



City of Rockville
Rockville, Maryland

INVITATION FOR BIDS # 05-22

SWM FACILITIES IMPROVEMENTS: NORTHEAST PARK

Bids Due by 02:00 P.M., Thursday, August 25, 2022

ISSUED BY:

Procurement Division
City of Rockville, City Hall
111 Maryland Avenue
Rockville, Maryland 20850
Phone: (240) 314-8430
Fax: (240) 314-8439

A 5% Bid Bond is required for this Invitation for Bid

Any individual with a disability who would like to receive the information in this publication in another form may contact the ADA Coordinator at 240-314-8100, TDD 240-314-8137

MFD-V Outreach Program

It is the intent of the City of Rockville to increase opportunities for minority, female, disabled, or veteran (MFD-V) owned businesses to compete effectively at supplying goods, equipment, and services to the City, within the constraints of statutory purchasing requirements, departmental needs, availability, and sound economical considerations. Suggested changes and MFD-V enhancements to this solicitation's requirements for possible consideration and/or inclusion in future solicitations are encouraged. Any questions regarding MFD-V outreach or questions/concerns regarding the City's bidding process should be addressed to Pat Ryan, pryan@rockvillemd.gov or 240-314-8434.

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Statement of "No Bid Submittal"

If you do not intend to submit on this requirement, please complete and return this form prior to date shown for receipt of bids to the buyer listed in this IFB by **email only to jpierson@rockvillemd.gov**.

I/WE HAVE DECLINED TO BID ON IFB # 05-22, titled **SWM FACILITIES IMPROVEMENTS: NORTHEAST PARK** for the following reason(s): [Please place a check mark (✓) next to the reason(s) as applicable]

(✓)	Reason
<input checked="" type="checkbox"/>	Proposal requirements too "restrictive".
<input type="checkbox"/>	Insufficient time to respond to the Invitation for Bids.
<input type="checkbox"/>	We do not offer this service.
<input type="checkbox"/>	Our schedule would not permit us to perform.
<input type="checkbox"/>	Unable to meet requirements.
<input type="checkbox"/>	Unable to meet insurance or bond requirements.
<input type="checkbox"/>	Scope of Services unclear (please explain below).
<input type="checkbox"/>	Other (please specify below).

REMARKS:

Are you a Minority, Female, Disabled or Veteran-Owned (MFD-V) business? Yes No

Company Name: _____

Mailing Address: _____

Telephone Number: _____ Email Address: _____

Authorized Signatory

Printed Name

Title

Date



CITY OF ROCKVILLE
ROCKVILLE, MARYLAND

INVITATION FOR BID 05-22

SWM FACILITIES IMPROVEMENTS: NORTHEAST PARK

SECURED BIDS will be received electronically via a City designated bid receipt software solution until **THURSDAY, AUGUST 25, 2022 at 02:00 PM**. The bidder assumes full responsibility for the timely delivery of a bid via the designated solution. Bids delivered in any other fashion will not be considered. Properly submitted bids will be opened in a virtual environment after the time set for receipt of bids and will be read aloud via a City telepresence software solution at the phone number and/or web address provided by the City and contained within this solicitation.

Submission of a bid electronically is consent by the bidder to conduct any or all elements of the procurement by electronic means, in accordance with the terms of this invitation for bid.

Bids presented after the bid receiving deadline will not be received for any reason. The official time clock for receiving bids will be that of the City's third-party software solution provider's computer server system.

ATTENTION: BIDDERS ARE HEREBY NOTIFIED THAT THE CITY'S THIRD-PARTY SOFTWARE SOLUTION PROVIDER'S COMPUTER SERVER TIME MAY DIFFER FROM THAT OF OTHER ELECTRONIC DEVICES, COMPUTER SOFTWARE AND COMPUTER HARDWARE THAT MAY BE USED TO ELECTRONICALLY SUBMIT THE BID. BIDDERS ARE RESPONSIBLE FOR ALLOWING ADEQUATE TIME TO SUCCESSFULLY DELIVER THE BID TO THE REQUIRED ELECTRONIC LOCATION BY THE REQUIRED TIME.

PRE-BID CONFERENCE

A virtual, telepresence pre-bid meeting will be held on **TUESDAY, AUGUST 02, 2022, AT 02:00 PM**. Individuals interested in viewing the project location may participate in the site visit referenced above prior to the pre-bid meeting. Bidders must register below in order to attend the meeting. This meeting is not mandatory; however, bidders are strongly encouraged to attend.

Register for the Virtual Pre-bid Meeting Here: [Registration Link](#)

DEADLINE FOR QUESTIONS

Questions pertaining to this bid may be directed to Jonathan Pierson, Assistant Director via the City's Collaboration Portal only at <https://contracts.rockvillemd.gov/gateway/Default.aspx> no later than **FRIDAY, AUGUST 12, 2022, AT 10:00 AM**. Oral answers to questions relative to interpretation of specification or the bid process will not be binding on the City.

PROJECT DESCRIPTION

IFB #05-22 SWM FACILITIES IMPROVEMENTS: NORTHEAST PARK (The Project) is a stormwater retrofit, stream restoration, and stabilization project at Northeast Park in the City of Rockville, MD. The Project includes furnishing of all materials, labor, equipment, tools and services, and all other associated work as shown on the Construction Drawings and included in these documents.

SWM Facilities Improvement: Northeast Park

The Northeast Park is located north of Neal Drive and Wesley Road, south of Taft Street, and east of Gude Drive in the City of Rockville in Montgomery County, Maryland. The facility is located within the Rock Creek Watershed (MD Basin Code 02140206) and was originally constructed in 1973 as part of the Redgate Farm Pond cluster. In 2005, the facility was converted into an extended detention pond to provide water quality treatment to a 51.07 acre drainage area (26.59 acres impervious). Despite regular dredging over the past five years, a recent inspection of Northeast Park SWM Pond identified a 91 percent loss of capacity due to sedimentation.

Functionality is to be restored through a facility retrofit which will provide additional storage volume and an improved maintenance access. End-of-road treatments will also be installed at Neal Drive and Wesley Road to intercept concentrated flow upstream of the SWM pond and provide additional water quality treatment.

The stream restoration portion will stabilize and restore the upstream channel to reduce sediment loading to the pond. This includes removing and replacing the existing 48-inch RCP outfall pipe and installing a standard State Highway Administration (SHA) headwall. Runoff from the proposed storm drain improvements will transition from the outfall downstream approximately 280 linear feet through a series of four riffle-weirs and pools. This will restore floodplain connectivity, stabilize channel banks and improve stream habitat. Large wetland areas adjacent to the channel will be regularly flooded to sustain wetland vegetation and manage flashy stormwater flows.

SUMMARY OF WORK

The City of Rockville intends to enter into a Contract with a qualified firm to provide construction and construction-related services for the Northeast Park SWM Facility Retrofit and Stream Restoration project. The Project shall be paid for in accordance with Bid Proposal Form Pay Item No. 1 through Pay Item No. 52 and as detailed in the Technical Specifications for IFB #05-22 Pay Item No. 1 through Pay Item No. 52.

For the purposes of this Contract, the "City" shall refer to City of Rockville staff or a designated representative and the "Engineer" shall refer to the design engineer.

The engineering drawings and specifications are intended to cover a complete project. It should be distinctly understood that failure to mention any work which would normally be required to complete the project shall not relieve the Contractor of their responsibility to perform such work.

PROJECT CLASSIFICATION

The estimated cost/classification of this project is within the range of \$1,000,001 to \$2,500,000 (Class D). This range is in accordance with project classifications established by the State of Maryland DGS.

BID SECURITY

Bids must be accompanied by an electronic copy of the Bid security made payable to the Mayor and Council of Rockville in an amount of five percent (5%) of Bidder's Total Bid Price and in the form of a Bid Bond (AIA Bid bond form is acceptable) or a certified check, where the original security instrument must be mailed to City of Rockville, Procurement Division, 111 Maryland Avenue, Rockville, Maryland 20850, referencing the solicitation number. The City reserves the right to disqualify any bid, in any instance, where the City cannot locate the mailed, original security instrument. The City shall not be liable for any certified checks it cannot locate, or in any instance where a certified check is cashed by any individual not employed by the City of Rockville.

AGREEMENT/PERFORMANCE & PAYMENT BONDS

The successful contractor shall be required to complete and electronically return a copy of the City's Standard Form of Agreement along with Performance and Payment Bonds in the amount of 100% of the Contract award within fifteen days after the date of issuance (samples attached), where two (2) sets of the original agreement and original bonds must be mailed to City of Rockville, Procurement Division, 111 Maryland Avenue, Rockville, Maryland 20850. No other form of performance or payment security will be permitted. Failure by the contractor to provide both the electronic versions and original versions of the agreement or bonds, as required, shall be just cause for annulment of the award and the forfeiture of the Bid Guarantee which shall become the property of the City, not as a penalty but in liquidation of damages sustained. Any instance where the City cannot locate the mailed versions of the agreement or bonds shall be just cause for annulment of the award and the forfeiture of the Bid Guarantee which shall become the property of the City, not as a penalty but in liquidation of damages sustained.

INSURANCE

The successful contractor shall be required to electronically furnish a certificate of insurance to include endorsements for additional insured and waiver of subrogation requirements within fifteen days after the date of request by the City. Failure by the contractor to provide insurance shall be just cause for annulment of the award and the forfeiture of the Bid Guarantee which shall become the property of the City, not as a penalty but in liquidation of damages sustained.

SUBMISSION

All bid forms and documents must be electronically filled out, signed, and submitted via one combined pdf document using the City's Collaboration Portal **only** at:

<https://contracts.rockvillemd.gov/gateway/Default.aspx>

At a minimum the file name of the pdf document must contain the Bid Number, Bidders Name and Bid Due Date.

A virtual, telepresence bid opening will be held a few minutes after the bid submittal due date and time. Individuals interested in attending the virtual bid opening must register below:

Register for Virtual Bid Opening Here: [Registration Link](#)

SUBMITTALS

The following information must be submitted with the bid, **where failure to submit requested items may result in rejection of the bid:**

- Bid Proposal Form
- A certified check or bid bond must be in the amount of five percent (5%) of the total bid amount, made payable to the Mayor and Council of Rockville as in General Conditions and Inspections to Bidders, #24.
- If the bidder intends to subcontract any or part of the work, then the bidder must identify and include references for each qualified subcontractor, together with a description of the proposed subcontract work. This evidence shall be submitted with the bid. A minimum of three references shall be provided; additional project references may be required to meet all the requirements.

BID AWARD

Award will be made to lowest responsive and responsible bidder(s) complying with all provisions of the Invitation for Bid provided the price is reasonable and in the best interest of the City to accept. The City reserves the right to award by individual Capital Improvement project and project site, group, all or none or any combination thereof. Both Capital Improvement projects must be bid.

BIDDER QUALIFICATIONS

At a minimum, Bidders must provide written evidence (through references) of five (5) years prior experience with the scope of work as detailed in the specifications.

If the bidder intends to subcontract any or part of the work, then the bidder must identify and include references for each qualified subcontractor, together with a description of the proposed subcontract work. This evidence shall be submitted with the bid, or the City, at its discretion, may determine the bid to be unresponsive. A minimum of three references shall be provided; additional project references may be required to meet all the requirements.

The City shall have the right to take such steps as it deems necessary to determine the ability of the Bidder to perform the work and reserves the right to request additional information. The right is reserved to reject any bid where an investigation of the evidence or information submitted by such Bidder does not satisfy the City that the Bidder is qualified to properly carry out the terms of the Bid Document. Alternatively, the City may request a low Bidder to replace and resubmit qualifications for portions of work being performed by a subcontractor without alteration to the cost proposal.

ADDENDUM

Oral answers to questions relative to interpretation of specifications or the proposal process will not be binding on the City.

To ensure fair consideration for all offerors, any interpretation made to prospective offerors will be expressed in the form of an addendum to the specifications, if such information is deemed necessary for the preparation of proposals or if the lack of such information would be detrimental to the uninformed offeror. Such addendums, if issued, will be posted at City's Collaboration Portal listed below:

<https://contracts.rockvillemd.gov/gateway/Default.aspx>

Please note, that it is the respondent's responsibility to check this site frequently for Addendums, which may impact pricing, this documents requirements, terms and/or conditions. Failure to sign and return an Addendum with your response may result in disqualification of proposal.

NOTICE TO BIDDERS

Companies not incorporated in the State of Maryland must be in compliance with the State of Maryland Code of Regulations Title 21, State Procurement Regulations in order to enter into a contract with the City. "Pursuant to 7-201 et seq. of the Corporations and Associations, Article of the Annotated Code of Maryland corporations not incorporated in the State, shall be registered with the Department of Assessments and Taxation, 301 West Preston Street, Baltimore, Maryland 21201 before doing any interstate or foreign business in this state. Before doing any intrastate business in this state, a foreign corporation shall qualify with the Department of Assessments and Taxation."

US TREASURY IDENTIFICATION NUMBER

Bidders must supply with their bids their U.S. Treasury Department Employers' Identification Number as such number is shown on their Employer's quarterly Federal Tax Return (U.S. Treasury Department Form No. 941). This number shall be inserted on the Bid Sheet in the space provided.

QUALIFICATION TO CONTRACT WITH PUBLIC BODY

Bidders must be qualified to bid in the State in accordance with Section 14-308 of the State Finance and Procurement Article of the Annotated Code of Maryland which ordains that any person convicted of bribery (upon acts committed after July 1, 1997) in furtherance of obtaining a contract from the state or any subdivision of the State of Maryland shall be disqualified from entering into a contract with the City.

DISABILITY INFORMATION

ANY INDIVIDUALS WITH DISABILITIES WHO WOULD LIKE TO RECEIVE THE INFORMATION IN THIS PUBLICATION IN ANOTHER FORM MAY CONTACT THE ADA COORDINATOR AT 240-314-8100 TDD 240-314-8137.



**CITY OF ROCKVILLE
MARYLAND
GENERAL CONDITIONS AND INSTRUCTIONS TO
BIDDERS
CONSTRUCTION 3/2022**

1. **TERMS AND CONDITIONS** The terms and conditions of this document govern in event of conflict with any terms of the bidder's proposal, and are not subject to change by reasons of written or verbal statement by the contractor unless accepted in writing. Words and abbreviations which have well known technical or trade meanings are used in accordance with such meanings.
2. **COVID-19 VACCINATION REQUIREMENT** The Contractor agrees to provide the City's Project Manager or designated City staff proof of vaccination of any employee, subcontractor, or agent prior to such employee, subcontractor, or agent, pursuant to this Agreement, entering a City facility and performing any service or making any delivery in close proximity to one or more City employees, members of the Mayor and Council, members of a City board, commission or task force, or members of the general public in the City. Proof of vaccination means the demonstration of having received a full dose of a COVID-19 vaccine authorized by the Food and Drug Administration in a manner and on a schedule consistent with current United States Centers for Disease Control and Prevention guidelines. This paragraph shall not apply to any deliveries made pursuant to this Agreement by a common carrier.
3. **PRE-BID MEETING** A virtual, telepresence pre-bid meeting may be held for the purpose of describing the project and for answering any questions prospective bidders may have. If applicable, time and date will be shown on the bid announcement page.
4. **SUBMISSION OF BID** All bids are to be submitted electronically, in a pdf format file, via a City designated bid receipt software solution. File name of the pdf document must contain the Bid Number, Bidders Name and Bid Due Date. The following forms must be submitted:
 - Bid proposal page(s) in duplicate
 - Non-collusion/non-conviction affidavit
 - Bid Bond
 - Reference sheet
 - Other forms as required in the bid document.

The bid proposal form must be filled out and submitted electronically. Conditional bids and bids containing escalator clauses will not be accepted. All bids must be regular in every respect and no interlineation, exclusions, or special conditions shall be made or included. Bids must contain an electronic or scanned signature, in the space provided, of an individual authorized to bind the bidder.

5. **LATE BIDS** It is the bidder's responsibility to assure delivery of the bid at the proper time via the designated electronic, software solution. Bids delivered in any other fashion will not be considered. All bids will be publicly opened in a virtual environment after the time set for receipt of bids and read aloud via a City telepresence software solution. Bidders may attend bid openings at the phone number and/or web address provided by the City.
6. **ADDENDUM** In the event that any addenda to this solicitation are issued, all solicitation terms and conditions will retain in effect unless they are specifically changed in the addendum. It is the responsibility of the bidder to make inquiry as to addenda issued. Oral answers to questions relative to interpretation of specifications or the proposal process will not be binding on the City.

Such addendums, if issued, will be posted via the city's designated electronic, software solution

Please note, that it is the bidder's responsibility to check this site frequently for Addendums, which may impact pricing, this document's requirements, terms and/or conditions. Failure to acknowledge an addendum on the bid proposal form or to sign and return an Addendum with your response may result in disqualification of proposal.

7. **BID OPENING** All bids received in response to an Invitation for Bid will be opened at the date, time and place specified and publicly read via a City telepresence software solution. A tabulation of bids received are posted using the City's designated electronic software solution.
8. **ACCEPTANCE OF BIDS** The City will accept or reject any or all bids or any or all items within ninety (90) days after the date of bid opening. Bids may not be withdrawn during that period.
9. **BID WITHDRAWAL** Bids may be electronically withdrawn (deleted) or modified by deleting the initial file uploaded and replacing it with a modified file using the City's electronic, software solution before the time specified for bid opening. Requests received after bid opening will not be considered.
10. **BID AWARD** Award will be made to lowest responsive and responsible bidder complying with all provisions of the Invitation for Bid, provided the price is reasonable and in the best interest of the City to accept. The City reserves the right to award by individual commodities/services, group, all or none or any combination thereof. When a group is specified, all items in the group must be bid.

In determining the responsibility of a bidder, the following criteria will be considered:

- a. The ability, capacity and skill of the bidder to perform the contract or provide the services required;
- b. Whether the bidder can perform the contract or provide the service promptly, or within the time specified, without delay or interference;

- c. The character, integrity, reliability, reputation, judgment, experience and efficiency of the bidder;
- d. The quality of performance on previous contracts or services;
- e. The previous and existing compliance by the bidder with laws and ordinance relating to the contract or service;
- f. The sufficiency of the financial resources and ability of the bidder to perform the contract or provide the service;
- g. The quality, availability and adaptability of the goods or services to the particular use required;
- h. The ability of the bidder to provide future maintenance and service for the use of the subject of the contract;
- i. Whether the bidder is in arrears to the City or a debt or contract or is in default on a surety to the City;
- j. Such other information as may be secured by the City having a bearing on the decision to award the contract.

11. ELECTRONIC PAYMENT OPTION

The Vendor ACH Payment Program of the City allows payments to be deposited directly to a designated financial institution account. Funds will be deposited into the account of your choice automatically and on time. All transactions are conducted in a secure environment. The program is totally free as part of the Finance Department's efforts to improve customer services. Program information and registration can be viewed at the following web address:

<https://na3.docuSign.net/Member/PowerFormSigning.aspx?PowerFormId=8868c030-9f7e-4b3e-88de-c89fbce65636&env=na3&acct=b56266c3-6d22-426a-8422-e01bcbb466ec&v=2>

12. SENSITIVE DOCUMENTS

All project participants needing either electronic or hardcopy documents dealing with critical facilities or sensitive information will be required to make application with, and receive approval from the City prior to receiving this information. Permission to receive said documents (herein referred to as "sensitive") will pertain only to the individual approved. Sensitive documents (either electronic or hardcopy documents dealing with critical facilities or sensitive information) received from the City must be handled consistent with the terms of non-disclosure required for application. Contractor is responsible to restrict use of sensitive documents to project participants only and shall take appropriate measure to prevent distribution of sensitive document to anyone inside or outside of the Contractor's company except Contractor's project participants. After completion of the project, all sensitive documents remaining in the Contractor's possession shall continue to be governed under the terms of non-disclosure and must continue to be stored in a secure manner. After such records are no longer needed for record purposes, the records shall be destroyed or returned to the City.

Where services require the Contractor to access the City's electronic information resources and/or its

electronic data assets, the Contractor shall adhere to all requirements, terms and conditions of the City's Contractor/Vendor On-Site and Remote Access Confidentiality Agreement, which can be viewed at the following web address:

<https://www.rockvillemd.gov/documentcenter/view/36407>

- 13. **DOCUMENTS, MATERIALS AND DATA** All documents materials or data developed as a result of this contract are the City's property. The City has the right to use and reproduce any documents, materials and data, including confidential information, used in the performance of, or developed as a result of this contract. The City may use this information for its own purposes, including reporting to state and federal agencies. The contractor warrants that it has title to or right to use all documents, materials or data used or developed in connection with this contract. The Contractor must keep confidential all documents, materials and data prepared or developed by the contractor or supplied by the City.
- 14. **ERRORS IN BIDS** When an error is made in extending total prices, the unit price will govern. Erasures in bids must be initialed by the bidder. Carelessness in quoting prices or in preparation of the bid will not relieve the bidder from performing the contract. Errors discovered after public opening cannot be corrected and the bidder will be required to perform if the bid is accepted.
- 15. **MISTAKES** Bidders are expected to be thoroughly familiar with all bid documents, including all addenda. No consideration will be granted for any alleged misunderstanding of the intent of the contract documents. In the process of assembling and binding the bid documents individual pages or drawings may have been inadvertently omitted. Each bidder shall carefully and thoroughly examine these bid documents for completeness. No claim of any bidder will be allowed on the basis that these bid documents are incomplete.
- 16. **PRICES** Bids must be submitted on a firm, fixed price, F.O.B. destination basis only unless otherwise specified herein.
- 17. **PROMPT PAYMENT DISCOUNTS** All discounts other than prompt payment are to be included in the bid price. Prompt payment discounts will be considered in the evaluation of your bid if the discount on payment is not conditioned on payment being made in less than thirty (30) days from receipt of invoice.
- 18. **BIDDER'S PAYMENT TERMS** The City will reject as non-responsive a bid under this solicitation, which is conditioned on payment of proper invoices in less than thirty (30) days. However, this does not preclude a bidder from offering a prompt payment discount for payment of proper invoices in less than thirty (30) days.
- 19. **INTEREST IN MORE THAN ONE BID AND COLLUSION**
Multiple bids uploaded/received in response to a single solicitation from an individual, firm, partnership, corporation, affiliate, or association under the same or different names will be rejected. Reasonable grounds for believing that a bidder is interested in more than one bid for a solicitation both as a bidder and as a subcontractor for another bidder will result in rejection of all bids in which the bidder is interested. However, a firm acting only as a

subcontractor may be included as a subcontractor for two or more bidders submitting a bid for the work. Any or all bids may be rejected if reasonable grounds exist for believing that collusion exists among any bidders. Bidders rejected under the above provisions shall be disqualified if they respond to a re-solicitation for the same work.

20. **QUALIFICATION OF THE BIDDER** The City shall have the right to take such steps as it deems necessary to determine the responsibility of the bidder to perform the obligations under the contract and the bidder shall furnish to the City all such information for this purpose as the City may request. The right is reserved to reject any bid where an investigation of available information does not satisfy the City that the bidder is qualified to carry out the terms of the contract.
21. **PLACING OF ORDERS** Orders against contracts will be placed with the Contractor on a Purchase Order (or Procurement Card – currently Mastercard) executed by the Purchasing Agent or designee. Where Master Agreements have been released by the City, orders may be placed directly with the Contractor by authorized personnel in the ordering Department(s). Issuance of all purchase orders will be contingent upon appropriation of funds by the Mayor and Council and encumbrance of such funds after July 1st of each year, as provided by the City Code.
22. **INSPECTION OF THE WORK SITE** Each bidder shall visit the site of the proposed work and become fully acquainted with the existing conditions and fully informed as to any facility involved, and the difficulties and restrictions attending the performance of this contract. Applicable drawings, technical specifications and contract documents should be thoroughly examined. The successful bidder shall in no way be relieved of any obligation due under the executed contract by the failure to examine any form of legal instrument or to visit the site.
23. **RISK OF LOSS AND CONDITION OF SITE** The City makes no representation and assumes no responsibility for the condition of the site or applicable structures on the site. The contractor shall accept the site and the contents thereon in the condition in which they are represented. Any damages or loss whatsoever while the contract is in effect (whether by reason of fire, theft, breakage or other happenings) shall not relieve the Contractor from any obligations under this contract. The Contractor shall store any materials on site as not to damage the materials and shall maintain such storage areas, as directed by the City, in hazard free condition.
24. **SUBCONTRACTORS** Nothing contained in the contract documents, shall create any contractual relationship between the City and any subcontractor or sub-subcontractor.

Unless otherwise indicated, the successful contractor who will subcontract the delivery, installation, or portion of the work herein described will submit to the Project Manager, prior to the start of work, the following information: 1) A description of the items to be subcontracted, 2) the subcontractor name, address, and telephone number, and 3) the nature and extent of the work utilized during the life of the contract. Subcontractors shall be considered agents of the Contractor, who shall be held fully accountable for all of

the subcontractor services, labor, and materials relative to the contract.

25. **BID BOND** Bids must be accompanied by an electronic copy of a certified check or bid bond for five percent (5%) of the total amount of the bid, made payable to the Mayor and Council of Rockville, where the original security instrument must be mailed to City of Rockville, Procurement Division, 111 Maryland Avenue, Rockville, Maryland 20850, referencing the solicitation number. AIA Bond forms are acceptable. Bonds must be issued by a surety licensed to do business in the State of Maryland. The City reserves the right to disqualify any bid, in any instance, where the City cannot locate the mailed, original security instrument. The City shall not be liable for any certified checks it cannot locate, or in any instance where a certified check is cashed by any individual not employed by the City of Rockville. Bid bonds will not be returned.
26. **EXECUTION OF AGREEMENT/BONDS** Subsequent to award and within fifteen (15) calendar days after the prescribed forms are presented to the Contractor, the Contractor shall execute and electronically deliver to the City the required Agreement and Bonds, where two (2) sets of the original agreement and original bonds must be mailed to City of Rockville, Procurement Division, 111 Maryland Avenue, Rockville, Maryland 20850.

Bonds shall be in effect during the original term of the contract and during the guarantee and warranty period required under the Contract, unless otherwise stated therein.

PERFORMANCE BOND The Contractor shall execute and deliver to the City the required Performance Bond for 100% of the bid amount.

PAYMENT BOND For a contract exceeding One Hundred Thousand Dollars (\$100,000) the payment bond shall be in an amount equal to 100% of the bid amount. For a contract exceeding Twenty-Five Thousand Dollars (\$25,000) but not exceeding One Hundred Thousand Dollars (\$100,000) the payment bond shall be in an amount equal to fifty percent (50%) of the bid amount. Bonds shall be executed by a surety company authorized to do business in the State of Maryland.

The successful bidder may request that in lieu of bonds, the City accept the equivalent in the form of a certified check or other security. Such requests will be accepted or rejected by the City Manager. If rejected, the successful bidder will be required to furnish the bonds or forfeit the bid bond. The City shall not be liable for any certified checks it cannot locate, or in any instance where a certified check is cashed by any individual not employed by the City of Rockville.

Failure of the successful bidder to execute the agreement and supply both the electronic versions and original versions of the required forms within fifteen (15) calendar days shall constitute a default. Any instance where the City cannot locate the mailed versions of the agreement or bonds shall also constitute a default. The successful bidder shall forfeit to the City as liquidated damages for such failure or refusal an amount in cash equal to the security deposited with the bid.

The City may either award the contract to the next low responsive and responsible bidder or re-advertise the bids, and may charge against the original bidder the difference between the amount of the bid and the amount for which a contract for the work is subsequently executed. If a more favorable bid is received by a re-advertising, the defaulting bidder shall have no claim against the City for a refund.

27. **LEGAL REQUIREMENTS** All materials, equipment, supplies and services shall conform to applicable Federal, State, County and City laws, statutes, rules and regulations. The Contractor shall observe and comply with all Federal, State, County and City laws, statutes, rules and regulations that affect the work to be done. The provisions of this contract shall be governed by the laws of the State of Maryland.
28. **INDEMNIFICATION OF THE COUNCIL** The Contractor shall indemnify and save harmless the Mayor and Council from all suits, actions and damages or costs, of every name and description to which the Council may be subjected or put by reason of injury to persons or property as a result of the work, whether caused by negligence or carelessness on the part of the Contractor, or subcontractors or agents thereof.
29. **DELIVERY** Time is of the essence. The Contractor shall expedite the work and achieve substantial completion within the contract time. If time limits are not specified, state the number of days required to make delivery/completion in the space provided. Defective or unsuitable materials or workmanship shall be rejected and shall be made good by the Contractor, not withstanding that such materials/workmanship have been previously been overlooked and accepted.
30. **CHANGES IN QUANTITIES/ITEMS** The City reserves the right to add or delete any item(s) from the bid in whole or in part at the City's discretion as given in the Bid or Proposal wherever it deems it advisable or necessary so to do and such changes shall in no way vitiate the contract nor affect the bid prices for any item or remaining work. Unit prices submitted in the bid shall not be increased or decreased regardless of changes in quantity. The City may waive minor differences in specifications in bids provided these differences do not violate the specifications' intent nor materially affect the operation for which the items or services are being purchased

The Contractor will be paid for the actual amount of authorized work done or material furnished under any item of the bid at the price bid and stipulated for such item. In case any quantity is increased, the Contractor shall not be entitled to any increased compensation over and above the unit price bid for such item, or any claim for damages on account of loss of anticipated profits should any quantities be decreased. The Contractor shall be responsible for confirming the accuracy of the specified quantities prior to ordering materials or supplies and the City's payment shall be based on the actual quantities incorporated in the work and not the quantities specified in the bid document. The quantities must not exceed the Contract specified quantities without specific written authorization of the Project Manager and it is the Contractor's responsibility to obtain said authorization.

31. **MATERIALS** All materials shall be new and free from defects. They shall be standard products of current manufacture. Unless otherwise noted in the contract documents, the Contractor shall abide by specific manufacturer instructions and recommendations on installation and operation.
32. **BRAND NAME OR EQUAL** Identification of an item by manufacturer's name, trade or brand name, or catalog number is for information and establishment of a quality level desired and is not intended to restrict competition. Bidders may offer any brand which meets or exceeds the specification, unless 'brand name only' is specified. Bids on other makes and/or models will be considered provided the bidder clearly states on the proposal what is being proposed and forwards with the bid complete descriptive literature indicating how the characteristics of the article being offered will meet the specifications. The City reserves the right to accept or reject items offered as an equal.
33. **DEFECTIVE MATERIALS/WORKMANSHIP** Defective or unsuitable materials or workmanship shall be rejected and shall be made good by the Contractor. If the work shall be found to be defective or to have been damaged before final acceptance, the Contractor shall make good such defect in a manner satisfactory to the City, without extra compensation even though said defect or injury may have not been due to any act or negligence of the Contractor.
34. **TIME OF BEGINNING AND COMPLETION** Unless otherwise stipulated in the bid document, the Contractor shall begin work on the Contract within ten (10) working days after the mailing of a purchase order and shall diligently prosecute the same, so that it shall be fully completed within the time as stated in the contract. The Contractor shall not commence any work under the Contract until a written Purchase Order is received from the Purchasing Agent.
35. **FAILURE TO COMPLETE WORK ON TIME/ LIQUIDATED DAMAGES** The Contractor accepts this contract with the understanding and intention to perform fully and in an acceptable manner within the time stated. Should he fail to complete fully, to all intent and purpose, the work specified in the time specified, or within the time as it may have been extended by the City, the Contractor shall pay, for each calendar day that any work shall remain uncompleted, not including Sundays, the sum of \$400 per calendar day or such other amount as specified in the Special Provisions. This sum is hereby agreed upon, not as a penalty, but as liquidated damages and the City shall have the right to deduct the amount of such damages from any moneys due the Contractor under this Contract.
- The City shall recover such Liquidated Damages by deducted the amount thereof out of any moneys due or that may become due the Contractor, and if said moneys are insufficient to cover said damages, then the Contractor or the Surety shall pay the amount due upon demand by the City.
36. **AUTHORITY OF THE CITY MANAGER IN DISPUTES** Except as may otherwise be provided by the final agreement, any dispute concerning a question of fact arising under the agreement signed by the City and the Contractor which is not disposed of by the final agreement shall be decided by the City Manager who

shall notify the Contractor in writing of his determination. The Contractor shall be afforded the opportunity to be heard and offer evidence in support of the claim. Pending final decision of the dispute herein, the Contractor shall proceed diligently with performance under the agreement signed by the City and the Contractor. The decision of the City Manager shall be final and conclusive unless an appeal is taken pursuant to the City Purchasing Ordinance.

37. **CONTRACT DELAYS/EXTENSION OF TIME** The Contractor shall pursue the contract so as to complete all work within the time allotted in the bid document. The completion date as set in the bid document allows for inclement weather, holidays and coordination with other companies. If the Contractor is delayed in the delivery of the supplies, equipment or services by any act of neglect of the City or by a separate Contractor employed by the City, or by any changes, strikes, lockouts, fires, unusual delays in transportation or delay authorized by the City, the City shall review the cause of such delay and shall make an extension of time if warranted. All claims for extensions must be in written notice sent to the Project Manager within ten (10) calendar days after the date when such alleged cause for extension of time occurred. All such claims shall state specifically the amount of time of the delay the Contractor believes to have suffered. If written notice is not received within the prescribed time the claim shall be forfeited and invalidated.
38. **CONTRACT DELAYS - NO DAMAGE CLAIMS ACCEPTED** The Contractor shall make no claim for extra monetary compensation for delays, whether ordered by the City or not, caused by delays in funding, governmental approvals, private or public companies' actions, inclement weather, site conditions, or from any cause whatsoever. The Contractor shall adjust its operation to continue the work at other locations under the contract, if available, and as directed by the City. If it is necessary to discontinue the work temporarily, the Contractor shall resume work within 48 hours of notice from the City. The City may adjust the completion date to compensate for the lost day(s) on a day-for-day basis, if the City finds that the Contractor could not make up for such lost day(s) by reallocating its forces or rescheduling the work, up to the time remaining on the original schedule at the time of shutdown.
39. **PROGRESS SCHEDULE AND SCHEDULE OF OPERATIONS** The construction of this project will be planned and recorded with an Activities Chart Project Schedule (AC) and Written Narrative (WN) unless specifically determined to be unnecessary by the Project Manager. The AC Project Schedule and Written Narrative will break down, in detail, the time (working days or completion date) involved in performing major construction activities for the duration of the project. The AC Project Schedule shall be used for the coordination and monitoring of major work under the contract including the activities of subcontractors, vendors and suppliers. The AC Project Schedule shall be prepared in accordance with the requirements of the Maryland State Highway Administration Standard Specifications for Construction and Materials dated January 1982, and the errata and addend thereto, subsequent supplement(s) and the Special Provisions as set forth in this Invitation for Bids, unless otherwise directed or approved by the Project Manager. The schedule shall be consistent with the contract specified completion date(s) and/or working

days. The Contractor is responsible for preparing the initial AC Project Schedule and Written Narrative.

Preparation of Initial Schedule - Within 10 calendar days after notification that the Contractor is the apparent successful bidder, the Contractor will complete development of a initial AC Project Schedule and Written Narrative (describing the logical time representations as proposed in the AC Project Schedule), and submit 2 (two) copies of each AC and WN to the Project Manager for review and approval.

Updating Project Schedule: At any time that it becomes apparent the schedule, created as above and approved by the Project Manager, is not being implemented, either because the work or service is ahead or behind schedule, the Contractor shall immediately notify the Project Manager and shall submit a revised, written, updated AC and WN for the Project Manager's review, revision and approval. The contractor shall make every effort to meet the original completion date and/or working days allowed unless otherwise so directed by the Project Manager.

Payment for Schedule AC/WN: No special compensation will be paid for preparing or revising the above project AC/WN as the cost shall be considered incidental to the contract with compensation incorporated into the bid items(s).

40. **SPECIFICATIONS** The Construction Specifications for this contract will be those shown below and additions included in the bid document, if applicable. In the event of conflict, the City determination shall govern. The following specifications and standards, listed below, including all subsequent addenda, amendments and errata are made part of this contract to the extent required by the references thereto:
1. Maryland Department of Transportation, State Highway Administration, "Standard Specifications for Construction and Materials" (Maryland Department of Transportation, State Highway Administration), dated January 2008 and all errata and addenda thereto. MDSHA Book of Standards for Highway and Incidental Structures.
 2. Montgomery County Department of Transportation "Montgomery County Road Construction Code and Standard Specifications."
 3. Standard Specifications of WSSC dated July 2005.
 4. Montgomery County Department of Transportation "Design Standards" August 1991.
 5. Maryland Dept of the Environment "1994 Standards and Specifications Soil Erosion and Sediment Control"
 6. The U. S. Department of Transportation, Federal Highway Administration, "Manual on Uniform Traffic Control Devices" latest edition.
 7. Montgomery County Noise Ordinance.
41. **CONTRACT DOCUMENTS** The contract documents are complementary and what is required by any one shall be binding as if required by all. Words and abbreviations that have well known technical or trade meanings are used in the contract documents in accordance with such recognized meanings. On drawings, the figured dimensions shall govern in the case of discrepancy between the scales and figures. Anything shown on the construction plans and not mentioned in the

specifications or mentioned in the specifications and not shown on the plans shall have the same effect as if shown or mentioned respectively in both.

Prior to bidding, the Contractor should obtain clarification of all questions which may have arisen as to intent of the contract document, or any actual conflict between items in the contract documents. Should the Contractor have failed to obtain such clarification, then the City may direct that the work proceed by any method indicated, specified or required, in the judgment of the City, by the contract documents. Such direction by the City shall not constitute the basis for a claim for extra costs by the Contractor. The Contractor acknowledges that he had the opportunity to request clarification prior to submitting his bid to the City and that he is not entitled to a claim for extra cost as a result of failure to receive such clarification.

Any discrepancies which may be discovered during the execution of work between actual conditions and those represented by the contract documents shall be reported to the City and work shall not proceed until written instruction has been received by the contractor from the City.

42. **INTERPRETATION** Any questions concerning terms, conditions and definitions of the contract and bidding regulations shall be directed in writing to the Contract Officer. Any questions concerning the technical specifications and drawings shall be directed in writing to the Project Manager. The submission of a bid shall be prima facie evidence that the bidder thoroughly understands the terms of the contract documents. The Contractor shall take no advantage of any error or omission in these contract documents.
43. **PRE-CONSTRUCTION CONFERENCE** A pre-construction conference may be held in person or virtually following contract award. The meeting must be attended by the Contractor. No compensation will be made by the City to the Contractor for meetings.
44. **EMERGENCY CONTACT** The Contractor shall provide at least two local telephone numbers which may be used for contacting an official of the Contractor at all times, 24 hours per day, seven days per week: at which numbers person(s) of responsibility will be available to respond to City directives relative to the contract. The Contractor shall have available sufficient personnel and equipment to immediately respond to emergency needs, as determined by the City. There will be no special compensation paid for this requirement but the cost is to be considered incidental to the other contract pay items.
45. **SUPERVISION AND DIRECTION OF WORK** The work shall be under the general supervision of the Project Manager. While it is intended that the Contractor shall be allowed in general to carry on the contract in accordance with such general plan as may appear to the Contractor most desirable, the Project Manager, at the Project Manager's discretion, may from time to time, direct the order in which, and points at which, the work shall be prosecuted and may exercise such general control over the conduct of the work at a time or place, as shall be required, in the Project Manager's opinion, to safeguard the interests of the City, and the Contractor shall have no claims for damages or extra compensation on account of the fact that it shall have been necessary to carry on the work in different sequence from that which

the Contractor may have contemplated. The Contractor shall immediately comply with any and all orders and instructions given by the Project Manager, but nothing herein contained shall be considered such an assumption of control over the work by the City or the Project Manager as to relieve the Contractor of any obligations or liabilities under the contract.

46. **INSPECTION** Work and materials will be inspected promptly to see that the same strictly correspond with the drawings and specifications, but if, for any reason, delay should occur in connection with such inspection, the Contractor shall have thereby no claim for damages or extra compensation. Materials and workmanship shall be always subject to the approval of the Project Manager, but no inspection, approval or acceptance of any part of the work or of the materials used therein, nor any payment on account thereof shall prevent the rejection of said materials or work at any time thereafter, should said work or materials be found to be defective or not in accordance with the requirements of the contract. Any costs for any "re-inspection" of the job shall be the responsibility of the contractor.
47. **TERMINATION FOR DEFAULT** The contract may be cancelled or annulled by the City in whole or in part by written notice of default to the Contractor upon nonperformance or violation of contract terms and an award made to next low Bidder, or, articles specified may be purchased on the open market similar to those so terminated. In either event, the defaulting Contractor (or his surety) shall be liable to the City for costs to the City in excess of the defaulted contract prices: provided, that the Contractor shall continue the performance of this contract to the extent not terminated under the provisions of this clause.
48. **TERMINATION FOR CONVENIENCE** This Contract may be terminated, in whole or in part, upon written notice to the Contractor when the City determines that such termination is in its best interest. The termination is effective 10 days after the notice is issued, unless a different time is given in the notice. The City is liable only for payment for goods and services delivered and accepted or approved by the City prior to the effective date of the termination.
49. **EMPLOYEES** The Contractor shall employ only competent, skillful persons to do the work, and whenever the Project Manager shall notify the Contractor in writing that any person employed on the work is, in his opinion, incompetent, disobedient, disorderly, discourteous or otherwise unsatisfactory, such person shall be discharged from the work and shall not again be employed for this contract except with the consent of the Project Manager.
50. **NON-WORK DAY** The City observes the following holidays: New Year's Day, Martin Luther King's Birthday, President's Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, Thanksgiving Friday and Christmas Day, all days of general and congressional elections throughout the State, and a five-day work week.

The Contractor will not be permitted to do any work which requires the services of the City's inspection, supervisory or line and grade forces on the days on which the above mentioned holidays are observed by the City or on Saturdays or Sundays, unless otherwise

authorized by the Project Manager in writing. However, the Contractor, with verbal permission of the Project Manager, may be permitted to perform clean up and such other items for which no specific payment is involved on Saturdays and holidays.

The normal number of working hours per day on this Contract will be limited to eight, unless otherwise authorized by the Project Manager in writing.

In case of an emergency, which may require the services of the City on Saturdays, Sundays, holidays or longer than eight hours per day, the Contractor shall request permission of the Project Manager to work. If, in the opinion of the Project Manager the emergency is bona fide, he will grant permission to the Contractor to work such hours as may be necessary. Also, if in the opinion of the Project Manager, a bona fide emergency exists, the Project Manager may direct the Contractor to work such hours as may be necessary whether the Contractor requests permission to do so or not.

51. **LANGUAGE** The Contractor shall appoint one or more crewmembers or supervisors to act as liaison with the City and emergency services personnel. All liaisons shall be fluently bilingual in English and the Contractor's employees' language(s), and at least one liaison shall be present at each work site at all times when any of the Contractor's employees or agents are at the site.
52. **IMMIGRATION REFORM AND CONTROL ACT**
The Contractor awarded a contract pursuant to this bid shall warrant that it does not and shall not hire, recruit or refer for a fee, for employment under the contract, an alien knowing the alien is an unauthorized alien and hire any individual without complying with the requirements of the Immigration Reform and Control Act of 1986 (the Act), including but not limited to any verification and record keeping requirements. The Contractor shall further assure the City that, in accordance with the Act, it does not and will not discriminate against an individual with respect to hiring, or recruitment or referral for a fee, of the individual for employment or the discharging of the individual from employment because of such individual's national origin or in the case of a citizen or intending citizen, because of such individual's citizenship status.
53. **EQUAL EMPLOYMENT OPPORTUNITY** The Contractor will not discriminate against any employee or applicant for employment because of age (in accordance with applicable law), ancestry, color, national origin, race, ethnicity, religion, disability, genetics, marital status, pregnancy, presence of children, gender, sexual orientation, gender identity or expression, or veteran status. The Contractor will take affirmative action to ensure that applicants are employed, and the employees are treated fairly and equally during employment with regard to the above. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment, layoff or termination, rates of pay or other form of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause. Contractors must also include the same nondiscrimination language in all subcontracts.

If the Contractor fails to comply with nondiscrimination clauses of this contract or fails to include such contract provisions in all subcontracts that subcontractors will not discriminate against any employee or applicant for employment in the manner described above, this contract may be declared void AB INITIO, cancelled, terminated or suspended in whole or in part and the Contractor may be declared ineligible for further contracts with the City of Rockville. Any employee, applicant for employment, or prospective employee with information concerning any breach of these requirements may communicate such information to the City Manager who shall commence a prompt investigation of the alleged violation. Pursuant to such investigation, the Contractor will permit access to the Contractor's books, records, and accounts. If the City Manager concludes that the Contractor has failed to comply with nondiscrimination clauses, the remedies set out above may be invoked.

54. **ETHICS REQUIREMENTS** In accordance with the City's financial disclosure and ethical conduct policy and/or ordinances a prerequisite for payment pursuant to the terms of this contract is that the Contractor may be required to furnish explicit statements, under oath, that the City Manager, and/or any other officer, agent, and/or employee of the City, and any member of the governing body of the City of Rockville or any member or employee of a Commission, Board, or Corporation controlled or appointed by the City Council, Rockville, Maryland has not received or has not been promised directly or indirectly any financial benefit by way of fee, commission, finder's fee, or in any other manner, remuneration arising from directly or indirectly related to this contract, and that upon request by the City Manager, or other authorized agent, as a prerequisite to payment pursuant to the terms of this contract, the Contractor will furnish to the Mayor and Council of the City of Rockville, under oath, answers to any interrogatories to a possible conflict of interest has herein embodied.
55. **DRAWINGS TO BE FOLLOWED** The approved drawings, profiles and cross sections on file with the City will show the location, details and dimensions of the work contemplated, which shall be performed in strict accordance therewith and in accordance with the specifications. Any deviations from the drawings or specifications as may be required by the exigencies of construction in all cases will be determined by the Project Manager. There shall be no such deviations without the written authorization of the Project Manager. On all drawings, etc., the figured dimensions shall govern in the case of discrepancy between the scales and figures. The Contractor shall take no advantage of any error or omission in the drawings or specifications. The Project Manager shall make such corrections and interpretations as may be deemed necessary for the fulfillment of the intent of the specifications and of the drawings as construed by the Project Manager whose decision shall be final.
56. **CERTIFICATION** Under no circumstances will Contractors be paid for materials utilized on any City contract unless certified to by the Project Manager. The Contractor must not incorporate any materials into a City project without prior authorization and certification of the Project Manager, unless necessary to eliminate or avoid hazardous conditions. Under these emergency circumstances the responsibility for notification to the Project Manager and quantity/quality confirmation rests

with the Contractor and must be obtained within 24 hours of the work.

57. **DECISIONS AND EXPLANATIONS BY PROJECT MANAGER** The Project Manager shall make all necessary explanations as to the meaning and intent of the specifications and drawings, and shall give all orders and directions, either contemplated therein or thereby, or in every case in which a difficult or unforeseen condition arises during the prosecution of the work. Should there be any discrepancies or should any misunderstanding arise as to the intent of anything contained in the drawings and specifications, the decision of the Project Manager shall be final and binding. The Project Manager shall in all cases determine the amount, quality, acceptability and estimates of the work to be paid for under the Contract, and shall decide all questions in relation to the work. In case any questions arise between parties relating to the Contract, such decision and estimate shall be a condition precedent to the right of the Contractor to receive payment under that part of the Contract which is in dispute.
58. **WORK TO BE DONE AND MATERIALS TO BE FURNISHED** The Contractor shall do all the work and furnish all the labor, materials, tools, and equipment necessary or proper for performing the work required by the Contract, in the manner called for by the drawings and specifications and within the Contract time. The Contractor shall complete the entire work together with such extra work as may be required, at the prices fixed therefore, to the satisfaction of the Project Manager and in accordance with the specifications and drawings.
59. **NOTIFICATION TO OTHER AGENCIES** The Contractor will be responsible for notifying all concerned agencies affected by the work a minimum of 48 hours in advance of any activity, as prescribed by said agencies, including, but not limited to: the Washington Gas, PEPCO, Verizon Comcast Cable, Transcontinental Gas, City of Rockville Utilities Division, Montgomery County Government, State Highway Administration and the Washington Suburban Sanitary Commission. The Contractor must notify MISS UTILITY at 1-800-257-7777 a minimum of 72 hours and no more than 5 working days prior to removal of any pavement or beginning any excavation. There shall be no measurement or direct payment to the Contractor for such notification, working around, the protection of, or repair of damage to such existing utilities caused by the proposed construction activities directly or indirectly.
60. **PERMITS AND REGULATIONS** Unless stipulated elsewhere in these specifications, the Contractor shall be responsible for obtaining and paying for all applicable permits. Where signatures of the City are required in connection with the obtaining of such permits, certificates, etc., the Contractor shall prepare the proper paperwork and present it to the City for signature. City of Rockville Permit fees shall be waived. If the Contractor ascertains at any time that any requirement of this contract is at variance with applicable laws, ordinances, regulations and/or building codes, notification to the Project Manager shall be made immediately and any necessary adjustment to the contract shall be made. Without proper notice to the Project Manager, the Contractor shall bear all costs arising from the performance of work the Contractor knows to be contrary to such laws, ordinances, etc.

61. **EXCAVATION** Unless specifically provided in the specifications, all trench and roadway excavation is hereby unclassified as to the character of materials. The lump sum or unit price, as specified, for or including excavation shall constitute full payment for removal and disposal of all materials, regardless of type, encountered in trenching and roadway excavation, within the limits of this Contract, as necessary and as shown to be removed on the Contract drawings and/or as directed by the Project Manager, except as otherwise provided for under this Contract. All bidders are hereby directed to familiarize themselves with all site conditions including subsurface and the proximity of adjacent features.
62. **SERVICE OF NOTICES** The mailing a written communication, notice or order, addressed to the Contractor at the business address filed with the City, or to his office at the site of the work shall be considered as sufficient service upon the Contractor of such communication, notice or order; and the date of said service shall be the date of such mailing. Written notice shall also be deemed to have been duly served if delivered in person to the individual or member of the firm or to any officer of the corporation for whom it was intended if delivered or sent by registered or certified mail to the last known address.
63. **PATENT RIGHTS** Whenever any article, materials, equipment, process, composition, means, or things called for by these specifications is covered by letters of patent, the successful bidder must secure, before using or employing such article, material etc., the assent in writing of the Owner or Licensee of such Letters of Patent and file the same with the City.
- The said assent is to cover not only the use, employment, and incorporation of said article, material, equipment, process, composition, combination, means, or thing in the construction and completion of the work but also the permanent use of said article, material, etc., thereafter by or on behalf of the City, in the operation and maintenance of the project for the purposes for which it is intended or adapted. The Contractor shall be responsible for any claims made against the City, its agents and employees or any actual or alleged infringement of patents by the use of any such patented articles, etc., in the construction and completion of the work, and shall save harmless and indemnify the City, its agents and employees from all costs, expenses, and damages, including Solicitor's and Attorney's fees which the City may be obligated to pay by reason of any actual or alleged infringement of patents used in the construction and completion of the work herein specified.
64. **CARE AND PROTECTION OF WORK** From the commencement of the Contract until its completion, the Contractor shall be solely responsible for the care of the work and all injury or damage to the same, from whatever cause, shall be made good by the Contractor at the Contractor's own expense, before the final estimate is made. The Contractor shall provide suitable means of protection for all materials intended to be used in the work and for work in progress, as well as completed work.
65. **ABANDONMENT OF OR DELAY IN WORK** If the work under the Contract shall be abandoned by the Contractor, or if at any time the Project Manager shall be of the opinion and shall so certify, in writing, to the Contractor, that the performance of the Contract is

unnecessarily or unreasonably delayed, or that the Contractor has violated any of the provisions of the Contract or is executing the same in bad faith or if the work is not fully completed within the time specified for its completion, together with such extension of time as may have been granted, the City by written notice, may order the Contractor to discontinue all work there under, or any part thereof, within the number of days specified on such notice. At the expiration of said time the Contractor shall discontinue the work, or such part thereof, and the City shall have the power, by Contract, or otherwise, to complete said work and deduct the entire cost thereof from any monies due or to become due the Contractor under the Contract. For such completion of work the City may, for itself or its Contractor, take possession of and use or cause to be used any or all materials, tools, and equipment found on the site of said work. When any part of the Contract is being carried on by the City, as herein provided, the Contractor shall continue the remainder of the work in conformity with the terms of the Contract and in such manner as not to interfere with the City's workmen.

66. **SUBLETTING OR ASSIGNING OF CONTRACT** The City and the Contractor each bind themselves, their partners, successors, assigns and legal representatives of such other parties in respect to all covenants, agreements, and obligations contained in the contract documents. Neither party to the contract shall sublet, sell, transfer, assign or otherwise dispose of the Contract or any portion thereof, or of the work provided for therein, or of his right, title or interest therein to any person, firm or corporation without the written consent of the other party, nor shall the Contractor assign any monies due or to become due hereunder without the previous written consent of the City.
67. **NO WAIVER OF CONTRACT** Neither the acceptance by the City or its Project Manager nor any order, measurement, certificate or payment of money, of the whole or any part of the work, nor any extension of time nor possession taken by the City or its Project Manager shall operate as a waiver of any portion of the Contract, or any right to damage therein provided. The failure of the City to strictly enforce any provision of this contract shall not be a waiver of any subsequent breach of the same or different nature.
68. **DUTIES, OBLIGATIONS, RIGHTS AND REMEDIES** The duties and obligations imposed by the contract documents and the rights and remedies available there under shall be in addition to and not a limitation of the duties, obligations, rights and remedies otherwise imposed or available by law, unless so indicated.
69. **IMPLIED WORK** All incidental work required by the drawings or specifications for which no payment is specifically provided and any work or materials not therein specified which are required to complete the work and which may fairly be implied as included in the Contract, and which the Project Manager shall judge to be so included, shall be done or furnished by the Contractor without extra compensation. The intent is to prescribe a complete work or improvement which the Contractor undertakes to do in full compliance with the contract documents together with any authorized alterations, special provisions and supplemental agreements.

70. **MEASUREMENT OF WORK AND MATERIAL** The work and material to be paid for will be measured and determined by the Project Manager according to the specifications and drawings, and the working lines that may be given. No allowance will be made for any excess above the quantities required by the specifications, drawings and lines on any part of the work, except where such excess material has been supplied or work done by order of the Project Manager and in the absence of default or negligence on the part of the Contractor. Should the dimensions of any part of the work or of the materials be less than those required by the drawings or the directions of the Project Manager, only the actual quantities placed will be allowed in measurement.

71. **EXTRA COSTS** If the contractor claims that any instructions by the contract documents or otherwise involve extra compensation or extension of time, a written protest must be submitted to the Project Manager within ten (10) calendar days after receipt of such instructions and before proceeding to execute the work, stating in detail the basis for objection. No such claim will be considered unless so made.

72. **CONTINGENT ITEMS & QUANTITIES** Items and quantities identified as being contingent are provided in the Contract for use when and as directed by the Project Manager. These items shown on the Plans or in the specifications are established for the purpose of obtaining a bid price. The quantities for these contingent items may be increased or decreased without any adjustment to the Contract unit price bid or the contingent items may be deleted entirely from the Contract by the Project Manager without negotiation. The Contractor shall submit no claim against the City for any adjustment to the Contract unit price bid, should the contingent items be increased, decreased or eliminated entirely. Payment for any contingent items used will be made on the basis of the quantities as actually measured and as specified in the Specifications. Materials, Construction Requirements and Basis of Payment shall be as specified elsewhere in the Specifications, Plans or Special Provisions.

73. **CHANGES IN THE SCOPE OR EXTRA WORK** The City, without invalidating the contract, may issue written changes in the work consisting of additions, deletions, or modifications with the contract sum and completion date being adjusted accordingly. All such changes, or additional work must be authorized in writing by the Purchasing Agent prior to starting such work. Costs shall be limited to the cost of materials, labor, field supervision and field office personnel directly involved in and attributed to the change. All costs and/or credits to the City for a change in the work shall be determined by the unit price bid or by mutual agreement.

The Contractor shall do all work that may be required to complete the work contemplated at the unit prices bid or at a lump sum price to be mutually agreed upon.

The Contractor shall perform extra work, for which there is no quantity or price included in the Contract, whenever it is deemed necessary or desirable, to complete fully the work as contemplated, and such work shall be done in accordance with the specifications therefore, or in the best workmanlike manner as directed. Where such a price or sum cannot be agreed upon by both parties, or where this method of payment is impracticable, the Project Manager may order the Contractor to do such

work on a force account basis, which will be paid for as follows.

74. **FORCE ACCOUNT WORK** When the Contractor is required to perform work as a result of additions or changes to the contract for which there are no applicable unit prices in the contract, the City and Contractor shall make every effort to come to an agreed upon price for the performance of such work. If an agreement cannot be reached, the City may require the Contractor to do such work on a force account basis to be compensated in accordance with the following:

- A. **Labor.** For all labor and for foremen in direct charge of the specific operations the Contractor shall receive the actual wages for each and every hour that said labor and foremen are actually engaged in such work.
- B. **Materials.** For materials accepted by the Project Manager and incorporated into the project, the Contractor shall receive the actual cost of such materials, including transportation charges paid by him (exclusive of machinery rentals as hereinafter set forth). Excess materials delivered to the job site and not incorporated into the project will not be paid for and it is the Contractor's responsibility to remove said excess material from the job site.
- C. **Equipment.** For any machinery or special equipment (other than small equipment tools, whether rented or owned), the use of which has been authorized in writing, by the Project Manager the Contractor shall receive the rates agreed upon in writing before such work is begun which price shall include fuel, oil and miscellaneous necessities, or the Contractor shall receive those rates which may be specified elsewhere in the Special Provisions. For the purpose of definition, equipment with a new cost of \$1000 or less will be considered small tools and equipment.
- D. **Materials and Supplies Not Incorporated in the Work.** For materials and supplies expended in the performance of the work (excluding those required for rented equipment) and approved by the Project Manager, the Contractor shall receive the actual cost of such materials and supplies used.
- E. **Subcontractors.** The Contractor shall receive the actual cost of work performed by a subcontractor. Subcontractor's cost is to be determined as in A., B., C., and D. above, plus the fixed fee for overhead and profit allowance computed as in G.
- F. **Superintendence.** No additional allowance shall be made for general superintendence, the use of small tools, or other costs for which no specific allowance is herein provided
- G. **Contractor's Fixed Fee.** The procurement officer and the Contractor shall negotiate a fixed fee for force account work performed pursuant to this specification by his force and by his subcontractors. The City shall pay 10 percent of A as compensation for overhead and profit for the work performed. The

Contractor shall proceed diligently with the performance of the force account work to completion. The Contractor's fixed fee shall include an amount equal to the sum of 65 percent of A, which shall include, but not be limited to the following:

- (1) Compensation for all costs paid to, or in behalf of, workmen by reason of subsistence and travel allowances, health and welfare benefits, pension fund benefits or other benefits that may be required by collective bargaining agreement or other employment contract generally applicable to the classes of labor employed in the work; and
- (2) Bond premiums, property damage, liability and workmen's compensation insurance premiums, unemployment insurance contributions and Social Security taxes on the force account work.

In addition, the Contractor's fixed fee may include an amount not to exceed 10 percent of B, unless specifically authorized by the Project Manager in advance of the work; 5 percent of D, and 5 percent of E with the exception of that portion chargeable to equipment as defined above.

- H. **Compensation.** The compensation as set forth above shall be received by the Contractor as payment in full for change order work done on a force account basis. At the end of each day, the Contractor's representatives and the Project Manager, shall compare records of the cost of work as ordered on a force account basis. Differences shall be immediately resolved and any unresolved difference shall be brought to the attention of the Project Manager by written notice from the Contractor within two working days of the occurrence.
- I. **Statements.** No payment will be made for work performed on a force account basis until the Contractor furnishes the Project Manager duplicate itemized statements of the cost of such force account work detailed as to the following:
 - (1) Name, classification, date, daily hours, total hours, rate, and extension for such workmen. Contractor shall provide certified payrolls
 - (2) Designation, dates, daily hours, total hours, rental rate, and extension for each unit of machinery and equipment. Contractor shall provide original receipted invoices.
 - (3) Quantities of materials, prices and extensions. Contractor shall provide original receipted invoices.
 - (4) Transportation of materials. Contractor shall provide original receipted invoices.

If, however, the materials used in the force account work are not specifically purchased for such work but are taken from the Contractor's stock, then in lieu of the original invoices the statements shall contain or be accompanied by

an affidavit of the Contractor which shall certify that such materials were taken from his stock that the quantity claimed was actually used and that the price and transportation of the material as claimed represent actual cost. Any request for payment under this Section should be submitted in the order outlined by the above.

The Contractor shall be responsible for all damages resulting from work done on a force-account basis, the same as if this work had been included in the original Contract.

Work performed without previous written order by the Project Manager will not be paid.

75. **ALLOWANCES** Whenever an allowance is mentioned in the specifications, then the contractor shall include in his contract sum the entire amount of such specified allowances. The expenditure of these allowances is to be at the Purchasing Manager's direction. However, the allowance expenditure is limited to items properly inferable from the title and description of the allowance. Unexpended balances are to be credited to the City. Compensation payable to the contractor for expenditure of allowances directed by the Purchasing Manager shall be based on the cost to the contractor as shown by actual invoices or receipts, and no additional overhead or profit shall be payable to the contractor for such allowances.

76. **PROGRESS PAYMENTS AND RETAINAGE** The Contractor shall submit a detailed application for payment on a monthly basis, preferable on an AIA G702 form. Such application for payment, notarized, if required, must be accompanied by supporting data and documents substantiating the Contractor's right to payment and reflecting a five percent (5%) retainage.

Applications for payment shall not include payment for equipment or materials delivered to the site but not installed or for materials or equipment properly stored off-site unless specifically approved by the Project Manager. If such approval is granted, the Contractor must submit with the application for payment, bills of sale or other such documentation satisfactory to the City to establish the City's title to such materials or equipment or otherwise to protect the City's interest, including applicable insurance and transportation to the site for materials and equipment stored off site. Such approvals are typically reserved for "big ticket" items that individually would exceed five percent (5%) of the bid total. The Contractor shall promptly pay each subcontractor and supplier for work completed upon receipt of payment from the City the amount to which said subcontractor is entitled, reflecting any percentage retained from payments to the Contractor on account of each subcontractors work. The Contractor shall, by an appropriate agreement with each subcontractor, require each subcontractor to make prompt payments to his subcontractors in a similar manner.

The City shall be under no obligation to pay or to see to the payment of any moneys to any subcontractor except as may otherwise be required by law.

No Certificate of Payment or partial or entire use of the facility by the City shall constitute an acceptance of any work which is not in accordance with the Contract Documents.

Payments Withheld – The City may decline to certify payment or because of subsequently discovered evidence or observations, nullify the whole or any part of any Certification of Payment previously issued, as may be necessary to protect the City from loss because of: (1) defective work not remedied, (2) third party claim filed or evidence indicating probable filing of such claim, (3) failure of the Contractor to make payments properly to subcontractors or suppliers, (4) reasonable evidence that the work can not be completed for the unpaid balance of the contract sum, (5) reasonable evidence that the work will not be completed within the Contract time, (6) persistent failure to carry out the work.

77. **FINAL PAYMENT REQUEST** Upon reaching substantial completion, as defined by receipt of occupancy permit or when all related punch list items have been completed, whichever date is later, the Contractor may submit a written Application for Final Payment. All supporting documentation and data shall be submitted with the Request for Final Payment as is applicable to the monthly Requests for Payment referenced heretofore.

Out of the amount representing the total of the final payment request the City shall deduct five (5%) percent, which shall be in addition to any and all other amounts which, under the Contract, it is entitled or required to retain and shall hold said sum for a period of one hundred and twenty (120) days after the date of acceptance of the work by the City.

Within thirty (30) days after the approval of the final payment request, the City will pay to the Contractor the amount remaining after deducting from the total amount of the final estimate all such sums as have hereto before been paid to the Contractor under the provision of the Contract and also such amounts as the City has or may be authorized under the Contract to reserve or retain.

Neither the final payment nor the remaining retainage shall become due until the Contractor submits to the Project Manager:

1. An affidavit that all payrolls, bills for materials and equipment and other indebtedness connected with the work for which the City or his property might in any way be responsible, have been paid.
2. Consent of surety to final payment, and
3. If requested, data establishing payment or satisfaction of obligations, such as receipt, release and waivers of liens arising out of the Contract;
4. All punch list items are completed to the satisfaction of the Project Manager.

If any subcontractor refuses to furnish a release or waiver of liens required by the City, the Contractor may furnish a bond satisfactory to the City to indemnify him against any such lien. If any such lien remains unsatisfied after all payments are made, the Contractor shall refund to the City all moneys that the latter may be compelled to pay in discharging such lien, including all costs and reasonable attorney fees.

Acceptance by the Contractor of final payment shall operate as a release to the Mayor and Council and every officer and agent thereof, from all claims and liabilities to the Contractor for anything done or furnished or relating to the work under the contract.

78. **RELEASE OF RETAINAGE** Upon the expiration of the aforesaid period of one hundred and twenty (120) days succeeding the date of acceptance, the City will pay to the Contractor all sums reserved or retained, less such amount as it may be empowered under the provisions of the Contract to retain.
79. **GUARANTEES / WARRANTIES** All guarantees and warranties required shall be furnished by the Contractor and shall be delivered to the Project Manager before final payment is made. The Contractor guarantees that the items conform to the contract documents.
80. **GUARANTEE PERIOD** The Contractor shall warrant and guarantee the work required under this Contract for a period of twelve (12) months from the date of Final Acceptance. The Contractor warrants and guarantees to the City, that materials and equipment furnished under the Contract shall be of good quality and new unless otherwise required or permitted by the Contract Documents, that all work will be in accordance with the Contract Documents, and that all work will be of good quality, free from faults and defects. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. If required by the City, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

The Contractor's obligation to perform and complete the work in a workmanlike manner, free from faults and defects and in accordance with the Contract Documents shall be absolute. The Contractor shall remedy, at his own expense, and without additional cost to the Owner, all defects arising from either workmanship or materials, as determined by the City, or City's representative. The obligations of the Contractor under this Paragraph shall not include normal wear and tear under normal usage.

If the Contractor does not, within ten (10) days after notification from the Project Manager, signify his intention in writing or in action to correct work, as described above, then the Project Manager may proceed with the work and charge the cost thereof to the account of the Contract as herein before provided.

81. **Substantial Completion**. Sufficient completion of the project or the portion thereof to permit utilization of the project, or portion thereof for its intended purpose. Substantial completion requires not only that the work be sufficiently completed to permit utilization, but that the City can effectively utilize the substantially completed work. Determination of substantial completion is solely at the discretion of the City. Substantial completion does not mean complete in accordance with the contract nor shall substantial completion of all or any part of the project entitle the Contractor to acceptance under the contract.

At such time as the Contractor has completed the work and prior to requesting a final inspection, the Contractor shall make written request for an inspection for substantial completion. Such request shall be made no less than seven (7) calendar days prior to the requested date of inspection. An inspection will be made by the City and a determination will be made as to whether or not the work is in fact substantially complete and a "punch list" will be developed. "Punch Lists" containing numerous items or items which may affect the intended

use of the work will be considered cause to delay issuance of a document of Substantial Completion. Operation and Maintenance manuals shall be submitted and approved prior to issuance of any document of Substantial Completion.

82. **TRANSFER OF TITLE** The Contractor warrants that title to all work, materials and equipment covered by the Application for Payment will pass to the City either by incorporation in construction or upon the receipt of payment by the Contractor, free and clear of all liens, claims, interests or encumbrances, and that no work, materials, or equipment covered by an Application for Payment will have been acquired by the Contractor, or by any person performing the work at the site or furnishing materials or equipment for the project, subject to an agreement under which an interest therein or an encumbrance thereon is retained by the seller or otherwise imposed by the Contractor or such other persons.
83. **USE OF PREMISES** Whenever, in the opinion of the Project Manager, any portion of the work is completed or is in an acceptable condition for use, it shall be used for the purpose it was intended, however, such use shall not be held as acceptance of that portion of the work, or as a waiver of any of the provisions of the Contract.
84. **DETERMINATION OF CITY'S LIABILITY** The acceptance by the Contractor of the final payment made as aforesaid shall operate as and be a release to the City and every officer and agent thereof, from all claims by and liabilities to the Contractor for anything done or furnished for or relating to or affecting the work under the contract.
85. **NO LIMITATION OF LIABILITY** The mention of any specific duty or liability of the Contractor in any part of the specification shall not be construed as a limitation or restriction upon any general liability or duty imposed upon the Contractor.
86. **PRESERVATION OF MONUMENTS AND TREES** The Contractor shall be responsible for the preservation of all public and private property, trees, monuments, highway signs, markers, fences, and curbs or other appurtenances, and shall use every precaution to prevent damage or injury thereto. Any expense necessary to provide adequate protection, whether such designated item be on or off the right-of-way, shall be assumed by the Contractor.
87. **PUBLIC ACCESS** The Contractor shall at all times conduct the work in such a manner as to insure the least obstruction to traffic practicable. The convenience and safety of the general public and the residents along the improvement shall be provided for in an adequate and satisfactory manner. Fire hydrants shall be kept accessible to fire apparatus at all times. Handicap access shall remain accessible.
88. **HAZARDOUS AND TOXIC SUBSTANCES** Manufacturers and distributors are required by Federal "Hazard Communication" provision (29 CFR 1910.1200), and the Maryland "Access to Information About Hazardous and Toxic Substances" law to label each hazardous material or chemical container, and to provide Material Safety Data Sheets to the purchaser. The Contractor must comply with these laws and must provide the City with copies of all relevant documents,

including Material Safety Data Sheets, prior to performance of services or contemporaneous with the delivery of goods.

89. **MAINTENANCE OF VEHICULAR TRAFFIC (if applicable)**

Unless otherwise directed by the Project Manager, traffic must be maintained on all roadways within the construction area continuously or with the least amount of interruption during the construction period necessary to minimize accidents and accident severity and maintain safety while at the same time minimizing inconvenience to the traveling public and the Contractor. The Project Manager shall have the exclusive right to order a road to be closed or to remain open. No equipment will be stored or permitted to stand within the limits of the roadway right-of-way where traffic must be maintained. Any earth dropped on the surface of the existing road shall be removed immediately to avoid possible hazardous conditions. The Contractor shall prepare and submit a Traffic Control Plan (TCP) for the Project Manager's review, revision, and approval, at least ten days before beginning work, unless otherwise directed.

All Traffic Control Devices shall be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD), latest edition (and all revisions). With the approved TCP implemented, the Contractor will be permitted to work with the following provisions: All traffic lanes must be restored at the end of each day unless specifically authorized otherwise, in advance, by the Project Manager:

The City reserves the right to modify or expand on the methods of traffic control specified and to restrict working hours if, in the opinion of the Project Manager, the Contractor's operations are a detriment to traffic during rush hour periods.

Signs on fixed supports shall be mounted on two posts. Signs mounted on portable supports are suitable for temporary conditions. During periods of partial shutdown, or extended periods when no work is being performed, the Contractor shall remove or adequately cover all construction signs as directed by the Project Manager.

The Contractor shall be responsible for removing, storing, covering, and resetting all existing traffic signs and delineators that become inapplicable and will confuse traffic during the various stages of construction, the cost of which shall be included in the price for Maintenance of Traffic or in the absence of such a pay item it shall be accomplished at no additional compensation, as incidental to the contract. Any signs lost or damaged will be replaced by the Contractor at its expense.

The Contractor shall provide, maintain in new condition, and move when necessary or directed all traffic control devices used for the guidance and protection of vehicles.

The Contractor shall be responsible for providing the appropriate signs to reflect varying traffic patterns prior to the commencement of a new stage of construction.

Traffic must be safely maintained at all times throughout the entire length of the project. No additional compensation shall be paid to the contractor for traffic maintenance, even if the contract time exceeds the contractually specified completion date or working days.

When required lane shifts are implemented, existing painted lane markings no longer applicable shall be removed to the satisfaction of the Project Manager.

Temporary crash cushions are to be installed as shown on the Plans. Unless otherwise specified, sand containers shall be used. The crash cushions shall conform to Subsection 104.10 of the MDSHA Specifications.

Crash cushions shall be reset to reflect changing traffic patterns caused by different stages of Traffic Control. The crash cushions shall be reset at locations shown on the Plans or as directed by the Project Manager.

Should any of the sand container components be damaged during the resetting of the system or during the course of the project, the Contractor shall replace the damaged components at its own expense.

The Contractor shall have flaggers on this Project for the purpose of controlling traffic while maneuvering heavy equipment. This may require a temporary lane closure in any of the specified Traffic Control Phases. These temporary lane shutdowns shall be kept to a minimum and the normal traffic pattern for the Traffic Phase shall be restored as quickly as possible. The Contractor shall comply with Section B-20 of the MUTCD regarding flagger signing.

Prior to stopping work each day the Contractor will be required to reshape all graded areas and eliminate all drop-offs not protected by barriers by filling with compacted stone at maximum of 8:1 slope.

All barriers and barricades shall be adequately illuminated at night, as specified herein, and all lights for this purpose shall be kept operative from sunset to sunrise.

No work shall be commenced in any stage of construction until the barriers and barricades for that stage, indicated on the Plans, or as specified by the Project Manager, are completely in place. The Contractor will be solely responsible for all accidents and damages to any persons and property resulting from its operations. Compliance with prescribed precautions contained herein or in the MDSHA Specifications or Manual On Uniform Traffic and Control shall not relieve the Contractor of its primary responsibility to take all necessary measures to protect and safeguard the work, nor relieve the Contractor from any responsibilities prescribed by GP-7 of the January 2001 MDSHA Standard Specifications for Construction and Materials.

The Contractor shall notify and obtain approval in writing from the Project Manager, at least 48 hours before changing any Traffic Control Phase.

Any construction materials or debris dropped on the roadway surface shall be removed immediately to avoid possible hazardous conditions.

Materials The Contractor shall provide, maintain in first class condition, replace and move when necessary or directed all materials, devices, flagging, etc., required to maintain traffic in accordance with the Traffic Control Plans or as directed by the Project Manager. Reference is made to the latest edition of the MUTCD, wherein all

such items are fully described with regard to use, application, warranties, size, color, placement, etc., and wherein typical traffic control device layouts are shown, as all such devices and techniques planned for use on this project shall strictly conform to the Manual's request except as noted on the Plans.

When any of the following items have been established on the Plans or as directed by the Project Manager, the Specifications will be adhered to in accordance with the respective sections.

Lights, Warnings, Etc. - All banners and imitation barrels shall be adequately illuminated at night, and all lights for this purpose shall be kept operative from sunset to sunrise.

Steady burning warning lights shall be used to delineate channelization through and around obstructions in a construction or maintenance area, on detour curves, on lane closures, and in other similar conditions (MUTCD 6E-4, 6E-5). Flashing warning lights shall be the means for identifying a particular and individual hazard and shall not be used in sequence, in clusters, or for delineation (MUTCD: 6E-5, 6E-6).

Where noted on the plans the first two (2) warning signs shall include a "High Level Warning Device." In addition to the flags the signs shall also be equipped with a Type "B" High Intensity Flag Warning Light. This device must meet the requirements of MUTCD 6C-11 and 6E-5. The device shall be incidental to the Temporary Traffic Sign item if provided for, otherwise the costs shall be considered incidental and no special compensation will be paid.

Barriers: Temporary concrete barriers shall be installed on the roadway approaches as shown on the plans or as approved in writing.

Any permanent facilities damaged as a result of anchoring temporary concrete barriers (anchor holes, etc.) shall be repaired to the satisfaction of the Project Manager using an epoxy grout or other material as may be specified by the Project Manager. Epoxy grout shall consist of sand and epoxy, mixed by volume according to manufacturer's recommendations.

Method of Measurement and Basis of Payment: All work and materials required under the TCP not covered or specified as a pay item on the price proposal form will be included in the lump sum price bid for Maintenance of Traffic. In the absence of such an item the Contractor agrees that there will be no special compensation paid for maintenance of vehicular traffic as described above and the cost shall be considered incidental to the contract and compensated as part of other contract bid item(s).

90. **PARKING, STORAGE AND STAGING AREAS** Parking, storage and staging areas for the Contractor's use during the Project must have prior approval of the Project Manager. All areas used for storage of equipment or material shall be restored to their original condition, immediately upon completion of the work. No additional compensation will be provided for restoring, re-grading, placement of topsoil, and seed and mulch in these areas.

91. **PEDESTRIAN TRAFFIC** Pedestrians shall be safeguarded by the use of signs lights, barricades and barriers as shown on the traffic control plan and/or directed by the Project Manager. Pedestrian traffic shall be maintained at all times unless specifically authorized otherwise, in advance, by the Project Manager. The Contractor shall submit a pedestrian traffic safety plan in accordance with the MUTCD, incorporating safety measures and other provisions to fully implement the intent of this paragraph. All work and materials required to prepare and implement the pedestrian traffic safety plan shall be considered incidental to the contract and there shall be no special compensation paid for this item unless special pay items are included in the Price Proposal page. No additional compensation shall be paid for maintenance of vehicular and pedestrian traffic if for whatever reason the project time extends beyond the contract specified completion date or working days.

92. **HANDICAP ACCESS** Where handicap access exists within the line of work under this contract it will be the contractor's responsibility to maintain said access during the life of this contract. This service is considered to be incidental to this contract and no special compensation will be paid for this service unless provided on the Price Proposal page.

93. **TOILET FACILITIES** Toilet facilities meeting MOSHA standards shall be provided at the job site for all projects exceeding \$100,000 in value and at all other job sites when directed by the City. No special compensation shall be paid unless specifically provided for in the Price Proposal page of this solicitation.

94. **STAKEOUT-CONSTRUCTION CONTROL** Survey construction control provided by the City shall be limited to the baseline with stations not over 100 feet, and the elevation of the top of each marked point. P.C.s, P.T.s. P.I.s, P.V.T.s, and at least one point on the tangent beyond the end of each curve will be staked. The Contractor shall request baseline stakeout a minimum of five days in advance of construction. Stakeout data other than stated above will be furnished by the construction Contractor per MDSHA Section 815 for structures, otherwise per WSSC specs. section 01000(H) and as described in detail below and in these specifications. The City's responsibility for stakeout for the entire project shall be limited to that data described above and this shall be provided only once. The Contractor shall preserve or otherwise ensure adequate survey controls exist throughout the life of the contract.

Surveys and stakeout shall be accomplished by the Contractor as outlined above and in conformance with WSSC specifications Section 01000-10-I I(H), entitled "Construction Stakeout By Contractor."

The provisions therein are primarily for pipeline stakeout. The Contractor's responsibilities under this contract are hereby expanded to include, in addition to pipeline stakeout, similar responsibilities for all phases of stakeout necessary to construct all facilities under this contract including but not limited to clearing and grubbing excavation, pavement, curbs and gutters, storm drainage pipes and facilities, culverts, structures, storm water management facilities, street lights, traffic signal conduits and components, noise walls, retaining walls, ditches and sediment control features.

The stakeout and survey record data shall be preserved and turned over to the City for filing following completion of specific components of work.

Method of Measurement and Payment Generally, stakeout shall be considered incidental to the contract and no special compensation shall be paid, unless a specific pay item is included in the contract Price Proposal page of this contract. Where payment is provided, progress payments for stakeout shall be made based on the percentage resulting from the price bid for stakeout divided by the total bid, multiplied by the monthly payment exclusive of the stakeout payment, except the final payment shall be adjusted as necessary to equal the total price bid for stakeout.

Grade Sheet by Contractor: Grade sheets showing hub and design elevations for roadway, water mains, drainage structures and piping, walks, lights, infiltration facilities clearing/grubbing, excavation, and related components will be provided by the construction Contractor at least 8 hours in advance of construction and will be subject to approval by the Project Manager. Stakeout for curb and gutter in all vertical and horizontal curves is to be at intervals of 25 feet or less unless otherwise specifically authorized by the Project Manager. This work is considered incidental to the contrast and no extra compensation will be paid.

95. **DEBRIS** Under no circumstance will any open fires be permitted within the City of Rockville. All debris will be removed and hauled from site (except when otherwise specifically authorized in the bid document) and disposed in accordance with Local, State and Federal laws in effect at the disposal site. No special compensation will be paid as all costs for off-site disposal shall be included in the applicable bid prices and considered incidental to the contract.
96. **CLEAN UP** In addition to any provisions regarding clean up in the bid document, clean up, including the restoration of areas of construction, shall proceed as quickly as is practicable. The period between construction and final clean up shall normally not exceed one week. If at any time during the course of the work the cleaning operation in any given area becomes delinquent in the opinion of the Project Manager he may order that construction be stopped until such cleaning is completed. Any such order shall not extend the Final Completion date under this contract. Unless otherwise indicated, all materials razed, demolished, or otherwise removed from the work site shall become the property of the Contractor and shall be disposed of legally and properly off site at his expense.

Upon Final Completion of the work and before acceptance and final payment shall be made, the Contractor shall clean and remove from the street, footways, lawns, and adjacent property, all surplus and discarded materials, rubbish and temporary structures, restore in an acceptable manner all property, both public and private, which has been damaged during the prosecution of the work and shall leave the work area in a neat and presentable condition throughout the entire length of the project under contract.

If the Contractor fails to clean up at Final Completion of the work, the City may do so and the cost thereof shall be charged to the Contractor.

INSURANCE REQUIREMENTS REV2 (09/08)

Prior to the execution of the contract by the City, the Contractor must obtain at their own cost and expense and keep in force and effect during the term of the contract including all extensions, the following insurance with an insurance company/companies licensed to do business in the State of Maryland evidenced by a certificate of insurance and/or copies of the insurance policies. The Contractor's insurance shall be primary. The Contractor must electronically submit to the Purchasing Division a certificate of insurance prior to the start of any work. In no event may the insurance coverage be less than shown below.

Unless otherwise described in this contract the successful contractor and subcontractors will be required to maintain for the life of the contract and to furnish the City evidence of insurance as follows:

MANDATORY REQUIREMENTS FOR INSURANCE

Contractor's insurance coverage shall be primary insurance as respects the City, its elected and appointed officials, officers, consultants, agents and employees and any insurance or self-insurance maintained by the City, shall be excess of the Contractor's insurance and shall not be called upon to contribute with it.

Type of Insurance	Amounts of Insurance	Endorsements and Provisions
<p>1. Workers' Compensation 2. Employers' Liability</p>	<p>Bodily Injury by Accident: \$100,000 each accident</p> <p>Bodily Injury by Disease: \$500,000 policy limits</p> <p>Bodily Injury by Disease: \$100,000 each employee</p>	<p>Waiver of Subrogation: WC 00 03 13 Waiver of Our Rights to Recover From Others Endorsement signed and dated.</p>
<p>3. Commercial General Liability</p> <p>a. Bodily Injury b. Property Damage c. Contractual Liability d. Premise/Operations e. Independent Contractors f. Products/Completed Operations g. Personal Injury</p>	<p>Each Occurrence: \$1,000,000</p>	<p>City to be listed as additional insured and provided 30 day notice of cancellation or material change in coverage. CG 20 37 07 04 and CG 20 10 07 04 forms to be both signed and dated.</p>
<p>4. Automobile Liability</p> <p>a. All Owned Autos b. Hired Autos c. Non-Owned Autos</p>	<p>Combined Single Limit for Bodily Injury and Property Damage - (each accident): \$1,000,000</p>	<p>City to be listed as additional insured and provided 30 day notice of cancellation or material change in coverage. Form CA20 48 02 99 form to be both signed and dated.</p>
<p>5. Excess/Umbrella Liability</p>	<p>Each Occurrence/Aggregate: \$1,000,000</p>	<p>City to be listed as additional insured and provided 30 day notice of cancellation or material change in coverage.</p>
<p>6. Professional Liability</p>	<p>Each Occurrence/Aggregate: \$1,000,000</p>	

Alternative and/or additional insurance requirements, when outlined under the special provisions of this contract, shall take precedence over the above requirements in part or in full as described therein.

POLICY CANCELLATION

No change, cancellation or non-renewed shall be made in any insurance coverage without a thirty (30) day written notice to the City Purchasing Division. The Contractor shall electronically furnish a new certificate prior to any change or cancellation date. The failure of the Contractor to deliver a new and valid certificate will result in suspension of all payments and cessation of on-site work activities until a new certificate is furnished.

ADDITIONAL INSURED

The Mayor and Council of Rockville, which includes its elected and appointed officials, officers, consultants, agents and employees must be named as an additional insured on the Contractor's Commercial and Excess/Umbrella Insurance for liability arising out of contractor's products, goods, and services provided under this contract. Additionally, The Mayor and

Council of Rockville must be named as additional insured on the Contractor's Automobile and General Liability Policies. Endorsements reflecting the Mayor and Council of Rockville as an additional insured are required to be submitted with the insurance certificate.

SUBCONTRACTORS

All subcontractors shall meet the requirements of this Section before commencing work. In addition, Contractor shall include all subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.

CERTIFICATE HOLDER

The Mayor and Council of Rockville

(Contract #, title)

City Hall

111 Maryland Avenue

Rockville, MD 20850

SPECIAL PROVISIONS

PROJECT DESCRIPTION

The project description for IFB #05-22 SWM Facilities Improvements: Northeast Park is included in Section I. The scope of work includes but is not limited to the following:

- Perform construction stakeout;
- Provide and maintain sediment control and tree protection measures at all times throughout the construction period;
- Provide temporary pedestrian access throughout the construction period;
- Install in-stream and bank stabilization structures;
- Excavate, salvage, haul, place and/or dispose of fill as defined by these contract documents;
- Install cover/nurse crop and native seed mix as well as shrubs and trees;
- Remove non-native invasive species;
- Restoration of all disturbed areas;
- Landscaping including the planting of trees, shrubs, and herbaceous plants;
- Follow up maintenance and replacement of landscaping for a period of two years including control of non-natives and invasive (NNI) plants within the limits of disturbance; and
- Other incidental work as necessary.

CONTRACT TERM

This contract will begin 10 working days from the date of issuance of a notice to proceed. All work associated with this project must be completed within 365 calendar days after the notice to proceed has been issued. It is possible that the City may issue a Limited Notice to Proceed (LNTP) to allow for mobilization, coordination, field measuring, NNI eradication, shop drawing review/approval, submission of work plan and ordering long lead time components.

If directed by the DPW Inspector or Forestry Inspector for specific landscape pay items, landscaping may be delayed until the subsequent planting season, but must be completed no later than 60 days from the start of the subsequent planting season as detailed in the Contract Documents.

CONTRACT EXTENSIONS

The City reserves the right to extend the contract with the awarded contractor for more than one year which may include additional work, change orders or other services where applicable.

NOTICE TO PROCEED AND COMPLETION SCHEDULE

The specified completion date and time shown herein below is to be strictly adhered to unless authorized or directed otherwise in writing by the Chief of Construction Management. The completion date, where specified, has an allowance for inclement weather and holidays. Time extensions for unusual conditions causing project delays not covered in these special provisions will be subject to the conditions covered under the GENERAL CONDITIONS AND INSTRUCTIONS TO BIDDERS; however, no compensation above that indicated herein for specific items shall be paid to the Contractor for any delay, regardless of the source of delay.

The Contractor shall provide a bar-chart schedule at the Project Kick-Off Meeting or at such time as directed by the Chief of Construction Management, but not more than once per month or with any change order. In addition, the contractor shall verbally provide updates to the Project Inspector as requested.

CONSTRUCTION WORK HOURS

Work is permitted between 7:00 am to 5:00 pm, Monday through Friday. Working outside of these hours must first be approved in writing by the City. Work on any street, other than secondary residential (generally 26' in width) shall be limited to 9:00 am to 3:00 pm Monday through Friday. No work shall be permitted outside these hours unless written approval is obtained from the Chief of Construction Management or his/her designee. This also applies to construction related activities such as dewatering or pumping where construction crews may not be on site.

COVID-19 PRECAUTIONS DURING CONSTRUCTION

During COVID-19, special precautions are required during construction, as recommended by the Centers for Disease Control (CDC) website at:

<https://www.cdc.gov/coronavirus/2019/ncov/community/organizations/constructionworkers.html>
and summarized below:

- Wear face coverings at all times, whether working inside or outside;
- Limit close contact with others by maintaining a distance of at least 6 feet, when possible;
- Clean and disinfect frequently touched surfaces such as shared tools, machines, vehicles and other equipment, handrails, ladders, doorknobs, and portable toilets. Clean and disinfect frequently touched surfaces periodically throughout the shift but also:
 - At the beginning and end of every shift; and
 - After anyone uses a shared vehicle, tools and/or workstation.
- Limit tool sharing if possible;
- Practice proper hand hygiene by cleaning hands often, to include:
 - before and after work shifts and breaks; after blowing your nose, coughing or sneezing;
 - Before putting on and removing eye and/or face protection (face masks, safety glasses, goggles, etc.); and
 - Use hand sanitizer (minimum 60% alcohol) as much as possible when not able to use a sink.
- Notify Contractor supervisor and stay at home if experiencing any symptoms (refer to CDC website for list of symptoms);
- Follow CDC-recommended steps if one of the contractors becomes sick and do not allow the person to return to work until the criteria to discontinue home isolation are met, as per the CDC website.
- Notify City's Project Manager of any positive COVID cases that are reported onsite from a City facility, to allow for appropriate contact tracing.

The Contractor should also abide by OSHA COVID-19 standards, found at:

<https://www.osha.gov/SLTC/covid-19/>

also refer to Montgomery County COVID-19 policies/procedures found at:

<https://montgomerycountymd.gov/covid19/reopening/>

and

<https://www.montgomerycountymd.gov/covid19/>

CONTRACT DOCUMENTS

In addition to the requirements of GENERAL CONDITIONS AND INSTRUCTIONS TO BIDDERS, Item No. 40, in the case of discrepancies in the Contract Documents and need for interpretation, the documents shall be given precedence in the following order:

- Change Orders
- Addenda
- General Conditions and Instructions to Bidders (City of Rockville)
- Technical Specifications
- Special Provisions
- Drawings
- Standard Details by others
- City of Rockville Standard Details for Construction
- Applicable Standards listed below

Any questions, requests for information or revisions to the specifications must first be reviewed and approved by the City of Rockville.

APPLICABLE STANDARDS

As a minimum standard of quality workmanship, all work is to comply with the latest provisions and recommendation of the following documents in the following order of precedence. In the event of conflict, the City's determination shall govern.

- City of Rockville Standards and Details for Construction, latest edition.
- Washington Suburban Sanitary Commission, General Conditions and Standard Specifications, latest edition.
- Montgomery County Department of Public Works and Transportation Design Standards, latest edition.
- Montgomery County Department of Permitting Services, Water Resources Division, Standard Details, latest edition.
- Maryland Department of Transportation, State Highway Administration's (MDSHA) "Standard Specifications for Construction and Materials" including all errata and addenda thereto and additions included in these special provisions, latest edition.
- MDSHA Book of Standards and Standard Specifications for Construction and Material, latest edition.
- MDSHA Manual on Uniform Traffic Control Devices for Streets and Highway (MD-MUTCD) and Temporary Traffic Control Typical Applications (TTCTA), latest edition.
- Maryland Department of the Environment (MDE) Soil Erosion and Sediment Control Regulations, latest edition.
- American Society for Testing and Materials, (ASTM) Standards, latest edition.
- American Water Works Association Standards (AWWA) Standards, latest edition
- American Association of State Highway and Transportation Officials, (AASHTO) Standards, latest edition
- American Concrete Institute (ACI) Standards, latest edition.

All references to the State of Maryland, State, S.R.C, State Roads Commission, State Highway Administration or Commission in the Special Provisions, Technical Specifications or Book of Standards shall be interpreted to refer to the City of Rockville Department of Public Works.

PERMITS

The Contractor is responsible for implementation and compliance with all conditions of all permits as listed below:

- **Army Corps of Engineers Permit/Authorization-** This Army Corps of Engineers permit/authorization is attached in Appendix B; Chesapeake Bay TMDL RGP
- **Maryland Department of the Environment (MDE) Authorization-** This MDE permit/authorization is attached in Appendix B; Application Number MDRCPO5H2
- **Montgomery County Soil Conservation District-** This verification of compliance with the Maryland Conservation Practice Standard for Ponds, code 378 is attached in Appendix C
- **City of Rockville Stormwater Permit-** This City permit is issued by the Department of Public Works and is attached in Appendix D; SMP2021-00012
- **City of Rockville Forestry Permit-** This City permit is issued by the Forestry Division of the Recreation and Parks Department and is attached in Appendix D; FTP2020-00001
- **City of Rockville Sediment Control Permit-** This City permit is issued by the Department of Public Works and is attached in Appendix D; SCP2021-00009

The Contractor is responsible for all reporting, inspection requests, documentation and notifications associated with these permits. Compensation for implementation of the requirements of the above permits is to be included in appropriate bid items and no special compensation will be made.

PROJECT KICK-OFF MEETING AND PRE-CONSTRUCTION CONFERENCE

Upon issuance of the Notice to Proceed, the City may arrange a project kick-off meeting with all appropriate City staff and the Contractor. This will be either a virtual or office-based meeting to review the project requirements. The City will decide which City staff will attend. The Contractor shall arrange any pre-construction meetings required by associated permits and/or approvals (City of Rockville, Montgomery County, State of Maryland). These pre-construction meetings shall be held on the project site among the Contractor, design engineer's representative, and appropriate City staff, including the Chief of Construction Management, Project Inspector, appropriate Permit Inspector, and Department of Engineering Project Manager.

All subsequent notifications for inspection and coordination with the City and all other agencies are the responsibility of the Contractor.

MOBILIZATION/DEMOBILIZATION

Mobilization shall include all activities and costs for transportation of personnel, equipment, and operating supplies to and from the site; establishment of offices, and other necessary facilities for the Contractor's operations at the site; premiums paid for performance and payment bonds, including coinsurance and reinsurance agreements as applicable; and other items as specified in this specification. Demobilization shall include all activities and costs for transportation of personnel, equipment, and supplies not included in the contract from the site; including the disassembly, removal and site cleanup/repair of offices, buildings, and other facilities assembled on the site for this contract. This work includes mobilization and any additional mobilization and demobilization activities, and costs as required

during the performance of the contract. The Contractor shall provide and pay all the cost for temporary utilities including electricity, telephone and water. All temporary facilities shall be available for the duration of the project. The Contractor shall be responsible for compliance with code ordinances and requirements of local officials for temporary facilities, controls, and related health and safety requirements. It shall be the responsibility of the Contractor to provide all necessary electrical service. In the event electrical power will not be available, it shall be the Contractor's responsibility to provide any necessary generator to continue construction. The Contractor shall provide and pay all the cost for toilet facilities for all workmen, as required by local ordinances for complete and adequate sanitary arrangements. Sanitary facilities and the surrounding area shall be kept clean and neat at all times. They shall be located on the project site as approved by the City.

Payment of the Mobilization item will not be made more than once per site, regardless of the fact that the Contractor may have, for any reason, shut the work down on the project or moved their equipment away from the project and then back again.

VALUE ENGINEERING

The City will consider value engineering change proposals in accordance with Maryland SHA Standard Specifications for Construction and Materials (2018, or current) Section TC-2.10 VALUE ENGINEERING CHANGE PROPOSALS.

ALTERNATE/EQUIVALENT EQUIPMENT OR MATERIAL

The Contractor may propose, in writing, to use alternate/equivalent equipment or material. The proposal should include a complete set of product specifications and justification for the substitution. The Contractor is responsible for all costs to review the proposal by the City's Engineer of record. The City will transmit the proposal to the Engineer of record that completed the design. The Engineer of record will submit a cost proposal that consists of a review and recommendation whether or not the substitution is acceptable. If the Contractor approves the Engineer's cost proposal it will be accounted for in an appropriate change order.

EMERGENCY CONTACT INFORMATION

The Contractor shall provide the name(s) and phone number(s) of a representative(s) of the Contractor who can be reached in case of an emergency. This shall be submitted to the City prior to the start of construction.

EMERGENCY INFORMATION

The Contractor shall post information concerning emergency medical, fire, rescue and hazardous waste phone numbers from which personnel on the site can obtain information if needed. The Contractor shall also list the name and number of at least two representatives of the Contractor who can be reached in case of an emergency. The representatives must be fluent in English. The emergency information shall be in a central position, so it is visible and accessible 24 hours a day. The emergency information shall be posted for the entire length of the Contract.

PUBLIC UTILITIES

Comply with MDSHA Specifications under Sections GP 5.05, and GP 7.17 regarding public utilities.

It shall be the Contractor's responsibility to cooperate to the fullest extent possible with the utility owners in their work of adjusting the existing utilities to suit the proposed construction under this contract. All

utilities, unless provided for on the contract drawings, shall be relocated or constructed by their respective owners.

The location of existing utilities shown on the plans and profiles are approximate only and it shall be the Contractor's responsibility to determine the exact location of the utilities prior to commencing work in all areas of possible conflict. All test pits must be completed in coordination with the City and the affected utility companies. The existence of utilities other than those shown on the plans is not known. If, during construction operations, the Contractor should encounter additional utilities, he shall immediately notify the City and take all necessary and proper steps to protect the continuance of service of such facilities.

The Contractor shall notify the utility owner and City when previously unknown or different utilities are encountered. The Contractor shall support and protect existing utilities whether or not shown on the plans at no additional cost to the City. The Contractor shall not receive compensation for the temporary relocation of or temporary installation of utilities that are constructed for the convenience of the Contractor.

In case of any damage to utilities by the Contractor, either above or below ground, the owner shall be immediately notified. The Contractor shall arrange for restoration of such utilities to a condition equal to that which existed before the damage was done, by repairing, rebuilding, or otherwise restoring as may be directed, and at the Contractor's entire cost and expense.

The Contractor shall take into consideration when preparing his bid, the costs associated with the coordination during construction with various utility companies for any relocation or installation by the utility companies which may be necessary in areas within, or adjacent to, the limits of his contract. No additional compensation or time extensions will be allowed the Contractor for work interruptions, changes in construction sequences, changes in methods of handling excavation and drainage, and changes in types of equipment used, made necessary by others performing work within, or adjacent to, the limits of this contract. The contract time as stated in this contract includes the time needed for utility adjustments and no extension of time will be granted for delays caused by utility adjustments.

All other expenses likely to be incurred by the Contractor as a result of working around and protecting utilities, as well as cooperating with the owners of same during the relocating of such facilities, will not be measured or compensated for under any stipulated pay item.

CONTACTS

The following utility companies and City departments may be affected by this project. It shall be the Contractor's responsibility to notify all utilities and/or City departments and coordinate his construction operations with them to avoid unnecessary delays.

City of Rockville – Forester

Ms. Paula Perez
240-314-8705

City of Rockville – Chief, Construction Management

Mr. Mike Wilhelm
240-314-8542

City of Rockville – Operations & Maintenance Superintendent

Mr. Steve Sokol
240 -314-8567

City of Rockville – Project Inspector

Ms. Mandi Murray
240-314-8547

City of Rockville – Sediment Control Inspector

Mr. Arthur Simpson
240-314-8879

City of Rockville – DPS Forestry Inspector

Mr. Shaun Ryan
240-314-8233

City of Rockville – Engineering Project Manager

Mr. Diron H. Baker
240-314-8553

City of Rockville – Water and Sewer Utilities

240-314-8567

MISS UTILITY

1-800-257-7777 or 811

Transcontinental Gas

410-465-0960

Verizon

1-800-837-4966

Washington Gas Company

844-927-4427

Washington Suburban Sanitary Commission (WSSC)

301-206-4001

For Locations of Utilities, call "MISS UTILITY", at 811, 1-800-257-7777 or <http://www.missutility.net/>

Before interfering with any utility service, the Contractor shall notify the affected utility companies and affected property owners in advance and coordinate any required service interruption with the owner and City. For any water service shut-down, the Contractor must provide at least 21 calendar days' notice such that the City can provide proper notification. The Contractor shall be responsible for contracting Miss Utility for the location of all utilities prior to the start of work.

PROTECTION OF WORK, PROPERTY AND PERSONS

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with this project. All necessary precautions shall be taken: to prevent injury to the Contractor's employees and other persons who may be affected by the project; to prevent damage to or loss of materials or equipment incorporated into the project; and to protect other property at or

adjacent to the site including but not limited to trees, shrubs, lawns, walks, fences, pavements, roadways, utilities, structures, buildings, playgrounds and park facilities not designated for removal, relocation, or replacement in the course of construction; to provide warning signs as directed by the City for personnel and the public. Costs associated with this work are incidental to the work and no specific payments will be made.

SITE ACCESS

Access to the site is by public streets and thoroughfares. After the completion of the project, all roads, driveways, parking lots, sidewalks, landscaping, fences, utilities, structures, buildings, lawns and other facilities not designated for removal, relocation or replacement that are damaged by the Contractor's actions shall be restored to the same condition or better. Prior to any construction activities, it is the Contractor's responsibility to document any existing damage or conditions indicative of substandard facilities. Costs associated with this work shall be included with the appropriate Pay Item.

Due to the proximity of public park property, community trails, private property and natural resources, the Contractor shall exercise extreme care in their construction operations. All work must be kept within these limits and within the "Limits of Disturbance" as shown on the Engineering Drawings.

Access to parks, easements across private property and other City-owned property in wooded areas must be coordinated with the City and the private property owners prior to the Contractor entering the property.

In addition, the community trails should remain open to the public during construction. The Contractor shall exercise prudence regarding site security, storage, staging, safety, worker identification/background and other matters that may impact the public. The Contractor must be sensitive to the community and adjacent property owners. The Contractor shall immediately advise the Engineer and/or the City Project Manager of any problems involving the community.

As such, the potential for trespassers is high. The job site will need to be secured every day. The Contractor shall be held responsible for securing their own equipment.

ACCESS TO ADJACENT PROPERTIES

Access must be maintained to all properties abutting this project at all times. All work affecting private properties is to be coordinated with the property owner by the Contractor. The Contractor shall maintain access to private driveways at all times unless specifically approved in advance by the City.

ENTERING PRIVATE PROPERTY TO PERFORM WORK

The Contractor is to carefully examine the plans provided to ensure a clear understanding of the private property limits and work limits. Under no circumstances is the Contractor to enter beyond the specified limits or perform any work that affects private property without advance notice to and permission from the private owner and the City.

PRESERVATION AND RESTORATION OF PROPERTY & MONUMENTS

The Contractor is to carefully examine the plans provided with the contract drawings to ensure a clear understanding of the private property limits and work limits. The Contractor shall not enter upon private property for any purpose without first obtaining permission from the City and written permission from the property owner. The Contractor shall be responsible for the preservation of all public and private property, including but not limited to plants (trees, shrubs, and seasonal vegetation), lawns, walks, fences, pavements, roadways, utilities, structures, buildings, playgrounds and park facilities not designated for

removal, relocation, or replacement, along and adjacent to the work areas, and shall use every precaution necessary to prevent damage or injury thereto. The Contractor shall take suitable precaution to prevent damage to underground or overhead public utility structures and must protect carefully from disturbances or damages all land monuments and property markers until the Project Inspector has witnessed or otherwise referenced their locations. All disturbed monuments and markers must be reset to their correct location by the Contractor at no additional compensation.

The Contractor shall be responsible for all damages or injury to public or private property of any character during the prosecution of the work, resulting from any act, omission, neglect or misconduct in his manner or method of executing said work satisfactorily, or due to the non-execution of said work, or at any time due to defective work or materials. When or where any direct or indirect damage or injury is done to public or private property or on account of any act, omission, neglect or misconduct in the execution of the work or in consequence of the non-execution thereof on the part of the Contractor, the Contractor must restore, at its own expense, such property to a condition similar or equal to rebuilding or otherwise restoring as may be directed by the City, or he shall make good such damage or injury in an acceptable manner. In case of the failure on the part of the Contractor to restore such property in a reasonable amount of time, or make good such damage or injury the City may, upon 24 hours' notice, proceed to repair, rebuild or otherwise restore such property as may be deemed necessary and the cost thereof will be deducted from any monies due or which may become due the Contractor under this Contract. City crews or another Contractor may accomplish said work.

After the completion of the project, all plants (trees, shrubs, and seasonal vegetation), lawns, walks, fences, pavements, roadways, utilities, structures, buildings, playgrounds and park facilities and other facilities not designated for removal, relocation or replacement that are damaged by the Contractor's actions shall be restored to the same condition or better. Prior to any construction activities, it is the Contractor's responsibility to document any existing damage or conditions indicative of substandard facilities. The Contractor shall provide pre-project photographs or videotape of the project work areas to the DPW Project Inspector. Costs associated with this work are incidental to the work and no specific payments will be made.

All of the requirements outlined above shall be considered incidental to this contract and no special compensation shall be paid.

SITE CONDITIONS

The Contractor shall visit each work site prior to performing the work to verify the existing conditions.

The geotechnical data on the Engineering Drawings is provided for the Contractor's information only. The City does not warranty or guarantee the accuracy or completeness of the data. The Contractor should note the date and method(s) of data collection. The interpretation of the data and its applicability to the project is the responsibility of the Contractor and they are responsible for satisfying themselves as to the actual conditions and/or confirming the data provided prior to submitting their bid. There is no warranty or guarantee that geotechnical conditions other than those identified will not be encountered.

The topography shown on the Engineering Drawings represents the existing conditions at the time of the survey. However, the Contractor shall satisfy themselves as to all conditions at the time of bidding this project and include in their proposal any changes necessary to accomplish a complete and functional project. The Contractor will only be permitted to bring discrepancies in earthwork quantities to the

attention of the City at the time of bidding. After award of Contract, payment for Earthwork pay items will be considered fixed.

Should there be any discrepancies between Engineering Drawings, specifications and/or field conditions after bidding and prior to the beginning of work, the Contractor shall bring such discrepancies to the attention of the City of Rockville at the pre-construction meeting.

The Contractor shall use the horizontal and vertical survey control points shown on the Engineering Drawings to layout the lines of work, stake out the location of all proposed structures, and test the levels of all construction. No other datum or control points will be accepted.

The Contractor shall create a video record of the project areas prior to beginning work. The City shall be notified 48 hours prior to the scheduled video recording of the site and will have a representative present to identify other areas that may be affected by the proposed construction. The Contractor shall be responsible for the repair, replacement and/or reconstruction of any property destroyed or damaged as a result of this Contract. This shall include all public and/or privately constructed driveways, fences, gates, buildings, landscaping, utility lines and other permanent items. All claims will be verified by the City through the video record of the area. The video record shall be submitted to the City prior to mobilization of any equipment for the Contract.

CONTRACTORS STAGING AND STORAGE

The Contractor will establish temporary staging areas as approved by the City. Cleanup of each staging area shall occur daily. Contractor shall cover topsoil, stone, and aggregate stockpiles with tarps to prevent sedimentation of the street.

Submit a sketch (a marked up set of plans is acceptable) and brief description for approval by the Chief of Construction Management showing the location of equipment and materials, location of portable sanitary toilet, and means and methods to protect pedestrians and existing public facilities (including trees) within the area as shown on the plans. This plan may have to be approved by the City Forester, if any grassed or tree areas will be utilized.

There shall be no payment for this work. It shall be considered incidental to the contract.

TEMPORARY UTILITIES

The Contractor shall pay all fees, obtain necessary permits, and have meters installed for temporary utilities as may be required for the execution of this contract. As needed, the Contractor through direct local arrangements must obtain temporary electric service for the purpose of this contract with the electric company, PEPCO. The Contractor shall furnish and install all necessary temporary service drops, wiring, connections, etc., necessary for temporary service required by the Contractor. All costs associated with any temporary electric service required by the Contractor are considered incidental to other pertinent pay items. This item shall not be measured for payment.

The Contractor shall, at the beginning of the project, provide suitable temporary sanitary toilet facilities on the premises, in accordance with the GENERAL CONDITIONS AND INSTRUCTIONS TO BIDDERS. The City shall approve the location of the sanitary toilet.

POSTING PARKING RESTRICTION SIGNS

The Contractor shall be responsible for furnishing adequate personnel, equipment and sign stakes as necessary to post City furnished parking restriction signs a minimum of 48 hours and no more than 72

hours in advance of the construction operations for that particular portion of that street. The Contractor shall coordinate the schedule in advance with the City and shall mark the signs with the appropriate restriction dates. Parking may not be restricted for more than three consecutive dates without prior written City approval. Towing of parked vehicles shall be the responsibility of the Project Inspector only. Vehicles will not be towed unless the Project Inspector has verified that the proper parking restriction signs were posted a minimum of 48 hours in advance. The Contractor shall be responsible for revising the dates on the signs in the event of delays in the schedule and for the prompt removal of the signs when the construction operation is complete. The signing operation shall be closely coordinated with the Project Inspector and no signs shall be marked, posted, revised, reposted, or removed without the Project Inspectors advanced authorization. Signs and stakes shall be carefully removed and revised and reused until otherwise authorized by the Project Inspector.

Stakes shall be 2-inch x 2-inch, four (4) feet long, driven a minimum of one foot into the ground or until stable.

Signs must be spaced no more than forty (40) feet apart. Where street trees exist and it is determined that their use will not damage the tree, the signs shall be placed approximately four (4) feet above the ground. Where no street trees are available, signs must be placed on stakes provided by and installed by the Contractor. Black waterproof indelible markers shall be provided by and used by the Contractor and numbers shall be large and legible.

No special compensation shall be paid to the Contractor for the posting of the no parking signs and shall be considered incidental to the appropriate pay item.

CONSTRUCTION STAKEOUT AND AS-BUILTS

Construction Stakeout shall be in accordance with Section 107 of the Maryland SHA Standard Specifications for Construction and Materials (2018, or current), with the following exceptions:

The Contractor shall be responsible for all construction stakeout.

The Contractor shall complete project as shown on approved plans. The City will not provide any construction stakeout for this project. Contractors are to use benchmark and layout information as shown on the plans.

The Contractor shall provide as-built information. One set of redline as-builts shall be maintained and kept on-site at all times. Any deviations from approved plans shall be marked, in red, on the as-builts. As-built information shall consist of any deviation to the approved plan such as grading limits, slopes, types/length/height of restoration features, and any modifications to typical details. Upon completion of project, submit as-builts for approval. Retainage shall not be released until as-builts are approved. A copy of the Department of Public Works As-built Plan Requirements is attached in Appendix A.

The City will provide an electronic CAD file of the layout information for the Contractor. The Contractor must complete an agreement for receipt of the electronic file.

PRECAST STRUCTURES

The Contractor may substitute comparable pre-cast inlets for those specified herein, if they have been approved for use by the Montgomery County Government, the Washington Suburban Sanitary Commission or the MDSHA. The Contractor shall be responsible for engineering modifications and field stakeout to piping alignments and other components if required to accommodate the pre-cast units. The structures must be channelized per WSSC Standards and Specifications. The Contractor shall submit shop

drawings for all precast structures and shall be received by the City at least 10 business days prior to fabrication. Shop drawings shall be sealed by a Professional Engineer licensed in the State of Maryland. Shop drawings must be approved by the Professional Engineer who sealed the Engineering Drawings for conformance to plan requirements. Fabrication shall not occur until such approval is obtained from the design Engineer. Prior approval of the City is required for substitutions.

AERIAL ELECTRIC LINES

The Contractor shall be aware that State law requires that a 10-foot radial clearance shall be maintained for all construction equipment and materials in relation to electric lines carrying 750 volts or more. Because the State law is more stringent than the Federal laws, the State law shall be considered the minimal distance.

NOISE CONTROL MEASURES

All work must comply with the noise ordinance requirements for Montgomery County. A copy of the ordinance enforced by the Department of Environmental Protection (DEP) is attached to these contract documents in Appendix H for observation and compliance. With City approval, the Contractor may request a waiver through Montgomery County. The Contractor is fully responsible to submit the request and comply with any conditions of the waiver approval. The Contractor shall consider the processing time of this request, which includes a public notice element, when scheduling their work.

WATER POLLUTION CONTROL MEASURES

The Contractor shall not discharge or permit discharge into the waters, canals, ditches, or drainage system any fuels, oil, bitumen, garbage, sewage or other materials which may be harmful to fish, wildlife or vegetation or that may be detrimental to outdoor recreation. The Contractor shall be responsible for investigation and complying with all applicable federal, state and local laws and regulations governing pollution of water. All work under this Contract shall be performed in such a manner that objectionable conditions will not be created in waters through or adjacent to the project areas.

AIR POLLUTION CONTROL MEASURES

All fine-grained, loose materials hauled to or from this project shall be covered to prevent spillage and blowing. Material, which is not covered after notification by the City, will not be accepted for use on this project. This material will not be included in measurement for payment.

Burning will not be permitted.

ENVIRONMENTAL PROTECTION MEASURES

Impervious barriers, (i.e., plastic, metal drip pans, etc.) shall be placed under any compressors, generators, welding machines, etc., to prevent oils, solvents, organic compounds, or other contaminants from leaching into the soil. Any oils, solvents, organic compounds, or contaminants spilled on the site during the process of the work shall be immediately removed and cleaned up by the Contractor. Any earth contaminated by a spill shall also be removed and replaced with new certified clean material to the satisfaction of the City and the Maryland Department of the Environment (MDE). If the City has to remove the oils, solvents, organic compounds, contaminants, or earth, the City may deduct the costs of removal and clean up from the total contract amount owed the Contractor.

EROSION AND SEDIMENT CONTROLS

The Contractor is responsible for adhering to the City's laws and ordinances regarding sediment control. The Maryland Department of the Environment (MDE) issues the General Permit for Stormwater Associated with Construction Activity, and the City will obtain a Notice of Intent (NOI) authorization to

discharge stormwater under this General Permit. This permit will be formally transferred to the Contractor by the City after award. Upon final acceptance, the Contractor shall formally transfer the permit back to the City.

The Contractor shall be responsible for coordinating all work, and for notifying the City:

- Upon installation of all erosion and sediment control devices to schedule a “Notice to Proceed” inspection prior to commencing work.
- Prior to removing sediment control devices; and
- Upon completion of final grading, establishment of ground covers and approved land stabilization.
- During the progression of all work, the Contractor shall make periodic inspections and maintain sediment control devices, including cleaning and routine maintenance as directed or necessary, to ensure that the intended purpose is accomplished. Under no circumstances shall sediment be allowed to enter private properties, stormdrains, or City waterways.

When directed in the field by the Project Inspector, the Contractor shall be required to adjust location and/or increase or decrease quantities of sediment control measures and provide temporary stabilization measures.

All sediment control measures shall be installed and maintained as shown on the Construction Documents in Engineering Drawings, Section VII, City of Rockville Standard Erosion and Sediment Control Notes, MDE Standards and Specifications for Soil Erosion and Sediment Control, in compliance with the MDE Notice of Intent (NOI) General Permit for construction activities, and as directed by the Project Inspector. Please refer to MDSHA “Standard Specifications for Construction and Materials” including all errata and addenda thereto and additions included in these special provisions, latest edition (i.e., 2017, section 308.02 Material and section 308.03 Construction).

Furnish and install temporary erosion and sediment controls. The Contractor is to protect the integrity of the erosion control measures installed. The erosion control measures shall be provided until such times as the temporary ground cover is sufficiently established, and the Project Inspector gives written authorization to remove said measures. The Contractor shall comply with all local, state and federal laws, ordinances, and regulations pertaining to erosion, sediment and pollution control, including those promulgated by the State of Maryland, and shall indemnify and hold harmless the City from and against all claims, damages, losses and expenses resulting from such work.

The Contractor shall have an employee present on site at all times who has met the requirements for certification of the Responsible Personnel training in erosion and sediment control according Maryland State Law. This employee shall have sufficient authority to install, maintain, adjust or otherwise implement approved sediment control measures.

The Contractor shall take all measures to control erosion and sedimentation at construction site, including borrow and waste areas and temporary access roads, and at off-site areas especially vulnerable to damage from erosion and sedimentation. All erosion and sediment control measures will be subject to approval by the City. All erosion and sediment control measures shall be implemented prior to any construction occurring. All temporary erosion and sediment control measures shall be removed within thirty (30) days after completion of construction and establishment of permanent erosion control.

Work shall be scheduled so that areas subject to erosion are exposed for the shortest possible time. Only those trees, shrubs and grasses shall be removed that are necessary for construction as designated by the

forest conservation plan and/or approved plans; those remaining shall be protected to preserve their aesthetic and erosion control values. Temporary on-site structures and buildings shall be located to preserve the existing landscape and to minimize erosion, including that from construction traffic. If practicable, work shall be scheduled in seasons when erosion is less of a hazard, particularly for sites with steep slopes and erodible soils.

Temporary protection shall be required for disturbed areas until final grading is completed and permanent vegetation is established; and shall consist of planting temporary grass cover or other vegetation when feasible. Other short-term protection shall include covering disturbed areas, stockpiles, and topsoil piles with a mulch of hay, straw or wood chips, stabilizing with netting, or covering with plastic sheets. Graded slopes and fills shall be limited to an angle and to lengths that will maintain stability and allow easy maintenance. Construction equipment shall not be operated in a way to make the land more susceptible to erosion, such as leaving tracks up and down slopes. Access roads shall be located and constructed so as to prevent erosion.

Controls for surface water runoff shall be constructed as early as possible to prevent the formation of gullies or rills. These controls shall be maintained during the entire construction period or until permanent storm drains/revetments are completed. Diversion channels or berms, slope drains, flow barriers, dikes or other structures, which retard or spread water flow, shall control runoff. Compacted embankments, ditches, furrows or temporary diversions across slopes shall be provided to intercept runoff before it reaches erodible areas. Diversions and drains shall be directed into stabilized areas where the discharge can be spread out and dissipated.

If unusually intense storms cause planned control measures to fail, prompt restoration and cleanup of sediment deposits shall be made, including damage to adjacent property. If construction is delayed or shut down, temporary cover of exposed and disturbed areas shall be provided.

FOREST AND TREE CONSERVATION REQUIREMENTS

The Contractor shall complete all forest and tree conservation requirements according to the approved contract documents.

All forestry related work shall be under the direct supervision of someone who is both certified by the International Society of Arboriculture and registered in the State of Maryland as Licensed Tree Expert. Provide proof of both prior to on-site Forestry pre-construction meeting. Promptly replace any existing trees designated to remain that are damaged or destroyed in the course of development. Perform all site preparation, including removal of pavements, structures, and inclusion of soil amendments, PRIOR to installing plantings.

Maintain and monitor all tree plantings in accordance with the contract documents, for a period of two years from the date the plantings are inspected and approved by the City Forester. Such maintenance shall include when appropriate, but not necessarily be limited to:

- Watering, fertilizing and control of competing vegetation during the initial planting and through the two (2) year maintenance period as may be necessary.
- Pruning, mulching, tightening and removal of guys and stakes within six (6) months, resetting of plants to proper grades or upright position, and furnishing and applying such sprays or other items necessary to thwart damage from insects and disease.
- Providing protection measures such as fencing and interpretive signs as necessary, to prevent destruction or degradation of the planting site.

- Eradicate, suppress and control non-native invasive plant species, as approved by the City Forester, in order to maintain the health of the trees planted.
- Guarantee survival of 100% of landscape tree plantings and 85% of forest plantings under 2" caliper in good health and in flourishing condition of active growth for a minimum period of two years from the date that the plantings are inspected and approved by the City Forester.
- Replace, as soon as weather permits, any dead plantings to ensure compliance with the above minimum survival requirements; provided, however, that dead trees and plantings shall be removed immediately.

Special attention must be given the existing landscape features and special care taken to protect the natural surroundings. The roots of such trees or shrubbery will not be cut unnecessarily. The Contractor will be required to root prune the tree roots, which extend into grading limits and/or from trees intended to be left in an undamaged state or otherwise prevent damage to roots of trees. No road machinery of any description, which might throw off gas or smoke in such volume as to damage vegetation, shall be allowed to stand under such trees or shrubbery.

Any tree that in the opinion of the City, may be defaced, bruised, injured or otherwise damaged by the Contractor's equipment or operations must be protected prior to the start of work by means acceptable to the City. Contractor must verify all saved trees prior to construction. Prior to commencing construction, all tree protection techniques must be approved by the City Forester's office.

Any tree, or landscape features scarred or damaged by the Contractor's operations must be removed, correctively pruned, restored or replaced as nearly as possible to the original conditions, as required by the Project Inspector and at the Contractor's expense. No ropes, cables or guys are to be fastened to or attached to any nearby trees for anchorage or in lieu of placing of dead men.

CARE OF WATER DURING CONSTRUCTION

The Contractor shall furnish, install, test, operate, monitor, and maintain dewatering systems of sufficient scope, size, and capacity to control water flow into excavations and permit construction to proceed on dry, stable sub-grades. Dewatering operations shall be maintained to ensure erosion control, stability of excavations and constructed slopes, prevent excavation from flooding, and prevent damage to sub-grades and permanent structures.

The Contractor shall provide a suitable watercourse (i.e. fire hose, etc.) to direct the flow of water so as to have minimal impact upon the environment, private property, roadway and pedestrian traffic. Any damage caused by discharge of water is the responsibility of the Contractor. The Contractor shall not discharge any water so as to cause sediment to reach any storm drain inlet or water course.

The Contractor shall provide shoring, bracing and cofferdams during construction as necessary to protect personnel, structures and equipment. No special payment will be made for shoring, bracing or cofferdams. The Contractor is responsible for ensuring the safety of his employees and sub-contractors, and for complying with all applicable provisions of Maryland Occupational Safety and Health Administration.

The Contractor shall protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by dewatering operations. The Contractor shall provide an adequate system to lower and control water to permit excavation, construction of structures, and placement of fill materials on dry sub-grades. The

Contractor shall install sufficient dewatering equipment to drain water-bearing strata above and below bottom of ponds and other excavations.

Work areas shall be dewatered in a manner that avoids endangering public health, property, and portions of work under construction or completed. The Contractor shall provide sumps, sedimentation tanks, dewatering basins or non-woven dewatering bags as required by the Project Inspector. Standby equipment shall be provided on-site, installed, and available for immediate operation, to maintain dewatering on continuous basis if any part of the system becomes inadequate or fails. If dewatering requirements are not satisfied due to inadequacy or failure of dewatering system, the Contractor shall restore damaged structures and foundation soils at no additional expense to the City. The Contractor shall remove all dewatering systems from project site on completion of dewatering.

All pumps and generators utilized for bypass and dewatering operations shall be “quiet” rated with a full-load noise level of less than 63 dB at a distance of 23 feet or as approved by the Chief of Construction Management. The City may require additional measures, such as the use of straw bale baffle walls, for work approved outside of normal working hours.

Care of water during construction shall be considered incidental to the appropriate pay item.

MAINTENANCE OF STREAM FLOW

Contractor shall provide maintenance of stream flow per the Maryland Waterway Construction Guidelines, Section 308 of the MDSHA standard specifications, and as per the plans. The Contractor shall be responsible for dewatering all areas where necessary to perform work under this contract. All work shall be carried out in areas free from excessive water. The Contractor shall use necessary pumping and other equipment required for removal of water from the work area, and shall maintain the excavations, foundation, and other parts of the work area free from water, as required or directed by the City. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water.

All pumps and generators utilized for bypass and dewatering operations shall be “quiet” rated with a full-load noise level of less than 63 dB at a distance of twenty-three (23) feet or as approved by the Chief of Construction Management. The City may require additional measures, such as the use of straw bale baffle walls, for work approved outside of normal working hours.

Dewatering of sediment laden water shall use a “quiet” pump, as described above for clean water bypass of sufficient size to convey the sediment laden runoff from the area under construction. All sediment laden runoff from the area under construction shall be filtered using a portable sediment tank, filter bag, or other MDE approved control.

Discharges from hoses or pipes shall outfall onto adequately sized rock for the outfall velocities of the pump around. In the event that bedrock is present bypass or treated flows may discharge directly onto the bedrock at that location. Other methods may be approved by the Sediment Control Inspector.

Sandbags shall consist of materials, which are resistant to ultraviolet radiation, tearing and puncture, and woven tightly enough to prevent leakage of fill material (i.e., sand, fine gravel, etc.). Sheeting shall consist of polyethylene plastic, which is impervious and resistant to puncture and tearing.

DAILY CLEAN-UP

The Contractor shall at all times keep the work areas clean and orderly and shall promptly remove all waste and rubbish. The daily debris shall be collected in covered containers and disposed of in proper fashion. All directions from authorized public officials having jurisdiction over health and safety shall be obeyed. The site will be "broom cleaned" at the end of each working shift. Open excavations may not be left unattended. Site must be secured each night.

The Contractor shall clean every street upon which any work has been performed under this contract on a daily basis. The cleanup shall be accomplished by use of a vacuum assisted sweeper truck, manual (push) broom sweeping or other method as directed and or approved by the Project Inspector. Under no circumstance shall the contractor use compressed air or jet water sprays for cleanup purposes.

SAMPLING AND TESTING OF MATERIALS

Unless provided elsewhere in the contract documents, all required sampling and material testing shall be the responsibility of the Contractor. No separate payment will be made, and the costs shall be incidental to the appropriate pay item. Testing shall be in accordance with applicable Notes shown on the Construction Documents in Engineering Drawings, Section VII.

The City reserves the right to test all materials and construction separate from and in addition to the specific requirements dictated in this contract. Testing shall be generally limited to:

- Taking and/or collecting samples of soil and/or other backfill materials for proctor tests;
- Performing proctor tests in a lab;
- Performing compaction tests on site;
- Taking concrete cylinder samples and testing compression strength;
- Asphalt sampling and compaction testing.

Employment of a testing agency in no way relieves the Contractor of his responsibility and obligation to comply with all aspects of this contract and to perform all work in a proper, acceptable and workman like manner and doing all such work in full compliance with these contract documents.

SAMPLING AND TESTING OF ASPHALT MATERIALS

A Maryland State Highway (SHA) Certified Asphalt Plant must provide all asphalt supplied for this contract. Mix designs for the various types of material to be supplied must be submitted to the Project Inspector a minimum of fourteen (14) calendar days before beginning work. Under no circumstances will the contractor be allowed to begin supplying asphalt for this contract without the City and the Contractor having received written approval of the mix designs from the City or the City's Asphalt Testing Consultant. The Contractor shall deliver to the City Project Inspector, a box sample of the material to be supplied, each day prior to lay down operations beginning. Any material laid down without having a box sample delivered to the City Project Inspector, will be subject to complete removal and replacement at the Contractors expense. Any box sample failing testing by the City's Asphalt Testing Consultant will cause that days placed asphalt to be completely removed and replaced at the Contractors expense.

SUBMITTALS OF MATERIALS

The Contractor shall submit two (2) copies of all delivery tickets, shop drawings, inspection, testing or certification reports, obtained approvals or permits, and other submittals required for this project to the Chief of Construction Management.

INSPECTION AND CERTIFICATION

All materials shall be subject to inspection or test by the City prior to installation and no previous certification or inspection shall bar rejection if the material is found to be inferior, damaged or defective. The certification requirements may be waived for any or all of the materials at the discretion of the City.

INSPECTION AND REPAIRS

The City reserves the right to inspect any and all work either in progress or completed. All work shall be inspected prior to backfill. Any portion of the work that is backfilled prior to inspection shall be uncovered at the contractor's expense to enable the Project Inspector to adequately inspect. If the work is found to be unsatisfactory or in conflict with the provisions in these specifications the City may hold back payment for work completed. The Chief, Construction Management, DPW will give written notification of the unsatisfactory work to the contractor. The Contractor shall have no more than ten (10) days to correct the condition.

CONTRACTOR'S EMPLOYEES

Contractor's employees are to present a professional appearance, shall be neat, clean, well groomed, courteous, and conduct themselves in a respectable manner while performing duties and while on City and/or private property.

The Contractor's employees shall conduct themselves in a professional manner. They shall minimize their impacts to the surrounding properties, including when they arrive to the site, take breaks, eat lunch and depart the site. Contractor's employees shall be respectful and polite to inquiries from residents or individuals not associated with the project. Any inquiries beyond basic information should be referred to the City. The Contractor shall inform the City of any inquiries that occur that is beyond providing basic information.

The Contractor shall provide the City with a listing of all personnel assigned to the contract. In addition, the Contractor shall provide a listing of names, and emergency telephone numbers of supervisory personnel assigned to the contract. It will be the Contractor's responsibility to keep this list up to date.

The City reserves the right to request that the contractor remove any employee if it is determined that services are not being performed in accordance with the terms and conditions of the contract.

SUB-CONTRACTORS

The Contractor shall have the right to sub-contract but shall be fully responsible and cannot be relieved of any liability under this contract on account of any sub-contractor. All sub-contracting must have prior written City approval. The City reserves the right to approve or reject any sub-contractor.

Nothing contained in the contract documents shall create any contractual relationship between the owner and any subcontractor or sub-subcontractor. Vendors who will subcontract the delivery, installation, or any other portion of the work herein described will submit, prior to construction, the following information:

A description of the items to be subcontracted, and the subcontractor's name, address, and telephone number. During the life of the contract, the Contractor shall provide the name, nature, and extent of all subcontractors.

Subcontractors shall be considered an agent of the Contractor, who shall be held fully accountable for all of the subcontractor services, labor, and materials relative to the contract.

CHANGES IN WORK

If an event arises which the contractor considers may result in the addition, deletion or modification to the contract, the Contractor shall notify the City prior to commencing work under that change.

All such changes, or additional work must be authorized in writing by the City prior to starting such work.

INVOICES AND PAYMENT

The Contractor shall submit a detailed invoice to the Chief, Construction Management Division, DPW for payment at the end of each month for all work completed and accepted by the City during that month.

The Contractor shall attach to each monthly invoice, all required documentation of testing results.

LANDSCAPING WARRANTY BOND

The Contractor shall provide a warranty bond for all landscaping provided in item No. 35, item No. 36, items No. 38 through No. 44, item No. 49, item No. 51 and item No. 52. Bond shall be in the amount equivalent to the total for all items listed above. The bond shall be posted at the completion and acceptance of the entire project. Bond shall be in effect for two years. Bond should guarantee 100 percent survival rate on all trees 2" and larger and guarantee 85% percent survival rate on other landscaping. Retainage will not be released until this bond is received and approved by the City Attorney's Office. Cost of bonds will not be paid separately but shall be included with the appropriate bid items.

CONDITIONS FOR APPROVAL FOR ACCESS TO CITY OF ROCKVILLE FACILITIES

All Contractor and subcontractor employees that will work on the job site or who have access to sensitive information are to have initial background checks performed by the City to assure the City information used and generated by this project will not end up in unauthorized hands. The initial background checks are valid for one year and subject to annual renewal for employees continuing to work on the project. The Contractor shall allow 4 weeks, from date of submission of personnel information or from the date of Notice to Proceed, whichever is later, for the City to perform background checks.

"Sensitive" documents and information are defined as those that could reasonably be used to aid in or plan for contaminating or damaging the City's system or City customers. Examples of such documents include, but are not limited to:

- plans/blueprints, as-built drawings, or contract documents of City facilities
- plans/blueprints, as-built drawings, contract documents, or 200-foot sheets of the water distribution system or the wastewater collection system

For any document or information to be provided to the Contractor where there is uncertainty whether it is "sensitive", the City shall have sole discretion to make such determination.

The contractor shall issue contractor's project participants photo identification cards. Identification cards must be worn at all times while on any City property. Contractor employees found on-site without proper identification will be immediately removed from City property. The design of identification cards shall be reviewed and approved by the City prior to issuance. Identification cards for employees who are no longer associated with the project, for any reason, will be immediately recovered by the Contractor. The Contractor is responsible to control and inventory all identification cards issued so those cards are not obtained or used by unauthorized individuals.



City of Rockville
Rockville, Maryland

TECHNICAL SPECIFICATIONS

INVITATION FOR BID #05-22 SWM FACILITIES IMPROVEMENTS: NORTHEAST PARK

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 33146, Expiration Date: 01/14/2023.



In response to the advertisement by the City of Rockville inviting bids for the work and in conformance with the bid document on file in the Purchasing Division of the City of Rockville, we hereby certify that we are the only person, or persons interested in this bid proposal as principals, and that an examination has been made of the work site, the specifications, the plans and the bid documents. We propose to furnish all necessary machinery, materials, equipment, tools, labor and other means of construction required to complete the project. Bidders must bid all items.

The following items shall be performed per the referenced Standard Specification and the Contract Documents. Measurement and Payment shall be as described in the Technical Specifications unless otherwise specified in the Contract Documents. All work items described in the Contract Documents that are not referenced by a specific pay item shall be considered incidental to all other items in the Contract Documents.

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**TECHNICAL SPECIFICATIONS FOR
IFB #05-22
SWM FACILITIES IMPROVEMENTS:
NORTHEAST PARK**

I. SUMMARY OF WORK

This project is for the completion of stormwater management (SWM) facility retrofits, stream restoration, stream bank stabilization, and other associated work as shown on the Contract Drawings and included in these specifications. The scope of work includes but is not limited to the following:

- Perform clearing, stream diversion, excavation, grading, stream restoration/stabilization work, and plantings;
 - A. Northeast Park SWM Facility – SWM facility retrofit, stream restoration, and bioretention facilities at the ends of Neal Drive and Wesley Road.
- Provide and maintain erosion and sediment control and tree protection measures at all times throughout the construction period;
- Provide temporary pedestrian and vehicle traffic control throughout the construction period;
- Proper disposal of all debris and excavated materials at an approved site; and
- Restoration of all disturbed areas.

II. PROJECT LOCATIONS

The following project locations are all located in the Montgomery County, Maryland

- A. North of Neal Drive and Wesley Road, within Northeast Park in the City of Rockville;

III. DESCRIPTION OF PAY ITEMS

- A. The Contractor shall provide the labor, materials, tools and equipment necessary for the completion of the following pay items.
- B. The City may adjust the location and/or quantity of items without modification to the unit price. The City may direct that the location of a work item be adjusted. The City may also require an additional quantity of a pay item to be completed, whether shown on the Contract Drawings or not. The quantity of a pay item may also be decreased. Payment shall only be made for items of work actually completed and accepted by the City.
- C. All lump sum pay items will be prorated for each pay estimate. A percentage of the lump sum item will be paid based upon the amount of work completed and accepted by the City. The Contractor shall provide a Schedule of Values for each lump sum item detailing labor, materials, equipment and tools.
- D. BayLand Consultants & Designers, Inc. prepared project plans (CADD files) for the City of Rockville. The City will provide electronic CADD files to assist with construction stakeout. Use of CADD files is subject to: City of Rockville approval and BayLand Consultants & Designers, Inc.'s Disclaimer of Liability. All locations of utilities shown on the plans are for information and guidance only. No guarantee is made of the accuracy of the locations. The Contractor is responsible for verifying/ locating all existing utilities prior to proceeding with work. Payment for test pits/subsurface investigations will be considered incidental to the Contract price bid.

IV. REQUIRED SUBMITTALS, CERTIFICATIONS, AND NOTIFICATIONS

The Contractor will be responsible for completing all submittals in accordance with the terms and conditions of the Contract Documents. The submittals required for work under this Contract include, but are not limited to:

- Video Record of the Project Areas prior to beginning work and shall submit to the City prior to mobilization of any equipment for the Contract.
- The Contractor must submit a satisfactory CPM-logic based construction schedule prior to starting work. No work shall be started until the schedules and methods of operation have been accepted by the Engineer.
- The Contractor must submit all shop Contract Drawings to the City ten (10) days prior to the start of the work.
- The Contractor must submit to the City proof of contract with a Maryland Licensed Tree Expert (LTE) before the pre-construction meeting.
- The Contractor shall submit copies of results of subsurface investigations, and the results of all compaction tests to the City. The Contractor shall also submit topsoil analysis.
- The Contractor shall, at the preconstruction meeting or a minimum of fourteen days prior to installation of the dewatering and pump around systems, submit to the City/Engineer a letter report, including working drawings and/or design data that is required to detail any or all of the following:
 1. The proposed type of dewatering and pump around systems, including relief of hydrostatic head and maintenance of the excavation in a dewatered and in a hydrostatically relieved condition;
 2. Arrangement, location and depths of the components of the systems;
 3. A complete description of equipment to be used, with installation, operation and maintenance procedures;
 4. Standby equipment and power supply;
 5. Location and size of berms, dikes, sumps and discharge lines, including the relation to water disposal ditches;
 6. Product information for filter bags;
 7. Design calculations demonstrating adequacy of the selected systems and equipment.
- Shop drawings and certificates of compliance requirements.
- The City may inspect and take such samples of fertilizer that they deem necessary for testing or may require the Contractor to furnish an affidavit from the manufacturer or a testing laboratory as to the available nutrients contained therein.
- The Contractor must provide written notification ten (10) days prior to the start of work.
- The Contractor must submit material and site preparation certifications in writing for the City's approval according to the Project Specifications incorporated by reference and contained herein.
- The City shall be notified 48 hours prior to the scheduled video recording of the project site and will have a representative present to identify other areas that may be affected by the proposed construction.
- The Contractor is responsible to make all necessary notifications required by the Contract Drawings, specifications and permits. Written notification is to be made 10 days prior to starting work.
- The Contractor must obtain written approval by the City before undertaking any work involving extra cost. Problems or changed conditions must be called to the attention of the Inspector or the City Project Manager immediately.
- The Contractor must notify the MDE at least 5 days before beginning construction. Additionally, the Contractor shall inform the City at least 48 hours before initiating pump around operations.

PAY ITEM NO. 1 – MOBILIZATION

DESCRIPTION

This work shall encompass all preparatory operations related to the construction project that are necessary to commence work and includes the movement of personnel and equipment to the project site. Included shall be all networking and coordination with the City personnel and 3rd party entities such as Miss Utility and test pitting for the location of utilities. All work to be performed under this pay item shall be in accordance with the requirements of Section 108 of the of the Maryland Department of Transportation, State Highway Administration's Standard Specifications for Construction and Materials, dated July 2018, with the following additions and/or modifications. An Engineer's Office is not required for this Contract.

The Contractor is encouraged to videotape site conditions prior to disturbance. Damage to any existing site feature that the Contractor is unable to demonstrate was existing prior to the initiation of construction activities shall be repaired or replaced by the Contractor at no cost to the City.

Mobilization shall also include the restoration of existing curbs, sidewalks, asphalt path, etc. after construction.

SUBMITTALS

- **Construction Schedule:** Submitted a minimum of 10 days prior to the start of work.
- **Documentation of Initial Site Conditions:** Video or photo documentation of the project site and work areas as directed by the City.

MEASUREMENT & PAYMENT

Mobilization will not be measured and will be paid for at the Contract's lump sum (LS) price for the pay item "Mobilization". The City retains the right to organize payments for this bid item according to the project schedule and prorate payments based on contract completion.

Payment for "Mobilization" encompasses all instances of mobilization to the project site and will not be duplicated or increased, even if the Contractor may, for any reason, shut the work down on the project or move their equipment away from the project site and then back again. The restoration of existing curbs, sidewalks, asphalt path, etc. shall be included in the price bid. The inspection of all inflow pipes and the removal of accumulated aggregate within the pipes shall be included in the price bid.

PAY ITEM NO. 2 – CONSTRUCTION STAKEOUT

DESCRIPTION

This item shall be in accordance with “Section 107 – Construction Stakeout” of the Maryland Department of Transportation, State Highway Administration’s (MDSHA) *Standard Specifications for Construction and Materials*, latest edition and any addenda thereto, unless otherwise noted below.

The Contractor shall:

- A. Provide and have available to the project an adequate engineering staff which is competent and qualified to set all lines and grades needed to construct the project and all related grading.
- B. Make all field measurements necessary to stakeout the baseline of construction and lay out the lines and grades called for in the Contract Documents or as directed by the City. Use the horizontal and vertical survey control points shown on the Contract Drawings to layout the lines of work, limits of grading, planting and fill placement, and to stake out the location of all proposed structures as described in Contract Documents.
- C. Use benchmarks shown on the Contract Drawings for construction. Furnish the assistance for their preservation after being set. The Contractor is held responsible for preservation of the benchmarks. If, in the opinion of the City, the benchmarks are willfully or carelessly disturbed or destroyed by the Contractor or their employees, the entire cost of replacing them will be charged against the Contractor and the cost will be deducted from the Contractor’s final payment.
- D. Demarcate the Limit of Disturbance (LOD) and trees to be protected, to the satisfaction of the City, as part of the construction stakeout operation and before any clearing operation commences.
- E. Once the LOD and trees to be protected have been demarcated and accepted by the City, High Visibility Fence and/or Temporary Chain Link Fence shall be installed along all portions of the LOD as shown on the Contract Drawings.
- F. To assist the Contractor in survey and stakeout, electronic CAD files will be provided by the Designer at the pre-construction meeting.
- G. Notify the City once the stakeout or any phase of the stakeout is completed. The City will inspect the construction stakeout prior to the Contractor beginning clearing and grubbing activities. The purpose of the inspection is not to verify the stakeout, but to allow the City an opportunity to assess the lines established by the Contractor, prior to the start of construction. Obvious errors with the stakeout will be remedied prior to the Contractor proceeding with construction. This inspection will in no way relieve the Contractor of their responsibilities to construct the site as specified in the Contract Documents.

CONSTRUCTION METHODS

- A. **Stream Baseline Stakeout:** For stream baseline stakeout, the Contractor will furnish a staked baseline of construction of the proposed location of the stream, as depicted on the plans, with the spacing of stations (stakes, nails, crosses, etc.) not to exceed 25 feet. All points of curvature (PC) and points of tangency (PT) must be staked.
- B. **Structure Stakeout:** For stream structures, the Contractor will furnish appropriately spaced benchmarks and the necessary references required to locate all stream structures in the Contract Documents.
- C. **Line and Grade:** At a minimum, the Contractor shall stake out the location (horizontal and vertical) of all proposed stormdrain pipes and structures, all boundaries – including the limit of disturbance, wetlands, easements, parcels, areas to be protected, and subgrade entities – and all proposed breaks in slope. In addition to the listed features, the Contractor shall stake out any other features that would naturally be necessary to construct the site in accordance with the Contract Drawings.
- D. **Control Markers:** Preserve the baseline of construction, working lines and benchmarks set at the beginning of the project. Replace any disturbed or destroyed controls at no additional cost to the City.
- E. **Control Stakes:** Furnish, set and preserve stakes at each station along each side of the proposed baseline for the individual baselines of construction, as specified in 107.03.01. Set additional stakes as needed for horizontal and vertical controls necessary for the correct layout of the work.
- F. **Layout:** For structures specified in the Contract Drawings proceed with the layout work. Check the proposed structure lengths by electronic distance measurement or chaining from the field layouts. Compensate measurements for horizontal alignment when chaining is used. Check the location of structures to verify its correct location with relation to existing on-site features and conditions that are to remain in the original positions. Notify the City of any discrepancies at once in writing; otherwise, all planned dimensions, grades and field measures will be deemed correct. All lines established on the ground will be preserved for reference, marked and kept available at all times during construction unless otherwise approved by the City.
- G. **Demarcation:**
 - 1. Perform all demarcation as specified or directed by the City. Demarcate the limits of disturbance (LOD) and trees to be protected in accordance with the Contract Documents with flagging or other method approved by the City. Flagging shall be a minimum 2-mil vinyl that is 1-1/2 inches wide.
 - 2. Immediately reset/replace any damaged or destroyed flagging unless the flagging is located where high visibility fence or tree protection measures have already been installed. Resetting/replacing demarcation measures shall be at the expense of the Contractor. Remove all demarcation at the completion of construction.

MEASUREMENT & PAYMENT

Construction Stakeout will not be measured and will be paid for at the Contract's lump sum (LS) price for the pay item "Construction Stakeout". The Contract's lump sum price must include compensation for the furnish, placement and maintenance of construction layout stakes, flagging of disturbance, trees to be protected and wetland limits, removal of flagging and stakes following project completion, and for all material, labor, equipment, tools, and incidentals necessary to complete the work.

PAY ITEM NO. 3 – MAINTENANCE OF TRAFFIC

DESCRIPTION

This item shall consist of maintenance of traffic in accordance with “Section 104 – Maintenance of Traffic” of the Maryland Department of Transportation, State Highway Administration’s (MDSHA) *Standard Specifications for Construction and Materials*, latest edition and any addenda thereto and the U.S. Department of Transportation Federal Highway Administration’s Manual on Uniform Traffic Control Devices (MUTCD), latest edition and any addenda thereto, unless otherwise noted below.

- A. The Contractor shall provide for Maintenance of Traffic as shown on the approved Contract Drawings, in accordance with all local laws and regulations and as directed by the City. Warning signs and pedestrian traffic detour signs shall be installed according to applicable MDSHA and Montgomery County traffic control requirements.
- B. Temporary flaggers are required during all deliveries and all heavy equipment movement within the activity area and/or public rights of way.

MATERIALS

All signs, barriers and flaggers shall be in accordance with the latest editions of MUTCD, the Maryland State Highway Administration Specifications for Construction and Materials, section 104 and as approved by the City.

SUBMITTALS

- **Certification of Compliance** with applicable state standards for all traffic control devices

CONSTRUCTION METHODS

- A. Construction shall be in accordance with Section 104 unless otherwise noted on the Contract Documents.
- B. The Contractor shall contact the City three (3) days prior to the installation of traffic control signage. No site disturbance shall occur until traffic control signage has been posted and approved by the City.
- C. Existing signage which is no longer applicable shall be covered, rotated or demarcated by another approved means in tandem with the installation of temporary traffic control signage.
- D. The City may require the relocation of signage to ensure visibility and protection of the public. No traffic controls shall be removed or relocated without permission of the City.
- E. Temporary signage which is posted for greater than three (3) days must be installed on four (4) by four (4) inch lumber posts.
- F. Driveway access shall be maintained unless written agreements have been obtained with the owners prior to blockage.

MEASUREMENT & PAYMENT

Traffic Control will not be measured and will be paid for at the Contract’s lump sum (LS) price for the pay item “Maintenance of Traffic”. The Contract’s lump sum price must include compensation for the furnish, placement and maintenance of all traffic control devices, including flaggers, for the duration of the project. Payment shall include all material, labor, equipment, tools, and incidentals necessary to complete the work.

The City retains the right to organize payments for this item according to the project schedule and prorate payments based on project completion.

PAY ITEM NO. 4 – CLEARING AND GRUBBING

DESCRIPTION

This item shall consist of clearing and grubbing areas in accordance with the Contract Drawings, as directed by the City and the requirements of “Section 101 – Clearing and Grubbing” of the Maryland Department of Transportation, State Highway Administration’s (MDSHA) *Standard Specifications for Construction and Materials*, latest edition and any addenda thereto, unless otherwise noted below.

- A. Clearing shall consist of removal at ground level, trees with a diameter at breast height (DBH) less than 12 inches, brush, shrubs, grass, weeds, other vegetation, down timber, rotten wood, rubbish, fences, incidental structures and general debris within the limits of disturbance as shown on Contract Drawings.
- B. The demolition and disposal of unaccounted for site features as defined under the Pay item “Demolition and Disposal of Existing Structures and Debris”.
- C. When debris and other vegetation is marked for removal outside of the limits of disturbance, these features shall be removed by hand.
- D. Tree removal for trees with a DBH greater than or equal to 12 inches will be paid for in accordance with the Pay item “Tree Removal”.
- E. Grubbing shall consist of removal of stumps, roots, stubs and foundations, other buried items and debris, which interfere with this work. Unless otherwise indicated on the Contract Drawings, such removal shall be carried out to a depth of not less than two feet below sub-grade or sub-base levels.
- F. Clearing and grubbing on the embankment shall be performed in accordance with United States Department of Agriculture Soil Conservation Service Technical Note 705: Operations and Maintenance Alternatives for Removing Trees from Dams dated April 1, 1981.
- G. Non-native/invasive control via mechanical removal within the limits of disturbance will not be paid for separately and will be considered incidental to Clearing and Grubbing. This shall include the associated soil media as described within the Pay item “Non-Native Invasive Removal”.
- H. The stockpiling of items to be removed and relocated/reset and proper disposal of all unsuitable materials, debris and other unusable items collected during clearing and grubbing operations will be included in Clearing and Grubbing.
- I. The stripping and stockpiling of existing topsoil and existing wetland soil media as well as the proper disposal of all unsuitable topsoil and wetland soil media will be considered incidental to the cost of Clearing and Grubbing.

CONSTRUCTION

- A. The limit of disturbance shall be staked in the field and approved by the City in accordance with the Pay item “Construction Stakeout” before any clearing and grubbing may take place. It shall be the responsibility of the Contractor to walk the limits of disturbance with the Sediment Control Inspector, Forestry Inspector, City, Construction Inspector, Engineering Project Manager, Engineer or their representative before clearing operations have begun. Clearing and Grubbing shall not commence until authorized by the City.
- B. Protect existing trees and other vegetation indicated to remain in place, against unnecessary cutting, breaking or skinning of roots, skinning and bruising of bark, smothering (by stockpiling construction materials or excavated materials within the drip line), excess foot and/or vehicular traffic, and parking of vehicles within the drip line. Provide temporary fences, barricades or guards as required to protect the trees and vegetation located outside the limits of disturbance. Trees located inside the limit of disturbance that are not marked for removal shall be protected in accordance with the Pay item “Tree Protection”.
- C. Remove all waste material from the property and legally dispose of it. Trees to be removed shall be dropped in such a manner that the tree falls within the limits of disturbance as

- shown on the Contract Drawings. Unless otherwise shown or directed by the Plan Set, the DPW Inspector, or City Forestry Inspector, excess tree materials are to be removed offsite and legally disposed of. If required, stumps shall either be ground to a depth of two feet below grade or shall be removed mechanically as directed by the City Forestry Inspector.
- D. The Contractor shall be responsible for any and all damage to all-natural resources including trees, shrubs, herbaceous plants and wetlands located beyond the limit of disturbance, which occurs from their operations during the life of the Contract. The Contractor shall fully restore, at their own expense, and to the satisfaction of the City, any trees, shrubs, herbaceous plants, and wetlands that have been damaged or destroyed. Wetland restoration shall be in accordance with regulatory agency conditions.
 - E. The Contractor shall be responsible for debris removal from within the limit of disturbance and stream channel as shown on the Contract Drawings. Additional debris may have accumulated in the work area and stream channel and shall be removed as directed by the City at no additional cost to the City and legally disposed.
 - F. Burning of cleared and grubbed materials is not permitted.
 - G. Non-native/invasive control shall be in accordance with the Contract Drawings.
 - H. Guardrails shall be removed and re-installed in accordance with "Section 605.03.06 – Remove and Reset Existing Traffic Barrier" of MDSHA *Standard Specifications for Construction and Materials*, latest edition and any addenda thereto
 - I. Signs shall be removed and re-installed in accordance with relevant sections of "Section 813 – Signs" of MDSHA *Standard Specifications for Construction and Materials*, latest edition and any addenda thereto
 - J. Chain-link and Wood Fence shall be removed and re-installed in accordance with relevant sections of "Section 607 – Chain Link Fence" of MDSHA *Standard Specifications for Construction and Materials*, latest edition and any addenda thereto

MEASUREMENT & PAYMENT

Clearing and Grubbing will not be measured and will be paid for at the Contract's lump sum (LS) price for the pay item "Clearing and Grubbing". The Contract's lump sum price must include compensation for all clearing and grubbing – including tree removal and disposal of trees less than 12" caliper, flush cut trees, and stump removal and disposal activities; for the removal and proper disposal of debris, trash and incidental structures; for the removal, salvage and stockpiling of materials, labor, equipment, tools and incidentals necessary to complete the work. All tree removal over 12" caliper and associated activities will be covered under a separate pay item for "Tree Removal".

PAY ITEM NO. 5 – NON-NATIVE INVASIVE SPECIES REMOVAL AND MONITORING

DESCRIPTION

These provisions shall be used as guidelines and may be modified upon approval of the City of Rockville Forester. This work consists of the eradication and removal of NNI species in the LOD and a 25' offset of the LOD as shown on the Northeast Park Contract Documents. Areas within the forest canopy that are cleared of Non-Native Invasive (NNI) species may be considered for tree plantings. Consultation with the Forestry Inspector and/or City Forester should take place prior to planting any trees within the forested area. This section covers invasive removal beyond initial clearing and grubbing and includes herbicide application. Invasives removed as part of initial clearing and grubbing will not be paid separately under this item. The contractor should assume 4 seasonal treatments per year, plus follow-up treatments for two years.

MATERIALS

Materials include mechanical equipment, herbicides and any other incidental material needed to successfully treat NNI species within the Contract. All herbicides shall be EPA registered chemicals that are approved for use in forested areas and adjacent to waterways to control and prevent re-growth of undesirable vegetation. When herbicides are applied, all applications shall utilize a visible marker dye.

SUBMITTALS

A. Qualification Data:

1. Supervisor of the crew, must have five (5) or more years documented successful experience identifying, removing and controlling invasive plants in this geographic region. The name and contact information of this superior and their qualifications, including a list of completed projects similar scope, shall be submitted for review. Project information shall include name, location, date, reference names and phone numbers of jurisdictional departments.
2. A professional pesticide applicator, licensed by the State of Maryland in the following categories is required for this work so that the chemical treatments conform to accepted Integrated Pest Management (IPM) practices; Forest (2), Ornamental and Turf (3A and 3C), and Aquatic (5). The State of Maryland Pesticide Applicator License and Certification must be submitted for the company, crew supervisor, and personnel working on the project.

B. Manufacturer's Specifications: Product labels and material safety data sheets for all herbicides, wetting agents, basal oil, and dyes.

C. Schedule: The Contractor shall submit an NNI Management Plan for review and approval prior to plant removal or treatment work. The plan must detail the treatment procedure, timing, and frequency through the treatment period. Specific chemical types and quantities for herbicide applications shall be included. A pre-treatment meeting shall take place to determine the course of the remaining forest management/NNI species work. At that time, the NNI Management Plan should be revised to reflect management measures for the remaining treatment period.

D. Treatment Logs:

1. The Contractor must submit to the City treatment logs listing the project, area treated, species treated, percent of approximate NNI coverage, overall acreage surveyed versus acreage treated, method of treatment, dates treated and

weather during treatment. When herbicide is applied, the type, application rate and total amount of herbicide used must be included in the treatment logs.

2. Treatment logs must be submitted during all treatment efforts.
3. The Contractor must submit a copy of the treatment log to the City within 24 hours after application.

CONTRACTOR RESPONSIBILITIES

- A. The Contractor shall be responsible for protection of desirable species that are to remain. Any native plant material that is killed or damaged through any act of negligence by the Contractor in applying and handling of the herbicide on the project will be replaced at no additional expense to the City. Due to the nature of the treatment area and the density of invasive species some collateral damage to desired vegetation may occur.
- B. Tree protection fencing may only be removed for purposes of accessing invasive species removal areas. The Contractor is only to remove fencing as required for access and fencing must be reestablished at the end of each workday. Only mowing and spraying equipment may access areas outside of the limit of disturbance, no stockpiling or storage of equipment is to occur in these areas. Do not pull perennial vines from trees.
- C. Maintain the labels for all herbicides being used in their possession and material safety data sheets while on site.
- D. Conduct all herbicide formulations and applications in strict conformance with the manufacturer's recommendations and per requirements of regulatory agencies and licensure.
- E. Maintain a written record of herbicide application, including the formulation, concentration, area treated and date for each application. The City may request the written record at any time.

CONSTRUCTION METHODS

A. Removal:

1. Mechanical removal of non-native invasive species will include removal of above ground plant material and excavation of the soils that support them to a minimum of 6 inches below existing grade. Existing topsoil, subsoil, and any other associated material shall be disposed of off-site at a location approved by the City and shall not be salvaged for re-use on site.
2. Initial removal may not require an herbicidal application component. This will be left to the discretion of the Contractor. The City must be notified a minimum of five (5) days prior to herbicidal application.
3. The areas must be immediately stabilized in accordance with the Contract Documents.
4. The Maryland Invasive Species Council lists *Invasive Species of Concern in Maryland | Terrestrial Plants* considered non-native invasive species by the City of Rockville Forestry Division that shall be treated by the Contractor.
<http://mdinvasives.org/species-of-concern/terrestrial-plants/> The Contract Drawings include a list of species which were observed on site in during field assessments.

- B. **Inspection and Initial Acceptance:** After construction is complete, the Contractor shall perform an initial herbicide application and a 2-3 week follow-up application on any non-native invasive species found within the LOD in accordance with integrated pest management practices. The Contractor shall contact the City for inspection of the area. If the first seasonal treatment and treatment logs are satisfactory, the City will give written

notice to the Contractor. The notice will constitute the Certificate of Acceptance, and the two-year post construction treatment period will begin from the date of the written notice. The Certificate of Acceptance will not be issued until the treatment logs have been submitted to the City.

C. Post Construction Treatment:

1. The Contractor shall guarantee for the duration of two years post construction 85 percent eradication of all non-native invasive species. The two-year treatment period shall begin after the date of written notice and must include a minimum of two growing seasons (April 1 to September 30).
2. Monitoring inspections shall occur a minimum of four times a year; including a minimum of three times per growing season. Any regeneration shall be treated with an effective herbicide that is safe for use near aquatic habitats.
3. Treatment shall include all targeted NNI vegetation within the LOD, whether it has regenerated, sprouted from the existing seed bank, or otherwise propagated within the project area.
4. The City will assume monitoring and maintenance responsibilities after the Contractor's two-year post construction treatment period has been completed.

D. Final Inspection: The Contractor and the City Inspector will conduct a final inspection at the end of the two-year post construction treatment period. It is the Contractor's responsibility to notify the City within two weeks of the anticipated meeting. If the treatment does not meet the 85% kill rate, the Contractor must reapply the herbicide at no additional cost. The kill rate will be based on percent cover of non-native invasive species.

MEASUREMENT & PAYMENT

Non-Native Invasive Species Removal will not be measured and paid for at the Contract's lump sum (LS) price for the pay item "Non-Native Invasive Species Removal and Monitoring". The contract's lump sum price must include full compensation for complete eradication of NNI material by any approved means, proper disposal of NNI material, monitoring, continued removal throughout the post construction treatment period, restoration of any disturbance which occurs during the monitoring period and all materials, labor, equipment, tools, and other incidentals necessary to complete this work. Repairs to damaged vegetation due to the Contractor's negligence as determined by the City shall be made at no additional expense to the City.

PAY ITEM NO. 6 – DEMOLITION & DISPOSAL OF EXISTING SITE FEATURES

DESCRIPTION

This work shall encompass removal and proper disposal of all concrete structures, bollards, asphalt path, pavement and pipes. This work will be conducted in areas of proposed grading and within the limits of disturbance, as specified in the Contract Drawings, or as directed by the City. At a minimum Demolition and Disposal of Existing Site Features shall include:

- A. Saw cutting, removal and disposal of pavement.
- B. Removal and disposal of the existing 18-in reinforced concrete pipe (RCP) and 48-in RCP
- C. Removal and disposal of the existing headwall/endwall structures

CONSTRUCTION METHODS

- A. All demolition, removal and disposal shall be performed according to the contract drawings and all applicable Federal, State and local laws, regulations and guidelines. Demolition shall generally be limited to complete or partial removal of items indicated on the Contract Drawings and/or directed by the City in the field including but not limited to structures to be removed, bollards, concrete wall, gabions, storm drain pipe, culverts, and abandoned utilities. These materials are to be disposed of in a proper and legal manner by the Contractor. No blasting will be permitted.
- B. Saw cut existing asphalt or concrete according to Maryland Department of Transportation, State Highway Administration, Standard Specifications for Construction and Materials, latest edition and any addenda thereto, Section 522.03 Portland Cement Concrete Pavement Repairs and Section 505.03.02 Hot Mix Asphalt Patches. All saw cuts shall be to the full depth of the curb and gutter, sidewalk or pavement being cut.
- C. Perform work so adjacent structures, equipment, paving and materials, which are to remain, shall not be damaged. If damage occurs, the Contractor shall repair or replace the adjacent structures, equipment, paving and materials as directed by the City at no additional cost to the City. Existing utilities damaged by demolition shall be replaced with the same material and quality as the existing utilities. Before construction begins, the Contractor shall inspect existing structures, equipment and paving that will remain in-place within and adjacent to the work area for existing defects and damage found during this inspection shall be reported to the City. All damage repairs shall be at the contractor's expense.
- D. All equipment, materials and structures within the limits of disturbance (LOD), designated for removal, shall become the property of the Contractor.
- E. The Contractor is responsible for the removal and proper disposal of all debris and structures within the limits of disturbance as shown on the plans. Debris shall be removed from areas of proposed grading and all other areas within the limits of disturbance. Large debris may be removed using excavator buckets, cable winch, towing strap, laborers with bags or buckets, or other methods identified by the Contractor and approved by the City.
- F. The Contractor shall provide shoring and bracing during construction as necessary to protect personnel, structures and equipment. No special payment will be made for shoring and bracing. All costs shall be included with the appropriate pay item.

MEASUREMENT & PAYMENT

The demolition and disposal of existing site features will not be measured and will be paid for at the Contract's lump sum (LS) price for the pay item "Demolition & Disposal of Existing Site Features". The demolition and disposal of site features not explicitly list as incidental to specific pay items shall be incidental to this work. Payment for demolition and disposal as described herein must include compensation for all saw cutting, removal, disposal, and for all material, labor, equipment, tools, and incidentals necessary to complete the work.

PAY ITEM NO. 7 – TREE REMOVAL (DBH ≥ 12” TO < 18”)

PAY ITEM NO. 8 – TREE REMOVAL (DBH ≥ 18” TO < 24”)

PAY ITEM NO. 9 – TREE REMOVAL (DBH ≥ 24”)

DESCRIPTION

This work shall encompass the clearing, grubbing, and removal of trees greater than or equal to 12” caliper as shown on the Contract Drawings and with approval by the City. Trees to be removed shall be felled in such a way that the tree falls within the limit of disturbance as defined by the Contract Drawings. Damage to adjacent structures or natural resources, including trees, outside of the defined limit of disturbance shall be restored to existing conditions by the contractor. The cost of any restoration required because of improper felling of trees will be incidental to this pay item. Additional trees may be removed at the direction of the City. The tree stump will be ground out to a depth of six (6) inches below the normal surface level including all surface roots.

At the discretion of the City, the Contractor (or sub-contractor) performing any tree removal work must be a Certified Arborist, certified by the International Society of Arboriculture and be registered in the State of Maryland as a Licensed Tree Expert as issued by Maryland DNR (Department of Natural Resources). The same person must hold both certifications. At the request of the City, the Contractor must provide records of registration prior to work commencing.

SUBMITTALS

- **Arborist Certification** issued by the International Society of Arboriculture
- **Tree Expert License** issued by Maryland DNR (Department of Natural Resources)

MEASUREMENT & PAYMENT

Tree Removal will be measured and paid for each (EA) tree removed. The Contract’s unit price for the pay items “Tree Removal (DBH ≥ 12” to < 18”)", Tree Removal (DBH ≥ 18” to < 24”)", and “Tree Removal (DBH ≥ 24”)" must include compensation for all labor, materials, and equipment necessary to complete this work. Previous fallen trees, regardless of size, will be removed and paid for under the pay item for “Clearing and Grubbing”.

PAY ITEM NO. 10 – TREE PROTECTION PLANK
PAY ITEM NO. 11 – TREE PROTECTION FENCE

DESCRIPTION

Tree protection shall be in accordance with “Section 120 – Tree Preservation” of the Maryland Department of Transportation, State Highway Administration’s (MDSHA) *Standard Specifications for Construction and Materials*, latest edition and any addenda thereto, unless otherwise noted below.

- A. Tree Protection shall consist of implementing arboricultural activities related to tree preservation and protection of existing trees on site not marked for removal including the installation of tree protection fencing and trunk protection as shown on Contract Drawings and directed by the City and/or approval agencies. Tree protection shall be installed at the locations specified on the Contract Drawings or as needed to preserve all trees with a diameter at breast height (DBH) greater than or equal to six inches that are not marked for removal on the Contract Drawings.
- B. Trunk protection shall be utilized for trees that are directly adjacent to or have the potential to be damaged by machinery.
- C. All tree protections and tree removals shall occur under the supervisions of a Maryland licensed Tree Expert and with approval of the City.

MATERIALS

Tree protection measures shall be as shown on the Contract Drawings.

SUBMITTALS

- **Arborist Certification** issued by the International Society of Arboriculture
- **Tree Expert License** issued by Maryland DNR (Department of Natural Resources)

CONSTRUCTION METHODS

- A. All work will be performed to meet or exceed current industry standards. This will also meet the minimum of the most recently published ANSI standards and the City of Rockville Tree Manual.
- B. The Contractor’s Arborist shall be responsible for supervising all arboricultural activities included within the Contract Documents.
- C. All trees to be protected shall be demarcated in accordance with the Construction Stakeout Specifications and all tree protection measures must be installed prior to beginning clearing and grubbing operations and installing erosion and sediment controls.
- D. Failure to comply with specifications may result in penalties as prescribed by the City of Rockville Ordinances Tree and Vegetation – Public Lands, City Code, Chapter 21 and Trees and Forest Conservation, City Code, Chapter 22, latest addition and any addenda thereto.

MEASUREMENT & PAYMENT

Tree Protection Plank shall be measured and paid for per each (EA) tree protected to the satisfaction of the City. The Contract’s unit price for the pay item “Tree Protection Planking” must include compensation for all labor, materials, and equipment necessary to complete this work. Removal of the Tree Protection Planking must be included in the price bid.

Tree Protection Fence shall be measured and paid for per linear foot (LF) of Tree Protection Fence installed to the satisfaction of the City. The Contract’s unit price for the pay item “Tree Protection Fence” must include compensation for all labor, materials, and equipment necessary to complete this work. Removal of the Tree Protection Fence must be included in the price bid.

Demarcating trees will be paid for separately as part of the pay item "Construction Stakeout". Payment for multilingual sign will not be made separately and will be considered incidental to the cost of Tree Protection.

Payment for the services of a licensed arborist will not be paid for separately and will be considered incidental to the price. Payment for multilingual sign will not be made separately and will be considered incidental to the cost of Tree Protection.

PAY ITEM NO. 12 – TREE PRUNING

DESCRIPTION

Tree limbs and roots shall be pruned as shown on the Contract Drawings and as directed by the City Forestry Inspector.

SUBMITTALS

- **Arborist Certification** issued by the International Society of Arboriculture
- **Tree Expert License** issued by Maryland DNR (Department of Natural Resources)

CONSTRUCTION METHODS

- A. Methods for root pruning and limb pruning shall be as directed by the City Forester in the field.
- B. Limb Pruning shall be performed prior to construction access.
- C. Root Pruning shall be performed prior to rough excavation.

MEASUREMENT & PAYMENT

Limb and Root Pruning shall be measured and paid for per linear foot (LF) of root pruned to the satisfaction of the City. The length shall be measured parallel to the trench line and the limits of disturbance. The Contract's unit price for the pay item "Tree Pruning" must include compensation for all labor, materials, and equipment necessary to complete this work.

PAY ITEM NO. 13 – HIGH VISIBILITY FENCE

DESCRIPTION

This work shall encompass the furnish and installation of High Visibility Fence as shown on the Contract Drawings or as directed by the City. Areas where High Visibility Fencing is to be installed shall be designated by flagging in the field prior to scheduling the preconstruction meeting.

MATERIALS

Mesh – Mesh shall be international orange, high density polyethylene diamond mesh with a mesh opening of 1½ inches. Mesh shall be four feet (4') in height with a roll weight of 20 pounds per roll and roll size of four feet (4') by 50 feet.

Posts – Posts shall be a conventional metal “T” or “U” posts.

Ties – Tension wire or rope

SUBMITTALS

- **Product Data:** Product manufacturer data for Mesh

CONSTRUCTION METHODS

- A. The Contractor shall erect the High Visibility Fence as designated on the Contract Drawings and/or as directed by the City prior to beginning construction.
- B. Posts shall be spaced a maximum of 12 feet. Tree ties, wrapped around a horizontal fence strand and post, are for securing the post. Tension wire or rope may be used as a top stringer woven through the top row of strands to prevent potential sagging. Should construction sequencing allow and with the approval of the City, fencing from a completed section of the project site can be removed and reused on the site. The High Visibility Fence and posts shall be removed at the end of the contract and with the approval of the City. The fence and posts shall become the property of the Contractor at the completion of the project.
- C. The Contractor shall maintain the High Visibility Fence in good repair throughout the duration of the construction.

MEASUREMENT & PAYMENT

High Visibility Fence will be measured and paid for per linear foot (LF) of High Visibility Fence installed to the satisfaction of the City and Sediment Control Inspector. The Contract's unit price for the pay item “High Visibility Fence” must include compensation for furnish, placement, maintenance, and removal of the High Visibility Fencing and all materials, labor, equipment, tools, and other incidentals necessary to complete the work.

PAY ITEM NO. 14 – E&SC DEVICE: SUPER SILT FENCE
PAY ITEM NO. 15 – E&SC DEVICE: SILT FENCE ON PAVEMENT
PAY ITEM NO. 16 – E&SC DEVICE: MOUNTABLE BERM
PAY ITEM NO. 17 – E&SC DEVICE: FILTER LOG

DESCRIPTION

This work includes installation, inspection, and maintenance of the erosion and sediment control measures as shown on the Contract Documents. Furnishing materials for installation shall be incidental to the price bid. Removal of all temporary erosion and sediment control measures with permission of the Sediment Control Inspector shall be included in the price bid for each pay item. All erosion and sediment controls must be in accordance with the requirements of the 2011 *Maryland Standards and Specifications for Soil Erosion and Sediment Control*.

MATERIALS

All materials used shall be consistent with the material specifications provided in the 2011 *Maryland Standards and Specifications for Soil Erosion and Sediment Control* and the Contract Documents. Any deviation from these specifications must be approved by the Erosion and Sediment Control Inspector.

CONSTRUCTION METHODS

- A. Sediment control will be provided as shown on the Contract Drawings and as required by the Sediment Control Inspector in the field. With permission of the Sediment Control Inspector and the City, the location of sediment controls may be adjusted in the field. The Contractor shall regularly inspect the sediment controls and perform any maintenance required during the contract period.
- B. The Contractor shall complete all work in accordance with the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control and the Contract Drawings.
- C. The approval by the Soil Conservation District for the construction of this project does not extend to off-site transfer and/or material placement sites. Prior to commencing any grading operations, the Contractor shall make application for and secure all necessary permits for the operation and grading on any off-site areas that will be used in conjunction with this project. The permit shall include, but not be limited to, the approval of the jurisdictions Soil Conservation District.
- D. In case of repeated violations for the Sediment and Erosion Control Plan on the part of the Contractor, the Owner reserves the right to employ outside assistance or to use their own forces to provide the necessary corrective measures. Such incurred direct costs, plus project engineering cost, will be charged to the Contractor and appropriate deductions made from the Contractor's monthly invoice.
- E. Permanent seeding/turf establishment shall be in accordance with standards and specifications provided on the Contract Drawings and the Pay item "Permanent Stabilization".

MEASUREMENT & PAYMENT

Super Silt Fence will be measured and paid for per linear foot (LF) of Super Silt Fence installed to the satisfaction of the City and the Sediment Control Inspector. The Contract's unit price for the pay item "E&SC Device: Super Silt Fence" must include full compensation for furnish, installation, maintenance and removal of Super Silt Fence and all materials, labor, equipment, tools, and other incidentals necessary to complete this work. The cost of replacement of Super Silt Fence, if deemed necessary by the Sediment Control Inspector, must be incidental to the Contract's unit price for this pay item.

Silt Fence on Pavement will be measured and paid for per linear foot (LF) of Silt Fence on Pavement installed to the satisfaction of the City and the Sediment Control Inspector. The Contract's unit price for the pay item "E&SC Device: Silt Fence on Pavement" must include full compensation for furnish, installation, maintenance and removal of Super Silt Fence and all materials, labor, equipment, tools, and other incidentals necessary to complete this work. The cost of replacement of Super Silt Fence, if deemed necessary by the Sediment Control Inspector, must be incidental to the Contract's unit price for this pay item.

Mountable Berms shall be measured and paid for per each (EA) Mountable Berm installed to the satisfaction of the City and the Sediment Control Inspector. The Contract's unit price for the pay item "E&SC Device: Mountable Berm" must include full compensation for furnish, installation, maintenance and removal of Mountable Berm and all materials, labor, equipment, tools, and other incidentals necessary to complete this work. The cost of replacement of Mountable Berms, if deemed necessary by the Sediment Control Inspector, must be incidental to the Contract's unit price for this pay item.

Filter Logs will be measured and paid for per linear foot (LF) of Filter Log installed to the satisfaction of the City and the Sediment Control Inspector. The Contract's unit price for the pay item "E&SC Device: Filter Log" must include full compensation for furnish, installation, maintenance and removal of Filter Log and all materials, labor, equipment, tools, and other incidentals necessary to complete this work. The cost of replacement of Filter Logs, if deemed necessary by the Sediment Control Inspector, must be incidental to the Contract's unit price for this pay item.

PAY ITEM NO. 18 – STAGING AND STOCKPILING AREAS

DESCRIPTION

This work includes the installation, maintenance, and removal of Staging Area and Stockpiling Areas according to the Contract Drawings. Any deviations must be approved by the Owner and Engineer. Furnishing materials for installation, including the tarp for Stockpiling Areas, shall be incidental to the price bid. If necessary, the Contractor is required to install additional sediment control devices to prevent the migration of materials from the Staging and Stockpiling Areas. No payment shall be made for additional Staging and Stockpiling Areas installed within the Limits of Disturbance.

MATERIALS

Staging and Stockpiling Areas – Staging and Stockpiling Areas shall be stabilized with a minimum of four to six inches of mulch and underlain by filter cloth when required by the Sediment Control Inspector or City. When stockpiling in paved areas, the Contractor shall install timber matts over six (6) inches of mulch and filter cloth. Staging and stockpiling areas shall be surrounded by an edge restraint such as filter logs or an alternative approved by the City and Sediment Control Inspector.

Filter Logs – Filter Logs shall be as specified in the *2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control* and the Contract Documents.

Mulch – Mulch for shall be raw wood material from hard or soft timber that is the product of a mechanical chipper, hammermill, or tub grinder. Mulch shall be free of mold, dirt, sawdust, and deleterious material and shall not be in advanced state of decomposition. Material shall be dry with the maximum dimension of individual mulch pieces not exceeding twelve inches in length by two inches in width.

Timber Matts – Timber matts may be mix or hard wood and two-ply minimum. Broken timber matts shall be replaced.

Filter Cloth – Filter Cloth shall be nonwoven geotextile fabric as specified in section H-1 Materials of the *2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control*

Stockpiles – Temporary stabilization for stockpiled material shall as specified in the Pay item “Temporary Stabilization” in addition to tarp.

Tarp – Tarps shall be impervious sheeting capable of being secured in-place.

CONSTRUCTION METHODS

- A. The Contractor shall install the Staging and Stockpiling Areas as shown on the Contract Drawings and as directed by the City prior to beginning construction. Any deviations shall be approved by the Sediment Control Inspector.
- B. The Contractor shall inspect the condition of Staging Areas and Stockpiling Areas daily. Minimum depths of materials shall always be maintained.
- C. The Staging Areas and Stockpiling Areas shall be removed at the completion of the contract and become the property of the Contractor. Filter cloth shall be installed below mulch to facilitate remediation.
- D. The Contractor shall protect the stockpiles with tarps. When required by the Sediment Control Inspector, stockpiles will be stabilized according to the temporary stabilization guidelines in the Pay Item “Temporary Stabilization”.

- E. Upon completion of construction of the Water Treatment Plant location, mulch may be incorporated into the permanent stabilization of the site. A maximum of three (3) inches of mulch can remain at the location of the Construction Access Road, the remainder may be placed in floodplain areas to a maximum depth of three (3) inches at the direction of the Engineer. The Contractor shall remove and dispose of all other materials off site.

MEASUREMENT & PAYMENT

Staging and Stockpiling Areas shall be measured and paid for per square yard (SY) installed to the satisfaction of the Sediment Control Inspector. The Contract's unit price for the pay item "Staging and Stockpiling Areas" shall include all mulch, filter cloth, timber mats, tarps, incidentals, labor, equipment, materials, maintenance, and removal with approval of the Sediment Control Inspector and Owner. Additional erosion and sediment control devices, temporary stabilization of the stockpiles and maintenance of the stockpiles as required by the Sediment Control Inspector shall be incidental to the price bid.

PAY ITEM NO. 19 – TEMPORARY CONSTRUCTION ACCESS ROAD

DESCRIPTION

This work includes the installation, maintenance, and removal of Temporary Construction Access Road according to the Contract Drawings. Any deviations must be approved by the Owner and Engineer. Furnishing materials for installation shall be incidental to the price bid. Payment will include labor, equipment, and materials as necessary to install Temporary Construction Access Road as shown on the Contract Drawings. If necessary, the Contractor is required to install Super Silt Fence, additional Mountable Berms or other sediment control devices to prevent the migration of materials from the Temporary Construction Access Road. No payment shall be made for additional sediment controls as necessary to prevent the migration of materials from the Temporary Construction Access Road, Mountable Berms or additional Temporary Construction Access Road installed within the Limits of Disturbance.

MATERIALS

Temporary Construction Access Road – Temporary Construction Access Road shall be a stable and firm material that does not promote the migration of site materials (including the path itself) from the site, or leach toxins. Temporary Construction Access Road shall be a minimum six inches of #2 stone over filter cloth, timber matts over a minimum of twelve inches of wood mulch and filter cloth or Dura-Base Advanced Composite Mats.

Filter Cloth – Filter Cloth shall be nonwoven geotextile fabric as specified in section H-1 Materials of the *2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control*.

Mulch – Mulch shall be raw wood material from hard or soft timber that is the product of a mechanical chipper, hammermill or tub grinder. Mulch shall be free of mold, dirt, sawdust, and deleterious material and shall not be in advanced state of decomposition.

CONSTRUCTION METHODS

- A. The Contractor shall erect the Temporary Construction Access Road as shown on the Contract Drawings and as directed by the Owner prior to beginning construction. Any deviations shall be approved by the Sediment Control Inspector.
- B. The Contractor shall inspect the condition of the Temporary Construction Access Road daily. Minimum depths of materials shall be maintained at all times.
- C. The Temporary Construction Access Road shall be removed at the completion of the contract and become the property of the Contractor.
- D. The Contractor shall be responsible for all other Construction Access Roads required to move within the work area and complete the construction. All Construction Access Roads must be constructed within the Limits of Disturbance as shown on the Contact Drawings. There will be no additional payment for Construction Access Roads constructed in addition to that which is shown on the Contract Drawings.

MEASUREMENT & PAYMENT

Construction Access Road will be measured and paid for per Linear Foot (LF) of construction Access Road installed to the satisfaction of the City and the Sediment Control Inspector. The Contract's unit price for "Construction Access Road" must include full compensation for the installation, maintenance and removal (upon project completion), of the Construction Access Road including all materials, labor, equipment, tools, and other incidentals necessary to complete this work. Maintenance must include any cleaning of the Construction Access Road or additional stabilization necessary to keep the Construction Access Road operational through construction. The cost of any sediment control devices necessary to prevent the migration of material from the Construction Access Road will be incidental to the Contract's unit price.

Removal must include removal of all materials related to the Construction Access Road including any sediment control devices deemed necessary to prevent sediment migration.

PAY ITEM NO. 20 – MAINTENANCE OF STREAM FLOW AND SITE DEWATERING SYSTEM

DESCRIPTION

This work shall consist of maintaining and/or diverting stream flow through/around the construction site, isolating work areas from stream flow and dewatering the work areas in accordance with the Contract Documents or as directed by the City. A satisfactory system will:

1. Facilitate construction within the allotted construction timeframe
2. Prevent flooding upstream or downstream of the system
3. Address groundwater seepage
4. Prevent the discharge of sediment laden runoff
5. Provide controlled and non-erosive discharge to receiving channels

Modifications - such as additional filter bags, sumps, portable sediment tanks – or the addition of flocculants/clarifiers may be required by the Sediment Control Inspector based on site and weather conditions.

All work shall be in accordance with the requirements of the Maryland Department of the Environment's (MDE) *Maryland Standards and Specifications for Soil Erosion and Sediment Control*, latest edition and any addenda thereto and the Maryland Department of the Environment's (MDE) *Maryland's Guidelines to Waterway Construction*, latest edition and any addenda thereto.

MATERIALS

All materials used shall be consistent with the material specifications provided in the *2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control* and the Contract Documents. Any deviation from these specifications must be approved by the Erosion and Sediment Control Inspector.

Temporary Riprap Outfall – See Pay Item “Class I Riprap”. Shall be as specified on Contract Drawings.

Sandbags – Sandbags shall be resistant to ultraviolet radiation, tearing, and puncture. Material shall be woven tightly enough to prevent the leakage of fill material. Polyethylene sheeting shall be installed on the upstream side of the sandbag dike and keyed into the ground as shown on the Contract Drawings.

Sheeting – Polyethylene sheeting shall be 10 millimeters or thicker impervious, resistant to puncture, and resistant to tearing.

Temporary Horizontal Drawdown – Drawdown shall be as specified in the *2011 Maryland Standards and Specification for Soil Erosion and Sediment Control* and use 6” PVC to be converted into Low Flow Device after construction is completed.

Diversion Pipes – Diversion Pipes shall be flexible pipe sized to carry required discharge.

Pump(s) – Pump(s) shall be large enough to empty any ponding water in an expeditious manner and to maintain uninterrupted base flow to areas downstream of the work area. Pumps shall be in compliance with the City of Rockville and Montgomery County Noise Ordinance. the Contractor must construct devices to muffle pump noise at no additional expense to the City, when necessary.

Sediment Filter Bag(s) – Sediment Filter Bags shall be as specified in Maryland Department of

the Environment's (MDE) *Maryland Standards and Specifications for Soil Erosion and Sediment Control*, latest edition and any addenda thereto. Filter bags shall be placed on 12-inches of shredded hardwood bark mulch. Nonwoven Geotextile with a minimum surface area of 225 square feet per side with double stitched seams using high strength thread shall be utilized. The sleeve shall be sized to accommodate a maximum 4-inch diameter pump discharge hose. The bag must be manufactured from a Nonwoven Geotextile that meets or exceeds minimum average roll values described below:

Specification	Value	ASTM
Grab Tensile	250 lbs	ASTM D-4632
Puncture	150 lbs	ASTM D-4833
Permittivity	1.2 sec ⁻¹	ASTM D-4491
UV Resistance	70% Strength at 500 hours	ASTM D-4355
Apparent Opening Size (AOS)	0.15-0.18 mm	ASTM D-4751
Seam Strength	90%	ASTM D-4632

SUBMITTALS

- **Product Data:** Product manufacturer data for Sediment Filter Bags
- **Maintenance of Stream Flow and Site Dewatering Plan:** The Contractor shall, at the preconstruction meeting or a minimum of fourteen days prior to installation of the dewatering and pump around systems, submit to the City/Engineer a letter report, including working drawings and/or design data that is required to detail any or all of the following:
 - A. The proposed type of dewatering and pump around systems, including relief of hydrostatic head and maintenance of the excavation in a dewatered and in a hydrostatically relieved condition;
 - B. Arrangement, location and depths of the components of the systems;
 - C. A complete description of equipment to be used, with installation, operation and maintenance procedures;
 - D. Standby equipment and power supply;
 - E. Location and size of berms, dikes, sumps and discharge lines, including the relation to water disposal ditches;
 - F. Product information for filter bags;
 - G. Design calculations demonstrating adequacy of the selected systems and equipment.

CONSTRUCTION METHOD

A. General

1. Maintenance of Stream Flow and Dewatering operations must be set up and operated in accordance with the Maryland Department of the Environment's (MDE) *Maryland Standards and Specifications for Soil Erosion and Sediment Control*, latest edition and any addenda thereto and Maryland Department of the Environment's (MDE) *Maryland's Guidelines to Waterway Construction*, latest edition and any addenda thereto, unless otherwise directed by the City.
2. The Contractor must notify the Maryland Department of the Environment at least five (5) days before beginning construction. Additionally, the Contractor shall inform the City at least 48 hours before initiating clear water diversion system operations.
3. No mechanical equipment shall be used to place pipe outside of the LOD.
4. All clear water diversion operations must be inspected after installation, prior to operation.
5. The approved sequence of construction for the project is provided on the Sediment and Erosion Control Plans. The Contractor's project schedule shall address maintenance of stream flow and dewatering practices coordinated with the work planned for each day

- and reflect the necessary labor and equipment allocations for daily set up, maintenance and take-down of the practices. The Contractor is advised to address all permit requirements and restrictions, or any revisions thereto, when developing the project schedule.
6. With permission of the Sediment Control Inspector the location of sediment controls may be adjusted in the field.
 7. The Contractor is responsible for ensuring water is adequately filtered or otherwise treated per sediment control requirements before leaving the work area.
 8. The Contractor shall prevent surface water and subsurface or groundwater from flowing into excavations and from flooding the Project Site and surrounding area. Water shall not be allowed to accumulate in excavations or other areas of the Site.
 9. Water must be removed to prevent softening of foundation bottoms, undercutting footings and soil changes detrimental to stability of sub-grades and foundations.
 10. Any repair to foundations which results from deficient dewatering is the sole responsibility and cost of the Contractor.
 11. Additional costs, damages and delays in the construction timeline which result from inadequacies in the systems shall be the sole responsibility and cost of the Contractor.

B. Maintenance of Stream Flow

1. Sandbag dikes shall be installed at the upstream and downstream ends of the work area as shown on the Contract Drawings and stream flow should be routed around the work area.
2. The clear water diversion practices will discharge onto the outlet protection as required by the Sediment Control Inspector or City.

C. Site Dewatering System

1. Install filter bag on a slope so incoming water flows downhill through the filter bag without creating more erosion. Strap the neck of the filter bag tightly to the discharge hose. The neck of the system should be tied off tightly to stop the water from flowing out of the system without first passing through the walls of the bag. To increase the efficiency of filtration, place the bag on a rounded clean aggregate, wood chip (mulch) or hay bale bed to maximize water flow through the surface area of the bag and allow water to flow in all directions. All dewatering installations must be inspected by appropriate permit inspectors and the City before being put into operation.
2. Coir matting, plastic sheeting, or a temporary riprap outfall pad shall be placed downstream of the filter bag for stabilization of discharge as directed by the City.
3. The filter bag is full when it no longer can efficiently filter sediment or pass water at a reasonable rate. Flow rates will vary depending on the size of the filter bag, the type and amount of sediment discharged into the filter bag, the type of ground, rock or other substance under the bag and the degree of the slope on which the bag lies. Under most circumstances filter bag will accommodate flow rates of 1500 gallons per minute. Use of excessive flow rates or overfilling filter bag with sediment will cause ruptures of the bags or failure of the hose attachment straps. Clean-up resulting from misuse of the filter bag shall be remediated at the Contractor's expense.
4. Dispose of contents of filter bag offsite. Full or partially full Filter bags cannot be left in place and must be removed from site and legally disposed. At the City's and DPW Sediment Control Inspector's option, the bags may be left to dry completely and then be cut open and the silt material graded, seeded or otherwise permanently stabilized with the approval of the City and the direction of the DPW Sediment Control Inspector.

MEASUREMENT & PAYMENT

Maintenance of Stream Flow and Site Dewatering shall not be measured and will be paid for at the Contract's lump sum (LS) price for the pay item "Maintenance of Stream Flow and Site Dewatering". There will be no additional payment for this item of work. The price bid will be full

compensation for all materials, labor, equipment, tools and incidentals necessary to complete the work as specified in the Contract Documents, or by the City. The price bid includes design, redesign regardless of the type required to satisfactorily divert stream flow and dewater the project site, excavation, backfill, dewatering the site and excavation as necessary to install diversion and dewatering practices, maintenance of the diversion and dewatering practices, sandbags, polyethylene sheeting, filter bags, pipes, pumps, hoses, connections, portable sediment tanks (if required) and outlet protection. Payment will not be adjusted for alternative diversion and dewatering systems regardless of any changes in quantities from that shown in the Contract Documents.

PAY ITEM NO. 21 – UNCLASSIFIED EXCAVATION, OFFSITE REMOVAL, AND GRADING

DESCRIPTION

This work consists of all labor, materials, equipment and services necessary for and incidental to the execution and completion of earthwork and grading, as indicated on the Contract Drawings and specified herein. Preparation of subgrade is part of this work. In general, except as otherwise noted herein and/or on the Contract Drawings, earthwork and grading shall be in accordance with “Sections 201 through 211” of the Maryland Department of Transportation, State Highway Administration’s (MDSHA) *Standard Specifications for Construction and Materials*, latest edition and any addenda thereto, unless otherwise noted below. All references to measurement and payment in the MDSHA specifications shall be disregarded.

- A. Excavation and/or grading undertaken in the general site limits that is intended to be permanent shall be classified under this Pay item. The depth or width of excavation shall not determine the excavation classification.
- B. Immediately notify the City in the event unsuitable earth is encountered during earthwork or subsequent construction operations at or just below the final sub-grade elevation. Stop all work within the immediate vicinity of the unsuitable material. Do not remove any unsuitable material without obtaining written authorization and proper measurements from the City. Unsuitable material shall be removed from the site as soon as possible.
- C. Unsuitable and excess materials removed in any excavation shall be removed from the project site and deposited in disposal sites approved by the City. This work shall be performed at the expense of the Contractor.
- D. Saturated material to be removed and disposed of shall be partially dewatered on site. When exported, dewatered spoil material shall be transported in lined water-tight trucks and adequately covered or tarped. Sufficient freeboard shall be maintained. No additional payment shall be made for the transport of dewatered material in lined trucks. No payment shall be made for the portion of the weight that is in excess of the dry material weight, nor shall payment be made for any additional trucks or equipment required as a result of the Contractor's election to export partially dewatered material.
- E. Undercut and backfill for material installation shall be incidental to the various material items and shall not be included in the price bid.
- F. Payment for earthwork associated with the removal and/or installation of stormwater management structures including headwalls and pipes, as well as any work covered in clearing and grubbing, demolition and disposal of existing structures and debris, installation of pavement and invasive species eradication will be incidental to the various material items and will not be included in the price bid.
- G. No payment will be made for temporary grading required for the installation of tree protection measures, sediment controls or site access. This work shall be incidental to the price bid for the various material items, construction stakeout, or mobilization.
- H. Cut and fill quantities may be shown on the Contract Drawings in the Site Analysis to assist in the economical handling of the earthwork. It shall be understood, however, that while cut and fill quantities are computed from information obtained by preliminary surveys, inspections and earthwork studies, the quantities are subject to change as a result of natural erosive processes since the time of survey, shrinkage or swell, type of equipment used on the Project and the method of handling. The Contractor will only be permitted to bring discrepancies in earthwork quantities to the attention of the City at the time of bidding. After Award of Contract payment for earthwork operations will be considered fixed. If a Contractor finds a discrepancy in earthwork quantities prior to Award of Contract, this information will be shared with all bidders.
- I. It shall be the obligation of the Contractor to utilize all suitable materials from excavation in the construction of fills throughout the entire area of the Contract. No payment shall be made for the purchase or import of suitable materials which are required due to the premature removal of suitable material from the project site.

- J. Stockpile suitable excavated materials on site in a safe manner so as not to impede pedestrian or vehicular traffic. Stockpile locations shall be located as shown on the Contract Drawings or as otherwise approved by the City Sediment Control Inspector. Shape and grade stockpiles to prevent surface water ponding. Stabilize or cover stockpiles as necessary or as directed by the City.

EXISTING UTILITIES

- A. Notify "Miss Utility" by calling 1-800-257-7777 at least 48 hours prior to performing earthwork. Locate existing underground utilities in the areas of work. If utilities are to remain in place, provide adequate means of protection during earthwork operations. The Contractor will be responsible for the repair of any damage to utilities shown on the plans or identified in the field.
- B. Should piping or other utilities be encountered during excavation, consult the City immediately for directions as to procedures. Cooperate with the City and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of City.
- C. Do not interrupt existing utilities serving occupied facilities, except when permitted in writing by the City and acceptable temporary utility services have been provided.

CONSTRUCTION METHODS

- A. **Explosives:** The use of explosives is prohibited unless approved by the City.
- B. **Safety:** Provide protective measures necessary for the safety of the workers, public and adjacent property. Prevent cave-ins, collapse of walls, structures and slopes, both on and adjacent to the site.
- C. **Standards:** Comply with regulations of local authorities having jurisdiction, including all applicable OSHA requirements.
- D. **Repair:** Includes the removal of damaged materials and replacement with new materials (as required by these specifications) where such materials are affected by settlement or other damage caused by improper earthwork.

MATERIALS

With exception of materials listed below, all materials shall meet the requirements stated in Category 900 of the latest edition of the Maryland State Highway Administration (MDSHA) Standard Specifications for Construction and Materials.

Suitable Fill – shall be free from vegetative matter, organics, frozen material, rocks/stones greater than one and a half inches in any dimension, waste metal products, unsightly debris, toxic material, or other deleterious materials. The material shall not contain mica in quantities, which, in the judgment of the Engineer are sufficient to affect compaction characteristics. shall be a minimum of 105 pounds per cubic foot for the maximum dry density according to AASHTO T-180, Method C; and shall not have a liquid limit greater than 40 nor a plasticity index greater than 10 according to ASTM D-4318.

- 1. Cohesionless materials: Must be classified in accordance with AASHTO guidelines as either A-3 (sand) or A-2 (sand and fines), and the minimum dry unit weight must not be less than 100 PCF maximum dry density as determined by ASTM D-698 or ASTM D-2049.
- 2. Cohesive materials: Must be classified in accordance with AASHTO guidelines as A-4 (silt), A-5 (silt), A-6 (clay) or A-7 (clay).

Suitable fill shall be non-manufactured, native fill material meeting the specifications. Crushed stone material is not allowable.

Streambed Material – shall consist of salvaged sand, gravel and cobble material from the top six to 12 inches of the existing stream channel in areas where the existing channel will be filled or in areas where streambed grading is to occur. Streambed Material includes all-natural stone within the channel and may range in diameter from one millimeter to six inches. Streambed Material shall be stored onsite in stockpile areas designated on Contract Drawings for use in constructing structures and the proposed stream bed as described in the Contract Documents. If sufficient salvaged material is not available to provide the material needed per the Contract Documents, a furnished Streambed Material shall be used. The furnished Streambed Material stone mix shall meet the following size distribution requirements:

Streambed Material Grading Analysis	
Sieve Size	Passing by Weight (Min %)
2-1/2 in.	95
1-1/2 in.	75
1/4 in.	25

Only well graded materials will be accepted. Certification of gradation, including sieve analysis, is required. Organic material and soil are acceptable within the smallest size fraction.

MATERIAL STORAGE

- A. Stockpile excavated material suitable for backfill or fill as indicated on Contract Drawings, until required. Place, grade and shape stockpiles for proper drainage. Stockpile locations are indicated on the Contract Drawings, though temporary stockpiling of material may be permitted anywhere within the LOD with approval of the DPW Sediment Control Inspector. Stockpiles shall be sloped and shaped according to the requirements of the Maryland Department of the Environment’s (MDE) *Maryland Standards and Specifications for Soil Erosion and Sediment Control*, latest edition and any addenda thereto, and the Contract Drawings.
- B. Locate and retain soil materials away from edge of excavations.
- C. Dispose of excess and or unsatisfactory waste materials as specified herein.
- D. Do not stockpile excavated or borrow material within the roadway limits, adjacent to water bodies, adjacent to open excavations or pits or within the 100-year floodplain without prior approval from the City and Sediment Control Inspector. Drainage will be directed to an approved erosion and sediment control device.

USE OF EXCAVATED MATERIAL

- A. With the approval of the City, use any excavated native stone, gravel, sand or other material including but not limited to riprap and streambed material that conforms to the requirements of the Contract Documents. All other excavated material shall be disposed of at an approved location.
- B. Do not excavate or remove any material that is not within the limits of excavation, as indicated by the slope and grade lines on the Contract Drawings, without written authorization from the City.

SUBMITTALS

- **Material Test Results:** The Contractor shall obtain samples of proposed fill materials and perform all required testing to determine that fill materials are in conformance with the Contract Documents and compaction requirements. The Contractor shall submit test results to the City for review and approval prior to installation. At a minimum test results shall include proctor density, particle distribution, Atterberg limits, and compaction test results.
 - a. AASHTO T-180, Method C (dry density)
 - b. ASTM D2216 (moisture content)

- c. ASTM D4318 (plasticity)
 - d. ASTM D6913-17 (gradation)
 - e. AASHTO A-2-4, AASHTO M143, ASTM D2487 (soil classification)
 - f. ASTM D698A (soil compaction)
- The Contractor shall submit certification of gradation of streambed material, including sieve analysis, to the City for review and approval prior to installation

CONSTRUCTION METHODS

- A. All earth slopes shall be finished in accordance with the contours, elevation, or to the lines on the Contract Drawings. The work shall be done in proper sequence with other operations involved.
- B. Slopes excavated or constructed for the convenience of the Contractor, such as for haul roads or temporary drains, shall meet the design slope on the Contract Drawings for that area. Exceptions will require approval of the Engineer and City prior to construction of the slope. No payment will be made for temporary slope construction.
- C. Berm ditches, when required, shall be constructed before or at the time cuts are started.
- D. The widening of cut or excavation sections beyond the limits shown on the Contract Drawings is prohibited in all instances except when required to remove unsuitable material by written order of the City. When so ordered by the City, the procurement of additional suitable materials, including those for embankments, shall be done in accordance with the following provisions.
 - 1. The widening of cuts or excavation sections shall be finished so that completed flat and slope areas shall be uniform in appearance; the slopes shall be no steeper than the cut slopes indicated on the Contract Drawings and shall be in accordance with the line and slope directed by the Engineer.
 - 2. If the City directs the Contractor to excavate beyond the limits originally proposed and within the limits of the site, right-of-way, or easement prior to the starting of earthwork in an excavation section, then all material within the above limits shall be classified as Class I Excavation and will be paid for under its appropriate class.
- E. Uniformly grade areas within limits of grading under this section, including adjacent transition areas. Smooth finish surface within specified tolerances, with uniform levels or slopes between points where elevation is shown, or between such points and existing grades.
- F. Fine grading around existing trees to remain is to be performed under the supervision of a certified arborist and with the City's approval using small equipment or by hand grading only. Tree protection may be required by the City will be paid for in accordance with the Pay item "Tree Protection Fence" and "Tree Protection Plank".
- G. The backfilling around trees to be saved as shown on the Contract Drawings shall be performed under the supervision of a Certified Arborist, certified by the International Society of Arboriculture and be registered in the State of Maryland as a Licensed Tree Expert as issued by Maryland Department of Natural Resources.
- H. Finished areas must conform to within a tolerance of 0.1 foot above or below the required final elevations.
- I. Construction will be in accordance with MDSHA Section 201.03 for local grading fills and 210.03 for tamped fills. Fill materials will be placed in maximum lifts of 8 inches around structures and other fills unless specified otherwise in the Contract Drawings.
- J. Areas on which fill is to be placed, must be stripped of all topsoil and then scarified prior to placement of fill. Fill material must be placed in eight inch (maximum thickness before

- compaction) layers to be continuous and horizontal over the entire length of fill. Each layer of fill must be compacted by a power roller approved by the City.
- K. Compact the material that is one foot below the top of subgrade to at least 92 percent of the maximum dry density per AASHTO T-180. When necessary, add water or dry the layer in order to compact to the required density. Generally, the material shall be within two percent of the optimum moisture content but may be outside of this range if approved by the City or a licensed Geotechnical Engineer.
1. For structural compaction as required by the Contract Drawings or City, compaction must be carried out at optimum moisture content to a dry density of 95% of the maximum density (standard Proctor density per ASTM D 698 and AASHTO method T-99). The moisture content and compaction standard for embankments layers shall be per MD-378 Pond Code.
 2. For vegetative compaction as required by the Contract Drawings or City, compaction must be carried out at a less than optimum moisture content (e.g., at a water content of less than 13% on a soil having an optimum content of 15%) to a dry density of between 80% and 85% of the maximum density (standard Proctor density per ASTM D 698). Geotechnical testing of any fill materials within vegetative areas shall be at the sole discretion of the City.
- L. In the event the fill is rocky, the rocky fill may only be used with written permission of the City and up to the elevation specified by the City. A minimum of one foot of suitable fill and topsoil must cap all rocky fill. Soft spots shall be eliminated by proof-rolling.
- M. The soils used in fill and backfill must be moistened or aerated to within two percent of the optimum at no additional cost to the City. Where the soil layer is too dry, the Contractor must apply water uniformly using approved equipment to increase the moisture content to within two percent of the optimum. Where the soil layer is too wet, the Contractor must dry the soils by plowing or disking to aerate the soil and reduce the moisture content to within two percent of the optimum.
- N. Unsuitable existing fill, soft or loose natural soils, organic material and rubble shall be stripped to approved grades as determined by the City and/or a licensed Geotechnical Engineer.
- O. During construction, the grading operations shall be performed in a manner so that the excavation is well drained at all times. When necessary, excavations shall be drained to sumps, which shall be pumped continuously, if required, to an approved sediment control device. The Contractor shall maintain and keep all ditches open and free from soil and debris while in service or until final acceptance of the work and all grading shall be done on neat, regular lines conforming to the sections and contours shown on the Contract Drawings. All work shall be done in proper sequence with all other associated operations. Before any slab or surfacing is placed, all drainage facilities shall be installed which are required to permit free and uninterrupted flow of the surface and underground water from the site or to pumping sumps, etc.
- P. During construction, the site shall be maintained in a well-drained condition at all times. Side and berm ditches or gutters draining from cuts to embankments or otherwise shall be so constructed as to avoid damage to embankments by erosion. All drainage necessary to provide free and uninterrupted flow of the surface and underground water shall be installed before surfacing is placed. When stabilized side and outlet ditches provide the principal means for drainage, the cutting and stabilization of such ditches for the disposition of surface water shall be the first step in the grading operation.

MAINTENANCE

- A. Protect newly graded areas from traffic and erosion in accordance with City and State Sediment Control Standards and keep free of trash and debris. Repair and reestablish grades in settled, eroded, and rutted areas to specified tolerances.
- B. Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify surface, reshape and compact to required density prior to further construction.

MEASUREMENT & PAYMENT

Earthwork has been estimated based on survey and will serve as a basis for estimated payments. It is the Contractor's sole responsibility to verify any change in existing conditions and determine the effort necessary to achieve the grades shown within the payment quantities listed. The price bids shall include furnishing all labor, tools, equipment and materials necessary to complete the work as shown and specified in strict accordance with the Contract Documents and accepted by the Engineer and City. Also included in the price bid shall be all excavation, temporary stockpiling of material, preparation of the subgrade for stabilization, fill placement, compaction, testing, hauling, disposing of excess and unsuitable materials; and for rounding and transitioning slopes. Payment will not be made for the excavation of any material which is used for purposes other than those designated. The localized excavation, backfilling and fine-grading specified in the Contract Documents for the various stabilization techniques will not be measured but will be considered incidental to the respective pay items.

Earthwork: Unclassified Excavation and Offsite Disposal will not be measured but will be paid for at the Contract lump sum (LS) price. Payment shall include removing, salvaging, stockpiling and properly disposing of unsuitable fill material.

Removing, salvaging, stockpiling and installing Streambed Material will not be measured or paid for separately but will be considered incidental to the Earthwork pay items.

PAY ITEM NO. 22 – STORMWATER MANAGEMENT ACCESS ROAD

DESCRIPTION

Work shall consist of furnishing all material, labor, services and related items to complete the installation of permeable, plantable and flexible Stormwater Management Access Road and a Stone Access Pad in accordance with the Contract Drawings and these specifications.

MATERIALS

Materials shall be delivered to the site in manufacturer's original, palletized configuration with labels clearly identifying product style number, color, name and manufacturer. Contractor shall inspect all materials upon delivery to assure that the proper type, grade, color and certification have been received. Materials shall be stored in a clear, dry area in accordance with the manufacturer's specifications. It shall be the Contractor responsibility to protect all materials from damaged due to the jobsite conditions. Damaged materials shall not be incorporated into the work.

STORMWATER MANAGEMENT ACCESS ROAD

Pavers – Drivable Grass by Soil Retention Products, Inc., Corporate Office: 2501 State Street, Carlsbad, CA 92008, or approved equal.

Filter Fabric – MD SHA Class ST.

Base Aggregate – MD SHA Graded Aggregate Base Material.

Edge Restraint – Snap Edge manufactured by SEK – Surebond, 3925 Stern Avenue St., St. Charles, IL 60174, or approved equal.

Bedding Course – Defined as the initial material directly beneath the Pavement system. The minimum bedding course thickness shall be 2 inches for planting applications and 0.25" to 1" of sand for non-planted applications. For planted applications, the bedding course shall be a thorough mix of 75% sand and 25% granular compost material. The bedding course for non-planted applications shall be sand.

Sand – Sand shall be clean, non-plastic, and free from deleterious or foreign matter. The sand shall be sharp and manufactured from crushed rock. Do not use limestone screenings stone dust. The particles shall conform to ASTM C33 CSA A23.1-M94.

Compost Materials – Compost shall be finely ground, well screened composted products such as composted manures, mushroom compost or green-waste compost and shall be in accordance with MD SHA Section 920.02.05. Material should be able to mix well with sand, able to hold moisture, and provide nutrients.

Infill – Infill for planting applications shall be a bedding course mix covered with two inches of topsoil, seed, and mulch. See the Pay Item "Permanent Stabilization"

Erosion Control Blankets – City approved, net-free, biodegradable, fibrous, soil stabilization matting. Product must be designed to minimize the potential for animal entrapment and must adhere to MDE standards and specifications for soil stabilization matting.

STONE PAD

Stone – Stone shall be class 0 Riprap ($D_{50} = 4$ inches; $D_{Max} = 6$ ").

Filter Fabric – ACF N080 non-woven Filter Cloth or an approved equivalent.

SUBMITTALS

- **Product Manufacturer Data:** Product manufacturer data for paver product and filter fabric.
- **Product Sample:** Product sample of pavers.
- **Sieve analysis:** Sieve analysis for bedding sand and graded aggregate base material
- **Product Verification:** Product verification and source for compost and seed mixes
- **Installer Qualifications:** Installer shall demonstrate experience of successfully completing the installation of pavers or other pavement systems on project of similar or large scope.

CONSTRUCTION METHODS

- Subgrade Preparation:** The Contractor shall excavate to the lines and grades shown on the Contract Drawings and undercut as necessary for installation. The foundation shall be proof rolled as directed by the City and inspected to determine if remedial work is required. The foundation and subgrade shall be inspected and approved by the City prior to placement of base material or fill soils.
- Subbase:** The Contractor shall install the filter fabric prior to installation of the aggregate base. The aggregate base shall be compacted according to the structural fill requirements described in the specification for "Unclassified Excavation, Offsite Removal and Grading".
- Bedding Course:** The Contractor shall spread the Bedding Course uniformly as shown on the Contract Drawings.
- Pave Installation:** The Contractor shall install restraints and pavers in accordance with the manufacturer's guidelines. A ten (10) linear foot section of the Stormwater Management Access Road shall be inspected and approved by the City prior completion of the remainder of the road. It shall be the Contractor's responsibility to notify the City in a timely fashion to prevent delays. All work shall meet the lines, grades and locations required by the Contract Drawings. Paver mats shall be in one axial direction and matts shall be butted against one another leaving no significant gaps. Paver mats shall be adjusted as required to maintain good grid pattern, consistent with the approved section of Stormwater Management Access Road.
- Infill:** The Contractor shall spread the infill uniformly across the mats with a push broom. Cover shall be 2 inches of topsoil, seeded stabilized with soil stabilization matting until vegetation has been established.
- Vegetation:** Planting materials shall be installed as specified in the technical specification for "Permanent Stabilization". Planting areas shall be covered by a light later of topper/seed cover to preserve moisture and promote germination and/or plant establishment.
- Protection:** Planted areas shall not be traversed until vegetation has been established. Erosion control blankets shall be installed as described on page B-39 of the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control. Erosion control blankets shall be placed and "pinned" immediately after placement of the seed but in no case, more than 24 hours after seed placement.
- Maintenance:** Contractor shall maintain the stormwater management access road in good working order and condition until final acceptance by the City.

MEASUREMENT & PAYMENT

Stormwater Management Access Road will be measured and paid for per liner foot (LF) of Stormwater Management Access Road installed to the satisfaction of the City, measured along the centerline of the roadway. The length of the Stone Pad shall not be counted towards the measured length. The Contract's unit price for the pay item "Stormwater Management Access Road" must include full compensation for all installation, excavation, undercut, disposal of surplus or unsuitable materials and compaction and all materials, labor, equipment, tools, and other incidentals necessary to complete this work. Seeding, mulching and the Stone Pad shall be incidental to the cost.

PAY ITEM NO. 23 – REMOVABLE BOLLARD & BOLLARDS

DESCRIPTION

Work shall consist of installing bollards and removable bollards at the locations specified on the Contract Drawings or at the direction of the City.

MATERIALS

- A. Concrete shall be Mix No. 3 as specified in Section 902 of the Maryland Department of Transportation, State Highway Administration's (MDSHA) *Standard Specifications for Construction and Materials*, latest edition and any addenda thereto.
- B. Bollards and Removable Bollards shall be as shown on the Contract Drawings. 18-inch by 18-inch yellow reflector (paint/tape) shall be securely fastened to the bollards as described on the Contract Drawings.
- C. Removeable Bollards – Removeable Bollards shall be 6" Harbor Straight Bollards (model HRR-6) in Hunter Green as manufactured by Keystone Ridge Design, Inc. or an approved equivalent.
- D. Bollards – Bollards shall be 6" Harbor Straight Bollards (model HRE-6) in Hunter Green as manufactured by Keystone Ridge Design, Inc. or an approved equivalent.

SUBMITTALS

- A. The Contractor shall submit product manufacturer data and installation guidelines to the City for review and approval.
- B. The Contractor shall submit for City review and approval certificates of compliance for all concrete mix and associated materials stating that the material furnished is in accordance with and meets test requirements.

CONSTRUCTION

- A. The Contractor shall furnish all labor, materials and equipment necessary to construct, install, and maintain the bollards as shown on the Contract Drawings and described in these specifications or as directed by the City.
- B. Removable Bollards shall be installed as directed in the product installation guidelines unless otherwise directed by the City. Bollards and Removable Bollards shall be installed at the locations shown on the Contract Drawings and/or as directed by the City.

MEASUREMENT AND PAYMENT

Bollards and Removable Bollards will be measured and paid for each (EA) installed. The payment will be full compensation for complete installation, including all materials, labor, equipment, tools and other incidentals to complete this work.

PAY ITEM NO. 24 – MODIFICATION OF EXISTING STRUCTURES & APPURTENANCES

DESCRIPTION

Work shall encompass all labor, materials, equipment, and services necessary for and incidental to the execution and completion of modifications to existing, onsite structures, as indicated on the Contract Drawings and specified herein.

At a minimum, work shall include:

- A. Fabrication and installation of the Clemson Leveler, low flow device, and associated appurtenances including the concrete footer.
- B. Modifications to existing riser structure: converting riser to open top riser, proposed trash rack, and anti-vortex plate.
- C. The proper disposal of all excess and/or removed material

All work shall be performed to meet the dimensions specified on the Contract Drawing regardless of the Contractor's means and methods.

MATERIALS

The Contractor must utilize the materials listed under section 305.02 of Maryland Department of Transportation, State Highway Administration's *Standard Specifications for Construction and Materials*, dated July 2018 and adhere to the specifications provided for all repairs and modifications to existing structures. When necessary, flowable backfill must meet the specifications described under Section 314 of Maryland Department of Transportation, State Highway Administration's *Standard Specifications for Construction and Materials*, dated July 2018 and any supplemental references.

CLEMSON LEVELER AND LOW FLOW

PVC Pipe, Perforated and Non-Perforated – PVC Pipe must be US Plastic Corp. PVC Schedule 80 pipe or an approved equivalent. Exposed pipe shall be rated for direct sunlight exposure and meet UL 651. Perforations must be as described on the Contract Drawings.

Flange Joint and Hardware – Flange Joint shall be corrosion and UV resistant. All hardware shall be galvanized and rated for direct sunlight exposure, meeting UL 651.

Non-Shrink Grout – Grout must be non-shrinking and meet the standards and specifications described in section 902.11 of the Maryland Department of Transportation, State Highway Administration's *Standard Specifications for Construction and Materials*, dated July 2018.

Trash Guard – Trash guard must be Agri Drain Bar Guard size for the proposed PVC pipe or an approved equivalent.

Locking End Cap – PVC End Cap must be size to fit the PVC pipe, lock into place and attached in a method that create a water-tight seal.

Pipe Elbows – Pipe elbows must be size to fit the PVC pipe and attached in such a manner that it creates a water-tight seal. Right angle bends are not acceptable or T-shaped elbows are not acceptable.

Rebar Supports – Rebar Supports shall be #5 and epoxy coated. Rebar installed in the concrete footers shall be pre-bent.

Wire Mesh Supports – Wire mesh supports shall be supported with ¾" rolled-pipe that is UV-

resistant and rated for 160 lb/psi

Wire Mesh – Wire mesh shall be 12½ gauge, galvanized with 2"x4" openings

TRASH RACK

Rebar – Rebar shall be 1" structural steel tubing or #5 steel rebar with 4" wide steel anchor plate for securing trash rack to riser as described on the Contract Drawings. .

Anti-Vortex Plate – Anti-vortex plate shall be gauge 11 steel.

SUBMITTALS

Submittals shall be made for all materials described above.

CONSTRUCTION METHODS

- A. The Contractor must perform all structural modifications in accordance with the Contract Drawings, requirements of Maryland Department of Transportation, State Highway Administration, Standard Specifications for Construction and Materials (referred to MDSHA herein), latest edition and any addenda thereto, Section 305.
- B. When flowable fill is required, the Contractor shall install flowable in conformance with Section 314 of MDSHA and the Contract Drawings.
- C. Existing structures, pipes and appurtenances indicated for modification, re-use or resetting shall be inspected by the Contractor prior to the start of construction. Any structures, pipes or appurtenances which have deteriorated to the degree that re-use or modification is not possible will be reported to the City prior to their disturbance. Failure to allow the City to assess the condition of damaged structures prior to their disturbance will result in no compensation by the City for the replacement or repair of the damaged structures.
- D. Sawcut existing concrete according to Maryland Department of Transportation, State Highway Administration, Standard Specifications for Construction and Materials, latest edition and any addenda thereto, Section 522.03 Portland Cement Concrete Pavement Repairs and Section 505.03.02 Hot Mix Asphalt Patches. All saw cuts shall be to the full depth of the surface being cut.
- E. The Contractor shall cut all existing concrete surfaces with a power saw in such a manner as to create a tight, neat, straight, water sealed joint. No "jack-hammering" or tearing of the existing surfaces will be allowed. The Contractor shall protect all adjacent surfaces as necessary.
- F. The Contractor must take care not to damage any existing appurtenances that are marked for re-use on the Contract Drawings when removing the appurtenances to access existing structures. Saw cutting or an approved equivalent method will be utilized to create openings in the existing structure as necessary to achieve the proposed modifications.
- G. If grouting or additions to the structure are proposed, the Contractor must create and install rebar reinforcement. Rebar will be embedded a minimum of 3" into the existing structure. The Contractor is responsible for the reinforcement designs and shall sub-contract a structural engineer when necessary. Fabricated Structures will be inspected by the City prior to their installation.
- H. Fabrication and installation of any proposed low flow or other proposed structural appurtenance that is not otherwise included within a separate pay item and modifications to the existing structure necessary to attach these devices shall be included in the price bid.
- I. Damage caused to existing structures during modification must be immediately reported to the City and repaired at the Contractor's expense. If the damage to the structure is irreparable, or repairs are unsatisfactory to the City, the damaged structure will be replaced in kind and properly disposed of at no expense to the City.

MEASUREMENT & PAYMENT

Modification of Existing Structures & Appurtenances will not be measured and will be paid for at the Contract's lump sum (LS) price for the pay item "Modification of Existing Structures and Appurtenances". The Contract's lump sum price must include full compensation for all structure modifications, purchase and delivery or fabrication of all proposed appurtenances as shown on the Contract Drawings and all materials, labor, equipment, tools, saw cutting, rebar forms, excavation and backfill necessary to install proposed appurtenances and other incidentals necessary to complete this work. The Contractor is responsible for maintaining any modified structures in good working order until the product is accepted by the City. The Contractor is responsible for the design of rebar reinforcement and all structural modifications. A qualified professional shall be sub-contracted when necessary.

PAY ITEM NO. 25 – MDSHA STANDARD TYPE “C” ENDWALL

DESCRIPTION

This item shall consist of furnishing and installing a Maryland State Highway Administration Standard Type “C” Endwall. All work shall be in accordance with “Section 305 – Miscellaneous Structures” of the Maryland Department of Transportation, State Highway Administration’s (MDSHA) *Standard Specifications for Construction and Materials*, latest edition and any addenda thereto, unless otherwise noted below.

SUBMITTALS

The Contractor shall submit the manufacturer endwall detail to the City for review and approval prior to installation. The endwall shall not be installed until it has been approved by the City.

MEASUREMENT AND PAYMENT

Measurement and payment for the MDSHA Standard Type “C” Endwall will be made at the Contract unit price per each (EA) installed. Payment will be full compensation for all applicable excavation, sheeting, shoring, dewatering, hauling, storing, rehandling of material, removal and disposal of excess and unsuitable material, tamped fill, forming bed, foundation, grouting, masonry, bedding, pipe, backfill, compaction, inspection, and for all material, labor, equipment, tools and incidentals necessary to complete the work. The cost of excavation, selected backfill, select borrow, common borrow and pipe bedding backfill will be considered incidental to the Contract unit price and will not be paid for separately. Payment for removal and disposal of existing pipe, end walls and headwalls will be paid for separately as part of pay item “Demolition & Disposal of Existing Site Features”.

PAY ITEM NO. 26 – MDSHA STANDARD B-48 HEADWALL

DESCRIPTION

This item shall consist of furnishing and installing a Maryland State Highway Administration Standard B-48 Headwall. All work shall be in accordance with “Section 305 – Miscellaneous Structures” of the Maryland Department of Transportation, State Highway Administration’s (MDSHA) *Standard Specifications for Construction and Materials*, latest edition and any addenda thereto, unless otherwise noted below.

SUBMITTALS

The Contractor shall submit the manufacturer headwall detail to the City for review and approval prior to installation. The endwall shall not be installed until it has been approved by the City.

MEASUREMENT AND PAYMENT

Measurement and payment for the MDSHA Standard B-48 Headwall will be made at the Contract unit price per each (EA) installed. Payment will be full compensation for all applicable excavation, sheeting, shoring, dewatering, hauling, storing, rehandling of material, removal and disposal of excess and unsuitable material, tamped fill, forming bed, foundation, grouting, masonry, bedding, pipe, backfill, compaction, inspection, and for all material, labor, equipment, tools and incidentals necessary to complete the work. The cost of excavation, selected backfill, select borrow, common borrow and pipe bedding backfill will be considered incidental to the Contract unit price and will not be paid for separately. Payment for removal and disposal of existing pipe, end walls and headwalls will be paid for separately as part of pay item “Demolition & Disposal of Existing Site Features”.

PAY ITEM NO. 27 – REINFORCED CONCRETE PIPE

DESCRIPTION

This item shall consist of furnishing and installing a 48” CL IV Reinforced Concrete Pipe (RCP). All work shall be in accordance with “Section 303 – Pipe Culverts” of the Maryland Department of Transportation, State Highway Administration’s (MDSHA) *Standard Specifications for Construction and Materials*, latest edition and any addenda thereto, unless otherwise noted below.

SUBMITTALS

The Contractor shall submit the manufacturer pipe detail to the City for review and approval prior to installation. The pipe shall not be installed until it has been approved by the City.

MEASUREMENT AND PAYMENT

Measurement and payment for the Reinforced Concrete Pipe will be made at the Contract unit price per LF (LF) installed. Payment will be full compensation for all applicable excavation, sheeting, shoring, dewatering, hauling, storing, rehandling of material, removal and disposal of excess and unsuitable material, tamped fill, forming bed, foundation, grouting, masonry, bedding, pipe, backfill, compaction, inspection, and for all material, labor, equipment, tools and incidentals necessary to complete the work. The cost of excavation, selected backfill, select borrow, common borrow and pipe bedding backfill will be considered incidental to the Contract unit price and will not be paid for separately. Payment for removal and disposal of existing pipe, end walls and headwalls will be paid for separately as part of pay item “Demolition & Disposal of Existing Site Features”.

PAY ITEM NO. 28 – RIPRAP: CLASS I
PAY ITEM NO. 29 – RIPRAP: CLASS II

DESCRIPTION

These pay items shall encompass supply and installation of Class I and II Riprap for all structures as shown on the Contract Drawings or as directed by the City. Non-woven geotextile will be required at any rock-soil interface and should be installed over the exposed earth before the design grades are achieved by backfilling with riprap. Undercut below the finished grade for the installation of proposed riprap shall be incidental to this pay item. All work shall be in accordance with “Section 312 – Riprap Slope and Channel Protection” of the Maryland Department of Transportation, State Highway Administration’s (MDSHA) *Standard Specifications for Construction and Materials*, latest edition and any addenda thereto, unless noted otherwise on Contract Documents.

MATERIALS

Riprap – A Riprap shall conform to MDSHA Section 901.02 - Stone for Riprap, Channels, Ditches, Slopes and Gabions of the of the Maryland Department of Transportation, State Highway Administration’s (MDSHA) Standard Specifications for Construction and Materials, latest edition and any addenda thereto. All rock shall be free from laminations, weak cleavages and will not disintegrate from the action of air, water and in handling and placing. Concrete will not be considered as an alternative for rock. White rock is not acceptable.

Nonwoven Geotextile – A non-woven Geotextile composed of polypropylene fibers with the following minimum mechanical properties:

- Grab tensile strength (ASTM D4632) - 205 lbs
- Grab tensile elongation (ASTM D4632) - 50%
- Trapezoid tear strength (ASTM D4533) - 80 lbs
- CBR puncture strength (ASTM D6241) - 535 lbs
- Apparent opening size (ASTM D4751) - 80 US Sieve
- Permittivity (ASTM D4491) - 1.4 per sec
- Flow rate (ASTM D4491) - 90 gal/min/ft²

SUBMITTALS

- **Product Data:** Manufacturer-Certified Product data for Nonwoven Geotextile.
- **Certificate of Compliance:** Certificate of Compliance issued by the material provider for the Riprap

CONSTRUCTION METHODS

- A. Riprap shall be used in accordance with the Contract Drawings and these pay item descriptions for the installation of the Riprap Inflow Protection and Riprap Pilot Channels as shown on the Contract Drawings or as directed by the City.
- B. Stockpiling of existing onsite riprap is incidental to the pay item for “Clearing and Grubbing”. Re-use of existing, onsite material must take priority over the import of additional material. Additional material shall only be ordered with approval from the City.

MEASUREMENT & PAYMENT

Riprap will be measured and paid for per Square Yard (SY) of the exposed surface face. The Contract’s unit price for the pay item “Class I Riprap” and “Class II Riprap” must include full compensation for all material, labor, equipment, tools, and incidentals necessary to complete this work including geotextile fabric, undercut by any approved means that is for the installation of riprap and disposal of surplus or unsuitable materials.

PAY ITEM NO. 30 – IMBRICATED BOULDER
PAY ITEM NO. 31 – COBBLE

DESCRIPTION

The pay item consists of the placement of Imbricated Boulders and Cobble within the stream channel for the Riffle-Weir System. Undercut and backfill necessary to install the boulders, cobble, topsoil, woody debris, and filter cloth and/or their substitute (when approved) shall be incidental to the price bid.

MATERIALS

Imbricated Boulder – Imbricated Boulders shall be either sandstone or granite, stackable, oblong, and flat in appearance, and dark brown or dark gray in color. The minimum dry unit weight of sandstone will be 145 pounds per cubic foot and granite boulders will be 155 pounds per cubic foot. In general, footer rocks shall be selected to be the largest rocks available. Footer Sandstone boulders are preferred, however, granite boulders may be used if the contractor shows the city due diligence in attempting to locate sandstone boulders. Any substitution will be at no cost to the City.

Cobble – Cobble shall be subangular silica cobble and shall be composed of a well-graded mixture of stone size to that 50% of the pieces, by weight, shall be larger than the d_{50} size noted in the Rock Size Table below. A well graded mixture as used herein is defined as a mixture composed primarily of larger stone sizes but with a sufficient mixture of other sizes to fill the large voids between the stones. The diameter of the largest stone size shall not exceed 1.5 times the specified d_{50} size. The minimum dry unit weight of cobble will be 155 pounds per cubic foot.

Rock Size Table		
Rock Type	Rock Size	% Mix Maximum
Subangular Silica Cobble	$d_{50} = 9"$ Min. = 6", Max. = 12"	-
Boulders	Greater than 6'x2'x2'	10
	3'x2'x1.25' to 6'x3'x2'	80*
	Less than 3'x2'x1.25'	10

*Can be up to 100% of mix

SUBMITTALS

Imbricated Boulder – The contractor will locate potential sources for the stone. The contractor shall submit to the City a certificate verifying the following boulder information:

- 1) Stone classification
- 2) Stone density (i.e., weight per cubic foot)
- 3) Weight of stone being supplied
- 4) Stone quality shall meet all of the above specifications

Cobble – The contractor shall obtain cobble samples from the quarry and submit to the City the samples and a certificate verifying the following cobble information:

- 1) Stone classification
- 2) Stone density (i.e., weight per cubic foot)
- 3) Weight of stone being supplied
- 4) Stone quality shall meet all of the above specifications

CONSTRUCTION

Construction shall be as specified on the Contract Drawings. Berm construction shall be in accordance with the pay item "Unclassified Excavation, Offsite Removal, and Grading".

MEASUREMENT AND PAYMENT

The Imbricated Boulder and Cobble will be measured and paid for at the Contract unit price per ton (TON). The payment will be full compensation for all undercut, furnishing and installing all boulders, cobble, topsoil, woody debris, and filter cloth and/or their substitute (when approved), and all transportation, preparation, compaction, disposal of excess material, and for all material, labor, structure stakeout, equipment, tools and incidentals necessary to complete the work.

Woody Debris will not be measured and paid for separately but will be considered incidental to the Contract unit price.

Filter Cloth will not be measured and paid for separately but will be considered incidental to the Contract unit price.

PAY ITEM NO. 32 – BIORETENTION BASINS

DESCRIPTION

The Bioretention Basins consists of all materials necessary to install the facilities as shown on the Contract Drawings and described in these specifications or as directed by the City. Undercut and backfill necessary to install materials shall be incidental to the price bid.

MATERIALS

Mulch – Mulch shall be single or double shredded, well-aged hardwood mulch. No pine or wood chips.

Soil Media – Soil Media shall be a loamy sand (60-65%) and compost (35-40%) or sandy loam (30%), coarse sand (30%), and compost (40%) mix.

- 1) USDA loamy sand or sandy loam soil types shall have:
 - a. Clay content <5%
 - b. Organic content >10%
 - c. pH range: 5.5-7.0
 - d. Required infiltration rates:
 - i. Loamy sand = 2.41 in/hr
 - ii. Sandy loam = 1.02 in/hr
 - iii. Coarse Sand = 8.27 in/hr
- 2) Compost shall be finely ground, well screened composted products such as composted manures, mushroom compost or green-waste compost and shall be in accordance with MD SHA Section 920.02.05. Material should be able to mix well with sand, able to hold moisture, and provide nutrients.

Non-Woven Filter Cloth – Non-Woven Filter Cloth shall be ACF NO80 or approved equivalent

Washed Gravel/#57 Stone – Washed Gravel/#57 Stone shall AASHTO M-43 technical specifications and be either no. 57 or no. 6 stone.

River Stone – River Stone shall be Maryland river stone and be 2” to 4” in size.

Class I Riprap – A Riprap shall conform to MDSHA Section 901.02 - Stone for Riprap, Channels, Ditches, Slopes and Gabions of the of the Maryland Department of Transportation, State Highway Administration’s (MDSHA) Standard Specifications for Construction and Materials, latest edition and any addenda thereto. All rock shall be free from laminations, weak cleavages and will not disintegrate from the action of air, water and in handling and placing. Concrete will not be considered as an alternative for rock. White rock is not acceptable.

Imbricated Boulder – Imbricated Boulders shall be either sandstone or granite, stackable, oblong, and flat in appearance, and dark brown or dark gray in color. The minimum dry unit weight of sandstone will be 145 pounds per cubic foot and granite boulders will be 155 pounds per cubic foot. In general, footer rocks shall be selected to be the largest rocks available. Footer Sandstone boulders are preferred, however, granite boulders maybe used if the contractor shows the city due diligence in attempting to locate sandstone boulders. Any substitution will be at no cost to the City.

Concrete – Concrete shall meet requirements with “Section 902 – Portland Cement Concrete and Related Products” of the MDSHA *Standard Specifications for Construction and Materials*, latest edition and any addenda thereto, Portland Cement Concrete Mix No. 3 on Table 902A.

Curb and Gutter – Refer to 602.02 of MDSHA *Standard Specifications for Construction and*

Materials. Concrete shall be Mix No. 3 as specified in “Section 902 – Portland Cement Concrete and Related Products” of the MDSA *Standard Specifications for Construction and Materials*, latest edition and any addenda thereto.

SUBMITTALS

Mulch – The Contractor shall submit Manufacturer-Certified Product data for the mulch to the City for approval, including textural analysis results for the Soil Media.

Soil Media – The Contractor shall submit Certificate of Compliance by the material provider for the Soil Media and source to the City for approval, including mechanical and chemical analysis results for the Soil Media.

Non-Woven Filter Cloth – Manufacturer-Certified Product data for Nonwoven Geotextile.

Washed Gravel/#57 Stone – Certificate of Compliance issued by the material provider for the Washed Gravel/#57 Stone.

River Stone – Certificate of Compliance issued by the material provider for the River Stone.

Class I Riprap – Certificate of Compliance issued by the material provider for the Riprap

Imbricated Boulder – The contractor will locate potential sources for the stone. The contractor shall submit to the City a certificate verifying the following boulder information:

- 1) Stone classification
- 2) Stone density (i.e., weight per cubic foot)
- 3) Weight of stone being supplied
- 4) Stone quality shall meet all of the above specifications

Concrete / Curb and Gutter – The Contractor shall submit shop drawings for all structural elements as specified on the Contract Drawings of the Bioretention Basin to the City for approval.

CONSTRUCTION

Construction shall proceed as specified on the Contract Drawings.

Excavation shall be conducted in dry conditions with equipment located outside of the bioretention area to minimize bottom and sidewall compaction. Only lightweight, low ground-contact equipment shall be used within the facility area and the bottom shall be scarified before installing filter media.

Install precast concrete structure.

For installation of curb and gutter, refer to Section 603.03 of MDSA *Standard Specifications for Construction and Materials*. Curb and Gutter shall be Montgomery County Combination Concrete Curb and Gutter Type A (Standard No. MC-100.01).

The Contractor shall exercise caution to minimize compaction of the base of the bioretention facility and the required backfill.

Class I Riprap, Washed Gravel, #57 Stone, and River Stone for the shall be clean, washed, and free of fines.

Bioretention Soil Media may be mixed on-site before placement but soils shall not be placed under saturated conditions. The filter media shall be placed and graded using excavators or backhoes operating adjacent to the facility. The media shall be placed in horizontal layers, 12

inches per lift maximum. Proper compaction of the media will occur naturally. Spraying or sprinkling water on each lift until saturated may quicken settling times.

The bioretention soil specifications provide enough organic material to adequately supply nutrients from natural cycling. The primary function of the bioretention structure is to improve water quality. Adding fertilizers defeats, or at a minimum, impedes this goal. At the direction of the City, only add fertilizer if wood chips or mulch are used to amend the soil. Rototill urea fertilizer at a rate of 2 pounds per 1000 square feet.

MEASUREMENT AND PAYMENT

The Bioretention Basins will be measured and paid for at the Contract unit price per each (EA) installed. The payment will be full compensation for all undercut, furnishing and installing all materials and all transportation, preparation, compaction, disposal of excess material, and for all material, labor, structure stakeout, equipment, tools and incidentals necessary to complete the work. Bollards will be paid under the pay item "Bollards and Removable Bollards."

PAY ITEM NO. 33 – COMPACTED CLAY LINER

DESCRIPTION

The Contractor shall furnish all labor, materials, and equipment necessary to produce, install and maintain the Compacted Clay Liner as shown on the Contract Drawings and described in these specifications or as directed by the City.

MATERIALS

Clay – Clay used in the Compacted Clay Liner shall meet the MD-378 requirements for impervious fill and be classified as either GC, SC, CH or CL with 30 percent passing the #200 sieve. The material must have a minimum dry unit weight not less than 105 pounds per cubic foot (PCF) maximum dry density as determined by the American Society for Testing and Materials (ASTM) D-698. The material must be free of roots, stumps, wood, rubbish, stones greater than 2” and frozen or other objectionable materials.

Suitable Fill - Suitable Fill shall be free from vegetative matter, organic material, sludge, grit, trash, muck, roots, logs, stumps or frozen material and other deleterious substances. Except as otherwise specified or approved, the material shall not contain rocks or lumps larger than six inches in greatest dimension. Materials having a maximum dry density of less than 100 pounds per cubic foot (AASHTO T 180) shall not be used unless specifically approved in writing by the Engineer. Cinders, ashes, rubble and construction debris shall not be used in the work.

SUBMITTALS

- A. Prior to the start of work on this item, the Contractor shall submit, in writing, a source of clay material and laboratory tests (proctor, particle distribution, and Atterberg limits) for review and approval. Any unapproved material brought to the project site and not approved through testing shall be removed and replaced at no expense to the City.
- B. Ship tickets for clay delivered.
- C. Compaction testing results for each Compacted Clay Liner shall be submitted to the City for approval.

CONSTRUCTION

- A. The Contractor shall furnish all labor, materials, and equipment necessary to construct, install, and maintain the Compacted Clay Liner as shown on the Contract Drawings and described in these specifications or as directed by the City.
- B. The pond shall be dewatered as shown on the approved erosion and sediment control plans. This may include sandbag dikes or pump around techniques.
- C. The Contractor shall review the Compacted Clay Liner Technical Specification and details with the Engineer and the City prior to construction.
- D. The Contractor shall stake out the location of the Compacted Clay Liner and review with the Engineer and City prior to construction. No construction is to begin until the extents are approved by the Engineer and the City.
- E. The subgrade surface of the Compacted Clay Liner shall be graded to remove surface irregularities and shall be scarified or otherwise acceptably scored or loosened to a minimum depth of 2”. The subgrade shall be free from vegetative matter, organic material, sludge, grit, trash, muck, roots, logs, stumps or frozen material and other deleterious substances. Except as otherwise specified or approved, the material shall

- not contain rocks or lumps larger than 2" in greatest dimension. The moisture content of the loosened material shall be controlled as specified for the clay liner, and the surface materials of the foundation shall be compacted and bonded with the first layer of the compacted clay liner.
- F. The location of the Compacted Clay Liner may be modified to better conform to site conditions with the approval of the Engineer.
 - G. Compacted Clay Liner material shall be compacted to assure maximum density and minimum permeability. Compacted clay fill shall conform to a minimum 95 percent of maximum dry density as determined by ASTM D698. Clay fill shall be placed in eight (8)-inch maximum lifts and each lift shall be compacted with construction equipment, rollers, and/or hand tampers. If hand tampers are used, lift thickness shall not exceed four (4)-inches. Uniform moisture should be maintained throughout each lift, and water should be added as needed to maintain uniformity of moisture content prior to compaction. Each clay lift shall be scarified and compacted prior to placement of the next lift to promote interlocking between lifts; however, the final lift of clay shall not be scarified. Compaction of each Compacted Clay Liner shall be tested by the onsite geotechnical engineer and results of the compaction testing shall be submitted to the City for approval.
 - H. In instances where groundwater is encountered during excavation for, or during installation of Compacted Clay Liner, the contractor may need to operate sump pit or other dewatering device(s) to drawdown local groundwater and to allow for required compaction.
 - I. The finished surface of the Compacted Clay shall be installed to meet the final grades as shown on the Contract Drawings. All fill placed above the Compacted Clay Liner shall comply with Suitable Fill where applicable as shown on Construction Drawings. Where Wetland Soil Media is specified over the Compacted Clay Liner, the 1' topsoil layer shall be replaced with 6" Suitable Fill and 6" (min.) Wetland Soil Media layer as described in the pay item for "Wetland Soil Media". Where Driveable Grass Access Road is specified over the Compacted Clay Liner, the 1' topsoil layer shall be replaced the Access Road as described in the pay item for "Driveable Grass Paver Access Road" as shown on Construction Drawings.

MEASUREMENT AND PAYMENT

Payment for the Compacted Clay Liner will be paid for at the unit price bid per ton of Compacted Clay Liner material. The payment will be full compensation for all material, undercut, backfill, trenching, hauling, removal of excess material, stockpile, blending, spreading, placement, compaction, equipment, testing, tools labor, and incidentals necessary to complete the work.

PAY ITEM NO. 34 – WETLAND SOIL MEDIA

DESCRIPTION

This pay item shall encompass supply and installation of Wetland Soil Media for the wetland benches as specified in the Contract Drawings and as directed by the City.

MATERIALS

Salvaged Wetland Soil Media – Salvaged Wetland Soil Media shall meet the following characteristic:

- pH: 5.5 to 7.5
- Contamination: No more the 1% contamination by volume (dry weight basis)

Furnished materials shall meet the specifications provided below unless an equivalent is approved by the City.

Sand – ASTM C33 Concrete Sand with a grain size diameter of 0.02 to 0.04 inches

Compost – Compost shall have the following characteristics:

- Source Separated Compost (Type B) produced by a MD SHA certified compost operator
- Lawn clipping based compost shall be tested for contaminants
- pH: 5.5 to 7.5
- Moisture: 30% to 55% wet weight basis
- Organic Matter: 25% to 65% dry weight basis
- Particle Distribution as follows (dry weight basis):
 - 3 inch (75mm), 100% passing
 - 1 inch (25mm), 90-100% passing
 - 0.75 inch (19mm), 70-100% passing
 - 0.25 inch (6.4mm), 30-60% passing
 - 0.04 inch (1mm), 30% passing minimum
- Contamination: No more the 1% contamination by volume (dry weight basis)
- Soluble Salt Concentration: Less than 5 ds (mmhos/cm)

Topsoil – Either Salvaged or Furnished Topsoil shall meet the requirements as described in the 2020 Maryland Department of Transportation State Highway Administration Specifications for Construction and Materials, Section 920. Clay content shall be less than 5%. Topsoil shall not be salvaged from areas affected by NNI Removal.

SUBMITTALS

- **Product data:** Particle distribution and manufacture product description of the Sand
- **Topsoil analysis:** soil classification, particle distribution, pH, soluble salt concentration, and percent organic matter
- **Compost Analysis:** the compost source, pH, moisture, percent organic matter, particle distribution, soluble salt concentration and percent contamination at a minimum
- **Salvaged Wetland Soil Media analysis:** pH and percent contamination
- **Elevation Checks:** Check shots shall be review and approved by the City

CONSTRUCTION METHODS

- A. Existing soil media within the footprint of the bottom of the basin shall be considered Wetland Soil Media. The Contractor shall salvage the top one foot of media and stockpile separately for re-use. Salvaged wetland soil media shall be tested and amended to meet the specifications provided. Furnished Wetland Soil Media shall not be ordered without permission of the City. Material shall not be salvaged from areas affected by NNI Removal.
- B. With permission of the City, the Contractor may order the components of Furnished Wetland Soil Media. Furnished Wetland Soil Media shall be a well-mixed blend of 40% Sand, 40% Compost, and 20% Topsoil. The contractor may also order pre-mixed Furnished Wetland Soil Media, which is preferred to mixing on site.
- C. Wetland Soil Media shall be placed as shown on the Contract Drawings on proposed wetland planting areas to a minimum depth of six (6) inches prior to planting. The components shall be mixed thoroughly and approved by the City prior to placement. An elevation check will be performed by the Contractor and approved by the Construction Inspector prior to placement of the media. After placement of the media, an additional grade check will be performed and approved. Discrepancies will be resolved at the Contractor's expense.

MEASUREMENT & PAYMENT

Salvaged Wetland Soil Media will be not be measured and will be incidental to the price bid for "Clearing and Grubbing" and "Unclassified Excavation, Offsite Removal and Grading". The payment must include full compensation for all testing, elevation checks, amendments, installation and maintenance of Wetland Soil Media and all labor, equipment, tools, and incidentals necessary to complete the work.

When Wetland Soil Media is furnished by the Contractor, Furnished Wetland Soil Media will be measured and paid for per ton (TON) installed. The contract's unit price for the pay item "Furnished Wetland Soil Media" must include full compensation for furnishing of topsoil, furnishing of sand and Compost materials, mixing of components, installation and maintenance of Wetland Soil Media material, elevation checks, and all labor, equipment, tools, and incidentals necessary to complete the work.

PAY ITEM NO. 35 – HERBACEOUS PLANTS: PLUGS
PAY ITEM NO. 36 – HERBACEOUS PLANTS: QUARTS

DESCRIPTION

These items consist of furnishing, installing and maintaining the Herbaceous Plantings shown in the Contract Drawings; and all planting operations necessary to complete the work as specified.

One month prior to the start of work on this item, the Contractor shall submit a proposed planting schedule including the source of herbaceous plants to the City for review. No work shall be performed until the City approves this schedule.

MATERIALS

Plant Material – All plant material shall conform to the current issue of the American Standard for Nursery Stock published by the American Association of Nurserymen.

- Plant materials must be selected from certified nurseries that have been inspected by state and/or federal agencies. Nursery inspection certificates shall be furnished to the City upon request.
- The nursery supply source shall certify that the origin of the herbaceous plantings are from Hardiness Zone 7a.
- Substitutions of herbaceous material will be permitted, with approval of the Project Manager. Substitutions must be native to the Maryland Piedmont Region and of the same size, value and quality of the original plant.
- Plant material collected from the "wild" is prohibited.
- All herbaceous plant material supplied must be wet cultivated and free of all invasive plants. No other sources of cultivation will be accepted.
- Herbaceous plant material damaged in handling or transportation or insufficiently cared for upon arrival may be rejected by the City.
- All rejected materials must be removed from the site by the Contractor within 48 hours
- All rejected plant material must be documented by the Landscape Foreman and a copy listing the rejected plant material must be provided to the City within 48 hours.

Water – Water used in the establishment or caring of plants and seed shall be free from any substance that is harmful to plant life.

SUBMITTALS

- **Supplier:** For quarts and plugs
- **Qualification Data:** The Contractor must submit Landscape Foreman qualifications verifying years of experience; include list of completed projects having similar scope of work identified by name, location, date, reference names and phone numbers.
- **Planting Schedule:** The Contractor shall provide a final plant schedule listing plants to be installed one month prior to installation to the City. The final planting schedule must indicate anticipated planting dates for each type of planting.

- **Written Confirmation:** The Contractor and/or his subcontractor shall review the Construction Documents plant schedule and planting plan and prepare written confirmation to the City prior to ordering any plant material that the Contractor and/or his subcontractor agree, to the best of their knowledge, that the plant schedule and planting plan is workable and no substitutions or modifications are necessary.
- **Notification of Delivery:** The Contractor must notify the City of the delivery schedule 2 weeks in advance so the plant material may be inspected upon arrival.
- **Signed Delivery Tickets:** All signed delivery tickets matching the approved delivery must be provided to the City upon receipt of the delivery.
- **Maintenance Plan:** Contractor shall submit a plan for maintenance of plantings during a calendar year for City approval before expiration of required maintenance periods.

CONSTRUCTION

The Contractor shall be responsible for furnishing and installing all herbaceous plant material as specified on the Contract Drawings and in accordance with MDSHA 710, except as further described below.

- A. **Personnel:** Landscape Foreman must have 5 years or more documented successful experience in herbaceous and tree plantings. All work must be performed by personnel familiar with the planting procedures under the direct supervision of a qualified Landscape Foreman. The Contractor must submit installer qualifications verifying years of experience; include list of completed projects having similar scope of work identified by name, location, date, reference names and phone numbers.
- B. **Installation:**
1. Herbaceous vegetation must be planted between: March 1 to May 15 or September 15 to November 15 unless otherwise directed by the City.
 2. Contractor must verify they can obtain the specified plants and quantities prior to final construction estimate. Any discrepancies or shortages of specified plant material must be reported to the City immediately.
 3. The Contractor and/or his subcontractor should be aware of the site design conditions and should take all prudent steps to ensure that the plant material specified in the Construction Documents are acclimated to the site conditions prior to delivery to the job site. The Contractor and/or his subcontractor shall review the Construction Documents plant schedule and planting plan and prepare written confirmation to the City prior to ordering any plant material that the Contractor and/or his subcontractor agree, to the best of their knowledge, that the plant schedule and planting plan is workable and no substitutions or modifications are necessary. If the plant material is available from sources where aquatic conditions are duplicated at the nursery, the Contractor should favor these sources as the supplier.
 4. The Contractor must notify the City of the delivery schedule two weeks in advance so the plant materials may be inspected upon arrival at the job site. All plants delivered for the specific restoration project must be unloaded, inventoried and grouped by plant species under the direct supervision of the City. All deliveries shall be made with the Landscape Foreman present and all signed delivery tickets matching the approved delivery must be provided to the City upon receipt of the delivery. Rootstock of aquatic plant material must be kept moist during transport from the source to the job site and until planted.
 5. Plants not installed the day of delivery must be properly stored and protected from direct sun and wind. Plant material must not be dropped, handled by the stems or foliage. Plant stems must be protected from being damaged, scarred or broken while being handled, stored and transported by equipment.
 6. Prior to placement or installation of herbaceous plants, the Contractor must flag all plant material locations for approval. The City may require adjustments to plant material

- locations to meet field conditions. Actual planting must be performed during the specified periods only when weather and soil conditions are suitable and in accordance with locally accepted practice, as approved by the City. Deviation from the specified planting dates will be permitted only when approved in writing by the City. Plant materials shall be placed as indicated in the Contract Documents or as directed by the City and shall follow other general planting practices by nursery tradesmen. The herbaceous plant material shall be guaranteed to break dormancy.
7. All excavated and finished borrow or topsoil must be free of noxious weeds. Noxious weeds that emerge must be removed each September by the Contractor for the duration of the maintenance guarantee.
 8. Prior to installation of herbaceous plantings, the pond must be allowed to fill to the design elevation of the permanent pool such that the wetland bench is fully saturated. The pond shall then be drained such that the wetland bench is exposed and herbaceous plantings shall be installed. The pond does not need to be fully drained.
 9. Following installation of herbaceous materials, the water surface elevation must be maintained within 6 inches of the design elevation of the permanent pool until the Certificate of Acceptance has been issued.
- C. **Inspection and Initial Acceptance:** In addition to the standard acceptance requirements, the Contractor will provide the City with a detailed “as-built” planting plan on a full size copy of the Restoration and Planting Plan. The plan will show distinct, labeled planting areas. The plan will show the individual location of herbaceous plant species. As directed by the City, if the planting density is too high to reasonably show individual plant locations on the plans, the “as-built” planting plan will be accompanied by a spreadsheet inventory of plants in each distinct planting area. The inventory will include the numbers of plants and species located in each distinct planting area.
- D. **Certificate of Acceptance:** The Certificate of Acceptance will only be issued once all planting materials for the project have been accepted. If the plant material, installation, and planting “as built” are satisfactory, the City will give written notice to the Contractor. The notice will constitute the Certificate of Acceptance and the warranty period will begin from that date of the written notice.

MAINTENANCE AND MONITORING

The Contractor must begin maintenance immediately after each plant is installed. Inspect plants daily during the installation period and perform maintenance during the two years from the beginning of the warranty period. The Contractor shall provide all materials, labor and equipment to complete all landscape maintenance work for two years from the beginning of the warranty period.

- A. **Insect and Disease Control:** The Contractor shall be responsible for monitoring the site conditions on each visit to determine if any insect or disease problems exist. The Contractor must immediately notify the City of any problem identified.
- B. **Invasive Plant Control:** The Contractor shall be responsible for monitoring the site conditions on each visit to determine if invasive plant control is needed. The Contractor must immediately notify the City of any problem identified.
- C. **Competing/Encroaching Plants:** The Contractor shall be responsible for monitoring the site conditions on each visit to determine if vegetation is competing or encroaching on installed plants. The Contractor must immediately notify the City of any problem identified. The Contractor shall be responsible for removing any competing or encroaching vegetation.

WARRANTY

The Contractor will receive a Certificate of Acceptance from the City and the warranty period will begin from the date of acceptance by the City. The Contractor shall furnish a written warranty

covering the herbaceous plants during the two-year warranty. The Warranty shall provide herbaceous plant replacements for two years after acceptance of the work. The Contractor is responsible for replacement of all herbaceous plants which fail to grow, are not true to name, or are impaired to the extent that they will not grow properly as determined by the City. The Contractor is responsible for replacement before final inspection, as determined by City. All replacement will occur during the specified planting season. The herbaceous plants acceptance rate is 85 percent at the end of the two-year warranty period.

REPLACEMENT

The Contractor shall be responsible for one-time replacement. Replacements will be made during the next appropriate planting period and the replacements will be of the same size and species as the original. The Contractor must provide the City with a record of the location and units of herbaceous plants dead and replaced.

MEASUREMENT & PAYMENT

Herbaceous Plantings will be measured and paid for each (EA) plug and quart installed. The Contract's unit price for the pay items "Herbaceous Plug" and "Herbaceous Quart" must include full compensation for furnishing and installing plugs and quarts – including planting pit excavation and backfilling – maintaining and monitoring plantings, two-year guarantee of plantings, one-time replacement of plantings and all material, labor, equipment, tools and incidentals necessary to complete the work.

PAY ITEM NO. 37 – GOOSE EXCLUSION FENCING

DESCRIPTION

Work shall consist of furnishing, installing and maintaining the Goose Exclusion Fencing as shown in the Contract Drawings.

MATERIALS

Netting – Netting shall be 42” high heavy duty polypropylene mesh.

Posts – Posts shall be a minimum of 60” long, made of steel, and have a “T” shape.

Masonry String – String is to be 12 to 18 gauge seine nylon twine.

Flagging – Flagging shall be fluorescent in color, reflective, and made of vinyl.

SUBMITTALS

Maintenance Instructions: The contractor shall submit a maintenance plan for the goose exclusion fencing as part of the Herbaceous Plants Maintenance Plan. Fencing shall be checked at a minimum of once a month.

CONSTRUCTION

The Contractor shall be responsible for furnishing and installing all exclusion fencing material as specified on the Contract Drawings.

MAINTENANCE

The Contractor shall be responsible for maintenance of fencing through the warranty period as described in the pay item “Herbaceous Plants”. The Contractor shall remove the fencing at the end of the warranty period or as directed by the City.

MEASUREMENT & PAYMENT

Goose Exclusion Fencing will not be measured and will be paid at the Contract’s lump sum (LS) price bid for the pay item “Goose Exclusion Fencing”. The Contract’s unit price for the pay item must include full compensation for all material, labor, equipment, tools and incidental items necessary to complete the work.

PAY ITEM NO. 38 – WOODY VEGETATION: SHRUBS

PAY ITEM NO. 39 – WOODY VEGETATION: OVERSTORY TREE 2” CALIPER

PAY ITEM NO. 40 – WOODY VEGETATION: OVERSTORY TREE 1” CALIPER

PAY ITEM NO. 41 – WOODY VEGETATION: UNDERSTORY TREE 6’-7’ HT

PAY ITEM NO. 42 – WOODY VEGETATION: UNDERSTORY TREE 4’-5’ HT

PAY ITEM NO. 43 – WOODY VEGETATION: LIVE STAKES

PAY ITEM NO. 44 – WOODY VEGETATION: TUBELINGS

DESCRIPTION

These items consist of furnishing and planting Woody Vegetation as specified in the Contract Drawings or as directed by the City. No substitution of plant materials is permitted.

Prior to the start of work on this item, the Contractor shall submit a proposed planting schedule, including source of trees and shrubs to the City for review. No work shall be performed until the Forestry Inspector approves this schedule.

MATERIALS

Plant Material – All plant material shall conform to the current issue of the American Standard for Nursery Stock published by the American Association of Nurserymen.

- Plant materials must be selected from certified nurseries that have been inspected by state and/or federal agencies. Nursery inspection certificates shall be furnished to the City upon request.
- Trees and shrubs must be sourced from a nursery located within the Piedmont area of the Mid-Atlantic with a Zone 7 rating or lower (no Zone 8).
- Plant material collected from the "wild" is prohibited.
- Container grown stock shall have been grown in a container long enough for the root system to have developed sufficiently to hold its soil. Roots shall visibly extend to the inside face of the growing container without the presence of circling roots. All container grown plants shall be grouped and watered daily until they are planted.
- Trees and shrubs damaged in handling or transportation may be rejected by the City.

Water – Water used in the establishment or caring of plants and seed shall be free from any substance that is injurious to plant life.

Fertilizer – Plant fertilizer is to be applied only to containerized plants. The Contractor shall use organic fertilizers. Suitable products that are commercially available are marketed and certified as “organic” or “natural” fertilizers. Organic materials shall include such items as: sea grasses/kelp, rock powder, bone meal, whey, bean meal, blood meal, composted manure, etc. Product nutrient content shall be identified in the standard form of Nitrogen (N), Phosphorous (P) and Potassium (K) ratios. Typical organic fertilizer nutrient content ranges from 1-1-1 to 10-2-10. The minimum acceptable nutrient content shall be 4-2-4, unless otherwise directed by the City.

Mycorrhizal Fungi – Mycorrhizal fungi applied to trees and shrubs shall consist of live spores of both endo- and ectomycorrhizal fungi.

Deer Protection – All woody vegetation shall be protected per the details and notes in the Contract Drawings or approved equal. Fencing shall be made from welded wire.

- Deer Protection Fencing shall remain in place for the entire maintenance period (specified below). At the end of the maintenance period, consult with the City of Rockville to coordinate removal at contractor’s expense.

Mulch – Mulch applied to trees and shrubs shall consist of composted hardwood bark.

Compost – Compost shall have the following characteristics:

- Source Separated Compost (Type B) produced by a MDA certified compost operator
 - Lawn clipping based compost shall be tested for contaminants
- pH: 5.5 to 7.5
- Moisture: 30% to 55% wet weight basis
- Organic Matter: 25% to 65% dry weight basis
- Particle Distribution as follows (dry weight basis):
 - 3 inch (75mm), 100% passing
 - 1 inch (25mm), 90-100% passing
 - 0.75 inch (19mm), 70-100% passing
 - 0.25 inch (6.4mm), 30-60% passing
 - 0.04 inch (1mm), 30% passing minimum
- Contamination: No more the 1% contamination by volume (dry weight basis)
- Soluble Salt Concentration: Less than 5 ds (mmhos/cm)

SUBMITTALS

- **Supplier:** For Trees and shrubs
- **Product Certificates:** For soil amendments and fertilizers, signed by product manufacturer.
- **Qualification Data:** The Contractor must submit Landscape Foreman qualifications verifying years of experience; include list of completed projects having similar scope of work identified by name, location, date, reference names and phone numbers.
- **Planting Schedule:** Indicating anticipated planting dates for each type of planting.
- **Maintenance Plan:** Contractor shall submit a plan for maintenance of woody vegetation during a calendar year for City approval before expiration of required maintenance periods.
- **Nursery Inspector Certificates**
- **Signed Delivery Tickets:** All signed delivery tickets matching the approved delivery must be provided to the City upon receipt of the delivery.

CONSTRUCTION

The contractor shall furnish trees and shrubs as specified on the Contract Drawings and as further described below.

- A. **Personnel:** Landscape Foreman must have 5 years or more documented successful experience in herbaceous and tree plantings. All work must be performed by personnel familiar with the planting procedures under the direct supervision of qualified Landscape Foreman. The Contractor must submit installer qualifications verifying years of experience; include list of completed projects having similar scope of work identified by name, location, date, reference names and phone numbers.
- B. **Installation:**
 1. The trees and shrubs shall be reviewed by the City Forestry Inspector once they arrive on-site and before the plantings are installed to inspect for damage, health and consistency with the approved planting plan and submittal.
 2. The Contractor shall refer to the Planting Plan on the Contract Drawings for specific tree locations. The exact placement of the trees and shrubs may be field adjusted at the direction of the Forestry Inspector during planting.
 3. Immediately after site preparation and approval, trees shall be planted. Planting shall not be conducted between June 1 and September 1, when the ground is frozen or as directed by the City.

4. Rootstock of the plant material shall be kept moist during transport from the source to the job site and until planted.
 5. The Contractor is required to stake out each individual planting pit for trees and request the City to inspect and approve tree planting techniques prior to proceeding.
 6. All planting pits shall be dug by hand. Walls of planting pits shall be dug so that they are vertical or sloping outward in heavy soils. Scarify the walls of the pit after digging.
 7. Excavate the planting pit to two times the width of the root mass.
 8. The planting pit shall be deep enough to allow the root flare to be flush with the existing grade or no more than three inches above existing grade.
 9. Remove all debris from the pit and tamp loose soil in the bottom of the pit by hand.
 10. Do not handle the tree by the branches, leaves or stem.
 11. Place the plant straight in the center of the planting pit, carrying the plant by the root mass. Never lift or carry a tree by the trunk or branches.
 12. Place four ounces of fertilizer in each planting pit for up to one-gallon size containers, six ounces for up to three-gallon container size, place eight ounces for up to a five-gallon container size and ten ounces for up to a ten-gallon container size. Place the fertilizer in the planting pit completely surrounding the plant ball prior to backfilling.
 13. Mix a minimum of 500 spores of endomycorrhizal fungi and 30 million spores of ectomycorrhizal fungi to each cubic foot of backfill for tree and shrub planting.
 14. Backfill planting pit with existing soil and hand tamp as pit is being backfilled to completely fill all voids and air pockets. Water when hole is half backfilled with soil. Do not over compact soil. Make sure plant remains straight during backfilling/tamping procedure. If staking is required, trees must be staked per the City of Rockville standard planting detail. All stakes must be removed after six months.
 15. Do not cover the top of the root mass with soil.
 16. Trees and shrubs shall be mulched per the City of Rockville standard planting detail on the Contract Drawings. A minimum of 20-inch diameter area of mulch shall be placed around each plant. Mulch shall be two to three inches thick. Mulch shall NOT be placed directly against the stem of the plant.
 17. Water trees thoroughly immediately after backfilling and mulching planting pit.
 18. The Contractor shall leave no open planting pits at the close of each day.
- C. **Inspection and Initial Acceptance:** In addition to the standard acceptance requirements, the Contractor will provide the City with a detailed “as-built” planting plan on a full size copy of the Planting Plan. The plan will show distinct, labeled planting areas. The plan will show the individual location of trees and shrubs. As directed by the City, if the planting density is too high to reasonably show individual plant locations on the plans, the “as-built” planting plan will be accompanied by a spreadsheet inventory of plants in each distinct planting area. The inventory will include the numbers of plants and species located in each distinct planting area.
- D. **Certificate of Acceptance:** The Certificate of Acceptance will only be issued once all planting materials for the project have been accepted. If the plant material, installation, and planting “as built” are satisfactory, the City will give written notice to the Contractor. The notice will constitute the Certificate of Acceptance and the warranty period will begin from that date of the written notice.
- E. **Stockpiles:** Any areas previously utilized to stockpile material that now coincide with the location of proposed woody vegetation shall be amended with 6 inches of compost and tilled to a depth of 24 inches prior to the installation of proposed vegetation.
- F. **Forest and Tree Conservation:** The Contractor shall complete all forest and tree conservation requirements according to the Contract Drawings, and the following requirements:
1. To protect and maintain existing forested areas and/or individual significant trees as provided by the Contract Drawings and any directives of the Forestry Inspector.

2. To promptly replace any existing trees designated to remain that are that are damaged or destroyed during development.
3. To perform all site preparation, including removal of pavements, structures, and inclusion of soil amendments, PRIOR to installing plantings.

MAINTENANCE

- A. During planting, all areas shall be kept neat, clean and free of all trash and debris, and all reasonable precautions shall be taken to avoid damage to existing plants, turf, structures and private property.
- B. Remove all tags, labels, strings and wire from the plant materials, unless otherwise directed by the City.
- C. Final cleanup shall be the responsibility of the Contractor and consist of removing all trash and materials incidental to the project and disposing of them off-site.
- D. The plant material shall be maintained and monitored by the Contractor for two years after completion, final inspection and approval of the planting by the City Forestry Inspector.
- E. It will be the Contractor's responsibility to supply water if there is none available on the site. Any costs associated with supplying water shall be the responsibility of the Contractor.
- F. Contractor is responsible for removal of wire cages and staking if required by City.

WARRANTY AND REPLACEMENT

- A. The Contractor shall guarantee for the duration of two years with 100 percent care and replacement warranty on all trees and a two year, 85 percent care and replacement warranty on all other landscaping plants.
- B. The period of care and replacement shall begin after final inspection and approval of the initial installation of all plants and continue for two years, with two potential plant replacement periods each year. The City will assume maintenance and replacement warranty responsibility after the Contractor's two-year care and replacement warranty has been completed.
- C. Plant replacements shall be performed in accordance with these specifications.

MEASUREMENT & PAYMENT

Planting of Woody Vegetation shall be measured and paid for per each (EA) tree, shrub, live stake, and tubeling installed to the satisfaction of the City. The contract's unit price for the pay items "Woody Vegetation: Overstory/Understory Trees...", "Woody Vegetation: Shrubs", "Woody Vegetation: Live Stakes", and "Woody Vegetation: Tubelings" must include full compensation for furnishing, installing, maintenance and warranty bond, including all materials, labor, equipment, tools, and incidentals necessary to complete the work as specified in these specifications and on the Contract Drawings. Installation and removal of Deer Protection Fencing shall be incidental to the price bid.

PAY ITEM NO. 45 – TEMPORARY STABILIZATION

DESCRIPTION

This pay item shall encompass establishment of temporary vegetative stabilization and/or installing erosion control blankets as directed by the City or specified in the Contract Drawings.

Temporary seed and mulch operations shall be completed according to the Contract Drawings and the Maryland Department of the Environment's *2011 Maryland Standards and Specifications for Soil and Erosion Control*, "Section 20.0 Standards and Specifications for Vegetative Establishment."

MATERIALS

Seed – Seed mixes, application rates, seeding dates, seeding depths, fertilizer rate, and lime rates shall be per the Temporary Seeding Summary as specified on the Contract Drawings.

Seed shall be certified that the Pure Live Seed (PLS) percentage is equal to or greater than that which is specified on the Plant Schedules. If the PLS is less than specified, the Contractor shall increase the seeding rate to compensate for the PLS difference at his/her own expense.

All seed and seed varieties shall be free from State and Federal prohibited noxious weed seeds and the following:

Annual bluegrass	Corn cockle	Spurred anode
Bermuda grass	Dodder	Wild garlic
Bindweed	Giant foxtail	Wild onion
Cocklebur	Horse nettle	

Mulch – Straw, or wood cellulose fiber mulch (hydromulch) shall be per the Standards and Specifications for Soil Preparation, Topsoiling, and Soil Amendments as specified on the Contract Drawings

Erosion Control Blankets – City approved, net-free, biodegradable (within 12 months), fibrous, soil stabilization matting. Product must be designed to minimize the potential for animal entrapment and must adhere to MDE standards and specifications for soil stabilization matting.

Water – Water used in the establishment or caring of plants and seed shall be free from any substance that is injurious to plant life.

SUBMITTALS

- **Product Data:** For each type of product indicated.
- **Certification of Seed:** From seed vendor for each seed monostand or mixture stating the botanical and common name and percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.
- **Product Certificates:** For soil amendments and fertilizers, signed by product manufacturer.

CONSTRUCTION METHODS

- A. The Contractor shall furnish and install temporary seed and mulch and/or erosion control blankets as specified on the Contract Drawings. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization must be completed within three calendar days as to the surface of all perimeter dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 verticals (3:1); and seven calendar days as to all other disturbed or graded areas on the project site not under active grading.
- B. The Contractor shall install erosion control blankets over any seeded area with finished slopes equal to or steeper than 3H:1V at the direction of the City Sediment Control Inspector. Erosion control blankets shall also be installed over seeded areas that are prone to flooding. Erosion control blankets shall be installed as described on page B-39 of the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control. Erosion control blankets shall be placed and “pinned” immediately after placement of the seed but in no case, more than 24 hours after seed placement.
- C. Areas with temporary seeding must meet the approval of the City. The Contractor is responsible to schedule all initial and follow up inspections required by the inspectors in a timely manner.

MEASUREMENT & PAYMENT

Temporary Stabilization will not be measured and paid at the Contract’s lump sum (LS) price bid for the pay item “Temporary Stabilization”. The Contract’s unit price for the pay item must include full compensation for all material, labor, equipment, tools and incidental items necessary to complete the work.

PAY ITEM NO. 46 – BITUMINOUS CONCRETE: SURFACE COURSE

PAY ITEM NO. 47 – BITUMINOUS CONCRETE: BASE COURSE

PAY ITEM NO. 48 – GRADED AGGREGATE BASE

DESCRIPTION

Work shall consist of furnishing all material, labor, services and related items to restoration and/or in-kind replacement of the existing Northeast Park asphalt path and the Neal Park/Wesley Road roads.

MATERIALS

Bituminous Concrete Surface Course – 2-inch Superpave Asphalt Mix 9.5mm – PG 64S-22, Level 2 (two 1.5-inch lifts)

Bituminous Concrete Base Course – 4-inch Superpave Asphalt Mix 12.5mm – PG 64S-22, Level 2 (two 2.5-inch lifts)

Graded Aggregate Base – Refer to section 901.01 Graded Aggregate Base of MDSHA Standards Specifications for Construction and Materials.

SUBMITTALS

- **Certification of Compliance:** Suppliers shall provide certification that mix designs meet the material specifications.
- **Gradation:** Gradation of the Graded Aggregate Base shall be submitted for approval
- **Compaction Test Results:** Contractor shall submit proctor test results for approval

CONSTRUCTION METHODS

CONCRETE SURFACE AND BASE COURSE

- Refer to section 505.03 of MDSHA *Standards and Specifications for Construction and Materials*
- Pavement damaged during construction activity shall be identify by the City during construction. Repairs to damaged pavement shall be partial depth when less than 50% of the pavement section is affected. If greater than 50% of the pavement thickness is compromised, repairs shall be full depth. The City shall identify the type of repair prior to the initiation of repair activities.
- Partial depth pavement repair material shall be Superpave Asphalt Mix 9.5mm – PG 64S-22, Level 2. When directed by the City, Crack Filler or Cold Patch Material may be utilized.
- Full depth pavement repair materials shall 5-inch Superpave Asphalt Mix 12.5mm – PG 64S-22, Level 2 and 3-inch Superpave Asphalt Mix 9.5mm.

GRADED AGGREGATE BASE

- Refer to section 501.03 of MDSHA *Standards and Specifications for Construction and Materials*

MEASUREMENT & PAYMENT

Bituminous Concrete Pavement will be measured and paid for per ton (TON) of surface or base course installed to the satisfaction of the City. The Contract's unit price for the pay items

“Bituminous Concrete: Surface Course” and “Bituminous Concrete: Base Course” must include compensation for the furnish, placement, testing, compaction and maintenance of the bituminous concrete as shown on the Contract Drawings, including all materials, labor, equipment, tools, and other incidentals necessary to complete this work.

Pavement repair shall be measured and paid for per ton (TON) of surface or base course installed to the satisfaction of the City. This must include compensation for the furnish, placement, testing, compaction and maintenance of the bituminous concrete surface and base course including all materials, labor, equipment, tools, and other incidentals necessary to complete this work. Removal and disposal of existing damaged pavement and the installation of pavement markings shall be incidental to the unit price bid.

Graded Aggregate Base for pavement repair will be measured and paid for per square yard (SY) of surface area installed to the satisfaction of the City. The Contract’s unit price for the pay item “Graded Aggregate Base” must include compensation for the furnish, placement, undercut, compaction, testing and maintenance of the Graded Aggregate Base as shown on the Contract Drawings, including all materials, labor, equipment, tools, and other incidentals necessary to complete this work.

PAY ITEM NO. 49 – PERMANENT STABILIZATION
PAY ITEM NO. 50 – FURNISHED TOPSOIL
PAY ITEM NO. 51 – NATIVE SEED MIXES
PAY ITEM NO. 52 – COVER/NURSE CROP SEED MIX

DESCRIPTION

This pay item shall encompass supply and installation of all topsoil, seed, mulch and stabilization matting for the areas specified to be seeded with permanent seed mixes in accordance with the Contract Documents. Prior to start of work on this item, the Contractor shall submit a proposed seeding schedule, including the source of the seed, to the City for review. No work shall be performed until the City approves this schedule.

MATERIALS

All materials shall conform to the Maryland Department of Transportation, State Highway Administration, Standard Specifications for Construction and Materials, latest edition, and any addenda thereto (hereafter referred to as MDSHA) or as specified on the Contract Drawings.

Topsoil – Topsoil shall be per the Standards and Specifications for Soil Preparation, Topsoiling, and Soil Amendments as specified on the Contract Drawings (Section B-4 of the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control). Topsoil shall not be salvaged from areas affected by NNI Removal. Topsoil shall also meet the specifications of the Maryland Department of Transportation, State Highway Administration, Standard Specifications for Construction and Materials, Section 920 Landscaping Materials.

The Contractor shall maintain a separate stockpile for topsoil, and it shall not be comingled with other fill materials.

Seed – Application rates, seeding dates, seeding depths, fertilizer rate, and lime rates shall be per the Permanent Seeding Summary and Planting Plan Schedule as specified on the Contract Drawings.

Seed shall be certified that the Pure Live Seed (PLS) percentage is equal to or greater than that which is specified on the Plant Schedules. If the PLS is less than specified, the Contractor shall increase the seeding rate to compensate for the PLS difference at his/her own expense.

All seed varieties shall be free from State and Federal prohibited noxious weed seeds and the following:

Annual bluegrass	Corn cockle	Spurred anode
Bermuda grass	Dodder	Wild garlic
Bindweed	Giant foxtail	Wild onion
Cocklebur	Horse nettle	

Mulch – Wood cellulose fiber mulch (hydromulch) shall be per the Standards and Specifications for Soil Preparation, Topsoiling, and Soil Amendments as specified on the Contract Drawings. Straw shall not be utilized.

Erosion Control Blankets – Erosion Control Blankets shall be City approved, net-free, biodegradable, fibrous, soil stabilization matting. Product must be designed to minimize the potential for animal entrapment. Soil Stabilization Matting must be biodegradable within 12 months.

Water – Water used in the establishment or caring of plants and seed shall be free from any

substance that is injurious to plant life.

Fertilizer – Fertilizer shall be slow release commercial grade with a standard analysis of 10-10-10.

SUBMITTALS

- **Product Data:** For each type of product indicated.
- **Certification of Seed:** From seed vendor for each seed monostand or mixture stating the botanical and common name and percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.
- Certification of each seed mixture for turfgrass sod, identifying source, including name and telephone number of the supplier.
- **Product Certificates:** For soil amendments and fertilizers, signed by product manufacturer.
- **Qualification Data:** For landscape Installer
- **Material Test Reports:** For existing surface soil and imported topsoil.
- **Planting Schedule:** Indicating anticipated planting dates for each type of planting.
- **Maintenance Plan:** Contractor shall submit a plan for maintenance of seeds during a calendar year for City approval before expiration of required maintenance periods.

CONSTRUCTION

The Contractor shall furnish and install topsoil, seed mixes and mulch as per the Standards and Specifications for Soil Preparation, Topsoiling and Soil Amendments as specified on the Contract Drawings; and as further described below.

A. Installation:

1. All areas disturbed by construction shall be covered with topsoil in a 6 inch to 8 inch layer and lightly compacted to a minimum thickness of 4 inches; and seeded in accordance with the planting plans and schedules. Areas not disturbed or below the normal water surface elevation of the stream or otherwise stabilized with rock shall not be seeded, except where noted on the Contract Drawings or by the City.
2. All areas to be seeded shall conform to the finished grades as specified on the plans and be free of all weeds, trash, debris, brush, clods, loose rocks and other foreign materials larger than 3 inches in diameter or length that would interfere with seeding. All gullies, washes or disturbed areas that develop subsequent to final dressing shall be repaired prior to seeding.
3. Native seed mixes shall be applied in accordance with the manufacturer's recommendations. If applied in the fall, the Contractor shall be responsible for the maintenance of the mulch until germination occurs in the spring. Areas which wash out or fail to germinate shall be reseeded at no cost to the City.
4. If planting cannot be accomplished within the dates as specified on the Contract Drawings, apply temporary seeding and mulch. Erosion control blankets shall be installed at the direction of the City.
5. Unless otherwise recommended by the seed supplier, no seeding shall be performed on frozen ground or when the temperature is 32°F/00°C or lower.
6. Contractor shall install erosion control blankets over any seeded area with finished slopes steeper than or equal to 3H:1V. Erosion control blankets shall also be installed over seeded areas that are prone to flooding. Erosion control blankets shall be installed as described on page B-39 of the Maryland Department of the Environment's (MDE) *Maryland Standards and Specifications for Soil Erosion and Sediment Control*, latest edition and any addenda thereto. Erosion control blankets shall be placed and "pinned" immediately after placement of the seed but in no case, more than 24 hours after seed placement.

7. Areas that are to be seeded as directed by the planting plan **AND** have not been graded or otherwise had the soil exposed, will require some site preparation. A light disking or rototilling **ONLY** 1 inch deep is all that is needed and it is important to stay outside the Critical Root Zone (CRZ) of trees as indicated in the Contract Drawings.
 8. Areas previously used for the stockpiling of soil shall be tilled or plowed to a depth of 16 inches to decompact the soil prior to the placement of topsoil. Further amend the soil in stockpile areas by mixing four inches of compost into the decompacted soil.
 9. Immediately after seeding, the site shall be watered lightly but thoroughly so that the top 4 inches of soil is saturated.
 10. The Contractor shall mulch and tack all seeded areas within 24 hours after seeding.
 11. It shall be the responsibility of the Contractor to select the most appropriate mulch material for the areas being seeded and to maintain the mulch material until vegetation has become established.
- B. Clean-up:** The Contractor shall be responsible for the removal of all trash and any other materials incidental to the project and disposing of them off-site.
- C. Maintenance:** Inspect all areas and make repairs. Replace and reseed as required to produce an acceptable stabilized area. Do not mow seed mix areas at any time after the completion of seeding or re-seeded areas during maintenance period.
- D. Initial Inspection:**
1. Once planting is completed, including clean up and maintenance, a request in writing should be submitted for initial inspection of total planting. The Landscape Contractor should notify the DPW Inspector for this request. Weather permitting; the inspection should take place within 10 business days by the DPW Inspector.
 2. The Landscape Contractor should be notified by the DPW Inspector in writing if the work is not satisfactorily complete. This note should include deficiencies in the work and the time frame in which corrections should be made. There should be an allowance of 10 days minimum for working days to correct work and another inspection will be scheduled by the DPW Inspector. Once the work is satisfactorily complete the Landscape Contractor should be notified in writing.
- A. Periodic Inspection:** Once a month for the first year all work areas shall be inspected for surface erosion. Any areas showing ongoing erosion shall be re-graded and restabilized as directed by the DPW Inspector.
- B. Final Inspection:**
1. After the plant material has been installed for two years, the final inspection should occur during the growing season (April through October). The DPW Inspector should make the inspection within 10 days in vigorous growing conditions with 85 percent herbaceous coverage.
 2. Any plants showing signs of disease or insect infestation should be immediately removed or treated and the Contractor shall reseed bare spots as directed. Dead or unacceptable plants will be removed and replaced by the same sized species designated on the plant list and in accordance with the plan and specifications.
 3. To insure the integrity of the period, repairs and additional measures should be made, including, watering, weeding, spraying, and control of exotic, invasive or weed plants. With the approval of the DPW Inspector after the completion of all work, the Landscape Contractor's work will be considered complete.

MAINTENANCE

- A. First Year Herbaceous areas:** To prevent weeds from going to seed, when vegetation is 18-24 inches tall mow with a brush hog or weed eater to a height of no less than 8 inches.
- B. Second Year:** Spot treat invasive species, do not mow prior to last frost.

WARRANTY

The Contractor shall maintain a minimum 85% aerial coverage of herbaceous seeding for 2 years after final inspection of installation. This shall include necessary care and replacement to achieve the required coverage.

MEASUREMENT & PAYMENT

Furnished Topsoil will be measured and paid for per ton (TON) installed to the satisfaction of the City. The contract's unit price for "Furnished Topsoil" shall be full compensation for furnishing, amending, placing and compacting Furnished Topsoil and for all materials, labor, testing, equipment, tools, and incidentals necessary to complete the work.

Permanent Stabilization be measured and paid for per square yard (SY) of area stabilized to the satisfaction of the City and Sediment Control Inspector. The contracts unit price for the pay items "Permanent Stabilization", "Native Seed Mix", and "Cover/Nurse Crop Seed Mix" must include full compensation for all fertilizer, seed, and mulch to stabilize the site and establish permanent vegetation, nurse crop seed mix and the installation of the permanent soil stabilization matting. All materials, labor, testing, equipment, tools, inspections, maintenance, warranty bond, and incidentals necessary to complete the permanent vegetative establishment shall be included in the price bid.



City of Rockville
Rockville, Maryland

BID PROPOSAL FORMS

INVITATION FOR BID # 05-22 SWM FACILITIES IMPROVEMENTS: NORTHEAST PARK

**THESE FORMS, UNLESS NOTED OTHERWISE, MUST BE
COMPLETED, SIGNED
AND
SUBMITTED**

**FAILURE TO COMPLY WILL
RESULT IN THE
DISQUALIFICATION OF YOUR BID**

In response to the advertisement by the City of Rockville inviting bids for the work and in conformance with the bid document on file in the Purchasing Division of the City of Rockville, we hereby certify that we are the only person, or persons interested in this bid proposal as principals, and that an examination has been made of the work site, the specifications, the plans and the bid documents. We propose to furnish all necessary machinery, materials, equipment, tools, labor and other means of construction required to complete the project. Bidders must bid all items.

The following items shall be performed per the referenced Standard Specification and the Contract Documents. Measurement and Payment shall be as described in the Technical Specifications unless otherwise specified in the Contract Documents. All work items described in the Contract Documents that are not referenced by a specific pay item shall be considered incidental to all other items in the Contract Documents.

**CITY OF ROCKVILLE
ROCKVILLE, MARYLAND**

**INVITATION FOR BID # 05-22
SWM FACILITIES IMPROVEMENTS: NORTHEAST PARK**

BID PROPOSAL FORM

THIS FORM MUST BE COMPLETED, SIGNED AND RETURNED

IN ACCORDANCE WITH ALL TERMS, SPECIFICATIONS AND REQUIREMENTS, WE PROPOSE TO FURNISH ALL LABOR, EQUIPMENT, MATERIALS AND SERVICES AND THE PERFORMANCE OF ALL WORK NECESSARY TO CONSTRUCT THE SWM FACILITY RETROFIT & STREAM RESTORATION PROJECT. PROVIDE PRICING BELOW TO INCLUDE OVERHEAD, PROFIT, TAXES, INSURANCE AND OTHER APPLICABLE FEES AND COSTS.

ITEM NO.	DESCRIPTION	UNIT	EST QTY	UNIT PRICE	TOTAL
NORTHEAST PARK SWM FACILITY (ITEMS 1-52)					
1	Mobilization	LS	1		
2	Construction Stakeout	LS	1		
3	Maintenance of Traffic	LS	1		
4	Clearing and Grubbing	LS	1		
5	Non-native Invasive Species Removal and Monitoring	LS	1		
6	Demolition & Disposal of Existing Site Features	LS	1		
7	Tree Removal (DBH ≥ 12" to < 18")	EA	20		
8	Tree Removal (DBH ≥ 18" to < 24")	EA	12		
9	Tree Removal (DBH ≥ 24")	EA	22		
10	Tree Protection Planking	EA	17		
11	Tree Protection Fence	LF	110		
12	Tree Pruning	LF	1,010		
13	High Visibility Fence	LF	2,065		
14	Super Silt Fence	LF	275		
15	Silt Fence on Pavement	LF	130		
16	Mountable Berm	EA	4		
17	Filter Log	LF	330		

ITEM NO.	DESCRIPTION	UNIT	EST QTY	UNIT PRICE	TOTAL
18	Staging and Stockpiling Areas	SY	620		
19	Temporary Construction Access Road	LF	710		
20	Maintenance of Stream Flow and Site Dewatering System	LS	1		
21	Unclassified Excavation, Offsite Removal and Grading	LS	1		
22	Stormwater Management Access Road	LF	328		
23	Removable Bollard & Bollards	EA	16		
24	Modification of Existing Structure and Appurtenances	LS	1		
25	MDSHA Standard Type "C" Endwall	EA	1		
26	MDSHA Standard B-48 Headwall	EA	1		
27	48" Reinforced Concrete Pipe	LF	20		
28	Class I Riprap	SY	175		
29	Class II Riprap	SY	61		
30	Imbricated Boulder	TON	370		
31	Cobble	TON	140		
32	Bioretention Basins	EA	2		
33	Compacted Clay Liner	TON	670		
34	Wetland Soil Media	TON	90		
35	Herbaceous Plugs	EA	7,950		
36	Herbaceous Quarts	EA	900		
37	Goose Exclusion Fencing	LS	1		
38	Woody Vegetation: Shrubs	EA	78		
39	Woody Vegetation: Overstory Tree 2" Caliper	EA	10		
40	Woody Vegetation: Overstory Tree 1" Caliper	EA	63		
41	Woody Vegetation: Understory Tree 6'-7' HT	EA	43		
42	Woody Vegetation: Understory Tree 4'-5' HT	EA	12		
43	Woody Vegetation: Live Stakes	EA	50		
44	Woody Vegetation: Tubelings	EA	120		

ITEM NO.	DESCRIPTION	UNIT	EST QTY	UNIT PRICE	TOTAL
45	Temporary Stabilization	LS	1		
46	Bituminous Concrete Surface Course	TON	30		
47	Bituminous Concrete Base Course	TON	10		
48	Graded Aggregate Base	SY	45		
49	Permanent Stabilization	SY	1,000		
50	Furnished Topsoil	TON	700		
51	Native Seed Mix	SY	11,600		
52	Cover/Nurse Crop Seed Mix	SY	5,120		
NORTHEAST PARK SWM FACILITY TOTAL \$					

Write the Total Bid Price for the IFB **05-22 SWM FACILITIES IMPROVEMENTS: NORTHEAST PARK** in words:

By submitting this offer I acknowledge receipt of and incorporation into this offer of the following Addenda (check each applicable box):

Addendum #1 , Addendum #2 , Addendum #3 , Addendum #4 , Addendum #5 , Addendum #6

CONTRACT DURATION

This contract will begin 10 working days from the date of issuance of a notice to proceed. All work associated with this project must be completed within 365 calendar days after the notice to proceed has been issued. It is possible that the City may issue a Limited Notice to Proceed (LNTP) to allow for mobilization, coordination, field measuring, NNI eradication, shop drawing review/approval, submission of work plan and ordering long lead time components.

If directed by the DPW Inspector or Forestry Inspector for specific landscape pay items, landscaping may be delayed until the subsequent planting season, but must be completed no later than 60 days from the start of the subsequent planting season as detailed in the Contract Documents.

Confirm your ability to meet the above schedule. _____ YES _____ NO

This bid and its Firm Fixed Prices shall remain valid through December 31, 2022 for acceptance by the City. Once awarded, the Contractor's bid's Firm Fixed Prices shall remain valid for the Contract Duration.

The City of Rockville reserves the right to reject any or all bids, offer or proposals, to waive informalities, and to accept all or any part of any bid, offer proposal as they may deem to be in the best interest of the City of Rockville.

I hereby certify that I have read and understand the requirements of this Invitation for Bid No. 05-22 and, that I, as the Bidder, will comply with all requirements, and that I am duly authorized to execute this proposal/offer document and any contract(s) and/or other transactions required by award of this Invitation For Bid.

Comprehensive Signature Page

BIDDER MUST COMPLETE UNDER APPROPRIATE SECTION & RETURN WITH BID

Instruction for Signature on Bid Proposal

The bid, if submitted by an individual, shall be signed by an individual; if submitted by a partnership, shall be signed by such member or members of the partnership as have authority to bind the partnership; if submitted by a corporation the same shall be signed by the President and attested by the Secretary or an Assistant Secretary. If not signed by the President as aforesaid, there must be attached a copy of that portion of the By-Laws, or a copy of a Board resolution, duly certified by the Secretary, showing the authority of the person so signing on behalf of the corporation. In lieu thereof, the corporation may file such evidence with the Administration, duly certified by the Secretary, together with a list of the names of those officers having authority to execute documents on behalf of the corporation, duly certified by the Secretary, which listing shall remain in full force and effect until such time as the Administration is advised in writing to the contrary. In any case where a bid is signed by an Attorney in Fact the same must be accompanied by a copy of the appointing document, duly certified.

IF AN INDIVIDUAL					
Individual Name					
DBA					
Address					
City		State		ZIP	
Signature					
Printed Name					
Title					
Date					
Witness Signature					
Witness Name					
Witness Title					
Date					

IF A PARTNERSHIP					
Name of Partnership					
Address					
City		State		ZIP	
Member Signature					
Printed Name					
Title					
Date					
Witness Signature					
Witness Name					
Witness Title					
Date					

IF A CORPORATION					
Name of Corporation					
Address					
City		State		ZIP	
Fed ID or SSN					
State Of Incorporation					
Signature					
Printed Name					
Title					
Date					
Witness Signature					
Witness Name					
Witness Title					
Date					

CONTACT FOR ADMINISTRATION	
Individual Name	
e-mail	
Telephone	
FAX	
EMERGENCY SERVICE (24hr.) PHONE	

REMITTANCE ADDRESS (if different than organizational address above)					
Address					
City		State		ZIP+4	

MFD-V INFORMATION	
MFD-V Information	<p><i>For informational purposes only – Is your company certified as a Minority, Female, Disabled or Veteran (MFD-V) business: _____ yes _____ no _____ I choose not to respond</i></p>

AFFIDAVIT OF QUALIFICATION TO CONTRACT WITH A PUBLIC BODY
BIDDER MUST COMPLETE, SIGN, AND RETURN WITH BID

I hereby affirm that: I am the _____ (insert title) and the duly authorized representative of _____ (insert organization name) whose address is _____

And, that I possess the legal authority to make this affidavit on behalf of myself and the firm for which I am acting. I affirm:

1. Except as described in Paragraph 2 below, neither I nor the above firm nor, to the best of my knowledge, any of its controlling stockholders, officers, directors, or partners, performing contracts with any public body (the State or any unit thereof, or any local governmental entity in the state, including any bi-county or multi-county entity), has:

- A. been convicted under the laws of the State of Maryland, any other state, or the United States of any of the following:
 - (1) bribery, attempted bribery, or conspiracy to bribe.
 - (2) a criminal offense incident to obtaining, attempting to obtain, or performing a public or private contract.
 - (3) fraud, embezzlement, theft, forgery, falsification or destruction of records, or receiving stolen property.
 - (4) a criminal violation of an anti-trust statute.
 - (5) a violation of the Racketeer Influenced and Corrupt Organization act, or the Mail Fraud Act, for acts in connection with the submission of bids or proposals for a public or private contract.
 - (6) a violation of Section 14-308 of the State Finance and Procurement Article of the Annotated Code of Maryland.
 - (7) conspiracy to commit any of the foregoing.

B. pled *nolo contendere* to, or received probation before verdict for, a charge of any offense set forth in subsection A of this paragraph.

C. been found civilly liable under an anti-trust statute of the State of Maryland, another state, or the United States for acts or omissions in connection with the submission of bids or proposals for a public or private contract.

D. during the course of an official investigation or other proceeding, admitted, in writing or under oath, an act or omission that would constitute grounds for conviction or liability under any law or statute described in subsection A or C of this paragraph.

2. [State "none," or as appropriate, list any conviction, plea or admission as described in Paragraph 1 above, with the date, court, official or administrative body, the individuals involved and their position with the firm, and the sentence or disposition, if any]. _____

3. I further affirm that neither I nor the above firm shall knowingly enter into a contract with the Mayor and Council of Rockville under which a person or business debarred or suspended from contracting with a public body 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.

I acknowledge that this Affidavit shall be furnished to the Mayor and Council of Rockville and, where appropriate, to the State Board of Public Works and to the Attorney General. I acknowledge that I am executing this Affidavit in compliance with the provisions of Title 16 of the State Finance and Procurement Article of the Annotated Code of Maryland which provides that persons who have engaged in certain prohibited activity may be disqualified, either by operation in law or after a hearing, from entering into contracts with the Mayor and Council of Rockville. I further acknowledge that if the representations set forth in this Affidavit are not true and correct, the Mayor and Council of Rockville may terminate any contract awarded, and take any other appropriate action.

Signature _____

Printed Name _____

Title _____

Date _____

NON—COLLUSION AFFIDAVIT
BIDDER MUST COMPLETE, SIGN, AND RETURN WITH BID

I hereby affirm that: I am the _____ (insert title) and the duly authorized representative of _____ (insert organization name) whose address is _____

And, that I possess the legal authority to make this affidavit on behalf of myself and the firm for which I am acting.

I affirm:

1. I am fully informed respecting the preparation and contents of the attached bid and of all pertinent circumstances respecting such bid;
2. Such bid is genuine and is not a collusive or sham bid
3. Neither the said bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other bidder, firm or person to submit a collusive or sham bid in connection with the Contract for which the attached bid has been submitted or to refrain from bidding in connection with Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other bidder, firm or person to fix the price or prices in the attached bid or of any other bidder, or to fix any overhead, profit or cost element of the bid price or the bid price of any other bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the Mayor and Council of Rockville, Maryland (Local Public Agency) or any person interested in the proposed Contract; and
4. The price or prices quoted in the attached bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant. I do solemnly declare and affirm under the penalties of perjury that the contents of these affidavits are true and correct.

Signature

Printed Name

Title

Date

STORMWATER MANAGEMENT & STREAM RESTORATION EXPERIENCE

BIDDER REFERENCE FORM

BIDDER MUST COMPLETE AND SUBMIT WITH BID

The City of Rockville reserves the right to reject bids from any company not meeting the minimum qualifications. The Bidder shall be a competent and experienced contractor with an established reputation within the community. The bidder shall have performed similar work for a minimum period of five (5) years. He shall furnish a representative list of five (5) projects involving work as specified, two of which shall be the last jobs completed. The City may make such investigations as it deems necessary to determine the ability of the Bidder to perform the work, and the Bidder shall furnish to the City all such information and data for this purpose as the City may request.

Bidder Name	
-------------	--

#1 Project Name			
Project Owner's Name			
Project Site Address			
Project Owner's Contact Name			
Project Owner's Contact Telephone			
Project Owner's Contact e-mail			
Contract Value	\$		
Scheduled completion date		Percent complete	
Description of Project Work			
Name of your project foreman			

BIDDER REFERENCE FORM - BIDDER MUST COMPLETE AND SUBMIT WITH BID

#2 Project Name			
Project Owner's Name			
Project Site Address			
Project Owner's Contact Name			
Project Owner's Contact Telephone			
Project Owner's Contact e-mail			
Contract Value	\$		
Scheduled completion date		Percent complete	
Description of Project Work			
Name of your project foreman			

#3 Project Name			
Project Owner's Name			
Project Site Address			
Project Owner's Contact Name			
Project Owner's Contact Telephone			
Project Owner's Contact e-mail			
Contract Value	\$		
Scheduled completion date		Percent complete	
Description of Project Work			
Name of your project foreman			

BIDDER REFERENCE FORM - BIDDER MUST COMPLETE AND SUBMIT WITH BID

#4 Project Name			
Project Owner's Name			
Project Site Address			
Project Owner's Contact Name			
Project Owner's Contact Telephone			
Project Owner's Contact e-mail			
Contract Value	\$		
Scheduled completion date		Percent complete	
Description of Project Work			
Name of your project foreman			

#5 Project Name			
Project Owner's Name			
Project Site Address			
Project Owner's Contact Name			
Project Owner's Contact Telephone			
Project Owner's Contact e-mail			
Contract Value	\$		
Scheduled completion date		Percent complete	
Description of Project Work			
Name of your project foreman			

SUB-CONTRACTOR REFERENCE FORM
BIDDER MUST COMPLETE AND SUBMIT WITH BID

SUBMIT A SEPARATE REFERENCE FORM FOR EACH PROPOSED SUBCONTRACTOR

Subcontractor's Name			
Address			
Telephone			
Subcontractor's Contact Name			
Description of Work to be Subcontracted			

#1 Reference Organization Name			
Address			
Contact Name			
Contact Name Telephone			
Contact Name e-mail			
Contract Value	\$		
Scheduled completion date		Percent complete	
Description of Project Work			

SUB-CONTRACTOR REFERENCE FORM
BIDDER MUST COMPLETE AND SUBMIT WITH BID


#2 Reference Organization Name			
Address			
Contact Name			
Contact Name Telephone			
Contact Name e-mail			
Contract Value	\$		
Scheduled completion date		Percent complete	
Description of Project Work			

#3 Reference Organization Name			
Address			
Contact Name			
Contact Name Telephone			
Contact Name e-mail			
Contract Value	\$		
Scheduled completion date		Percent complete	
Description of Project Work			

BIDDER’S QUESTIONNAIRE

CITY MAY REQUIRE COMPLETION AND SUBMISSION AFTER RECEIPT OF BIDS

In order to be considered for award, the Bidder must complete this questionnaire in its entirety and submit it to the Purchasing Manager within the time specified. The bidder must answer all questions. If additional space is required, attach continuation sheets and clearly indicate the question being answered. The City reserves the right to verify any information contained within this report and to request additional information or clarification. The City reserves the right to reject the bid of a bidder who has previously failed to perform properly or to complete in a timely manner contracts of a similar nature, or if investigation shows the bidder unable to perform the requirements of the Contract or if the bidder fails to complete and submit the Bidder’s Questionnaire in its entirety. If additional sheets are necessary please attach to this form and reference the applicable number.

Bidder’s Name			
Bidder’s Address			
City		State / Zip	
Telephone		Fax Number	
Organized under the laws of State of:			
BIDDER’S AUTHORIZED REPRESENTATIVE’S SIGNATURE BELOW		DATE	
			
Print Name:			
Title:			

1. ORGANIZATION

1.1 How many years has your organization been in business as a Contractor?

1.2 How many years has your organization been in business under its present business name?

1.3 Under what **other** or former names has your organization operated?

1.4 If your organization is a corporation, answer the following:

Date of incorporation:

State of incorporation:

President's name:

Vice-president's name(s):

Secretary's name:

Treasurer's name:

1.5 If your organization is a partnership, answer the following:

Date of organization:

Type of partnership (if applicable):

Name(s) of general partner(s):

1.6 If your organization is individually owned, answer the following:

Date of organization:

Name of owner:

1.7 If the form of your organization is other than those listed above, describe it and name the principals:

2. LICENSING

2.1 List jurisdictions and trade categories in which your organization is legally qualified to do business, and indicate registration or license numbers, if applicable.

3. EXPERIENCE

3.1 List the categories of work that your organization normally performs with its own forces.

3.2 Has your organization ever failed to complete any work awarded to it? If yes, provide details on a separate sheet. NO: _____ YES: _____

3.3 Are there any judgment, claims, arbitration, proceedings or suits pending or outstanding against your organization or its officers? If yes, provide details. NO: _____ YES: _____

3.4 Within the past five years, has any officer or principal of your organization ever been an officer or principal of another organization when it failed to complete a construction contract? If yes, provide details. NO: _____ YES: _____

3.5 Within the last two years, has any owner of any project threatened to impose or imposed liquidated damages against your organization? If yes, provide details. NO: _____ YES: _____

3.6 Within the last two years, has your organization constructed any projects where the date of substantial completion was more than 30 days after the contract completion date as determined by the contract and any changes orders? If yes, provide details. NO: _____ YES: _____

3.7 Within the last 2 years, has your organization constructed any projects where the change orders exceeded 10% of the contract price? If yes, provide details. NO: _____ YES: _____

3.8 State the total worth of work in progress and under contract:

In Progress	\$
Under Contract	\$

3.9 State the average annual amount of construction work performed during the past five years:

\$

4. FINANCIAL

4.1 State that you will provide a copy of your firm’s audited financial statements for the past two (2) years, if requested, by the City of Rockville. YES: _____ NO: _____

4.2 Is your firm currently for sale or involved in any transaction to expend or to become acquired by another business entity? If yes, please explain the impact both in organizational and directional terms. NO: _____ YES: _____

4.3 Is your firm currently in default on any loan agreement or financing agreement with any bank, financial institution, or other entity? If yes, specify date(s), details, circumstances, and prospects for resolution. NO: _____ YES: _____

5. SAFETY

5.1 Has your organization been cited by OSHA (or State equivalent) in the past five years? If so, provide a copy of the citation(s). NO: _____ YES: _____

5.2 Has your organization experienced a work-related fatality in the past 10 years? If so, provide details. NO: _____ YES: _____

5.3 Provide copies of the last 3-years OSHA Form 300A or OSHA 300 Log. Please omit any personally identifiable or confidential information.

5.4 Provide a copy of your current Workers' Compensation Experience Rating from the NCCI.

5.5 Does your organization have a written safety program? NO: _____ YES: _____

5.5.1 Describe the safety training programs offered to all employees on the elements of the safety program.

5.6.2 When was the last year the written safety program was audited or updated?

5.6.3 Provide an overview of the elements of your written safety program (i.e., table of contents). (This may be returned to non-awarded bidders.)

5.7 Does your organization hire subcontractors? NO: _____ YES: _____

5.7.1 Does your organization conduct pre-contractor qualification of these subcontractors specifically focusing on their safety performance? NO: _____ YES: _____

5.7.2 Describe how your organization manages the safety performance of subcontractors on the jobsite.

5.7.3 Does your organization have a written policy addressing subcontractor's responsibility for complying with OSHA regulations on jobsites? (i.e., OSHA's multi-employer citation policy).

NO: _____ YES: _____

CERTIFICATION

The above statements are certified to be true and accurate.

BY: _____

Signature

Date

Print Signature/Title



SAMPLE
Do Not Complete or Return

CONTRACT PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: That we (1) _____
_____ a (2) _____
hereinafter called "Principal" and (3) _____
of _____, State of _____ hereinafter called the "Surety", are
held and firmly bound unto (4) The Mayor and Council of Rockville, Maryland, hereinafter called
"City", in the penal sum of *(100% of Contract Amount)* _____ (\$ _____) in
lawful money of the United States, for the payment of which sum well and truly to be made, we bind
ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these
presents.

THE CONDITION OF THIS OBLIGATION is such that Whereas, the Principal entered into a
certain contract with the City, dated the _____ day of _____, 2022, a copy of which
is hereto attached and made a part hereof for the construction of IFB 05-22 SWM FACILITIES
IMPROVEMENTS: NORTHEAST PARK.

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the
undertakings, covenants, terms, conditions, and agreements of said contract during the original term
thereof, and any extensions thereof which may be granted by the City, with or without notice to the
Surety, and if he shall satisfy all claims and demands incurred under such contract, and shall fully
indemnify and save harmless the City from all costs and damages which it may suffer by reason of
failure to do so, and shall reimburse and repay the City all outlay and expense which the City may
incur in making good any default, then this obligation shall be void; otherwise to remain in full force
and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees
that no change, extension of time, alteration or addition to the terms of the contract or to the work to
be performed thereunder or the specifications accompanying the same shall in any way affect its
obligation on this bond, and it does hereby waive notice of any such change, extension of time,
alteration or addition to the terms of the contract or to the work or to the specifications.

CONTRACT PERFORMANCE BOND

PROVIDED, FURTHER, that no final settlement between the City and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in two (2) counterparts, each one of which shall be deemed an original, this the _____ day of _____, 2022.

ATTEST:

Corporate Secretary or Asst. Secretary

(Print or Type Name and Title)

Principal
By _____ (Seal)
President or Vice President

(Print or Type Name and Title)

(Address)

ATTEST:

Witness as to Surety

(Print or Type Name and Title)

Surety
By _____ (Seal)
Attorney-in-Fact

(Print or Type Name)

(Address)

(Address)

NOTE: Date of Bond must not be prior to date of Contract.

- (1) Correct name of Contractor
- (2) A Corporation, a Partnership or an Individual
- (3) Name of Surety
- (4) Name of City
- (5) If Contract is Partnership, all partners should execute bond



SAMPLE
Do Not Complete or Return

CONTRACT PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: That we (1) _____
_____ a (2) _____
hereinafter called "Principal" and (3) _____
of _____, State of _____ hereinafter called the
"Surety", are held and firmly bound unto (4) The Mayor and Council, of Rockville, Maryland, hereinafter
called "City", in the penal sum of *(100% of Contract Amount)* _____ (\$ _____) in lawful money
of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs,
executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that Whereas, the Principal entered into a certain
contract with the City, dated the _____ day of _____, 2022, a copy of which is hereto
attached and made a part hereof for the construction of: IFB 05-22 SWM FACILITIES IMPROVEMENTS:
NORTHEAST PARK.

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms,
subcontractors, and corporations furnishing materials for or performing labor in the prosecution of the work
provided for in such contract, and any authorized extension or modification thereof, including all amounts
due for materials, lubricants, oil, gasoline, coal, repairs on machinery, equipment and tools, consumed or
used in connection with the construction of such work, and all insurance premiums on said work, and for
all labor, performed in such work whether by subcontractor or otherwise, then this obligation shall be void;
otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said surety, for value received hereby stipulates and agrees that no
change, extension of time, alteration or addition to the terms of the contact or to the work to be performed
thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond,
and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of
the contact or to the work or to the specifications.

CONTRACT PAYMENT BOND

PAGE 2

PROVIDED, FURTHER, that no final settlement between the City and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in two (2) counterparts, each one of which shall be deemed an original, this the ____ day of _____ 2022.

ATTEST:

Principal

Corporate Secretary or Asst. Secretary

By _____ (Seal)
President or Vice President

(Print or Type Name and Title)

(Print or Type Name and Title)

(Address)

ATTEST:

Surety

Witness as to Surety

By _____ (Seal)
Attorney-in-Fact

(Print or Type Name and Title)

(Print or Type Name)

(Address)

(Address)

NOTE: Date of Bond must not be prior to date of Contract.

- (1) Correct name of Contractor
- (2) A Corporation, a Partnership or an Individual
- (3) Name of Surety
- (4) Name of City
- (5) If Contract is Partnership, all partners should execute bond.



SAMPLE ONLY
Do Not Complete Or Return

STANDARD FORM OF AGREEMENT BETWEEN THE CITY OF ROCKVILLE
AND CONTRACTOR

This Agreement, made this _____ day of _____, 2022, by and between

THE MAYOR AND COUNCIL OF ROCKVILLE, MARYLAND, hereinafter referred to as the "COUNCIL" and

(A) _____ hereinafter referred to as the "CONTRACTOR".

WITNESSETH, that the CONTRACTOR and the COUNCIL for the consideration hereinafter named, agree as follows:

ARTICLE 1. The COUNCIL agrees to pay the CONTRACTOR for the performance of the contract the sum

of _____ dollars(\$ _____)

ARTICLE 2. The CONTRACTOR agrees to furnish separate 100% performance and payment bonds in such form as shall be acceptable to the COUNCIL.

ARTICLE 3. The CONTRACTOR agrees to furnish all of the machines, equipment, material, and/or labor described in the specifications entitled Invitation For Bid # 05-22 SWM FACILITIES IMPROVEMENTS: NORTHEAST PARK.

ARTICLE 4. The COUNCIL may make any alterations, deviations, additions or omissions from the aforesaid specifications, which it may deem proper, without affecting or making void this contract; and in such cases the COUNCIL shall value or appraise such alterations and recommend the amount added to or deducted from the amount herein agreed to be paid to the CONTRACTOR for the excess or deficiency occasioned by such alterations. In case any alterations or deviations are made, such further time may be allowed for completion of the work, caused by such alterations or deviations as the purchasing agent or an appropriate department head of the City of Rockville shall decide to be reasonable.

ARTICLE 5. If the CONTRACTOR shall be adjudged bankrupt or if he shall make a general assignment for the benefit of his creditors, or if a Receiver shall be appointed on account of his insolvency, or if he shall persistently or repeatedly refuse or shall fail, except in case where extension of time is provided, to supply enough properly skilled workmen or proper materials or if he should fail to make prompt payment to subcontractors for materials or labor, or disregard law, ordinances or the instructions of the COUNCIL or otherwise be guilty of substantial violation of any provision of this Agreement, then the COUNCIL may, without prejudice to any other right or remedy, and after giving the CONTRACTOR reasonable notice, terminate the employment of the CONTRACTOR and take possession of the machines, equipment and material already delivered or in process of delivery.

ARTICLE 6. The CONTRACTOR and the COUNCIL agree that this Agreement, the Invitation for Bid or the request for quotation and all of the specifications therewith and all modifications thereof constitute the Contract, and that they are fully a part of the Contract as if hereto attached or herein repeated and that for themselves and each of them, their successors, personal representatives and assigns hereby agree to the performance of the covenants herein contained.

ARTICLE 7. The CONTRACTOR, with the execution of this Contract, makes assurance that all materials necessary for the completion of this project are now available to him or will be available so as not to cause delay in the time specified for completion, nor will there be any further expense to the COUNCIL by reason of any special expense imposed by his supplier or fabricator after this Contract is executed.

ARTICLE 8. The CONTRACTOR at all times shall observe and comply with all Federal and State Laws and local laws, ordinances and regulations in any manner affecting the conduct of the work; and all such other orders or decrees as exist at present and those which may be enacted later, of bodies or tribunals having any jurisdiction or authority over the work, and shall indemnify and save harmless the Mayor and Council and all of its officers, agents, and servants against any claim or liability arising from or based on the violation of any such laws, by-laws, ordinances, regulations, orders or decrees whether by himself or his employees.

ARTICLE 9. The CONTRACTOR shall indemnify and save harmless the Mayor and Council of Rockville, Maryland, and all its officers, agents and servants from all suits, actions and damages and costs, of every name and description to which the COUNCIL may be subjected or put by reason of injury to persons or property as a result of the work, whether caused by negligence or carelessness on the part of the CONTRACTOR, his servants or agents or to other cause.

ARTICLE 10. The CONTRACTOR will not discriminate against any employee or applicant for employment because of age (in accordance with applicable law), sex, race, ancestry, color, religion, sexual orientation, gender identity or expression, physical or mental handicap, marital status, or political expression. The Contractor will take affirmative action to ensure that applicants are employed and the employees are treated fairly and equally during employment with regard to the above. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment, layoff or termination, rates of pay or other form of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.

If the Contractor fails to comply with nondiscrimination clauses of this contract or fails to include such contract provisions in all subcontracts, this contract may be declared void AB INITIO, cancelled, terminated or suspended in whole or in part and the Contractor may be declared ineligible for further contracts with the City of Rockville. Any employee, applicant for employment, or prospective employee with information concerning any breach of these requirements may communicate such information to the City Manager who shall commence a prompt investigation of the alleged violation. Pursuant to such investigation, the Contractor will permit access to the Contractor's books, records, and accounts. If the City Manager concludes that the Contractor has failed to comply with nondiscrimination clauses, the remedies set out above may be invoked.

IN WITNESS WHEREOF, the said

(A) _____
_____ and the COUNCIL have
caused these presents to be signed and sealed.

For Corporations.

Corporation: _____

*By: _____ (Seal)
(Either president or vice-president. If other person is authorized, authorization in form of corporate resolution must be attached.)

Witness: _____
(Should be secretary or Asst. secretary.)

***Corporate seal must be impressed through name of person signing for corporation.**

For individuals or partnerships.

Name: _____ (Seal)
(Either owner or partner)

Witness: _____

MAYOR AND COUNCIL OF ROCKVILLE, MARYLAND

By: _____ Date: _____
Robert DiSpirito, City Manager

ATTEST
By: _____ Date: _____
Sara Taylor-Ferrell, City Clerk/Director of Council Operations

Approved as to form and legality:

City Attorney Date: _____

NOTE (A): The CONTRACTOR shall enter the exact name of the business. An individual trading as a company shall enter: John Doe dba Doe Masonry Company.



Department of Public Works
111 Maryland Avenue, Rockville, MD 20850-2364

As-Built Plan Requirements

1. All entities who construct public water or sewer lines, storm drainage systems, bike paths, sidewalks or streets to be maintained by the City of Rockville must submit an “As-built” set of construction drawings for approval as a part of the City’s acceptance process. Additionally, entities constructing any stormwater management or stream restoration facilities must submit an “As-Built” set of construction drawings. The initial submittal shall be three (3) sets of “red-lined” marked up prints, which should be delivered to the Department of Public Works counter at City Hall (Attn: Don Jackson, Engineering Technician). This submittal shall include recorded copies of any public easements required with the project.
2. The As-Built drawings shall clearly show any changes or variations from the approved design. Horizontal variations greater than 1.0 foot should be shown dimensionally or through plus stations. Horizontal variations greater than 10.0 feet should also show the graphic relocation of the object. Vertical elevation variations greater than 0.1 feet shall be provided for all shown design elevations. A benchmark elevation and benchmark description and location shall also be provided on each plan sheet.
3. As-Built plans for a surface SWM facility shall include the following additional information.
 - a) Length, width, slope information and depth or contours (1 foot intervals) of the pond area along with a verification of the original design volume.
 - b) A benchmark on the riser, inlet headwall, or other approved location.
 - c) Revised design computations verifying the functionality of the pond. Computations shall be submitted directly to the DPW project engineer, along with an additional paper copy of the As-Built plans.
 - d) The grading/storage volumes must be approved by DPW prior to landscaping/planting. All plantings must be added to the As-Built plans after plant installation. As-Built plans will not be approved without required plantings.

NOTE: As-Built data, which shows that the constructed facility varies from the original design storage elevations by greater than or equal to 10%, will have to be corrected (regraded) prior to submission for review unless storage is verified. All constructed features not previously approved on the original construction drawings may have to be modified at the City’s discretion.

4. All As-Built information shall be blocked in and shown on the original construction drawings and shall be blocked in as thus 386.25.
5. The As-Built Certificate (shown on the following page) shall be signed and sealed by a MD professional engineer or a MD professional land surveyor and shall appear on the cover sheet of the As-Built Plan set. All sheets included in the permit set must be submitted in the final as-built set.
6. The City’s inspector and project engineer will review the As-Built information. The design engineer will be notified to submit mylars for As-Built approval once all changes have been satisfactorily shown. The As-Built information shall preferably be shown on the original construction drawings (i.e., the original mylars with the permit approval stamp and original P.E. seal). Placing As-Built information upon a scanned image or other reproduction of the original construction drawings is acceptable so long as the quality, integrity, and legibility of the original drawings are substantially preserved without undue compromise. As-Built drawings will be scanned by the City for archiving, so both the As-Built and original information must be sufficiently discernible. The As Built plan set shall be submitted to Department of Public Works Engineering Division (Attn: Don Jackson, Engineering Technician) for signature and shall contain the same red-lined information as approved in the As-Built review. No paper prints, paper or mylar sepias will be accepted.

AS-BUILT CERTIFICATE

I hereby certify that the information shown on this record drawing is an accurate and complete representation of data established from field information obtained under the direction of a Professional Land Surveyor or a Professional Engineer, and that the physical dimensions or elevations shown thus 37.55' are as-built information and the facility was constructed according to the approved plans, except as otherwise noted hereon.

Name

License #

Title

Date

**APPENDIX 2: SELF-VERIFICATION
FOR ACTIVITIES AUTHORIZED BY THE
CHESAPEAKE BAY TOTAL MAXIMUM DAILY LOAD REGIONAL GENERAL
PERMIT**

GENERAL INFORMATION AND INSTRUCTIONS

The TMDL Regional General Permit (TMDL RGP) was established to authorize activities in Waters of the U.S. resulting in minimal adverse effects, with the specific purpose of reducing nutrient and sediment pollution in accordance with the Chesapeake Bay TMDL.

As described in Section V of the TMDL RGP, some work may qualify for Self-Verification, where an applicant is allowed to verify they meet the terms and conditions of the permit (a role typically performed by a project manager at the Corps). Activities authorized by the TMDL RGP, which may be Self-Verified include:

Activity A) The Retrofit of Existing Stormwater Management Facilities

Activity B) The Retrofit and Stabilization of Existing Outfalls

Activity C) Nontidal Stream and Wetland Restoration

To qualify for self-verification, a project must meet the General Conditions of the TMDL RGP and fall under the impact and conversion limits of Self-verifying activities (Outlined below and in Section IV of the TMDL RGP). The checklist below will assist in determining whether a proposed activity qualifies for Self-verification under the TMDL RGP. If a project does not meet the conditions for Self-Verification, it may still be eligible for Corps Verification under the TMDL RGP (see TMDL RGP Section IV and Appendix 3-Corps Verification) or authorization using an alternative permit.

APPLICABLE WATERS

The Bay TMDL RGP is applicable in nontidal waters and nontidal wetlands in the Chesapeake Bay watershed within the State of Maryland, District of Columbia, and Fort Belvoir, Fort Myer, and the Pentagon in Virginia.

HOW TO OBTAIN/APPLY FOR AUTHORIZATION

An applicant pursuing Self-Verification under the TMDL RGP should complete Appendix 2 and attach it to their joint permit application for the respective geographic area. See *Section VII of the TMDL RGP for detailed instructions as necessary.*

Activities authorized by the Bay TMDL RGP that are self-verifying may commence without written notification from the Corps after the permittee has:

- Confirmed that the activity will be conducted in compliance with the terms and conditions of the Bay TMDL RGP, which may include consultation with the Corps and/or outside relevant Federal and State agencies. Prospective permittees must refer to the terms and conditions of the Bay TMDL RGP to determine if the activity may be eligible for authorization under this Bay TMDL RGP. In addition, the applicant must make a determination whether the proposed activity is eligible for self-verification. All terms and conditions of the TMDL RGP still apply to self-verification activities authorized by this TMDL RGP, and
- Submitted this Self-Verification Appendix, correspondence from the SHPO if required (*See General Condition number 17 of the TMDL RGP*), correspondence from USFWS if required (*See General Condition number 21 of the TMDL RGP*), permit application using the established Corps of Engineers permit application procedures.
- Provided supplemental information for any proposed work meeting the description of the two activities below:
 - Activity B) The Retrofit and Stabilization of Existing Outfalls
The applicant must provide photographic documentation that the existing (pre-construction) outfall is in a degraded condition.
 - Activity C) Nontidal Stream and Wetland Restoration Activities
Documentation that the existing (pre-construction) stream reach is in a degraded condition using a Corps approved Functional or Conditional Assessment Methodology (FCAM) or BIBI Score in combination with geomorphic evidence of stream quality degradation. The applicant must also provide rationale for stream site selection and the proposed design approach using applicable evidence, prioritization tools, and literature.
- Obtained all required State and local authorizations.

IMPACT AND CONVERSION LIMITS FOR SELF-VERIFICATION ACTIVITIES

Activity A) Retrofits of Existing Stormwater Management Facilities: Permanent impacts may not exceed 1 Acre of nontidal wetlands and/or nontidal streams, or 2,000 linear feet of nontidal streams, rivers, and other open waters, or a combination thereof

Activity B) Retrofit and Stabilization of Outfalls: Permanent impacts may not exceed 5,000 square feet of nontidal wetlands and/or nontidal streams, or 200 linear feet of nontidal streams, rivers and other open waters, or a combination thereof

Activity C) Nontidal Streams and Wetland Restoration Activities: Permanent impacts may not exceed ½ acre of nontidal wetland and/or nontidal streams, or 1,000 linear feet of nontidal streams.

SELF VERIFICATION FOR THE TMDL RGP

1. BACKGROUND INFORMATION

Self-Verified Activity Summary	
Project Name: Northeast Park SWM Retrofit	Lat/Long (Dec degrees): 39.092341 N/77.132202 W
Applicant: Diron Baker, Senior Civil Engineer City of Rockville, DPW 111 Maryland Avenue Rockville, MD 20850	County: Montgomery County
	Proposed Activity: SWM Retrofit
<p>Project Summary: The project will retrofit an in-line stormwater management facility located in the Rock Creek watershed. The project purpose is to improve water quality and quantity management of the facility. In addition to removal of accumulated sediment, the work will incorporate a riffle-weir conveyance leading into the forebay that will provide reduced sedimentation and long term stability. The retrofit will also include non-native species treatment and extensive native plantings to provide additional functional uplift. The project will contribute water quality improvement credits toward the City of Rockville's NPDES and MS4 requirements.</p>	

2. BASIC REQUIREMENTS FOR USE OF THE BAY TMDL RGP

*If you answer **No** to any of the questions below your project does not qualify for the Bay TMDL RGP, and you must submit an application for processing under another permit type in accordance with the established Corps of Engineers permit application procedures for Maryland, Virginia, and the District of Columbia:*

- a) Are the activities in waters of the U.S. part of an acceptable watershed strategy, such as a Chesapeake Bay Watershed Implementation Plan (WIP), whose purpose is to identify implementation activities needed to meet nutrient and sediment load reduction targets under the Chesapeake Bay TMDL? **Yes**
- b) Does the project comply with all of the TMDL RGP terms and conditions, including avoidance and minimization, aquatic life movements, endangered species, single and complete project, and cultural resources? **Yes**

3. BASIC REQUIRMENTS FOR SELF-VERIFYING ACTIVITIES UNDER THE TMDL RGP

If you answer **Yes** to any question below, your project **does not** qualify for **Self-Verification** under the TMDL RGP, and you must submit an application for review and processing under another permit type (See *Section V of the TMDL RGP to explore the Corps Verified Activity options*).

- a) Is work proposed in Use III, Use IV, or other cold water resources identified in mapped waterways (Code of Maryland Regulations (COMAR) *Section 26.08.02.02*? <https://maryland.maps.arcgis.com/apps/webappviewer/index.html?id=dc5100c0266d4ce89df813f34678944a> **No**
- b) Is work proposed in Tier II watersheds (COMAR 26.08.02.04-1)? **No**

c) Does the U.S. Fish and Wildlife Service documentation indicate that federally listed Threatened or Endangered species may be affected by the proposed activity? **No**

d) Does the State Historic Preservation Office documentation indicate that historic or cultural resources may be affected by the proposed activity? **No**

e) Is your project located in or adjacent to a proposed or existing Federally authorized civil works project? **No**

4. ACTIVITY A: RETROFIT OF EXISTING STORMWATER MANAGEMENT FACILITIES (*complete item 4 only if applicable*)

*If you answer **Yes** to any question below, your project **does not** qualify for **Self-Verification** under the TMDL RGP, and you must submit an application for review and processing under another permit type (See also Section IV of the TMDL RGP to explore the Corps Verified Activity options).*

a) Does proposed work include expansion of stormwater management facilities outside the existing as-built footprint? **No**

b) Is the sole purpose of the proposed activity general maintenance of a stormwater management facility? **No**

c) Do total permanent impacts exceed 1 acre of nontidal waters of the U.S. or more than 2,000 linear feet of nontidal streams, rivers, and other open waters or a combination thereof? **No**

5. ACTIVITY B: RETROFIT AND STABILIZATION OF OUTFALLS (*complete item 5 only if applicable*) **N/A**

*If you answer **Yes** to any question below, your project **does not** qualify for **Self-Verification** under the TMDL RGP, and you must submit an application for review and processing under another permit type (See also Section VI of the TMDL RGP to explore the Corps Verified Activity options).*

a) Does work involve increasing or extending piping of an outfall in Waters of the US? **Select An Answer**

b) Do the total permanent impacts to nontidal waters of the U.S. (wetlands, streams, etc.) for the overall project exceed 5,000 square feet or 200 linear feet of streams, rivers, open waters, or a combination thereof? **Select An Answer**

c) Does the project result in more than 5,000 square feet of resource conversion (i.e. wetlands to streams) or 200 linear feet of streams, rivers and other open waters? See section IX of the TMDL RGP for a definition of "conversion." **Select An Answer**

6. ACTIVITY C: NONTIDAL STREAM AND WETLAND RESTORATION ACTIVITIES (*Complete item 6 only if applicable*) **N/A**

If you answer **Yes** to any question below, your project **does not** qualify for **Self-Verification** under the TMDL RGP, and you must submit an application for review and

processing under another permit type (See also Section IV of the TMDL RGP to explore the Corps Verified Activity options).

a) Do the total permanent impacts exceed ½ acre of nontidal waters and wetlands or 1,000 linear feet of nontidal streams, rivers, open waters, or a combination? [Select An Answer](#)

b) Does the discharge of fill result in loss or conversion of any type of waters of the U.S.? [Select An Answer](#)

If you answer **No** to any question below, your project **does not** qualify for **Self-Verification** under the TMDL RGP, and you must submit an application for review and processing under another permit type (See also Section IV of the TMDL RGP to explore the Corps Verified Activity options).

c) Are the existing aquatic resources on the site in a degraded condition? [Select An Answer](#)

Please describe how degradation was documented for each aquatic resource impacted (See Sections IV.C.1.ii of the TMDL RGP and provide attachments if needed).

d) Will the project provide “functional lift” as documented using an approved Functional or Conditional Assessment Methodology (FCAM)? [Select An Answer](#)

Please list the FCAM used and describe how conditions and/or functions are expected to change for each aquatic resource impacted on the site. Please attach the FCAM, functional lift forecast, resource evaluations, and resource map.

7.

Impact Table							
Resource Name	Resource Type	Proposed Activity	Latitude	Longitude	Impact Type	Area (sqft)	Length (ft)
SWM inflow	Intermittent trib.	Restoration/retrofit	39.092822	-77.132902	Permanent	5,219	531
Open water	Facility pond	Retrofit	39.092194	-77.131916	Permanent	9,487	N/A
In-facility wetland	PEM	Retrofit	39.092194	-77.131916	Permanent	~3,900	N/A
In-facility wetland	PFO	Retrofit	39.092194	-77.131916	Permanent	~6,760	N/A

Table describing project impacts. All aquatic resources in the project area should be identified on project plans and/or maps. "Resource type" may be (Tributary, PEM, PFO, etc), "Proposed Activities" include (fill, stream diversion, construction access, conversion to other resource type, relocation, restoration, enhancement). Coordinates should be provided in decimal degrees to the fifth decimal point. Impact type (Temporary or permanent). See Section IX Definitions for clarification. Length is only required for streams.

TMDL RGP SELF-CERTIFICATION

- *I certify that the information on this form and on the attached plans and specifications is true and accurate to the best of my knowledge and belief.*
- *I certify that I will provide to the Corps an As-built & Post Construction Report in accordance with General Condition 5 and 6 outlined in the TMDL RGP.*
- *I certify that I will provide an electronic written post-construction report to the Corps (NAB-Regulatory@usace.army.mil) by December 31 of project completion year. The post-construction report shall include: a) The application tracking number & State permit number; b) Location of the completed work (latitude and longitude); c) dates during which the work occurred; d) A point of contact name and contact information (email and phone) e) surveyed as-built drawings, to scale, with control (latitude/longitude) depicting the final work including the restoration of the temporary impacts; f) A set of geo-referenced photographs that show the pre-construction and post-construction conditions for the project; g) narrative describing how the project purpose and objectives were met.*
- *The activities proposed in waters of the U.S. are part of an appropriate watershed strategy such as a Chesapeake Bay Watershed Implementation Plan for the purpose of meeting nutrient and sediment load reduction targets in accordance with the Chesapeake Bay TMDL.*
- *The activity complies with the siting criteria and land use practice recommendations stated in Sections 1-3 of the Federal Aviation Administration Advisory Circular 150/5200-33. This document can be found at:http://www.faa.gov/documentLibrary/media/advisory_circular/150-5200-33B/150_5200_33b.pdf*

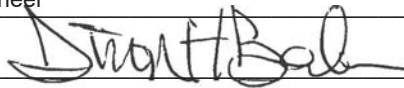
Your name and signature below, as permittee, confirms that your project: a) meets the self-verification criteria and b) that you accept and agree to comply with the applicable terms and conditions in the Regional General Permit for Chesapeake Bay TMDL Activities.

Permittee Printed

Name: Diron Baker, Senior Civil Engineer

Permittee Signature: _____

Date: 02/05/2021



**United States Department of the Interior**

U.S. Fish & Wildlife Service
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401
410/573 4575

**Online Certification Letter**Today's date: Project:

Dear Applicant for online certification:

Thank you for using the U.S. Fish and Wildlife Service (Service) Chesapeake Bay Field Office online project review process. By printing this letter in conjunction with your project review package, you are certifying that you have completed the online project review process for the referenced project in accordance with all instructions provided, using the best available information to reach your conclusions. This letter, and the enclosed project review package, completes the review of your project in accordance with the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884), as amended (ESA). This letter also provides information for your project review under the National Environmental Policy Act of 1969 (P.L. 91-190, 42 U.S.C. 4321-4347, 83 Stat. 852), as amended. A copy of this letter and the project review package must be submitted to this office for this certification to be valid. This letter and the project review package will be maintained in our records.

Based on this information and in accordance with section 7 of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), we certify that except for occasional transient individuals, no federally proposed or listed endangered or threatened species are known to exist within the project area. Therefore, no Biological Assessment or further section 7 consultation with the U.S. Fish and Wildlife Service is required. Should project plans change, or if additional information on the distribution of listed or proposed species becomes available, this determination may be reconsidered.

This response relates only to federally protected threatened or endangered species under our jurisdiction. For additional information on threatened or endangered species in Maryland, you should contact the Maryland Wildlife and Heritage Division at (410) 260-8573. For information in Delaware you should contact the Delaware Division of Fish and Wildlife, Wildlife Species Conservation and Research Program at (302) 735-8658. For information in the District of Columbia, you should contact the National Park Service at (202) 339-8309.

The U.S. Fish and Wildlife Service also works with other Federal agencies and states to minimize loss of wetlands, reduce impacts to fish and migratory birds, including bald eagles, and restore habitat for wildlife. Information on these conservation issues and how development projects can avoid affecting these resources can be found on our website (www.fws.gov/chesapeakebay)

We appreciate the opportunity to provide information relative to fish and wildlife issues, and thank you for your interest in these resources. If you have any questions or need further assistance, please contact Chesapeake Bay Field Office Threatened and Endangered Species program at (410) 573-4527.

Sincerely,

Genevieve LaRouche
Field Supervisor



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

<http://www.fws.gov/chesapeakebay/>

<http://www.fws.gov/chesapeakebay/endsppweb/ProjectReview/Index.html>

In Reply Refer To:

March 29, 2019

Consultation Code: 05E2CB00-2019-SLI-1085

Event Code: 05E2CB00-2019-E-02595

Project Name: Northeast Park SWM Retrofit and Stream Restoration

Subject: List of threatened and endangered species that may occur in your proposed project location, and/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. This 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 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>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

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 Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Wetlands

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

Project Summary

Consultation Code: 05E2CB00-2019-SLI-1085

Event Code: 05E2CB00-2019-E-02595

Project Name: Northeast Park SWM Retrofit and Stream Restoration

Project Type: LAND - RESTORATION / ENHANCEMENT

Project Description: The City of Rockville Department of Public Works is proposing a stream restoration project to improve water quality in the Potomac River watershed. The project is located in a forested park and is comprised of an eroded stream channel which discharges into a stormwater management facility.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/39.0922202426287N77.13223999122962W>



Counties: Montgomery, MD

Endangered Species Act Species

There is a total of 1 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. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> ▪ Federal agencies may finish consultation with the NLEB 4(d) Rule Consultation Form at https://www.fws.gov/chesapeakebay/pdf/StreamlinedConsultationForm29Feb2016.pdf for projects with tree clearing = to or > 15 acres; send to Trevor_Clark@fws.gov Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

RIVERINE

- [R5UBH](#)



Maryland

Department of the Environment

Larry Hogan, Governor
Boyd K. Rutherford, Lt. Governor
Ben Crumbles, Secretary
Horacio Tablada, Deputy Secretary

2/17/2021

City of Rockville DPW

111 Maryland Ave
Rockville, Maryland 20850

RE: Registration of Application Number: **MDRCP05H2**

Dear Mr. Diron Baker:

This letter confirms that you are now under the Department's Consent Order for discharges of stormwater associated with construction activity and that you have met the General Permit eligibility criteria and declared your intention to operate in accordance with the terms of 14-GP for discharges into: **Rock Creek (02140206)**

In signing the Declaration of Intent (DOI), the eNOI, providing Certification of an approved Erosion and Sediment Control (E&SC) plan and paying the permit fee, you have certified your agreement to comply with the terms of the permit for: **Northeast Park SWM Retrofit and Stream Restoration**

Issued to **City of Rockville DPW**

For **2.35 acres**

At property located at
Rockville, Maryland 20850

The Consent Order approval is identified by the Number **MDRCP05H2**. This coverage will continue until the deadline for new registrations required under a new general permit, the date you obtain coverage under an individual permit or general permit, or the date the Consent Order is terminated, whichever occurs first.

You should print the full permit text by going to MDE's website or from this link "mdewwp.page.link/CGP". You must become thoroughly familiar with the content of the permit and post a copy onsite. A summary of the permit requirements and provision are provided below:

In addition to stormwater associated with construction activity, Per Part III.A.4 of the permit, non-stormwater discharges from: dewatering from construction excavations, which must be managed by controls in accordance with the 2011 Standards and Specifications for Soil Erosion and Sediment Control (ES&C); fire fighting activities; air conditioning condensate; uncontaminated spring water; and foundation or footing drains where flows are not causing an erosive condition or contaminated with process materials such as solvents are permissible. Any discharges not covered by the Consent Order may require additional permit coverage (Part III.A.3).

RE: Registration of Application Number: **MDRCP05H2**

Page 2 of 2

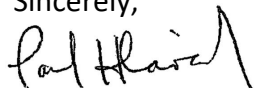
The coverage requirements include:

- (Part III.D) Training requirements of all site personnel to understand aspects of permit and plan compliance relevant to their specific duties.
- (Part IV.A) Effluent Limitations, including selecting, installing, implementing and maintaining control measures (i.e., BMPs, controls, practices, etc.) at the construction site that minimize pollutants in the discharge, as well as requirements to modify controls or ceasing those discharges as required.
- (Part IV.B) Prevention of the discharge of sediment to surface waters, or conveyance systems leading to surface waters, including required corrective actions and on-site documentation.
- (Part IV.C.1) Mandatory inspection and frequency requirements.
- (Part IV.C.2) Requirements for posting information regarding this registration.
- (Part IV.C.3) Onsite record maintenance, including that the approved E&SC plan, the approved stormwater management plan, a copy of the general permit, the eNOI and a copy of this registration letter.
- (Part IV.C.3.b) Written report requirements including use of the form as provided by MDE(available on MDE's website "mdewwp.page.link/CGP" as a fillable Microsoft Word form and as an Adobe Acrobat file.
- (Part IV.D) Upon request, reporting requirements that may apply to you.

Remember to contact the compliance program to schedule a preconstruction meeting 2 weeks prior to starting construction. If the current E&SC plan approval covers only part of the entire site, be advised that this registration does not cover discharges from the other portions for the site until the appropriate E&SC approval authority approves the E&SC plan for those portions. The responsible party is required to submit any Modifications to this coverage, Transfers of Authorization, or Notices of Termination via the ePermits portal. 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.

Sincerely,



Paul Hlavinka

Industrial and General Permits Division

Wastewater Permits Program



Maryland

Department of the Environment

Larry Hogan, Governor
Boyd K. Rutherford, Lt. Governor

Ben Grumbles, Secretary
Horacio Tablada, Deputy Secretary

CONSENT ORDER

To Comply With The Terms and Conditions of the General Permit for Stormwater Associated with Construction Activity 14GP

The Maryland Department of the Environment (“Department”) has the powers, duties, and responsibilities vested in it pursuant to Sections 1-301 and 9-301 through 9-344, inclusive, of the Environment Article of the Annotated Code of Maryland, to implement and enforce the environmental laws of the State, including protection of the waters of the State;

Pursuant to Section 9-322 of the Environment Article, a person may not discharge any pollutant, including stormwater associated with construction activity, to waters of the State without a permit;

Pursuant to Section 9-335 of the Environment Article, the Department may issue an order to take corrective action to any person who has violated Title 9, subtitle 3 of the Environment Article, any rule or regulation adopted under Title 9, subtitle 3, or any order or permit issued under Title 9, subtitle 3;

A person who violates any provision of Title 9, subtitle 3 of the Environment Article or any rule, regulation, order, or permit adopted or issued by the Department under Title 9, subtitle 3 may be subject to potential civil and administrative penalties pursuant to Section 9-342, including for engaging in construction or land disturbing activities without a discharge permit;

In recognition that the General Permit for Stormwater Associated with Construction Activity (General NPDES Permit Number MDRC; State Discharge Permit Number 14GP) (“14GP”) is beyond its five-year term, and in recognition that NPDES permits have a maximum duration of five years, the Department is no longer issuing new registrations under the expired permit 14GP. Proposed new discharges of stormwater associated with construction activity will not be allowed to obtain general permit coverage until a new permit is issued; and

Any person that has signed a Declaration of Intent (a “Declarant”), acknowledging the intent to seek permit coverage for all new and existing stormwater discharges that are composed in whole or in part of discharges associated with construction activity [as defined by 40 Code of Federal Regulations (40 CFR), Section 122.26 (b)(14)(x) and Section 122.26(b)(15)(i); see Part IX.3 for further definition of “construction activity”] under a new general permit once final and effective, voluntarily consents to the Department entering this Order. As described in the Declaration of Intent, the Declarant also voluntarily consents to abide by the terms and conditions of the expired 14GP until a new general permit is final

Consent Order
Page 2

and effective or the Declarant is issued an individual discharge permit, whichever comes first.

ORDER

THEREFORE, pursuant to Sections 1-301 and 9-301 through 9-344, inclusive, of the Environment Article, the Department, hereby ORDERS that each Declarant shall, after receipt from the Department of documentation of approval of the NOI, comply with all terms and conditions of 14GP.

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 Order cause, have the reasonable potential to cause or contribute to an excursion above any applicable water quality standard, the Department may withdraw or revoke this Order and require any Declarant to obtain an individual permit or alternative general permit coverage. Alternatively, the Department may modify this Order to include different limitations and requirements, 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.

This Order is not intended to be nor shall it be construed to be a permit or an authorization for permit coverage. Compliance by a Declarant with the terms of this Order shall not relieve the Declarant of its obligation to comply with any other applicable local, state, or federal laws and regulations.

Nothing in this Order shall be construed to limit any authority of the Department to issue any order or to take any action it deems necessary to protect public health or the environment, or to limit any authority the Department now has or may hereafter be delegated.

The Department reserves the right to withdraw or revoke this Order at any time. Unless otherwise withdrawn or revoked, this Order shall remain in full force and effect for each Declarant until the deadline for new registrations required under a new general permit, or the date the Declarant obtains coverage under an individual permit or alternative general permit, whichever occurs first.

This Order will be effective for each Declarant upon approval of the NOI by the Department.

STATE OF MARYLAND,
DEPARTMENT OF THE ENVIRONMENT



D. Lee Currey, Director
Water and Science Administration

Date May 18, 2020



Maryland
Department of
the Environment

APPENDIX B

IFB # 05-22
SECTION VI

Larry Hogan, Governor
Boyd K. Rutherford, Lt. Governor
Ben Grumbles, Secretary
Horacio Tablada, Deputy Secretary

February 9, 2021

Mr. Diron Baker
C/O Mr. Jason Traband
7455 New Ridge Road
Hanover, Maryland 21076

Re: AI Number: 77143
Pre-Application Project Name: City of Rockville/Northeast Park SWM Pond Retrofit
Pre-Application Meeting Date: August 20, 2019

Dear Mr. Baker:

The Nontidal Wetlands Division and Waterway Construction Division has reviewed the plans and information provided for the retrofit of an existing stormwater management facility located off of East Gude Drive, Rockville, Montgomery County. All proposed work will occur within the existing facility footprint. Therefore, no authorization is required from the Nontidal Wetland Division and Waterway Construction Division.

Dam Safety Division may require an authorization for the proposed project, or choose to delegate it to the local Soil Conservation District (SCD), or may even exempt the project outright. If you have any questions about this, please contact the Dam Safety Division (410-537-3538), or your local SCD.

An Army Corps of Engineers authorization may be required. If you have any questions in regards to Army Corps of Engineers authorization, please feel free to contact Ms. Kathy Anderson via phone at 410-962-5690, or by via email at kathy.anderson@usace.army.mil.

If you have any questions, or if I can assist you in any way, please do not hesitate to contact me by telephone at 410-537-3788 or by email at Paula.Stonesifer@maryland.gov.

Sincerely,

A handwritten signature in cursive script that reads "Paula D. Stonesifer".

Paula D. Stonesifer
Natural Resources Planner
Nontidal Wetlands Division

cc: Applicant



United States Department of Agriculture

August 2, 2021

John Zawitoski
District Manager
Montgomery Soil Conservation District
Montgomery Field Service Center
18410 Muncaster Road
Derwood, MD 20855-1421

Subject: Northeast Park Stormwater Management Pond

As requested, the above referenced project has been reviewed for compliance with the conservation practice for Ponds, code 378 you may consider this verification that the plans comply with the Maryland Conservation Practice Standard for Ponds, code 378.

Please submit completed MD-14 Small Pond Summary Sheet and a copy of the small pond approval to the Dam Safety Permits Division MD Department of the Environment.

At the completion of the project have certifying engineer provided sealed as-built plans and documentation, that comply with the conservation practice standard, to field office.

If you have any questions, please give me a call (240)405-5670.

A handwritten signature in cursive script that reads "Warren Johnson".

Warren Johnson P.E.
Civil Engineer

Copy: Charlotte Brewster, District Conservationist, NRCS, Derwood, MD
Brandy Gibbons, Acting District Conservationist, NRCS, Derwood, MD
J'Que Jones PE, State Conservation Engineer, NRCS, Annapolis, MD
John Roche PE, Chief Dam Safety Permits Division, MDE, Baltimore MD

APPENDIX C

MD-ENG-14
(Rev. 10/2000)
Reference:
NRCS-MD-378

U. S. Department of Agriculture
Natural Resources Conservation Service
POND SUMMARY SHEET

Note: This form is to be used for NRCS Class "a" ponds only. Other ponds require permit from Maryland Department of the Environment, Dam Safety Division

PROJECT INFORMATION

Project Name: Northeast Park SWM Retrofit & Stream Restoraiton
SCD File No: _____
Pond No: _____

MARYLAND COORDINATES (to nearest 1000 feet)	
East	<u>1,275,000</u>
North	<u>519,000</u>
County	<u>MONTGOMERY</u>
ADC Map/Grid	<u>5164 / J-6</u>

OWNER INFORMATION

Name: Mayor & Council of Rockville
Address: Neal Dr
City, State, Zip: Rockville, MD, 20850

TYPE OF POND: Excavated
 Embankment
 Both

Drainage Area: 51.07 Acres
Surface Area: 0.75 Acres
Normal Depth: 6.5 Feet
Design Storm Frequency: 100 Years
Storage at Design High Water (DHW): 9.7 Ac-ft

PURPOSE OF POND (Check all that apply)

<input checked="" type="checkbox"/> Stormwater Management-Wet	<input type="checkbox"/> Sediment Control	<input type="checkbox"/> Wetland Mitigation
<input type="checkbox"/> Stormwater Management-Dry	<input type="checkbox"/> Livestock	<input type="checkbox"/> Wildlife/Fish
<input type="checkbox"/> Infiltration/Water Quality	<input checked="" type="checkbox"/> Flood Control	<input type="checkbox"/> Fire Control
<input type="checkbox"/> Water Supply/Irrigation	<input type="checkbox"/> Recreation	<input type="checkbox"/> Other (Specify below): _____
<input type="checkbox"/> Sand & Gravel Wash Pond	<input type="checkbox"/> Borrow Material	

EMBANKMENT		Maximum Fill Height	
Top Elevation	<u>386.00</u> Feet	Top Width	<u>12</u> Feet
Normal Pool Elevation	<u>376.50</u> Feet	Side Slopes: U.S.	<u>3</u> :1
DHW Water Elevation	<u>384.43</u> Feet	D.S.	<u>2</u> :1

Will embankment serve as public roadway? Yes No

PRINCIPAL SPILLWAY

Barrel Size: 24 Inches
 BCCMP Alum (CAP) RCP PVC Cast-in-Place Box Culvert
 Weir Channel Other: _____
LINED WITH 16" HDPE

Design Capacity at DHW: 18.21 cfs

EMERGENCY SPILLWAY

Velocity: _____ Ft/sec
 Crest Elev: 383.00 Ft
 Spillway Protection: Grass Riprap Gabions Other: GRASS PAVERS

Design Capacity at DHW: 114 Cfs
 Bottom Width: 15 Feet
 Side Slopes: 7 :1

DISTANCES BELOW POND TO	
Property Line:	<u>3</u> Feet
Public Road:	<u>155</u> Feet

Soil Conservation District (Name): _____
 District Manager Signature: [Signature] Date: 8-10-2021

The following line to be completed and form is to be resubmitted after As-Built certification has been accepted by the District:
 Date As-Built Accepted: _____

 District Representative Signature
 Page 168 of 206

APPENDIX D

FORESTRY PERMIT

PERMIT #: FTP2020-00001 **DATE OF ISSUE:** 03/23/21
EXPIRATION DATE: 3/23/2023
PERMITEE: CITY OF ROCKVILLE DPW
ADDRESS: 111 MARYLAND AVENUE
 ROCKVILLE MD 20850

PHONE: Primary: 240-314-8280
Project Name: NORTHEAST PARK SWM **SITE ADDRESS:** NEAL DR
SUBDIVISION: GR53 **LOT:** P550 **BLK:**

PROJECT DESCRIPTION:

Northeast Park SWM Retrofit and Stream Restoration

THIS PROJECT REQUIRES THE FOLLOWING:

X	PRECONSTRUCTION MEETING	X	SIGNIFICANT TREE PLANTING
X	SIGNIFICANT TREE REMOVAL	X	ON-SITE PLANTING
X	ROOT PRUNING		OFF SITE PLANTING
X	TREE PRUNING	X	POST PLANTING INSPECTION
	AERATION SYSTEM	X	POST CONSTRUCTION MEETING
X	TREE PROTECTION FENCE		TWO YEAR WARRANTY
X	TREE PROTECTION SIGNAGE	X	FIVE YEAR WARRANTY
	PERMANENT PROTECTION FENCE		FOREST CONSERVATION EASEMENT
X	PREPLANTING MEETING		TREE COVENANTS
			OTHER

CONDITIONS:

- Schedule a pre-construction meeting with the Forestry Inspector, Shaun Ryan (240 314-8733 or sryan@rockvillemd.gov) and the Senior Sediment and Erosion Inspector, Dylan Drudul (240 314-8879 or ddrudul@rockvillemd.gov). The ISA certified arborist/MD LTE must be present. You must provide at least 48 hours notice before meeting and the limits of disturbance must be staked prior to the meeting. No clearing, grading, or tree removals may be done prior to this meeting. No installation of tree protection fence or sediment control devices may be installed prior to this meeting.
- Provide any additional tree save measures as directed by the Forestry Inspector.
- Non-native/Invasive (NNI) plant control is required per the approved FCP during the 5-year warranty and maintenance period. A copy of the City's Non-native and Invasive Plant List is available on the City website. Prior to any NNI work, a Management Plan for removing/controlling the non-native and invasive plants must be submitted to and approved by the Forestry Inspector. A contractor who is experienced in this type of work shall prepare the Management Plan. References may be requested. An initial treatment must be completed and approved by the Forestry Inspector prior to the start of the Five-year Warranty.
- The applicant is required to schedule a pre planting meeting with the Forestry Inspector prior to installing any plant material. The tree locations must be staked in the field prior to this meeting.
- Apply approved wildlife protection to newly planted trees as directed by the Forestry Inspector.
- Bonds must remain in effect and will not be released until all remedial tree work has been done, all violations pertaining to the project have been corrected, all outstanding fines have been paid, and the FTPO five-year warranty and maintenance agreement period has been satisfied.
- All work covered by permit must be completed by the expiration date which is two years from date of issuance. Requests for extensions must be submitted in writing to the City Forester 30 days prior to the permit expiration date justifying the permit extension.
- Exact locations of tree protection measures, including but not limited to tree protection fence, mulching and root pruning as required will be directed by Forestry Inspector during the preconstruction meeting.
- Requirements of the FTPO will be met prior to acceptance of planting inspection. Aspects of the FCP may be amended on site consistent with recommendations from the City Forester or appropriate designee.

THIS PERMIT AUTHORIZES THE ABOVE DESCRIBED CONSTRUCTION SUBJECT TO ALL APPLICABLE LAWS, REGULATIONS, TERMS, AND CONDITIONS HEREIN AND ELSEWHERE

APPROVED:

CITY FORESTER **Shaun Ryan**

Digitally signed by Shaun Ryan
 DN: cn=US, email=sryan@rockvillemd.gov,
 o=City of Rockville, ou=Environmental Services,
 Landscape Architect, CN=Shaun Ryan
 Reason: I have reviewed this document
 Date: 2021.03.24 10:40:57-0400'

03/23/21

REV: FFTPPR 03/24/21

MFD 03/24/21

FORESTRY PERMIT

PERMIT #: FTP2020-00001 **DATE OF ISSUE:** 03/23/21
EXPIRATION DATE: 3/23/2023
PERMITEE: CITY OF ROCKVILLE DPW
ADDRESS: 111 MARYLAND AVENUE
 ROCKVILLE MD 20850

PHONE: Primary: 240-314-8280
Project Name: NORTHEAST PARK SWM **SITE ADDRESS:** NEAL DR
SUBDIVISION: GR53 **LOT:** P550 **BLK:**

PROJECT DESCRIPTION:

Northeast Park SWM Retrofit and Stream Restoration

ENGINEER: CHRISTOPHER STEPP
ADDRESS: 7455 NEW RIDGE RD STE T
 HANOVER MD 21076
PHONE: (W) 410-694-9401 (H) (F)

ESTIMATED COST OF WORK:	PERMIT FEES:	AMOUNT OF SECURITY:
PLANTING: OTHER:	TOTAL FEES:	PLANTING: OTHER: BOND: L OF C: CASH: OTHER:

THIS PERMIT AUTHORIZES THE ABOVE DESCRIBED CONSTRUCTION SUBJECT TO ALL APPLICABLE LAWS, REGULATIONS, TERMS, AND CONDITIONS HEREIN AND ELSEWHERE

APPROVED:

CITY FORESTER **Shaun Ryan**

Digitally signed by Shaun Ryan
 DN: cn=US, email=ShaunRyan@rockvillemd.gov, o=City of Rockville, ou=Information Management, c=US
 Architecture, CN=Shaun Ryan
 Reason: I have reviewed this document
 Date: 2021.03.24 10:41:18-04'00'

03/23/21

REV: FTTPRM 03/24/21

MFD 03/24/21

APPENDIX D

SEDIMENT CONTROL PERMIT (SCP)

PERMIT#: SCP2021-00009

DATE OF ISSUE: 02/06/2021

DATE OF EXPIRATION: 2/6/2023

PWK PERMIT:

TYPE OF SEDIMENT CONTROL PERMIT: SC

APPLICANT: CITY OF ROCKVILLE DPW
 ADDRESS: 111 MARYLAND AVE
 ROCKVILLE MD 20850
 DAYTIME PHONE: 240-314-8500

SITE ADDRESS: E GUDE DR

SUBDIV: RIGHT-OF-WAY LOT: 0000 BLK: 000

TYPE OF WORK: Northeast Park SWM Facility Retrofit and Stream Restoration, Contact #10-21

CONDITIONS:

1. This permit is for sediment control only associated with the retrofit of Northeast Park SWM Facility, Contract #10-21. All work must comply with the approved plans dated 02/03/2021 and any subsequent revisions. Plan revisions, including field changes, must be reviewed and approved by the Rockville Department of Public Works.
2. Permittee must schedule a preconstruction meeting with the City Project Inspector, Mandi Murray, CPII, CBLP at 240-314-8547, the City Sediment and Erosion Control Inspector, Dylan Drudul, at 240-314-8879, Project Engineer, Diron Baker, at 240-314-8533, City Forestry Inspector, Shaun Ryan at 240-314-8233 at least 48 hours prior to construction. Limits of disturbance and tree protection fencing locations must be staked and flagged prior to the pre-construction meeting.
3. Permittee must contact MISS UTILITY at 811, 1 800 257-7777, or www.missutility.net for marking of existing utilities. MISS UTILITY requires two full business days notice. Existing utilities must be marked prior to the pre-construction meeting.
4. A copy of the permit MUST be on the job-site.
5. The Maryland Department of the Environment (MDE) issues the General Permit for Stormwater Associated with Construction Activity, and the City will obtain a Notice of Intent (NOI) authorization to discharge stormwater under this General Permit. This permit will be formally transferred to the Contractor by the City after award. Upon final acceptance, the Contractor shall formally transfer the permit back to the City.
6. If required, permittee must supply the Chief, Construction Management, with lab results (from a Maryland State Certified Lab) to confirm that all construction work and materials comply with project specifications. This includes acceptable certification for compaction and backfill.
7. Any damage to public improvements must be repaired or replaced in accordance with City standards at the direction of the City Project Inspector.
8. Contractor is to comply with the Montgomery County Noise Ordinance. Apply for a waiver if needed.
9. All work covered by this permit must be completed by the expiration date which is two (2) years from date of permit issuance. Requests for permit extensions must be submitted in writing to the Department of Public Works 30 days prior to the expiration date, justifying the extension in accordance with Chapter 19, Section 29.

WATER SHED: ROC TOTAL AREA OF PROPERTY: 257,004
 FLOODPLAIN VARIANCE REQ'D: N TOTAL AREA TO BE DISTURBED: 102,366
 USE PERMIT NUMBER: TOTAL IMPERVIOUSNESS PROPOSED:

(INCLUDE 30' CONTIGUOUS RIGHTS OF WAY)

ESTIMATED COST

OF WORK:	PERMIT FEES:	AMOUNT OF SECURITY:
S/C:	Permit Fee \$0.00	S/C:
	TOTAL FEES \$0.00	BOND:
		L OF C:
		CASH:

This permit authorizes the above described construction subject to all applicable laws, regulations, terms and conditions herein and

Approved: Craig Simoneau 02/06/2021
 Director of Public Works

rev: fscp2pmt 02/06/2021

DHB 02/06/2021
 DHB Staff Contact

APPENDIX D

SEDIMENT CONTROL PERMIT (SCP)

PERMIT#: SCP2021-00009

DATE OF ISSUE: 02/06/2021

DATE OF EXPIRATION: 2/6/2023

PWK PERMIT:

TYPE OF SEDIMENT CONTROL PERMIT: SC

APPLICANT: CITY OF ROCKVILLE DPW

ADDRESS: 111 MARYLAND AVE

ROCKVILLE MD 20850

DAYTIME PHONE: 240-314-8500

SITE ADDRESS: E GUDE DR

SUBDIV: RIGHT-OF-WAY

LOT: 0000

BLK: 000

ENGINEER: BAYLAND

ADDRESS: 1321 MERCEDES DRIVE

SUITE A

HANOVER MD 21076

DAYTIME PHONE:

OWNER/DEVELOPER: CITY OF ROCKVILLE

ADDRESS: 111 MARYLAND AVENUE

ROCKVILLE MD 20850

DAYTIME PHONE:

This permit authorizes the above described construction subject to all applicable laws, regulations, terms and conditions herein and

Approved: Craig Simoneau 02/06/2021
Director of Public Works

rev: fscp2pmt 02/06/2021

DHB 02/06/2021
DHB Staff Contact

STORMWATER MANAGEMENT PERMIT (SMP)

PERMIT#: **SMP2021-00012**

DATE OF ISSUE: **02/06/2021**
DATE OF EXPIRATION: **2/6/2023**

PWK PERMIT:

SCP PERMIT:

APPLICANT: **CITY OF ROCKVILLE DPW**
ADDRESS: **111 MARYLAND AVE**
ROCKVILLE MD 20850
DAYTIME PHONE: **240-314-8500**

SITE ADDRESS: **E GUDE DR**

SUBDIV: **RIGHT-OF-WAY** LOT: **0000** BLK: **000**

This permit is for the Stormwater Management Facilities checked below:

- | | |
|---|---|
| Surface Sand Filter | Infiltration |
| Underground Sand Filter | MDE - Approved Proprietary |
| Perimeter Sand Filter | Filtering System (see notes) |
| Bioretention | Shallow Wetland |
| Underground Concrete Vault | ED Wetland |
| Underground Pipe | <input checked="" type="checkbox"/> Pond/Wetland System |
| Micropool ED | Swale (Dry/Wet) |
| <input checked="" type="checkbox"/> Wet Pond | Non Structural |
| <input checked="" type="checkbox"/> Wet ED Pond | Monetary Contribution |
| Multiple Pond | Other |
| Dry ED Pond | |

FACILITIES: TOTAL AREA OF PROPERTY: **102,360.00**

Facility Type	Drainage	Impervious	Ownership	Recharge	Quality	Quantity	Quantity
	Area	Area		Volume	(WQv)	(Cpv)	(Qp)
Pond-Quantity and Extended Detention	51.07	26.59	Public	No	Yes	Yes	No

This permit authorizes the above described construction subject to all applicable laws, regulations, terms and conditions herein and

Approved: Craig Simoneau 02/06/2021
Director of Public Works

rev: fsmpprmt 02/06/2021

DHB 02/06/2021
DHB Staff Contact

STORMWATER MANAGEMENT PERMIT (SMP)

PERMIT#: SMP2021-00012

DATE OF ISSUE: 02/06/2021
DATE OF EXPIRATION: 2/6/2023

PWK PERMIT:
SCP PERMIT:

APPLICANT: CITY OF ROCKVILLE DPW
ADDRESS: 111 MARYLAND AVE
ROCKVILLE MD 20850
DAYTIME PHONE: 240-314-8500

SITE ADDRESS: E GUDE DR

SUBDIV: RIGHT-OF-WAY LOT: 0000 BLK: 000

CONDITIONS:

1. This permit is for the construction of Northeast Park SWM Facility Retrofit, Contract #10-21. All work must comply with the approved plans dated 02/03/2021 including any subsequent plan revisions. Plan revisions, including field changes, must be approved by the Rockville Department of Public Works.
2. Permittee must schedule a preconstruction meeting with the City Project Inspector, Mandi Murray, CPII, CBLP at 240-314-8547, the City Sediment and Erosion Control Inspector, Dylan Drudul, at 240-314-8879, Project Engineer, Diron Baker, at 240-314-8533, City Forestry Inspector, Shaun Ryan at 240-314-8233 at least 48 hours prior to construction. Limits of disturbance and tree protection fencing locations must be staked and flagged prior to the pre-construction meeting.
3. Permittee must contact MISS UTILITY at 811, 1 800 257-7777, or www.missutility.net for marking of existing utilities. MISS UTILITY requires two full business days' notice. Existing utilities must be marked prior to the pre-construction meeting.
4. If required, the permittee must supply the Chief, Construction Management with lab results (from a Maryland State Certified Lab) to confirm that all construction work and materials comply with the project specifications. This includes acceptable certification for compaction and backfill.
5. Prior to bond release, on-site grading must be approved to demonstrate safe conveyance of stormwater per the approved plan.
6. Bonds will not be released until construction has been completed and inspected, and any damage to public right-of-way has been repaired or replaced to the satisfaction of the City Project Inspector and Chief, Construction Management.
7. Bonds will not be released until all code violations pertaining to the project have been corrected and all outstanding fines have been paid.
8. Permittee must comply with the Montgomery County Noise Ordinance. Apply for a waiver if needed.
9. All work covered by this permit must be completed by the expiration date which is two (2) years from date of permit issuance. Requests for extensions must be submitted in writing to the Department of Public Works 30 days prior to the permit expiration date justifying the permit extension in accordance with Chapter 19, Section 29.
10. A copy of this permit MUST be on the job-site at all times.
11. Stormwater management as-built plans, material tickets, and a scanned copy of the as-built, sealed by a licensed Maryland Professional Engineer or Professional Land Surveyor, must be submitted and approved by the City prior to release of permit. The as-built of the stormwater management facilities must include at a minimum: the bottom elevation; critical dimensions; volume; pipe size, material and invert; outlet structure opening dimensions and elevations; and number and species of plantings.

This permit authorizes the above described construction subject to all applicable laws, regulations, terms and conditions herein and

Approved: Craig Simoneau 02/06/2021
Director of Public Works

rev: fsmpprmt 02/06/2021

DHB 02/06/2021
DHB Staff Contact

STORMWATER MANAGEMENT PERMIT (SMP)

PERMIT#: **SMP2021-00012**

DATE OF ISSUE: **02/06/2021**
DATE OF EXPIRATION: **2/6/2023**

PWK PERMIT:

SCP PERMIT:

APPLICANT: **CITY OF ROCKVILLE DPW**
ADDRESS: **111 MARYLAND AVE
ROCKVILLE MD 20850**
DAYTIME PHONE: **240-314-8500**

SITE ADDRESS: **E GUDE DR**

SUBDIV: **RIGHT-OF-WAY** LOT: **0000** BLK: **000**

WATER SHED: **Rock Creek**
FLOODPLAIN VARIANCE REQ'D: **N** TOTAL DRAINAGE AREA :
USE PERMIT NUMBER: TOTAL IMPERVIOUSNESS PROPOSED:

ESTIMATED COST

OF WORK:	PERMIT FEES:	AMOUNT OF SECURITY:
SMP:	Permit Fee \$0.00 TOTAL FEES: \$0.00	SMP: BOND: L OF C: CASH:

PROPERTY OWNER:	CITY OF ROCKVILLE	ENGINEER:	BAYLAND CONSULTANTS
ADDRESS:	111 MARYLAND AVENUE ROCKVILLE MD 20850	ADDRESS:	1321 MERCEDES DRIVE SUITE A HANOVER MD 21076
DAYTIME PHONE:		DAYTIME PHONE:	

This permit authorizes the above described construction subject to all applicable laws, regulations, terms and conditions herein and

Approved: *Craig Simoneau* 02/06/2021
Director of Public Works

rev: fsmpprmt 02/06/2021

DHB 02/06/2021
DHB Staff Contact

Chapter 31B – Noise Control

- § 31B-2. Definitions.
- § 31B-3. Regulations.
- § 31B-4. Noise control advisory board.
- § 31B-5. Noise level and noise disturbance violations.
- § 31B-6. Noise level and noise disturbance standards for construction.
- § 31B-7. Measurement of sound.
- § 31B-8. Noise sensitive areas.
- § 31B-9. Leafblowers.
- § 31B-10. Exemptions.
- § 31B-11. Waivers.
- § 31B-12. Enforcement and penalties.

Sec. 31B-1. Declaration of policy.

- (a) The County Council finds that excessive noise harms public health and welfare and impairs enjoyment of property. The intent of this Chapter is to control noise sources to protect public health and welfare and to allow the peaceful enjoyment of property. This Chapter must be liberally construed to carry out this intent.
- (b) The Department of Environmental Protection administers this Chapter.
 - (1) The Department must coordinate noise abatement programs of all County agencies, municipalities, and regional agencies.
 - (2) A County agency, municipality in which this Chapter applies, or regional authority subject to County law must not adopt a standard or regulation that is less stringent than this Chapter or any regulation adopted under this Chapter.
 - (3) The Director may form an Interagency Coordinating Committee to assist the Director in coordinating noise control policy. If the Director forms the Committee, the Director must designate an individual to chair the Committee. The members of the Committee should be designated by County, local, and regional agencies that the Director invites to participate.
 - (4) The Department must establish procedures to identify and reduce noise sources when the County plans and issues permits, variances, exemptions, or approvals.
 - (5) The Department should make recommendations to the County Executive, County Council, and Planning Board regarding noise control policy, regulations, enforcement, and noise sensitive areas. (1996 L.M.C., ch. 32, § 1.)

Editor's note—See County Attorney Opinion dated 3/16/92 explaining that the Washington Metropolitan Area Transportation Authority (esp. Metrorail) is subject to the County's noise control law, although an exemption may be obtained if it is in the public interest.

Sec. 31B-2. Definitions.

In this Chapter, the following words and phrases have the following meanings:

- (a) *Construction* means temporary activities directly associated with site preparation, assembly, erection, repair, alteration, or demolition of structures or roadways.
- (b) *dba* means decibels of sound, as determined by the A-weighting network of a sound level meter or by calculation from octave band or one-third octave band data.
- (c) *Daytime* means the hours from 7 a.m. to 9 p.m. on weekdays and 9 a.m. to 9 p.m. on weekends and holidays.

- (d) Decibel means a unit of measure equal to 10 times the logarithm to the base 10 of the ratio of a particular sound pressure squared to the standard reference pressure squared. For this Chapter, the standard reference pressure is 20 micropascals.
- (e) *Department* means the Department of Environmental Protection.
- (f) *Director* means the Director of the Department of Environmental Protection or the Director's authorized designee.
- (g) *Enforcement officer* means:
- (1) for a noise originating from any source:
 - (A) an employee or agent of the Department designated by the Director to enforce this Chapter;
 - (B) a police officer; or
 - (C) a person authorized under Section 31B-12(a) to enforce this Chapter;
 - (D) a person authorized by a municipality to enforce this Chapter; or
 - (2) for a noise originating from an animal source, the Director of the Animal Services Division in the Police Department or the Director's authorized designee.
- (h) *Impulsive noise* means short bursts of a acoustical energy, measured at a receiving property line, characterized by a rapid rise to a maximum pressure followed by a somewhat slower decay, having a duration not greater than one second and a field crest factor of 10 dBA or more. Impulsive noise may include, for example, noise from weapons fire, pile drivers, or punch presses.
- (i) *Leaf blower* means any portable device designed or intended to blow, vacuum, or move leaves or any other type of unattached debris or material by generating a concentrated stream of air. Leafblower includes devices or machines that accept vacuum attachments.
- (j) *Nighttime* means the hours from 9 p.m. to 7 a.m. weekdays and 9 p.m. to 9 a.m. weekends and holidays.
- (k) *Noise* means sound, created or controlled by human activity, from one or more sources, heard by an individual.
- (l) *Noise area* means a residential or non-residential noise area:
- (1) *Residential noise area* means land in a zone established under Section 59-C-1.1, Section 59-C-2.1, Division 59-C-3, Section 59-C-6.1, Section 59-C-7.0, Section 59-C-8.1, Section 59-C-9.1 for which the owner has not transferred the development rights, or Section 59-C-10.1, or land within similar zones established in the future or by a political subdivision where Chapter 59 does not apply.
 - (2) *Non-residential noise area* means land within a zone established under Section 59-C-4.1, Section 59-C-5.1, Section 59-C-9.1 for which the owner has transferred the development rights, or Division 59-C-12, or land in similar zones established in the future or by a political subdivision where Chapter 59 does not apply.
- (m) *Noise disturbance* means any noise that is:
- (1) unpleasant, annoying, offensive, loud, or obnoxious;
 - (2) unusual for the time of day or location where it is produced or heard; or
 - (3) detrimental to the health, comfort, or safety of any individual or to the reasonable enjoyment of property or the lawful conduct of business because of the loudness, duration, or character of the noise.
- (n) *Noise sensitive area* means land designated by the County Executive as a noise sensitive area under Section 31B-8.

- (o) *Noise-suppression plan* means a written plan to use the most effective noise-suppression equipment, materials, and methods appropriate and reasonably available for a particular type of construction.
- (p) *Person* means an individual, group of individuals, corporation, firm, partnership, or voluntary association; or a department, bureau, agency, or instrument of the County or any municipality, or of any other government to the extent allowed by law.
- (q) *Prominent discrete tone* means a sound, often perceived as a whine or hum, that can be heard distinctly as a single pitch or a set of pitches. A prominent discrete tone exists if the one-third octave band sound pressure level in the band with the tone exceeds the arithmetic average of the sound pressure levels of the 2 contiguous one-third octave bands by:
 - (1) 5 dB for center frequencies of 500 Hz and above;
 - (2) 8 dB for center frequencies between 160 and 400 Hz; or
 - (3) 15 dB for center frequencies less than or equal to 125 Hz.
- (r) *Qualifying performing arts facility* means the outdoor area of a building, outdoor seasonal, temporary, or permanent stage, or other clearly defined outdoor area or space, which is:
 - (1) used for an outdoor arts and entertainment activity; and
 - (2) owned or operated by the County; and
 - (3) so designated by the County Executive in an Executive Order published in the County Register. The Executive may revoke a designation at any time by publishing an Executive Order revoking the designation in the County Register.
- (s) *Receiving property* means any real property where people live or work and where noise is heard, including an apartment, condominium unit, or cooperative building unit.
- (t) *Sound* means an auditory sensation evoked by the oscillation of air pressure.
- (u) *Source* means any person, installation, device, or animal causing or contributing to noise. (1996 L.M.C., ch. 32, § 1; 2001 L.M.C., ch. 2, § 1.)

Editor's note—See County Attorney Opinion dated 10/6/00 indicating that long-term parking on public streets is prohibited in certain circumstances, but not based on the size of the vehicle. See County Attorney Opinion dated 3/16/92 explaining that the Washington Metropolitan Area Transportation Authority (esp. Metrorail) is subject to the County's noise control law, although an exemption may be obtained if it is in the public interest.

Sec. 31B-3. Regulations.

The County Executive may establish noise control regulations and standards as necessary to accomplish the purposes and intent of this Chapter. Any regulation must be at least as stringent as this Chapter. The Executive by regulation may set fees that are sufficient to offset the costs of Department reviews or other actions required or authorized by this Chapter. (1996 L.M.C., ch. 32, § 1.)

Sec. 31B-4. Noise control advisory board.

- (a) A Noise Control Advisory Board must advise the County Executive, Director, County Council, and Planning Board on noise control issues, including administration and enforcement of this Chapter.
- (b) The Board consists of 11 members appointed by the Executive and confirmed by the Council.
- (c) The Board must elect one member as Chair and another member as Vice-Chair to serve at the pleasure of the Board. The Board must meet at the call of the chairperson as required to perform its duties, but not less than once each quarter. A majority of the members of the

Board constitutes a quorum for transacting business. The Board may act by a majority vote of those present.

- (d) At least every third year, the Board must evaluate the effectiveness of the County's noise control program and recommend any improvements to the Director, County Executive, County Council, and Planning Board.
- (e) No later than March 1 each year, the Chair of the Board must report to the Director, County Executive, County Council, and Planning Board on activities and actions the Noise Control Advisory Board took during the previous calendar year. (1996 L.M.C., ch. 32, § 1; 1999 L.M.C., ch. 2, § 1.)

Editor's note-1999 L.M.C., ch. 2, § 1, increased the number of Board members from 7 to 11. 1999 L.M.C., ch. 2, § 2, states:

Sec. 2. Transition.

- (a) The terms of the 4 members of the Noise Control Advisory Board added by this Act end:
 - (1) for 1 member, on September 30, 1999, and every third year thereafter;
 - (2) for 2 members, on September 30, 2000, and every third year thereafter; and
 - (3) for 1 member, on September 30, 2001, and every third year thereafter.
- (b) When appointing the first individual to serve in one of the 4 new positions, the County Executive must designate the term in subsection (a) for which the Executive is appointing the individual.
- (c) This Act does not affect the term of any current member of the Board.
Cross reference-Boards and commissions generally, § 2-141 et seq.

Sec. 31B-5. Noise level and noise disturbance violations.

- (a) *Maximum allowable noise levels.*
 - (1) Except as otherwise provided in Sections 31B-6(a) and 31B-8, a person must not cause or permit noise levels that exceed the following levels:

<i>Maximum Allowable Noise Levels (dBA) for Receiving Noise Areas</i>		
	<i>Daytime</i>	<i>Nighttime</i>
Non-residential noise area	67	62
Residential noise area	65	55

- (2) A person must not cause or permit the emission of a prominent discrete tone or impulsive noise that exceeds a level, at the location on a receiving property where noise from the source is greatest, that is 5 dBA lower than the level set in paragraph (1) for the applicable noise area and time.
 - (3) Sound that crosses between residential and non-residential noise areas must not exceed the levels set in paragraph (1) for residential noise areas.
- (b) *Noise disturbance.* A person must not cause or permit noise that creates a noise disturbance.
- (c) *Examples.* The following examples illustrate common noise-producing acts that violate this section if they exceed the noise level standards set in subsection (a) or create a noise

disturbance. The examples are illustrative only and do not limit or expand the noise level or noise disturbance standards of this section:

- (1) Sounding a horn or other signaling device on any motor vehicle on private property except:
 - (A) in an emergency; or
 - (B) as a danger warning signal during daytime hours if the device complies with noise level limits.
- (2) Operating a sound-producing device on public streets for commercial advertising or to attract public attention.
- (3) Selling anything by outcry.
- (4) Loading, unloading, opening, closing or otherwise handling containers, building materials, construction equipment, or similar objects.
- (5) Operating a device that produces, reproduces, or amplifies sound.
- (6) Allowing an animal to create a noise disturbance.
- (7) Operating power equipment mounted on a motor vehicle or operating other devices powered by a generator or a motor vehicle. (1996 L.M.C., ch. 32, § 1.)

Editor's note—See County Attorney Opinion dated 10/6/00 indicating that long-term parking on public streets is prohibited in certain circumstances, but not based on the size of the vehicle. See County Attorney Opinion dated 3/16/92 explaining that the Washington Metropolitan Area Transportation Authority (esp. Metrorail) is subject to the County's noise control law, although an exemption may be obtained if it is in the public interest.

Sec. 31B-6. Noise level and noise disturbance standards for construction.

- (a) *Maximum allowable noise levels for construction.*
 - (1) A person must not cause or permit noise levels from construction activity that exceed the following levels:
 - (A) From 7 a.m. to 5 p.m. weekdays:
 - (i) 75 dBA if the Department has not approved a noise-suppression plan for the activity; or
 - (ii) 85 dBA if the Department has approved a noise-suppression plan for the activity.
 - (B) The level specified in Section 31B-5 at all other times.
 - (2) Construction noise levels must be measured at the location, at least 50 feet from the source, on a receiving property where noise from the source is greatest.
 - (3) The Department must by regulation establish requirements for noise-suppression plans and adopt procedures for evaluating and approving plans. The regulations must provide that, at least 10 days before approving a noise-suppression plan, the Director must provide public notice reasonably calculated to reach at least a majority of households that might be affected by the construction activity noise levels above 75 dBA.
- (b) *Construction noise disturbance.* The prohibition on noise disturbance in Section 31B- 5(b) applies to construction activities, notwithstanding subsection (a).
- (c) *Examples.* The following examples illustrate common construction noise-producing acts that violate this section if they exceed the noise level standards set in subsection (a) or create a noise disturbance. The examples are illustrative only and do not limit or expand the construction noise level or noise disturbance standards of this section:
 - (1) Delivering materials or equipment, or loading or unloading during nighttime hours in a residential noise area.
 - (2) Operating construction equipment with audible back-up warning devices during nighttime hours. (1996 L.M.C., ch. 32, § 1.)

Sec. 31B-6A. Seasonal noise level standard for qualifying outdoor arts and entertainment activities.

- (a) Each outdoor arts and entertainment activity held at a qualifying performing arts facility must not exceed the following noise decibel limits:
 - (1) from 11 a.m. to 11 p.m. during April 1 through October 31, 75 dBA, as measured on the receiving property; and
 - (2) at all other times, the maximum allowable noise level set in Section 31B-5.
- (b) A qualifying performing arts facility which has complied with this Section must not cause or permit noise levels from an outdoor arts and entertainment activity to exceed the standards in subsection (a).
- (c) Any outdoor arts and entertainment activity conducted at a qualifying performing arts facility which has complied with this Section must not be cited as causing a noise disturbance.
- (d) The Department must annually advise the Executive and Council, and the operator of each qualifying performing arts facility, whether the noise levels specified in this Section remain appropriate for that facility and the extent of compliance with those levels. (2011 L.M.C., ch. 7, § 1)

Sec. 31B-7. Measurement of sound.

- (a) The Department must issue regulations establishing the equipment and techniques it will use to measure sound levels. The Department may rely on currently accepted standards of recognized organizations, including the American National Standards Institute (ANSI), American Society for Testing and Materials (ASTM), and the United States Environmental Protection Agency.
- (b) For multiple sources of sound, the Department may measure sound levels at any point to determine the source of a noise. (1996 L.M.C., ch. 32, § 1.)

Sec. 31B-8. Noise sensitive areas.

- (a) The County Executive may designate by regulation land within any geographical area as a noise sensitive area to protect public health, safety, and welfare. The regulation may prohibit certain noise producing activities in the noise sensitive area.
- (b) A regulation under subsection (a) must:
 - (1) describe the area by reference to named streets or other geographic features;
 - (2) explain the reasons for the designation;
 - (3) establish specific noise limits or requirements that apply in the noise sensitive area; and
 - (4) describe by example or enumeration activities or sources that violate the limits or requirements.
- (c) A regulation under subsection (a) may establish limits or requirements for a noise sensitive area that are more stringent than those that otherwise would apply to the area under this Chapter. (1996 L.M.C., ch. 32, § 1.)

Sec. 31B-9. Leafblowers.

- (a) Except as provided in this section, a person must not sell, buy, offer for sale, or use a leafblower at any time that has an average sound level exceeding 70 dBA at a distance of 50

- feet. This requirement is in addition to any other noise level or noise disturbance standard that applies under this Chapter.
- (b) An individual who owns or occupies a residence in a residential noise area may use at the individual's residence a leafblower bought or manufactured before July 1, 1990, until July 1, 1998, even if it exceeds the standard in subsection (a). After July 1, 1998, a person must not use any leafblower that violates the standard in subsection (a).
 - (c) The Department must apply the standard in subsection (a) in accordance with the most current leaf-blower testing standard of the American National Standards Institute (ANSI).
 - (d) The Department may inspect, and on its request a person must produce, any leafblower that is sold, offered for sale, or used in the County, to determine whether the leafblower complies with this section. A person who relies in good faith on a manufacturer's written representation of the sound level of a leafblower that has not been modified is not subject to a penalty for violating this section. (1996 L.M.C., ch. 32, § 1.)

Sec. 31B-10. Exemptions.

- (a) This Chapter does not apply to:
 - (1) agricultural field machinery used and maintained in accordance with the manufacturer's specifications;
 - (2) emergency operations by fire and rescue services, police agencies, or public utilities and their contractors;
 - (3) a source or condition expressly subject to any State or federal noise-control law or regulation that is more stringent than this Chapter;
 - (4) sound, not electronically amplified, created between 7 a.m. and 11 p.m. by sports, amusements, or entertainment events or other public gatherings operating according to the requirements of the appropriate permit or licensing authority. This includes athletic contests, carnivals, fairgrounds, parades, band and orchestra activities, and public celebrations.
- (b) The County Executive may issue regulations exempting from Section 31B-5 sources associated with routine residential living during daytime hours, such as home workshops, power tools, and power lawn and garden equipment, when used in accordance with manufacturer specifications. This exception does not apply to repairs or maintenance on a motor vehicle that is not registered for use on public roads. (1996 L.M.C., ch. 32, § 1.)

Sec. 31B-11. Waivers.

- (a) *Temporary waiver.*
 - (1) The Director may waive any part of this Chapter for a temporary event if the noise the event will create or cause in excess of the limits established under this Chapter is offset by the benefits of the event to the public.
 - (2) When the Director receives an application under this subsection, the Director must provide public notice of the application reasonably calculated to reach at least a majority of households that might be affected by noise levels anticipated for the event. The Director must not approve an application under this subsection less than 10 days after the public notice.
- (b) *General waiver.*
 - (1) The Director may waive any part of this Chapter if the Director determines that compliance in a particular case is not practical and would impose undue hardship.
 - (2) When the Director receives an application under this subsection, the Director must schedule a hearing on the application within 60 days.
 - (3) At least 30 days before the hearing, the applicant must advertise the hearing by:

- (A) placing a display advertisement in a newspaper of general circulation in the community where the source that is the subject of the application is located; and
 - (B) posting a sign at the location of the source.
 - (4) Based on evidence presented at the hearing, the Director may grant a waiver for up to 3 years, under terms and conditions appropriate to reduce the impact of the exception.
 - (5) The Director may renew a waiver granted under this subsection if the applicant shows that the circumstances supporting the original waiver have not changed.
- (c) *Violation of waiver.* The Director may suspend, modify, or revoke a waiver granted under this section if a person violates the terms or conditions of the waiver.
- (d) *Regulations and fees.* The County Executive must issue regulations implementing this section that:
- (1) set the procedures and fees to apply for a waiver under subsections (a) or (b);
 - (2) require the applicant to use the best technology and strategy reasonably available to mitigate noise, as determined by the Director;
 - (3) allow temporary waivers under subsection (a) of no more than 30 days, renewable at the discretion of the Director no more than twice; and
 - (4) specify the requirements for the hearing advertisement and sign required under subsection (b)(3). (1996 L.M.C., ch. 32, § 1.)

Sec. 31B-12. Enforcement and penalties.

- (a) The Department must enforce this Chapter. The County Executive may delegate in writing the authority to enforce parts of this Chapter to the Police Department or any other Executive agency.
- (b) A violation of this Chapter is a Class A violation. Each day a violation continues is a separate offense. A violation of Section 31B-6 is a separate offense in addition to any other violation of this Chapter arising from the same act or occurrence.
- (c) The Department may seek injunctive or other appropriate judicial relief to stop or prevent continuing violations of this Chapter.
- (d) If the Director finds that a person has violated this Chapter, the Director may issue a notice of violation and corrective order to the person. The notice must contain the following information:
 - (1) the section of this Chapter that the person violated;
 - (2) the date, nature, and extent of the violation;
 - (3) the action required to correct the violation;
 - (4) if the Director requires a compliance plan, the deadline for submitting the plan to the Director; and
 - (5) the deadline for compliance.
- (e) The compliance plan referred to in subsection (d)(4) must establish a schedule for achieving compliance with this Chapter, as specified in the corrective order. A compliance plan, and amendments to a plan, are not effective until the Director approves the plan or amendment. An action allowed under an approved compliance plan does not violate this Chapter.
- (f) An enforcement officer may issue a civil citation for any violation of this Chapter if the enforcement officer:
 - (1) witnesses the violation; or

- (2) receives complaints from at least 2 witnesses of a noise disturbance. Complaints by 2 witnesses are required to issue a citation under paragraph (2), but are not required to prove that a person violated this Chapter.
- (g) The Director of the Animal Services Division may initiate administrative action before the Animal Matters Hearing Board instead of an enforcement officer issuing a citation under subsection (f) for a violation of this Chapter originating from an animal source.
- (h) A person aggrieved by any action or order of the Director under Sections 31B-9 and 31B-11 may seek reconsideration within 10 days after the date of the action or order. A request for reconsideration must be in writing to the Director, and must specify the date and nature of the action or order, the injury sustained, the remedy requested, and the legal basis for the remedy. If the Director finds that there are material facts in dispute, the Director may refer the matter to a hearing officer under the procedures specified in Chapter 2A. If the Director finds that there are no material facts in dispute, the Director must make a final decision on the request for reconsideration in writing within 45 days after receiving the request. The aggrieved person may appeal from the Director's final decision within 30 days after the Director issues the decision, as provided in Section 2A-11.
- (i) (1) A person responsible for a violation of Section 31B-6 and the person responsible for the management or supervision of the construction site where the source of the violation is located are jointly and severally liable for the violation.
 (2) For recurring violations of Section 31B-6 on the same construction site, in addition to any other penalty under this Chapter, the Director may issue a stop work order, as provided in Section 8-20, for up to:
 (A) 3 consecutive working days for a second violation within 30 days after the first violation;
 (B) 5 consecutive working days for a third violation within 60 days after the first violation; and
 (C) 7 working days per offense for the fourth and subsequent violations within a 120-day period.
 (3) This Chapter does not limit the Director's authority under Chapter 8 to revoke a permit or approval issued under that Chapter.
- (j) Any person aggrieved by a violation of this Chapter may file a civil action in any court with jurisdiction against a person responsible for the alleged violation. The aggrieved person must notify the alleged violator and the Director of the alleged violation at least 60 days before filing the action. A person must not file an action under this subsection if the County Attorney has filed a civil action against the same alleged violator regarding the same violation. (1996 L.M.C., ch. 32, § 1; 2001 L.M.C., ch. 2, § 1.)

Endnotes

Editor's note—In *Burrows v. United States*, 2004 U.S. Dist. LEXIS 1104 (2004), the Court interpreted Montgomery County Code Chapter 31B neither to permit a private cause of action for noise control, nor to permit suit against the federal government. Chapter 31B is discussed in *Miller v. Maloney Concrete Company*, 63 Md.App. 38, 491 A.2d 1218 (1985). *Cross references-Noise from quarries, § 38-14; radio, etc., without earphones prohibited in public transit facilities, § 54A-2; industrial area noise regulations, § 59-A-5.7.

[Note]

NORTHEAST PARK SWM RETROFIT AND STREAM RESTORATION CONSTRUCTION DRAWINGS

BEFORE YOU DIG CALL
1-800-257-7777 OR DIAL 811



GENERAL SITE NOTES

1. TOPOGRAPHIC SURVEY PERFORMED BY BAYLAND CONSULTANTS & DESIGNERS, INC., DATED 3-28-2019.
 2. HORIZONTAL AND VERTICAL CONTROL ESTABLISHED FROM REAL TIME KINEMATIC (RTK) GLOBAL POSITIONING SYSTEM (GPS) CONTROL POINTS, TRAVERSE POINTS ARE IRON REBAR UNLESS OTHERWISE SPECIFIED. COORDINATES AND BEARINGS SHOWN HEREON ARE REFERRED TO THE MARYLAND COORDINATE SYSTEM (NAD83/1991). ELEVATIONS SHOWN HEREON ARE REFERRED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD83).
- | HT | NORthing | EASTing | ELEVATION | DESCRIPTION |
|--------|------------|--------------|-----------|--------------|
| TFS #1 | 519,241.70 | 1,275,119.33 | 389.60 | REBAR W/ CAP |
| TFS #2 | 519,638.69 | 1,274,844.50 | 408.92 | REBAR W/ CAP |
| TFS #3 | 519,460.32 | 1,274,612.09 | 392.84 | REBAR W/ CAP |
| TFS #4 | 519,383.20 | 1,274,768.29 | 386.77 | REBAR W/ CAP |
| TFS #5 | 519,120.16 | 1,275,007.91 | 386.20 | REBAR W/ CAP |
3. CONTOURS AND PLANIMETRICS SHOWN OUTSIDE OF LIMIT OF WORK ARE BASED ON CITY OF ROCKVILLE 2013, 2014 & 2017 GIS TOPOGRAPHY.
 4. PROPERTY LINES SHOWN ARE BASED ON MONTGOMERY COUNTY 2014 CADASTRAL DATA.
 5. ONLY TREES WITH A 6" DIAMETER OR GREATER THAT ARE WITHIN THE LIMIT OF WORK WERE FIELD LOCATED.
 6. FEMA FIRM #2403103340 EFFECTIVE SEPTEMBER 29TH 2006 SHOWS THAT THE PROJECT SITE IS NOT WITHIN FEMA FLOODPLAIN LIMITS.
 7. ROCKS SHOWN IN PLAN VIEW AND PROFILE ARE SYMBOLIC AND DO NOT REPRESENT INDIVIDUAL STONES.
 8. THE FACILITY DISCHARGES TO CREEK ROCK VIA AN UNNAMED TRIBUTARY (CREEK CREEK WATERSEED MD BASIN CODE: 02140206) WHICH IS A USE 1 STREAM WITH A STREAM CLOSURE PERIOD FROM MARCH 1ST THROUGH JUNE 15TH.
 9. THE PROJECT SITE IS NOT LOCATED WITHIN THE CRITICAL AREA.
 10. AS PER COORDINATION WITH THE MARYLAND DEPARTMENT OF THE ENVIRONMENT, THE PROJECT IS EXEMPT FROM STATE WETLAND AND WATERWAY IMPACT PERMITTING AS ALL RESOURCES ARE WITHIN THE EXISTING FACILITY. THE PROJECT QUALIFIES AS A SELF-VERIFICATION ACTIVITY UNDER THE U.S. ARMY CORPS OF ENGINEERS' REG. FEDERAL PERMIT ACTIVITY A: RETROFITS OF EXISTING STORMWATER MANAGEMENT FACILITIES.
 11. THE GENERAL PERMIT NUMBER FOR STORMWATER DISCHARGE FROM CONSTRUCTION ASSOCIATED ACTIVITY GREATER THAN 1 ACRE IS MD09P050.

GENERAL CONSTRUCTION NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF ROCKVILLE STANDARD SPECIFICATIONS OR DETAILS FOR CONSTRUCTION UNLESS OTHERWISE NOTED. THE STATE HIGHWAY ADMINISTRATION'S HIGHWAY STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS AND THE BOOK OF STANDARDS FOR HIGHWAY & INCIDENTAL STRUCTURES SHALL BE USED IF NO CITY OF ROCKVILLE STANDARDS OR DETAILS EXIST.
2. THE EXISTING UTILITIES AND OBSTRUCTIONS SHOWN ARE FROM THE BEST AVAILABLE RECORDS AND SHALL BE VERIFIED BY THE CONTRACTOR TO THEIR SATISFACTION PRIOR TO CONSTRUCTION. NECESSARY PRECAUTIONS SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT EXISTING SERVICES AND MANHOLE AND ANY DAMAGE TO THEM SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S OWN EXPENSE.
3. THE CONTRACTOR SHALL CONTACT "MISS UTILITY" AT 1-800-257-7777 AND THE CITY UTILITIES MAINTENANCE DIVISION AT 240-314-8567 A MINIMUM OF 48 HOURS IN ADVANCE OF ANY EXCAVATION, BORING, PILE DRIVING AND/OR DIGGING FOR THE LOCATION OF GAS, ELECTRIC, TELEPHONE, WATER AND SEWER LINES.
4. MECHANICAL EXCAVATION SHALL BE CONDUCTED WITHIN 3 FEET HORIZONTALLY OR WITHIN 2 FEET VERTICALLY OF KNOWN UTILITY LOCATIONS. HAND OR SHOP DIGGING SHALL BE DONE WITHIN THESE LIMITS. UNDERGROUND UTILITIES, ONCE UNCOVERED, SHALL BE PROTECTED FROM BEING STRUCK BY EQUIPMENT.
5. IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NATURALLY BE REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY TO COMPLETE SUCH WORK.
6. ALL TREES WITH A DIAMETER GREATER THAN 12 INCHES WITHIN THE LIMIT OF DISTURBANCE SHALL NOT BE REMOVED UNLESS PRIOR APPROVAL IS OBTAINED OR EXPLICITLY SHOWN ON THE PLANS TO BE REMOVED. ALL TREES TO REMAIN WITHIN THE LIMIT OF DISTURBANCE THAT ARE NOT TO BE REMOVED SHALL BE PROTECTED.
7. ALL FILL AREAS SHALL BE CLEANED OF ALL VEGETATION AND DEBRIS, SCORIFIED TO A MINIMUM DEPTH OF 12 INCHES PRIOR TO THE PLACEMENT OF FILL. FILL MATERIAL SHALL BE PLACED IN CONTROLLED LOTS WITH A MAXIMUM THICKNESS OF 12 INCHES PRIOR TO COMPACTION THAT IS CONTINUOUS OVER THE ENTIRE AREA OF FILL. EACH LAYER OF FILL SHALL BE COMPACTED WITH THE MINIMUM NUMBER OF PASSES NECESSARY TO PRODUCE A FULL ASPHYMPTIC COMPACTION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS TESTING INCLUDING CONCRETE, FLOWABLE FILL, HOT MIX ASPHALT AND FILL COMPACTION. ALL MATERIALS TESTING SHALL BE PERFORMED BY THE CONTRACTOR AND SHALL BE COMPLETED FOR AS PART OF THE APPROPRIATE PAY ITEM.
9. SEE STANDARD GEOTECHNICAL NOTES FOR FILL COMPACTION TESTING REQUIREMENTS.
10. ALL DISTURBED AREAS SHALL HAVE PERMANENT OR TEMPORARY STABILIZATION COMPLETED WITHIN:
 - 10.A. END OF THE WORK DAY FOR AREAS WITHIN WATERWAYS.
 - 10.B. THREE CALENDAR DAYS ON SLOPES GREATER THAN 3:1 AND TO THE SURFACE OF ALL PERMETER SEDIMENT CONTROL.
 - 10.C. SEVEN CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS.
11. ALL DISTURBED AREAS WITH SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITH 100% BIOGRADABLE SOIL STABILIZATION MATTING THAT HAS A SUFFICIENT DESIGN SHEAR STRESS FOR THE APPLICATION OR AS SHOWN ON THE APPROVED SEDIMENT AND EROSION CONTROL PLANS.
12. ALL PERMANENTLY STABILIZED AREAS SHALL INCLUDE A MINIMUM OF 4" OF TOPSOIL PER THE 2011 MDE SPECIFICATIONS.
13. ALL STAKING, RESTAINING, AND CUT SHEETS SHALL BE PERFORMED BY A REGISTERED LAND SURVEYOR OR PROFESSIONAL ENGINEER AT THE CONTRACTOR'S EXPENSE.
14. ALL CONSTRUCTION TO BE PERFORMED IN ACCORDANCE WITH STATE OF MARYLAND OCCUPATIONAL SAFETY LAWS.
15. CONTRACTOR MUST ENSURE THAT COPIES OF FEDERAL, STATE, AND CITY PERMITS ARE POSTED ON SITE PRIOR TO THE START OF ANY WORK.
16. ALL ROADS SHALL BE CLEANED AND CLEARED BY THE END OF EACH DAY. ANY MUD OR ROCKS TRACKED ON THE ROADWAYS SHALL BE SWEEP BEFORE THE END OF SHIFT EACH DAY.
17. CONTRACTOR SHALL RESTORE ALL AREAS IMPACTED BY CONSTRUCTION ACTIVITY. THIS SHALL INCLUDE BUT IS NOT LIMITED TO GRASS AREAS, ROADS, PAVED AREAS, ETC..

CITY OF ROCKVILLE MONTGOMERY COUNTY, MARYLAND



LOCATION MAP
SCALE: 1"=1000'

CITY OF ROCKVILLE GENERAL NOTES (11/16)

1. THE APPLICANT IS THE ENTITY FOR WHICH THE CITY OF ROCKVILLE DEPARTMENT OF PUBLIC WORKS (DPW) HAS ISSUED A PERMIT. FOR DPW PROJECTS WHERE A PERMIT IS NOT APPLICABLE, THE ENTITY FOR WHICH THE CITY CONTRACT IS ISSUED SHALL BE CONSIDERED THE APPLICANT IN THESE NOTES. THE APPLICANT IS RESPONSIBLE FOR ALL CONTRACTORS, AGENTS, SUBCONTRACTORS, OR OTHER ENTITIES COMPLETING WORK UNDER THIS PERMIT AND/OR APPROVED PLAN.
2. THE APPLICANT MUST ARRANGE A PRE-CONSTRUCTION MEETING PRIOR TO COMMENCING ANY WORK. PROVIDE AT LEAST 48 HOURS OF NOTICE TO THE FOLLOWING: CITY PROJECT INSPECTOR LISTED IN THE PERMIT; CITY FORESTRY INSPECTOR AT 240-314-8711, IF REQUIRED BY EITHER A DPW AND/OR FORESTRY PERMIT; OR DPW SENIOR CONTROL INSPECTOR AT 240-314-8879, IF REQUIRED BY PERMIT.
3. THE APPLICANT MUST CONTACT MISS UTILITY AT 1-800-257-7777 OR #811 OR MISSUTILITY.NET SO THAT UTILITIES ARE MARKED PRIOR TO HOLDING ANY PRE-CONSTRUCTION MEETING.
4. INFORMATION CONCERNING EXISTING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS. THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF EXISTING UTILITIES BY DIGGING TEST PITS AT THE UTILITY CROSSINGS WELL IN ADVANCE OF TRENCHING. IF CLEARANCE IS LESS THAN SHOWN ON THIS PLAN, CONTACT THE PROFESSIONAL ENGINEER WHO STAMPED THE DESIGN PLANS BEFORE PROCEEDING WITH CONSTRUCTION.
5. MAINTAIN A MINIMUM ONE-FOOT VERTICAL CLEARANCE BETWEEN ALL CITY UTILITIES CROSSING ANY OTHER UTILITY, UNLESS OTHERWISE NOTED. MAINTAIN A FIVE-FOOT HORIZONTAL CLEARANCE BETWEEN A CITY UTILITY WITH ANY OTHER UTILITY OR STRUCTURE. THE ONLY EXCEPTION IS THAT THERE SHALL BE A TEN-FOOT HORIZONTAL CLEARANCE BETWEEN CITY WATER AND SEWER MAINS.
6. AT THE END OF EACH DAY, ALL TRENCHES SHALL BE BACKFILLED, ALL EQUIPMENT SECURED, AND THE AREA LEFT IN A SAFE CONDITION. STEEL PLATES ARE ALLOWED TO REMAIN NO LONGER THAN SEVEN DAYS. PLATES ARE TO BE NOTCHED (NEEDED) AND PINNED TO THE ROADWAY. PLATES MUST BE LARGE ENOUGH TO ALLOW A MINIMUM OF ONE-FOOT BEARING ON ALL FOUR SIDES OF THE PAVEMENT SURROUNDING THE EDGEMANT. THE STEEL PLATE REQUIREMENTS ONLY APPLY TO PUBLIC STREETS.
7. THE PUBLIC ROAD UTILITY PATCH SHALL BE IN ACCORDANCE WITH CITY STANDARD DETAIL #60, OR AS SHOWN ON THE PLANS. ALL TRENCHES IN PUBLIC STREETS SHALL BE FILLED WITH COMPACTED GRADED AGGREGATE BASE (GAB) FROM BELOW THE PAVEMENT TO THE TOP OF THE PIPE EMBEDMENT ZONE OR TO A DEPTH OF FIVE-FEET, WHICHEVER IS LESS.
8. DPW NORMAL WORKING HOURS ARE MONDAY THROUGH FRIDAY, EXCEPT HOLIDAYS, FROM 7 A.M. TO 5 P.M. THE CITY OBSERVES THE FOLLOWING HOLIDAYS: NEW YEAR'S DAY, MARTIN LUTHER KING JR. BIRTHDAY, PRESIDENT'S DAY, INDEPENDENCE DAY, LABOR DAY, VETERANS' DAY, THANKSGIVING DAY, THANKSGIVING FRIDAY, AND CHRISTMAS DAY. ALL DAYS OF GENERAL AND CONGRESSIONAL ELECTIONS THROUGHOUT THE STATE. THE CONTRACTOR WILL NOT BE PERMITTED TO CLOSE LANES OR DO ANY WORK THAT REQUIRES THE SERVICES OF THE CITY FORCES. ALL TRENCHES IN NORMAL WORKING HOURS, UNLESS LISTED IN THE PERMIT, SHALL BE OPENED AND REPAIRED BY DPW IN WRITING. HOWEVER, THE CONTRACTOR, WITH VERBAL PERMISSION OF DPW MAY BE PERMITTED TO WORK OUTSIDE OF THE NORMAL WORK HOURS FOR CLEAN-UP ACTIVITIES OR OTHER SUCH ITEMS THAT DO NOT ADVERSELY IMPACT TRAFFIC, RESIDENTS OR CITY SERVICES.
9. TRAFFIC WILL BE MAINTAINED ON ALL ROADWAYS WITHIN THE CONSTRUCTION AREA AS DIRECTED BY DPW. NO LANE CLOSURE SHALL BE PERMITTED BETWEEN 7:00-8:00 A.M. OR 3:30-6:00 P.M. MONDAY THROUGH FRIDAY, AN EXCEPTION IS THAT LANE CLOSURES ARE PERMITTED ON SECONDARY RESIDENTIAL STREETS AT ANY TIME DURING NORMAL WORKING HOURS. DEPARTMENT AND DESIGN OF ALL TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). IF REQUIRED, TRAFFIC CONTROL PLANS SHALL BE REVIEWED AND APPROVED BY THE CHIEF OF THE TRAFFIC AND TRANSPORTATION DIVISION. DPW MAY SUSPEND LANE CLOSURE OR OTHER TRAFFIC CONTROLS AT ANY TIME DURING, OR IN ADVANCE OF, INCIDENT WEATHER EVENTS.
10. SHEETING AND SHORING IS THE TOTAL RESPONSIBILITY OF THE APPLICANT. A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MARYLAND SHALL SEAL THESE DRAWINGS. PROVIDE THREE COPIES TO DPW FOR INFORMATIONAL PURPOSES ONLY.
11. IN ADDITION TO ALL CITY PERMITS, THE APPLICANT IS RESPONSIBLE TO ENSURE THAT ALL NECESSARY FEDERAL, STATE AND/OR MONTGOMERY COUNTY APPROVALS AND/OR PERMITS HAVE BEEN OBTAINED IN ASSOCIATION WITH THIS APPROVED PLAN.
12. SHOP DRAWINGS MUST BE PREPARED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MARYLAND PRIOR TO FABRICATION. THE PROFESSIONAL ENGINEER WHO SEALED THE DESIGN PLANS (BUT NOT THE SHOP DRAWINGS) MUST APPROVE THE SHOP DRAWINGS FOR CONFORMANCE TO THE APPROVED DESIGN. PROVIDE THREE COPIES OF APPROVED SHOP DRAWINGS TO DPW PRIOR TO CONSTRUCTION. STANDARD PRE-CAST STRUCTURES PREVIOUSLY LICENSED BY THE MARYLAND STATE HIGHWAY ADMINISTRATION, MONTGOMERY COUNTY AND WASHINGTON SUBURBAN SANITATION COMMISSION DO NOT REQUIRE A SHOP DRAWING SUBMISSION. USE ACTUAL FIELD SOILS DATA FOR DESIGN OF PIPES AND STRUCTURES. ALL PIPES AND STRUCTURES IN PAVED AREAS SHALL BE DESIGNED FOR HS-20 VEHICLE LOADING.
13. UPON COMPLETION OF CONSTRUCTION, THE APPLICANT SHALL PROVIDE THREE SETS OF RED LINED AS-BUILT PRINTS (24 X 36) FOR REVIEW AND APPROVAL BY DPW. THE DRAWINGS MUST CONTAIN THE ORIGINAL APPROVAL SIGNATURES AND PROFESSIONAL ENGINEER'S SEAL AND SIGNATURE (A SCANNED IMAGE OF THE ORIGINAL WILL BE ACCEPTABLE). THE AS-BUILT SHALL BE SEALED BY A PROFESSIONAL ENGINEER OR PROFESSIONAL SURVEYOR, AS APPROPRIATE AND MUST BE LICENSED BY THE STATE OF MARYLAND. THE SEAL SHALL NOTE THAT IT IS ONLY FOR THE AS-BUILT AND SHALL INCLUDE AN AS-BUILT CERTIFICATION ACCEPTABLE TO DPW. UPON RECEIPT OF WRITTEN APPROVAL, THE CONTRACTOR, WITH VERBAL PERMISSION OF DPW MAY BE PERMITTED TO WORK OUTSIDE OF THE NORMAL WORK HOURS FOR CLEAN-UP ACTIVITIES OR OTHER SUCH ITEMS THAT DO NOT ADVERSELY IMPACT TRAFFIC, RESIDENTS OR CITY SERVICES.
14. THE APPLICANT MUST NOTIFY THE MONTGOMERY COUNTY NOISE CONTROL ORDINANCE. PLEASE REFER TO THE MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION AT 240-777-7770, AISH@MONTGOMERYCOUNTYMD.GOV, OR WWW.MONTGOMERYCOUNTYMD.GOV/DEP

OPERATION, MAINTENANCE AND INSPECTION
INSPECTION OF THE PROJECTS SHOWN HEREON SHALL BE PERFORMED AT LEAST ANNUALLY IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS COMPLETED WITHIN USDA, NRCS STANDARDS AND SPECIFICATIONS FOR POND CONSTRUCTION. THE POND OWNERS AND ANY MANAGERS, SUCCESSORS OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE POND OWNERS SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATORS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.

SITE ANALYSIS

1. TOTAL SITE AREA:	5.90 ACRES
1.1. PROPOSED DISTURBED AREA:	2.35 ACRES
2. TOTAL AREA TO BE STABILIZED:	2.35 ACRES
2.1. TOTAL EX. IMPERVIOUS AREA:	0.18 ACRES
2.2. TOTAL EX. IMPERVIOUS AREA TO REMAIN:	0.18 ACRES
2.3. TOTAL IMP. IMPERVIOUS AREA:	0.00 ACRES
2.4. TOTAL TO BE STABILIZED WITH VEGETATION:	1.42 ACRES
2.5. TOTAL AREA TO BE STABILIZED:	0.75 ACRES
3. PROPOSED IMPERVIOUS AREA:	0.00 ACRES
4. ESTIMATED CUT:	4030 CY
5. ESTIMATED FILL:	300 CY

NOTE:
THE EARTHWORK QUANTITIES SHOWN HEREON ARE FOR INFORMATION PURPOSES ONLY. BAYLAND MAKES NO GUARANTEE OF ACCURACY OF QUANTITIES OR BALANCE OF SITE. THE DEVELOPER AND CONTRACTOR SHALL TAKE FULL RESPONSIBILITY OF ACTUAL EARTHWORK QUANTITIES ENCOUNTERED DURING CONSTRUCTION. ESTIMATED CUT QUANTITIES DO NOT INCLUDE UNDERCUT FOR RIBBAP, STONE, IMPERVIOUS BACKFILL OR THE STRIPPING OF TOPSOIL IN AREAS OF PROPOSED FILL OR OUTSIDE THE LIMITS OF GRADING. ESTIMATED FILL QUANTITIES DO NOT INCLUDE MATERIAL FILLS SUCH AS RIBBAP, STONE, IMPERVIOUS BACKFILL, OR TOPSOIL.

SHEET LIST TABLE

SHEET	DESCRIPTION
1	COVER SHEET
2/FC-01	TREE TABLE
3	BORING LOGS
4/FC-02	EXISTING CONDITIONS & NIN REMOVAL PLAN
5	SITE PLAN
6	PROFILES & DETAILS
7	PROFILES & NOTES
8	CROSS SECTIONS
9	RSC DETAILS & NOTES
10	NEAL DRIVE BORENMENT
11	WESLEY ROAD BORENMENT
12	STRUCTURE DETAILS & NOTES
13	DRAINAGE AREA MAP
14	EROSION & SEDIMENT CONTROL PLANS
15	EROSION & SEDIMENT CONTROL PLANS
16	EROSION & SEDIMENT CONTROL NOTES & DETAILS
17	EROSION & SEDIMENT CONTROL NOTES
18	TRAFFIC CONTROL PLAN
19/FC-03	FOREST CONSERVATION AND PLANTING PLAN
20/FC-04	FOREST CONSERVATION AND PLANTING PLAN NOTES AND DETAILS
21/FC-05	FOREST CONSERVATION AND PLANTING PLAN NOTES AND DETAILS
22/FC-06	FOREST CONSERVATION AND PLANTING PLAN NOTES

LEGEND

TRAVERSE POINT	TFS #	EX. LIGHT POLE	
EX. PROPERTY LINE/RIGHT-OF-WAY		EX. UTILITY POLE	
EX. MAJOR CONTOUR		EX. FIRE HYDRANT	
EX. MINOR CONTOUR		EX. SIGN	
EX. ROAD		EX. GUY WIRE	
EX. TREELINE		PR. MAJOR CONTOUR	
EX. WOOD FENCE		PR. MINOR CONTOUR	
EX. SOIL		PR. ODD CONTOUR	
EX. EASEMENT		BORING LOCATION	
EX. SEWER & MANHOLE		PR. LIMIT OF DISTURBANCE	
EX. STORM DRAIN, INLET & MANHOLE		PR. EASEMENT	
EX. WATER & VALVE		PR. RIBBAP	
EX. TREELINE		PR./EX. TO PATH	
EX. CRITICAL ROOT ZONE		PR./EX. DRAINAGE AREA	
EX. TREE		PR. TREELINE	
EX. TREE (TO BE REMOVED)		PR. CHAINLINK FENCE	
		PR. SD PIPE AND HEADWALL	

DESIGN AND QUANTITIES CERTIFICATION APPROVAL FOR WORK IN CITY PARKS

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE LATEST MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL CONSERVATION AND SEDIMENT CONTROL. THE ORDINANCE OF THE ROCKVILLE CITY CODE ESTIMATED TOTAL AMOUNT OF EXCAVATION AND FILL HAS BEEN COMPUTED TO BE 4,300 CUBIC YARDS OF EXCAVATION AND 300 CUBIC YARDS OF FILL AND THE TOTAL AREA TO BE DISTURBED AS SHOWN ON THESE PLANS HAS BEEN DETERMINED TO BE 2.35 ACRES, ALL OF WHICH IS ON-SITE, THE IMPERVIOUS AREA SUBJECT TO STORMWATER MANAGEMENT SHOWN ON THIS PLAN IS 27.99 ACRES.

Christopher Stepp
DIRECTOR OF RECREATION AND PARKS
2/16/21
DATE

Christopher Stepp
CHRISTOPHER STEPP P.E.
DATE 07/28/2021
33146
MD P.E. REGISTRATION NO.

OWNER'S/DEVELOPER'S CERTIFICATION

I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION OR DEVELOPMENT, OR ALL SUCH ACTIVITIES WHICH ARE PLANNED OR BEING CONDUCTED IN CONNECTION WITH THE PROJECT INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATION OF TRAINING AT A MINIMUM OF THE ENVIRONMENTAL APPROVAL TRAINING PROGRAM (EATP) FROM THE STATE OF MARYLAND AND EROSION BEFORE BEGINNING THE PROJECT AND THAT THE APPLICABLE SEDIMENT CONTROL PLAN SHALL BE IN ACCORDANCE WITH THE CITY OF ROCKVILLE AND THE STATE OF MARYLAND. I/WE THE UNDERSIGNED HEREBY MAKE THIS PLAN.

Craig L. Simonsau
2021.11.08 17:08:13-0500
DATE
OWNER/DEVELOPER SIGNATURE

USDA - NRCS MARYLAND POND CODE 378 APPROVAL

NO.	REVISIONS AFTER PLAN APPROVAL	P.E. INITIAL	DATE

Bayland Consultants & Designers, Inc.
"Integrating Engineering and Environment"
7455 New Ridge Road, Suite T Phone: (410) 694-9481
Hanover, Maryland 21076 Fax: (410) 694-9485
www.baylandinc.com
BAYLAND JOB NO. B_31981

DESIGNED *CS/SG*
DRAFTED *JS/AM*
CHECKED *CS*

DEPARTMENT OF PUBLIC WORKS
CITY OF
ROCKVILLE
111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGN PLAN APPROVAL

Craig L. Simonsau
2021.11.08 17:08:14-0500
DIRECTOR OF PUBLIC WORKS

PKWF *CS/SG* 2021-00009
SUPP 2021-00012 FTFP 2020-00001

AS BUILT PLAN APPROVAL
CHIEF, CONSTRUCTION MANAGEMENT
PLAN APPROVAL DATE

STORMWATER MANAGEMENT PLAN
COVER SHEET

NORTHEAST PARK SWM RETROFIT AND
STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND

PROFESSIONAL CERTIFICATION:
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 33146, EXPIRATION DATE: 01/14/2023
Christopher Stepp
CHRISTOPHER STEPP

DATE SUBMITTED:
10/8/2021

SCALE AS SHOWN

SHEET NO. 1 OF 21

FILE # F-295

IFB #05-22

EXISTING TREE SURVEY

Table with columns: TREE NUMBER, DBH IN (ONE IN STEM), DBH IN (AWLSTEM CALCULATED), LATIN NAME, COMMON NAME, CONDITION, CRZ (FT), LOCATION (IN QUANT FOREST), REPLACEMENTS REQUIRED. Contains tree survey data for trees 1 through 100.

Table with columns: TREE NUMBER, DBH IN (ONE IN STEM), DBH IN (AWLSTEM CALCULATED), LATIN NAME, COMMON NAME, CONDITION, CRZ (FT), LOCATION (IN QUANT FOREST), REPLACEMENTS REQUIRED. Contains tree survey data for trees 101 through 200.

Table with columns: TREE NUMBER, DBH IN (ONE IN STEM), DBH IN (AWLSTEM CALCULATED), LATIN NAME, COMMON NAME, CONDITION, CRZ (FT), LOCATION (IN QUANT FOREST), REPLACEMENTS REQUIRED. Contains tree survey data for trees 201 through 300.

Table with columns: TREE NUMBER, DBH IN (ONE IN STEM), DBH IN (AWLSTEM CALCULATED), LATIN NAME, COMMON NAME, CONDITION, CRZ (FT), LOCATION (IN QUANT FOREST), REPLACEMENTS REQUIRED. Contains tree survey data for trees 301 through 400.

QUALIFIED PROFESSIONAL CERTIFICATION
I CERTIFY THAT I AM A DULY CERTIFIED PROFESSIONAL ENGINEER QUALIFIED TO PREPARE AND SEAL THE PLANS FOR THIS PROJECT.
SIGNED: _____ DATE: 07/12/2021
JASON TRABAND
7455 NEW RIDGE ROAD, SUITE 1
HANOVER, MARYLAND 21076
410-694-9401
JTR@NORWELANDINC.COM

Consultants & Designers, Inc.
"Integrating Engineering and Environment"
7455 New Ridge Road, Suite T
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BAYLAND JOB NO. 8-31901

DEPARTMENT OF PUBLIC WORKS
CITY OF
ROCKVILLE
111 MARYLAND AVE.
ROCKVILLE, MARYLAND

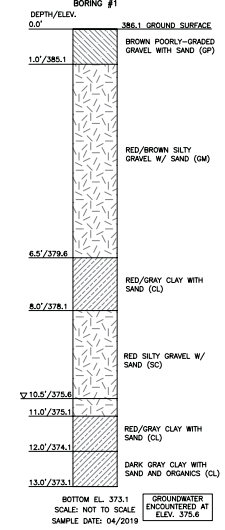
DESIGN PLAN APPROVAL
AS BUILT PLAN APPROVAL
Stamp: Chief S. Serotina, 382-1108, 1783-526102
Stamp: Director of Public Works
Stamp: PMP# SUPP 2021-00012
Stamp: SPP# 2021-00009

STORMWATER MANAGEMENT PLAN
TREE TABLE
Stamp: Chief, Construction Management
Stamp: PLAN APPROVAL DATE

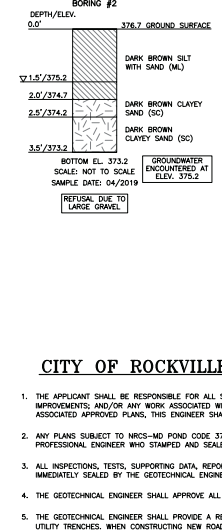
NORTHEAST PARK SWM RETROFIT AND
STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND

DATE SUBMITTED: 10/9/2021
NO. REVISIONS: 0
SCALE: AS SHOWN
SHEET NO. 2
FILE # F-295
OF 22

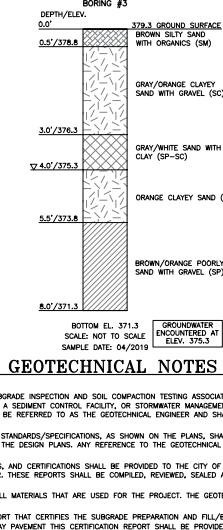
SOIL BORING LOG



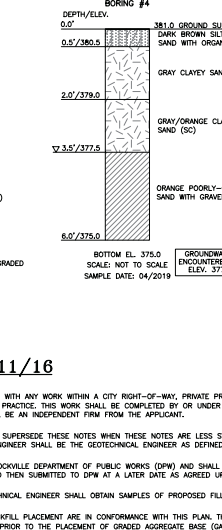
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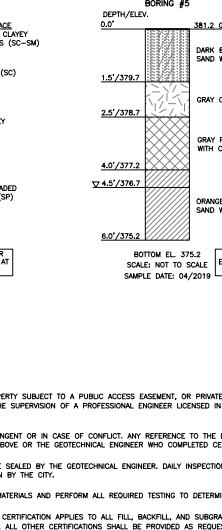
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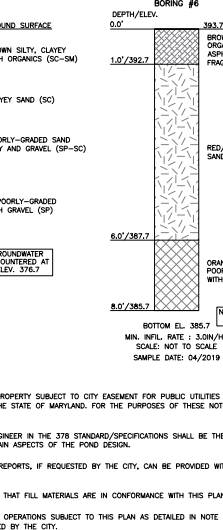
SOIL BORING LOG



SOIL BORING LOG



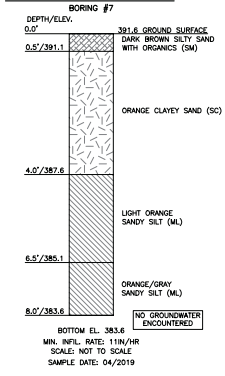
SOIL BORING LOG



CITY OF ROCKVILLE GEOTECHNICAL NOTES 11/16

- THE APPLICANT SHALL BE RESPONSIBLE FOR ALL SUBGRADE INSPECTION AND SOIL COMPACTION TESTING ASSOCIATED WITH ANY WORK WITHIN A CITY RIGHT-OF-WAY, PRIVATE PROPERTY SUBJECT TO A PUBLIC ACCESS EASEMENT, OR PRIVATE PROPERTY SUBJECT TO CITY EASEMENT FOR PUBLIC UTILITIES OR PUBLIC IMPROVEMENTS; AND/OR ANY WORK ASSOCIATED WITH A SEDIMENT CONTROL FACILITY, OR STORMWATER MANAGEMENT PRACTICE. THIS WORK SHALL BE COMPLETED BY OR UNDER THE SUPERVISION OF A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MARYLAND. FOR THE PURPOSES OF THESE NOTES AND ASSOCIATED APPROVED PLANS, THIS ENGINEER SHALL BE REFERRED TO AS THE GEOTECHNICAL ENGINEER AND SHALL BE AN INDEPENDENT FIRM FROM THE APPLICANT.
- ANY PLANS SUBJECT TO NRCS-MD POND CODE 378 STANDARDS/SPECIFICATIONS, AS SHOWN ON THE PLANS, SHALL SUPERSEDE THESE NOTES WHEN THESE NOTES ARE LESS STRINGENT OR IN CASE OF CONFLICT. ANY REFERENCE TO THE ENGINEER IN THE 378 STANDARD/SPECIFICATIONS SHALL BE THE PROFESSIONAL ENGINEER WHO STAMPED AND SEALED THE DESIGN PLANS. ANY REFERENCE TO THE GEOTECHNICAL ENGINEER AS DEFINED ABOVE OR THE GEOTECHNICAL ENGINEER WHO COMPLETED CERTAIN ASPECTS OF THE POND DESIGN.
- ALL INSPECTIONS, TESTS, SUPPORTING DATA, REPORTS, AND CERTIFICATIONS SHALL BE PROVIDED TO THE CITY OF ROCKVILLE DEPARTMENT OF PUBLIC WORKS (DPW) AND SHALL BE SEALED BY THE GEOTECHNICAL ENGINEER. DAILY INSPECTION REPORTS, IF REQUESTED BY THE CITY, CAN BE PROVIDED WITHOUT BEING IMMEDIATELY SEALED BY THE GEOTECHNICAL ENGINEER. THESE REPORTS SHALL BE COMPLETED, REVIEWED, SEALED AND THEN SUBMITTED TO DPW AT A LATER DATE AS AGREED UPON BY THE CITY.
- THE GEOTECHNICAL ENGINEER SHALL APPROVE ALL FILL MATERIALS THAT ARE USED FOR THE PROJECT. THE GEOTECHNICAL ENGINEER SHALL OBTAIN SAMPLES OF PROPOSED FILL MATERIALS AND PERFORM ALL REQUIRED TESTING TO DETERMINE THAT FILL MATERIALS ARE IN CONFORMANCE WITH THIS PLAN.
- THE GEOTECHNICAL ENGINEER SHALL PROVIDE A REPORT THAT CERTIFIES THE SUBGRADE PREPARATION AND FILL/BACKFILL PLACEMENT ARE IN CONFORMANCE WITH THE PLAN. THE CERTIFICATION APPLIES TO ALL FILL, BACKFILL, AND SUBGRADE OPERATIONS SUBJECT TO THIS PLAN AS DETAILED IN NOTE #1, INCLUDING UTILITY TRENCHES. WHEN CONSTRUCTING NEW ROADWAY PAVEMENT THIS CERTIFICATION REPORT SHALL BE PROVIDED PRIOR TO THE PLACEMENT OF GRADED AGGREGATE BASE (GAB). ALL OTHER CERTIFICATIONS SHALL BE PROVIDED AS REQUESTED BY THE CITY.
- ALL FILL AND/OR BACKFILL MATERIAL SHALL BE FREE FROM ORGANICS, FROZEN MATERIAL, ROCKS/STONES GREATER THAN ONE AND A HALF INCHES IN ANY DIMENSION, WASTE METAL PRODUCTS, UNSHIPPED DEBRIS, TOXIC MATERIAL, OR OTHER DELETERIOUS MATERIALS; SHALL BE A MINIMUM OF 100 POUNDS PER CUBIC FOOT FOR THE MAXIMUM DRY DENSITY ACCORDING TO AASHTO T-190, METHOD C; AND SHALL NOT HAVE A LIQUID LIMIT GREATER THAN 30 NOR A PLASTICITY INDEX GREATER THAN SIX ACCORDING TO ASTM D-4318. ALL OTHER MATERIALS SHALL MEET THE REQUIREMENTS STATED IN CATEGORY 900 OF THE LATEST EDITION OF THE MARYLAND STATE HIGHWAY ADMINISTRATION (MSHA) STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS.
- COMPACT THE MATERIAL THAT IS ONE FOOT BELOW THE TOP OF SUBGRADE TO AT LEAST 92 PERCENT OF THE MAXIMUM DRY DENSITY PER AASHTO T-180. COMPACT THE TOP ONE FOOT TO AT LEAST 97 PERCENT OF THE MAXIMUM DRY DENSITY. WHEN NECESSARY, ADD WATER OR DRY THE CATEGORY IN ORDER TO COMPACT TO THE REQUIRED DENSITY. GENERALLY THE MATERIAL SHALL BE WITHIN TWO PERCENT OF THE OPTIMUM MOISTURE CONTENT BUT MAY BE OUTSIDE OF THIS RANGE IF APPROVED BY THE GEOTECHNICAL ENGINEER.
- FILL AND BACKFILL MATERIALS MUST COMPLETELY FILL ALL SPACES UNDER AND ADJACENT TO THE STRUCTURE OR PIPE. FOR STORMWATER MANAGEMENT EMBANKMENTS, THE APPLICANT SHALL SCARIFY EACH LIFT WITH A SHEEPSFOOT ROLLER OR CLAW TO A MINIMUM DEPTH OF TWO-INCHES PRIOR TO PLACING THE NEXT LIFT. THE APPLICANT SHALL SCARIFY EMBANKMENTS PARALLEL WITH THE CENTERLINE OF THE DRAIN CORSE. PERPENDICULAR TO THE PRINCIPAL SLOPE, BEDDING SHALL BE PROVIDED IN ACCORDANCE WITH DETAILS INDICATED ON THE CONSTRUCTION DRAWINGS. AT NO TIME DURING THE BACKFILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE CLOSER THAN FOUR-FEET, MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE. UNDER NO CIRCUMSTANCES SHALL THE APPLICANT DRIVE EQUIPMENT OVER ANY PART OF A CORRUGATED METAL PIPE UNLESS THERE IS A COMPACTED FILL OF 24-INCHES OR GREATER OVER THE STRUCTURE OR PIPE.
- AT A MINIMUM, COMPACTION TESTS SHALL BE COMPLETED FOR EVERY LIFT OF FILL OR BACKFILL. THE TESTING FREQUENCY SHALL BE AT LEAST ONCE PER 150 LINEAR FEET OF TRENCH OR ONCE PER 1,500 SQUARE FEET OF FILL. AT A MINIMUM, THERE SHALL BE AT LEAST ONE COMPACTION TEST PER LIFT AND A LEAST TWO COMPACTION TESTS PER DAY. THE GEOTECHNICAL ENGINEER SHALL SUPPLY DPW WITH CERTIFIED COMPACTION TEST RESULTS, INCLUDING CERTIFICATION OF PIPE BEGING SUBGRADE AND FILL SUBGRADE.
- PRIOR TO PLACING ANY ROADWAY FILL ON EXISTING GRADES (ORIGINAL GRADE AFTER TOPSOIL HAS BEEN STRIPPED), FILL PREPARED BY OTHERS OUTSIDE OF THIS PLAN OR FILL NOT PREPARED UNDER THE SUPERVISION OF THE GEOTECHNICAL ENGINEER, SCARIFY THE MINIMUM TOP EIGHT-INCHES OF SOIL MATERIAL. COMPACT THIS LAYER TO THE COMPACTION REQUIREMENTS IN THESE NOTES. PROOF-ROLL THIS COMPACTED LAYER USING A FULLY LOADED DUMP TRUCK (MINIMUM 20 TON PAYLOAD CAPACITY). THE GEOTECHNICAL ENGINEER SHALL INSPECT THE PROOF-ROLLING AND DETERMINE IF THE SUBGRADE IS ACCEPTABLE OR IF THERE ARE AREAS THAT REQUIRE REMEDIATION. SUBGRADE AREAS THAT FAIL PROOF-ROLLING SHALL BE REMEDIATED TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER BY EITHER OF THE FOLLOWING METHODS:
 - SCARIFYING, MOISTURE CONDITIONING, AND RE-COMPACTION OF THE SUBGRADE MATERIALS.
 - UNDERCUTTING SOFT OR UNSUITABLE AREAS OF SUBGRADE AND BACKFILLING WITH COMPACTED SELECT BORROW (MSHA SECTION 916).
 - UNDERCUTTING OF SOFT OR UNSUITABLE AREAS OF SUBGRADE AND PLACING A LAYER OF GEOTEXTILE COVERED BY MD SHA #57 COARSE AGGREGATE (TABLE 901A).
 DPW MAY APPROVE AN ALTERNATE APPROACH FOR SOIL REMEDIATION/IMPROVEMENT IF IT IS RECOMMENDED AND SEALED BY THE GEOTECHNICAL ENGINEER.
- EXCEPT WHEN SPECIFIED, DO NOT PLACE LAYERS EXCEEDING EIGHT-INCHES UN-COMPACTED DEPTH. PLACE THE MATERIAL IN HORIZONTAL LAYERS ACROSS THE FULL WIDTH OF THE EMBANKMENT. PERFORM ALL ROLLING IN A LONGITUDINAL DIRECTION ALONG THE EMBANKMENT. BEGIN AT THE OUTER EDGES AND PROGRESS TOWARDS THE CENTER. VARY THE TRAVEL PATHS OF TRAFFIC AND EQUIPMENT OVER THE WIDTH OF THE EMBANKMENT TO AID IN OBTAINING UNIFORM COMPACTION.
- UNIFORMLY GRADE AREAS TO A SMOOTH SURFACE, FREE OF IRREGULAR SURFACE CHANGES. GRADE AND PREPARE THE SUBGRADE SECTION TO THE LINES, GRADES, CROSS SECTIONS AND/OR ELEVATIONS SHOWN ON THE PLANS. AT ALL TIMES, MAINTAIN THE SUBGRADE SURFACE IN SUCH CONDITION AS TO READILY DRAIN.
- DO NOT PLACE BACKFILL OR FILL SOIL MATERIAL ON SURFACES THAT ARE MUDDY, FROZEN, OR CONTAIN FROST OR ICE. VEHICULAR AND EQUIPMENT TRAFFIC SHALL BE DISTRIBUTED ACROSS THE PREPARED SURFACE IN SUCH A MANNER AS TO PREVENT DISTURBANCE. REPAIR ANY DAMAGE TO THE PREPARED SURFACE TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER. THE GEOTECHNICAL ENGINEER MUST APPROVE THE STORAGE OR STOCKPILING OF HEAVY LOADS ON A ROADWAY SURFACE.
- UNSATISFACTORY EXISTING FILL, SOFT OR LOOSE NATURAL SOILS, ORGANIC MATERIAL, AND RUBBLE SHALL BE STRIPPED TO APPROVED GRADES AS DETERMINED BY THE GEOTECHNICAL ENGINEER.
- PROTECT ALL STRUCTURES AND UTILITIES FROM ANY DAMAGE IN THE HANDLING, PROCESSING OR COMPACTING OF EMBANKMENT OR BACKFILL MATERIAL. EXERCISE CAUTION NEAR ARCHES, RETAINING WALLS, CULVERTS AND UTILITY TRENCHES TO PREVENT UNDUE STRAIN OR MOVEMENT. THE GEOTECHNICAL ENGINEER MAY REQUIRE THE USE OF SPECIALLY SELECTED MATERIAL ADJACENT TO STRUCTURES TO PROTECT AGAINST DAMAGE. DO NOT USE ROCK GREATER THAN ONE AND A HALF INCHES IN ANY DIMENSION ADJACENT TO STRUCTURES.
- WHEN PLACING AND COMPACTING EMBANKMENT ON HILLSIDES OR AGAINST EXISTING EMBANKMENTS, CONTINUOUSLY BENCH THE SLOPES WHERE THE SLOPE IS STEEPER THAN 4:1 WHEN MEASURED AT RIGHT ANGLES TO THE ROADWAY OR EMBANKMENT CENTERLINE. PERFORM THE BENCHING OPERATION AS THE EMBANKMENT IS CONSTRUCTED IN LAYERS. MAINTAIN A BENCH WIDTH OF AT LEAST FIVE-FEET, BEGIN EACH HORIZONTAL CUT AT THE INTERSECTION OF THE ORIGINAL GROUND AND THE VERTICAL SIDES OF THE PREVIOUS CUT. IF THE MATERIAL CUT FROM THE BENCHES MEETS FILL REQUIREMENTS, COMPACT THIS MATERIAL ALONG WITH THE NEW EMBANKMENT MATERIAL.
- WHEN PLACING FILL OVER EXISTING PAVEMENT, THOROUGHLY BREAK UP, SCARIFY, OR REMOVE THE PAVEMENT AS SPECIFIED OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
- PRIOR TO THE PLACEMENT OF ASPHALT PAVEMENT, PROOF-ROLL THE COMPACTED GRADED AGGREGATE BASE (GAB) LAYER USING A FULLY LOADED DUMP TRUCK (MINIMUM 20 TON PAYLOAD CAPACITY). THE GEOTECHNICAL ENGINEER SHALL INSPECT THE PROOF-ROLLING AND DETERMINE IF THE GAB IS ACCEPTABLE OR IF THERE ARE AREAS THAT REQUIRE REMEDIATION. GAB AREAS THAT FAIL PROOF-ROLLING SHALL BE REMEDIATED TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER BY EITHER OF THE FOLLOWING METHODS:
 - SCARIFYING, MOISTURE CONDITIONING, AND RE-COMPACTION OF THE GAB MATERIALS.
 - UNDERCUTTING SOFT OR UNSUITABLE AREAS OF GAB AND REPLACING WITH COMPACTED GAB.
 DPW MAY APPROVE AN ALTERNATE APPROACH FOR GAB REMEDIATION/IMPROVEMENT IF IT IS RECOMMENDED AND SEALED BY THE GEOTECHNICAL ENGINEER. THE GEOTECHNICAL ENGINEER SHALL PROVIDE A SEALED APPROVAL OF THE GAB PRIOR TO PLACEMENT OF ASPHALT. DPW MAY ACCEPT AN ORAL OR EMAIL APPROVAL WHILE THE FINAL APPROVAL AND REPORTS ARE BEING COMPILED AND COMPLETED.

SOIL BORING LOG



SOIL CLASSIFICATION

BORING NUMBER	DEPTH (FEET)	MOISTURE CONTENT (%)	SOIL DESCRIPTION (USC)	PERCENT PASSING			PERCENT PASSING					BULK DENSITY (G/CM ³)	BULK DENSITY (LB/FT ³)	NOTES		
				LL	PL	PI	NO. 1 IN SIEVE	1/2 IN SIEVE	NO. 4 SIEVE	NO. 10 SIEVE	NO. 40 SIEVE				NO. 60 SIEVE	NO. 100 SIEVE
B-2	2'-2.5'		DARK BROWN SILTY, CLAYEY SAND				72.7	70.9	67.4	67.2	63.3	53.6	43.2	1.46	91.14	
B-3	0.5'-3'		GRAY/ORANGE CLAYEY SAND WITH GRAVEL				97.2	90.5	89.9	83.8	68.9	50.9	26.0	1.49	93.02	
B-4	2'-3.5'		GRAY/ORANGE CLAYEY SAND				100	100	97.6	97.6	95.8	95.8	24.9	1.50	93.64	
B-5	1.5'-2.5'		GRAY CLAYEY SAND				100	100	96.7	96.6	93	93	75.1	1.58	98.64	
B-1	1'-6.5'		RED/BROWN SILTY GRAVEL WITH SAND	35	26	9	76.6	72.7								
B-2	2.5'-3.5'		DARK BROWN CLAYEY SAND	30	22	8	100	100	97.2	90.5	89.9	83.8	68.9	50.9	26.0	
B-6	1'-4'		RED/BROWN CLAYEY SAND	32	21	11	100	100	97.6	97.6	95.8	95.8	24.9			
B-7	4'-4.5'		LIGHT ORANGE SANDY SILT	35	27	8	100	100	96.7	96.6	93	93	75.1			

- NOTES:
 1. SOIL BORINGS ARE NOT TO SCALE.
 2. BORING LAYERS IDENTIFIED IN THE SOIL CLASSIFICATION TABLE HAVE UNDERGONE LABORATORY TESTING AND ASTM D2487 USCS CLASSIFICATION PROCEDURES. ALL OTHER BORING LOGS ARE BASED ON VISUAL FIELD CLASSIFICATION ONLY.
 3. SOIL BORINGS WERE OBTAINED FOR DESIGN PURPOSES ONLY. BORING DATA IS PROVIDED FOR THE CONTRACTOR'S CONVENIENCE AND IS ACCURABLE ONLY AT THE SPECIFIC POINTS WHERE THE BORINGS WERE PERFORMED. NO WARRANTY IS IMPLIED FOR THE CONTINUITY OF SUBSURFACE CONDITIONS.

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CITY OF ROCKVILLE
 111 MARYLAND AVE. ROCKVILLE, MARYLAND

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 CHIEF, CONSTRUCTION MANAGEMENT
 PLAN APPROVAL DATE

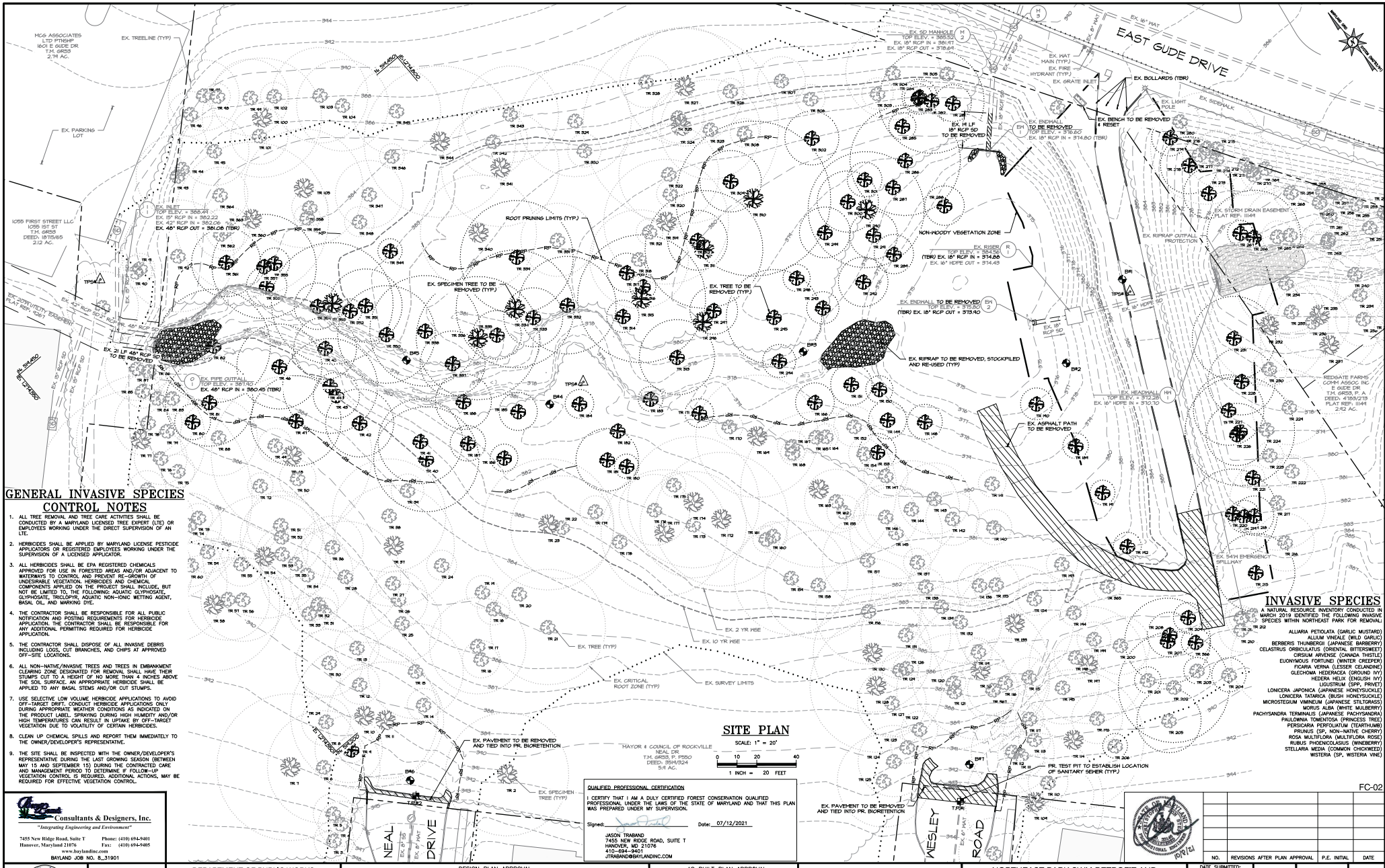
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STORMWATER MANAGEMENT PLAN
 BORING LOGS

NORTHEAST PARK SWM RETROFIT AND STREAM RESTORATION
 BURGUNDY & CHESTNUT GROVE, P550
 CITY OF ROCKVILLE, MARYLAND

DATE SUBMITTED: 10/8/2021
 REVISIONS AFTER PLAN APPROVAL
 SCALE: -
 SHEET NO. 3 OF 22
 FILE # F-295

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GENERAL INVASIVE SPECIES CONTROL NOTES

1. ALL TREE REMOVAL AND TREE CARE ACTIVITIES SHALL BE CONDUCTED BY A MARYLAND LICENSED TREE EXPERT (LTE) OR EMPLOYEES WORKING UNDER THE DIRECT SUPERVISION OF AN LTE.
2. HERBICIDES SHALL BE APPLIED BY MARYLAND LICENSE PESTICIDE APPLICATORS OR REGISTERED EMPLOYEES WORKING UNDER THE SUPERVISION OF A LICENSED APPLICATOR.
3. ALL HERBICIDES SHALL BE EPA REGISTERED CHEMICALS APPROVED FOR USE IN FORESTED AREAS AND/OR ADJACENT TO WATERWAYS TO CONTROL AND PREVENT RE-GROWTH OF UNDERGROUND VEGETATION, HERBICIDES AND CHEMICAL COMPONENTS APPLIED ON THE PROJECT SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING: AGUATEX SUPPRESSANT, GLYPHOSATE, TRICLOPYR, GLYCOLIC NON-IONIC WEEDING AGENT, BASKO OIL, AND MARKING DYE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PUBLIC NOTIFICATION AND POSTING REQUIREMENTS FOR HERBICIDE APPLICATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING REQUIRED FOR HERBICIDE APPLICATION.
5. THE CONTRACTOR SHALL DISPOSE OF ALL INVASIVE DEBRIS INCLUDING LOGS, CUT BRANCHES, AND CHIPS AT APPROVED OFF-SITE LOCATIONS.
6. ALL NON-NATIVE/INVASIVE TREES AND TREES IN EMBARMENT CLEARING ZONE DESIGNATED FOR REMOVAL SHALL HAVE THEIR STUMPS CUT TO A HEIGHT OF NO MORE THAN 4 INCHES ABOVE THE SOIL SURFACE. AN APPROPRIATE HERBICIDE SHALL BE APPLIED TO ANY BASAL STEMS AND/OR CUT STUMPS.
7. USE SELECTIVE LOW VOLUME HERBICIDE APPLICATIONS TO AVOID OFF-TARGET DRIFT. CONDUCT HERBICIDE APPLICATIONS ONLY DURING APPROPRIATE WEATHER CONDITIONS AS INDICATED ON THE PRODUCT LABEL. SPRAYING DURING HIGH HUMIDITY AND/OR HIGH TEMPERATURES CAN RESULT IN UPTAKE BY OFF-TARGET VEGETATION DUE TO VOLATILITY OF CRYSTAL HERBICIDES.
8. CLEAN UP CHEMICAL SPILLS AND REPORT THEM IMMEDIATELY TO THE OWNER/DEVELOPER'S REPRESENTATIVE.
9. THE SITE SHALL BE INSPECTED WITH THE OWNER/DEVELOPER'S REPRESENTATIVE DURING THE LAST GROWING SEASON (BETWEEN MAY 15 AND SEPTEMBER 15) DURING THE CONTRACTED CARE AND MANAGEMENT PERIOD TO DETERMINE IF FOLLOW-UP VEGETATION CONTROL IS REQUIRED. ADDITIONAL ACTIONS MAY BE REQUIRED FOR EFFECTIVE VEGETATION CONTROL.

INVASIVE SPECIES

- A NATURAL RESOURCE INVENTORY CONDUCTED IN MARCH 2018 IDENTIFIED THE FOLLOWING INVASIVE SPECIES WITHIN NORTHEAST PARK FOR REMOVAL:
- ALLIARIA PETIOLATA (GARLIC MUSTARD)
 - ALHAMBRA VINE (WILD GARLIC)
 - Berberis thunbergii (JAPANESE BARBERY)
 - Celastrus orbiculatus (ORIENTAL Bittersweet)
 - Cirsium arvense (CANADA THISTLE)
 - Euonymus fortunei (WINTER CREEPER)
 - Fragaria vesca (LESSER CELANDE)
 - Glechoma hederacea (GROUND HNY)
 - Hedera helix (ENGLISH IVY)
 - Loganberry (SP. PRIVET)
 - LONGICHA TATARICA (BUSH HONEYSUCKLE)
 - Microcotyle yunnanensis (JAPANESE STICKLE)
 - Morus alba (WHITE MULBERRY)
 - Pachysandra terminalis (JAPANESE PACYNSANDRA)
 - Palafoxia tomentosa (PRINCESS TREE)
 - PERFORATA PROLETARIUM (TEARLEAF)
 - Rosa multiflora (MULTIFLORA ROSE)
 - Rubus phoenicolasus (WINEBERRY)
 - Stellaria media (COMMON CHICKWEED)
 - Wisteria (SP. WISTERIA VINE)

SITE PLAN

SCALE: 1" = 20'
0 10 20 40
1 INCH = 20 FEET

QUALIFIED PROFESSIONAL CERTIFICATION
I CERTIFY THAT I AM A DULY CERTIFIED FOREST CONSERVATION QUALIFIED PROFESSIONAL UNDER THE LAWS OF THE STATE OF MARYLAND AND THAT THIS PLAN WAS PREPARED UNDER MY SUPERVISION.
Signed: _____ Date: 07/12/2021
JASON TRABAND
7455 NEW RIDGE ROAD, SUITE 1
HANOVER, MD 21076
410-684-8401
JTRABAND@BAYLANDINC.COM

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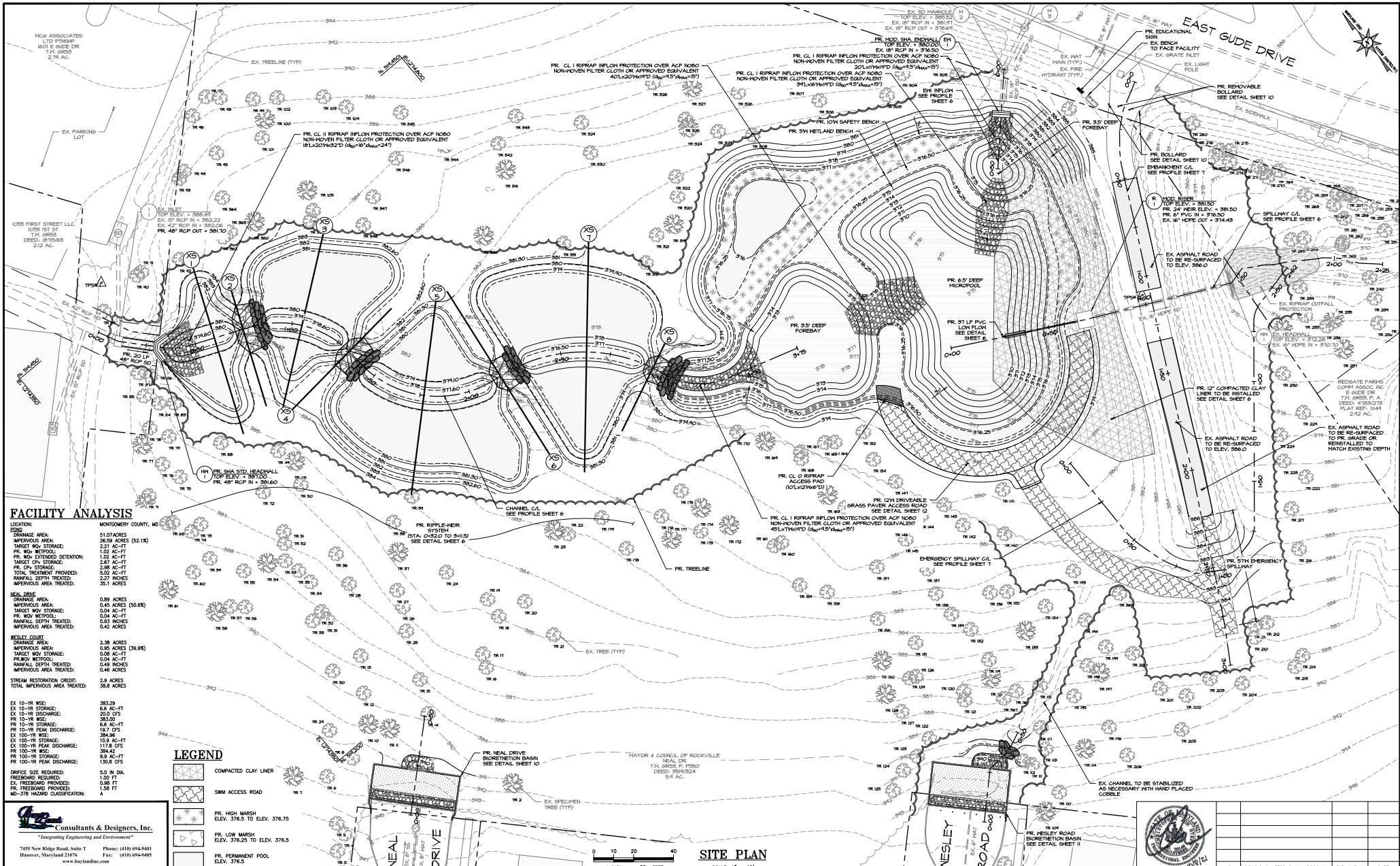
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DIR. OF PUBLIC WORKS
PKF SC97 2021-00009
SMP9 2021-00012 FTP9 2020-00001
PLAN APPROVAL DATE

AS BUILT PLAN APPROVAL
CHIEF, CONSTRUCTION MANAGEMENT
PLAN APPROVAL DATE

STORMWATER MANAGEMENT PLAN
EXISTING CONDITIONS & NNI REMOVAL PLAN
NORTHEAST PARK SWM RETROFIT AND STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND

NO.	REVISIONS AFTER PLAN APPROVAL	P.E. INITIAL	DATE

DATE SUBMITTED: 10/8/2021
SCALE: 1" = 20'
SHEET NO. 4 OF 22
FILE # F-295



FACILITY ANALYSIS

LOCATION: MONTGOMERY COUNTY, MD

FORM

51.07 ACRES
IMPERVIOUS AREA: 26.59 ACRES (52.1%)
TARGET WQ STORAGE: 1.02 AC-FT
PR. WQ METEOROL: 1.02 AC-FT
PR. WQ EXTENDED DETENTION: 1.02 AC-FT
TARGET CFS STORAGE: 2.47 AC-FT
PR. CFS STORAGE: 2.48 AC-FT
TOTAL TREATMENT PROVIDED: 5.03 AC-FT
RAINFALL DEPTH TREATED: 2.27 INCHES
IMPERVIOUS AREA TREATED: 35.1 ACRES

NEAL DRIVE

0.89 ACRES
IMPERVIOUS AREA: 0.42 ACRES (50.8%)
TARGET WQ STORAGE: 0.04 AC-FT
PR. WQ METEOROL: 0.04 AC-FT
PR. WQ EXTENDED DETENTION: 0.04 AC-FT
TOTAL TREATMENT PROVIDED: 0.08 AC-FT
RAINFALL DEPTH TREATED: 0.42 ACRES

WESLEY ROAD

2.38 ACRES
IMPERVIOUS AREA: 0.85 ACRES (39.9%)
TARGET WQ STORAGE: 0.08 AC-FT
PR. WQ METEOROL: 0.08 AC-FT
PR. WQ EXTENDED DETENTION: 0.08 AC-FT
TOTAL TREATMENT PROVIDED: 0.16 AC-FT
RAINFALL DEPTH TREATED: 0.44 ACRES

STREAM RESTORATION CHANNELS

2.51 ACRES
TOTAL IMPERVIOUS AREA TREATED: 38.8 ACRES

EX 10-1R WQ: 380.29
EX 10-1R STORAGE: 6.4 AC-FT
EX 10-1R DISCHARGE: 20.0 CFS
PR 10-1R WQ: 380.00
PR 10-1R STORAGE: 6.4 AC-FT
PR 10-1R PEAK DISCHARGE: 19.7 CFS
EX 10-1R WQ: 384.96
EX 10-1R STORAGE: 10.58 AC-FT
EX 10-1R PEAK DISCHARGE: 30.42
PR 10-1R WQ: 384.96
PR 10-1R STORAGE: 8.8 AC-FT
PR 10-1R PEAK DISCHARGE: 13.8 CFS

ORFICE SIZE REQUIRED: 5.0 IN DIA.
FREEDOM PROVIDED: 1.08 FT
EX. FREEDOM PROVIDED: 0.98 FT
PR. FREEDOM PROVIDED: 1.08 FT
MD-378 HAZARD CLASSIFICATION: A

LEGEND

- COMPACTED CLAY LINER
- SWM ACCESS ROAD
- PR. HIGH MARSH ELEV. 376.5 TO ELEV. 376.75
- PR. LOW MARSH ELEV. 376.25 TO ELEV. 376.5
- PR. PERMANENT POOL ELEV. 376.5

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CITY OF ROCKVILLE
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DESIGN PLAN APPROVAL

AS BUILT PLAN APPROVAL

DATE SUBMITTED: 10/9/2021
SCALE: 1" = 20'
SHEET NO. 5 OF 22
FILE # F-295

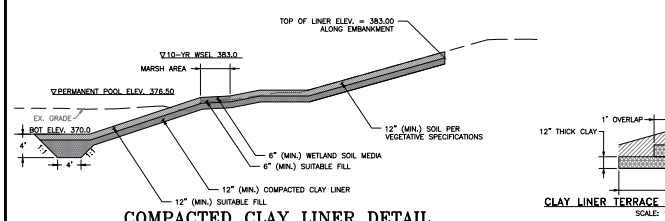
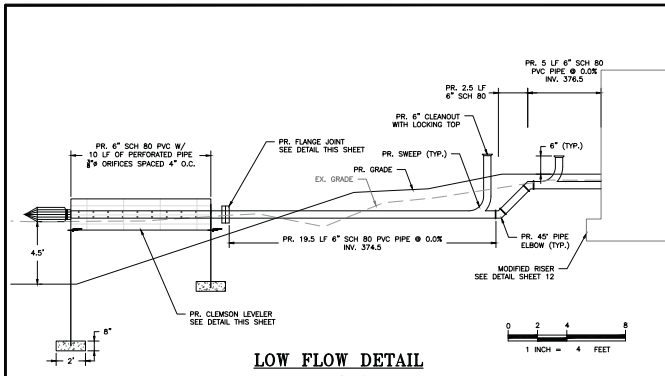
STORMWATER MANAGEMENT PLAN
SITE PLAN

DATE SUBMITTED: 10/9/2021
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SHEET NO. 5 OF 22
FILE # F-295

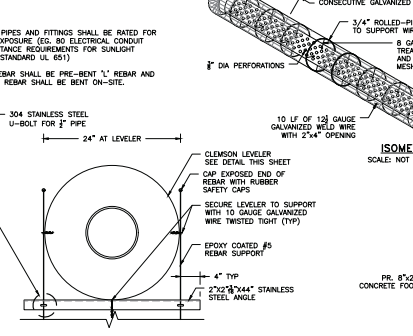
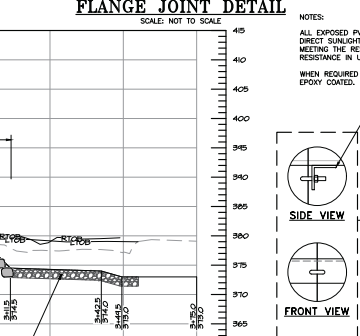
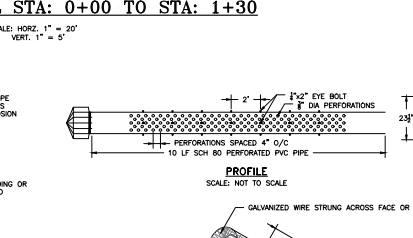
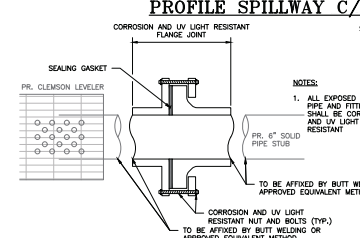
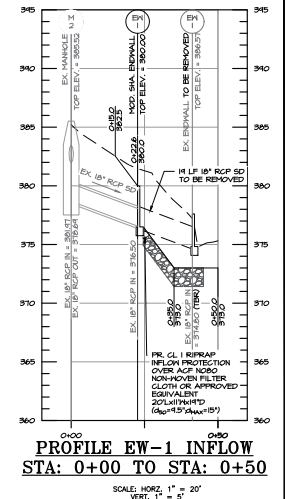
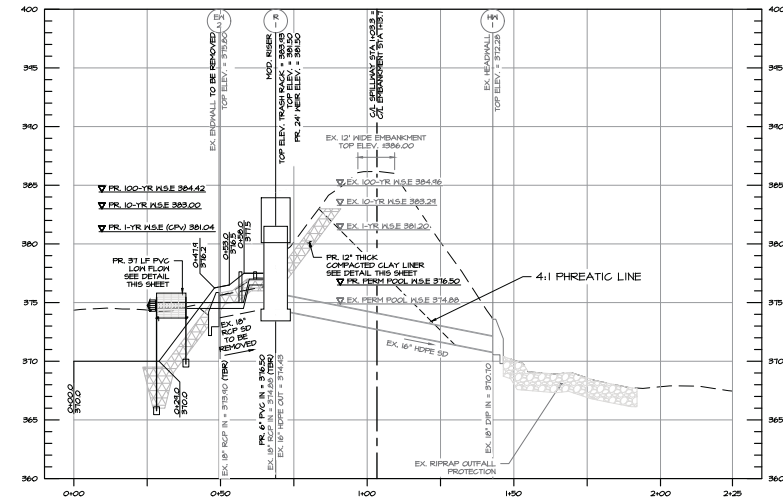
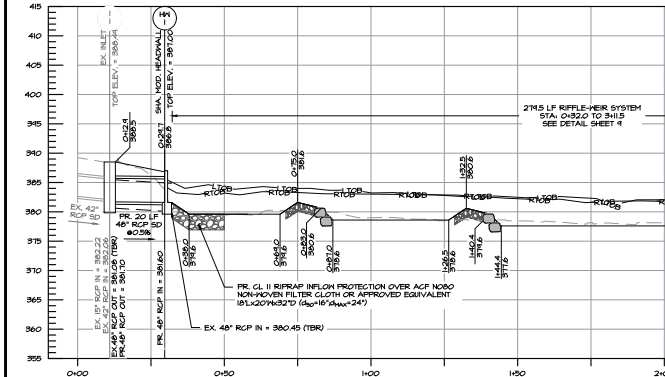
NORTHEAST PARK SWM RETROFIT AND STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND

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SHEET NO. 5 OF 22
FILE # F-295



- NOTES:**
1. THE 12" COMPACTED CLAY LINER SHALL MEET THE MD-378 REQUIREMENTS FOR IMPERVIOUS MATERIAL (OC, SC, CH, CL) AND SHALL HAVE A PERMEABILITY OF LESS THAN 10⁻⁷ CM/SEC.
 2. THE 12" COMPACTED CLAY LINER SHALL BE INSTALLED AS PER MD-378 CONSTRUCTION SPECIFICATIONS, IN TWO (2) 8" LIFTS BEFORE COMPACTION.
 3. THE MINIMUM REQUIRED DENSITY SHALL NOT BE LESS THAN 95% OF THE MAXIMUM DRY WEIGHT WITH A MOISTURE CONTENT WITH 2% OF THE OPTIMUM. EACH LAYER SHALL BE COMPACTED AS NECESSARY TO OBTAIN THE DENSITY AND IS TO BE CERTIFIED BY A GEOTECHNICAL ENGINEER AT THE TIME OF CONSTRUCTION. ALL COMPACTION IS TO BE COMPLETED AS PER AASHTO METHOD T-99 (STANDARD PROCTOR).
 4. BELOW PERMANENT POOL, THERE SHALL BE A MINIMUM OF 12" SUITABLE FILL OVER COMPACTED CLAY LINER. IN WETLAND MARSH AREAS, 4" OF WETLAND SOIL MEDIA SHALL BE INSTALLED OVER 6" OF SUITABLE OVER THE COMPACTED CLAY LINER. A MINIMUM OF 4" OF TOPSOIL AND 8" OF SUITABLE FILL OVER THE COMPACTED CLAY LINER ALONG THE EMBANKMENT. CONTRACTOR SHALL INSTALL COMPACTED CLAY LINER UNDER DRIVABLE GRASS ACCESS ROAD WHERE SPECIFIED.
 5. THE COMPACT CLAY LINER MAY BE INSTALLED ON SLOPES 3:1 OR STEEPER IN UP TO 4 FOOT WIDE FLAT TERRACES WITH A MINIMUM OVERLAP OF 12" ON EACH TERRACE.



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Craig L. Stronach
382.11.08.17.28.18.06.07
DIRECTOR OF PUBLIC WORKS
PLAN APPROVAL DATE

AS BUILT PLAN APPROVAL
CHIEF, CONSTRUCTION MANAGEMENT
PLAN APPROVAL DATE

STORMWATER MANAGEMENT PLAN
PROFILES & DETAILS

NORTHEAST PARK SWM RETROFIT AND STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND

DATE SUBMITTED: 10/9/2021
SCALE: AS SHOWN
SHEET NO. 6 OF 22
FILE # F-295

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10/9/21

MD-378 CONSTRUCTION SPECIFICATIONS

THESE SPECIFICATIONS ARE APPROPRIATE TO ALL PONDS WITHIN THE SCOPE OF THE STANDARD FOR PRACTICE MD-378. ALL REFERENCES TO ASTM AND AASHTO SPECIFICATIONS APPLY TO THE MOST RECENT VERSION.

SITE PREPARATION

AREAS DESIGNATED FOR BORROW AREAS, EMBANKMENT, AND STRUCTURAL WORKS SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL. ALL TREES, VEGETATION, ROOTS AND OTHER OBSTRUCTABLE MATERIAL SHALL BE REMOVED. CHANNEL BANKS AND SHOULDER BREAKS SHALL BE SLOPED TO NO STEEPER THAN 1:1. ALL TREES SHALL BE CLEARED AND GRUBBED WITHIN 15 FEET OF THE TOE OF THE EMBANKMENT.

AREAS TO BE COVERED BY THE RESERVOIR WILL BE CLEARED OF ALL TREES, BRUSH, LOGS, FENCES, RUBBISH AND OTHER OBSTRUCTABLE MATERIAL UNLESS OTHERWISE DESIGNATED ON THE PLANS. TREES, BRUSH, AND STUMPS SHALL BE CUT APPROXIMATELY LEVEL WITH THE GROUND SURFACE, FOR DRY STORMWATER MANAGEMENT Ponds, A MINIMUM OF A 25-FOOT RADIUS AROUND THE INLET STRUCTURE SHALL BE CLEARED.

ALL CLEARED AND GRUBBED MATERIAL SHALL BE DISPOSED OF OUTSIDE AND BELOW THE LIMITS OF THE DAM AND RESERVOIR AS DIRECTED BY THE OWNER OR HIS REPRESENTATIVE. WHEN SPECIFIED, A SUFFICIENT QUANTITY OF TOPSOIL WILL BE STOCKPILED IN A SUITABLE LOCATION FOR USE ON THE EMBANKMENT AND OTHER DESIGNATED AREAS.

EARTH FILL

MATERIAL THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED DESIGNATED BORROW AREAS. IT SHALL BE FREE OF ROOTS, STUMPS, WOOD, RUBBISH, STONES GREATER THAN 6", FROZEN OR OTHER OBSTRUCTABLE MATERIALS. CHANNEL BANKS AND SHOULDER BREAKS SHALL BE SLOPED TO NO STEEPER THAN 1:1. ALL SPICES UNDER THE PIPE ARE FILLED. CARE SHALL BE EXERCISED TO PREVENT ANY DEVIATION FROM THE ORIGINAL LINE AND GRADE OF THE PIPE. THE FIRST JOINT MUST BE LOCATED WITHIN 4 FEET FROM THE RISER.

MATERIALS USED IN THE OUTER SHELL OF THE EMBANKMENT MUST HAVE THE CAPABILITY TO SUPPORT VEGETATION OF THE QUALITY REQUIRED TO PREVENT EROSION OF THE EMBANKMENT.

PLACEMENT AREAS ON WHICH FILL IS TO BE PLACED SHALL BE SCARIFIED PRIOR TO PLACEMENT OF FILL. FILL MATERIALS SHALL BE PLACED IN MAXIMUM 8 INCH THICK (BEFORE COMPACTION) LAYERS WHICH ARE TO BE CONTINUOUS OVER THE ENTIRE LENGTH OF THE FILL. THE MOST PERMEABLE BORROW MATERIAL SHALL BE PLACED IN THE DOWNSTREAM PORTIONS OF THE EMBANKMENT. THE PRINCIPAL SPILLWAY MUST BE INSTALLED CONCURRENTLY WITH FILL PLACEMENT AND NOT EXCAVATED INTO THE EMBANKMENT.

COMPACT THE MOVEMENT OF THE HAULING AND SPREADING EQUIPMENT OVER THE FILL SHALL BE CONTROLLED SO THAT THE ENTIRE SURFACE OF EACH LIFT SHALL BE TRAVELED BY NOT LESS THAN ONE TRAILER TRACK OF HEAVY EQUIPMENT OR COMPACTION SHALL BE ACHIEVED BY A MINIMUM OF FOUR COMPLETE PASSES OF A SHEEPSFOOT, RUBBER Tired OR VIBRATORY ROLLER. FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SUCH THAT THE REQUIRED DENSITY OF COMPACTION WILL BE OBTAINED WITH THE EQUIPMENT USED. THE FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SO THAT IF FORMED INTO A BALL, IT WILL NOT CRUMBLE, YET NOT BE SO WET THAT WATER CAN BE SQUEEZED OUT.

WHEN REQUIRED BY THE REVIEWING AGENCY THE MINIMUM REQUIRED DENSITY SHALL NOT BE LESS THAN 90% OF MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT WITHIN +/- .2% OF THE OPTIMUM. EACH LAYER OF FILL SHALL BE COMPACTED AS NECESSARY TO OBTAIN THAT DENSITY, AND IS TO BE CERTIFIED BY THE ENGINEER AT THE TIME OF CONSTRUCTION. ALL COMPACTION IS TO BE DETERMINED BY AASHTO METHOD T-99 (STANDARD PROCTOR).

CUT OFF TRENCH THE EXISTING TRENCH SHALL BE EXCAVATED INTO IMPERVIOUS MATERIAL ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE WIDTH OF THE TRENCH SHALL BE DETERMINED BY THE EQUIPMENT USED FOR EXCAVATION, WITH THE MINIMUM BEING FOUR FEET. THE DEPTH SHALL BE AT LEAST FOUR FEET BELOW EXISTING GRADE OR AS SHOWN ON THE PLANS. THE SIDE SLOPES OF THE TRENCH SHALL BE 1 TO 1 OR FLATTER. THE BACKFILL SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMBERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY.

EMBANKMENT CORE THE CORE SHALL BE PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE TOP WIDTH OF THE CORE SHALL BE A MINIMUM OF FOUR FEET. THE HEIGHT SHALL EXTEND UP TO AT LEAST THE 10 YEAR WATER ELEVATION OR AS SHOWN ON THE PLANS. THE SIDE SLOPES SHALL BE 1 TO 1 OR FLATTER. THE CORE SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMBERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY. IN ADDITION, THE CORE SHALL BE PLACED CONCURRENTLY WITH THE OUTER SHELL OF THE EMBANKMENT.

STRUCTURE BACKFILL

BACKFILL ADJACENT TO PIPES OR STRUCTURES SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE ADDONING FILL MATERIAL. THE FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED FOUR INCHES IN THICKNESS AND COMPACTED BY HAND TAMBERS OR OTHER MANUALLY DIRECTED COMPACTION EQUIPMENT. THE MATERIAL NEEDS TO FILL COMPLETELY ALL SPACES UNDER AND ADJACENT TO THE PIPE. AT NO TIME DURING THE BACKFILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE DEEPER THAN FOUR FEET TO ANY PART OF A STRUCTURE UNDER NO CIRCUMSTANCES SHALL EQUIPMENT BE DRIVEN OVER ANY PART OF A CONCRETE STRUCTURE OR PIPE, UNLESS THERE IS A COMPACTED LIFT OF 24" OR GREATER OVER THE STRUCTURE OR PIPE.

STRUCTURE BACKFILL MAY BE FLOWABLE FILL MEETING THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 313 AS MODIFIED. THE MIXTURE SHALL HAVE A 1500 PSI 28 DAY UNCONFINED COMPRESSIVE STRENGTH. THE SPONGIBLE FILL SHALL HAVE A MINIMUM PH OF 4.0 AND AN INFLUENCE OF LOSS CHAIN MATERIAL SHALL BE PLACED SUCH THAT A MINIMUM OF 6" (MEASURED PERPENDICULAR TO THE OUTSIDE OF THE PIPE) OF FLOWABLE FILL SHALL BE UNDER (BEDDING), OVER AND, ON THE SIDES OF THE PIPE. IT ONLY NEEDS TO EXTEND UP TO THE SPRING LINE FOR RIBD CONNECTIONS. AVERAGE SLOPE OF THE FILL SHALL BE 7 TO 1 TO ASSURE FLOWABILITY OF THE MATERIAL. ADEQUATE MEASURES SHALL BE TAKEN (SAND BAGS, ETC.) TO PREVENT FLOATING THE PIPE, WHEN USING FLOWABLE FILL. ALL METAL PIPE SHALL BE BITUMINOUS COATED. ANY ADDONING SOIL FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED FOUR INCHES IN THICKNESS AND COMPACTED BY HAND TAMBERS OR OTHER MANUALLY DIRECTED COMPACTION EQUIPMENT. THE MATERIAL SHALL COMPLETELY FILL ALL VOID ADJACENT TO THE FLOWABLE FILL ZONE, AT NO TIME DURING THE BACKFILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE DEEPER THAN FOUR FEET, MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE UNDER NO CIRCUMSTANCES SHALL EQUIPMENT BE DRIVEN OVER ANY PART OF A STRUCTURE OR PIPE UNLESS THERE IS A COMPACTED LIFT OF 24" OR GREATER OVER THE STRUCTURE OR PIPE. BACKFILL MATERIAL OUTSIDE THE STRUCTURAL BACKFILL (FLOWABLE FILL) ZONE SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE CORE OF THE EMBANKMENT OR OTHER EMBANKMENT MATERIALS.

PIPE CONDUITS

ALL PIPES SHALL BE CIRCULAR IN CROSS SECTION.

CORRUGATED METAL PIPE ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR CORRUGATED METAL PIPE:

1. MATERIALS (POLYMER COATED STEEL PIPE) STEEL PIPES WITH POLYMERIC COATINGS SHALL HAVE A MINIMUM COATING THICKNESS OF 0.01 INCH (10 MIL) ON BOTH SIDES OF THE PIPE. THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATIONS M-245 & M-246 WITH WATER TIGHT COUPLING BANDS OR FLANGES.

MATERIALS (ALUMINUM COATED STEEL PIPE) - THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATION M-274 WITH WATER TIGHT COUPLING BANDS OR FLANGES. ALUMINUM COATED STEEL PIPE WHEN USED WITH FLOWABLE FILL OR WHEN SOIL AND/OR WATER CONDITIONS WARRANT THE NEED FOR INCREASED DURABILITY, SHALL BE FULLY BITUMINOUS COATED PER REQUIREMENTS OF AASHTO SPECIFICATION M-190 TYPE A.

ANY ALUMINUM COATING DAMAGED OR OTHERWISE REMOVED SHALL BE REPLACED WITH COLD APPLIED BITUMINOUS COATING COMPOUND. ALUMINUM SURFACES THAT ARE TO BE IN CONTACT WITH CONCRETE SHALL BE PAINTED WITH ONE COAT OF ZINC CHROMATE PRIMER OR TWO COATS OF ASPHALT.

MATERIALS (ALUMINUM PIPE) THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATION M-196 OR M-211 WITH WATER TIGHT COUPLING BANDS OR FLANGES. ALUMINUM PIPE WHEN USED WITH FLOWABLE FILL OR WHEN SOIL AND/OR WATER CONDITIONS WARRANT FOR INCREASED DURABILITY, SHALL BE FULLY BITUMINOUS COATED PER REQUIREMENTS OF AASHTO SPECIFICATION M-190 TYPE A. ALUMINUM SURFACES THAT ARE TO BE IN CONTACT WITH CONCRETE SHALL BE PAINTED WITH ONE COAT OF ZINC CHROMATE PRIMER OR TWO COATS OF ASPHALT. HOT DIP GALVANIZED BOLTS MAY BE USED FOR CONNECTIONS TO THE SUBORDINATING SOLS SHALL BE BETWEEN 4 AND 9.

2. COUPLING BANDS, ANTI-SEEP COLLARS, END SECTIONS, ETC.) SHALL BE COMPOSED OF THE SAME MATERIAL AND COATINGS AS THE PIPE. METALS MUST BE INSULATED FROM DISSIMILAR MATERIALS WITH USE OF RUBBER OR PLASTIC INSULATING MATERIALS AT LEAST 24 MILS IN THICKNESS.

3. CONNECTIONS ALL CONNECTIONS WITH PIPES MUST BE COMPLETELY WATER TIGHT. THE DRAM PIPE OR BARREL CONNECTION TO THE RISER SHALL BE WELDED ALL AROUND WHEN THE PIPE AND RISER ARE METAL. ANTI-SEEP COLLARS SHALL BE CONNECTED TO THE PIPE IN SUCH A MANNER AS TO BE COMPLETELY WATER TIGHT. DAMPLE BANDS ARE NOT CONSIDERED TO BE WATER TIGHT.

ALL CONNECTIONS SHALL USE A RUBBER OR NEOPRENE GASKET WHEN JOINING PIPE SECTIONS. THE END OF EACH PIPE SHALL BE RE-ROLLED AN ADEQUATE NUMBER OF CORUGATIONS TO ACCOMMODATE THE BANDWIDTH. THE FOLLOWING TYPE CONNECTIONS ARE ACCEPTABLE FOR PIPES LESS THAN 24 INCHES IN DIAMETER. FLANGES ON BOTH ENDS OF THE PIPE WITH A CIRCULAR 3/8 INCH NEOPRENE GASKET. PREPARED TO THE FLANGE RING GASKET. SANDWICHED BETWEEN ADJACENT FLANGES. A 12 INCH WIDE STANDARD LAP TYPE BAND WITH 1/2 INCH WIDE BY 3/8 INCH THICK CLOSED CELL CIRCULAR NEOPRENE GASKETS. AND A 12 INCH WIDE RUBBER TYPE BAND WITH O-RING GASKETS HAVING A MINIMUM DIAMETER OF 1/2 INCH GREATER THAN THE CORUGATION DEPTH. PIPES 24 INCHES IN DIAMETER AND LARGER SHALL BE CONNECTED BY A 24 INCH LONG ANNULAR CORRUGATED BAND USING A MINIMUM OF 4 (FOUR) RODS AND LUGS. 2 ON EACH CONNECTING PIPE END. A 24 INCH WIDE BY 3/8 INCH THICK CLOSED CELL CIRCULAR NEOPRENE GASKET SHALL BE INSTALLED WITH 12 INCHES ON THE END OF EACH PIPE. FLANGED JOINTS WITH 3/8 INCH CLOSED CELL GASKETS THE FULL WIDTH OF THE FLANGES IS ALSO ACCEPTABLE.

HELICALLY CORRUGATED PIPE SHALL HAVE EITHER CONTINUOUSLY WELDED SEAMS OR HAVE LOCK SEAMS WITH INTERNAL CAULKING OR A NEOPRENE BAND.

4. BEDDING THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH, WHERE ROCK OR SOFT, SPONGY OR OTHER UNSTABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTED TO PROVIDE ADEQUATE SUPPORT.

5. BACKFILLING SHALL CONFORM TO STRUCTURE BACKFILL.

6. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

REINFORCED CONCRETE PIPE - ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR REINFORCED CONCRETE PIPE:

1. MATERIALS REINFORCED CONCRETE PIPE SHALL HAVE BELL AND SPIGOT JOINTS WITH RUBBER GASKETS AND SHALL EQUAL OR EXCEED ASTM C-361.

2. BEDDING REINFORCED CONCRETE PIPE CONDUITS SHALL BE LAID IN A CONCRETE BEDDING/CRADLE FOR THEIR ENTIRE LENGTH. THIS BEDDING/CRADLE SHALL CONSIST OF HIGH SLUMP CONCRETE PLACED UNDER THE PIPE AND UP THE SIDES OF THE PIPE AT LEAST 50% OF ITS OUTSIDE DIAMETER WITH A MINIMUM THICKNESS OF 6 INCHES. WHERE A CONCRETE CRADLE IS NOT USED FOR STRUCTURAL REASONS, FLOWABLE FILL MAY BE USED AS DESCRIBED IN THE STRUCTURE BACKFILL SECTION OF THE STANDARD. ORGEL BEDDING IS NOT PERMITTED.

3. LAYING PIPE BELL AND SPIGOT PIPE SHALL BE PLACED WITH THE BELL END UPSTREAM. JOINTS SHALL BE MADE IN ACCORDANCE WITH RECOMMENDATIONS OF THE MANUFACTURER OF THE MATERIAL. AFTER THE JOINT IS MADE FOR THE ENTIRE LINE, THE BEDDING SHALL BE PLACED SO THAT ALL SPACES UNDER THE PIPE ARE FILLED. CARE SHALL BE EXERCISED TO PREVENT ANY DEVIATION FROM THE ORIGINAL LINE AND GRADE OF THE PIPE. THE FIRST JOINT MUST BE LOCATED WITHIN 4 FEET FROM THE RISER.

4. BACKFILLING SHALL CONFORM TO STRUCTURE BACKFILL.

5. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

PLASTIC PIPE - THE FOLLOWING CRITERIA SHALL APPLY FOR PLASTIC PIPE:

1. MATERIALS PVC PIPE SHALL BE PVC-1120 OR PVC-1220 CONFORMING TO ASTM D1785 OR ASTM D-2241. CORRUGATED HIGH DENSITY POLYETHYLENE (HDPE) PIPE, COUPLINGS AND FITTINGS SHALL CONFORM TO THE FOLLOWING: 4 TO 10 INCH PIPE SHALL MEET THE REQUIREMENTS OF AASHTO M224 TYPE S, AND 12 THROUGH 24 INCH SHALL MEET THE REQUIREMENTS OF AASHTO M24 TYPE S.

2. JOINTS AND CONNECTIONS TO ANTI-SEEP COLLARS SHALL BE COMPLETELY WATER TIGHT.

3. BEDDING - THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH, WHERE ROCK OR SOFT, SPONGY OR OTHER UNSTABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTED TO PROVIDE ADEQUATE SUPPORT.

4. BACKFILLING SHALL CONFORM TO STRUCTURE BACKFILL.

5. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

DRAINAGE DAPHRAGMS WHEN A DRAINAGE DAPHRAGM IS USED, A REGISTERED PROFESSIONAL ENGINEER WILL SUPERVISE THE DESIGN AND CONSTRUCTION INSPECTION. CONCRETE CONCRETE SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 414, MIX NO. 3.

ROCK RIPRAP

ROCK RIPRAP SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 414, MIX NO. 3.

GEOTEXTILE SHALL BE PLACED UNDER ALL RIPRAP AND SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 921.09, CLASS C.

CASE OF WATER DURING CONSTRUCTION

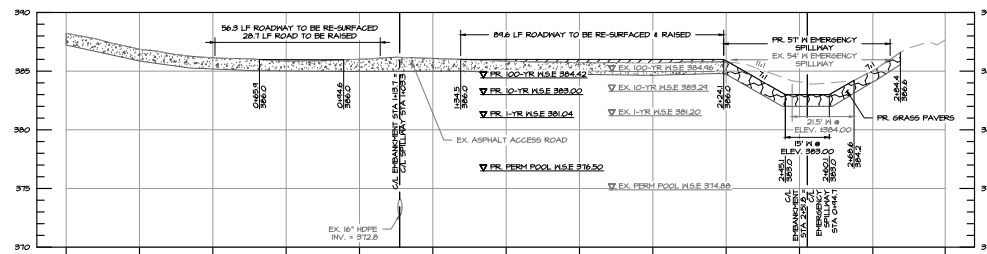
ALL WORK ON PERMANENT STRUCTURES SHALL BE CARRIED OUT IN AREAS FREE FROM WATER. THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN ALL TEMPORARY DIKES, LEVEES, COFFERDAMS, DRAINAGE CHANNELS, AND STREAM DIVERSIONS NECESSARY TO PROTECT THE AREAS TO BE OCCUPIED BY THE PERMANENT WORKS. THE CONTRACTOR SHALL ALSO FURNISH, INSTALL, OPERATE, AND MAINTAIN ALL NECESSARY PUMPING AND OTHER EQUIPMENT REQUIRED FOR REMOVAL OF WATER FROM VARIOUS PARTS OF THE WORK AND FOR MAINTAINING THE EXCAVATIONS, FOUNDATION, AND OTHER PARTS OF THE WORK FREE FROM WATER AS REQUIRED OR DIRECTED BY THE ENGINEER FOR CONSTRUCTING EACH PART OF THE WORK, AFTER HAVING SERVED THEIR PURPOSE. ALL TEMPORARY PROTECTIVE WORKS SHALL BE REMOVED OR LEVELLED AND GRADED TO THE EXTENT REQUIRED TO PREVENT OBSTRUCTION IN ANY DEGREE WHATSOEVER OF THE FLOW OF WATER TO THE SPILLWAY OR OUTLET WORKS AND SO AS NOT TO INTERFERE IN ANY WAY WITH THE OPERATION OR MAINTENANCE OF THE STRUCTURE. STREAM DIVERSIONS SHALL BE MAINTAINED UNTIL THE FULL FLOW CAN BE PASSED THROUGH THE PERMANENT WORKS. THE REMOVAL OF WATER FROM THE REQUIRED EXCAVATION AND THE FOUNDATION SHALL BE ACCOMPLISHED IN A MANNER AND TO THE EXTENT THAT WILL MAINTAIN STABILITY OF THE EXCAVATED SLOPES AND BOTTOM REQUIRED EXCAVATION AND WILL ALLOW SATISFACTORY PERFORMANCE OF ALL CONSTRUCTION OPERATIONS DURING THE PLACING AND COMPACTING OF MATERIAL IN REQUIRED EXCAVATIONS, THE WATER LEVEL AT THE LOCATIONS BEING REFLECTED SHALL BE MAINTAINED BELOW THE BOTTOM OF THE EXCAVATION AT SUCH LOCATIONS WHICH MAY REQUIRE DRAINING THE WATER SHOPS FROM WHICH THE WATER SHALL BE PUMPED.

STABILIZATION

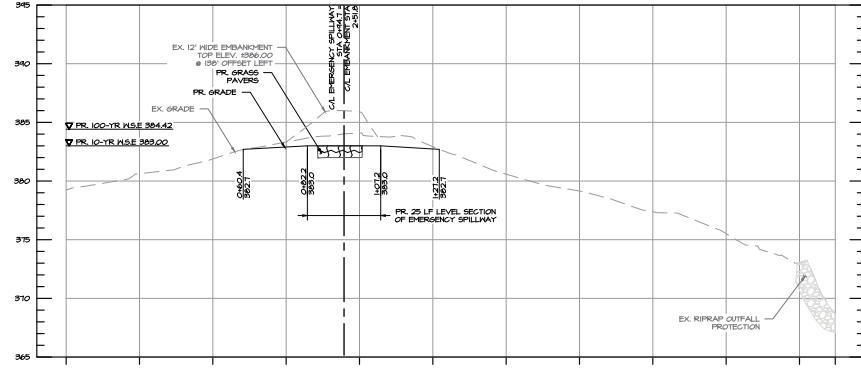
ALL BORROW AREAS SHALL BE GRADED TO PROVIDE PROPER DRAINAGE AND LEFT IN A SIGHTLY CONDITION. ALL EXPOSED SURFACES OF THE EMBANKMENT, SPILLWAY, SPOIL AND BORROW AREAS, AND BERMUS SHALL BE STABILIZED BY SEEDING, LIMING, FERTILIZING AND MULCHING IN ACCORDANCE WITH THE NATURAL RESOURCES CONSERVATION SERVICE STANDARDS AND SPECIFICATIONS FOR CRITICAL AREA PLANTING (M0-342) OR AS SHOWN ON THE ACCOMPANYING DRAWINGS.

EROSION AND SEDIMENT CONTROL

CONSTRUCTION OPERATIONS WILL BE CARRIED OUT IN SUCH A MANNER THAT EROSION WILL BE CONTROLLED AND WATER AND AIR POLLUTION MINIMIZED. STATE AND LOCAL LAWS CONCERNING POLLUTION ABATEMENT WILL BE FOLLOWED. CONSTRUCTION PLANS SHALL DETAIL EROSION AND SEDIMENT CONTROL MEASURES.



PROFILE EMBANKMENT C/L STA: 0+00 TO STA: 3+00



PROFILE EMERGENCY SPILLWAY C/L STA: 0+00 TO STA: 2+62

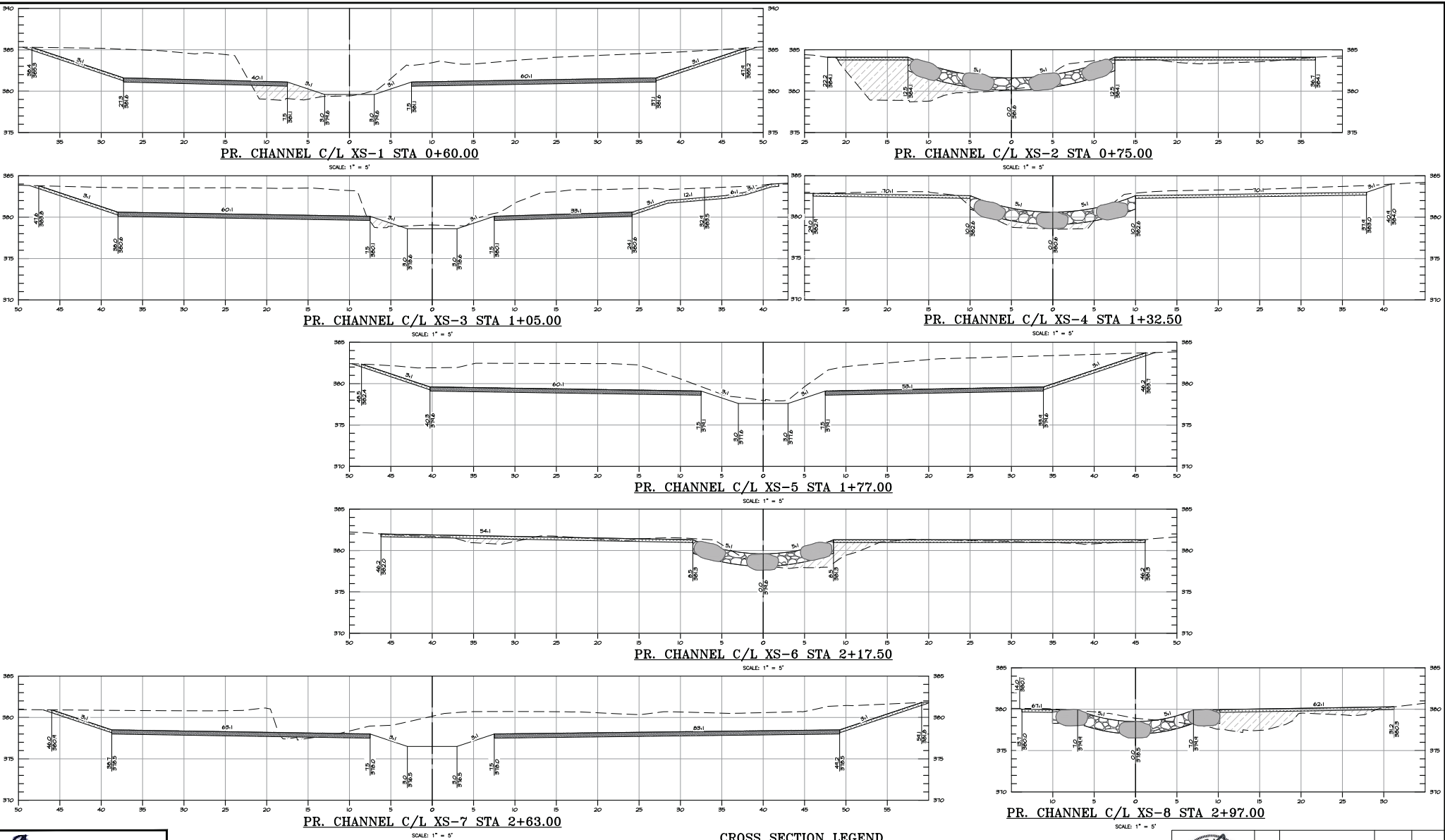
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BAYLAND JOB NO. B-31961

DESIGNED CS/GS
DRAFTED JS/AM
CHECKED CS
DEPARTMENT OF PUBLIC WORKS
CITY OF
ROCKVILLE
111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGN PLAN APPROVAL
AS BUILT PLAN APPROVAL
STORMWATER MANAGEMENT PLAN
PROFILES & NOTES
NORTHEAST PARK SWM RETROFIT AND STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND

DATE SUBMITTED: 10/8/2021
SCALE AS SHOWN
SHEET NO. 7 OF 22
FILE # F-295
NO. REVISIONS AFTER PLAN APPROVAL P.E. INITIAL DATE

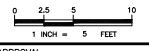
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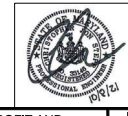
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NOTE: ROCKS SHOWN ON CROSS SECTION VIEWS ARE SYMBOLIC AND DO NOT REPRESENT INDIVIDUAL STONES. SEE ROCK SIZING TABLES SHEET 9 FOR ACTUAL ROCK DIMENSIONS.



CROSS SECTION LEGEND

- EX. GRADE
- PR. GRADE
- PR. RSC BOULDERS
- PR. FILTER FABRIC
- PR. RSC COBBLE (3/8-9")
- PR. SUITABLE FILL MATERIAL
- PR. TOPSOIL
- PR. WETLAND SOIL MEDIA



DESIGNED CS/AG
DRAFTED JS/MW
CHECKED CS

DEPARTMENT OF PUBLIC WORKS
CITY OF
ROCKVILLE
111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGN PLAN APPROVAL

Chief Engineer
SMP# 2021-00012

Director of Public Works
SMP# 2021-00012

PLAN APPROVAL DATE

AS BUILT PLAN APPROVAL

Chief Construction Management

PLAN APPROVAL DATE

STORMWATER MANAGEMENT PLAN
CROSS SECTIONS

NORTHEAST PARK SWM RETROFIT AND
STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND

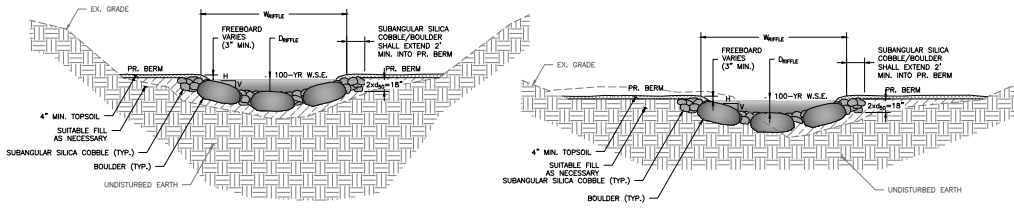
NO.	REVISIONS AFTER PLAN APPROVAL	P.E. INITIAL	DATE

DATE SUBMITTED: 10/8/2021

SCALE: 1" = 5'

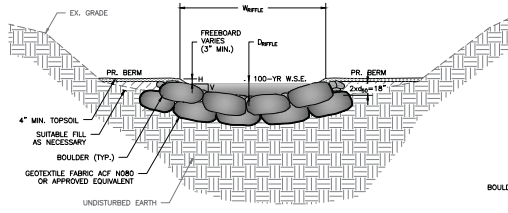
SHEET NO. 8 OF 22

FILE # F-295

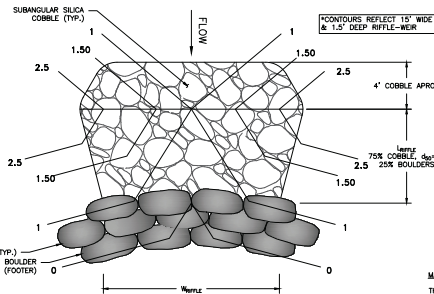


SECTION A
WEIR BACK VIEW (THROUGH COBBLE)
IN CUT
SCALE: NOT TO SCALE

SECTION A
WEIR BACK VIEW (THROUGH COBBLE)
IN CUT
SCALE: NOT TO SCALE



SECTION B
WEIR FRONT VIEW (THROUGH BOULDER)
SCALE: NOT TO SCALE



RIFFLE-WEIR TYPICAL PLAN VIEW
SCALE: NOT TO SCALE

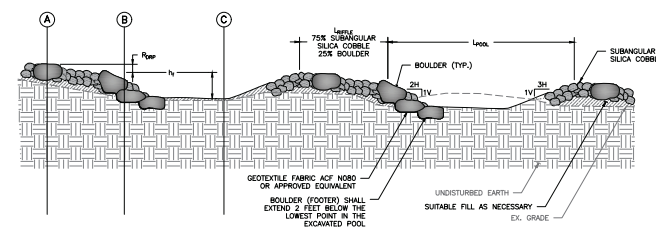
RIFFLE-WEIR DATA TABLE

	PR. REGENERATIVE STORMWATER CONVEYANCE SYSTEM (RSC) FROM STA: 0+32.0 TO 3+11.5
Length (RIFFLE LENGTH)	VARIES - SEE PROFILE
Locs. (POOL LENGTH)	VARIES - SEE PROFILE
N (POOL DEPTH)	2.0 FT.
W (POOL WIDTH)	VARIES - SEE SECTIONS
W (RIFFLE WIDTH)	VARIES - SEE SECTIONS
Depth (RIFFLE DEPTH)	VARIES - SEE PROFILE
R (DROP ACROSS RIFFLE)	VARIES - SEE PROFILE
H (RIFFLE SIDE SLOPE)	SH:1V

RIFFLE-WEIR ROCK SIZE TABLE

ROCK TYPE	ROCK SIZE	% MIX
SUBANGULAR SILICA COBBLE	D50 = 0.75" MIN. = 6", MAX. = 12"	-
BOULDERS	GREATER THAN 6"x3"x2" 3"x2"x1.25" TO 6"x3"x2"	10 80
	LESS THAN 3"x2"x1.25"	10

NOTE:
1. BOULDERS SHALL BE STACKABLE, OBLONG AND FLAT IN APPEARANCE.
2. PERCENTAGES BY WEIGHT SHOWN REFER TO THE MAXIMUM ALLOWABLE.
3. ROCK SIZE DISTRIBUTION
3"x2"x1.25" TO 6"x3"x2" CAN BE UP TO 100% OF MIX



RIFFLE/POOL TYPICAL PROFILE
SCALE: NOT TO SCALE

RIFFLE-WEIR CONSTRUCTION SPECIFICATIONS

MATERIALS

THE CONTRACTOR WILL NOT BE GRANTED AN EXTENSION OF EXTRA TIME OR EXTRA COMPENSATION DUE TO DELAY CAUSED BY SAMPLING, TESTING, APPROVAL OR DISAPPROVAL OF THE MATERIALS UNDER THE REQUIREMENTS OF THESE SPECIFICATIONS. THE MATERIALS SHALL BE AS SPECIFIED ON THE RIFFLE-WEIR ROCK SIZE TABLE AND REFERRED TO IN THIS SPECIFICATION. THE CONTRACTOR SHALL OBTAIN MATERIAL FROM A QUARRY AND PROVIDE CERTIFICATION OF ORIGIN ANALYSIS OF SAMPLES OF STONE TO THE CITY FOR APPROVAL. PRIOR TO INSTALLATION, IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO MAKE ALL NECESSARY ARRANGEMENTS WITH THE SOURCE OF SUPPLY IN A TIMELY FASHION, SO THAT THE CONTRACTOR SHALL MAINTAIN AN ADEQUATE SUPPLY OF ALL MATERIALS AND THAT WORK SHALL NOT BE UNNECESSARILY DELAYED DUE TO INSUFFICIENT SUPPLY.

FOOTER AND WEIR BOULDERS - BOULDERS SHALL BE AS SPECIFIED ON THE RIFFLE-WEIR ROCK SIZE TABLE. BOULDERS SHALL BE EITHER SANDSTONE OR GRANITE, STACKABLE, OBLONG, AND FLAT IN APPEARANCE, AND DARK BROWN OR DARK GRAY IN COLOR. THE MINIMUM DRY UNIT WEIGHT OF SANDSTONE WILL BE 140 POUNDS PER CUBIC FOOT & GRANITE BOULDERS WILL BE 135 POUNDS PER CUBIC FOOT. IN GENERAL, FOOTER ROCKS SHALL BE SELECTED TO BE THE LARGEST ROCKS AVAILABLE. FOOTER ROCKS SHALL BE PLACED AT THE BOTTOM AND DOWNSTREAM SIDE OF THE TRENCH. FOOTER BOULDERS SHALL EXTEND 2 FEET BELOW THE LOWEST POINT IN THE EXCAVATED POOL. SANDSTONE BOULDERS ARE PREFERRED, HOWEVER, GRANITE BOULDERS MAY BE USED IF THE CONTRACTOR SHOWS THE CITY DUE DILIGENCE IN ATTEMPTING TO LOCATE SANDSTONE BOULDERS. ANY SUBSTITUTION WILL BE AT NO COST TO THE CITY.

COBBLE - THE STONE SHALL BE SUBANGULAR SILICA COBBLE AND SHALL BE COMPOSED OF A WELL-GRADED MIXTURE OF STONE SIZE SO THAT 50% OF THE PIECES, BY WEIGHT, SHALL BE LARGER THAN THE D50 SIZE NOTED IN RIFFLE-WEIR ROCK SIZE TABLE. A WELL-GRADED MIXTURE AS USED HEREIN IS DEFINED AS A MIXTURE COMPOSED PRIMARILY OF LARGER STONE SIZES BUT WITH A SUFFICIENT MIXTURE OF OTHER SIZES TO FILL THE LARGE VOIDS BETWEEN THE STONES. THE DIAMETER OF THE LARGEST STONE SIZE SHALL NOT EXCEED 1.5 TIMES THE SPECIFIED D50 SIZE. THE MINIMUM DRY UNIT WEIGHT OF COBBLE WILL BE 135 POUNDS PER CUBIC FOOT.

WOODY DEBRIS - LARGE WOODY DEBRIS OR INVERTED BROOMWAYS SHALL BE CUT FROM HARDWOOD TREES WITH A TRUNK DIAMETER AT BREAST HEIGHT (DBH) OF 6 INCHES TO 24 INCHES. ROOT FANS SHALL BE OBLONG TO CIRCULAR SHAPE AND HAVE A MINIMUM SPREAD OF 2 FEET AS MEASURED AT ITS NARROWEST AXIS AND COVERING AN AREA A MINIMUM OF 10 SQUARE FEET. THE ATTACHED TRUNK SHALL BE A MINIMUM OF 6 FEET IN LENGTH AND BE CLEAR OF LEAF MATERIAL. THEIR SIZE SHALL NOT EXCEED 10 PERCENT OF THE POOL VOLUME.

LARGE WOODY DEBRIS CAN BE SALVAGED FROM THE PROJECT SITE PROVIDED THEY MEET THE ABOVE REQUIREMENTS AND ARE CLEARLY FLAGGED FOR CLEANING AND GRUBBING. NO LIVE TREES SHALL BE HARVESTED FOR THE SOLE PURPOSE OF PROVIDING MATERIALS FOR THIS ITEM IF SUFFICIENT MATERIALS MEETING THE ABOVE REQUIREMENTS ARE NOT AVAILABLE FROM THE PROJECT SITE. THE CONTRACTOR SHALL THEN OBTAIN OFF-SITE MATERIAL MEETING THE SPECIFIED REQUIREMENTS.

TOPSOIL - TOPSOIL SHALL BE PER THE STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS AS SPECIFIED ON SHEET 17. TOPSOIL SHALL NOT BE SALVAGED FROM AREAS AFFECTED BY NRI REMOVAL. THE CONTRACTOR SHALL MAINTAIN A SEPARATE STOCKPILE FOR TOPSOIL, AND IT SHALL NOT BE COMINGLED WITH OTHER FILL MATERIALS.

FILTER CLOTH - FILTER CLOTH SHALL NOT EXCEED THE REQUIREMENTS OF AC7 HOB9 POLYPROPYLENE NONWOVEN GEOTEXTILE FABRIC. THE CONTRACTOR SHALL PROVIDE MATERIAL SPECIFICATION TO THE COUNTY FOR APPROVAL. FILTER FABRIC SHALL BE PLACED UNDER ALL BOULDERS. REFER TO CONSTRUCTION DRAWINGS FOR PLACEMENT LOCATION. TO PREVENT UNDOING, A CONTINUOUS SHEET OF FILTER FABRIC SHALL BE USED ALONG THE CROSS-SECTION. FILTER FABRIC SHALL NOT BE PLACED IN THE POOLS SO AS NOT TO IMPEDE FILTRATION.

SUBMITTALS

- FOOTER AND WEIR BOULDERS - THE CONTRACTOR WILL LOCATE POTENTIAL SOURCES FOR THE STONE. THE CONTRACTOR SHALL SUBMIT TO THE CITY A CERTIFICATE VERIFYING THE FOLLOWING BOULDER INFORMATION:
 - STONE CLASSIFICATION
 - STONE DENSITY (I.E., WEIGHT PER CUBIC FOOT)
 - WEIGHT OF STONE BEING SUPPLIED.
 - STONE QUALITY SHALL MEET ALL OF THE ABOVE SPECIFICATIONS.
- COBBLE - THE CONTRACTOR SHALL OBTAIN COBBLE SAMPLES FROM THE QUARRY AND SUBMIT TO THE CITY THE SAMPLES AND A CERTIFICATE VERIFYING THE FOLLOWING COBBLE INFORMATION:
 - STONE CLASSIFICATION
 - STONE DENSITY (I.E., WEIGHT PER CUBIC FOOT)
 - WEIGHT OF STONE BEING SUPPLIED.
 - STONE QUALITY SHALL MEET ALL OF THE ABOVE SPECIFICATIONS.
- TOPSOIL - THE CONTRACTOR SHALL OBTAIN A TOPSOIL SAMPLE AND SUBMIT TO THE CITY FOR APPROVAL. THE SAMPLE AND CERTIFICATE WITH THE SOURCE AND SPECIFICATIONS OF THE COMPOST.
- FILTER CLOTH - THE CONTRACTOR SHALL PROVIDE MATERIAL SPECIFICATION TO THE CITY FOR APPROVAL.

CONSTRUCTION

THE RIFFLE-WEIR SYSTEM SHALL BE INSTALLED ACCORDING TO THE SEQUENCE OF CONSTRUCTION, THE CONSTRUCTION DRAWINGS, THESE SPECIFICATIONS, AND AS DIRECTED BY THE CITY.

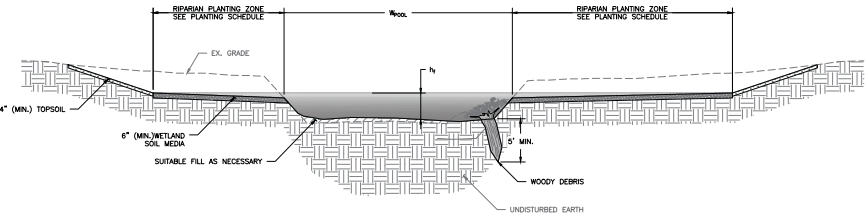
CONSTRUCTION OF THE RIFFLE-WEIR SYSTEM SHALL BEGIN AT THE UPSTREAM END AND PROCEED DOWNSTREAM TO THE SWM POND. CONTRACTOR MAY WORK DOWNSTREAM TO UPSTREAM PER STEPS BELOW WITH PERMISSION OF SEDIMENT CONTROL INSPECTOR.

EXCAVATE THE FIRST POOL AND INSTALL RIPRAP INFLOW PROTECTION TO PROVIDE STABILIZATION. THEN INSTALL THE RIFFLE-WEIR. FOOTER BOULDERS SHALL BE PLACED AT THE INTERFACE OF THE POOLS AND RIFFLES AS SHOWN ON THE CONSTRUCTION DRAWINGS. A CONTINUOUS SHEET OF GEOTEXTILE SHALL BE USED TO SEPARATE ANY POTENTIAL EARTHEN FILL AND THE BOULDERS THAT LINE THE FACILITY BOTTOM. ADDITIONAL BOULDERS SHALL BE PLACED ON TOP OF THE FOOTER BOULDERS AT THE WEIR ELEVATION UPSTREAM OF THE FOOTER BOULDERS TO FORM THE WEIR CHANNEL. PARABOLIC SHAPE. BOULDERS SHALL BE ARRANGED HORIZONTALLY IN THE CENTER OF THE CHANNEL AND THE ARMS ON EITHER SIDE OF THE CHANNEL SHALL BE EXTENDED PARABOLICALLY/APPROXIMATELY 20 DEGREE ANGLE LONGITUDINALLY TO THE CENTER OF THE POOL. THE BOULDERS SHALL BE ARRANGED TO MAXIMIZE INTERLOCKING. THE FACE OF THE BOULDERS SHALL BE TILTED DOWNSTREAM TO OCCUPY HALF OF THE INCLINE (6 VERTICAL) MADE UP OVER THE ENTIRE LENGTH OF THE WEIR.

ONCE THE BOULDERS HAVE BEEN PLACED, FILL WITH 75% COBBLE AND 25% BOULDERS TO FORM THE BACKSIDE OF THE WEIR. A SMALL COBBLE APRON SHALL BE PLACED WHERE THE BOULDERS MEET THE POOL ON THE DOWNSTREAM SIDE. ONCE THE WEIR-POOL COMBINATION IS COMPLETE, THE ENTIRE SURFACE SHALL BE STABILIZED WITH TEMPORARY SEEDING. ANY DISTURBED AREA SHALL BE STABILIZED AT THE END OF EACH WORKING DAY WITH TEMPORARY SEEDING. EXCAVATED MATERIAL SHALL BE USED TO BLEND THE EDGES OF DOWNSTREAM WEIR AND SURROUNDING GRADE.

CONTINUE THE PROCESS OF ALTERNATING POOLS AND RIFFLES/WEIRS DOWN THROUGH THE SYSTEM TO THE SWM POND. PLACE LARGE WOODY DEBRIS/INVERTED ROOT WADS IN POOLS AS SHOWN ON THE CONSTRUCTION DRAWINGS. THE CONTRACTOR SHALL PUSH THE TRUNK STEM DOWN INTO SOIL OR EXCAVATE THE TRENCH FOR THE INVERTED ROOT WAD AND PLACE IN THE TRENCH SO THE INVERTED ROOT WAD SITS WITH THE ROOT MASS UPWARD IN THE SHALLOW AQUATIC POOLS AND BASKETS TO SECURE. ROOT WADS SHALL BE EMBEDDED 5 FEET BELOW THE INVERT OF THE POOL IN A VERTICAL ALIGNMENT.

BLOW TOPSOIL OVER THE TOPS OF THE WEIRS AND BERMS. CONTRACTOR SHALL NOT BE BLOWN OVER TEMPORARILY DISTURBED WETLANDS. COMPLETE FINAL STABILIZATION AND PERMANENT SEEDING AS INDICATED IN THESE CONSTRUCTION DRAWINGS.



SECTION C
THROUGH POOL
TYPICAL RIFFLE-WEIR SECTIONS
SCALE: NOT TO SCALE

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DEPARTMENT OF PUBLIC WORKS
CITY OF
ROCKVILLE
111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGN PLAN APPROVAL

AS BUILT PLAN APPROVAL

STORMWATER MANAGEMENT PLAN
RSC DETAILS & NOTES

NORTHEAST PARK SWM RETROFIT AND
STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND

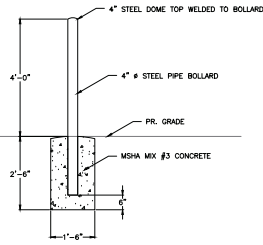
DATE SUBMITTED:
10/9/2021

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SHEET
NO. 9
OF 22

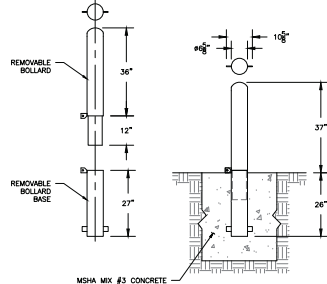
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- NOTES:**
1. ALL PIPE TO BE STANDARD WEIGHT AS PER AISC MANUAL.
 2. ALL EXPOSED METAL SURFACES SHALL BE PAINTED WITH GALVANNEED PAINT - ONE COAT METAL PRIMER AND TWO COATS HUNTER GREEN PAINT. 5009 FROM KEYSTONE ROSE DESIGN.
 3. 18" x 18" YELLOW REFLECTOR (REFLECTIVE PAINT/TAPE) BE SECURELY FASTENED TO EVERY OTHER BOLLARD. IF REFLECTIVE TAPE IS USED, THE MINIMUM ROLL WIDTH SHALL BE 6" AND THERE SHALL BE NO GAPS BETWEEN LAYERS. SIGNAGE WILL NOT BE ALLOWED ON BOLLARDS. END OF ROAD MARKER (MUTCO TYPE 4 OBJECT MARKER 004-3) SHALL BE INSTALLED SEPARATELY ADHERING TO SIGNAGE REQUIREMENTS FOR HEIGHT, IF REQUIRED.



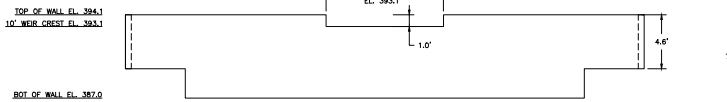
PROPOSED BOLLARD DETAIL

SCALE: 1" = 2'

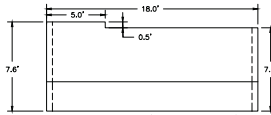


PROPOSED REMOVABLE BOLLARD DETAIL

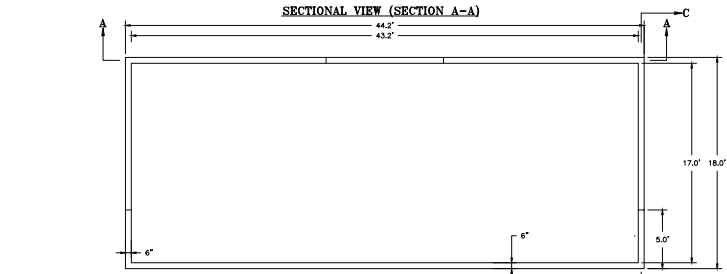
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SECTIONAL VIEW (SECTION A-A)



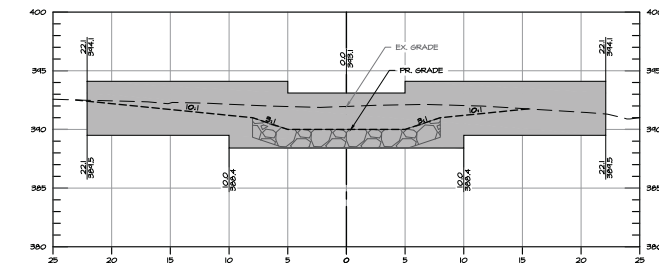
SIDE VIEW (SECTION C-C)



PLAN VIEW

NEAL DRIVE BIORETENTION STRUCTURE DETAIL

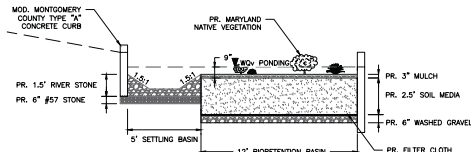
SCALE: 1" = 5'



NEAL DRIVE BIORETENTION SECTION A-A' STA 0+22.75

OPERATION, MAINTENANCE & INSPECTION

1. THE FACILITY WILL BE INSPECTED EVERY THREE YEARS AND MAINTAINED BY THE CITY OF ROCKVILLE DPW.
 - A. SEDIMENT REMOVAL SHALL OCCUR WHEN 50% OF THE TOTAL FOREBAY CAPACITY (0.75' DEPTH @ ELEV. 392.75) HAS BEEN LOST.
2. WET WEATHER INSPECTIONS MUST BE CONDUCTED AFTER MAJOR STORM EVENTS DURING THE FIRST YEAR AFTER CONSTRUCTION THEN BI-ANNUALLY AT A MINIMUM. INSPECTORS TO ENSURE THAT THE BIORETENTION IS OPERATING AS DESIGNED AND INTENDED. INSPECTORS SHALL EXAMINE FOR EVIDENCE OF CLOGGING, EXCESSIVE FLOW RATE, EROSION, SEDIMENTATION, ADEQUACY OF INFLOWS AND OUTFLOWS, ETC. INSPECTIONS SHOULD BE PERFORMED WITH AS-BUILT PLANS IN HAND.
3. DEBRIS AND LITTER REMOVAL SHALL BE ENSURED DURING REGULAR INSPECTIONS.
4. THE TOP FEW INCHES OF BASIN MEDIA SHOULD BE REMOVED WITH LIGHT EQUIPMENT TO PREVENT COMPACTION AND REPLACED WITH NEW MEDIA WHEN WATER POUNDS FOR MORE THAN 12 HOURS. SILTS AND SEDIMENT SHOULD BE REMOVED FROM THE SURFACE OF THE FILTER BED WHEN ACCUMULATION EXCEEDS ONE INCH.
5. OCCASIONAL PRUNING AND REPLACEMENT OF DEAD VEGETATION SHALL BE PERFORMED AS NECESSARY. IF SPECIFIC PLANTS ARE NOT SURVIVING, MORE APPROPRIATE SPECIES SHOULD BE USED. WATERING MAY BE REQUIRED DURING PROLONGED DRY PERIODS.



PR. TYPICAL NEAL DRIVE BIORETENTION SECTION

BIORETENTION MATERIAL SPECIFICATIONS

MATERIAL	SPECIFICATION	SIZE	NOTES
MULCH	HARDWOOD MULCH	SINGLE OR DOUBLE SHIPPED WELL AGED, NO PINE OR WOOD CHIPS.	
SOIL MEDIA	LOAMY SAND (65-85%) & COMPOST (15-40%) OR SANDY LOAM (30%), COARSE SAND (20%) & COMPOST (40%).	USDA SOIL TYPES LOAMY SAND OR SANDY LOAM; CLAY CONTENT <5%; ORGANIC CONTENT 5-10%; pH RANGE: 5.5-7.0	REQUIRED INFILTRATION RATES: LOAMY SAND = 2.41 IN/HR (4.8 FT/DAY) SANDY LOAM = 1.02 IN/HR (2.0 FT/DAY) COARSE SAND = 8.27 IN/HR (16.5 FT/DAY)
NON-WOVEN FILTER CLOTH	ACF NORDO OR APPROVED EQUIVALENT	N/A	FOR USE AS SHOWN
WASHED GRAVEL #57 STONE	AASHTO M-43	NO. 57 OR NO. 6	3/8" TO 3/4"
RIVER STONE	MARYLAND RIVER STONE	2" TO 4"	
CONCRETE	MSHA MIX NO. 3		PRE-CAST AND BROUGHT ON SITE

WATER QUALITY VOLUME ANALYSIS NEAL DRIVE BIORETENTION INSET

DRAINAGE AREA	0.89 ACRES
IMPERVIOUS AREA:	0.45 ACRES (51%)
TARGET WOV STORAGE:	0.037 AC-FT
PR. WOV PROVIDED:	0.035 AC-FT
RAINFALL DEPTH TREATED:	0.93 INCHES
IMPERVIOUS AREA TREATED:	0.42 ACRES

SCALE: 1" = 5'



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BAYLAND JOB NO. 8_31901

DESIGNED CS/AG
DRAFTED JS/MW
CHECKED CS

DEPARTMENT OF PUBLIC WORKS
CITY OF
ROCKVILLE
111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGN PLAN APPROVAL

Chief: [Signature] SEP 21 10:18 AM 2021
DIRECTOR OF PUBLIC WORKS

PRJ# 2021-00012 SC# 2021-00009
SMP# 2021-00012 FTP# 2020-00001

PLAN APPROVAL DATE

AS BUILT PLAN APPROVAL

CHIEF, CONSTRUCTION MANAGEMENT

PLAN APPROVAL DATE

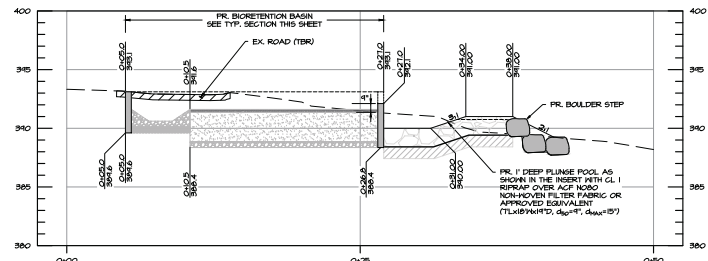
STORMWATER MANAGEMENT PLAN
NEAL DRIVE BIORETENTION

NORTHEAST PARK SWM RETROFIT AND STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND

DATE SUBMITTED: 10/8/2021
SCALE: AS SHOWN
SHEET NO. 10 OF 22
FILE # F-295

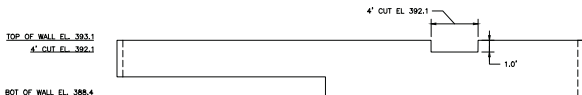
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3. DEBRIS AND LITTER REMOVAL SHALL BE ENSURED DURING REGULAR INSPECTIONS.
4. THE TOP FEW INCHES OF BASIN MEDIA SHOULD BE REMOVED, WITH LIGHT EQUIPMENT TO PREVENT COMPACTION AND REPLACED WITH NEW MEDIA WHEN WATER PONDING FOR MORE THAN 72 HOURS. SILTS AND SEDIMENT SHOULD BE REMOVED FROM THE SURFACE OF THE FILTER BED WHEN ACCUMULATION EXCEEDS ONE INCH.
5. OCCASIONAL PRUNING AND REPLACEMENT OF DEAD VEGETATION SHALL BE PERFORMED AS NECESSARY. IF SPECIFIC PLANTS ARE NOT SURVIVING, MORE APPROPRIATE SPECIES SHOULD BE USED. WATERING MAY BE REQUIRED DURING PROLONGED DRY PERIODS.

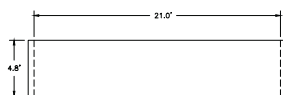


**PROFILE WESLEY ROAD BIORETENTION C/L
STA: 0+00 TO STA: 0+50**

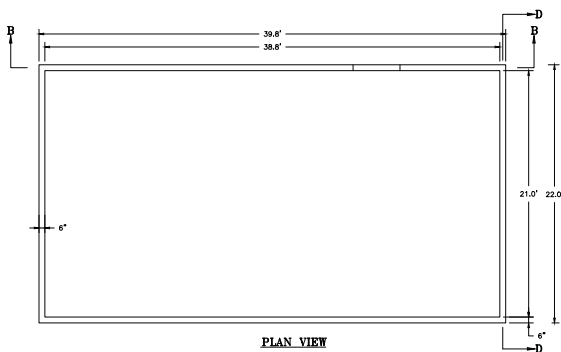
SCALE: HORIZ. 1" = 5'
VERT. 1" = 5'



SECTIONAL VIEW (SECTION B-B)



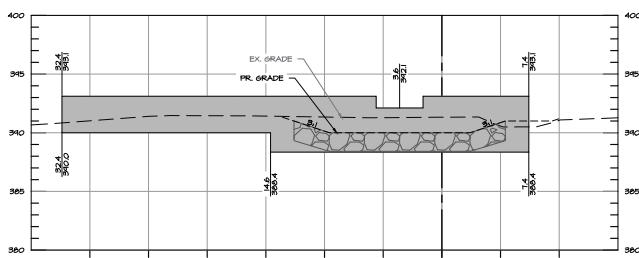
SIDE VIEW (SECTION D-D)



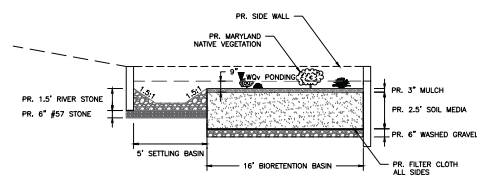
PLAN VIEW

WESLEY ROAD BIORETENTION STRUCTURE DETAIL

SCALE: 1" = 5'



WESLEY ROAD BIORETENTION SECTION B-B' STA 0+26.75

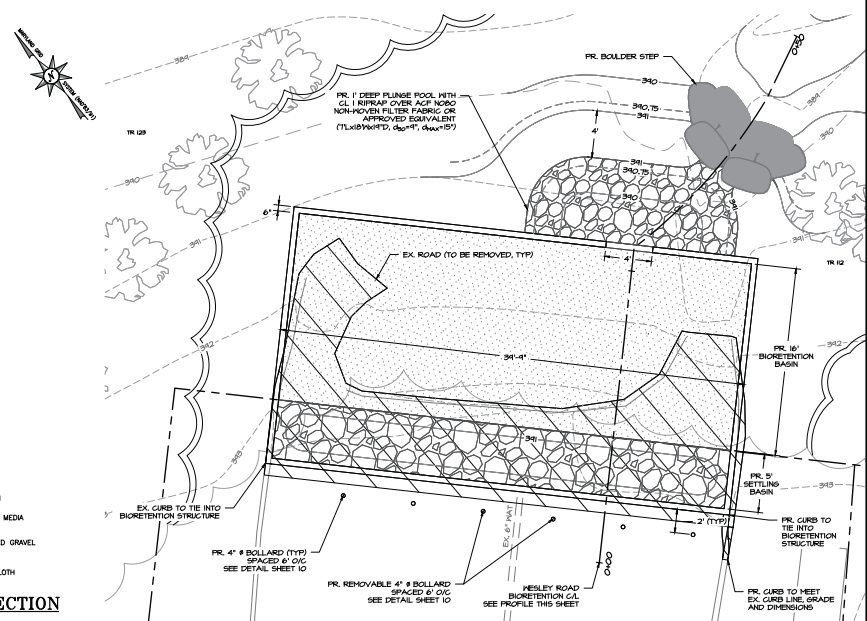


PR. TYPICAL WESLEY ROAD BIORETENTION SECTION

SCALE: 1" = 4'

WATER QUALITY VOLUME ANALYSIS

DRAINAGE AREA:	2.38 ACRES
IMPERVIOUS AREA:	0.95 ACRES (40%)
TARGET WQ STORAGE:	0.081 AC-FT
PR. WQ PROVIDED:	0.039 AC-FT
RAINFALL DEPTH TREATED:	0.49 INCHES
IMPERVIOUS AREA TREATED:	0.46 ACRES



WESLEY ROAD BIORETENTION INSET

SCALE: 1" = 5'

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DEPARTMENT OF PUBLIC WORKS
CITY OF
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DESIGN PLAN APPROVAL

CRAG E. SHROPSHIRE
3031.11.08.17.08.25.08.10
DIRECTOR OF PUBLIC WORKS

PR# 2021-00012 SC# 2021-00009
SUP# 2021-00012 FTP# 2020-00001

PLAN APPROVAL DATE

AS BUILT PLAN APPROVAL

CHIEF, CONSTRUCTION MANAGEMENT

PLAN APPROVAL DATE

STORMWATER MANAGEMENT PLAN
WESLEY ROAD BIORETENTION

NORTHEAST PARK SWM RETROFIT AND
STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND

DATE SUBMITTED: 10/8/2021

SCALE: AS SHOWN

SHEET NO. 11 OF 22

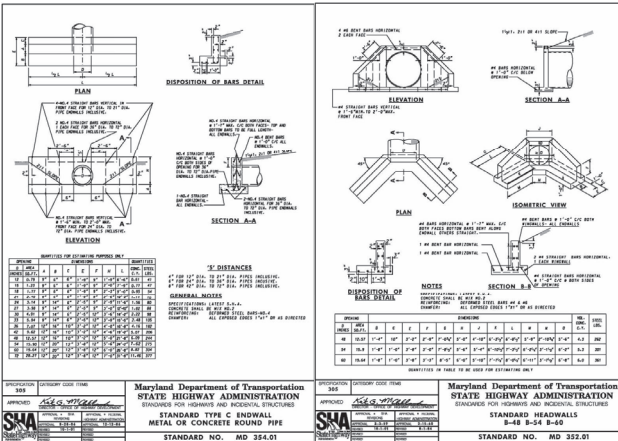
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NO. REVISIONS AFTER PLAN APPROVAL

P.E. INITIAL DATE

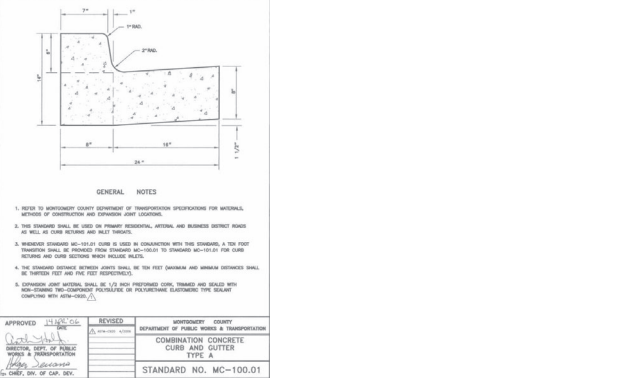
GENERAL STRUCTURAL NOTES

- BUILDING CODES**
 - 1.1. ALL CONSTRUCTION SHALL CONFORM WITH THE 2000 IRC BUILDING CODE AND ALL SUBSEQUENT SUPPLEMENTS.
 - 1.2. IN ADDITION, ALL CONSTRUCTION SHALL CONFORM WITH THE GOVERNING LOCAL BUILDING CODE.
- MISCELLANEOUS**
 - 2.1. SHOP DRAWINGS FOR ALL STRUCTURAL ELEMENTS SHOWN ON THE CONSTRUCTION DRAWINGS SHALL BE SUBMITTED BY THE CONTRACTOR OR OWNER FOR REVIEW BY THE REGISTERED ENGINEER. IF THE CONTRACTOR OR OWNER FAILS TO SUBMIT THE SHOP DRAWINGS, THE ENGINEER WILL NOT BE RESPONSIBLE FOR STRUCTURAL CERTIFICATION AND DESIGN OF THE PROJECT. THE SHOP DRAWINGS SHALL INDICATE ANY DEVIATIONS OR OMISSIONS FROM THE CONSTRUCTION DRAWINGS. THE GENERAL CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS PRIOR TO SUBMISSION AND MAKE ALL CORRECTIONS DEEMED NECESSARY.
 - 2.2. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS SHOWN ON THE CONSTRUCTION DRAWINGS BEFORE PROCEEDING WITH CONSTRUCTION. ALL DISCREPANCIES AND OMISSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER.
 - 2.3. THE CONTRACTOR SHALL NOT SUBMIT REPRODUCTIONS OF THE STRUCTURAL CONSTRUCTION DRAWINGS AS SHOP DRAWINGS.
 - 2.4. SCALES SHOWN ON THE STRUCTURAL CONSTRUCTION DRAWINGS ARE FOR GENERAL INFORMATION ONLY. DIMENSIONAL INFORMATION SHALL NOT BE OBTAINED BY SPLITTING THE DRAWINGS.
- CAST-IN-PLACE CONCRETE**
 - 3.1. ALL CONCRETE CONSTRUCTION SHALL CONFORM TO THE "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 308)" AND TO THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318)".
 - 3.2. IN ADDITION TO THE ABOVE, ALL CONCRETE WORK SHALL CONFORM TO THE FOLLOWING:
 - 3.2.1. RECOMMENDED PRACTICES FOR HOT WEATHER CONCRETING (ACI 308)
 - 3.2.2. RECOMMENDED PRACTICES FOR COLD WEATHER CONCRETING (ACI 308)
 - 3.2.3. RECOMMENDED PRACTICES FOR CONCRETE FLOORING (ACI 304)
 - 3.3. ALL CONCRETE EXPOSED TO PUBLIC VIEW SHALL CONFORM TO THE REQUIREMENTS FOR ARCHITECTURAL CONCRETE CONTAINED IN ACI 301.
 - 3.4. ALL CONCRETE, UNLESS OTHERWISE NOTED, SHALL BE STONE AGGREGATE CONCRETE HAVING A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI. ALL CONCRETE EXPOSED TO WEATHER SHALL HAVE AN AIR ENTRAINMENT OF 5% +/- 1%. NO ADmixTURES CONTAINING CALCIUM CHLORIDE SHALL BE PERMITTED. MAXIMUM AGGREGATE SIZE SHALL BE 1" AND MAXIMUM SLUMP SHALL BE 4". 3" FOR SLABS ON GRADE. ALL CONCRETE EXCEPT FOOTINGS SHALL CONTAIN A WATER REDUCING ADMIXTURE. FIBERGLASS METAL OR CONCRETE ROUND PIPE SHALL CONFORM TO ASTM C 150 AND NORMAL WEIGHT AGGREGATES SHALL CONFORM TO ASTM C 33.
 - 3.5. ALL REINFORCING BARS SHALL BE NEW BILLET STEEL CONFORMING TO ASTM A 615 GRADE 60. ALL WELDED WIRE FABRIC (W.W.F.) SHALL CONFORM TO ASTM A 185. LAP ALL REINFORCING BARS A MINIMUM OF 4 BAR DIAMETERS AND ALL W.W.F. A MINIMUM OF 2 FULL GRIDS, UNLESS NOTED OTHERWISE.
 - 3.6. ALL REINFORCING SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH THE DESIGN MANUAL OF STANDARD PRACTICES, ACI 315 DETAILS AND DETAILING OF CONCRETE REINFORCEMENT, ACI SP 66 "DETAILING MANUAL".
 - 3.7. THE CONTRACTOR SHALL RETAIN THE SERVICES OF A QUALIFIED INDEPENDENT TESTING AGENCY. ALL CONCRETE SHALL BE SAMPLED AND TESTED BY THE TESTING AGENCY. THE CONTRACTOR SHALL NOTIFY THE TESTING AGENCY 48 HOURS PRIOR TO THE PLACEMENT OF ANY CONCRETE. THE TESTING AGENCY SHALL PERFORM ALL SAMPLING AND TESTING IN ACCORDANCE WITH ASTM C 1077.
 - 3.8. THE CONCRETE STRUCTURE SHALL NOT SUPPORT THE DESIGN LIVE LOAD FOR A MINIMUM OF 28 DAYS AND ALL SHORING AND REFORMING REQUIRED TO SUPPORT THE CONCRETE STRUCTURE DURING CONSTRUCTION SHALL BE DESIGNED AND PROVIDED BY THE CONTRACTOR. SHOP DRAWINGS, SIGNED AND SEALED BY A REGISTERED ENGINEER IN THE STATE OF MARYLAND, SHALL BE SUBMITTED FOR REVIEW. SHOP DRAWINGS SHALL INDICATE THE TYPE, EXTENT, SIZE AND LOCATION OF ALL SHORING AND REFORMING AS WELL AS THE SEQUENCE OF CONSTRUCTION.
 - 3.9. GROUND BLAST FURNACE SLAG MAY BE USED TO REPLACE UP TO 50% OF THE PORTLAND CEMENT IN A MIX, AND FLY ASH OR POZZOLAN MAY BE USED TO REPLACE UP TO 25% OF PORTLAND CEMENT, SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER AND SHALL CONFORM TO ASTM C 898.
 - 3.10. MINIMUM COVER FOR ALL REINFORCING SHALL BE 3" UNLESS NOTED OTHERWISE.
 - 3.11. THE GENERAL CONTRACTOR SHALL SUBMIT PLANS SHOWING ALL PENETRATIONS THROUGH THE FRAMED CONCRETE SLABS. THE OPENINGS SHALL BE ACCURATELY LOCATED AND DIMENSIONED.
- PRECAST CONCRETE**
 - 4.1. ALL PRECAST CONCRETE ELEMENTS SHALL BE DESIGNED BY THE CONTRACTOR AND HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4500 PSI. HIGHER STRENGTH CONCRETE MAY BE USED IF PROVIDED BY DESIGN. COMPLETE DESIGN CALCULATIONS AND SHOP DRAWINGS, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MARYLAND, SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION.
 - 4.2. ALL PRECAST CONCRETE ELEMENTS SHALL BE DESIGNED TO SUPPORT THE DEAD AND LIVE LOADING CONDITIONS SHOWN OR INDICATED IN THE CONSTRUCTION DOCUMENTS. THE CONNECTIONS FOR PRECAST CONCRETE ELEMENTS SHOWN ARE SCHEMATIC AND FOR REFERENCE ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN OF ALL CONNECTIONS.
 - 4.3. THE CONTRACTOR SHALL NOT CUT OR DRILL ANY OPENINGS INTO THE PRECAST CONCRETE ELEMENTS WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER AND PRECAST MANUFACTURER.
 - 4.4. REFER TO "CAST-IN-PLACE CONCRETE SECTION" FOR ADDITIONAL INFORMATION ON CONCRETE AND REINFORCING.



MODIFICATIONS TO CONCRETE STRUCTURES GENERAL NOTES

1. ALL REMOVAL SHALL BE COMPLETED WITH SAW CUTS.
2. ANY EXPOSED REBAR SHALL BE PROTECTED FROM CORROSION BY USING A REPAIR EPOXY SPRAY, BACK COULING AND FILL HOLES WITH MORTAR, OR OTHER APPROVED METHOD.
3. THE EXISTING CONCRETE SURFACE SHALL BE PREPARED BY SCABBING, SCAMPING, HIGH PRESSURE (5000 TO 45000 PSI) WATER JETTING OR OTHER APPROVED METHOD. THE SURFACE SHALL THEN BE CLEANED, LOW PRESSURE (5000 PSI) WATER CLEANING, DETERGENT CLEANING, OR OTHER APPROVED METHOD AND ALLOWED TO DRY THOROUGHLY.
4. FOLLOWING SURFACE PREPARATION, ALL CUT CONCRETE SURFACES SHALL BE COATED WITH AN EPOXY POLYSULFIDE JOINT SEALANT.
5. REBAR DOWELS SHALL BE INSTALLED TO THE NEW CONCRETE WITH THE EXISTING STRUCTURE AND SHALL BE CONTINUOUS A MINIMUM OF 3 INCHES INTO THE EXISTING STRUCTURE.
6. ALL REBAR SHALL BE EPOXYED INTO THE EXISTING STRUCTURE TO FORM A TIGHT FIT. EPOXY SHALL BE FILL HIT-800 VS OR APPROVED EQUIVALENT.
7. SEE "GENERAL STRUCTURAL NOTES" FOR INFORMATION ON CONCRETE AND STEEL REINFORCING SPECIFICATIONS.



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DESIGN PLAN APPROVAL

Cheryl S. Sherrill
202-111-0817/202-848-2426/202-848-2427
DIRECTOR OF PUBLIC WORKS

PKW 2021-00012
SMP 2021-00012

DATE: 10/9/2021

AS BUILT PLAN APPROVAL

CHEF, CONSTRUCTION MANAGEMENT

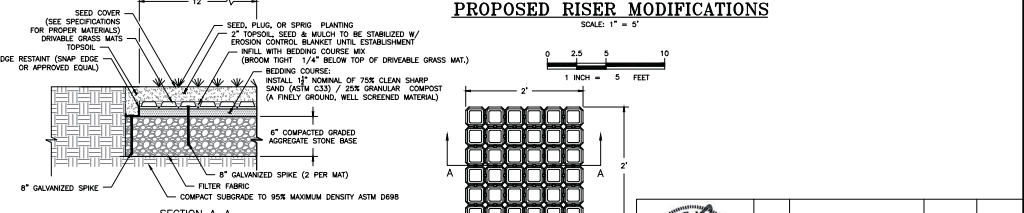
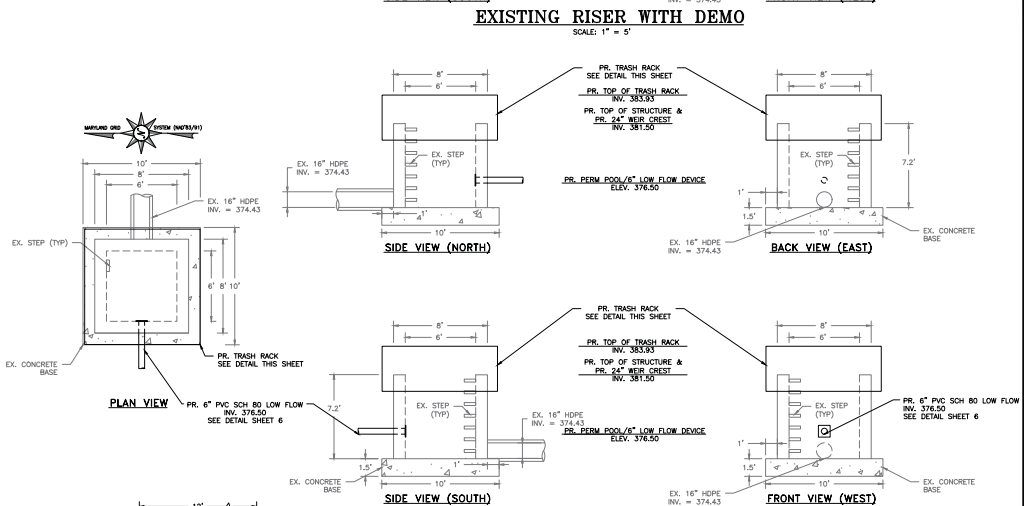
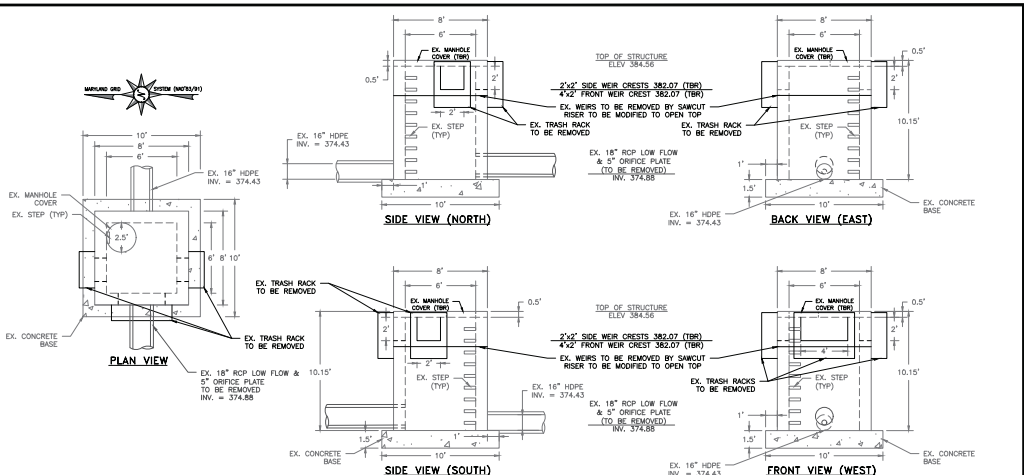
DATE: 10/9/2021

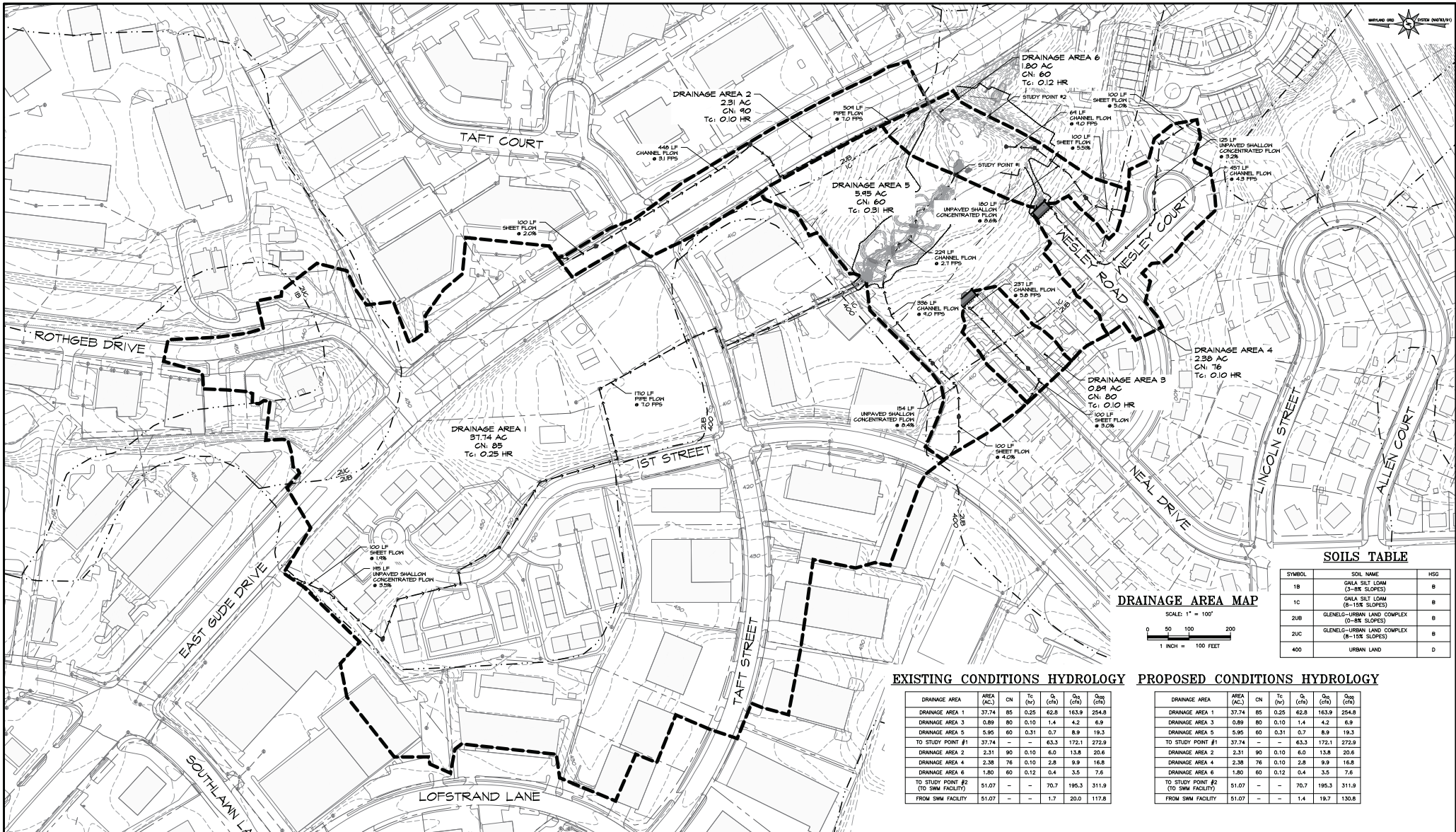
STORMWATER MANAGEMENT PLAN
STRUCTURE DETAILS & NOTES

NORTHEAST PARK SWM RETROFIT AND STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND

NO.	REVISIONS AFTER PLAN APPROVAL	P.E. INITIAL	DATE

DATE SUBMITTED: 10/9/2021
SCALE: 1" = 5'
SHEET NO. 12 OF 22
FILE # F-295

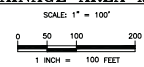




SOILS TABLE

SYMBOL	SOIL NAME	HSG
1B	GALIA SILT LOAM (3-8% SLOPES)	B
1C	GALIA SILT LOAM (8-15% SLOPES)	B
2UB	GLENELG-URBAN LAND COMPLEX (0-8% SLOPES)	B
2UC	GLENELG-URBAN LAND COMPLEX (8-15% SLOPES)	B
400	URBAN LAND	D

DRAINAGE AREA MAP



EXISTING CONDITIONS HYDROLOGY

DRAINAGE AREA	AREA (AC)	CN	Tc (hr)	Q (cfs)	Q ₁₀ (cfs)	Q ₅₀ (cfs)
DRAINAGE AREA 1	37.74	85	0.25	62.8	163.9	254.0
DRAINAGE AREA 3	0.89	80	0.10	1.4	4.2	6.9
DRAINAGE AREA 5	5.95	60	0.31	0.7	8.9	19.3
TO STUDY POINT #1	37.74	-	-	63.3	172.1	272.9
DRAINAGE AREA 2	2.31	90	0.10	6.0	13.8	20.6
DRAINAGE AREA 4	2.39	76	0.10	2.8	9.9	15.8
DRAINAGE AREA 6	1.80	60	0.12	0.4	3.5	7.6
TO STUDY POINT #2 (TO SWM FACILITY)	51.07	-	-	70.7	195.3	311.9
FROM SWM FACILITY	51.07	-	-	1.7	20.0	117.8

PROPOSED CONDITIONS HYDROLOGY

DRAINAGE AREA	AREA (AC)	CN	Tc (hr)	Q (cfs)	Q ₁₀ (cfs)	Q ₅₀ (cfs)
DRAINAGE AREA 1	37.74	85	0.25	62.8	163.9	254.0
DRAINAGE AREA 3	0.89	80	0.10	1.4	4.2	6.9
DRAINAGE AREA 5	5.95	60	0.31	0.7	8.9	19.3
TO STUDY POINT #1	37.74	-	-	63.3	172.1	272.9
DRAINAGE AREA 2	2.31	90	0.10	6.0	13.8	20.6
DRAINAGE AREA 4	2.39	76	0.10	2.8	9.9	15.8
DRAINAGE AREA 6	1.80	60	0.12	0.4	3.5	7.6
TO STUDY POINT #2 (TO SWM FACILITY)	51.07	-	-	70.7	195.3	311.9
FROM SWM FACILITY	51.07	-	-	1.4	19.7	130.6

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BAYLAND JOB NO. B-31961

DEPARTMENT OF PUBLIC WORKS
CITY OF
ROCKVILLE
111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGN PLAN APPROVAL

AS BUILT PLAN APPROVAL

CHIEF, CONSTRUCTION MANAGEMENT

PLAN APPROVAL DATE

STORMWATER MANAGEMENT PLAN
DRAINAGE AREA MAP

NORTHEAST PARK SWM RETROFIT AND
STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND

DATE SUBMITTED: 10/9/2021

SCALE: 1" = 100'

SHEET NO. 13 OF 22

FILE # F-295

STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

- A. SOIL PREPARATION
1. TEMPORARY STABILIZATION
a. SEEDBED PREPARATION CONSISTS OF LOOSING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF GRADUAL APPROPRIATE CONSTRUCTION EQUIPMENT...
b. APPLY FERTILIZER AND LIME AS NEEDED...
2. PERMANENT STABILIZATION
a. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE...
b. SOIL CONTAINS LESS THAN 400 PARTS PER MILLION (PPM) OF LEAD...
c. SOIL CONTAINS 15 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT...
d. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE PORE FLOW...
e. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS...
f. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE...
g. APPLIED SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST...
h. SOIL LIME AND FERTILIZER SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL...
i. TOPSOIL IS PLACED OVER PROPOSED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION...
j. TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS...
k. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
a. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETABLE GROWTH...
b. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING NUTRIENT SUPPLY...
c. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH...
d. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE...
l. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRING SPECIAL CONSIDERATION AND DESIGN...
m. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:
1. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND...
2. TOPSOIL MUST BE FREE OF NOXIOUS FUNGI OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, NET SEED, POISON IVY, TOILET, OR OTHERS AS SPECIFIED...
3. TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRICULTURIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE AGRICULTURAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL...
n. TOPSOIL APPLICATION
1. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL...
2. UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES...
3. FERTILIZERS MUST BE APPLIED IN SUCH A MANNER THAT SOILING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE...
o. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)
1. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER...
2. FERTILIZERS MUST BE OF COMPOSITION, FREE FLOWING AND SOLUBLE FOR ACCURATE APPLICATION...
3. LIME MATERIALS MUST BE GROUND LIMESTONE WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES...
4. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL...
5. MATURE COMPOST MAY BE SUBSTITUTE AS A SOIL AMENDMENT AND INCORPORATED INTO THE TOP 9 INCHES OF SOIL...
6. THE PLANTING DATES LISTED ARE FOR EACH ZONE AND MAY REQUIRE ADJUSTMENT TO REFLECT LOCAL CONDITIONS...

STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

- A. SEEDING
1. SPECIFICATIONS
a. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW...
b. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY...
c. ALL SEED MUST BE PLACED IN THE FIELD AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN...
d. NO-INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURE MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA...
e. DRILL SEEDING: THIS INCLUDES USE OF CONVENTIONAL DRILL OR BROADCAST SPREADERS...
f. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE B.1...
g. SOIL PREPARED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER...
h. SPRINKLER OR CULPINNER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL...
i. ANCHORING SEEDS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVER...
j. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER...
k. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER...
l. HYDROSEEDING IS BEING APPLIED AT THE TIME OF SEEDING...
m. LIME USE ONLY: GROUND AGRICULTURAL LIMESTONE...
n. HYDROSEEDING: NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME...
o. MIX SEED AND FERTILIZER ON SITE AND USE IMMEDIATELY AND WITHOUT INTERRUPTION...
2. MULCHING (IN ORDER OF PREFERENCE)
a. STRAW CONSISTING OF THROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY...
b. WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE...
c. WCFM IS TO BE ORED GREEN OR CONTRASTING COLOR...
d. WCFM INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS...
e. WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT PERMANENT WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER...
f. WCFM MATERIAL MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS...
3. ANCHORING
a. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER...
b. WOOD CELLULOSE FIBER MULCH MAY BE USED FOR ANCHORING STRAW...
c. SYNTHETIC BINDERS SUCH AS ACRYLIC DYE (AGRO-TOCH), DCA-700, PROTRESIT, TERRA TACK...
4. NOTES
1. PERMANENT SEEDING SHALL ONLY BE NECESSARY FOR STABILIZATION OF AREAS WHERE THE PERMANENT LANDSCAPE PLAN DOES NOT REQUIRE SEEDING...

CITY OF ROCKVILLE STANDARD EROSION AND SEDIMENT CONTROL NOTES 11/16

- 1. THE APPLICANT MUST OBTAIN INSPECTION AND APPROVAL BY THE CITY OF ROCKVILLE DEPARTMENT OF PUBLIC WORKS (DPW) AT THE FOLLOWING POINTS:
a. AT THE REQUIRED PRECONSTRUCTION MEETINGS...
b. AT THE INSTALLATION OF EROSION CONTROL MEASURES AND PRIOR TO ANY OTHER LAND DISTURBING ACTIVITY...
c. AT THE INSTALLATION OF A SEDIMENT BASIN OR STORMWATER MANAGEMENT STRUCTURE AT THE REQUIRED INSPECTION POINTS...
d. FOR REMOVAL OR MODIFICATION OF ANY SEDIMENT CONTROL DEVICES...
e. FOR FINAL ACCEPTANCE...
2. ALL EROSION CONTROL MEASURES ARE TO BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH APPLICABLE PUBLISHED STANDARDS AND SPECIFICATIONS...
3. THE APPLICANT SHALL CONTRACT ALL EROSION AND SEDIMENT CONTROL MEASURES FOR THE APPROVED PLAN AND CONSTRUCTION SPECIFICATIONS...
4. THE APPLICANT SHALL PROTECT ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS TO PREVENT THE DEPOSITION OF MATERIALS...
5. THE APPLICANT SHALL INSPECT DAILY AND MAINTAIN CONTINUOUSLY IN EFFECTIVE OPERATING CONDITION ALL EROSION AND SEDIMENT CONTROL MEASURES...
6. ALL SEDIMENT BASINS, TRAP BARRIERS, WEEDS, PERMETER DIKES AND PERMANENT SLOPES STEEPER OR FLATTER THAN 2:1 SHALL BE STABILIZED WITH 2:1 SEED AND ANCHORED STRAW MULCH...
7. PRIOR TO REMOVAL OF SEDIMENT CONTROL MEASURES, THE APPLICANT SHALL STABILIZE ALL CONTRIBUTORY AREAS...
8. SURFACE DRAINAGE FLOWS OVER UNSTABILIZED CUT AND FILL SLOPES SHALL BE CONTROLLED BY EITHER PREVENTING DRAINAGE FLOWS FROM TRAVERSING THE SLOPES OR INSTALLING MECHANICAL DEVICES...
9. PERMANENT SWALES OR OTHER POINTS OF CONCENTRATED WATER FLOW SHALL BE STABILIZED WITH SOIL OR SEDIMENT EROSION CONTROL MATTING...
10. TEMPORARY SEDIMENT CONTROL DEVICES SHALL BE REMOVED, WITH PERMISSION OF DPW, WITHIN 30 CALENDAR DAYS FOLLOWING ESTABLISHMENT OF PERMANENT STABILIZATION...
11. NO PERMANENT CUT OR FILL SLOPE WITH A GRADIENT STEEPER THAN 3:1 WILL BE PERMITTED IN LAWN MAINTENANCE AREAS...
12. PERMANENT SWALES OR OTHER POINTS OF CONCENTRATED WATER FLOW SHALL BE STABILIZED WITH SOIL OR SEDIMENT EROSION CONTROL MATTING...
13. THE APPLICANT SHALL INSTALL A SLASH BUCK AT THE BOTTOM OF EACH DOWNSLOPE UNLESS THE DOWNSLOPE IS CONNECTED BY A DRAIN LINE TO AN ACCEPTABLE OUTLET...
14. WATER PUMPED FROM AN EXCAVATION DURING CONSTRUCTION SHALL BE PUMPED EITHER TO SEDIMENT TRAP AND/OR SEDIMENT BASIN OR PUMPED TO THE STORM DRAIN SYSTEM...
15. THE APPLICANT SHALL INSTALL A SLASH BUCK AT THE BOTTOM OF EACH DOWNSLOPE UNLESS THE DOWNSLOPE IS CONNECTED BY A DRAIN LINE TO AN ACCEPTABLE OUTLET...
16. AFTER FINISHED GRADING, THE APPLICANT SHALL PROVIDE ACCEPTABLE GRADIENTS SO AS TO: (1) PREVENT WATER FROM STANDING ON THE SURFACE...
17. SEDIMENT TRAPS OR BASINS ARE NOT PERMITTED WITHIN 20 FEET OF A BUILDING...
18. ALL INLETS IN NON-SUMP AREAS SHALL HAVE ASPHALT BERMS INSTALLED AT THE TIME OF BASE PAVING TO DIRECT RAINFALL TO INLETS...
19. THE DPW SEDIMENT CONTROL INSPECTOR HAS THE OPTION OF REQUIRING ADDITIONAL SEDIMENT CONTROL MEASURES, IF DEEMED NECESSARY...
20. THE ELEVATIONS ARE RELATIVE TO THE OUTLET ELEVATION...
21. VEGETATIVE STABILIZATION SHALL BE PERFORMED IN ACCORDANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS...
22. TEMPORARY SEDIMENT TRAPS SHALL BE CLEANED OUT AND RESTORED TO THE ORIGINAL DIMENSIONS...
23. SEDIMENT REMOVED FROM TRAPS SHALL BE PLACED AND STABILIZED IN APPROVED AREAS...
24. ALL SEDIMENT BASINS AND TRAPS MUST BE SURROUNDED WITH A WELDED WIRE SAFETY FENCE...
25. OFF-SITE SPOIL OR BORROW AREAS MUST HAVE APPROVED SEDIMENT CONTROL PLANS...
26. PROTECT ALL TREES TO BE PRESERVED DURING CONSTRUCTION...
27. THE APPLICANT IS RESPONSIBLE FOR ALL ACTIONS OF CONTRACTOR AND SUBCONTRACTORS...
28. THE APPLICANT SHALL COMPLY WITH ALL PROVISIONS OF THE INPES CONSTRUCTION DISCHARGE PERMIT...

SEQUENCE OF CONSTRUCTION

- NOTES:
1. CONTACT THE FOLLOWING ENTITIES AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION...
2. TREE FELLING AND REMOVAL SHALL NOT IMPACT TREES THAT ARE TO REMAIN...
3. EXISTING TOPSOIL, BERM AND SLOPE MATERIAL SHALL BE STOCKPILED SEPARATELY...
4. ANY MATERIAL TAKEN OFF SITE MUST GO TO A SITE WITH AN ACTIVE AND APPROVED SEDIMENT AND EROSION CONTROL PLAN...
5. STANDARD STABILIZATION METHOD FOLLOWING NATURAL SOIL DISTURBANCE OR RE-DISTURBANCE...
6. THE SEQUENCE OF CONSTRUCTION IS INTENDED TO COVER THE INSTALLATION OF SEDIMENT CONTROLS AND GENERAL INSTRUCTION TO THE CONTRACTOR...
7. CONTRACTOR MUST PROTECT AND REPAIR/REPLACE EXISTING INFRASTRUCTURE...
8. SEDIMENT AND EROSION CONTROLS CANNOT BE REMOVED UNTIL THE SITE HAS ADEQUATE STABILIZATION...
9. CONTRACTOR SHALL NOTIFY THE CITY OF ROCKVILLE'S CONSTRUCTION MANAGEMENT DIVISION...
10. CONTACT MSE UTILITY AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION...
11. INSTALL TREE PROTECTION MEASURES, HIGH VELOCITY FENCE, TRAFFIC CONTROL SIGNS AND PRUNES AS DIRECTED...
12. OBTAIN WRITTEN APPROVAL FROM THE CITY'S SEDIMENT AND EROSION CONTROL INSPECTOR...
13. INSTALL HIGH VELOCITY FENCE, STAGNO/STOCKPILE AREA, SILT FENCE ON PAVEMENT...
14. INSTALL PROPOSED BOREHOLENATION BASINS AT THE ENDS OF NEAL DRIVE AND WESLEY ROAD...
15. WITH SEDIMENT AND EROSION CONTROL INSPECTOR'S APPROVAL...
16. INSTALL PHASE I CONSTRUCTION ACCESS ROAD, MOUNTABLE BERM, FILTER LOG, SANDBAG DIKES...
17. INSTALL SUMP PITS, PIPE AND FILTER BAG FOR DRAINING SITE OF SEDIMENT...
18. REMOVE EXISTING 48" RCP DOWNSLOPE AND SALVAGE EXISTING RIPRAP MATERIAL...
19. STARTING UPLIFT AND MOVING DOWNSLOPE (STA. 0+32.0 TO 3+11.5)...
20. PERMANENTLY STABILIZE ALL DISTURBED AREAS WITH THE SPEC AREA WITH SEDIMENT AND EROSION CONTROL INSPECTOR'S APPROVAL...
21. INSTALL PHASE II CONSTRUCTION ACCESS ROAD, SANDBAG DIVERSIONS, PUMPS & DIVERSION PIPES...
22. INSTALL SUMP PITS, PIPE AND FILTER BAG FOR DRAINING SITE OF SEDIMENT...
23. REMOVE EXISTING 48" RCP DOWNSLOPE...
24. STARTING UPLIFT AND MOVING DOWNSLOPE...
25. PERMANENTLY STABILIZE ALL DISTURBED AREAS WITH THE SPEC AREA...
26. REMOVE EXISTING 48" RCP DOWNSLOPE...
27. BEGIN GRADING...
28. BEGIN POND EXCAVATION AND INSTALLATION OF GYAL LINER...
29. PERMANENTLY STABILIZE ALL DISTURBED AREAS WITH THE SPEC AREA...
30. REMOVE EXISTING 48" RCP DOWNSLOPE...
31. REMOVE ANY REMAINING CONSTRUCTION ACCESS ROAD...
32. WITH SEDIMENT AND EROSION CONTROL INSPECTOR'S APPROVAL...
33. REPAIR AND MAINTAIN ANY SERVICABLE STRUCTURE OR FILL...
34. RECTIFY ANY NON TIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS OR 100 YEAR FLOOD PLAN...
35. ALL STABILIZATION IN THE NON TIDAL WETLAND AND NON TIDAL WETLAND BUFFER SHALL CONSIST OF THE FOLLOWING SPECIES...
36. TO PROTECT AQUATIC SPECIES, IN STREAM WORK IS PROHIBITED...
37. STORMWATER RUNOFF FROM IMPERVIOUS SURFACES SHALL BE CONTROLLED...
38. CULVERTS SHALL BE CONSTRUCTED AND ANY RIP RAP PLACED SO AS NOT TO OBSTRUCT THE MOVEMENT OF AQUATIC SPECIES...

BEST MANAGEMENT PRACTICES FOR WORKING IN NON TIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS AND 100 YEAR FLOODPLAINS

- 1. NO EXCESS FILL CONSTRUCTION MATERIAL, OR DEBRIS SHALL BE STOCKPILED OR STORED IN NON TIDAL WETLANDS...
2. PLACE MATERIALS IN A LOCATION AND MANNER WHICH DOES NOT ADVERSELY IMPACT SURFACE OR SUBSURFACE WATER FLOW...
3. DO NOT USE EXCAVATED MATERIAL AS BACK FILL...
4. PLACE HEAVY EQUIPMENT ON MATS OR SUITABLE PROTECTION...
5. REPAIR AND MAINTAIN ANY SERVICABLE STRUCTURE OR FILL...
6. RECTIFY ANY NON TIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS OR 100 YEAR FLOOD PLAN...
7. ALL STABILIZATION IN THE NON TIDAL WETLAND AND NON TIDAL WETLAND BUFFER SHALL CONSIST OF THE FOLLOWING SPECIES...
8. AFTER INSTALLATION HAS BEEN COMPLETED...
9. TO PROTECT AQUATIC SPECIES, IN STREAM WORK IS PROHIBITED...
10. STORMWATER RUNOFF FROM IMPERVIOUS SURFACES SHALL BE CONTROLLED...
11. CULVERTS SHALL BE CONSTRUCTED AND ANY RIP RAP PLACED SO AS NOT TO OBSTRUCT THE MOVEMENT OF AQUATIC SPECIES...
12. THE APPLICANT IS RESPONSIBLE FOR ALL ACTIONS OF CONTRACTOR AND SUBCONTRACTORS...
13. THE APPLICANT SHALL COMPLY WITH ALL PROVISIONS OF THE INPES CONSTRUCTION DISCHARGE PERMIT...

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DESIGN PLAN APPROVAL
City of Rockville
Director of Public Works
PLAN APPROVAL DATE

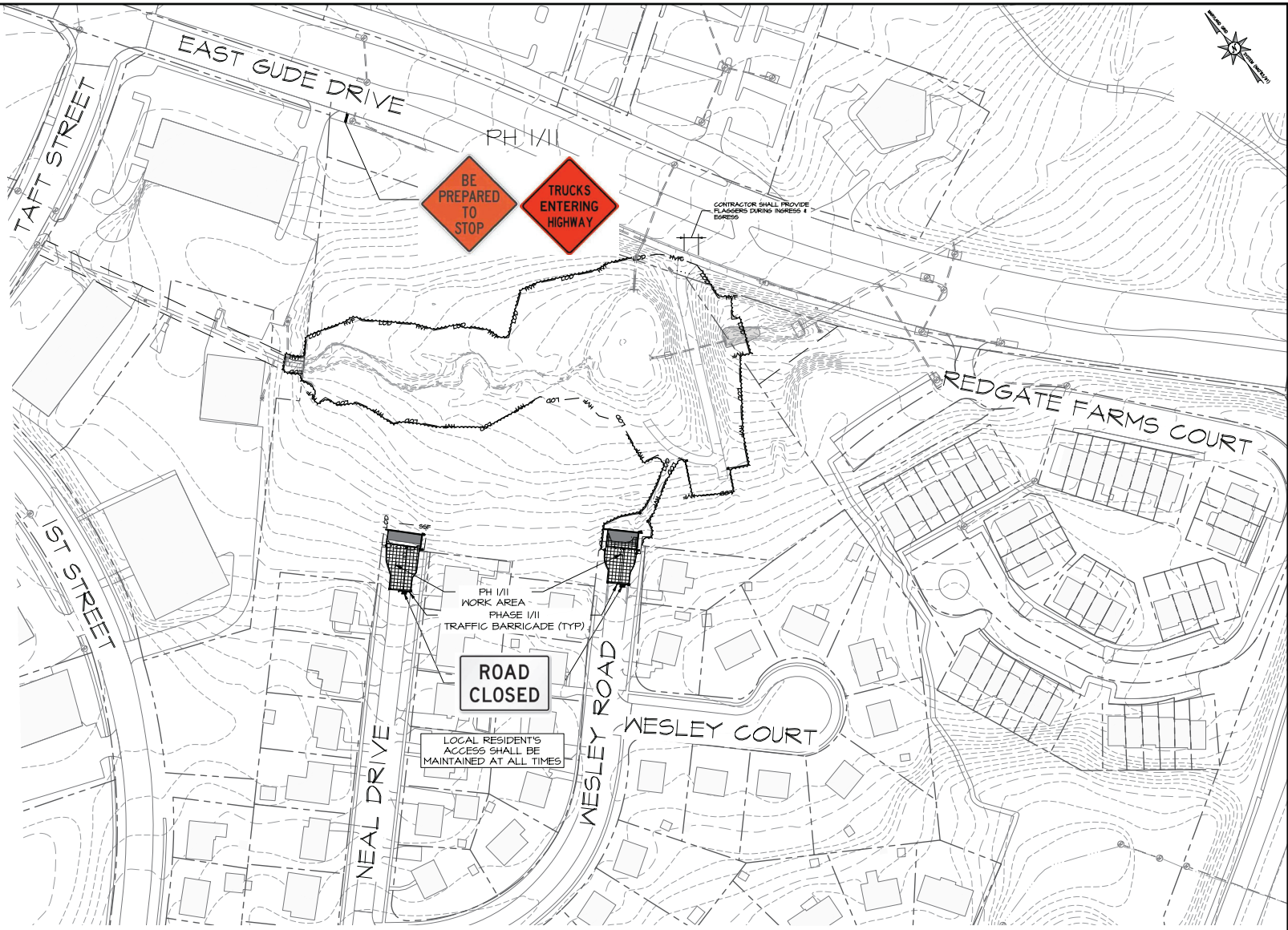
AS BUILT PLAN APPROVAL
Chief Construction Manager
PLAN APPROVAL DATE

STORMWATER MANAGEMENT PLAN
EROSION & SEDIMENT CONTROL NOTES

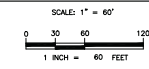
NORTHEAST PARK SWM RETROFIT AND STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND
DATE SUBMITTED: 10/9/2021
SCALE: SHEET NO. 17 OF 22
FILE #

TEMPORARY TRAFFIC CONTROL NOTES

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MD MUTCD); STATE HIGHWAY ADMINISTRATION (SHA) BOOK OF STANDARDS, SPECIFICATIONS AND GUIDELINES; THESE PLANS; THE PROJECT SPECIAL PROVISIONS; AND ALL OTHER CONTRACT DOCUMENTS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FABRICATING AND POSTING NO PARKING SIGNS 48 HOURS BEFORE BASING ON-STREET PARKING SIGNS/LETTERS TEMPORARILY.
3. THE CONTRACTOR SHALL NOTIFY UPCOMING CONSTRUCTION TO THE CITY INSPECTOR, NEIGHBORHOOD RESOURCES COORDINATOR (240-314-8344), CITY POLICE (240-314-8900), AND AFFECTING HOA AT LEAST TWO WEEKS PRIOR TO CONSTRUCTION.
4. THE CONTRACTOR SHALL NOTIFY MIES UTILITY AT 1-800-257-7777, 5 WORKING DAYS BEFORE WORK.
5. THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN CIRCULATIONS DURING CONSTRUCTION FOR ANY SIDEWALK CLOSURE, THE CONTRACTOR SHALL SET UP APPLICABLE DETOUR SIGNS AND BARRICADES BASED ON THE MD SHA STANDARDS NO. 104.00-09A, 104.00-09B, OR 104.00-09C.
6. ACCESS TO THE RESIDENTIAL PROPERTIES AND DRIVEWAYS MUST BE MAINTAINED AT ALL TIMES.
7. THE CONTRACTOR SHALL ONLY PERFORM AS MUCH WORK AS CAN BE COMPLETED DURING EACH WORK DAY.
8. AT THE END OF EACH WORK DAY, THE CONTRACTOR SHALL REMOVE ALL TEMPORARY SIGNS THAT ARE NOT APPLICABLE.
9. PERMANENT SIGNS IN CONFLICT WITH TEMPORARY TRAFFIC CONTROL SETUPS SHALL BE COVERED OR REMOVED AND SHALL BE RETURNED TO THEIR ORIGINAL PLACES AFTER THE COMPLETION OF CONSTRUCTION.
10. ANY PAVEMENT MARKINGS, SIGNS, CITY FACILITIES OR OTHER TRAFFIC CONTROL DEVICES DAMAGED BY THE CONTRACTOR SHALL BE RESTORED TO THEIR ORIGINAL CONDITION.
11. ADDITIONAL CONSTRUCTION WARNING SIGNS SHALL BE PLACED AS NEEDED WHEN DIRECTED BY THE CITY ENGINEER OR INSPECTOR.
12. FOR ROADWAY CLOSURE, THE APPLICANT SHALL PLACE A VARIABLE MESSAGE SIGN BOARD IN EACH DIRECTION OF THE ROAD AT LEAST 48 HOURS PRIOR TO THE CLOSURE AND THE MESSAGE SHOULD BE APPROVED BY THE CITY'S CHIEF OF CONSTRUCTION MANAGEMENT OR CITY INSPECTOR.
13. IT IS THE RESPONSIBILITY OF THE CONTRACTOR PERFORMING WORK ON OR ADJACENT TO A PUBLIC ROAD TO PROVIDE, INSTALL, AND MAINTAIN APPROPRIATE TRAFFIC CONTROL DEVICES, AS WELL AS ANY ADDITIONAL TRAFFIC CONTROL DEVICES THAT MAY BE REQUIRED TO ENSURE THE SAFE AND EFFICIENT MOVEMENT OF TRAFFIC AND PEDESTRIANS THROUGH OR AROUND THE WORK AREA AND TO PROVIDE THE REQUIRED PROTECTION FOR THE SAFETY OF ROAD WORKERS.
14. THE MAINTENANCE OF TRAFFIC DRAWINGS SHALL BE USED IN COMBINATION WITH THE GENERAL NOTES IN SHA STANDARDS MD 104.00-01 TO MD 104.00-18 AND STANDARD DETAILS IN SHA STANDARDS MD 104.01-1 TO MD 104.01-62.
15. WORK MAY NOT BE PERFORMED UNTIL ALL APPLICABLE TRAFFIC CONTROL DEVICES ARE IN PLACE, TRAFFIC CONTROL DEVICES MUST BE IN PLACE ANY TIME WORK IS IN PROGRESS.
16. THE CITY MUST APPROVE ANY CORRECTIONS, MODIFICATIONS, OR ADDITIONS TO THIS PLAN.
17. LOCATIONS OF DEVICES MAY BE MODIFIED AS DIRECTED BY THE CITY TO ACCOMMODATE FIELD CONDITIONS.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TRAFFIC CONTROL DEVICES AND SHALL IMMEDIATELY REPLACE ANY WHICH ARE MISSING OR DETERMINED BY THE CITY TO BE UNSUITABLE FOR USE.
19. ALL SIGNS THAT ARE PART OF A WORK ZONE FOR MORE THAN THREE (3) DAYS SHALL BE PLACED ON POSTS.
20. ALL CONSTRUCTION SHALL BE COMPLETED DURING THE HOURS OF 7AM AND 5PM OR AS DIRECTED BY THE CITY. IT IS ANTICIPATED THAT PHASE I/II WILL BE COMPLETED IN APPROXIMATELY 84 WORKING DAYS WITH EAST GUDE DRIVE OPEN TO TRAFFIC. IT IS ANTICIPATED THAT THE PROPOSED BORTENTIONS WILL BE COMPLETED IN APPROXIMATELY 13 WORKING DAYS WITH THE ENDS OF NEAL DRIVE AND WESLEY ROAD CLOSED FOR THAT TIME.
21. PHASE I/II TRAFFIC CONTROL INCLUDES:
 - 21.1. INSTALLATION OF WARNING SIGNS
 - 21.2. REMOVAL OF PHASE I/II SIGNAGE UPON COMPLETION OF STREAM RESTORATION AND POND RETROFIT
22. NEAL DRIVE AND WESLEY ROAD TRAFFIC CONTROL INCLUDES:
 - 22.1. INSTALLATION OF WARNING SIGNS AND TRAFFIC BARRICADE
 - 22.2. FLAGGING AS NECESSARY TO ALLOW CONSTRUCTION VEHICLE PASSAGE DURING BORTENTION CONSTRUCTION
 - 22.3. REMOVAL OF NEAL DRIVE AND WESLEY ROAD SIGNAGE AND BARRICADES UPON COMPLETION OF THE PROJECT



TRAFFIC CONTROL PLAN



Consultants & Designers, Inc.
"Integrating Engineering and Environment"

7455 New Ridge Road, Suite T Phone: (410) 694-9481
Hanover, Maryland 21076 Fax: (410) 694-9485
www.baylandinc.com
BAYLAND JOB NO. 8_31901

DESIGNED CS/GG
DRAFTED JS/MW
CHECKED CS

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCKVILLE
111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGN PLAN APPROVAL

Chris L. Sirotenko
2024.11.08.17.08.1618.007

DIRECTOR OF PUBLIC WORKS

PR#F 2021-00012 SC#F 2021-00009
SN#F 2021-00012 FTP# 2020-00001

PLAN APPROVAL DATE

AS BUILT PLAN APPROVAL

CHIEF, CONSTRUCTION MANAGEMENT

PLAN APPROVAL DATE

STORMWATER MANAGEMENT PLAN

TRAFFIC CONTROL PLAN

NORTHEAST PARK SWM RETROFIT AND STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND

NO.	REVISIONS AFTER PLAN APPROVAL	P.E. INITIAL	DATE

DATE SUBMITTED: 10/8/2021

SCALE: 1" = 60'

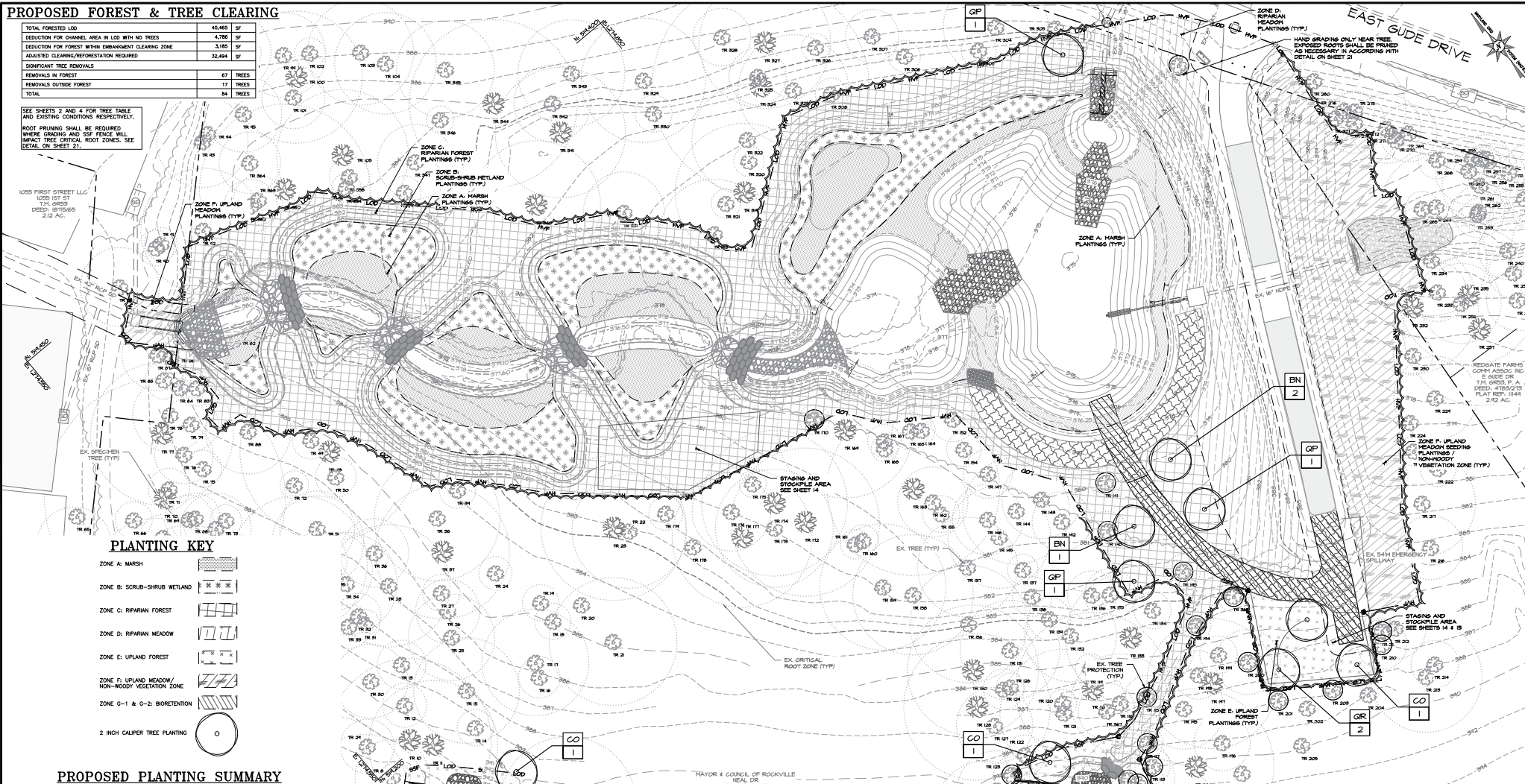
SHEET NO. 18 OF 22

FILE # F-295

PROPOSED FOREST & TREE CLEARING

TOTAL FORESTED LOD	40,485 SF
DEDUCTION FOR CHANNEL AREA IN LOD WITH NO TREES	4,786 SF
DEDUCTION FOR FOREST WITH EMBANKMENT CLEARING ZONE	3,185 SF
ADJUSTED CLEARING/REFORESTATION REQUIRED	32,494 SF
SIGNIFICANT TREE REMOVALS	
REMOVALS IN FOREST	67 TREES
REMOVALS OUTSIDE FOREST	17 TREES
TOTAL	84 TREES

SEE SHEETS 2 AND 4 FOR TREE TABLE AND EXISTING CONDITIONS RESPECTIVELY.
ROOT PRUNING SHALL BE REQUIRED WHERE GRADING AND 10% FENCE WILL IMPACT TREE CRITICAL ROOT ZONES. SEE DETAIL ON SHEET 21.



PLANTING KEY

- ZONE A: MARSH
- ZONE B: SCRUB-SHRUB WETLAND
- ZONE C: RIPARIAN FOREST
- ZONE D: RIPARIAN MEADOW
- ZONE E: UPLAND FOREST
- ZONE F: UPLAND MEADOW/
NON-WOODY VEGETATION ZONE
- ZONE G-1 & G-2: BIORETENTION
- 2 INCH CALIPER TREE PLANTING

PROPOSED PLANTING SUMMARY

ZONE A: HIGH MARSH PLANTING	9,076 SF
ZONE B: SCRUB-SHRUB WETLAND PLANTING	2,622 SF
ZONE C: RIPARIAN FOREST	22,767 SF
ZONE D: RIPARIAN MEADOW	6,429 SF
ZONE E: UPLAND FOREST	2,872 SF
ZONE F: UPLAND MEADOW	6,337 SF
ZONE G-1 & G-2: BIORETENTION	1,140 SF
TOTAL REFORESTATION AREA (ZONE B, C & E)	36,261 SF

QUALIFIED PROFESSIONAL CERTIFICATION
I CERTIFY THAT I AM A DULY CERTIFIED FOREST CONSERVATION QUALIFIED PROFESSIONAL UNDER THE LAWS OF THE STATE OF MARYLAND AND THAT THIS PLAN WAS PREPARED UNDER MY SUPERVISION.

Signed: _____ Date: 07/12/2021

JASON TRABAND
7455 NEW RIDGE ROAD, SUITE 1
HANOVER, MD 21076
410-694-9901
JTRABAND@LANDINC.COM

FC-03

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CITY OF ROCKVILLE
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DESIGN PLAN APPROVAL
AS BUILT PLAN APPROVAL
DATE SUBMITTED: 10/9/2021
SCALE: 1" = 20'
SHEET NO. 19 OF 22
FILE # F-295

FOREST CONSERVATION AND PLANTING PLAN
NORTHEAST PARK SWM RETROFIT AND STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND

DESIGNED: CS/AG
DRAFTED: JS/AM
CHECKED: CS

ZONE A: HIGH MARSH PLANTING SCHEDULE - 9,076 SF

Table with columns: BOTANICAL NAME/ TECHNICAL DESCRIPTION, COMMON NAME, INDICATOR STATUS, SIZE, TYPE, SPACING, QUANTITY. Lists various plant species and their quantities for Zone A.

INSTALL AT LOWER ELEVATIONS OF ZONE
**INSTALL AT HIGHER ELEVATIONS OF ZONE

ZONE B: SHRUB-SCRUB WETLAND PLANTING SCHEDULE - 7,602 SF

Table with columns: BOTANICAL NAME/ TECHNICAL DESCRIPTION, COMMON NAME, INDICATOR STATUS, SIZE, TYPE, SPACING, QUANTITY. Lists various shrub and scrub species and their quantities for Zone B.

ZONE C: RIPARIAN FOREST PLANTING SCHEDULE - 25,787 SF

Table with columns: BOTANICAL NAME/ TECHNICAL DESCRIPTION, COMMON NAME, INDICATOR STATUS, SIZE, TYPE, SPACING, QUANTITY. Lists various riparian forest species and their quantities for Zone C.

ZONE D: RIPARIAN MEADOW SEEDING SCHEDULE - 8,429 SF

Table with columns: BOTANICAL NAME/ TECHNICAL DESCRIPTION, COMMON NAME, INDICATOR STATUS, SIZE, TYPE, SPACING, QUANTITY. Lists various meadow seeding species and their quantities for Zone D.

ZONE E: UPLAND FOREST PLANTING SCHEDULE - 2,478 SF

Table with columns: BOTANICAL NAME/ TECHNICAL DESCRIPTION, COMMON NAME, INDICATOR STATUS, SIZE, TYPE, SPACING, QUANTITY. Lists various upland forest species and their quantities for Zone E.

ZONE F: UPLAND MEADOW SEEDING SCHEDULE - 8,995 SF

Table with columns: BOTANICAL NAME/ TECHNICAL DESCRIPTION, COMMON NAME, INDICATOR STATUS, SIZE, TYPE, SPACING, QUANTITY. Lists various upland meadow seeding species and their quantities for Zone F.

ZONE G-1: NEAL DRIVE BIORETENTION PLANTING SCHEDULE - 520 SF

Table with columns: BOTANICAL NAME/ TECHNICAL DESCRIPTION, COMMON NAME, INDICATOR STATUS, SIZE, TYPE, SPACING, QUANTITY. Lists various bio-retention species and their quantities for Zone G-1.

ZONE G-2: WESLEY ROAD BIORETENTION PLANTING SCHEDULE - 620 SF

Table with columns: BOTANICAL NAME/ TECHNICAL DESCRIPTION, COMMON NAME, INDICATOR STATUS, SIZE, TYPE, SPACING, QUANTITY. Lists various bio-retention species and their quantities for Zone G-2.

NATIVE WETLAND SEED MIX COMPOSITION

Table showing the composition of native wetland seed mix, including species names and their respective percentages.

NATIVE DETENTION AREA SEED MIX COMPOSITION

Table showing the composition of native detention area seed mix, including species names and their respective percentages.

COVER/NURSE CROP SEEDING TABLE

Table showing the seeding table for cover/nurse crop, including species names, seeding rates, and dates.

NATIVE UPLAND SEED MIX COMPOSITION

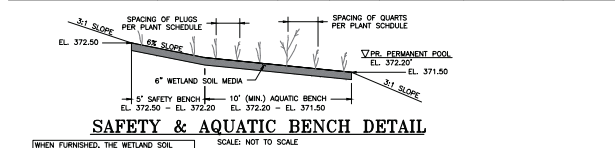
Table showing the composition of native upland seed mix, including species names and their respective percentages.

NATIVE FLOODPLAIN SEED MIX COMPOSITION

Table showing the composition of native floodplain seed mix, including species names and their respective percentages.

QUALIFIED PROFESSIONAL CERTIFICATION
I CERTIFY THAT I AM A DULY CERTIFIED FOREST CONSERVATION QUALIFIED PROFESSIONAL UNDER THE LAWS OF THE STATE OF MARYLAND AND THAT THIS PLAN WAS PREPARED UNDER MY SUPERVISION.

Signature and Date: Jason Trabant, 07/12/2021



SAFETY & AQUATIC BENCH DETAIL
SCALE: NOT TO SCALE

NATIVE RIPARIAN WOODY SEED MIX

Table showing the composition of native riparian woody seed mix, including species names and their respective percentages.

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DEPARTMENT OF PUBLIC WORKS
CITY OF ROCKVILLE
111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGN PLAN APPROVAL
AS BUILT PLAN APPROVAL
FOREST CONSERVATION AND PLANTING PLAN NOTES AND DETAILS

NO. REVISIONS AFTER PLAN APPROVAL
DATE SUBMITTED: 10/9/2021
SCALE: AS NOTED
SHEET NO. 20 OF 22
FILE # F-295

NORTHEAST PARK SWM RETROFIT AND STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND

GENERAL PLANTING NOTES

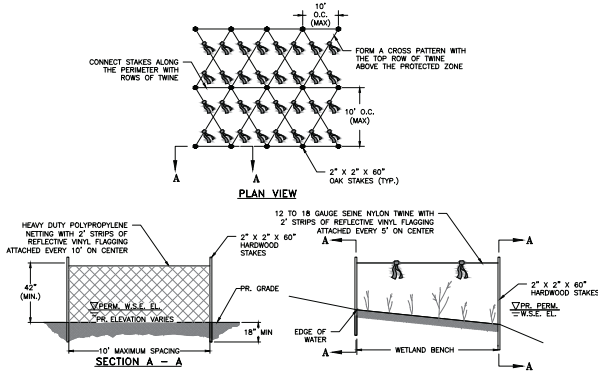
1. ALL PLANT MATERIALS SHALL BE NURSERY GROWN AND SHALL CONFORM TO AMERICAN ASSOCIATION OF NURSERYMEN, INC. STANDARDS.
2. CONTRACTOR IS RESPONSIBLE TO VERIFY ALL UTILITY LOCATIONS PRIOR TO PLANTING MATERIAL. IF CONFLICTS ARISE, BAYLAND, INC. AND THE CITY OF ROCKVILLE MUST BE NOTIFIED PRIOR TO ANY GROUND BREAKING.
3. WETLAND PLANTING WILL BE ACCOMPLISHED BETWEEN MARCH 15TH AND MAY 15TH (SPRING PLANTING SEASON) OR SEPTEMBER 15TH AND NOVEMBER 15TH (FALL PLANTING SEASON).
4. TREES AND SHRUBS SHALL BE PLANTED FROM MARCH 1 TO MAY 31 AND FROM SEPTEMBER 15 TO DECEMBER 15. PLANTING MAY BE CONTINUED DURING THE WINTER MONTHS PROVIDING THERE IS NO FROST IN THE GROUND AND ROOT FREE TOPSOIL PLANTING METHODS ARE USED.
5. NO CONTAINER-GROWN MATERIAL SHALL BE PLANTED IF NOT ACCUMATED TO THE CURRENT WEATHER CONDITIONS. CONTRACTOR IS RESPONSIBLE FOR GENERAL MAINTENANCE INCLUDING WATERING.
6. NO AQUATIC BENCH PLANTINGS SHALL BE INSTALLED UNTIL POND HAS BEEN ALLOWED TO FILL AND BENCH HAS BECOME SATURATED. IMMEDIATELY INSTALL GOOSE PROTECTION FENCING (DETAIL THIS SHEET) AFTER INSTALLATION OF AQUATIC BENCH PLANTINGS).
7. ALL PLANTING MATERIAL AND PLANTING METHODS SHALL CONFORM TO CONSTRUCTION SPECIFICATIONS.
8. ALL AREAS WITHIN THE LIMITS OF DISTURBANCE SHALL BE STABILIZED PER THE DETAILS AND SPECIFICATIONS FOR VEGETATIVE ESTABLISHMENT.
9. IF A MINIMUM COVERAGE OF 85% IS NOT ACHIEVED IN THE PLANTED AQUATIC BENCH AFTER THE SECOND GROWING SEASON, A REINFORCEMENT PLANTING WILL BE REQUIRED.
10. REMOVE GOOSE PROTECTION FENCING AFTER TWO GROWING SEASONS IF THE PLANTS HAVE BECOME ESTABLISHED.

PLANT MATERIALS AND PLANTING METHODS

PLANT MATERIALS
THE LANDSCAPE CONTRACTOR SHALL FURNISH AND INSTALL ALL OF THE PLANT MATERIALS CALLED FOR ON DRAWINGS AND/OR LISTED IN THE PLANT SCHEDULE.

1. PLANT NAMES
PLANT NAMES USED IN THE PLANT SCHEDULE SHALL CONFORM TO "STANDARDIZED PLANT NAMES", LATEST EDITION.
2. PLANT STANDARDS
ALL PLANT MATERIALS SHALL BE NURSERY GROWN AND SHALL HAVE BEEN GROWN UNDER THE SAME CLIMATE AS THE LOCATION OF THIS PROJECT FOR AT LEAST TWO YEARS BEFORE PLANTING. NEITHER HEELED IN PLANTS NOR PLANTS FROM COLD STORAGE WILL BE ACCEPTED.
3. PLANT IDENTIFICATION
LEGIBLE LABELS SHALL BE ATTACHED TO ALL SHADE TREES, MAJOR TREES, SPECIMEN SHRUBS AND BUNDLES OR BOIES OF OTHER PLANT MATERIAL GIVING THE BOTANICAL AND COMMON NAMES, SIZE AND QUANTITY OF EACH. EACH SHIPMENT OF PLANTS SHALL BEAR CERTIFICATES OF INSPECTION AS REQUIRED BY FEDERAL, STATE AND COUNTY AUTHORITIES.

- PLANTING METHODS**
4. PLANTING SEASONS ARE DESCRIBED AS FOLLOWS:
ALL PROPOSED PLANT MATERIAL ARE TO BE PLANTED IN ACCORDANCE WITH THE FOLLOWING PLANTING METHODS DURING THE PROPER PLANTING SEASONS AS DESCRIBED IN THE FOLLOWING:
A. PLANTING SHALL BE IN ACCORDANCE WITH CITY OF ROCKVILLE SPECIFICATIONS AND SHALL NOT BE CONDUCTED BETWEEN JUNE 1 AND SEPTEMBER 1, OR AS DIRECTED BY THE CITY.
B. EXCAVATION OF PLANT PITS
A. LOCATIONS OF ALL PROPOSED TREES SHALL BE STAKED AND APPROVED IN THE FIELD BY THE CITY FORESTRY INSPECTOR BEFORE ANY OF THE PROPOSED PLANT MATERIAL IS INSTALLED BY THE LANDSCAPE CONTRACTOR.
B. PLANTING PITS SHALL BE IN ACCORDANCE WITH CITY OF ROCKVILLE SPECIFICATIONS OR AS DIRECTED BY THE CITY.
C. PLANT GUARANTEE
ALL PLANT MATERIAL SHALL BE GUARANTEED FOR THE DURATION TWO (2) YEARS WITH 100% CARE AND REPLACEMENT WARRANTY ON ALL TREES AND A TWO (2) YEAR, 85% CARE AND REPLACEMENT WARRANTY ON ALL OTHER LANDSCAPING PLANTS.
THE PERIOD OF CARE AND REPLACEMENT SHALL BEGIN AFTER FINAL INSPECTION AND APPROVAL OF THE INITIAL INSTALLATION OF ALL PLANTS AND CONTINUE FOR TWO YEARS, WITH TWO (2) POTENTIAL PLANT REPLACEMENT PERIODS EACH YEAR. THE CITY WILL ASSUME MAINTENANCE AND REPLACEMENT WARRANTY RESPONSIBILITY AFTER THE TWO-YEAR CARE AND REPLACEMENT WARRANTY HAS BEEN COMPLETED.
PLANT REPLACEMENTS SHALL BE PERFORMED IN ACCORDANCE WITH CITY OF ROCKVILLE SPECIFICATIONS.

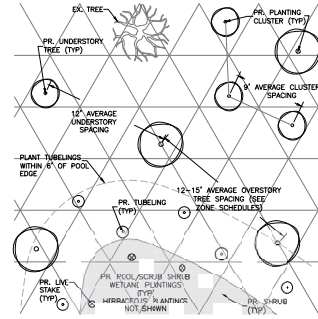


NOTES:

1. HARDWOOD T-POSTS SHALL BE INSTALLED IN TWO ROWS ALONG THE INNER AND OUTER WETLAND BENCH PERIMETER. STAKES SHALL BE SPACED A MAXIMUM OF 10' O/C AND SHALL BE DRIVEN A MINIMUM OF 18" DEEP.
2. HEAVY DUTY POLYPROPYLENE NETTING WITH 15"x14" OPENINGS SHALL BE STRETCHED TAUGHT AND ATTACHED TO EACH ADJACENT STAKE IN THE SAME ROW USING 4-8 HEAVY DUTY UV RESISTANT ZIP TIES TO CREATE AN INNER AND OUTER PERIMETER FENCE.
3. EVERY 100' OF OUTER PERIMETER FENCE, THE INNER NETTING WILL BE STRETCHED ACROSS THE WETLAND BENCH TO THE OUTER PERIMETER FENCE AND BACK TO THE INNER PERIMETER TO CONTINUE THE INNER PERIMETER FENCE.
4. 2' STRIPS OF FLUORESCENT COLORED REFLECTIVE VINYL FLAGGING SHALL BE SECURELY FASTENED TO THE PERIMETER FENCE BETWEEN THE HARDWOOD STAKES AT A MAXIMUM 10' O/C.
5. 12 TO 18 GAUGE NYLON SENE TWINE SHALL BE STRUNG ACROSS THE WETLAND BENCH IN A 20-240 PATTERN RUNNING FROM INNER STAKE TO OUTER STAKE. ADDITIONAL FLUORESCENT COLORED REFLECTIVE VINYL FLAGGING SHALL SECURELY FASTENED TO THE NYLON SENE TWINE AT A MAXIMUM 5' O/C. ADDITIONAL STAKES MAY BE REQUIRED TO ADEQUATELY SUPPORT THE NYLON SENE TWINE IN WIDER SECTIONS OF THE WETLAND BENCH.
6. THE GOOSE PROTECTION FENCING SHALL COMPLETELY ENCLOSE THE WETLAND BENCH AND PREVENT GOOSE ACCESS TO THE WATER FROM LAND AND VISE VERSA.
7. THE FENCING MUST REMAIN IN PLACE UNTIL THE VEGETATION HAS HAD TIME TO BECOME ESTABLISHED. AFTER TWO GROWING SEASONS OR AT THE DIRECTION OF THE OWNER/DEVELOPER THE FENCING SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY.

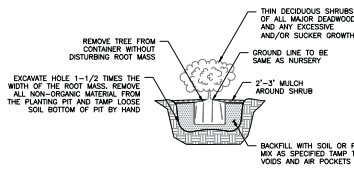
GOOSE EXCLUSION FENCING DETAIL

SCALE: NOT TO SCALE



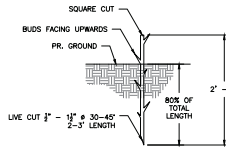
TYPICAL 30'x30' NATURALIZED WOODY PLANTING DETAIL

SCALE: NOT TO SCALE



SHRUB PLANTING - CONTAINER GROWN

SCALE: NOT TO SCALE



NOTES:

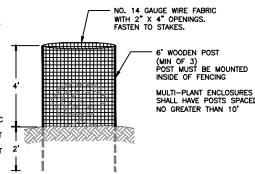
1. LIVE STAKES MUST BE INSTALLED WHILE DORMANT (DECEMBER 1 - APRIL 1). DO NOT ALLOW THEM TO DRY OUT.
2. LIVE STAKE MATERIALS SHALL CONSIST OF DORMANT BRANCHES OF CORNUS AMOMUM (SLY DOGWOOD) AND SALIX NIGRA (BLACK WILLOW) ONLY. EACH SPECIES SHALL COMPOSE 50 PERCENT OF THE MIX. MATERIALS SHALL BE PURCHASED FROM A NURSERY SPECIALIZING IN THE PRODUCTION OF SIMILAR MATERIALS AND SHALL INCLUDE CONFIRMATION OF SPECIES. EACH LIVE CUTTING SHALL RANGE IN DIAMETER FROM 0.5 TO 1.5 IN. AT ITS SMALLEST POINT AND SHALL HAVE A MINIMUM LENGTH OF 2 FT.

LIVE STAKE DETAIL

SCALE: NOT TO SCALE

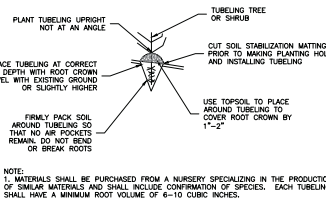
NOTES:

1. HEIGHT OF CAGE SHALL BE 4 FT. (MAX).
2. CUT A SECTION OF WELDED WIRE FENCING WITH PLANTS IN CENTER.
3. CREATE ENCLOSURE BY FASTENING 1 1/2-INCH RELEASABLE CABLE TIES (ONE AT TOP AND ONE 6 IN. MIN. ABOVE THE GROUND AT EACH POST) TO EACH POST.
4. DO NOT DAMAGE PLANT DURING INSTALLATION.
5. CAGE SHALL PROVIDE 12\"/>



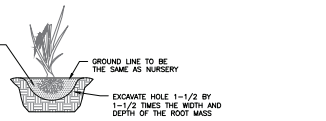
SHRUB PLANTING/MULTI-STEM TREE/GROUPED PLANTING DEER BROWSE PROTECTION

NOT TO SCALE



TUBELING DETAILS

SCALE: NOT TO SCALE



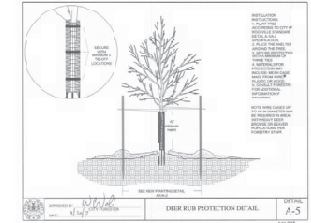
HERBACEOUS PLANTING - QUART

SCALE: NOT TO SCALE

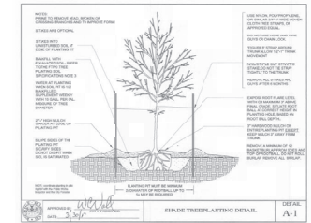
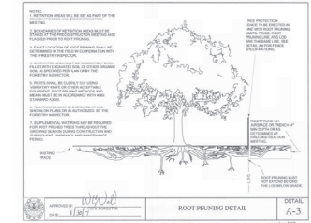


HERBACEOUS PLANTING - PLUG

SCALE: NOT TO SCALE



NOTE: DEER PROTECTION CAGES MUST BE WELDED WIRE.



SEE SHEET 16 FOR THE FOLLOWING DETAILS:
TREE PROTECTION/HIGH VISIBILITY FENCE
TREE PROTECTION SIGN

QUALIFIED PROFESSIONAL CERTIFICATION
I CERTIFY THAT I AM A DULY CERTIFIED FOREST CONSERVATION QUALIFIED PROFESSIONAL UNDER THE LAWS OF THE STATE OF MARYLAND AND THAT THIS PLAN WAS PREPARED UNDER MY SUPERVISION.

Signed: Jason Triband Date: 07/12/2021

JASON TRIBAND
7465 NEW RIDGE ROAD, SUITE T
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410-694-9901
JTR@BAYLANDLANDING.COM

FC-05



NO.	REVISIONS AFTER PLAN APPROVAL	P.E. INITIAL	DATE

DATE SUBMITTED:	SCALE:	SHEET NO.	FILE #
10/8/2021	AS NOTED	21	F-295
IFB #05-22	OF 22		

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CHECKED CS

DEPARTMENT OF PUBLIC WORKS
CITY OF
ROCKVILLE
111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGN PLAN APPROVAL
Craig L. Strimling
2021.11.08.17:08:34:677
DIRECTOR OF PUBLIC WORKS
PKF SCF 2021-00009
SNP 2021-00012 FTF 2020-00001
PLAN APPROVAL DATE

AS BUILT PLAN APPROVAL

CHIEF, CONSTRUCTION MANAGEMENT
PLAN APPROVAL DATE

FOREST CONSERVATION AND PLANTING PLAN NOTES AND DETAILS

NORTHEAST PARK SWM RETROFIT AND STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND

