 STONE SEDIMENT CONTROL	40	TON	
800080	CALCIUM CHLORIDE	5	TON	
388058	CLASS 2 EXCAVATION SEDIMENT CONTROL	100	CY	
388102	SUPER SILT FENCE	150	LF	
388100	SILT FENCE ON PAVEMENT	100	LF	
388067	INLET PROTECTION	2	EA	
110204	ADJUSTING AND REPLACING FENCES, SHRUBS, TREES, HEDGES, ETC.	1	LS	

109.04 MEASUREMENT AND PAYMENT.

DELETE Paragraph 109.04.2 and **REPLACE** with the following:

2. ***Class 3 Excavation / Select Backfill - Proper Disposal of Unsuitable Material:*** Payment for furnishing select backfill shall be in accordance with the stipulated price per cubic yard in place and compacted. Price shall include disposal of unsuitable material on-site or offsite. Payment shall not be made for select backfill material placed outside of specified trench widths. Payment for the first 4-inches below the pipe, where sand backfill is already required as bedding, will not be paid for as Class 3 excavation. These 4-inches of sand bedding up to 6-inches of sand above the pipe are considered incidental to price bid for pipe installation. The only exception will be if Rock is encountered. If rock is encountered then Class 3 excavation will be paid in the quantity excavated below the bottom of pipe.

This allowance shall only be used if the County and Engineer review the proposed work and give prior approval.

INSERT: The following after the last paragraph:

7. Contingent Asphalt Driveway Repairs:

This item of work consists of providing all material, labor, equipment, tools, and incidentals necessary for construction of miscellaneous additional work efforts associated with asphalt drive repairs beyond the scope of work otherwise defined by the Contract Documents, as ordered by the Engineer. Asphalt drive repairs shall be in accordance with Baltimore County Department of Public Works Road & Street Details Plate Numbers R-15 and R-15A. This allowance shall only be used if the County and Engineer review the proposed work and give prior approval.

8. Contingent Geotextile Class SE:

This item of work shall consist of providing all labor, material, and equipment required to furnish and install geotextile Class SE when needed to separate soil types and applied vertically on the sides of the trench in accordance with the Standard Specifications for Construction and Materials and as shown, specified, and as directed by the Engineer.

9. Contingent Geotextile Class ST:

This item of work shall consist of providing all labor, material, and equipment required to furnish and install geotextile Class ST when needed to separate soil types and applied vertically on the sides of the trench in accordance with the Standard Specifications for Construction and Materials and as shown, specified, and as directed by the Engineer.

10. Contingent Geotextile Soil Reinforcement Fabric (Mirafi 500x):

This item of work shall consist of providing all labor, material, and equipment required to furnish and install geotextile Mirafi 500X, applied horizontally for soil reinforcement in place of additional excavation, in accordance with Section SP 4-1 of the Special Provisions and the Standard Specifications for Construction and Materials and as shown, specified, and as directed by the Engineer.

11. Contingent 6" Utility Underdrain:

This item of work shall consist of providing all labor, material, and equipment required to complete the utility underdrains when directed by the Engineer in accordance with the Standard Specifications for Construction and Materials.

12. Contingent Flowable Fill Utility Cuts:

This item of work shall consist of furnishing and placing complete, flowable fill, in addition to that shown on the Contract Drawings, specified, or included in the other Bid items, and in accordance with the written direction of the Engineer.

13. Contingent #2 Stone Sediment Control:

This item of work shall consist of providing all labor, material, and equipment to provide No. 2 Stone for Sediment Control when directed by the Engineer in accordance with the Standard Specifications for Construction and Materials.

14. Contingent Calcium Chloride:

This item of work shall consist of providing all labor, material, and equipment to provide calcium chloride when directed by the Engineer in accordance with the Standard Specifications for Construction and Materials.

15. Contingent Class 2 Excavation Sediment Control:

This item of work shall consist of providing all labor, material, and equipment required to provide Class 2 Excavation for Sediment Control when directed by the Engineer in accordance with the Standard Specifications for Construction and Materials.

16. Contingent Super Silt Fence:

This item of work shall consist of providing all labor, material, and equipment required to complete the super silt fence for erosion and sediment control when directed by the Engineer in accordance with the Standard Specifications for Construction and Materials.

17. Contingent Silt Fence on Pavement:

This item of work shall consist of providing all labor, material, and equipment required to complete the silt fence on pavement for erosion and sediment control when directed by the Engineer in accordance with the Standard Specifications for Construction and Materials.

18. Contingent Inlet Protection:

This item of work shall consist of providing all labor, material, and equipment required to provide inlet protection on all storm drain inlets as required by the Inlet Protection Note on Contract Drawing ESC-2 when directed by the Engineer in accordance with the Standard Specifications for Construction and Materials.

19. Contingent Adjusting and Replacing Fences, Shrubs, Trees, Hedges, etc.:

This item of work shall consist of providing all labor, material, and equipment required to remove and relocate adjacent to the work fences, shrubs, trees, hedges, mailboxes, etc., when directed by the Engineer in accordance with the Standard Specifications for Construction and Materials.

END OF SECTION

THIS PAGE INTENTIONALLY LEFT BLANK

**SP 3 – CATEGORY 200
GRADING**

SP 3-1 – SECTION 205 – TEST PIT EXCAVATION

205.04 MEASUREMENT AND PAYMENT.

INSERT: The following after the first **paragraph**:

Test Pit Excavation will be measured and paid for at the fixed Contract unit price per cubic yard. The payment will be full compensation for all material, labor, equipment, tools, and incidentals necessary to complete the work. Tamped backfill will not be measured but the cost will be incidental to the Contract unit price per each Test Pit excavated. The excavation will be allowed to be left open and plated for up to five (5) days where it is deemed safe by the engineer. Any pavement to be replaced will be paid for as specified in Section 504.

THIS PAGE INTENTIONALLY LEFT BLANK

**SP 4 – CATEGORY 300
DRAINAGE & UTILITY CONSTRUCTION**

SP 4-1 – SECTION 300 – GENERAL REQUIREMENTS

300.03.04 Excavation

INSERT: The following after the first paragraph:

All excavation on this project is considered to be unclassified.

INSERT: The following after the last sentence of paragraph **(b) Dewatering Excavations:**

See Section SP 6-1 – Section 02240 – Dewatering of the Special Provisions for additional dewatering information and requirements.

INSERT: The following after the last sentence of paragraph **(e) Unstable Bottom:**

Payment for the first 4-inches below the bottom of pipe, where suitable backfill is already required for bedding, will be considered incidental to the price bid for the sewer force mains and no separate payment shall be made.

INSERT: The following before the first paragraph of **(h).(3) Refilling Procedures:**

Use Select Borrow suitable backfill, as approved by the inspector, from 4-inches below the bottom of pipe to 6-inches above the top of pipe. No extra payment will be made for this suitable backfill, it will be considered incidental to the price bid for the sewer force mains. Suitable backfill shall be carefully placed in the pipe embedment zone in accordance with the Contract Drawings for all polyethylene-encased ductile iron pipe and fittings.

DELETE paragraph **(h).(4) Compaction Around Pipes** in its entirety and **REPLACE** with the following:

(4) Compaction Around Pipes.

Prior to beginning excavation, the Contractor shall present the Engineer with manufacturer-approved specifications for compaction to be used for the particular pipe material being installed. The pipe to which the manufacturer-approved specifications apply shall be installed in full compliance with these specifications, except as otherwise directed by the Contract Documents.

For rigid pipes such as reinforced concrete pipe and for ductile iron pipes, the following compaction specifications shall be used: Suitable material shall be carefully placed around the pipe and brought up evenly along both sides of the pipe to a depth of 2 feet over the pipe or structure. This initial backfill shall be carefully placed and tamped by

approved mechanical means in 4-inch/6-inch layers, to a minimum of 92 percent of AASHTO T-180 density (see Contract Drawings for additional details). Care shall be exercised during this operation in order to insure that the pipe is not damaged and the alignment of the utility is not disturbed.

In unimproved areas outside the existing or proposed road right-of-way, unless trench compaction as used within road right-of-way is specified on the Plans, compaction shall be accomplished as follows for the remaining depth of trench. Backfill material shall be placed in 12-inch layers and compacted in such a manner that a completely dense refill is obtained which is free of voids and not susceptible to settlement.

In all County and State roads, trench compaction as described below, will be required for rigid pipe and ductile iron pipe within rights-of-way except as noted on the Contract Drawings. The area extending from 2 feet above a pipe to the subgrade shall be refilled in layers not to exceed 8 inches. The refill shall be tamped by approved mechanical means and compacted to not less than 92 percent of the maximum density at optimum moisture content, as determined by the modified Proctor method, AASHTO designation T-180, to within the top foot of subgrade. Within County roads the top foot of subgrade shall be compacted to 95 percent of the maximum density determined as noted above. Within State rights-of-way, the top foot of subgrade shall be compacted to 97 percent of the maximum density determined as noted above.

In all proposed subdivision roads where rigid pipe and/or ductile iron pipe are used, the area extending from two feet above a pipe to the subgrade shall be refilled in layers not to exceed 12 inches. The refill shall be tamped by approved mechanical means to ensure no consolidation or settlement. If a waiver of 60-day maintenance of stone base is desired, the Developer must contact the Division of Construction Contracts Administration for application prior to grading. For all material with moisture content more than 3 percent above optimum, the material shall be compacted to a minimum of 98 percent AASHTO T-180 density at existing moisture content. Soils more than 3 percent below optimum moisture content shall be wetted to bring the moisture content to within plus or minus 3 percent of optimum.

Prior to placement of the stone road base or subbase, the subgrade will be inspected and tested for structural capacity in accordance with existing procedures. In those instances where additional subgrade preparation is required to increase pavement support, the following procedures shall apply:

- a. Undercut trench backfill 1 foot plus an overcut of 2 feet on each side of the trench.
- b. Place soil reinforcing geotextile meeting AASHTO M-288 Class SE or ST as applicable or an equivalent reinforcing grid, as specified, and fill to original subgrade with Aggregate Base Course.
- c. Aggregate backfill shall be rutted, regraded and compacted prior to pavement base construction.

Insofar as Specifications for mechanical tamping equipment or methods are concerned,

no specific requirements are included in these Specifications other than the use of any particular type of equipment is subject to approval of the Engineer, and that he has the sole right to judge what equipment is suitable for the uses intended.

After the completion of refilling, all material not used therein shall be removed and disposed of in such a manner and to such a point as approved or directed by the Engineer; and all roads, sidewalks and other places on the line of the work shall be left clean and in good order. The Contractor shall clean up without extra compensation. If the Contractor fails to do such work within a reasonable time after receipt of notice, the Engineer shall arrange for the necessary clean-up effort, and the cost will be retained out of monies due to or to become due to the Contractor, under the Contract.

INSERT: The following as paragraph (h).(5) **Soil Reinforcing Fabric:**

(5) Soil Reinforcing Fabric: As noted in this section of the Standard Specifications, prior to reconstruction of the roadway removed to complete installation of the force main, the subgrade will be inspected and tested by the County for structural capacity. In these locations in which Baltimore County has determined that additional subgrade preparation is required in order to increase pavement support, at the direction of the Resident Engineer, soil reinforcing fabric consisting of woven geotextile will be placed on top of the subgrade to stop subgrade material from contaminating the base material. The soil reinforcing fabric shall be Mirafi 500x or equal and meet the following mechanical and hydraulic properties:

Property/Test Method	Unit	500x
MECHANICAL PROPERTIES		
Grab Tensile Strength		
ASTM D4632		
Strength @ Ultimate	N (lbs)	890 (200)
Elongation @ Ultimate	% MD/CD	15/15 0.33
Trapezoidal Tear Strength		
ASTM D4533	N (lbs)	334 (75)
Puncture Tear Strength		
ASTM D6241	N (lbs)	3115 (700)
UV Resistance after 500 hrs.		
ASTM D4355	% strength	70
HYDRAULIC PROPERTIES		
Apparent Opening Size (AOS)		
ASTM D4751	US Sieve (mm)	40 (0.425)
Permittivity		
ASTM D4491	sec ⁻¹	0.05

A contingent item measured on a square yard basis has been provided in the proposal for soil reinforcing fabric. Payment for this item shall be considered full compensation

for all labor, materials, and equipment necessary to furnish and install the soil reinforcing fabric in accordance with the manufacturer's recommendations.

END OF SECTION

SP 4-2 – SECTION 308 – EROSION AND SEDIMENT CONTROL

DELETE 308.03.08 Stabilization Requirements in its entirety and **REPLACE** with the following:

308.03.08 Stabilization Requirements. Permanently or temporarily stabilize areas flatter than 3:1 and stockpile areas as soon as possible, but not later than seven days after grubbing and grading activities have ceased in the area. Permanently or temporarily stabilize trap embankments and slopes, earth dikes, temporary swales, perimeter dike/swales, ditches, and slopes 3:1 or steeper as soon as possible, but not later than three days after grubbing and grading activities have ceased in the area. The three and seven day requirements mean that the stabilization operation is complete within the applicable three or seven day time frame.

When the excavation or embankment reaches the bottom of the subgrade, those areas in which paving will be placed are exempt from the stabilization requirements. Areas between temporary berms, except median areas, need not be stabilized during incremental stabilization. When permanently stabilized areas are disturbed by grading operations or other activities not specifically approved, restabilization will be at no additional cost to the County.

Stabilization requirements may be reduced to less than three days for sensitive areas. Perform maintenance as necessary to ensure continued stabilization.

Track all slopes within three days of establishment with cleated type equipment operating perpendicular to the slope.

DELETE 308.03.11 Waste Areas in its entirety and **REPLACE** with the following:

308.03.11 Waste Areas. Off-site waste areas on State or Federal property require MDE approval. The Baltimore County Soil Conservation District shall approve all other off-site waste areas. All waste areas and stockpile areas shall be protected by erosion and sediment control measures and stabilized in accordance with the three or seven day stabilization requirement.

END OF SECTION

THIS PAGE INTENTIONALLY LEFT BLANK

SP 4-3 – SECTION 359 – ABANDONMENT OF WATER MAINS AND WATER APPURTENANCES

359.04 MEASUREMENT AND PAYMENT.

DELETE Paragraph **b** under **359.04 MEASUREMENT AND PAYMENT** and **REPLACE** with the following:

- b.** All work under this item will not be measured. Costs of Abandonment of Water Mains and/or Water Appurtenances are to be considered incidental to other bid items and the costs associated included in the price bid for items of new construction. This shall include but not be limited to any removal of existing pipe of any material, removal of fire hydrants, removal of frame & cover, removal and abandonment of valves and vaults; removal of blow-off valve and vaults; and any other work associated with the abandonment of existing water mains.

END OF SECTION

THIS PAGE INTENTIONALLY LEFT BLANK

**SP 4-4 – SECTION 361 – SANITARY SEWERS AND SANITARY SEWER HOUSE
CONNECTIONS**

DELETE 361.04 MEASUREMENT AND PAYMENT *Sanitary Sewers* and *Sewer House Connections* and REPLACE with the following:

361.04 MEASUREMENT AND PAYMENT.

A. *Sanitary Sewers* and *Sewer House Connections*:

Complete in place, are paid for at the Contract unit price bid per linear foot for the particular type and size of pipe specified in the Contract Documents. This price includes and covers cutting and full depth paving repair, test pitting in advance of laying the pipe; unclassified excavation and refill, hauling and off-site disposal of all excavated material, bracing; flow control including pumping and other disposal of water; removing the existing abandoned waterline as shown on the Drawings and as directed by the Engineer in the field and capping the remaining extents, furnishing and placing pipe bedding and suitable backfill; furnishing and placing all pipe, fittings, and joining materials, including the encased 6-inch x 6-inch x 4-inch wye and 45 degree elbow on house connections in accordance with Contract Documents to the grade indicated, testing, and incidentals and related work as shown, specified, and directed; leakage and field testing; surface restoration, and all labor, equipment and work necessary to complete the work.

Connections of the proposed sanitary sewers main into manholes, inclusive of drop connections shall not be measured separately and will be considered incidental to the installation of the sanitary sewer.

END OF SECTION

THIS PAGE INTENTIONALLY LEFT BLANK

SP 4-5 – SECTION 363 – SANITARY SEWER FORCE MAINS

DELETE 363.04 MEASUREMENT AND PAYMENT in its entirety and **REPLACE** with the following:

363.04 MEASUREMENT AND PAYMENT.

- A. Measurements for payment for all force mains are made horizontally along the centerline of the trench through all fittings and valves except between vertical bends where measurement is made along the center of the pipe, including all fittings. The list of pipe fittings shown on drawings is for convenience only. In case of discrepancy between the list of pipe fittings and the drawings, the drawings will govern.

Sewer Force Mains are paid for at the Contract unit price per linear foot for the particular size and type of pipe specified on the Plans or directed by the Engineer. The Contract price bid shall include: cutting and full depth paving repair; test pitting in advance of laying the pipe; unclassified excavation and refill; hauling and off-site disposal of all excavated material; bracing; flow control including pumping and other disposal of water; removing the existing abandoned waterline as shown on the Drawings and as directed by the Engineer in the field and capping the remaining extents; furnishing and placing of pipe and appurtenances; fittings; gate valves; relief valves; caps; concrete anchors and buttresses; material, labor and installation of restrained joints; furnishing and placing pipe bedding and suitable backfill; non-detectable warning tape material, labor and installation; corrosion resistant coating of ductile iron pipe and fittings; leakage and field testing; surface restoration, and all labor, equipment and work necessary to complete the work.

Connection of the proposed sewer force main into manholes shall not be measured separately and will be considered incidental to the installation of the sewer force main.

END OF SECTION

THIS PAGE INTENTIONALLY LEFT BLANK

**SP 5 – CATEGORY 900
MATERIALS**

SP 5-1 – SECTION 905 - PIPE

SUPPLEMENT with the following:

905.01.14 Marking Ductile Iron Pipe

INSERT: The following after the first paragraph:

Submit a detailed laying schedule for all pipe, fittings, and appurtenances. Upon request, the Contractor shall require the manufacturer to legibly mark specials in accordance with the laying schedule and marking diagram.

905.08.01 Ductile Iron Pipe and Fittings – Sewer. All ductile iron pipe and fittings for sanitary force mains shall be in accordance with Section 905.02, Ductile Iron Pipe and Fittings (Water Mains) except for the requirements specified below in 905.08.02 thru 905.08.03.

905.08.02 Ductile iron pipe, fittings and appurtenance shall conform to AWWA C150 and C151, and be subject to the following supplemental requirements.

1. The pipe shall be of the diameter and class shown, shall be furnished complete with rubber gaskets as indicated in the Contract Documents, and all specials and fittings shall be provided as required per the Contract Documents.
2. Ductile iron pipe joints shall conform to AWWA C111.
3. Fittings shall conform to AWWA C153 or C110.
4. All pipe and fittings shall be lined with a minimum 40.0 mils dry film thickness (DFT) with Protecto 401 Ceramic Epoxy or approved equal.
5. The exterior of ductile iron pipe and fittings shall be coated with a layer of arc-sprayed zinc per ISO 8179. The mass of the zinc applied shall be 200 g/m² of pipe surface area. A finishing asphaltic layer top coat shall be applied to the zinc. The mean dry film thickness of the finishing layer shall not be less than 3 mils with a local minimum not less than 2 mils. The zinc coating system shall conform to ISO 8179-1 “Ductile iron pipes – External zinc-based coating – Part 1” Metallic zinc with finishing layer. Second edition 2004-06-01.”
6. Pipe laying lengths shall be provided in 20 foot nominal lengths with allowable trim pipe lengths in accordance with AWWA C151 and special shorter lengths provided as required.
7. All buried pipe shall be restrained. Ductile iron pipe shall be furnished with push-on restrained joints or restrained mechanical joints (Megalugs Series 1100). Push-on joint fittings with ANSI/AWWA C111/A21.11 SBR restraining gaskets rated for 250 psi minimum operating pressure shall be supplied. Restraining gaskets shall be provided with high-strength stainless steel wedges with “teeth” used to grip the spigot end of the pipe. Approved products include American Ductile Iron: Fastite® Pipe with Fast-Grip® Gaskets; US Pipe: Tyton® Pipe with Field Lok® Gaskets; and McWane: Tyton® Ppe with McWane Sure Stop 350® Gaskets. Restrained mechanical joints shall be used at fittings. Approved restrained mechanical joints include EBAA Iron Megalugs; and American Ductile Iron – MJ Coupled Joint.

905.08.03 Installation. Ductile iron pipe shall be loaded, transported, unloaded, installed, and tested in accordance with AWWA C600. The Contractor shall install all ductile iron pipe and fittings including joint restraint devices per manufacturer's installation instructions.

END OF SECTION

DELETE SECTION 905.07.03 – WATER VALVES AND TAPPING SLEEVES in its entirety and **REPLACE** with the following:

SP 5-2 – SECTION 905.07.03 – SANITARY SEWER VALVES

905.07.03.01 DESCRIPTION

The Contractor shall furnish and install all materials, equipment and appurtenances necessary for the complete and satisfactory installation of all piping systems as shown on the Contract Drawings and as required for a complete installation as specified herein.

905.07.03.02 SUBMITTALS

A. Shop Drawings and Product Data:

1. The drawings developed by the Engineer are diagrammatic in nature and may not indicate all necessary bends, offsets and fittings. The Contractor shall, prior to developing shop drawings for field piping installation, inspect each area of work for site conformance with the Contract Documents. Submission of the shop drawings for field piping systems shall be verification that the Contractor has inspected the work areas and that the shop drawings indicate all field/site conditions which may impact the installation and performance of the work. Field or site conditions which impact the installation or performance of the work shall be indicated on the shop drawings. Failure of the Contractor to indicate these field or site conditions during the shop drawing phase which impact installation shall be cause for disallowing claims associated with these field or site conditions.
2. Submit detailed certified dimensional shop drawings and manufacturer's product data for materials and equipment.
3. Catalog data for all valves and appurtenances, including operators.
4. Shop drawings for all valves and appurtenances.
5. Manufacturer's installation recommendations.
6. Shop drawings shall include plan and section view including elevation, dimensions from fixed structures, valve and instrument locations.
7. Layout drawings for valve vault shall include plan and section view including elevation dimensions from fixed structures and valve locations.

- B. Show complete information concerning materials of construction, fabrication, protective coatings, installation and anchoring requirements, fasteners and other details.

- C. Maintenance Data and Operating Instructions:
1. Submit an Operation and Maintenance Manual for the equipment furnished including a detailed description of the function of each principal component, procedures for operation, instructions for overhaul and maintenance.
 2. Include lubrication schedule, safety precautions, test procedures, electrical schematics, and parts lists.
- D. Equipment Warranty and Certification Form: In addition to submitting shop drawings for the sewage surge relief valve, the Contractor shall obtain and submit to the Engineer and Owner certification from the valve manufacturer that the valve meets the requirements intended application and contract specifications. The certification shall be provided by way of the Equipment Warranty and Certification Forms.

905.07.03.03 QUALITY ASSURANCE

- A. The valve manufacturer shall be regularly engaged in the design, manufacture, and maintenance of the valves for sewage service and shall have furnished valves of the same general design, type and comparable size specified herein, which have been used and proved satisfactory under similar test, service, and operating conditions for at least five (5) years. The manufacturer shall furnish satisfactory evidence of adequate facilities for furnishing parts for repairs and for maintenance of valves furnished.

905.07.03.04 WARRANTY

- A. The Contractor shall submit to the Owner a written manufacturer's warranty covering equipment defects and workmanship, and shall be responsible for repairing or replacing at his own expense, including labor and shipping, all parts defective in material or workmanship for a period of two years from the date of final acceptance.

905.07.03.05 PRODUCTS

905.07.03.05.01 GENERAL NOTES

- A. The Contractor shall verify all dimensions of valves, special castings and fittings, pipe equipment, etc., so that all of the pipe work performed will fit together properly and will conform to the arrangement as shown on the drawings. In selecting laying lengths of fittings, the Contractor shall be guided by the dimensions of equipment to which connections are made and by the indicated dimensions on the drawings. All pipe and specials shall be accurate to the dimensions shown. Hubs, spigots, and flanges shall be at right angles to the axis of the opening, and openings shall be at the exact angle specified.

905.07.03.05.02 GENERAL NOTES - VALVES

- A. Valves specified herein shall have the type of ends specified or as indicated on the drawings or as required by equipment connections.
- B. Where extension stems are required, they shall be doweled or otherwise securely attached to the valve stem.
- C. The valve and operator shall be the responsibility of the valve manufacturer. All valves shall open left, counterclockwise.

905.07.03.05.03 AIR / VACUUM RELEASE VALVES

- A. Combination Air Valve combines an air and vacuum orifice and an air release orifice in a single body. Valve shall be specially designed to operate with liquids carrying solid particles such as wastewater. The valve shall enable the separation of the liquid from the sealing mechanism. The valve shall be provided with a non-slam single orifice add-on component. The valve shall automatically open to prevent the formation of a vacuum in the pipeline.
- B. Valve air and vacuum component shall discharge large volumes of air during filling of the system, shall admit large volumes of air during drainage and at water column separation, and shall release entrapped air in pressurized systems. A 316 stainless steel isolation ball valve shall be provided to isolate the air release valve from the system.
- C. Valve flange, base body, top cover and top body and other structural components shall be 316 Stainless Steel. Floats shall be constructed of Polypropylene. O-rings shall be Buna-N, and Clamp shall be Cast Stainless Steel. The Air & Vacuum Seal and Air Release Seal shall be EPDM.
- D. Valve discharge shall be provided with a threaded Polypropylene outlet.
- E. Manufacturers
 1. Basis of Design: ARI Flow Control Accessories Ltd.; 2” ARI-D26 NS (2-inch reinforced nylon valve),
 2. Or approved equal.

905.07.03.05.04 GATE VALVES

- A. Gate valves shall be ductile iron with stainless steel trim, solid wedge, tapered seat, non-rising stem, as shown on drawings, non-asbestos packing, and shall be in accordance with AWWA C500 and these specifications.
- B. Valve body, bonnets, discs, and handwheels shall be ductile iron ASTM A536 Grade 65-45-12. The body and bonnet wall thickness shall exceed the minimum wall thickness stated in AWWA Standard C500, Section 4.4, Table 1. Accurately machined bronze seating rings shall be secured in the valve body. Valve wedge shall be provided with bronze seating rings, machined and scraped, if necessary, to seat truly flat against body seating rings.
- C. Valve stems shall be 304 stainless steel and rotate freely in the valve bonnet recess. Design of the stuffing box shall permit repacking under line pressure. Stuffing box glands shall be brass; gland followers shall be ductile iron.
- D. Gate valves shall be designed for a minimum working pressure of 250 psi and a test pressure of 300 psi hydrostatic test pressure.
- E. Unless otherwise indicated or required, valves for above ground ductile iron pipe shall have flanged ends in accordance with ANSI B16.1, 125 pound class. All buried valves shall be provided with mechanical joint ends compatible with the adjoining pipe. Provide hand wheel and/or extension stem with operating nut, as indicated on the plans or as required by the particular installation.
- F. Provide a valve position indicator for each valve by Valcom, Trumbull, or approved equal.
- G. Gate valves shall be American R/D 100-line Solid Wedge Gate Valve, or approved equal.
- H. Body and bonnet fasteners shall be of rustproof material having the physical properties of ASTM A307. Packing and gaskets shall be of non-asbestos materials.
- I. Internal and external coating, testing and inspections shall be in accordance with AWWA C500. Valves shall be marked with the requirements of AWWA C500 and MSS-SP25.
- J. Gate valves shall be provided with a ductile iron manual operating nut, extension stem, and a floor or valve box as indicated on the Contract Drawings. Contractor shall furnish two (2) operating nut keys. The direction of rotation of the operating nut to open the valve shall be to the left (counterclockwise). Each valve body or operator shall have a cast thereon word "OPEN" and an arrow indicating the direction to open.

- K. 2-inch AWWA operating nut shall be constructed of ductile iron ASTM A536 Grade 65-45-12 with integrally cast shield not less than 4-inch end to end, 3-inch side to side and a total height of not less than 2-11/16 inches. Total weight of the operating nut shall not be less than 2.25 pounds. The ductile iron operating nut shall be fusion bonded epoxy coated inside and out with no uncoated surface.
- L. The County and the Engineer shall inspect valves prior to installation. Adequate notice shall be provided.

905.07.03.05.05 LAYING PIPE AND FITTINGS

- A. Pipe, fittings and accessories shall be stored and handled in a manner that will ensure installation in a clean, sound, and undamaged condition. Ductile and cast iron pipe, fittings, valves and appurtenances shall be unloaded, handled, and stored in accordance with AWWA C600. If damage or coating abrasion occurs and is deemed repairable by the County, it shall be repaired as directed by the Engineer in accordance with manufacturer's recommendations. If damage is not repairable in the opinion of the Engineer, such pipe, fittings, valve or appurtenance will be rejected and shall be removed and replaced at Contractor's expense.

905.07.03.05.06 INSTALLATION OF VALVES

- A. The County shall inspect all valves prior to installation. A minimum of 7 days' notice shall be provided. The Contractor shall plan for valve inspection within their construction schedule. If the County deems the valve to be unacceptable or the valve does not meet the specified requirements, the valve shall be returned by the Contractor at no cost. The rejection or return of any valve shall not be justification for additional cost or time.
- B. All valves shall be installed in accordance with the manufacturer's instructions and as required herein.
- C. All valves should be installed with position dials clearly visible from the operating locations.
- D. See plan sheets for dimensions and layout of fittings and valves.

905.07.03.05.07 TESTING

- A. Operate all valves twice through a complete open/close cycle. Check for valve seating to be drip tight. If leaking occurs, adjust or replace valve packing as necessary and retest. Replace valves if persistent leaking occurs.

905.07.03.05.08 PAINTING

- A. Valves shall be provided with the manufacturer's standard factory-applied coating system.

905.07.03.05.09 EXTENSION STEMS

- A. Extension stems shall be provided for operation for valves where required or shown on the Contract Drawings. Extension stems shall be made from extra heavy galvanized steel, sized as to transmit full torque from the operating mechanism to the valve without binding, twisting, or bending. Extension stems shall be complete with coupling for attachments to the valve stem for non-rising stems and operating nut located in valve box. Where required, universal joints shall be required for deflection offset.
- B. Stem guides shall be high-strength cast iron and installed as necessary, but at a minimum so that extension stems do not go unsupported for lengths of more than eight (8) feet.

905.07.03.05.10 MEASUREMENT AND PAYMENT.

- A. Combination Air Release Valve and Vault will be measured per each combination air release valve and vault installed. Payment shall be full compensation for all materials, installation, labor, equipment, combination air release valves, PVC piping, fittings, precast concrete vaults, painting, frame and cover, excavation and refill, proper offsite disposal of unsuitable material, cutting pavement, pavement removal and disposal, stone bedding, bracing, compaction, acceptance testing, dewatering and incidentals necessary to acceptably complete this work.
- B. Dewatering Gate valve and vault will be measured per each dewatering gate valve and vault installed. Payment shall be full compensation for all materials, installation, labor, equipment, dewatering gate valve and all appurtenances, fittings, precast concrete vault, painting, frame and cover, excavation and refill, proper offsite disposal of unsuitable material, cutting pavement, pavement removal and disposal, stone bedding, bracing, compaction, acceptance testing, dewatering and incidentals necessary to acceptably complete this work.

END OF SECTION

SP 6 – TECHNICAL SPECIFICATIONS

SP 6-1 – SECTION 02240

DEWATERING

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This work shall consist of dewatering surface water, perched water and groundwater from trench excavations, as required to successfully install the utilities and directed by the Engineer. When groundwater is encountered in excavation areas, the Contractor shall dewater the area and keep the excavation free of water until the area has been backfilled or the construction completed. No excavation shall be started below the water table until the water table has been lowered to a minimum depth of 2 feet below the bottom of proposed excavations.
- B. Dewatering shall be performed by a Contractor who has adequate experience in construction dewatering. The Contractor or its principal must have a minimum of ten years of experience in performing similar dewatering projects.

1.02 PERFORMANCE REQUIREMENTS

- A. Dewatering Performance: Design, furnish, install, test, operate, monitor, and maintain dewatering system of sufficient scope, size, and capacity to control hydrostatic pressures and to lower, control, remove, and dispose of groundwater and permit excavation and construction to proceed on dry, stable subgrades.
 - 1. Obtain necessary well permit to install the wells.
 - 2. Maintain dewatering operations to ensure erosion control, stability of excavations and constructed slopes, that excavation does not flood, and that damage to subgrades and permanent structures is prevented.
 - 3. Prevent surface water from entering excavations by grading, dikes, or other means.
 - 4. Accomplish dewatering without causing erosion, damaging adjacent buildings, structures, utilities and site improvements adjacent to excavation.
 - 5. Remove dewatering system when no longer needed.

1.03 SUBMITTALS

- A. Work Plan and Shop Drawings: For dewatering system provide work plan and shop drawings showing arrangement, locations, and details of sumps, wells and well

points; locations of risers, headers, filters, pumps, power units, and discharge lines; and means of discharge, control of sediment, and disposal of water.

1. Include a plan outlining control procedures to be adopted if dewatering problems arise.
 2. Include shop drawings signed and sealed by the qualified professional engineer responsible for their preparation.
 3. Displacement and settlement monitoring.
- B. Contractor shall obtain pre-construction photographs and/or videotape, sufficiently detailed, of existing conditions of adjoining construction within the radius of influence of the dewatering zone. The photographs/videotapes shall record the condition of existing structures, especially of any damages or cracks that may exist and that might be misconstrued as damage caused by dewatering operations.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. The Contractor shall provide all materials and equipment required to perform groundwater dewatering in accordance with the County approved dewatering practices. Refer to Standard Specification Section 308 for Erosion and Sediment Control for dewatering system approvals, maintenance and components.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by dewatering operations.
1. Prevent surface water and subsurface or groundwater from entering excavations, from ponding on prepared subgrades, and from flooding site and surrounding area.
 2. Protect subgrades and foundation soils from softening and damage by rain or water accumulation.
- B. Install dewatering system to ensure minimum interference with roads, streets, walks, and other adjacent occupied and used facilities.
1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from the County. Provide alternate routes around closed or obstructed traffic ways if required.

- C. Provide temporary grading to facilitate dewatering and control of surface water.
- D. Monitor dewatering systems continuously.
- E. Promptly repair damages to adjacent facilities caused by dewatering.
- F. Protect and maintain temporary erosion and sedimentation controls, which are specified in the Baltimore County Standard Specifications, during dewatering operations.

3.02 INSTALLATION

- A. Install dewatering system complete with pump equipment, standby power and pumps, filter material gradation, valves, appurtenances, water disposal, and surface-water controls.
 - 1. Use filters or other means to prevent pumping of fine sands or silts from the subsurface.
- B. Based on the geology of the site, perched water and running sand conditions should be expected. Dewatering systems should be designed to properly dewater perched water conditions to prevent running sand conditions or other conditions that could compromise structures, utilities, sidewalks, pavements, and other facilities.
- C. Before excavating below groundwater level, place system into operation to lower water to specified levels. Operate the system continuously until dewatering is no longer required. Except for utility trenches, no excavation shall be made until the water level has been lowered to at least 2 feet below the design excavation level.
- D. Provide an adequate system to lower and control groundwater to permit excavation, construction of structures, and placement of fill materials on dry subgrades. Install sufficient dewatering equipment to drain water-bearing strata above and below bottom of foundations, drains, sewers, and other excavations.
 - 1. Do not permit open-sump pumping that leads to loss of fines, soil piping, subgrade softening, and slope instability.
- E. Reduce hydrostatic head in water-bearing strata below subgrade elevations of the utilities, foundations, drains, sewers, and other excavations.
- F. Dispose of water removed by dewatering in a manner that avoids endangering public health, property, and portions of work under construction or completed. Dispose of water and sediment in a manner that avoids inconvenience to others. Provide sumps, sedimentation tanks, and other flow-control devices as required by authorities having jurisdiction.

- G. Provide standby equipment on site, installed and available for immediate operation, to maintain dewatering on continuous basis if any part of system becomes inadequate or fails. If dewatering requirements are not satisfied due to inadequacy or failure of dewatering system, restore damaged structures and foundation soils at no additional expense to the County.
 - 1. Remove dewatering system from Project site on completion of dewatering.
- H. Damages: Promptly repair damage to adjacent structures, utilities, sidewalks, pavements, and other facilities caused by dewatering operations.
- I. Dewatering shall remove water from excavations. Water and its removal shall be considered unclassified excavation, fully responsibility of the Contractor.
- J. Where necessary, the Contractor shall lower the water table around the subgrade sufficiently to prevent a condition that destroys the bearing capacity of the soil strata.
- K. Responsibility for performance of dewatering methods and devices lies entirely with the Contractor. Correction of settlement and damage to persons and property due to the settlement shall be the responsibility of the Contractor.

PART 4 - MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. Measurement: Dewatering will not be measured and shall be considered incidental to the pertinent bid items.
- B. Payment: Payment for dewatering shall be included in the prices bid for items in the proposal and as defined in these Specifications.

END OF SECTION

SP 6-2 – SECTION 02737

MANHOLE REHABILITATION

2737.01 DESCRIPTION

2737.01.01 Reference. All applicable requirements of other portions of the Contract Documents apply to the Work of this Section.

2737.01.02 Description of Work. These specifications include requirements to provide a system for manhole rehabilitation that includes lining the existing manhole 69669 interior. It is the Contractor's responsibility to stop all active leaks in association with the lining of the manhole interiors.

2737.01.03 This work shall include the furnishing of all materials, equipment, tools, and labor as required for the (interior and exterior) rehabilitation of the manholes.

2737.01.04 Rehabilitation products shall be applied to the manhole from the cover seat to and including the benches, and channel. Each system must provide a non-prorated warranty as herein described in manholes to stop infiltration, prohibit root intrusion, protect the existing structure from further deterioration, and provide a surface liner resistant to collection system gases and chemicals.

2737.01.05 Prior to the work, all rehabilitation products shall be kept dry, protected from weather, and stored under cover. The materials shall be stored in acceptable temperatures according to the manufacturer's recommendations. All products shall be handled according to their Material Safety Data Sheets.

2737.01.06 For any ASTM standard referenced, the Contractor shall use the most current active version.

2737.01.07 Safety.

- (a) Contractor shall ensure public safety and worker safety during progress of the rehabilitation work.
- (b) Contractor shall use employees who are properly trained and who are aware of possible work, materials, and job site related hazards.
- (c) It shall be the responsibility of the Contractor to provide adequate measures to protect pedestrian and vehicular traffic on streets. Signals and barricades shall conform to requirements of federal, state and local laws, rules, regulations, precautions, orders and decrees.
- (d) Contractor shall report to the County any condition that may pose a threat to the health and welfare of the project inspectors, contractor's employees, or the general public.

- (e) Provide proper ventilation and personal protective equipment as required to ensure worker safety. Perform work in adherence to statutes of appropriate local, state, and federal health and labor laws, including OSHA confined space entry requirements.
- (f) Contractor shall have available on the job-site current manufacturer's Material Safety Data Sheets.
- (g) Contractor shall keep the working area clean, safe, appropriately barricaded, and properly lighted.
- (h) The Contractor shall conduct operations in accordance with applicable OSHA standards, including those safety requirements involving entry into a confined space. Make suitable precautions to eliminate hazards to personnel near construction activities.
- (i) The following plans shall be on-site for the duration of the project and be made available to County personnel as requested:
 - (1) Safety Plan: The Safety Plan shall identify all competent persons, a description of the daily safety program for the job site, and all emergency procedures to be implemented in the event of a safety incident. All work shall be conducted in accordance with the Contractor's submitted Safety Plan.
 - (2) Emergency Plan: The Emergency Plan shall detail procedures to be followed in event of health and safety emergencies, pump failures, overspray, chemical spills, sewer overflows, service backups, and sewage spillage. Address dangers associated with sewer rehabilitation work (i.e. working with large boiler trucks).
 - (3) Health and Safety Plan: The Health and Safety Plan shall identify a health and safety officer (i.e. crew chief) responsible for providing health and safety oversight of personnel participating on the project team, performing and documenting routine work area inspections, conducting safety meetings, and providing safety orientations for team members.
 - (4) Equipment: The Contractor shall maintain a list of critical rehabilitation equipment to be inspected on a daily basis. Monthly maintenance logs and noise attenuation logs shall also be maintained.
 - (5) Odor Control Plan: The Contractor shall develop an odor control plan that will ensure that project specific odors will be minimized at the project site and surrounding area.

2737.01.08 Contractor Experience.

- (a) The Contractor for the rehabilitation of the manhole structures must have a minimum of two years experience using the liner product proposed and have installed at least 1,000 vertical linear feet of the proposed product for collection system manholes.
- (b) The Contractor shall be licensed by the liner process manufacturer.

2737.01.09 Product Experience. The product proposed for the rehabilitation of the manholes must have been in use for at least three years and a minimum of 1,500 vertical linear feet of the product must have been installed in collection system manholes.

2737.01.10 Submittals - After Notice of Award. After the Notice of Award, the Contractor shall submit the information listed below for review and approval. The notice to proceed will not be issued until all of the listed information has been reviewed and approved by the County and/or the Engineer.

- (a) Shop drawings and product data for the manhole rehabilitation method including a report outlining the process to be used in the rehabilitation of the manholes. The report shall also include information specific to the job, such as schedule, coordination issues, access, timing, manufacturer's installation instructions, curing operations and procedures, traffic control, and flow control.
- (b) Samples of all materials proposed shall be provided for approval from the County prior to initiation of the Work. The samples shall be accompanied by the manufacturer's sworn certification that components and products will be manufactured in accordance with specified reference standards for components and products.
- (c) All measurements made by the Contractor to verify manhole depths, elevations and diameters, prior to ordering of material.
- (d) Manufacturer's published literature and published data for the proposed manhole rehabilitation system, including all Material Safety Data Sheets.
- (e) The manhole rehabilitation system supplier's letter of certification for the workers who will perform rehabilitation work. If, during the installation process, any of the crew members performing the installation are not identified on this letter, then a new certification letter listing the crew member(s) must be received from the rehabilitation system supplier prior to initiation of the specific project.

- (f) Independent test report showing that the physical properties of the proposed system meet the requirements of these specifications and the requirements published in the manufacturer's literature.
- (g) The manufacturer's certification that the proposed system for the project meets the requirements of these specifications and will meet or exceed the physical properties given in the manufacturer's published literature submitted as required by Part (i) of this subsection.
- (h) Documentation of Contractor's experience. This shall include references for all jobs within the last two years that were either completed or under construction using the proposed rehabilitation method, and shall show that at least 1,000 vertical linear feet of this proposed product has been installed by this Contractor. References for a minimum of 5 jobs shall be provided. Information provided shall include a description of the job (including the liner method used and vertical feet of liner installed), the location of the job, the value of the job, the Owner, and the contact for the job including name, title, address, and phone number.
- (i) Documentation of Product experience. This shall include references for jobs completed with the proposed rehabilitation method. The jobs submitted shall show that at least 1,500 vertical linear feet of the product has been installed by the Contractor or other Contractors. The documentation shall include at least ten jobs, which have been completed, within the last three years. Information provided for each job shall include a description of the job (including the liner method used and vertical feet of liner installed), the location of the job, the value of the job, the Owner, and the contact for the job including name, title, address, and phone number.
- (j) If requested, proof of any federal, state, or local permits or licenses necessary for the project.
- (k) Calculations (or letter from the manufacturer) supporting recommended liner thicknesses or wall coverage thicknesses.
- (l) Manhole Patching Mix
- (m) Manhole Infiltration Control Mix
- (n) Manhole Sealer
- (o) Manhole Epoxy Liner
- (p) The Contractor shall submit a disposal plan for review and acceptance by the County prior to beginning any work that may generate waste

materials. A plan shall be submitted for each job order. The plan shall include a complete description of the materials that are expected to be encountered and their proposed disposal site(s). The Contractor may change his disposal plan only by written notice to the County. The acceptance of a plan and/or any related notice to the County must be evidenced by a written response from the County. The Contractor shall insure that all permits related to his disposal operations have been obtained, and the Contractor shall comply with all requirements of those permits. The Contractor shall show evidence that all required permits have been obtained for all disposal sites by submitting a copy of all such permits to the County as part of the Contractor's disposal plan. The Contractor shall also submit copies of records of all disposals of solids or semisolids resulting from cleaning operations. Expenses related to the disposal plan and related disposal activities, including debris disposal, shall be considered incidental and included in the cost of the project.

- (q) Product Warranty and Certification Form (to be completed for each manhole rehabilitation product proposed): To insure that all products and materials proposed for use on this project are of the highest quality and specifically designed and manufactured for the intended installation or use, a Product Warranty and Certification Form shall be completed by the rehabilitative product manufacturer(s), manufacturer's representative or vendor as well as the manhole liner installer certifying that the product(s) they are proposing to use is specifically designed for the intended application, installation and/or function. Failure to complete this form may prevent the product(s) from being used on this project.

PRODUCT WARRANTY AND CERTIFICATION FORM

REFERENCE:

THE UNDERSIGNED HEREBY ATTESTS THAT HE HAS EXAMINED ALL THE REFERENCED PROJECT INFORMATION, PROJECT INSTALLATION REQUIREMENTS AND THE CONTRACT SPECIFICATIONS AND HEREBY WARRANTS AND CERTIFIES THAT THE REHABILITATION PRODUCTS THAT THEY PROPOSE TO FURNISH, DELIVER AND INSTALL FOR THIS PROJECT MEETS OR EXCEEDS THE REQUIREMENTS OF THESE CONTRACT SPECIFICATIONS, IS SUITABLE FOR THE INTENDED PURPOSE AND INSTALLATION, AND WILL SATISFACTORILY PERFORM TO THE CRITERIA SPECIFIED. THIS WARRANTY SHALL BE IN ADDITION TO, AND NOT IN LIEU OF, ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED.

PRODUCT: _____

MANUFACTURER: _____

Address:

By: _____
(Typed Name and Title)

(SEAL)

_____/s/_____
(Signature) (Date)

The Product Warranty and Certification must be signed by a Principal Person (President, Vice-President, etc.) of the Product's Manufacturer. In the event the manufacturer is not the Supplier then a Principal Person of the Supplier must also sign this form.

MANUFACTURER'S REPRESENTATIVE/VENDOR: _____

Address:

By: _____
(Typed Name and Title)

(SEAL)

_____/s/_____
(Signature) (Date)

The Product Warranty and Certification must be signed by a Principal Person (President, Vice-President, etc.) of the Installation Contractor. In the event the manufacturer is not the Installation Contractor then a Principal Person of the Installation Contractor must also sign this form.

INSTALLATION CONTRACTOR: _____

Address:

By: _____
(Typed Name and Title)

(SEAL)

_____/s/_____
(Signature) (Date)

2737.02 MATERIALS

2737.02.01 Patching and Infiltration Control Materials. The Contractor may use the following products in conjunction with the liner material to facilitate manhole rehabilitation. Material compatibility of the products must be confirmed prior to commencement of work. If alternate patching and/or infiltration control mixes need to be used in order to be compatible with the lining material, the product specifications shall be reviewed and approved by the County before the product is ordered.

- (a) Patching Mix: A quick-setting cementitious material shall be used as a patching mix and is to be mixed and applied according to manufacturer's recommendations and shall have the following minimum requirements:

Compressive Strength	ASTM C109	6 hr 1,400 psi
Shrinkage	ASTM C596	0% at 90% relative humidity
Bond Cement	ASTM C321	28 day 150 psi Sulfate resistant
Density, when applied		105 ±5 pcf

- (b) Infiltration Control Mix: A rapid-setting cementitious product specifically formulated for leak control shall be used to stop minor water infiltration and shall be mixed and applied according to manufacturer's recommendations and shall have the following minimum requirements:

Compressive Strength	ASTM C109	1 hr	600 psi
Compressive Strength	ASTM C579 Method B	24 hr	1,000 psi
Bond	ASTM C321	1 hr	30 psi
Bond	ASTM C321	24 hr	80 psi

- (c) Grouting Mix. A cementitious grout shall be used for stopping very active infiltration and filling voids and shall be mixed and applied according to the manufacturer's recommendations. The cementitious grout shall be volume stable and have a minimum 28 day compressive strength of 250 psi and 1 day strength of 50 psi. Chemical grouts may be used for stopping very active infiltration and shall be mixed and applied per the manufacturer's recommendations.

- (d) Manhole Sealer. The manhole sealer material shall be an Acrylamide or Urethane Base Gel as specified below:

Acrylamide Base Gel. The acrylamide base gel shall be based on a two-part chemical grout. The material shall have the following minimum properties:

- (1) A minimum of 10 percent acrylamide base material by weight in the total sealant mix. A higher concentration of acrylamide base material shall be used, when directed by the County, to increase strength or offset dilution during the induction period.
- (2) A controllable reaction from ten seconds to no more than one hour.
- (3) A viscosity of approximately 2 centipoise which can be increased with additives, as approved by the manufacturer.
- (4) Viscosity to remain constant throughout the induction period.
- (5) The ability to tolerate some dilution and react in moving water.
- (6) The reaction (curing) shall produce a homogeneous and firm gel.
- (7) Latex additive to increase the strength, adhesion, solution density and viscosity shall be used when directed by the County.
- (8) Use of catalyst containing dimethyl amino propionitrile (DMAPN) is prohibited.

Urethane Base Gel. Urethane base gel materials shall have the following minimum properties:

- (a) One part urethane prepolymer thoroughly mixed with between five and ten parts of water by weight. The recommended mix ratio is one part urethane prepolymer to eight parts of water (11 percent prepolymer). When high flow rates from leaks are encountered, the ratio of water being pumped may be lowered.
- (b) A liquid prepolymer having a solids content of 75 percent to 95 percent, and a specific gravity of greater than 1.00.
- (c) A liquid prepolymer having a viscosity of between 100 and 1,500 centipoise at 70 °F that can be pumped through 500 feet of ½-inch hose with a 1,000 psi head at a 1 ounce/second flow rate.
- (d) The water used to react the prepolymer should be in the pH range of five to nine.

- (e) A relatively rapid viscosity increase of the prepolymer/water mix. Viscosity increases rapidly in the first minute for one to eight prepolymer/water ratio at 50 °F.
- (f) The ability to increase mix viscosity, density, gel strength, and resistance to shrinkage by the use of additives to the water is required.
- (e) Other Materials: No other material shall be used with the above mixes without prior approval or recommendation from the manufacturer and the County.
- (f) Water: Water shall be clean and potable.

2737.02.02 Epoxy Liner.

- (a) The monolithic high-build epoxy liner shall consist of a 100% solids epoxy formulated with exceptionally high physical strengths and broad range chemical resistance. The liner system coverage shall be a minimum of 100 mils and shall be determined by the manufacturer. The manufacturer shall provide documentation for the recommended thickness.
- (b) The epoxy liner shall have the following minimum requirements:

Test	Property	Results
ASTM D790	Flexural Strength	12,443 psi
ASTM D695	Compressive Strength, Yield	12,870 psi
ASTM D638	Tensile Strength	6,640 psi
ASTM D638	% Elongation @ Max Load	1.53%
ASTM D2240	Hardness, Shore D	80
ASTM D256	Impact, IZOD	0.345 ft. lb/in of notch

- (c) The epoxy liner shall have the following minimum requirements after seven day curing

Test	Property	Results
ASTM D2240-75	Hardness	82 Shore D
ASTM D638	Ultimate Elongation	6%

- (d) Chemical Resistance: The corrosion resistance of the epoxy lining shall be tested by the lining manufacturer in accordance with ASTM D543. For the chemical resistance requirements, refer to the following table.

**CONCENTRATIONS OF CHEMICAL SOLUTIONS
 FOR CHEMICAL RESISTANCE TEST TABLE**

CHEMICAL SOLUTION	CONCENTRATION, %
Tap Water (pH 6-9)	100
Nitric Acid	5
Phosphoric Acid	10
Sulfuric Acid	10
Petroleum Hydrocarbon Based Fuels (e.g. Gasoline, diesel, etc.)	100
Vegetable Oil ¹	100
Detergent ²	0.1
Soap ²	0.1
Domestic Sewage*	100

¹. Cotton seed, corn, or mineral oil

². As per ASTM D543

* Contractor to include a written statement that their material and resin combination has been successfully installed in the United States and is chemically resistant to domestic sanitary sewage.

- (d) The epoxy liner shall have a five-year labor and materials, non-prorated warranty to stop infiltration and further deterioration of the structure.
- (e) The manufacturer shall warrant that the products are produced in conformity with its standard specifications or formulations within recognized tolerances, free of adulteration or contamination, and that the product will perform in accordance with representations in the manufacturer's literature and technical data sheets when properly applied in strict conformance with the printed instructions on the container and prescribed in technical data instructions and when applied to a properly prepared surface.

2737.03 CONSTRUCTION REQUIREMENTS

2737.03.01 Cleaning. All concrete and masonry surfaces must be clean prior to repair. Cleaning shall be performed immediately before lining of the manhole. Grease, laitance, loose bricks, mortar, unsound concrete, wall mounted steps (cut flush with wall), and other materials must be completely removed. Water blasting (minimum 1200 psi) utilizing proper nozzles shall be the primary method of cleaning; however, other methods such as wet or dry sandblasting, acid wash, concrete cleaners, degreasers or mechanical means may be required to properly clean the surface. Surfaces on which these other methods are used shall be thoroughly rinsed, scrubbed, and neutralized to remove cleaning agents and their reactant products.

Debris accumulated during the cleaning operations shall be removed from the sewer and properly disposed of in accordance with an approved disposal plan at an acceptable disposal site. Debris shall not be returned to the sanitary system, streams or storm drain system.

Installation of the rehabilitation method shall serve as confirmation by the Contractor that the manhole was sufficiently cleaned to support the particular method of rehabilitation.

2737.03.03 Flow Control. When required for acceptable completion of manhole rehabilitation, the Contractor shall provide for adequate Flow Control including but not limited to required pumping, plugging and bypassing as stipulated in the Flow Control Section of the Specifications.

2737.03.04 Prior to performance of the actual work, the Contractor shall carefully inspect the entire site and locate the manholes designated to be rehabilitated. If a flow meter is encountered in any manhole, the contractor shall notify the County inspector 48 hours prior to needed removal of meter. The Contractor shall not remove the flow meter themselves. The cost for any flow meters damaged by the contractor or his subcontractors is the contractor's responsibility.

2737.03.05 Site conditions may preclude the Contractor from mobilizing the sealing and lining equipment near the manhole. The Contractor shall work within the public right-of-way areas and easements as indicated in the plans. If the manhole is inaccessible, as determined by the Contractor and the County, the Contractor shall hand apply the sealers and liners per the manufacturer's instructions and recommendations. Hand application shall be completed at no additional cost to the County.

2737.03.06 All materials shall be delivered to the job site in the manufacturer's original sealed containers that bear identifying labels. All materials shall be used in strict accordance with the sealers and liners equipment manufacturer's printed directions.

- 2737.03.07** The Contractor shall be licensed by the sealer and liner process manufacturer.
- 2737.03.08** The Contractor shall conduct operations in accordance with applicable OSHA standards, including those safety requirements involving entry into a confined space. Make suitable precautions to eliminate hazards to personnel near construction activities when pressurized air is being used.
- 2737.03.09** **Manhole Step Removal:** The Contractor shall remove steps prior to manhole lining, unless otherwise specified by the County. Step removal shall consist of neatly cutting the steps flush with the wall prior to any lining installation. The Contractor shall be responsible for proper disposal of the steps.
- 2737.03.10** **Preparation of Surfaces to Receive Sealing and Lining.**
- (a) Throughout the entire surface preparation process, any nearby installations, equipment vehicles, structures, etc. shall be protected from blasting grit and dust.
 - (b) Place covers over bench to prevent extraneous material from entering the sewer lines during cleaning and rehabilitation work.
 - (c) Filter solids-laden water through an approved de-silting device. No material shall be allowed to travel downstream.
 - (d) Sludge or other surface impurities (including, but not limited to, oils, grease, incompatible existing coatings, waxes, form release, curing compounds, efflorescence, sealers, salts, or other contaminants) shall be removed by fresh water blasting (3,000 psi minimum). Should this operation be insufficient to remove surface impurities, abrasive blasting shall be performed. An environmentally acceptable detergent may be used in conjunction with the water blast as long as it is thoroughly rinsed out with fresh water after application.
 - (e) Loose and protruding brick, mortar, and concrete shall be removed using a mason's hammer and chisel and/or scraper.
 - (f) Concrete or brick to be coated shall be prepared by fresh water or abrasive blasting using properly graded, clean, sharp angular abrasive blast media to produce a sound surface, with no evidence of laitance, loose concrete contaminants or debris, and shall display a surface profile suitable for lining. Minor rebuilding of the manhole may be required to provide a smooth surface; this may include patching, reshaping, and/or replacement of missing bricks with new bricks or a solid layer of concrete mortar. Previously applied coatings, if any, shall be completely removed during abrasive blasting operations.

- (g) Prior to application of the liner, all apparent leaks in structural section joints around pipe penetrations, minor cracks or leaks in other areas of the structure, shall be plugged or repaired with an approved patching mix, or infiltration control mix in accordance with this Specification. Major cracks or leaks shall be plugged or repaired with an approved chemical grout in accordance with this Specification. The patching mix, infiltration control mix, and chemical grout shall be mixed and applied per the manufacturer's recommendations. Any excessive cavities in wall area and around pipe penetrations shall be filled with an approved patching mix or chemical grout. Remove all protruding pipe ends no longer in use after approval is obtained from County. Remove all excess expansion joint material prior to application of the liner system.
- (h) Some leaks may require weep holes to localize the infiltration during the application, after which the weep holes shall be plugged with the quick-setting infiltration control mix prior to the final liner application. When severe infiltration is present, drilling may be required in order to pressure grout using a cementitious or chemical grout. The manufacturer's recommendations shall be followed when pressure grouting is required.
- (i) All masonry surfaces shall be washed to clean blast dust out of the pores of the brick or cement substrate.
- (j) Structure walls shall be sprayed with a chlorine solution to kill any bacteria growth in the substrate and rinsed just prior to the application of the liner.
- (k) The walls shall be tested for pH and brought to a neutral state prior to application of the liner.
- (l) Areas of manholes that are found to be structurally damaged and in need of repair beyond the scope of this specification shall be brought to the attention of the County. A suitable repair method shall be developed for each area and submitted to the County for review prior to commencing the repair.
- (m) Any bench, invert, channel, or service line repairs shall be made at this time using the quick-setting patching mix, and shall be used per the manufacturer's recommendations.
- (n) Manhole benches and inverts shall be prepared and cleaned in the same manner as prescribed above.
- (o) Invert Repair: Invert repair shall be performed on all inverts with visible damage or infiltration. After blocking flow through the manhole and

thoroughly cleaning invert, the quick-setting patch mix shall be applied to the invert in an expeditious manner. The mix shall be troweled uniformly onto the damaged invert extending out onto the base of the manhole sufficiently to tie into the structural/structurally enhanced monolithic liner to be applied. The finished invert surfaces shall be smooth and free of ridges. The flow may be re-established in the manhole after the mix has properly cured. Upon completion of the invert repair and manhole lining, there shall be a smooth transition from the invert to all of the lined and unlined incoming and outgoing connections.

- (p) All surfaces shall be inspected during and after cleaning and before the manhole is lined.
- (q) Installation of the rehabilitation method shall serve as confirmation by the Contractor that the pipe/manhole/lateral was sufficiently cleaned to support the particular method of rehabilitation.

2737.03.11 Manhole Sealer.

- (a) Sealing cracks shall mean that the entire wall and bench surface is sealed by permeation grouting the soil surrounding the manhole. Grout shall extend from manhole base to top of cone section and will include the cone-to-frame joint, bench, and where pipes enter and exit the manholes.
- (b) Chemical grout material shall conform to the requirements specified.
- (c) Chemical grout shall be applied to exterior manhole surfaces through application holes drilled in manhole walls, which are to be located in a staggered configuration to assure adequate distribution of grout into the soil. Location of holes shall typically be at 2 feet vertical intervals, with four holes per level. Locations will depend on actual field conditions. Chemical grout shall be applied through threaded connections into lower holes until grout is freely flowing from the next highest set of holes and a thorough grout zone is established as determined by the County. The Contractor shall be fully responsible for damage caused to the existing manhole due to his or his subcontractors' operations. Chemical grout injection pressures shall not exceed 25 psi at the inlet. Holes shall be filled with a quick setting infiltration control mix once chemical application is completed and prior to the liner application.

2737.03.12 Manhole Lining.

- (a) Application of Epoxy Liner
 - (1) The Contractor shall take precautions to keep overspray or excess material from entering the newly installed liner pipe and

any other pipes in the manhole. Any overspray or excess material shall be removed by the contractor.

- (2) Prior to liner application onto walls, manhole bench area shall be covered with plywood sections, which conform to the internal dimensions of the manhole, to prevent accumulation of liner material on bench. No application shall be made to frozen surfaces or if freezing is expected to occur inside the manhole within 24 hours after application.
- (3) Mixing: For each bag of product, use the amount of materials specified by the manufacturer and mix per the manufacturer's instructions and recommendations.

 - (i) The Contractor shall empty the mixed material into the holding hopper and prepare another batch with timing such that the nozzleman can spray in a continuous manner without interruption until each application is complete.
- (4) Spraying

 - (i) Low pressure spray liner shall be applied to the manhole wall and bench surfaces and allow liner to cure in accordance with the product manufacturer's instructions and recommendations. The spray equipment shall be specifically designed to accurately apply the specified liner materials and shall be regularly maintained and in proper working order.
 - (ii) Liner application shall be completed with a minimum of two coats or as per the manufacturer's recommendations, to achieve no less than the minimum liner thickness as discussed in 2737.02. The first coat shall be applied to a surface that meets the manufacturer's requirements for a successful bond between the liner and the existing manhole. Materials shall be spray applied from the bottom of the wall to the top, to a minimum uniform thickness to ensure that all cracks, crevices, and voids are filled and a relatively smooth surface remains after light troweling, if required. The light troweling is performed to compact the material into voids and to set the bond. The second application, as necessary per the manufacturer's recommendations, shall be applied based on the manufacturer's recommendations for the time elapsed since the first application and the required consistency of the first coat for a proper bond between

the applications. If the window of time is exceeded, additional procedures may be required by the manufacturer's instructions before the second coat can be applied. The second application shall be applied from the bottom up and shall be a finished smooth surface.

- (iii)** Bench Application: The plywood covers shall be removed and the bench sprayed such that a gradual slope is produced from the walls to the channel with the thickness at the edge of the channel being no less than the minimum liner thickness as discussed in 2737.02. The wall bench intersection shall be rounded to a uniform radius equal to the full circumference of the intersection. If using an epoxy lining, the sloped surfaces shall be given a non-slip finish by broadcasting aluminum oxide or silica sand into the surface prior to gelation.
- (iv)** Channel/Invert Application: The channel/invert of the manhole shall also be lined when the manhole has not been lined through with a pipe liner. Upon completion of the lining of the channel/invert there shall be a smooth transition from the channel/invert to all of the lined and unlined incoming and outgoing connections.
- (5)** Watertight Seal Between Pipe Liner and Manhole Liner: Where a manhole has been lined through with a pipeline liner, the Contractor shall prepare a watertight seal and smooth transition between the pipe liner and manhole liner system. No leakage or gaps will be allowed. The method of sealing and preparing a smooth transition shall be approved by the County.
- (6)** The installation of the approved liner system shall be in strict accordance with the manufacturer's written instruction. This shall include re-grouting all inlet and outlet lines and benches as needed, plus the preparation, installation, curing, and finish operation, for the completion of the rehabilitation process. Sagging of the material is not permitted.
- (7)** Curing

 - (i)** Caution should be taken to minimize exposure of applied product to sunlight and air movement. If application of second coat is to be longer than 15 minutes after completion of application of first coat, the manhole cover shall be set back in place. At no time should the

finished product be exposed to sunlight or air movement for longer than 15 minutes before replacing the manhole cover.

- (ii) The final application shall have a minimum of 4 hours cure time before being subjected to active flow. Total cure times shall be determined by the manufacturer.
- (iii) Traffic shall not be allowed over manholes during or immediately after the rehabilitation. Traffic shall be allowed over the manholes after a period of time as determined by the manufacturer.

2737.03.19 Inspection and Quality Control. The County shall have the right to inspect work at all times. Failure of the County to provide inspection services does not relieve the Contractor of his responsibility to perform the work in accordance with these Specifications.

2737.03.20 Clean-up and Disposal. The Contractor shall not allow waste or debris to accumulate. He shall have it removed from the job site at frequent intervals.

2737.03.21 Defective Work. Any defects, which, in the judgement of the County, will affect the integrity or strength of the manhole rehabilitation, impede flow or operations and maintenance (O&M) equipment, or allow leakage into the rehabilitated manhole shall be repaired or the lining replaced at the Contractor's expense. Obtain approval of the County for method and length of repair, which may require field or workshop demonstration.

2737.03.22 Quality Assurance. The Contractor shall use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

- (a) Testing and Inspection. All rehabilitated manholes shall be tested for acceptance for payment of line item. Tests shall be performed no sooner than five (5) days after completion of manhole sealing and lining, unless otherwise approved by the County. At the direction of the County, rehabilitated manholes shall be tested as follows:
 - (1) Visually verify the absence of leaks and that any services are reinstated and unobstructed.
 - (2) The Contractor shall conduct one of the following tests:
 - (i) A Negative Air Pressure (Vacuum) Test. The test shall be conducted according to ASTM C1244 and Section 362.03.09 of the County Standards.

- (ii) An Exfiltration Test. The test shall be conducted according to ASTM C969.
 - (iii) A Discontinuity (Holiday) Test. The test shall be conducted according to ASTM D5162 (Test Method B unless recommended otherwise by the manufacturer). The contractor shall consult the epoxy lining manufacturer for recommendations regarding test equipment and inspection voltages.
- (3) A final visual inspection shall be made and any deficiencies in the finished lining shall be marked and repaired according to the manufacturer's recommendations.
 - (4) Provide test results to County.
- (b) Epoxy Liner. At the direction of the County's representative, the Contractor may be directed to verify the liner thickness at any random point of the new interior surface. Any areas found to be thinner than minimum tolerances shall immediately receive additional material.
 - (c) Flow control/bypass systems shall remain in place until after the manhole rehabilitation and/or replacement testing has been successfully completed.

2737.03.23 Acceptance for Payment. After the various types of rehabilitation work have been completed, the work shall be visually inspected for compliance and tested for water tightness and uniformity by the Contractor in the presence of the County. If the tests specified herein cannot be conducted on the proposed product and/or rehabilitated manhole, the Contractor shall note that with the manhole rehabilitation product shop drawing submittals and shall provide an alternate test method for review and approval by the County, at no additional expense to the County. If a post-rehabilitation water tightness test is not provided, the Contractor will not receive full compensation for the manhole rehabilitation tasks. The County reserves the right to inspect the rehabilitated manholes during the warranty period. Any leakage or defects in the work found by this inspection or watertightness testing shall be corrected by the Contractor within 30 days from notice, at no additional cost to the County.

2737.04 MEASUREMENT AND PAYMENT

2737.04.01 Manhole Rehabilitation. Shall be measured based upon vertical linear foot of manhole rehabilitated, of each manhole size, measured from the bottom of the frame to the invert of the channel at the center of the manhole.

- (a) **Basis of Payment.** Manhole Rehabilitation shall be paid for at the contract unit price bid per vertical linear foot of manhole rehabilitated, using the rehabilitation technology specified. The unit price includes all labor, surface preparation, materials, equipment, tools, confined space entry and equipment, resident notification and incidentals for cleaning, repairing, patching, sealing and waterproofing of all surfaces including walls, chimney, bench and channel, liner application, preconstruction video, sediment and root removal, debris collection and disposal, traffic control and related permits, flow control, manhole step removal, testing, site restoration, site cleanup, crack repair, sealing of leaks, pipe seal repair, and all other rehabilitation work, not included under other items, necessary to complete the rehabilitation as specified and directed.

END OF SECTION

THIS PAGE INTENTIONALLY LEFT BLANK

SP 6-3 – SECTION 03410

PRECAST STRUCTURAL CONCRETE

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Contractor shall provide all materials, labor, equipment and services necessary to design, construct and install precast structures for manholes, combination air valve vaults and dewatering valve vaults, as shown on the Contract Drawings.
- B. The structures shall be constructed of precast reinforced concrete. They shall be water tight, non-corrosive, durable and structurally sound. All inlet and outlet connections shall be sealed.

1.02 SUBMITTALS

- A. Shop Drawings: Submit detailed fabrication and installation drawings certified by a Professional Engineer registered in the State of Maryland prior to fabrication. Show plans, elevations, dimensions, cross sections, openings, joint design including watertight sealant, and indicate location, size, and type of reinforcing steel.
- B. Calculations: Submit manufacturer's complete design calculations certified by a Professional Engineer registered in the State of Maryland, including load calculations, buoyancy calculations, and concrete mix design.
- C. Certifications: Submit manufacturer's certifications and laboratory test reports including mill certification for the reinforcing steel, certificates of compliance for all flexible connectors and/or inlet and outlet seals, and certified test reports specified in referenced ASTM Standards.

1.03 DESIGN CRITERIA

- A. All precast structures shall be designed in accordance with ACI 350 "Building Code Requirements for Environmental Engineering Concrete Structures"
- B. Top slab must be separate and removable from structure. Structures shall be designed to accommodate pumps, piping, valves and other equipment, as shown or specified.

- C. Loads:
 - 1. Live Loads: MDSHA HS-27 (135% of AASHTO HS20-44 Loading)
 - 2. Dead Load:
 - a. Earth at 120 pcf and 60 pcf for equivalent fluid pressure.
 - b. Use 125 psf and 65 psf for weight of soil for vertical dead load and buoyancy calculations.
- D. Concrete and reinforcing shall conform to the Baltimore County Standard Specifications.
- E. Flotation design shall have a factor of safety of 1.5 minimum and shall be addressed by the certifying Engineer to the satisfaction of the Baltimore County Bureau of Engineering/Construction.
- F. Wall thicknesses shown on Contract drawings are the minimum.
- G. All mechanical connections between precast units and any cast-in-place concrete or precast units shall be 316 stainless steel.

1.04 QUALITY ASSURANCE

- A. Fabricator Qualifications: Fabrication shall be by a firm experienced in the manufacturing of precast concrete units similar to the ones indicated for this project and with a record of successful in-service performance.
- B. Design Standards: Comply with ACI 350” Building Code Requirements for Environmental Engineering Concrete Structures” and the design recommendations of PCI MNL 120, “PCI Design Handbook – Precast and Prestressed Concrete.”

1.05 DELIVERY, STORAGE AND HANDLING

- A. Store precast concrete units at the project site in a manner to prevent cracking, distorting, warping, or other physical damage, and so that markings are visible.
- B. Lift and support precast concrete units only at designated lifting and supporting points as shown on approved shop drawings.

1.06 JOB CONDITIONS

- A. Verify dimensions at the project site and prepare shop drawings to reflect actual field conditions and dimensions.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Subject to compliance with requirements, manufacturers that may be used to include:
 - 1. Concrete Pipe and Precast
 - 2. Gillespie Precast
 - 3. Monarch Products Company, Inc.

2.02 MATERIALS

- A. Concrete Materials
 - 1. Portland Cement: ASTM C150, Type II
 - 2. Aggregates: Except as modified by PCI MNL 116, use ASTM C33 coarse aggregates.
 - 3. Water: Potable, in accordance with ACI 318 and 350.
 - 4. Air-Entraining Admixture: ASTM C260, certified by the manufacturer to be compatible with other required admixtures.
 - 5. Water-Reducing; Retarding; Water-Reducing and Retarding; High-Range, Water-Reducing and High-Range, Water-Reducing and Retarding Admixtures: ASTM C494.
 - 6. Fly Ash or Natural Pozzolans: ASTM C618
 - 7. Silica Fume: ASTM C1240
 - 8. Calcium chloride or admixtures containing chlorides shall not be used.
- B. Reinforcing Steel
 - 1. Reinforcing Bars: ASTM A615, Grade 60, deformed, epoxy coated.
 - 2. Wire Fabric: ASTM A1064, welded steel, epoxy coated or galvanized.
 - 3. Epoxy Coating: Epoxy coated reinforcing steel shall be fusion bonded epoxy powder. The epoxy protective coating shall be a one coat, heat

curable, thermosetting powdered coating that is electro-statically applied on metal surfaces. For reinforcement steel the color shall be a bright color to contrast with the normal color of the reinforcement steel and rust (e.g. orange, red, green, yellow, etc. and not brown or any color in the rust family). If reinforcement steel is coated before fabrication, all hairline cracks and minor damage on fabrication bends shall be patched, even if there is no bond loss. Epoxy coatings shall conform to ASTM D3963.

2.03 CONCRETE MIXES

- A. Compressive Strength: 5,000 psi at 28 days
- B. Maximum Water-Cement Ratio: 0.40
- C. Add air-entraining admixture at manufacturer's prescribed rate to result in normal-weight concrete at point of placement having an air-content as follows, with a tolerance of plus or minus 1-1/2 percent:
 - 1. Air Content: 5 percent for 1-1/2-inch nominal maximum aggregate size
 - 2. Air Content: 6 percent for 3/4 -inch nominal maximum aggregate size
 - 3. Air Content: 7 percent for 1/2-inch nominal maximum aggregate size
- D. Joints
 - 1. Joints between precast concrete units shall comply with ASTM C990, and shall be watertight.

2.04 COATINGS

- A. Coat exterior surface of precast concrete units with Koppers Co. Inc., Bitumastic 300-M, or approved equal, 32 mil minimum thickness. Coat interior surfaces in accordance with Painting Section 09900.

2.05 FABRICATION

- A. Reinforcement: Comply with recommendations in CRSI's "Manual of Standard Practice" for fabricating, placing and supporting reinforcement.
- B. Mix concrete in accordance to PCI MNL 116. After concrete batching, no additional water may be added.

- C. Place concrete in a continuous operation to prevent seams or planes of weakness from forming in the precast concrete units. Comply with PCI MNL 116 for measuring, mixing, transporting, and placing concrete.
- D. Thoroughly consolidate placed concrete by internal and external vibration without dislocating or damaging reinforcement and built-in items. Use equipment and procedures complying with PCI MNL 116.
- E. Cure concrete, according to requirements in PCI MNL 116, by moisture retention without heat or by accelerated heat curing using low-pressure live steam or radiant heat and moisture.
- F. Product tolerances: Fabricate precast concrete units straight and true to size and shape with exposed edges and corners precise and true so the finished units comply with PCI MNL 116 product tolerances.
- G. Pipe openings: All pipe openings in the precast units shall be provided with a gasket cast integrally into the structure. Gasket shall be rubber, meeting the requirements of ASTM C923, and manufactured by A-Lok Products Corp., or approved equal. Pipe opening elevations are fixed. Non-standard riser units shall be provided, as necessary, so that joints do not occur at pipe openings.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install precast concrete units on undisturbed soil with a stone bedding, which has been leveled and compacted as shown on the Contract Drawings. Excavation shall be free of standing water until backfilling is complete.
- B. Install precast concrete units level, plumb, square and true, without exceeding the recommended erection tolerances in PCI MNL 127, "Recommended Practice for Erection of Precast Concrete".

PART 4 - MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement and payment will be made for the valve vaults. These vaults will be paid for at the unit cost for the combination air valve and vault and dewatering valve and vaults. Included in the unit cost for each combination air valve and vault and each dewatering valve and vault shall be the vaults, manhole frames and covers, pipe supports, steps, flexible gasket connectors, painting and

coatings, valves, and supplemental fittings and appurtenances as required to ensure a complete installation.

END OF SECTION

SP 6-4 – SECTION 09900

PAINTING

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Related Work Specified Elsewhere:
 - 1. Pre-finishing, shop priming, and factory-applied coating system requirements as specified in various other Sections of these Specifications.
- B. Pipe shall not be painted. Ductile iron pipe shall be provided with factory-applied exterior zinc coating system as specified in SP 5-1 – Section 905 – Pipe.
- C. Valves shall be provided with factory applied coating systems and shall generally not require field painting except as specified herein. Refer to SP 5-2 – Section 905.07.03 – Sanitary Sewer Valves.
- D. All color selection, where not indicated or specified, shall be as directed by the County with no extra compensation allowed. Final work shall match the approved samples.

1.02 QUALITY ASSURANCE

- A. Applicator Qualifications: Painting applicator shall show evidence of acceptability as a qualified applicator by the manufacturer of products specified herein. Submit such evidence with Submittals as specified herein.
- B. Referenced Standards:
 - 1. Steel Structures Painting Council Surface Preparation Specifications:
 - a. SSPC-SP1, Solvent Cleaning.
 - b. SSPC-SP2, Hand Tool Cleaning.
 - c. SSPC-SP6, Commercial Blast Cleaning.
 - d. SSPC-SP8, Pickling.
 - e. SSPC-SP10, Near-White Blast Cleaning.

1.03 SUBMITTALS

A. Samples:

1. Submit color charts displaying manufacturer's full range of standard colors for initial selection by Engineer.
2. Submit sample color chips of standard colors and samples of any intermixes required.

B. Schedule and Product Data: Submit paint schedule in same format as the paint schedule herein, and indicate which of the selected manufacturer's products are intended for use. Do not perform painting or coating work without County's approval of submitted paint schedule.

1. Submit technical data sheets for each coating, giving descriptive data, curing times, mixing, thinning, and application requirements.
2. Provide material analysis, including vehicle type and percentage by weight and by volume of vehicle, resin and pigment.
3. Submit manufacturer's Material Safety Data Sheet (MSDS) and other safety requirements.

C. Certificates: Paint manufacturer's direct factory representative shall certify in writing to the County painting and coating compliance with the following:

1. Factory representative's initial site inspection of conditions pertinent to painting and coating work with Contractor or his authorized painting representative.
2. Factory representative's second site inspection at completion of painting and coating work to check proper application and actual mil thickness compliance with these Specifications.
3. Certification issued to County only following unacceptable painting and coating work being rectified to Owner Representative's satisfaction.
4. Factory representative shall make his services available to the County for immediate consultation in regard to the painting and coating work, and shall make above stated inspections in the Owner Representative's presence.
5. Manufacturer shall certify that the coating materials utilized are "non-lead" (less than 0.06% lead by weight in dried film) as defined in Part 1303 of Consumer Product Safety Act.
6. All paint shall meet the current OTC VOC Phase II Regulations: Industrial Maintenance and Exterior Metal Coating, 250g/l.

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver paint materials to job site in their original unopened containers with labels intact and legible at time of use.
- B. Store approved materials at the job site in a suitable and designated area restricted to storage of paint and coating materials and related equipment. Maintain temperature in area of storage between 40 degrees F (4 degrees C) and 110 degrees F (43 degrees C), or as required by manufacturer.
- C. Use all means necessary to ensure safe storage and use of paint and coating materials and the prompt and safe disposal of waste. Store paint and coating products protected from weather when such products may be affected by freezing.

1.05 JOB CONDITIONS

- A. Field and Shop Coat Compatibility: To ensure satisfactory paint and coating performance, it is a Contract requirement that products applied in the shop and field be mutually compatible.
 - 1. Contractor shall require fabricators and equipment manufacturers to apply shop coats that are compatible with field coats specified herein.
 - 2. Above requirement does not apply to full factory-finished items, that is, items having both primer and final finish coatings, except as specified in the following paragraphs.
- B. Painting Factory-Finished Equipment: Equipment, such as valves and other such items, which when installed become an integral part of a system and which may be delivered fully factory-finished (that is, having finish coatings in addition to the prime coating) shall not require repainting in the field unless:
 - 1. Factory finish is unacceptable to the County, that is, not having generic type of paint or proper mil thickness to withstand corrosive atmosphere of wastewater facilities; or,
 - 2. Factory finish is damaged.
 - 3. On factory-finished items requiring repainting, first sand existing paint to a dull finish and then repaint with scheduled finish system for the installed location of such factory-finished items.
- C. Painting Caulking Compound: Do not apply paint over caulking compound until integral solvents have been released from the compound; usually two weeks for butyl-rubber based caulking and one day for acrylic latex caulking.

- D. Color
 - 1. As directed by the County.
 - 2. Paint equipment not furnished with a factory finish, or not finished with an acceptable factory finish, and piping and conduits the same color as adjacent surface.
 - 3. Final work shall match County approved samples. County shall select colors where not indicated or specified with no extra compensation allowed the Contractor for such.
- E. Placing Into Service: Do not place painted items into service until paints and coatings are fully cured (dry-hard).
- F. Environmental Requirements:
 - 1. Adhere to manufacturer's data on air and surface temperature limits and relative humidity during application and curing of coatings, or requirements herein:
 - a. Air temperature shall not be below 35 degrees F (2 degrees C) or above 110 degrees F (43 degrees C).
 - b. Relative humidity shall be no higher than 85%.
 - 2. Do not spray-apply paint when wind velocity is above 15 mph.
 - 3. Schedule coating work to avoid dust and airborne contaminants.
 - 4. Apply exterior finishes during daylight hours only,
 - 5. When painting must be done in confined spaces, or because of unfavorable ambient conditions, longer drying times will be necessary.
 - 6. Provide supplementary ventilation such as fans and blowers in confined or enclosed areas to carry off solvents during the evaporation stage.
- G. Protection:
 - 1. Protect paint materials before, during and after application and protect other work and materials with drop cloths or other impervious material.
 - 2. Clean up or otherwise remedy without additional cost damage by paint and coatings to public or private property.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Paint: As specified in the PAINT SCHEDULE included herein.
- B. Thinners: Only those thinners recommended for that purpose by the manufacturer of material to be thinned.

2.02 MATERIALS

- A. Paint: As specified in the PAINT SCHEDULE included herein,
- B. Thinners: Only those thinners recommended for that purpose by the manufacturer of material to be thinned.

PART 3 - EXECUTION

3.01 SURFACE PREPARATION

- A. Ferrous Metal:
 - 1. Shop Primed:
 - a. Immediately before paint application, clean sand, dust, mud, dirt and other foreign matter from shop coat.
 - b. Touch-up damaged or destroyed shop paint.
 - c. Surface preparation of surfaces to be touched-up must be as effective as those specified for shop painting.
 - 2. Not Shop Primed and Submerged or Intermittently Submerged in Liquid:
 - a. Grind smooth to a rounded contour sharp edges and welds, and remove weld splatter.
 - b. Except for insides of pipes sandblast in accordance with SSPC SP-10 or pickle in accordance with SSPC SP-8.
 - c. After sandblasting, remove dust and spent sand from surface by brushing or vacuum cleaning.
 - d. Apply prime coat before surface starts to rust.
 - e. Do not allow sandblasted surface to stand overnight before coating.

3. Not Shop Primed and Non-Submerged:
 - a. Grind smooth to a rounded contour sharp edges and welds, and remove weld splatter.
 - b. Sandblast in accordance with SSPC SP-6.
 - c. After sandblasting, remove dust and spent sand from surface by brushing or vacuum cleaning.
 - d. Apply prime coat before surface starts to rust.
 - e. Do not allow sandblasted surface to stand overnight before coating.
- B. New Concrete: Clean in accordance with ASTM D4258 or SSPC-SP13
 1. Remove oil, grease, dirt, etc. by steam cleaning or scrubbing with a strong commercial type detergent and flushing with water.
 2. Neutralize and flush clean chemical contamination.
 3. Fill exposed aggregate or deep pits and air holes with cement grout and trowel to a uniform surface texture.
 4. Perform work only on cured, clean and dry concrete surfaces.

3.02 APPLICATION

- A. General:
 1. Strictly follow paint manufacturer's label instructions for mixing, thinning, proper spreading rate and drying time. In no case shall film thickness be less than manufacturer's recommendations nor shall area coverage per gallon exceed manufacturer's recommendations.
 2. If material has thickened or must be diluted for application, the coating shall be built up to the same film thickness achieved with undiluted material. Do not use thinner to extend coverage of the paint.
 3. Regardless of the surface, it shall be the painter's responsibility to achieve a protective and decorative finish either by decreasing the coverage or by applying additional coats of paint.
- B. Method of Application:
 1. Workmanship: In general, finished surface regardless of method of paint application shall show no evidence of improper application according to accepted trade practice. Do not use paint rollers having nap exceeding 3/8 inch.

2. Multi-coat Application:

- a. Succeeding coats of paint shall show visual difference from preceding coats. Each coat shall have a uniform appearance and be tinted to the final coat. The final coat shall present solid hiding with edges of paint adjoining other paint or materials made clean with and sharp without overlap. Wipe or otherwise render undercoats dust free just prior to application of succeeding coatings.
- b. Do not apply additional coats of paint until the film to be recoated is sufficiently cured to receive the next coat.
- c. If the time limit is exceeded for coatings that have a maximum recoat time, consult paint manufacturer before proceeding with next coat.

C. Painting Exposed/Concealed Surfaces:

1. It is a requirement of this specification that all exposed interior surfaces be painted except as specified herein and elsewhere in the Specifications.
2. Exterior surfaces painted only as scheduled.
3. In interior exposed areas of structures, paint mechanical and electrical systems, including pipe, duct and conduit system, except for full factory finished items as defined previously.
4. In interior concealed areas no painting is required including mechanical and electrical systems therein, except that pipe identification is required on piping in concealed but accessible areas.
5. Paint above stated exposed mechanical and electrical systems the same color as adjacent wall and/or ceiling color. Paint materials as scheduled herein.
6. Do not paint exposed aluminum surfaces or rubber components.

3.03 CLEANING

- A. Upon completion of work, remove paint and coating spots, oil and grease stains from floors, walls, fixtures, hardware and equipment, leaving their finishes in a satisfactory condition. Remove materials and debris from the site of work, and leave in a clean condition so far as this work is concerned.
- B. Keep site free from accumulation of paint containers, solvents, and thinner and used cleaning cloths and legally dispose of same off premises daily.

3.04 PAINT SCHEDULE

- A. General: The paint systems specified are acceptable options. The following paint systems are intended to include items to be painted at the job site. Any item not specifically named herein but obviously required to be painted, shall be painted in accordance with the system selected by the County, or otherwise painted as directed by the County.
- B. Schedule: Refer to Finish Paint Schedule Table that follows.

FINISH PAINT SCHEDULE TABLE

Item No.	Items to be Painted	TNEMEC	CARBOLINE	FINISH COLOR (Remarks)
1	Misc. Ferrous Metals: Misc. metal fabrications, valve handwheels, etc.	<ul style="list-style-type: none"> Three Coats: Series V69 Hi-Build Epoxoline II @ 4.0-6.0 mils DFT/coat. 	<ul style="list-style-type: none"> One Coat: Carboguard 635VOC @ 4.0-6.0 mils DFT. Two Coats: Carboguard 690 @ 6.0-8.0 mils DFT/coat. 	Valve handwheels shall be OSHA Safety Red.
2	A. Concrete Surfaces: valve vault interiors	<ul style="list-style-type: none"> Two Coats: Series 617 WB Conformal Stain @ 150-200 ft²/gal per coat. 	<ul style="list-style-type: none"> See Note 1. 	White
	B. Concrete Surfaces: floors	<ul style="list-style-type: none"> See Note 2 	<ul style="list-style-type: none"> See Note 2. 	Clear

Table Notes:

- Two coats Sherwin Williams H & C Colortop Water-Based Solid Color Concrete Stain @ 150- 250 ft²/gal per coat may be used for this item.
- New or unpainted concrete floors shall receive two coats Sherwin Williams H & C Colortop Solvent-Based Solid Color Concrete Sealer 250 @ 150-200 ft²/gal per coat. H & C Shark Grip Slip Resistant Additive shall be added to the second coat @ 3.2 ounces/gal.
- Listed DFT mils per coat applies for spray-on application. Application of paint by roller or brush shall be in accordance with manufacturer's requirements. Additional coats required by the manufacturer to achieve overall listed DFT shall be completed by the Contractor.

PART 4 - MEASUREMENT AND PAYMENT

4.1 GENERAL

- A. This item will not be measured for payment but will be considered incidental and included in the prices bid for items in the proposal and as defined in these Specifications.

END OF SECTION

THIS PAGE INTENTIONALLY LEFT BLANK

SP 7 – BID ITEMS

SP 7 – 1 MEASUREMENT AND PAYMENT

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

- A. Measurement and payment shall be according to the provisions of the Standard Specifications for Construction and Materials, except as modified herein.

1.02 DESCRIPTION

- A. Payment for the work completed under this Contract will be made at the lump sum and unit prices bid. These prices shall include the furnishing of all labor, tools, equipment and materials, and the performing of all work necessary to complete the project as shown and specified, in strict accordance with all the requirements of the Contract Documents and to the entire satisfaction of the Engineer, as shown, specified, and as directed by the Engineer.
- B. When the term “as directed by the Engineer” is used in describing the method of measurement or basis of payment for an item of the Contract, it shall be understood that the order from the Engineer to the Contractor will be either: 1) a written direction, or 2) a verbal directive to be followed by written confirmation of it from both the Contractor to the Engineer and from the Engineer to the Contractor to minimize the possibility of a misunderstanding between the two.

1.03 CONTINGENT ITEMS

- A. These items of work shall be in accordance with the Standard Specifications for Construction and Materials.
- B. The Contractor in submitting the Proposal agrees to accept as full compensation the unit prices stipulated for the fixed price contingent items that are incorporated into the work as indicated. The fixed price contingent items shall be in accordance with Standard Specifications for Construction and Materials and Section SP 2-1 of these Special Provisions.
- C. Contingent and fixed price contingent allowances shall only be used if the County and Engineer review the proposed work and give prior approval.

1.04 PAYMENT ITEMS

ITEM 1 – CLEARING AND GRUBBING

- 1. This item of work consists of providing all material, labor, and equipment necessary to complete the clearing and grubbing of all necessary vegetation in accordance

with the Standard Specifications for Construction and Materials and as shown, specified, and as directed by the Engineer.

2. Work performed under this item will not be measured for payment but will be paid for at the Contract lump sum price in accordance with the Standard Specifications for Construction and Materials.

ITEM 2 – MAINTENANCE OF TRAFFIC

1. This item of work consists of providing all material, labor, and equipment required to maintain traffic during construction to include, but not be limited to, the fabrication, installation, maintenance, and removal of all temporary maintenance of traffic control devices and steel plating in accordance with Sections SP 1-9 and SP 1-10 of these Special Provisions. Maintenance of traffic shall be in accordance with the Standard Specifications for Construction and Materials and as shown, specified, and as directed by the Engineer.
2. Work performed under this item will not be measured for payment but will be paid for at the Contract lump sum price.

ITEM 3 – MOBILIZATION

1. This item of work consists of providing all material, labor, and equipment necessary to complete the mobilizing of all necessary equipment and supplies in accordance with the Standard Specifications for Construction and Materials and as shown, specified, and as directed by the Engineer.
2. Work performed under this item will not be measured for payment but will be paid for at the Contract lump sum price in accordance with the Standard Specifications for Construction and Materials.

ITEM 4 – EROSION AND SEDIMENT CONTROL

1. This item of work shall consist of all labor, materials, and equipment required to complete erosion and sediment control as required by the Contract Documents, in accordance with the Standard Specifications for Construction and Materials, and as shown, specified, and directed by the Engineer.
2. Work performed under this item will not be measured for payment but will be paid for at the Contract lump sum price in accordance with the Standard Specifications for Construction and Materials.

ITEM 5 – 10” DIP CLASS 54 PIPE AND FITTINGS

1. This item of work consists of providing all material, labor, and equipment required to complete placement of the sanitary sewer force main as shown on the Contract Drawings in accordance with the Standard Specifications for Construction and

Materials and Sections SP 4-5 and SP 5-1 of the Special Provisions, and as shown, specified, and as directed by the Engineer.

2. The Contract unit price bid for this item of work shall include removing the existing abandoned waterline as shown on the Drawings and as directed by the Engineer in the field and capping the remaining extents, in accordance with Section 359 of the Standard Specifications for Construction and Materials and Section SP 4-3 of the Special Provisions, and as shown, specified, and as directed by the Engineer.
3. The Contract unit price bid for this item of work shall include all appurtenances and manhole connections.
4. Measurement and payment per linear foot under this item shall be made in accordance with the Standard Specifications for Construction and Materials and Sections SP 4-3, SP 4-5, and SP 5-1 of the Special Provisions.

ITEM 6 – 12” PVC SDR-35 PIPE AND FITTINGS

1. This item of work consists of providing all material, labor, and equipment required to complete placement of the sanitary sewer gravity pipe as shown on the Contract Drawings in accordance with the Standard Specifications for Construction and Materials and Section SP 4-4 of the Special Provisions, and as shown, specified, and as directed by the Engineer.
2. The Contract unit price bid for this item of work shall include removing the existing abandoned waterline as shown on the Drawings and as directed by the Engineer in the field and capping the remaining extents, in accordance with Section 359 of the Standard Specifications for Construction and Materials and Section SP 4-3 of the Special Provisions, and as shown, specified, and as directed by the Engineer.
3. The Contract unit price bid for this item of work shall include all appurtenances, manhole connections, and drop connection.
4. Measurement and payment per linear foot under this item shall be made in accordance with the Standard Specifications for Construction and Materials and Sections SP 4-3 and SP 4-4 of the Special Provisions.

ITEM 7 – COMBINATION AIR/VACUUM RELIEF VALVES AND VAULTS

1. This item of work consists of providing all material, labor, and equipment required to complete installation of the combination air valves and vaults, including heavy duty manhole frame and cover, as shown on the Contract Drawings in accordance with the Standard Specifications for Construction and Materials and Sections SP 5-2 and SP 6-3 of the Special Provisions, and as shown, specified, and as directed by the Engineer.

2. Measurement and payment per each valve and vault installed under this item shall be made in accordance with the Standard Specifications for Construction and Materials and Sections SP 5-2 and SP 6-3 of the Special Provisions.

ITEM 8 – DEWATERING VALVES AND VAULTS

1. This item of work consists of providing all material, labor, and equipment required to complete installation of the dewatering valves and vaults, including heavy duty manhole frame and cover, as shown on the Contract Drawings in accordance with the Standard Specifications for Construction and Materials and Sections SP 5-2 and SP 6-3 of the Special Provisions, and as shown, specified, and as directed by the Engineer.
2. Measurement and payment per each valve and vault installed under this item shall be made in accordance with the Standard Specifications for Construction and Materials and Sections SP 5-2 and SP 6-3 of the Special Provisions.

ITEM 9 – PRECAST SANITARY MANHOLES – 48 IN.

1. This item of work consists of providing all material, labor, and equipment required to complete installation of the precast sanitary manholes as shown on the Contract Drawings in accordance with the Standard Specifications for Construction and Materials, and as shown, specified, and as directed by the Engineer.
2. The Contract unit price bid for this item of work shall include removing the existing abandoned waterline as shown on the Drawings and as directed by the Engineer in the field and capping the remaining extents, in accordance with Section 359 of the Standard Specifications for Construction and Materials and Section SP 4-3 of the Special Provisions, and as shown, specified, and as directed by the Engineer.
3. Measurement and payment per vertical linear feet installed under this item shall be made in accordance with the Standard Specifications for Construction and Materials and Section SP 4-3 of the Special Provisions.

ITEM 10 – SANITARY HEAVY TRAFFIC MANHOLE FRAME AND COVER – 24 IN.

1. This item of work consists of providing all material, labor, and equipment required to furnish and install all 24-inch diameter sanitary heavy traffic manhole frame and cover for the sanitary manholes as shown on the Contract Drawings in accordance with Baltimore County Standard Detail Plate S-8, and as shown, specified, and as directed by the Engineer.
2. Measurement and payment per each unit installed under this item shall be made in accordance with the Standard Specifications for Construction and Materials.

ITEM 11 – MANHOLE REHABILITATION – 48 IN.

1. This item of work consists of providing all material, labor, and equipment required to complete manhole rehabilitation as shown on the Contract Drawings in accordance with the Standard Specifications for Construction and Materials and Section SP 6-2 of the Special Provisions, and as shown, specified, and as directed by the Engineer.
2. Measurement and payment per vertical linear foot of 48-inch diameter manhole rehabilitated shall be made in accordance with the Standard Specifications for Construction and Materials and Section SP 6-2 of the Special Provisions.

ITEM 12 – GAB FOR MAINTENANCE OF TRAFFIC, STAGE 1

1. This item of work shall consist of providing all labor, material, and equipment required to complete the aggregate base for maintenance of traffic when directed by the Engineer in accordance with the Standard Specifications for Construction and Materials, Baltimore County Standard Detail Plate R-38, and as shown, specified, and as directed by the Engineer.
2. Measurement and payment per ton under this item will be made in accordance with the Standard Specifications for Construction and Materials.

ITEM 13 – HOT MIX ASPHALT FOR STAGE 1 MAINTENANCE OF TRAFFIC

1. This item of work shall consist of providing all labor, material, and equipment required to complete and place the hot mix asphalt for maintenance of traffic when directed by the Engineer in accordance with the Standard Specifications for Construction and Materials, Baltimore County Standard Detail Plate R-38, and as shown, specified, and as directed by the Engineer.
2. Measurement and payment per ton under this item will be made in accordance with the Standard Specifications for Construction and Materials.

ITEM 14 – HOT MIX ASPHALT FOR STAGE 2 MAINTENANCE OF TRAFFIC

1. This item of work consists of providing all material, labor, and equipment required to complete placement of hot mix asphalt surface and hot mix asphalt base for full depth permanent paving trench repair and mill and overlay along Forge Road, Richlyn Drive, and the Access Drive as shown on the Contract Drawings and in accordance with the Standard Specifications for Construction and Materials and as shown, specified, and as directed by the Engineer.
2. Measurement and payment per ton under this item shall be made in accordance with the Standard Specifications for Construction and Materials. Also included is the services of an independent professional testing consultant for the sampling and laboratory testing of all materials.

ITEM 15 – CONCRETE DRIVEWAY REPAIRS

1. This item of work consists of providing all material, labor, equipment, tools, and incidentals necessary for construction of concrete drive repairs as shown on the Contract Drawings. Concrete drive repairs shall be in accordance with Baltimore County Department of Public Works Road & Street Details Plate Numbers R-15 and R-15A.
2. Measurement and payment per square yard under this item will be made in accordance with the Standard Specifications for Construction and Materials.

ITEM 16 – CONCRETE CURB AND GUTTER REPLACEMENT

1. This item of work consists of providing all material, labor, equipment, tools, and incidentals necessary for construction of concrete curb and gutter repairs as shown on the Contract Drawings. Concrete curb and gutter repairs shall be in accordance with Baltimore County Department of Public Works Road & Street Details Plate Numbers R-20B, R-21, and R-24.
2. Measurement and payment per linear foot under this item will be made in accordance with the Standard Specifications for Construction and Materials.

ITEM 17 – ASPHALT CURB REPLACEMENT

1. This item of work consists of providing all material, labor, equipment, tools, and incidentals necessary for construction of hot mix asphalt curb repairs as shown on the Contract Drawings. Hot mix asphalt curb repairs shall be in accordance with the Standard Specifications for Construction and Materials, the Hot Mix Asphalt Mountable Curb detail on the Contract Drawings, and as shown, specified, and as directed by the Engineer.
2. Measurement and payment per linear foot under this item will be made in accordance with the Standard Specifications for Construction and Materials.

ITEM 18 – TURFGRASS ESTABLISHMENT

1. This item of work shall consist of providing all labor, material, and equipment required to complete permanent seeding on the 4-inches of topsoil placed, and temporary straw mulching, in accordance with the Standard Specifications for Construction and Materials, and as directed by the Engineer.
2. Measurement and payment per square yard under this item will be made in accordance with the Standard Specifications for Construction and Materials.
3. Work shall include furnishing all labor, materials, and equipment necessary to complete the work required, to include, but not be limited to, preparing the seed bed, furnishing and placing fertilizer, lime, seed, and water, maintaining and

replacing if necessary, temporary straw mulching, and all related work as shown, specified, or directed.

ITEM 19 – FIXED PRICE CONTINGENT ITEM – TEMPORARY TRAFFIC SIGNS

1. This item of work consists of providing all material, labor, and equipment required to furnish and install temporary traffic signs on or along the roadway to facilitate construction of the new force main as shown on the Contract Drawings and in accordance with the Standard Specifications for Construction and Materials and as shown, specified, and as directed by the Engineer.
2. Measurement and payment per square foot under this item will be made in accordance with the Standard Specifications for Construction and Materials and Section SP 2-1 of these Special Provisions.

ITEM 20 – FIXED PRICE CONTINGENT ITEM – TEST PIT EXCAVATION / CONVENTIONAL EXCAVATION METHODS

1. This item of work consists of providing all material, labor, and equipment required for conventional test pit excavation in accordance with the Standard Specifications for Construction and Materials and as shown, specified, and as directed by the Engineer. Test pits conducted for the convenience of the Contractor will not be paid using the fixed price contingent item. Test pits conducted for the convenience of the Contractor shall be considered incidental to the unit price for the force main.
2. Measurement and payment per cubic yard under this item will be made in accordance with the Standard Specifications for Construction and Materials and Sections SP 2-1 and SP 3-1 of these Special Provisions.

ITEM 21 – FIXED PRICE CONTINGENT ITEM – TEST PIT EXCAVATION (VACUUM)

1. This item of work consists of providing all material, labor, and equipment required to complete test pits by vacuum excavation up to 6-foot depth in accordance with the Standard Specifications for Construction and Materials and as shown, specified, and as directed by the Engineer. Test pits conducted for the convenience of the Contractor will not be paid using the fixed price contingent item. Test pits conducted for the convenience of the Contractor shall be considered incidental to the unit price for the force main.
2. Measurement and payment per cubic yard under this item will be made in accordance with the Standard Specifications for Construction and Materials and Sections SP 2-1 and SP 3-1 of these Special Provisions.

ITEM 22 – FIXED PRICE CONTINGENT ITEM – CLASS 3 EXCAVATION / SELECT BACKFILL – PROPER DISPOSAL OF UNSUITABLE MATERIAL

1. This item of work consists of providing all material, labor, and equipment required to furnish suitable backfill and removal and proper off-site disposal of unsuitable material in accordance with the Standard Specifications for Construction and Materials and as shown, specified, and as directed by the Engineer.
2. Measurement and payment per cubic yard under this item will be made in accordance with the Standard Specifications for Construction and Materials and Section SP 2-1 of these Special Provisions.

ITEM 23 – FIXED PRICE CONTINGENT ITEM – BORROW FOR BACKFILLING TRENCHES – PROPER DISPOSAL OF UNSUITABLE MATERIAL

1. This item of work consists of providing all material, labor, and equipment required to furnish and install borrow material and properly dispose of material found to be unsuitable in accordance with the Standard Specifications for Construction and Materials and as shown, specified, and as directed by the Engineer.
2. Measurement and payment per cubic yard under this item will be made in accordance with the Standard Specifications for Construction and Materials and Section SP 2-1 of these Special Provisions.

ITEM 24 – FIXED PRICE CONTINGENT ITEM – MIX NO. 1 CONCRETE

1. This item of work consists of providing all material, labor, and equipment required to provide Mix No. 1 concrete when directed by the Engineer in accordance with the Standard Specifications for Construction and Materials.
2. Measurement and payment per cubic yard of the actual quantity of Mix No. 1 concrete placed when directed by the Engineer under this item will be made in accordance with the Standard Specifications for Construction and Materials and Section SP 2-1 of these Special Provisions.

ITEM 25 – CONTINGENT ITEM – ASPHALT DRIVEWAY REPAIRS

1. This item of work consists of providing all material, labor, equipment, tools, and incidentals necessary for construction of miscellaneous additional work efforts associated with asphalt drive repairs beyond the scope of work otherwise defined by the Contract Documents, as ordered by the Engineer. Asphalt drive repairs shall be in accordance with Baltimore County Department of Public Works Road & Street Details Plate Numbers R-15 and R-15A. This allowance shall only be used if the County and Engineer review the proposed work and give prior approval.
2. Measurement and payment per ton under this item will be made in accordance with the Standard Specifications for Construction and Materials and Section SP 2-1 of these Special Provisions.

ITEM 26 – CONTINGENT ITEM – GEOTEXTILE CLASS SE

1. This item of work shall consist of providing all labor, material, and equipment required to furnish and install geotextile Class SE when needed to separate soil types and applied vertically on the sides of the trench in accordance with the Standard Specifications for Construction and Materials and as shown, specified, and as directed by the Engineer.
2. Measurement and payment per square yard under this item will be made in accordance with the Standard Specifications for Construction and Materials and Section SP 2-1 of these Special Provisions.

ITEM 27 – CONTINGENT ITEM – GEOTEXTILE CLASS ST

1. This item of work shall consist of providing all labor, material, and equipment required to furnish and install geotextile Class ST when needed to separate soil types and applied vertically on the sides of the trench in accordance with the Standard Specifications for Construction and Materials and as shown, specified, and as directed by the Engineer.
2. Measurement and payment per square yard under this item will be made in accordance with the Standard Specifications for Construction and Materials and Section SP 2-1 of these Special Provisions.

ITEM 28 – CONTINGENT ITEM – GEOTEXTILE SOIL REINFORCEMENT FABRIC (MIRAFI 500X)

1. This item of work shall consist of providing all labor, material, and equipment required to furnish and install geotextile Mirafi 500X, applied horizontally for soil reinforcement in place of additional excavation, in accordance with Section SP 4-1 of the Special Provisions and the Standard Specifications for Construction and Materials and as shown, specified, and as directed by the Engineer.
2. Measurement and payment per square yard under this item will be made in accordance with the Standard Specifications for Construction and Materials and Section SP 2-1 of these Special Provisions.

ITEM 29 – CONTINGENT ITEM – 6” UTILITY UNDERDRAIN

1. This item of work shall consist of providing all labor, material, and equipment required to complete the utility underdrains when directed by the Engineer in accordance with the Standard Specifications for Construction and Materials.
2. Measurement and payment per linear foot installed under this item will be made in accordance with the Standard Specifications for Construction and Materials and Section SP 2-1 of these Special Provisions.

ITEM 30 – CONTINGENT ITEM – FLOWABLE FILL UTILITY CUTS

1. This item of work shall consist of furnishing and placing complete, flowable fill, in addition to that shown on the Contract Drawings, specified, or included in the other Bid items, and in accordance with the written direction of the Engineer.
2. Measurement and payment under this item will be made on the basis of the actual in-place cubic yard volume of material satisfactorily furnished and placed, as directed by the Engineer. Payment will be made at the unit price per cubic yard.

ITEM 31 – CONTINGENT ITEM – #2 STONE SEDIMENT CONTROL

1. This item of work shall consist of providing all labor, material, and equipment to provide No. 2 Stone for Sediment Control when directed by the Engineer in accordance with the Standard Specifications for Construction and Materials.
2. Measurement and payment per ton of the actual quantity of stone installed under this item will be made in accordance with the Standard Specifications for Construction and Materials and Section SP 2-1 of these Special Provisions.

ITEM 32 – CONTINGENT ITEM – CALCIUM CHLORIDE

1. This item of work shall consist of providing all labor, material, and equipment to provide calcium chloride when directed by the Engineer in accordance with the Standard Specifications for Construction and Materials.
2. Measurement and payment per ton of the actual quantity of calcium chloride placed under this item will be made in accordance with the Standard Specifications for Construction and Materials and Section SP 2-1 of these Special Provisions.

ITEM 33 – CONTINGENT ITEM – CLASS 2 EXCAVATION SEDIMENT CONTROL

1. This item of work shall consist of providing all labor, material, and equipment required to provide Class 2 Excavation for Sediment Control when directed by the Engineer in accordance with the Standard Specifications for Construction and Materials.
2. Measurement and payment will be per cubic yard of the actual quantity of Class 2 Excavation for Sediment Control when directed by the Engineer in accordance with the Standard Specifications for Construction and Materials and Section SP 2-1 of these Special Provisions.

ITEM 34 – CONTINGENT ITEM – SUPER SILT FENCE

1. This item of work shall consist of providing all labor, material, and equipment required to complete the super silt fence for erosion and sediment control when directed by the Engineer in accordance with the Standard Specifications for Construction and Materials.

2. Measurement and payment per linear foot installed under this item will be made when directed by the Engineer in accordance with the Standard Specifications for Construction and Materials and Section SP 2-1 of these Special Provisions.
3. The unit price shall include all labor, materials, and equipment necessary for providing and installing super silt fence, including silt fence check dams and clear water diversion pipe into silt fence as directed by the Engineer.

ITEM 35 – CONTINGENT ITEM – SILT FENCE ON PAVEMENT

1. This item of work shall consist of providing all labor, material, and equipment required to complete the silt fence on pavement for erosion and sediment control when directed by the Engineer in accordance with the Standard Specifications for Construction and Materials.
2. Measurement and payment per linear foot installed under this item will be made when directed by the Engineer in accordance with the Standard Specifications for Construction and Materials and Section SP 2-1 of these Special Provisions.
3. The unit price shall include all labor, materials, and equipment necessary for providing and installing silt fence on pavement when directed by the Engineer in accordance with the Standard Specifications for Construction and Materials.

ITEM 36 – CONTINGENT ITEM – INLET PROTECTION

1. This item of work shall consist of providing all labor, material, and equipment required to provide inlet protection on all storm drain inlets as required by the Inlet Protection Note on Contract Drawing ESC-2 when directed by the Engineer in accordance with the Standard Specifications for Construction and Materials.
2. Measurement and payment will be per storm drain inlet when directed by the Engineer in accordance with the Standard Specifications for Construction and Materials and Section SP 2-1 of these Special Provisions.

ITEM 37 – CONTINGENT ITEM – ADJUSTING AND REPLACING FENCES, SHRUBS, TREES, HEDGES, ETC.

1. This item of work shall consist of providing all labor, material, and equipment required to remove and relocate adjacent to the work fences, shrubs, trees, hedges, mailboxes, etc., when directed by the Engineer in accordance with the Standard Specifications for Construction and Materials.
2. Work performed under this item will not be measured for payment but will be paid for at the Contract lump sum price in accordance with the Standard Specifications for Construction and Materials.

END OF SECTION

THIS PAGE INTENTIONALLY LEFT BLANK

GEOTECHNICAL ENGINEERING REPORT
FOR:
RICHLYN MANOR SANITARY FORCE MAIN
PERRY HALL, MARYLAND
E2CR PROJECT NO. 22542-04

Prepared for:



40 Wight Avenue
Hunt Valley, Maryland 21050

Consultant to:

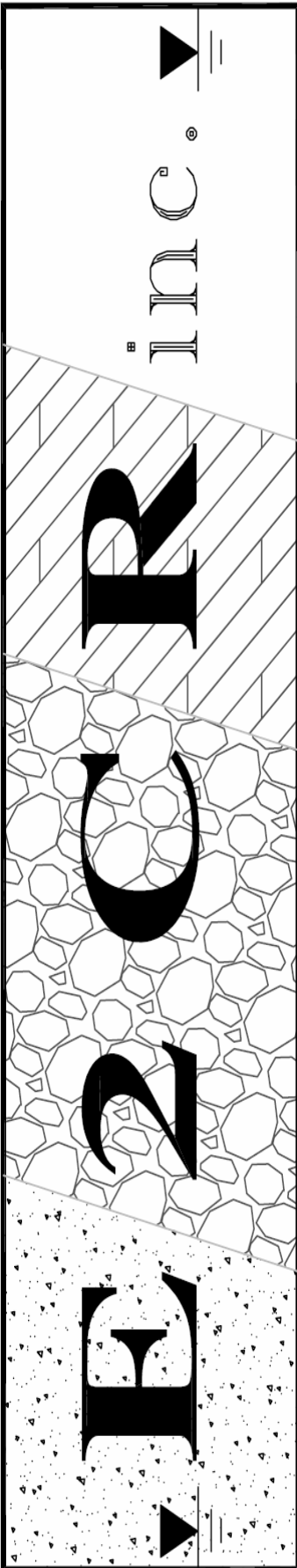


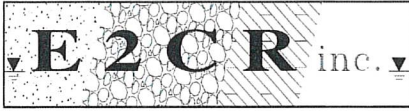
Prepared by:

E2CR, Inc.

1405 Parker Road | Suite A | Baltimore | MD 21227
Phone: 410-737-9100 | Fax: 410-737-9101 | E-mail: email@e2cr.com

February 1, 2024





1405-A Parker Road
Baltimore, Maryland 21227

Phone: 410-737-9100
Fax: 410-737-9101
Email: email@e2cr.com

February 1, 2024

Mr. David Cox, P.E.
JMT, Inc.
40 Wight Avenue
Hunt Valley, MD 21030

Re: Geotechnical Engineering Report
Richlyn Manor Sanitary Force Main
Baltimore County DPW Contract 2018-01; Task 2
Perry Hall, Baltimore County, Maryland
JMT Project Number: 18-01561
E2CR Project No. 22542-04

Dear Mr. Cox:

E2CR, Inc. (E2CR) has completed the subsurface investigation for the proposed Richlyn Manor Sanitary Sewer Force Main (SSFM) Improvements project located in the Perry Hall area of Baltimore County, Maryland. The investigation was performed in accordance with our proposal dated July 13, 2022, and was authorized by JMT.

Presented herein and attached is a summary of our findings during the investigation along with our evaluations and geotechnical recommendations for the design and installation of the proposed Richlyn Manor Sanitary Force Main.

We wish to advise you that we will store the soil samples obtained from the soil test borings for a period of sixty (60) days from the date of this letter, after which time the samples will be discarded unless other disposition is requested.

We appreciate the opportunity to have been of service on this project. If there are any questions related to the information contained within this report, please contact us.

Sincerely,
E2CR, INC.


Mazdak Karimpour, E.I.T.
Geotechnical Engineer



Neeraj Singh, P.E.
Project Manager

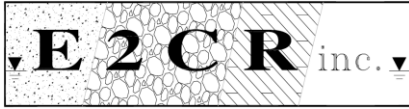
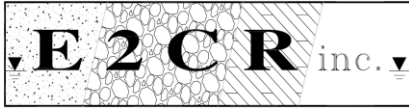


TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
2.0	SITE AND PROJECT DESCRIPTION	1
3.0	PURPOSE AND SCOPE	3
4.0	FIELD INVESTIGATION.....	4
5.0	LABORATORY TESTING	5
6.0	SUBSURFACE CONDITIONS.....	6
6.1	Site Geology	6
6.2	Subsurface Stratigraphy.....	7
	6.2.1 Stratum I (Fill).....	7
	6.2.2 Stratum II (Residual).....	8
6.3	Groundwater	9
7.0	EVALUATION AND RECOMMENDATION.....	9
7.1	Soil Parameters for Thrust Blocks and Restraints	9
7.2	Lateral Earth Pressure.....	11
7.3	Force Main -General.....	12
7.4	Pipe Installation, Subgrade Material and Bedding	12
	7.4.1 Segment 1 – Forge Road.....	12
	7.4.2 Segment 2 – Richlyn Drive.....	13
	7.4.3 Segment 3 – Driveway from Richlyn Drive to Richlyn Manor SPS.....	14
7.5	Open Cut and Cover and Support of Excavation.....	15
7.6	Thrust Block and Restraints.....	15
7.7	Trench Backfill	16
7.8	Dewatering.....	18
7.9	Soil Corrosivity.....	18
7.10	Pavement Considerations.....	19
8.0	REMARKS.....	19



LIST OF TABLES

Table 1: Summary of Boring Data..... 5
 Table 2: Strata Depths..... 7
 Table 3: Soil Parameters for Thrust Blocks and Restraints 10
 Table 4: Equivalent Fluid Pressures 11
 Table 5: Results of the Modified Proctor Test..... 16

APPENDICES

APPENDIX A:

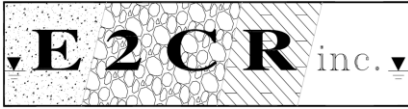
Figure 1: Site Vicinity Map
 Figure 2: Aerial Photograph
 Figure 3: Proposed Construction & Boring Location Plan STA 0+00 to STA 0+50
 Figure 4: Proposed Construction & Boring Location Plan STA 0+50 to STA 4+50
 Figure 5: Proposed Construction & Boring Location Plan STA 4+50 to STA 7+75
 Figure 6: Proposed Construction & Boring Location Plan STA 7+75 to STA 13+50
 Figure 7: Proposed Construction & Boring Location Plan STA 13+50 to STA 17+50
 Figure 8: Proposed Construction & Boring Location Plan STA 17+50 to STA 21+50
 Figure 9: Proposed Construction & Boring Location Plan STA 21+50 to STA 25+50
 Figure 10: Proposed Construction & Boring Location Plan STA 25+50 to STA 29+50
 Figure 11: Proposed Construction & Boring Location Plan STA 29+50 to STA 33+50
 Figure 12: Proposed Construction & Boring Location Plan STA 33+50 to STA 38+50
 Figure 13: Proposed Construction & Boring Location Plan STA 38+50 to STA 43+50
 Figure 14: Proposed Construction & Boring Location Plan STA 43+50 to STA 44+46
 Figure 15: Subsurface Profile – Borings SB-11, SB-10 and SB-09
 Figure 16: Subsurface Profile – Borings SB-09, and SB-08
 Figure 17: Subsurface Profile – Borings SB-08, SB-07 and SB-06
 Figure 18: Subsurface Profile – Borings SB-06, SB-05 and SB-04
 Figure 19: Subsurface Profile – Borings SB-04, and SB-03
 Figure 20: Subsurface Profile – Borings SB-03, SB-02 and SB-01

APPENDIX B:

Table B-1: Summary of Boring Data
 Boring Logs

APPENDIX C:

Table C-1: Summary of Laboratory Test Data
 Laboratory Test Results (Graphical Format)
 Summary of Corrosion Potential Test Results



Re: Geotechnical Engineering Report
Richlyn Manor SFM Improvements
E2CR Project No. 22542-04
February 2024

Page 1 of 21

1.0 INTRODUCTION

This geotechnical exploration was conducted for the proposed Richlyn Manor Sanitary Sewer Force Main (SSFM) Improvements project in the Perry Hall area of Baltimore County, Maryland. The geotechnical exploration was conducted for Johnson, Mirmiran, and Thompson, Inc. (JMT), Principal Consultants to Baltimore County; in general accordance with our proposal dated July 13, 2022, and was authorized by JMT.

The geotechnical investigation was conducted under the following Baltimore County Contract:

- Baltimore County DPW Contract 2018-01 On-Call Sanitary Sewer Rehabilitation Design Services, Task Order 2: Richlyn Manor Sanitary Force Main.

The overall project consists of decommissioning of the existing Richlyn Manor Waste Water Treatment Plant (WWTP) and replacing the WWTP with the Richlyn Manor Sewage Pumping Station (SPS). As part of the upgrades, about 4,446± lf of 10-inch DIP sanitary sewer force main (SSFM) and about 250 feet of 12-inch SDR-35 PVC gravity sewer main will be installed from the new SPS to an existing manhole on Forge Road.

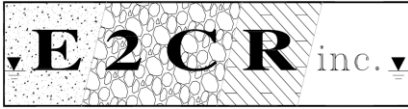
This Geotechnical Engineering Report (GER) addresses only the SSFM and gravity sewer main improvements and not the SPS Improvements. A separate GER, dated June 13, 2023, was prepared by E2CR for the proposed Richlyn Manor SPS Improvements.

2.0 SITE AND PROJECT DESCRIPTION

The Richlyn Manor Sewage Pumping Station is located at 9950 Richlyn Drive, in the Perry Hall area of Baltimore County, Maryland. The Richlyn Manor SSFM will be installed from near the Richlyn Manor SPS to an existing manhole on Forge Road. The site location is shown in Figure 1, “Site Vicinity Map” and Figure 2, “Aerial Photograph” in Appendix A.

Based on the information provided, it is our understanding that the project consists of installing about 4,696 feet of sanitary sewer. The proposed sanitary sewer will connect to an existing manhole 69669 on Forge Road. The sanitary sewer will be a gravity sewer consisting of a 12-inch PVC pipe for a distance of about 250 feet, i.e. to Manhole SSMH-2. From SSMH-2, the sanitary sewer will be a 10-inch DIP SSFM and will be installed for a distance of about 4,446 feet to near the Richlyn Manor Sewage Pumping Station. The final about 100 feet of SSFM to the Richlyn Manor SPS will be installed under a separate Contract.

The proposed Richlyn Manor 12-inch PVC gravity sewer and 10-inch DIP SSFM will be installed for a length of about 4,696 linear feet along Forge Road, Richlyn Drive, and along a



driveway from Richlyn Drive to the Richlyn Manor SPS. The details of the proposed sanitary sewer are as follows:

- **Forge Road:** Along Forge Road, from existing MH No. 69669 (at Sta. 0+00) the sanitary sewer will consist of a 12-inch Gravity Pipe (SDR-35 PVC), to manhole SSMH-2 at about Sta.2+50. The rim of MH 69669 is at EL +281.81 feet and the gravity sewer invert is at about EL +275 feet. From SSMH-2, the sanitary sewer will consist of a 10-inch DIP SSFM and will be installed along Forge Road for a distance of about 700 feet to the intersection of Forge Road and Richlyn Drive. Two 45-degree horizontal bends will be installed at this intersection. The ground elevation near the intersection is at about EL +277 feet and the pipe invert is at about EL+268.7 feet.
 - The invert of the gravity sewer and sanitary force main will be at depths of about 6 feet to 13 feet along Forge Road. The manholes and other structure depths could be a few more feet deeper.
 - It is anticipated that the gravity sewer and sanitary force main in this segment will be installed using conventional cut-and-cover methods.
 - Borings SB-10 and SB-11 were drilled in this segment.
- **Richlyn Drive:** The proposed 10-inch DIP SSFM will be installed along Richlyn Drive from about Sta. 7+00 to about Sta. 39+40 feet, i.e. a distance of about 3,240 feet. At Sta. 39+40, the ground elevation is at about EL +190.5 feet and the SSFM invert is at about EL +182.8 feet.
 - The invert of the force main will be at depths of about 6 feet to 9 feet along Richlyn Drive. The manholes and other structure depths could be a few more feet deeper.
 - It is anticipated that the sanitary force main in this segment will be installed using conventional cut-and-cover methods.
 - Borings SB-2 to SB-9 were drilled in this segment.
- **Driveway from Richlyn Drive to Richlyn Manor SPS:** The proposed 10-inch DIP SSFM will be installed from the end of Richlyn Road along a driveway to Richlyn Manor SPS, i.e. from Sta. 39+40 to about Sta. 44+46 feet, a distance of about 506 feet. At Sta. 44+46 feet, a temporary cap will be installed. At Sta. 39+40, the ground elevation is at about EL +190.5 feet and the SSFM invert is at about EL +182.8 feet. At Sta. 44+46 feet, the ground elevation is at about EL +120 feet and the SSFM invert is at about EL+111.39 feet.
 - The invert of the SSFM will be at depths of about 6 feet to 9 feet along the driveway from Richlyn Drive to Richlyn Manor SPS. The manholes and other structure depths could be a few feet more.



Re: Geotechnical Engineering Report
Richlyn Manor SFM Improvements
E2CR Project No. 22542-04
February 2024

Page 3 of 21

- It is anticipated that the SSFM in this segment will be installed using conventional cut-and-cover methods.
- Borings SB-1 to SB-2 were drilled in this segment.

Based on the available data, the ground slopes considerably from about EL+281.8 feet at the tie-in to an existing manhole on Forge Road to about EL+111.39 feet at the temporary cap near the Richlyn Manor SPS. Therefore, the grade change is about 170 feet between the two end points of the project. All elevations are based on NAVD 88. The proposed site plan is shown in Figure 3 through Figure 14, “Proposed Construction and Boring Location Plan” in Appendix A.

3.0 PURPOSE AND SCOPE

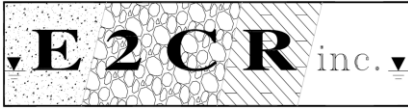
The purpose of the investigation was to evaluate the subsurface conditions along the proposed force main to aid in the design and construction of the project.

Our scope of services as directed by JMT was to perform eleven (11) soil test borings, conduct laboratory tests on representative soil samples, analyze the field and laboratory data, and provide recommendations for the design and installation of the proposed gravity sewer and SSFM.

Specifically, the scope of our services included the following:

- Mobilize a drill rig and drill 11 borings to depths of 15 feet to 20 feet.
- The borings would be drilled to the proposed depths or about 5 feet to 10 feet of rock would be cored in the borings, if the rock was encountered above the proposed excavation depth for the installation of the SSFM.
- Measure the groundwater levels. Where possible, the boreholes would be left open overnight for 24-hour groundwater reading.
- Conduct laboratory tests on soil and rock samples.
- Analyze the subsurface soil and groundwater conditions and prepare a geotechnical engineering report for the design and construction of the project. The report would include a Boring Location Plan, Boring Logs, Groundwater Levels, Subsurface Strata, Subsurface Profiles, Design Parameters, Later Earth Pressures (if and where required), Dewatering, Support of Excavation, Earthwork (Soil and rock types, suitability, placement, compaction, etc.), Bearing Conditions, Bearing Capacity & Settlement of Structures, etc.

Our scope included obtaining and testing soil samples for corrosion potential. However, evaluation of the corrosion potential was not included in our scope of services. Our scope did not



Re: Geotechnical Engineering Report
Richlyn Manor SFM Improvements
E2CR Project No. 22542-04
February 2024

Page 4 of 21

include environmental sampling and evaluation for the potential presence of pollutants in the soil or groundwater.

4.0 FIELD INVESTIGATION

The field investigation was performed in December 2023. A total of eleven (11) borings (SB-1 through SB-11) were drilled at the approximate locations shown in Figures 3 through 14, “Proposed Construction and Boring Location Plan,” in Appendix A. The borings were drilled to depths of about 15 feet to 20 feet below the existing ground surface. Auger refusal was not encountered in any of the borings. Therefore, bedrock was not cored in any of the eleven borings.

The borings were drilled using either a CME-55 truck-mounted drill rig or a Diedrich D-50 truck-mounted drill rig. The boreholes were advanced using hollow stem auger (HSA) in accordance with “Standard Practice for Using Hollow-Stem Augers for Geotechnical Exploration and Soil Sampling” ASTM D 6151. Standard penetration tests (SPT) were conducted in accordance with the “Standard Test Method for Standard Penetration Test (SPT) and Split-Barrel Sampling of Soils” ASTM D1586 and split spoon samples were obtained in each boring at depth intervals of 2.5 feet to a depth of 10 feet and at depth intervals of 5 feet thereafter. A representative portion of each split spoon soil sample was placed in a glass jar and appropriately marked. Bulk/bag samples were obtained off the auger flights from all borings.

Additional soil samples were collected, in all the borings, from near the proposed gravity sewer invert or force main invert for corrosion potential tests.

All soil samples were brought to our laboratory for further evaluation and testing.

Groundwater levels were monitored during drilling and at the completion of drilling. All the drilled borings were located in the roadway and could not be left open and therefore 24-hour water readings were not obtained. The borings were grouted at completion and patched with an asphalt patch to match the existing pavement.

All field operations were monitored by a geologist or a geotechnical engineer, who recorded the observations on field boring logs. A summary of the boring data is included in Table 1 below. The edited logs of the boring are included in Appendix B.

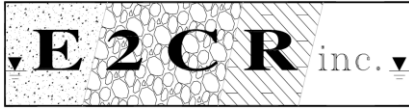


Table 1: Summary of Boring Data

Boring No.	Coordinate ¹ (feet)		Elevation ¹ (feet)	Depth ² (feet)	Groundwater ³ (feet)
	Northing	Easting			
SB-1	639,585.8070	1,471,148.3294	121.43	15	_ ³
SB-2	639,701.1949	1,470,666.5154	190.94	15	_ ³
SB-3	639,730.3150	1,470,366.3724	193.86	15	_ ³
SB-4	639,389.1289	1,470,079.5438	231.01	15	_ ³
SB-5	639,055.5708	1,469,751.0465	234.68	15	_ ³
SB-6	638,767.9413	1,469,483.4738	224.31	20	_ ³
SB-7	638,404.8038	1,469,145.4338	241.76	15	_ ³
SB-8	638,117.6664	1,468,869.0046	241.78	15	9.0
SB-9	637,628.4095	1,468,521.0945	276.43	15	_ ³
SB-10	637,632.1019	1,468,135.2929	283.40	20	_ ³
SB-11	637,679.9061	1,467,598.2509	283.69	20	_ ³

Notes:

1. Coordinates and Elevations are provided by JMT and are based on NAVD 88 Datum
2. Below the existing ground surface
3. Not encountered

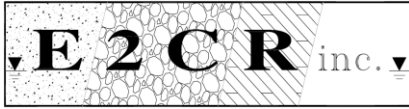
5.0 LABORATORY TESTING

All soil samples retrieved from the soil test boring were transported to our laboratory and were visually inspected by a geotechnical engineer to corroborate and/or modify the field classification. Selected samples were subjected to various testing to determine their engineering characteristics.

Laboratory geotechnical tests conducted on soil samples included:

- Natural moisture content tests (ASTM D2216)
- Sieve analysis without hydrometer tests (ASTM D422)
- Atterberg limits tests (ASTM D4318)
- Modified Proctor tests (ASTM D1557)

All tests were performed in general accordance with applicable ASTM procedures. The results of the laboratory tests are summarized in Table C-1 in Appendix C. The results of the laboratory tests in graphical format are also included in Appendix C.



Re: Geotechnical Engineering Report
Richlyn Manor SFM Improvements
E2CR Project No. 22542-04
February 2024

Page 6 of 21

Four (4) samples from near the invert elevation of the proposed gravity sewer or sanitary sewer force main were tested to determine their corrosion potential. The tests conducted included the following:

- pH of soil (AASHTO T288)
- Chloride Ion Concentration (AASHTO T291)
- Sulfate Ion Concentration (AASHTO T290)
- Soil minimum resistivity (AASHTO T289)
- Oxidation Reduction Potential - ORP (ASTM D1498)

The results of the corrosion potential tests are included in Appendix C.

6.0 SUBSURFACE CONDITIONS

The site geology and the site subsurface stratigraphy are discussed in the following sections.

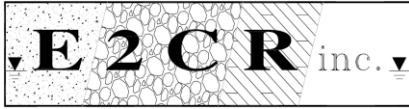
6.1 Site Geology

The site lies near the intersection of the Coastal Plains and the Piedmont Physiographic Province of Maryland. The soils of the Piedmont Region are mostly of residual origin and have been derived from the in-situ weathering and/or chemical decomposition of the underlying parent rock. There are some surficial Coastal Plains alluvial soils and also some localized alluvial soils eroded from the residual soils and deposited near streams and rivers.

According to the soil map of Baltimore County (USDA), the surficial soils at the site belong to Legore-Montalto-Urban land (LgB). Legore-Montalto-Urban land (LgB) is a clay to silty clay loam soil. It is well-drained and does not flood frequently.

According to the Geologic Map of the White Marsh Quadrangle, Maryland (Crowley & Reinhardt, 1976), the parent rock consists of Bradshaw Layered Amphibolite. Bradshaw Layered Amphibolite is a fine and medium-grained metamorphic rock that consists of a centimeter to meter scale interlayered amphibolite and hornblende-quartz-plagioclase gneiss with subordinate biotite-quartz-plagioclase gneiss.

Towards the south end of the project, near Forge Road, the surficial soils are Alluvial and belong to the Upland Gravel Formation, consisting of orange, brown poorly sorted fine sand and boulders within a clay-silt matrix. Ferruginous cementation is common. The thickness varies from 0.5 meters to 8 meters.



6.2 Subsurface Stratigraphy

The edited boring Logs are included in Appendix B. The boring logs describe the subsurface stratigraphy encountered at boring locations. Based on the borings, the subsurface stratigraphy at the site generally consists of two (2) main strata, with two sub-strata in each of the two main strata. The subsurface conditions encountered in the borings are shown in Figures 15 through 20 “Generalized Subsurface Profile” in Appendix A. The transitions between strata may be gradual and indistinct.

The borings indicate the presence of pavement consisting of 4.5 inches to 7 inches of Asphalt and 1 inch to 9 inches of Gravel/Aggregate Base in all the borings. Below the pavement, the subsurface stratigraphy at the site, based on the boring logs, is summarized in Table 2 and discussed in the following sections.

Table 2: Strata Depths

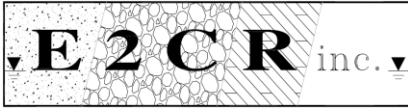
Boring No.	Pavement		Stratum Depth ¹ (feet)			
			Stratum I (Fill)		Stratum II (Residual)	
	Asphalt (inches)	Gravel Base (Inches)	Stratum IA	Stratum IB	Stratum IIA	Stratum IIB
SB-1	6.0	5.0	0.9 – 8.0	- ²	8.0 – 15.0+	- ²
SB-2	7.0	6.0	1.1 – 5.5	- ²	5.5 – 12.0	12.0 – 15.0+
SB-3	7.0	5.0	1.0 – 8.0	- ²	8.0 – 12.0	12.0 – 15.0+
SB-4	7.0	5.0	1.0 – 8.0	- ²	8.0 – 12.0	12.0 – 15.0+
SB-5	7.0	6.0	1.1 – 5.5	- ²	5.5 – 8.0	8.0 – 15.0+
SB-6	6.0	2.0	0.7 – 8.0	- ²	- ²	8.0 – 20.0+
SB-7	5.0	9.0	- ²	1.2 – 5.5	5.5 – 15.0+	- ²
SB-8	6.0	9.0	- ²	1.3 – 5.5	- ²	5.5 – 15.0+
SB-9	4.5	5.0	- ²	0.8 – 5.5	- ²	5.5 – 15.0+
SB-10	7.0	3.0	- ²	0.8 – 5.5	12.0 – 20.0+	5.5 – 12.0
SB-11	5.0	1.0	- ²	0.5 – 5.5	5.5 – 8.0	8.0 – 20.0+

Notes:

1. Below the existing ground surface
2. Not encountered

6.2.1 Stratum I (Fill)

Stratum I Fill material was encountered below the pavement section in all the investigated locations. The Fill material extends to depths of up to about 5.5 feet to 8 feet below the existing



ground surface. The encountered Fill material is classified into two sub-strata due to their different characteristics. These sub-strata are described below:

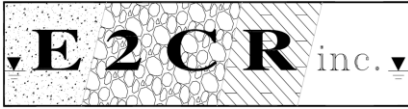
- **Stratum IA (Clay Fill):** The clayey soils of Stratum IA were encountered in borings SB-1 through SB-6 below the pavement section and extended to depths of up to about 8 feet below the existing ground surface. The Fill materials in this stratum were described as brown, black, and green, Lean CLAY and Sandy Lean CLAY. SPTs performed in Stratum IA soils yielded N-values from 1 blow per foot (bpf) to 12 bpf with average and median N-values of 8 bpf and 9 bpf, respectively. Two tested samples retrieved from this strata yielded liquid limit and corresponding plasticity index of 41.5 to 44.2 and 20.2 to 25.6, respectively.
- **Stratum IB (Sand Fill):** The Sandy soils of Stratum IB were encountered in borings SB-7 through SB-11 below the pavement section and extended to depths of about 5.5 feet below the existing ground surface. The Fill materials in this stratum were described as brown, reddish brown, and gray Silty/Clayey SAND, poorly graded SAND and, poorly graded GRAVEL. SPTs performed in Stratum IB soils yielded N-values from 8 bpf to 33 bpf with average and median N-values of 18 bpf and 16 bpf, respectively.

6.2.2 Stratum II (Residual)

Stratum II was encountered below the Fill material of Stratum I in all of the investigated locations. The soils of Stratum II extend to the bottom of all of the borings. Stratum II consists of soils that were formed in situ from the weathering and/or chemical decomposition of the underlying parent rock. The encountered residual material of Stratum II is classified into two sub-strata due to their different characteristics. These sub-strata are described below:

- **Stratum IIA (Clay/Silt Residual):** The Clayey residual soils of Stratum IIA were encountered in all borings except borings SB-6, SB-8, and SB-9. The material extended to a depths of 8 feet to 20+ feet below the existing ground surface (boring SB-10). The soils of this stratum were described as green, brown, and gray Lean CLAY, Sandy Lean CLAY, Fat Clay, and Sandy Elastic Silt. SPTs performed in Stratum IA soils yielded N-values from 5 bpf to 20 bpf with average and median N-values of 13 bpf and 13 bpf, respectively.

Moisture content tests conducted on samples retrieved from Stratum IIA yielded moisture content values ranging from about 12.9 percent to 45.5 percent with average and median moisture content values of 25.3 percent and 24.4 percent, respectively. Atterberg Limits



tests conducted on the samples retrieved from this stratum yielded Liquid Limit and Plasticity Index values ranging between 33 to 62 and 13 to 28, respectively.

- **Stratum IIB (Sand/Silt Residual):** The Sandy residual soils of Stratum IIB were encountered in all borings except borings SB-01, and SB-07. Stratum IIB extended to the bottom of the boring in all of the investigated areas except SB-10. In SB-10, Stratum IIB extended to 12 feet below the existing ground surface and was underlain by Stratum IIA. The soils of this stratum were described as red, brown, and orange Silty/Clayey SAND, poorly graded SAND, and Sandy SILT. SPTs performed in Stratum IIB soils yielded N-values from 7 bpf to 39 bpf with average and median N-values of 18 bpf and 15 bpf, respectively.

Moisture content tests conducted on samples retrieved from Stratum IIB yielded moisture content values ranging from about 5.3 percent to 44.6 percent with average and median moisture content values of 18.2 percent and 13.3 percent, respectively.

6.3 Groundwater

Groundwater level readings were obtained in the borings during drilling and, at the end of drilling. Groundwater was encountered in boring SB-8 at a depth of 9 feet below the existing ground level.

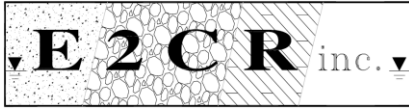
Please note that fluctuations in precipitation, seasonal conditions, construction activity, surface runoff, and site-specific factors could cause groundwater conditions to be different from those observed.

7.0 EVALUATION AND RECOMMENDATION

The recommendations presented herein were based on our understanding of the project, the engineering characteristics of the subsurface materials encountered in the borings, and the anticipated behavior of the subsurface materials both during and after construction.

7.1 Soil Parameters for Thrust Blocks and Restraints

Locations where the force main experiences abrupt changes in direction, plugs, and tees, will require pipe restraints, either through the use of thrust blocks or restrained joints. Restraints will also be required for joints. The structural design of thrust blocks and restraints is not part of our scope of services. The soil parameters provided in Table 3 should be used for designing the thrust blocks and restraints:



As described in Section 6.2, the subsurface stratigraphy at the site consists of two main strata with two sub-strata, each.

Based on the in-situ tests and laboratory test results, the design parameters, based on undrained conditions, for the four sub-strata are provided below in Table 3. In addition, parameters for Select Borrow and No. 57 Stone Fill have also been provided in case the in-situ soil is removed and replaced with either Select Borrow or No. 57 Stone Fill.

Table 3: Soil Parameters for Thrust Blocks and Restraints

Strata	Moist Unit Weight (pcf)	Elastic Modulus (ksf) ¹	Horizontal Subgrade Modulus (pci) ²	Strength Parameters	
				Cohesion (psf)	Friction Angle (°)
Stratum IA	115	150	75	750	0
Stratum IB	120	200	125	0	28
Stratum IIA	120	400	125	1,500	0
Stratum IIB	125	500	175	0	30
Select Borrow (Sand)	125	500	90	0	32
No. 57 Stone (Backfill)	110	1200	125	0	38

Please note that the unit weight values provided in Table 3 are moist unit weight values.

An ultimate friction factor of 0.35 should be used between concrete and soil.³

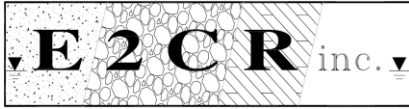
An ultimate friction factor of 0.25 should be used between DIP and soil.³

An ultimate friction factor of 0.20 should be used between PVC pipe and soil.³

The References used to calculate the design parameters are as follows:

¹AASHTO. (2020). *AASHTO LRFD Bridge Design Specifications*. Table C10.4.6.3-1: Elastic Constants of various Soils, Page 10-20. Washington, DC: American Association of State Highway and Transportation Officials.

²Naval Facilities Engineering Command. (1986). *Foundations & Earth Structures Design Manual 7.02*. Coefficient of lateral subgrade Reaction, Pages 7.2-235 & 7.2-236. Alexandria, Virginia: Naval Facilities Engineering Command.



³Naval Facilities Engineering Command. (1986). *Foundations & Earth Structures Design Manual 7.02*. Table 1: Ultimate Friction Factors and Adhesion for Dissimilar Materials, page 7.2-63. Alexandria, Virginia: Naval Facilities Engineering Command.

Please note that the unit weight values provided in Table 3 are moist unit weight values. The buoyant soil unit values should be used for design at locations where the thrust block or restraints are anticipated to be submerged in groundwater. There are clay layers/lenses at the site. The backfill around structures could get saturated, leading to a bath-tub type condition. In such a situation, the groundwater should be assumed to be at the ground surface. A coefficient of sliding friction of 0.35 between concrete and the undisturbed soils can be used for design.

7.2 Lateral Earth Pressure

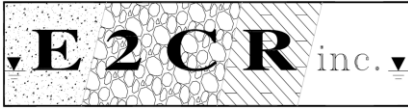
Support of excavation (SOE) and below-ground walls of structures will be subjected to lateral earth pressures. SOE or walls that are braced should be designed for at-rest pressures and walls that are not braced should be designed for active pressures. The design should be checked for seismic conditions. Table 4 below provides the equivalent fluid pressures for SOE and below-grade walls, assuming no hydrostatic pressures.

The lateral earth pressures, expressed as equivalent fluid pressure for permanent structures, are included in the table below:

Table 4: Equivalent Fluid Pressures

Stratum	Equivalent Fluid Pressure (psf)		
	At Rest	Active	Passive
Stratum IA	115	115	115
Stratum IB	65	45	300
Stratum IIA	120	120	120
Stratum IIB	65	45	325
Soil Backfill (Sand)	60	40	350
Stone Backfill	45	30	400

The equivalent fluid pressure does not include hydrostatic pressures and surcharge loads. The coefficient of sliding for concrete and subgrade is 0.35.



Note:

1. If there is a possibility that the structure could experience ponding of water against the walls, then hydrostatic pressures should be included in the analysis.
2. These parameters are not for braced excavations for support of excavation. Appropriate pressure diagrams should be used based on the type of bracing used.

7.3 Force Main -General

Based on the information provided, it is our understanding that the project consists of installing about 4,696 feet of gravity sewer and SSFM.

The ground slopes considerably from about EL+281.8 feet at the tie-in to an existing manhole on Forge Road to about EL+111.39 feet at the temporary cap near the Richlyn Manor SPS. Therefore, the grade change is about 170 feet between the two end points of the proposed gravity sewer and force main. All elevations are based on NAVD 88.

The invert of the sanitary sewer is at a depth of about 5 feet to 13 feet below the existing grade. The sanitary sewer will be installed in existing roadways. Therefore, it will not be possible to slope the excavation and some type of temporary support of excavation system will be required.

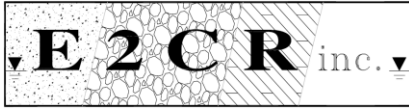
7.4 Pipe Installation, Subgrade Material and Bedding

7.4.1 Segment 1 – Forge Road

Along Forge Road, from existing MH No. 69669 (at Sta. 0+00) the sanitary sewer will consist of a 12-inch Gravity Pipe (SDR-35 PVC), to manhole SSMH-2 at about Sta.2+50. The rim of MH 69669 is at EL +281.81 feet and the gravity sewer main invert is at about EL +275 feet. From SSMH-2, the sanitary sewer will consist of a 10-inch DIP SSFM and will be installed along Forge Road for a distance of about 700 feet to the intersection of Forge Road and Richlyn Drive. Two 45-degree horizontal bends will be installed at this intersection. The ground elevation near the intersection is at about EL +277 feet and the pipe invert is at about EL+268.7 feet.

The invert of the gravity sewer and force main will be at depths of about 6 feet to 13 feet along Forge Road. The manholes and other structure depths could be a few feet more.

It is anticipated that the gravity sewer and force main in this segment will be installed using conventional cut-and-cover methods.



Re: Geotechnical Engineering Report
Richlyn Manor SFM Improvements
E2CR Project No. 22542-04
February 2024

Page 13 of 21

Borings SB-10 and SB-11 were drilled in this segment. The borings encountered about 5.5 feet of fill and residual sands and clays below the fill. Therefore, the subgrade along the proposed gravity sewer or SSFM in this segment is anticipated to be in the clayey residual soils of Stratum IIA or sandy residual soils of Stratum IIB.

The Borings indicate that the N-values at the proposed invert are about 12 bpf to about 19 bpf. These soils are considered to be suitable to support the proposed gravity sewer and SSFM.

Although the borings did not reveal the presence of any unsuitable or deleterious materials, if such materials are encountered, they should be undercut and replaced with compacted select borrow per Baltimore County Standard Specifications. The depth of undercut should be limited to about 2 feet unless specifically directed by the Geotechnical Engineer. Compacted AASHTO No 57 stone wrapped in geotextile fabric could be used instead of compacted select borrow.

All pipes should be supported on firm existing material or a firmly placed and compacted fill and bedding material, as per Baltimore County Standard Specifications.

7.4.2 Segment 2 – Richlyn Drive

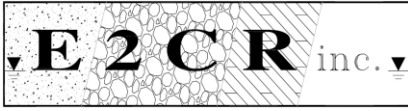
The proposed 10-inch DIP SSFM will be installed along Richlyn Drive from about Sta. 7+00 to about Sta. 39+40 feet, i.e. a distance of about 3,240 feet. At Sta. 39+40, the ground elevation is at about EL +190.5 feet and the SSFM invert is at about EL +182.8 feet.

The invert of the force main will be at depths of about 6 feet to 9 feet along Richlyn Drive. The manholes and other structure depths could be a few feet more. It is anticipated that the force main in this segment will be installed using conventional cut-and-cover methods.

Borings SB-2 to SB-9 were drilled in this segment. The borings encountered about 5.5 feet to 8 feet of fill and residual sands and clays below the fill. Therefore, the subgrade along the proposed SSFM in this segment is anticipated to be in the clayey or sandy fill or clayey/sandy residual soils.

The Borings indicate that the N-values at the proposed invert are generally about 10 bpf to about 20 bpf, except near boring SB-3, where the clayey fill at subgrade has SPT N-values of 1 bpf to 5 bpf. These soils are considered to be suitable to support the proposed SSFM, except near SB-3,

The clayey fill soils at the pipe subgrade near borings SB-3 should be field inspected by a qualified inspector working under the direction of a geotechnical engineer. If the soils at the subgrade are soft or unsuitable, the soils at the subgrade should be undercut by about 2 feet and be replaced with select borrow or No. 57 stone, wrapped in geotextile fabric.



Re: Geotechnical Engineering Report
Richlyn Manor SFM Improvements
E2CR Project No. 22542-04
February 2024

Page 14 of 21

Although the other borings did not reveal the presence of any unsuitable or deleterious materials, if such materials are encountered, they should be undercut and replaced with compacted select borrow per Baltimore County Standard Specifications. The depth of undercut should be limited to about 2 feet unless specifically directed by the Geotechnical Engineer. Compacted AASHTO No 57 stone wrapped in geotextile fabric could be used instead of compacted select borrow.

All pipes should be supported on firm existing material or a firmly placed and compacted fill and bedding material, as per Baltimore County Standard Specifications.

7.4.3 Segment 3 – Driveway from Richlyn Drive to Richlyn Manor SPS

The proposed 10-inch DIP SSFM will be installed from the end of Richlyn Road along a driveway to Richlyn Manor SPS, i.e. from Sta. 39+40 to about Sta. 44+46 feet, a distance of about 506 feet. At Sta. 44+46 feet, a temporary cap will be installed. At Sta. 39+40, the ground elevation is at about EL +190.5 feet and the SSFM invert is at about EL +182.8 feet. At Sta. 44+46 feet, the ground elevation is at about EL +120 feet and the SSFM invert is at about EL+111.39 feet.

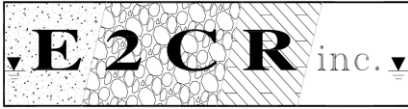
The invert of the force main will be at depths of about 6 feet to 9 feet along the driveway from Richlyn Drive to Richlyn Manor SPS. The manholes and other structure depths could be a few feet more. It is anticipated that the force main in this segment will be installed using conventional cut-and-cover methods.

Borings SB-1 to SB-2 were drilled in this segment. The borings encountered about 5.5 feet to 8 feet of fill and residual sands and clays below the fill. Therefore, the subgrade along the proposed SSFM in this segment is anticipated to be in the sandy/clayey fill of Stratum I or sandy/clayey residual soils of Stratum II.

The Borings indicate that the N-values at the proposed invert are about 7 bpf to about 18 bpf. These soils are considered to be suitable to support the proposed SSFM.

Although the borings did not reveal the presence of any unsuitable or deleterious materials, if such materials are encountered, they should be undercut and replaced with compacted select borrow per Baltimore County Standard Specifications. The depth of undercut should be limited to about 2 feet unless specifically directed by the Geotechnical Engineer. Compacted AASHTO No 57 stone wrapped in geotextile fabric could be used instead of compacted select borrow.

All pipes should be supported on firm existing material or a firmly placed and compacted fill and bedding material, as per Baltimore County Standard Specifications.



Re: Geotechnical Engineering Report
Richlyn Manor SFM Improvements
E2CR Project No. 22542-04
February 2024

Page 15 of 21

7.5 Open Cut and Cover and Support of Excavation

The proposed force main is anticipated to be installed using the conventional open cut and cover method. It is anticipated that most of the force main alignment will traverse the fill soils of Stratum I or residual soils of Stratum II. The excavation depth for the open-cut sections is anticipated to be approximately 6 feet to 13 feet. The sides of the excavation would need to be sloped at a temporary slope of 1.5H:1V in clayey soils or 2H:1V in sandy soils. If there isn't enough space to slope the excavation, then the excavation will have to be supported. It is anticipated that trench boxes should generally be adequate for support of excavation. At some locations, temporary sheeting and shoring may be required. The sheeting and shoring or custom support of excavation (SOE) should be designed using the parameters provided in Tables 3 and 4. The design of the SOE system should be left to the Contractor.

Excavation difficulty due to the presence of boulders and dense decomposed rock is generally not anticipated. However, due to differential weathering, less weathered rock or more intact rock could be encountered in areas not explored by the borings. The trench would need to be kept dewatered at all times due to the possibility of ponding during construction. The groundwater, if encountered, should be lowered to at least 2 feet below the pipe subgrade.

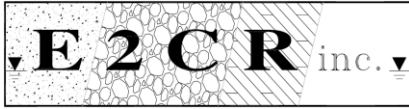
The existing pavement will be disturbed during construction. As a minimum, the pavement should be patched in kind after the gravity sewer or SSFM installation. Traffic control will also be required during construction.

Excavation of trenches, installation of pipes, and backfill should be performed per the latest edition of the Baltimore County Standard Specification for Construction.

7.6 Thrust Block and Restraints

The SSFM will have horizontal bends, vertical bends, tie-ins, etc., and will require thrust blocks, thrust collars, thrust restraints, or restrained joints. The soils at the site are generally suitable for installing thrust blocks, collars, and restraints. It is recommended that the geotechnical design parameters be based on the most conservative conditions.

The parameters shown in Table 3, Section 7.1 should be used to design the thrust blocks, thrust collars, or restrained joints. Please note that the unit weight values provided in Table 3 are moist unit weight values and the soil parameters are based on undrained conditions. The buoyant soil unit weight values should be used for design at locations where the thrust block and restraints are anticipated to be submerged in groundwater.



The thrust blocks should preferably bear against undisturbed earth. The fill is loose/soft in some areas, hence the thrust block dimensions could become relatively large. If the size and weight of the thrust block become an issue, then an alternative would be to remove the existing soil in the passive wedge behind the proposed thrust block. The entire passive zone behind the thrust block should be backfilled with compacted No. 57 Stone wrapped in geotextile non-woven fabric. The use of No. 57 Stone will reduce the thrust block dimensions and therefore reduce the contact stress on the bearing surface.

7.7 Trench Backfill

The soils excavated from the trenches are expected to be Sandy Lean CLAY, Sandy Fat Clay, Clayey SAND, and, poorly graded SAND with Silt. The results of modified Proctor tests performed on soils encountered in some of the borings are summarized in Table 5 below:

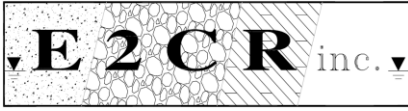
Table 5: Results of the Modified Proctor Test

Boring No.	USCS	Natural Water Content (%)	Maximum Dry Density (pcf)	Optimum Water Content (%)
SB-1	CL	30.2	116.2	17.2
SB-6	CH	35.5	111.7	19.1
SB-9	SC	7.3	136.4	7.1
SB-11	SP-SM	7.0	132.9	8.3

Based on the modified Proctor tests, the optimum moisture content of the on-site silty to clayey Sand varies from about 7.1 percent to about 8.3 percent; and the optimum moisture content of the clayey soils is about 17.2 percent to 19.1 percent.

The borings SB-7 through SB-11 encountered sandy fill to depths of 5.5 feet to 8 feet. The natural moisture content values of the sandy soils encountered in these borings, except SB-10, within the top about 8 feet, varies from about 5 percent to about 13 percent. The sands at boring SB-10 had a moisture content of 13% to 47%.

Based on the moisture content tests, at the time of testing, the sandy soils near borings SB-7, SB-8, SB-9, and SB-11, have natural moisture content values within about 2±% of the optimum moisture content values or slightly higher. These sandy soils, with minimal moisture conditioning, can be used to backfill the trench. The sandy soils near borings B-10 will require considerable moisture conditioning, or aeration to reduce their moisture content, prior to being used for backfill.



Re: Geotechnical Engineering Report
Richlyn Manor SFM Improvements
E2CR Project No. 22542-04
February 2024

Page 17 of 21

The borings SB-1 through SB-6 encountered 5.5 feet to 8 feet of clayey fill soils at the surface. The natural moisture content of some of the clayey soils is within about 2+/- percent of the optimum moisture content and can be reused to backfill the trench as common borrow fill. Clayey soils with suitable moisture content were encountered in boring SB-1 within the top 3 feet; boring SB-2 within the top 5 feet; boring SB-3 within the top 7.5 feet; and boring SB-5 within the top about 5 feet. The other clayey soils, encountered along the alignment, have natural moisture content values well above the optimum moisture content values. These clayey soils will need to be aerated to reduce the moisture content before they can be reused as backfill material. These wet clayey soils will be difficult to handle during earthwork and hence can't be reused as backfill material.

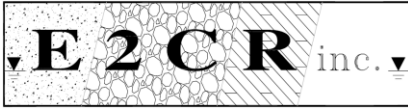
Depending on the Contractor's work methods, it may or may not be possible to segregate the suitable clay from the unsuitable clay. If the wet clay gets mixed with the suitable clay, the entire clay material may have to be wasted and offsite borrow will be required to backfill the trench.

Note that the excavation will extend deeper in the areas where suitable sands were encountered at the surface in borings SB-7, SB-8, SB-9, and SB-11. Residual clays underlie the sand fills. If the sands get mixed with the clay, the entire excavated material may become unsuitable to be reused, especially within the top 2 feet below the pavement subgrade. Offsite suitable borrow will be required to backfill the trenches, especially within the top 2 feet below subgrade.

In general, the bulk samples tested from borings SB-1 and SB-6 would be considered as common borrow in accordance with Maryland State Highway Administration (SHA) specifications and could be used as backfill material in the trenches below 2 feet of pavement subgrade, provided the moisture content is within 2 percent of optimum moisture content. The bulk sample from SB-11 would classify as select borrow. The sample from boring SB-9 was borderline select borrow/common borrow.

Excavated material should have natural moisture content or have to be moisture conditioned to ± 2 percentage points of the optimum moisture before being used as backfill material. Due to the nature of construction, aeration to reduce moisture content will not be possible. Offsite borrow material will be required to backfill areas where excavated material cannot be reused as backfill.

The soil backfill in the top 2 feet, in paved areas, should consist of "select borrow", i.e. materials that are classified as A-2, A-3, or A-2-4 (as per MDSHA Classification) or A-1-a, A-1-b, A-2-4, A-2-5 or A-3 (as per AASHTO Classification) and have minimum Proctor dry density (ASTM D1557 or AASHTO T-180) of 105 pcf.



Re: Geotechnical Engineering Report
Richlyn Manor SFM Improvements
E2CR Project No. 22542-04
February 2024

Page 18 of 21

For pipes located in the rights-of-way of State and/or County roads, the backfill around the pipeline, below the top 2 feet of subgrade, should be placed in lifts no more than 8-inch thick (loose lifts) and compacted to at least 92 percent of its modified Proctor maximum dry density (ASTM D-1557 or AASHTO T-180). The backfill in the top 2 feet of the trench below the final subgrade should be compacted to at least 97 percent of the modified Proctor maximum dry density (ASTM D-1557 or AASHTO T-180), or as per MDSHA specifications. In grass areas or non-structural areas, the trench backfill should be compacted to about 92 percent of the maximum dry density, as per the modified Proctor (ASTM D-1557 or AASHTO T-180).

Backfilling of trenches should be performed in accordance with the latest edition of the Baltimore County Standard Specification for Construction.

7.8 Dewatering

Groundwater was only encountered in boring SB-8 at a depth of 9 feet. Therefore, the proposed excavations for pipes and manholes are not anticipated to encounter groundwater. However, any surface water that enters the excavations during construction will require dewatering. The site contains layers of sand and clay. This can cause trapping of water over impermeable clay layers leading to perched water conditions.

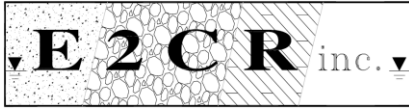
The proposed subgrade of the SSFM, in several locations, will consist of clayey soils. These soils could lose strength and become unstable if exposed to water. Therefore, it is important to keep the excavation dry. A dewatering system could be required to provide dry working conditions in the excavations.

In general, the groundwater should be lowered to at least 2 feet below the proposed bottom of the excavation to provide a stable working surface. The means and methods are by the Contractor and the Contractor could use any method to keep the excavation dry. The actual method of dewatering, at all locations, should be left to the Contractor.

The dewatering should be continued until sufficient backfill is placed on top of the pipes in order to prevent the pipe from floating.

7.9 Soil Corrosivity

Soil samples were collected in the borings for corrosion potential testing, at or near the proposed invert of the water main. A total of four (4) samples from borings, SB-01, SB-06, SB-09, and SB-11 were tested for corrosion potential. The tests included pH, minimum resistivity, oxidation-reduction potential, chloride ion concentration, and sulfate ion concentration.



Re: Geotechnical Engineering Report
Richlyn Manor SFM Improvements
E2CR Project No. 22542-04
February 2024

Page 19 of 21

The test results are included in Appendix C. The interpretation of the corrosion potential tests was not included in our scope of services.

7.10 Pavement Considerations

Our scope of services did not include evaluating the existing pavement section of the roadways. As a minimum, in areas where the pavement section is disturbed or damaged during construction of the force main, the damaged pavement should be replaced with a pavement section which is equal to or thicker than the existing pavement section. The pavement section encountered at each of the boring locations is summarized in Table B-1 in Appendix B. The pavement sections encountered at the investigated boring locations indicate the following:

- Forge Road (Borings B-10 and B-11)
 - 5 inches to 7 inches of Asphalt Concrete
 - 1 inch to 3 inches of Aggregate Base.

- Richlyn Drive (Boring B-2 to Boring B-9)
 - 1.5 inches to 7 inches of Asphalt Concrete
 - 2 inches to 9 inches of Aggregate Base

- Driveway from Richlyn Drive to Richlyn Manor SPS (Borings B-1 and B-2)
 - 6 inches to 7 inches of Asphalt Concrete
 - 5 inches to 6 inches of Aggregate Base.

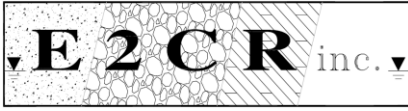
8.0 REMARKS

This report has been prepared solely and exclusively for JMT to provide guidance to design professionals in developing facility plans for the Richlyn Manor Force Main improvements project located in Perry Hall, Baltimore County, Maryland.

It is considered that adequate evaluations and recommendations have been provided to serve as a basis for the design requirements for the project.

This report is not intended for use by others, and the information contained herein does not apply to other sites. The Consulting Engineer cannot be held accountable for any problems that occur due to the application of this report than its intended purpose. This report in its entirety should be attached to the project specifications.

This report does not contain environmental considerations for the proposed construction. Additional recommendations can be provided as needed.

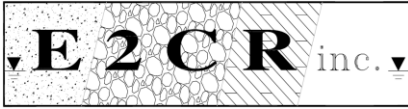


Re: Geotechnical Engineering Report
Richlyn Manor SFM Improvements
E2CR Project No. 22542-04
February 2024

Page 20 of 21

These analyses and recommendations are based on information made available to us at the time of our investigation and the actual conditions encountered at the test boring locations at that time. General assumptions have been made that the limited exploratory test borings represent the site conditions in relation to the aerial extent and depths of the borings. It should be noted, however, that the actual subsurface conditions between the test boring locations might vary from the conditions indicated on the appended test boring logs. Should the actual conditions encountered during construction differ significantly from those indicated by the test boring logs, we should be notified immediately so that the analyses and recommendations can be reviewed and/or revised as necessary.

Our professional services have been performed and this report has been prepared in accordance with generally accepted engineering principles and practices. E2CR, Inc. assumes no responsibility for interpretations made by others based upon our work or our recommendation.

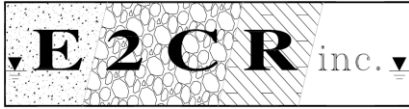


Re: Geotechnical Engineering Report
Richlyn Manor SFM Improvements
E2CR Project No. 22542-04
February 2024

Page 21 of 21

References:

- AASHTO. (2012). *AASHTO LRFD Bridge Design Specifications*. Washington, DC: American Association of State Highway and Transportation Officials.
- American Society for Testing and Materials. (2019). Annual Book of ASTM Standards. *ASTM D5057 Standard Test Method for Screening Apparent Specific Gravity and Bulk Density of Waste, 11.04*.
- Bowles, J. E. (1996). *Foundation Analysis and Design* (5th ed.). New York, NY: McGraw-Hill.
- Coduto, D. P. (1999). *Geotechnical Engineering: Principles and Practices*. Upper Saddle River, NY: Prentice-Hall, Inc.
- Crowley, W. P., & Reinhardt, J. (1980). *Geologic Map of the Ellicott City Quadrangle, Maryland*. Baltimore, Maryland: Maryland Geological Survey.
- International Code Council. (2018). *2018 International Building Code*. International Code Council.
- Maryland Geological Survey. (2020, August 6). *A Brief Description of the Geology of Maryland*. Retrieved from <http://www.mgs.md.gov>
- Naval Facilities Engineering Command. (1986). *Foundations & Earth Structures Design Manual 7.02*. Alexandria, Virginia: Naval Facilities Engineering Command.
- Naval Facilities Engineering Command. (1986). *Soil Mechanics Design Manual 7.01*. Alexandria, Virginia: Naval Facilities Engineering Command.
- Reinhardt, J. (1977). *Geologic Map of the Middle River Quadrangle, Maryland*. Baltimore, MD: Maryland Geological Survey.
- Sowers, G. F. (1979). *Introductory Soil Mechanics and Foundations: Geotechnical Engineering* (4th ed.). New York: Macmillan.
- Terzaghi, K. v., & Peck, R. B. (1968). *Soil Mechanics in Engineering Practice*. John Wiley & Sons, Inc.
- Tomlinson, M. J. (1986). *Foundation Design and Construction*. London: Longman Group UK Limited.
- Tschebotarioff, G. P. (1973). *Foundations, Retaining, and Earth Structures*. New York: McGraw-Hill, Inc.
- U.S. Geological Survey. (1973). *Earthquake history of Maryland: Earthquake Information Bulletin*. U.S. Geological Survey.
- Youd, T. L., & Idriss, I. M. (2001, April). Liquefaction Resistance of Soils: Summary report from the 1996 and 1998 NCEER/NSF Workshops on Evaluation of Liquefaction Resistance of Soils. *Journal of Geotechnical and Geoenvironmental Engineering, ASCE*, 127(4), 297-313.



APPENDICES

APPENDIX A:

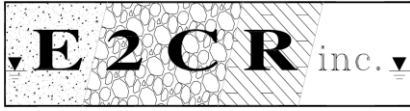
Figure 1:	Site Vicinity Map
Figure 2:	Aerial Photograph
Figure 3:	Proposed Construction & Boring Location Plan STA 0+00 to STA 0+50
Figure 4:	Proposed Construction & Boring Location Plan STA 0+50 to STA 4+50
Figure 5:	Proposed Construction & Boring Location Plan STA 4+50 to STA 7+75
Figure 6:	Proposed Construction & Boring Location Plan STA 7+75 to STA 13+50
Figure 7:	Proposed Construction & Boring Location Plan STA 13+50 to STA 17+50
Figure 8:	Proposed Construction & Boring Location Plan STA 17+50 to STA 21+50
Figure 9:	Proposed Construction & Boring Location Plan STA 21+50 to STA 25+50
Figure 10:	Proposed Construction & Boring Location Plan STA 25+50 to STA 29+50
Figure 11:	Proposed Construction & Boring Location Plan STA 29+50 to STA 33+50
Figure 12:	Proposed Construction & Boring Location Plan STA 33+50 to STA 38+50
Figure 13:	Proposed Construction & Boring Location Plan STA 38+50 to STA 43+50
Figure 14:	Proposed Construction & Boring Location Plan STA 43+50 to STA 44+46
Figure 15:	Subsurface Profile – Borings SB-11, SB-10 and SB-09
Figure 16:	Subsurface Profile – Borings SB-09, and SB-08
Figure 17:	Subsurface Profile – Borings SB-08, SB-07 and SB-06
Figure 18:	Subsurface Profile – Borings SB-06, SB-05 and SB-04
Figure 19:	Subsurface Profile – Borings SB-04, and SB-03
Figure 20:	Subsurface Profile – Borings SB-03, SB-02 and SB-01

APPENDIX B:

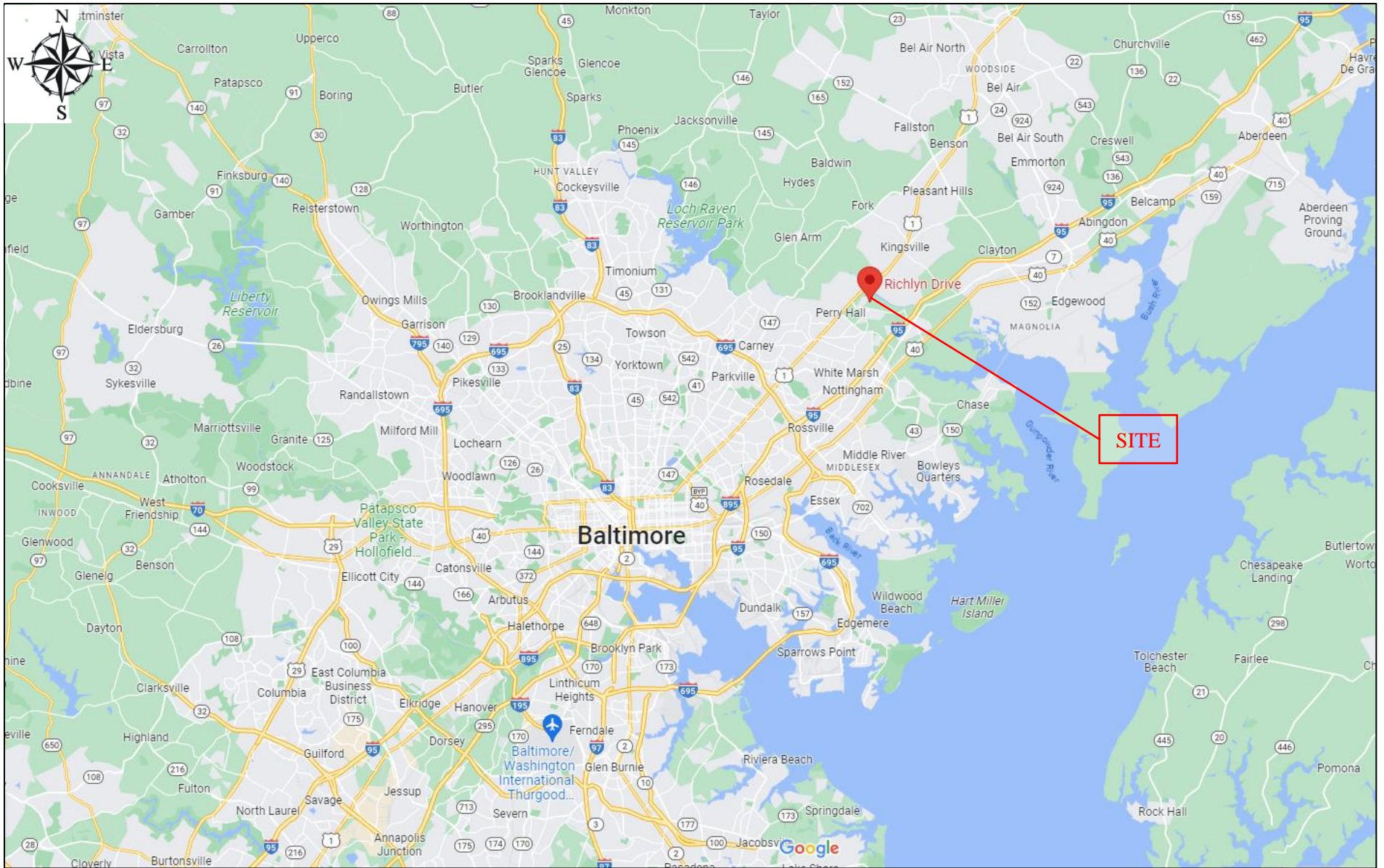
Table B-1:	Summary of Boring Data Boring Logs
------------	---------------------------------------

APPENDIX C:

Table C-1:	Summary of Laboratory Test Data Laboratory Test Results (Graphical Format) Summary of Corrosion Potential Test Results
------------	--



APPENDIX A
FIGURES



E2CR, INC.

**Richlyn Manor Force Main
Site Vicinity Map**

FIGURE: 1

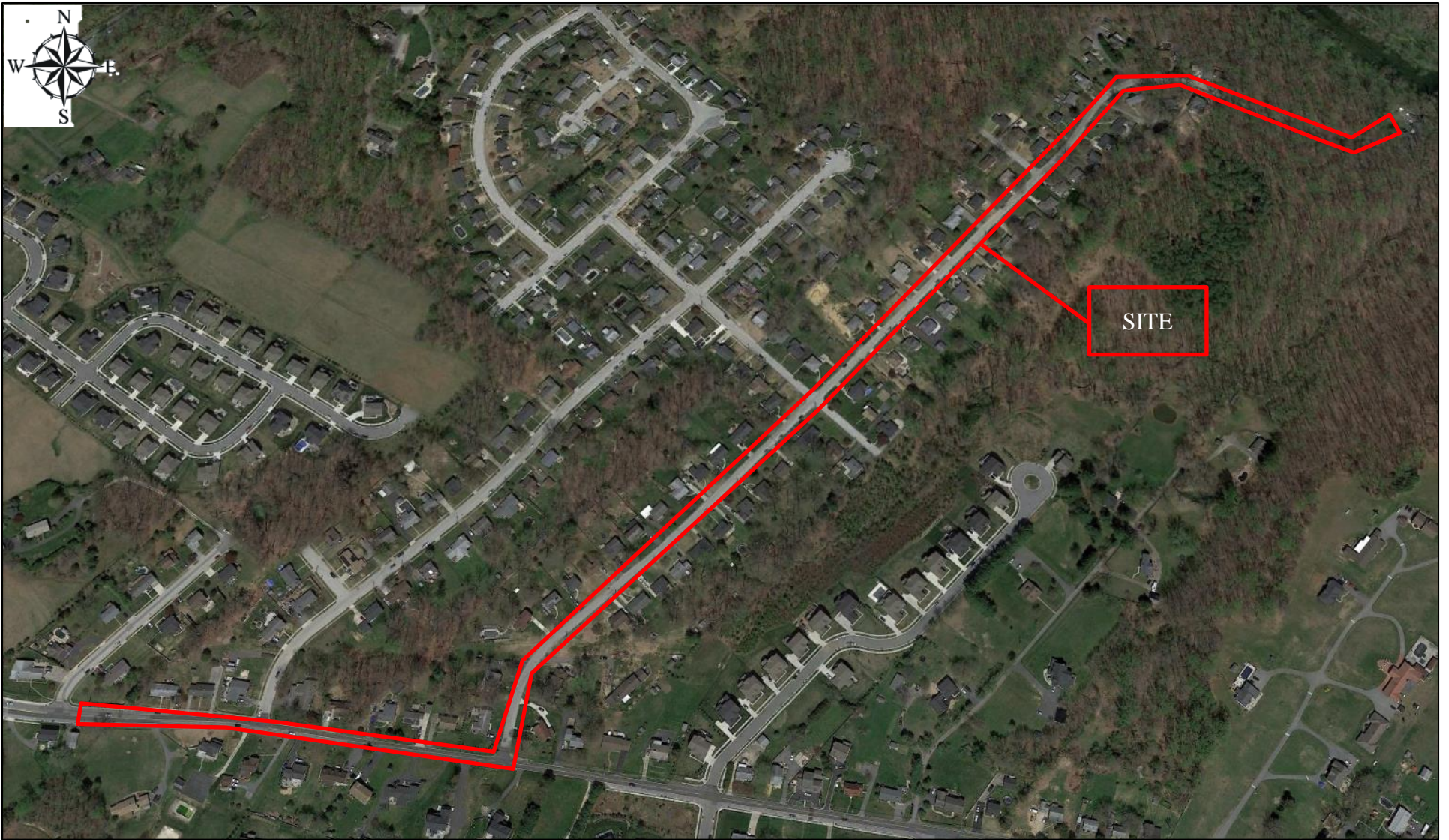
DRAWN BY: MK

CHECKED BY: NS

DATE: January 2024

JOB NO.: 22542-04

SCALE: NTS



E2CR, INC.

Richlyn Manor Force Main
Aerial Photograph

FIGURE: 2

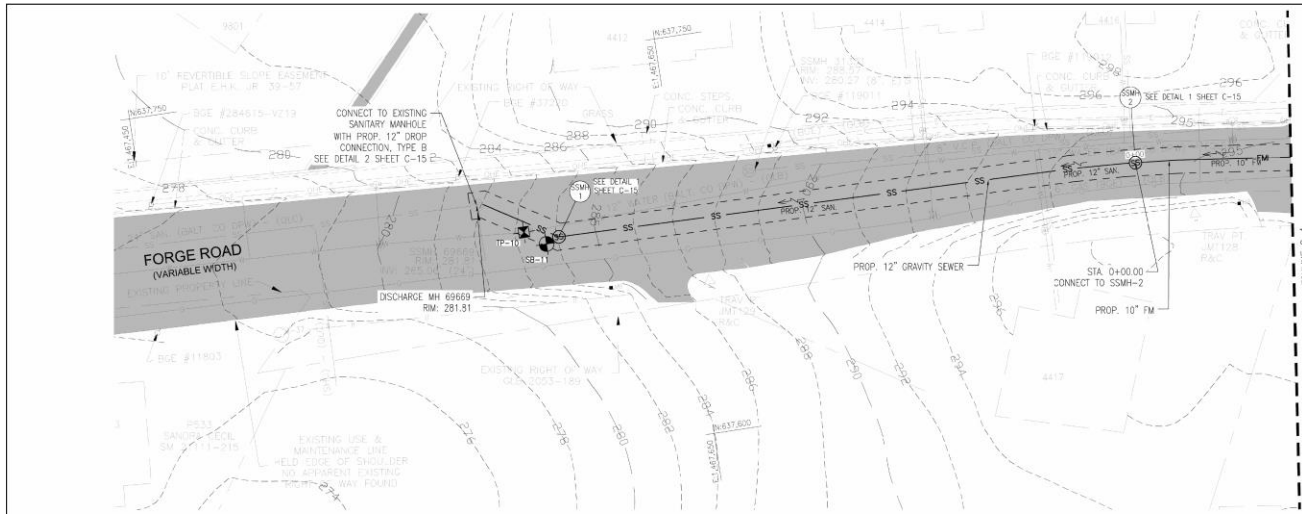
DRAWN BY: MK

CHECKED BY: NS

DATE: January 2024

JOB NO.: 22542-04

SCALE: NTS

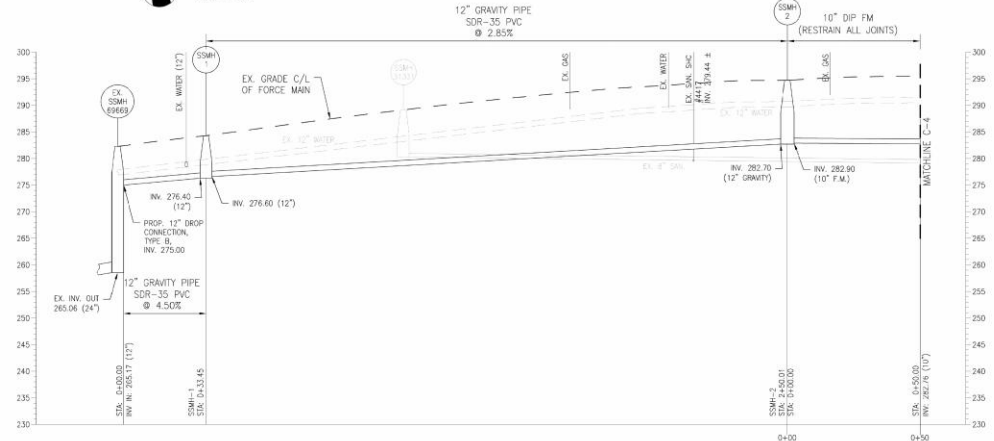


GRAVITY STAKEOUT			
LOCATION	ITEM	NORTHING	EASTING
STA. 0+00.00	SSMH-2	637676.7897	1467822.141
-	CONNECT TO MH 69669	637698.1632	1467574.448
-	SSMH-1	637681.8506	1467603.269

SANITARY MANHOLE SCHEDULE				
SSMH NO.	NORTHING	EASTING	RIM	INVERT
SSMH-1	637681.8506	1467603.269	284.00	276.60 (12")
SSMH-2	637676.7807	1467822.241	294.68	282.70 (10")

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

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'

**Proposed Construction
 Courtesy of JMT**

APPROVED: _____ Chief
 STORMWATER ENGINEERING
 BALTIMORE COUNTY DEPT. OF
 ENVIRONMENTAL PROTECTION
 AND SUSTAINABILITY

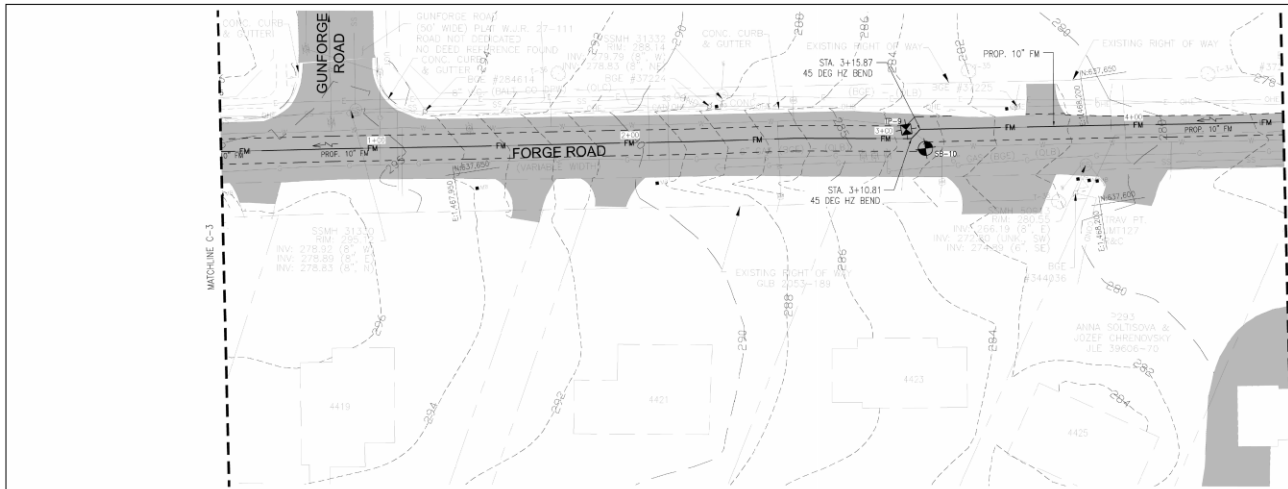


PROFESSIONAL CERTIFICATION	AS-BUILT / REVISION	BY DATE	F.R.A. NO.	KEY SHEET POSITION	DRAWING SCALE	DPW AND TRANSPORTATION
I, ENGINEER, CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR SUPERVISED BY ME OR THAT I AM A DEPUTY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.						
LICENSE NO.	EMPLOYMENT DATE	CONTRACT COMPLETION BOX	R.O.V. NO.		PLAN SCALE: AS SHOWN	SEE DRAWING 2000-XXXX FOR ORIGINAL IDENTIFIERS
ENGINEER: CAROL DUBOIS	DATE: 08/14/2024	TELEPHONE: 410-326-1100			PAPER SCALE: N/A	FOR ORIGINAL IDENTIFIERS
DESIGNED BY: CAROL DUBOIS	DATE: 08/14/2024	TELEPHONE: 410-326-1100				
CHECKED BY: CAROL DUBOIS	DATE: 08/14/2024	TELEPHONE: 410-326-1100				
DATE: 08/14/2024	DATE: 08/14/2024	TELEPHONE: 410-326-1100				

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: 0000 PERRY HALL, MD

SHEET DESIGNATION	CONTRACT NUMBER
C-3	XXXXXXX
	PROJ. NO. J-16020660
	SHEET X OF DRAWING NUMBER
	DATE: 08/14/2024

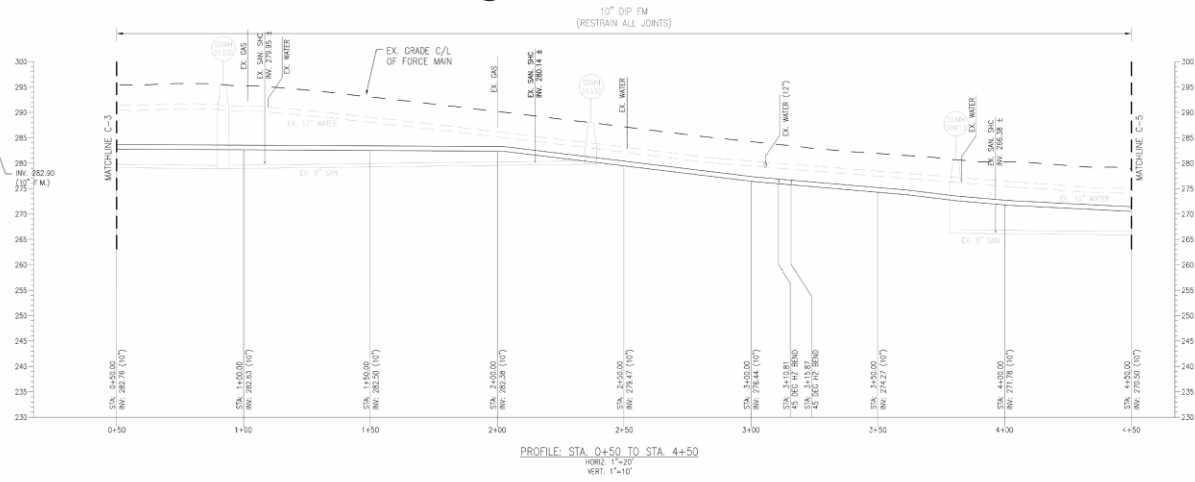
E2CR, INC.	Richlyn Manor Force Main	FIGURE: 3	DRAWN BY: MK	CHECKED BY: NS
	Proposed Construction & Boring Location Plan STA 0+00 to STA 0+50	DATE: January 2024	JOB NO.: 22542-04	SCALE: NTS



FORCE MAIN TAKEOUT			
LOCATION	ITEM	NORTHING	EASTING
STA. 3+10.81	45° HB	837636.7883	1468130.341
STA. 3+15.87	45° HB	837639.8483	1468134.367

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

PLAN: STA. 0+50 TO STA. 4+50
 SCALE: 1"=80'0"



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



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

MARYLAND COORDINATE SYSTEM
 HORIZONTAL - NAD 83 (081)
 VERTICAL - NAVD 83

SHEET DESIGNATION	C-4	CONTRACT NUMBER	XXXXXXX
PROJECT NO.	J-16000660	SHEET X OF	
DRAWING NUMBER		FILE NO.	

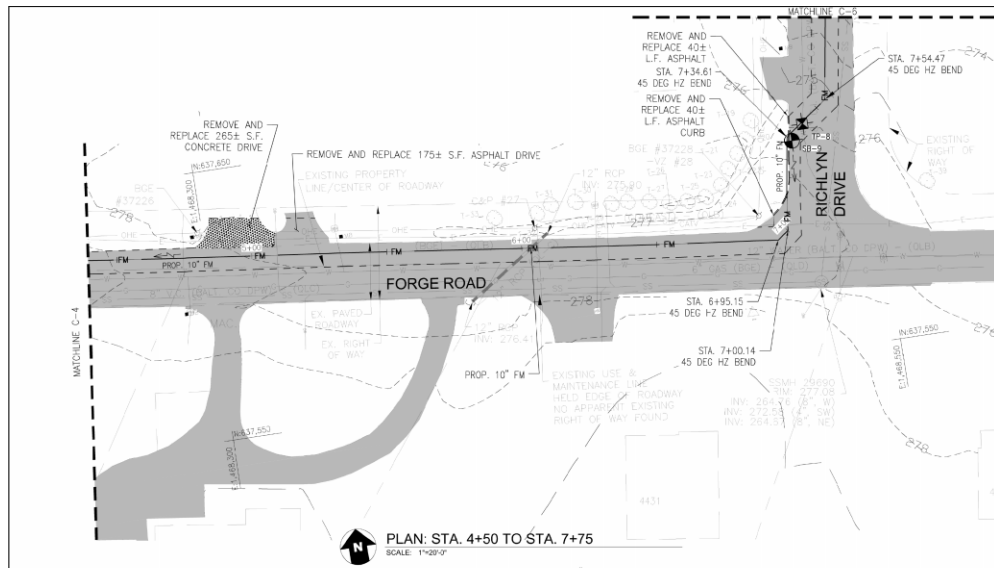
**Proposed Construction
 Courtesy of JMT**

DATE	BY	REVISION

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
 PERRY HALL, MD

COUNCILMANIC DIST. NO. 5
 ELECTION DIST. NO. 11

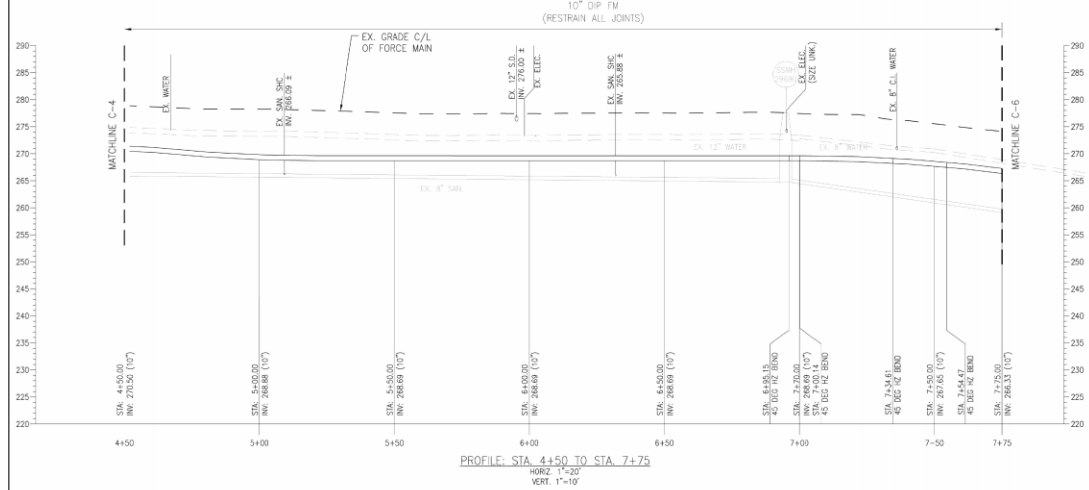
E2CR, INC.	Richlyn Manor Force Main Proposed Construction & Boring Location Plan STA 0+50 to STA 4+50	FIGURE: 4	DRAWN BY: MK	CHECKED BY: NS
		DATE: January 2024	JOB NO.: 22542-04	SCALE: NTS



FORCE MAIN STAKEOUT			
LOCATION	ITEM	NORTHING	EASTING
STA. 6+95.15	45° HB	637592.8178	1468510.709
STA. 7+00.14	45° HB	637595.9004	1468514.635
STA. 7+34.61	45° HB	637630.0251	1468519.46
STA. 7+54.47	45° HB	637641.7297	1468535.502

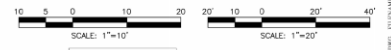
SITE GRADING NOTE:
 1. CONTRACTOR SHALL RESTORE DISTURBED PAYMENT FROM UTILITY CUTS TO THEIR ORIGINAL SLOPE AND GRADE IN EQUAL OR BETTER CONDITION.

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



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

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



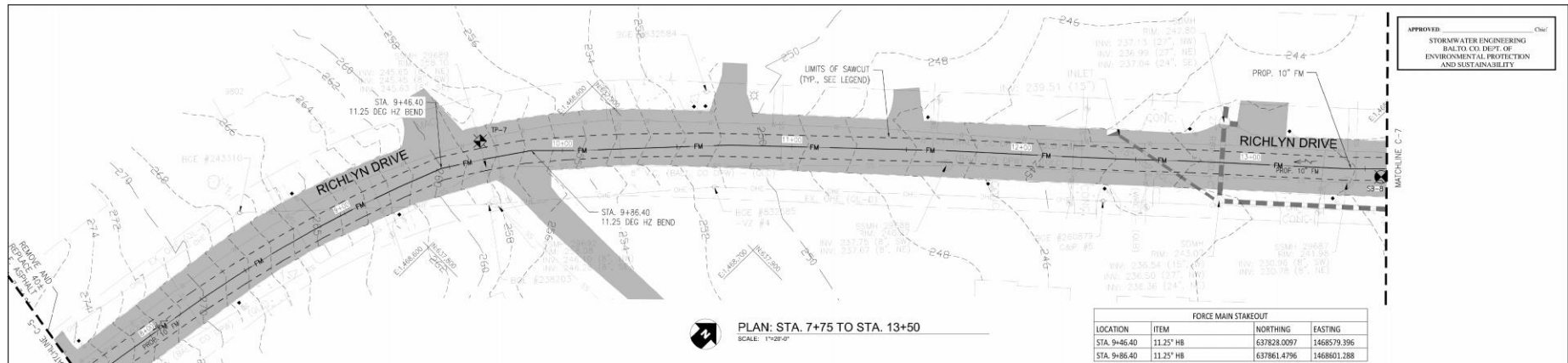
MARYLAND COORDINATE SYSTEM
 HORIZONTAL - NAD 83/2011
 VERTICAL - NAVD 83

SHEET DESIGNATION	CONTRACT NUMBER
C-5	XXXXXX
PROJECT NO.	J-10000060
SHEET X OF	DRAWING NUMBER
FILE NO.	25

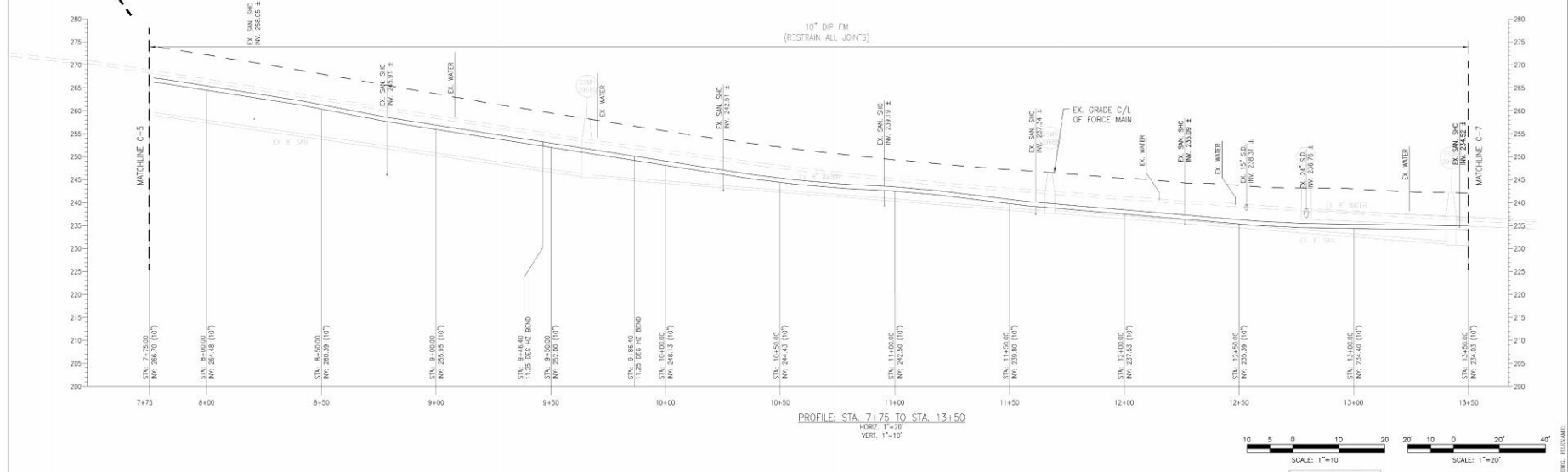
<p>Proposed Construction Courtesy of JMT</p>	DESIGNED BY	DATE	F.W.A. NO.	KEY SHEET POSITION SHEET	DRAWING SCALE	DPW AND TRANSPORTATION	
	TRACED BY	BY DATE			PLAN SCALE AS SHOWN	SEE DRAWING 2003-XXXX FOR ORIGINAL SIGNATURES	
	CHECKED BY	TRAFFIC	DESIGNERS	STRUCTURED	SDM	SDM	SEE DRAWING 2003-XXXX FOR ORIGINAL SIGNATURES
	DATE						
	DATE						

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
 SUBDIVISION: 0020 PERRY HALL, MD
 COUNCILMANIC DIST. NO.: 5
 ELECTION DIST. NO.: 11

<p>E2CR, INC.</p>	<p>Richlyn Manor Force Main Proposed Construction & Boring Location Plan STA 4+50 to STA 7+75</p>	FIGURE: 5	DRAWN BY: MK	CHECKED BY: NS
		DATE: January 2024	JOB NO.: 22542-04	SCALE: NTS



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

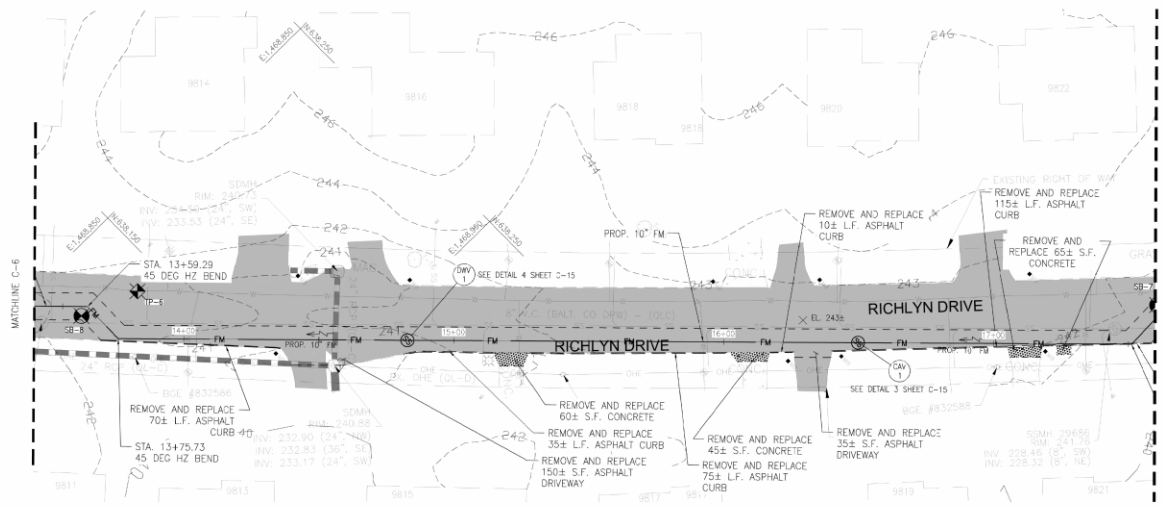


Proposed Construction Courtesy of JMT	S-BUILT / REVISION BY DATE P.A. NO. KEY SHEET POSITION SHEET	DRAWING SCALE: AS SHOWN SEE DRAWING 2003-XXXX FOR ORIGINAL SIGNATURES	DFW AND TRANSPORTATION BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION	SHEET DESIGNATION: C-6 CONTRACT NUMBER: XXXXXX
	DATE OF ENGINEERING OR CONSTRUCTION: _____ TRAFFIC: _____ REVISIONS: _____ REVIEWED BY: _____ DATE REVIEWED: _____	PROJECT: RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN PLAN & PROFILE STA. 7+75 TO STA. 13+50	SUBDIVISION: 0030 PERRY HALL, MD	COUNCILMANIC DIST. NO.: 5 ELECTION DIST. NO.: 11

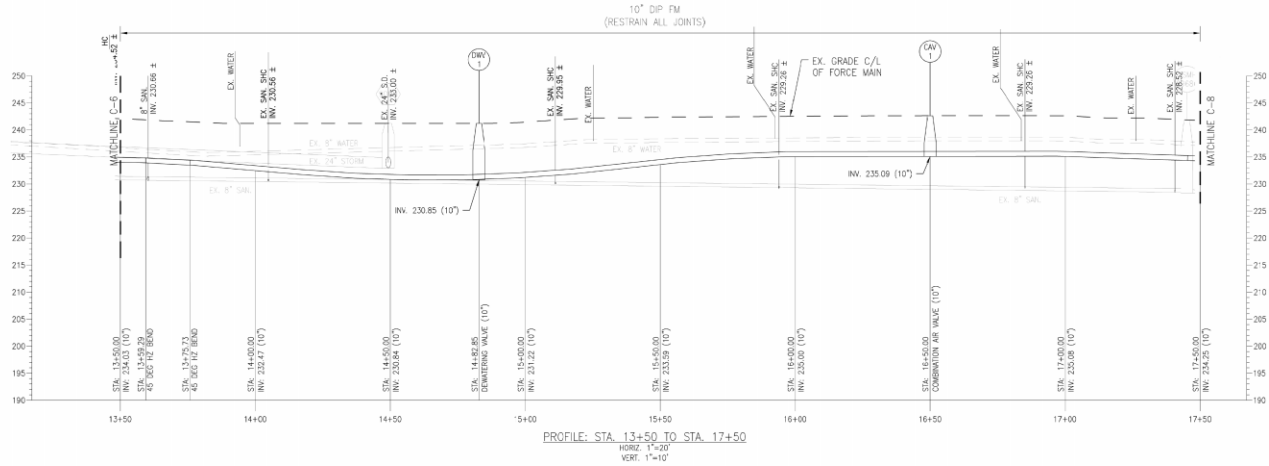
<h1>E2CR, INC.</h1>	Richlyn Manor Force Main Proposed Construction & Boring Location Plan STA 7+75 to STA 13+50	FIGURE: 6 DATE: January 2024	DRAWN BY: MK JOB NO.: 22542-04	CHECKED BY: NS SCALE: NTS
---------------------	--	--	--	---

FORCE MAIN STAKEOUT			
LOCATION	ITEM	NORTHING	EASTING
STA 13+59.29	45' HB	638121.731	1468968.103
STA 13+75.73	45' HB	638121.5058	1468964.544
STA 14+82.85	DEWATERING VALVE-3	638197.5209	1468960.023
STA 16+50.00	COMBINATION AIR VALVE-4	638316.1246	1469077.791

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



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



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

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



Proposed Construction
 Courtesy of JMT

S-BUILT / REVISION	BY DATE	P.A. NO.	REV SHEET POSITION	DRAWING SCALE	DPW AND TRANSPORTATION
				PLAN SCALE: AS SHOWN	SEE DRAWING 2003-XXXX FOR ORIGINAL SIGNATURES
				PROFILE SCALE: N/A	SEE DRAWING 2003-XXXX 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
 SUBDIVISION: 0030 PERRY HALL, MD
 COUNCILMANIC DIST. NO: 5
 ELECTION DIST. NO: 11

SHEET DESIGNATION	CONTRACT NUMBER
C-7	XXXXXX
	PROJ. NO.
	J-16000660
	SHEET X OF
	DRAWING NUMBER
	FILE NO.

E2CR, INC.

Richlyn Manor Force Main
Proposed Construction & Boring Location Plan
STA 13+50 to STA 17+50

FIGURE: 7
DATE: January 2024

DRAWN BY: MK
JOB NO.: 22542-04

CHECKED BY: NS
SCALE: NTS

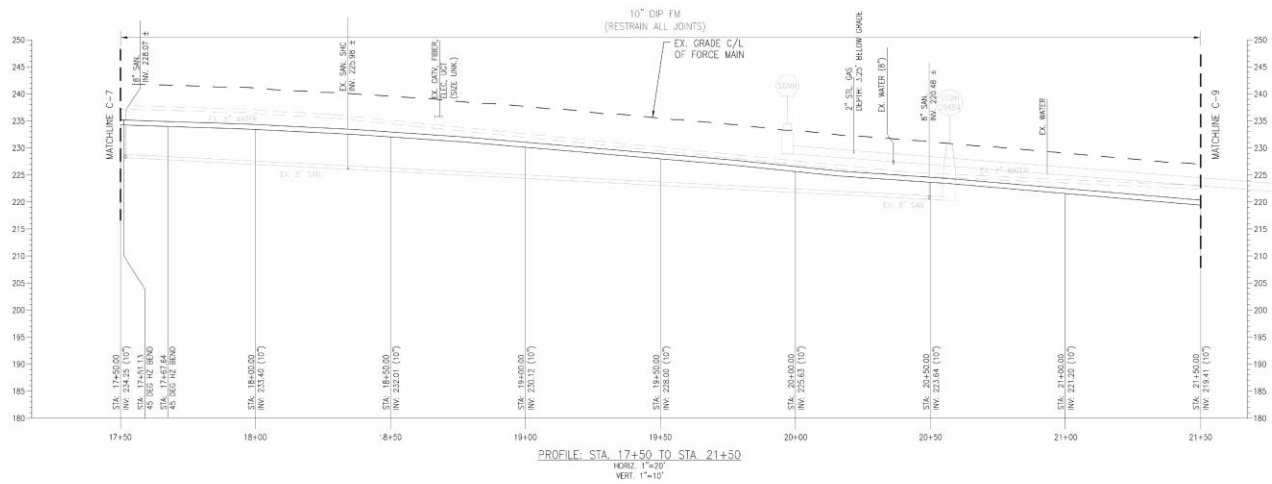


FORCE MAIN STAKEOUT			
LOCATION	ITEM	NORTHING	EASTING
STA. 17+51.13	45' HB	638387.888	1469149.049
STA. 17+67.64	45' HB	638404.353	1469148.493

SITE GRADING NOTE:

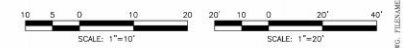
- CONTRACTOR SHALL RESTORE DISTURBED PAYMENT FROM UTILITY CUTS TO THEIR ORIGINAL SLOPE AND GRADE IN EQUAL OR BETTER CONDITION.

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



PROFILE: STA. 17+50 TO STA. 21+50
HORIZ. 1"=20'
VERT. 1"=10'

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



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

SHEET DESIGNATION	CONTRACT NUMBER
C - B	XXXXXX
PROJECT NO.	3-1000060
SHEET X OF	
DRAWING NUMBER	
FILE NO.	36

<p>Proposed Construction Courtesy of JMT</p>	S-BUILT / REVISION	BY DATE	P.A. NO.	KEY SHEET POSITION	DRAWING SCALE	DPW AND TRANSPORTATION			
	TRACT COMPLETION BOX		S.O.V. NO.		PLAN SCALE: AS SHOWN	SEE DRAWING 2003-XXXX FOR ORIGINAL SIGNATURES			
	NO. OF ENGINEERING OR CONSULTING	TRAFFIC	HIGHWAYS	STRUCTURES	SHOW MANS	SEWER	WATER	PEEP ENGINEER	HDR. OF ENGINEERING & CONSTRUCTION
	REVIEWED BY:	SEE DRAWING 2003-XXXX 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. 17+50 TO STA. 21+50
 SUBDIVISION: 0030 PERRY HALL, MD
 COUNCILMANIC DIST. NO.: 5
 ELECTION DIST. NO.: 11

E2CR, INC.

Richlyn Manor Force Main
Proposed Construction & Boring Location Plan
STA 17+50 to STA 21+50

FIGURE: 8
DATE: January 2024

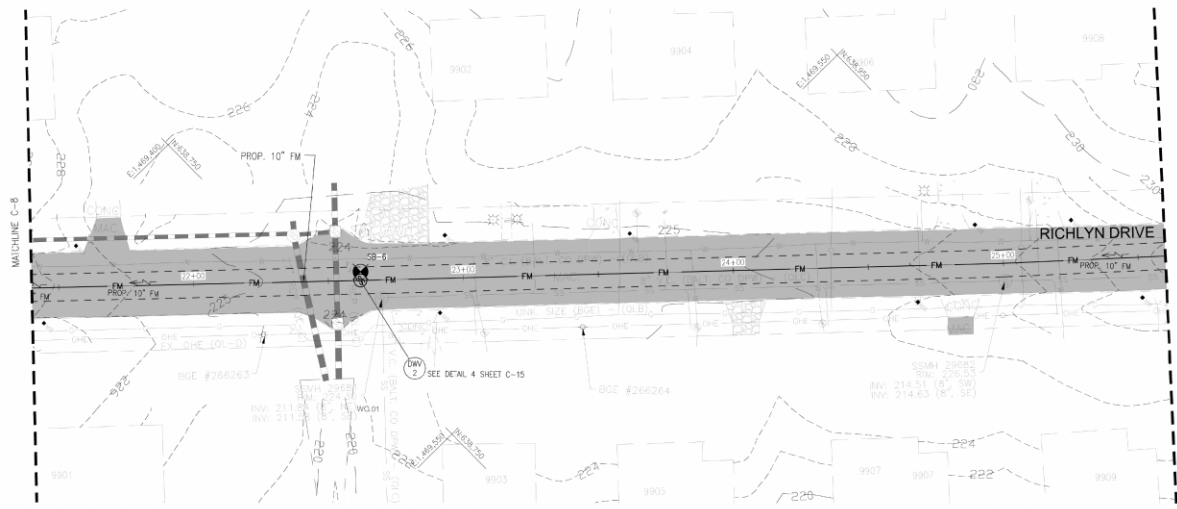
DRAWN BY: MK
JOB NO.: 22542-04

CHECKED BY: NS
SCALE: NTS

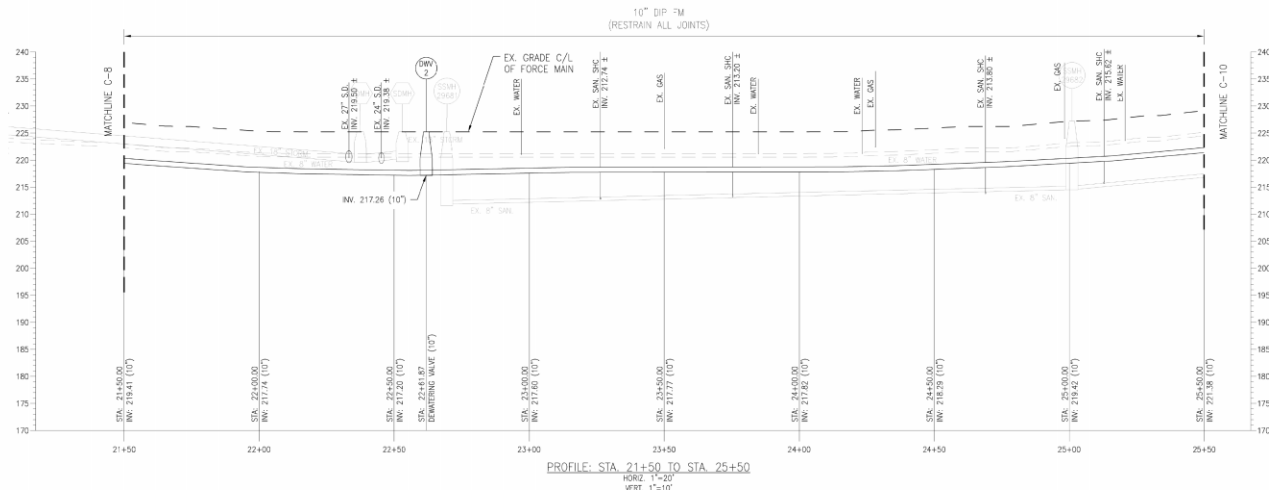
FORCE MAIN STAKEOUT			
LOCATION	ITEM	NORTHING	EASTING
STA 22+61.87	DEWATERING VALVE-5	638765.6713	1469485.741

SITE GRADING NOTE:

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

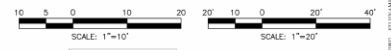


PLAN: STA. 21+50 TO STA. 25+50
SCALE: 1"=20'-0"



PROFILE: STA. 21+50 TO STA. 25+50
HORIZ. SCALE: 1"=20'-0"
VERT. SCALE: 1"=10'-0"

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



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

SHEET DESIGNATION	CONTRACT NUMBER
C-9	XXXXXX
PROJECT NO.	J-16000660
SHEET X OF	
DRAWING NUMBER	
FILE NO.	

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

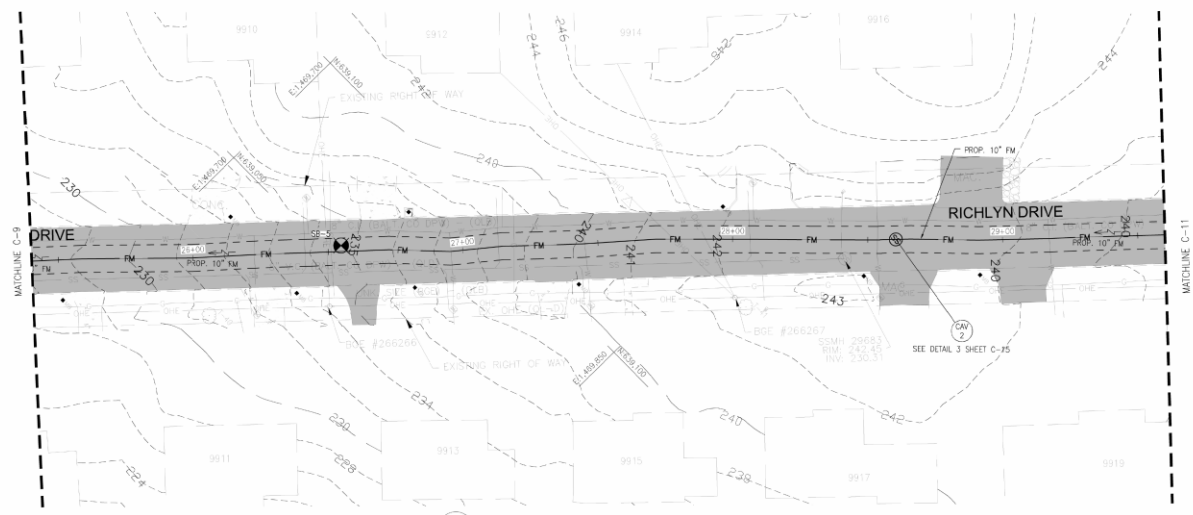
BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION
 RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN
 PLAN & PROFILE STA. 21+50 TO STA. 25+50
 SUBDIVISION: 0030 PERRY HALL, MD
 COUNCILMANIC DIST. NO: 5
 ELECTION DIST. NO: 11

**Proposed Construction
Courtesy of JMT**

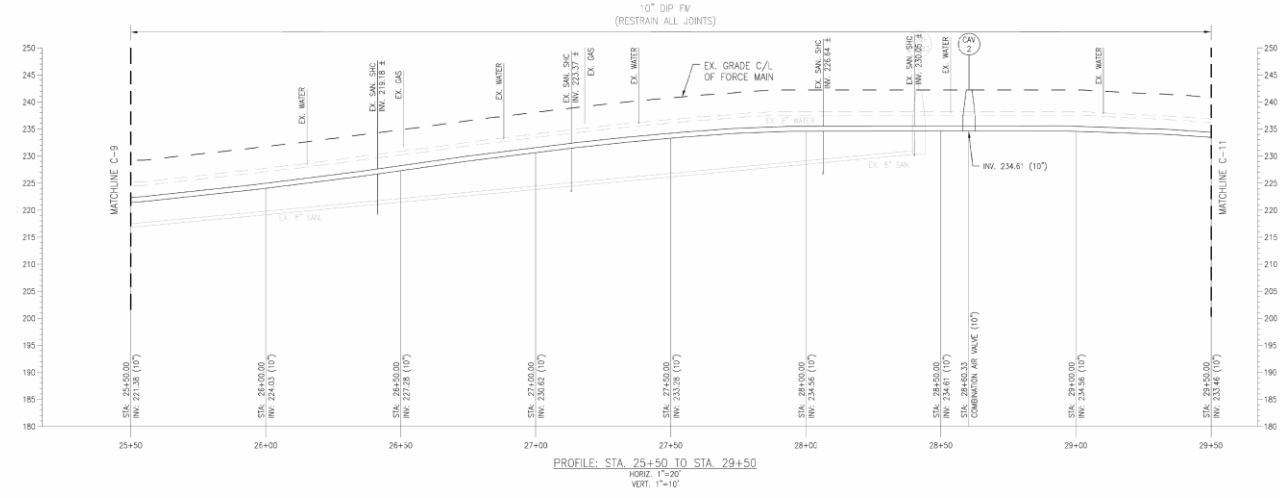
E2CR, INC.	Richlyn Manor Force Main Proposed Construction & Boring Location Plan STA 21+50 to STA 25+50	FIGURE: 9	DRAWN BY: MK	CHECKED BY: NS
		DATE: January 2024	JOB NO.: 22542-04	SCALE: NTS

FORCE MAIN STAKEOUT			
LOCATION	ITEM	NORTHING	EASTING
STA. 28+60.33	COMBINATION AIR VALVE-6	639203.731	1468993.36

SITE GRADING NOTE:
 1. 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'



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

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



**Proposed Construction
 Courtesy of JMT**

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

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
 SUBDIVISION: 0030 PERRY HALL, MD
 COUNCILMANIC DIST. NO.: 5
 ELECTION DIST. NO.: 11

SHEET DESIGNATION	CONTRACT NUMBER
C-10	XXXXXX

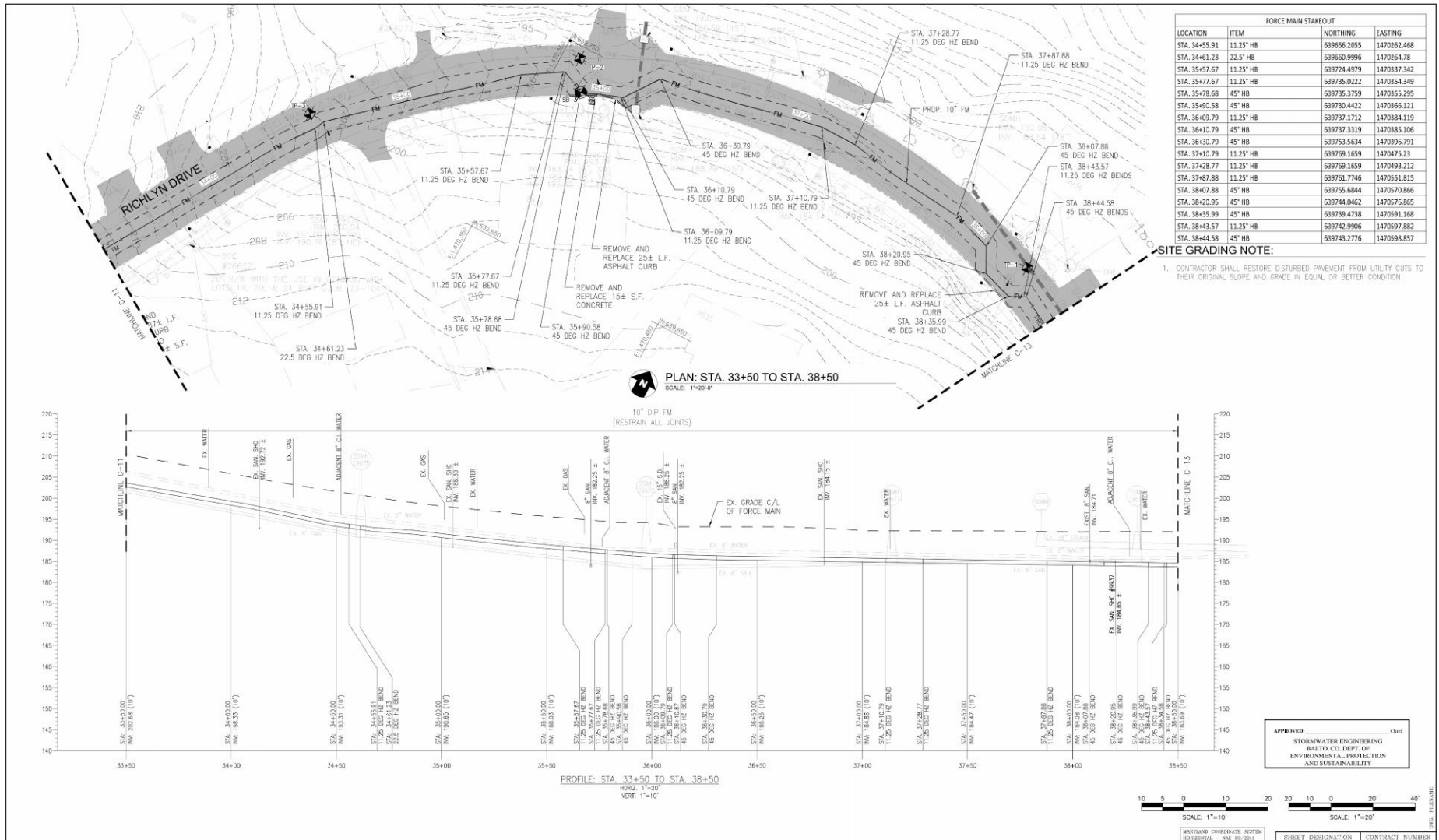
E2CR, INC.

**Richlyn Manor Force Main
 Proposed Construction & Boring Location Plan
 STA 25+50 to STA 29+50**

FIGURE: 10
DATE: January 2024

DRAWN BY: MK
JOB NO.: 22542-04

CHECKED BY: NS
SCALE: NTS



**Proposed Construction
Courtesy of JMT**

S-BUILT / REVISION	BY DATE	P.A. NO.	KEY SHEET POSITION SHEET	DRAWING SCALE	DEPT AND TRANSPORTATION

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: 0030 PERRY HALL, MD

SHEET DESIGNATION	CONTRACT NUMBER
C-12	XXXXXX

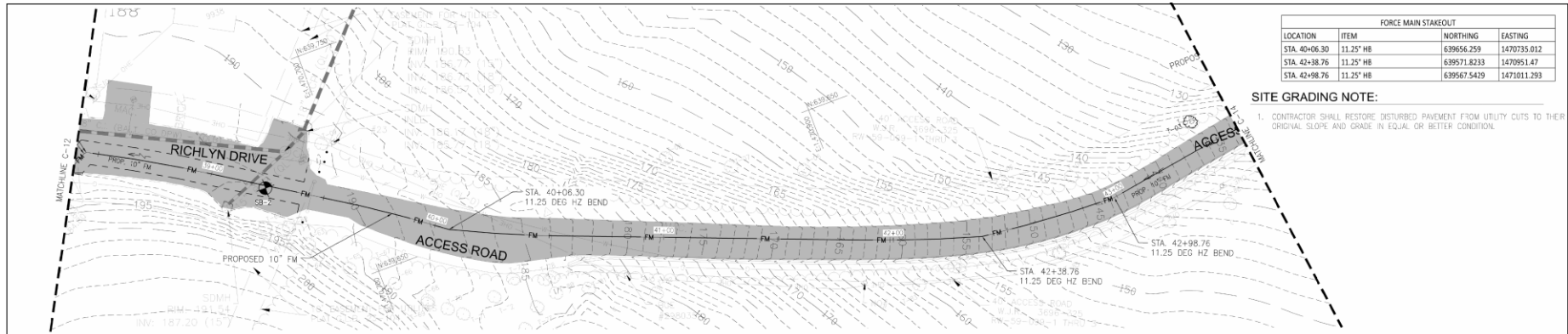
E2CR, INC.

**Richlyn Manor Force Main
Proposed Construction & Boring Location Plan
STA 33+50 to STA 38+50**

FIGURE: 12
DATE: January 2024

DRAWN BY: MK
JOB NO.: 22542-04

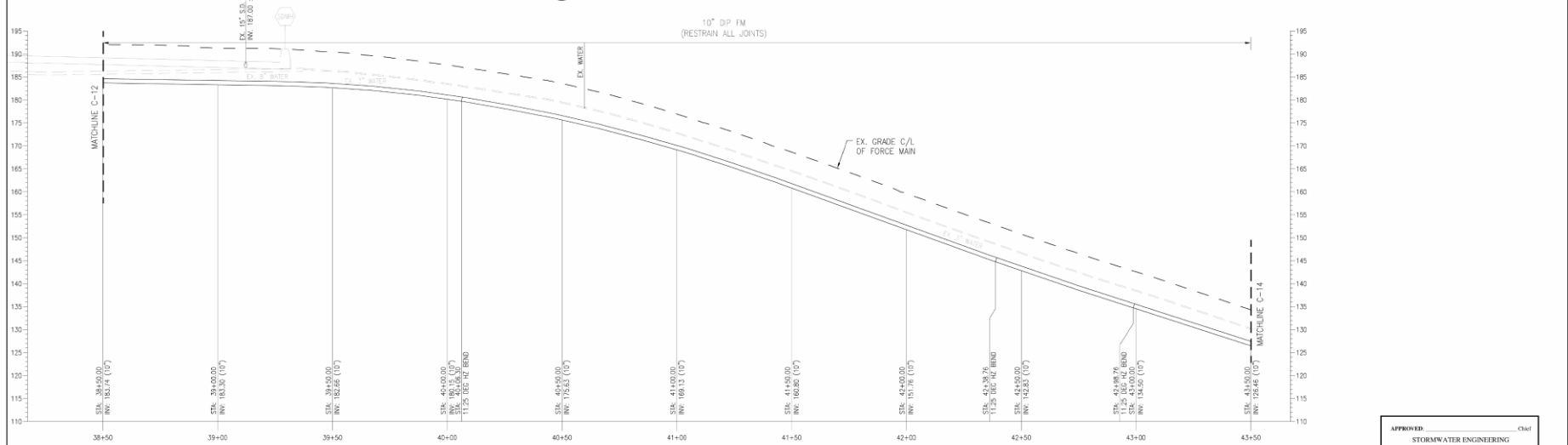
CHECKED BY: NS
SCALE: NTS




FORCE MAIN STAKEOUT			
LOCATION	ITEM	NORTHING	EASTING
STA. 40+06.30	11.25° HB	639556.259	1470735.012
STA. 42+38.76	11.25° HB	639571.8233	1470951.47
STA. 42+98.76	11.25° HB	639567.5429	1471011.293

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

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



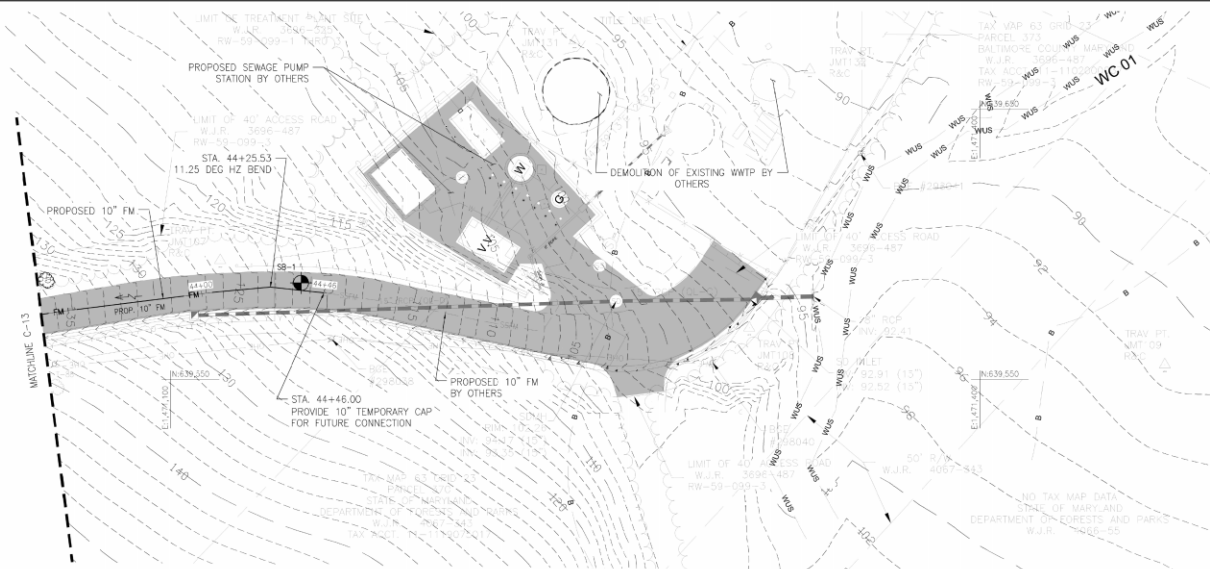
PROFILE: STA. 38+50 TO STA. 43+50
 HORIZ. 1"=20'
 VERT. 1"=10'

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



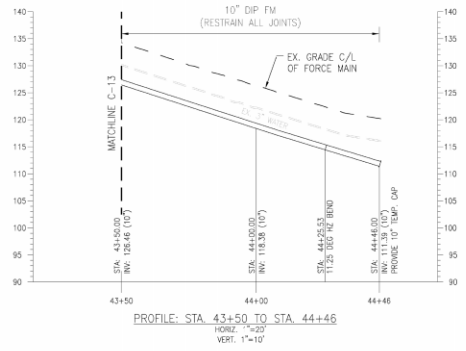
PROFESSIONAL ENGINEER Proposed Construction Courtesy of JMT	S-BUILT / REVISION BY DATE P.A. NO. KEY SHEET POSITION SHEET R.O.V. NO.	DRAWING SCALE PLAN SCALE: AS SHOWN PROFILE SCALE: 1"=10' SEE DRAWING 2003-XXXX FOR ORIGINAL SIGNATURES	BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN PLAN & PROFILE STA. 38+50 TO STA. 43+50	SHEET DESIGNATION: C-13 CONTRACT NUMBER: XXXXXXXX PROJ. NO.: J-16000060 SHEET X OF DRAWING NUMBER FILE NO.: 25
	REVIEWED BY: SITE REVIEWED:	DRAWING NO. 2003-XXXX FOR ORIGINAL SIGNATURES SUBDIVISION: 0030 PERRY HALL, MD	MARYLAND COORDINATE SYSTEM HORIZONTAL - NAD 83/2011 VERTICAL - NAVD 83 COUNCILMANS DIST. NO.: 5 ELECTION DIST. NO.: 11	BALTIMORE COUNTY MARYLAND

E2CR, INC.	Richlyn Manor Force Main Proposed Construction & Boring Location Plan STA 38+50 to STA 43+50	FIGURE: 13 DATE: January 2024	DRAWN BY: MK JOB NO.: 22542-04	CHECKED BY: NS SCALE: NTS
-------------------	--	----------------------------------	-----------------------------------	------------------------------



FORCE MAIN TAKEOUT			
LOCATION	ITEM	NORTHING	EASTING
STA. 44+25.73	11.25" HB	639584.2559	1471136.913

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



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

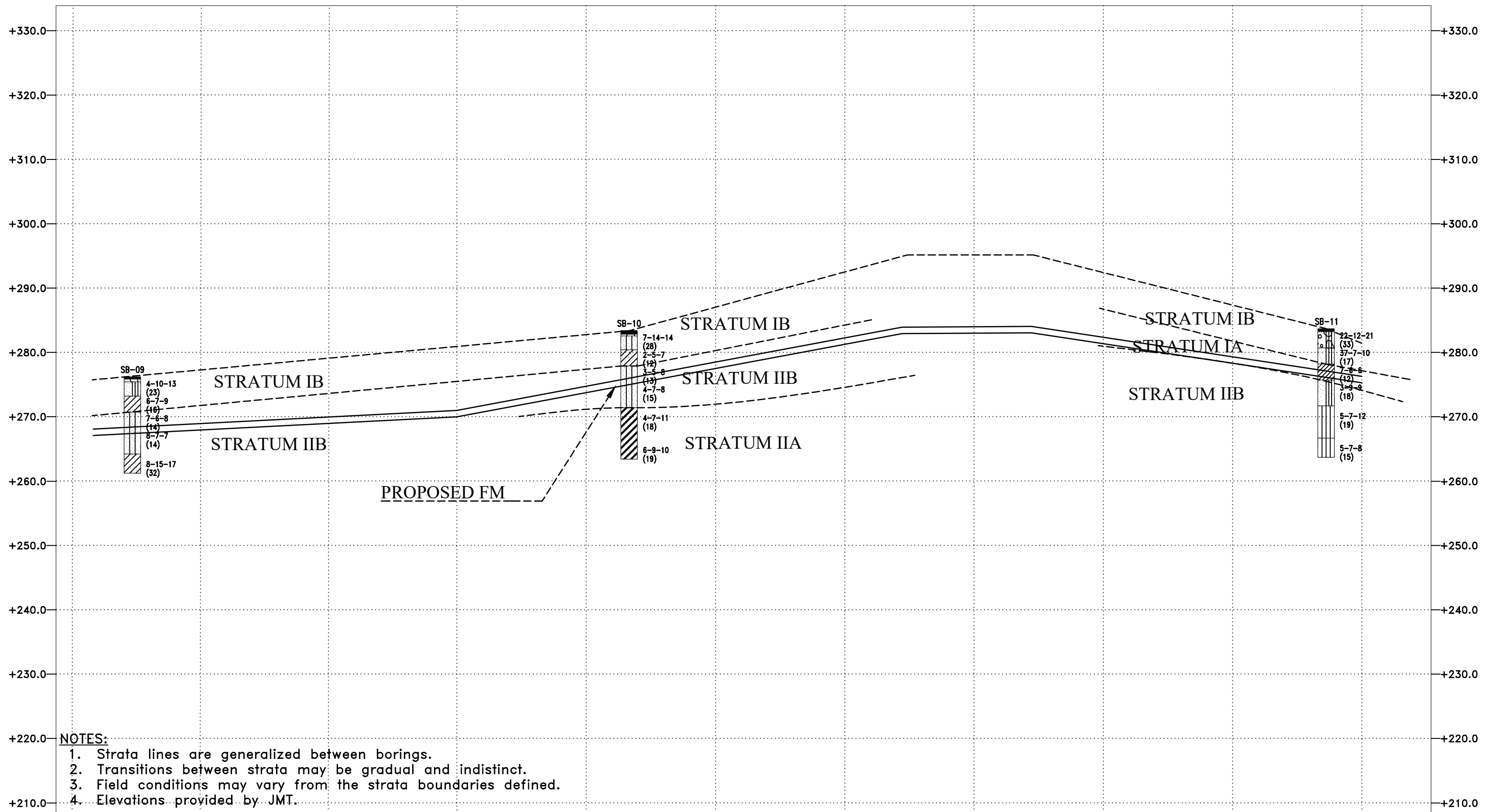
Proposed Construction
 Courtesy of JMT

S-BUILT / REVISION	BY	DATE	F.W.A. NO.	KEY SHEET POSITION SH	DRAWING SCALE	DWP AND TRANSPORTATION
					PLAN SCALE: AS SHOWN	
					PROFILE SCALE: 1/4"=1'-0"	SEE DRAWING 2002-XXXX FOR ORIGINAL SIGNATURES
						SEE DRAWING 2002-XXXX 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. 43+50 TO STA. 44+46
 SUBDIVISION: 0030 PERRY HALL, MD
 COUNCILMANIC DIST. NO: 5
 ELECTION DIST. NO: 11

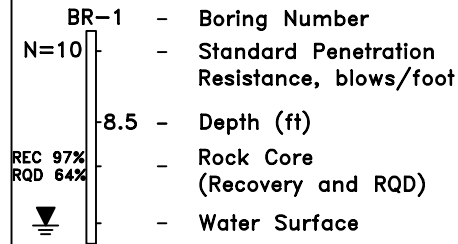
SHEET DESIGNATION	CONTRACT NUMBER
C-14	XXXXXX
	PROJ. NO. J-10000060
	SHEET X OF
	DRAWING NUMBER
	FILE NO.

E2CR, INC.	Richlyn Manor Force Main	FIGURE: 14	DRAWN BY: MK	CHECKED BY: NS
	Proposed Construction & Boring Location Plan STA 43+50 to STA 44+46	DATE: January 2024	JOB NO.: 22542-04	SCALE: NTS



- NOTES:**
1. Strata lines are generalized between borings.
 2. Transitions between strata may be gradual and indistinct.
 3. Field conditions may vary from the strata boundaries defined.
 4. Elevations provided by JMT.

LEGEND

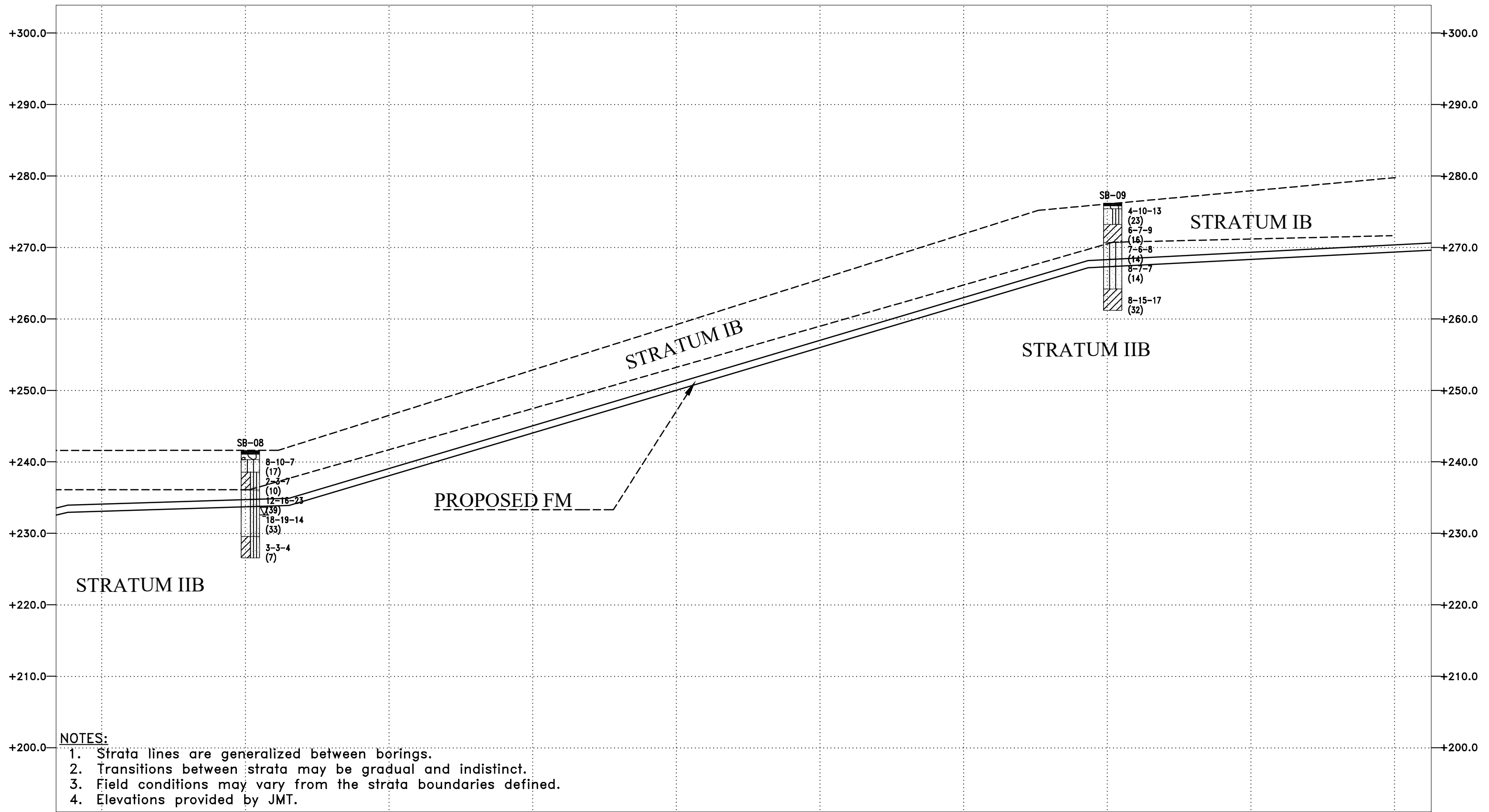


- STRATUM IA - FILL (Clay)
- STRATUM IB - FILL (Sand)
- STRATUM IIA - Residual (Clay/Silt)
- STRATUM IIB - Residual (Sand/Silt)

E2CR, INC.
 161
 SP - 144

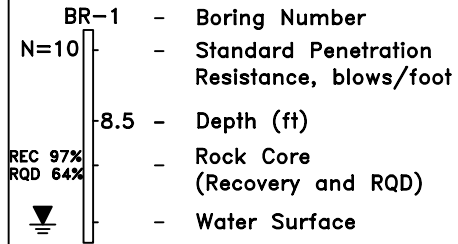
Richlyn Manor Force Main
 FIGURE 15: GENERALIZED SUBSURFACE PROFILE
 FORGE ROAD

DRAWN BY: MK	CHECKED BY: NS
JOB NO.: 22542-04	DATE: January 2024



- NOTES:**
1. Strata lines are generalized between borings.
 2. Transitions between strata may be gradual and indistinct.
 3. Field conditions may vary from the strata boundaries defined.
 4. Elevations provided by JMT.

LEGEND

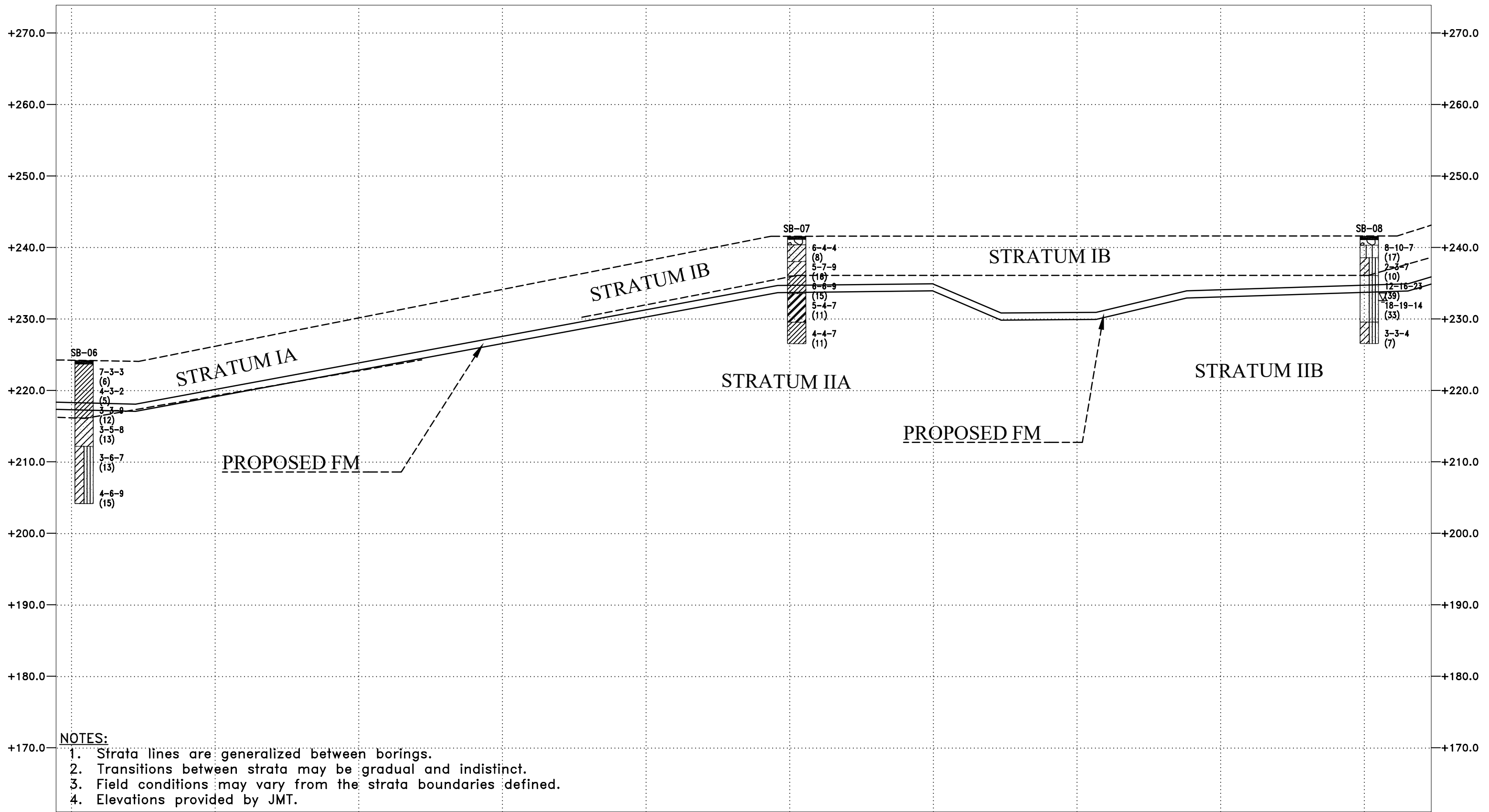


- STRATUM IA - FILL (Clay)
- STRATUM IB - FILL (Sand)
- STRATUM IIA - Residual (Clay/Silt)
- STRATUM IIB - Residual (Sand/Silt)

E2CR, INC.
162
SP - 145

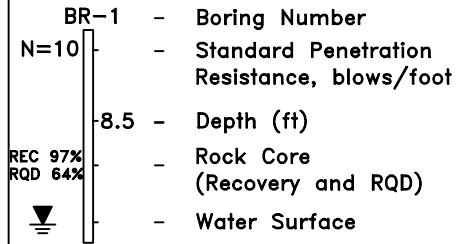
Richlyn Manor Force Main
FIGURE 16: GENERALIZED SUBSURFACE PROFILE
RICHLYN DRIVE

DRAWN BY: MK	CHECKED BY: NS
JOB NO.: 22542-04	DATE: January 2024



- NOTES:**
1. Strata lines are generalized between borings.
 2. Transitions between strata may be gradual and indistinct.
 3. Field conditions may vary from the strata boundaries defined.
 4. Elevations provided by JMT.

LEGEND

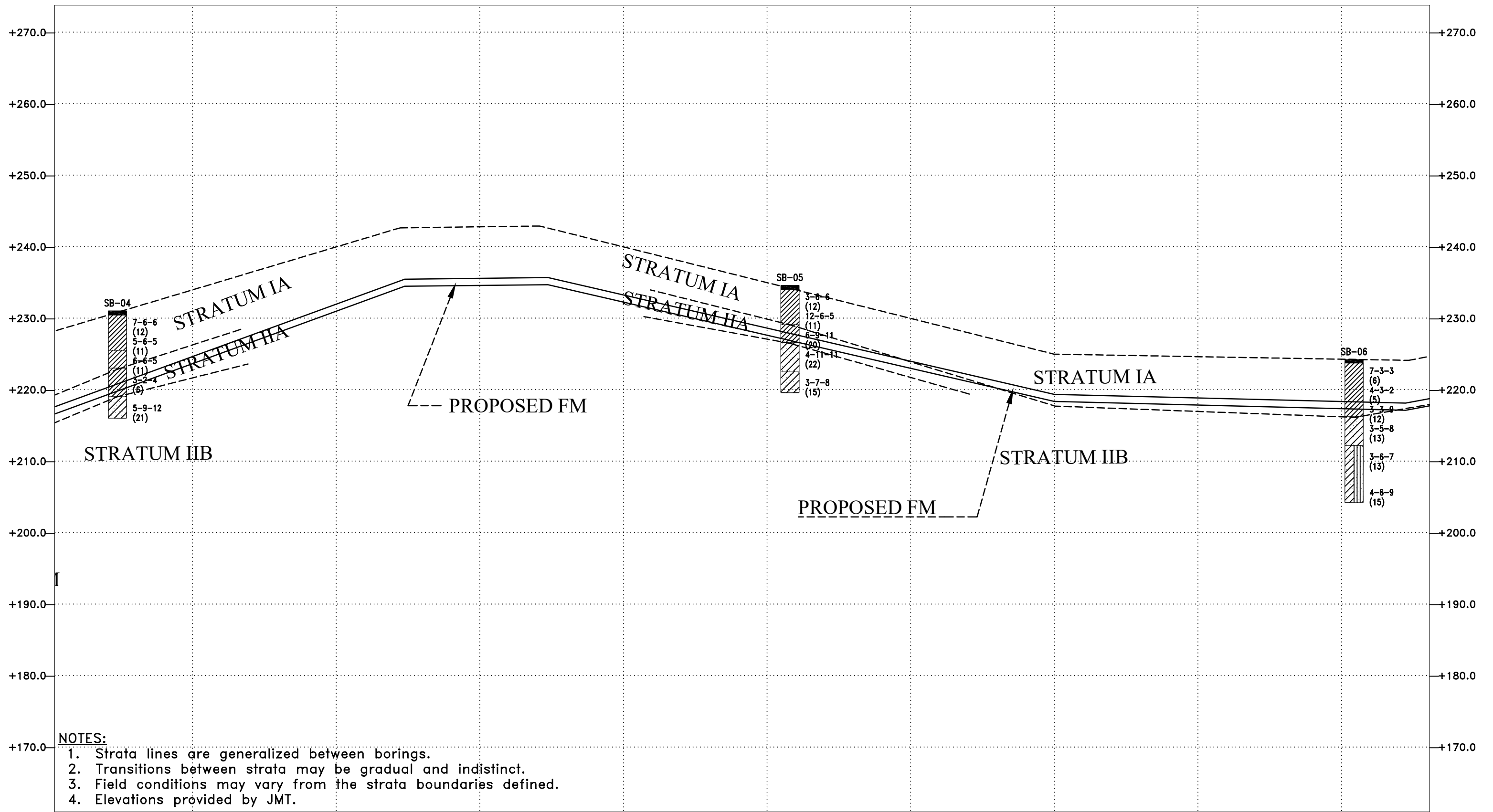


- | | | |
|-------------|---|----------------------|
| STRATUM IA | - | FILL (Clay) |
| STRATUM IB | - | FILL (Sand) |
| STRATUM IIA | - | Residual (Clay/Silt) |
| STRATUM IIB | - | Residual (Sand/Silt) |

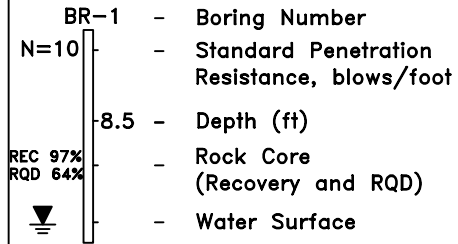
E2CR, INC.
 163
 SP - 146

Richlyn Manor Force Main
FIGURE 17: GENERALIZED SUBSURFACE PROFILE
 RICHLYN DRIVE

DRAWN BY: MK	CHECKED BY: NS
JOB NO.: 22542-04	DATE: January 2024



LEGEND

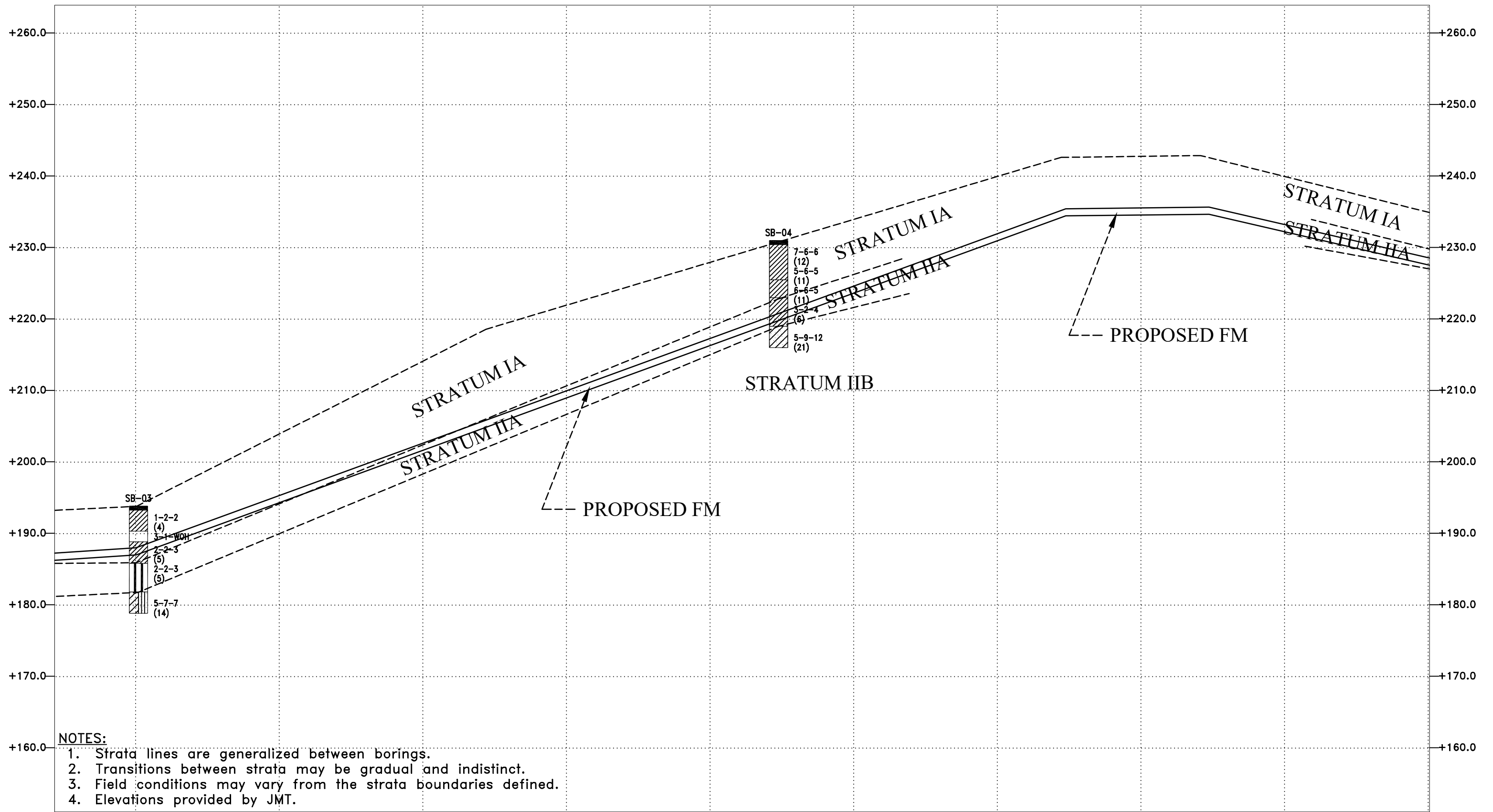


- STRATUM IA - FILL (Clay)
- STRATUM IB - FILL (Sand)
- STRATUM IIA - Residual (Clay/Silt)
- STRATUM IIB - Residual (Sand/Silt)

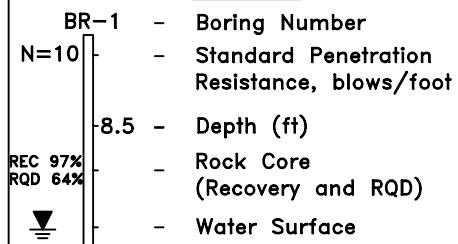
E2CR, INC.
 164
 SP - 147

Richlyn Manor Force Main
FIGURE 18: GENERALIZED SUBSURFACE PROFILE
 RICHLYN DRIVE

DRAWN BY: MK	CHECKED BY: NS
JOB NO.: 22542-04	DATE: January 2024



LEGEND

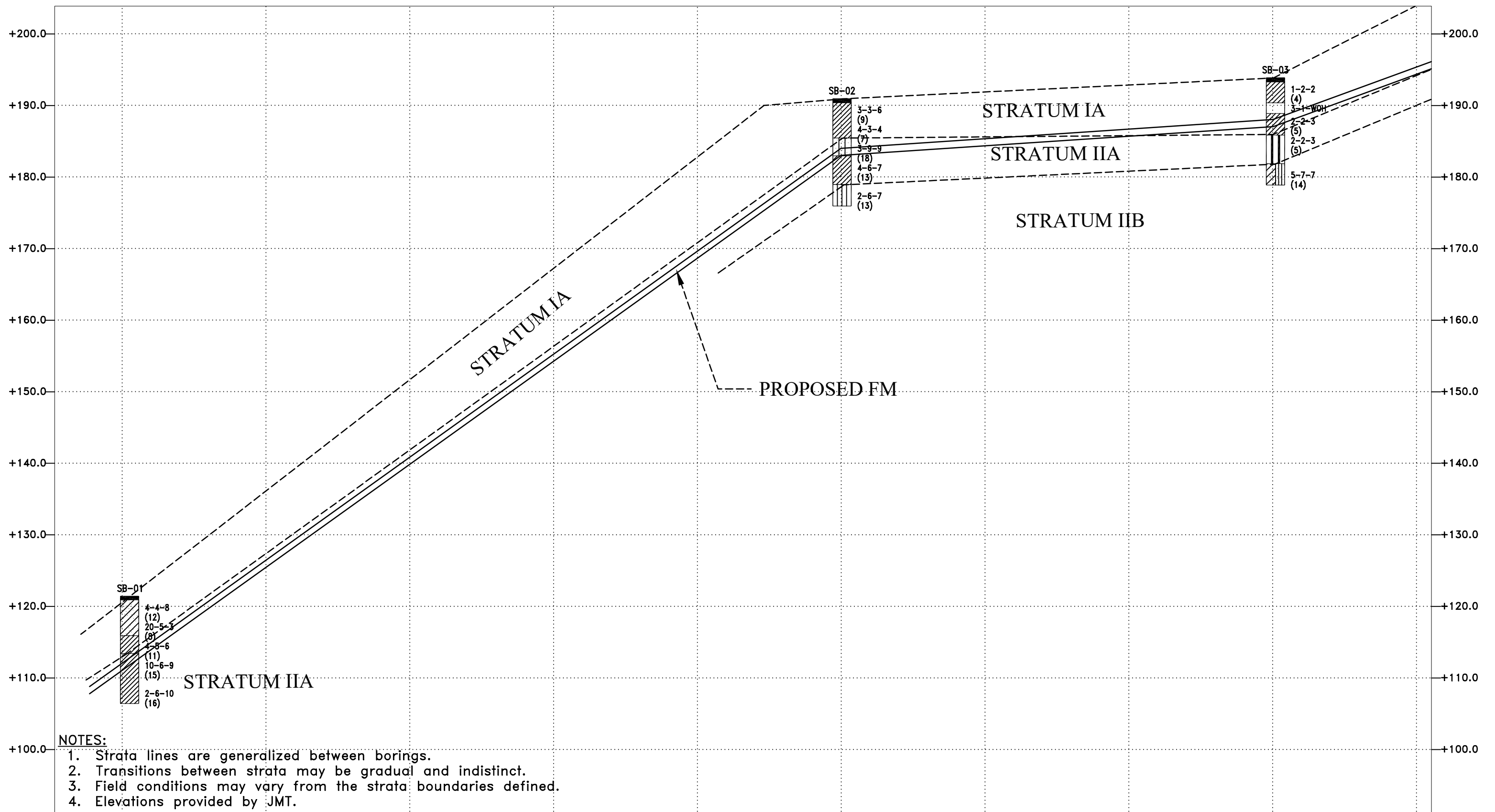


- STRATUM IA - FILL (Clay)
- STRATUM IB - FILL (Sand)
- STRATUM IIA - Residual (Clay/Silt)
- STRATUM IIB - Residual (Sand/Silt)

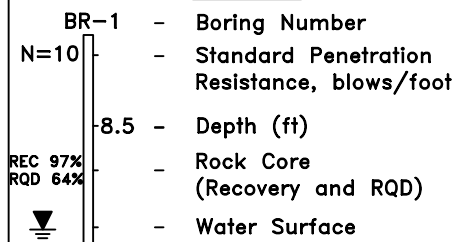
E2CR, INC.
 165
 SP - 148

Richlyn Manor Force Main
FIGURE 19: GENERALIZED SUBSURFACE PROFILE
 RICHLYN DRIVE

DRAWN BY: MK	CHECKED BY: NS
JOB NO.: 22542-04	DATE: January 2024



LEGEND

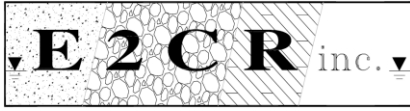


- STRATUM IA - FILL (Clay)
- STRATUM IB - FILL (Sand)
- STRATUM IIA - Residual (Clay/Silt)
- STRATUM IIB - Residual (Sand/Silt)

E2CR, INC.
 166
 SP - 149

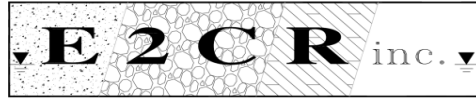
Richlyn Manor Force Main
FIGURE 20: GENERALIZED SUBSURFACE PROFILE
 RICHLYN DRIVE

DRAWN BY: MK	CHECKED BY: NS
JOB NO.: 22542-04	DATE: January 2024



APPENDIX B

BORING LOGS



BORING SUMMARY

Richlyn Manor Force Main
E2CR Project No. 22542-04

TABLE B-1

Boring No.	Coordinates ¹		Elevation ¹ (ft)	Boring Depth ² (ft)	Pavement Section		Groundwater Depth ² (ft)	
	Northing (ft)	Easting (ft)			Asphalt	GAB	Encountered	Extended
SB-01	639585.807	1471148.329	121.43	15.00	6.00	5.0	-	-
SB-02	639701.1949	1470666.515	190.94	15.00	7.00	6.0	-	-
SB-03	639730.315	1470366.372	193.86	15.00	7.00	5.0	-	-
SB-04	639389.1289	1470079.544	231.01	15.00	7.00	5.0	-	-
SB-05	639055.5708	1469751.047	234.68	15.00	7.00	6.0	-	-
SB-06	638767.9413	1469483.474	224.31	20.00	6.00	2.0	-	-
SB-07	638404.8038	1469145.434	241.76	15.00	5.00	9.0	-	-
SB-08	638117.6664	1468869.005	241.78	15.00	6.00	9.0	9.0	-
SB-09	637628.4095	1468521.095	276.43	15.00	4.50	5.0	-	-
SB-10	637632.1019	1468135.293	283.4	20.00	7.00	3.0	-	-
SB-11	637679.9061	1467598.251	283.69	20.00	5.00	1.0	-	-

1. Elevations and coordinates were provided by JMT
2. Boring depth measured from the existing ground surface

REFERENCE NOTES FOR BORING LOGS (USCS per ASTM D-2487, D-2488)

Drilling and Sampling:

DS – Driven Spoon	RB – Rock Bit Drilling
ST – Shelby Tube Sampler	BS – Bulk Sample of Cuttings
RC – Rock Core	PA – Power Auger (no sample)
DC – Driven Casing	HSA – Hollow Stem Auger
PM – Pressuremeter	WS – Wash Sample
DCP – Dynamic Cone Penetrometer	PS – Piston Sampler
MD – Mud Drilling	GS – Grab Sample of Cuttings

Standard Penetration Tes (SPT): Driving a 2" O.D., 1-3/8" I.D., split spoon sampler a distance of 1.0 foot into undisturbed soil with a 140 lb hammer falling 30 inches. It is customary to drive the spoon 6 inches to seat into undisturbed soil, and then perform the test. The number of hammer blows for seating the spoon and making the test recorded for each 6 inches of penetration on the boring log (Example 6-8-9). The standard penetration test value (N-Value) is obtained by adding the last two figures (i.e. 8+9=17 blows per foot). (ASTM D-1586).

Strata Changes: In the column "Soil Descriptions", on the boring log, the horizontal lines represent strata changes. The transitions between strata may be gradual and indistinct.

Groundwater: Observations were made at the times indicated. Porosity of soil strata, weather conditions, site topography, etc. may cause changes in the water levels indicated on the logs.

Correlation of Penetration Resistance to Soil Properties:

Relative Density of Coarse Grained Soils		Consistency of Fine Grained Soils		
Classification	N-Value	Classification	N-Value	Undrained Shear Strength (lb/ft ²)
Very Loose	< 5	Very Soft	<2	< 250
Loose	5 – 10	Soft	2 – 4	250 – 500
Medium Dense	10 – 30	Medium Stiff	4 – 8	500 – 1000
Dense	30 – 50	Stiff	8 – 15	1000 – 2000
Very Dense	> 50	Very Stiff	15 – 30	2000 – 4000
		Hard	> 30	> 4000

Relative Proportions:

<u>Estimated Relative Moisture Condition:</u>		<u>Relative Proportions:</u>	
Dry	- Absence of moisture, dusty, dry to the touch	trace	0 – 15%
Slightly Moist	- Some moisture, but still has a dry appearance	with	15 – 30%
Moist	- Damp, but no visible water	Prefix	30 – 49%
Very Moist	- Enough moisture to wet hands		
Wet	- Saturated; Visible free water, usually soil is below water table		

Relative Hardness of Rock:

Extremely Soft	- Pieces 1 inch or more in thickness can be broken by finger pressure; can be scratched readily by fingernail.
Very Soft	- May be broken with fingers; can cut with a knife.
Soft	- May be scratched with a nail; corners and edges may be broken with fingers.
Moderately Hard	- One moderate blow of hammer required to break sample.
Hard	- More than one blow of hammer required to break sample.
Extremely Hard	- Several hard blows of hammer required to break sample.

Relative Quality of Rocks:

Quality	RQD
Very Poor	0 – 25%
Poor	25 – 50%
Fair	50 – 75%
Good	75 – 90%
Excellent	90 – 100%

RQD = Rock Quality Designation



CLIENT JMT
PROJECT NUMBER 22542-04
DATE STARTED 12-11-2023 **COMPLETED** 12-11-2023
DRILLING CONTRACTOR E2CR, Inc.
DRILLING METHOD HSA
EQUIPMENT
HOLE SIZE 3.3 in.
LOGGED BY C. McClain **CHECKED BY**

PROJECT NAME Richlyn Manor Pumping Station
PROJECT LOCATION Perry Hall, MD
POSITION Lat.: 13.304296° Long.: -121.711309°
GROUND ELEVATION 121.43 ft **FINAL DEPTH** 15.00 ft
GROUNDWATER LEVELS:
 AT TIME OF DRILLING
 AT END OF DRILLING
 AFTER DRILLING

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	RECOVERY %	REMARKS
			Asphalt 6"				Offset 5' down the road
			Green, brown, gray, moist, loose, Clayey SAND, contains pieces of Asphalt (SC) (FILL)	SPT S-1	4-4-8 (12)		
5	117		Green, orange brown, gray, moist, stiff, Sandy LEAN CLAY (CL) (possible FILL)	SPT S-2	20-5-3 (8)	22	
			Green, greenish brown, moist, stiff, Gravelly LEAN CLAY (CL)	SPT S-3	4-5-6 (11)	89	
10	112			SPT S-4	10-6-9 (15)	89	
15	107		Terminated at 15.00 ft.	SPT S-5	2-6-10 (16)	28	
20	102						
25	97						
	92						

NOTES



CLIENT JMT
PROJECT NUMBER 22542-04
DATE STARTED 02-11-2023 **COMPLETED** 12-11-2023
DRILLING CONTRACTOR E2CR, Inc.
DRILLING METHOD HSA
EQUIPMENT
HOLE SIZE 3.3 in.
LOGGED BY C. McClain **CHECKED BY**

PROJECT NAME Richlyn Manor Pumping Station
PROJECT LOCATION Perry Hall, MD
POSITION Lat.: 13.299935° Long.: -121.710267°
GROUND ELEVATION 190.94 ft **FINAL DEPTH** 15.00 ft
GROUNDWATER LEVELS:
 AT TIME OF DRILLING
 AT END OF DRILLING
 AFTER DRILLING

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	RECOVERY %	REMARKS
			Asphalt 7"				Offset 4' towards middle of the road Chattering at 5.0'
			Green, brown, black, moist, medium stiff, Sandy LEAN CLAY with Gravel (CL) (FILL)	SPT S-1	3-3-6 (9)		
5	186		Orange, green, greenish brown, black, moist, medium dense, Silty SAND (SM)	SPT S-2	4-3-4 (7)		
			Green, brownish green, moist, stiff, Sandy LEAN CLAY with Gravel (CL)	SPT S-3	3-9-9 (18)		
10	181		Green, brownish green, moist, stiff, Sandy LEAN CLAY with Gravel (CL)	SPT S-4	4-6-7 (13)		
			Orange, green, white, black, brown, stiff, Sandy SILT (ML) (Residual)	SPT S-5	2-6-7 (13)		
15	176		Terminated at 15.00 ft.				
20	171						
25	166						

NOTES



CLIENT JMT
PROJECT NUMBER 22542-04
DATE STARTED 12-11-2023 **COMPLETED** 12-11-2023
DRILLING CONTRACTOR E2CR, Inc.
DRILLING METHOD HSA
EQUIPMENT
HOLE SIZE 3.3 in.
LOGGED BY C. McClain **CHECKED BY**

PROJECT NAME Richlyn Manor Pumping Station
PROJECT LOCATION Perry Hall, MD
POSITION Lat.: 13.297220° Long.: -121.710012°
GROUND ELEVATION 193.86 ft **FINAL DEPTH** 15.00 ft
GROUNDWATER LEVELS:
 AT TIME OF DRILLING
 AT END OF DRILLING
 AFTER DRILLING

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	RECOVERY %	REMARKS
		Asphalt 7"					
		Dark brown, greenish brown, moist, soft, Sandy LEAN CLAY with Gravel (CL) (FILL)		SPT S-1	1-2-2 (4)	67	
		No Recovery		SPT S-2	3-1-WOH	0	
5	189	Green, dark brown, moist, soft, Sandy LEAN CLAY with Gravel (CL) (FILL)		SPT S-3	2-2-3 (5)	33	
		Orange, orange brown, very moist, soft, Sandy Elastic SILT (MH)		SPT S-4	2-2-3 (5)	100	
10	184	Dark gray, orange, green, gray, brown, moist, medium dense, Silty Clayey SAND (SC-SM) (Residual)		SPT S-5	5-7-7 (14)	100	
15	179	Terminated at 15.00 ft.					
20	174						
25	169						
	164						

NOTES



CLIENT JMT
PROJECT NUMBER 22542-04
DATE STARTED 12-11-2023 **COMPLETED** 12-11-2023
DRILLING CONTRACTOR E2CR, Inc.
DRILLING METHOD HSA
EQUIPMENT
HOLE SIZE 3.3 in.
LOGGED BY C. McClain **CHECKED BY**

PROJECT NAME Richlyn Manor Pumping Station
PROJECT LOCATION Perry Hall, MD
POSITION Lat.: 13.294643° Long.: -121.713175°
GROUND ELEVATION 231.01 ft **FINAL DEPTH** 15.00 ft
GROUNDWATER LEVELS:
 AT TIME OF DRILLING
 AT END OF DRILLING
 AFTER DRILLING






DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	RECOVERY %	REMARKS
			Asphalt 7"				
			Dark brown, orange, green, stiff, medium dense, Lean CLAY with Sand (CL) (FILL)	SPT S-1	7-6-6 (12)	44	
5	227		Greenish brown, brown, black, moist, stiff, Sandy Lean CLAY (CL) (possible FILL)	SPT S-2	5-6-5 (11)	89	
			Green, orange brown, gray, moist, medium stiff, Sandy LEAN CLAY with Gravel (CL)	SPT S-3	6-6-5 (11)	67	
10	222		Dark brown, grayish brown, green, gray, moist, medium dense, Clayey SAND with Rock fragments (SC) (Residual)	SPT S-4	3-2-4 (6)	67	
							Chattering at 12.0'
15	217		Terminated at 15.00 ft.	SPT S-5	5-9-12 (21)	83	
	212						
20							
	207						
25							
	202						

NOTES



CLIENT JMT
PROJECT NUMBER 22542-04
DATE STARTED 12-11-2023 **COMPLETED** 12-11-2023
DRILLING CONTRACTOR E2CR, Inc.
DRILLING METHOD HSA
EQUIPMENT
HOLE SIZE 3.3 in.
LOGGED BY C. McClain **CHECKED BY**

PROJECT NAME Richlyn Manor Pumping Station
PROJECT LOCATION Perry Hall, MD
POSITION Lat.: 13.291689° Long.: -121.716270°
GROUND ELEVATION 234.68 ft **FINAL DEPTH** 15.00 ft
GROUNDWATER LEVELS:
 AT TIME OF DRILLING
 AT END OF DRILLING
 AFTER DRILLING

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	RECOVERY %	REMARKS	
			Asphalt 7.0"					
			Green, greenish brown, moist, stiff, Sandy LEAN CLAY (CL) (FILL)	 SPT S-1	3-6-6 (12)	83		
5	230		Dark brown, brown, greenish brown, moist, very stiff, Sandy LEAN CLAY (CL)	 SPT S-2	12-6-5 (11)	44		
			Brown, greenish brown, black, moist, medium dense, Clayey SAND with Rock fragments (SC) (Residual)	 SPT S-3	6-9-11 (20)	89		
10	225		Brown, greenish brown, black, moist, medium dense, Clayey SAND with Rock fragments (SC) (Residual)	 SPT S-4	4-11-11 (22)	89		
			Green, greenish brown, orange, black, moist, medium dense, Clayey SAND with Rock fragments (SC) (Residual)	 SPT S-5	3-7-8 (15)	89		
15	220		Terminated at 15.00 ft.					
20	215							
25	210							
	205							

NOTES



CLIENT JMT
 PROJECT NUMBER 22542-04
 DATE STARTED 12-11-2023 COMPLETED 12-11-2023
 DRILLING CONTRACTOR E2CR, Inc.
 DRILLING METHOD HSA
 EQUIPMENT _____
 HOLE SIZE 3.3 in.
 LOGGED BY C. McClain CHECKED BY _____

PROJECT NAME Richlyn Manor Pumping Station
 PROJECT LOCATION Perry Hall, MD
 POSITION Lat.: 13.289283° Long.: -121.718937°
 GROUND ELEVATION 224.31 ft FINAL DEPTH 20.00 ft
 GROUNDWATER LEVELS: _____
 AT TIME OF DRILLING _____
 AT END OF DRILLING _____
 AFTER DRILLING _____

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	RECOVERY %	REMARKS
			Asphalt 6"				
			Green, greenish brown, moist, soft to stiff, Lean CLAY (CL) (FILL)		7-3-3 (6)	67	
5	220		Orange brown, tan, white, black, moist, medium dense, Clayey SAND (SC) (Residual)		4-3-2 (5)	33	
10	215		Orange brown, light brown, gray, moist, medium dense, Silty Clayey SAND, trace Rock fragments (SC-SM) (Residual)		3-3-9 (12)	89	
15	210		Orange brown, light brown, gray, moist, medium dense, Silty Clayey SAND, trace Rock fragments (SC-SM) (Residual)		3-5-8 (13)	72	
20	205		Orange brown, light brown, gray, moist, medium dense, Silty Clayey SAND, trace Rock fragments (SC-SM) (Residual)		3-6-7 (13)	89	
20	205		Terminated at 20.00 ft.		4-6-9 (15)	89	
25	200						
	195						

NOTES



CLIENT JMT
PROJECT NUMBER 22542-04
DATE STARTED 12-11-2023 **COMPLETED** 12-11-2023
DRILLING CONTRACTOR E2CR, Inc.
DRILLING METHOD HSA
EQUIPMENT CME-55 Red Dragon
HOLE SIZE 3.3 in.
LOGGED BY M. Karimpour **CHECKED BY**

PROJECT NAME Richlyn Manor Pumping Station
PROJECT LOCATION Perry Hall, MD
POSITION Lat.: 13.286244° Long.: -121.722305°
GROUND ELEVATION 241.76 ft **FINAL DEPTH** 15.00 ft
GROUNDWATER LEVELS:
 AT TIME OF DRILLING
 AT END OF DRILLING
 AFTER DRILLING

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	RECOVERY %	REMARKS
			Asphalt 5"				Bulk bag obtained 1.0'-7.0'
			Gravel Base 9"				
			Dark brown, greenish brown, moist, loose, Clayey SAND, trace Gravel (SC) (FILL)		SPT S-1 6-4-4 (8)	100	
5	237		Dark brown, reddish brown, dark red, moist, medium dense, Clayey SAND, trace Gravel (SC) (FILL)		SPT S-2 5-7-9 (16)	100	
			Light gray, tan, light brown, moist, stiff, Lean CLAY with Sand (CL)		SPT S-3 6-6-9 (15)	100	
10	232		Red, gray, pink, moist, stiff, Fat CLAY with Sand (CH)		SPT S-4 5-4-7 (11)	100	S-4: PP=2.0tsf, TV=0.8tsf
15	227		Orange brown, yellow, yellowish brown, moist, stiff, LEAN CLAY with Sand (CL)		SPT S-5 4-4-7 (11)	100	S-5: PP=2.5tsf, TV=1.0tsf
			Terminated at 15.00 ft.				
20	222						
25	217						
	212						

NOTES



CLIENT JMT
PROJECT NUMBER 22542-04
DATE STARTED 12-11-2023 **COMPLETED** 12-11-2023
DRILLING CONTRACTOR E2CR, Inc.
DRILLING METHOD HSA
EQUIPMENT CME-55 Red Dragon
HOLE SIZE 3.3 in.
LOGGED BY M. Karimpour **CHECKED BY**

PROJECT NAME Richlyn Manor Pumping Station
PROJECT LOCATION Perry Hall, MD
POSITION Lat.: 13.283758° Long.: -121.724968°
GROUND ELEVATION 241.78 ft **FINAL DEPTH** 15.00 ft
GROUNDWATER LEVELS:
 ▽ **AT TIME OF DRILLING** 9.00 ft Water on rods
 ▼ **AT END OF DRILLING** Not encountered. Caved: 9.9'
 ▽ **AFTER DRILLING**

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	RECOVERY %	REMARKS
			Asphalt 6"				
			Gravel Base 9"				
			Light gray, light brown, tan, moist, medium dense, Silty SAND with Gravel (SM) (FILL)	SPT S-1	8-10-7 (17)	83	Bulk bag obtained 1.0'-7.0'
			Dark brown, greenish brown, moist, medium dense, Silty Clayey SAND with Gravel (SC-SM) (FILL)	SPT S-2	2-3-7 (10)	100	
5	237		White, gray, tan, moist, dense, poorly graded SAND with Silt and Gravel (SP-SM)	SPT S-3	12-16-23 (39)	100	
			White, gray, tan, moist, dense, poorly graded SAND with Silt and Gravel (SP-SM)	SPT S-4	18-19-14 (33)	100	
10	232		Red, orange, yellow, brown, moist, loose, Silty Clayey SAND (SC-SM) (Residual)	SPT S-5	3-3-4 (7)	100	
15	227		Terminated at 15.00 ft.				Wet cuttings from 12.0'
20	222						
25	217						
	212						

NOTES



CLIENT JMT
PROJECT NUMBER 22542-04
DATE STARTED 12-11-2023 **COMPLETED** 12-11-2023
DRILLING CONTRACTOR E2CR, Inc.
DRILLING METHOD HSA
EQUIPMENT CME-55 Red Dragon
HOLE SIZE 3.3 in.
LOGGED BY M. Karimpour **CHECKED BY**

PROJECT NAME Richlyn Manor Pumping Station
PROJECT LOCATION Perry Hall, MD
POSITION Lat.: 13.280636° Long.: -121.729500°
GROUND ELEVATION 276.43 ft **FINAL DEPTH** 15.00 ft
GROUNDWATER LEVELS:
 ▽ **AT TIME OF DRILLING** Not encountered
 ▼ **AT END OF DRILLING** Not encountered. Caved: 12.5'
 ▽ **AFTER DRILLING**

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	RECOVERY %	REMARKS
			Asphalt 4.5"				
			Gravel Base 5"				
			Red, orange, brown, moist, medium dense, poorly graded SAND with Silt and Gravel (SP-SM) (FILL)		4-10-13 (23)	89	Bulk bag obtained 1.0-7.0'
	272		Brown, orange, reddish brown, moist, medium dense, Clayey SAND with Gravel (SC) (FILL)		6-7-9 (16)	100	
	5		Red, reddish brown, orange, moist, medium dense, Silty SAND (SM)		7-6-8 (14)	100	
	267		Dark red, reddish brown, moist, dense, Clayey SAND (SC) (Residual)		8-7-7 (14)	100	
	15		Terminated at 15.00 ft.		8-15-17 (32)	0	
	257						
	20						
	252						
	25						
	247						

NOTES



BOREHOLE NUMBER SB-10

Sheet 1 of 1

CLIENT JMT
PROJECT NUMBER 22542-04
DATE STARTED 12-07-2023 **COMPLETED** 12-07-2023
DRILLING CONTRACTOR E2CR, Inc.
DRILLING METHOD HSA
EQUIPMENT CME-55 Red Dragon
HOLE SIZE 3.3 in.
LOGGED BY M. Karimpour **CHECKED BY**

PROJECT NAME Richlyn Manor Pumping Station
PROJECT LOCATION Perry Hall, MD
POSITION Lat.: 13.277148° Long.: -121.729485°
GROUND ELEVATION 283.40 ft **FINAL DEPTH** 20.00 ft
GROUNDWATER LEVELS:
 ▽ **AT TIME OF DRILLING** Not encountered
 ▼ **AT END OF DRILLING** Not encountered
 ▼ **AFTER DRILLING**

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	RECOVERY %	REMARKS
			Asphalt 7"				Bulk bag obtained 1.0'-7.0' Hard drilling from 1.0' to 1.5' due to possible Asphalt layer
			Gravel Base 3" Dark gray, black, moist, medium dense, Silty SAND (SM) (FILL)	SPT S-1	7-14-14 (28)	100	
5	279		Red, reddish brown, moist, medium dense, Clayey SAND (SC) (FILL)	SPT S-2	2-5-7 (12)	100	
			Red, dark red, reddish brown, moist, medium dense, Silty SAND (SM) (Residual)	SPT S-3	3-5-8 (13)	100	
10	274		Red, dark red, reddish brown, moist, medium dense, Silty SAND (SM) (Residual)	SPT S-4	4-7-8 (15)	100	
15	269		Tan, gray, white, yellow, moist, very stiff, Sandy Fat CLAY (CH) (Residual)	SPT S-5	4-7-11 (18)	100	
20	264		Terminated at 20.00 ft.	SPT S-6	6-9-10 (19)	0	S-6: No recovery after multiple attempts. Sample collected from auger head.
25	259						
	254						

NOTES

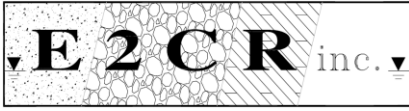


CLIENT JMT
PROJECT NUMBER 22542-04
DATE STARTED 12-07-2023 **COMPLETED** 12-07-2023
DRILLING CONTRACTOR E2CR, Inc.
DRILLING METHOD HSA
EQUIPMENT CME-55 Red Dragon
HOLE SIZE 3.3 in.
LOGGED BY M. Karimpour **CHECKED BY**

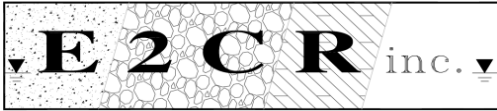
PROJECT NAME Richlyn Manor Pumping Station
PROJECT LOCATION Perry Hall, MD
POSITION Lat.: 13.272291° Long.: -121.729069°
GROUND ELEVATION 283.69 ft **FINAL DEPTH** 20.00 ft
GROUNDWATER LEVELS:
 ▽ **AT TIME OF DRILLING** Not encountered
 ▼ **AT END OF DRILLING** Not encountered
 ▽ **AFTER DRILLING**

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	RECOVERY %	REMARKS
			Asphalt 5"				Offset 6' towards the other side of the road due to underground utilities. Bulk bag obtained 1.0'-7.0'
			Gravel Base 1"				
			Brown, red, orange, moist, dense, poorly graded GRAVEL with Sand and Silt (GP-GM) (FILL)	SPT S-1	22-12-21 (33)	89	
5	279		Red, orange, wet, medium dense, poorly graded SAND with Silt, trace Gravel (SP-SM) (FILL)	SPT S-2	37-7-10 (17)	100	
			Red, moist, stiff, Sandy LEAN CLAY, trace Gravel (CL)	SPT S-3	7-6-6 (12)	100	
10	274		White, tan, orange, light brown, moist, medium dense, poorly graded SAND with Silt and Gravel (SP-SM)	SPT S-4	3-9-9 (18)	100	
			White, tan, light gray, pink, moist, very stiff, Sandy SILT with Clay (ML)	SPT S-5	5-7-12 (19)	100	
15	269						
			White, tan, pink, light gray, moist, stiff, Sandy SILT (ML)	SPT S-6	5-7-8 (15)	100	
20	264		Terminated at 20.00 ft.				
25	259						
	254						

NOTES



APPENDIX C
LABORATORY TEST RESULTS

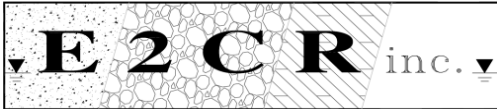


SUMMARY OF LABORATORY TEST RESULTS

Richlyn Manor Force Main
E2CR Project No. 22542-04

TABLE C-1

Boring No.	SAMPLE				CLASSIFICATION		Moisture Content (%)	ATTERBERG LIMITS			GRAIN SIZE DIST.			MODIFIED PROCTOR	
	No.	Depth (feet)			USCS	AASHTO		LL	PL	PI	Gravel (%)	Sand (%)	Fines (%)	Max. Dry Density (pcf)	Optimum Moisture (%)
SB-01	S-1	1.0	-	2.5			15.8%								
	S-2	3.5	-	5.0	SC		25.9%					44.1%			
	S-3	6.0	-	7.5			34.2%								
	S-4	8.5	-	10.0	CL	A-6(4)	24.4%	33.0	20.0	13.0	24.1%	20.7%	55.2%		
	Bulk Bag	1.0	-	7.0	CL	A-7-6(10)	30.2%	41.0	23.0	18.0	14.0%	20.5%	65.5%	116.2	17.2
SB-02	S-1	1.0	-	2.5			17.7%								
	S-2	3.5	-	5.0			17.3%								
	S-3	6.0	-	7.5	SM	A-4(0)	25.7%	NP	NP	NP	13.5%	46.1%	40.4%		
	S-4	8.5	-	10.0			22.3%								
SB-03	S-1	1.0	-	2.5			19.7%								
	S-2	3.5	-	5.0											
	S-3	6.0	-	7.5			16.5%								
	S-4	8.5	-	10.0	MH	A-7-5(15)	45.5%	61.9	38.3	23.6	0.6%	36.2%	63.2%		
	S-5	13.5	-	15.0			30.1%								
SB-04	S-1	1.0	-	2.5	CL	A-7-6(17)	22.7%	15.9	41.5	25.6	2.8%	26.2%	71.0%		
	S-2	3.5	-	5.0			27.2%								
	S-3	6.0	-	7.5			20.0%								
	S-4	8.5	-	10.0			25.0%								
SB-05	S-1	1.0	-	2.5			19.5%								
	S-2	3.5	-	5.0			17.7%								
	S-3	6.0	-	7.5			20.2%								
	S-4	8.5	-	10.0	SC		33.8%					34.6%			

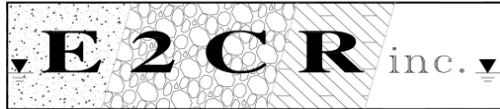


SUMMARY OF LABORATORY TEST RESULTS

Richlyn Manor Force Main
E2CR Project No. 22542-04

TABLE C-1

Boring No.	SAMPLE			CLASSIFICATION		Moisture Content (%)	ATTERBERG LIMITS			GRAIN SIZE DIST.			MODIFIED PROCTOR	
	No.	Depth (feet)		USCS	AASHTO		LL	PL	PI	Gravel (%)	Sand (%)	Fines (%)	Max. Dry Density (pcf)	Optimum Moisture (%)
SB-06	S-1	1.0	-	2.5			26.8%							
	S-2	3.5	-	5.0	CL	A-7-6(21)	28.1%	44.2	24.1	20.2	0.0%	5.6%	94.4%	
	S-3	6.0	-	7.5			30.5%							
	S-4	8.5	-	10.0			35.2%							
	S-5	13.5	-	15.0			44.6%							
	Bulk Bag	1.0	-	7.0	CH	A-7-6(19)	35.5%	55.9	27.1	28.8	7.7%	23.9%	68.4%	111.7
SB-07	S-1	1.0	-	2.5			10.7%							
	S-2	3.5	-	5.0			12.0%							
	S-3	6.0	-	7.5			26.8%							
	S-4	8.5	-	10.0	CH	A-7-6(21)	24.4%	54.9	26.7	28.2	3.4%	23.4%	73.2%	
SB-08	S-1	1.0	-	2.5			10.9%							
	S-2	3.5	-	5.0			7.3%							
	S-3	6.0	-	7.5			5.3%							
	S-4	8.5	-	10.0	SP-SM	A-1-b	5.3%	NP	NP	NP	37.6%	51.9%	10.5%	
SB-09	S-1	1.0	-	2.5										
	S-2	3.5	-	5.0			6.5%							
	S-3	6.0	-	7.5			13.4%							
	S-4	8.5	-	10.0	SM	A-1-b	12.7%	NP	NP	NP	11.4%	73.5%	15.1%	
	Bulk Bag	1.0	-	7.0	SC	A-2-6(0)	7.3%	24.7	14.3	10.4	7.7%	68.0%	24.3%	136.4



SUMMARY OF LABORATORY TEST RESULTS

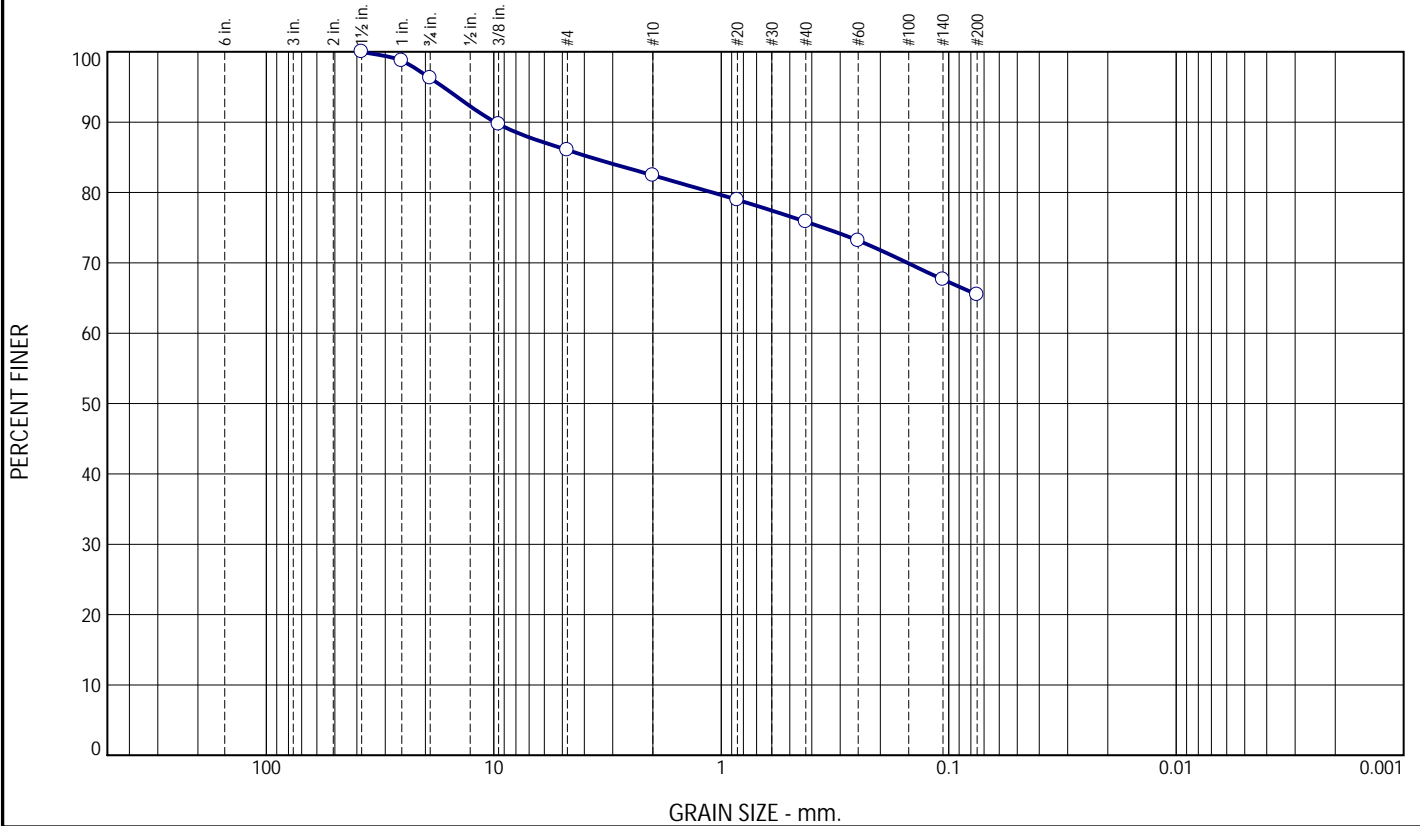
Richlyn Manor Force Main
 E2CR Project No. 22542-04

TABLE C-1

Boring No.	SAMPLE				CLASSIFICATION		Moisture Content (%)	ATTERBERG LIMITS			GRAIN SIZE DIST.			MODIFIED PROCTOR	
	No.	Depth (feet)			USCS	AASHTO		LL	PL	PI	Gravel (%)	Sand (%)	Fines (%)	Max. Dry Density (pcf)	Optimum Moisture (%)
SB-10	S-1	1.0	-	2.5			47.6%								
	S-2	3.5	-	5.0			18.6%								
	S-3	6.0	-	7.5	SM	A-2-4(0)	13.3%	NP	NP	NP	0.8%	73.3%	25.9%		
	S-4	8.5	-	10.0			20.8%								
SB-11	S-1	1.0	-	2.5											
	S-2	3.5	-	5.0			11.7%								
	S-3	6.0	-	7.5			12.9%								
	S-4	8.5	-	10.0			6.6%								
	S-5	13.5	-	15.0			13.1%								
	Bulk Bag	1.0	-	7.0	SP-SM	A-1-b	7.0%	NP	NP	NP	23.6%	64.8%	11.6%	132.9	8.3

Particle Size Distribution Report

ASTM D422



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	3.7	10.3	3.6	6.6	10.3	65.5	

Test Results (ASTM D422)				
Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)	Pct. of Fines
1 1/2	100.0			
1	98.7			
3/4	96.3			
3/8	89.7			
#4	86.0			
#10	82.4			
#20	79.0			
#40	75.8			
#60	73.2			
#140	67.6			
#200	65.5			

Material Description		
Brown, Sandy Lean CLAY		
<u>Atterberg Limits</u>		
PL= 23	LL= 41	PI= 18
<u>Coefficients</u>		
D ₉₀ = 9.8823	D ₈₅ = 3.7650	D ₆₀ =
D ₅₀ =	D ₃₀ =	D ₁₅ =
D ₁₀ =	C _u =	C _c =
<u>Classification</u>		
USCS= CL	AASHTO= A-7-6(10)	
<u>Test Remarks</u>		
Natural Moisture=30.2%		

* (no specification provided)

Source of Sample: SB-01 Depth: 1.0'-7.0'
 Sample Number: BULK

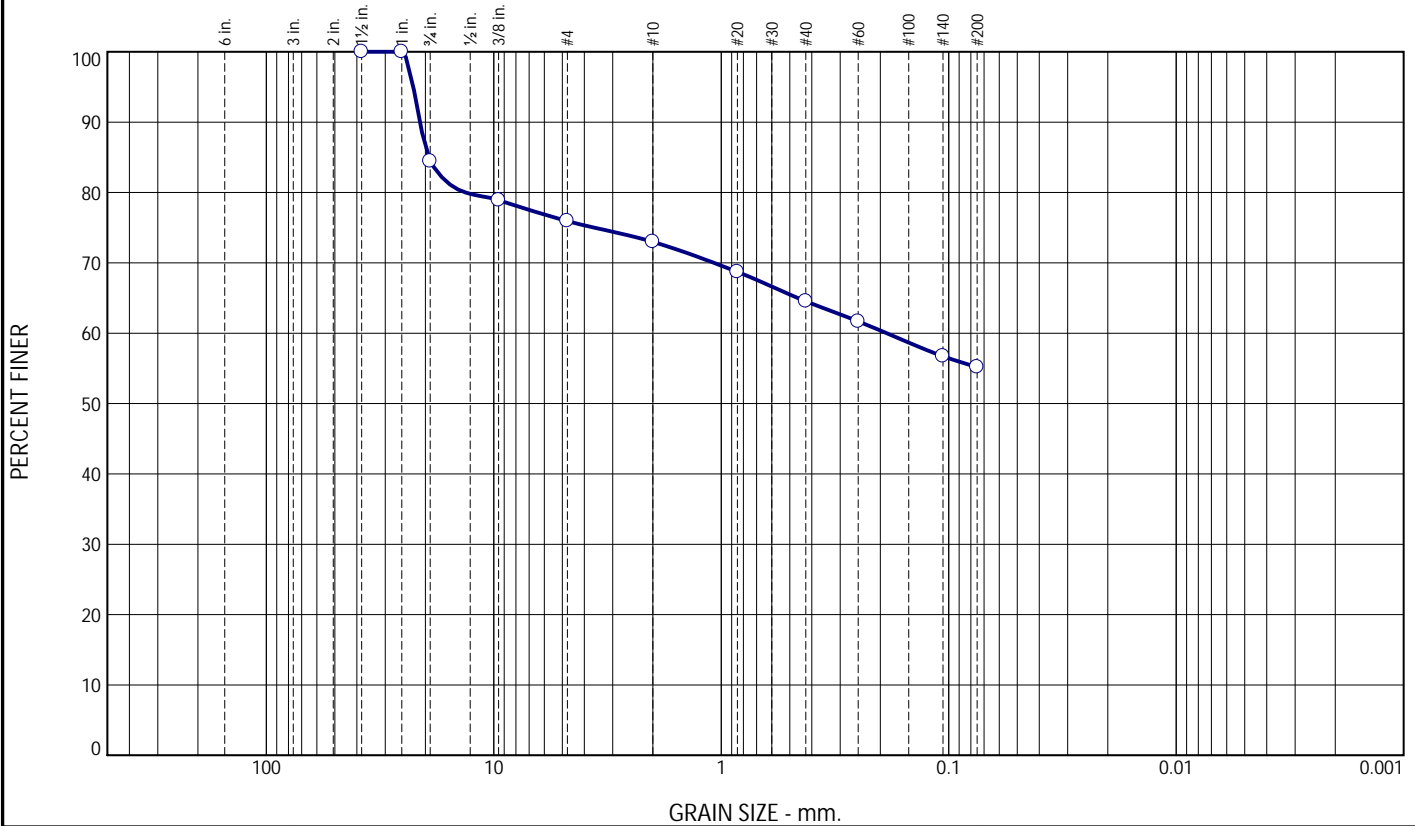
Sample Date: 1/10/2024

E2CR, Inc. Baltimore, MD	Client: JMT Project: RICHLYN MANOR FM Project No: 22542-04
Figure	

Tested By: AM _____

Particle Size Distribution Report

ASTM D422



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	15.6	8.5	2.9	8.5	9.3	55.2	

Test Results (ASTM D422)				
Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)	Pct. of Fines
1 1/2	100.0			
1	100.0			
3/4	84.4			
3/8	78.9			
#4	75.9			
#10	73.0			
#20	68.7			
#40	64.5			
#60	61.7			
#140	56.7			
#200	55.2			

Material Description
Brown, Black, Gravelly Lean CLAY with Sand

Atterberg Limits
 PL= 20 LL= 33 PI= 13

Coefficients
 D₉₀= 21.1192 D₈₅= 19.4031 D₆₀= 0.1875
 D₅₀= D₃₀= D₁₅=
 D₁₀= C_u= C_c=

Classification
 USCS= CL AASHTO= A-6(4)

Test Remarks
 Natural Moisture=24.4%

* (no specification provided)

Source of Sample: SB-01 Depth: 8.5'-10.0'
 Sample Number: S-4

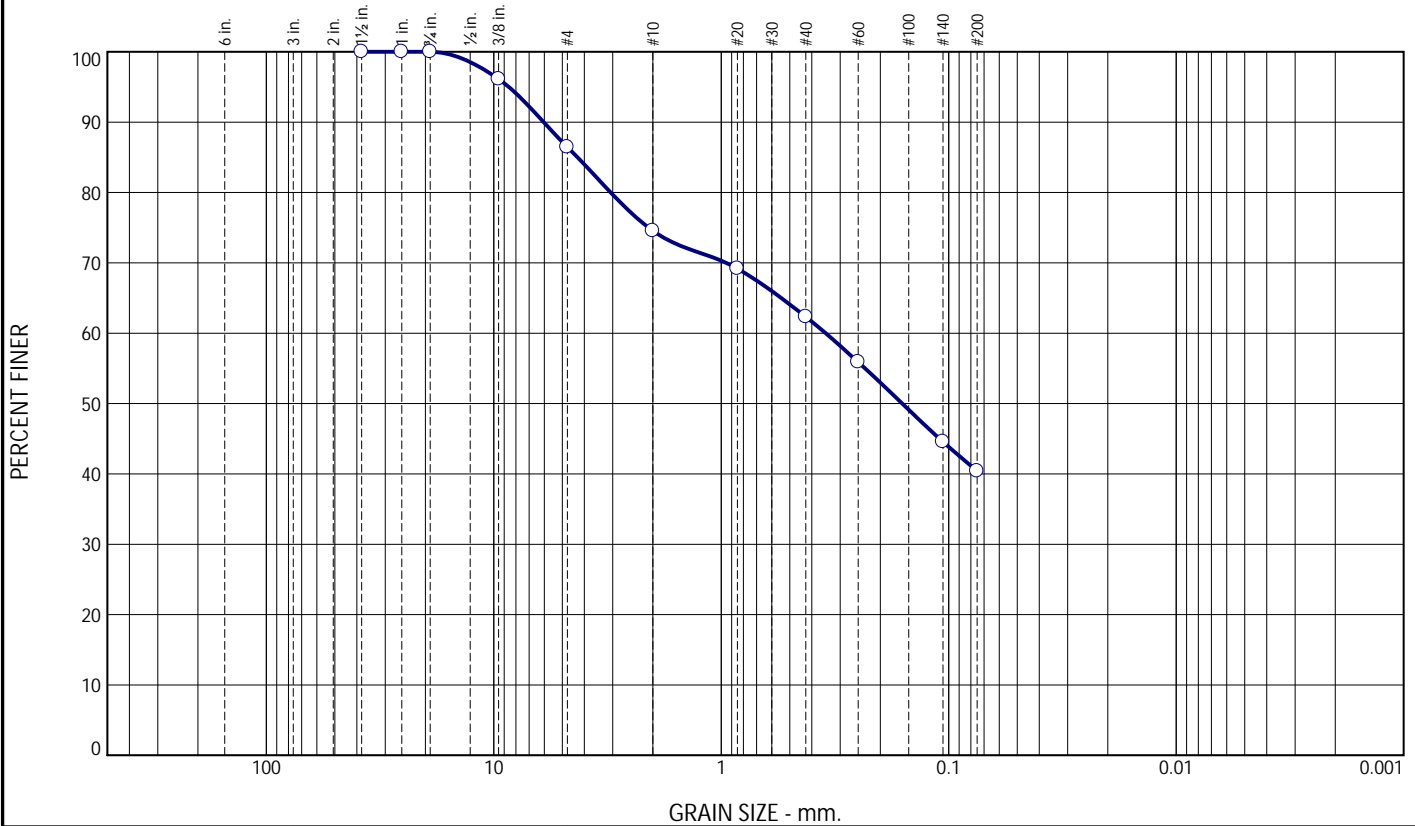
Sample Date: 1/10/2024

E2CR, Inc. Baltimore, MD	Client: JMT Project: RICHLYN MANOR FM Project No: 22542-04	Figure
---	--	--------

Tested By: AM _____

Particle Size Distribution Report

ASTM D422



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	13.5	11.9	12.3	21.9	40.4	

Test Results (ASTM D422)				
Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)	Pct. of Fines
1 1/2	100.0			
1	100.0			
3/4	100.0			
3/8	96.1			
#4	86.5			
#10	74.6			
#20	69.2			
#40	62.3			
#60	55.9			
#140	44.6			
#200	40.4			

Material Description
Orange, Black, White, Silty SAND

PL= NP	<u>Atterberg Limits</u>	PI= NP
	LL= NP	
	<u>Coefficients</u>	
D ₉₀ = 6.0353	D ₈₅ = 4.2877	D ₆₀ = 0.3476
D ₅₀ = 0.1602	D ₃₀ =	D ₁₅ =
D ₁₀ =	C _u =	C _c =
	<u>Classification</u>	
USCS= SM	AASHTO= A-4(0)	
	<u>Test Remarks</u>	
Natural Moisture=25.7%		

* (no specification provided)

Source of Sample: SB-02 Depth: 6.0'-7.5'
Sample Number: S-3

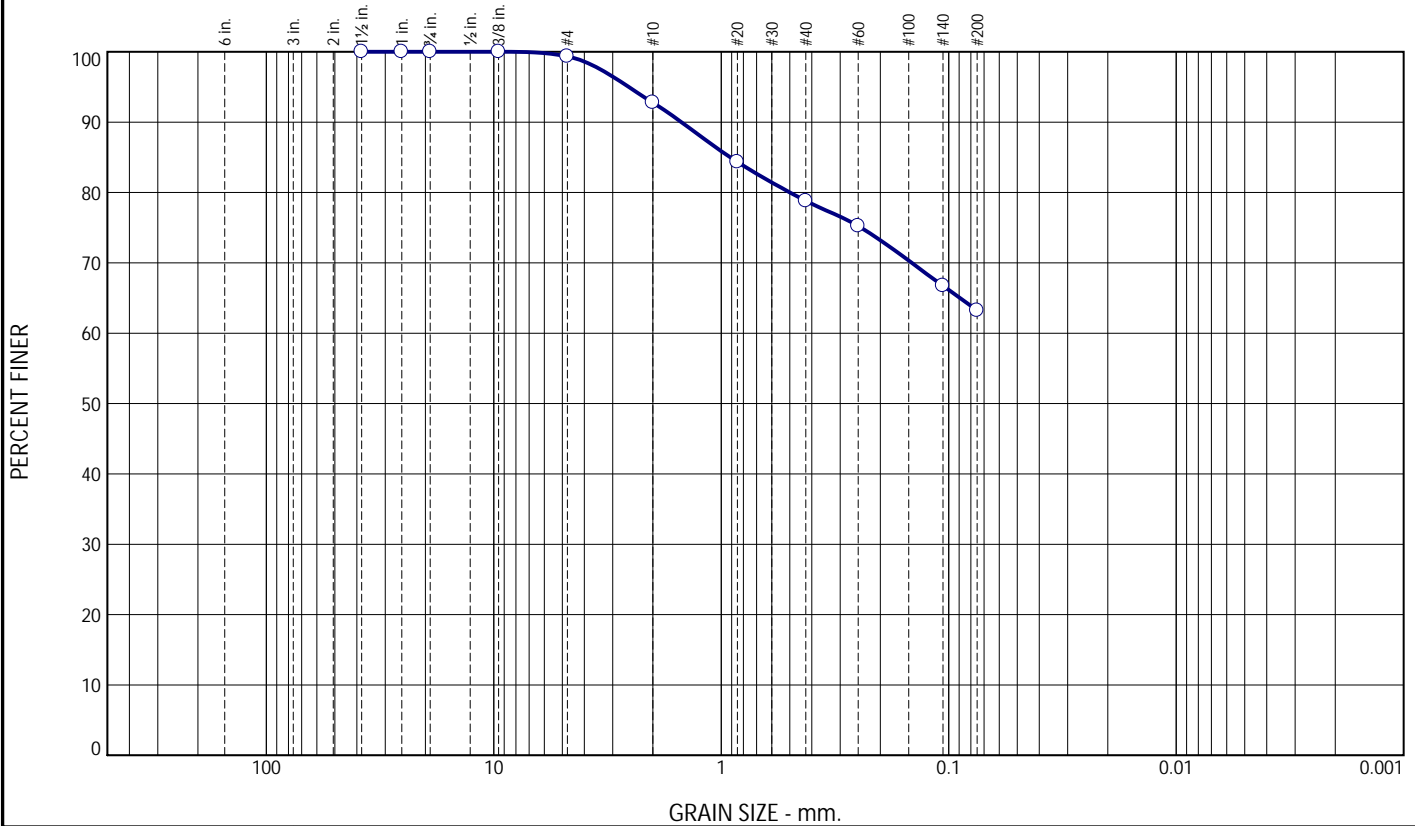
Sample Date: 1/10/2024

<p>E2CR, Inc.</p> <p>Baltimore, MD</p>	<p>Client: JMT Project: RICHLYN MANOR FM</p> <p>Project No: 22542-04</p> <p style="text-align: right;">Figure</p>
--	---

Tested By: AM _____

Particle Size Distribution Report

ASTM D422



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.6	6.6	14.0	15.6	63.2	

Test Results (ASTM D422)				
Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)	Pct. of Fines
1 1/2	100.0			
1	100.0			
3/4	100.0			
3/8	100.0			
#4	99.4			
#10	92.8			
#20	84.3			
#40	78.8			
#60	75.2			
#140	66.7			
#200	63.2			

Material Description
Brown, Orange, Sandy Elastic SILT

Atterberg Limits
 PL= 38.3 LL= 61.9 PI= 23.6

Coefficients
 D₉₀= 1.4969 D₈₅= 0.9134 D₆₀=
 D₅₀= D₃₀= D₁₅=
 D₁₀= C_u= C_c=

Classification
 USCS= MH AASHTO= A-7-5(15)

Test Remarks
 Natural Moisture=45.5%

* (no specification provided)

Source of Sample: SB-03 Depth: 8.5'-10.0'
 Sample Number: S-4

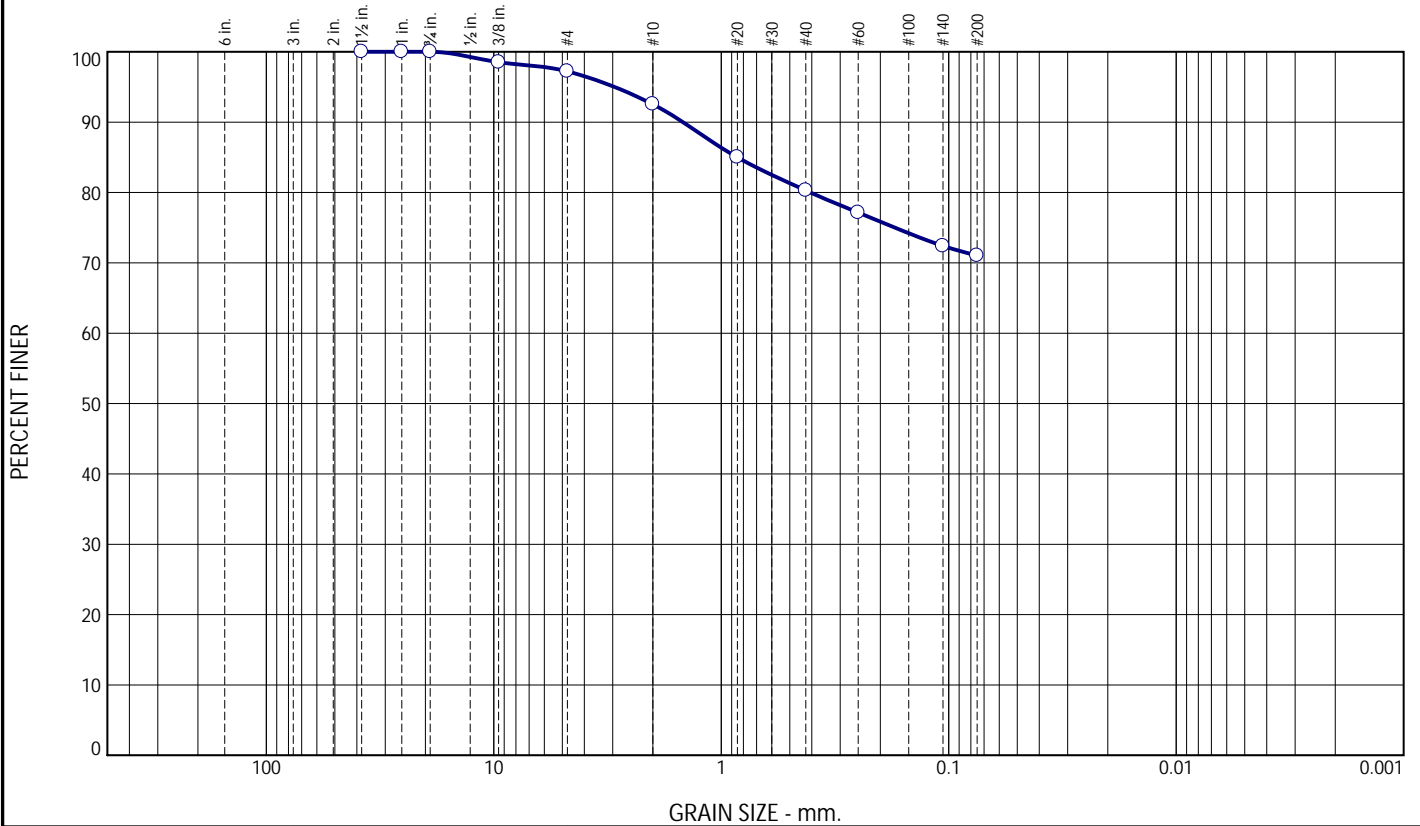
Sample Date: 1/10/2024

E2CR, Inc. Baltimore, MD	Client: JMT Project: RICHLYN MANOR FM Project No: 22542-04
Figure	

Tested By: AM _____

Particle Size Distribution Report

ASTM D422



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	2.8	4.7	12.2	9.3	71.0	

Test Results (ASTM D422)				
Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)	Pct. of Fines
1 1/2	100.0			
1	100.0			
3/4	100.0			
3/8	98.5			
#4	97.2			
#10	92.5			
#20	85.0			
#40	80.3			
#60	77.1			
#140	72.4			
#200	71.0			

Material Description
Brown, Tan, White, Lean CLAY with Sand

Atterberg Limits
 PL= 15.9 LL= 41.5 PI= 25.6

Coefficients
 D₉₀= 1.4749 D₈₅= 0.8503 D₆₀=
 D₅₀= D₃₀= D₁₅=
 D₁₀= C_u= C_c=

Classification
 USCS= CL AASHTO= A-7-6(17)

Test Remarks
 Natural Moisture=22.7%

* (no specification provided)

Source of Sample: SB-04 Depth: 1.0'-2.5'
 Sample Number: S-1

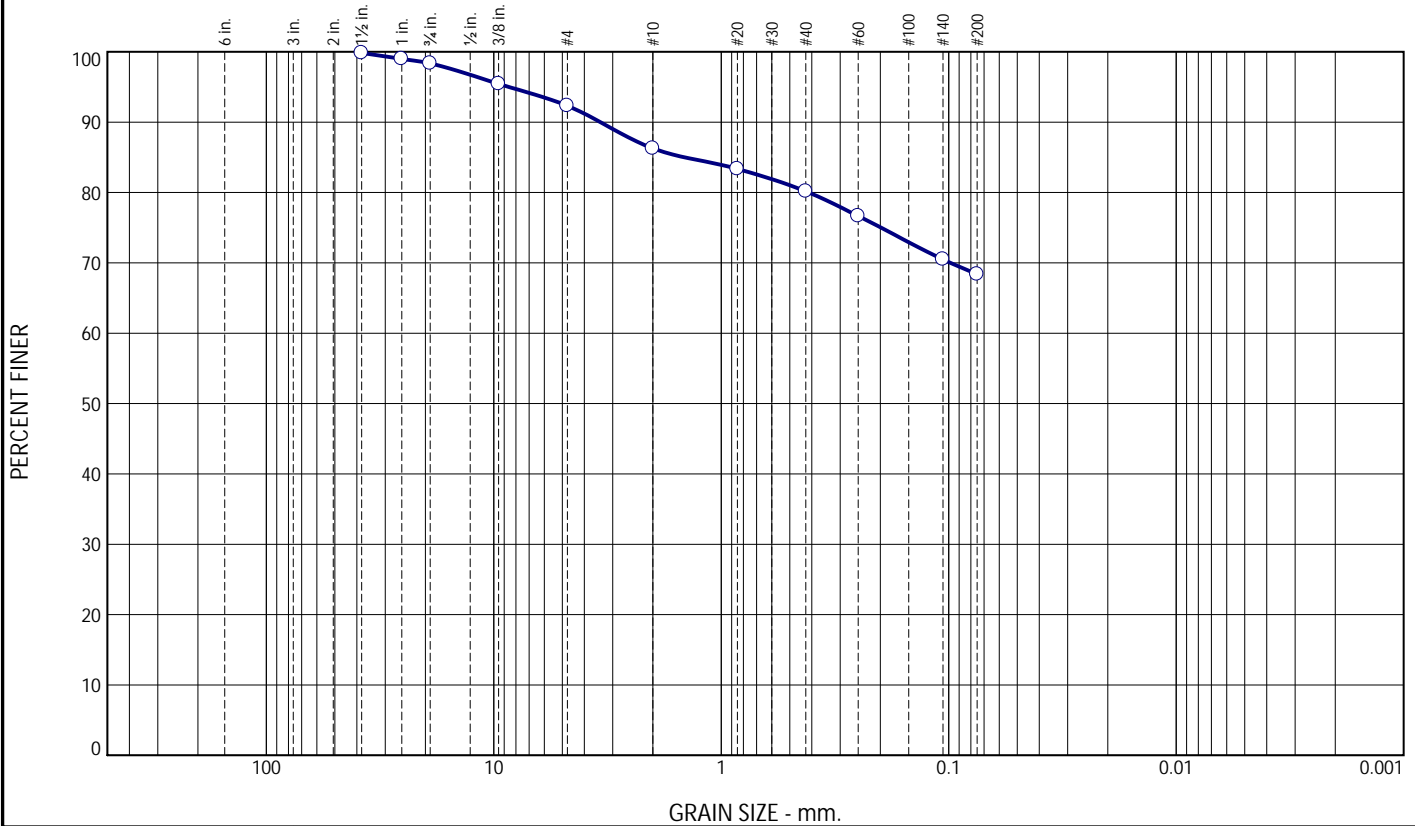
Sample Date: 1/10/2024

E2CR, Inc. Baltimore, MD	Client: JMT Project: RICHLYN MANOR FM Project No: 22542-04
Figure	

Tested By: AM _____

Particle Size Distribution Report

ASTM D422



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
		6.1	6.0	6.1	11.8	68.4	

Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)	Pct. of Fines
1 1/2	99.8			
1	99.0			
3/4	98.4			
3/8	95.4			
#4	92.3			
#10	86.3			
#20	83.4			
#40	80.2			
#60	76.7			
#140	70.5			
#200	68.4			

Material Description
Brown, Tan, Sandy Fat CLAY

Atterberg Limits
 PL= 27.1 LL= 55.9 PI= 28.8

Coefficients
 D₉₀= 3.3995 D₈₅= 1.4506 D₆₀=
 D₅₀= D₃₀= D₁₅=
 D₁₀= C_u= C_c=

Classification
 USCS= CH AASHTO= A-7-6(19)

Test Remarks
 Natural Moisture=35.5%

* (no specification provided)

Source of Sample: SB-06 Depth: 1.0'-7.0'
 Sample Number: BULK

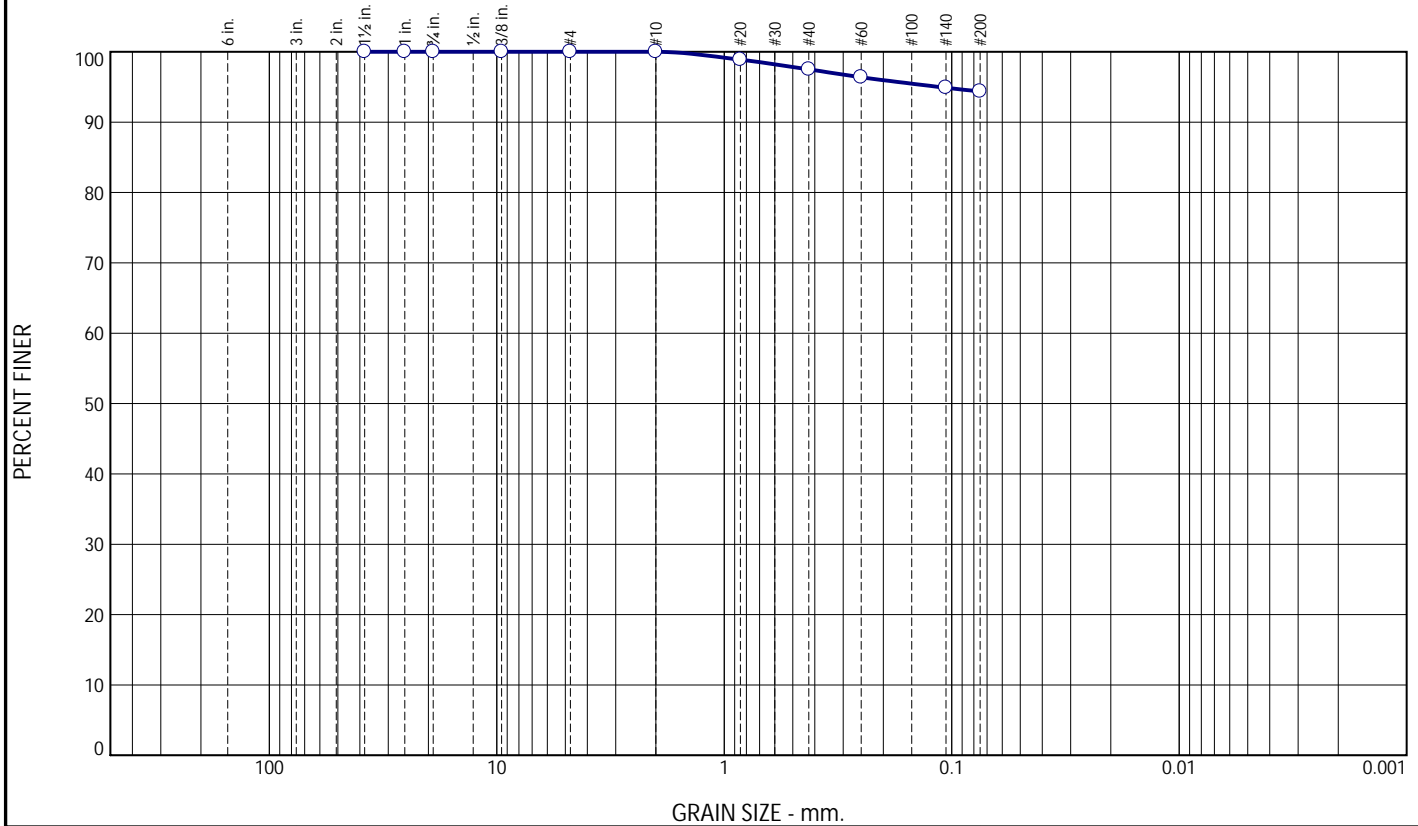
Sample Date: 1/10/2024

<p>E2CR, Inc.</p> <p>Baltimore, MD</p>	<p>Client: JMT</p> <p>Project: RICHLYN MANOR FM</p>
	<p>Project No: 22542-04</p> <p>Figure</p>

Tested By: AM _____

Particle Size Distribution Report

ASTM D422



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	2.5	3.1	94.4	

Test Results (ASTM D422)				
Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)	Pct. of Fines
1 1/2	100.0			
1	100.0			
3/4	100.0			
3/8	100.0			
#4	100.0			
#10	100.0			
#20	98.9			
#40	97.5			
#60	96.4			
#140	94.9			
#200	94.4			

Material Description		
Tan, Black, Lean CLAY		
<u>Atterberg Limits</u>		
PL= 24.1	LL= 44.3	PI= 20.2
<u>Coefficients</u>		
D ₉₀ =	D ₈₅ =	D ₆₀ =
D ₅₀ =	D ₃₀ =	D ₁₅ =
D ₁₀ =	C _u =	C _c =
<u>Classification</u>		
USCS= CL	AASHTO= A-7-6(21)	
<u>Test Remarks</u>		
Natural Moisture=28.1%		

* (no specification provided)

Source of Sample: SB-06 Depth: 3.5'-5.0'
 Sample Number: S-2

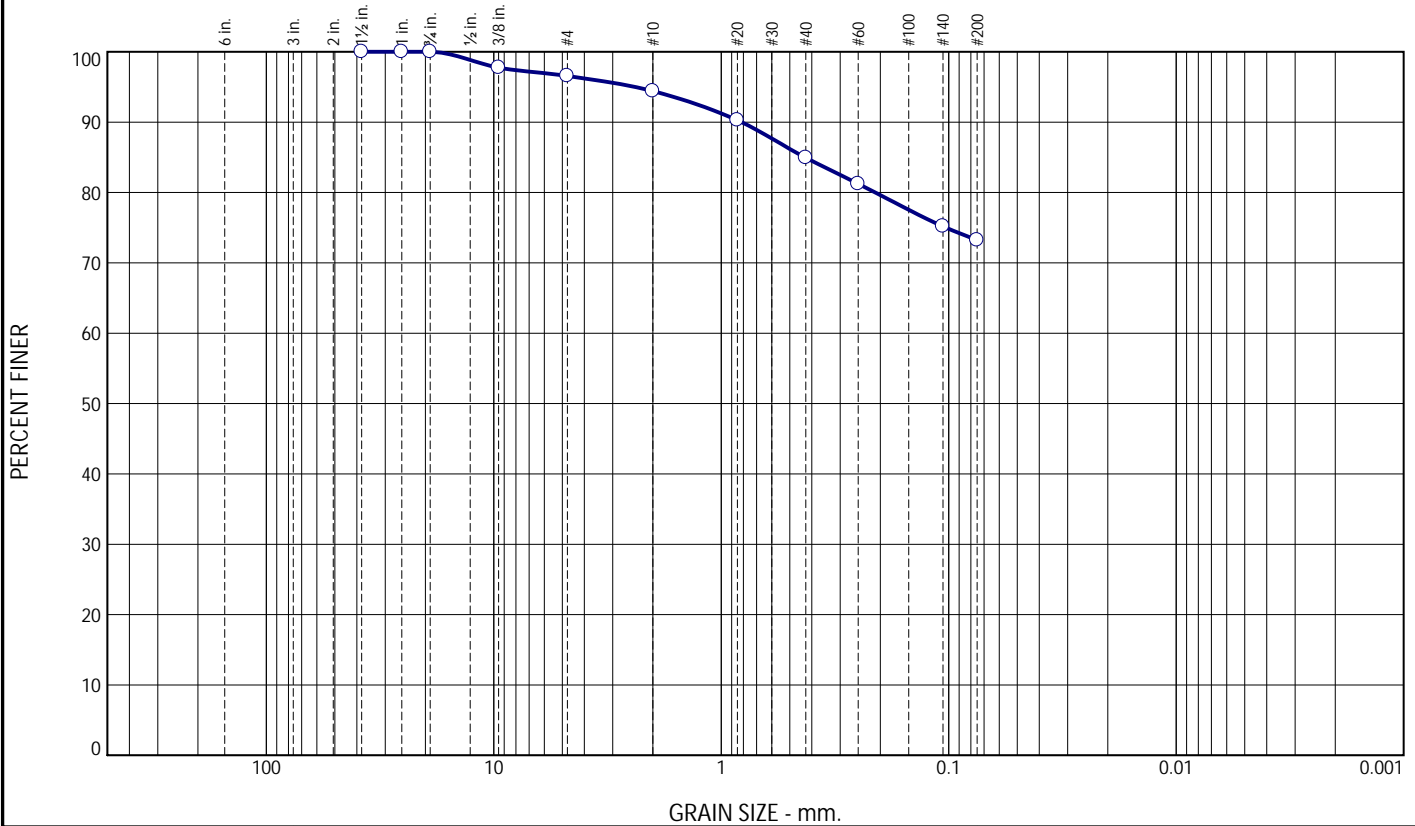
Sample Date: 1/10/2024

E2CR, Inc. Baltimore, MD	Client: JMT Project: RICHLYN MANOR FM Project No: 22542-04
Figure	

Tested By: AM _____

Particle Size Distribution Report

ASTM D422



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	3.4	2.2	9.5	11.7	73.2	

Test Results (ASTM D422)				
Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)	Pct. of Fines
1 1/2	100.0			
1	100.0			
3/4	100.0			
3/8	97.7			
#4	96.6			
#10	94.4			
#20	90.3			
#40	84.9			
#60	81.2			
#140	75.2			
#200	73.2			

Material Description
Brown, Gray, Tan, Fat CLAY with Sand

Atterberg Limits
 PL= 26.7 LL= 54.9 PI= 28.2

Coefficients
 D₉₀= 0.8149 D₈₅= 0.4285 D₆₀=
 D₅₀= D₃₀= D₁₅=
 D₁₀= C_u= C_c=

Classification
 USCS= CH AASHTO= A-7-6(21)

Test Remarks
 Natural Moisture=24.4%

* (no specification provided)

Source of Sample: SB-07 Depth: 8.5'-10.0'
 Sample Number: S-4

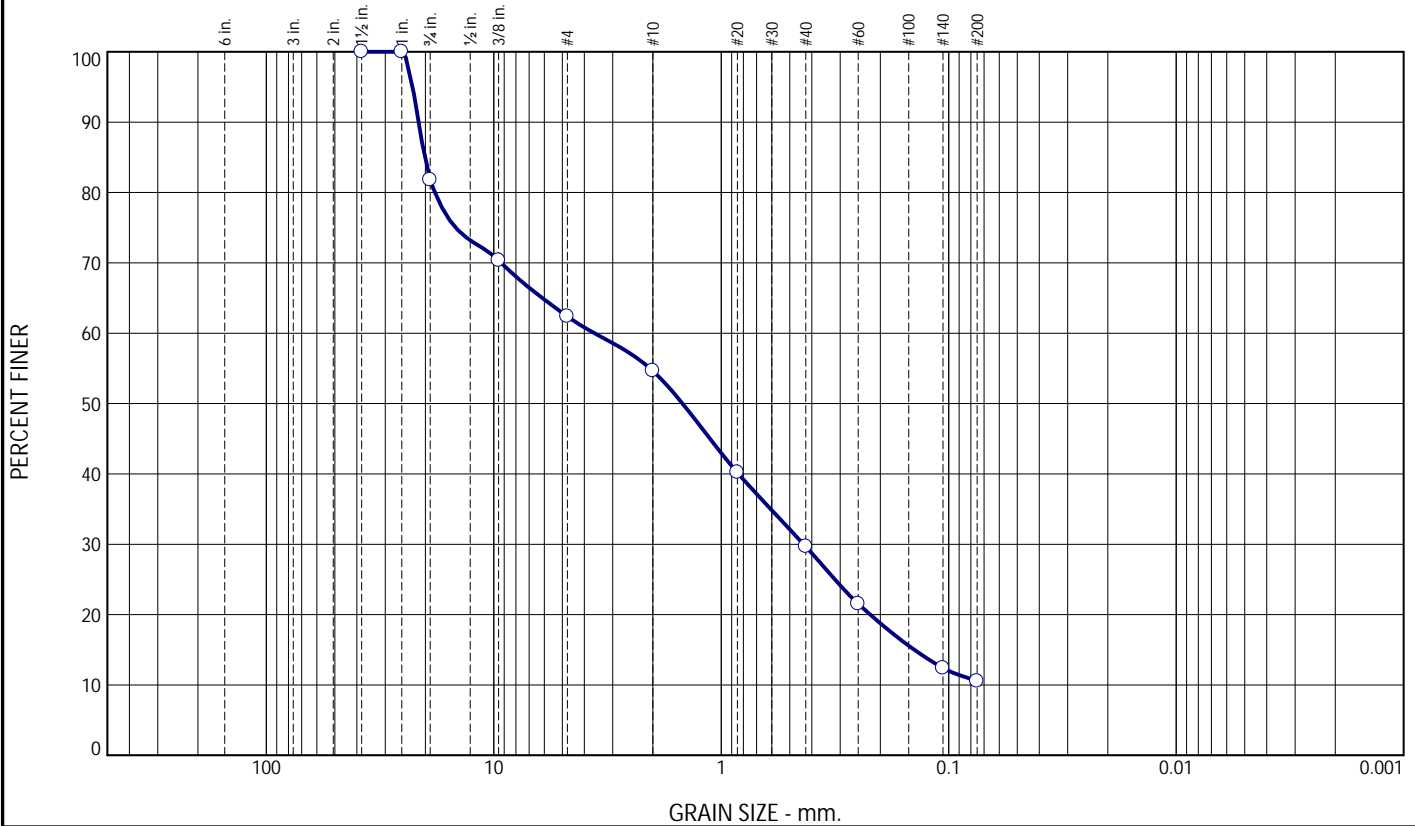
Sample Date: 1/10/2024

E2CR, Inc. Baltimore, MD	Client: JMT Project: RICHLYN MANOR FM Project No: 22542-04
Figure	

Tested By: AM _____

Particle Size Distribution Report

ASTM D422



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	18.2	19.4	7.8	24.9	19.2	10.5	

Test Results (ASTM D422)				
Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)	Pct. of Fines
1 1/2	100.0			
1	100.0			
3/4	81.8			
3/8	70.3			
#4	62.4			
#10	54.6			
#20	40.2			
#40	29.7			
#60	21.5			
#140	12.4			
#200	10.5			

* (no specification provided)

Material Description

Tan, Gray, White, Poorly Graded SAND with Silt and Gravel

Atterberg Limits

PL= NP LL= NP PI= NP

Coefficients

D₉₀= 21.4094 D₈₅= 20.1355 D₆₀= 3.6091
D₅₀= 1.4805 D₃₀= 0.4345 D₁₅= 0.1417
D₁₀= C_u= C_c=

Classification

USCS= SP-SM AASHTO= A-1-b

Test Remarks

Natural Moisture=5.3%

Source of Sample: SB-08 Depth: 8.5'-10.0'
Sample Number: S-4

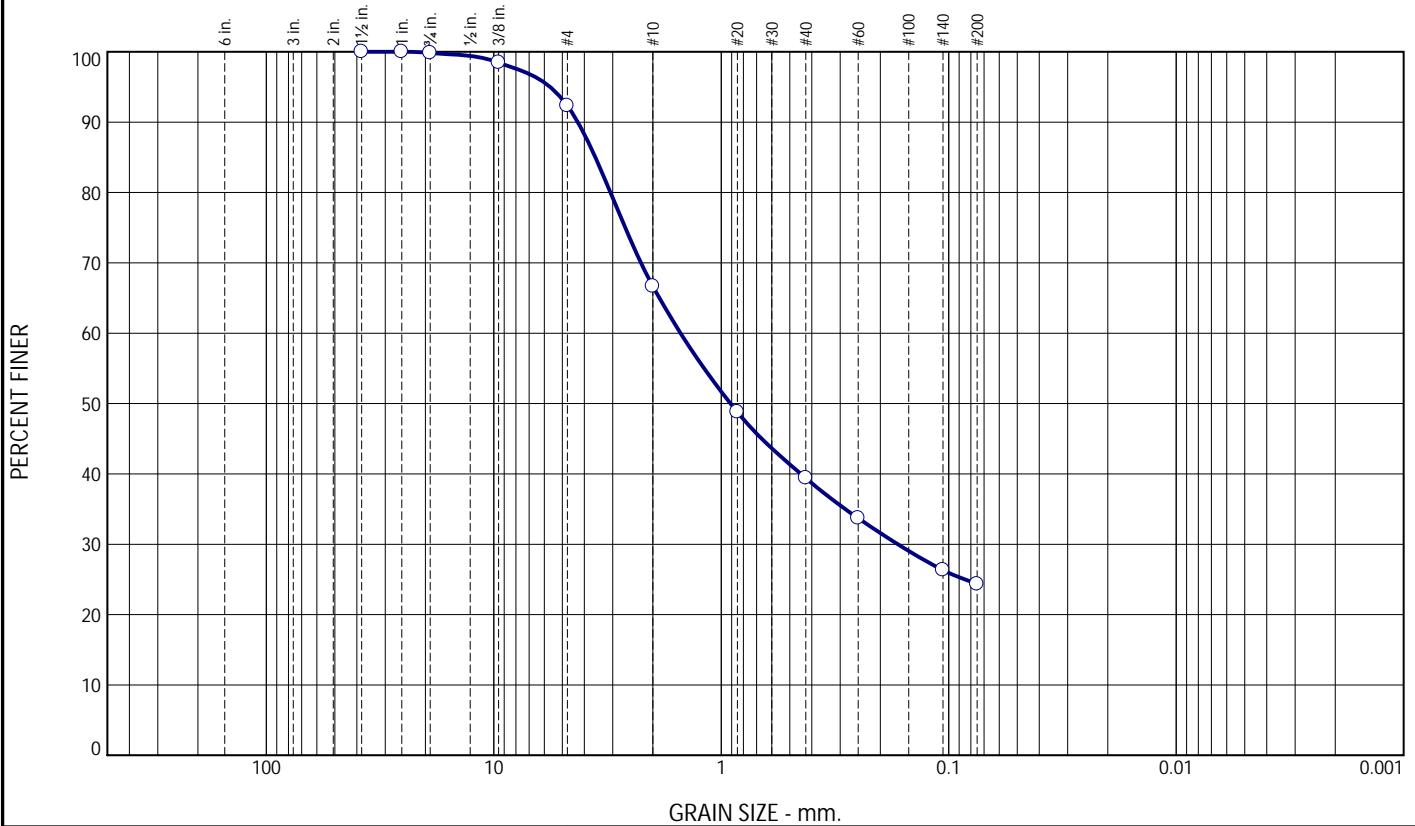
Sample Date: 1/11/2024

E2CR, Inc. Baltimore, MD	Client: JMT Project: RICHLYN MANOR FM Project No: 22542-04
Figure	

Tested By: CM _____

Particle Size Distribution Report

ASTM D422



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.2	7.5	25.6	27.3	15.1	24.3	

Test Results (ASTM D422)				
Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)	Pct. of Fines
1 1/2	100.0			
1	100.0			
3/4	99.8			
3/8	98.5			
#4	92.3			
#10	66.7			
#20	48.8			
#40	39.4			
#60	33.7			
#140	26.3			
#200	24.3			

Material Description

Brown, Clayey SAND

PL= 14.3 Atterberg Limits LL= 24.7 PI= 10.4

D₉₀= 4.2738 Coefficients D₈₅= 3.5794 D₆₀= 1.5098
 D₅₀= 0.9110 D₃₀= 0.1675 C_u= C_c=

USCS= SC Classification AASHTO= A-2-6(0)

Test Remarks
 Natural Moisture=7.3%

* (no specification provided)

Source of Sample: SB-09 Depth: 1.0'-7.0'
 Sample Number: BULK

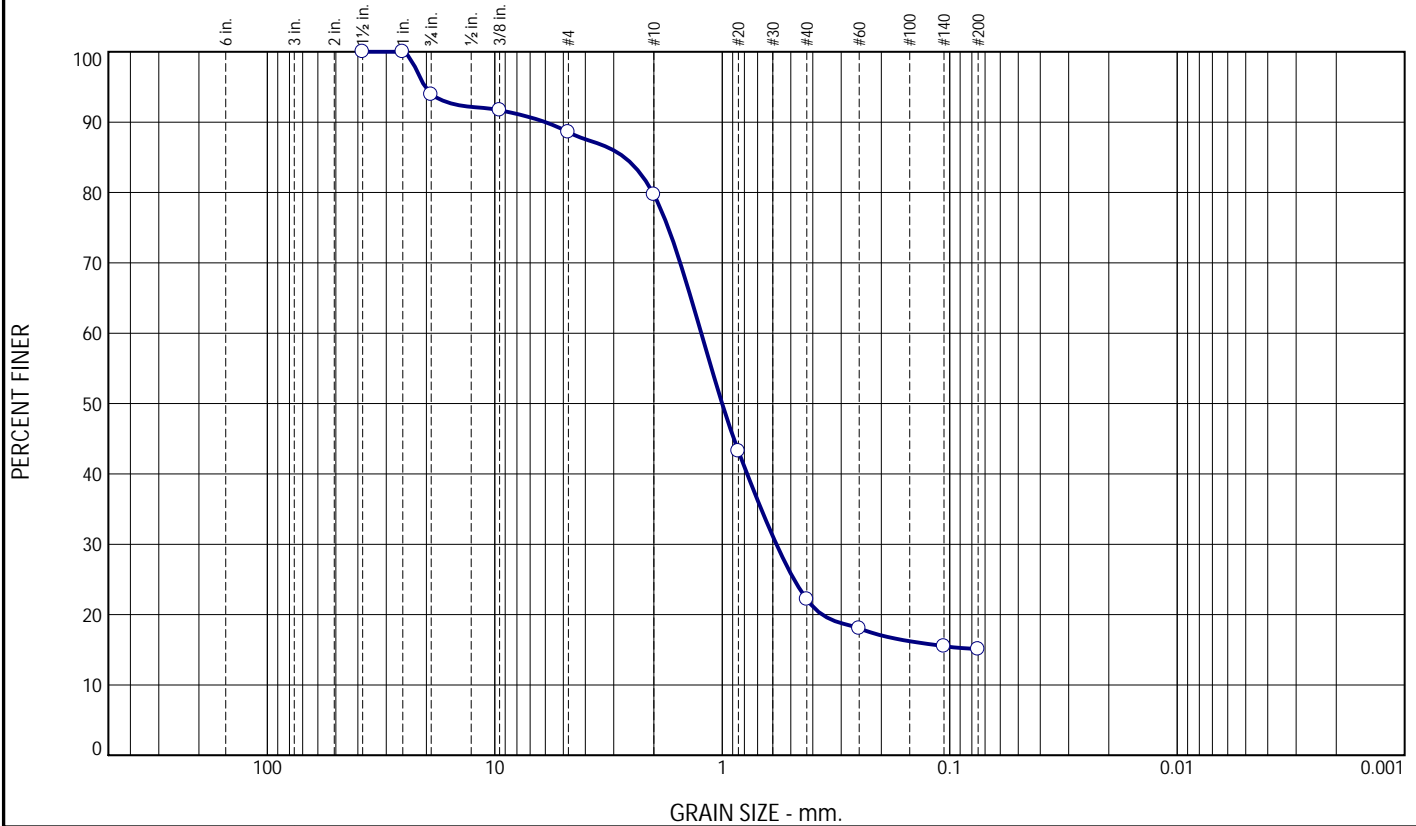
Sample Date: 1/11/2024

E2CR, Inc. Baltimore, MD	Client: JMT Project: RICHLYN MANOR FM Project No: 22542-04	Figure
---	--	--------

Tested By: AM _____

Particle Size Distribution Report

ASTM D422



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	6.1	5.3	8.9	57.5	7.1	15.1	

Test Results (ASTM D422)				
Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)	Pct. of Fines
1 1/2	100.0			
1	100.0			
3/4	93.9			
3/8	91.7			
#4	88.6			
#10	79.7			
#20	43.2			
#40	22.2			
#60	18.0			
#140	15.5			
#200	15.1			

Material Description		
Brown, Silty SAND		
<u>Atterberg Limits</u>		
PL= NP	LL= NP	PI= NP
<u>Coefficients</u>		
D ₉₀ = 5.9969	D ₈₅ = 2.6901	D ₆₀ = 1.2369
D ₅₀ = 1.0017	D ₃₀ = 0.5785	D ₁₅ =
D ₁₀ =	C _u =	C _c =
<u>Classification</u>		
USCS= SM	AASHTO= A-1-b	
<u>Test Remarks</u>		
Natural Moisture=12.7%		

* (no specification provided)

Source of Sample: SB-09 Depth: 8.5'-10.0'
 Sample Number: S-4

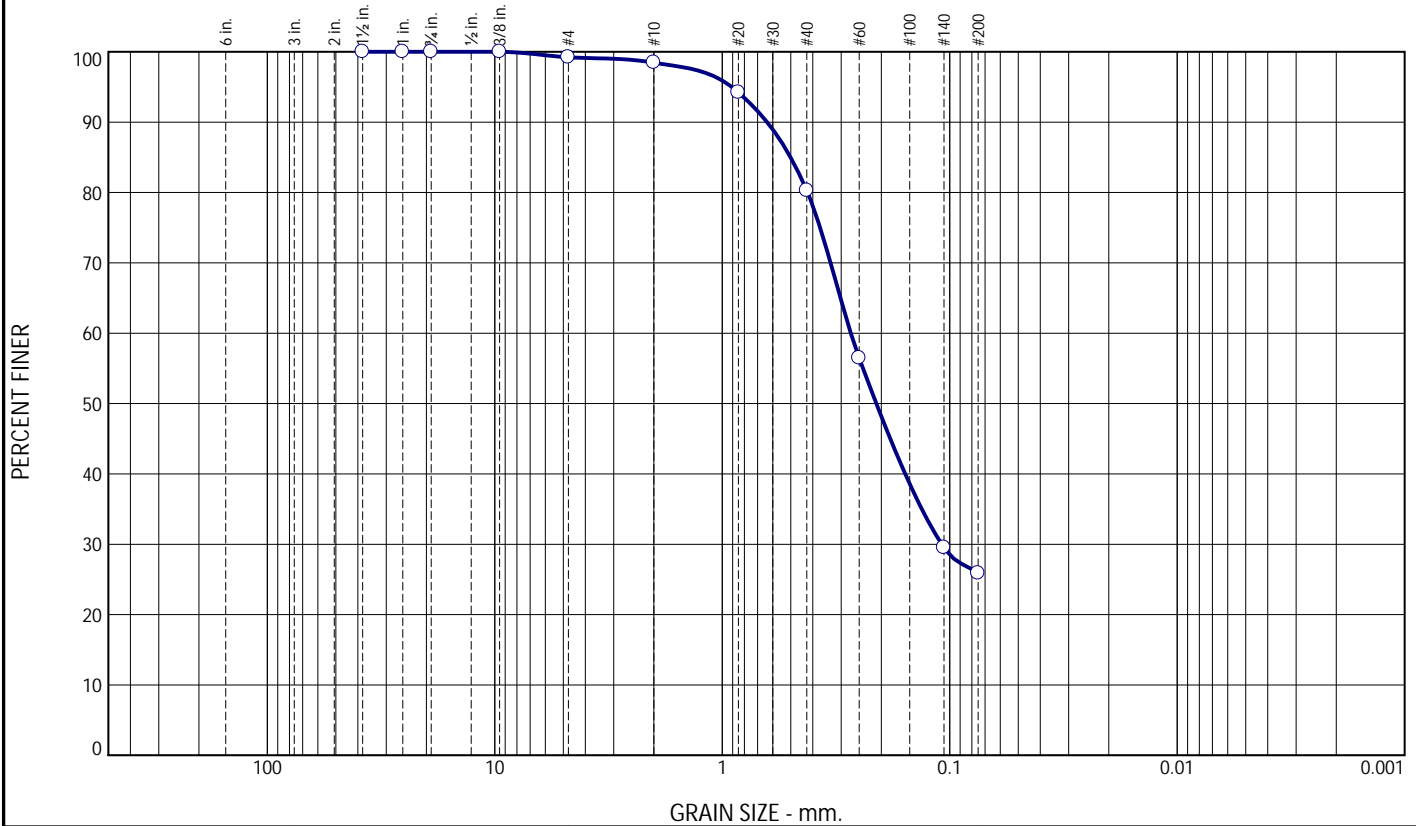
Sample Date: 1/10/2024

<p>E2CR, Inc.</p> <p>Baltimore, MD</p>	Client: JMT Project: RICHLYN MANOR FM
	Project No: 22542-04 Figure

Tested By: AM _____

Particle Size Distribution Report

ASTM D422



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.8	0.7	18.2	54.4	25.9	

Test Results (ASTM D422)				
Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)	Pct. of Fines
1 1/2	100.0			
1	100.0			
3/4	100.0			
3/8	100.0			
#4	99.2			
#10	98.5			
#20	94.2			
#40	80.3			
#60	56.5			
#140	29.5			
#200	25.9			

Material Description		
Red, Silty SAND		
<u>Atterberg Limits</u>		
PL= NP	LL= NP	PI= NP
<u>Coefficients</u>		
D ₉₀ = 0.6354	D ₈₅ = 0.5009	D ₆₀ = 0.2721
D ₅₀ = 0.2103	D ₃₀ = 0.1084	D ₁₅ =
D ₁₀ =	C _u =	C _c =
<u>Classification</u>		
USCS= SM	AASHTO= A-2-4(0)	
<u>Test Remarks</u>		
Natural Moisture=13.3%		

* (no specification provided)

Source of Sample: SB-10 Depth: 6.0-7.5'
 Sample Number: S-3

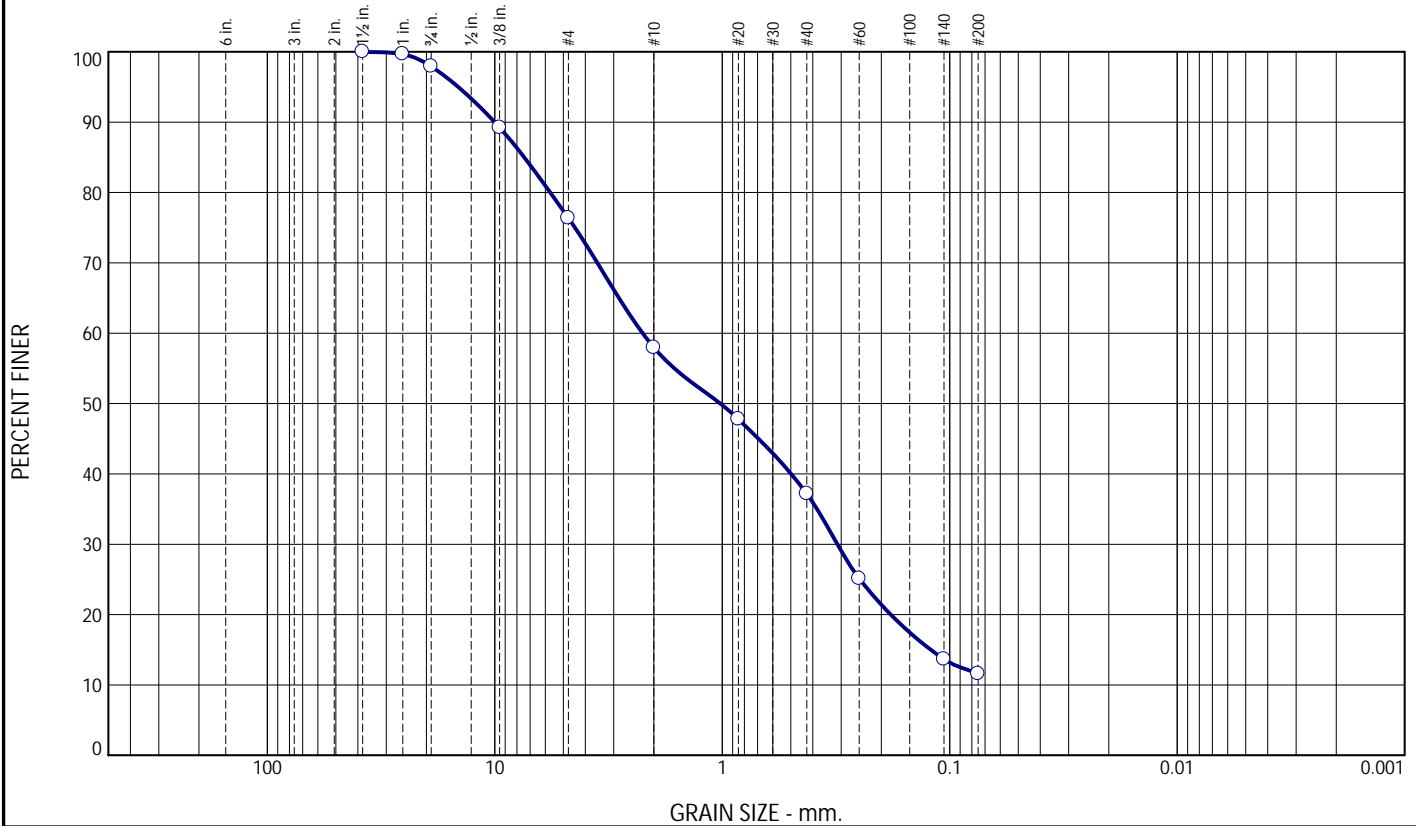
Sample Date: 1/10/2024

E2CR, Inc. Baltimore, MD	Client: JMT Project: RICHLYN MANOR FM Project No: 22542-04	Figure
---	--	--------

Tested By: AM _____

Particle Size Distribution Report

ASTM D422



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	2.1	21.5	18.4	20.8	25.6	11.6	

Test Results (ASTM D422)				
Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)	Pct. of Fines
1 1/2	100.0			
1	99.7			
3/4	97.9			
3/8	89.2			
#4	76.4			
#10	58.0			
#20	47.8			
#40	37.2			
#60	25.1			
#140	13.7			
#200	11.6			

Material Description
Brown, Poorly Graded SAND with Silt and Gravel

Atterberg Limits
 PL= NP LL= NP PI= NP

Coefficients
 D₉₀= 10.0236 D₈₅= 7.4253 D₆₀= 2.2413
 D₅₀= 1.0202 D₃₀= 0.3119 D₁₅= 0.1211
 D₁₀= C_u= C_c=

Classification
 USCS= SP-SM AASHTO= A-1-b

Test Remarks
 Natural Moisture=7.0%

* (no specification provided)

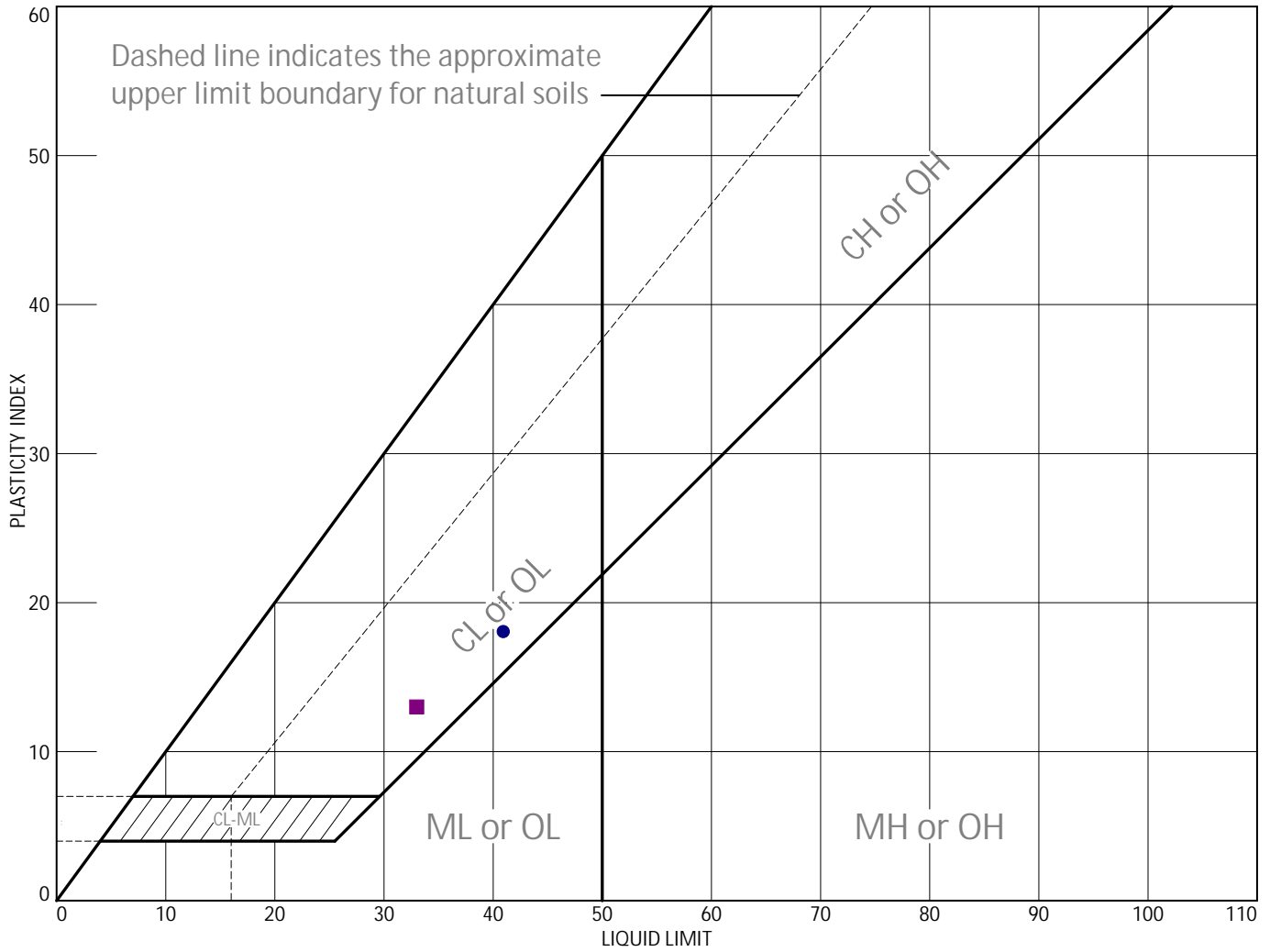
Source of Sample: SB-11 Depth: 1.0'-7.0'
 Sample Number: BULK

Sample Date: 1/10/2024

E2CR, Inc. Baltimore, MD	Client: JMT Project: RICHLYN MANOR FM Project No: 22542-04	Figure
---	--	--------

Tested By: AM _____

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	Brown, Sandy Lean CLAY	41	23	18	75.8	65.5	CL
■	Brown, Black, Gravelly Lean CLAY with Sand	33	20	13	64.5	55.2	CL

Project No. 22542-04 Client: JMT
 Project: RICHLYN MANOR FM

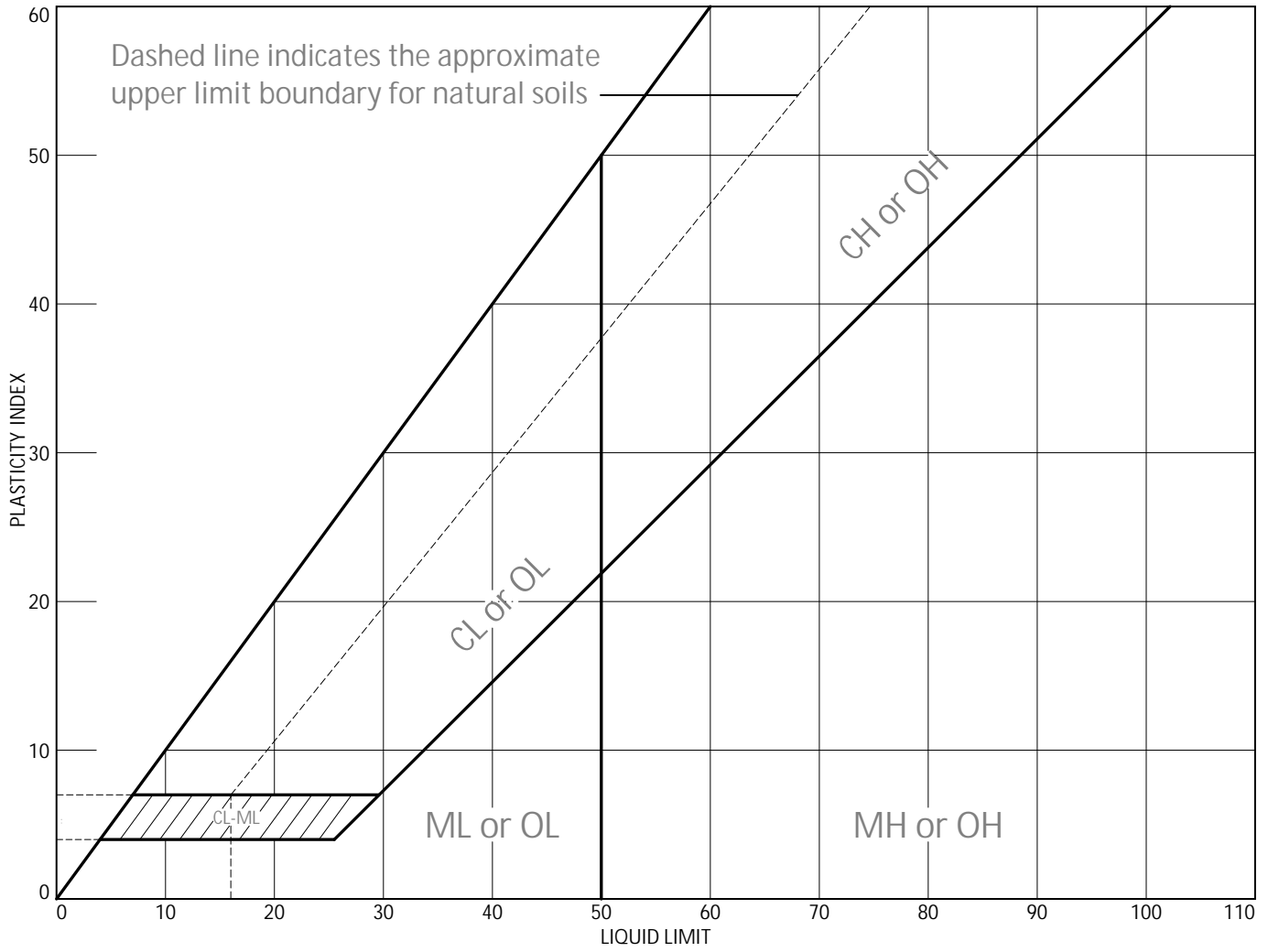
● Source of Sample: SB-01 Depth: 1.0'-7.0' Sample Number: BULK
 ■ Source of Sample: SB-01 Depth: 8.5'-10.0' Sample Number: S-4

E2CR, Inc.
 Baltimore, MD

Remarks:
 ● Natural Moisture=30.2%
 ■ Natural Moisture=24.4%

Figure

LIQUID AND PLASTIC LIMITS TEST REPORT



MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
● Orange, Black, White, Silty SAND	NV	NP	NP	62.3	40.4	SM

Project No. 22542-04 Client: JMT
 Project: RICHLYN MANOR FM

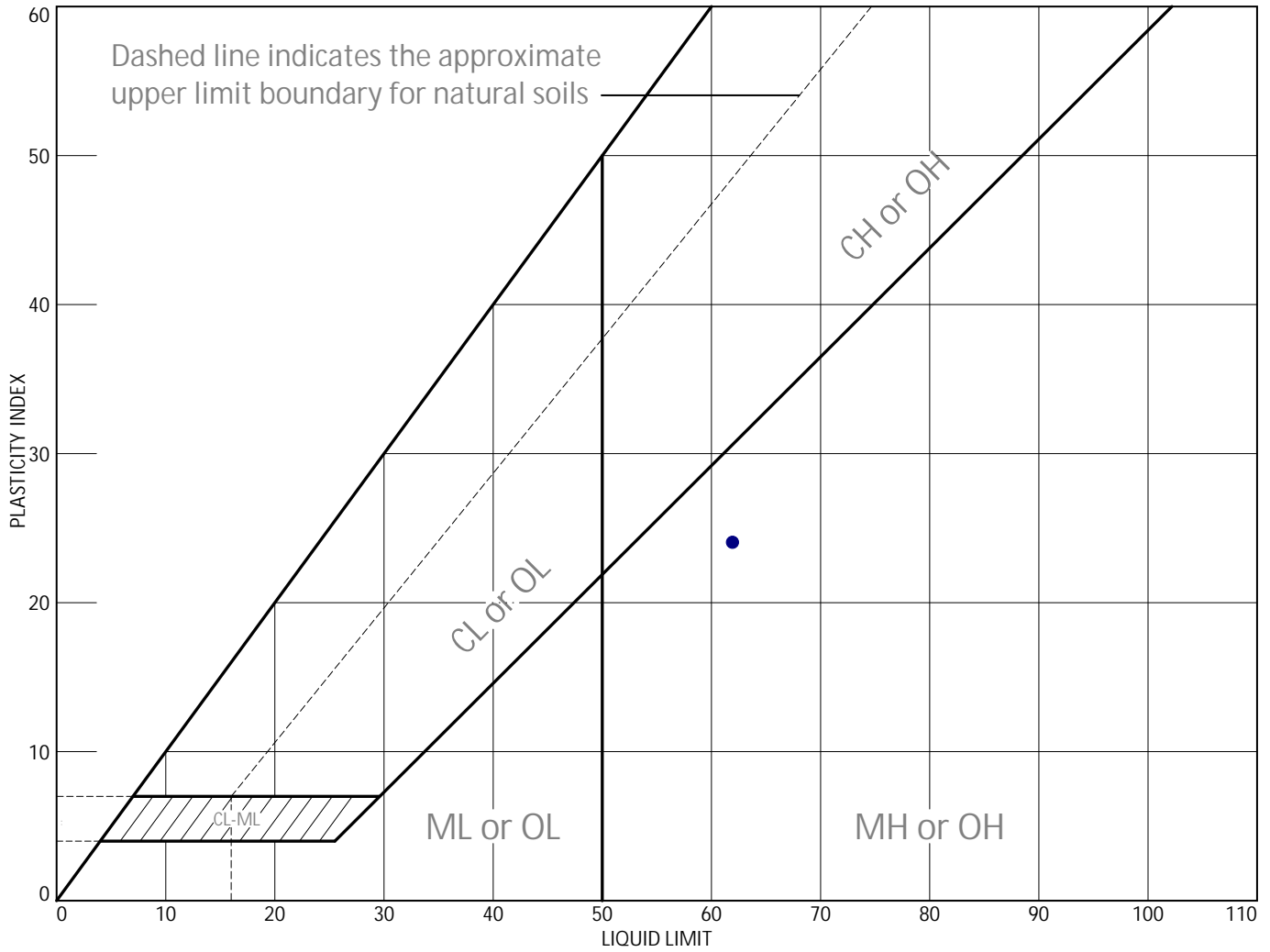
● Source of Sample: SB-02 Depth: 6.0'-7.5' Sample Number: S-3

E2CR, Inc.
 Baltimore, MD

Remarks:
 ● Natural Moisture=25.7%

Figure

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	Brown, Orange, Sandy Elastic SILT	62	38	24	78.8	63.2	MH

Project No. 22542-04 Client: JMT
 Project: RICHLYN MANOR FM

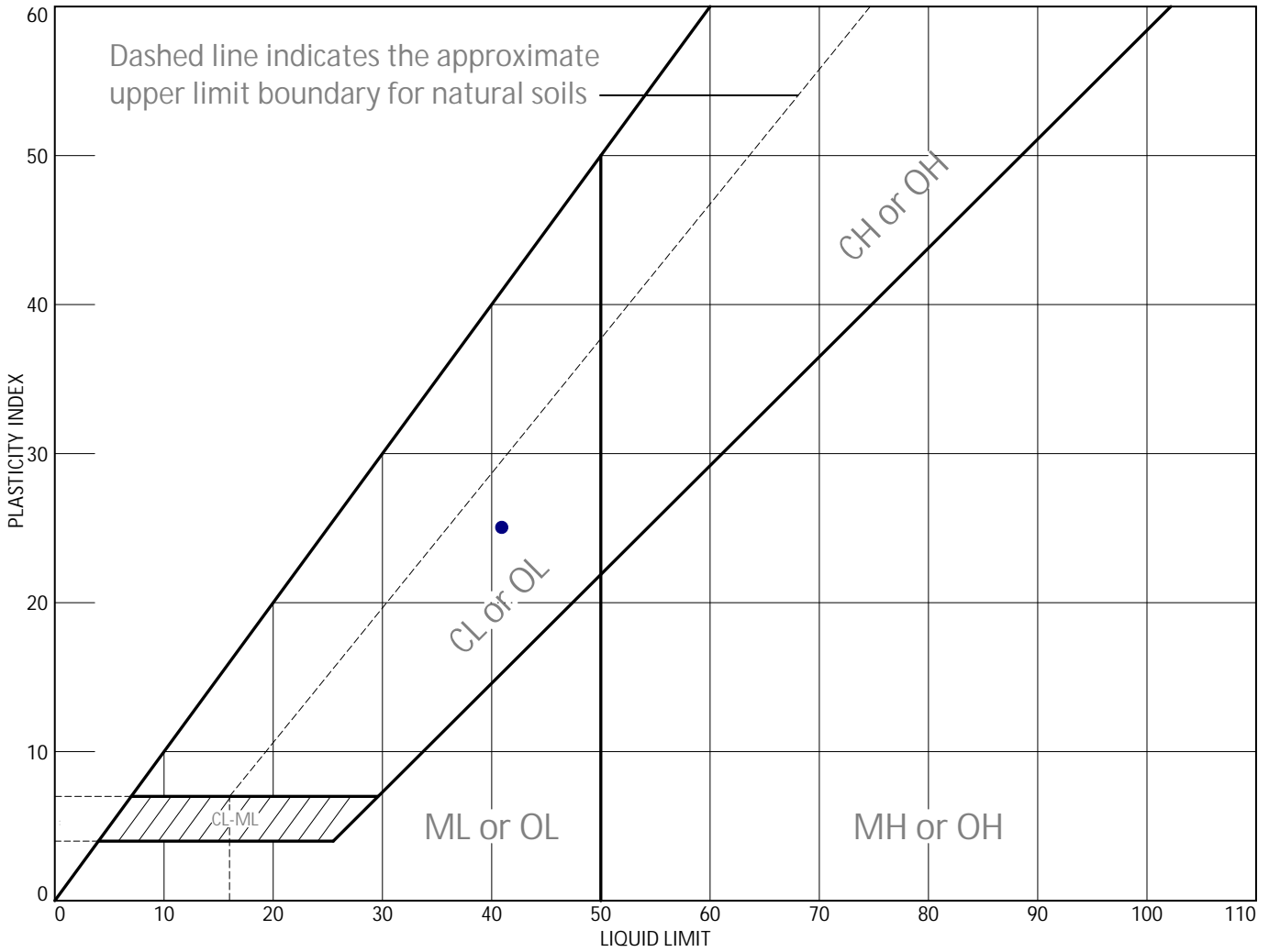
● Source of Sample: SB-03 Depth: 8.5'-10.0' Sample Number: S-4

E2CR, Inc.
 Baltimore, MD

Remarks:
 ● Natural Moisture=45.5%

Figure

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	Brown, Tan, White, Lean CLAY with Sand	41	16	25	80.3	71.0	CL

Project No. 22542-04 Client: JMT
 Project: RICHLYN MANOR FM

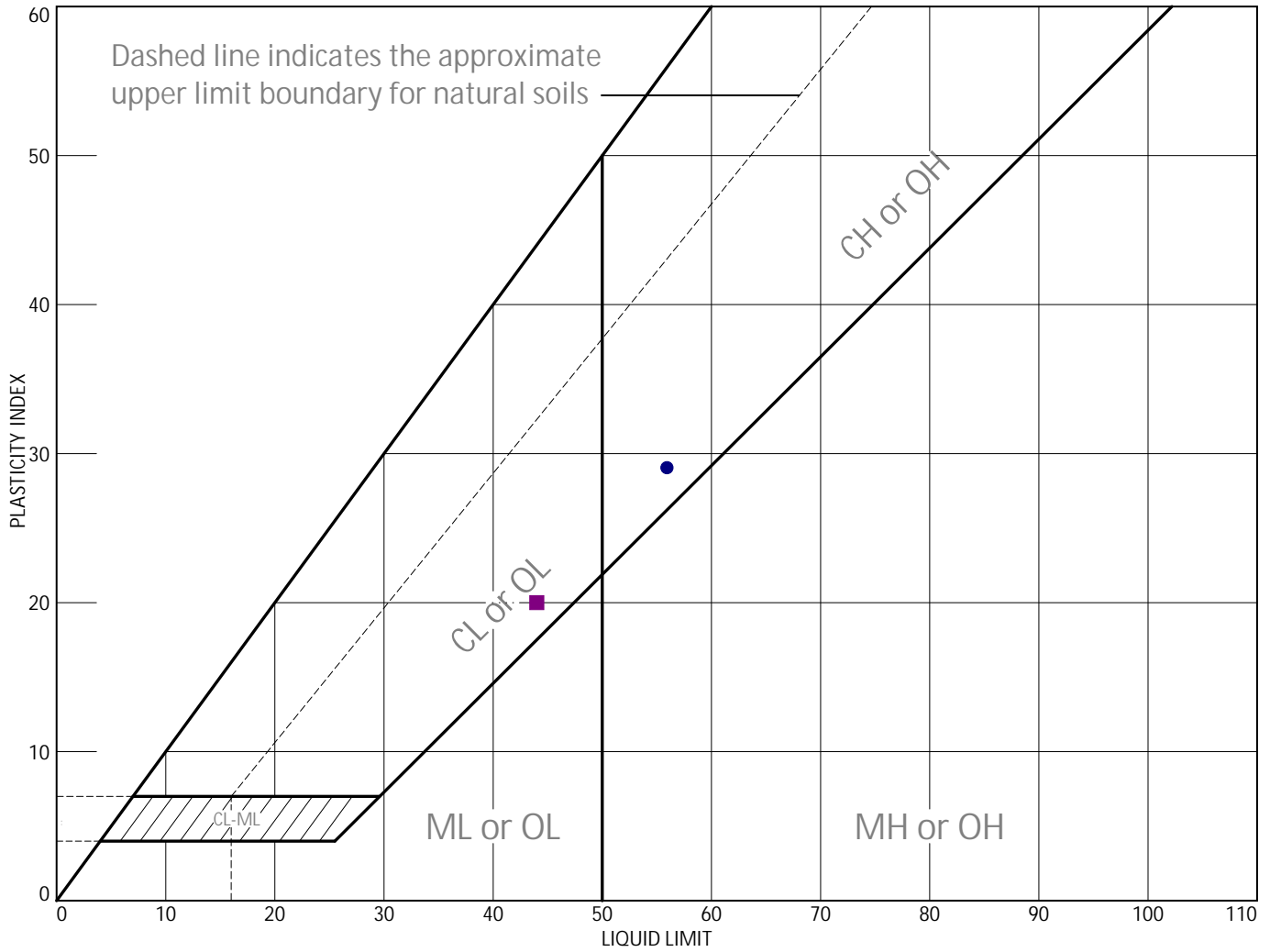
● Source of Sample: SB-04 Depth: 1.0'-2.5' Sample Number: S-1

E2CR, Inc.
 Baltimore, MD

Remarks:
 ● Natural Moisture=22.7%

Figure

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	Brown, Tan, Sandy Fat CLAY	56	27	29	80.2	68.4	CH
■	Tan, Black, Lean CLAY	44	24	20	97.5	94.4	CL

Project No. 22542-04 Client: JMT
 Project: RICHLYN MANOR FM

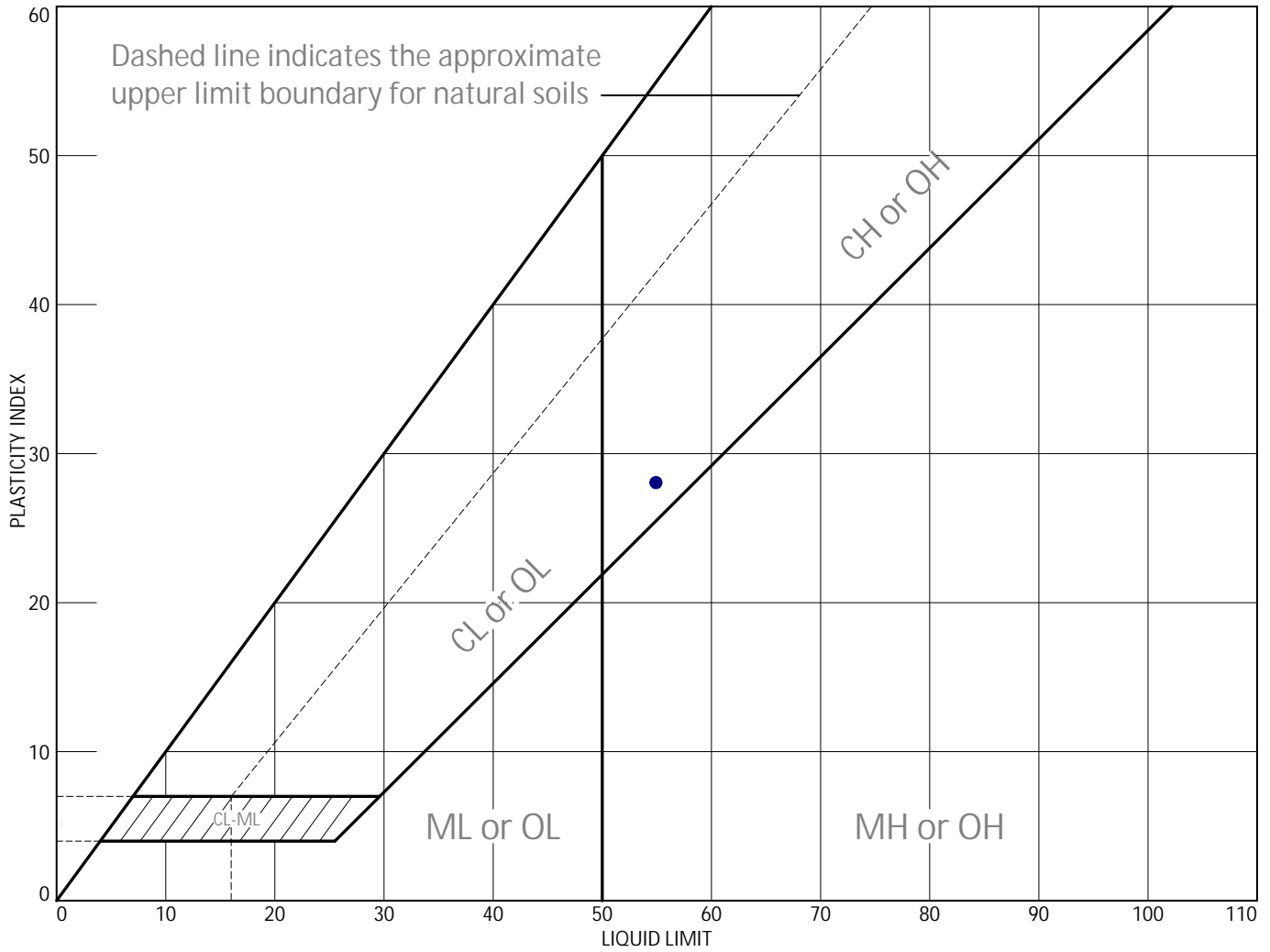
● Source of Sample: SB-06 Depth: 1.0'-7.0' Sample Number: BULK
 ■ Source of Sample: SB-06 Depth: 3.5'-5.0' Sample Number: S-2

E2CR, Inc.
 Baltimore, MD

Remarks:
 ● Natural Moisture=35.5%
 ■ Natural Moisture=28.1%

Figure

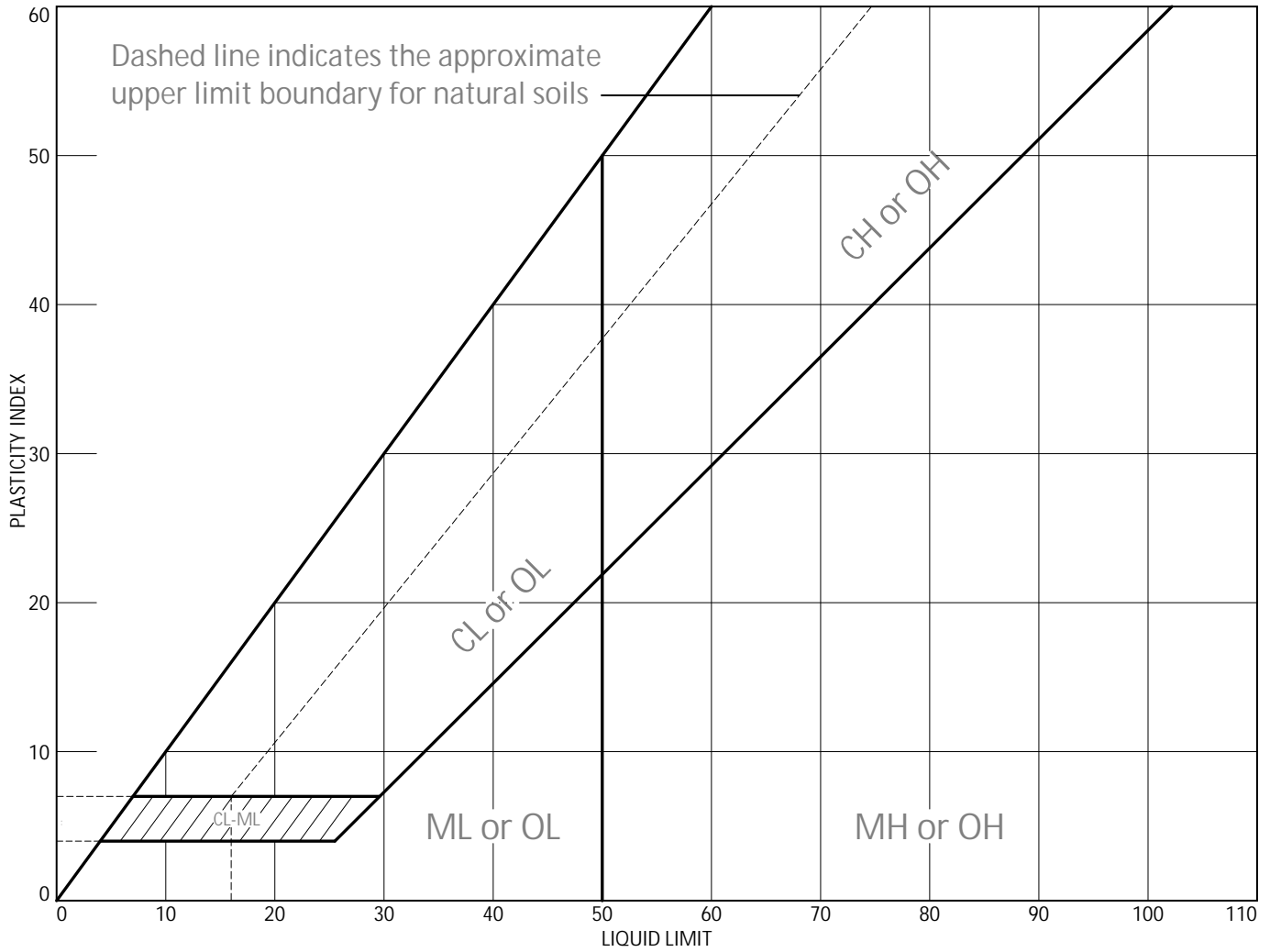
LIQUID AND PLASTIC LIMITS TEST REPORT



MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
● Brown, Gray, Tan, Fat CLAY with Sand	55	27	28	84.9	73.2	CH

Project No. 22542-04 Client: JMT Project: RICHLYN MANOR FM ● Source of Sample: SB-07 Depth: 8.5'-10.0' Sample Number: S-4	Remarks: ● Natural Moisture=24.4%
E2CR, Inc. Baltimore, MD	Figure

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	Tan, Gray, White, Poorly Graded SAND with Silt and Gravel	NV	NP	NP	29.7	10.5	SP-SM

Project No. 22542-04 Client: JMT
 Project: RICHLYN MANOR FM

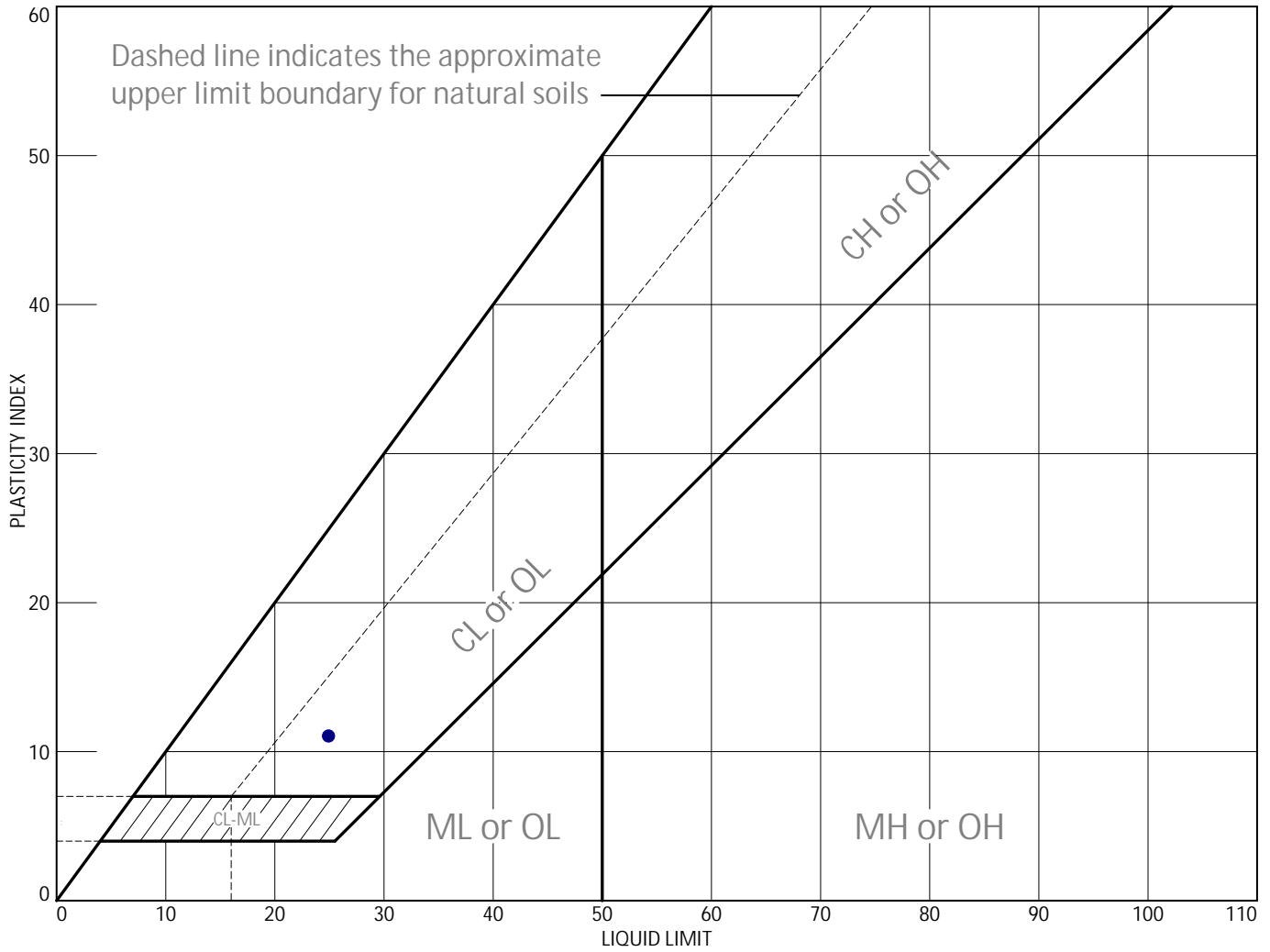
● Source of Sample: SB-08 Depth: 8.5'-10.0' Sample Number: S-4

E2CR, Inc.
 Baltimore, MD

Remarks:
 ● Natural Moisture=5.3%

Figure

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	Brown, Clayey SAND	25	14	11	39.4	24.3	SC
■	Brown, Silty SAND	NV	NP	NP	22.2	15.1	SM

Project No. 22542-04 Client: JMT
 Project: RICHLYN MANOR FM

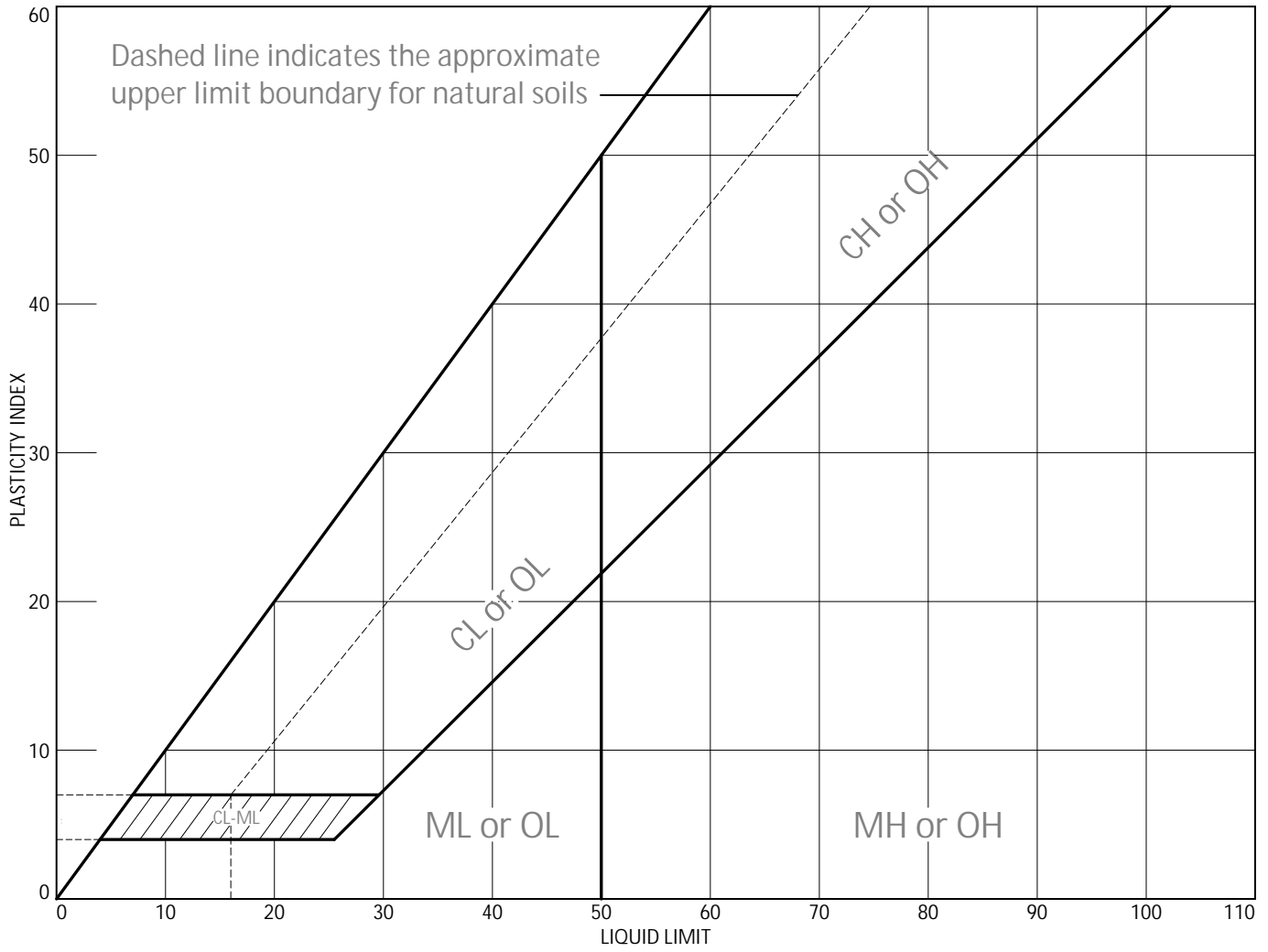
● Source of Sample: SB-09 Depth: 1.0'-7.0' Sample Number: BULK
 ■ Source of Sample: SB-09 Depth: 8.5'-10.0' Sample Number: S-4

E2CR, Inc.
 Baltimore, MD

Remarks:
 ● Natural Moisture=7.3%
 ■ Natural Moisture=12.7%

Figure

LIQUID AND PLASTIC LIMITS TEST REPORT



MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
● Red, Silty SAND	NV	NP	NP	80.3	25.9	SM

Project No. 22542-04 Client: JMT
 Project: RICHLYN MANOR FM

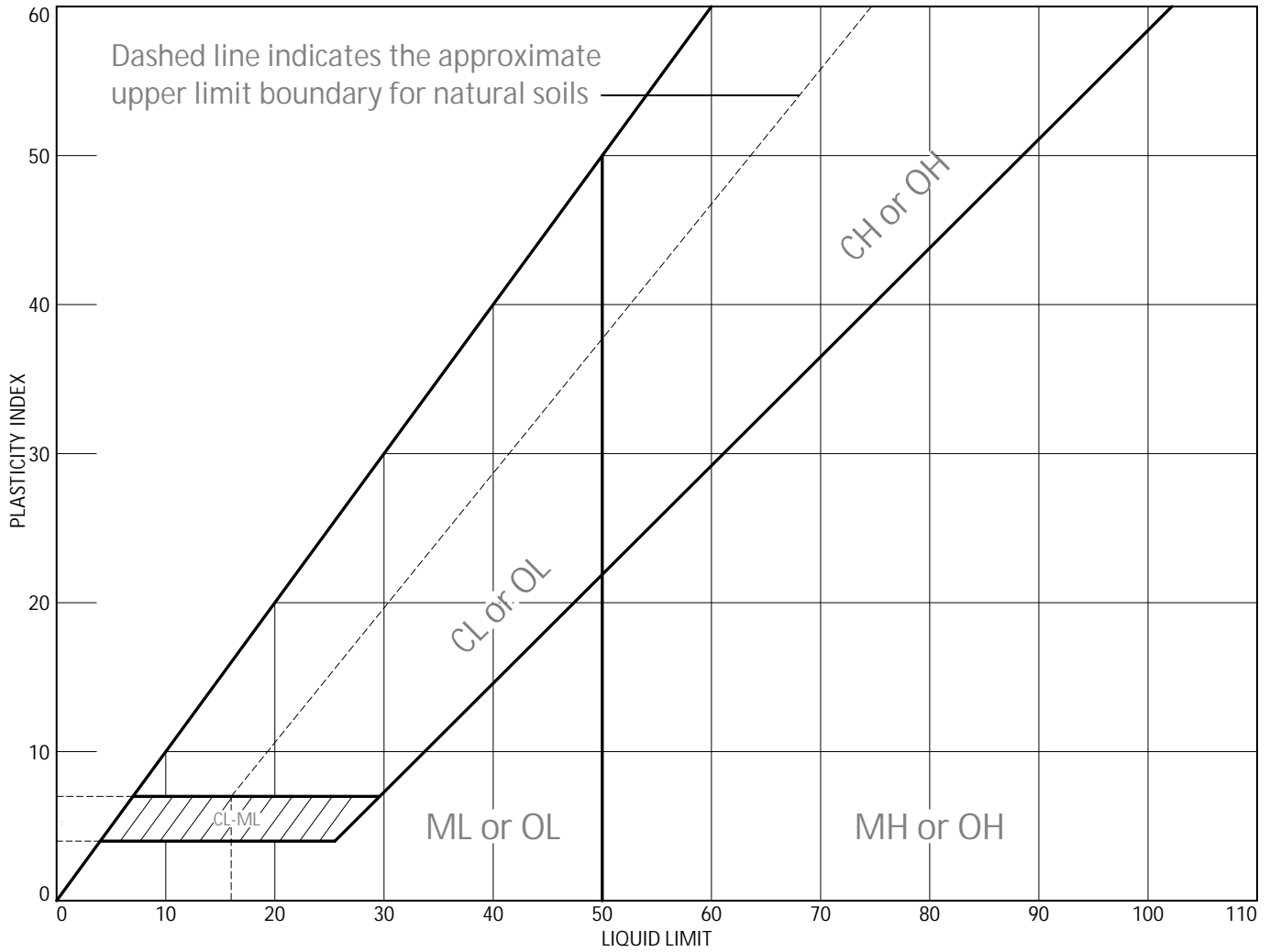
● Source of Sample: SB-10 Depth: 6.0-7.5' Sample Number: S-3

E2CR, Inc.
 Baltimore, MD

Remarks:
 ● Natural Moisture=13.3%

Figure

LIQUID AND PLASTIC LIMITS TEST REPORT



MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
● Brown, Poorly Graded SAND with Silt and Gravel	NV	NP	NP	37.2	11.6	SP-SM

Project No. 22542-04 Client: JMT
 Project: RICHLYN MANOR FM

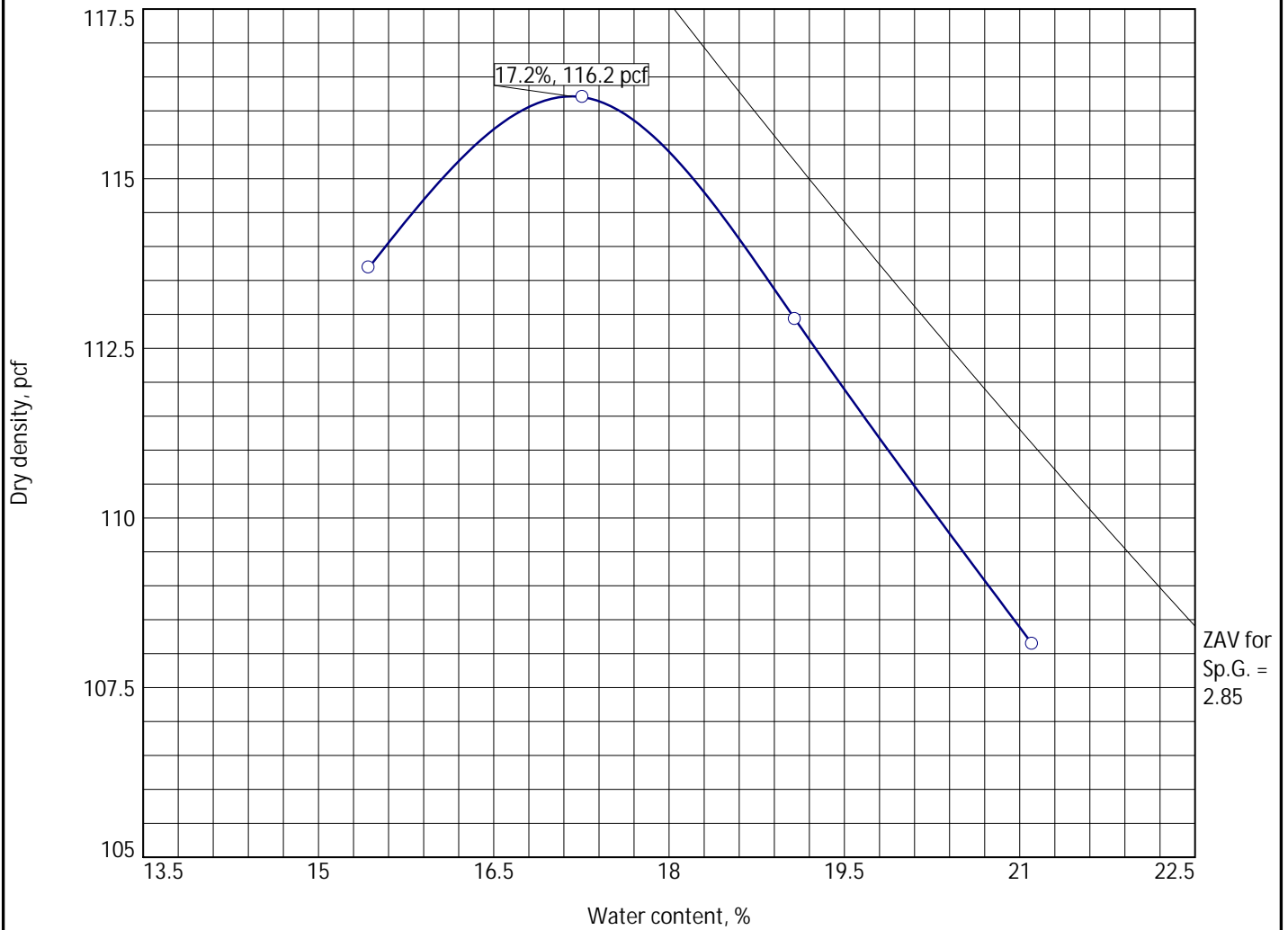
● Source of Sample: SB-11 Depth: 1.0'-7.0' Sample Number: BULK

E2CR, Inc.
 Baltimore, MD

Remarks:
 ● Natural Moisture=7.0%

Figure

COMPACTION TEST REPORT



Test specification: AASHTO T 180-21 Method C Modified

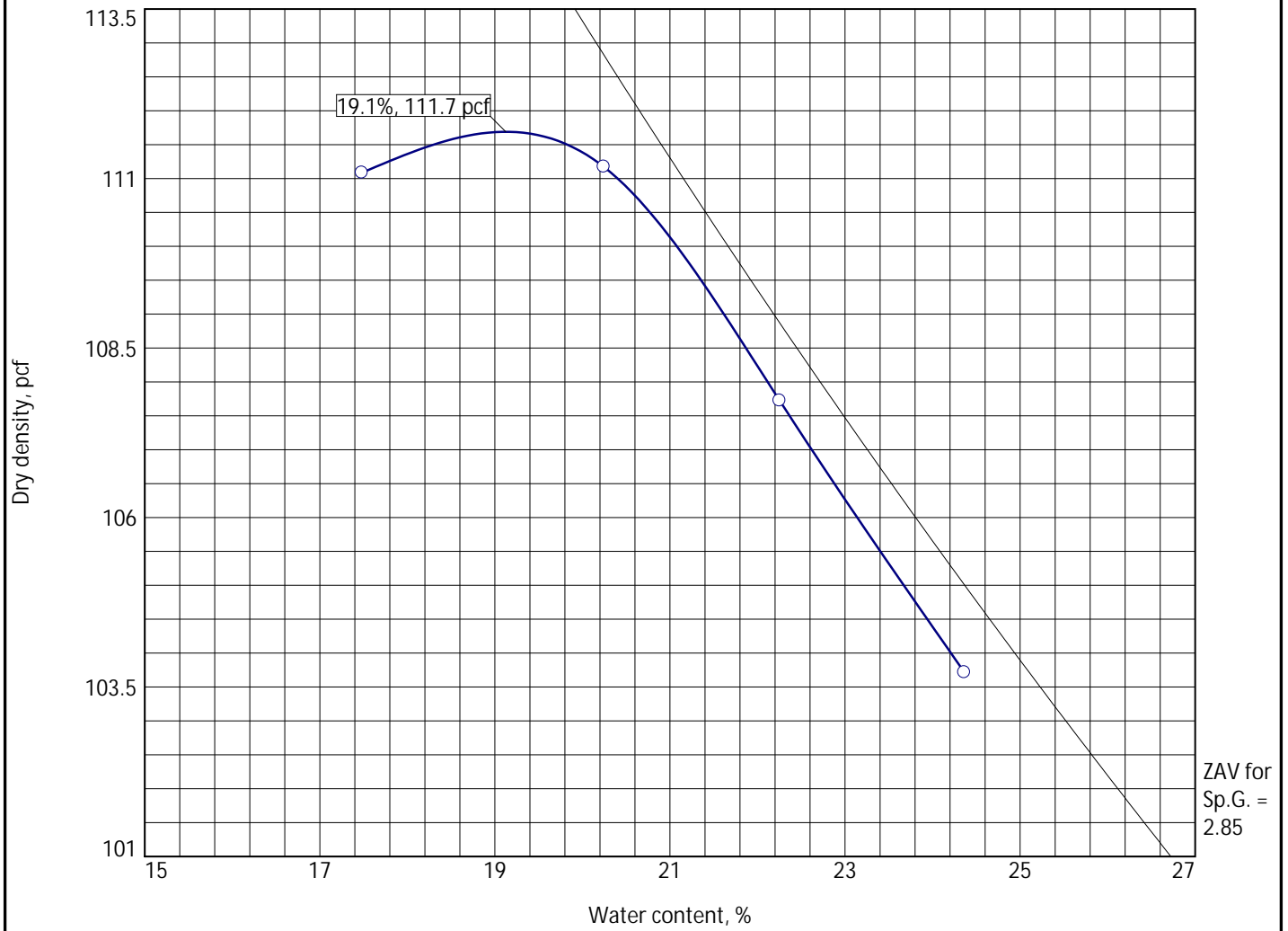
Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > 3/4 in.	% < No.200
	USCS	AASHTO						
1.0'-7.0'	CL	A-7-6(10)	30.2		41	18	3.7	65.5

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 116.2 pcf Optimum moisture = 17.2 %	Brown, Sandy Lean CLAY
Project No. 22542-04 Client: JMT Project: RICHLYN MANOR FM Date: 01/09/2024 Source of Sample: SB-01 Sample Number: BULK E2CR, Inc. Baltimore, MD	Remarks: Natural Moisture: 30.2%

Figure

Tested By: AM _____

COMPACTION TEST REPORT



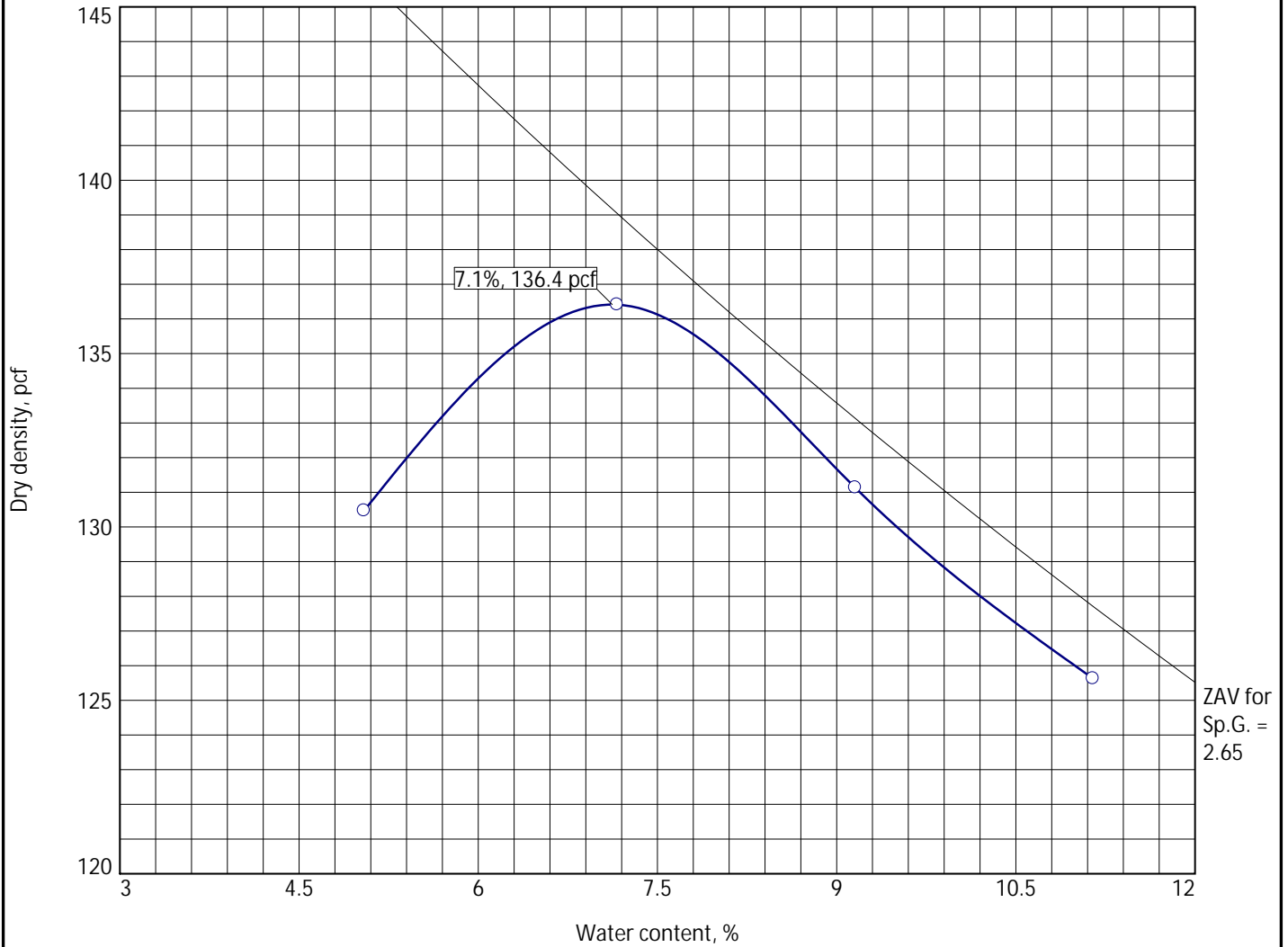
Test specification: AASHTO T 180-21 Method C Modified

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > 3/4 in.	% < No.200
	USCS	AASHTO						
1.0'-7.0'	CH	A-7-6(19)	35.5		55.9	28.8	1.6	68.4

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 111.7 pcf Optimum moisture = 19.1 %	Brown, Tan, Sandy Fat CLAY
Project No. 22542-04 Client: JMT Project: RICHLYN MANOR FM Date: 01/09/2024 Source of Sample: SB-06 Sample Number: BULK E2CR, Inc. Baltimore, MD	Remarks: Natural Moisture: 35.5%
	Figure

Tested By: AM _____

COMPACTION TEST REPORT



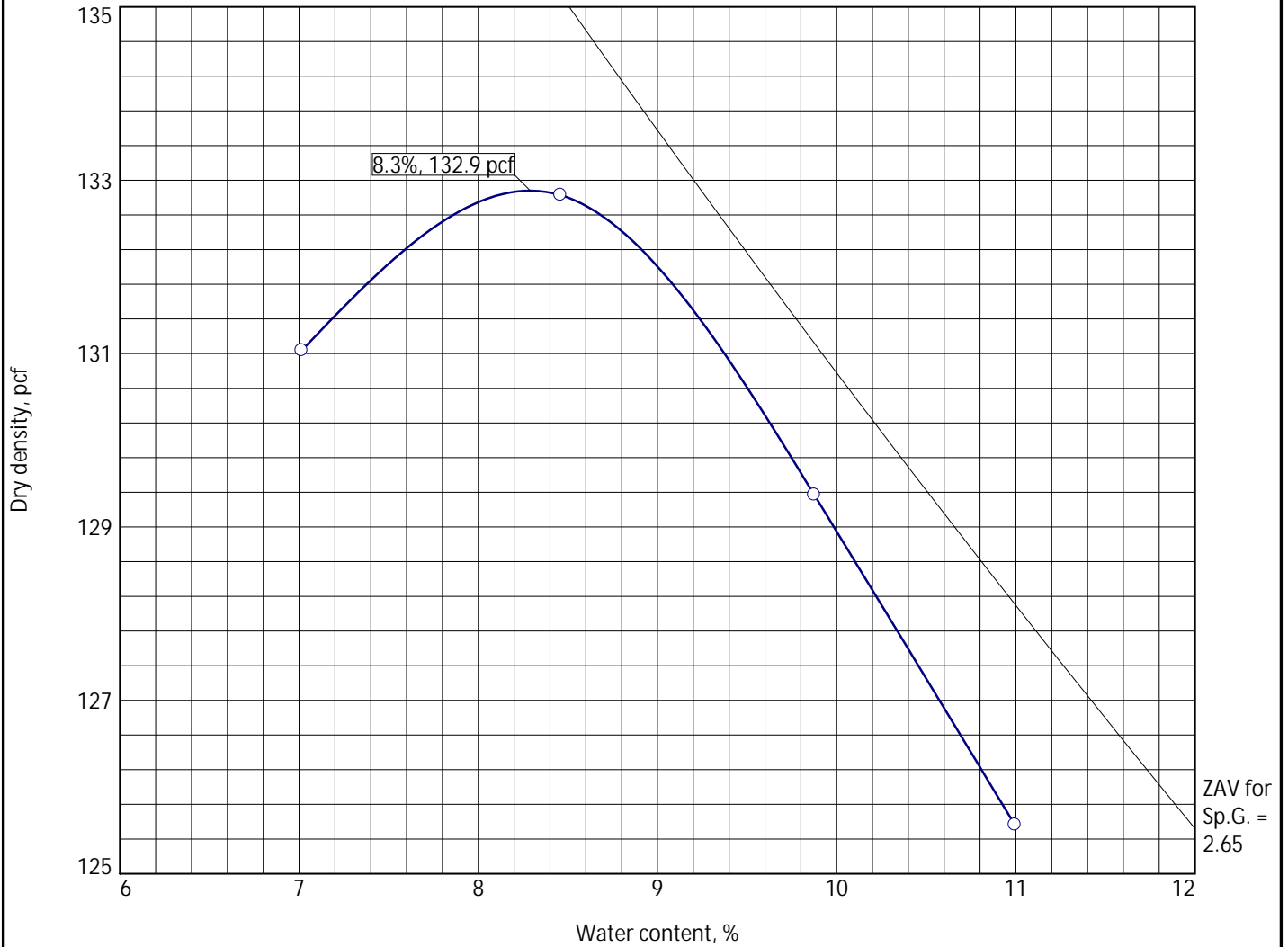
Test specification: AASHTO T 180-21 Method C Modified

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > 3/4 in.	% < No.200
	USCS	AASHTO						
1.0'-7.0'	SC	A-2-6(0)	7.3		24.7	10.4	0.2	24.3

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 136.4 pcf Optimum moisture = 7.1 %	Brown, Clayey SAND
Project No. 22542-04 Client: JMT Project: RICHLYN MANOR FM Date: 01/09/2024 Source of Sample: SB-09 Sample Number: BULK E2CR, Inc. Baltimore, MD	Remarks: Natual Moisture:7.3%
	Figure

Tested By: AM _____

COMPACTION TEST REPORT



Test specification: AASHTO T 180-21 Method C Modified

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > 3/4 in.	% < No.200
	USCS	AASHTO						
1.0'-7.0'	SP-SM	A-1-b	7.0		NP	NP	2.1	11.6

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 132.9 pcf Optimum moisture = 8.3 %	Brown, Poorly Graded SAND with Silt and Gravel
Project No. 22542-04 Client: JMT Project: RICHLYN MANOR FM Date: 01/09/2024 Source of Sample: SB-11 Sample Number: BULK E2CR, Inc. Baltimore, MD	Remarks: Natural Moisture: 7.0%

Figure

Tested By: AM _____



Laboratory Soil Corrosion Test Results

Project:	Richlyn Manor FM		
Client:	E2CR		
BMT Job No.:	1518-61	Dates Tested:	12/28/23 - 12/30/23

Sample ID/Location	SB-01, S-3 & S-4	SB-06, S-3 & S-5	SB-09, S-3 & S-6	SB-011, S-3 & S-7
Depth, ft	6.0' - 10.0'	6.0' - 10.0'	6.0' - 10.0'	6.0' - 10.0'
As Received Moisture Content (ASTM D2166)	18.3%	25.5%	9.0%	12.1%
As Received Resistivity, ohm-cm	680	600	8,500	7,200
Minimum Resistivity (AASHTO T289), ohm-cm	560	510	3,300	4,300
pH (AASHTO T288)	7.58	5.86	6.26	7.64
Sample Temperature during pH Test, °C	19.0	18.9	18.8	18.8
Oxidation Reduction Potential - ORP, (ASTM D1498), mV	201	215	193	194
Chloride Ion Concentration, (AASHTO T291), ppm	198	154	46	17
Sulfate Ion Concentration, (AASHTO T290), ppm	20	2	5	10

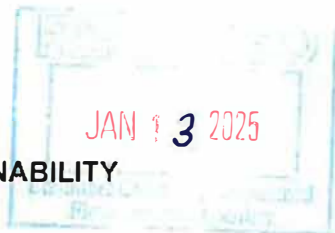
Distilled / deionized water used for all soil water mixes

Tested by: AS
 Reviewed by: SK

THIS PAGE INTENTIONALLY LEFT BLANK

SECTION III

Permits



**BALTIMORE COUNTY, MARYLAND
DEPARTMENT OF ENVIRONMENTAL PROTECTION AND SUSTAINABILITY
ENVIRONMENTAL AGREEMENT**

All grading and stormwater management permit application numbers should be included on this Environmental Agreement (EA). Please return completed form with ORIGINAL signatures to EPS, 111 W. Chesapeake Avenue, Room 305, Towson, MD 21204.

ENVIRONMENTAL AGREEMENT for:

UM 230188

Project Name: Richlyn Manor Force Main
 Plat Reference: NA
 Tax Acct. No.: NA
 Total Estimated Cost: NA
 (All Environmental Securities)

Grading Permit # CEN-24-000110
Stormwater Management Permit # CEN-24-000109
EIR Plan #'s NA

THIS ENVIRONMENTAL AGREEMENT, NUMBER *EA-2025-00001, made this
 ___ day of ___ 20___ by and between Baltimore County MD DPWT
 _____, hereinafter referred to as the applicant, party of the
 first part, and BALTIMORE COUNTY, MARYLAND, a political subdivision of the State of Maryland,
 hereinafter referred to as the County, party of the second part.

WHEREAS, the applicant agrees to implement all environmental measures as set forth in this agreement, at no cost to the County, including:

	<u>AMOUNT</u>	<u>APPLICATION DATE</u>
a. Grading, erosion and sediment control Required performance security amount	<u>NA</u>	★ _____
b. Storm water management Required performance security amount (List facilities separately)	<u>NA</u>	★ _____
c. Forest conservation Required performance security amount	<u>NA</u>	★ _____
d. Forest buffer mitigation Required performance security amount	<u>NA</u>	★ _____
e. Wetland mitigation Required performance security amount	<u>NA</u>	★ _____
f. Chesapeake Bay Critical Area mitigation Required performance security amount	<u>NA</u>	★ _____
g. Other (Specify) _____ Required performance security amount	<u>NA</u>	★ _____

★ Applicant – please leave blank

Now, THEREFORE, THIS AGREEMENT WITNESSETH:
THAT, for and in consideration of the provisions and benefits herein contained, the parties do hereby agree as follows:

1. The applicant agrees:

- a. To implement all required environmental measures for this project in accordance with applicable permits, plans and performance requirements.
- b. To post security(ies) with the County as required in Baltimore County Code Section 32-4-312, in accordance with applicable time frames and procedures specified in the Baltimore County Code and the Department of Environmental Protection and Resource Management Policy, Rules and Regulations Manual.
- c. To process any request(s) for reduction to security(ies) in accordance with Baltimore County Code Section 32-4-313 and the Department of Environmental Protection and Resource Management Policy, Rules and Regulations Manual.

WITNESS the signatures of:

Date: 7/3/24

Signed: Amy Bley (Seal)

Printed Name: Amy Bley

Title, if applicable: Chief, Sewer Design Section

Address: County Office Building, Room 200

Witness Signature: _____

111 W. Chesapeake Avenue

Witness Printed Name: _____

Towson MD 21204

Email: abley1@baltimorecountymd.gov

Phone: 410-987-3781

APPROVED

By: ★ [Signature]
Director of Environmental Protection and Sustainability

Date: ★ Jan. 14, 2025

Horacio Tablada

Rev. 2, March 1, 2017
S>EPS>Shared>ReferenceMaterial



JOHN A. OLSZEWSKI, JR.
County Executive

HORACIO TABLADA, *Director*
Department of Environmental Protection
and Sustainability

June 17, 2024

Carroll Engineering Inc
215 Schilling Circle, Suite 102
Hunt Valley, MD 21031
Attn: Craig Shannon

RE: Richlyn Manor Sanitary Sewer Interceptor
Rehabilitation
Stormwater Management Variance
Lower Gunpowder Falls & Bird River Watersheds
Project I.D. M230188
Tracking Number: 05-24-4128

Dear Mr. Craig Shannon,

This office has reviewed the information submitted and finds that a stormwater management variance can be granted for this project under Section 33-4-113 (a) (2) of Title 4 of the Baltimore County Code. Section 33-4-113 (a) (2) allows a stormwater management variance to be granted if there are exceptional circumstances such that strict adherence to the provisions of the design standards would result in unreasonable hardship or practical difficulty and not fulfill the intent of the regulations.

This project is for the installation of approximately 4,450 feet of 10" force main along Richlyn Drive and Forge Road. All disturbed areas will be re-established once the force mains installation is completed. Although the disturbed area is in excess of 5,000 square feet, there will be no increase in impervious area or runoff resulting from the project.

Please contact Charu Malhotra, PE at 410-887-3768 should you have any questions.

Very truly yours,

A handwritten signature in blue ink, appearing to read "Kritty Udhin", with a large, sweeping flourish extending to the left.

Kritty Udhin, P.E., Manager
Stormwater Management
Department of Environmental Protection
& Sustainability

KU:cm



Maryland

Department of the Environment

Wes Moore, Governor
Aruna Miller, Lt. Governor

Serena McIlwain, Secretary
Suzanne E. Dorsey, Deputy Secretary
Adam Ortiz, Deputy Secretary

11/25/2025

Baltimore County

**111 West Chesapeake Avenue
Towson, Maryland 21204**

RE: Authorization of Application Number: **20CPC09Y1/MDRCC09Y1**

Dear **Mr. Zachary Davis**,

This letter confirms, that as of **11/25/2025**, your authorization for coverage under the General Permit for Stormwater Associated with Construction Activity (MDRC/20-CP) was granted for discharges into:

Use IV: Bird River (02130803), Lower Gunpowder Falls (02130802)

In signing the Notice of Intent (NOI) you have certified that the Operator named here:

Baltimore County

intends to abide by the terms of the MDRC/20-CP permit for:

Richlyn Manor Force Main

for a total disturbed area of: **1.15 acres**

at a property located at:

Perry Hall, Maryland 21128

in:

Baltimore County

This coverage will continue under the terms of the General Permit until the permit is renewed by MDE (see 20CP Part I.F). You must print the full permit text to be kept on file and onsite with this letter. The permit text can be printed from:

https://mde.maryland.gov/programs/Water/wwp/Pages/gp_construction.aspx

Staff on-site must be thoroughly familiar with the content of the permit and where a copy is available on-site. A summary of the permit requirements and provision are provided below.

The stormwater discharges associated with construction and associated support activity are authorized under this authorization provided that appropriate stormwater controls are designed, installed, and maintained (see 20CP Parts III.A and III.B). In addition to stormwater associated with construction activity (see 20CP Part I.C.2) of the permit specifies the allowable non-stormwater discharges under this authorization. Any discharges not authorized by the General Permit may require additional permit coverage (see 20CP Part I.E).

If the current E&SC plan approval covers only part of the entire site, be advised that this registration does not authorize discharges from the other portions for the site until the appropriate E&SC approval authority approves the E&SC plan for those portions.

Discharges must be controlled as necessary to meet applicable water quality standards (see 20CP Part III.B). The narrative surface water quality criteria in Maryland's water quality standards include floating debris, oil, grease, scum, sludge, and other floating materials in amounts sufficient to cause the receiving water(s) to be unsightly; change the existing color to produce objectionable color for aesthetic purposes, or interfere directly or indirectly with designated uses; or elevate temperature which interfere directly or indirectly with designated uses.

In addition to the Technology-Based and Water Quality-Based Limits, the permit requirements include:

- “Site Inspection, Monitoring and Records”, categorized as Person(s) Responsible for Inspecting Site (see 20CP Part III.C.1), Frequency of Inspections (see 20CP Part III.C.2), Increase in Inspection Frequency for Sites Discharging to Sensitive Waters (see 20CP Part III.C.3), Reductions in Inspection Frequency (see 20CP Part III.C.4), Areas That Must Be Inspected (see 20CP Part III.C.5), Requirements for Inspections (see 20CP Part III.C.6), Inspection Report (see 20CP Part III.C.7) and Records On-site (see 20CP Part III.C.8).
- “Corrective Actions”, categorized as Conditions Triggering Corrective Action (see 20CP Part III.D.1), Corrective Action Deadlines (see 20CP Part III.D.2), and Corrective Action Report (see 20CP Part III.D.3).
- “Staff Training Requirements”, categorized as Prior to the commencement of construction activities (see 20CP Part III.E.1), Regarding subcontractors or outside service providers (see 20CP Part III.E.2), Specific training related to scope of jobs (see 20CP Part III.E.3), and Easy access to documents (see 20CP Part III.E.4).
- “Stormwater Pollution Prevention Plan (SWPPP)”, categorized as when a SWPPP is required (see 20CP Part III.F.1), the onsite availability of your SWPPP (see 20CP Part III.F.3) and when your SWPPP must be updated (see 20CP Part III.F.4).

You are required to submit any Modifications to this coverage, Transfers of Authorization, or Notices of Termination via the ePermits portal found at <https://egov.maryland.gov/mde/npdes/Account/Login>. If your contact information changes, update it through the ePermits portal. If you have any questions, please call the administrative team for the General Permit at (410) 537-3019.

Lastly, please remember to contact the compliance program to schedule a preconstruction meeting two (2) weeks prior to starting construction. If the compliance program contact name isn't on your approved E&SC plan, refer to the regional office Compliance Program Contacts listed on the following web page:

<https://mde.maryland.gov/programs/water/Compliance/Pages/index.aspx>

Sincerely,



Matthew Perry
Industrial Stormwater Permits Division
Wastewater Pollution Prevention & Reclamation Program

General Permit for Stormwater Associated with Construction Activity Addendum

You indicated that the permit may involve rare, threatened, or endangered species that may be impacted by your construction project. You must have indicated these identified sensitive areas in your E&SC or in your SWPPP (Part III.F.3.i), to highlight where protections must take place based on consultation with DNR.

Cause(s) of the impairment: Bacteria, Ions, Metals, Nutrients, PCBs, Sediments, Toxicity.

You indicated you are sharing permit-related functions among multiple operators. Where there are multiple operators associated with the same site, they may develop a group SWPPP instead of multiple individual SWPPPs. Regardless of whether there is a group SWPPP or multiple individual SWPPPs, each operator is responsible for compliance with the permit's terms and conditions. In other words, if Operator A relies on Operator B to satisfy its permit obligations, Operator A does not have to duplicate those permit-related functions if Operator B is implementing them for both operators to be in compliance with the permit. However, Operator A remains responsible for permit compliance if Operator B fails to implement any measures necessary for Operator A to comply with the permit. In addition, all operators must ensure, either directly or through coordination with other operators, that their activities do not compromise any other operators' controls or any shared controls. The SWPPP must be kept up-to-date throughout coverage under this permit.

Stormwater Pollution Prevention Plan (SWPPP)

For Construction Activities At:

Richlyn Manor Pumping
Station Force Main
Perry Hall, Maryland

Joint SWPPP Prepared For:

Baltimore County Department of Public Works and Transportation, referred to herein as "County"
Baltimore County Department of Public Works & Transportation – Pump Group
Bureau of Engineering and Construction
111 W. Chesapeake Avenue Room 200
Towson, MD 21204
410-887-3788
zdavis@baltimorecountymd.gov

and Contractor performing work on Baltimore County Project, referred to herein as "Contractor"

Contractor

Name:

Address:

Phone:

Email:

SWPPP Prepared By:

Zachary Davis
Baltimore County Department of Public Works & Transportation
Bureau of Engineering and Construction – Pump Group
111 W. Chesapeake Avenue Room 200,
Towson, MD 21204
410-887-3788

SWPPP Preparation Date:

April 2025

Estimated Project Dates

Project Start Date: December 2025 (NTP)

Project Completion Date: _____

A SWPPP is required for your site in the following situations (Part III.F.1 of the Permit). Indicate which of these conditions apply at your site:

- I am sharing liability between and among operators on the same site. This SWPPP clarifies (**contractor name**) and Baltimore County Department of Public Works & Transportation (DPWT) areas of responsibility.
- I plan to use Chemical Additives or Polymers for Sediment Control.
- I have the potential for any of the non-stormwater discharges prohibited in permit Part I.D (also listed below). This may include any of these.
1. Wastewater from the Concrete Washout. (permit Part III.A.3.d).
 2. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials. (permit Part III.A.3.d)
 3. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance (permit Parts III.A.3.a and III.A.3.c.iii).
 4. Toxic or hazardous substances from a spill or other release (also see permit Part III.A.3.c iv, III.A.3.f. and VI.J) (whether the site is known to be contaminated by PCBs, PFAS, mercury, lead, or other metals, or any other source of toxic industrial pollution); and
 5. Water contaminated by toxic or hazardous substances from sites managed under Maryland's Voluntary Cleanup Program (VCP) or Land Restoration Program (LRP).
- I plan on implementing controls associated with the activities requiring pollution prevention measures, referenced in Part III.A.3 of the permit.
- None of the above, I am voluntarily creating a SWPPP for my construction activity.

Contents

SECTION 1: CONTACT INFORMATION/RESPONSIBLE PARTIES (Part III.F.2.a of the permit).....	5
1.1 Operator(s) / Subcontractor(s).....	5
1.2 Stormwater Team (Part III.F.2.b of the permit).....	7
SECTION 2: NATURE OF CONSTRUCTION ACTIVITIES (Part III.F.2.c of the permit)	7
2.1 Project/Site Information	7
2.2 Discharge Information.....	8
2.3 Description of the Construction Activities (Part III.F.2.c.i - v of the permit) 9	
2.4 Sequence and Estimated Dates of Construction Activities (Part III.F.2.c.vi of the permit)	11
2.5 Authorized Non-Stormwater Discharges (Part III.F.2.e of the permit)	12
SECTION 3: DEWATERING AND USE OF CHEMICAL TREATMENT (Part III.F.2.c of the permit).....	12
3.1 Dewatering Practices.....	12
3.2 Chemical Treatment.....	13
SECTION 4: POLLUTION PREVENTION STANDARDS (Part III.A.3 of the Permit).....	14
4.1 Potential Sources of Pollution.....	14
4.2 Spill Prevention and Response.....	14
4.3 Fueling and Maintenance of Equipment or Vehicles (Part III.A.3.a in the Permit)15	
4.4 Washing of Equipment and Vehicles (Part III.A.3.b in the Permit).....	16
4.5 Storage, Handling, and Disposal.....	17
SECTION 5: INSPECTION, MAINTENANCE, AND CORRECTIVE ACTION.....	21
5.1 Inspection Personnel and Procedures (Part III.C of the Permit)	21
5.2 Corrective Action (Part III.D of the Permit).....	23
SECTION 6: TRAINING (Part III.E of the Permit).....	24
SECTION 7: EROSION AND SEDIMENT CONTROLS (Part III.F.f.i)	25
7.1 Stream Protection Zone (Natural Buffers or Equivalent Sediment Controls) (Part III.F.f.ii)	25
7.11 Compliance with Other Requirements	26
SECTION 8: CERTIFICATION AND NOTIFICATION.....	26
SECTION 9: Appendices.....	27
9.1 Amendment Log.....	27

9.2 Site Maps (Part III.A.2.n of the permit) 41

9.3 Sample Subcontractor Certifications/Agreements 55

9.5 Grading and Stabilization Activities Log 56

9.6 Rainfall Log..... 57

9.7 SWPPP Training Log..... 59

9.8 Standard Inspection Form for MDE General Permit for Stormwater
Associated with Construction Activity 61

9.9 Standard Corrected Action Log..... 66

9.10 Dewatering Inspection Report..... 67

9.11 Turbidity Monitoring Report Form and Instructions 70

9.12 Delegation of Authority..... 73

SECTION 1: CONTACT INFORMATION/RESPONSIBLE PARTIES (Part III.F.2.a of the permit)

1.1 Operator(s) / Subcontractor(s)

Operator(s):

Owner's Representative: Baltimore County DPWT
Zachary Davis
Project Engineer (Engineer III)
111 W. Chesapeake Avenue Room 200
Towson, MD 21204
410-887-3788
Zdavis@baltimorecountymd.gov

Area of Control:

The County has operational control over construction plans and specifications, including the ability to make modifications to those plans and specification. The County's area of control is limited to control of these plans and specifications only.

Contractor performing work on Baltimore County Project, referred to as "Contractor"

Contractor: TBD

Name:

Address:

Phone:

Email:

Area of Control

The Contractor has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit conditions including authorization to direct workers at a site to carry out activities required by the 20-CP permit, correct violations (including repair or installation of erosion and sediment controls), and/or halt construction activity until violations or the permit are corrected. The Contractor is responsible for entirety of project site, including during any periods of inactivity. Contractor's responsibility for the entirety of project site do not end until Final Acceptance of the work has been issued by the County and this permit is closed out.

Subcontractor(s):

All subcontractors performing work on the project site shall be the responsibility of the Contractor. The Contractor shall notify subcontractors of stormwater requirements applicable to their work. The County assumes no responsibility for any subcontractors. The Contractor may consider using Subcontractor Agreements (See Appendix 9.3).

Emergency 24-Hour Contact:

Contractor Name: TBD

Company:

Phone:

Entity	Project Area	Responsibility
Contractor	Entire work area	The Contractor has the sole responsibility for compliance with all Permit Terms and Conditions, and that responsibility continues through and until Final Acceptance of all work is issued by the County and this permit is closed out.
Contractor	Entire work area	The Contractor is responsible for any and all stormwater management and erosion and sediment controls, including any controls not shown on the Construction Drawings. This responsibility includes the installation and maintenance of all stormwater management and erosion and sediment control measures in accordance with Contract Drawings and Contract Documents.
Contractor	Entire work area	The Contractor is responsible for conducting all inspections and submitting all reports required to comply with the 20-CP permit and SWPPP. This includes all inspections and reporting during periods of inactivity.
Contractor	Entire work area	The Contractor is responsible for all turbidity monitoring and reporting. This includes monitoring and reporting during periods of inactivity. Section I of the Turbidity Monitoring Reports shall reflect that the Contractor is the responsible party for submitting the reports, and include the County's NPDES Number.
County	Plans and Specifications	The County has operational control over construction plans and specifications, including the ability to make modifications to those plans and specification. The County's responsibility is limited to control of these plans and specifications only.

1.2 Stormwater Team (Part III.F.2.b of the permit)

Stormwater Team		
Name and/or position, and contact	Responsibilities	I Have Read the 20-CP and Understand the Applicable Requirements
(Zachary Davis, Pump Group EIII) Baltimore County Department of Public Works & Transportation 410-887-3788 zdavis@baltimorecountymd.gov	Owners Representative (Overseeing the initial development of the SWPP)	<input checked="" type="checkbox"/> Yes Date: April 2025
Carroll Engineering, Inc. 410-785-7423 mensor@ceiengineering.com	Civil Engineer	<input checked="" type="checkbox"/> Yes Date: April 2025
Contractor Name: Company: Phone:	Construction Manager's Representative	<input type="checkbox"/> Yes Date:

SECTION 2: NATURE OF CONSTRUCTION ACTIVITIES (Part III.F.2.c of the permit)

2.1 Project/Site Information

Project Name and Address

Project/Site Name: Richlyn Manor Sanitary Pumping Station Force Main

Project Street/Location: Forge Road and Richlyn Drive

City: Perry Hall

State: Maryland

ZIP Code: 21128

County or Similar Subdivision: Baltimore County, Richlyn Manor

Business days and hours for the project: M-F 7:00am-5:00pm

Project Latitude/Longitude

Latitude: 39.41998 N
 (decimal degrees)

Longitude: - 76.44280 ° W
 (decimal degrees)

Latitude/longitude data source:

Map GPS Other (please specify): _____

Additional Project Information

Are you requesting permit coverage as a state or federal entity? Yes No

Have you received an assigned MDE SF number for the Erosion and Sediment Control Plan?
 X Yes No

If yes, please provide the assigned number:

Baltimore County Soil Conservation District no. 120-29H2-25

2.2 Discharge Information

Does your project/site discharge stormwater into a Municipal Separate Storm Sewer System (MS4)? Yes No

Are there any waters of this State within 50 feet of your project's earth disturbances? Yes No

Provide the Watershed Basin Code below. If your project discharges to more than one watershed, please provide all basin codes.

Lower Gunpowder Falls	02130802
Bird River	02130803

Outfall ID	Name of receiving water	Is the receiving water impaired (on the CWA 303(d) list)?	List the pollutants that are causing the impairment	Is there a completed TMDL for this receiving waterbody?	Is this receiving water designated as a Tier II?
POI-1	Lower Gunpowder Falls	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Ions, Metals, Bacteria, Nutrients, Sediments, Toxicity	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
POI-2	Gunpowder River	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Biological, Metals, Nutrients, PCBs, Sediments,	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

2.3 Description of the Construction Activities (Part III.F.2.c.i - v of the permit)

General Description of Project

Provide a general description of the nature of your construction activities. For any demolition, include the dates of past renovations:

The Richlyn Manor Sanitary Pumping Station Force Main project is located in Perry Hall, Maryland. At the northeast end of Richlyn Drive there is a drive that provides access to the location of a future sewage pumping station. To the southwest, Richlyn Drive intersects Forge Road, and there is a sanitary sewer network in this vicinity that transports sewage to a treatment facility. The scope of the project consists of installation of a ten-inch (10") force main that will transport sewage from the future pumping station at the end of Richlyn Drive and discharge the sewage to an existing sanitary sewage system within the limits of Forge Road. Portions of the access road, Richlyn Drive, and Forge Road will be impacted by the installation of the force main and ultimately returned to their original hydrologic conditions in their existing or better conditions. The contractor is responsible for providing protection in accordance with the contract documents and all parts of the SWPPP plan (in its entirety), whether noted herein or not.

Size of Construction Site

Size of Property: 1.15 acres

Total Acreage Expected to be Disturbed by Construction Activities: 1.15 acres

Maximum Acreage Expected to be Disturbed at Any One Time: 1.15 acres

Type of Construction Site (check all that apply):

- Single-Family Residential
 Multi-Family Residential
 Commercial
 Industrial
 Institutional
 Highway or Road
 Utility
 Other _____

Will there be demolition of any structure built or renovated before January 1, 1980?

- Yes No

If yes, do any of the structures being demolished have at least 10,000 square feet of floor space? Yes No N/A

Pollutant-Generating Activities (Part III.F.c.vii)

- Equipment refueling may occur on site from mobile fuel tanks to equipment. Potential for spills exists during the setup and transfer of fuel. Refueling activities will occur at a designated location which offers protection from spilled fuel and have available dry cleanup materials. Spills will be immediately cleaned up.
- Equipment washing to remove sediment laden material from tires and tracks shall be performed prior to exiting the LOD. All sediment wash activities shall be directed to an MDE approved ESC device.
- Fertilizers shall be stored in designated locations and utilized at rates in accordance with the approved ESC plans and in accordance with MDE and manufacture guidance. Care shall be taken to not employ fertilizers immediately prior to heavy rainfall events.
- Grading and disturbance of earth to install utilities could result in the transmission of sediment during rainfall events. All earth disturbance will occur within the designated LOD and runoff will be directed to an MDE approved ESC device.
- Site excavation will result in solid waste materials. All materials will be hauled off at the end of the working day to a site with an open grading permit and an approved sediment control plan.

Pollutant-Generating Activity

Asphalt paving, concrete paving, pipe construction and finishes (paint, adhesives, hazardous materials within building components, solid waste), material transport, installation of utilities, equipment refueling, washing of sediment from wheels and tracks, fertilizers for vegetative stabilization.

Pollutants or Pollutant Constituents

Asphalt paving	Asphalt, binders. Hydrocarbon based materials
Concrete Paving	Concrete & cement materials
Pipe Construction	Paints, caulks, sealants, hazardous materials within construction components
Utility Trenching	Sediment

Equipment Refueling	Fuel, Hydrocarbon based materials
Equipment Washing	Sediment
Fertilizer Application	Phosphorus, Nitrogen
Dewatering	Sediment

Construction Support Activities *(only provide if applicable)*

Describe any construction support activities for the project (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas)

Excavated soil material from excavation activity shall be hauled off site at the end of each working day and will be part of the contractors' means and methods.

Inlets near the work area shall have inlet protection devices installed at the discretion of the Baltimore County erosion and sediment control inspector.

Contact information for construction support activity:

Name: (to be provided by the Contractor)
Telephone number: (to be provided by the Contractor)
Email: (to be provided by the Contractor)
Address: (to be provided by the Contractor)

2.4 Sequence and Estimated Dates of Construction Activities (Part III.F.2.c.vi of the permit)

Phase I

Force main installation associated trench pavement repair	
Estimated Start Date of Construction Activities for this Phase	December 2025
Estimated End Date of Construction Activities for this Phase	TBD
Estimated Date(s) of Application of Stabilization Measures for Areas of the Site Required to be Stabilized	December 2025-TBD
Estimated Date(s) when Stormwater Controls will be Removed	TBD

Phase II

Site paving (Contingent items)	
Estimated Start Date of Construction Activities for this Phase	TBD
Estimated End Date of Construction Activities for this Phase	TBD
Estimated Date(s) of Application of Stabilization Measures for Areas of the Site Required to be Stabilized	TBD

Estimated Date(s) when Stormwater Controls will be Removed	January 2027
--	--------------

2.5 Authorized Non-Stormwater Discharges (Part III.F.2.e of the permit)

List of Authorized Non-Stormwater Discharges Present at the Site

Type of Authorized Non-Stormwater Discharge <i>You are required to identify the locations of these authorized non-stormwater discharges on your site map.</i>	Present at the construction site?
Discharges from emergency fire-fighting activities	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Landscape irrigation;	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Waters used to wash vehicles and equipment	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Water used to control dust	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Potable water including uncontaminated water line flushing (requires separate "HT" permit)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
External building washdown (soaps/solvents are not used, and external surfaces do not contain hazardous substances)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Pavement wash waters	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Uncontaminated air conditioning or compressor condensate	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Uncontaminated, non-turbid discharges of ground water or spring water	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Construction dewatering water	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SECTION 3: DEWATERING AND USE OF CHEMICAL TREATMENT (Part III.F.2.c of the permit)

3.1 Dewatering Practices

General

No dewatering practices are shown on the construction plans, and no specific dewatering practice is included in the construction specifications. If it is determined that a dewatering practice is required, it is the sole responsibility of the Contractor to properly install, operate, and maintain any and all dewatering practices.

Specific Dewatering Practices

The Contractor shall insert the name of any additional dewatering practice(s) to be installed	
Description: Insert a description of any additional dewatering practice(s) to be installed (Contractor)	
Installation	Contractor shall insert approximate installation date(s)

Maintenance Requirements	Contractor shall insert maintenance requirements for the dewatering practice
---------------------------------	--

[Repeat as needed.]

3.2 Chemical Treatment

Will this site use treatment chemicals? YES NO

Soil Types

List all the soil types (include soil types expected to be found in fill material) that are expected to be exposed during construction in areas of the project that will drain to chemical treatment systems: N/A

Treatment Chemicals

List all treatment chemicals that will be used at the site and explain why these chemicals are suited to the soil characteristics: N/A

List all treatment chemicals, a description of the dosage to be used and the method of storage: N/A

Provide any additional applicable Safety Data Sheet information: N/A

Provide all additional local requirements affecting the use of treatment chemicals: N/A

Special Controls for Cationic Treatment Chemicals (if applicable)

If MDE authorized you to use cationic treatment chemicals, include the official authorization letter or other communication, and identify the specific controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will not lead to an exceedance of water quality standards. Also, include any other approval authorities contacted for the approval.

Provide the name(s) of approval authorities contacted and date(s) contacted: N/A

Provide a brief explanation for the use of Cationic Treatment Chemicals: N/A

Training on Use of Additives

Describe the training that personnel who handle and apply chemicals have received prior to permit coverage, or will receive prior to the use of treatment chemicals: N/A

List all treatment chemicals	Is there any specific training that personnel must receive prior to handling or applying this chemical?	Explain the training

[Repeat as needed.]

SECTION 4: POLLUTION PREVENTION STANDARDS (Part III.A.3 of the Permit)

4.1 Potential Sources of Pollution

Construction Site Pollutants

You must consider where potential spills and leaks could occur that contribute pollutants to stormwater discharges, and any known hazardous or toxic substances, such as PCBs and asbestos that will be disturbed or removed during construction.

Pollutant-Generating Activity	Pollutants or Pollutant Constituents (that could be discharged if exposed to stormwater)	Location on Site (or reference SWPPP site map where this is shown)
Equipment Refueling	Fuels, Hydrocarbons	Within the LOD in close proximity to fuel cleanup kits.
Asphalt Paving	Asphalt, hydrocarbons	Trench repair and road replacement/repair
Concrete paving	Concrete materials	Reconstructed driveways and curbs
Trench & Manhole Excavation	Sediment	Within LOD
Fertilizer Application	Phosphorus, Nitrogen	Within LOD

[Contractor shall include any additional rows as necessary]

4.2 **Spill Prevention and Response**

Spill prevention and response procedures (see Part I.D.5 and Part III.A.3.c.iv of the permit). You must include the following:

- o Procedures for expeditiously stopping, containing, and cleaning up spills, leaks, and other releases. Identify the name or position of the employee(s) responsible for detection and response of spills or leaks; and
- o Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity consistent with Part III.A.3.f. and established under either 40 CFR 110, 40 CFR 117, or 40 CFR 302, occurs during a 24-hour period (see Part III.A.3.f). Contact information must be in locations that are readily accessible and available to all employees. You may also reference the existence of Spill Prevention Control and Countermeasure (SPCC) plans developed for the construction activity under Part 311 of the CWA, or spill control programs otherwise required by an NPDES permit for the construction activity, provided that you keep a copy of that other plan on site.

Employees and workers in the vicinity of an activity where the potential for spilling of a contaminant or hazardous material exists shall maintain awareness until the activity ceases. Any activity where a spill occurs shall immediately stop, the project superintendent shall be immediately notified. The project superintendent is responsible for employing necessary spill containment and counter measures. The superintendent shall be responsible for notifying appropriate emergency response personnel and agencies in accordance with federal, state and Baltimore County requirements. Material shall be cleaned up utilizing dry cleanup methods or methods dictated by the responding emergency agency. All spilled material shall be contained and disposed of in a safe and legal manner at an approved location for receiving the spilled materials.

Employees handling contaminated or hazardous materials shall receive appropriate training in the use and handling of said materials in accordance with manufacturer's, federal, state, and county guidelines. Employees shall also receive training in spill prevention and response.

Super silt fence along the trench and manhole excavation.

Inlet protection on the inlets within the drainage path of the work area.

Filter bag on the dewatering hose.

4.3 **Fueling and Maintenance of Equipment or Vehicles (Part III.A.3.a in the Permit)**

General

Equipment fueling shall occur in a designated area where protective measures are in place to provide secondary containment for any spilled materials. The contractor is responsible for providing and keeping fuel spill kit(s) on site with necessary absorbent materials and readily available at the location where equipment is refueled.

Specific Pollution Prevention Practices

Information Data Sheets / Training Information	
Description: Education of employees handling materials. All major equipment refueling and vehicle maintenance will occur off site. Minor vehicle refueling and maintenance will occur within the LOD in close proximity to fuel cleanup kits under the supervision of a trained employee.	
Installation	Throughout Project Duration
Maintenance Requirements	Review of procedures and training of employees

Fuel Spill Kit	
Description: Kit to include components to contain and perform dry cleanup of fuel spills	
Installation	Located at the area of Equipment Fueling
Maintenance Requirements	Superintendent to maintain and replenish as needed.

4.4 Washing of Equipment and Vehicles (Part III.A.3.b in the Permit)

General

The contractor must clean and wash all equipment prior to leaving the LOD to minimize sediment track out.

Specific Pollution Prevention Practices

Sump pit, filter bag, and portable sediment tank.	
Description: Sump pits, portable sediment tanks, filter bags, and super silt fence (MDE/BCSCD ESC approved devices installed to capture wash water).	
Installation	Throughout project duration
Maintenance Requirements	<p>System frequently checked for clogs and accumulated sediment removed. Remove accumulated sediment to an MDE approved location. Sump pits (SP), portable sediment tanks (PST), and filter bags (FB) shall be monitored for sediment laden water and reconstruction. Replace geotextile and stone as needed. During SP, PST, and FB maintenance it is recommended to have a secondary dewatering device on hand to dewater the site while the primary dewatering device is offline. All discharge shall be in an area approved by the Baltimore county ESC inspector and additionally protected by inlet protections or super silt fence. Refer to the approved ESC plans, Baltimore County Soil Conservation District (BCSCD) Urban Policy and Guidelines Manual, and the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control Manual for additional maintenance requirements.</p> <p>Super silt fence shall be inspected for holes or breaks in the chain links and fabric daily. If the fence is not functioning properly, all work must cease until the fence repair has been approved by the BCSCD inspector.</p>

	<p>If sump pits clog, the perforated pipe needs to be removed and the geotextile and stone replaced. The point of discharge must be kept free of erosion.</p> <p>The portable sediment tank requires frequent maintenance. Remove accumulated sediment from inner pipe when it reaches two feet in depth. If the system clogs, the inner pipe needs to be pulled out, accumulated sediment removed, and the geotextile replaced. The point of discharge must be kept free of erosion.</p> <p>If the filter bag clogs, it needs to be replaced. Rips, tears, and punctures also necessitate replacement of the filter bag. The connection between the pump hose and the filter bag needs to be kept water tight during operation. If the bedding becomes displaced, it must be replaced.</p>
--	---

4.5 Storage, Handling, and Disposal

4.5.1 Building Products (Part III.A.3.c.i in the Permit)

General

n/a

Specific Pollution Prevention Practices

Covered Secured Containers	
Description:	
Installation	
Maintenance Requirements	

Secondary Fuel Storage Containment	
Description: n/a	
Installation	
Maintenance Requirements	

4.5.2 Pesticides, Herbicides, Insecticides, Fertilizers, and Landscape Materials (Part III.A.3.c.ii in the Permit)

General

Fertilizers shall be stored under tarps on skids until ready for use. Fertilizers will not be delivered until initial implementation of fertilizer applications to avoid long term storage.

Specific Pollution Prevention Practices

Covered Storage	
Description: Fertilizers to be covered by secured tarps	
Installation	Upon delivery
Maintenance Requirements	Tarps to be inspected and secured daily.

4.5.3 Diesel Fuel, Oil, Hydraulic Fluids, Other Petroleum Products, and Other Chemicals (Part III.A.3.c.iii in the Permit)

General

<p>Mobile fueling of equipment occurs at designated areas within the LOD and in close proximity to Spill Containment kits assigned to the crew who are trained in such containment and disposal procedures. Tanks dispensing fuel are properly labeled and identified on the truck and other protections present as required for said fuel station.</p> <p>For diesel fuel, oil, hydraulic fluids, and other products not specifically mentioned, store in water-tight containers and provide:</p> <ol style="list-style-type: none"> a. cover (e.g. plastic sheeting or roofing) to minimize exposure to precipitation and stormwater. b. an effective means to minimize discharge from spill areas (e.g. spill kits with personnel available to respond quickly in the event of a spill) and provide secondary containment (e.g. spill berms, spill containment pallets). c. clean spills immediately using dry clean-up methods and dispose of used materials properly. Notify the authorities as required. Do not hose down the area to clean surfaces or spills. d. Eliminate the source of the spill to prevent further discharge.
--

Specific Pollution Prevention Practices

Spill prevention and cleanup kits at location of refueling	
Description: Spill prevention and dry clean up kits	
Installation	Upon Delivery
Maintenance Requirements	Inspected daily, replaced, and replenished as needed. Fuel is monitored daily for spills/leaks and contained using fuel spill kits.

4.5.4 Hazardous or Toxic Waste (Part III.A.3.c.iv in the Permit)

General

<p>Paints, solvents, and paint cleanup kits shall be provided on site and stored in a safe, covered location away from the elements.</p>
--

Specific Pollution Prevention Practices

Spill Prevention and Cleanup Kits	
Description: Paints, solvents, and paint cleanup kits shall be provided on site and stored in a safe, covered location away from the elements. Separate hazardous and toxic waste from domestic waste and store in sealed containers constructed of suitable materials to prevent leakage and corrosion in accordance with applicable Resource Conservation and Recovery Act (RCRA) requirements and all federal/local requirements. Store containers within appropriately sized secondary containment devices (e.g. spill berms, containment pallets) to prevent discharge in a covered area with spill kits on site. Clean up all spills immediately, and notify authorities as required (Part III.A.3.f). Eliminate the source of the spill to prevent further discharge.	
Installation	During pipe and sanitary structure (manhole, combination air valve, dewatering valve and vault) installation.
Maintenance Requirements	Provide paint spill cleanup kits and dispose of any toxic waste off site at an approved location.

Barriers for outside storage	
Description:	
Installation	
Maintenance Requirements	

4.5.5 Construction and Domestic Waste (Part III.A.3.c.v in the Permit)

General

Construction waste to be disposed of in approved receptacles and haul-off to approved licensed landfill at the end of each working day.

Specific Pollution Prevention Practices

Daily Disposal	
Description: Proper housekeeping is supervised by the onsite Foreman and assigned Supervisor whom used daily disposal of properly packaged and contained debris on a daily basis making sure not to house hazardous materials for disposal in such bags. Solids generated by building activities are also loaded promptly and disposed of accordingly at licensed landfills. No dumpsters are present onsite.	
Installation	Throughout project duration
Maintenance Requirements	The foreman, site supervisor and employees shall dispose of materials at the time of discarding. Excess disposed waste shall be picked up at the end of each working day. The Contractor shall follow any applicable Federal, State,

	and Local Laws and Regulations for all components to be removed and disposed of.
--	--

4.5.6 Sanitary Waste (Part III.A.3.c.vi in the Permit)

General

Porta-potty's shall be available to construction employees.

Specific Pollution Prevention Practices

Installation of Portable Bathrooms	
Description: Portable Bathrooms with containment in accordance with State requirements	
Installation	Throughout project duration
Maintenance Requirements	Portable bathrooms shall be inspected weekly and serviced on an as needed basis.

4.5.7 Washing of Applicators and Containers used for Paint, Concrete or Other Materials (Part III.A.3.d in the Permit)

General

Washing of materials shall be performed offsite where effluent is captured and discharged to sanitary sewer systems in accordance with local Wastewater Authorities guidelines for disposal of materials. Where materials cannot be received by the sanitary authority, applicators and containers shall not be washed and be disposed of at an appropriate receiving disposal facility.

Specific Pollution Prevention Practices

Training	
Description: Training on the proper cleaning and disposal of containers and applicators.	
Installation	During Initial arrival onsite
Maintenance Requirements	Maintain visual inspection throughout project to prevent improper cleaning and disposal of applicators and containers.

4.5.8 Fertilizers (Part III.A.3.e in the Permit)

General

Fertilizers shall be stored under tarps on skids until ready for use. Fertilizers will not be delivered until initial implementation of fertilizer applications to avoid long term storage.

Specific Pollution Prevention Practices

Covered Storage	
Description: Fertilizers to be covered by secured tarps	
Installation	Upon delivery
Maintenance Requirements	Tarps to be inspected and secured daily.

4.5.9 Releases in Excess of Reportable Quantities. (Part III.A.3.f in the Permit)

Discharges of hazardous substances and oil resulting from on-site spills are not authorized by this permit. (Part I.D.5). In the event of a discharge resulting from a spill of hazardous substances or oil from a construction site (Parts III.A.3.c.iii and Part III.A.3.c.iv), where the release is an amount equal to or in excess of a reporting quantity established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302, occurring during a 24 hour period:

- i. You shall notify the National Response Center (NRC) as soon as you have knowledge of the discharge in accordance with the requirements of 40 CFR Part 110, 40 CFR Part 117, and 40 CFR Part 302;
 - 1-800-424-8802 or
 - 202-267-2675 (in the Washington, DC metropolitan area)
- ii. You shall notify the Maryland Department of the Environment as soon as you have knowledge of the discharge;
 - Between 8AM and 5PM at 410-537-3510
 - All other hours at (866) 633-4686

You must also, within seven (7) calendar days of knowledge of the release, provide a description of the release, the circumstances leading to the release, and the date of the release to the Department's compliance program. Local requirements may necessitate additional reporting of spills or discharges to local emergency response, public health, or drinking water supply agencies. No condition of this general permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations.

SECTION 5: INSPECTION, MAINTENANCE, AND CORRECTIVE ACTION

5.1 Inspection Personnel and Procedures (Part III.C of the Permit)

Instructions – Describe inspection procedures
Personnel Responsible Inspection schedule Record daily rainfall (See Appendix VI)

Personnel Responsible for Inspections	
Name	Contractor to provide (name & title).
Certificate of attendance for a Responsible Personnel Training Program <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Has the Approval Authority waived the Certificate of Training requirement?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A

Inspection Schedule

Standard Frequency:
<input checked="" type="checkbox"/> Once each calendar week (Sunday to Saturday), and after a storm event of 0.25 inches or greater within 24 hours (either the same day the rainfall event concludes or the next day), or <input type="checkbox"/> Every four (4) business days
Increased Frequency (if applicable):
For areas of sites discharging to sediment or nutrient-impaired waters or to waters designated as Tier II. <input checked="" type="checkbox"/> Once per day on which dewatering discharge occurs
Rain Gauge Location (if applicable)
Maintain rain gauge on project site to record daily rainfall (See Appendix 9.6 for Rainfall Log).

Dewatering Inspection Schedule

Dewatering Inspection
<input checked="" type="checkbox"/> Once per day on which the discharge of dewatering water occurs.

Inspection Report Forms

See Appendix 9.8 Standard Inspection Form & Appendix 9.10 Dewatering Discharges

5.2 Corrective Action (Part III.D of the Permit)

Instructions – Describe correction action

When an item is found to be in non-compliance, work within the drainage area draining to the non-compliant item will cease. Corrective action shall be taken by the contractor to return any non-compliant items to a compliant condition prior to continuing work.

Personnel Responsible for Corrective Actions

Name and Title: Contractor to provide (name and title)

Telephone number:

Email:

Area of site responsible for: Full Limits of Work

Corrective Action Forms

See Appendix 9.9 Standard Corrective Action Log

SECTION 6: TRAINING (Part III.E of the Permit)

Instructions – Describe training

The following personnel, at a minimum, must receive training, and therefore should be listed individually in the table below:

- Personnel who are responsible for the design, installation, maintenance, and repair of stormwater and erosion and sediment (ESC) controls
- Personnel responsible for the application and storage of treatment chemicals
- Personnel who are responsible for conducting inspections
- Personnel who are responsible for taking corrective actions
- Personnel who are responsible for spill response

Personnel must be trained to understand the following if related to the scope of their job duties:

- The permit deadlines associated with installation, maintenance, and removal of stormwater & ESC controls and with stabilization;
- The location of all stormwater controls on the site required by this permit, and how they are to be maintained;
- The proper procedures to follow with respect to the permit's pollution prevention requirements; and
- When and how to conduct inspections, record applicable findings, and take corrective actions.

Document all training.

Documentation for Completion of Training

See Appendix 9.7 SWPPP Training Log

Name	Describe Training	Completion date
Contractor personnel to sign at preconstruction meeting	Insert Text	Completion date

SECTION 7: EROSION AND SEDIMENT CONTROLS (Part III.F.f.i)

Erosion and Sediment Controls are to be installed per the approved Erosion and Sediment Control Plans under Baltimore County Soil Conservation District Number (forthcoming).

Erosion and Sediment Control Measures are to be installed per the Maryland Department of the Environment (MDE) 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control.

Erosion control devices shall be inspected weekly and the next day after each rain event with a written inspection report being part of each inspection. Devices will be maintained in accordance with the requirements set forth in the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control.

Devices shall be installed and inspected by the MDE erosion control Inspector as outlined in the approved sequence of construction.

Approved Erosion and Sediment Control Plans

Plan Number	Insert ESC Plan Number
Date	Insert Date

7.1 Stream Protection Zone (Natural Buffers or Equivalent Sediment Controls) (Part III.F.f.ii)

No proposed earth disturbance is proposed withing 100 feet of any stream.

Buffer Compliance Alternatives

Are there any disturbance within the Stream Protection Zone? YES NO

Check the compliance alternative that you have chosen:

- (i) I will provide and maintain a 50-foot (100-foot average within a Tier II) undisturbed natural buffer.
- (ii) I will provide and maintain an undisturbed natural buffer that is less than 50 feet and is supplemented by additional erosion and sediment controls, which in combination achieves the sediment load reduction equivalent to a 50-foot undisturbed natural buffer.

7.11 Compliance with Other Requirements

- i. *Threatened and Endangered Species Protection. Include documentation required in Part III.A.2.n supporting your eligibility with regard to the protection of State threatened and endangered species and designated critical habitat.*
- ii. *Safe Drinking Water Act Underground Injection Control (UIC) Requirements for Certain Subsurface Stormwater Controls. If you are using any of the following stormwater controls at your site, document any contact you have had with the Department for implementing the requirements for underground injection wells in the Safe Drinking Water Act and EPA's implementing regulations at 40 CFR 144 -147. Such controls would generally be considered Class V UIC wells:*
- iii. *Infiltration trenches (if stormwater is directed to any bored, drilled, driven shaft or dug hole that is deeper than its widest surface dimension, or has a subsurface fluid distribution system);*
- iv. *Commercially manufactured pre-cast or pre-built proprietary subsurface detention vaults, chambers, or other devices designed to capture and infiltrate stormwater flow; and*
- v. *Drywells, seepage pits, or improved sinkholes (if stormwater is directed to any bored, drilled, driven shaft or dug hole that is deeper than its widest surface dimension, or has a subsurface fluid distribution system).*

SECTION 8: CERTIFICATION AND NOTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and Title:	Contractor Name	Contractor
Signature and Date:		

Name and Title:	Zachary Davis	Owner's Representative
Signature and Date:		

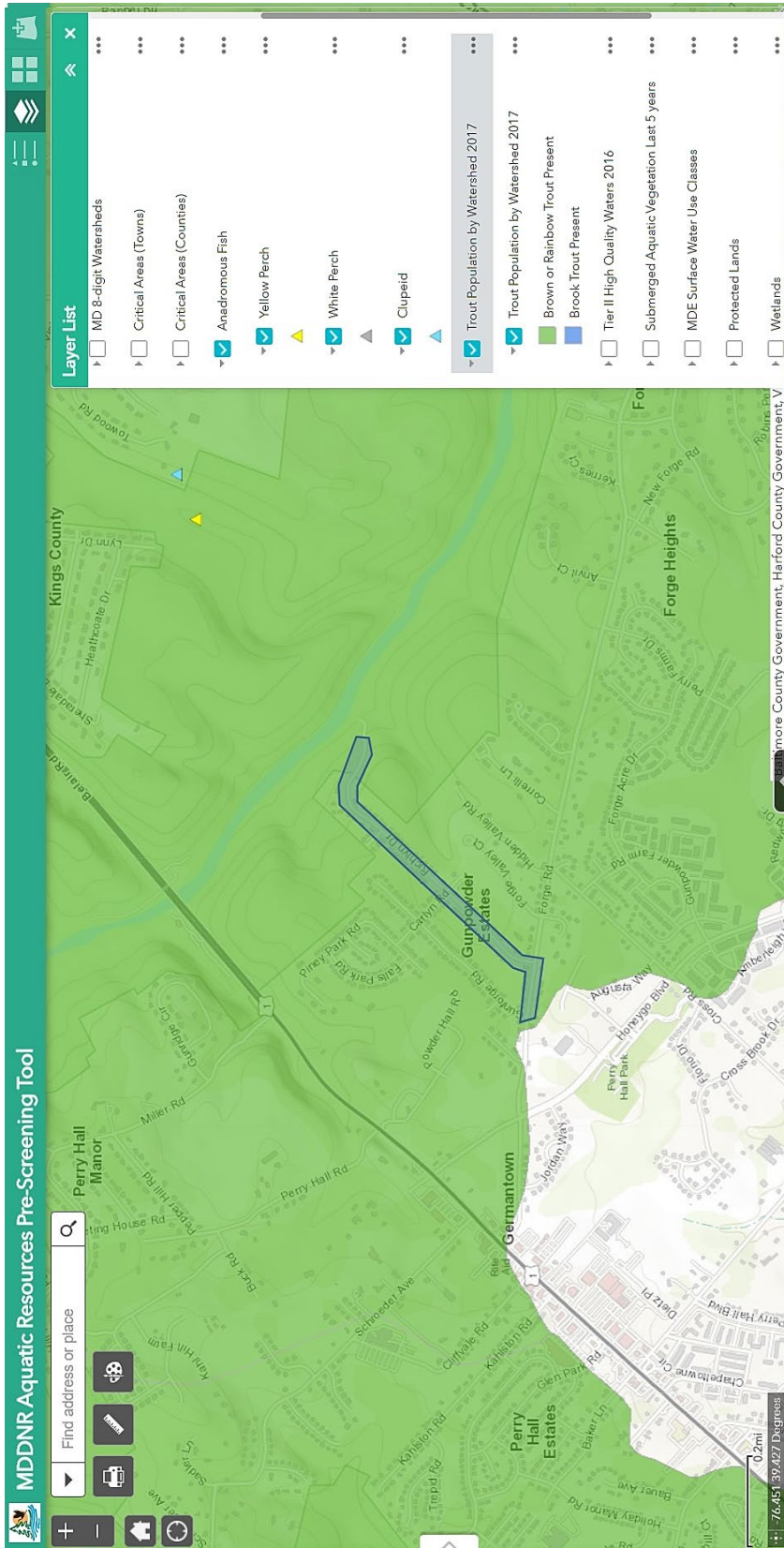
SECTION 9: Appendices

9.1 Amendment Log

Use the table below to record any SWPPP Amendments.

No.	Description of the Amendment	Date of Amendment	Amendment Prepared by [Name(s) and Title]

9.2 Site Maps (Part III.F.2.d of the permit)





United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127



In Reply Refer To:
Project Code: 2023-0081742
Project Name: Richlyn Manor Sanitary Force Main

May 13, 2023

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

05/13/2023

2

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

05/13/2023

3

Attachment(s):

- Official Species List

05/13/2023

1

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
(410) 573-4599

05/13/2023

2

PROJECT SUMMARY

Project Code: 2023-0081742

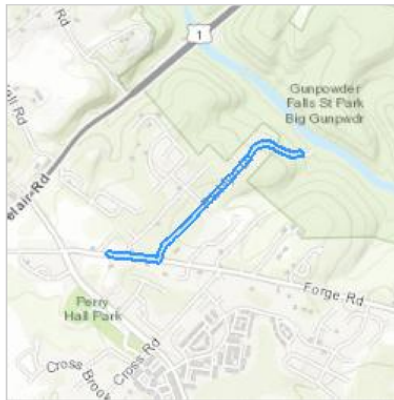
Project Name: Richlyn Manor Sanitary Force Main

Project Type: Wastewater Facility - New Construction

Project Description: Baltimore County Department of Public Works (DPW) is proposing to construct a new sanitary pumping force main along Richlyn Drive in Perry Hall, Baltimore County, Maryland.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@39.419058500000006,-76.44398551419505,14z>



Counties: Baltimore County, Maryland

d

05/13/2023

3

ENDANGERED SPECIES ACT SPECIES

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> ▪ The monarch is a candidate species and not yet listed or proposed for listing. There are generally no section 7 requirements for candidate species (FAQ found here: https://www.fws.gov/savethemonarch/FAQ-Section7.html). Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

05/13/2023

3

ENDANGERED SPECIES ACT SPECIES

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none">• The monarch is a candidate species and not yet listed or proposed for listing. There are generally no section 7 requirements for candidate species (FAQ found here: https://www.fws.gov/savethemonarch/FAQ-Section7.html). Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

05/13/2023

4

IPAC USER CONTACT INFORMATION

Agency: County of Baltimore
Name: Rhiannon Flickinger
Address: 40 Wight Ave
City: Hunt Valley
State: MD
Zip: 21030
Email: rflickinger@jmt.com
Phone: 4105682694



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127



In Reply Refer To:
Project code: 2023-0081742
Project Name: Richlyn Manor Sanitary Force Main

May 13, 2023

Federal Nexus: no
Federal Action Agency (if applicable): County of Baltimore

Subject: Technical assistance for 'Richlyn Manor Sanitary Force Main'

Dear Rhiannon Flickinger:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on May 13, 2023, for 'Richlyn Manor Sanitary Force Main' (here forward, Project). This project has been assigned Project Code 2023-0081742 and all future correspondence should clearly reference this number. **Please carefully review this letter. Your Endangered Species Act (Act) requirements are not complete.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into the IPaC must accurately represent the full scope and details of the Project. Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter.

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project is not reasonably certain to cause incidental take of the northern long-eared bat. Unless the Service advises you within 15 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the Action is not likely to result in unauthorized take of the northern long-eared bat.

05/13/2023

IPaC Record Locator: 382-126408287

2

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Monarch Butterfly *Danaus plexippus* Candidate

You may coordinate with our Office to determine whether the Action may cause prohibited take of the animal species and/or critical habitat listed above. Note that if a new species is listed that may be affected by the identified action before it is complete, additional review is recommended to ensure compliance with the Endangered Species Act.

Next Steps

Coordination with the Service is complete. This letter serves as technical assistance. All conservation measures should be implemented as proposed. Thank you for considering federally listed species during your project planning.

We are uncertain where the northern long-eared bat occurs on the landscape outside of known locations. Because of the steep declines in the species and vast amount of available and suitable forest habitat, the presence of suitable forest habitat alone is a far less reliable predictor of their presence. Based on the best available information, most suitable habitat is now expected to be unoccupied. During the interim period, while we are working on potential methods to address this uncertainty, we conclude take is not reasonably certain to occur in areas of suitable habitat where presence has not been documented.

If no changes occur with the Project or there are no updates on listed species, no further consultation/coordination for this project is required for the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place before project implements any changes which are final or commits additional resources.

If you have any questions regarding this letter or need further assistance, please contact the Chesapeake Bay Ecological Services Field Office and reference Project Code 2023-0081742 associated with this Project.

05/13/2023

IPaC Record Locator: 382-126408287

3

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

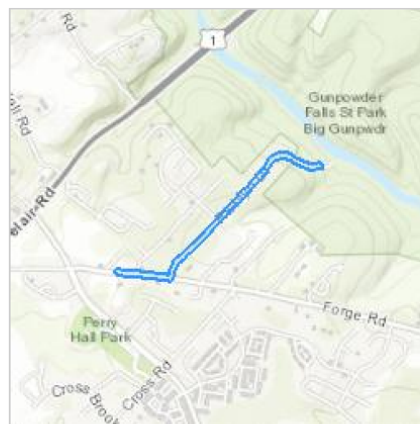
Richlyn Manor Sanitary Force Main

2. Description

The following description was provided for the project 'Richlyn Manor Sanitary Force Main':

Baltimore County Department of Public Works (DPW) is proposing to construct a new sanitary pumping force main along Richlyn Drive in Perry Hall, Baltimore County, Maryland.

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@39.41905850000006,-76.44398551419505,14z>



DETERMINATION KEY RESULT

Based on the answers provided, the proposed Action is consistent with a determination of “may affect, but not likely to adversely affect” for the Endangered northern long-eared bat (*Myotis septentrionalis*).

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

No

2. Do you have post-white nose syndrome occurrence data that indicates that northern long-eared bats (NLEB) are likely to be present in the action area?

Bat occurrence data may include identification of NLEBs in hibernacula, capture of NLEBs, tracking of NLEBs to roost trees, or confirmed acoustic detections. With this question, we are looking for data that, for some reason, may have not yet been made available to U.S. Fish and Wildlife Service.

No

3. Does any component of the action involve construction or operation of wind turbines?

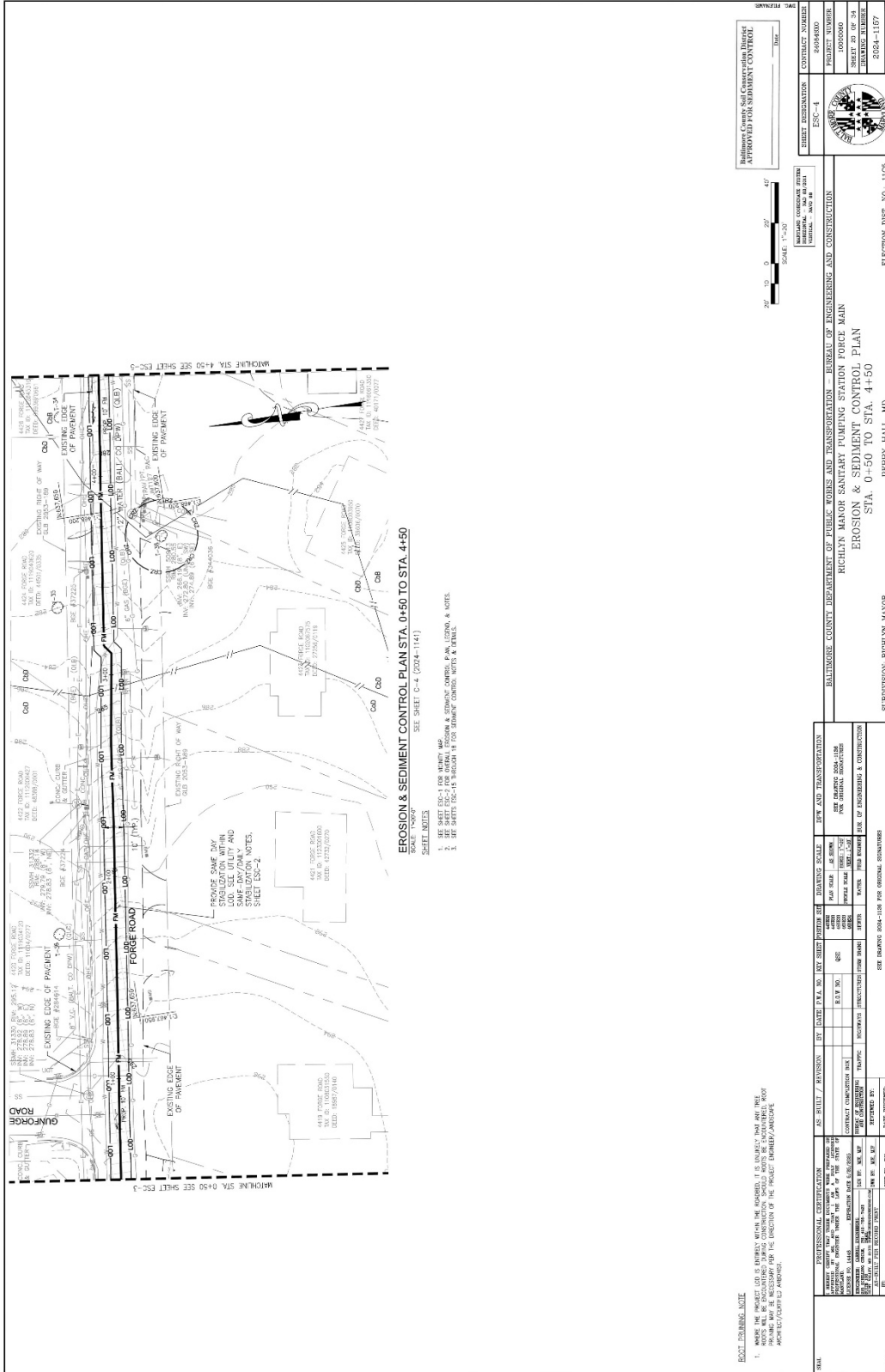
Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

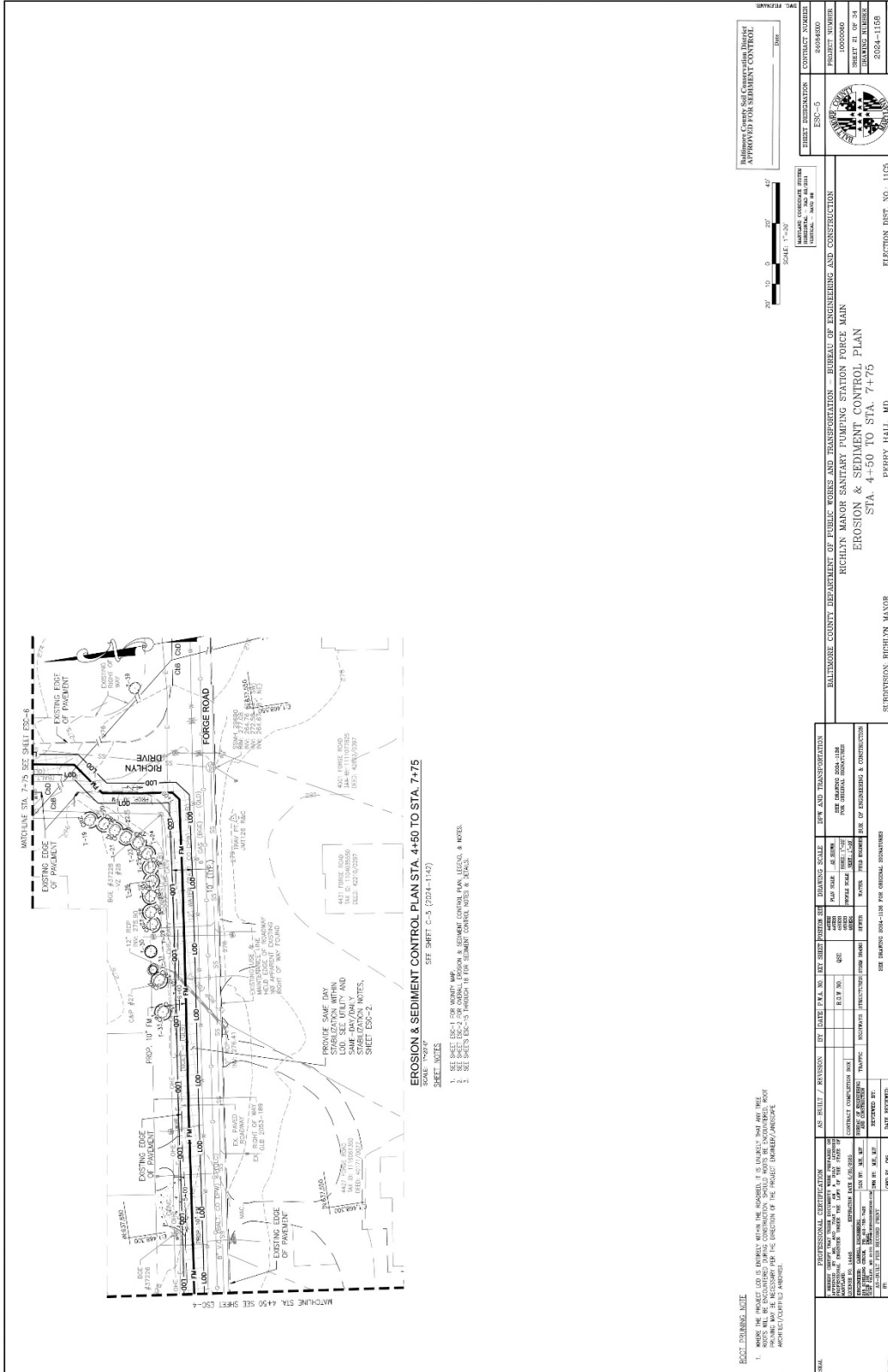
No

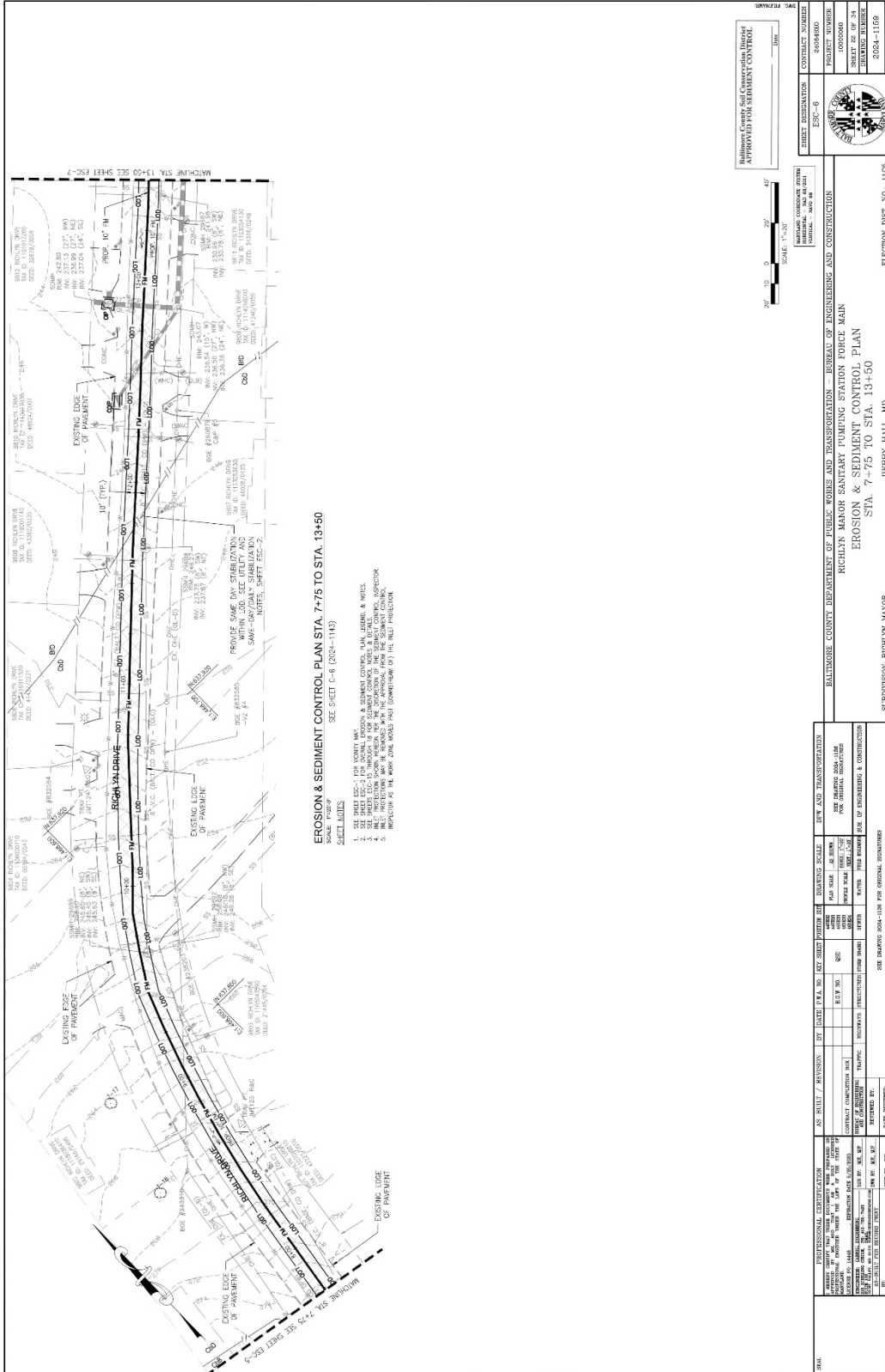
4. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

No

9.2 Site Maps (Part III.A.2.n of the permit)



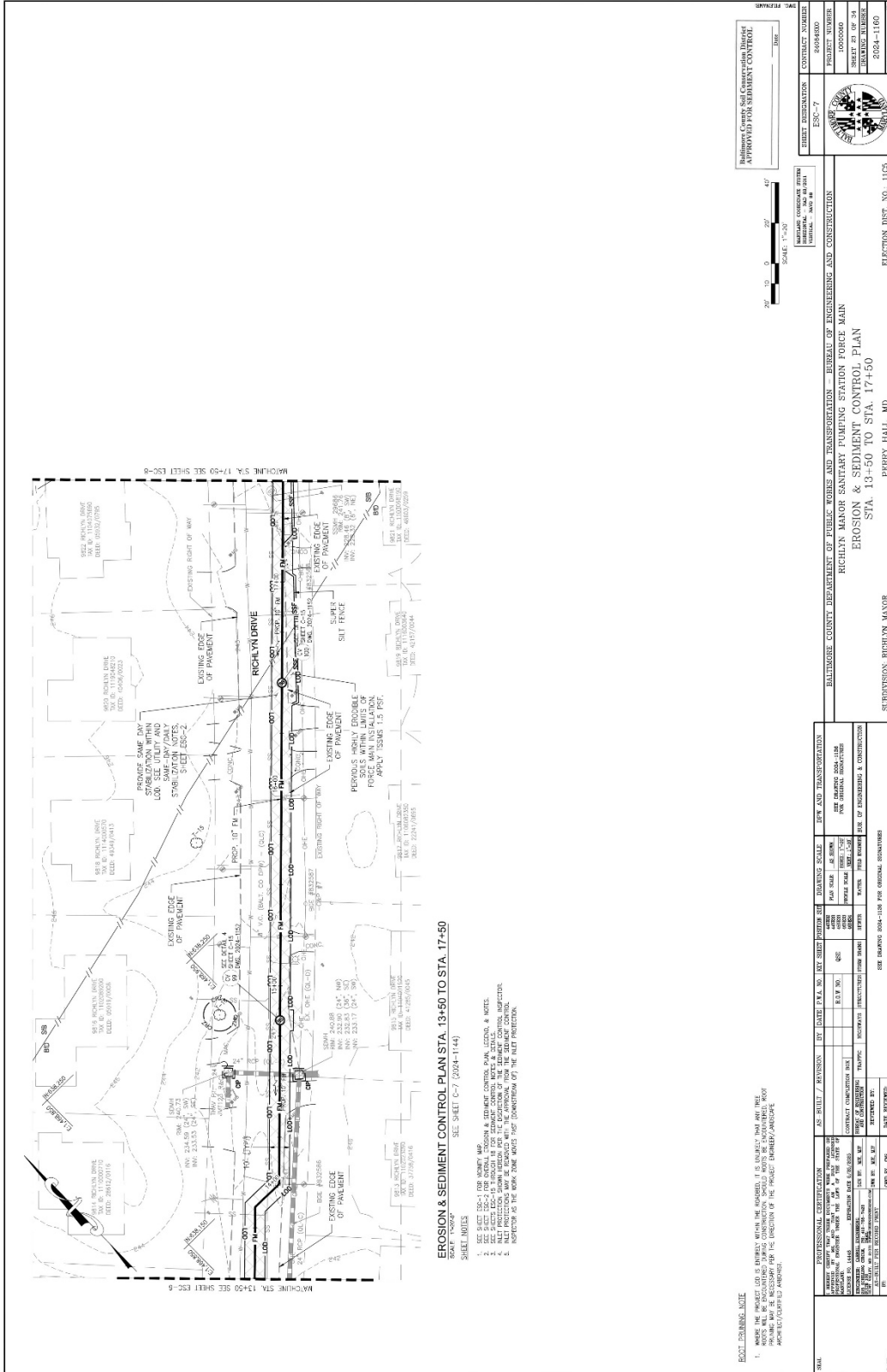


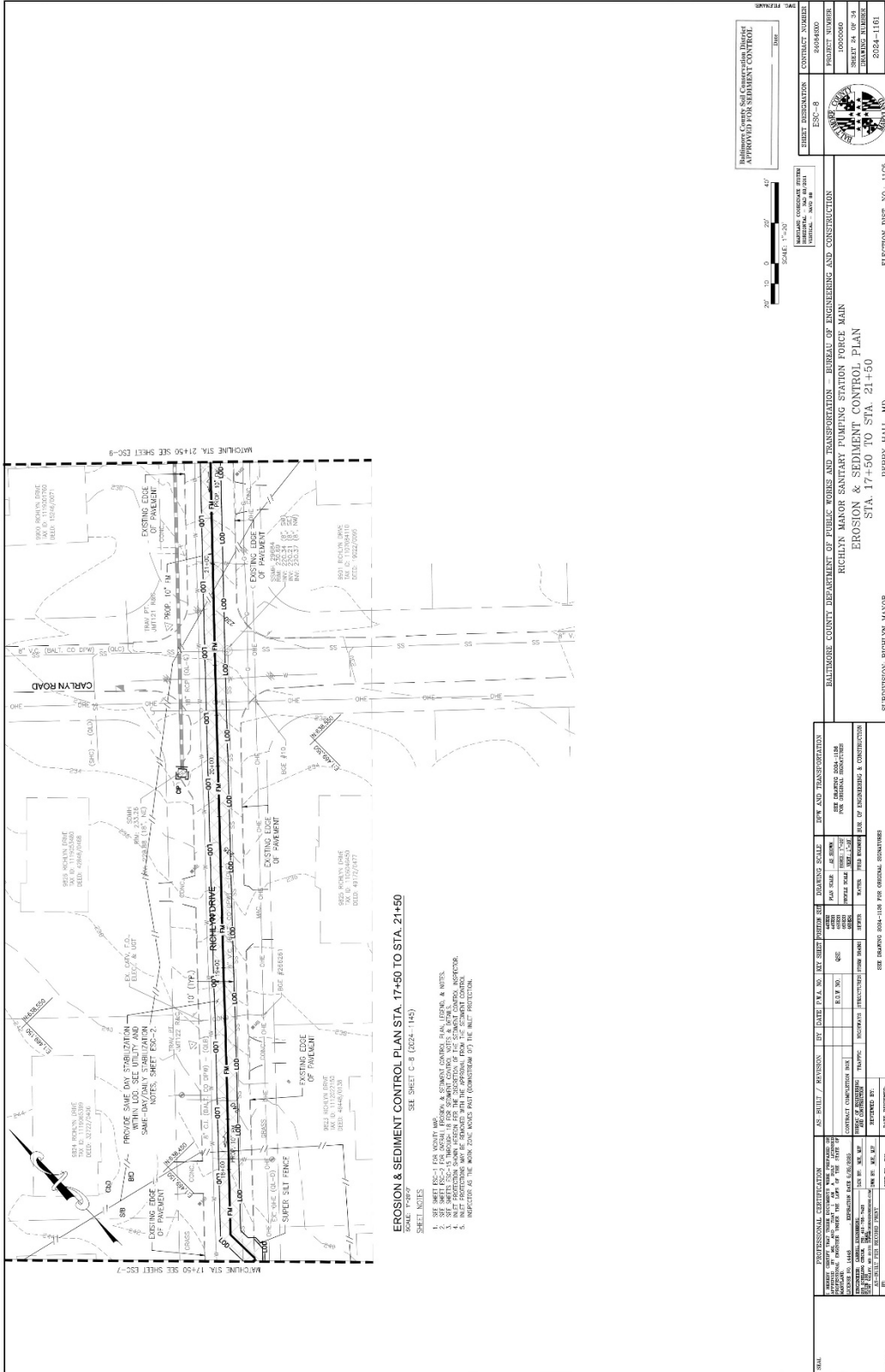


EROSION & SEDIMENT CONTROL PLAN STA. 7+75 TO STA. 13+50
 SCALE 1"=20'
 SEE SHEET C-6 (2024-1143)

- NOTES:**
- SEE SHEET C-6 FOR EROSION CONTROL MEASURES AND STABILIZATION PLAN, LEGEND & NOTES.
 - SEE SHEET C-6 FOR EROSION CONTROL MEASURES AND STABILIZATION PLAN, LEGEND & NOTES.
 - SEE SHEET C-6 FOR EROSION CONTROL MEASURES AND STABILIZATION PLAN, LEGEND & NOTES.
 - SEE SHEET C-6 FOR EROSION CONTROL MEASURES AND STABILIZATION PLAN, LEGEND & NOTES.
 - SEE SHEET C-6 FOR EROSION CONTROL MEASURES AND STABILIZATION PLAN, LEGEND & NOTES.

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 SUPERVISOR: RICHLYN MANOR PERRY HALL, MD ELECTION DIST. NO. 11C5		BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION BUREAU OF ENGINEERING AND CONSTRUCTION
PROJECT NUMBER 2024-1109	SHEET NUMBER 2024-1109	SHEET TITLE EROSION & SEDIMENT CONTROL PLAN
CONTRACT NUMBER 2024-1109	CONTRACT DATE 2024-11-09	CONTRACT DESCRIPTION RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN
DRAWING SCALE 1"=20'	SHEET SCALE 1"=20'	DATE OF PREPARATION & CONSTRUCTION 2024-11-09
DATE OF PREPARATION & CONSTRUCTION 2024-11-09	DATE OF PREPARATION & CONSTRUCTION 2024-11-09	DATE OF PREPARATION & CONSTRUCTION 2024-11-09





EROSION & SEDIMENT CONTROL PLAN STA. 17+50 TO STA. 21+50
 SCALE 1"=20'

- SEE SHEET C-8 (2024-1143)
1. SEE SHEET C-8 FOR NOTES.
 2. SEE SHEET C-8 FOR NOTES.
 3. SEE SHEET C-8 FOR NOTES.
 4. SEE SHEET C-8 FOR NOTES.
 5. SEE SHEET C-8 FOR NOTES.

Baltimore County Soil Conservation District APPROVED FOR SEDIMENT CONTROL	
PROJECT NUMBER	2018-1101
DATE	2018-11-01
PROJECT NUMBER	2018-1101
DATE	2018-11-01

PROJECT NUMBER	2018-1101
DATE	2018-11-01
PROJECT NUMBER	2018-1101
DATE	2018-11-01

PROJECT NUMBER	2018-1101
DATE	2018-11-01
PROJECT NUMBER	2018-1101
DATE	2018-11-01

PROJECT NUMBER	2018-1101
DATE	2018-11-01
PROJECT NUMBER	2018-1101
DATE	2018-11-01

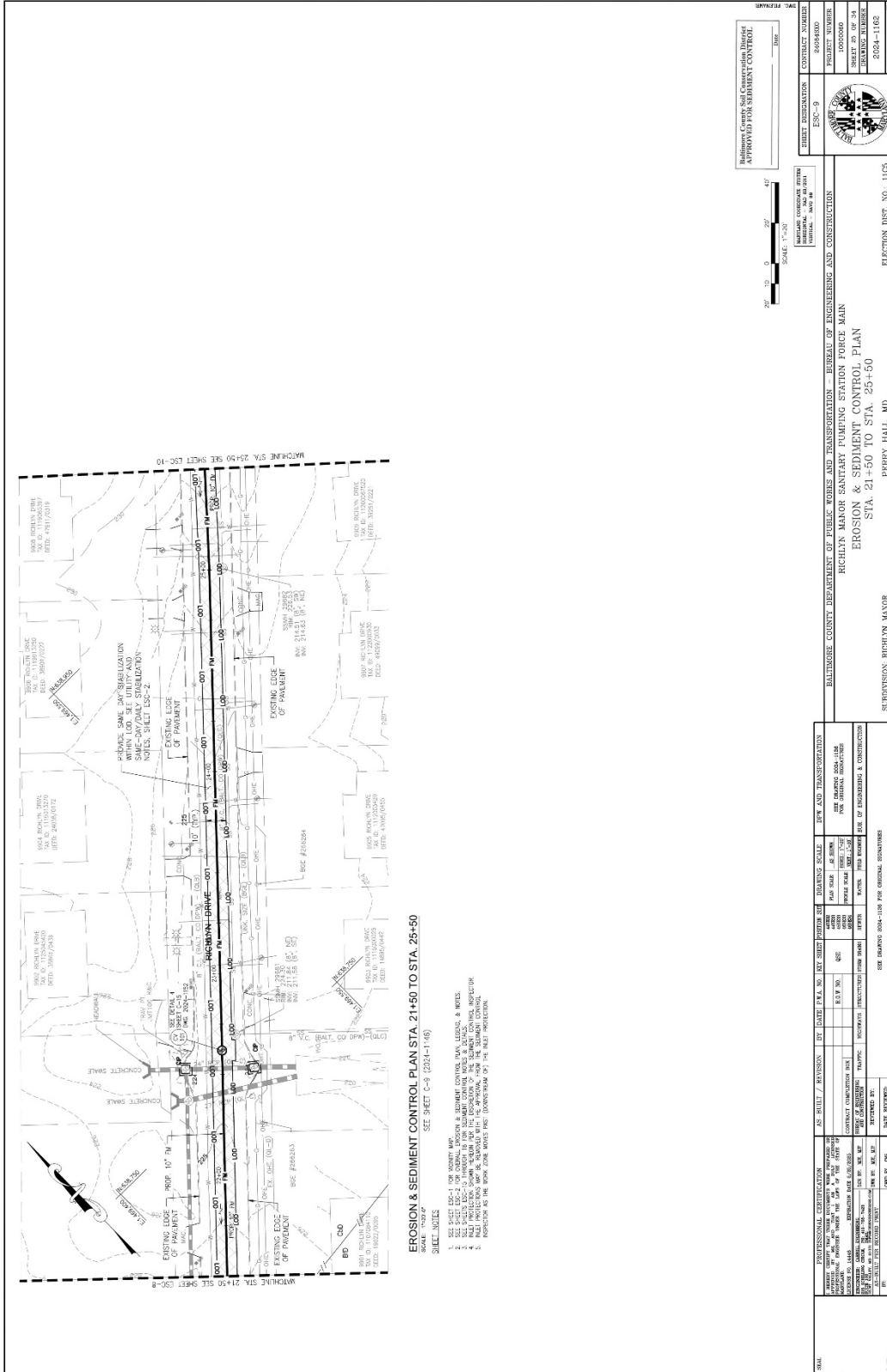
PROJECT NUMBER	2018-1101
DATE	2018-11-01
PROJECT NUMBER	2018-1101
DATE	2018-11-01

PROJECT NUMBER	2018-1101
DATE	2018-11-01
PROJECT NUMBER	2018-1101
DATE	2018-11-01

PROJECT NUMBER	2018-1101
DATE	2018-11-01
PROJECT NUMBER	2018-1101
DATE	2018-11-01

PROJECT NUMBER	2018-1101
DATE	2018-11-01
PROJECT NUMBER	2018-1101
DATE	2018-11-01

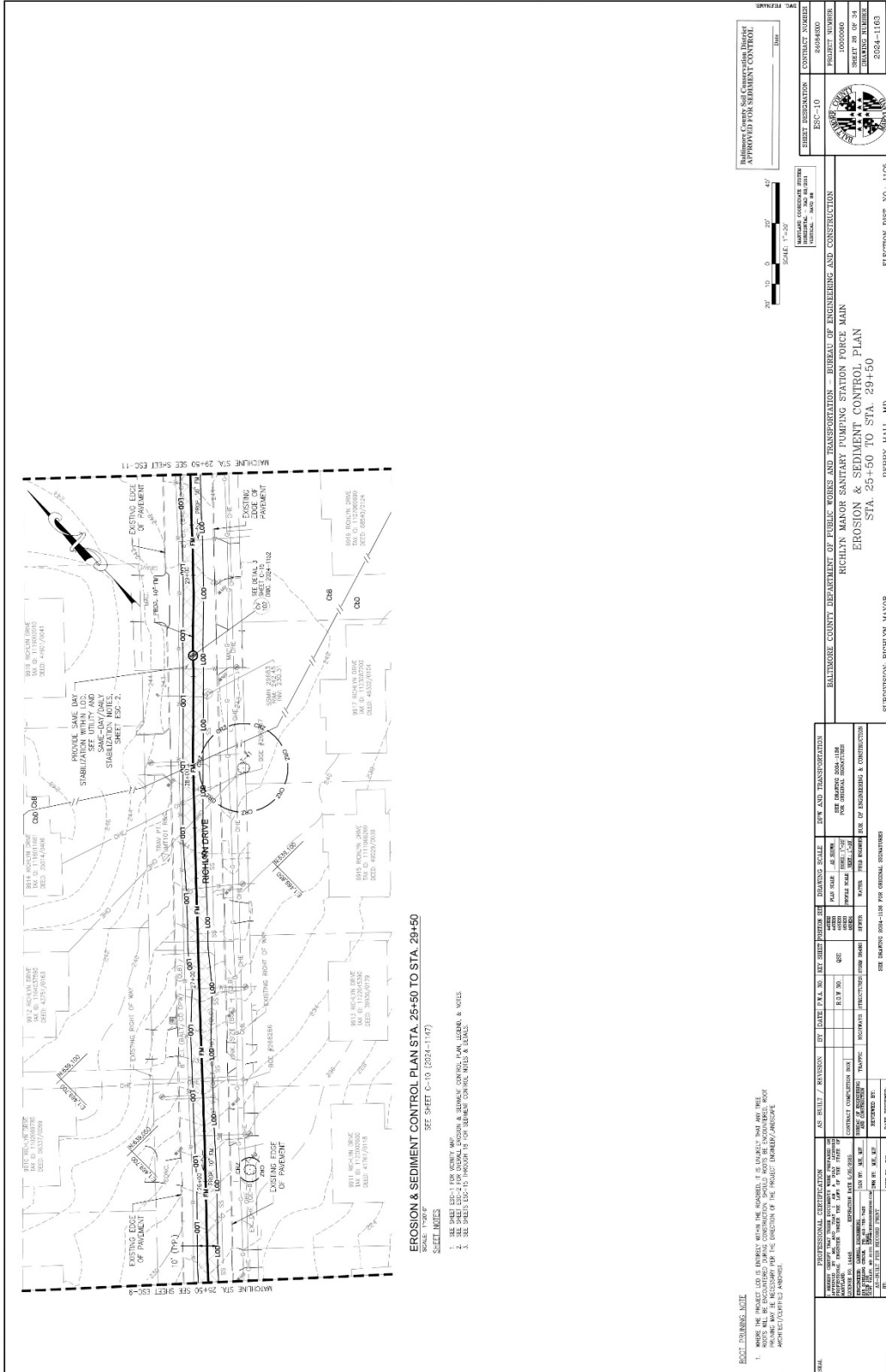
PROJECT NUMBER	2018-1101
DATE	2018-11-01
PROJECT NUMBER	2018-1101
DATE	2018-11-01



EROSION & SEDIMENT CONTROL PLAN STA. 21+50 TO STA. 25+50
 SCALE: 1"=20'
 SEE SHEET C-8 (2324-1146)

- SHEET NOTES**
1. SEE SHEET C-8 FOR EXISTING AND PROPOSED CONSTRUCTION, EROSION, AND SEDIMENT CONTROL PLAN, LEGEND, & NOTES.
 2. ALL PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF BALTIMORE'S SWPPP REGULATIONS AND THE SWPPP REGULATIONS.
 3. ALL PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF BALTIMORE'S SWPPP REGULATIONS AND THE SWPPP REGULATIONS.
 4. ALL PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF BALTIMORE'S SWPPP REGULATIONS AND THE SWPPP REGULATIONS.
 5. ALL PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF BALTIMORE'S SWPPP REGULATIONS AND THE SWPPP REGULATIONS.

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 SUPERVISOR: RICHLYN MANOR PERRY HALL, MD ELECTION DIST. NO. 11C5		BALTIMORE COUNTY PROJECT NUMBER: 10000000 SHEET 20 OF 34 DRAWING NUMBER: 2024-1102 DATE: 08/20/24
CONTRACT NUMBER: ESC-9 CONTRACT VALUE: \$1,000,000.00	CONTRACTOR: [Logo] PROJECT NUMBER: 10000000 SHEET 20 OF 34 DRAWING NUMBER: 2024-1102	DATE: 08/20/24



EROSION & SEDIMENT CONTROL PLAN STA. 25+50 TO STA. 29+50

SCALE: 1"=20'

SEE SHEET C-10 (2024-1147)

SEE SHEET C-11

- 1. THE SHEET LINES ARE FOR GENERAL INFORMATION ONLY.
- 2. THE SHEET LINES ARE TO BE MAINTAINED THROUGHOUT THE PROJECT.
- 3. THE SHEET LINES ARE TO BE MAINTAINED THROUGHOUT THE PROJECT.

EXCUT DRAWERS NOTE

- 1. WHERE THE PROJECT LINES ENTER WITHIN THE BOUNDARY, IT IS INDICATED BY ANY LINE.
- 2. THE SHEET LINES ARE TO BE MAINTAINED THROUGHOUT THE PROJECT.
- 3. THE SHEET LINES ARE TO BE MAINTAINED THROUGHOUT THE PROJECT.

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 SUPERVISOR: RICHLYN MANOR PERRY HALL, MD		BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION BUREAU OF ENGINEERING AND CONSTRUCTION PROJECT NUMBER: 10000000 SHEET NO. OF 34 DRAWING NUMBER: 2024-1103 DATE: 08/20/24	
CONTRACT NUMBER: ESC-10 PROJECT NUMBER: 10000000 SHEET NO. OF 34 DRAWING NUMBER: 2024-1103		DATE: 08/20/24	

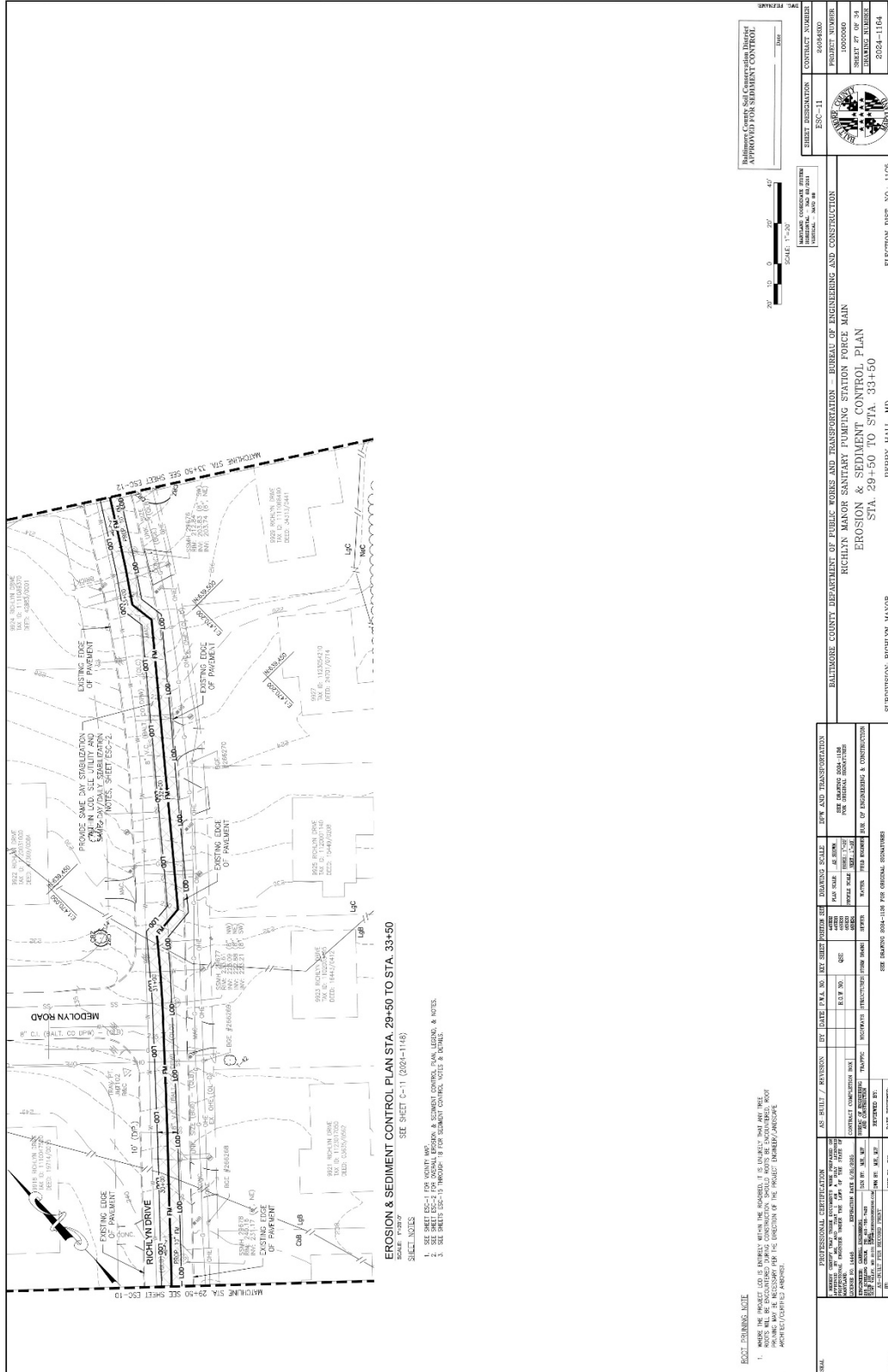


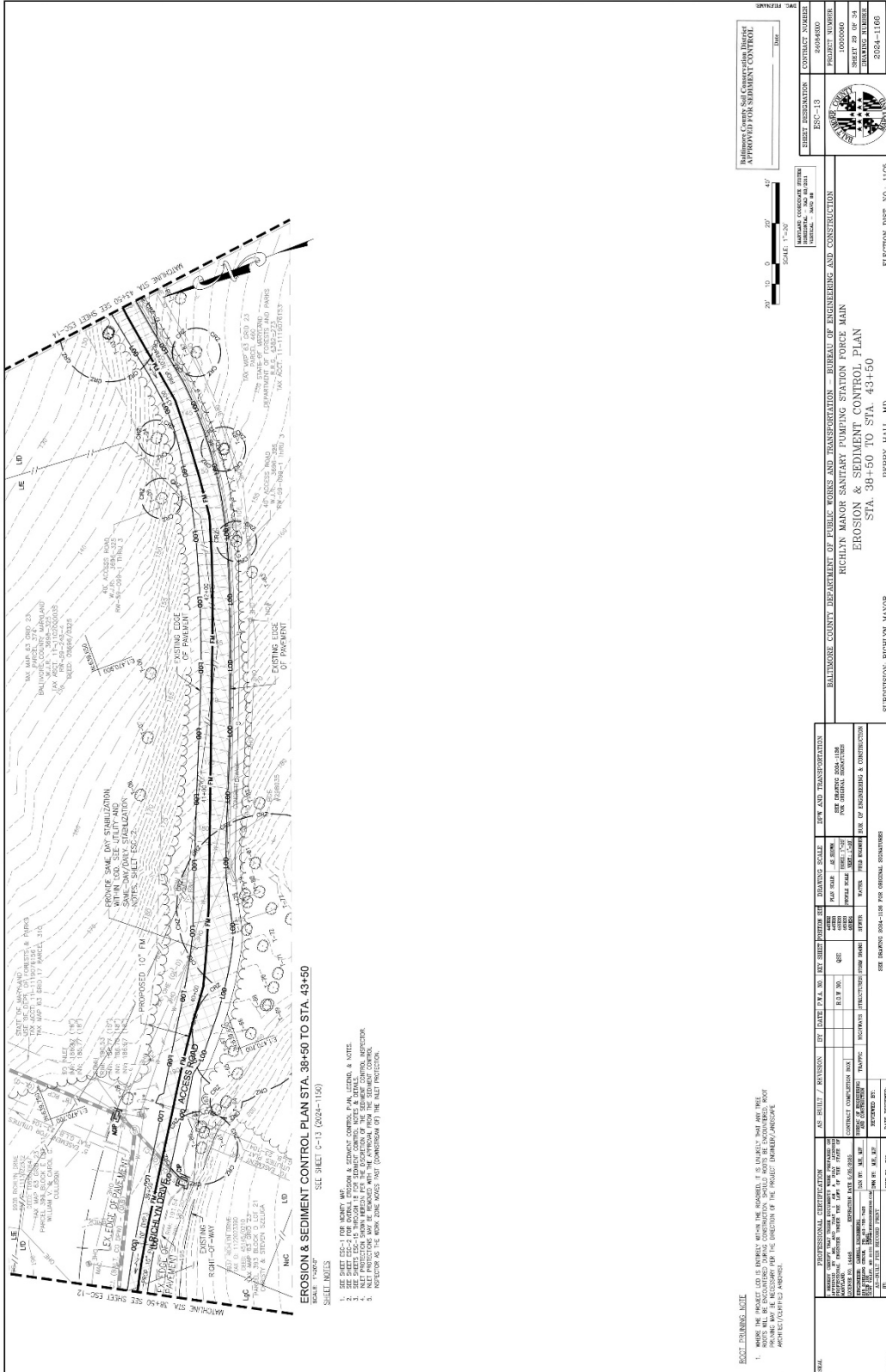
DATE: 08/20/24

SCALE: 1"=20'

DATE: 08/20/24

DATE: 08/20/24





EROSION & SEDIMENT CONTROL PLAN STA. 38+50 TO STA. 43+50
 SHEET INDEX: SEE SHEET C-13 (2024-1106)

- EXCISE DRAWING NOTE**
- WHERE THE PROJECT LIES WITHIN THE BOUNDARY OF AN ADJACENT PROPERTY, THE PROJECT OWNER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE ADJACENT PROPERTY OWNER.
 - THE PROJECT OWNER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE ADJACENT PROPERTY OWNER.
 - THE PROJECT OWNER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE ADJACENT PROPERTY OWNER.
 - THE PROJECT OWNER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE ADJACENT PROPERTY OWNER.

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 SUPERVISOR: RICHLYN MANOR PERRY HALL, MD ELECTION DIST. NO.: 11C5		BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION BUREAU OF ENGINEERING AND CONSTRUCTION
PROJECT NUMBER: 2024-1106 SHEET NO. OF 34 DRAWING REVISIONS: 01	PROJECT NUMBER: 2024-1106 SHEET NO. OF 34 DRAWING REVISIONS: 01	PROJECT NUMBER: 2024-1106 SHEET NO. OF 34 DRAWING REVISIONS: 01
DATE: 08/20/2024 TIME: 10:00 AM	DATE: 08/20/2024 TIME: 10:00 AM	DATE: 08/20/2024 TIME: 10:00 AM

9.3 Sample Subcontractor Certifications/Agreements

You may use the sample below as a template to record any subcontractor agreements.

SUBCONTRACTOR CERTIFICATION
STORMWATER POLLUTION PREVENTION PLAN

Project Number: _____

Project Title: _____

Operator(s): _____

As a subcontractor, you are required to comply with the Stormwater Pollution Prevention Plan (SWPPP) for any work that you perform on-site. Any person or group who violates any condition of the SWPPP may be subject to substantial penalties or loss of contract. You are encouraged to advise each of your employees working on this project of the requirements of the SWPPP. A copy of the SWPPP is available for your review at the office trailer.

Each subcontractor engaged in activities at the construction site that could impact stormwater must be identified and sign the following certification statement:

I certify under the penalty of law that I have read and understand the terms and conditions of the SWPPP for the above designated project and agree to follow the practices described in the SWPPP.

This certification is hereby signed in reference to the above-named project:

Company:

Address:

Telephone Number:

Type of construction service to be provided:

Signature:

Title:

Date:

9.4 Cationic Chemical Treatment Approval Form

Use the form found on the construction website for approval for the use of Cationic Chemical Additives:
https://mde.maryland.gov/programs/water/www/Pages/gp_construction.aspx

When submitting for the approval of Cationic Chemical Additives, the form must be accompanied with the information contained in section 4.12 of the SWPPP. The approval authority may request additional information.

Remember that final approval from the appropriate authority must be received prior to the use of Cationic Chemical Additives.

9.5 Grading and Stabilization Activities Log

Use the table below to record any grading/stabilization activities.

Date Grading Activity Initiated	Description of Grading Activity	Description of Stabilization Measure and Location	Date Grading Activity Ceased (Temporary or Permanent)	Date When Stabilization Measures Initiated
Date			Date <input type="checkbox"/> Temporary <input type="checkbox"/> Permanent	Date
Date			Date <input type="checkbox"/> Temporary <input type="checkbox"/> Permanent	Date
Date			Date <input type="checkbox"/> Temporary <input type="checkbox"/> Permanent	Date
Date			Date <input type="checkbox"/> Temporary <input type="checkbox"/> Permanent	Date

9.6 Rainfall Log

Use the table below to record the rainfall gauge readings at the beginning and end of each workday.

Month/Year			Month/Year			Month/Year		
Day	Start time	End time	Day	Start time	End time	Day	Start time	End time
1			1			1		
2			2			2		
3			3			3		
4			4			4		
5			5			5		
6			6			6		
7			7			7		
8			8			8		
9			9			9		
10			10			10		
11			11			11		
12			12			12		
13			13			13		
14			14			14		
15			15			15		
16			16			16		
17			17			17		
18			18			18		
19			19			19		
20			20			20		
21			21			21		
22			22			22		
23			23			23		
24			24			24		

Month/Year			Month/Year			Month/Year		
Day	Start time	End time	Day	Start time	End time	Day	Start time	End time
25			25			25		
26			26			26		
27			27			27		
28			28			28		
29			29			29		
30			30			30		
31			31			31		

9.7 SWPPP Training Log

You may use the sample below as a template to record specific personnel training.

Stormwater Pollution Prevention Training Log

Project Name:
Project Location:
Instructor's Name(s):
Instructor's Title(s):

Course Location	Date	Course Length (hours)

Stormwater Training Topic: *(check as appropriate)*

- | | |
|--|---|
| <input type="checkbox"/> Sediment and Erosion Controls
<input type="checkbox"/> Stabilization Controls
<input type="checkbox"/> Pollution Prevention Measures | <input type="checkbox"/> Emergency Procedures
<input type="checkbox"/> Inspections/Corrective Actions
<input type="checkbox"/> Other: _____
_____ |
|--|---|

Specific Training Objective:

Attendee Roster:

No.	Name of Attendee	Company
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

(attach additional pages as necessary)

9.8 Standard Inspection Form for MDE General Permit for Stormwater Associated with Construction Activity

**STANDARD INSPECTION FORM FOR MARYLAND DEPARTMENT OF THE ENVIRONMENT
 GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY**

General Information			
Project Name			
Permittee			
Permit Number		Date of Inspection	
Start Time		End Time	
Inspector's Name(s)			
Responsible Personnel Certification # (required under Part IV.C.1)			
Inspector's Contact Information			
Date Earth Disturbance Began			
Describe present phase of construction	<input type="checkbox"/> Clearing/Grubbing <input type="checkbox"/> Rough Grading <input type="checkbox"/> Infrastructure <input type="checkbox"/> Demolition <input type="checkbox"/> Building Construction <input type="checkbox"/> Final Grading <input type="checkbox"/> Final Stabilization Notes:		
Type of Inspection (check all that apply):			
<input type="checkbox"/> Weekly routine <input type="checkbox"/> Pre-storm event <input type="checkbox"/> During storm event <input type="checkbox"/> Post-storm event <input type="checkbox"/> Due to a discharge of significant amounts of sediment <input type="checkbox"/> Monthly for stabilized areas; list phases/lots stabilized:			
Has there been a storm event since the last inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No			
If yes, provide:			
Storm Start Date & Time:			
Storm Duration (hrs):			
Approximate Amount of Precipitation (in):			

Permit Coverage and Plans				
	Subject	Status	Corrective Action Needed and Notes	Date Corrected
1	Was an NOI submitted for all disturbed acres?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
2	Is the permittee listed above still in control of permitted activities at the site? (If no, submit a Transfer of Authorization form to MDE via ePermits)	<input type="checkbox"/> Yes <input type="checkbox"/> No		
3	Do the approved plans reflect current site conditions?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
4	Are the approved E&S and SWM plans maintained at the site?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
5	Have the E&S or SWM plan approvals expired?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
5	Are the NOI, permit documents, and all inspection reports and enforcement actions on file at the site,	<input type="checkbox"/> Yes <input type="checkbox"/> No		

Permit Coverage and Plans			
	Subject	Status	Corrective Action Needed and Notes
	and a notice of permit coverage posted?		
6	Is the site permanently stabilized, temporary erosion and sediment controls are removed or set to be removed, and stormwater discharges from construction activity are eliminated?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
7	If #6 is Yes, has a Notice of Termination been submitted to MDE?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
8	Are all discharges composed entirely of stormwater or as authorized by the permit?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Discharge of significant amounts of sediment			
	Subject	Status	Notes
	Is there evidence of the discharge of significant amounts of sediment to surface waters, or conveyance systems leading to surface waters?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	If "yes" is checked above, have all applicable notification requirements in Part IV.B of the General Permit been met?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<i>A discharge of significant amounts of sediment may be indicated by (but is not limited to) observations of the following. Note whether any are observed during this inspection:</i>			
1	Earth slides or mud flows	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2	Concentrated flows of stormwater such as rills, rivulets or channels that cause erosion when such flows are not filtered, settled or otherwise treated to remove sediment	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3	Turbid flows of stormwater that are not filtered, settled or otherwise treated to reduce turbidity	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4	Deposits of sediment at the construction site in areas that drain to unprotected stormwater inlets or catch basins that discharge directly to surface waters	<input type="checkbox"/> Yes <input type="checkbox"/> No	
5	Deposits of sediment from the construction site on public or private streets outside of the permitted construction activity	<input type="checkbox"/> Yes <input type="checkbox"/> No	
6	Deposits of sediment from the construction site on any adjacent property outside of the permitted construction activity	<input type="checkbox"/> Yes <input type="checkbox"/> No	
7	Discharges from the construction site to municipal conveyances, curbs and gutters, or streams running through or along the site where visual observations show that the discharges differ from ambient conditions in	<input type="checkbox"/> Yes <input type="checkbox"/> No	

Permit Coverage and Plans				
	Subject	Status	Corrective Action Needed and Notes	Date Corrected
	terms of turbidity so as to indicate significant amounts of sediment present in them			

BMPs						
	BMP/activity (some recommended items to check included below)	Installed/Im- plemented?	Maintenance Required?	Location	Corrective Action Needed and Notes (note any BMPs required by plans but not yet installed)	Date Correction Completed
1	Temporary stabilization - in accordance with 26.17.01.07(B)(6)(f)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No			
2	Permanent stabilization - in accordance with 26.17.01.07(B)(6)(f)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No			
3	Stockpile protection - check for stabilization, silt fence or other controls	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Used	<input type="checkbox"/> Yes <input type="checkbox"/> No			
4	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No			
5	Silt fence - check for proper installation including toeing in, stakes and supports, gaps and tears, and sediment buildup	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Used	<input type="checkbox"/> Yes <input type="checkbox"/> No			
6	Check dams, dikes, and diversion ditches	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Used	<input type="checkbox"/> Yes <input type="checkbox"/> No			
7	Storm drain inlet protection - check for gaps, tears, sediment buildup	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Used	<input type="checkbox"/> Yes <input type="checkbox"/> No			

BMPs						
	BMP/activity (some recommended items to check included below)	Installed/Im- plemented?	Maintenance Required?	Location	Corrective Action Needed and Notes (note any BMPs required by plans but not yet installed)	Date Correction Completed
8	Construction entrance - check for trackout, soil buildup on entrance	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No			
9	Sediment basins/traps - check for sediment buildup, erosion, proper outlet structures	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Used	<input type="checkbox"/> Yes <input type="checkbox"/> No			
10	Outfall protection - check for erosion, sediment	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Used	<input type="checkbox"/> Yes <input type="checkbox"/> No			
11	Is trash/litter from work areas contained to prevent discharge to surface waters?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No			
12	Are washout facilities (e.g., paint, stucco, concrete) available, clearly marked, and maintained?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No			
13	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No			
14	Are materials that are potential stormwater contaminants stored inside or under cover?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No			

BMPs						
	BMP/activity (some recommended items to check included below)	Installed/Implemented?	Maintenance Required?	Location	Corrective Action Needed and Notes (note any BMPs required by plans but not yet installed)	Date Correction Completed
15	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No			
16	(Other)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No			

9.9 Standard Corrected Action Log

You may use the sample below as a template as a Standard Inspection Form

2022 CGP Corrective Action Log

Project Name: _____

NPDES ID Number: _____

Section A – Individual Completing this Log	
Name:	Title:
Company Name:	Email:
Address:	Phone Number:
Section B – Details of the Problem (CGP Part 5.4.1.a)	
Complete this section <u>within 24 hours</u> of discovering the condition that triggered corrective action.	
Date problem was first identified:	Time problem was first identified:

What site conditions triggered this corrective action? <i>(Check the box that applies. See instructions for a description of each triggering condition (1 thru 6).)</i> <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5a <input type="checkbox"/> 5b <input type="checkbox"/> 6
Specific location where problem identified:
Provide a description of the specific condition that triggered the need for corrective action and the cause (if identifiable):
Section C – Corrective Action Completion (CGP Part 5.4.1.b) Complete this section <u>within 24 hours</u> after completing the corrective action.
For site condition # 1, 2, 3, 4, or 6 (those not related to a dewatering discharge) confirm that you met the following deadlines (CGP Part 5.2.1):

9.10 Dewatering Inspection Report

Section A – Dewatering Discharges (CGP Part 4.6.3) Complete this section <u>within 24 hours</u> of completing the inspection. <i>(If necessary, complete additional inspection reports for each separate inspection location.)</i>	
Inspector Information	
Inspector Name:	Title:
Company Name:	Email:
Address:	Phone Number:
Inspection Details	
Inspection Date:	Inspection Location:
Discharge Start Time:	Discharge End Time:
Rate of Discharge (gallons per day):	Corrective Action Required? ¹ <input type="checkbox"/> Yes <input type="checkbox"/> No

Describe Indicators of Pollutant Discharge at Point of Dewatering Discharge:¹

Attach Photographs of:

1. Dewatering water prior to treatment by a dewatering control(s) and the final discharge after treatment; and
2. Dewatering control(s); and
3. Point of discharge to any receiving waters flowing through or immediately adjacent to the site and/or to constructed or natural site drainage features, storm drain inlets, and other conveyances to receiving waters.

¹ If you observe any of the following indicators of pollutant discharge, you are required to take corrective action under Part 5.1 .5.b:

- a sediment plume, suspended solids, unusual color, presence of odor, decreased clarity, or presence of foam; or
- a visible sheen on the water surface or visible oily deposits on the bottom or shoreline of the receiving water.

Section B – Signature and Certification (CGP Part 4.7.2)

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

MANDATORY: Signature of Operator or "Duly Authorized Representative:"

Signature:	Date:
Printed Name:	Affiliation:


OPTIONAL: Signature of Contractor or Subcontractor

Signature:	Date:
Printed Name:	Affiliation:

9.11 Turbidity Monitoring Report Form and Instructions

Part III.B.4.d.iii requires you to use the MDE eReporting system, or “egov.maryland.gov/mde/npdes/Account/Login” system, to submit your report electronically. To be in compliance complete and submit the following form.

Turbidity Monitoring Report Form

		Maryland Department of the Environment Turbidity Monitoring Report Form for Dewatering Discharges to Tier II and Sediment Impaired Waters Under the 20CP NPDES Construction General Permit	
SECTION I. PERMIT INFORMATION			
Permit	NPDES ID		
	Does this report fulfill turbidity monitoring report obligations of other operators that are covered under this permit for the same project site? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, provide the NPDES ID number(s) for all other such operators at the same project site: _____		
SECTION II. OPERATOR INFORMATION			
Operator Information	Operator Name		
	Mailing Address		
	Street		
	City	State	ZIP Code
	County or Similar Government Division:		
	Phone Number	Email Address	
Preparer	Complete if form was prepared by someone other than the certifier:		
	First Name	Middle Initial	Last Name
	Organization		
	Phone Number	Email Address	
SECTION III. SITE INFORMATION			
Site Address	Site Name		
	Street/Location		
Site Address	City	State	ZIP Code
	County or Similar Government Division:		
SECTION IV. MONITORING QUARTER			
Monitoring Quarter	Identify monitoring quarter (select only one):	<input type="checkbox"/> Quarter 1 (January 1 – March 31) <input type="checkbox"/> Quarter 3 (July 1 – September 30)	<input type="checkbox"/> Quarter 2 (April 1 – June 30) <input type="checkbox"/> Quarter 4 (October 1 – December 31)
SECTION V. TURBIDITY MONITORING DATA			

Stormwater Pollution Prevention Plan (SWPPP)
RICHLYN MANOR SANITARY PUMPING STATION FORCE MAIN

Turbidity Monitoring	Discharge Point Description/ Name:				
	Was dewatering water discharged during the monitoring quarter? <input type="checkbox"/> Yes (Enter the data below) <input type="checkbox"/> No (Skip to Section VII)				
	Specific Week within Monitoring Quarter	Daily Maximum (NTU) ¹	Benchmark Threshold (NTU)	Notes	Average exceeds Benchmark ²
	Week 1		150		<input type="checkbox"/> Yes <input type="checkbox"/> No
	Week 2		150		<input type="checkbox"/> Yes <input type="checkbox"/> No
	Week 3		150		<input type="checkbox"/> Yes <input type="checkbox"/> No
	Week 4		150		<input type="checkbox"/> Yes <input type="checkbox"/> No
	Week 5		150		<input type="checkbox"/> Yes <input type="checkbox"/> No
	Week 6		150		<input type="checkbox"/> Yes <input type="checkbox"/> No
	Week 7		150		<input type="checkbox"/> Yes <input type="checkbox"/> No
	Week 8		150		<input type="checkbox"/> Yes <input type="checkbox"/> No
	Week 9		150		<input type="checkbox"/> Yes <input type="checkbox"/> No
	Week 10		150		<input type="checkbox"/> Yes <input type="checkbox"/> No
	Week 11		150		<input type="checkbox"/> Yes <input type="checkbox"/> No
	Week 12		150		<input type="checkbox"/> Yes <input type="checkbox"/> No
Week 13		150		<input type="checkbox"/> Yes <input type="checkbox"/> No	
Week 14		150		<input type="checkbox"/> Yes <input type="checkbox"/> No	
¹ Report to the nearest whole number. Enter "N/A" if no dewatering discharge occurred during any particular week. ² If "Yes," the operator must conduct follow-up corrective action pursuant to Part III.D.2, and document any corrective action taken in the corrective action log in accordance with Part III.D.4.					
VI. CERTIFICATION INFORMATION					
Certification Information	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.				
	First Name		Middle Initial	Last Name	
	Title				
	Signature			Date (MM/DD/YYYY)	
	Phone Number		Email Address		

General Instructions

Who Must Submit A Turbidity Monitoring Report to MDE?

Sites covered under the Construction General Permit (20CP) that are required to monitor pursuant to Part III.B.4 of the permit must submit Turbidity Monitoring Reports consistent with the reporting requirements specified in Part III.B.4.d of the permit.

When Must I Submit A Turbidity Monitoring Report to MDE?

You must submit your report to MDE no later than 28 days following the end of each monitoring quarter. Submit a form for every quarter the site is active.

Monitoring Quarter #	Months	Reporting Deadline
1	January 1 – March 31	April 28
2	April 1 – June 30	July 28
3	July 1 – September 30	October 28
4	October 1 – December 31	January 28

Completing the Form

Obtain and read a copy of the 20CP, viewable at <https://mde.wv.gov/paas/link/CGP>. To complete this form, type or print, using uppercase letters, in the appropriate areas only. Please submit the original document with signature in ink - do not send a photocopied signature. **Photocopy your form for your records before you send the completed original form to the appropriate address.**

Section I. Permit Information

Provide the NPDES ID (i.e., NOI tracking number starting with "MDRC") assigned to the site for which this form is being submitted. Submit the form only for sites discharging dewatering water to a sediment-impaired water or a water designated as a Tier II water.

Indicate whether this report fulfills turbidity monitoring report obligations of other operators that are covered under this permit for the same project site. If the answer is yes, provide all relevant NPDES ID numbers.

Section II. Operator Information

Provide the legal name of the person, firm, public organization, or any other entity that is considered the operator of the site. See Part I.B.1 and Appendix A for the definition of "operator." Provide the operator's mailing address, phone number, and e-mail. The operator information in this Section should match the operator information provided on your NOI form.

If this form was prepared by someone other than the certifier, include the name, organization, phone number, and email address of the person who prepared this form.

Section III. Site Information

Enter the official or legal name and complete street address, including city, State, ZIP code, and county or similar government subdivision of the site. If the site lacks a street address, indicate the general location (e.g., intersection of State Highways 61 and 34). The site information in this Section should match the site information provided on your NOI form.

Section IV. Monitoring Quarter

Indicate the appropriate monitoring quarter (Quarter 1, 2, 3, or 4).

Months	Monitoring Quarter
January 1 – March 31	1
April 1 – June 30	2
July 1 – September 30	3
October 1 – December 31	4

Section V. Turbidity Monitoring Data

Provide the discharge point description/name if you are discharging dewatering water from more than one point at the site. If you are discharging from only one point at the site, leave the spaces blank.

Submit Section V data for each dewatering discharge point. For example, if you are discharging dewatering water from two points at the site, then submit two Section Vs (one for each discharge point).

Indicate whether dewatering occurred during the monitoring quarter. If "Yes" enter the data in the data table. If "No" skip to Section VI.

For reporting purposes, a monitoring week starts with a Monday and ends on Sunday. A numerical value is assigned for each week, which is called a Week Number (e.g., 1, 2, 3 etc.).

Next, determine the daily maximum turbidity value for the corresponding monitoring week. The report has a notes field to indicate if multiple days caused an exceedance.

Enter the daily maximum turbidity values for the corresponding week into the table. Enter "N/A" into the table for the turbidity weekly average if no dewatering discharge occurred during the week.

The benchmark threshold for turbidity for this permit is 150 NTUs.

For each week with a value for the daily maximum that exceeds the benchmark, select "Yes" or "No" in the table to indicate whether the weekly average value exceeds the 150 NTU benchmark or the alternate turbidity benchmark (whichever is applicable). If "Yes", the operator must conduct follow-up corrective action pursuant to Part III.D.5 and document any corrective action taken in the corrective action log in accordance with Part III.D.3.

Section VI. Certification Information

Forms must be signed by a person described in Part II.A.8, or by a duly authorized representative of that person.

An unsigned or undated form will be considered incomplete.

Revisions to a Submitted Form

If you have previously submitted a form with an error, submit a revised form with the correct information. After discovering the error, submit the revised form as soon as possible. Make a notation on the revised form where the correction was made.

9.12 Delegation of Authority

DELEGATION OF AUTHORITY

In accordance with the Maryland General Discharge Permit No. 20CP, Part II.A.8, the following individuals or positions have been designated as duly authorized representatives of the Operators. These individuals have the explicit duty of initiating and directing comprehensive measures to assure long-term compliance with this permit and SWPPP.

Name: See Section 1.2 of the SWPPP for all duly authorized employees.

Titles: Provided by contractor

Company: Provided by contractor (to be determined)

Phone #: See Section 1.2 of the SWPPP

I certify the individual or position named above has the delegated authority to sign inspection reports and/or amend or modify this SWPPP.

Operator Signature – Contractor Company Name
Signature – Owner

Operator

Date:

Date:



GENERAL PERMIT FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITY
General NPDES Permit Number MDRC0000
State Discharge Permit Number 20CP0000A
EFFECTIVE DATE: April 1, 2023 EXPIRATION DATE: March 31, 2028
MODIFIED: May 2, 2023

Table of Contents

PART I. PERMIT APPLICABILITY 3

 A. Geographic Coverage3

 B. Eligibility Conditions.....3

 C. Eligible Discharges (Types of Discharges Authorized)4

 D. Prohibited Discharges.....5

 E. Requiring an Individual Permit or an Alternative General Permit6

 F. Continuation of an Expired General Permit and Permit Coverage7

 G. Duty to Reapply.7

Part II. AUTHORIZATION UNDER THIS PERMIT 7

 A. Authorization Request8

 B. NOI Approval Process and Public Notification Period13

 C. Effective Date of Coverage.13

 D. Transfer of Authorization.14

 E. E&SC Requirements for Coverage.....14

 F. How to Terminate Coverage.....14

Part III. CONTROL MEASURES AND EFFLUENT LIMITATIONS 16

 A. Technology-Based Limits.....16

 1. Control Measure Selection and Design Considerations..... 16

 2. Erosion and Sediment Controls (E&SCs) 17

 3. Pollution Prevention Requirements..... 21

 4. Construction Dewatering Requirements 24

 B. Water Quality-Based Limits.....24

 1. General Effluent Limitation to Meet Applicable Water Quality Standards 24

 2. Water Quality-Based Conditions for Sites Discharging to Tier II Waters 25

 3. Water Quality-Based Conditions for Sites Discharging to Impaired Waters 25

 4. Turbidity Benchmark Monitoring to Protect Water Quality 25

 C. Site Inspection, Monitoring and Records.27

 1. Person(s) Responsible for Inspecting Site 27

 2. Frequency of Inspections 27

 3. Increase in Inspection Frequency: 28

 4. Reductions in Inspection Frequency 28

 5. Areas That Must Be Inspected 28

 6. Requirements for Site Inspections 29

 7. Inspection Report..... 29

- 8. Records On-site 30
- D. Corrective Actions31
 - 1. Conditions Triggering Corrective Action. 31
 - 2. Corrective Action Deadlines (except dewatering) 31
 - 3. Corrective Action Report..... 32
 - 4. Corrective Action Required by the Department..... 32
 - 5. Corrective Action Deadlines (for dewatering) 32
- E. Staff Training Requirements33
 - 1. Prior to the commencement of construction activities,..... 33
 - 2. Regarding subcontractors or outside service providers, 33
 - 3. Specific training related to scope of jobs, 33
 - 4. Easy access to documents,..... 33
- F. Stormwater Pollution Prevention Plan (SWPPP)33
 - 1. General Requirements 33
 - 2. SWPPP Contents..... 34
 - 3. On-site Availability of your SWPPP 38
 - 4. SWPPP Modifications..... 38
- Part IV. STANDARD PERMIT CONDITIONS 39
 - A. Duty to Comply39
 - B. Property Rights.....39
 - C. Water Construction and Obstruction39
 - D. Right of Entry.....39
 - E. Duty to Provide Information.39
 - F. Availability of Reports39
 - G. Submitting Additional or Corrected Information40
 - H. Removed Substances40
 - I. Toxic Pollutants40
 - J. Oil and Hazardous Substances Prohibited40
 - K. Proper Operation and Maintenance.....40
 - L. Bypass40
 - M. Upset.....40
 - N. Need to Halt or Reduce Activity Not a Defense.....41
 - O. Duty to Mitigate41
 - P. Permit Actions.41
 - Q. Severability.41
 - R. Reopener Clause for Permits.....41
 - S. Civil and Criminal Liability41
 - T. Action on Violations42
 - U. Civil Penalties for Violations of Permit Conditions.....42
 - V. Criminal Penalties for Violations of Permit Conditions.42
 - W. Administrative Penalties for Violations of Permit Conditions.42
- Part V. AUTHORITY TO ISSUE GENERAL NPDES PERMITS..... 43

- Appendix A – Definitions
- Appendix B – Stream Protection Zones
- Appendix C – 20CP Antidegradation Checklist
- Appendix D - Turbidity Monitoring Report Form

PART I. PERMIT APPLICABILITY

By this permit the Maryland Department of the Environment (the Department) authorizes the discharge of pollutants to Waters of this State in accordance with the effluent limitations and conditions set forth herein associated with construction activity. This authorization is pursuant to the provisions of Title 9 of the Environment Article, Annotated Code of Maryland and its implementing regulations at COMAR 26.08.04; and the provisions of the Federal Clean Water Act (CWA), 33 U.S.C. §1251 et seq., as amended by the Water Quality Act of 1987, and its implementing regulations at 40 CFR Parts 122, 123, 124, 125 and 127. Authorization under this permit is required from the “commencement of construction activities” (see Appendix A), until one of the conditions for terminating this permit’s coverage has been met (see Part II.F).

“You” and “Your” are used in this permit to refer to the authorized operator or applicant, as the context indicates, and that party’s facility or responsibilities.

A. Geographic Coverage

This permit covers all areas of the State of Maryland.

B. Eligibility Conditions

To be covered under this permit, you must meet the eligibility conditions in this Part and follow the requirements for obtaining permit coverage in Part II.

1. You are an “operator” of a construction site for which discharges will be covered under this permit. For the purposes of this permit and in the context of stormwater discharges associated with construction activity, an “operator” is any party associated with a construction project that meets either of the following two criteria:
 - a. The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications (e.g., in most cases this is the owner of the site); or
 - b. The party has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit conditions including authorization to direct workers at a site to carry out activities required by the permit, correct violations (including repair or installation of erosion and sediment controls (E&SC)), and/or halt construction activity until violations of the permit are corrected; in most cases this is the general contractor (as defined in Appendix A) of the project).

Where there are multiple operators associated with the same project, all operators must obtain permit coverage. If the operator of a “construction support activity” (Part I.C.1.c) is different than the operator of the main site, that operator must also obtain permit coverage. See Stormwater Pollution Prevention Plan (SWPPP) Part III.F for clarification on the sharing of permit-related functions between and among operators on the same site and for conditions that apply to developing a SWPPP for multiple operators associated with the same site. Subcontractors generally are not considered operators for the purposes of this permit.

2. Your site’s construction activities:
 - a. Will disturb one or more acres of land, or will disturb less than one acre of land but are part of a common plan of development or sale (defined in Appendix A) that will ultimately disturb one or more acres of land; or
 - b. Have been designated by EPA or the Department as needing permit coverage under 40 CFR 122.26(a)(1)(v) or 40 CFR 122.26(b)(15)(ii);
3. For “new source” (defined in Appendix A) only if:
 - a. The Department has not, prior to authorization under this permit, determined that discharges from your site will not meet applicable water quality standards. Where such a determination is made prior to authorization, the Department may notify you that an

individual permit application is necessary (Part I.E and Part II.B). However, the Department may authorize your coverage under this permit after you have included appropriate controls and implementation procedures designed to bring your discharge into compliance with this permit, specifically the requirement to meet water quality standards. In the absence of information demonstrating otherwise, the Department expects that compliance with the requirements of this permit, including the requirements applicable to such discharges in Part III.B, will result in discharges that meet applicable water quality standards.

- b. Discharges from your site to a Tier II water will not lower the water quality of the applicable water so that existing in-stream water uses and the level of water quality necessary to protect existing uses are maintained and protected (as provided the Antidegradation Policy Implementation Procedures in COMAR 26.08.02.4-1). In the absence of information demonstrating otherwise, the Department expects that compliance with the requirements of this permit, including the antidegradation review requirements applicable to such discharges in Part III.B.2, will result in discharges that will not lower the water quality of such waters.
4. Discharges from your site are not: already covered by a different NPDES permit for the same discharge; or in the process of having coverage under a different NPDES permit for the same discharge denied, terminated, or revoked.

C. Eligible Discharges (Types of Discharges Authorized)

1. The following stormwater discharges are authorized under this permit provided that appropriate stormwater controls are designed, installed, and maintained according to the terms of this permit (see Parts III.A and III.B):
 - a. Stormwater discharges, including stormwater runoff, snowmelt runoff, and surface runoff and drainage, associated with construction activity under 40 CFR 122.26(b)(14)(x) or 122.26(b)(15)(i);
 - b. Stormwater discharges designated by the Department as needing a permit under 40 CFR 122.26(a)(1)(v) or 122.26(b)(15)(ii);
 - c. Stormwater discharges from construction support activities (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas) provided that:
 - i. The support activity is directly related to the construction site required to have permit coverage for stormwater discharges;
 - ii. The support activity is not a commercial operation, nor does it serve multiple unrelated construction sites;
 - iii. The support activity does not continue to operate beyond the completion of the construction activity at the site it supports; and
 - iv. Stormwater controls are implemented in accordance with Parts III.A and III.B for discharges from the support activity areas.
 - d. Stormwater discharges from earth-disturbing activities associated with the construction of staging areas and the construction of access roads conducted prior to active mining.
2. The following non-stormwater discharges associated with your construction activity are authorized under this permit provided that, with the exception of water used to control dust and to irrigate vegetation in stabilized areas, these discharges are not routed to areas of exposed soil on your site and you comply with any applicable requirements for these discharges in Parts III.A and III.B:
 - a. Discharges from emergency fire-fighting activities;
 - b. Landscape irrigation;
 - c. Water used to wash vehicles and equipment, provided that there is no discharge of soaps, solvents, or detergents used for such purposes;

- d. Water used to control dust;
 - e. External building washdown, provided soaps, solvents, and detergents are not used, and external surfaces do not contain hazardous substances (as defined in Appendix A) (e.g., paint or caulk containing polychlorinated biphenyls (PCBs));
 - f. Pavement wash waters, provided spills or leaks of toxic or hazardous substances have not occurred (unless all spill material has been removed) and where soaps, solvents, and detergents are not used. You are prohibited from directing pavement wash waters directly into any Waters of this State, storm drain inlet, or stormwater conveyance, unless the conveyance is connected to a sediment basin, sediment trap, or similarly effective control;
 - g. Uncontaminated air conditioning or compressor condensate;
 - h. Uncontaminated, non-turbid discharges of ground water or spring water;
 - i. Foundation or footing drains where flows are not contaminated with process materials such as solvents or contaminated ground water; and
 - j. Construction dewatering water discharged in accordance with Part III.A.4.
3. Use of Chemical Additives for Sediment Control: The use of any chemical additives (defined in Appendix A) for sediment control at a construction site is subject to conditions in this permit (Part III.A.2.m). Cationic Chemical Additives (defined in Appendix A) are subject to additional controls and monitoring (Part III.A.2.m.xiii - Part III.A.2.m.xvi). Anionic and cationic additives have different NOI requirements (Part II.A.2), deadlines (Part II.A.9) and processes (Part II.A.11). Any substances not approved by the Department are prohibited.
4. Also authorized under this permit are discharges of stormwater listed above in Part I.C.1 or Part I.C.3 or authorized non-stormwater discharges listed above in Part I.C.2, commingled with a discharge authorized by a different NPDES permit or a discharge that does not require NPDES permit authorization.

D. Prohibited Discharges

The Department includes the prohibited discharges in this Part as a reminder to the operator that the only non-stormwater discharges authorized by this permit are in Part C above. To prevent the prohibited discharges, operators must comply with the applicable pollution prevention requirements in Part III.A.3. Any unauthorized non-stormwater discharges must be covered under an individual permit or alternative general permit. This is not meant to be a comprehensive list of all prohibited discharges.

- 1. Wastewater from the Concrete Washout. (Part III.A.3.d).
- 2. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials. (Part III.A.3.d)
- 3. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance (Part III.A.3.a and Part III.A.3.c.iii).
- 4. Soaps or solvents, or detergents used in vehicle and equipment washing or external building washdown (Part III.A.3.b);
- 5. Toxic or hazardous substances from a spill or other release (also see Part III.A.3.c iv, Part III.A.3.f. and Part IV.J); and
- 6. Water contaminated by toxic or hazardous substances (e.g. from sites managed under Maryland's Voluntary Cleanup Program (VCP) or Land Restoration Program (LRP) or demolition debris contaminated by PCBs (Part III.B.3)), not addressed by a stormwater pollution prevention plan (Part III.F) and consistent with requirements stipulated by the Department's LMA or WSA.

E. Requiring an Individual Permit or an Alternative General Permit

The Department may require you to obtain, or you may also request, an individual permit or coverage under another general permit as described below, even though you may be eligible for coverage under this permit. If the Department requires you to apply for and obtain an alternative permit and you do not apply as required, the Department may terminate your coverage under this permit. This termination is effective at the end of the day that the Department specified for the application or Notice of Intent (NOI) to be submitted, after which you must cease discharges that were covered by this permit.

1. **Portable Batch Plants:** Process water discharges from concrete and asphalt plants, including batch plants, are not authorized under this permit and must have coverage under the General Permit for Discharges from Mineral Mines, Quarries, Borrow Pits and Concrete and Asphalt Plants or an individual permit.
2. **Mining Activity:** Earth disturbance for the purposes of preparation of sites for mineral mining or coal mining must obtain permit coverage under the specific General Permit for that activity, or under an individual permit. Such sites require coverage under those General Permits or individual permits specifically designated for discharges from mineral mining and coal mining activities. Mining sites where construction of structures or other non-mining related development will occur as part of reclamation, or any non-mining earth disturbance following completion of mining reclamation (unless otherwise ineligible for coverage), must obtain coverage under this General Permit if earth disturbance of one acre or more will occur.
3. **Landfills:** Earth disturbance of one acre or more for the purposes of construction of landfill cells or other structures, roads, and appurtenances to landfill operation must be covered under this General Permit unless the Department has authorized coverage under a different permit or general permit. For areas such as the interior of landfill cells where stabilization does not occur, you may terminate coverage once the landfill cell begins operating as a landfill and accepting waste, as long as you obtain coverage under the General Permit for Discharges of Stormwater Associated with Industrial Activity.
4. **New Sources where the E&SC Plan Fails to Meet State Standards:** If the Department determines that a discharge may cause water quality standards to be exceeded in the receiving water, where such a determination is made prior to authorization, based on a failure of your E&SC plan to meet State E&SC or stormwater management (SWM) standards (see Part I.B.3 and Part II.B), you may be required to obtain an individual NPDES discharge permit.
5. **Prohibited Discharges:** If the Department determines that a discharge contains a prohibited non-stormwater discharge (Part I.D), based on information in your NOI (Part II.C), Notice of Transfer (Part II.D) or from other sources, where the discharge is not covered by one of the above General Permits (Part I.E.1, I.E.2 or I.E.3), and is not addressed by applicable pollution prevention requirements in Part III.A.3, you may be required to obtain an individual NPDES discharge permit.
6. **Water Quality Standards:** At any time after authorization, the Department may determine that your stormwater discharges may cause, have reasonable potential to cause, or contribute to an excursion above any applicable water quality standard, or are causing or contributing to an impairment of a waterbody [i.e., waterbodies listed as impaired on the Integrated Report for Section 303(d)]. (See Part III.B.1, Part III.B.2, Part III.B.3 and Part IV.P). If such a determination is made, the Department may require you to: a. Modify the stormwater controls to adequately address, achieve and document the identified water quality concerns; b. Submit valid and verifiable data and information that are representative of ambient conditions and indicate that the receiving water is attaining water quality standards; or c. Cease discharges of pollutants from construction activity and apply for and obtain an individual discharge permit.
7. **Existing Sources where the E&SC Plan Fails to Meet State Standards:** If your E&SC plan fails to meet State E&SC or SWM standards (see Part II.B.2), the Department may require you to apply for an individual permit if you are unable to include appropriate controls and implementation procedures

designed to bring your discharge into compliance with this permit, specifically the requirement to meet water quality standards.

8. When an Individual Permit or an Alternative General Permit are required under this Part I.E, the Department will notify you in writing. This notice shall include:
 - a. A brief statement of the reasons for this decision;
 - b. A statement setting a deadline for the notified person to file an application for an individual permit or file a NOI in accordance with the terms of the alternative general permit;
 - c. A permit application if applicable; and
 - d. For existing permittees, a statement that on the effective date of the individual permit or the alternative general permit as it applies to the individual permittee, coverage under this general permit shall automatically terminate.
9. The Department may grant additional time to submit the individual permit application or alternative general permit NOI upon request of the applicant.
10. Any person authorized by this permit may request to be excluded from the coverage of this permit by applying for an individual permit or filing an NOI for coverage under an alternative general permit. The person seeking an individual permit must submit an individual application in accordance with the United States Environmental Protection Agency's (EPA) National Pollutant Discharge Elimination System (NPDES) regulations at 40 C.F.R. Part 122, with reasons supporting the request to the Department. The person seeking coverage under an alternative general permit must file an NOI in accordance with the terms of the alternative general permit. A request for an individual permit shall be granted if the Department determines that the reasons cited by the applicant are adequate to support the request. If the applicant seeks coverage under an alternative general permit, the terms of that permit will determine whether coverage under the alternative general permit is obtained.
11. When an individual permit is issued to a person otherwise covered by this permit, the applicability of this permit to the individual permittee is automatically terminated on the effective date of the individual permit. Similarly, when a person subject to this permit obtains coverage under an alternative general permit, the applicability of this permit is terminated on the effective date of the alternative general permit. When an individual permit is denied to an applicant otherwise covered by this permit, or the applicant is denied coverage under the terms of an alternative general permit, the applicability of this general permit to the permittee may be terminated by the Department.

F. Continuation of an Expired General Permit and Permit Coverage

Unless this permit is terminated by the Department, an expired general permit continues in full force and effect, until the date(s) specified under a reissued general permit. If you wish to continue a regulated activity after this permit's expiration date, you must submit a Continuation of Authorization statement at least 60 days before the expiration date of this permit, unless permission for a later date has been granted by the Department. Notices of Intent or Continuation of Authorization statements submitted later than the expiration date of the existing permit will not be accepted by the Department and permit coverage will not be extended.

G. Duty to Reapply.

If you wish to continue an activity regulated by this permit under a renewed general permit, you must apply for and obtain authorization as required by the new permit once issued.

Part II. AUTHORIZATION UNDER THIS PERMIT

All "operators" (as defined in Appendix A) associated with your construction site, who meet the eligibility requirements (Part I.B), and who seek coverage under this permit, must submit to the Department a complete and accurate NOI, fee payment and associated documentation (Part II.A) according to the deadlines in Table 1. The approval of the authorization is contingent on a response to any comments taken during the public notification period (Part II.B), and the Department's review of the submission. Your Authorization is effective once the Department provides you with a authorization letter (Part II.C).

Emergency Authorization Exception: A person who must conduct earth-disturbing activities prior to obtaining general permit coverage for discharges in response to a public emergency (e.g., natural disaster, widespread disruption in essential public services), and the related work requires immediate authorization to avoid imminent endangerment to human health, public safety, or the environment, or to reestablish essential public services, must obtain emergency authorization from the Department within 24 hours after initiating earth-disturbing activities. The person must obtain such emergency authorization in writing or via electronic mail. If the Department denies emergency authorization, the person must immediately stabilize earth disturbance and complete the authorization process under this Part before resuming earth disturbance. Where circumstances allow, it is recommended that a person obtain emergency authorization prior to initiating earth-disturbing activities. A person with emergency authorization is authorized to discharge on the condition that a complete and accurate NOI is submitted within 7 calendar days after commencing earth-disturbing activities, and must ultimately complete all requirements to obtain regular coverage under the general permit. The person must provide a copy of the emergency authorization with the NOI.

A. Authorization Request

1. **Notice of Intent (NOI).** You must submit to the Department an NOI (Part II.A.2) to be covered under this general permit. The NOI must be submitted prior to the expiration date of this permit, be accompanied by the appropriate fee (Part II.A.3) and include support documentation (Part II.A.4). The applicant must submit the documents in either the electronic or paper format designated by the Department (Part II.A.5 or Part II.A.6), and they must be certified (Part II.A.7 and Part II.A.8).
2. **Contents of Notice of Intent.** The NOI must include the following:
 - a. The site's name, mailing address, and general location;
 - b. The site's latitude and longitude in decimal degrees of at least 4 decimals, using a central point within the property boundary;
 - c. A vicinity map of the site;
 - d. The Operator's name and signatory's signature, address, telephone number, email address;
 - e. The preparer's name, organization, email address and telephone number;
 - f. The resident agent (for corporations/LLC) name and address, if the business is not incorporated or registered to do business in Maryland;
 - g. Federal Tax ID (not required for Individual);
 - h. Workers Compensation Certificate of Compliance document provided by the Workers Compensation Commission or Workers Comp Provider and Policy Number;
 - i. A brief project description, including existing and proposed land uses;
 - j. The type of organization (e.g., Individual, Sole Proprietor, Partnership, Volunteer Organization, Corporation, State, Federal, or Local Government);
 - k. Type of construction (e.g., Single-Family Residential, Multifamily Residential, Industrial and Warehouses, Institutional, Commercial, Other Non-residential Construction, Highway or Road, Bridge, Tunnel & Elevated Highway, Water, Sewer, or other Pipeline, Communications & Power Line Construction, Heavy Construction, Not Elsewhere Classified, Wrecking and Demolition Work, Other Special Trade Contractors);
 - l. The name of the receiving water(s) (if the discharge is to a municipal separate storm sewer system, the name of the municipal system and the receiving water(s) must be supplied);
 - m. A confirmation that the permittee has compared the eventual receiving water(s) with the Maryland 303(d) list, the date on which the comparison took place, and a statement as to whether the eventual receiving water(s) are listed on the 303(d) list as impaired for pollutants such as sediment or PCBs. Indicate the name and location of the impaired water(s) and the pollutant(s) for which the water is impaired;
 - n. A confirmation if the receiving water(s) are Tier II (high quality waters), and if so that the antidegradation review and Checklist have been completed (Part II.A.4.b);
 - o. The total site area, the total proposed disturbed area;
 - p. An indication whether you were exempted or waived from any requirements in the SWM Plan;
 - q. The E&SC Plan Approval Authority and Plan ID;

- r. Estimated construction project start date and end date;
 - s. Indicate identifying information for the main developer if the activity is part of a common plan of development or sale;
 - t. An indication if earth-disturbing activities have commenced on your project/site, and if so indicate if your project is an “emergency-related project”;
 - u. An indication if there is or will be demolition of any structure built or renovated before January 1, 1980;
 - v. An indication if any of the structures being demolished have at least 10,000 square feet of floor space (Part III.B.3);
 - w. An indication if disturbing material or soils with known contamination by toxic or hazardous substances (Part I.D.6) and identify the contaminants, (e.g. from sites managed under Maryland’s Voluntary Cleanup Program (VCP), Land Restoration Program (LRP), or base on historic land records).
 - x. An indication if chemical additives are used for flocculation, and when intending to use a product that is cationic to identify the product (Part I.C.3);
 - y. Permit number of any other NPDES Permit you retain for this site, or if part of a common plan the name of the owner, and an indication if this is new or a continuation of coverage (see Table 1); and
 - z. An indication if there were any Federal or State listed rare, threatened, and endangered species or designated critical habitat located in the project area and if so are there specific requirements in your E&SC or SWPPP.
 - aa. An indication if dewatering benchmarks are applicable.
3. **Fees.** An application fee is required at the time of submission of an NOI. The fee schedule is based on the size of the total planned disturbance. If the area of disturbance is projected to increase, an NOI should be resubmitted with a fee that reflects this change in coverage. The applicant must determine the appropriate fee to be paid from the fee schedule set in State regulations COMAR 26.08.04.09-1 C(2). Fee clarification: For builders constructing single family homes within a larger common plan of development or sale where the common plan of development or sale has an authorization under this permit with an approved E&SC plan that specifies single family homes on Standard Plans, and the small residential lots individually themselves each are less than an acre, there is no additional fee.
4. **Additional Documentation Required:** The following documents are required and must be submitted as part of a complete authorization request.
- a. Erosion and Sediment Control (E&SC) and Stormwater Management (SWM) Plans: Persons who obtain coverage under this general permit must, prior to commencing construction, develop and obtain approval from the appropriate approval authority of: E&SC plans (Part II.A.4.a) in accordance with the requirements established in Title 4, Subtitle 1 of the Environment Article, Annotated Code of Maryland (Sediment Control); and in Code of Maryland Regulations (COMAR) 26.17.01 (E&SC); and SWM plans (unless exempted by the following law or regulation or obtaining a proper waiver from the approval authority) in accordance with the requirements established in Title 4, Subtitle 2 of the Environment Article, Annotated Code of Maryland (SWM); and in COMAR 26.17.02 (SWM). *For State or federal phased approvals, site preparation or grading may begin once the E&SC plan and Concept SWM plan have been approved, however further construction activities require final SWM plan approval.*
Where coverage under this permit is required but either E&SC, SWM plan requirements, or both are exempt under Title 4, a SWPPP must submitted in place of the exempted plan or plans as part of a complete authorization request.
 - b. Antidegradation checklist: If your construction activity will result in discharges to Tier II waters, then you must complete the Checklist (Appendix C) as part of your antidegradation review (Part III.B.2).
 - c. Stormwater Pollution Prevention Plan (SWPPP): You must develop and submit a SWPPP consistent with Part III.F, when required by this permit (refer to Part III.F.1).

5. **How to Submit Your NOI and accompanying documentation via eNOI:** You must use the Department's NPDES eNOI Tool to electronically prepare and submit your NOI for coverage under this permit unless you received a Waiver from the Department (Part II.A.6). In addition to the NOI, you will also attach any additional documentation required, such as the proof of E&SC and SWM approval (either in the form of a letter or waiver signed by the approval authority, a copy of the stamped approval from the plan), antidegradation checklist and SWPPP as required by this permit. To access the tool, go to access the system at:
<https://egov.maryland.gov/mde/npdes/Account/Login>.
6. **Where to Submit NOI and accompanying documentation, when exempted from eNOI:** You may submit your documents via mail only when granted a waiver from the Department. All other applicants must submit NOIs for coverage under this general permit through the electronic system designated by the Department. Waivers from electronic reporting may be granted based on one of the following conditions:
- If the operator's operational headquarters are physically located in a geographic area (i.e., ZIP code or census tract) that is identified as underserved for broadband Internet access in the most recent report from the Federal Communications Commission; or
 - If the operator has limitations regarding available computer access or computer capability.

If the operator wishes to obtain a waiver from submitting a report electronically, operators must submit a request to the Department. In that request, operators must document which exemption they meet, provide evidence supporting any claims, and a copy of their completed NOI form. A waiver may only be considered granted once operators receive written confirmation from the Department.

If the Department grants the operator approval to use a paper NOI, and they elect to use it, the operator must request the form from the Department. Those with the waiver will submit completed paper forms, required documents and payment by mail to the Department at the following address:

The Maryland Department of the Environment
Water and Science Administration
P.O. Box 2057
Baltimore, Maryland 21203-2057

7. **Certification.** Any person signing documents under this section must provide certification in accordance with the laws and regulations identified in Part II.A.8 below.
8. **Signature Requirements.**
- Signatory:* All authorization requests, including NOIs, transfers, modifications or emergency requests must be signed by a signatory as follows:
- For a corporation: By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
 - a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or
 - the manager of one or more properties belonging to the owner, provided the manager is authorized to make management decisions which govern the operation of the regulated facility having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
 - For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

- c. For a municipality, State, Federal, or other public agency: By either a principal executive officer, ranking elected official or other duly authorized employee. For purposes of this section, a principal executive officer of a Federal agency includes:
 - i. the chief executive officer of the agency; or
 - ii. a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of the EPA).

Duly Authorized Representative: Your SWPPP, Turbidity Monitoring Report Form (i.e. Appendix D) or Antidegradation Checklist (i.e. Appendix C), including changes to your SWPPP to document any corrective actions taken as required by Part IV, and all reports submitted to the Department, must be signed by a Signatory as described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- a. the authorization is made in writing by a Signatory;
- b. the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or a position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and
- c. the signed and dated written authorization is included in the SWPPP or Antidegradation Checklist and made available to the Department upon request.

Changes in Signatory or Duly Authorized Representative: If an authorization for a representative is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of PART II.D must be submitted to the Department prior to submitting or with any reports, information or applications that must be signed by a duly authorized representative.

All certification of E&SC or SWM Plans must be signed in accordance with requirements established in COMAR 26.17.01.07 (E&SC) and COMAR 26.17.02.09 (SWM).

- 9. **Deadlines for Coverage.** The deadlines in Table 1 apply to operators applying for coverage under this permit. If you miss the deadline to submit your complete NOI package (Part II.B.1), any and all discharges from your construction activities will continue to be unauthorized under the CWA until they are covered by this or a different NPDES permit. The Department may take enforcement action for any unpermitted discharges that occur between the commencement of construction activities and discharge authorization.

Table 1 - Deadlines for Permit Coverage

Type of Operator	NOI Package Submittal Deadline	Special Instructions
<p>Operator of an Existing Construction Site with an active authorization number under the prior 14GP (i.e., a site where construction activities commenced prior to the effective date of this permit and which did have coverage under the prior 14GP permit).</p>	<p>Within 6 months after the effective date of this permit.</p>	<p>On eNOI select 'Continuation'. No additional fee or public notification period is required. Comply with the terms and conditions of the 14GP in the interim. (This includes sites that filed DOI with an NOI after the 14GP expired).</p>
<p>Operator of a New Site (i.e. a site where construction activities commence on or after the effective date of this permit but before expiration of this permit).</p>	<p>A minimum of 14 days prior to commencing construction activities.</p>	
<p>New Operator (i.e. an operator that through transfer of ownership, operation or both replaces the operator of an already permitted construction site that is either a "New site" or an "existing site").</p>	<p>A minimum of 14 days prior to date that the transfer will take place to the new owner/operator.</p>	<p>No additional fee or public notification period is required.</p>
<p>Amendments to Construction Activity which Adds a SWPPP Requirement (i.e. a request to modify an existing authorization for use of a cationic chemical additive or other triggering activity requiring SWPPP).</p>	<p>Amendments for use of any approved cationic chemical additive must be submitted a week prior to use. All other amendment must be submitted within 7 days of the change.</p>	<p>Amendments are required each time a new approved cationic chemical additive is used, or for the first time an approved anionic chemical additive is used. Amendments are not required for other changes for authorizations that already had a SWPPP.</p>
<p>Increase in Construction Activity (i.e. a request to modify an existing authorization for an increase in project acreage).</p>	<p>A minimum of 14 days prior to increasing construction activities.</p>	<p>If the increase is one acre or more, the process is the same as a new NOI. Fees are only assessed if the modification results in the total acreage being increased to the next fee tier.</p>
<p>Operator of an "emergency-related project" (i.e., a project initiated in response to a public emergency (e.g., mud slides, earthquake, extreme flooding conditions, disruption in essential public services), for which the related work requires immediate authorization to avoid imminent endangerment to human health or the environment, or to reestablish essential public services).</p>	<p>No later than 7 calendar days after commencing construction activities.</p>	<p>You are considered provisionally covered under the terms and conditions of this permit immediately. After reviewing the NOI, the Department may request more information prior to issuing full coverage or deny continued coverage.</p>

10. **Failure to Notify.** If you miss the deadline (Part II.A.9) to submit your NOI (Part II.A), any and all discharges from your construction activities will continue to be unauthorized under the CWA and of the Environment Article, Annotated Code of Maryland, until they are covered by this or a different NPDES permit. The Department may take enforcement action for any unpermitted discharges that occur between the commencement of construction activities and discharge authorization.

11. **Modifying your NOI.** Reasons to modify your NOI include an increase in the number of acres that will be disturbed at the site beyond that stated in the documentation of coverage under the general permit, or the addition of an activity that requires a SWPPP. If after submitting your NOI you need to correct or update any fields, you may do so by submitting a "Modify/Amend NOI" form using eNOI. In

cases where the change necessitates a SWPPP, you must include the SWPPP along with the request. For increases in land disturbance of one acre or more, the process to modify the permit coverage is the same as for an initial NOI, thus a “Modify/Amend NOI” form may not be used. The permittee must reissue the NOI and be granted approval from the Department in order to have general permit coverage for the increased acreage before beginning earth disturbance on it.

B. NOI Approval Process and Public Notification Period

1. *Complete NOI Package.* The Department will begin processing a Notice of Intent (NOI) to be covered under this general permit once the NOI is complete (no errors) and the applicant provides verification that the E&SC plan for the project has been approved (i.e. scanned signature page, or a signed letter) by the appropriate approval authority (see Part II.A.4.a), and if required has paid the appropriate application fee, provided the signed Antidegradation Checklist (see Part II.A.4.b) and signed SWPPP (see Part II.A.4.c). The Department will not begin processing the NOI package until the required information is provided.

Public Notification Period. The Department will regularly post NOI information on the NOI system website to include all complete NOI packages submitted during the previous week, with the exception in this Part for Single Family Homes in a Common Plan of Development or Sale (see below). This Public Notification Period serves as an announcement that the NOI has been submitted, providing the public with an additional notification in cases where they were not aware of the project. In order to provide opportunity for review of NOI package information, the Department will not complete authorization for construction sites during a minimum 14 day period that begins on the date the NOI information is posted on the NOI system website. E&SC and SWM Plans can be accessed through the appropriate approval authority (which is identified on the NOI).

After 14 days have elapsed from the date the Department posted the NOI information on the NOI system, the Department will make every reasonable effort, within 48 business hours, to issue notification that the site is covered under this permit, with the exception described in paragraph 3 of this section. [Note: If you modify/edit/alter the information while the NOI/eNOI is in the public notification period, you may cause the NOI/eNOI to restart the public notification period.]

Exception to Public Notification Period: For larger common plan of development or sale where the common plan of development or sale has an authorization under this permit with an approved E&SC plan that specifies single family home lots on Standard Plans, or groups of single homes on small residential lots, and the homes are being constructed by a single builder within this common plan of development, there is no additional notification period.

2. *Exception to NOI Approval Process.* If the Department identifies there are additional controls necessary to meet the requirements of this permit or water quality standards (e.g. receives a detailed, written explanation as to why the E&SC plan fails to meet State E&SC or SWM standards), prior to issuance of General Permit coverage, the Department will do the following: (i) notify the general permit applicant that this information has been requested, (ii) evaluate the information, and (iii) make a decision and send notification of that decision to the NOI applicant, confirming whether an individual permit or changes to the NOI are required, and any timeframes for required actions (see Part I.E.4).

C. Effective Date of Coverage.

1. Based on the Department’s review of your NOI (Part II.B) or Transfer Request (Part II.D) and associated documentation and fee payment, prior to authorization the Department may perform further review, notify you that additional controls are necessary to meet the requirements of this permit or water quality standards, or deny coverage under this permit and require submission of an application for an individual NPDES permit. In these instances, the Department will notify you in writing of the delay, of the need for additional effluent limits, or of the request for submission of an individual NPDES permit application. If your request for coverage under the permit is granted, the Department will notify you and provide a authorization number.

2. Coverage under this general permit is effective on the date described in the authorization letter that you receive from the Department. You must contact the Department's compliance program two (2) weeks prior to starting construction to schedule a preconstruction meeting.

D. Transfer of Authorization.

The authorization under this permit is not transferable to any Operator except in accordance with this section, and in accordance with the Eligibility Conditions of this permit (Part I.B). As part of such transfer, the Department may require a separate application for an individual permit as stated in Part I. E.

1. As the transferor: Prior to relinquishing control, you must notify the Department via the eNOI system, of the proposed transfer, indicating the specific date of the proposed transfer of permit coverage, and to whom you propose to transfer permit coverage. You must familiarize the person who is assuming control of the permitted activities ("transferee" or new owner) with the program and provide the transferee/new owner with copies of: this general permit; the documentation from the Department that the site has coverage under the general permit; copies of any E&SC, SWM or SWPPPs prepared as required and the NOI submitted for the site.
2. As the transferee: You must certify (Part II.A.7), via the eNOI system, your intent to abide by this permit, and confirm that the other information given on the original NOI remain correct or update this information. By this certification you are acknowledging responsibility for compliance with all of the terms and conditions of this permit (which includes all conditions of the E&SC plan and SWM plan and if you are required to maintain a SWPPP, you must either follow the existing SWPPP or develop your own SWPPP).
3. The transfer becomes effective upon review and approval by the Department of a completed Transfer Request, signed by both the transferor and transferee.
4. Obligations of the permittee. All conditions and obligations outlined in this general permit apply to the new permittee/owner upon transfer. See Part III.C.8 for recordkeeping requirements applicable to the transferor following transfer.

E. E&SC Requirements for Coverage

Once construction has commenced, E&SC and SWM plan approvals must be kept up to date. Approved E&SC plans remain valid for 3 years from the date of approval (COMAR 26.17.01.08), after that time approvals may be extended or renewed by the approval authority. Where the Commencement of Construction Activities (see Appendix A) hasn't begun or construction contract not awarded at this 3 year milestone, a full reevaluation of any changes to E&SC due to modified sizing criteria for a 2-year or 10-year storm must take place and you must incorporate any updated sizing reflected in the ESC Handbook (see Appendix A). When the Commencement of Construction Activities has begun prior to this 3 year milestone, you must incorporate any updated sizing reflected and implement the E&SC to the maximum extent practicable as determined by the Appropriate Approval Authority (see Appendix A). Discharges from construction activity may not continue if the plans have expired, but may resume once plans are renewed without payment of an additional fee as long as coverage under this General Permit is still in effect.

F. How to Terminate Coverage.

Until you submit a request for termination of coverage under this permit and it is approved by the Department, you must comply with all conditions and effluent limitations in the permit. To request that your permit coverage be terminated, you must submit to the Department a complete and accurate Notice of Termination (NOT), which certifies that you have met the requirements for terminating in Part II.F.

1. Minimum Information Required in the NOT – You must provide the following minimum information for the Notice of Termination.
 - a. The Notice of Termination consists of the information requested in the electronic system (Part II.A.5), unless the permittee is otherwise directed by the Department (Part II.A.5). Any alternative form that the Department may direct for use will include, but not be limited to, the following:

- i. The mailing address and location of the construction site for which notification is submitted. Where a mailing address is not available, the location can be described in terms of the latitude and longitude (to the nearest 15 seconds) and Maryland Grid Coordinates of the approximate center of the facility;
- ii. The permittee's name, address, and telephone number;
- iii. The name, address, and telephone number of the general contractor(s);
- iv. The NOI identification number;
- v. The following certification statement, signed as required by section VI.L. herein:

"I certify under penalty of law that disturbed soils at the identified site have been permanently stabilized in accordance with approved E&SC plans; that temporary E&SC have been removed or will be removed within 6 months; and that all stormwater discharges associated with construction activity from this site that are authorized by this general permit have been eliminated. I understand that by submitting this Notice of Termination, I am no longer authorized to discharge stormwater associated with construction activity by the general permit and that discharging pollutants in stormwater associated with construction activity to waters of this State is unlawful under the laws of the State of Maryland unless authorized by a state discharge permit and to waters of the United States is unlawful under the Clean Water Act where the discharge is not authorized by an NPDES permit. I understand that I must maintain the records described in Part III.C.8 of the General Permit for three years from the date of this Notice of Termination. I understand that I have the duty to provide information in Part IV.E. during this record retention period. I also understand that the submittal of this Notice of Termination does not release the permittee from liability for any violations of this permit or the Clean Water Act which may have occurred at this site."

- b. The permittee must transmit the completed Notice of Termination form through the electronic system designated by the Department (Part II.A.5). If you have received a waiver (Part II.A.6) from the Department, you may file the NOT via mail to the following address:

The Maryland Department of the Environment
Water and Science Administration
1800 Washington Blvd., Suite 455
Baltimore, Maryland 21230-1708

2. Conditions for Terminating Coverage

You may terminate permit coverage only if one or more of the following conditions has occurred:

- a. You have completed all construction activities at your site and, if applicable, construction support activities covered by this permit (see Part I.C.1.c), and you have met the following requirements:
 - i. For any areas that (1) were disturbed during construction, (2) are not covered over by permanent structures, and (3) over which you had control during the construction activities, you have met the permanent stabilization requirements for final vegetative or non-vegetative stabilization in Part III.A.2.f;

The following are valid exceptions from the final stabilization requirement prior to terminating when you have provided a justification to and received concurrence from the Department:

- Disturbed areas on agricultural land that are restored to their preconstruction agricultural use. This Part for final stabilization criteria does not apply, unless the areas disturbed were not previously used for agricultural activities, such as buffer strips immediately adjacent to Waters of this State, and areas which are not being returned to their preconstruction agricultural use.
- Areas that need to remain disturbed. In limited circumstances, stabilization may not be required if the intended function of a specific area of the site necessitates that it remains disturbed, and only the minimum area needed remains disturbed (e.g., dirt access roads, utility pole pads, areas being used for storage of vehicles, equipment, materials, active landfill cells).

- ii. You have removed and properly disposed of all construction materials, waste and waste handling devices, and have removed all equipment and vehicles that were used during construction, unless intended for long-term use following your termination of permit coverage;
- iii. You have removed all stormwater controls that were installed and maintained during construction, except those that are intended for long-term use following your termination of permit coverage or those that are biodegradable; and
- iv. You have removed all potential pollutants and activities associated with construction that generate pollutants, unless needed for long-term use following your termination of permit coverage; or
- b. You have transferred control of all areas of the site for which you are responsible under this permit to another operator, and that operator has submitted an NOI and obtained coverage under this permit; or
- c. You have obtained coverage under an individual or alternative general NPDES permit. To terminate coverage under these conditions, you must submit a Notice of Termination.

Part III. CONTROL MEASURES AND EFFLUENT LIMITATIONS

A. Technology-Based Limits.

In the technology-based limits included in this Part, the term “minimize” means reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practice.

1. Control Measure Selection and Design Considerations

You must design, install, and maintain stormwater controls required in Parts III.A.2 (sediment) and III.A.3 (pollution prevention) to minimize the discharge of pollutants in stormwater from construction activities. These stormwater controls at a minimum must be developed in accordance with the requirements established in Title 4, Subtitle 1 of the Environment Article, Annotated Code of Maryland (Sediment Control); and as specified in the ESC Handbook. The ESC Handbook serves as the official guide for E&SC principles, methods, and practices. The Design Manual serves as the official guide for SWM principles, methods and practices. If the Department adopts applicable requirements after the effective date of this permit, including revised Standards and Specifications in the ESC Handbook, then you must update your plans accordingly (Part II.E). To meet this requirement (to design, install, and maintain stormwater controls), you must:

- a. Account for the following factors in designing your stormwater controls:
 - i. The expected amount, frequency, intensity, and duration of precipitation (refer to the most recent ESC Handbook for E&SC and Design Manual for post-construction stormwater management, to account for any updates based on climate change projections);
 - ii. The nature of stormwater runoff and run-on at the site, including factors such as expected flow from impervious surfaces, slopes, and site drainage features. You must design stormwater controls to control stormwater volume, velocity, and peak flow rates to minimize discharges of pollutants in stormwater (including temperature increases in Use III or Use IV watersheds) and to minimize channel and streambank erosion and scour in the immediate vicinity of discharge points; and
 - iii. The soil type and range of soil particle sizes expected to be present on the site.
- b. Design and install all stormwater controls in accordance with good engineering practices, including applicable design specifications.
- c. Complete installation of stormwater controls by the time each phase of construction activity has begun.
 - i. By the time construction activity in any given portion of the site begins, install and make operational any downgradient sediment controls (e.g., buffers, perimeter controls, exit point controls, storm drain inlet protection) that control discharges from the initial site clearing, grading, excavating, and other earth-disturbing activities.
 - ii. Following the installation of these initial controls, install and make operational all stormwater controls needed to control discharges prior to subsequent earth disturbing activities.

- iii. Ensure that stormwater management is installed for projects that span long periods of time to reduce downstream impacts related to potential flooding (e.g. more than half a year).
- d. Ensure that all stormwater controls are maintained and remain in effective operating condition during permit coverage and are protected from activities that would reduce their effectiveness.
 - i. Comply with any specific maintenance requirements for the stormwater controls listed in this permit, as well as any recommended by the manufacturer.
 - ii. If at any time you find that a stormwater control needs routine maintenance, you must immediately initiate the needed maintenance work, and complete such work by the close of the next business day.
 - iii. If at any time you find that a stormwater control needs repair or replacement, you must comply with the corrective action requirements in Part III.D.

2. Erosion and Sediment Controls (E&SCs)

You must implement erosion and sediment controls consistent with approved E&SC and SWM plans (Part II.E and Part II.A.4.a) and in accordance with the following requirements to minimize the discharge of pollutants in stormwater from construction activities. These controls are intended to prevent the discharge of significant amounts of sediment to surface waters, or conveyance systems leading to surface waters, particularly in the Chesapeake Bay watershed or impaired waterways. This permit is not an alternative for and does not take the place of any local permits or ordinances required by Maryland law or regulation or by the county or municipality that has jurisdiction where the construction activity occurs, including a grading permit, E&SC plan approval, or SWM plan approval. It is a condition of this permit that you comply with approved E&SC and SWM plans. Specific E&SC control design specifications are contained in the ESC Handbook.

- a. Provide and maintain a Stream Protection Zone. The Stream Protection Zone consists of a natural buffer from the site's earth disturbances to edge of stream of at least 50 feet for Tier I watersheds, or an average of 100 feet and not less than 50 feet at any point for Tier II watersheds, or other appropriate E&SCs in addition to, or instead of, a Stream Protection Zone. Additional requirements may also apply based on State regulations or local criteria (e.g., wetlands and waterways, forest conservation, and critical area). Refer to Appendix B for more specifics related to this requirement.

Stream Protection Zone Alternatives. If work is required within the Stream Protection Zone, additional E&SC measures are required. Such measures include accelerated stabilization, redundant controls, increased buffers, passive or active chemical treatment, or a reduction in the size of the grading unit. See Appendix B for additional conditions applicable to each compliance alternative.

- b. Minimize soil compaction. In areas of your site where post-construction stormwater control infiltration practices will be installed:
 - i. Restrict vehicle and equipment use in these locations to avoid soil compaction; or
 - ii. Before seeding or planting areas of exposed soil that have been compacted, use techniques that rehabilitate and condition the soils as necessary to support vegetative growth.
- c. Preserve native topsoil, unless infeasible.
- d. Minimize steep slope disturbances. Minimize the disturbance of "steep slopes" (as defined in Appendix A).
- e. Install sediment controls along any perimeter areas of the site that will receive pollutant discharges.
 - i. Remove sediment before it has accumulated to no more than one-half of the above-ground height of any perimeter control, or as specified in the cleanout volumes included in your approved plans.
 - ii. Exception. For areas at "linear construction sites" (as defined in Appendix A) where perimeter controls are infeasible (e.g., due to a limited or restricted right-of-way),

implement other practices as necessary to minimize pollutant discharges to perimeter areas of the site.

- f. Stabilize exposed portions of the site. Implement and maintain stabilization measures that minimize erosion from exposed portions of the site in accordance with the ESC Handbook. Stabilization practices are used to promote the establishment of vegetation on exposed soil, or in other cases to provide a stable, non-eroding surface for frequently used areas (e.g., equipment and material storage, staging areas, heavily used travel lanes) and to improve the water quality from the runoff of these areas. After initial soil disturbance or redisturbance, permanent (ESC Handbook Section B-4-5) or temporary (ESC Handbook Section B-4-4) stabilization is required within:
 - i. Three (3) calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and
 - ii. Seven (7) calendar days as to all other disturbed areas on the project site except for those areas under active grading.

Stabilization requirements are found in Section B-4 of the ESC Handbook. These include details on heavy use area protection, incremental stabilization, soil preparation, mulching, plant species, and seeding rates. Adequate vegetative stabilization requires 95% groundcover (ESC Handbook Section B-4). If environmental conditions, such as winter weather, prevent or delay seed germination, it is important to use a method of anchoring mulch to prevent erosion.

- g. Direct stormwater to vegetated areas and maximize stormwater infiltration and filtering to reduce pollutant discharges, unless infeasible.
- h. Minimize tracking of sediment at entrance or exit from construction site.
 - i. Restrict vehicle use to properly designated exit points;
 - ii. Use appropriate stabilization techniques (ESC Handbook Section B-1 or B-2) at all points that exit onto paved roads;
 - iii. Implement additional track-out controls as necessary to ensure that sediment removal occurs prior to vehicle exit; and
 - iv. Where sediment has been tracked-out from your site onto paved roads, sidewalks, or other paved areas outside of your site, remove the deposited sediment by the end of the same business day in which the track-out occurs or by the end of the next business day if track-out occurs on a non-business day. Remove the track-out by sweeping, shoveling, or vacuuming these surfaces, or by using other similarly effective means of sediment removal. You are prohibited from hosing or sweeping tracked-out sediment into any stormwater conveyance, storm drain inlet, or Waters of this State.
- i. Minimize dust. On areas of exposed soil, minimize the generation of dust through the appropriate application of water or other dust suppression techniques (ESC Handbook Section H-5).
- j. If you install a sediment trap or basin:
 - i. Situate the trap or basin outside of any Waters of this State and any natural buffers established under Part III.A.2.a;
 - ii. Design the trap or basin to avoid collecting water from wetlands;
 - iii. Design the trap or basin, outlet structures and associated erosion controls consistent with state standards (ESC Handbook Section D and G);
 - iv. Remove accumulated sediment to maintain stormwater capacity and conduct all other appropriate maintenance to ensure the trap or basin remains in effective operating condition as required for the practice in the ESC Handbook Section G.
- k. Protect storm drain inlets.
 - i. Install inlet protection measures (ESC Handbook Section E-9) that remove sediment from discharges prior to entry into any storm drain inlet that carries stormwater flow from your site to a Waters of this State, provided you have authority to access the storm drain inlet; and

- ii. Clean, or remove and replace, the protection measures as sediment accumulates, the filter becomes clogged, or performance is compromised. If the 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. Where there is evidence of sediment accumulation adjacent to the inlet protection measure, remove the deposited sediment by the end of the same business day in which it is found or by the end of the following business day if removal by the same business day is not feasible.

- l. Minimize erosion of stormwater conveyance channels and their embankments, outlets, adjacent streambanks, slopes, and downstream waters. Use erosion controls and velocity dissipation devices within and along the length of any stormwater conveyance channel and at any outlet to slow down runoff to minimize erosion.

- m. If you are using chemical additives (defined in Appendix A) for control of sediment (such as polymers or flocculants) at your site, you must comply with the requirements identified in this section. You must refer to the most current version of Standards for Use of Chemical Additives for Sediment Control document available on the Department's website at <https://mdewwp.page.link/ChemAddStandards> for specific instructions on information which must be included in your SWPPP, additional requirements, and assistance in applying for chemical additive use.
 - i. The use of chemical additives for sediment control should only be considered in the event that water quality standards cannot be met using conventional best management practices.
 - ii. Should the use of chemical additives be necessary, you must utilize conventional best management practices for E&SCs at a location prior to and after the application of chemical additives.
 - iii. Chemical additives may only be applied where treated stormwater is directed to a sediment control (e.g., sediment basin, perimeter control) prior to discharge. This permit intends to authorize additives used to create flocculation of suspended materials in stormwater or groundwater. It does not authorize use of chemical additives for bank or soil stabilization.
 - iv. Chemical additives must be approved by the Department prior to use. The Department maintains a current list of pre-approved polymers/flocculants including approved application method and maximum allowable dosage concentration or application rate on its website (<https://mdewwp.page.link/MDFlocs>).
 - v. If you wish to use a chemical additive which is not found on the approved list, you must request approval by following the Department's Procedures for Review of Chemical Additives for Sediment Control. You may not begin use of any chemical additive absent from the pre-approved list until you receive written approval from the Department.
 - vi. You are required to identify all additives you will be using in your SWPPP, and any cationic chemical additives in your Notice of Intent (pursuant to Part II.A.1 of this permit). If you wish to change to or add another preapproved chemical, you must provide notification to the Industrial Stormwater Permits Division of the Department within 30 days of commencing the use of the new pre-approved chemical additive.
 - vii. You must minimize exposure of stored chemicals to stormwater. Store all treatment chemicals in leakproof containers that are kept under storm-resistant cover and surrounded by secondary containment structures (e.g., spill berms, decks, spill containment pallets), or provide equivalent measures designed and maintained to minimize the potential discharge of treatment chemicals in stormwater or by any other means (e.g., storing chemicals in a covered area, having a spill kit available on site and ensuring personnel are available to respond expeditiously in the event of a leak or spill).
 - viii. You must comply with relevant local requirements affecting the use of chemical additives. If requested by the E&SC plan approval authority, provide a Safety Data Sheet (SDS) with your E&SC plan.
 - ix. You must use chemical additives and chemical treatment systems in accordance with good engineering practices, and with dosing specifications and sediment removal design specifications provided by the provider/supplier of the applicable chemicals.

- x. You must document any departures from good engineering practices or dosing specifications and sediment removal design specifications provided by the provider/supplier of the applicable chemicals.
 - xi. Selection of chemical additives and dosing rates should be determined based on site-specific test results. Documentation of the chemical selection process and dosing rate determination must be included in your SWPPP. Dosing rates cannot exceed those found on the Department's list of pre-approved chemical additives.
 - xii. Ensure that all persons who handle and use chemical additives at the site are provided with appropriate, product-specific training. At a minimum, this training must cover proper dosing requirements and safe handling practices.
 - xiii. You must notify and receive written approval from the Department's Industrial Stormwater Permits Division of the Department at least 7 days prior to using cationic chemical additives (as defined in Appendix A). Use of anionic chemical additives requires notice once on the NOI to indicate additives are being used, however when changing additives for better results, only SWPPP updates are required. For anionic the notice to the Department must occur no later than a week (7 days) after you begin using a product.
 - xiv. To receive authorization to use cationic chemical additives under this permit, you must identify in your SWPPP appropriate controls and implementation procedures (including where the chemical is applied, description of active treatment systems required, dosing, filtering, pH monitoring, etc.) designed to ensure that your use of cationic chemical additives will not lead to a violation of water quality standards. See the Standards for Use of Chemical Additives for Sediment Control document for additional instructions for completing your SWPPP and requesting use of cationic chemical additives.
 - xv. A copy of the SWPPP section regarding use of cationic chemical additives must be submitted along with the NOI and Request for Use of Cationic Chemical Additives form. You are required to comply with all such requirements if the Department has authorized you to use cationic chemical additives at your site.
 - xvi. Depending on the chemical additive selected for use, you may be required to sample discharges and test for residuals or other components. Any such monitoring requirement will be laid out in your authorization letter. Results of required monitoring must be maintained with the SWPPP and made available if requested by Department personnel.
 - xvii. Authorization is conditioned on your compliance with additional requirements necessary to ensure that the use of such chemicals will not cause an exceedance of water quality standards. If you use polymers or other chemical treatments as part of your controls, you must identify the polymers or chemical treatments used and the purpose in your SWPPP.
- n. You must consider Federal and State listed rare, threatened, and endangered species and designated critical habitat in the design of the E&SC plan in accordance with the DESIGN METHODOLOGY in the ESC Handbook, Section A-4. You must use MERLIN "<https://dnr.maryland.gov/Pages/Merlin.aspx>" or contact the Department of Natural Resources (DNR) to identify where threatened and endangered species or designated critical habitat are located within your Project area (see Appendix A). If rare, threatened, and endangered species and designated critical habitat is identified, you must contact the DNR to determine additional regulatory requirements. You must also indicate the areas on the E&SC plan, and the SWPPP (Part III.F.3.i) if applicable, where protections must take place based on consultation with DNR.
- o. Manage stockpiles or land clearing debris piles composed, in whole or in part, of sediment or soil (ESC Handbook Section B-4-8):
- i. Locate the piles outside of any stream protection zones established under Part III.A.2.a and away from any stormwater conveyances, drain inlets, and areas where stormwater flow is concentrated;
 - ii. Install a sediment barrier along all downgradient perimeter areas;
 - iii. For piles that will be unused for more than 7 days (3 days for all slopes steeper than 3 horizontal to 1 vertical (3:1)), provide cover or appropriate temporary stabilization (consistent with Part III.A.2.f);
 - iv. You are prohibited from hosing down or sweeping soil or sediment accumulated on pavement or other impervious surfaces into any stormwater conveyance, storm drain inlet, or Waters of this State, unless it is treated through a basin per your approved E&SC plan.

3. Pollution Prevention Requirements

You must implement pollution prevention controls in accordance with the following requirements to minimize the discharge of pollutants in stormwater and to prevent the discharge of pollutants from spilled or leaked materials from construction activities.

- a. For equipment and vehicle fueling and maintenance:
 - i. Implement measures to eliminate the discharge of spilled or leaked chemicals, including fuels and oils, from these activities (Examples of effective means include: locating activities away from waters of the State and stormwater inlets or conveyances so that stormwater coming into contact with these activities cannot reach Waters of this State; providing secondary containment (e.g., spill berms, decks dikes, spill containment pallets) and cover where appropriate; and having a spill kit available on site and ensuring personnel are available to respond expeditiously in the event of a leak or spill.);
 - ii. If applicable, comply with the Spill Prevention Control and Countermeasures (SPCC) requirements in 40 CFR part 112 and Section 311 of the CWA;
 - iii. Ensure adequate supplies are available at all times to handle spills, leaks, and disposal of used liquids;
 - iv. Use drip pans and absorbents under or around leaky vehicles;
 - v. Dispose of or recycle oil and oily wastes in accordance with other federal, state, tribal, or local requirements;
 - vi. Clean up spills or contaminated surfaces immediately, using dry clean up measures (do not clean contaminated surfaces by hosing the area down); and
 - vii. Eliminate the source of the spill to prevent a discharge or a continuation of an ongoing discharge.

- b. For equipment and vehicle washing:
 - i. Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters; (Examples of effective means to minimize the discharge include locating activities away from Waters of this State and stormwater inlets or conveyances and directing wash waters to a sediment basin or sediment trap, using filtration devices, such as filter bags or sand filters, or using other similarly effective controls.)
 - ii. Ensure there is no discharge of soaps, solvents, or detergents in equipment and vehicle wash water; and
 - iii. For storage of soaps, detergents, or solvents, provide either
 - cover (e.g., plastic sheeting, temporary roofs) to minimize the exposure of these detergents to precipitation and to stormwater, or
 - a similarly effective means designed to minimize the discharge of pollutants from these areas.

- c. For storage, handling, and disposal of building products, materials, and wastes:
 - i. For building materials and building products (Examples of building materials and building products typically present at construction sites include asphalt sealants, copper flashing, roofing materials, adhesives, concrete admixtures, and gravel and mulch stockpiles), provide either
 - cover (e.g., plastic sheeting, temporary roofs) to minimize the exposure of these products to precipitation and to stormwater, or
 - a similarly effective means designed to minimize the discharge of pollutants from these areas.

Note: Minimization of exposure is not required in cases where the exposure to precipitation and to stormwater will not result in a discharge of pollutants, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use).

- ii. For pesticides, herbicides, insecticides, fertilizers, and landscape materials:

- In storage areas, provide either
 - cover (e.g., plastic sheeting, temporary roofs) to minimize the exposure of these chemicals to precipitation and to stormwater, or
 - a similarly effective means designed to minimize the discharge of pollutants from these areas; and
 - Comply with all application and disposal requirements included on the registered pesticide, herbicide, insecticide, and fertilizer label (see also Part III.A.3.e).
- iii. For diesel fuel, oil, hydraulic fluids, other petroleum products, and other chemicals:
- Store chemicals in water-tight containers, and provide either
 - cover (e.g., plastic sheeting, temporary roofs) to minimize the exposure of these containers to precipitation and to stormwater, or
 - a similarly effective means designed to minimize the discharge of pollutants from these areas (e.g., having a spill kit available on site and ensuring personnel are available to respond expeditiously in the event of a leak or spill), or provide secondary containment (e.g., spill berms, decks, spill containment pallets); and
 - Clean up spills immediately, using dry clean-up methods where possible, and dispose of used materials properly. Notify the authorities as required. (Part III.A.3.f). You are prohibited from hosing the area down to clean surfaces or spills; and
 - Eliminate the source of the spill to prevent a discharge or a furtherance of an ongoing discharge.
- iv. For hazardous or toxic wastes (Examples of hazardous or toxic waste that may be present at construction sites include paints, caulks, sealants, fluorescent light ballasts, solvents, petroleum-based products, wood preservatives, additives, curing compounds, and acids.):
- Separate hazardous or toxic waste from construction and domestic waste;
 - Store waste in sealed containers, which are constructed of suitable materials to prevent leakage and corrosion, and which are labeled in accordance with applicable Resource Conservation and Recovery Act (RCRA) requirements and all other applicable federal, state, tribal, or local requirements;
 - Store all outside containers within appropriately-sized secondary containment (e.g., spill berms, decks, spill containment pallets) to prevent spills from being discharged, or provide a similarly effective means designed to prevent the discharge of pollutants from these areas (e.g., storing chemicals in a covered area, having a spill kit available on site);
 - Dispose of hazardous or toxic waste in accordance with the manufacturer's recommended method of disposal and in compliance with federal, state, tribal, and local requirements;
 - Clean up spills immediately, using dry clean-up methods, and dispose of used materials properly. Notify the authorities as required. (Part III.A.3.f). You are prohibited from hosing the area down to clean surfaces or spills;
 - Follow all other federal, state, tribal, and local requirements regarding hazardous or toxic waste; and
 - Eliminate the source of the spill to prevent a discharge or a furtherance of an ongoing discharge.
- v. For construction and domestic wastes (examples of construction and domestic waste include packaging materials, scrap construction materials, masonry products, timber, pipe and electrical cuttings, plastics, styrofoam, concrete, demolition debris and other trash or building materials, although not uncontaminated soils.):
- Provide waste containers (e.g., dumpster, trash receptacle) of sufficient size and number to contain construction and domestic wastes;
 - For waste containers that have lids, keep waste container lids closed when not in use and close lids at the end of the business day and during storm events. For waste containers that do not have lids, provide either
 - cover (e.g., a tarp, plastic sheeting, temporary roof) to minimize exposure of wastes to precipitation, or

- a similarly effective means designed to minimize the discharge of pollutants (e.g., secondary containment);
 - On business days, clean up and dispose of waste in designated waste containers; and
 - Clean up immediately if containers overflow.

Note: If illegal dumping is occurring note that there may be specific state or local laws that address dumping at your construction site.

Note: Minimization of exposure is not required in cases where the exposure to precipitation and to stormwater will not result in a discharge of pollutants (such as final products and materials intended for outdoor use) and where winds from intense storms will not cause these materials to mobilize.

Note: When using secondary containment, evaluate contained water for color; odor; floating, settled, or suspended solids; foam; oil sheen; and other indicators of stormwater pollutants and plan to pump and haul the water offsite to be treated if it is contaminated.
 - vi. For sanitary waste, position portable toilets so that they are secure and will not be tipped or knocked over and are located away from Waters of this State and stormwater inlets or conveyances.
- d. For washing applicators and containers used for stucco, paint, concrete, form release oils, curing compounds, or other materials:
 - i. Direct wash water into a leak-proof container or leak-proof and lined pit designed (refer to ESC Handbook Section H-6) so that no overflows can occur due to inadequate sizing or precipitation;
 - ii. Handle washout or cleanout wastes as follows:
 - Do not dump liquid wastes in storm sewers or Waters of this State.;
 - Dispose of liquid wastes in accordance with applicable requirements in Part III.A.3.c; and
 - Remove and dispose of hardened concrete waste consistent with your handling of other construction wastes in Part III.A.3.c; and
 - iii. Locate any washout or cleanout activities as far away as possible from Waters of this State and stormwater inlets or conveyances, and to the extent feasible, designate areas to be used for these activities and conduct such activities only in these areas.
- e. For the application of fertilizers:
 - i. Apply at a rate and in amounts consistent with manufacturer's specifications, or document in the SWPPP departures from the manufacturer specifications where appropriate in accordance with Part III.F;
 - ii. Apply at the appropriate time of year for your location, and preferably timed to coincide as closely as possible to the period of maximum vegetation uptake and growth;
 - iii. Avoid applying before rains that could cause excess nutrients to be discharged;
 - iv. The application to frozen ground is prohibited;
 - v. The application to stormwater conveyance channels is prohibited; and
 - vi. Follow all other federal, state, tribal, and local requirements regarding fertilizer application, including Agriculture Article § 8-803.4.
- f. Releases in Excess of Reportable Quantities. Discharges of hazardous substances and oil resulting from on-site spills are not authorized by this permit. (Part I.D.5). In the event of a discharge resulting from a spill of hazardous substances or oil from a construction site (Parts III.A.3.c.iii and Part III.A.3.c.iv), where the release is an amount equal to or in excess of a reporting quantity established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302, occurring during a 24 hour period:
 - i. You must notify the National Response Center (NRC) as soon as you have knowledge of the discharge in accordance with the requirements of 40 CFR Part 110, 40 CFR Part 117, and 40 CFR Part 302;
 - 1-800-424-8802 or
 - 202-267-2675 (in the Washington, DC metropolitan area)
 - ii. You must notify the Maryland Department of the Environment as soon as you have knowledge of the discharge;

- Between 8AM and 5PM at 410-537-3510
- All other hours at (866) 633-4686

You must also, within seven (7) calendar days of knowledge of the release, provide a description of the release, the circumstances leading to the release, and the date of the release to the Department's compliance program. Local requirements may necessitate additional reporting of spills or discharges to local emergency response, public health, or drinking water supply agencies. No condition of this general permit releases the permittee from any responsibility or requirements under other environmental statutes or regulations.

4. Construction Dewatering Requirements

Comply with the following requirements to minimize the discharge of pollutants from dewatering operations, in accordance with Part I.C.2.

- a. Route dewatering water through a sediment control designed to minimize discharges of pollutants and prevent discharges with visual turbidity (as defined in Appendix A). Appropriate controls are identified in the ESC Handbook Section F and may require additional use of chemical additives as provided in this permit that are designed to remove sediment.
- b. Do not discharge visible floating solids or foam;
- c. Use an oil-water separator or suitable filtration device (such as a cartridge filter) that is designed to remove oil, grease, or other products if dewatering water is found to contain these materials;
- d. To the extent feasible, use well-vegetated, upland areas of the site to infiltrate dewatering water before discharge. You are prohibited from using Waters of this State as part of the treatment area;
- e. To prevent dewatering-related erosion and related sediment discharges;
 - i. Use stable, erosion-resistant surfaces (e.g., well-vegetated grassy areas, clean filter stone, geotextile underlayment) to discharge from dewatering controls;
 - ii. Do not place dewatering controls, such as pumped water filter bags, on steep slopes; and
 - iii. At all points where dewatering water is discharged, comply with the velocity dissipation requirements of Part III.A.2.i;
- f. With backwash water, either haul it away for disposal or return it to the beginning of the treatment process;
- g. For any approved manufactured treatment systems, replace and clean the filter media used in dewatering devices when the pressure differential equals or exceeds the manufacturer's specifications; and
- h. Comply with dewatering-specific inspection requirements in Part C.

B. Water Quality-Based Limits.

1. General Effluent Limitation to Meet Applicable Water Quality Standards

Discharges must be controlled as necessary to meet applicable water quality standards. In the absence of information demonstrating otherwise, the Department expects that compliance with the conditions in this permit will result in stormwater discharges being controlled as necessary to meet applicable water quality standards. If at any time you become aware, or the Department determines, that discharges are not being controlled as necessary to meet applicable water quality standards, you must take corrective action as required in Parts III.D.1 and III.D.2, and document the corrective actions as required in Part III.D.3.

The narrative surface water quality criteria in Maryland's water quality standards (COMAR 26.08.02) include floating debris, oil, grease, scum, sludge, and other floating materials in amounts sufficient to cause the receiving water(s) to be unsightly; change the existing color to produce objectionable color for aesthetic purposes, or interfere directly or indirectly with designated uses; or elevate temperature which interfere directly or indirectly with designated uses.

The Department may require that you install additional controls (to meet the narrative water quality-based effluent limit above) on a site-specific basis or require you to obtain coverage under an individual permit, if information in your NOI or from other sources indicates that your discharges are

not controlled as necessary to meet applicable water quality standards. This includes situations where additional controls are necessary to comply with a wasteload allocation in an EPA-established or approved TMDL.

If during your coverage under a previous permit, you were required to install and maintain stormwater controls specifically to meet the assumptions and requirements of an EPA-approved or established TMDL (for any parameter) or to otherwise control your discharge to meet water quality standards, you must continue to implement such controls as part of your coverage under this permit.

2. Water Quality-Based Conditions for Sites Discharging to Tier II Waters

For any portion of the site that discharges within a catchment or directly into a tributary that is designated by the Department as Tier II for antidegradation purposes, you must perform an antidegradation review (COMAR 26.08.02.04-1), including the social and economic justification (SEJ) and alternatives analysis provisions, and complete the antidegradation checklist in Appendix C to establish the stormwater controls you will implement to protect the water resource. The checklist confirms that you will comply with the inspection frequency specified in III.C, the stabilization deadline specified in Part III.A.2.f and the additional controls required when work is considered within Stream Protection Zones as specified in Part III.A.2.a and Appendix B. The antidegradation checklist includes verification of whether the stream has assimilative capacity or if any waivers were allowed. Operators with discharges to Tier II streams with no assimilative capacity will be subject to additional review by the Department, which should happen well before submitting your NOI. In addition, on a case-by-case basis, the Department may notify operators of new sites or operators of existing sites with increased discharges that additional analyses, stormwater controls, or other measures are necessary to comply with the applicable antidegradation requirements, or notify you that an individual permit application is necessary.

3. Water Quality-Based Conditions for Sites Discharging to Impaired Waters

If you discharge to a water that is impaired, the Department may impose additional controls that are necessary for your discharge to meet water quality standards, including for it to be consistent with the assumptions of any available wasteload allocation in any applicable TMDL, or if coverage under an individual permit is necessary.

If you discharge to a water that is impaired for polychlorinated biphenyls (PCBs) and are engaging in demolition of any structure with at least 10,000 square feet of floor space built or renovated before January 1, 1980, you must:

- a. Implement controls to minimize the exposure of PCB-containing building materials, including paint, caulk, and pre-1980 fluorescent lighting fixtures, to precipitation and to stormwater (Examples of controls to minimize exposure of PCBs to precipitation and stormwater include separating work areas from non-work areas and selecting appropriate personal protective equipment and tools, constructing a containment area so that all dust or debris generated by the work remains within the protected area, using tools that minimize dust and heat. For additional information, refer to 20-CP Fact Sheet); and
- b. Ensure that disposal of such materials is performed in compliance with applicable state, federal, and local laws.

4. Turbidity Benchmark Monitoring to Protect Water Quality

For Sites Discharging dewatering water to Tier II or Waters Listed as impaired for sediment or a sediment-related parameter, you are required to comply with the benchmark monitoring requirements in this Part and document the procedures you will use at your site in your SWPPP pursuant to Part III.F.2.h. A summary of these requirements is included in Table 3.

The benchmark threshold is not an effluent limitation, rather it is an indicator that the dewatering controls may not be working to protect water quality, which the operator must investigate and correct as appropriate. A benchmark exceedance is not a permit violation. However, if a benchmark exceedance triggers corrective action in Part III.D.1.e, failure to conduct any required action is a permit violation.

Where there are multiple operators associated with the same site, the operators may coordinate with one another to carry out the monitoring requirements of this Part in order to avoid duplicating efforts. Such coordinating arrangements must be described in the SWPPP consistent with Part III.F.2.h. Regardless of how the operators divide the responsibilities for monitoring and reporting, each operator remains responsible for compliance with these requirements.

- a. Turbidity monitoring requirements
 - i. **Sampling frequency.** You must collect at least one turbidity sample from your dewatering discharge each day a discharge occurs.
 - ii. **Sampling location.** Samples must be taken at all points where dewatering water is discharged. Samples must be taken after the dewatering water has been treated by installed treatment devices pursuant to Parts III.A.4.a and III.A.4.c and prior to its discharge off site into a receiving water, constructed or natural site drainage feature, or storm drain inlet.
 - iii. **Representative samples.** Samples taken must be representative of the dewatering discharge for any given day as required in Part III.C.8.e.
 - iv. **Test methods.** Samples must be measured using a turbidity meter that reports results in nephelometric turbidity units (NTUs) and conforms with an approved method contained in Part 136 of the Federal Regulations (e.g., methods 180.1 and 2130). You are required to use the meter, and conduct a calibration verification prior to each day’s use, consistent with the manufacturer’s instructions.
- b. Turbidity benchmark
The benchmark threshold for turbidity for this permit is a daily maximum of 150 NTUs (referred to elsewhere in this permit as the “standard 150 NTU benchmark”)
- c. Comparison of turbidity samples to benchmark. Compare the daily maximum of your turbidity monitoring results to the standard 150 NTU benchmark.
 - i. If the daily maximum of your turbidity monitoring results exceeds the standard benchmark, you are required to conduct follow-up corrective action in accordance with Part III.D.5 and document any corrective action taken in your corrective action log in accordance with Part III.D.3.
 - ii. Although you are not required to collect and analyze more than one turbidity sample per day from your dewatering discharge, if you do collect and analyze more than one sample on any given day, you must include any additional results in your reporting.
 - iii. If you are conducting turbidity monitoring for more than one dewatering discharge point, you must report the daily maximum turbidity value for each discharge point and compare each to the turbidity benchmark.
- d. Reporting and recordkeeping.
 - i. You must maintain a log of daily turbidity measurements, as well as any calibration performed for the monitoring equipment.
 - ii. You must summarize the data using the form in Appendix D and submit the reports of your daily turbidity data summarized per week to the Department no later than 28 days following the end of each monitoring quarter (see Table 2). If there are monitoring weeks in which there was no dewatering discharge, or if there is a monitoring quarter with no dewatering discharge, indicate this in your turbidity monitoring report. If another operator associated with your same site is conducting turbidity monitoring on your behalf pursuant to Part III.B.4, indicate this in your turbidity monitoring report.
 - iii. For the purposes of this permit, the following monitoring quarters and reporting deadlines apply:

Table 2 - Monitoring Quarters and Deadlines for Reporting Turbidity Benchmark Monitoring Data

Monitoring Quarter #	Months	Reporting Deadline (no later than 30 days after end of the monitoring quarter)
1	January 1 – March 31	April 28
2	April 1 – June 30	July 28

3	July 1 – September 30	October 28
4	October 1 – December 31	January 28

- iv. You must use the Departments ePermits system (egov.maryland.gov/mde/npdes/Account/Login) to electronically submit your quarterly turbidity data, using the turbidity monitoring report form, in Appendix D. A copy of the filled out forms must also be kept on-site.
- v. For each day in which you are required to monitor, you must record the monitoring information and retain all such information for a period of at least three years from the date this permit expires or from the date your authorization is terminated.

Table 3- Summary of Turbidity Benchmark Monitoring Requirements

Applicability	Sampling Requirement	Turbidity Benchmark	Corrective Action	Reporting
Sites discharging dewatering water to a sediment impaired water or to a water designated as a Tier II for antidegradation purposes	Collect at least one turbidity sample per day, from each discharge point, on any day there is a dewatering discharge. Use turbidity sampling procedures specified in Part III.C.4.a.	Compare the daily maximum of your turbidity monitoring results to the 150 NTU benchmark.	If the daily maximum of turbidity monitoring results exceeds the 150 NTU turbidity benchmark, you are required to take follow-up corrective action in accordance with Part III.D.5.	Report all daily maximum turbidity monitoring results on a quarterly basis via ePermits using the monitoring form in Appendix D no later than 28 days following the end of each monitoring quarter.

C. Site Inspection, Monitoring and Records.

You must maintain records of your communications with the Department or delegated inspection authority related to the required pre-construction meetings. After the first earth disturbance occurs on the site, and thenceforth during the entire period of permit coverage whether the site is active or inactive, the permittee must conduct inspections of the permitted area.

1. Person(s) Responsible for Inspecting Site

The person(s) inspecting the site may be a person on the permittee’s staff or a third party hired or arranged to conduct inspections. The person conducting the inspection must hold a valid certificate of attendance from a training program for responsible personnel as required by Section 4-104(b) of the Environment Article, unless the E&SC plan approval authority has waived the requirement for a Certificate of Training in accordance with Section 4-104(c) of the Environment Article.

2. Frequency of Inspections

Unless you are subject to the Part III.C.3 site inspection frequency for discharges to Tier II waters or qualify for a Part III.C.4 reduction in the inspection frequency, at a minimum the permittee must conduct site inspections at one of the two following intervals,:

- a. Once each calendar week (Sunday to Saturday), and after a storm event of 0.25 inches or greater within 24 hours (either the same day the rainfall event concludes or the next day), or
- b. Once every four (4) business days.

You should discuss your inspection frequency selection at your preconstruction meeting, and you must keep your inspector updated if the inspection frequency changes. Document your inspection frequency selection and your communications with the inspector in your SWPPP, or with your inspection records.

In option III.C.2.a above, “within 24 hours” means that you must conduct an inspection within 24 hours once a storm event has produced 0.25 inches within a 24-hour period, even if the storm event is still continuing. Thus, if you have elected to inspect weekly in accordance with this Part III.C.2.a and there is a storm event at your site that continues for multiple days, and each day of the storm produces 0.25 inches or more of rain, you must conduct an inspection within 24 hours of the first day of the storm and within 24 hours after the end of the storm. To determine if a storm event of 0.25 inches or greater has occurred on your site, you must either keep a properly maintained rain gauge on your site or obtain the storm event information from a weather station that is representative of your location. For any day of rainfall during normal business hours that measures 0.25 inches or greater, you must record the total rainfall measured for that day in accordance with Part III.C.7.f.

3. Increase in Inspection Frequency:

a. For Sites Discharging to Tier II Waters

For any portion of the site that discharges to a water that is identified by the Department as Tier II for antidegradation purposes (see Part III.B.2), instead of the inspection frequency specified in Part III.C.2, you must conduct inspections twice every week. When reasonably possible schedule these within 24 hours of the occurrence of a storm event of 0.25 inches or greater, or the occurrence of runoff from snowmelt sufficient to cause a discharge. To determine if a storm event of 0.25 inches or greater has occurred on your site, you must either keep a properly maintained rain gauge on your site, or obtain the storm event information from a weather station that is representative of your location. For any day of rainfall during normal business hours that measures 0.25 inches or greater, you must record the total rainfall measured for that day in accordance with Part III.C.7.f.

b. For Sites subject to Dewatering Turbidity Benchmarks

You must conduct an inspection in accordance with Part III.C.7 during the discharge once per day on which the discharge occurs. The Part III.C.2 inspection frequency still applies to all other portions of the site, unless the site is affected by either the increased frequency in Part III.C.3.a or the reduced frequency in Part III.C.4.

4. Reductions in Inspection Frequency

For areas meeting stabilization requirements of COMAR 26.17.01.07.B.6(f) and the E&SC plan, inspections may be reduced to once per month if construction activity is suspended. If construction activity resumes in such a portion of the site at a later date, the inspection frequency immediately increases to that required in III.C.2; the permittee must document the beginning and ending dates of the period of stabilization in its inspection records.

Exception. For “linear construction sites” (as defined in Appendix A) where disturbed portions have undergone final stabilization at the same time active construction continues on other portions, you may reduce the frequency of inspections to twice per month for the first month, no more than 14 calendar days apart, in any area of your site where the stabilization steps in Part III.A.2.f have been completed. After the first month, you must inspect once more within 24 hours of the occurrence of a storm event of 0.25 inches or greater. If there are no issues or evidence of stabilization problems, you may suspend further inspections. If “wash-out” of stabilization materials or sediment is observed, following re-stabilization, inspections must resume at the inspection frequency required in Part III.C.2. Inspections must continue until final stabilization is visually confirmed following a storm event of 0.25 inches or greater.

5. Areas That Must Be Inspected

During your site inspection, you must at a minimum inspect the following areas of your site:

- a. All areas that have been cleared, graded, or excavated and that have not yet completed stabilization consistent with Part III.A.2.f;
- b. All stormwater controls (including pollution prevention controls) installed at the site to comply with this permit (This includes the requirement to inspect for sediment that has been tracked out from the site onto paved roads, sidewalks, or other paved areas consistent with Part III.A.2.h);
- c. Material, waste, borrow, and equipment storage and maintenance areas that are covered by this permit;

- d. All areas where stormwater typically flows within the site, including drainageways designed to divert, convey, or treat stormwater;
- e. All areas where construction dewatering is taking place, including controls to treat the dewatering discharge and any channelized flow of water to and from those controls;
- f. All points of discharge from the site; and
- g. All locations where stabilization measures have been implemented.

You are not required to inspect areas that, at the time of the inspection, are documented as considered unsafe to your inspection personnel.

6. Requirements for Site Inspections

During your site inspection, you must at a minimum:

- a. Check whether all stormwater controls (i.e., E&SCs and pollution prevention controls) are properly installed, appear to be operational, and are working as intended to minimize pollutant discharges;
- b. Check for the presence of conditions that could lead to spills, leaks, or other accumulations of pollutants on the site;
- c. Identify any locations where new or modified stormwater controls are necessary to meet the requirements of Parts III.A and III.B;
- d. Check for signs of visible erosion and sedimentation (i.e., sediment deposits) that have occurred and are attributable to your discharge at points of discharge and, if applicable, the banks of any Waters of this State flowing within or immediately adjacent to the site;
- e. Identify any incidents of noncompliance observed;
- f. If a discharge is occurring during your inspection:
 - i. Identify all discharge points at the site; and observe and document the visual quality of the discharge, and
 - ii. take note of the characteristics of the stormwater discharge, including color; odor; floating, settled, or suspended solids; foam; oil sheen; and other indicators of stormwater pollutants.
- g. Based on the results of your inspection, complete any necessary maintenance under Part III.A.1.d and corrective action under Part III.D;
- h. Verify if the site was subject to flooding.

7. Inspection Report

You must complete an inspection report within 24 hours of completing any site inspection and meet the applicable signature requirements. Approved forms for the inspection can be found on the Department's website. Each inspection report must include the following:

- a. the date and time of the inspection;
- b. the name(s) of the individual(s) who performed the inspection;
- c. for site inspections also include:
 - i. weather information (conditions during the inspection as well as time and amount of last recorded precipitation);
 - ii. a summary of your inspection findings, covering at a minimum the observations you made in accordance with Part III.C.6, including any necessary maintenance or corrective actions; (such as whether significant amounts of sediment were observed as described in Part III.C.6.d, above; an assessment of the condition of E&SCs and how any deficiencies were or are being addressed; and a description and date of any E&SC implementation and maintenance performed, including identification of any controls that have not been installed as required);
 - iii. a description of the site's present phase of construction;
 - iv. If you are inspecting your site based on a storm event (Part III.C.2.a or Part III.C.3), you must include the applicable rain gauge or weather station readings that triggered the inspection; and
 - v. If you documented that it is unsafe to inspect a portion of your site, you must describe the reason you found it to be unsafe and specify the locations to which this condition applies.
- d. for dewatering inspections conducted pursuant to Parts III.C.3.b also include:
 - i. approximate times that the dewatering discharge began and ended on the day of inspection;
 - ii. if the dewatering discharge is a continuous discharge that continues after normal business hours, indicate that the discharge is continuous.

- iii. estimates of the rate (in gallons per day) of discharge on the day of inspection;
- iv. whether or not any of the following indications of pollutant discharge were observed at the point of discharge to any receiving waters flowing through or immediately adjacent to the site, to constructed or natural site drainage features, or storm drain inlets:
 - a sediment plume, suspended solids, unusual color, presence of odor, decreased clarity, or presence of foam; or
 - a visible sheen on the water surface or visible oily deposits on the bottom or shoreline of the receiving water.

8. Records On-site

- a. After the first earth disturbance occurs on the site, and thenceforth during the entire period of permit coverage whether the site is active or inactive, you must post, at a safe, publicly accessible location in close proximity to the project site, a notice of permit coverage, including the project name as listed on the permit, the permittee, the words "General Permit for Stormwater Associated with Construction Activity", and the permit authorization number. For larger linear construction projects, the notice must be located so that it is visible from the public road that is nearest to the active part of the construction site, and it must use a font large enough to be readily viewed from a public right-of-way. For linear construction projects that extend over miles and for which a posting may be insufficient to provide notice of permit coverage, any proposed alternative methods of notification must be approved by the inspector during the preconstruction meeting.
- b. During the entire period of permit coverage, you must maintain the following records, which must be available when the site is active, either physically on-site or electronically accessible through your environmental reporting system, or at a readily accessible location within a reasonable distance from the site approved by the inspector during the preconstruction meeting.:
 - i. The NOI and records of all data used to complete the NOI;
 - ii. the approved E&SC plan;
 - iii. the approved SWM plan;
 - iv. a copy of this General Permit;
 - v. a copy of your SWPPP (if applicable);
 - vi. a copy of your antidegradation checklist (if applicable);
 - vii. a copy of the general permit authorization document from the Department;
 - viii. a copy of transfer of authorization documents (if applicable);
 - ix. all inspection reports and enforcement actions issued to the permittee from any appropriate enforcement or approval authority, including the Department, the delegated enforcement authority, or the U.S. Environmental Protection Agency; and
 - x. Written reports of all inspections conducted by the permittee.
- c. For a period of three (3) years from the date that general permit coverage for the site is terminated, the permittee must maintain the records in Part III.C.8.b above and a copy of the Notice of Termination (after it is prepared).
- d. When a permit is transferred, the original permittee must maintain the records in Part III.C.8.b above that document the permit activity up to the date of transfer. The original permittee must maintain those records for three (3) years from the date of transfer. Both the original permittee and the new permittee must maintain a copy of the Transfer of Authorization document.
- e. The permittee must ensure that samples and measurements taken for the purpose of monitoring are representative of the monitored activity. If the Department requires monitoring at a site covered by this permit, the permittee must use monitoring procedures that are sufficiently sensitive to meet an imposed limit, in accordance with federal regulations at 40 CFR 122.44(i)(1)(iv). Records of monitoring information must include:
 - i. the date, exact place, and time of sampling or measurements;
 - ii. the individual(s) who performed the sampling or measurements;
 - iii. the date(s) analyses were performed;

- iv. the individual(s) who performed the analyses;
 - v. the analytical techniques or methods used;
 - vi. the results of such analyses; and
 - vii. all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation.
- f. Reporting Requirements. You must provide, upon request by the Department, the information maintained in accordance with Part III.C.8 either by email when directed by the Department to send electronically or to:

The Maryland Department of the Environment
Water and Science Administration
Compliance Program
1800 Washington Blvd, Ste 420
Baltimore, Maryland 21230-1708

D. Corrective Actions

1. Conditions Triggering Corrective Action.

You must take corrective action to address any of the following conditions identified at your site:

- a. A stormwater control needs repair or replacement (beyond routine maintenance required under Part III.A.1.d);
- b. A stormwater control necessary to comply with the requirements of this permit was never installed, or was installed incorrectly;
- c. Your discharges are causing an exceedance of applicable water quality standards;
- d. A prohibited discharge has occurred (see Part I.D);
- e. During discharge from site dewatering activities the daily maximum of your turbidity monitoring results exceeds the 150 NTU benchmark; or
- f. Indications exist of significant amounts of sediment discharging such as:
 - i. Earth slides or mud flows;
 - ii. Concentrated flows of stormwater such as rills, rivulets or channels that cause erosion when such flows are not filtered, settled or otherwise treated to remove sediment;
 - iii. Turbid flows of stormwater that are not filtered, settled or otherwise treated to reduce turbidity;
 - iv. Deposits of sediment at the construction site in areas that drain to unprotected stormwater inlets or catch basins that discharge directly to surface waters;
 - v. Deposits of sediment from the construction site on public or private streets outside of the permitted construction activity;
 - vi. Deposits of sediment from the construction site on any adjacent property outside of the permitted construction activity; or
 - vii. Discharges from the construction site to municipal conveyances, curbs and gutters, or streams running through or along the site where visual observations show that the discharges differ from ambient conditions in terms of turbidity so as to indicate significant amounts of sediment present in them.

2. Corrective Action Deadlines (except dewatering)

If the permittee observes any of the triggering events (except e) described in Section III.D.1 above, or if any person informs the enforcement authority or the Department of a triggering event and the enforcement authority or the Department informs the permittee that one or more of the triggering events was verified, the permittee must undertake the following actions and record the dates and results of these actions in an on-site logbook, a SWPPP or electronically accessible through your environmental reporting system.

- a. Within one business day the permittee must inspect E&SC practices to verify compliance with its approved Plans. Any deficiencies, including; failure to follow the approved sequence of construction; failure to maintain approved buffers; grading beyond the limit of disturbance; or any approved E&SCs found to be missing, improperly installed or in need of maintenance must

be corrected immediately and may be considered to be a violation of this permit until such time that they are corrected.

- b. If the permittee believes the site to be in compliance with its approved Plans, the permittee must, by the next business day, contact the Compliance Program of the Water and Science Administration in the Department, the enforcement authority for the site (if it is not the Department), and the appropriate approval authority for E&SC and inform the authorities about the conditions observed during the inspection cited above. In addition to any requirements imposed by the delegated enforcement authority or the Department, the permittee must, after notifying the enforcement authority, implement any of the following that are determined to be appropriate towards the prevention of further triggering events:
 - i. Any change that may be approved in the field by the inspector for the enforcement authority for the site;
 - ii. Modifications to the Plans allowed as field modifications by the approval authority;
 - iii. Performing temporary or permanent seeding of disturbed areas more frequently than required by the approved Plan or regulation; or
 - iv. Increasing buffer distances.

The permittee must implement any changes needed based on the above review within four days after the triggering event is observed.

- c. If the permittee identifies additional triggering events, the permittee must determine if the E&SC plan and SWM plan are adequate or if an update to a SWPPP is required to prevent further triggering events, including any necessary on-site practices or plan modifications. Within three days of the observation of a second triggering event, the permittee must contact the Compliance Program of the Water and Science Administration in the Department, the enforcement authority for the site (if it is not the Department), and the approval authority for the Plans and advise them that:
 - i. The permittee observed a triggering event;
 - ii. If the E&SCs were properly installed and maintained, the event nevertheless happened; and
 - iii. The permittee is reviewing plans and will afford the approval authority the opportunity to concurrently review them.

The permittee must begin reviewing these plans within three days of the triggering event, submit revised plans to the approval authority no later than 14 days after the observation of a second triggering event and begin implementation of the changes to the revised Plans immediately upon approval from the approval authority.

3. Corrective Action Report

For each corrective action taken in accordance with this Part 2 above or Part 4 below, you must complete a report in accordance with the following requirements:

- a. Within 24 hours of identifying the corrective action condition, document the specific condition and the date and time it was identified.
- b. Within 24 hours of completing the corrective action (in accordance with the deadlines in Part III.D.2), document the actions taken to address the condition, including whether any SWPPP modifications are required.
- c. Each corrective action report must be signed in accordance with Part II.A.7 of this permit.
- d. You must keep a copy of all corrective action reports at the site, at an easily accessible location or electronically accessible through your environmental reporting system, so that it can be made available at the time of an on-site inspection or upon request by the Department.
- e. You must retain all corrective action reports completed for this Part for at least three (3) years from the date that your permit coverage expires or is terminated.

4. Corrective Action Required by the Department

You must comply with any corrective actions required by the Department as a result of permit violations found during an inspection provided under Part IV.D.

5. Corrective Action Deadlines (for dewatering)

If the permittee observes any of the dewatering triggering events described in Section III.D.1e above, you must:

- a. Immediately take all reasonable steps to minimize or prevent the discharge of pollutants until you can implement a solution, including shutting off the dewatering discharge as soon as possible depending on the severity of the condition taking safety considerations into account;
- b. Determine whether the dewatering controls are operating effectively and whether they are causing the conditions; and
- c. Make any necessary adjustments, repairs, or replacements to the dewatering controls to lower the turbidity levels below the benchmark or remove the visible plume or sheen.

When you have completed these steps and made any changes deemed necessary, you may resume discharging from your dewatering activities.

E. Staff Training Requirements

Each operator, or group of multiple operators, must assemble a “stormwater team” to carry out compliance activities associated with the requirements in this permit. At least one of the team members must be a qualified person who holds a valid certificate of attendance at a training program in accordance with Environment Article § 4-104 and must be on site at a frequency and duration sufficient to ensure compliance with the requirements of the permit and SWPPP (if applicable) and E&SC Plan.

1. Prior to the commencement of construction activities,

You must ensure that the following personnel on the stormwater team understand the requirements of this permit and their specific responsibilities with respect to those requirements:

- a. Personnel who are responsible for the compliance with the design, installation, maintenance, or repair of stormwater controls (including pollution prevention controls);
- b. Personnel responsible for the application and storage of treatment chemicals (if applicable);
- c. Personnel who are responsible for conducting inspections as required in Part III.C.1; and
- d. Personnel who are responsible for taking corrective actions as required in Part III.D.

2. Regarding subcontractors or outside service providers,

You are responsible for ensuring that all activities on the site comply with the requirements of this permit. You are not required to provide or document formal training for subcontractors or other outside service providers, but you must ensure that such personnel understand any requirements of this permit that may be affected by the work they are subcontracted to perform.

3. Specific training related to scope of jobs,

At a minimum, members of the stormwater team must be trained to understand the following if related to the scope of their job duties (e.g., only personnel responsible for conducting inspections need to understand how to conduct inspections):

- a. The permit deadlines associated with installation, maintenance, and removal of stormwater controls and with stabilization;
- b. The location of all stormwater controls on the site required by this permit and how they are to be maintained;
- c. The proper procedures to follow with respect to the permit’s pollution prevention requirements; and
- d. When and how to conduct inspections, record applicable findings, and take corrective actions.

4. Easy access to documents,

Each member of the stormwater team must have easy access to an electronic or paper copy of applicable portions of this permit, the most updated copy of your SWPPP, and other relevant documents or information that must be kept with the SWPPP.

F. Stormwater Pollution Prevention Plan (SWPPP)

1. General Requirements

All operators associated with a construction site under this permit must develop a SWPPP consistent with the requirements in Part III.F prior to their submittal of the NOI, if any of the following criteria apply at your site:

- a. The use of Chemical Additives or Polymers for Sediment Control,

- b. Construction activity which includes disturbing material or soils with known contamination by toxic or hazardous substances (Part I.D.6 and Part III.B.3), dewatering requiring turbidity benchmarks (Part III.B.4) or the Department notifies you to install additional controls to meet water quality standards (Part III.B.1),
- c. The implementation of controls associated with any of the pollution prevention activities referenced in Part III.A.3 (except projects less than 5 acres solely based on either building materials (including gravel or aggregate) present on-site, fertilizer required for revegetation or concrete washout),
- d. The sharing of permit-related functions between and among operators on the same site, or
- e. Where coverage under this permit is required but either E&SC, SWM plan requirements, or both are exempt under Title 4.

The SWPPP does not establish the effluent limits that apply to your site's discharges; these limits are established in this permit in Parts III.A and III.B.

Where there are multiple operators associated with the same site, they may develop a group SWPPP instead of multiple individual SWPPPs. Regardless of whether there is a group SWPPP or multiple individual SWPPPs, each operator is responsible for compliance with the permit's terms and conditions. In other words, if Operator A relies on Operator B to satisfy its permit obligations, Operator A does not have to duplicate those permit-related functions if Operator B is implementing them for both operators to be in compliance with the permit. However, Operator A remains responsible for permit compliance if Operator B fails to implement any measures necessary for Operator A to comply with the permit. In addition, all operators must ensure, either directly or through coordination with other operators, that their activities do not compromise any other operators' controls or any shared controls. The SWPPP must be kept up-to-date throughout coverage under this permit.

2. SWPPP Contents

At a minimum, the SWPPP must include the information specified in this Part and as specified in other parts of this permit. In cases where the information in paragraphs a – k below is contained in your approved E&SC plan, you may refer to that plan instead to avoid duplicate information.

- a. All Site Operators. Include a list (either maintain one yourself or reference a group list maintained by the main developer) of all other operators who will be engaged in construction activities at the site, and the areas of the site over which each operator has control.
- b. Stormwater Team. Identify the personnel (by name or position) that are part of the stormwater team, as well as their individual responsibilities, including which members are responsible for conducting inspections. Include documentation that the required personnel were, or will be, trained in accordance with Part III.E.
- c. Nature of Construction Activities. Include the following:
 - i. A description of the nature of your construction activities, including the age or dates of past renovations for structures that are undergoing demolition;
 - ii. The size of the property (in acres or length in miles if a linear construction site);
 - iii. The total area expected to be disturbed by the construction activities (to the nearest quarter acre or nearest quarter mile if a linear construction site);
 - iv. A description of any on-site and off-site construction support activity areas covered by this permit (see Part I.C.1.c);
 - v. The maximum area expected to be disturbed at any one time, including on-site and off-site construction support activity areas;
 - vi. A description and projected schedule for the following:
 - Commencement of construction activities in each portion of the site, including clearing and grubbing, mass grading, demolition activities, site preparation (i.e., excavating, cutting and filling), final grading, and creation of soil and vegetation stockpiles requiring stabilization;
 - Temporary or permanent cessation of construction activities in each portion of the site;
 - Temporary or final stabilization of exposed areas for each portion of the site; and
 - Removal of temporary stormwater controls and construction equipment or vehicles, and the cessation of construction-related pollutant-generating activities.

- If plans change due to unforeseen circumstances or for other reasons, the requirement to describe the sequence and estimated dates of construction activities is not meant to “lock in” the operator to meet these dates. When departures from initial projections are necessary, this should be documented in the SWPPP, the E&SC, or in associated records, as appropriate.
- vii. A list and description of all pollutant-generating activities on the site. For each pollutant-generating activity, include an inventory of pollutants or pollutant constituents (e.g., sediment, fertilizers, pesticides, paints, caulks, sealants, fluorescent light ballasts, contaminated substrates, solvents, fuels) associated with that activity, which could be discharged in stormwater from your construction site. You must take into account where potential spills and leaks could occur that contribute pollutants to stormwater discharges, and any known hazardous or toxic substances, such as PCBs and asbestos, that will be disturbed or removed during construction;
- viii. Business days and hours for the project;
- ix. If you are conducting construction activities in response to a public emergency (see Part I.F.1), a description of the cause of the public emergency (e.g., mud slides, earthquake, extreme flooding conditions, widespread disruption in essential public services), information substantiating its occurrence (e.g., state disaster declaration or similar state or local declaration), and a description of the construction necessary to reestablish affected public services.
- d. Site Map. Include a legible map, or series of maps (which may include reference to your E&SC map), showing the following features of the site:
 - i. Boundaries of the property (or right-of-way for linear utility projects);
 - ii. Locations where construction activities will occur, including:
 - Locations where earth-disturbing activities will occur (note any phasing), including any demolition activities;
 - Approximate slopes before and after major grading activities (note any steep slopes as defined in Appendix A);
 - Locations where sediment, soil, or other construction materials will be stockpiled;
 - Any crossings over Waters of this State;
 - Designated points where vehicles will exit onto paved roads;
 - Locations of structures and other impervious surfaces upon completion of construction; and
 - Locations of on-site and off-site construction support activity areas covered by this permit (see Part I.C.1.c).
 - iii. Locations of all Waters of this State to which the site discharges and one mile downstream of the site’s discharge points. Also identify if any are listed as impaired, or are identified as a Tier II water;
 - iv. Areas of State-listed critical habitat within the site or at discharge locations;
 - v. Type and extent of pre-construction cover on the site (e.g., vegetative cover, forest, pasture, pavement, structures);
 - vi. Drainage patterns of stormwater and authorized non-stormwater before and after major grading activities;
 - vii. Stormwater and authorized non-stormwater discharge locations, including:
 - Locations where stormwater or authorized non-stormwater will be discharged to storm drain inlets; and
 - Locations where stormwater or authorized non-stormwater will be discharged directly to Waters of this State.
 - viii. Locations of all potential pollutant-generating activities identified in Part III.F.2.c.vii;
 - ix. Locations of stormwater controls, including natural buffer areas and any shared controls utilized to comply with this permit; and
 - x. Locations where polymers, flocculants, or other treatment chemicals will be used and stored.
- e. Non-Stormwater Discharges. Identify all authorized non-stormwater discharges in Part I.C.2 that will or may occur.
- f. Description of Stormwater Controls.
 - i. For each of the Part III.A.2 E&SC effluent limits, Part III.A.3 pollution prevention effluent limits, and Part III.A.4 construction dewatering effluent limits, as applicable to your site, you must include the following:

- A description of the specific control(s) to be implemented to meet the effluent limit;
 - Any applicable stormwater control design specifications (including references to any manufacturer specifications, E&SC manuals, or ordinances relied upon, and any departures from such specifications must reflect good engineering practice and must be explained in the SWPPP);
 - Routine stormwater control maintenance specifications; and
 - The projected schedule for stormwater control installation/implementation.
- ii. You must also include any of the following additional information as applicable;
- Natural buffers or equivalent sediment controls (see Part III.A). You must include the following:
 - The compliance alternative to be implemented;
 - If complying with alternative 2, the width of natural buffer retained;
 - If complying with alternative 2, the E&SC(s) you will use to achieve an equivalent sediment reduction, and any information you relied upon to demonstrate the equivalency;
 - For “linear construction sites” where it is infeasible to implement compliance alternative 1, or 2, a rationale for this determination, and a description of any buffer width retained, supplemental E&SCs installed, or both; and
 - A description of any disturbances that have been exempted from these requirements by the approval authority that occur within Stream Protection Zones.
 - Perimeter controls for a “linear construction site” (see Part III.A.2.e). For areas where perimeter controls are not feasible, include documentation to support this assessment and a description of the other practices that will be implemented to minimize discharges of pollutants in stormwater associated with construction activities. Note: Routine maintenance specifications for perimeter controls documented in the SWPPP must include the Part III.A.2.e.i requirement that sediment be removed before it has accumulated to one-half of the above-ground height of any perimeter control.
 - Sediment track-out controls (see Parts III.A.2.h.ii and III.A.2.h.iii). Document the specific stabilization techniques or controls that will be implemented to remove sediment prior to vehicle exit.
 - Treatment chemicals (see Part III.A.2.m). You must include the following:
 - A listing of the soil types that are expected to be exposed during construction in areas of the project that will drain to chemical treatment systems. Also include a listing of soil types expected to be found in fill material to be used in these same areas, to the extent you have this information prior to construction or updated as you learn more about site conditions;
 - A listing of all treatment chemicals to be used at the site and why the selection of these chemicals is suited to the soil characteristics of your site;
 - If the Department authorized you to use cationic chemical additives for sediment control, include the specific controls and implementation procedures designed to ensure that your use of cationic chemical additives will not lead to an exceedance of water quality standards;
 - The dosage of all treatment chemicals to be used at the site and the methodology to be used to determine dosage;
 - Information from any applicable Safety Data Sheet (SDS);
 - Schematic drawings of any chemically enhanced stormwater controls or chemical treatment systems to be used for application of the treatment chemicals;
 - A description of how chemicals will be stored consistent with Part III.A.2.m.vi;
 - References to applicable state or local requirements affecting the use of treatment chemicals, and copies of applicable manufacturer’s specifications regarding the use of your specific treatment chemicals or chemical treatment systems; and
 - A description of the training that personnel who handle and apply chemicals have received prior to permit coverage, or will receive prior to use of the treatment chemicals at your site.
 - Stabilization measures (see Part III.A.2.f). You must include the following:

- The specific vegetative or non-vegetative practices that will be used;
 - The stabilization deadline that will be met in accordance with Part III.A.2.f;
 - If complying with deadlines for sites affected by unforeseen circumstances that delay the initiation or completion of vegetative stabilization, document the circumstances and the schedule for initiating and completing stabilization.
 - Spill prevention and response procedures (see Part I.D.5 and Part III.A.3.c.iv). You must include the following:
 - Procedures for expeditiously stopping, containing, and cleaning up spills, leaks, and other releases. Identify the name or position of the employee(s) responsible for detection and response of spills or leaks; and
 - Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity consistent with Part III.A.3.f. and established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302, occurs during a 24-hour period (see Part III.A.3.f). Contact information must be in locations that are readily accessible and available to all employees. You may also reference the existence of Spill Prevention Control and Countermeasure (SPCC) plans developed for the construction activity under Part 311 of the CWA, or spill control programs otherwise required by an NPDES permit for the construction activity, provided that you keep a copy of that other plan on site.
 - Waste management procedures (see Part III.A.3.c). Describe the procedures you will follow for handling, storing and disposing of all wastes generated at your site consistent with all applicable federal, state, tribal, and local requirements, including clearing and demolition debris, sediment removed from the site, construction and domestic waste, hazardous or toxic waste, and sanitary waste.
 - Application of fertilizers (see Part III.A.3.e). Document any departures from the manufacturer specifications where appropriate.
- g. Procedures for Inspection, Maintenance, and Corrective Action. Describe the procedures you will follow for maintaining your stormwater controls, conducting site inspections, and, where necessary, taking corrective actions, in accordance with Part III.A.1.d, Part III.C, and Part III.D of this permit. Also include:
- i. The inspection schedule you will follow, which is based on whether your site is subject to Part III.C.2 or Part III.C.3, or whether your site qualifies for any of the reduced inspection frequencies in Part III.C.4;
 - ii. If you will be conducting inspections in accordance with the inspection schedule in Part III.C.2, or Part III.C.3, the location of the rain gauge or the address of the weather station you will be using to obtain rainfall data; and
 - iii. Any maintenance or inspection checklists or other forms that will be used.
- h. Procedures for Turbidity Benchmark Monitoring from Dewatering Discharges (if applicable). If you are required to comply with the Part III.B.4 turbidity benchmark monitoring requirements, describe the procedures you will follow to collect and evaluate samples, report results to the Department and keep records of monitoring information, and take corrective action when necessary. Include the specific type of turbidity meter you will use for monitoring, as well as any manuals or manufacturer instructions on how to operate and calibrate the meter. Describe any coordinating arrangement you may have with any other permitted operators on the same site with respect to compliance with the turbidity monitoring requirements, including which parties are tasked with specific responsibilities. Include in your procedures a log (Part III.B.4.d) of turbidity monitoring equipment calibration and daily measurements of turbidity.
- i. Compliance with Other Requirements.
- i. Threatened and Endangered Species Protection. Include documentation required in Part III.A.2.n supporting your eligibility with regard to the protection of State threatened and endangered species and/or designated critical habitat.

- ii. Safe Drinking Water Act Underground Injection Control (UIC) Requirements for Certain Subsurface Stormwater Controls. If you are using any of the following stormwater controls at your site, document any contact you have had with the Department for implementing the requirements for underground injection wells in the Safe Drinking Water Act and EPA's implementing regulations at 40 CFR 144 -147. Such controls would generally be considered Class V UIC wells:
 - Infiltration trenches (if stormwater is directed to any bored, drilled, driven shaft or dug hole that is deeper than its widest surface dimension, or has a subsurface fluid distribution system);
 - Commercially manufactured pre-cast or pre-built proprietary subsurface detention vaults, chambers, or other devices designed to capture and infiltrate stormwater flow; and
 - Drywells, seepage pits, or improved sinkholes (if stormwater is directed to any bored, drilled, driven shaft or dug hole that is deeper than its widest surface dimension, or has a subsurface fluid distribution system).
- j. SWPPP Certification. You must sign and date your SWPPP in accordance with Part II.A.8.
- k. Post-Authorization Additions to the SWPPP. Once you are authorized for coverage under this permit, you must include the following documents as part of your SWPPP:
 - i. Any correspondence exchanged between you and the Department related to coverage under this permit;
 - ii. A copy of the acknowledgment letter you receive from the Department assigning your NPDES ID (i.e., permit authorization number);
 - iii. A copy of this permit (an electronic copy easily available to the stormwater team is also acceptable).

3. On-site Availability of your SWPPP

You must keep a current copy of your SWPPP at the site or at an easily accessible location so that it can be made available at the time of an on-site inspection or upon request by the Department, the EPA, the local approval agency, or the operator of a storm sewer system receiving discharges from the site. The Department may provide access to portions of your SWPPP to a member of the public upon request. Confidential Business Information (CBI) will be withheld from the public, but may not be withheld from the Department. If an on-site location is unavailable to keep the SWPPP when no personnel are present, notice of the plan's location must be posted near the main entrance of your construction site.

4. SWPPP Modifications

- a. You must modify your SWPPP, including the site map(s), within seven (7) days of any of the following conditions:
 - i. Whenever new operators become active in construction activities on your site, or you make changes to your construction plans, stormwater controls, or other activities at your site that are no longer accurately reflected in your SWPPP. This includes changes made in response to corrective actions triggered under Part III.D. You do not need to modify your SWPPP if the estimated dates in Part III.F.2.vi change during the course of construction;
 - ii. To reflect areas on your site map where operational control has been transferred (and the date of transfer) since initiating permit coverage;
 - iii. If inspections or investigations by the Department or its authorized representatives determine that SWPPP modifications are necessary for compliance with this permit;
 - iv. Where the Department determines it is necessary to install or implement additional controls at your site in order to meet the requirements of this permit, the following must be included in your SWPPP:
 - A copy of any correspondence describing such measures and requirements; and
 - A description of the controls that will be used to meet such requirements.
 - v. To reflect any revisions to applicable federal, state, or local requirements that affect the stormwater controls implemented at the site; and
 - vi. If applicable, if a change in chemical treatment systems or chemically enhanced stormwater control is made, including use of a different treatment chemical, different dosage rate, or different area of application.

- b. You must maintain records showing the dates of all SWPPP modifications. The records must include the name of the person authorizing each change (see Part III.F.2.j above) and a brief summary of all changes.
- c. All modifications made to the SWPPP consistent with Part III.F.4 must be authorized by a person identified in II.A.8.
- d. Upon determining that a modification to your SWPPP is required, if there are multiple operators covered under this permit, you must immediately notify any operators who may be impacted by the change to the SWPPP.

Part IV. STANDARD PERMIT CONDITIONS

A. Duty to Comply

You must comply at all times with the terms and conditions of this permit; the provisions of the Environment Article, Title 7, Subtitle 2 and Title 9, Subtitles 2 and 3 of the Annotated Code of Maryland; and the Clean Water Act, 33 U.S.C. § 1251 et seq. Any noncompliance with any of the requirements of this permit constitutes a violation of the Clean Water Act. As detailed in Part IV (Corrective Actions) of this permit, failure to take any required corrective actions constitute an independent, additional violation of this permit and the Clean Water Act. As such, any actions and time periods specified for remedying noncompliance do not absolve parties of the initial underlying noncompliance. However, where corrective action is triggered by an event that does not itself constitute permit noncompliance, there is no permit violation provided you take the required corrective action within the relevant deadlines established in Part III.D.

B. Property Rights.

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

C. Water Construction and Obstruction

This permit does not authorize you to construct or place physical structures, facilities, or debris or undertake related activities in any Waters of this State, unless otherwise authorized by the appropriate State and/or Federal Agency.

D. Right of Entry

You must permit the Secretary of the Department, the Regional Administrator for the EPA, or their authorized representatives, upon the presentation of credentials, to:

1. enter upon your premises where a discharge's source is located or where any records are required to be kept under the terms and conditions of this permit;
2. access and copy, at reasonable times, any records required to be kept under the terms and conditions of this permit;
3. inspect, at reasonable times, any monitoring equipment or monitoring method required in this permit;
4. inspect, at reasonable times, any collection, treatment, pollution management, or discharge facilities required under this permit;
5. sample, at reasonable times, any discharge of pollutants; and
6. take photographs (which may require direction for reasons of national security).

E. Duty to Provide Information.

You must provide within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit to the Department. You must also provide copies of records required to be kept by this permit to the Department, upon request.

F. Availability of Reports

Except for data determined to be confidential under the Maryland Public Information Act or Section 308 of the Clean Water Act implemented in 33 U.S.C. § 1318, all submitted data, plans or reports prepared pursuant to this permit, including self-inspection information, must be available for public

inspection at the offices of the Department and the Regional Administrator of the Environmental Protection Agency.

G. Submitting Additional or Corrected Information

When you become aware that you failed to submit any relevant facts or submitted incorrect information in the NOI or in any other approved plans or report to the Department, you must submit the facts or information to the Department within 30 days.

H. Removed Substances

Wastes such as solids, sludges, or other pollutants removed from or resulting from treatment or control of wastewaters or facility operations, must be disposed of in a manner to prevent any wastes or runoff from wastes from contacting Waters of this State.

I. Toxic Pollutants

You must comply with effluent standards or prohibitions for toxic pollutants established under the Federal Clean Water Act, or under Section 9-314 and Sections 9-322 to 9-328 of the Environment Article, Annotated Code of Maryland. You must be in compliance within the time provided in the regulations that establish these standards or prohibitions, even if this permit has not yet been modified to incorporate the requirement.

J. Oil and Hazardous Substances Prohibited

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve you from any responsibility, liability, or penalties to which the permittee may be subject under Section 311 of the Clean Water Act (33. U.S.C. § 1321), or under the Annotated Code of Maryland.

K. Proper Operation and Maintenance.

The permittee must at all times properly operate and maintain all systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance requires the installation and operation of backup, auxiliary, or similar systems or controls, by a permittee when necessary to achieve compliance with the conditions of the permit.

L. Bypass

Any bypass of treatment facilities necessary to maintain compliance with the terms and conditions of this permit is prohibited unless:

1. the bypass is unavoidable to prevent a loss of life, personal injury or substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources;
2. there are no feasible alternatives;
3. notification is received by the Department within 24 hours (if orally notified, then followed by a written submission within five calendar days of the permittee's becoming aware of the bypass). Where the need for a bypass is known (or should have been known) in advance, this notification must be submitted to the Department for approval at least ten calendar days before the date of bypass or at the earliest possible date if the period of advance knowledge is less than ten calendar days; and
4. the bypass is allowed under conditions determined by the Department to be necessary to minimize adverse effects.

M. Upset

Conditions Necessary for Demonstration of an Upset. An upset shall constitute an affirmative defense to an action brought for noncompliance with technology-based effluent limitations only if the permittee demonstrates, through properly signed, contemporaneous operating logs, or other relevant evidence, that:

1. an upset occurred and that the permittee can identify the specific cause(s) of the upset;

2. the permitted facility was at the time being operated in a prudent and workman-like manner and in compliance with proper operation and maintenance procedures;
3. the permittee submitted a 24-hour notification of upset within 24-hours of becoming aware of the upset in accordance with the reporting requirements of Corrective Actions above;
4. the permittee submitted, within five (5) calendar days of becoming aware of the upset, documentation to support and justify the upset; and
5. the permittee complied with any remedial measures required to minimize adverse impact.

N. Need to Halt or Reduce Activity Not a Defense.

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this general permit.

O. Duty to Mitigate

The permittee must take all reasonable steps to minimize or prevent any adverse impact to Waters of this State or to human health resulting from noncompliance with any effluent limitations specified in this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

P. Permit Actions.

Authorization under this permit may be modified, revoked and reissued, or terminated for cause. At any time at the discretion of the Department or the U.S. Environmental Protection Agency, or if there is evidence indicating that stormwater discharges authorized by this permit cause, have the reasonable potential to cause or contribute to an excursion above any applicable water quality standard, the Department may require the owner or operator of such discharge to obtain an individual permit or alternative general permit coverage. A request by the permittee for a modification, revocation or reissuance, termination, or a notification of planned changes or anticipated noncompliance does not suspend the permittee's obligation to comply with all permit conditions.

Q. Severability.

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

R. Reopener Clause for Permits

This permit may be modified, or alternatively, revoked and reissued, in accordance with the procedures contained in COMAR 26.08.04.10 and 40 C.F.R. §§ 122.62, 122.63, 122.64 and 124.5, to comply with any applicable effluent standard or limitation issued or approved under Sections 301, 304, and 307 of the Clean Water Act [33 USCS §§ 1311, 1314, 1317] if the effluent standard or limitation issued or approved:

1. contains different conditions or is otherwise more stringent than any effluent limitation in this permit; or
2. controls any pollutant not limited in this permit. This permit, as modified or reissued under this section, must also contain any other requirements of the Act then applicable.

S. Civil and Criminal Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under section 309 of the CWA, with Title 9 of the Environment Article, Annotated Code of Maryland, any applicable State or Federal law, or regulation under authority preserved by section 510 of the CWA.

T. Action on Violations

The issuance or reissuance of this permit does not constitute a decision by the State not to proceed in an administrative, civil, or criminal action for any violations of State law or regulations occurring before the issuance or re-issuance of this permit, nor a waiver of the State's right to do so.

U. Civil Penalties for Violations of Permit Conditions.

In addition to civil penalties for violations of State water pollution control laws set forth in Section 9-342 of the Environment Article, Annotated Code of Maryland, the CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a civil penalty not to exceed the maximum amount authorized by Section 309(d) of the Act, as adjusted pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990 (28 U.S.C. § 2461 note), and codified at 40 CFR § 19.4.

V. Criminal Penalties for Violations of Permit Conditions.

In addition to the criminal penalties for violations of State water pollution control laws set forth in Section 9-343 of the Environment Article, Annotated Code of Maryland, the Clean Water Act provides that:

1. Any person who negligently violates Section 301, 302, 306, 307, 308, 311(b)(3), 318, or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under Section 402 of the Act, or in a permit issued under Section 404 of the Act, is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both; In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to a fine of not more than \$50,000 per day of violation or by imprisonment of not more than two years, or both;
2. Any person who knowingly violates Section 301, 302, 306, 307, 308, 311(b)(3), 318, or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under Section 402 of the Act, or in a permit issued under Section 404 of the Act, is subject to a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by imprisonment for not more than three years, or both; in the case of a second or subsequent conviction for a knowing violation, a person shall be subject to a fine of not more than \$100,000 per day of violation, or imprisonment of not more than 6 years, or both;
3. Any person who knowingly violates Sections 301, 302, 306, 307, 308, 311(b)(3), 318, or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under Section 402 of the Act, or in a permit issued under Section 404 of the Act, and who knows at that time that he is placing another person in imminent danger of death or serious bodily injury, is subject to a fine of not more than \$250,000 or imprisonment for not more than 15 years, or both; in the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both; an organization, as defined in Section 309(c)(3)(B)(iii) of the Act, shall, upon conviction of violating the imminent danger provision be subject to a fine of not more than \$1,000,000 for a first violation and up to \$2,000,000 for second or subsequent convictions;
4. Any person who: falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit, or knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance, shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

W. Administrative Penalties for Violations of Permit Conditions.

In addition to administrative penalties for violations of State water pollution control laws set forth in Section 9-342 of the Environment Article, Annotated Code of Maryland, the Clean Water Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to an administrative penalty, as follows:

1. Class I Penalty. Not to exceed the maximum amounts authorized by Section 309(g)(2)(A) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note) (currently \$16,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$37,500).
2. Class II Penalty. Not to exceed the maximum amounts authorized by Section 309(g)(2)(B) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note) (currently \$16,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$187,500).

Part V. AUTHORITY TO ISSUE GENERAL NPDES PERMITS

On September 5, 1974, the Administrator of the EPA approved the proposal submitted by the State of Maryland for the operation of a permit program for discharges into navigable waters under Section 402 of the federal Clean Water Act, 33 U.S.C. Section 1342. On May 15, 1989, EPA and Maryland entered into a superseding Memorandum of Agreement for such discharges. On September 30, 1990, the Administrator of the EPA approved the proposal submitted by the State of Maryland for the operation of a general permit program. Under the approvals described above, this general discharge permit is both a State of Maryland general discharge permit and an NPDES general discharge permit.

D. Lee Currey

D. Lee Currey (Dec 27, 2022 14:43 EST)

D. Lee Currey, Director

Water and Science Administration

Dec 27, 2022

Minor Modification "20CPA" was issued May 2, 2023 to correct typographical errors, consistent with 40 C.F.R. 122.63 and COMAR 26.08.04.10.



WATER AND/OR SEWERAGE CONSTRUCTION PERMIT

Permit No.: 24-22-1087
Permit Fee: N/A

Date Issued: 10/28/2025
Expiration Date: 10/28/2028

This permit authorizes Baltimore County Department of Public Works and Transportation to construct a sanitary force main together with all appurtenances, at the site of 9950 Richlyn Drive, Perry Hall, Baltimore County, in accordance with an application dated June 27, 2024 and received by the Maryland Department of the Environment on July 9, 2024 titled in part:

**RICHLYN MANOR FORCE MAIN
PROJECT NUMBER: PROJ-10000060
CONTRACT NO. 24084SXO
SHEET NOS. 1 THROUGH 39 OF 39
AND
SPECIAL PROVISIONS**

THIS PERMIT IS ISSUED SUBJECT TO THE ATTACHED FOLLOWING CONDITIONS:

Note: This permit may be suspended or revoked upon a final, unreviewable determination that the permittee lacks, or is in violation of federal, state or local approval necessary to conduct the activity authorized by this permit.

**Walid Saffouri, P.E., Program Administrator
Engineering & Capital Projects Program
Water and Science Administration**

GENERAL CONDITIONS FOR WATER OR SEWERAGE CONSTRUCTION PERMIT

- The structural adequacy and expected performance characteristics of the various components are not certified by this permit.
- This permit is not transferable.
- A copy of this permit must be posted at the work site during construction.
- This permit will expire, if not specifically extended, unless the construction authorized under this permit has been initiated. The permit will then remain valid for the remainder of construction for a period of up to five years from the start of construction.
- If any provision of this permit shall be held invalid for any reason, the remaining provisions shall remain in full force and effect, and such invalid provision shall be considered severed and deleted from this permit.
- Persons violating the requirements of this permit are subject to penalties of up to \$1000 per day as set forth in Environment Article 9-268 and 9-334 through 9-342, Annotated Code of Maryland.
- A copy of the plans and specifications, authorized for use under this permit, shall be made available at the work site during construction of this project. A revised construction permit in accordance with COMAR 26.03.12 is required prior to making substantive changes or material alteration to the construction authorized under this permit.
- The owner shall secure all Federal, State or local permits, including approval of Sedimentation and Erosion Control Plans that may be required before starting the construction of the project.
- The owner shall insure that this project is inspected during the progress of construction to assure substantial compliance with the approved plans and specifications. A log and construction records shall be maintained by the inspector and may be requested for review at any time by this office.
- The project engineer of the Maryland Department of the Environment (the 'Department') shall be notified prior to the start of construction.
- Inspectors of the Department shall be afforded access to the project site, at reasonable times and upon presentation of credentials:
 - a. to inspect construction authorized under this permit and to determine compliance with applicable regulations;
 - b. to have access to and copy any records required to be kept by this permit and by applicable regulations; and
 - c. to obtain any photographic documentation or evidence.
- Within 60 days after completion of construction, a copy of as-built drawings and the attached construction completion certificate (page 3 of this permit) shall be submitted to the Department. Where construction was completed in accordance with the original plans approved under this permit, the submittal of as-built drawings will not be required.
- The owner shall maintain a permanent record of the as-built drawings, or the original plans if as-built drawings are not required.

GENERAL CONDITIONS (CONTINUED)

- Pursuant to Labor & Employment Article 9-201, the owner shall ensure that the contractor and subcontractors involved in the construction of this project must carry workers' compensation insurance for their employees. If the owner determines to perform the project construction by his/her labor force, the owner shall provide the same. If the entity, undertaking the project construction, is not covered by a workers' compensation policy, a Certificate of Compliance shall be submitted and approved by the Workers' Compensation Commission before initiation of the construction.
- Approval must be obtained from the Department before this project may be placed into service. Any exception allowing partial use of this project shall have the prior written approval of the Department. Approval may be obtained pursuant to the following procedure:
 - a. Where large political subdivisions, commissions, authorities etc. have their own inspection capabilities (satisfactory to the Department), the attached construction completion certificate shall be completed by the director of Public Works or similar responsible person and submitted to the Department.
 - b. Where an acceptable local construction inspection program does not exist, the attached construction completion certification shall be completed by a Professional Engineer licensed to practice in the State of Maryland (preferably the same engineer whose seal and signature appear on the plans approved under this permit) and submitted to the Department.
 - c. Upon receipt of the signed certificate, the Department shall, within (30) working days of the receipt, 1) issue an approval, 2) require further review and on-site inspection or 3) reject the construction certification. Approval shall be automatic for projects that have not received some form of written notification from the Department within (30) working days of receipt of the signed certificate.

24-22-1087

Permit Number



Preti Shrestha
Project Engineer
Engineering & Capital Projects Program

WATER AND SEWER CONSTRUCTION COMPLETION CERTIFICATION

The undersigned certifies that the construction authorized by this permit has been completed and inspected and that it substantially meets the terms of Environment Article 9-204, Annotated Code of Maryland.

Signature

Title

Date

The above project has been accepted by the Department within the terms of Environment Article 9-204, Annotated Code of Maryland.

Authorized Official

Date

Complete this certificate and return to:
Maryland Department of the Environment
Engineering & Capital Projects Program (ECPP)
Office of Budget and Infrastructure Financing
1800 Washington Boulevard
Baltimore, MD 21230

06/2022



NOTICE

Prior to starting construction, please notify Preeti Shrestha, Project Engineer, by email at Preeti.shrestha@maryland.gov. Upon completion of the project, the construction must be certified with the signed permit returned to this office along with a set of as-built drawings.

Should you have any questions concerning the permit or its conditions, please contact me at (410) 537-3757 or at walid.saffouri@maryland.gov.

Sincerely,

A handwritten signature in black ink that reads "Walid Saffouri". The signature is fluid and cursive.

**Walid Saffouri, P.E., Program Administrator
Engineering and Capital Projects Program
Water and Science Administration**



Name: Baltimore County Dept. of Public Works
Address: 111 W. Chesapeake Avenue, Towson MD, 21204
County: BA; BALTIMORE COUNTY

Applicant Type: Government entity whose right-of-way the trees are within The applicant is a public agency: Yes

Is hereby granted a permit to perform:

Ground disturbance, 3 Tree(s) Perry Hall

The proposed tree care will: Eliminate a hazard to property, public safety, or health

Described as follows:

PARTICULAR TREE OR TREES INVOLVED:

Root prune only 3 trees between 9901 and 9999 Richlyn Drive to accommodate construction of sanitary force main. Trees indicated as T-45 spruce ((5.0" dbh), T-46 arborvitae (5.0"dbh) and T-55 white oak (26"dbh).

LIMITATIONS OR CONDITIONS ON TREE CARE OR PLANTING:

Contract/Job #: Old Permit #: 2024-0115

Location: 9901 - 9999 Richlyn Drive

NOTE: The roadside tree law does not convey tree ownership to the Department. Permission from the owner of the tree or trees in question (SHA, MdTA, local DPW, etc.) must also be obtained prior to beginning any work. Work on the tree or trees in question without permission of the owner may be considered a trespass by the owner of the tree or trees despite possession of a valid permit from the Department.

EXCLUDING ANY TREE NOT WITHIN THE RIGHT-OF-WAY OF A PUBLIC HIGHWAY

Provided, that the work authorized by this permit shall not begin until the Forest Warden designated by the Director as his agent shall be present and give their sanction to the means employed, and that the work may be suspended by order of the Forest Warden upon any failure or refusal of the operators to perform it in accordance with the rules and regulations of the Department of Natural Resources - Forest Service. This permit is granted under authority of the Annotated Code of Maryland, 1973, under Title 5, Subtitle 406, which places the care and protection of all trees growing within the right-of-way of any public road or between the curb and property lines of any street in any incorporated town in Maryland under the Department of Natural Resources - Forest Service. This permit, in no way cancels or contravenes the right of property owners to restrict or prevent the trimming or cutting of trees upon their own properties, except that trees covered by this permit may not be treated in any way other than as herein specified.

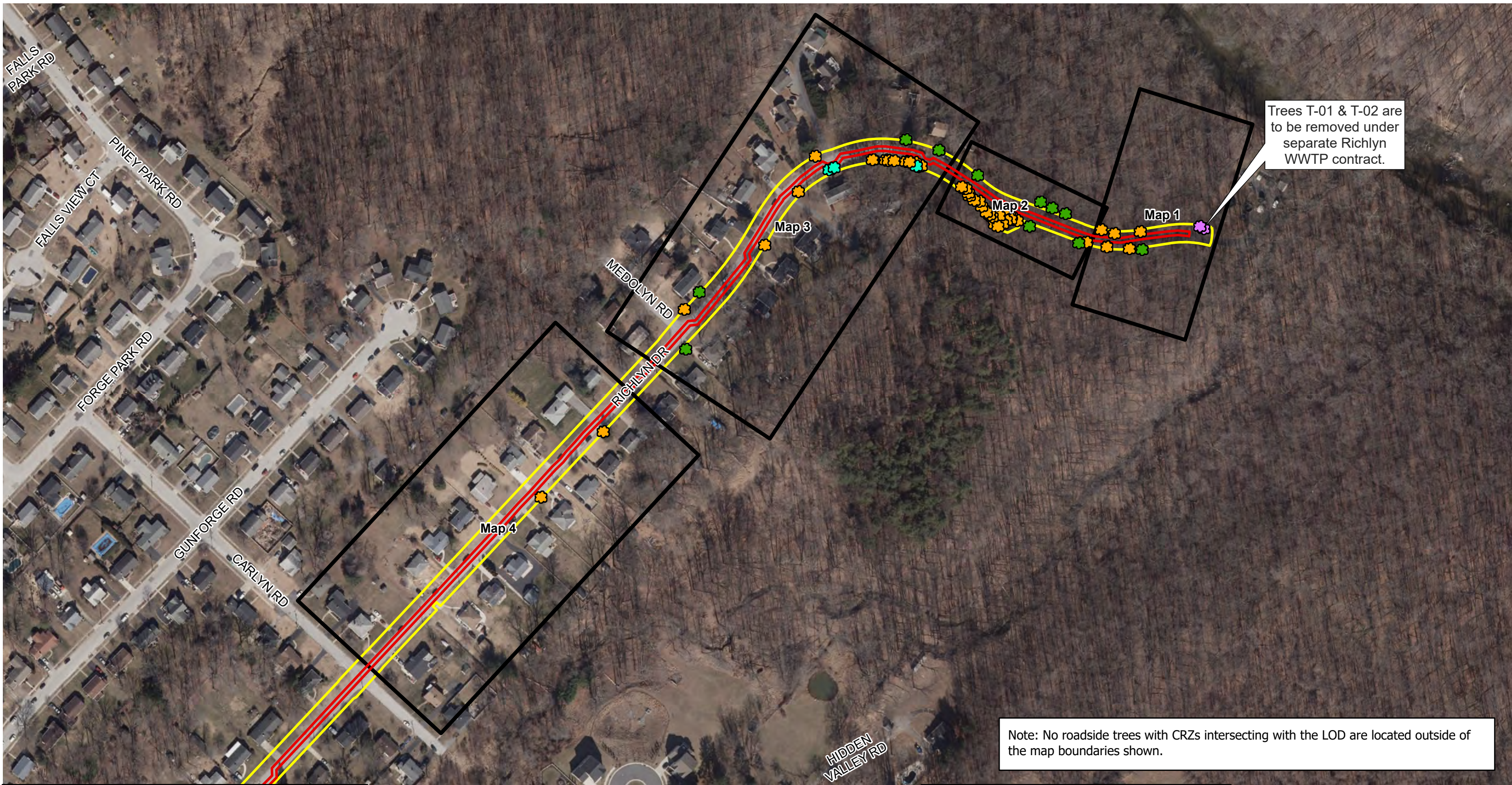
Authorized By: Rob Prenger Title: Forester

Address: 9405 Old Harford Road, Baltimore, MD., 21234

Issue Date: 09/22/2025

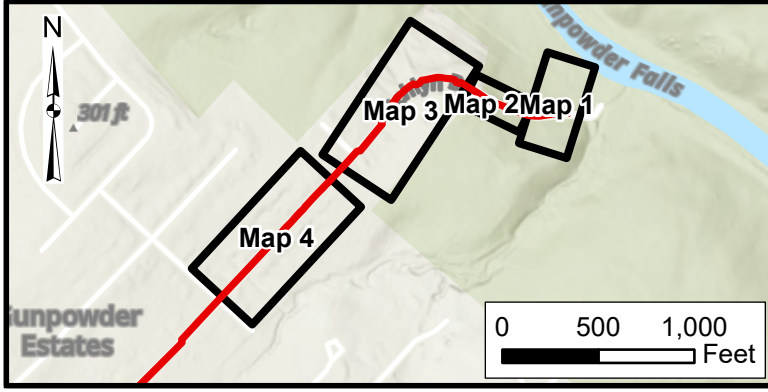
LTE performing the work: TBD





Trees T-01 & T-02 are to be removed under separate Richlyn WWTP contract.

Note: No roadside trees with CRZs intersecting with the LOD are located outside of the map boundaries shown.



Legend

- LOD
- ROW
- >2" DBH Surveyed Trees**
- Roadside Tree With Impacted CRZ - Root Pruning
- WWTP Tree to be Removed
- Roadside Trees - No Likely Impacts
- Trees Located Outside ROW

CREATED BY: ERM
SOURCE: MD IMAP

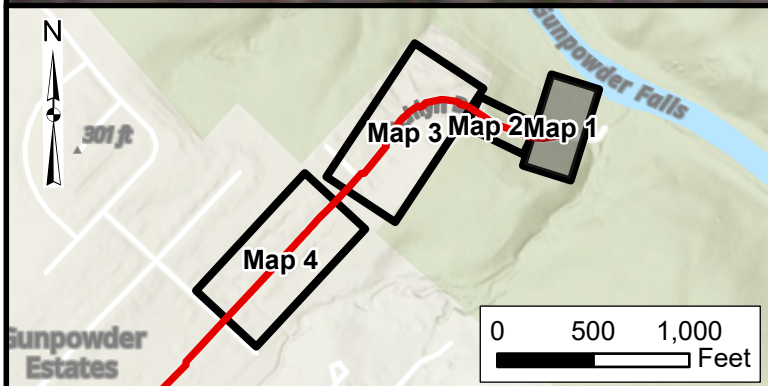
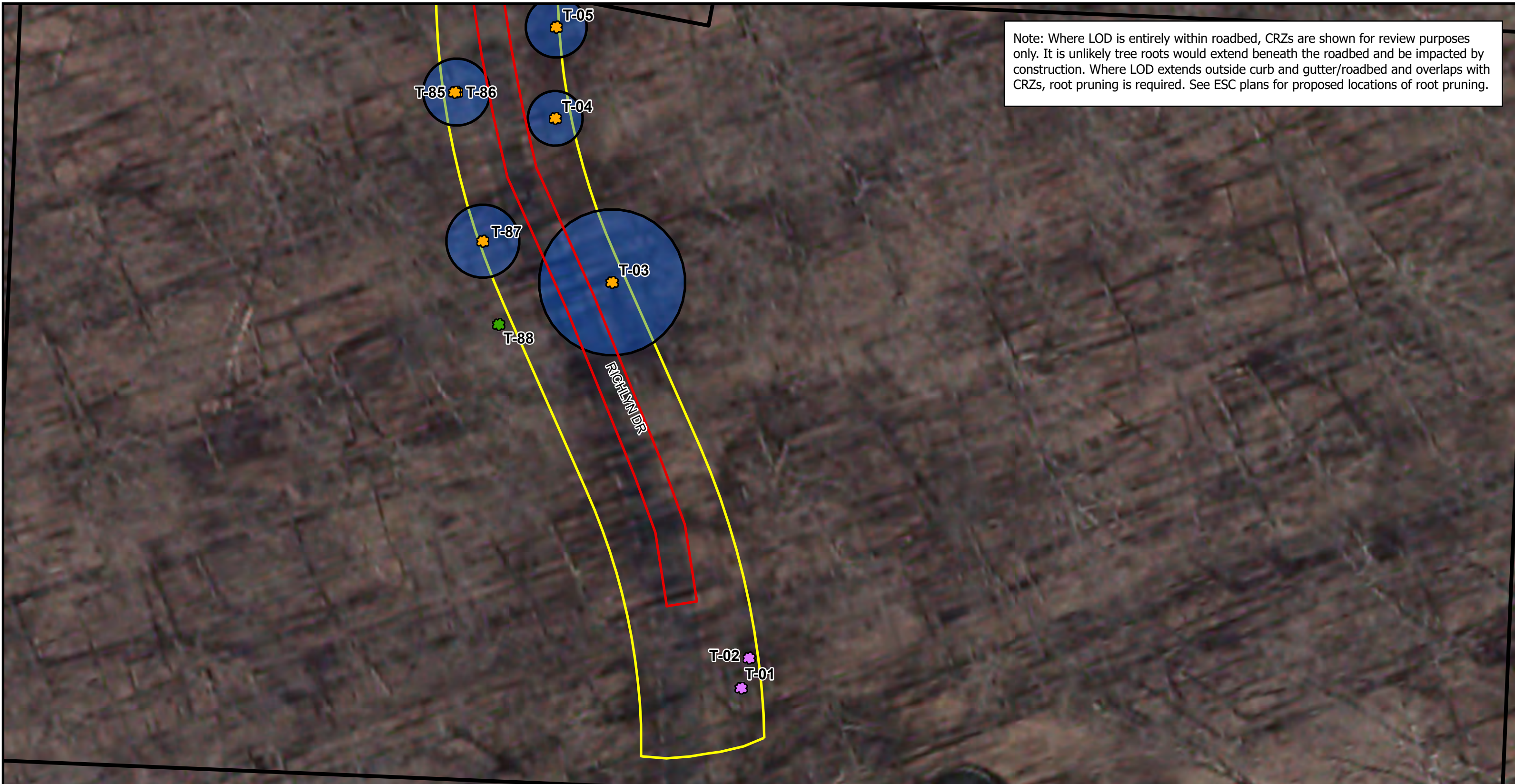
0 100 200 400 Feet
1" = 200'

ROADSIDE TREE PERMIT OVERVIEW

**RICHLYN MANOR
SANITARY FORCE MAIN**

DATE: OCTOBER 2023

Note: Where LOD is entirely within roadbed, CRZs are shown for review purposes only. It is unlikely tree roots would extend beneath the roadbed and be impacted by construction. Where LOD extends outside curb and gutter/roadbed and overlaps with CRZs, root pruning is required. See ESC plans for proposed locations of root pruning.



- Legend**
- LOD
 - ROW
 - Critical Root Zone
- >2" DBH Surveyed Trees**
- 🌳 Roadside Tree With Impacted CRZ - Root Pruning
 - 🌳 WWTP Tree to be Removed
 - 🌳 Roadside Trees - No Likely Impacts
 - 🌳 Trees Located Outside ROW

CREATED BY: ERM
SOURCE: MD IMAP

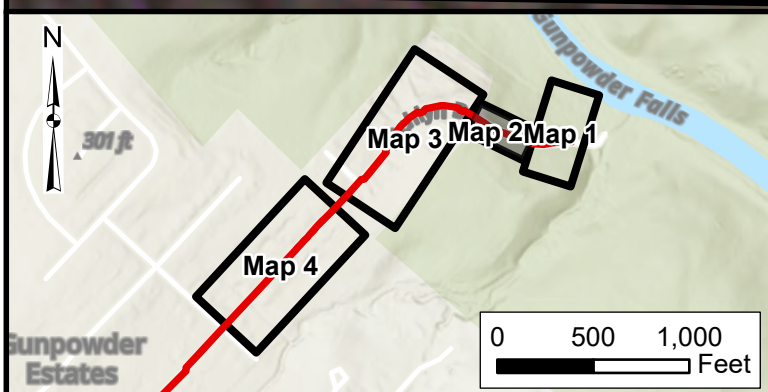
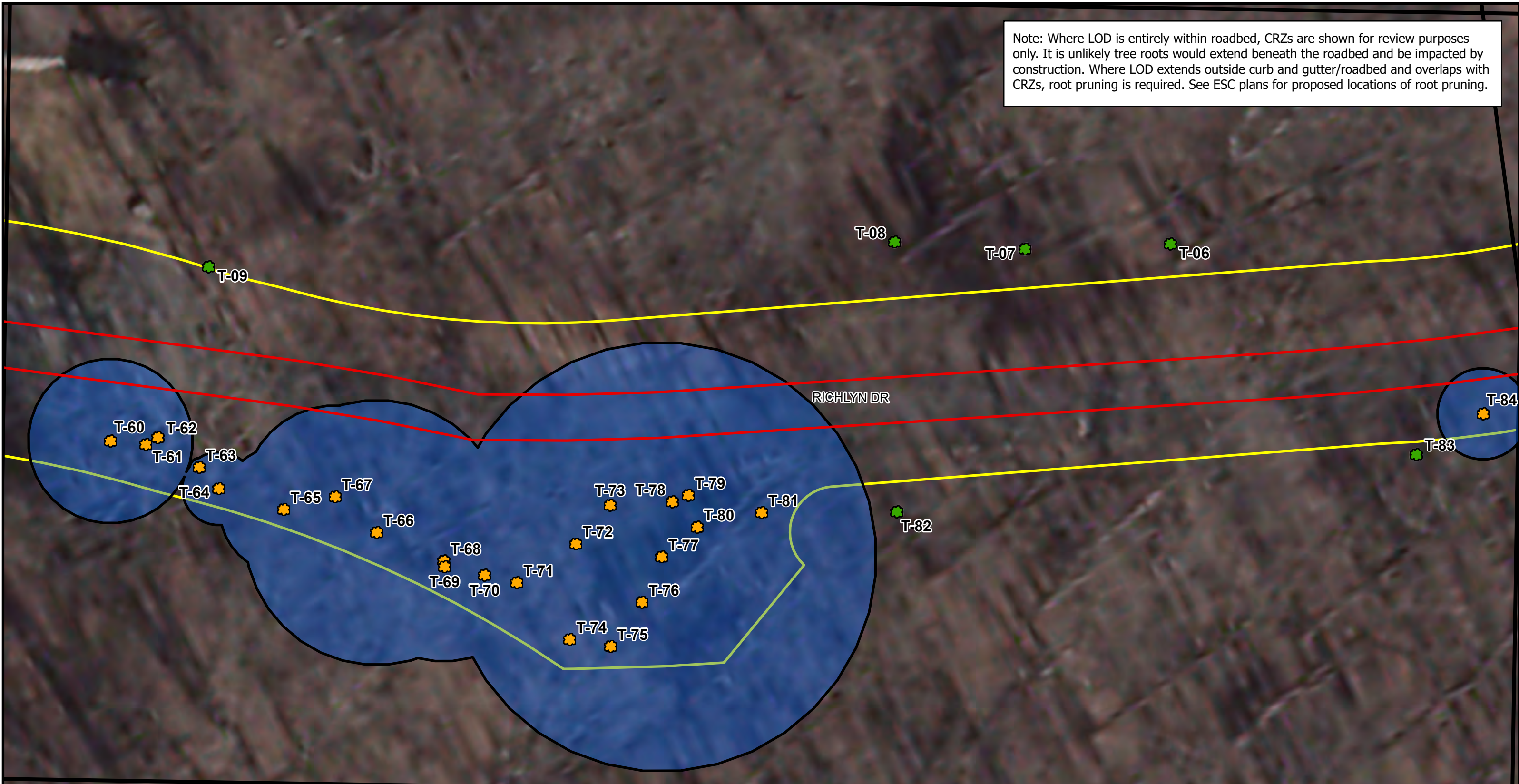
0 15 30 60 Feet
1" = 30'

**ROADSIDE TREE PERMIT
MAP 1**

**RICHLYN MANOR
SANITARY FORCE MAIN**

DATE: OCTOBER 2023

Note: Where LOD is entirely within roadbed, CRZs are shown for review purposes only. It is unlikely tree roots would extend beneath the roadbed and be impacted by construction. Where LOD extends outside curb and gutter/roadbed and overlaps with CRZs, root pruning is required. See ESC plans for proposed locations of root pruning.



Legend

- LOD
- ROW
- Critical Root Zone
- >2" DBH Surveyed Trees**
- ★ Roadside Tree With Impacted CRZ - Root Pruning
- ★ WWTP Tree to be Removed
- ★ Roadside Trees - No Likely Impacts
- ★ Trees Located Outside ROW

345

CREATED BY: ERM
SOURCE: MD IMAP

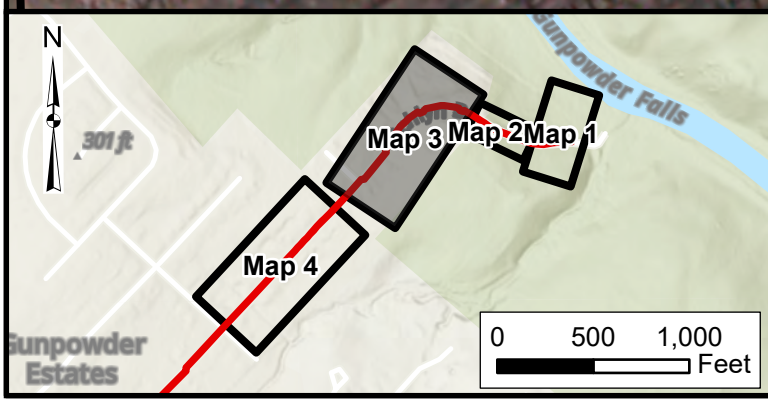
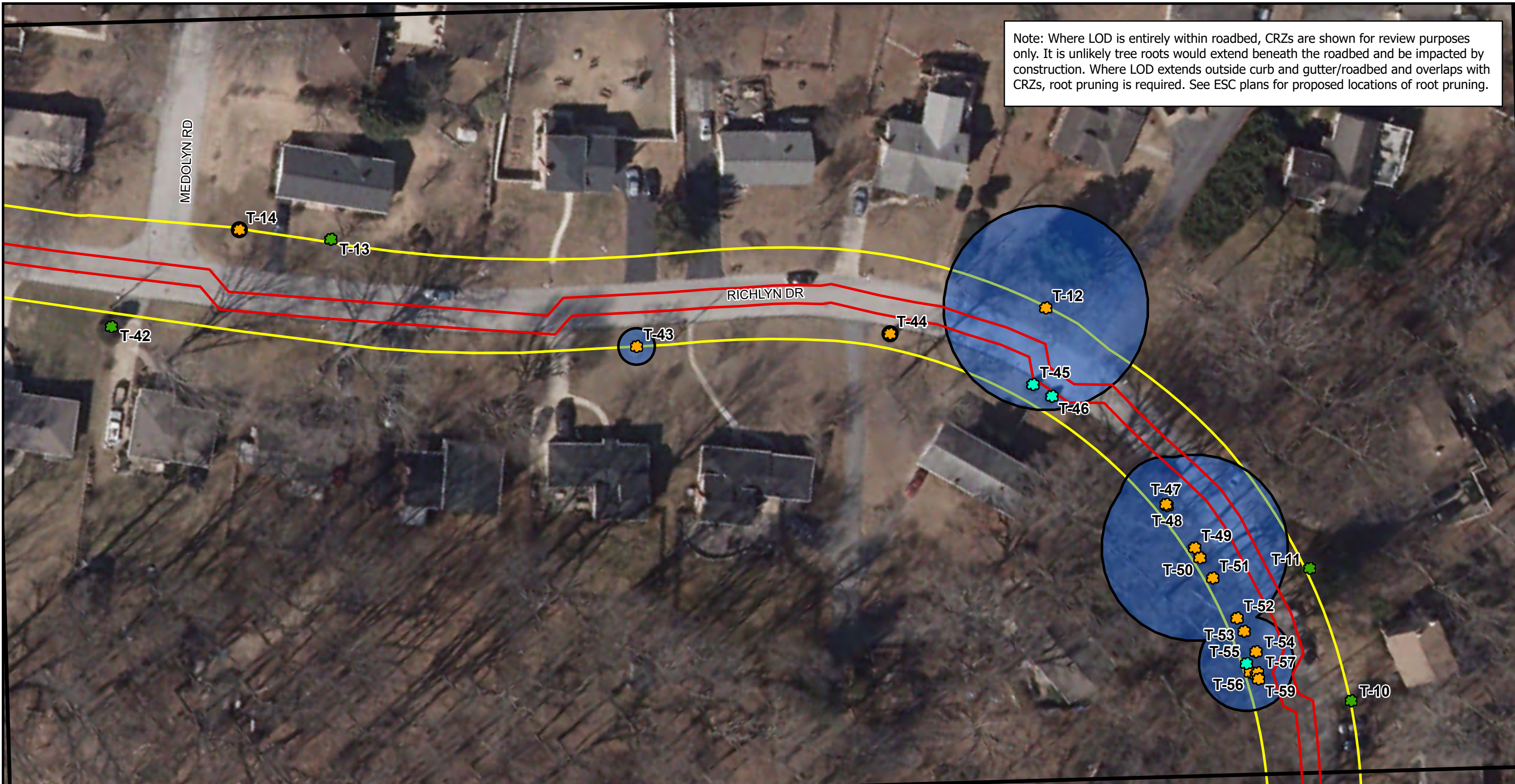
0 10 20 40 Feet
1" = 20'

**ROADSIDE TREE PERMIT
MAP 2**

RICHLYN MANOR
SANITARY FORCE MAIN

DATE: OCTOBER 2023

Note: Where LOD is entirely within roadbed, CRZs are shown for review purposes only. It is unlikely tree roots would extend beneath the roadbed and be impacted by construction. Where LOD extends outside curb and gutter/roadbed and overlaps with CRZs, root pruning is required. See ESC plans for proposed locations of root pruning.



Legend

- LOD
- ROW
- Critical Root Zone

>2" DBH Surveyed Trees

- ★ Roadside Tree With Impacted CRZ - Root Pruning
- ★ WWTP Tree to be Removed
- ★ Roadside Trees - No Likely Impacts
- ★ Trees Located Outside ROW

BALTIMORE COUNTY
MARYLAND

JMT

CREATED BY: ERM
SOURCE: MD IMAP

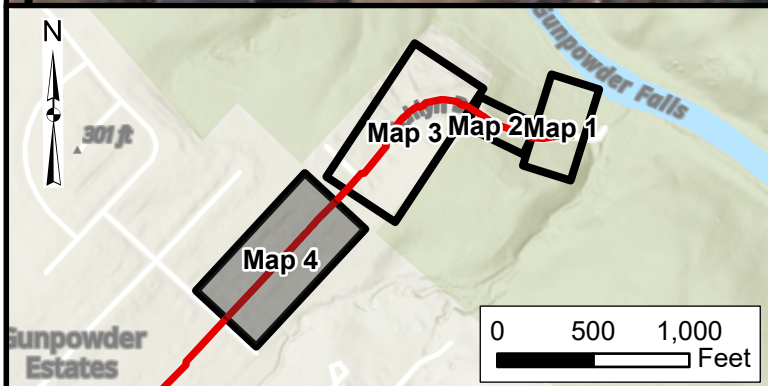
0 25 50 100 Feet
1" = 50'

**ROADSIDE TREE PERMIT
MAP 3**

RICHLYN MANOR
SANITARY FORCE MAIN




DATE: OCTOBER 2023

Note: Where LOD is entirely within roadbed, CRZs are shown for review purposes only. It is unlikely tree roots would extend beneath the roadbed and be impacted by construction. Where LOD extends outside curb and gutter/roadbed and overlaps with CRZs, root pruning is required. See ESC plans for proposed locations of root pruning.

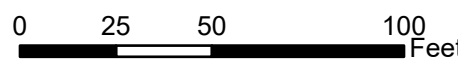


Legend

- LOD
- ROW
- Critical Root Zone
- >2" DBH Surveyed Trees**
- ★ Roadside Tree With Impacted CRZ - Root Pruning
- ★ WWTP Tree to be Removed
- ★ Roadside Trees - No Likely Impacts
- Trees Located Outside ROW

CREATED BY: ERM
SOURCE: MD IMAP



1" = 50'

**ROADSIDE TREE PERMIT
MAP 4**

**RICHLYN MANOR
SANITARY FORCE MAIN**

DATE: OCTOBER 2023

SECTION I V

Proposal

**This Section to be
Completed by Time of Bid**

SECTION-IV
PROPOSAL

DESCRIPTION OF WORK

Bid Opening via Teleconference WebEx Thursday, June 25, 2026 at 10:30 A.M. EST. via
WebEx teleconference Phone Number 1-415-655-0001, Access Code: 2307 057 7258##.

Begin Work Within Fifteen (15) Days After NOTICE TO PROCEED

Calendar Days for Completion: SIX HUNDRED SEVENTY FOUR (674) CALENDAR DAY

Liquidated and Other Damages: FIVE HUNDRED (\$500.00) PER CALENDAR DAY

Cost Group “E (\$2,500,001 to \$5,000,000)” (Prequalified contractors with a Cost Group restriction must bid within the dollar amount stated on their Certificate of Prequalification).

Work Classification: F-1

TO BALTIMORE COUNTY, MARYLAND: Work includes the construction of approximately 4,450 feet of 10 inch ductile iron pipe (DIP) force main and 250 feet of 12 Inch ductile iron pipe (DIP) gravity sewer in the Perry Hall area of Baltimore County. The force main will extend from the proposed Richlyn Manor Sanitary Pumping Station located at 9950 Richlyn Drive, Perry Hall, MD. The force main is to be located within Richlyn Drive before continuing onto Forge Road where it will terminate at a new gravity manhole prior to discharging into manhole number 69669 located east of Gunforge Road. Perry Hall - District 11c5.

The following listed Drawing Number(s) are collectively the “Drawings”, and are hereby incorporated in the Contract.

Workday Number
10000060

Drawing Number(s)
2024-1136 through 2024-1174

A pre-bid meeting will be held on Wednesday, June 3, 2026 at 10:00 a.m. EST via WebEx. Phone-In (Audio Only) 1-415-655-0001, Meeting Number 2306 221 6494##, for Video Conference go to [signin.webex.com/join](https://www.baltimorecountymd.gov/departments/public-works/engineering/contracts/current-solicitations), Meeting Number 2306 221 6494##, Password **7WcvMg5yHV7** or go to <https://www.baltimorecountymd.gov/departments/public-works/engineering/contracts/current-solicitations> for Webex link.

NOTE: No successful bidder may withdraw their bid within NINETY (90) days after the opening thereof.

The Contractor hereby declares that it has carefully examined the solicitation, plans and specifications, form of contract, Special Provisions and Drawings (collectively the “Contract Documents”). The Contractor also hereby declares that it has carefully examined the September 2023 “Standard Specifications for Construction and Materials” and “Standard Details for Contraction”, collectively the “Applicable County Law” and any and all Department of Public Works and Transportation revisions thereto as of the date of advertisement. The Contract Documents, the Applicable County Law and the Department of Public Works and Transportation revisions thereto are collectively the “Specifications” and are incorporated herein. Copies of any and all Department of Public Works and Transportation revisions including but not limited to the General Conditions Building Projects, are available online at www.baltimorecountymd.gov/departments/public-works/standards. Also, the Contractor has, to its satisfaction, examined the locality of the proposed work and agrees to furnish all labor, tools, materials, machinery, equipment, and other means of construction called for in the manner provided in the Specifications for the prices shown on the next page(s) and as evidenced by Contractor’s signature on the last page thereof.

SCHEDULE OF PRICES

NOTE: The Bidder shall fill out this Proposal, write in the unit prices in clear numerals, and make the extensions.

For complete information concerning these items, see Specifications and contract forms.

CONTRACT PROPOSAL

Richlyn Manor Force Main
 9950 Richlyn Drive, Perry Hall
 WORKDAY NUMBER: PROJ-10000060
 CONTRACT NUMBER: 24084 SX0
 CALENDAR DAYS: 674

CONTRACTOR: _____
ADDRESS: _____
PHONE: _____

BID ITEM	COMM. CODE	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL AMOUNT
1	110100	Clearing and Grubbing	LS	1		\$
2	120500	Maintenance of Traffic	LS	1		\$
3	130850	Mobilization	LS	1		\$
4	Write-In	Erosion and Sediment Control	LS	1		\$
5	Write-In	10" DIP Class 54 Pipe and Fittings	LF	4,444		\$
6	Write-In	12" PVC SDR-35 Pipe and Fittings	LF	258		\$
7	899526	Combination Air/Vacuum Relief Valve and Vault	EA	2		\$
8	Write-In	Dewatering Valve and Vault	EA	2		\$
9	870490	Precast Sanitary Manholes - 48 IN.	VF	21		\$
10	877100	Sanitary Heavy Traffic Manhole Frame and Cover - 24 IN.	EA	2		\$
11	Write-In	Manhole Rehabilitation - 48 IN.	VLF	25		\$
12	899220	Graded Aggregate Base (GAB) for Maintenance of Traffic, Stage 1	TON	734		\$

13	899210		Hot Mix Asphalt for Stage 1 Maintenance of Traffic	TON	173		\$
14	899200		Hot Mix Asphalt for Stage 2 Maintenance of Traffic	TON	818		\$
15	Write-In		Concrete Driveway Repairs	SY	8		\$
16	899350		Concrete Curb and Gutter Replacement	LF	20		\$
17	Write-In		Asphalt Curb Replacement	LF	510		\$
18	Write-In		Turfgrass Establishment	SY	78		\$
19	109005	F	Fixed Price Contingent Item - Temporary Traffic Signs	SF	500	\$22.00	\$11,000.00
20	Write-In	F	Fixed Price Contingent Item - Test Pit Excavation/Conventional Excavation Methods	CY	50	\$360.00	\$18,000.00
21	Write-In	F	Fixed Price Contingent Item - Test Pit Excavation(Vacuum)	CY	50	\$650.00	\$32,500.00
22	Write-In	F	Fixed Price Contingent Item - Class 3 Excavation/Select Backfill - Proper Disposal of Unsuitable Material	CY	500	\$130.00	\$65,000.00
23	109305	F	Fixed Price Contingent Item - Borrow for Backfilling Trenches - Proper Disposal of Unsuitable Material	CY	500	\$80.00	\$40,000.00
24	109405	F	Fixed Price Contingent Item - Mix No. 1 Concrete	CY	50	\$450.00	\$22,500.00
25	899241	C	Contingent Item - Asphalt Driveway Repairs	TON	50		\$
26	Write-in	C	Contingent item - Geotextile Class SE	SY	7,800		\$
27	Write-in	C	Contingent Item - Geotextile Class ST	SY	1,450		\$
28	899230	C	Contingent Item - Geotextile Soil Reinforcement Fabric (Mirafi 500X)	SY	575		\$
29	800110	C	Contingent Item - 6 INCH Utility Underdrain	LF	20		\$
30	301112	C	Contingent Item - Flowable Fill Utility Cuts	CY	150		\$
31	388062	C	Continent Item - #2 Stone Sediment Control	TON	40		\$

32	800080	C	Contingent Item - Calcium Chloride	TON	5		\$
33	388058	C	Contingent Item - Class 2 Excavation Sediment Control	CY	100		\$
34	388102	C	Contingent Item - Super Silt Fence	LF	150		\$
35	388100	C	Contingent Item - Silt Fence on Pavement	LF	100		\$
36	388067	C	Contingent Item - Inlet Protection	EA	2		\$
37	110204	C	Contingent Item - Adjusting and Replacing Fences, Shrubs, Trees, Hedges, etc.	LS	1		\$
TOTAL COST FOR CONTRACT							\$

TOTAL COST FOR CONTRACT IN WORDS

OFFICER SIGNATURE

TITLE

PROPOSAL AFFIDAVIT

1. AUTHORIZED REPRESENTATIVE

I HEREBY AFFIRM THAT:

I am the [title] _____ and the duly authorized representative of [business] _____ (the "Business") and that I possess the legal authority to make this Affidavit on behalf of myself and the Business for which I am acting.

2. PROPOSAL CERTIFICATION

THE UNDERSIGNED HEREBY ACKNOWLEDGES receipt of the following Addenda (list by number and date):

Accompanying this Proposal is a Bid Bond in an amount of 5% of the bid, the exact amount to be determined by the difference between the low bid and the next lowest bid, if two or more bids are received, or 5% of the bid if one bid is received. This guarantees payment to Baltimore County of the amount thus determined as liquidated damages in case of default in any matter specified as required before award or in any matter resulting in failure to execute and deliver an Agreement, together with Payment and Performance Bonds, after award.

3. AFFIRMATION REGARDING BRIBERY CONVICTIONS

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the Business, nor any of its officers, directors, partners, or any of its employees directly involved in obtaining or performing contracts with public bodies (as is defined in Section 16-101(f) of the State Finance and Procurement Article of the Annotated Code of Maryland), has been convicted of, or has had probation before judgment imposed pursuant to Section 6-225 of the Criminal Procedure Article of the Annotated Code of Maryland, or has pleaded nolo contendere to a charge of, bribery, attempted bribery, or conspiracy to bribe in violation of Maryland law, or of the law of any other state or federal law, except as follows [indicate the reasons why the affirmation cannot be given and list any conviction, plea, or imposition of probation before judgment with the date, court, official or administrative body, the sentence or disposition, the name(s) of person(s) involved, and their current positions and responsibilities with the Business]:

4. AFFIRMATION REGARDING OTHER CONVICTIONS

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the Business, nor any of its officers, directors, partners, or any of its employees directly involved in obtaining or performing contracts with public bodies, has:

(1) Been convicted under state or federal statute of a criminal offense incident to obtaining, attempting to obtain, or performing a public or private contract, fraud, embezzlement, theft, forgery, falsification or destruction of records, or receiving stolen property;

(2) Been convicted of any criminal violation of a state or federal antitrust statute;

(3) Been convicted under the provisions of Title 18 of the United States Code for violation of the Racketeer Influenced and Corrupt Organization Act, 18 U.S.C. §1961, et seq., or the Mail Fraud Act, 18 U.S.C. §1341, et seq., for acts arising out of the submission of bids or proposals for a public or private contract;

(4) Been convicted of a violation of the State Minority Business Enterprise Law, Section 14-308 of the State Finance and Procurement Article of the Annotated Code of Maryland;

(5) Been convicted of conspiracy to commit any act or omission that would constitute grounds for conviction or liability under any law or statute described in subsection (1), (2), (3), or (4) above;

(6) Been found civilly liable under a state or federal antitrust statute for acts or omissions in connection with the submission of bids or proposals for a public or private contract;

(7) Admitted in writing or under oath, during the course of an official investigation or other proceedings, acts or omissions that would constitute grounds for conviction or liability under any law or statute described above, except as follows [indicate reasons why the affirmations cannot be given, and list any conviction, plea, or imposition of probation before judgment with the date, court, official or administrative body, the sentence or disposition, the name(s) of the person(s) involved and their current positions and responsibilities with the Business, and the status of any debarment]:

5. AFFIRMATION REGARDING DEBARMENT

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the Business, nor any of its officers, directors, partners, or any of its employees directly involved in obtaining or performing contracts with public bodies, has ever been suspended or debarred (including being issued a limited denial of participation) by any public entity, except as follows [list each debarment or suspension providing the dates of the suspension or debarment, the name of the public entity and the status of the proceeding, the name(s) of the person(s) involved and their current positions and responsibilities with the Business, the grounds of the debarment or suspension, and the details of each person's involvement in any activity that formed the grounds of the debarment or suspension]:

6. AFFIRMATION REGARDING DEBARMENT OF RELATED ENTITIES

I FURTHER AFFIRM THAT:

(1) The Business was not established and it does not operate in a manner designed to evade the application of or defeat the purpose of debarment pursuant to Sections 16-101, et seq., of the State Finance and Procurement Article of the Annotated Code of Maryland; and

(2) The Business is not a successor, assignee, subsidiary, or affiliate of a suspended or debarred business, except as follows: [you must indicate the reasons why the affirmations cannot be given without qualification]:

7. SUB-CONTRACT AFFIRMATION

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the Business, has knowingly entered into a contract with a public body under which a person debarred or suspended under Title 16 of the State Finance and Procurement Article of the Annotated Code of Maryland will provide, directly or indirectly, supplies, services, architectural services, construction related services, leases of real property, or construction.

8. AFFIRMATION REGARDING COLLUSION

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the Business, nor any of its officers, directors, members or partners, nor any of its employees, have in any way:

(1) Agreed, conspired, connived, or colluded to produce a deceptive show of competition in the compilation of the accompanying bid or offer that is being submitted;

(2) In any manner, directly or indirectly, entered into any agreement of any kind to fix the bid price or price proposal of the bidder or offeror or of any competitor, or otherwise take any action in restraint of free competitive bidding in connection with the contract for which the accompanying bid or offer is submitted;

(3) Colluded with anyone to obtain information concerning the bid that would give the Business an unfair advantage over others.

9. POLITICAL CONTRIBUTION DISCLOSURE AFFIRMATION

I FURTHER AFFIRM THAT:

The Business affirms that it is aware of, and will comply with, the provisions of Sections 14- 101 through 14-108 of the Election Law Article of the Annotated Code of Maryland, which require that every person who makes, during any 12-month period, one or more contracts, with one or more Maryland governmental entities involving cumulative consideration, or at least \$200,000.00, shall file with the State Board of Elections certain specified information to include disclosure of attributable political contributions in excess of \$500 during defined reporting periods.

10. CERTIFICATION OF CORPORATION REGISTRATION AND TAX PAYMENT

I FURTHER AFFIRM THAT:

(1) The Business is a _____(State) (Corporation), (LLC), (Partnership), (Sole Proprietor/Individual), (Other:_____), that it **is** registered in accordance with the Corporations and Associations Article of the Annotated Code of Maryland, that it **is** in good standing in the State of Maryland, and that it **has** filed all of its annual reports, together with filing fees, with the Maryland State Department of Assessments and Taxation, and that the name and address of its resident agent filed with the State Department of Assessments and Taxation is:

Name: _____

Address: _____

(If none, so state)

(2) Except as validly contested, the Business has paid, or has arranged for payment of, all taxes due the State of Maryland and Baltimore County, and has filed all required returns and reports with the Comptroller of the Treasury, the State Department of Assessments and Taxation, and the Employment Security Administration, as applicable, and will have paid all withholding taxes due the State of Maryland prior to final settlement.

11. CONTINGENT FEES

I FURTHER AFFIRM THAT:

The Business has not employed or retained any person, partnership, corporation, or other entity, other than a bona fide employee or agent working for the Business, to solicit or secure the Contract, and that the Business has not paid or agreed to pay any person, partnership, corporation, or other entity, other than a bona fide employee or agent, any fee or other consideration contingent on the making of the Contract.

12. NONDISCRIMINATION IN EMPLOYMENT STATEMENT

I FURTHER AFFIRM THAT:

During the performance of any contract awarded of which this affidavit is a part:

(1) The Business will not discriminate against any employee or applicant for employment because of race, color, religion, sex, age, national origin, marital status, sexual orientation, genetic information, or disability unrelated in nature and extent so as to reasonably preclude the performance of the employment, or because of the individual's refusal to submit to a genetic test or make available the results of a genetic test. The Business will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, age, national origin, marital status, sexual orientation, genetic information, or disability unrelated in nature and extent so as to reasonably preclude the performance of the employment, or because of the individual's refusal to submit to a genetic test or make available the results of a genetic test. Such action shall include, but not be limited to the following: employment, promotion, upgrading, demotion or transfer, rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Business agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the owner setting forth provisions of this nondiscrimination clause.

(2) The Business will, in all solicitations or advertisements for employees placed by or on behalf of the Business, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, age, national origin, marital status, sexual orientation, genetic information, or disability unrelated in nature and extent so as to reasonably preclude the performance of the employment, or because of the individual's refusal to submit to a genetic test or make available the results of a genetic test.

(3) The Business shall send to each labor union or representative of workers with which the Business has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the owner, advising the said labor union or workers' representative of these commitments, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The Business shall furnish, if requested by the County, a compliance report concerning our employment practices and policies in order for the County to ascertain compliance with the special provisions of this affidavit concerning nondiscrimination in employment.

(5) In the event of the Business's noncompliance with the nondiscrimination clause of this affidavit, the contract may be canceled, terminated, or suspended in whole or in part, and the Business may be declared ineligible for further County work.

(6) The Business shall include the special provisions outlined herein pertaining to nondiscrimination in employment in every subcontract, so that such nondiscrimination in employment provisions shall be binding on each subcontractor or vendor.

13. FOREIGN CONTRACTS

I FURTHER AFFIRM THAT:

The Business affirms that it is aware of, and will comply with, the provisions of Sections 10-2-110 Article 10. Finance, Title 2 – Purchasing, Baltimore County Code 2003, which requires that prior to the award of a contract for services under the provisions of this title, and during the entire term of a contract award, the bidder or vendor shall disclose to the County whether any services covered by the bid or contract, including any subcontracted services, will be performed outside the United States. The disclosure shall be made to the Office of Budget and Finance, Purchasing Bureau.

14. MINORITY BUSINESS ENTERPRISE AND FEMALE CONTRACTORS

THIS BUSINESS INTENDS to affirmatively seek out and consider minority business enterprises to participate in this contract as subcontractors and/or suppliers of materials and services.

THE UNDERSIGNED UNDERSTANDS AND AGREES: that any and all subcontracting of supplies and services in connection with this contract, whether undertaken before or after award of contract, will be in accordance with the Minority Business Enterprise and Female Contractor requirement included in the Bid Proposal package and incorporated herein as if fully set forth; and

THE UNDERSIGNED ALSO UNDERSTANDS AND AGREES that no subcontracting will be approved until Baltimore County has reviewed and approved the affirmative actions taken by this firm.

15. REQUIREMENTS FOR EXECUTING AFFIDAVIT & PROPOSAL

The Affidavit must be signed in ink in order for the bid to be accepted and that the Proposal must be typewritten or filled out in ink.

THE UNDERSIGNED ALSO UNDERSTANDS that:

Proposals submitted by an INDIVIDUAL must be signed by an individual.

Proposals submitted by a PARTNERSHIP must be signed by the partner who is legally authorized authority to bind the partnership. Attach a copy of the Partnership Agreement and a duly certified resolution evidencing the authority of the partner so signing on behalf of the partnership.

Proposals submitted by a CORPORATION must be signed by a legally authorized officer of the corporation and attested to by the Corporate Secretary. Attach a copy of the Articles of Incorporation, By-Laws and a duly certified Board Resolution evidencing the authority of the officer so signing on behalf of the corporation.

Proposals submitted by a LIMITED LIABILITY COMPANY must be signed by a legally authorized member of the company and attested to. Attach a copy of the Operating Agreement, Articles of Organization and a duly certified resolution evidencing the authority of the member so signing on behalf of the limited liability company.

NOTE: The contractor may file with the County a list of the names of those officers, partners or members, as applicable, having legal authority to execute documents on behalf of and legally bind the contractor, duly certified, as applicable and legally required, together with the aforesaid corporate documents, which shall remain in full force and effect until such time as the County Department of Public Works and Transportation, Construction Contract Administration is advised in writing to the contrary.

16. ACKNOWLEDGMENT

I ACKNOWLEDGE THAT this Affidavit is to be furnished to the County and may be distributed to units of (1) Baltimore County; (2) the State of Maryland; (3) other counties or political subdivisions of the State of Maryland; (4) other states; and (5) the federal government. I further acknowledge that this Affidavit is subject to applicable laws of the United States and the State of Maryland, both criminal and civil, and that nothing in this Affidavit or any contract resulting from the submission of this bid or proposal shall be construed to supersede, amend, modify or waive, on behalf of Baltimore County, or the State of Maryland or any unit of the State of Maryland having jurisdiction, the exercise of any statutory right or remedy conferred by the Constitution and the laws of Maryland with respect to any misrepresentation made or any violation of the obligations, terms and covenants undertaken by the Business with respect to (a) this Affidavit, (b) the contract, and (3) other Affidavits comprising part of the contract.

I DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THIS AFFIDAVIT ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF.

WITNESS/ATTEST:

Date: _____

By: _____
Name: _____
Title: _____
(Authorized Representative and Affiant)

BID BOND

Principal _____

Business Address of Principal _____

Surety _____

Obligee: **BALTIMORE COUNTY, MARYLAND**
A body corporate and politic

A Corporation of the State of _____ and authorized to do business in Maryland

Five Percent of Bid Amount _____ \$ _____ 5% of Bid

Penal Sum of Bond [shall be determined pursuant to latest revised Specification / G.P. 2.07 (2000 Ed.)]

Richlyn Manor Force Main
Contract Name

24084 SX0
Contract Number/Proposal Item Number

KNOW ALL MEN BY THESE PRESENTS, that we, the Principal, above named, and Surety, above named, and authorized to do business in the State of Maryland, are held and firmly bound unto the Obligee, above named, in the penal sum of the amount stated above, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that if the aforesaid Principal is the apparent low bidder and complies with all specified matters required before award or if the aforesaid Principal is awarded the contract, the said Principal will, within the time required, execute and deliver to the Obligee a formal contract and good and sufficient payment and performance bonds in the form provided by the Obligee, then, this obligation to be void; otherwise the Principal and Surety will, upon demand, pay unto the Obligee the entire Penal Sum of this Bid Bond as liquidated damages.

THE SURETY FURTHER GUARANTEES No Proposal will be considered unless accompanied by a guaranty of the amount specified in the Proposal in the form of either a certified check, bank cashier's check or a Bid Bond on the form provided therein or an exact facsimile thereof. The Bid Bond must be executed by a Surety that is, as of the date of the Bid: (a) licensed in the State of Maryland, (b) rated "B" or better by the A.M. Best Company, (c) on federal funded projects, authorized by the underwriting limitation contained in the U.S. Department of the Treasury Circular 570, as amended, to guaranty the amount of the Bid, and (d) in good standing as determined by the County's Engineer. The Bid Bond must guaranty payment to the County of liquidated damages as follows: (a) if only one Bid is received, the guaranteed payment shall be five (5%) percent of the Bidder's Bid amount, (b) if two or more Bids are received, the guaranteed payment shall be the difference between the Bidder's Bid amount and the next lowest Bid amount, subject to the limitation that the guaranteed payment not be greater than five (5%) percent of the Bidder's Bid amount. This Bid Bond is required in case the successful Bidder, after issuance of notice of Award, fails to comply, timely and completely, with each of the requirements set forth under Section GP-3.04.

Signed and sealed _____
Date

IN WITNESS WHEREOF, the above-bounded parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

In Presence of:

Individual Principal

Witness: _____

as to: _____ (SEAL)

Print Name: _____

Print Name: _____

Corporate Principal

In Presence of:

(Name of Corporation)

Witness: _____

By: _____

Print Name: _____

Print Name: _____ (SEAL)

Title: _____

Surety

(Name of Surety)

Business Address: _____

Witness: _____

By: _____ Affix

Print Name: _____

Print Name: _____ Corporate

Title: _____ Seal

**BALTIMORE COUNTY
PREVAILING WAGE AND LOCAL HIRING**

AFFIDAVIT

(Project Name) _____

Proposal No.: _____

Project No.: _____

On behalf of _____, I do solemnly declare and affirm,
(Contractor)
under penalty of perjury, that to the best of my knowledge, information, and belief:

1. I have submitted all documentation in accordance with Baltimore County Code § 10-2- 506 and § 10-2-507 regarding the prevailing wage and local hiring laws and requirements of the prevailing wage guidelines located at ([Prevailing Wage and Local Hire Laws](#)), and acknowledge that I have read and agree to all provisions of said law, as amended, and have a continuing obligation to be compliant with the law and any changes to the law.

2. I shall not knowingly provide any false information relating to payroll documentation and/or hiring of local employees for capital improvement contracts that are subject to the prevailing wage and/or local hiring laws of Baltimore County. I further attest and certify that all documentation relating to the same will be accurate and complete and will remain accurate and complete on an ongoing basis, and will reflect the payroll and/or local hiring status of contractors, subcontractors, apprentices, and independent contractors performing work for the Contract (contract number _____). I acknowledge that I have been informed and am aware of the foregoing requirements and that I am authorized to make this certification on behalf of myself and all subcontractors and parties performing work pursuant to this Contract.

3. I certify and attest that I am an officer or agent of the Contractor or subcontractor who supervises the payment of employees. I understand and agree that all documentation related to prevailing wages and/or local hiring required by law shall be submitted to Baltimore County's Prevailing Wage Administrator or designee before any surety is released or final payment due under the terms of the Contract is made.

4. I further certify and attest that I will have personal knowledge of the wages paid to all employees of _____ for work performed on the Contract and of all of the hours worked, and that I am an authorized agent of the Contractor and assume responsibility for my actions.

5. I further certify and attest that _____ will comply with prevailing wage rates set by the State of Maryland as the same apply to the Contract and are a part of the bid documents and Contract, and that _____ will comply with applicable local hiring requirements.

6. I attest and certify that, if the Contract is subject to the local hiring requirement under §10-2-507 of the Baltimore County Code, _____ will make best efforts to ensure that residents of Baltimore County constitute at least 51% of the new hires made for the Contract, subject to all exceptions allowable by law.

7. I certify and attest that, if the Contract is subject to prevailing wage requirements, no rebates or deductions will be made, directly or indirectly, from any wages paid in connection with the Contract, other than those provided for by law.

8. I certify and attest that, if awarded the Contract and if the Contract is subject to prevailing wage law, I will submit certified payroll to the County through its electronic compliance system or as instructed by the Prevailing Wage and Local Hire Unit.

9. I certify that if awarded the Contract, I will provide a list of subcontractors who will participate as a beneficiary of this project to the agency and the Prevailing Wage and Local Hire Unit at PrevailingWage@baltimorecountymd.gov.

10. I understand that no funds will be dispersed by the County until an Employment Analysis has been issued to the Prevailing Wage and Local Hire Unit in compliance with the local hire law. The Employment Analysis will include how many jobs will be required to complete the project; how many current employees are available to complete the project, and how many of those jobs will require new hires.

Contractor/Bidder/Offeror

By

Printed Name

Printed Title

Date

Phone

License Number

Business Email

BALTIMORE COUNTY, MARYLAND

Prevailing Wage and Local Hiring Contract Requirements and Policies

The Contractor and all Subcontractors must comply with the Prevailing Wage and Local Hiring Laws, contained in Baltimore County Code § 10-2-506 and § 10-2-507, respectively, as amended. Prevailing wage means the wage rate paid by employers that is determined by a governmental authority, based upon a particular geographic area, for a given class of labor and type of project. The County will use the prevailing wage established by the State of Maryland (the "State") Department of Labor for state funded construction contracts in the County at the time of award. These rates include the basic hourly rate and fringe benefits. Apprentices must be paid at least the rate that the State's Apprenticeship and Training Council sets for an apprentice in the trade involved, based on a percentage of the prevailing wage rate in that trade. Any Contractor that is subject to the prevailing wage or local hiring law will be required to agree to the below provisions:

For the purposes of these requirements, an employee means an apprentice, laborer or mechanic employed by a contractor or subcontractor on a capital improvement project with a value of over \$300,000 or a County-subsidized capital project with a value over \$5,000,000.

Capital Improvement Project does not include blanket order or open-end agreements, capital improvement projects subject to a federal or state prevailing wage law, awarded without competition; with another governmental entity; to the extent the contractor is precluded from compliance by the terms of any federal or state law, contract or grant; entered into pursuant to Baltimore County Code § 10-2-310(e); entered into as a joint or cooperative purchase; or entered into as an emergency purchase.

The purpose of a prevailing wage is to ensure that contractors institute local hiring practices for Capital Improvement contracts and Capital Projects under certain circumstances as required by law, and that the Contractor's employees who work on capital improvement contracts are paid the going rate for their services. The prevailing wage rates are established by the State of Maryland Department of Labor and apply to all of the Contractor's employees and any and all Subcontractors. The Contractor and all Subcontractors must comply with all of the requirements of the Prevailing Wage Law including, but not limited to, the following:

1. Pay employees the prescribed rate as annually established by the State's Department of Labor; the prevailing wage rates in effect on the date a solicitation is issued and will apply throughout the term of a contract resulting from that solicitation. Contractor or subcontractors may NOT split or subdivide a capital improvement contract, pay an employee through a third party, treat an employee as a subcontractor or independent contractor to avoid any requirement of the County's prevailing wage law; or employ an individual classified as a helper or trainee to perform direct and measurable work on a capital improvement contract.

2. Pay employees at a rate equal to or more than the prevailing wage rate currently in effect for the type of work performed.

3. Pay employees overtime for work (I) more than eight hours in any single calendar day; (II) more than 40 hours in a work week; or (III) on a Sunday or a legal holiday.

4. Classify employees in their proper work classification in conformance with the schedule established by the State's Department of Labor.

5. May only make fair and reasonable deductions that are (a) required by law; (b) authorized in a written agreement between an employee and contractor or subcontractor signed at the beginning of employment (any deductions taken from employee paychecks including healthcare, pension, 401K, IRA, etc., child/spouse support, or tax levies); and submitted by the contractor or subcontractor to the Director of the County's Prevailing Wage Program; or required or allowed by a collective bargaining agreement between a bona fide labor organization and a contractor or subcontractor.

Electronically submit a certified copy of payroll records through the County's designated certified payroll and compliance system within 14 days after the end of payroll week ending date, to verify that Prevailing Wage rates have been paid to employees.

6. Backup documentation may be required upon demand from the County to be submitted for all 3rd party benefits being claimed, to include, but not limited to: *one month's healthcare transmittal showing employee name and amount company pays on their behalf, company vacation/sick policy, etc. or if Union, a Union transmittal for one month in which work has been performed.*

7. Retain records for a period of five (5) years after the work is completed and permit the Director of the County Prevailing Wage Program, or his/her designee, to inspect the payroll records at a reasonable time and as often as necessary.

8. Payroll records shall contain a statement signed by the contractor or subcontractor (including tiered subcontractors) certifying that the payroll records are complete and correct; the wage rates are not less than required by the Prevailing Wage Law; and the rate of pay and classification for each employee accurately reflects the work the employee performed.

9. All payroll records shall include the name, address, telephone number and email address of the contractor or subcontractor; the name and location of the job; and each employee's name, current address, unless previously reported; specific work classification; daily basic time and overtime hours; total basic time and overtime hours for the payroll period; rate of pay; fringe benefits by type and amount; and gross wages, and any deductions taken from employees' paychecks including, but not limited to, healthcare, pension/401K/IRA. Late submission of copies of any payroll records may be deemed deficient by the County until the required records are provided, and the County may postpone processing payments due under the Contract or under an agreement to finance the Contract.

10. Submit to random or regular audits and investigation of any complaint of a violation of the County's Prevailing Wage and Local Hiring Laws and requirements.
11. Make best efforts to fill at least 51% of new jobs required to complete the capital improvement contract or capital project with Baltimore County residents.
12. Submit monthly reports to the Director of the County's Prevailing Wage Unit relating to local hiring with respect to capital improvement contracts over \$300,00 or County-subsidized capital construction projects receiving assistance over \$5,000,000, that includes (a) the number of new hires needed for the contract or project, (b) the number of County residents hired during the reporting period, (c) the total number of all employees hired during the contract period, (d) best efforts made to fill open positions with County residents, and (e) 5) for new hires: name, last four (4) digits of the social security number, job title, hire date, address and referral source.
13. Agree that any and all disputes will be handled as set forth in the County's Prevailing Wage and Local Hire as a condition of award.
14. In the event the County determines that a provision of the Prevailing Wage and/or Local Hire Law has been violated, the County shall issue a written decision, including appropriate sanctions, and may withhold payment due the Contractor in an amount sufficient to pay each employee of the Contractor or any subcontractors the full amount of wages due under the Prevailing Wage Law, and an amount sufficient to satisfy a liability of the Contractor for liquidated damages as provided under the Prevailing Wage Law, pending a final decision on the violation by the County. The Contractor may appeal a written decision of the Director of the County's Prevailing Wage Unit that the Contractor violated a provision of the Prevailing Wage and/or Local Hire Law, to the Office of Administrative Hearings ("OAH"), within ten (10) working days after receiving a copy of the decision. OAH will conduct a hearing upon the receipt of a timely appeal. If no appeal, the decision of the Director of the County's Prevailing Wage Unit or his/her designee becomes final. A Contractor who is found to have violated the provisions of the Prevailing Wage or Local Hiring Laws intentionally, may not be awarded a County contract or work on any County project for a period of one year from the date of the OAH determination.
15. May not discharge, or otherwise retaliate against, an employee for asserting any right under the Prevailing Wage Law or for filing a complaint of a violation;
16. An aggrieved employee is a third-party beneficiary of the Contract and may by civil action recover the difference between the prevailing wage for the type of work performed and the amount actually received, with interest and a reasonable attorney's fee.
17. Each Contract subject to the Prevailing Wage and Local Hire Laws may specify the payment of liquidated damages to the County by the Contractor for any noncompliance with the Prevailing Wage and Local Law. Liquidated damages are:
 - a. \$10 for each calendar day that the payroll records are late (payrolls are to be submitted no later than 14 days after the week ending date shown on Certified Payroll Record CPR);
 - \$20 for each day that an employee is misclassified and/or paid less than the prevailing

wage rate; and a civil penalty of \$50 per violation of the requirement to post the prevailing wage rates at the work site.

- b. \$50 per month for each month the Local Hire report is not submitted by the last day of the existing month due.

These liquidated damages are solely related to prevailing wage and local hiring compliance and do not negate any other remedies available or set forth in the Contract, including delay damages or actual damages. These remedies are separate from, in addition to, and not in lieu of, any remedies available and set forth in the Contract, or at law, for other breaches or defaults under the Contract.

18. Where the initial Contract Sum is \$300,000 or below, but it is subsequently increased and exceeds \$300,000 due to an approved Contract Modification, the amount of any such Contract Modification that causes the Contract Sum to exceed \$300,000 is subject to the Prevailing Wage and Local Hiring Laws.
19. The Contractor and all subcontractors must post a clearly legible statement of each prevailing wage rate in a prominent and easily accessible place at the Work Site during the entire time Work is being performed, in English and any other language that is primarily spoken by the employees, at the Work Site.
20. A contract may include the actual cost of health and dental insurance, pension or retirement plan, paid time off such as vacation or sick days and life insurance. In calculating the cost per hour, divide the annual cost of benefits by 2,080 hours for each employee. Other benefits such as the use of a company vehicle, cell phones, lodging reimbursement, company owned tools **may not be credited towards the fringe benefit amount.**
21. All apprentices must be registered with the Maryland Apprenticeship and Training Council, V.A., or US DOL as well as be currently enrolled in, and attending appropriate classes, to which is considered "actively enrolled". Only actively enrolled apprentices may be employed on the project at the apprentice prevailing wage rate.

Classification	Modification Reason	Basic Hourly Rate	Borrowed From	Fringe Benefit Payment
BRICKLAYER	AD	\$24.00		\$0.00
CARPENTER	AD	\$35.89		\$14.60
CARPENTER - SHORING SCAFFOLD BUILDER	AD	\$35.89		\$14.60
CEMENT MASON	AD	\$24.00		\$0.00
ELECTRICIAN	AD	\$36.84	003	\$19.62
IRONWORKER - STRUCTURAL	AD	\$37.60		\$27.13
LABORER - AIR TOOL OPERATOR	AD	\$27.59		\$6.91
LABORER - ASPHALT PAVER	AD	\$27.59		\$6.91
LABORER - ASPHALT RAKER	AD	\$23.50		\$3.47
LABORER - BLASTER - DYNAMITE	AD	\$27.59		\$6.91
LABORER - BURNER	AD	\$27.59		\$6.91
LABORER - COMMON	AD	\$23.50		\$3.47
LABORER - CONCRETE PUDDLER	AD	\$23.50		\$3.47
LABORER - CONCRETE SURFACER	AD	\$27.59		\$6.91
LABORER - CONCRETE TENDER	AD	\$23.50		\$3.47
LABORER - CONCRETE VIBRATOR	AD	\$23.50		\$3.47
LABORER - DENSITY GAUGE	AD	\$23.50		\$3.47
LABORER - FIREPROOFER - MIXER	AD	\$23.50		\$3.47
LABORER - FLAGGER	AD	\$23.50		\$3.47
LABORER - GRADE CHECKER	AD	\$23.50		\$3.47
LABORER - HAND ROLLER	AD	\$23.50		\$3.47
LABORER - HAZARDOUS MATERIAL HANDLER	AD	\$27.59		\$6.91
LABORER - JACKHAMMER	AD	\$23.50		\$3.47
LABORER - LANDSCAPING	AD	\$23.50		\$3.47
LABORER - LAYOUT	AD	\$23.50		\$3.47
LABORER - LUTEMAN	AD	\$23.50		\$3.47
LABORER - MASON TENDER	AD	\$27.59		\$6.91
LABORER - MORTAR MIXER	AD	\$23.50		\$3.47
LABORER - PIPELAYER	AD	\$27.59		\$6.91
LABORER - PLASTERER - HANDLER	AD	\$23.50		\$3.47
LABORER - SCAFFOLD BUILDER	AD	\$27.59		\$6.91
LABORER - TAMPER	AD	\$23.50		\$3.47
MILLWRIGHT	AD	\$39.50	003	\$17.52
PAINTER - BRIDGE	AD	\$45.00		\$17.01
PILEDRIVER	AD	\$37.74	510	\$14.73
POWER EQUIPMENT OPERATOR - BACKHOE	AD	\$34.00		\$14.05
POWER EQUIPMENT OPERATOR - BROOM / SWEEPER	AD	\$31.04		\$14.05
POWER EQUIPMENT OPERATOR - BULLDOZER	AD	\$34.00		\$14.05
POWER EQUIPMENT OPERATOR - CONCRETE PUMP	AD	\$34.00		\$14.05
POWER EQUIPMENT OPERATOR - CRANE	AD	\$42.00		\$19.10
POWER EQUIPMENT OPERATOR - DRILL - RIG	AD	\$34.00		\$14.05
POWER EQUIPMENT OPERATOR - EXCAVATOR	AD	\$34.00		\$14.05
POWER EQUIPMENT OPERATOR - FORKLIFT	AD	\$31.04		\$14.05

CONTRACT NUMBER:
24084 SX0

BALTIMORE COUNTY PREVAILING WAGE RATES
HIGHWAY CONSTRUCTION

5/15/2026

POWER EQUIPMENT OPERATOR - GRADALL	AD	\$35.00	510	\$14.05
POWER EQUIPMENT OPERATOR - GRADER	AD	\$35.00		\$14.05
POWER EQUIPMENT OPERATOR - LOADER	AD	\$34.00		\$14.05
POWER EQUIPMENT OPERATOR - MECHANIC	AD	\$35.00		\$14.05
POWER EQUIPMENT OPERATOR - MILLING MACHINE	AD	\$22.00		\$0.00
POWER EQUIPMENT OPERATOR - PAVER	AD	\$25.00		\$2.15
POWER EQUIPMENT OPERATOR - ROLLER - ASPHALT	AD	\$20.50		\$4.30
POWER EQUIPMENT OPERATOR - ROLLER - EARTH	AD	\$31.04		\$14.05
POWER EQUIPMENT OPERATOR - SCREED	AD	\$29.23	003	\$16.48
POWER EQUIPMENT OPERATOR - SKID STEER (BOBCAT)	AD	\$31.04		\$14.05
POWER EQUIPMENT OPERATOR-VACUUM TRUCK	AD	\$38.60		\$15.75
STONE MASON	AD	\$45.65	510	\$21.51
TILE & TERRAZZO FINISHER	AD	\$28.85	510	\$12.85
TRUCK DRIVER - DUMP	AD	\$28.43		\$7.84
TRUCK DRIVER - FLATBED	AD	\$21.00		\$0.00
TRUCK DRIVER - LOWBOY	AD	\$24.75	510	\$2.00
TRUCK DRIVER - TACK/TAR TRUCK	AD	\$32.64	003	\$13.91
TRUCK DRIVER - WATER	AD	\$25.00		\$0.00

BALTIMORE COUNTY, MARYLAND
USE OF MINORITY BUSINESS ENTERPRISES AND WOMEN'S BUSINESS ENTERPRISES
IN
COUNTY CONTRACTS
MWBE Plan Package



Division of Diversity, Equity and Inclusion
The Jefferson Building
105 West Chesapeake Avenue
Towson, Maryland 21204
410-887-3407

www.baltimorecountymd.gov/go/mwbe



PROSPECTIVE BIDDERS/OFFERORS

Baltimore County Executive Order 2022-005 Use of Minority Business Enterprises and Women's Business Enterprises states:

SECTION 6. BID REQUIREMENTS.

- (A)(1) All bidders shall submit a list of all subcontractors contacted in preparation of their bid package or proposal.
(2) The list shall include the service to be performed, bid amount, and the race/ethnicity/gender of the business owner(s).
(B)(1) All bidders shall submit a list of all subcontractors to be used on a county contract in the bid package.
(2) This list shall include all subcontractors (both MWBE and non-MWBE) used, the service to be performed, the total amount to be paid, and the race/ethnicity/gender of the owner.

If the solicitation includes a MWBE **subcontracting** goal, you **MUST** demonstrate “**Good Faith**” **effort** either by:

1. Complete and sign FORM A, FORM B (to include FORM B-Prime if MWBE Prime wishes to count towards the goal) and FORM C **listing all subcontractors** with the initial bid submission.
 - a. *All Forms must be completed and signed. However, FORM C **MUST** be completed and signed by both the prime and the MWBE subcontractor.*
- OR**
2. If you are unable to meet any portion of the goal, you **MUST** do one of the following:
 - a. If you are requesting a **partial waiver**, complete and sign FORM A with initial bid submission. FORM B (to include FORM B-Prime if MWBE Prime wishes to count towards the goal) and FORM C (**listing all subcontractors**). In addition, complete, sign and submit FORM D and FORM E **accompanied with all supporting documentation** for the portion of the goal that will not be achieved as specified on FORM A.
 - b. If you are requesting a **full waiver**, complete and sign FORM A indicating your intent to request a full waiver **accompanied with a completed and signed FORM C listing all subcontractors**, FORM D and FORM E **accompanied with all supporting documentation. This MUST be submitted with the initial bid as specified on FORM A.**
 - c. *All Forms must be completed and signed. FORM C and FORM D **MUST** be completed and properly signed by **both the Prime AND the MWBE subcontractor(s).***

NOTE: The MWBE **subcontracting** goal applies to ALL prime/general contractors including certified and non-certified minority and women owned firms. **However, a Minority-owned or a Women-owned prime may self-perform up to 50% of MWBE subcontracting goal set in the solicitation. The MWBE primes that wish to count towards the goal must list themselves on all appropriate forms.**

12/2023

BALTIMORE COUNTY, MARYLAND **MWBE PARTICIPATION SUMMARY**

Executive Order: Minority Business Enterprises and Women Business Enterprises (MWBE) shall have the maximum opportunity to participate in the performance of contracts financed in whole, or in certain circumstances, in part with County funds. Accordingly, on December 6, 2022, the County Executive adopted the EXECUTIVE ORDER No. 2022-005 addressing MWBE participation in County contracts. The December 6, 2022 Executive Order may be found on the Baltimore County website at www.baltimorecountymd.gov/go/mwbe.

Each Contract: The County shall establish a minimum MWBE participation amount for each contract, as applicable.

Bidder/Offeror Responsibility: The bidder/offeror shall ensure that MWBE participation occurs in accordance with the contract requirements and the County Executive's Executive Order. All bidder/offerors shall ensure that MWBE have the maximum opportunity to compete for and perform County contracts, as applicable. Baltimore County, Maryland, and/or its bidder/offerors and contractors shall not discriminate on the basis of race, color, national origin, disability or sex in the award and performance of any County contract.

Mobilization Payments: For subcontractors, project start-up costs can also be significant. A subcontractor that has limited resources and access to credit may find that start-up expenses inhibit its ability to bid County contracts. Under circumstances where mobilization payments are approved for the prime contractor, the subcontractor should be paid an amount equal to their participation percentage no later than five (5) business days before they are required to mobilize to perform the contracted work.

Mobilization costs represent pre-contract costs incurred by a contractor to prepare a job site before the actual commencement of the contract. These costs can include movement of personnel and equipment to the project site and for the establishment of the Contractor's offices, buildings, and other facilities necessary to begin work.

APPROVED MWBE LISTINGS

Published compilations of approved and certified MWBE, contractors, subcontractors, material suppliers, etc. include:

DIRECTORY OF MINORITY BUSINESS ENTERPRISE (MDOT):

<https://marylandmdbe.mdbecert.com>

MINORITY BUSINESS DIRECTORY OF THE CITY OF BALTIMORE:

<https://baltimorecity.diversitycompliance.com>

BIDDER/OFFEROR'S ACTIONS

Seeking Firms:

The bidder/offeror will seek commitments by subcontract or otherwise from MWBE firms for supplies and/or services, any combined value of which equals or exceeds the required percentage of MWBE participation goal for the County contract. However a MWBE Prime that affirms its MWBE status on the Minority and/or Women Prime Participation Affidavit may count up to 50% of the goal.

Expenditures for Materials and Supplies:

A bidder/offeror may count toward its MWBE contract requirements all expenditures for materials and supplies obtained from MWBE suppliers and manufacturers, provided that the MWBE firm is furnishing and installing the materials and is certified to perform these services. If the MWBE firm is only being used as a supplier, wholesaler and/or regular dealer or is not certified to install the supplies/materials, for purposes of achieving the MWBE participation goal, you may only count sixty percent (60%) of the value of the subcontract for these supplies/products (60% Rule). To apply the 60% Rule, first divide the amount of the subcontract for these supplies/products only (not installation) by the total Contract value. Then, multiply the result by sixty percent (60%) and insert the percentage in the Percent of Total Contract field of Form B Subcontractor Participation Schedule.

BALTIMORE COUNTY, MARYLAND **MWBE PARTICIPATION SUMMARY**

Information to be supplied: All bidder/offerors shall submit the following information to the County at the time of bid submission:

1. The name of an employee designated as the bidder/offeror's liaison to the County's Minority Business Enterprise Office.
2. The following forms shall be completed and submitted:
 - Certified MWBE Utilization and Fair Solicitation Affidavit (**Form A**); from among those names appearing in the Approved MWBE Listings (excepting Federal Highway Administration projects, which exclusively require DBE approved and certified by the Maryland Department of Transportation MBE Advisory Committee);
 - A Subcontractor Participation Schedule (**Form B**) completed by the prime contractor for each MWBE listed on the Form.
 - A MWBE Prime Participation Schedule (Form B-Prime) completed by a MWBE prime contractor if the firm wishes to self-perform up to 50% of the MBE/WBE goal.
 - A MWBE Disclosure and Participation Statement (**Form C**) completed and signed by the prime contractor and MWBE firm for each MWBE listed on the Form. Form C **must match** what is stated on Form B.
 - If applicable, MWBE Subcontractor Unavailable Certificate (**Form D**) completed and signed by the prime contractor and MWBE for each MWBE listed on the Form.
3. If applicable, MWBE Outreach Efforts - Compliance Statement (**Form E**) completed and signed by the Bidder/Offeror. The prime shall submit a list of all subcontractors.
4. For DPW contracts, if the bidder/offeror intends to fulfill the MWBE requirements by use of a joint venture, he/she must submit a Joint Venture Disclosure Affidavit (**Form D-EEO-006-A** and **B** showing the extent of MWBE participation. If a bidder/offeror intends to use a MWBE joint venture as a subcontractor to meet its MWBE requirements, the affidavit must be submitted through the bidder/offeror by the proposed subcontractors and signed by all parties.
5. If the bidder/offeror's proposed MWBE participation does not meet the MWBE contract requirements, information sufficient to demonstrate that the bidder/offeror has made every effort to meet the requirements must be submitted. (See DETERMINATION OF BID RESPONSIVENESS hereafter)

RECORDS AND REPORTS

Returning Records: The bidder/offeror must keep such records as are necessary to determine compliance with its MWBE utilization requirements:

1. The MWBE and non-minority contractors, type of work being performed, actual values of work and services.
2. Documentation of all correspondence, contacts, telephone calls, etc., to obtain MWBE services for the contract.
3. All prime contractors and MWBE sub-contractors are required to report monthly, by the 10th of each month, to the County through an online system called PRISM. If the contractor cannot submit his/her report on time, he/she will notify the County MWBE office and request additional time to submit the report. Failure of the contractor to report in a timely manner may result in a finding of noncompliance. The County in its sole discretion and/or upon written request may require additional reports regarding MWBE. In the event you are not able to enter your payments in PRISM, a spreadsheet is attached for your use. Please be sure to list the PO for each invoice/ payment reported and include in your submission any corresponding documentation (e.g. copies of invoices or cancelled checks).

Retaining Records: All MWBE records must be retained for 3 years following the expiration or any earlier termination of the contract and shall be available for inspection and photocopying by the County.

Investigation and Notification: Whenever the County believes the bidder/offeror, contractor, or any subcontractor may not be operating in compliance with the MWBE requirements, the County may, in its sole discretion, conduct an investigation. If the County finds the bidder/offeror, contractor, or any subcontractor is not in compliance with the MWBE requirements, the County may exercise any and all rights and remedies available to the County, under the contract, at law or equity, as deemed applicable and appropriate by the County in its sole discretion.

BALTIMORE COUNTY, MARYLAND **MWBE PARTICIPATION SUMMARY**

DETERMINATION OF BID RESPONSIVENESS

Request for Deviation: If the bidder/offeror is unable to procure from MWBE firms (by subcontract or otherwise), supplies and services, any combined value of which equals the required percentage of the total value of the contract, the bidder/ offeror may request, in writing, a deviation or waiver of the contract requirements. To obtain such a waiver, the bidder/ offeror must submit the following information at the time bids are due:

1. The request for waiver request shall include (1) a signed unavailability statement (Form D) executed by all MBEs and WBEs that the bidder/offeror solicited for participation and (2) Outreach Efforts/Compliance Statement (Form E) that demonstrates the bidder/offeror's good faith efforts to comply with the contract requirements, including copies of solicitation documentation to all potential subcontractors:
2. Emails, letters, facsimile transmittals and confirmations containing plans, specifications, and anticipated time schedule for portions of the work to be performed and meeting notes and agendas clearly identifying the certified MBE or WBE classification and dates that the bidder/offeror contacted each MWBE; and
3. Telephone logs containing names, addresses, dates, telephone numbers, work to be performed, anticipated time schedule and classification of certified MBEs and WBEs contacted.

Bid Rejection: The failure of any bidder/offeror (including the apparent low bidder/offeror) to provide a responsive MWBE Plan as required by the solicitation may result in the bidder/offeror being deemed non-responsive and the County's rejection of the bid.

Liquidated Damages If the County issues a notice of intent to awards contract to the apparent low bidder/offeror who provided a responsive MWBE Plan, but, if after said notice and before execution of Contract Documents, it is determined by the County that the apparent low bidder/offeror has failed to comply with the MWBE Plan, such failure may result in the recommendation by the appropriate Procurement Official to annul the award and forfeit the bidder/offeror's Proposal Guaranty to the County, not as a penalty, but as liquidated damages, it being acknowledged that actual damages will be difficult if not impossible to accurately measure. In addition, the County may proceed as it determines to be in its best interest, including but not limited to, the Notice of Award may be made to the next lowest responsive and responsible bidder/offeror or the work may be re-advertised.

Contract Breach: If, after execution of a County contract, the contractor becomes aware it may or will fail to fulfill the applicable MWBE requirements and/or may or will deviate from the contractor's bid response/contract terms, the contractor shall promptly advise the County of this in writing. Thereafter, the County will determine what action or remedy is appropriate on a case-by-case basis, in the County's sole discretion.

Approval Required for Changes: Any and all changes to the MWBE subcontractors or the type or amount of work to be performed by such subcontractors during the contract term must be mutually agreeable to the County and the contractor and shall be documented via a contract amendment, executed by legally authorized representatives of the County and the contractor.

Cooperation in Reviews: The bidder/offeror will cooperate with the County in any reviews of the contractor's procedures and practices with respect to MBE or WBE firms, which the County may from time to time conduct in its sole discretion.

Other: If the documents used to determine the contractor's efforts, achievement of, and/or the status of an MWBE requirement or fulfillment thereof contain false, misleading or misrepresented information, the contractor may be declared in breach of the contract and the County may take any and all actions and/or remedies available to the County under the contract, at law, or in equity. If an MWBE is disqualified by any public entity, including but not limited to, Baltimore City, the State or MDOT, at any time after award or during the term of the contract, the County may, in its sole discretion, require the prime contractor to promptly submit for County approval, the contractor's plans for fulfilling the required MWBE participation under the contract, and/or request such detail and additional information as the County, in its discretion deems appropriate.



PRIME CONTRACTOR MINORITY AND WOMEN PARTICIPATION AFFIDAVIT

A. AUTHORIZED REPRESENTATIVE

I HEREBY AFFIRM THAT:

I am the [title]_____ and the duly authorized representative of [business]_____

_____ (the "Business") and that I possess the legal authority to make this Affidavit on behalf of myself and the Business for which I am acting.

B. AFFIRMATION REGARDING MINORITY AND WOMEN PARTICIPATION

I FURTHER AFFIRM THAT:

I am aware that, pursuant to the December 6, 2022 Executive Order of Baltimore County, Maryland, the following words have the meanings indicated.

(A) "Minority Business Enterprise" or "MBE" means a business enterprise that is owned, operated and controlled by one or more minority group members (African American, Hispanic American, Asian American, or Native American) who have at least 51% ownership and in which the minority group members have operational and managerial control, interest in capital and earnings commensurate with their percentage of ownership.

(B) "Women's Business Enterprise" or "WBE" means a business enterprise that is owned, operated and controlled by one or more women who have at least 51% ownership and in which the women have operational and managerial control, interest in capital and earnings commensurate with their percentage of ownership.

___ The Prime is a MBE or WBE

Maryland State Department of Transportation (MDOT) # _____

City of Baltimore # _____

Name Other Jurisdiction: _____ # _____

The ownership of the Noncertified MWBE business consists of _____% minorities and ___% women (for a total of _____%), each of which has operational and managerial control, interest in capital and earnings commensurate with their percent ownership.

_____ % African American _____ % Hispanic American _____ % Women
_____ % Asian American _____ % Native American _____ % Disadvantaged (DBE)

___ The MWBE prime anticipates meeting up to 50% of the stated participation goal with its own workforce.

MWBE primes percentage must be stated on the MWBE PRIME PARTICIPATION SCHEDULE (FORM B-PRIME) to count towards the goal.

___ The prime anticipates does not anticipate utilizing subcontractors for _____% of the work of the contract requirements, of which it anticipates _____% will be MBEs and _____% will be WBEs.

I DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THIS AFFIDAVIT ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF.

Date: _____

By: _____

(Authorized Representative and Affiant's Name and Title)

BALTIMORE COUNTY, MARYLAND
Certified MWBE Utilization and Fair Solicitation Affidavit
(FORM A)

**This document must be completed and submitted with Bid/Proposal to Baltimore County.*

NOTE: If you do not complete and submit this form with your bid or offer to the County, the County may, in its sole discretion, deem your bid or offer NON-RESPONSIVE and accordingly the COUNTY WILL NOT CONSIDER YOU FOR CONTRACT AWARD.

* * * * *

I acknowledge the goal for solicitation # 24084 SX0 is a minimum of 25%. This goal must be met by any combination of the MWBE subcontractors. However, for instances where the Prime is counting up to 50% of the goal, the remaining goal balance must be met by any combination of the MWBE subcontractors.

- The goal breakdown is as follows:
 - _____ % Minority/Women Prime
 - _____ % for certified MBE-owned businesses and/or
 - _____ % for certified WBE-owned businesses.

I have made a good-faith effort to achieve this MWBE solicitation requirement. If awarded the contract, I will comply with this MWBE contract requirement and will continue to use my best efforts to increase MWBE participation during the contract term.

PLEASE CHECK ONE BOX (EITHER 1, 2, OR 3)

- 1 Prime has met the MWBE contract requirements for this solicitation and contract. I submit the Subcontractor Participation Form B and Form C, along with this Affidavit, which details how the Prime will achieve the contract requirements. Submit a complete list of all additional subcontractors
- Or**
- 2 After having made a good-faith effort to achieve the MWBE requirements, the Prime can only achieve partial success. I submit the Subcontractor Participation Form B, Form C, Form D and Form E along with this Affidavit, which details how the Prime will partially achieve the contract requirements. Submit a complete list of all additional subcontractors

I request a partial waiver and will meet the following MWBE participation goals:

- Partial waiver of MWBE subcontract participation:
 - _____ % Minority/Women Prime
 - _____ % for certified MBE-owned businesses and/or
 - _____ % for certified WBE-owned businesses.

Or

- 3 After having made a good faith effort to achieve the MWBE requirements for this contract, the Prime is unable to achieve the requirements and/or sub requirements for this contract. I submit the MWBE Participation Form D and Form E, along with this Affidavit, which details the steps the Prime has taken in an attempt to achieve the contract requirements. Therefore, I request a full waiver.

IF YOU HAVE CHECKED BOX 2 OR 3, THE FOLLOWING IS APPLICABLE:

- 1) If a bidder is unable to comply with the goals established in a bid for a project, the bidder may submit a request for a waiver at the time of bid submission. However, occasions for granting waivers will be limited.

BALTIMORE COUNTY, MARYLAND
Certified MWBE Utilization and Fair Solicitation Affidavit
(FORM A)

- 2) The request for waiver shall include documentation that demonstrates the bidder’s good faith efforts to comply with the goals, including:
- a. Signed unavailability statements from all MBEs and WBEs that the bidder solicited for participation; and
 - b. Copies of solicitation documentation to include the scope of services to be performed by the subcontractors accompanied with the following:
 - i. Emails, letters, facsimile transmittals and confirmations containing plans, specifications, and anticipated time schedule for portions of the work to be performed and meeting notes and agendas clearly identifying the certified MBE or WBE classification and dates that the bidder contacted each; and
 - ii. Telephone logs containing names, addresses, dates, telephone numbers, work to be performed, anticipated time schedule and classification of certified MBEs and WBEs contacted.
 - iii. Responses from MWBE firms contacted to fulfill the goal.

As I have checked Box 2 or 3 of this Affidavit, I understand I must submit the following supporting documentation with the bid:

- *Subcontractor Participation Schedule* (Form B)
- *MWBE Subcontractor Disclosure and Participation Statement* (Form C)
- *MWBE Subcontractors Unavailable Certificate* (Form D) (if applicable)
- *MWBE Outreach Efforts – Compliance Statement* (Form E) (if applicable)

I acknowledge that the MWBE subcontractors/suppliers listed on the *Subcontractor Participation Schedule* (Form B) will be used to accomplish the percentage of MWBE participation that the Prime shall achieve. A fully executed Form C must match Form B.

In the solicitation of subcontract quotations or offers, MWBE subcontractors were provided the same information and amount of time to respond, as were non-MWBE subcontractors.

The solicitation process was conducted in such a manner so as to not place MWBE subcontractors at a competitive disadvantage to non-MWBE subcontractors.

I solemnly affirm under the penalties of perjury that this Affidavit is true to the best of my knowledge, information, and belief.

 Bidder/Offeror Name

 Phone Number

 Address

 Affiant Signature

 Address (continued)

 Printed Name & Title

 E-mail address

 Date

BALTIMORE COUNTY, MARYLAND

**MWBE PRIME PARTICIPATION SCHEDULE
(Form B-Prime)**

PLEASE COMPLETE AND SUBMIT THIS FORM TO ATTEST EACH SPECIFIC ITEM OF WORK THAT YOU AS THE MWBE PRIME FIRM WILL PERFORM USING ITS OWN WORKFORCE PERTAINING TO THE PERCENTAGE STATED ON THE SUBCONTRACTOR PARTICIPATION SCHEDULE (FORM B) FOR PURPOSES OF MEETING THE MWBE PARTICIPATION GOALS.

**This document must be completed and submitted with Bid/Proposal to Baltimore County.*

NOTE: If you do not complete and submit this form with your bid or offer to the County, the County may, in its sole discretion, deem your bid or offer NON-RESPONSIVE and accordingly the COUNTY WILL NOT CONSIDER YOU FOR CONTRACT AWARD.

Provided that _____ (Prime Contractor's Name) with Certification Number _____ is awarded the County contract in conjunction with Solicitation No. _____, such MWBE Prime Contractor intends to count the distinct, clearly defined portion of the work of the contract that the MBE/WBE Prime Contractor performs with its own forces toward fulfilling **up to fifty-percent (50%) of the MWBE participation goal**, at least \$ _____ which equals to _____% of the Total Contract Amount for performing the following products/services for the Contract:

NAICS CODE	WORK ITEM, SPECIFICATION NUMBER, LINE ITEMS OR WORK CATEGORIES (IF APPLICABLE). FOR CONSTRUCTION PROJECTS, GENERAL CONDITIONS MUST BE LISTED SEPARATELY.	DESCRIPTION OF SPECIFIC PRODUCTS AND/OR SERVICES	VALUE OF THE WORK

<p>MWBE PRIME CONTRACTOR</p> <p>Signature of Representative: _____</p> <p>Printed Name and Title: _____</p> <p>Firm's Name: _____</p> <p>Federal Identification Number: _____</p> <p>Address: _____</p> <p>Telephone: _____</p> <p>Email Address: _____</p> <p>Certified Yes No No</p> <p>Certifying Jurisdiction _____</p> <p>Date: _____</p>	<p>MWBE PRIME CONTRACTOR</p> <p>Minority Status:</p> <p><input type="checkbox"/> African American</p> <p><input type="checkbox"/> Hispanic American</p> <p><input type="checkbox"/> Women</p> <p><input type="checkbox"/> Asian American</p> <p><input type="checkbox"/> Native American</p> <p>Reviewed and Accepted by Baltimore County Minority Business Enterprise Office</p> <p>Name _____</p> <p>Title _____</p> <p>Date _____</p>
--	--

BALTIMORE COUNTY, MARYLAND
MWBE –UNAVAILABILITY CERTIFICATE
(FORM D)

If applicable, this document must be completed and submitted with Bid/Proposal to Baltimore County.

NOTE: If you do not complete and submit this form with your bid or offer to the County, the County may, in its sole discretion, deem your bid or offer NON-RESPONSIVE and accordingly the COUNTY WILL NOT CONSIDER YOU FOR CONTRACT AWARD.

1. It is hereby certified that the firm of _____
 (Name of Minority firm)

located at _____
 (Number) (Street)

_____ (City) (State) (Zip)

was offered an opportunity to bid on the _____ contract.

2. The _____ (MWBE Firm), is either unavailable for the work/service or unable to prepare a bid for this project for the following reason(s):

 Signature of Subcontractor MWBE Representative Title Date

 MDOT/Baltimore City Certification # Email Address # Telephone #

3. PRIME'S SIGNATURE AND CERTIFICATION

I certify under oath that I contacted the Certified MWBE and they advised me that they are unavailable, unable to perform the work/services for the above-contract or failed to respond to repeated requests for a price proposal for the above-contract.

 Signature of Prime Title Date

Rev 12/2024

BALTIMORE COUNTY, MARYLAND
MWBE - OUTREACH EFFORTS - COMPLIANCE STATEMENT
(FORM E)

**This document must be completed and submitted with Bid/Proposal to Baltimore County.*

NOTE: If you do not complete and submit this form with your bid or offer to the County, the County may, in its sole discretion, deem your bid or offer NON-RESPONSIVE and accordingly the COUNTY WILL NOT CONSIDER YOU FOR CONTRACT AWARD.

In conjunction with the bid or offer submitted in response to Solicitation Number _____, I state the following:

1. Bidder/Offeror identified opportunities to subcontract in these specific work categories:

2. Attached to this form are copies of the solicitation documentation in accordance with Section 6 (E) Bid Requirements of the Executive Order, used to solicit certified MWBEs for the subcontract opportunities accompanied with the signed MWBE Subcontractor Unavailability Certificate (Form D).

3. Bidder/Offeror made the following attempts to solicit MWBEs:

Signature – Bidder Offeror

Print or Type Name of Firm

Street Address

City State Zip Code

Date



JOHN A. OLSZEWSKI, JR.
County Executive

SEVETRA PEOPLES-BROWN
Executive Director
Chief of Diversity, Equity and Inclusion

To: Contractors/Consultants

From: Minority and Women Business Enterprise Office

Date: December 13, 2024

Subject: Compliance Reporting and Penalties

Baltimore County, Maryland (the "County") requires all Prime Contractors and all Subcontractors to submit payment reports by the 10th of each month through an online MWBE Compliance Portal (PRISM). The Portal can be found under Compliance Reporting for Primes and Subcontractors at www.baltimorecountymd.gov/go/mwbe. In the event you are not able to enter your payments in PRISM, a spreadsheet is attached for your use. Please be sure to list the PO for each invoice/payment reported and include in your submission any corresponding documentation (e.g. copies of invoices or canceled checks).

The County has found that a number of companies are failing to file reports in a timely manner, which makes it difficult for the County to verify compliance. As a result, the County has determined to assess penalties for non-compliance, effective September 1, 2018, as follows:

- (a) For failure to file timely monthly reports:
 - a. Assessment of a late fee of \$10 per day per task, up to a maximum of \$1,500 per task; and/or
 - b. For multiple violations, termination of the contract for convenience or for default, with the contractor suspended from participating in County contracts for five (5) years.
- (b) For failure to meet MWBE requirements:
 - a. Assessment of a penalty of up to 10% of the contract value; and/or
 - b. Termination of the contract for convenience, with the contractor suspended from participating in County contracts for five (5) years together with assessment of a penalty of up to 10% of the contract value; and/or
 - c. Termination of the contract for default together with assessment of a penalty of 10% of the contract value.

Each action and/or remedy described above is at the sole discretion of the County, and is in addition to any damages which the County may be entitled to under the contract. This short video can be used as guidance on submitting the Prime to Subcontractor Payment Reporting:

http://stage.prismcompliance.com/etc/movies/vendor_contractpayment_tutorial.htm

If after contract expiration, it has been determined the MWBE firms named were not used or were under used, by the contractor and supporting documentation was not provided and approved by the County the contractor may be assessed a penalty of up to 10% of the contract value and/or suspended from participating in County contracts for 5 years.

Questions regarding this correspondence and/or the use of this system can be directed to the MWBE Office at mwbe@baltimorecountymd.gov or call (410) 887-3407.

Attachment: MWBE Payment Report Form
 MWBE Payment Acknowledgement Form

Cc: File

S E C T I O N V

POST AWARD DOCUMENTS

**This Section to be Completed
by Successful Bidder after Award**

CONTRACT AGREEMENT

THIS CONTRACT AGREEMENT (“Contract”), IS MADE THIS _____ day of _____ 20____, by and between Baltimore County, Maryland, a body corporate and politic (“County”), and _____, (“Contractor”).

WITNESSETH, that the Contractor, for and in consideration of the payment or payments herein specified and agreed to by the County, hereby covenants and agrees to furnish and deliver all the materials and to do and perform all the work, services, and labor in fulfillment of the requirements of Contract Number **24084 SX0** “Project”) in strict conformity with the solicitation, plans, specifications, special provisions, any and all addenda, and the proposal, at the prices named therein, and all of which are collectively the Proposal, and said Proposal is attached hereto and made a part thereof.

The Project shall be done in strict compliance with (i) the Proposal, (ii) the Baltimore County Department of Public Works and Transportation September 2023 “Standard Specifications for Construction and Materials” and “Standard Details for Construction” (iii) and any and all revisions thereto as of the date of advertisement, including but not limited to the General Conditions Building Projects, as applicable, and all of which (i-iii) are made a part hereof and incorporated herein (collectively, the “Specifications”). Contractor understands and agrees it is Contractor’s responsibility and obligation to obtain a copy of the “Specifications” and agrees the Specifications are incorporated herein. Copies are available on the County’s website at www.baltimorecountymd.gov/departments/public-works/standards.

The Project shall be subject to the inspection and approval of the Director of Public Works and Transportation for Baltimore County, or his authorized representative, and in the event any portion thereof shall be rejected by said Director or his representative as defective or unsuitable, then the said portion shall be removed and replaced and be performed anew to the satisfaction and approval of the said Director or his representative at the cost and expense of the Contractor.

THE CONTRACTOR AFFIRMS that it is aware of, and will comply with, the provisions of Sections 14-101 through 14-108 of the Election Law Article of the Annotated Code of Maryland, as the same may be amended from time to time, which require that every person who makes, during any 12-month period, one or more contracts, with one or more Maryland governmental entities involving cumulative consideration, of at least \$200,000.00, to file with the State Board of Elections certain specified information to include disclosure of attributable political contributions in excess of \$500 during defined reporting periods.

THE CONTRACTOR FURTHER COVENANTS AND AGREES that all the Project shall be furnished, performed and delivered, in every respect, to the satisfaction and approval of the Director of Public Works and Transportation, aforesaid, on or before the expiration of **SIX HUNDRED SEVENTY FOUR (674) CALENDAR DAYS** (the “Contract Period”) after written notice has been given by the Director or their authorized representative to begin the work.

IT IS AGREED THAT TIME IS OF THE ESSENCE. In the event the Contractor fails to achieve Final Completion and Final Acceptance of the Contract work within the Contract Period specified herein, plus any extensions thereto agreed to in writing by a legally authorized representative of the County pursuant to the terms of this Contract, then Contractor shall pay the County the sum of **FIVE HUNDRED DOLLARS (\$500.00)** as Liquidated Damages for each **CALENDAR DAY** after the expiration of the Contract Period, as may be extended by the County, until the Contractor achieves Final Completion and Final Acceptance of the Project.

Contractor’s Initials

Date

Rev. 09/2024

IT IS FURTHER AGREED that:

- (a) These Liquidated Damages are a reasonable estimate of the County's damages solely due to the public's loss of use of the Project during the delay period and is not a penalty.
- (b) It is very difficult, if not impossible, to accurately measure the damages to the County due to the public's loss of use of the Project during the delay period.
- (c) Notwithstanding GP 8.09 of the Baltimore County Standard Specification for Construction, in addition to the damages due to the public's loss of use of the Project during the delay period, the County is likely to incur additional direct costs during the delay period, including but not limited to, costs for construction management, consultants, architectural services, office trailer and supplies, utilities, County employees' time, County vehicles, and such other costs that the County will incur to continue administration of the construction and the Contract during the delay period, all of which will be monitored by the County, and if so required by the County, the Contractor shall pay such actual damages incurred during the delay period. THE PARTIES HERETO UNDERSTAND AND AGREE THAT CONTRACTOR'S OBLIGATION TO PAY THE COUNTY FOR ACTUAL DAMAGES DURING THE DELAY PERIOD SHALL BE IN ADDITION TO THE CONTRACTOR'S OBLIGATION TO PAY THE LIQUIDATED DAMAGES DUE TO THE PUBLIC'S LOSS OF USE OF THE PROJECT.
- (d) The County shall have the right, but not the obligation, to deduct the Liquidated Damages due to the public's loss of use of the Project, and the County's actual costs and costs to continue administration of the construction and the Contract, from any monies due or any monies that may become due to the Contractor.

IT IS DISTINCTLY UNDERSTOOD AND AGREED that no claim for extra work, material or overhead not specifically provided for in the Contract will be allowed by the County, nor shall the Contractor do any work or furnish any materials not covered by this Contract and the Specifications, unless the same is ordered in writing by a legally authorized representative of the Department of Public Works and Transportation in accordance with the terms of the Contract. Any such work or materials which may be done or furnished by the Contractor without any such written order first being given shall be at said Contractor's sole risk, cost and expense and Contractor hereby covenants and agrees that without such written order, Contractor shall make no claim for compensation for work, materials, or overhead so done or furnished.

NOTWITHSTANDING GP 4.06 OF THE BALTIMORE COUNTY STANDARD SPECIFICATIONS FOR CONSTRUCTION, IT IS SPECIFICALLY AGREED that the Contractor shall have no entitlement to damages arising out of delay, disruption, interference or hindrance from any cause whatsoever. However, this provision shall not preclude recovery or damages by the Contractor for hindrances or delays due solely to fraud or gross negligence on the part of the County or its agents.

IT IS FURTHER DISTINCTLY AGREED that the said Contractor shall not assign this Contract, nor any part thereof, nor any right to any of the monies to be paid hereunder, nor shall any part of the work to be done or material furnished under said Contract be sublet without the prior written consent of a legally authorized representative of the Department of Public Works and Transportation in accordance with the terms of this Contract. Further, the acceptance of the final payment by the Contractor shall effectuate a release in full of all claims against County and its officials, employees, representatives, and agents arising out of, or by reason of the Project and this Contract.

The Contractor shall review government issued identification and badge all employees of the Contractor and its subcontractors. The Contractor shall also review all federal forms, including but not limited to I-9's, for compliance as well as copies of all employment eligibility and identity documentation maintained to the extent required by law.

The Bonds, given by the Contractor in a sum equal to the total contract price of the Project in compliance with the terms and provisions of this Contract, are hereby attached and incorporated herein.

IT IS AGREED that in the event that the County is delayed or prevented from timely execution of this Contract, the Contractor releases County and agrees Contractor shall have no action, claim or demand against County therefore.

Contractor's Initials

Date

Rev. 09/2024

THE CONTRACTOR HEREBY FURTHER AGREES to receive the prices set forth in the Proposal incorporated herein as full compensation for the completion of the Project and, in all respects, to complete said Contract to the satisfaction of the County.

THE CONTRACTOR REPRESENTS AND WARRANTS:

- (i) it is duly formed and validly existing under the laws of the State of _____;
- (ii) it is in good standing in the State of Maryland;
- (iii) it has the power and authority to consummate the obligations and responsibilities contemplated hereby, and has taken all necessary action to authorize the execution, delivery and performance required under this Contract;
- (iv) the Contractor and the person executing this Contract for the Contractor each warrant that he/she is duly authorized by the Contractor to execute and seal this Contract on the Contractor's behalf;
- (v) the warranties of merchantability and fitness for a particular purpose and use and warranties of title and against infringement, and all express warranties contained in this Contract, including but not limited to the Proposal (and any sample or model presented by Contractor and expressly accepted by the County) shall apply to the portion of this Contract pertaining to or for goods;
- (vi) all representations and warranties made in the Proposal and herein remain true and correct in all respects when made, as of the date of this Contract, and throughout the term of this Contract; and
- (vii) there exists no actual or potential conflict of interest between its performance under this Contract and its engagement or involvement in any other personal or professional activities and in the event such conflict or potential conflict arises during the term of this Contract, the Contractor shall immediately advise the County in writing thereof.

THE CONTRACTOR shall not disclose any documentation and information of any kind or nature disclosed to the Contractor in the course of its performance of duties hereunder without the express prior written consent of the County.

Those sections in this Contract which by their nature are intended to survive, including but not limited to, Contractor's representations and warranties, confidential information, and indemnification shall survive the termination of this Contract.

IN WITNESS WHEREOF, the Contractor has hereunto set its hand and seal the day and year first above written.

CONTRACTOR NAME: _____

WITNESS FEDERAL TAX ID or SS #: _____

_____ By: _____ (Seal)

_____ Name: _____

Type (Print) Name

Title: _____ Date: _____

WITNESS: **BALTIMORE COUNTY, MARYLAND**

Executive Secretary

D'Andrea L. Walker, County Administrative Officer

APPROVED FOR FORM AND LEGAL AND SUFFICIENCY* (Subject to execution by the duly authorized Administrative official and Chairperson of the County Council, as indicated).

APPROVED: _____ Date: _____
Lauren T. Buckler, Director
Department of Public Works & Transportation

Office of the County Attorney
*Approval of Form and Legal Sufficiency does not convey approval or disapproval of the substantive nature of this transaction. Approval is based upon typeset documents. All modifications require re-approval.

PERFORMANCE BOND

Bond No. _____

Principal

Business Address of Principal

Surety

Obligee: BALTIMORE COUNTY, MARYLAND
A body corporate and politic

A Corporation of the State of _____ and authorized to do business in Maryland

Penal Sum of Bond (express in words and figures)

DOLLARS \$ _____

Richlyn Manor Force Main

Date of Contract 20 _____

Contract Name

24084 SX0

Date Bond Executed 20 _____

Contract Number

KNOW ALL MEN BY THESE PRESENTS, that we, the PRINCIPAL, above-named, and SURETY, above-named, and authorized to do business in the State of Maryland, are held and firmly bound unto the OBLIGEE, above-named, in the penal sum of the amount stated above, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, THE PRINCIPAL entered into a certain contract with the OBLIGEE described and dated as shown above and is required to provide this bond pursuant to Maryland State law and/or County law and the contract.

NOW, THEREFORE, if the aforesaid PRINCIPAL shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term of said contract and any extensions thereof that may be granted by the OBLIGEE with or without notice to the SURETY, and during the life of any guaranty required under the contract, and shall also well and truly perform and fulfill all the undertakings covenants, terms, conditions and agreements of any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the SURETY being hereby waived, then, this obligation to be void; otherwise to remain in full force and effect.

THE SURETY FURTHER GUARANTEES That it is (a) licensed in the State of Maryland, (b) rated "B" or better by the A.M. Best Company, (c) on federal funded projects, authorized by the underwriting limitation contained in the U.S. Department of the Treasury Circular 570, as amended, to guaranty the amount of the Bid, and (d) in good standing as determined by the County's Engineer. A Performance Bond is required for each and every Contract in excess of twenty-five thousand (\$25,000). A Performance Bond shall be in the amount equal to at least one hundred (100%) percent of the Contract price. The fully executed Performance Bond shall be delivered by the Bidder to the Department's Division of Construction Contracts Administration no later than the time the Contract is to be executed by the Contractor.

IN WITNESS WHEREOF, the above-bounded parties have executed this instrument under their several seals on the date indicated above, the name and seal of each party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

In Presence of: Individual Principal

Witness: _____ **as to:** _____ (SEAL)

Print Name: _____ **Print Name:** _____

Attest: Corporate Principal

(Name of Corporation)

Witness: _____ **By:** _____ Affix

Print Name: _____ **Print Name:** _____ Corporate

Title: _____ Seal

Attest: Surety

(Name of Surety)

Business Address: _____

Witness: _____ **By:** _____ Affix

Print Name: _____ **Print Name:** _____ Corporate

Title: _____ Seal

Reviewed for Baltimore County Requirements

Office of the County Attorney

PAYMENT BOND

Bond Number _____

Principal

Business Address of Principal

Surety

Obligee: **BALTIMORE COUNTY, MARYLAND**
A body corporate and politic

A Corporation of the State of _____ and authorized to do business in Maryland

Penal Sum of Bond (express in words and figures)

DOLLARS \$ _____

Richlyn Manor Force Main
Contract Name

Date of Contract 20 _____

24084 SX0
Contract Number

Date Bond Executed 20 _____

KNOW ALL MEN BY THESE PRESENTS, that we, the PRINCIPAL, above-named, and SURETY, above-named, and authorized to do business in the State of Maryland, are held and firmly bound unto the OBLIGEE, above-named, in the penal sum of the amount stated above, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, THE PRINCIPAL entered into a certain contract with the OBLIGEE described and dated as shown above and is required to provide this bond pursuant to Maryland State law and/or County Law and the contract.

NOW, THEREFORE, the condition of this obligation is such that if the aforesaid PRINCIPAL shall promptly make payments to all persons supplying labor and/or material to the PRINCIPAL and to any subcontractor of the PRINCIPAL in the prosecution of the work provided for in said contract and any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the SURETY being hereby waived, then, this obligation to be void; otherwise to remain in full force and effect.

THE SURETY FURTHER GUARANTEES That it is (a) licensed in the State of Maryland, (b) rated "B" or better by the A.M. Best Company, (c) on federal funded projects, authorized by the underwriting limitation contained in the U.S. Department of the Treasury Circular 570, as amended, to guaranty the amount of the Bid, and (d) in good standing as determined by the County's Engineer. A Payment Bond is required for each and every Contract in excess of twenty-five thousand (\$25,000). A Payment Bond shall be in the amount equal to at least one hundred (100%) percent of the Contract price. The fully executed Payment Bond shall be delivered by the Bidder to the Department's Division of Construction Contracts Administration no later than the time the Contract is to be executed by the Contractor.

IN WITNESS WHEREOF, the above-bounded parties have executed this instrument under their several seals on the date indicated above, the name and seal of each party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

In Presence of:

Individual Principal

Witness: _____

as to: _____ (SEAL)

Print Name: _____

Print Name: _____

Attest:

Corporate Principal

(Name of Corporation)

Witness: _____

By: _____ Affix

Print Name: _____

Print Name: _____ Corporate

Title: _____ Seal

Attest:

Surety

(Name of Surety)

Business Address: _____

Witness: _____

By: _____ Affix

Print Name: _____

Print Name: _____ Corporate

Title: _____ Seal

Reviewed for Baltimore County Requirements

Office of the County Attorney



BALTIMORE COUNTY, MARYLAND

INSURANCE PROVISIONS

1. GENERAL REQUIREMENTS

- 1.1 Coverages Required:
Unless otherwise required by the specifications or the contract, the Contractor/Vendor shall purchase and maintain the insurance coverage's listed herein.
- 1.2 Certificate of Insurance:
Before starting work on the contract, or prior to the execution of the Contract on those bid, the Contractor/Vendor shall provide Baltimore County, Maryland with verification of insurance coverage evidencing the required coverages.
- 1.3 Baltimore County as Insured:
The coverage required, excluding Workers' Compensation and Employers' Liability and Medical Malpractice Liability/Professional Liability/Errors and Omissions Liability, must include Baltimore County, Maryland and its agents, employees, officers, directors, and appointed and elected officials as an additional insured.
- 1.4 Contractor's/Vendor's Responsibility:
The providing of any insurance herein does not relieve the Contractor/Vendor of any of the responsibilities or obligations the Contractor/Vendor has assumed in the contract or for which the Contractor/Vendor may be liable by law or otherwise.
- 1.5 Failure to Provide Insurance:
Failure to provide and continue in force the required insurance shall be deemed a material breach of the contract. The Contractor/Vendor must maintain the insurance coverages required under the terms and conditions on this Contract while this Contract is in effect including renewal and extension terms.

- 2.1.4 Damages not to be Excluded:
Such insurance shall contain no exclusions applying to operations by the Contractor/Vendor or any Subcontractor in the performance of the Contract including but not limited to:
 - (a) Collapse of, or structural injury to, any building or structure;
 - (b) Damage to underground property; or
 - (c) Damage arising out of blasting or explosion.

2.2 Automobile Liability Insurance

- 2.2.1 Minimum Limits of Coverage:
Bodily Injury Liability and Property Damage Liability
Combined Single Limit - \$500,000 any one accident.
- 2.2.2 Minimum Coverages to be Included:
Such insurance shall provide coverage for all owned, non-owned and hired automobiles.

2.3 Workers' Compensation and Employers' Liability Insurance

Such insurance must contain statutory coverage, including
Employers' Liability insurance with limits of at least:
Bodily Injury by Accident - \$250,000 each accident
Bodily Injury by Disease - \$500,000 policy limit
Bodily Injury by Disease - \$250,000 each employee

2.4 Valuable Papers and Records Coverage and Electronic Data Processing (Data and Media) Coverage

Minimum Limits of Coverage:
\$100,000 Per Claim and Each Occurrence
\$100,000 in the Aggregate

2.5 Other

Such other insurance in form and amount as may be customary for the type of business being under taken by the Contractor/Vendor.

2. INSURANCE COVERAGES

- 2.1 General Liability Insurance
 - 2.1.1 Minimum Limits of Coverage:
Personal Injury Liability and Property Damage Liability Combined Single Limit - \$500,000 each occurrence.
 - 2.1.2 Such insurance shall protect the Contractor/Vendor from claims which may arise out of, or result from, the Contractor's/Vendor's operations under the contract, whether such operations be by the Contractor/Vendor, any subcontractor, anyone directly or indirectly employed by the Contractor/Vendor or Subcontractor, or anyone for whose acts any of the above may be liable.
 - 2.1.3 Minimum Coverages to be Included:
 - (a) Independent Contractor's coverage;
 - (b) Completed Operations and Products Liability coverage;
 - (c) Contractual Liability coverage.