

**OCCOQUAN REGIONAL PARK
CAFÉ DECK CONSTRUCTION**
9751 Ox Rd, Lorton, VA 22079

PROJECT MANUAL

July 11, 2025



**NOVA Parks
Northern Virginia Regional Park Authority
5400 Ox Road
Fairfax Station, Virginia 22039**

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INVITATION TO BID – PAGE 1 OF 1
OCCOQUAN REGIONAL PARK
CAFÉ DECK CONSTRUCTION

This project involves the construction of a 900-square-foot raised deck at the Occoquan Regional Park Riverview event center café located in Lorton, Virginia. The deck construction includes six 30-inch diameter drilled concrete caisson footings, a steel substructure, wood decking and stainless-steel cable railings.

A five percent bid bond or certified check must be submitted with the bid for all total bids over \$500,000. The total bid shall be determined by the sum of the base bid and all alternates. All bids and bid bonds shall remain valid for ninety days. Performance and Labor and Material Payment bonds shall be required of the successful bidder for all contracts awarded over \$500,000.

Sealed bids will be received at the NOVA Parks Headquarters, 5400 Ox Road, Fairfax Station, Virginia 22039, until **August 19, 2025, at 10:00 a.m. EST.** Bids will be opened in public at that time.

Bids and bid bonds (if applicable) may be (1) submitted in person at the NOVA Parks Headquarters, (2) sent via U.S. Mail or other delivery service, or (3) electronically transmitted by emailing to thafner@nvrpa.org. It shall be the bidder's responsibility to ensure its bid is properly received by NOVA Parks prior to the bid opening. Bidders should request and obtain a written receipt or email confirmation from NOVA Parks documenting that the paper or electronically submitted bid was received at the proper location and at the correct date and time.

Contract documents may be obtained by visiting the NOVA Parks website www.novaparks.com at <https://www.novaparks.com/about/bids-proposals>. Contract documents include the following:

- Project Manual dated July 11, 2025
- Project Plan Sheets L-001, L-002, L-003, L-101, L-102, L-201, L-301, L-501, L-502, S-001, S-101, and S-501.

The park is open daily from 6 am to dusk. Bidders may visit the site during normal park operating hours. There will not be a formal pre-bid meeting. To submit questions, contact Todd Hafner, Senior Project Manager via email at thafner@nvrpa.org or by calling 703-795-2297.

All interested Bidders are requested to register with NOVA Parks by emailing Todd Hafner at thafner@nvrpa.org and providing the following information.

Company Name
Contact Person Name and Title
Address
Phone Number and Email Address

*******END OF INVITATION TO BID*******

FORM OF PROPOSAL - PAGE 1 OF 1
OCCOQUAN REGIONAL PARK
CAFÉ DECK CONSTRUCTION

PROPOSAL

To furnish all material, labor, tools, equipment and supplies to perform all work specified herein and shown in the Contract Documents.

Name of Bidder: _____

Address of Bidder: _____

Signature: _____

Print Name and Title: _____

Date: _____

Contact Phone
Number: _____

Bidder's Virginia
Contractor's License _____

To: Brian Nolan, Director of Planning and Development
Northern Virginia Regional Park Authority
5400 Ox Road
Fairfax Station, Virginia 22039

Bidders shall fill in all blank spaces on the Form of Proposal. The low bidder shall be determined by the sum of the Base Bid and any Alternates chosen at the sole discretion of the Owner.

Pursuant to and in compliance with the bid documents, the undersigned proposes and agrees, if this proposal is accepted, to furnish all labor, materials, supplies, equipment, and other facilities, and to perform all work described for consideration of the following amounts:

BASE BID:

_____ Dollars / \$ _____

Acknowledges Receipt of Addendum # _____ dated _____.

Acknowledges Receipt of Addendum # _____ dated _____.

Acknowledges Receipt of Addendum # _____ dated _____.

*******END OF FORM OF PROPOSAL*******

SUPPLEMENTAL GENERAL CONDITIONS

PART I. – GENERAL

1. All bidders shall submit their bids on the attached Form of Proposal.
2. All bidders shall include with their bid a list of at least three similar projects completed within the past three years. The listing shall include the following:
 - Project description, location, and date of completion
 - Total project cost
 - Client reference with contact name, telephone number and email address
3. The Park Authority reserves the right to disqualify any bidders who are determined not to have adequate experience or favorable client references. Any disqualifications shall be at the sole discretion of the Park Authority.
4. The only materials to be submitted with the bid are the 1-page Form of Proposal, the reference information as described above and the bid bond (if applicable). Submitting any other information, clarifications, pricing sheets or options may result in a bid disqualification.
5. Bidders must have a valid Virginia Contractor's License at the time bids are submitted and must include the license number on the Form of Proposal.
6. Any project addenda issued prior to bid date shall be posted on the NOVA Parks website as noted in the Invitation to Bid. Bidders are responsible for obtaining any addenda and acknowledging receipt of addenda where indicated on the Form of Proposal.
7. NOVA Parks will provide the building permit for the project and has substantially completed the permitting process. This project falls under the Fairfax County Special Inspections Program and NOVA Parks will provide the required third-party testing and inspection services. Contractor will not need to retain the services of a testing and inspection agency
8. NOVA Parks intends to award a contract and issue a Notice to Proceed to the responsive low bidder by September 30, 2025. Actual site construction may not begin until January 1, 2026, which will allow time for submittal review and the ordering of materials. The Contractor must complete all construction between January 1, 2026, and March 1, 2026. If the work is not completed within these time requirements, as that time may be adjusted by change orders, there shall be imposed on the Contractor liquidated damages of \$500.00 per calendar day for each day beyond the contract time it takes to complete the work.
9. All work shall be completed during normal weekday business hours of 7:00 a.m. to 6:00

p.m. unless otherwise authorized by the Owner.

10. Submittals shall be required for the following:

- a. Product data, material certificates, certificates of inspection, evaluation reports and samples for wood decking and top rails, deck fasteners and screws.
- b. Along with the above, Contractor shall submit one 24 inch long sample of the pre-grooved 2 x 6 Cumaru decking and one Ipe Clip Extreme Fastener.
- c. Product data, shop drawings, samples, qualification data, welding certificates, product test reports and evaluation reports for steel cable assembly and posts.
- d. Product data, qualification data, product certificates and sample warranty for plant material.
- e. Product data, qualification data, preconstruction test reports and testing agency qualifications for planting soil and soil amendments.
- f. All shop drawings and submittals as detailed in the Project Plans.

11. The Park Authority shall review submittals within seven days. If the submittal is rejected, the Contractor shall resubmit as required and until the submittal is approved. Delays for rejected submittals shall not be cause for an extension of the contract completion time.

12. The Contractor shall provide a written warranty to the Park Authority covering all defects in materials and workmanship for a period of one year form the date of project completion.

*******END OF SUPPLEMENTAL GENERAL CONDITIONS*******

SPECIFICATIONS

These specifications are to (1) provide additional specifications and directions in addition to those included in the Project Plans, and (2) clarify and/or modify some of the details and specifications within the Project Plans. Any changes and clarifications herein shall take precedent over the Project Plans.

1. The Contractor shall verify all existing conditions prior to the start of any work. Failure to visit the site in no way relieves the Contractor from furnishing any materials or performing any work that may be required by it to deliver a complete and fully functional raised deck.
2. Contractor may use the restroom facilities on site as the Owner does not want a portable toilet on the property.
3. The building café, restrooms and event center will remain operational during construction. The existing railing between the new deck and the existing concrete patio must remain in place until the end of the project and when the new railings are ready to be installed.
4. The Contractor shall clean the project site daily. There will be several weekend facility rentals during the construction time period. On weekends with rental events, Contractor shall relocate all stored materials and equipment to the upper boat ramp parking area as shown below.



5. When work is not in progress, Contractor shall install and maintain orange safety fence around the construction area.
6. The Contractor shall contact Miss Utility/VA811. The Contractor shall be responsible for any damages to marked underground utilities and shall repair all miscellaneous

damages caused to Park Property during the course of this project.

7. Excess dirt generated from the caisson drilling may be disposed of at the park at a location to be determined. All other construction debris to be disposed of offsite by the Contractor.
8. The wood decking (2x6 NOM. and 2x8 NOM. as per Plan Sheet L-101) and rail cap shall be Grade A Cumaru decking pre-grooved to receive hidden fasteners. Minimum decking length shall be 16 feet. One known supplier of this decking and the DeckWise products referenced below is Advantage Lumber (1-877-232-3915).
9. All decking and rail caps shall be sealed with two coats of DeckWise Hardwood Deck Sealer installed per manufacturer's recommendations. All four sides of decking and rail caps to be sealed prior to installation. All ends of decking and rail caps shall be sealed with DeckWise Ipe Seal Hardwood End Grain Sealer.
10. Decking shall be installed with the following hidden fastener system:
 - a. Ipe Clip Extreme Fastener with 3/32" spacing manufactured by DeckWise. Each decking board shall have a fastener installed at each joist.
 - b. Clips to be installed with stainless steel DeckWise Self-Tapping Metal Joist Deck screws - #7x1-5/8". The screws shall be installed at an angle through the decking and then into the steel joist. Contractor shall predrill both the decking and the steel to receive the screws. Even though the screws are labeled as self-tapping, predrilling will be required into the 3/8" steel joists.
 - c. The DeckWise clips and screws shall be black.
 - d. At starter board or where face penetrations are required, screws shall be DeckWise #7x2-1/4" and shall be countersunk and plugged.
11. Contractor shall install 3" wide DeckWise WiseWrap asphalt joint tape on top of all joists prior to decking installation
12. The project landscaping detailed in the Project Plans shall be modified as follows:
 - a. All mulch and vegetation under the proposed deck up to the existing asphalt pavement shall be removed and disposed of offsite by the Contractor. No plant materials are to be saved or transplanted. The rip rap stone shall be installed per plan.
 - b. The 24 plants shown on L-201 of the Project Plans shall be all new plants installed by the Contractor. There shall be 12 Blue Shadow Fothergilla and 12

Nigra Inkberry Holly. The plants shall be 3-gallon size or larger. No other new plants or trees are required.

13. The Contractor shall follow the recommendations and procedures included in the Geotech Report. While it is estimated that the final caisson depth may be approximately 18 feet below existing grade, Contractor shall include in its bid all costs to install caissons up to 30 feet below existing grade.

*******END OF SPECIFICATIONS*******

NVRPA DOCUMENT GC 101
INSTRUCTIONS TO BIDDERS AND
GENERAL CONDITIONS OF THE CONTRACT
FOR CONSTRUCTION

THIS DOCUMENT HAS IMPORTANT LEGAL CONSEQUENCES;
CONSULTATION WITH AN ATTORNEY IS ENCOURAGED
2018 EDITION

ARTICLE NUMBER	TITLE
1.	Definitions
2.	Contract Documents
3.	Laws and Regulations
4.	Conditions at Site or Structure
5.	Explanation to Bidders
6.	Preparation and Submission of Bids
7.	Bid Guarantee
8.	Withdrawal or Modification of Bids
9.	Receipt and Opening of Bids
10.	Errors in Bids
11.	Rejection of Bids
12.	Standard Forms
13.	Award of Contract
14.	Contract Security
15.	Progress Schedules
16.	Shop Drawings, Product Data, Samples
17.	Materials, Services and Facilities
18.	Inspection and Testing
19.	Substitutions
20.	Patents
21.	Surveys, Permits, Regulations
22.	Protection of Work, Property and Persons
23.	Supervision by Contractor
24.	Changes in the Work
25.	Changes in the Contract Sum or Other Relief
26.	Time for Completion and Liquidated Damages
27.	Correction of Work
28.	Suspension of Work, Authority's Right to Stop and Carry Out the Work
29.	Termination
30.	Uses of the Premises
31.	Payment to the Contractor
32.	Substantial Completion of the Work
33.	Final Completion and Final Payment
34.	Insurance
35.	Assignments
36.	Indemnification
37.	Contractor Liability
38.	Separate Contracts
39.	Subcontracting
40.	Engineer
41.	Warranty
42.	Contractual Disputes

**GENERAL CONDITIONS
OF THE CONSTRUCTION CONTRACT WITH
THE NORTHERN VIRGINIA REGIONAL PARK AUTHORITY**

Article 1: DEFINITIONS

- (a) **Addenda** – Written or graphic instruments issued prior to the Award of the Contract which modify or interpret the Contract Documents, Drawings, and Specifications by additions, deletions, clarifications, or corrections
- (b) **Engineer** – The design professional, including an architect, that has contracted with the Authority to design the Project and administer the Contract on behalf of the Authority. If no Project Engineer is designated all duties and responsibilities which the Engineer would otherwise have shall be the duties and responsibilities of the Authority.
- (c) **Authority** – The Northern Virginia Regional Park Authority.
- (d) **Change Order** – A written order to the Contractor authorizing an addition, deletion or revision in the Work within the general scope of the Contract Documents or authorizing an adjustment in the Contract Price or Contract Time. A Change Order, which adjusts the Contract Price or Contract Time, must be signed by the Authority, Contractor and Engineer. A Change Order includes a Field Order, as hereafter defined.
- (e) **Construction Change Directive** - A written order to the Contractor signed by the Authority directing an addition, deletion or revision in the Work within the general scope of the Contract Documents prior to an agreement between the Authority and the Contractor as to an adjustment in the Contract Price or Contract Time. Upon receipt of a Construction Changes Directive, the Contractor shall promptly proceed with the change in the Work described therein.
- (f) **Contract Sum** – The total monies payable to the Contractor under the terms and Conditions of the Contract Documents.
- (g) **Contract Time** – The specific date or the number of days stated in the Contract Documents or the Notice to Proceed for Substantial Completion of the Work.
- (h) **Contractor** – Any person or entity who has a contract directly with the Authority for the performance of the Work or a part thereof.
- (i) **Day** – A calendar day of 24 hours lasting from midnight one day to midnight the next day.
- (j) **Drawings** – The graphic and pictorial part of the Contract Documents that show the characteristics and scope of the Work to be performed and that has been prepared by or for the Authority. The term is used interchangeably with the word “Plans” and includes Standard Details.
- (k) **Field Order** – A written order issued by the Engineer or the Authority to the Contractor during construction effecting a change in the Work, but not involving an adjustment in the Contract Price or an extension of the Contract Time.
- (l) **Inspector** – The authorized representative of the Authority assigned to make detailed inspection of any or all portions of the Work. The Inspector is authorized to stop the Work in accordance with Article 29.
- (m) **Notice of Award** – The written notice of the acceptance of the Bid from the Authority to the successful Bidder.
- (n) **Special Conditions** – General requirements that are unique to a particular Contract.
- (o) **Standard Details** – Details showing standard products, methods, and materials contained within the Plans or other agency standards such as the current versions of the Fairfax County Public Facilities Manual or the Virginia Department of Highways and Transportation Road and Bridge standards and specifications.

- (p) **Specifications – Special Conditions, Standard Specifications and Standard Details.**
- (q) **Subcontractor – An individual, firm or corporation having a direct contract with the Contractor or with any other subcontractor for the performance of a part of the Work at the site.**

Substantial Completion – That date as certified by the Engineer when the construction of the Project or a specified part thereof is sufficiently completed in accordance with the Contract Documents so that the Project or specified part can be utilized for the purposes for which it is intended and when the Contractor has received all final inspections and occupancy permits from the appropriate jurisdictions.
- (r) **Supplementary General Conditions – Modifications to General Conditions required for the Project.**
- (s) **Supplier – Any person or organization who supplies materials or equipment for the Work (including that fabricated to a special design) but who does not perform labor at the site.**
- (t) **Work – Any and all labor, materials, equipment, and all obligations, duties, and responsibilities expressly stated or reasonably implied for the successful completion of the construction required by the Contract Documents. The Contractor’s Work includes payment of all sales, consumer, use, and other similar taxes required by law.**
- (u) **Written Notice – Any notice to any party of the Contract relative to any part of the Contract in writing and considered delivered and the service thereof completed when posted by mail to the party at its last given address, or delivered in person to the party or its authorized representative at the Project.**

Article 2: CONTRACT DOCUMENTS

- (a) **The agreement entered into by the parties shall consist of the Form of Construction Contract, the Form of Proposal submitted by the Contractor, the Supplemental General Conditions, these General Conditions, the specifications and drawings, including all modifications thereof, all of which shall be referred to collectively as the “Contract Documents.” The Form of Construction Contract shall be signed by the Authority and Contractor in as many original counterparts as may be mutually agreed upon. The Contract may be amended only by a written amendment to the Contract or a Change Order signed by both parties.**
- (b) **The Contract Documents are complimentary and what is required by one shall be binding on the Contractor as if required by all. In the event of any inconsistency between the Contract Documents, Contractor shall provide the greater quality or quantity of Work with no increase in the Contract Sum. The intent of the Contract Documents is that the Contractor shall furnish all labor, materials, tools, equipment, utilities, transportation and incidental work necessary for the proper execution of the Work in accordance with, or reasonably inferable from, the Contract Documents. In the event of conflicts among the Contract Documents, the Authority may designate the written or drawn provision or feature which shall be used and no additions to or deductions from the Contract Sum, or modification to the Contract Time, shall result from the choice. In case of conflicts, the Contract Documents shall take precedence in the following order: the Construction Contract; The Supplemental General Conditions; the General Conditions; the Special Conditions; the specifications; and the drawings.**
- (c) **This Contract is an entire and integrated agreement and is not severable.**
- (d) **Contractor shall identify in writing to the Authority and the Engineer, as soon as possible, any discrepancies, errors, omissions and/or inconsistencies or ambiguities, discovered by the Contractor in the Contract Documents. Work done by the Contractor after its discovery of such discrepancies, errors, omissions and/or inconsistencies or ambiguities and prior to response from the Engineer shall be done at the Contractor’s sole risk and cost.**

Article 3: LAWS AND REGULATIONS

- (a) In the performance of the Work, the Contractor shall comply with the requirements of all local, state and federal laws, codes, statutes, ordinances, rules, regulations and lawful orders of any public authority relating to the performance of the Work (the “Legal Requirements”).
- (b) All Contractors and Subcontractors for the Project must be properly licensed under the laws of the Commonwealth of Virginia and in good standing before submitting any bid and before commencing any Work. Upon the request of the Authority, any Contractor or Subcontractor for the Project shall promptly provide proof of its licensure.
- (c) The Contract and all other contracts and subcontracts are subject to the provisions of Article 3 and 5, Chapter 4, Title 40.1, Code of Virginia, 1950, as amended, relating to labor unions and the “right to work,” and all Contractors or Subcontractors, whether residents or nonresidents of the Commonwealth, who perform any work related to the project shall comply with all of the provisions of these code sections.
- (d) The Contractor shall furnish the Authority copies of affidavits upon request giving the original dates, renewal dates and expiration dates of all labor contracts related to any phase of the work to be performed on the project site under this Contract.
- (e) Contractor shall comply with all local, state and federal safety codes, statutes, rules, practices and regulations.

(f) EQUAL OPPORTUNITY EMPLOYMENT

- (1) During the performance of the Agreement, the Contractor agrees as follows:
 - (i) The Contractor shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability or other basis prohibited by federal or state law relating to discrimination in employment, except where there is a bona-fide occupational qualification reasonably necessary to the normal operation of the Contractor. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
 - (ii) The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, shall state that Contractor is an equal opportunity employer.
 - (iii) Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the notice, advertisement, and solicitation requirements of this paragraph.
- (2) The Contractor shall cause to be included the provisions of the foregoing paragraphs a.(i), a.(ii) and a.(iii) (substituting the subcontractor or vendor for Contractor as the obligated party) in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.

(g) DRUG-FREE WORKPLACE

- (1) During the performance of the Agreement, the Contractor agrees to (i) provide a drug-free workplace for the Contractor’s employees, (ii) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the Contractor’s workplace and specifying the actions that will be taken against employees for violations of such prohibition, (iii) state in all solicitations or advertisements for employees placed by or on behalf of the Contractor that the Contractor maintains a drug-free workplace, and (iv) cause to be included the provisions of the foregoing clause (substituting the subcontractor or vendor for the Contractor as the

obligated party) in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.

- (2) For the purposes of this section, “drug-free workplace” means a site for the performance of work done in connection with the Agreement by Contractor where its employees are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession or use of any controlled substance or marijuana during the performance of the Agreement.

(h) NO EMPLOYMENT OF UNAUTHORIZED ALIENS

Contractor represents and warrants that Contractor does not, and shall not during the performance of this Agreement, knowingly employ any unauthorized alien as defined in the Federal Immigration Reform and Control Act of 1986.

(i) STATEMENT OF NONDISCRIMINATION AGAINST FAITH-BASED ORGANIZATIONS

The Authority does not discriminate against faith-based organizations. (See Va. Code § 2.2-4343.1).

(j) PROMPT PAYMENT REQUIREMENTS

Within seven days after Contractor receives amounts paid for work subject to the Agreement performed by any “subcontractor,” as defined in Code of Virginia § 2.2-4347, Contractor shall take one of the two following actions:

- (1) Pay the subcontractor for the proportionate share of the total payment received from Owner attributable to the work performed by the subcontractor; or
- (2) Notify Owner and the subcontractor in writing of Contractor’s intent to withhold all or part of the subcontractor’s payment and the reason for nonpayment.

(k) Contractor shall provide its Federal employer identification number with each application to Owner for payment.

(l) Contractor shall pay interest to any “subcontractor” on all amounts owed by Contractor that remain unpaid after seven days following receipt by Contractor of payment from Owner for work performed by such subcontractor relating to the Agreement except as to amounts withheld as retainage.

(m) Contractor shall include in its subcontracts a provision requiring each subcontractor to include or otherwise be subject to the same payment and interest requirements with respect to each lower-tier subcontractor.

(n) No obligation imposed by this section shall be construed to create any obligation of Owner under Code of Virginia § 2.2-4354, no modification to the Agreement may be made for the purpose of providing reimbursement for the interest charge, and Contractor shall not invoice Owner for any such charge.

(o) LIMITATION ON OWNER’S LIABILITY FOR INTEREST

Owner shall not be liable to pay any interest to Contractor under any circumstance except in the case of amounts that Owner does not dispute to be due and payable to Contractor; interest shall accrue beginning on the 60th day after payment is due at a rate of 3% per annum.

(p) AUTHORIZATION TO CONDUCT BUSINESS IN VIRGINIA

The provisions of Va. Code § 2.2-4311.2 are incorporated by reference. If Contractor is a business entity described in Va. Code § 2.2-4311.2.A, Contractor must be authorized to transact business in Virginia if required by law to be so authorized and shall not allow its existence or certificate authority or registration to transact business to lapse or be revoked or cancelled during the term of the contract.

Article 4: CONDITIONS AT SITE OR STRUCTURE

- (a) All Bidders and Contractors shall visit the site and shall be responsible for having ascertained pertinent local conditions such as location, accessibility and general character of the site or building, and the character and extent of existing work within or adjacent to the site and to compare those conditions with the Contract Documents and the Legal Requirements. Claims, as a result of the Bidder's and/or Contractor's failure to comply with the foregoing, will not be considered by the Authority and are waived by the Contractor.

If in the performance of the Contract the Contractor discovers subsurface or latent conditions at the site that are materially different from those typical for the locality or indicated in the Contract Documents, the Contractor shall report the conditions to the Engineer and the Authority in writing before the conditions are disturbed. Upon such notice, or upon its own observation of such conditions, the Engineer shall promptly make such recommendations as it finds necessary to address the different conditions. Any change in the cost of the work or time needed for completion must be processed pursuant to the requirements of the Contract Documents.

Article 5: EXPLANATION TO BIDDERS

No oral explanation in regard to the meaning of drawings and specifications will be made and no oral instructions will be given before the award of the contract. Bidders shall identify in writing to the Authority and the Engineer any believed discrepancies, omissions, ambiguities or errors in the Contract Documents. Bidders must submit such a writing at least six (6) days prior to the time set for the receipt of bids to allow a sufficient time for a reply to reach them before the submission of their bids, but if there are two (2) weeks or less between the first bid advertisement and the time set for receipt of bids, then bidders may act up to three (3) days prior to the time set for receipt of bids. Any interpretation made will be in the form of an addendum to the specifications, which will be forwarded to all bidders, and its receipt by the bidder shall be acknowledged on the Bid Form.

Article 6: PREPARATION AND SUBMISSION OF BIDS

- (a) Bids shall be submitted in duplicate on the forms furnished, or true copies thereof, and shall be signed in ink. Erasures or other changes in a bid shall be explained or noted over the signature of the bidder. Bids containing any conditions, omissions, unexplained erasures, alterations or items not called for in the proposal, or irregularities of any kind, may be rejected by the Authority as being incomplete.
- (b) Each bid must give the full business address and contact information for the bidder and must be signed by a person with authority to bind the bidder. Bids by partnerships must furnish the full name of all partners and must be signed in the partnership name by one of the members of the partnership or an authorized representative, followed by the signature and designation of the person signing. Bids by corporations must be signed with the legal name of the corporation followed by the name of the state in which they are incorporated and by the signature and designation of the president, secretary or other person authorized to bind it in the matter. The name of each person signing shall also be typed or printed below the signature. A bid by a person who affixes to its signature the word "President," "Secretary," "Agent," or other designation without disclosing its principal, may be held to be the bid of the individual signing. When requested by the Authority, satisfactory evidence of the authority of the officer signing on behalf of the corporation shall be furnished.
- (c) Bids with the bid guarantee shall be enclosed in a sealed envelope, which shall be marked and addressed as indicated by the advertisement or invitation to bid. Prior to submitting a bid, the bidder must be in compliance with and have the licenses required under Virginia Code Section 54.1-

1100, et seq. The bidder shall place on the outside of the envelope containing the bid and shall place in the bid over its signature whichever of the following notations is appropriate, inserting its Contractor license number.

If the bidder shall fail to provide this information on its bid or on the envelope containing the bid and shall fail to promptly provide the Contractor license number to the Authority in writing when requested to do so before the opening of bids, its bid will not be considered.

- (d) The owner reserves the right to disqualify any Contractor and refuse to accept the bid of any bidder which has been convicted, or entered a plea of guilty or nolo contendere in any federal or state court to any charge involving any unlawful, corrupt or collusive practice involving a public contract either federal, state, or local or which has been determined in any judicial proceeding to have violated any antitrust, bid-rigging or collusive practice statute in connection with any public contract, or against whom such formal criminal prosecution or other judicial proceeding has been initiated.

Article 7: BID GUARANTEE

- (a) Any bid exceeding Five Hundred Thousand Dollars (\$500,000) shall be accompanied by a bid guarantee of not less than five percent (5%) of the amount of the bid, which may be certified check or cashier's check, or a Bid Bond made payable to the Authority. Bid Bonds shall be submitted on AIA Document A310. Such Bid Bond or check shall be submitted with the understanding that it shall guarantee that the bidder will not withdraw its bid during the period up to and including ninety (90) days following the opening of bids; that if its bid is accepted, it will enter into a formal contract with the Authority in accordance with the Form of Construction Contract included as a part of the Contract Documents, and that the referenced Performance Bond and Labor and material Payment Bond will be given; and that in the event of the withdrawal of the bid within the period, or failure to enter into the contract and give the bonds within ten (10) days after it has received notice of acceptance of its bid, the bidder shall be liable to the Authority for the difference between the amount of the bidder's bid and the amount of the bid for the next higher bidder to perform the Work but such amount shall not exceed the amount of the bid guarantee.
- (b) The Bid Bonds and checks will be returned to all except the three lowest bidders after the formal opening of the bids. The remaining Bid Bonds and checks will be returned to the lowest bidders after the Authority and the accepted bidder have executed the Contract and the Performance Bond and the Payment Bond have been approved by the Authority.
- (c) If the required Contract and bonds have not been executed within ninety (90) days after the date of the opening of the bids, then the bond or check of any bidder will be returned upon its request, provided it has not been notified of the acceptance of the bid prior to the date of such request.

Article 8: WITHDRAWAL OR MODIFICATION OF BIDS

A bidder may withdraw or modify its bid only by written notice delivered to the Authority prior to the time fixed for receipt of bids.

Article 9: RECEIPT AND OPENING BIDS

- (a) It is the responsibility of the bidder to assure that its bid is delivered to the place designated for receipt of bids and prior to the time set for receipt of bids. The Authority will not consider bids received after the time set for receipt of bids.
- (b) Bids will be opened at the time and place stated in the advertisement and the lowest bidder will be announced. The officer or agent of the Authority, whose duty it is to open the bids, will decide when the specified time has arrived. No responsibility will be attached to any officer or agent for the premature opening of a bid not properly addressed and identified.

Article 10: ERRORS IN BIDS

A bidder may withdraw its bid from consideration if the price bid was substantially lower than the other bids due solely to a mistake in the bid, provided the bid was submitted in good faith, and the mistake was a clerical mistake as opposed to a judgment mistake, and was actually due to an unintentional arithmetic error or an unintentional omission of quantity of work, labor or material made directly in the compilation of a bid, which unintentional arithmetic error or unintentional omission can be clearly shown by objective evidence drawn from inspection of original work papers, documents and materials used in the preparation of the bid sought to be withdrawn. Under this provision a bidder requesting to withdraw its bid shall follow the procedures set forth in Section 2.2-4330 of the Code of Virginia. The bidder must give notice in writing of its claim of right to withdraw its bid within the time frame required by Section 2.2-4330 of the Code of Virginia and shall submit its original work papers to the Authority in compliance with the requirements of Section 2.2-4330 of the Code of Virginia. Failure to strictly comply with the requirements of Section 2.2-4330 of the Code of Virginia shall constitute a waiver of the right to withdraw the bid.

No bid may be withdrawn when the result would be the awarding of the Contract on another bid of the same bidder. No bidder who is permitted to withdraw a bid shall for compensation supply any material or labor to or perform any subcontract or other work agreement for the person or firm to whom the contract is awarded or otherwise benefit, directly or indirectly, from the performance of the project for which the withdrawn bid was submitted, without the approval of the Authority. The person or firm to whom the Contract was awarded and the withdrawing bidder are jointly liable to the Authority in an amount equal to any compensation paid to or for the benefit of the withdrawing bidder without such approval.

If a bid is withdrawn under authority of this section, the next higher bidder shall be deemed to be the low bidder on the project.

Article 11: REJECTION OF BIDS

The Authority reserves the right to reject any and all bids when such rejection is in the interest of the Authority, and will reject the bid of a bidder who is not a responsible bidder. (See § 2.2-4319, Code of Virginia, 1950, as amended.)

Article 12: STANDARD FORMS

The copies of the Form of Construction Contract, and AIA Document A312, Performance Bond and the Labor and Material Payment Bond are incorporated into the General Conditions by reference and are made a part hereof to the same extent as though fully set forth herein.

Article 13: AWARD OF CONTRACT

- (a) The Contract will be awarded as soon as possible to the lowest responsive and responsible bidder, provided its bid is reasonable and it is in the interest of the Authority to accept it. The Authority reserves the right to waive any informality in bids received when such waiver is in the interest of the Authority; also to accept any item in the bid unless otherwise specified by the Authority. Each bidder shall be prepared, if so requested by the Authority, to present evidence of its experience, qualifications and financial ability to carry out the terms of the Contract.
- (b) If the bid forms contain alternate prices, the Authority may in its sole discretion, unless otherwise specified in the invitation for bid, select whatever alternates it chooses to accept subsequent to the bid opening but prior to the determination of the low bidder. The low bidder shall be determined by comparing each bidder's bid total based on the sum of the base bid and the alternates selected by the Authority.
- (c) Pursuant to the Virginia Public Procurement Act, in the event the lowest responsible bid exceeds available funds for the project, the Authority may enter into negotiations with the lowest responsible bidder in an effort to arrive at a contract amount within the limits of available funds. In such event, the Authority will inform the bidder of the amount of funds available, and will negotiate in good faith toward achieving the funding limit, preferably without any change in the scope or other change in the Contract Documents. However, negotiations may include change in scope, quantity of materials, or other changes, so long as any such changes are within the general scope of the original design. If the Authority and bidder reach agreement, the Authority may award a contract in accordance with

procedures or actions approved by the Authority Board. The Authority may terminate negotiations at any time prior to the award of a contract, and proceed as otherwise permitted by the Virginia Public Procurement Act.

Article 14: CONTRACT SECURITY

For all contracts of Five Hundred Thousand Dollars (\$500,000.00) or more, the Contractor shall deliver to the Authority or its designated representative, an AIA Document A312, Performance Bond and Labor and Material Payment Bond, each fully executed by one or more surety companies legally authorized to do business in Virginia and each in an amount equal to one hundred percent (100%) of the original Contract Sum. The bonds shall be conditioned as set forth in § 2.2-4337 of the Code of Virginia, as amended. Sureties shall be selected by the Contractor subject to approval by the Authority. No contract shall be deemed to be in effect until the bonds have been approved by the Authority. For the purposes of all Labor and Material Payment Bonds entered into pursuant to this Article, the term “subcontractors” as used in § 2.2-4337 A.2 of the Code of Virginia is interpreted to mean any contractors who participated in the prosecution of the Work undertaken by the Contractor, whether such subcontractor had a direct contract with the Contractor or whether there were one or more other intervening subcontractors.

Article 15: PROGRESS SCHEDULES

- (a) The Contractor shall, within ten (10) days of receipt of notice of award, prepare and submit to the Authority and Engineer a schedule for the completion of the Work within the timeframe set forth in the Contract Documents. This progress schedule shall be related to the entire Project; shall include all the Work; and shall meet the time for completion requirements of the Contract. It shall include an allowance for anticipated delay caused by ordinary adverse weather conditions and shall provide for the expeditious and practical execution of the Work within the time requirements of the Contract Documents. The schedule shall set forth as much detail as deemed necessary by the Authority.
- (b) The Authority’s acceptance of the schedule is not a representation or agreement that the schedule is logical or can be performed in the time or sequence indicated, but only that the Authority approves of the construction in that time and in that sequence.

Article 16: SHOP DRAWINGS, PRODUCT DATA and SAMPLES

- (a) Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or any Subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.
- (b) Product Data are illustrations, standard schedules, performance charts, instruction, brochures, diagrams and other information furnished by the Contractor to illustrate a material, product or system for some portion of Work.
- (c) Samples are physical examples, which illustrate materials, equipment or workmanship and establish standards of quality and esthetics by which the Work will be judged.
- (d) The Contractor shall review, approve and submit, with reasonable promptness and in such sequence as to cause no delay in the Work or in the work of the Authority or any separate contractor, all Shop Drawings, Product Data and Samples required by the Contract Documents.
- (e) By preparing and submitting Shop Drawings, Product Data and Samples, the Contractor represents that it has determined and verified all materials, field measurements, and field construction criteria related thereto, or will do so, and that it has checked and coordinated the information contained within such submittals with the requirements of the Work and the Contract Documents.
- (f) The Contractor shall not be relieved of responsibility for any deviation from the requirements of the Contract Documents by the Engineer’s approval of Shop Drawings, Product Data or Samples unless the Contractor had specifically informed the Engineer in writing of such deviation at the time of submission and the Engineer has given written approval to the specific deviation. The Contractor shall not be relieved from responsibility of errors or omissions in the Shop Drawings, Product Data or Samples by the Engineer’s approval thereof.

- (g) The Contractor shall direct specific attention, inviting or on resubmitted Shop Drawings, Product Data or Samples, to revisions other than those requested by the Engineer on previous submittals.
- (h) No portion of the Work requiring submission of a Shop Drawing, Product Data or Sample shall be commenced until the submittal has been approved by the Engineer. All such portions of the Work shall be in accordance with approved submittals.

Article 17: MATERIALS, SERVICES, AND FACILITIES

- (a) Materials and equipment shall be so stored as to insure the preservation of their quality and fitness for the work. Stored materials and equipment to be incorporated in the Work shall be located so as to facilitate prompt inspection.
- (b) Manufactured articles, materials, and equipment shall be stored, applied, installed, connected, erected, used, cleaned, and conditioned as directed by the manufacturer, and as approved by the Engineer.
- (c) Materials, supplies, and equipment shall be in accordance with samples, shop drawings, and catalogue cuts submitted by the Contractor and approved by the Engineer and Authority.
- (d) Materials, supplies, or equipment to be incorporated into the work shall not be purchased by the Contractor or the Subcontractor subject to a chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller.
- (e) All Work included in this Contract shall be performed to the standards specified. The Contractor shall employ no plant, equipment, materials, methods or persons to which the Engineer or the Authority reasonably objects, and shall remove no plant, equipment or other facilities from the site of the work without permission of the Engineer and the Authority. The Contractor's failure to comply with these requirements will constitute a breach of Contract and as such may result in a termination of the Contractor by the Authority.

Article 18: INSPECTION AND TESTING

- (a) All materials and equipment used in the construction of the Project shall be subject to adequate inspection and testing in accordance with generally accepted industry standards and the Legal Requirements as defined in the Contract Documents.
- (b) If the Contract Documents or the Legal Requirements require any part of the Work to specifically be inspected, tested or approved by someone other than the Contractor, the Contractor shall initiate and coordinate those inspections, test, or approvals with the proper authorities and shall give the Engineer and the Authority three (3) working days written notice of each such inspection. The Contractor shall then furnish the Engineer and the Authority with the required certificates of inspection, testing or approval. Unless otherwise specifically provided for, the Contractor shall bear all costs of such inspections, tests or approvals.
- (c) Inspection, test, or approvals by the Engineer or others will not relieve the Contractor from its obligations to perform the Work in accordance with the requirements of the Contract Documents.
- (d) The Authority, the Engineer and their representatives shall at all times have access to the Work. In addition, authorized representatives and agents of any participating federal, state or local agency shall be permitted to inspect all work, materials, payrolls, records of personnel, invoices of materials, and other relevant data and records. All such records shall remain available and accessible during performance of the Contract and until three years from the date of Final Payment, or, in case of dispute, for a period of three years after resolution of the dispute, whichever is later. The Contractor shall provide proper facilities for such access and observation of the Work and also for any inspection or testing thereof.
- (e) If any work is covered without the approval of the Engineer contrary to requirements of the Contract Documents, it must, if requested by the Engineer or the Authority, be uncovered for its observation and then recovered at the Contractor's expense.

- (f) If the Engineer or the Authority considers it necessary or advisable that approved covered work be inspected or tested by others, the Contractor, at the Engineer's or the Authority's request, shall uncover, expose or otherwise make that portion of the Work available for observation, inspection or testing as the Engineer or the Authority may require. If it is found that such work is defective, the Contractor will bear all the expenses of such uncovering, exposure, and observation as well as all expenses for the inspection, testing, and satisfactory reconstruction of that portion of the Work. If, however, such work is not found to be defective, the Contractor will be allowed an increase in the Contract Price or an extension of the Contract Time or both, directly attributable to such uncovering, exposure, observation, inspection, testing, and reconstruction, and an appropriate Change Order will be issued.

Article 19: SUBSTITUTIONS

- (a) After the Contract has been executed, the Authority and the Engineer will consider a written request for the substitution of products or materials specified by the Contract Documents. The Authority is not obligated to consider substitutions and such consideration is the Authority's sole discretion. By making requests for substitutions, the Contractor represents and certifies:
- (1) that the Contractor has personally investigated the proposed substitute product or material and determined that it is equal or superior in all respects to that specified by the Contract Documents.
 - (2) that the Contractor will provide the Authority with a warranty of the substituted product equal or superior to the warranty furnished in connection with the product or material originally specified by the Contract Documents.
 - (3) that the cost data presented is complete and includes all related costs under this Contract and Contractor waives all claims for any additional costs related to the substitution; and
 - (4) that the Contractor will coordinate the installation of the substituted product or material and that the Contractor will make all changes necessitated by the use of the substituted product without any additional cost to the Authority.

Article 20: PATENTS

The Contractor shall pay all applicable royalties and license fees. It shall defend all suits or claims for infringement of any patent rights and save the Authority harmless from loss on account thereof, except that the Authority will be responsible for any such loss when a particular process, design or the product of a particular manufacturer or manufacturers as specified is an infringement of a patent. However, if the Contractor has reason to believe that such particular process, design or product is an infringement, he shall be responsible for such loss unless he gives written notice to the Authority and the Engineer of the possible infringement.

Article 21: SURVEYS, PERMITS, REGULATIONS

- (a) The Authority will furnish all boundary surveys and establish all baselines for locating the principal component parts of the Work together with suitable number of benchmarks adjacent to the Work as shown in the Contract Documents.
- (b) Permits and licenses of a temporary nature necessary for the prosecution of the work, such as building, plumbing, and electrical permits, shall be secured and paid for by the Contractor unless otherwise stated in the Contract Documents. Permits, licenses, and easements for permanent use of structures or permanent changes in existing facilities shall be secured and paid for by the Authority unless otherwise specified.
- (c) The Contractor shall give all notices and comply with all permits and the Legal Requirements in the performance of the Work. The Contractor shall promptly notify the Engineer in writing if it comes to its attention that the Contract Documents are at variance with any such requirement.

- (d) If any permit, license or certificate expire, be revoked, terminated or suspended because of any act or omission of the Contractor, it shall not be entitled to any additional compensation for direct costs or to an extension of the Contract Time.
- (e) Permits obtained by the Authority for this Project are available for inspection in the Authority's offices.

Article 22: PROTECTION OF WORK, PROPERTY AND PERSONS

- (a) The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work, in compliance with industry standards and the Legal requirements. Contractor shall take all necessary precautions for the safety of and shall provide the necessary protection to prevent damage, injury or loss to all employees on the work and other persons who may be affected thereby, all the work and all materials or equipment to be incorporated therein, whether in storage on or off the site, and other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation or replacement in the course of construction. In case of suspension of work for any cause whatever, the contractor shall be responsible for the Project and shall take such precautions as may be necessary to prevent damage to the Work, provide for proper drainage and shall erect any necessary temporary structures, signs, or other facilities at its expense. During such period or suspension of work, the Contractor shall properly and continuously maintain in acceptable growing condition all living material in newly established plantings, seedings, and sodding furnished under this Contract, and shall take adequate precautions to protect new growth and other important growth against injury. Contractor shall also notify owners of adjacent utilities when prosecution of the Work may affect them.
- (b) In emergencies affecting the safety of persons or the Work or property at the site or adjacent thereto, the Contractor shall act, at its discretion, to prevent threatened damage, injury or loss. Any additional compensation or extension of time claimed by the Contractor on account of emergency work shall be determined as provided in the Contract Documents.

Article 23: SUPERVISION BY CONTRACTOR

- (a) The Contractor shall supervise and direct the work. It shall be solely responsible for the means, methods, techniques, sequencers and procedures of construction. The Contractor shall employ and maintain on the work a qualified supervisor or superintendent ("Supervisor") and provide a resume of its experience. This Supervisor shall have been designated in writing as the Contractor's representative at the site and shall not thereafter be changed unless such change is approved by or directed by the Authority. The Authority shall have the right to approve this Supervisor or order its removal from the job site, which right shall not be unreasonably exercised. This Supervisor shall have full authority to act on behalf of the Contractor and all communications given to the Supervisor shall be as binding as if given to the Contractor. This Supervisor shall be present on the site at all times as required to perform adequate supervision, control and coordination of the Work as determined by the Engineer or the Authority.
- (b) The Contractor shall be responsible to the Authority for the acts and omissions of its employees, Subcontractors and their agents and employees, and other persons performing any of the Work under a contract with the Contractor.
- (c) The Contractor shall not be relieved from its obligations to perform the Work in accordance with the Contract Documents either by the activities or duties of the Engineer and the Authority in their administration of the Contract or by inspections, tests, or approvals required or performed by persons other than the Contractor.
- (d) Prior to commencing work, the Contractor shall check all work performed by others that is necessary for the execution of the Contractor's work and shall promptly report to the Engineer in writing any deficiencies in such work which render it unacceptable or unsuitable for the Contractor's Work or which will increase the cost of the Work. Failure to give such written notice shall relieve the Authority of any responsibility therefore. The Contractor shall be responsible for all elevations, grades, and proper fitting of its Work.

Article 24: CHANGES IN THE WORK

- (a) The Authority, without invalidating the Contract, may order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, with the Contract Sum and the Contract Time being adjusted accordingly. All such changes in Work shall be authorized by written Change Order signed by the Authority and the Engineer, and shall be performed under the applicable conditions of the Contract Documents.
- (b) The cost or credit to the Authority resulting from a change in the Work shall be determined in one or more of the following ways:

 - (1) by mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
 - (2) by unit prices stated in the Contract Documents or subsequently agreed upon;
 - (3) by cost to be determined in a manner agreed upon by the parties and a combined overhead and profit of 15% of such costs if the Contractor performs the work with its own forces, or 15% for the combined overhead and profit of a Subcontractor performing the work with its own forces and 5% for the Contractor; in no event shall the total mark-up for overhead and profit exceed 20% of the cost; or
 - (4) by the method provided in Article 25(c).
- (c) If none of the methods set forth above is agreed upon, the Contractor, provided it receives a Construction Change Directive signed by the Authority, shall promptly proceed with the Work involved. The cost of such Work shall then be determined by the Engineer on the basis of the reasonable expenditures and savings of those performing the Work attributable to the change, including, in the case of an increase in the Contract Sum, a reasonable allowance for overhead and profit. In such case, and also under Article 25(b)(3) above, the Contractor shall keep and present, in such form as the Engineer may prescribe, an itemized accounting together with appropriate supporting data of the costs for inclusion in a Change Order. Unless otherwise provided in the Contract Documents, costs shall be limited to the following: cost of materials, including sales tax and cost of delivery,, cost of labor, including social security, unemployment insurance, and fringe benefits required by agreement or custom; workers' or workmen's compensation insurance; bond premiums; and rental value of equipment and machinery. The amount of credit to be allowed by the Contractor to the Authority for any deletion or change that results in a net decrease in the Contract Sum will be the amount of the actual net cost as confirmed by the Engineer. When both additions and credits covering related Work or substitutions are involved in any one change, the allowance for overhead and profit shall be figured on the basis of the net increase, if any, with respect to that change.
- (d) The Engineer or the Authority also may at any time by issuing a Field Order, make changes in the details of the Work. The Contractor shall proceed with the performance of any changes in the work so ordered and should the Contractor believe that such Field Order entitles it to a change in Contract Price or Time, or both, it shall give the Engineer and the Authority Written Notice thereof within ten days after the receipt of the Field Order. Failure to provide such written notice shall be deemed a waiver of any claims arising from or relating to the Field Order. Failure to proceed with work changed by a Field Order or a Change Order shall constitute a breach of contract and shall be cause for the termination of the Contract. All requests for a Change Order arising out of a Field Order must have a copy of the referenced Field Order attached.
- (e) Where the Work is contracted for on a unit price basis and the actual quantity of work for any pay item exceeds the estimated quantity by more than 25% of that amount stated in the Contract Documents, a Change Order will be issued for any increase or decrease in unit cost, which results from the increased work. If the quantity variation is such as to cause an increase in the time necessary for completion, the Authority shall, upon receipt of a written request for an extension of time, make an appropriate adjustment for extending the completion date in accordance with Article 26.

Article 25: CHANGES IN THE CONTRACT SUM OR OTHER RELIEF

If the Contractor wants to make a claim for an increase in the Contract Sum, or for any other relief under the Contract, it shall give the Engineer and the Authority written notice of the claim within ten

(10) days after the occurrence of the event giving rise to such claim. This notice shall be given by the Contractor before proceeding to execute any additional Work, except in an emergency endangering life or property. The notice shall set forth the basis for the claim and the relief or increase in the Contract Sum requested by the Contractor. After providing notice of its claim, Contractor shall provide the Authority and the Engineer with any information and/or documents requested by them to evaluate the claim. No such claim shall be valid unless so made. If the Authority and the Contractor cannot agree on the amount of the adjustment in the Contract Sum, it shall be determined by the Engineer in accordance with Article 40(e). Any change in the Contract Sum resulting from such claim shall be authorized by Change Order.

- (a) If the Contractor claims that additional cost is required because of, but not limited to,
 - (1) any written interpretation of the Contract Documents;
 - (2) any order by the Authority to stop the Work where the Contractor was not at fault; or
 - (3) any Field Order directed change in the Work; the Contractor shall make such claim as provided in Article 25(a).

Article 26: TIME FOR COMPLETION AND LIQUIDATED DAMAGES

- (a) All time limits stated in the Contract Documents are of the essence of the Contract.
- (b) The Contractor shall proceed with the Work with the diligence necessary to insure Substantial Completion within the Contract Time. It is expressly understood and agreed by and between the Contractor and the Authority that the Contract Time for the completion of the Work described herein is a reasonable and adequate time, taking into consideration the average climate and economic conditions and other factors prevailing in the locality of the Work.
- (c) If the Contractor shall fail to Substantially Complete the Work within the Contract Time, or extension of time granted by the Authority, then the Contractor shall pay to the Authority liquidated damages as specified in the Contract Documents for each calendar day after the date of Substantial Completion until the Work achieves Substantial Completion. Contractor agrees that the amount of liquidated damages is reasonable and waives any right it may have to contest the amount of liquidated damages as being unreasonable or a penalty. If liquidated damages are not set forth in the Contract Documents, Contractor shall be liable to Owner for any loss or damage arising from the Contractor's failure to complete the Work by the date of Substantial Completion.
- (d) If the Contractor is delayed at any time in the progress of the Work by any act or neglect of the Authority or the Engineer, or by any employee of either, or by any separate contractor employed by the Authority, or by changes ordered in the Work, or by labor disputes, fire, unusual delay in transportation, unusual and adverse weather conditions that could not be reasonably anticipated, unavoidable casualties, or any causes beyond the Contractor's control, or by delay authorized by the Authority, then the Contract Time shall be extended by Change Order for such reasonable time as the Engineer may determine.
- (e) Any claim for extension of time shall be made in writing to the Engineer and the Authority within (10) days after the commencement of the event giving rise to or causing the claimed delay; otherwise it shall be waived. The notice shall set forth the basis for the extension of time and any other relief requested by the Contractor. After providing notice of its claim, Contractor shall provide the Authority and the Engineer with any information and/or documents requested by them to evaluate the claim. In the case of a continuing delay only one notice of claim is necessary. The Contractor shall precisely identify the delay and its cause, and provide an estimate of the probable effect of such delay on the progress of the Work.
- (f) Contractor hereby expressly waives any claims against the Authority and the Engineer for any indirect or direct damages, costs or expenses which the Contractor or its Subcontractors may incur

as a result of any delay in the performance of the Contract, except and then only to the extent that the delay is caused by any act or omission of the Authority or the Engineer, or their agents or employees, and is due to causes within their control. In such event, Contractor may seek direct costs arising solely from the delay but shall not be entitled to any indirect costs including, without limitation, home office overhead costs. It is understood and agreed that the Contractor's sole and exclusive remedy in case of any noncompensable delay shall be an extension of the Contract Time, but only as determined in accordance with the provisions of the Contract Documents.

- (g) In the event that Contractor has incurred a delay for which it believes it is entitled to compensation under this Contract, it shall give the Authority written notice of that claim within ten (10) days of the commencement of the delay, and shall identify what it considers to be the cause of and expected duration of the delay.

Article 27: CORRECTION OF WORK

- (a) The Contractor shall promptly remove from the premises all work rejected by the Engineer or the Authority for failure to comply with the Contract Documents whether incorporated in the construction or not, and the Contractor shall promptly replace and re-execute the work in accordance with the Contract Documents and without expense to the Authority and shall bear the expense of making good all work of other Contractors destroyed or damaged by such removal or replacement.
- (b) Unauthorized work shall be any work done or materials ordered by the Contractor prior to receipt of the Notice to Proceed, previously rejected work incorporated into the Project, work done contrary to or regardless of the instructions of the Engineer, extra work performed without proper written authority, work done beyond the limits shown on the Plans, except as herein specified, any extra work done without written authority from the Engineer or the Authority, or any work done after discovery of a discrepancy, ambiguity, or inconsistency and before the Engineer provides any necessary instructions to the Contractor. The Authority shall not pay for unauthorized work. Unauthorized work may, at the Authority's sole discretion, be ordered removed or replaced at the Contractor's expense.

Article 28: SUSPENSION OF WORK; THE AUTHORITY'S RIGHT TO STOP AND CARRY OUT THE WORK

- (a) The Authority may order the Contractor in writing to suspend, delay, or interrupt all or any part of the Work for such period of time as it may determine to be appropriate for the convenience of the Authority.
- (b) **The Authority's Right to Stop the Work**

If the Contractor fails to correct defective Work as required, fails to carry out the Work in accordance with the Contract Documents, or if an emergency situation exists that threatens the safety of persons or property, the Authority, in addition to any other remedies it may have, by a written notice direct the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated. Contractor shall be liable to the Authority for any loss of damages arising from the stoppage of the Work including, without limitation, any loss or damage arising from a delay in the completion of the Work.

- (c) **Authority's Right to Carry Out the Work**

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within two (2) days after receipt of written notice from the Authority to commence and continue correction for such default or neglect with diligence and promptness, the Authority may, after two (2) days following receipt by the Contractor of an additional written notice of its decision to do so, make good such deficiencies without prejudice to any other remedy it may have. In such case an appropriate Change Order shall be issued deducting from the payments then or thereafter due the Contractor the cost of correcting such deficiencies, including compensation for the Engineer's additional services or other services as may be required and made necessary by such default, neglect or failure. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Authority. All charges and back

charges made against monies otherwise owed to or due to the Contractor shall be deemed accepted unless the Contractor rejects them in writing to the Authority within ten (10) days of receipt and states fully its reasons for rejecting them.

Article 29: TERMINATION

- (a) If the Contractor is adjudged a bankrupt or insolvent, or if it makes a general assignment for the benefit of its creditors, or if a trustee or receiver is appointed for the Contractor or for any of its property, or if it files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws, or if it fails to supply sufficient skilled workmen or suitable materials or equipment, or if it fails to make prompt payments to subcontractors or for labor, materials or equipment, or if it refuses or fails to prosecute the Work or any separable part thereof, with such diligence as will insure its completion within the Contract Time, or if it fails to complete the Work within the Contract Time required, or if it disregards laws, ordinances, rules, regulations, directions or orders of any public body having jurisdiction over the Work, or if it disregards the authority of the Engineer, or if it otherwise violates any provision of the Contract Documents, then the Authority may, without prejudice to any other right or remedy, seven (7) days after delivery of a written notice to the Contractor and its surety, terminate the services of the Contractor and take possession of the Project and of all materials, equipment, tools, construction equipment and machinery thereon owned by the Contractor, and finish the Work by whatever method it may deem expedient. In such case, the Contractor will not be entitled to receive any future payment until the Work is finished. If the unpaid balance of the Contract Price exceeds the direct and indirect costs of completing the Project, including compensation for additional professional services, such excess will be paid to the Contractor. If such costs exceed such unpaid balance, the Contractor shall pay the difference to the Authority. Such cost incurred by the Authority will be determined by the Engineer and incorporated in a Change Order.
- (b) If termination for cause by the Authority is deemed to be improper, it shall be deemed a termination for convenience.
- (c) Where the Contractor's services have been so terminated by the Authority, the termination shall not affect any rights the Authority then has or that may thereafter accrue against the Contractor. Any retention or payment of monies by the Authority due the Contractor will not release the contractor from compliance with the Contract Documents.
- (d) **Termination for Convenience**

The Authority may, effective not less than after seven (7) days from delivery of a written notice to the Contractor, without cause and without prejudice to any other rights or remedies it may have, terminate this Construction Contract for its own convenience for any reason. When this Construction Contract has been terminated for convenience, the Contractor shall be paid only for Work performed through the date of termination. The Contractor shall not be entitled to anticipated profits on unperformed portions of the Work.

Article 30: USE OF THE PREMISES

- (a) The Authority will have the right to enter the premises for the purpose of doing work not covered by the Contract Documents. This provision shall not be construed as relieving the Contractor of the sole responsibility for the care and protection of the Work or the restoration of any damaged work, except such as may be caused by agents or employees of the Authority.
- (b) Prior to Substantial Completion, the Authority, with the concurrence of the Contractor, may use any completed or substantially completed portion of the Work. Such use shall not constitute a final acceptance of such portions of the Work unless otherwise stated so in writing.

Article 31: PAYMENTS TO THE CONTRACTOR

- (a) Prior to submitting its first application for payment, the Contractor shall submit to the Authority and the Engineer a schedule of values allocating the costs of the various portions of the Work, prepared in such form and supported by such data to substantiate its accuracy as may be required by the Authority and the Engineer. This schedule, as approved, shall be used as a basis for

Contractor's applications for payment, which shall be submitted on the current edition of the AIA Application and Certification for Payment ("Application for Payment"), AIA Document G702.

- (b) At least twenty days before each progress payment falls due (but not more than once a month), the Contractor, the Engineer, and the Authority shall meet at the Project to determine the percentage of completion of the individual items in the schedule of values. If no agreement is reached, the Contractor shall prepare its Application for Payment using percentages it considers correct. Thereafter, the Contractor shall submit to the Engineer three (3) copies of its completed and signed Applications for Payment covering the work performed during the period of the Application for Payment and supported by such data as the Engineer may reasonably require. If payment is requested on the basis of materials and equipment not incorporated in the Work, the Application for Payment shall also be accompanied by such supporting data, satisfactory to the Engineer, as will protect the Authority's interests therein, including applicable insurance. See Article 32(c). The Engineer will, within fifteen days after receipt of each Application for Payment, either certify in writing its approval of payment for an amount based either on the agreed percentages of completion or the percentages the Engineer considers correct and present the Application for Payment to the Authority, or return the Application for Payment to the contractor stating in writing its reasons for refusing to approve payment. If payment has been refused, the Contractor may make the necessary corrections and resubmit the Application for Payment to the Engineer. The Authority will, within thirty days of its receipt of an approved Application for Payment, pay the Contractor a progress payment in the amount certified by the engineer, unless the Authority has reason to refuse payment of that amount in whole or in part, in which event it shall state its reasons in writing to the Contractor. The Authority will retain five (5) percent of the amount of each payment due until final completion and acceptance of all work. However, the Authority may, in its sole discretion, reduce the amount retained to 150% of the value of work remaining when the work is substantially complete. The decision to reduce retainage and the amount of such reduction shall be solely that of the Authority. On completion and acceptance of a part of the Work on which the price is stated separately in the Contract Documents, payment may be made in full, including retained percentages less authorized deductions. Prior to receiving each payment, and as part of its Applications for Payment, the Contractor shall certify in writing that it has made payment from the proceeds of prior payments and that it will make timely payments from the proceeds of progress and final payment then due it, to its subcontractors and suppliers in accordance with its contractual arrangement with them. If requested by the Authority, the Contractor shall provide evidence of such payments, including affidavits by subcontractors and suppliers.
- (c) The Application for Payment may also include an allowance for the cost of major materials and equipment not yet incorporated in the Work. When requested in writing by the Contractor and approved in writing by the Authority, payment will be made for nonperishable major material and equipment delivered and properly stored at the Work site or other approved site. Material for which payment has been made, wholly or partially, shall not be removed from the Work site or other approved site unless authorized by the Authority in writing.
- (d) The Contractor shall indemnify and save the Authority and its agents harmless from all losses, damages, liabilities, including attorney's fees, arising out of the demands of Subcontractors, laborers, workmen, mechanics, materialmen and furnishers of machinery parts thereof, equipment, tools, and all supplies incurred in the furtherance of the performance of the Work. The Contractor shall, at the Engineer's request, furnish satisfactory evidence that all obligations of the nature designated above have been paid, discharged, or waived. If the Contractor fails to do so, the Authority may, after having notified the Contractor, either pay unpaid bills or withhold from the Contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the Contractor will be resumed in accordance with the terms of the Contract Documents. In no event, however, shall the provisions of the foregoing sentence be construed to impose any obligations upon the Authority to either the Contractor, its Surety, or any third party. In paying any unpaid bills of the Contractor, any payment so made by the Authority will be considered as a payment made under the Contract Documents by the Authority to the Contractor and the Authority will not be liable to the Contractor for any such payments in good faith.
- (e) If the Authority fails to make a payment when due under the terms of this Contract, interest shall accrue on monies due and owing at the rate of 3% per annum commencing sixty (60) days after the date the payment was due.

- (f) The Authority may reduce in whole or in part any approved Application for Payment, whether or not it has been paid, to the extent necessary to protect the Authority from loss because of:
- (1) defective Work not remedied;
 - (2) failure to timely or properly pay Subcontractors;
 - (3) evidence that the Work cannot be completed for the amount remaining to be paid; or
 - (4) damage to the Authority;
 - (5) a persistent failure to carry out the Work in accordance with the Contract Documents.

Article 32: SUBSTANTIAL COMPLETION OF THE WORK

- (a) When the Contractor considers that the Work or, if agreed to by the Authority, a designated portion thereof is Substantially Complete as defined in Article 1, the Contractor shall prepare for submission to the Engineer a list of items to be completed or corrected. The failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. When the Engineer on the basis of its inspection determines that the Work or designated portion thereof is Substantially Complete, it will then prepare a Certificate of Substantial Completion which shall establish the Date of Substantial Completion, shall state the responsibilities of the Authority and the Contractor for security, maintenance, heat, utilities, damage to the Work, and insurance, and shall fix the time within which the Contractor shall complete the items listed therein. Warranties required by the Contract Documents shall commence on the Date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion. The Certificate of Substantial Completion shall be submitted to the Authority and the Contractor for their written acceptance of the responsibilities assigned to them in such Certificate.
- (b) Upon Substantial Completion of the Work or designated portion thereof and upon application by the Contractor and certification by the Engineer, the Authority shall make payment, reflecting adjustment in retainage, if any, for such Work or portion thereof, as provided in the Contract Documents.

Article 33: FINAL COMPLETION AND FINAL PAYMENT

- (a) Upon receipt of written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Engineer will promptly make such inspection and, when it finds the Work acceptable under the Contract Documents and the Contract fully performed, it will promptly issue a final Certificate for Payment stating that to the best of its knowledge, information, and belief, and on the basis of its observations and inspections, the Work has been completed in accordance with the terms and conditions of the Contract Documents and that the entire balance stated therein is due and payable to the Contractor. If the Contractor has completed all of the requirements and conditions, Final Payment shall be made within 30 days of receipt of the Contractor's Application. The Engineer's Final Certificate for Payment will constitute a further representation that the conditions precedent to the Contractor's being entitled to final payment as set forth in Article 32(b) have been fulfilled.
- (b) Neither the final payment nor the remaining retained percentage shall become due until the Contractor submits to the Engineer (1) an affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Authority or its property might in any way be responsible, have been paid or otherwise satisfied, (2) consent of surety, if any, to final payment, (3) if required by the Authority, other data establishing payment or satisfaction of all such obligations, such as receipts, release and waivers of liens arising out of the Contract, to the extent and in such form as may be designated by the Authority, (4) two (2) binders containing all product and equipment manuals, warranties and guarantees, and (5) as-built drawings. If any Subcontractor refuses to furnish a release or waiver required by the Authority, the Contractor may furnish a bond satisfactory to the Authority to indemnify it against any such lien. If any such lien remains unsatisfied after all payments are made, the Contractor shall refund to the Authority all

monies that the latter may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

- (c) If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by the issuance of Change Orders affecting final completion, and the Engineer so confirms, the Authority shall, upon application by the Contractor and certification by the Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance of the Contract Sum is less than the retainage stipulated in the Contract Documents, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Engineer prior to certification of such payment. Such payment shall then be made under the terms and conditions governing final payment. However, that payment shall not constitute a waiver of any claims the Authority may then or thereafter have.
- (d) The acceptance of final payment shall constitute a waiver of all claims by the Contractor except those previously made in writing, properly reserved pursuant to these General Conditions, and identified by the Contractor as unsettled at the time of the final Application for Payment. Such contractual claims, whether form money or other relief, shall be submitted in writing not later than 60 days after final payment. The Authority's Capital Programs Director shall review such contractual claims and issue a final decision in writing within 90 days after receipt.

Article 34: INSURANCE

(a) Contractor's Liability Insurance

The Contractor shall purchase and maintain such insurance as will protect it from claims set forth below which may arise out of or result from the Contractor's operations under the Contract, whether such operations be by itself or by any Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

- (1) claims under workers' or workmen's compensation, disability benefit and other similar employee benefit acts;
- (2) claims for damages because of bodily injury, occupational sickness or disease, or death of its employees;
- (3) claims for damages because of bodily injury, sickness or disease, or death of any person other than its employees;
- (4) claims for damages insured by usual personal injury liability coverage, which are sustained (1) by any person as a result of an offense directly or indirectly related to the employment of such person by the Contractor, or (2) by any other person;
- (5) claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting there from; and
- (6) claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

Liability insurance shall include all major divisions of coverage and be on a comprehensive basis including:

- (1) Premises Operations (including X, C and U coverage);
- (2) Independent Contractor's Protective;
- (3) Products and Completed Operations;
- (4) Personal Injury Liability with Employment Exclusions deleted;
- (5) Contractual, including provisions for indemnity obligations under this Agreement;

- (6) Owned, non-owned and hired motor vehicles;
- (7) Broad Form Property Damage including Completed Operation

Contractor shall have and maintain the following insurance in the amounts set forth below unless otherwise agreed to by the Owner in writing:

- (1) Workers' Compensation Insurance in an amount as required by state law. Workers' Compensation per statutory limits and employer's liability in the following minimum amounts: EL Each Accident - \$500,000, EL Disease Policy Limit - \$500,000, EL Disease Each Employee - \$500,000.
- (2) Commercial General Liability Insurance including coverage for bodily injury, property damage, contractual liability and products/completed operations with a minimum coverage of \$1,000,000 per occurrence and \$2,000,000 in the aggregate. Property damage coverage shall include coverage for explosion, collapse and underground hazards. Coverage for products/completed operations shall extend for a period of three (3) years after the date of substantial completion. Property damage in the amount of not less than \$1,000,000 for any one accident. Additional limits may be required.
- (3) Comprehensive Automobile Liability Insurance for bodily injury and property damage with a minimum coverage of \$1,000,000 per occurrence and \$1,000,000 in the aggregate.
- (4) Excess or Umbrella insurance supplementing coverage under the Commercial General Liability, Comprehensive Automobile Liability Insurance and Employer's Liability Insurance policies with a minimum coverage of \$1,000,000 per occurrence and \$1,000,000 in the aggregate

The Contractor shall endorse the Authority on its insurance policy as an additional insured to protect the interests of the public. Certificates of Insurance and Additional Insured Endorsements acceptable to the Authority shall be filed with the Authority prior to commencement of the Work. These Certificates and Endorsements shall contain a provision that coverages afforded under the policies will not be cancelled until at least thirty days prior written notice has been given to the Authority. Insurance certificates must include an additional insured endorsement naming the following as an additional insured: "The Northern Virginia Regional Park Authority, its officers, directors, agents, employees, and volunteers." The endorsement must be completed on endorsement form CG 20 10 11 85 or CG 20 10 07 04 or such other form acceptable to the Authority.

(b) **The Authority's Liability Insurance**

The Authority shall be responsible for purchasing and maintaining its own liability insurance and, at its option, may purchase and maintain such insurance as will protect it against claims that may arise from operations under the Contract.

(c) **Property Insurance**

Unless otherwise provided, the Authority shall purchase and maintain property insurance upon the entire Work at the site to the full insurable value thereof. This insurance shall include the interests of the Authority, the Contractor, Subcontractors, and Sub-subcontractors in the Work and shall insure against the perils of fire and extended coverage and shall include "all risk" insurance for physical loss or damage including, without duplication of coverage, theft, vandalism and malicious mischief. If the Authority does not intend to purchase such insurance for the full insurable value of the entire Work, it shall inform the Contractor in writing prior to commencement of the Work. The Contractor may then affect insurance that will protect the interests of itself, its Subcontractors and Sub-subcontractors in the Work, and by appropriate Change Order the cost thereof shall be charged to the Authority. If not covered under the all risk insurance or otherwise provided in the Contract Documents, the Contractor shall effect and maintain similar property insurance on portions of the

Work stored off the site or in transit when such portions of the Work are to be included in an Application for Payment.

- (d) The Authority shall purchase and maintain such boiler and machinery insurance as may be required by the Contract Documents or by law. This insurance shall include the interests of the Authority, the Contractor, Subcontractor and Sub-subcontractors in the Work
- (e) Any loss insured under Article 34(c) is to be adjusted with the Authority and made payable to the Authority as trustee for the insured's, as their interests may appear. The Contractor shall pay each Subcontractor a just share of any insurance monies received by the Contractor, and by appropriate agreement, written where legally required for validity, shall require each Subcontractor to make payments to its Sub-subcontractors in similar manner.
- (f) If the Contractor requests in writing that insurance for risks other than those described in Article 34(c) or (d) or other special hazards be included in the property insurance policy, the Authority may, if possible and in its sole discretion, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Change Order.
- (g) The Authority and the Contractor waive all rights against (1) each other and the Subcontractors, Sub-subcontractors, agents and employees each of the other, and (2) the Engineer and separate contractors, if any, and their subcontractors, sub-contractors, agents and employees, for damages caused by fire or other perils to the extent covered by insurance obtained pursuant to Article 34(c) or (d) or any other property insurance applicable to the Work, except such rights as they may have to the proceeds of such insurance held by the Engineer as trustee. The foregoing waiver afforded the Engineer, its agents and employees shall not extend to the liability imposed by Article 36(a). The Authority or the Contractor, as appropriate, shall require of the Engineer, separate contractors, Subcontractors and Sub-subcontractors by appropriate agreements, written where legally required for validity, similar waivers each in favor of all other parties enumerated in this Article 34(g).
- (h) If required in writing by the Contractor, the Authority as trustee shall, upon the occurrence of an insured loss, deposit in a separate account any money so received, and shall distribute it in accordance with the interests of the parties. If after such loss no other special agreement is made, replacement of damaged work shall be covered by an appropriate Change Order.
- (i) The Authority as trustee shall have power to adjust and settle any loss with the insurers.
- (j) If the Authority finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion thereof, such occupancy or use shall not commence prior to a time mutually agreed to by the Authority and the Contractor and to which the insurance company or companies providing the property insurance have consented by endorsement to the policy or policies. This insurance shall not be cancelled or lapsed on account of such partial occupancy or use. Consent of the Contractor and of the insurance company or companies to such occupancy or use shall not be unreasonably withheld.

Article 35: ASSIGNMENTS

Neither the Contractor nor the Authority shall sell, transfer, assign, or otherwise dispose of the Contract or any portion thereof, or of its rights, title, or interest therein, or its obligations thereunder, without written consent of both parties.

Article 36: INDEMNIFICATION

- (a) To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Authority, the Engineer and their agents, officers, directors and employees from and against all claims, damages, losses and expense, including but not limited to attorney's fees, arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom and (2) is caused in whole or in part by any negligent act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be

liable, regardless of whether or not it is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity that would otherwise exist as to any party or person described in this Article.

- (b) In any and all claims against the Authority or the Engineer or any of their agents or employees by any employee of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone whose acts any of them may be liable, the indemnification obligation under this Article shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor under workers' or workmen's compensation acts, disability benefit acts or other employee benefit act.
- (c) The Authority shall retain such monies due or to become due the Contractor under the Contract as considered necessary by the Authority until such suits, claims for damages costs or losses have been settled or otherwise disposed of or satisfactory evidence to that effect has been furnished to the Authority.

Article 37: CONTRACTOR LIABILITY

The Contractor shall be liable to Authority for all costs the Authority incurs as a result of the Contractor's failure to perform this Contract in accordance with its terms. The Contractor's failure to perform shall include the failure of its suppliers and or Subcontractors of any tier to perform. Contractor's liability shall include, but not be limited to, (1) damages, liquidated damages, and other delay costs payable to the Authority; (2) the Authority's increased costs of performance, such as extended overhead and increased performance costs resulting from Contractor-caused delays, improper Contractor work, or termination of the Contractor; (3) warranty and rework costs; (4) liability to third parties; (5) excess costs; and (6) attorney's fees and related costs.

Article 38: SEPARATE CONTRACTS

- (a) The Authority reserves the right to let other contracts in connection with this Project. The Contractor shall afford other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work and shall properly connect and coordinate its work with theirs. If the proper execution or results of any part of the Contractor's work depends upon the work of any other contractor, the Contractor shall inspect and promptly report to the Engineer any defects in such work that render it unsuitable for such proper execution and results. The commencement of work by the Contractor shall indicate an acceptance of the previous contractor's work.
- (b) The Authority may perform additional work related to the Project by itself, or it may let other contracts containing provisions similar to these. The Contractor shall afford the other contractors who are parties to such contracts, the Authority, if it is performing the additional work itself, reasonable opportunity for the introduction and storage of materials and equipment and the execution of work and shall properly connect and coordinate it Work with theirs.
- (c) If the performance of additional work by other contractors or the Authority is not specified in the Contract Documents prior to the execution of the Contract, Written Notice thereof shall be given to the Contractor prior to starting any such additional work. If the Contractor believes that the performance of such additional work by the Authority or others will result in additional expense to the Contractor or entitle it to an extension of the Contract Time, it may make a claim therefore as provided in Articles 25, 26 and 27.

Article 39: SUBCONTRACTING

- (a) The Contractor may utilize the services of Subcontractors – which will have been approved by the Authority prior to commencement of the work – on those parts of the Work that, under normal contracting practices are performed by Subcontractors. The Contractor shall submit a list of proposed Subcontractors prior to commencement of the Work for the Authority's review and approval. The Contractor shall not employ a Subcontractor to which the Authority may object. The Authority shall not withhold its approval unreasonably.
- (b) The Contractor shall not award work to a single Subcontractors in excess of 50 percent of the

Contract Price without prior written approval of the Authority.

- (c) The Contractor shall be fully responsible to the Authority for the acts and omissions of its Subcontractors and of persons either directly or indirectly employed by them, as it is for the acts and omissions of person directly employed by it. The Contractor shall be fully responsible for the coordination of the work of the trades, Subcontractors and suppliers, and their officers, agents and employees.
- (d) By an appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by the terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities that the Contractor, by the Contract Documents, assumes toward the Authority and the Engineer. The agreement shall preserve and protect the rights of the Authority and the Engineer under the Contract Documents with respect to the Work to be performed by the Subcontractor so that the subcontracting thereof will not prejudice such rights, and shall allow the Subcontractor, unless specifically provided otherwise in the Contractor-Subcontractor agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by these Documents, has against the Authority. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with its Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the Subcontract, copies of the Contract Documents to which the Subcontractor will be bound by this Paragraph and identify to the Subcontractor any terms and conditions of the proposed Subcontract that may be at variance with the Contract Documents. Each Subcontractor shall similarly make copies of such Documents available to its Sub-subcontractors.
- (e) Nothing contained in the Contract Documents shall create any contractual arrangement between any Subcontractor and the Authority.
- (f) Within seven (7) days after receipt of amounts paid to it, contractor shall either:

 - (1) Pay its subcontractors for the proportionate share of the total payment received attributable to the work performed by the subcontractor under the contract; or
 - (2) Notify the Authority and subcontractor in writing of his intentions to withhold all or part of the subcontractor's payment with the reasons for the nonpayment.
- (g) Contractor shall include in each of its subcontracts a provision requiring each subcontractor to include or otherwise be subject to the same payment and interest requirements with respect to each lower-tier subcontractor that the contractor is subject to in subparagraph (f) and Article 32(e).

Article 40: ENGINEER

- (a) The Engineer will act as the Authority's representative during the construction period and until final payment.
- (b) The Engineer will visit the site at intervals appropriate to the stage of construction to familiarize itself and determine in general if the work is proceeding in accordance with the Contract Documents. However, the Engineer will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. On the basis of its on-site observations, it will keep the Authority informed of the progress of the Work, and will endeavor to guard the Authority against defects and deficiencies in the Work of the Contractor.
- (c) The Engineer will not be responsible for and will not have control or charge of construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, and it will not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents. The Engineer will not be responsible for or have control or charge over the acts or omissions of the Contractor, Subcontractors, or any of their agents or employees, or any other persons performing any of the Work. This Article shall in no way change the Engineer's responsibilities or liability to Authority.

- (d) The Engineer will render interpretations necessary for the proper execution or progress of the Work, with reasonable promptness and in accordance with any time limit agreed upon. Either party to the Contract may make a written request to the Engineer for such interpretations.
- (e) Claims, disputes, and other matters in question between the Contractor and the Authority relating to the execution or progress of the Work or the interpretation of the Contract Documents shall be referred initially to the Engineer for decision, which it will render in writing within a reasonable time. Unless the Contractor provides written notice to the Authority and the Engineer of any objection to the Engineer's decision, the Engineer's decision shall be final and binding.
- (f) All interpretations and decisions of the Engineer shall be consistent with the intent of and reasonably inferable from the Contract Documents and will be in writing or in the form of drawings. The Engineer will endeavor to secure faithful performance by both the Authority and The Contractor, will not show partiality to either, and will not be liable for the result of any interpretation or decision rendered in good faith in such capacity.
- (g) The Engineer's decisions in matters relating to artistic effect will be final if consistent with the intent of the Contract Documents and agreed to by the Authority.
- (h) The parties agree to perform the Work, accept the interpretation or otherwise follow the decision of the Engineer so as to not delay the progress of the Work. Notwithstanding this provision, the Authority may stop the Work pending a judicial review of the Engineer's decision.
- (i) The Engineer will have authority to reject Work, which does not conform to the Contract Documents.
- (j) The Engineer will review and approve or take other appropriate action upon the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for conformance with the design concept of the Work and with the information given in the Contract Documents. Such action shall be taken with reasonable promptness so as to cause no delay. The Engineer's approval of a specific item shall not indicate approval of an assembly of which the item is a component.
- (k) The Engineer will conduct inspections to determine the dates of Substantial Completion and final completion, will receive and forward to the Authority for the Authority's review written warranties and related documents required by the Contract and assembled by the Contractor, and will issue a final Certificate for Payment upon compliance with the requirements of Article 34.
- (l) Notwithstanding any other provision to the contrary, Article 40(e) to (h) shall not apply to this project if there IS no Project Engineer.

Article 41: WARRANTY

- (a) The Contractor warrants to the Authority and the Engineer that all materials and equipment furnished under this Contract will be new unless otherwise specified and that all Work will be performed in a good and workmanlike manner and will be of good quality, free from faults and defects and in conformance with the Contract Documents and the Legal Requirements. All Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. If required by the Engineer, the Contractor shall furnish satisfactory evidence of the kind and quality of materials and equipment.
- (b) The Contractor shall promptly correct all Work rejected by the Engineer as defective or as failing to conform to the Contract Documents whether observed before or after substantial Completion and whether or not fabricated, installed, or completed. The Contractor shall bar all costs of correcting such rejected Work, including compensation for the Engineer's additional services made necessary thereby.
- (c) If, within one year after the Date of Substantial Completion of the Work or designated portion thereof or within one year after acceptance by the Authority of designated equipment or within such longer period of time as may be prescribed by law or by the terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be defective or not in accordance

with the Contract Documents, the Contractor shall correct it promptly after receipt of a written notice from the Authority to do so unless the Authority has previously given the Contractor a written acceptance of such condition. This obligation shall survive termination of the Contract. The Authority shall give such notice promptly after discovery of the condition.

Article 42: CONTRACTUAL DISPUTES

Contractual claims, whether for money or for other relief, shall be submitted in writing not later than (60) sixty days after final payment; however, written notice of the Contractor's intention to file such claim must be given at the time of the occurrence or beginning of the work upon which the claim is based. A written decision upon any such claims will be made by the Authority within thirty (30) days after submittal. The Contractor may not institute legal action prior to receipt of the Authority's decision on the claim unless it fails to render such decision within 120 days. The decision of the Capital Programs Director or other signatory on the Contract shall be final and conclusive unless the Contractor within six (6) months of the date of the final decision on a claim, initiates legal action as provided in § 2.2-4364 of the Code of Virginia. Failure of the Authority to render a decision within 120 days shall not result in the Contractor being awarded the relief claimed nor shall it result in any other relief or penalty. The sole result of the Authority's failure to render a decision within the time allotted shall be the Contractor's right to immediately institute legal action. No administrative appeals procedure pursuant to § 2.2-4365 of the Code of Virginia has established for contractual claims under this Contract.

Revised 1/10/18

CONSTRUCTION CONTRACT

This Construction Contract is made this ____ day of _____, 2025 by and between NOVA Parks, 5400 Ox Road, Fairfax Station, Virginia 22039 ("Authority"), and _____, ("Contractor") for the project known as Occoquan Regional Park Café Deck Construction.

Article 1.

1.1 The Contract Documents consist of this Construction Contract, the Conditions of the Contract (General, Supplementary, Special, and other Conditions), the Project Plans, the Specifications, all standard details that apply to any portion of the Work, and all addenda issued prior to and Change Orders issued after execution of this Construction Contract. The Contract Documents are more specifically listed in Exhibit A. Minimum contractor's liability insurance amounts are listed in Exhibit B.

Article 2. The Work

2.1 The Contractor shall furnish all labor, materials, and equipment necessary to perform Occoquan Regional Park Café Deck Construction shown, indicated or reasonably implied by the Contract Documents. The Work shall be done in strict accordance with the Contract Documents and all applicable federal, state, and local governmental specifications and requirements.

Article 3. Time of Commencement and Completion

3.1 The Contract Time will begin to run on the date indicated in the Authority's written Notice to Proceed. The Contractor shall start the Work within five (5) days of the date of the Notice to Proceed. The Contractor shall prosecute the work in such a manner as to achieve Substantial Completion of the base portion of the work within the time limits indicated in the Supplemental General Conditions.

3.2 If the Work is not Substantially Completed within the time required, as that time may be adjusted by Change Orders, there shall be imposed on the Contractor Liquidated Damages of \$500 per calendar day for each day beyond the Contract Time it takes to substantially complete the Work. Contractor is specifically referred to the General Conditions regarding its duties to notify the Authority in writing of any delays caused to it during the Work. The Liquidated Damages amount shall, in no event, be considered a penalty or other than the liquidated and adjusted damages to the Authority because of the delay. The Contractor and its surety agree that the stated sum per day shall be deducted and retained out of the monies which may become due hereunder and if not so deducted, the Contractor and its surety shall be liable therefore.

Article 4. Contract Sum

4.1 Authority agrees to pay Contractor _____ (Dollars) (\$00.00) for the Work subject to additions and deductions by Change Order.

4.2 The Authority shall make monthly progress payments on account of the Contract Sum to the Contractor as provided in the Contract Documents for the period ending the last day of each month. Not later than fifteen (15) days after the end of the period covered by the Application for Payment, Contractor will submit to the Architect a Request for Payment based on the payment schedule of values agreed to by the Architect. The Contractor's submission of its Application for Payment, the Authority's and Architect's review, and the Authority's payment of progress and final payments shall all be in accordance with the General Conditions.

Article 5. Miscellaneous Provisions

5.1 This Contract shall be construed and enforced in accordance with the laws of the Commonwealth of Virginia.

5.2 During the performance of this Contract, the Contractor agrees as follows:

A. The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, or national origin, except where religion, sex, or national origin is a bona fide occupation qualification reasonably necessary to the normal operation of the Contractor. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.

B. The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, will state that such Contractor is an equal opportunity employer.

C. Notices, advertisements, and solicitations placed in accordance with federal law, rule, or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.

The Contractor will include the provisions of subparagraphs A, B, and C above, in every subcontract or purchase order of over \$10,000 so that the provisions will be binding upon each subcontractor or vendor.

5.3 These terms and provisions supersede all previous communications, representations, or agreements, either oral or written, between the parties with respect to the subject matter of this Contract. This Agreement is entered into as of the day and year first written above.

NOVA Parks:

NOVA Parks

Signature: _____

Print Name: _____

Title: _____

Date: _____

CONTRACTOR:

Contractor: _____

Signature: _____

Print Name: _____

Title: _____

Date: _____

Exhibit A – Contract Documents

- Project Manual dated July 11, 2025
- Project Plan Sheets L-001, L-002, L-003, L-101, L-102, L-201, L-301, L-501, L-502, S-001, S-101, and S-501.

Exhibit B - Contractor's Liability Insurance

- General liability in the amount of not less than \$1,000,000 per occurrence and \$2,000,000 aggregate.
- Property damage in the amount of not less than \$1,000,000 for any one accident. Additional limits may be required.
- Umbrella policy for not less than \$1,000,000.
- Auto liability insurance for not less than \$1,000,000 combined single limits.
- Workers' Compensation per statutory limits and employer's liability in the following minimum amounts: EL Each Accident - \$500,000, EL Disease Policy Limit - \$500,000, EL Disease Each Employee \$500,000.
- Contractor shall endorse the Authority on its insurance policy as an additional insured using form CG 20 10 11 85 or CG 20 10 07 04.

Piedmont Geotechnical, Inc.
286 High Rail Terrace, SE • Leesburg, Virginia 20175
540-882-9350 • PiedmontGeo@aol.com

January 28, 2023

NOVA Parks
Attn: Mr. Todd Hafner
5400 Ox Road
Fairfax Station, Virginia 22032

Re: Geotechnical Engineering Evaluation
Proposed 800 Square Foot Elevated Deck
9751 Ox Road
Lorton, Virginia
PGI No. 3677VA

Dear Mr. Hafner:

Piedmont Geotechnical, Inc., has completed the authorized geotechnical engineering review for a proposed elevated deck. In summary it is our opinion that the elevated deck can be supported on a system of concrete piers consistent with your request to minimize disturbance to the area.

We have appreciated this opportunity to be of service to you. Should you have any questions regarding the recommendations, or if we may be of further service, please contact our office.

Sincerely,

Piedmont Geotechnical, Inc.



Daniel S. Rom, P.E.
Vice President

DSR/jbp



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 Commonwealth of Virginia, License No. 12511, Expiration Date: September 30, 2024

Geotechnical and Geo-Environmental Consulting

Virginia, Maryland, District of Columbia, West Virginia, New Jersey
North Carolina, Pennsylvania, Delaware, US Virgin Islands

**PROPOSED ELEVATED DECK
9751 OX ROAD
LORTON, VIRGINIA
PGI NO. 3677VA**

PROPOSED CONSTRUCTION

The project consists of the design and construction of an 800 square foot elevated deck which will extend eastward from the patio of the café at the Special Events Facility for Occoquan Regional Park. Photographs you provided show that the deck will extend over an existing vegetated slope. We understand that the site is within a delineated Fairfax County floodplain easement, and that approval to build may be dependent on using a foundation system that minimally impacts the area.

Construction will consist of steel framing with wood decking. The structural engineer has stated that maximum gravity loads for an individual pier will be 22 kips (LL+DL). A maximum downward load of 30 kips, with a shear load of 0.35 kips for applied lateral load were also specified, to account for stability, wind, and earthquake loading. No unusual loading conditions were indicated. Preference for a drilled concrete pier system was expressed.

EXISTING SITE CONDITIONS

The site consisted of a vegetated slope that extended down from the café patio to an access roadway below. Site grades ranged from 25+ in the west to 5+ in the east, and local site drainage is easterly.

FIELD EXPLORATION AND STUDY

The exploration consisted of making a single auger boring (A-1) in accordance with ASTM D1586 methods. The approximate test location is illustrated on the Boring Location Plan in the Appendix. The test location was established in accordance with generally accepted practice. The boring was made on December 19, 2022, and was advanced to a depth of 19 feet below existing grade levels. We were also provided with the results of an engineering study made for NOVA Parks in 2014, which include another soil boring (Burgess & Niple boring B-9) that is within the vicinity of the proposed elevated deck.

Laboratory testing was limited to the visual-manual classification methods described in ASTM D2488. The soil classification was done to estimate soil shear strength and performance characteristics.

SUBSURFACE CONDITIONS

The soils underlying the site are mapped as *Urban Land-Grist Mill* (98). These soils consist of earthy fill of fluviomarine deposits. The *urban land* designation infers that the soils may have been disturbed or altered as a result of grading or construction, resulting in soils with variable characteristics. The observed stratification is briefly described below:

STRATUM I - consists of dark brown to dark gray-brown, wet to moist Clayey SAND (SC). The depth of Stratum I was about 7.5 feet at A-1. The relative density ranged from *loose* to *medium dense*, with Standard Penetration Test (SPT) N-values from 12 to 16 blows per foot.

STRATUM II - consists of dark gray-brown, moist Clayey SAND (SC). Stratum II was encountered at A-1 below Stratum I to a depth of about 13.5 feet. The relative density was judged to be *loose* on the basis of an N-value of 6 blows per foot.

STRATUM III - consists of gray-brown, wet SILT (ML) to Elastic SILT (MH). The stratum was observed below Stratum II to a depth of 16.5 feet. The consistency was judged to be *medium stiff* on the basis of ease of an N-value of 12 blows per foot.

STRATUM IV - is *decomposed rock* described as gray-brown, moist Clayey SAND to Silty SAND. Stratum IV at A-1 was observed below Stratum III to the boring termination depth of 21 feet, where *auger refusal* conditions occurred. The relative density was judged to be *very dense* on the basis of N-values greater than 60 blows per foot.

Strata I, II, and III unconformably overlies ancient bedrock which is designated as Stratum IV. Free groundwater was encountered at a depth of 9 feet while augering, and the groundwater level was measured at 4.2 feet on completion on December 19, 2022. Seasonal influences such as precipitation, surface runoff, evaporation, and other factors will influence the groundwater level. In order to better define long-term water levels, it would be necessary to monitor conditions over an extended period of time.

GEOTECHNICAL RECOMMENDATIONS

A. Foundations

For a drilled-pier (caisson) foundation, the estimated loads used in our analysis consisted of 30 kips (vertical load) and 0.35 kips (lateral load). A 30-inch minimum diameter is usually specified for drilled piers, for ease of installation, and the 30-inch value was used in our calculations.

Given generally unfavorable soil overburden and groundwater conditions, the drilled piers should extend to bear on Stratum IV decomposed or hard rock. Soil borings A-1 (Piedmont - 2022) and B-9 (B&N - 2014) show that the top of the rock surface is at a depth of 16.5 feet to 17.5 feet. The actual rock surface may vary at unexplored locations and may be deeper to the west of the site.

A drilled pier which bears on the Stratum IV decomposed rock can be conservatively designed for an allowable bearing pressure value of 10,000 psf. In the unlikely event that a bearing pressure value greater than 10,000 psf is required, please call our office for further evaluation. Drilled piers *must not* be supported in the soft/loose coastal plain sediments which overlie the rock.

Inasmuch as the actual bearing pressure will be well below the allowable bearing pressure the vertical displacement (settlement) of an individual pier will be negligible. Modeling modulus of subgrade reaction values in accordance with guidelines in official LPILE software (Reese, et al), the maximum lateral deflection of an individual drilled pier at the ground surface will be less than 0.003 inches. Graphical representation of the LPILE analysis is included in the appendix to this report.

B. Groundwater Control

Given the groundwater conditions at the site it will be necessary for the foundation installer to address the groundwater condition in the construction process. The exact methods to place concrete below the water table can be proprietary for an installer of drilled piers, but typically consist of either dewatering the steel-lined shell or by using tremie methods.

Dewatering Method:

In the dewatering method the procedures are essentially the same as those used in dry conditions. Seepage water is removed from the interior of the liner by pumping, but only after the base of the liner has been seated into the competent bearing material below. This method can accommodate minor seepage provided that mortar is

not lost due to the flow of the water. A continuous flow of concrete into the liner is made such that the weight of the concrete within the liner is sufficient to offset the gravity head of the water on the outside of the liner at all times. The liner is gradually raised during concreting, assuring at all intervals that there is sufficient volume of concrete within the liner to offset the groundwater head.

Tremie Method:

A *tremie* is a watertight pipe that is typically a composite metallic pipe with a funnel-shaped coffer at the top. The discharge of the pipe must be set at the base of the drilled pier excavation within the steel liner. The bottom end of the discharge may be made watertight with an expendable loose plug. The tremie pipe must be sufficiently strong to withstand the external water pressure and any partial vacuum pressure that might develop inside the pipe.

A continuous stream of concrete to the base of the excavation is made from the hopper through the tremie pipe as the pipe is slowly raised. The tremie pipe must have a full head of concrete at all times to counter the energy head from the groundwater. As the concrete exits the base of the pipe, groundwater which has accumulated within the liner is displaced upward. When conducted properly the concrete is not contaminated by the water, except at the uppermost surface which can be removed, if necessary. Specific tremie method details may vary among foundation contractors.

REMARKS

This report has been prepared solely and exclusively to provide guidance to design professionals in developing plans and specifications. It has not been developed to meet the needs of others, such as contractors, and applications of this report for other than its intended purpose could result in substantial difficulties. The consulting engineer cannot be held accountable for problems which occur due to application of this report to other than its intended purpose.

These stated requirements are, of necessity, based on the limited concepts made available to us at the time of the writing of this report and on-site conditions, surface and subsurface, that existed at the time the exploratory borings were made. Further assumption has been made that the limited exploration, in relation both to the areal extent of the site and to depth, is representative of conditions across the site. If conditions contrary to those reported herein are encountered during the design or construction phase our analyses must be reviewed and revised as necessary. It is also recommended that we be given the opportunity to review the

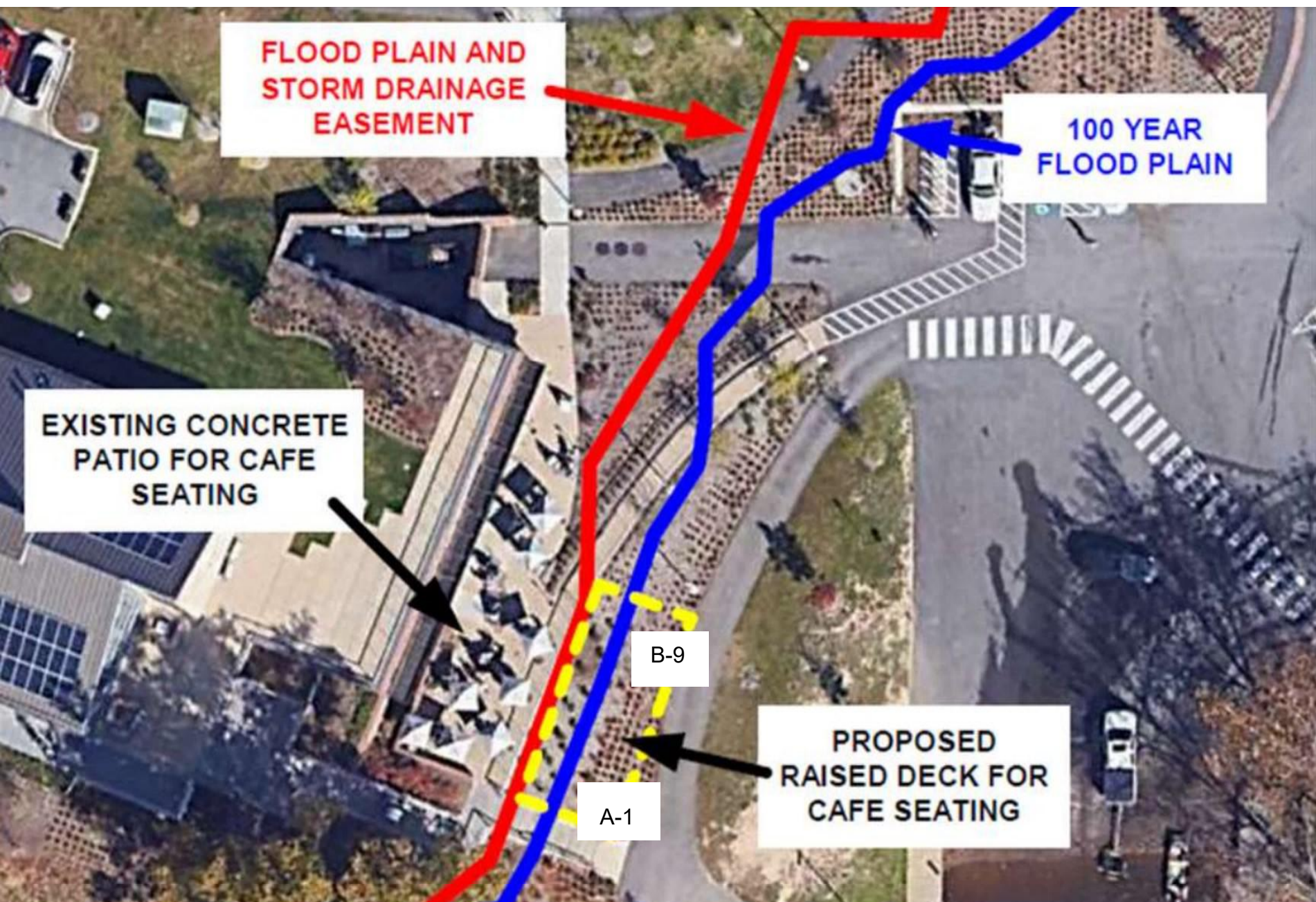
plans and specifications in order to comment on the interaction of soil conditions as described herein and the design requirements.

Our professional services have been performed, our findings obtained, and our recommendations prepared in accordance with generally accepted engineering principles and practices. This warranty is in lieu of all other warranties implied or expressed.

APPENDIX

1. Boring Location Plan
2. Soil Boring Logs
3. Unified Soil Classification
4. Field Classification
5. Graphical Output - LPile Analysis
- 6.. Important Information About this
Geotechnical Report

SOIL BORING LOCATIONS



Project: **Proposed Elevated Deck**Project Location: **9751 Ox Road, Lorton, Virginia**Project Number: **3677VA**

Log of Boring A-1

Sheet 1 of 1

Date(s) Drilled	December 19, 2022	Logged By	D. Rom	Checked By	DSR
Drilling Method	Hollow-stem auger	Drill Bit Size/Type	8-in	Total Depth of Borehole	21 feet bgs
Drill Rig Type	Diedrich D50	Drilling Contractor	SRM Drilling	Approximate Surface Elevation	5
Groundwater Level and Date Measured	9 ft while drilling, 4.2 ft at completion	Sampling Method(s)	Auger, SPT	Hammer Data	Safety
Borehole Backfill	cuttings	Location	see plan		

Elevation (feet)	Depth (feet)	Sample Type	Sample Number	Sampling Resistance, blows/ft	Material Type	Graphic Log	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
5	0		1		SC		Dark brown to dark gray-brown, wet to moist, loose to medium dense Clayey SAND	ground elevation assumed
			2	7-5-7				
			3	7-11-5				
0	5						4.2 ft at completion	
2.5	7.5				SC		Dark gray-brown, moist, loose Clayey SAND	
			4	2-2-4			9 ft while drilling	
-5	10							
8.5	13.5		5	7-4-8	ML-MH		Gray-brown, wet, medium stiff SILT to Elastic SILT	
-10	15							
11.5	16.5						Decomposed Rock: Gray-brown, moist, very dense Clayey SAND to Silty SAND	
			6	50/1				
-15	20		7	50/0				
							Soil boring terminated at 21 feet auger refusal	
-20	25							
-25	30							

Project: **Proposed Elevated Deck**
 Project Location: **9751 Ox Road, Lorton, Virginia**
 Project Number: **3677VA**

Key to Log of Boring Sheet 1 of 1

Elevation (feet)	Depth (feet)	Sample Type	Sample Number	Sampling Resistance, blows/ft	Material Type	Graphic Log	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
1	2	3	4	5	6	7	8	9

COLUMN DESCRIPTIONS

- | | |
|---|---|
| 1 Elevation (feet): Elevation (MSL, feet). | 6 Material Type: Type of material encountered. |
| 2 Depth (feet): Depth in feet below the ground surface. | 7 Graphic Log: Graphic depiction of the subsurface material encountered. |
| 3 Sample Type: Type of soil sample collected at the depth interval shown. | 8 MATERIAL DESCRIPTION: Description of material encountered. May include consistency, moisture, color, and other descriptive text. |
| 4 Sample Number: Sample identification number. | 9 REMARKS AND OTHER TESTS: Comments and observations regarding drilling or sampling made by driller or field personnel. |
| 5 Sampling Resistance, blows/ft: Number of blows to advance driven sampler one foot (or distance shown) beyond seating interval using the hammer identified on the boring log. | |

FIELD AND LABORATORY TEST ABBREVIATIONS

CHEM: Chemical tests to assess corrosivity
 COMP: Compaction test
 CONS: One-dimensional consolidation test
 LL: Liquid Limit, percent

PI: Plasticity Index, percent
 SA: Sieve analysis (percent passing No. 200 Sieve)
 UC: Unconfined compressive strength test, Q_u , in ksf
 WA: Wash sieve (percent passing No. 200 Sieve)

MATERIAL GRAPHIC SYMBOLS



Granite



SILT, SILT with SAND, SANDY SILT (ML-MH)



Clayey SAND (SC)

TYPICAL SAMPLER GRAPHIC SYMBOLS



Auger sampler



Bulk Sample



3-inch-OD California w/ brass rings



CME Sampler



Grab Sample



2.5-inch-OD Modified California w/ brass liners



Pitcher Sample



2-inch-OD unlined split spoon (SPT)



Shelby Tube (Thin-walled, fixed head)

OTHER GRAPHIC SYMBOLS



Water level (at time of drilling, ATD)



Water level (after waiting)



Minor change in material properties within a stratum



Inferred/gradational contact between strata



Queried contact between strata

GENERAL NOTES

- Soil classifications are based on the Unified Soil Classification System. Descriptions and stratum lines are interpretive, and actual lithologic changes may be gradual. Field descriptions may have been modified to reflect results of lab tests.
- Descriptions on these logs apply only at the specific boring locations and at the time the borings were advanced. They are not warranted to be representative of subsurface conditions at other locations or times.

Figure B-1

PROJECT NAME: Occoquan Regional Park Facility Upgrade		PROJECT NUMBER: 53037		BORING NUMBER: B-9	
CLIENT NAME: GWWO		CLIENT PROJECT NUMBER:		SHEET 1 OF 1	
DRILLER: Jimmy Cave		LOCATION: See boring location plan		ELEVATION (FEET): 5.4'	
WATER LEVELS		DATE	TIME	DEPTH	CAVED
ENCOUNTERED:		7/29/14	10:15	7.5'	
BEFORE CASING PULLED:		7/29/14	11:00	16.0'	
AFTER CASING PULLED:		7/29/14	11:15	8.0'	14.2'
LONG TERM:		7/30/14	6:45	5.0'	13.2'
				REVIEWER: T. Berg	

ELEVATION (FEET)	LEGEND	USCS	CLASSIFICATION	DEPTH (FEET)	SAMPLE #	BLOWS PER 6 INCHES	N VALUE	RECOVERY (INCHES)	MOISTURE CONTENT	REMARKS
5.4		T	TOPSOIL: 3"	0						
5.2					1	12-15-20	35	8		
		FILL	FILL, sampled as purplish brown and red silty fine to coarse SAND with gravel and brick fragments, moist		2	3-4-5	9	6		
-0.1				5						
		ML	Soft dark gray SILT with sand, trace gravel and organic matter, moist to wet		3	1-1-2	3	14		
-2.6					4	4-5-7	12	10		
		CL	Stiff gray and yellowish brown lean CLAY, trace sand, moist	10						
-6.6					5	11-13-16	29	18		
		ML	Very stiff olive, gray, and yellowish brown SILT with sand, trace rock fragments, moist	15						
-12.1					6	50/6	100	4		
-13.6		W	WEATHERED ROCK, sampled as black and olive sandy silt with rock fragments, moist	20						
				25						
				30						
										Boring terminated at 19.0'

Notes:

UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487)

Moisture Content (%)		Liquid Limit (%)		Plasticity Chart	
Coarse-grained soils (More than 50% passing No. 4 sieve)	Gravel (More than 75% passing No. 20 sieve)	$LL < 40$ $PI < 6$	Well-graded (More than 75% passing No. 40 sieve)	Plasticity Chart (ASTM D 2487)	Soil Classification (ASTM D 2487)
		$LL < 40$ $6 < PI < 12$			
	$LL < 40$ $PI > 12$	Poorly-graded (Less than 75% passing No. 40 sieve)			
	$LL > 40$ $PI < 6$	$PI < 6$			
Fine-grained soils (Less than 75% passing No. 20 sieve)	Clay (More than 75% passing No. 75 sieve)	$LL < 40$ $PI < 4$	Well-graded (More than 75% passing No. 40 sieve)		
		$LL < 40$ $4 < PI < 10$			
	$LL < 40$ $PI > 10$	Poorly-graded (Less than 75% passing No. 40 sieve)			
	$LL > 40$ $PI < 4$	$PI < 4$			

[illegible]

Piedmont Geotechnical, Inc.

14735 Wrights Lane • Waterford, Virginia 20197-1601
540-882-9350 • FAX 540-882-3629

FIELD CLASSIFICATION SYSTEM FOR SOIL EXPLORATION

COARSE-GRAINED SOILS (Silt, Sand, Gravel, and Combinations)

<u>Density</u>		<u>Particle Size Identification</u>	
Very Loose	≤5 blows/ft	Boulders	≥8 inch diameter
Loose	6 to 10 blows/ft	Cobbles	3 to 8 inches diameter
Medium Dense	11 to 30 blows/ft	Gravel	Coarse 1-3 in
Dense	31 to 50 blows/ft		Medium ½ - 1 in
Very Dense	≥51 blows/ft		Fine ¼ - ½ in
<u>Relative Proportions</u>		Sand	Coarse 0.6mm - ¼ in
Descriptive Term	Percent		Medium 0.2mm - 0.6mm
Trace	1-10		(broom straw dia)
Little	11-20		Fine 0.05mm - 0.2mm
Some	21-35		(human hair dia)
And	36-50	Silt	0.6mm - 0.002mm
			(can't see grains)

FINE-GRAINED SOILS (Clay, Silt, and Combinations)

<u>Consistency</u>		<u>Plasticity</u>	
Very Soft	≤3 blows/ft	Degree of	Plasticity
Soft	4 to 5 blows/ft	Plasticity	Index
Medium Stiff	6 to 10 blows/ft	None to slight	0-4
Stiff	11 to 15 blows/ft	Slight	5-7
Very Stiff	16 to 30 blows/ft	Medium	8-22
Hard	≥31 blows/ft	High to Very High	>22

Classifications on logs are made by visual inspection of samples.

Standard Penetration Test - Driving a 2.0-inch OD, 1¾-inch ID, sampler a distance of 1.0 foot into undisturbed soil with a 140-pound hammer free-falling a distance of 30.0 inches. It is customary for Piedmont Geotechnical, Inc., to drive the spoon 6 inches to seat into undisturbed soil, then perform the test. The number of hammer blows for seating the spoon and making the test are recorded on the boring log for each 6 inches of penetration (Example - 7/9/10). The Standard Penetration resistance value can be obtained by adding the last two figures (i.e. 9 + 10 = 19 blows/ft). (ASTM D-1586-84)

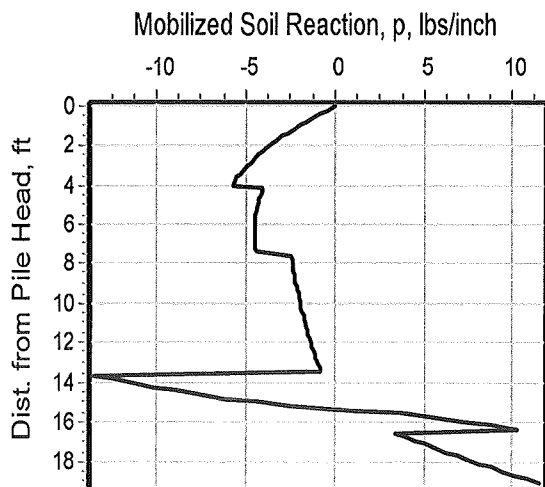
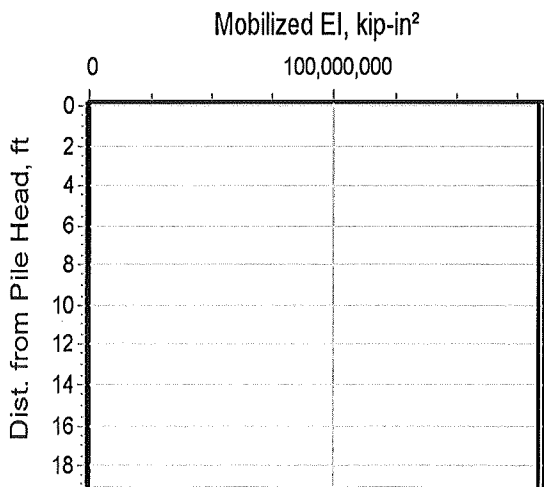
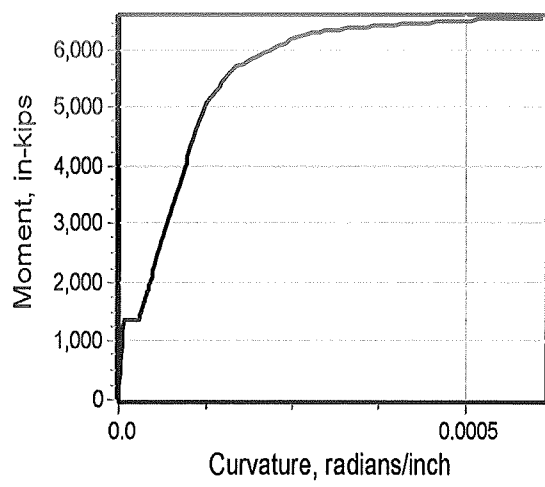
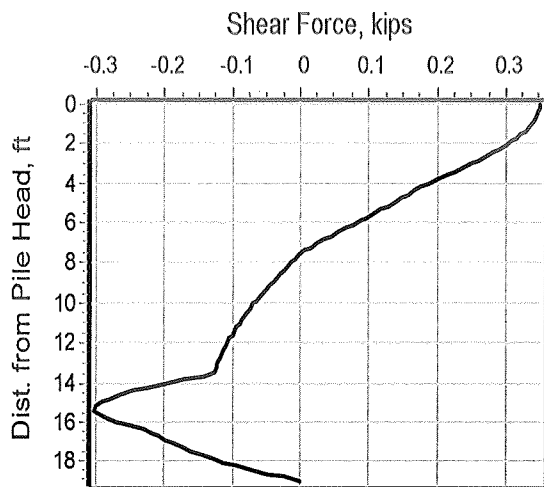
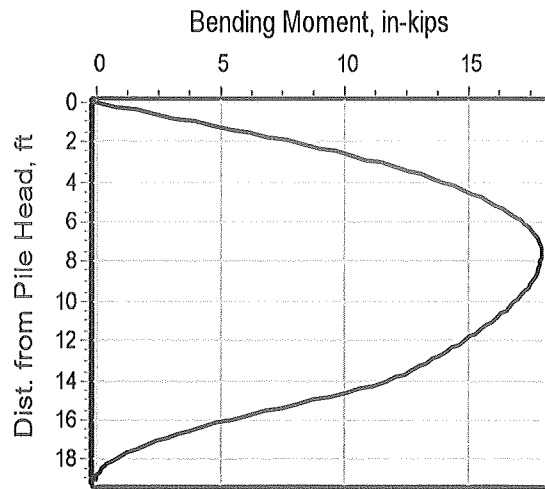
Stratum Changes - In the column "Soil Descriptions" on the boring log, the horizontal lines represent stratum changes. A solid line (-) represents an actually observed change, and a dashed line (---) represents an estimated change.

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

Geotechnical and Geo-Environmental Consulting

Virginia, Maryland, District of Columbia, West Virginia, New Jersey
North Carolina, Pennsylvania, Delaware, US Virgin Islands

L-Pile Graphical Output



Important Information about This Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, you can benefit from a lowered exposure to problems associated with subsurface conditions at project sites and development of them that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed herein, contact your GBA-member geotechnical engineer. Active engagement in GBA exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.

Understand the Geotechnical-Engineering Services Provided for this Report

Geotechnical-engineering services typically include the planning, collection, interpretation, and analysis of exploratory data from widely spaced borings and/or test pits. Field data are combined with results from laboratory tests of soil and rock samples obtained from field exploration (if applicable), observations made during site reconnaissance, and historical information to form one or more models of the expected subsurface conditions beneath the site. Local geology and alterations of the site surface and subsurface by previous and proposed construction are also important considerations. Geotechnical engineers apply their engineering training, experience, and judgment to adapt the requirements of the prospective project to the subsurface model(s). Estimates are made of the subsurface conditions that will likely be exposed during construction as well as the expected performance of foundations and other structures being planned and/or affected by construction activities.

The culmination of these geotechnical-engineering services is typically a geotechnical-engineering report providing the data obtained, a discussion of the subsurface model(s), the engineering and geologic engineering assessments and analyses made, and the recommendations developed to satisfy the given requirements of the project. These reports may be titled investigations, explorations, studies, assessments, or evaluations. Regardless of the title used, the geotechnical-engineering report is an engineering interpretation of the subsurface conditions within the context of the project and does not represent a close examination, systematic inquiry, or thorough investigation of all site and subsurface conditions.

Geotechnical-Engineering Services are Performed for Specific Purposes, Persons, and Projects, and At Specific Times

Geotechnical engineers structure their services to meet the specific needs, goals, and risk management preferences of their clients. A geotechnical-engineering study conducted for a given civil engineer

will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client.

Likewise, geotechnical-engineering services are performed for a specific project and purpose. For example, it is unlikely that a geotechnical-engineering study for a refrigerated warehouse will be the same as one prepared for a parking garage; and a few borings drilled during a preliminary study to evaluate site feasibility will not be adequate to develop geotechnical design recommendations for the project.

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project or purpose;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, the reliability of a geotechnical-engineering report can be affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If you are the least bit uncertain about the continued reliability of this report, contact your geotechnical engineer before applying the recommendations in it. A minor amount of additional testing or analysis after the passage of time – if any is required at all – could prevent major problems.*

Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read the report in its entirety. Do not rely on an executive summary. Do not read selective elements only. *Read and refer to the report in full.*

You Need to Inform Your Geotechnical Engineer About Change

Your geotechnical engineer considered unique, project-specific factors when developing the scope of study behind this report and developing the confirmation-dependent recommendations the report conveys. Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the elevation, configuration, location, orientation, function or weight of the proposed structure and the desired performance criteria;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project or site changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept*

responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.

Most of the “Findings” Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site’s subsurface using various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing is performed.* The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgement to form opinions about subsurface conditions throughout the site. Actual site-wide subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team through project completion to obtain informed guidance quickly, whenever needed.

This Report’s Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, they are not final, because the geotechnical engineer who developed them relied heavily on judgement and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* exposed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

This Report Could Be Misinterpreted

Other design professionals’ misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a continuing member of the design team, to:

- confer with other design-team members;
- help develop specifications;
- review pertinent elements of other design professionals’ plans and specifications; and
- be available whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction-phase observations.

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note*

conspicuously that you’ve included the material for information purposes only. To avoid misunderstanding, you may also want to note that “informational purposes” means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. This happens in part because soil and rock on project sites are typically heterogeneous and not manufactured materials with well-defined engineering properties like steel and concrete. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled “limitations,” many of these provisions indicate where geotechnical engineers’ responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a “phase-one” or “phase-two” environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually provide environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures.* If you have not obtained your own environmental information about the project site, ask your geotechnical consultant for a recommendation on how to find environmental risk-management guidance.

Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, the engineer’s services were not designed, conducted, or intended to prevent migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, *proper implementation of the geotechnical engineer’s recommendations will not of itself be sufficient to prevent moisture infiltration.* Confront the risk of moisture infiltration by including building-envelope or mold specialists on the design team. *Geotechnical engineers are not building-envelope or mold specialists.*



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