

COMPREHENSIVE AGREEMENT
BETWEEN
THE CITY OF HARRISONBURG, VIRGINIA
AND
MOMENTUM EARTHWORKS, LLC

_____, 2022

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List of Exhibits:

- A. PPEA Proposal from Momentum for 2021012-PW-PPEA Blacks Run Stream Restoration and Nutrient Reduction Project
- B. Interim Agreement between City of Harrisonburg, Virginia and Momentum Earthworks, LLC
- C. Contract Between Owner and Design Builder
- D. General Conditions of the Design Build Contract & Supplementary Conditions
- E. City’s General Terms and Conditions
- F. Public Hearing Notice

**COMPREHENSIVE AGREEMENT
BETWEEN
CITY OF HARRISONBURG, VIRGINIA
AND
MOMENTUM EARTHWORKS, LLC**

This Comprehensive Agreement (the “Agreement”) is made and entered into as of _____, 2022, by and between the City of Harrisonburg, Virginia, a municipal corporation of the Commonwealth of Virginia (“City” or “Owner”), and Momentum Earthworks, LLC, a Virginia limited liability company (“Momentum” or “Contractor”).

Recitals

R-1. Virginia’s Public-Private Education Facilities and Infrastructure Act of 2002 (“PPEA”) as set forth in the Code of Virginia §§ 56-575.1, *et seq.*, and the City of Harrisonburg Guidelines to the Public-Private Facilities and Infrastructure Act of 2002 (“Guidelines”) provide the City the authority and procedure required to enter into an agreement with a private entity to develop or operate certain qualified public infrastructure or government facility projects.

R-2. On or about June 30, 2020, the City received an unsolicited proposal pursuant to the Guidelines to provide the City certain design, permitting, and construction services in connection with the development of a project since identified as **2021012-PW-PPEA Blacks Run Stream Restoration and Nutrient Reduction Project** (the “Project”).

R-3. Pursuant to the PPEA Guidelines, the City subsequently gave notice that it had decided to consider the unsolicited proposal and invited any competing proposals submitted to it by a specified deadline for consideration to determine whether to proceed with the Project.

R-4. On or about October 23, 2020, a private entity, Momentum, submitted to the City a competing proposal, subsequently revised on or about March 2, 2021 (the “Proposal”) for the

development of the Project. A copy of the Proposal is attached hereto as Exhibit A. The City subsequently selected Momentum's Proposal for negotiation of a comprehensive agreement.

R-5. On June 15, 2021, the City and Momentum entered into an Interim Agreement, attached hereto as Exhibit B, to begin preliminary work on the Project, pending completion of negotiation of a comprehensive agreement for the full performance and construction of the Project. The City and Momentum have now negotiated a comprehensive agreement consistent with the PPEA and the Guidelines, the terms of which are set out in this Agreement.

R-6. In accordance with the PPEA and the City's Guidelines, this Comprehensive Agreement shall be posted on the City's website, along with the Proposal, for public comment.

R-7. The City hereby determines that the Work set forth in the Contract Documents serves the public purpose of the PPEA under the criteria of Virginia Code § 56-575.4(C), as amended, and the parties desire to enter into this Agreement.

NOW THEREFORE, for an in consideration of the mutual promises, conditions, and covenants herein set forth, the parties agree as follows:

1. Incorporation of Recitals. The foregoing recitals are true and correct and are incorporated herein by reference. The duties of a "private entity" as set forth in the PPEA and as applicable to the contracted work hereunder, are hereby incorporated into this Agreement and imposed upon Momentum (Contractor).

2. Definitions. The following definitions apply to this Agreement:

(a) "Contract Documents" means the following, listed in their order of precedence:

- i. Any written modifications to this Agreement made in accordance with this Agreement;

- ii. Any written Change Orders made in accordance with this Agreement;
- iii. This Agreement, including all exhibits thereto;
- iv. The Contract between Owner and Design Build Contractor (the "Design-Build Contract") (Exhibit C);
- v. The General Conditions of the Design-Build Contract (Exhibit D);
- vi. Contractor's Proposal; and
- vii. The City's General Terms & Conditions (Exhibit E).

(b) "General Conditions" means General Conditions of the Design Build Contract, as modified by the Supplemental Conditions, if any, and set forth herein as Exhibit D. The General Conditions shall serve as the General Conditions of Contract as referenced in the Design-Build Contract.

(c) "Project" means the design and construction of the Blacks Run Stream Restoration and Nutrient Reduction Project, the scope of which is set forth in the Contract between Owner and Design Build Contractor, Exhibit C. It also includes the associated monitoring and other regulatory permit obligations. "Project" includes both the entirety of the Project or a part thereof.

(d) "Project Progress Schedule" means the proposed schedule for the Project to be prepared and approved pursuant to the Contract Documents.

(e) "Scope of Work" or "Work" means all the design, construction, and other duties and services to be furnished and provided by Momentum as set forth in the Contract Documents. "Work" may include the entirety of the Work or a portion thereof.

(f) “Site” means the real property on which the components of the Projects are to be located.

(g) “Work Product” means all the data, information, documentation and other work product produced, prepared, obtained or deliverable by or on behalf of Momentum and in any way related to the Project.

3. General Scope. The City and Momentum agree that the Project shall be designed and constructed by Momentum for the benefit of the City and its successors or assigns, if any, in accordance with the Contract Documents.

4. Liquidated Damages. The parties understand and agree that the City intends to rely on Contractor’s completion of the Project in accordance with the Project Schedule for Final Acceptance in order to meet regulatory permit obligations under its Small Municipal Separate Storm Sewer System (MS4) and its TMDL action plans (collectively, the “Permit”) to reduce nutrients and sediments in the Chesapeake Bay and Blacks Run watersheds. In order to ensure compliance with the date by which the Permit requires TMDL reductions as contemplated by this Agreement (the “Permit Compliance Date”), the parties agree to the following action plan in the event that the progress schedule submitted for April 2023 progress schedule shows a substantial completion date after June 30:

(a) The parties will meet to discuss a catch-up schedule and whether concrete steps can be taken to reach completion at an earlier date, including but not limited to increased manpower and value engineering to enable substantial completion by the Permit Compliance Date.

(b) The City will request and diligently pursue any available extensions of the Permit Compliance Date for the Permit from the Virginia Department of

Environmental Quality (DEQ) or other agency. The extended date shall be the Permit Compliance Date.

- (c) If, ninety (90) days prior to the Permit Compliance Date, the project schedule continues to show a substantial completion date after the Permit Compliance Date as amended under subsection (b), Momentum shall procure the minimum number of TMDL credits necessary to comply with the requirements of the Permit, after taking into account all credits available to the City from all other sources. For the purposes of clarity only, it is anticipated as of the date of signing this Agreement that approximately 25,000 pounds of sediment credits for one-year use under Section 62.1-44.19:21.1 of the *Code of Virginia* would sufficiently cover late delivery of the Project by Momentum. Momentum will not unreasonably withhold or delay any assistance in obtaining such TMDL credits. If, 14 days prior to the Permit Compliance Date, the Project is not substantially complete, Momentum shall purchase the necessary credits and transfer them to the City for one year. After the one-year term of the credits, the City shall return the credits to Momentum on a timely basis so as to ensure that Momentum can return them to the agent from whom it has procured them without incurring overage fees.

5. Term. The term of this Agreement shall begin on the date of this Agreement and shall continue until its termination pursuant to Section 11 hereof, any other provision of this Agreement, or any other Contract Document, or by law.

6. Design-Build Contract. The City and Momentum shall execute and deliver the Design-Build Contract and all necessary permits for commencement of the Project concurrent with their execution and delivery of this Agreement.

7. Project Progress Schedule. Momentum shall submit the Project Progress Schedule as required by the Contract Documents and the City shall timely review such Schedule and approve it as appropriate. The City and Momentum shall also (i) execute and deliver in a timely fashion all instruments and documents as contemplated by the terms of this Agreement and the other Contract Documents, and (ii) perform obligations in accordance therewith. The Project Progress Schedule may be modified as circumstances warrant by written agreement of the parties. To help keep the Project on schedule, the City shall give prompt attention to permits, reviews, and approvals required for the Project.

8. Post-Construction Flood Study and Guarantee of Work.

(a) Momentum agrees that at completion of the Project, it will, at its cost, prepare the appropriate flood study and supporting documents and submit for and secure a letter of map revision (LOMR) from FEMA based on the record drawings, to document the as-built conditions and final floodplain and floodway mapping.

(b) Post-construction, Momentum shall conduct long-term monitoring during the growing season in Years 1, 2, and 3 in accordance with guidelines provided by the USACE and DEQ for similar projects. At the completion of the third year of meeting success criteria, Momentum shall perform a pollutant reduction efficiency validation study and a report documenting the final claimed pollutant reductions associated with the project will be developed.

(c) Momentum shall guarantee the Work for three (3) years from the date of Final Acceptance and shall remedy any outstanding or persisting issues that arise during that

period. If a culvert and vehicle bridge are constructed pursuant to a Change Order, the parties agree that such shall be considered a part of the Work, and Momentum shall provide any relevant construction plans to the City.

9. Payment to Private Entity.

(a) Payment by the City to Momentum for Work shall be as set forth in the Design-Build Contract and the General Conditions.

(b) The City shall arrange to finance any costs of the Project in a manner that results in the availability of funds in the amounts and at the times required to meet the projected needs for the Project. The City represents and warrants that it has or will request City Council to appropriate the funds necessary to fulfill all of the City's financial obligations related to the Project in the amounts and at the times required to meet the projected needs of the Project, including but not limited to a reasonable contingency to address adjustments reasonably required. Notwithstanding the foregoing, if the City is unable to finance the Project due to City Council's failure to appropriate funding or for any other reason, this Contract may be terminated by the City upon written notice to Momentum and City shall only pay Momentum for work performed up to the date of termination.

10. Representations and Warranties.

(a) City Representations and Warranties. The City hereby represents and warrants to Momentum as follows:

(i) The City is the responsible public entity, as that term is used in the PPEA and the Guidelines, for the Project. As such, the City has full power, right, and authority to execute, deliver, and perform its obligations under, in accordance with and subject to the terms and conditions of this Agreement and the other Contract Documents.

(ii) The City has taken or caused to be taken all requisite action to authorize the execution and delivery of, and the performance of its obligations under, this Agreement and the other Contract Documents.

(iii) Each person executing this Agreement or any other Contract Document, or any other agreement, instrument or document on behalf of the City to which the City is a party has been or at such time of execution will be duly authorized to execute each such document on behalf of the City.

(iv) Neither the execution and delivery by the City of this Agreement and the other Contract Documents executed by the City concurrently herewith, nor the consummation of the transactions contemplated hereby or thereby, is in conflict with or will result in a default under or violation of any other agreements or instruments to which it is a party or by which it is bound.

(v) There is no known action, suit, proceeding, investigation or litigation pending and served on the City which challenges the City's authority to execute, deliver or perform, or the validity or enforceability of, this Agreement and the other Contract Documents to which the City is a party, or which challenges the authority of the City official executing this Agreement or the other Contract Documents to which the City is a party, and the City has disclosed to Momentum any pending and unserved or threatened action, suit, proceeding, investigation or litigation with respect to such matters of which the City is aware.

(b) Private Entity Representations and Warranties. Momentum hereby represents and warrants to the City as follows:

(i) Momentum is a duly organized limited liability company created under the laws of the Commonwealth of Virginia. It holds a Class A license issued by the Virginia

Board for Contractors, and it has and will maintain throughout the term of this Agreement the requisite power and all required licenses (or it or its subcontractors will have all required licenses prior to the time activities which require licenses are undertaken) to carry on its present and proposed activities, and has full power, right and authority to execute, deliver and perform its obligations under, in accordance with and subject to the terms and conditions of this Agreement and the other Contract Documents.

(ii) Momentum has taken or caused to be taken all requisite action to authorize the execution and delivery of, and the performance of its obligations under, this Agreement and the other Contract Documents.

(iii) Each person executing this Agreement or any other Contract Document on behalf of Momentum to which Momentum is a party has been or at such time of execution will be duly authorized to execute each such document on behalf of Momentum.

(iv) Neither the execution and delivery by Momentum of this Agreement and the other Contract Documents executed by Momentum concurrently herewith, nor the consummation of the transactions contemplated hereby or thereby, is in conflict with or will result in a default under or violation of any other agreements or instruments to which it is a party or by which it is bound.

(v) There is no action, suit, proceeding, investigation, indictment or litigation pending and served on Momentum which challenges Momentum's authority to execute, deliver or perform, or the validity or enforceability of, this Agreement and the other Contract Documents to which Momentum is a party, or which challenges the authority of the Momentum official executing this Agreement and the other Contract Documents to which Momentum is a party, and Momentum has disclosed to the City any pending and unserved or threatened action,

suit, proceeding, investigation, indictment or litigation with respect to such matters of which Momentum is aware.

11. Termination.

This Contract may be terminated:

(a) If a party to this Agreement defaults or fails or neglects to carry out a material obligation under this Agreement (for purposes of this section, the “Defaulting Party”) and if the other party (for this purposes of this section, the “Non-Defaulting Party”) is not in material breach of this Agreement at the time, the Non-Defaulting party may give written notice to the Defaulting Party that it intends to terminate this Agreement, which notice shall contain a reasonably detailed explanation of the reasons for the proposed termination. The Defaulting Party shall correct the default, failure, or neglect within thirty (30) days after being given such notice; provided, however, if (i) the nature of such default, failure or neglect is such that it is not reasonably capable of being corrected within such thirty (30) day period and (ii) the Defaulting Party notified the Non-Defaulting Party of a reasonable alternative period reasonably acceptable to the Non-Defaulting Party with fifteen (15) days of receipt of such notice, the Defaulting Party shall be allowed such reasonable alternative period to correct the default, failure or neglect so long as the Defaulting Party promptly commences and diligently pursues such corrections to completion. If the Defaulting Party fails to make such corrections within the thirty (30) day period or fails to commence and diligently pursue to completion such corrections within the alternative period, then the Non-Defaulting Party may, at its sole discretion and without prejudice to any other remedy, terminate this Agreement. The terms of this Section 10 shall not apply to a failure on the part of the City of timely payment to Momentum, which shall be governed by the Design-Build Contract

and the General Conditions. Notwithstanding the above, the City may terminate this Agreement if City Council fails to appropriate funds for the project as set forth in Section 7(b).

(b) If not sooner terminated pursuant to the terms of subsection (a) above, or by mutual agreement, the Agreement shall terminate when all terms and conditions of all the Contract Documents (exclusive of warranty and indemnity obligations) have been satisfied.

12. Cooperation; Resolution of Disputes, Claims and Other Matters.

(a) The parties agree to cooperate to achieve the objectives of this Agreement, and to use reasonable and good-faith efforts to resolve all disputes and disagreements that may arise hereunder. Each party agrees to designate representatives with the authority to make decisions binding upon such party (subject in the case of the City to those matters requiring an appropriate vote) so as to not unduly delay the Project Schedule.

(b) All disputes, claims and other matters in question between the parties shall be resolved in accordance with the General Conditions.

13. Financial Statement. On an annual basis, Momentum shall file with the City a statement reflecting the general condition of Momentum.

14. Records.

(a) Protected Records. If Momentum believes that any Work Product or any other document or item subject to transmittal to or review by the City under the terms of this Agreement or any other Contract Document contain trade secrets or other information exempt or protected from disclosure pursuant to applicable law, Momentum shall use its reasonable efforts to identify such information prior to such transmittal or review, and the City shall confer an appropriate means of ensuring compliance with applicable laws prior to transmittal or review.

(b) Requests for Public Disclosure. The City recognizes that certain Work Product and other documents or materials of which the City obtains a copy, may contain trade secrets or other information exempt from disclosure under applicable law, or may include information that is otherwise subject to protection from misappropriation or disclosure. Should any such items become the subject of a request for public disclosure, the City shall respond as follows:

(i) The City shall use reasonable efforts to immediately notify the Momentum of such request and the date by which it anticipates responding.

(ii) Momentum must then assert in writing to the City any claim that such items are protected from disclosure.

(iii) If Momentum fails to make such assertion within three (3) business days after the City notifies Momentum of its intended response, the City shall have the right to make such disclosure.

(iv) If Momentum makes a timely assertion that the requested items contain trade secrets or other information exempt from disclosure or otherwise protected under applicable law, the City and Momentum may seek judicial declaration of the rights of the parties. Until such declaration is made, the City will maintain the confidentiality of such items.

(v) If the City's denial of a request for disclosure of items is challenged in court, Momentum shall assist the City in its defense and shall indemnify the City against any award of attorney's fees or fines ordered by the court.

15. Conditions Precedent to Agreement's Effectiveness. It shall be a condition precedent to this Agreement's effectiveness that:

(a) Entry into this Comprehensive Agreement and Contract Documents, including the Nutrient Credit Purchase Agreement, between the City and Momentum for the Project pursuant to the terms hereof has first been approved by the Council; that this Agreement and the Contract Documents have been properly executed by the City; and that the approved, executed Agreement and Contract Documents have been delivered to Momentum; and

(b) Momentum has certified that all material representations, information and data provided by Momentum to the City in support of, or in connection with, the Proposal are true and correct in all material respects; that such certification has been made by an officer of Momentum who has knowledge of the information provided in the Proposal; and that the executed certification has been delivered to the City.

(c) Momentum has obtained all required governmental permits and approvals for the Project. All permits required from the City will be delivered to Momentum not later than the date of delivery of the Notice to Proceed.

(d) City has secured all easements necessary for the construction of the Project.

16. Copy of Agreement to Auditor of Public Accounts. The City shall submit a copy of this Agreement to the Auditor of Public Accounts of the Commonwealth of Virginia within thirty (30) days of its effective date.

17. Miscellaneous.

(a) Successors and Assigns. Except as expressly otherwise provided, all of the terms, covenants and conditions hereof shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns. This Agreement may not be assigned without prior written consent of the parties to this Agreement.

(b) Mandatory Virginia Public Procurement Act Contract Provisions. During the term of this Contract, Momentum agrees as follows:

1. Pursuant to Virginia Code § 2.2-4311.1, Momentum does not, and shall not during the performance of this Contract for goods and services in the Commonwealth, knowingly employ an unauthorized alien as defined in the Federal Immigration Reform and Control Act of 1986.
2. Pursuant to Virginia Code § 2.2-4311.2, Momentum shall be authorized to transact business in the Commonwealth as a domestic or foreign business entity if so required by Title 13.1 or Title 50 of the Code of Virginia (1950), as amended, or as otherwise provided by law. Momentum shall not allow its existence to lapse or its certificate of authority to be revoked or cancelled at any time during the term of this contract. City may void this Contract if Momentum fails to remain in compliance with the provisions of this section.
3. Pursuant to Virginia Code § 2.2-4311:
 - a) Momentum will not discriminate against any subcontractor, employee, or applicant for employment because of race, religion, color, sex, national origin, age, disability, or any other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of its business. Momentum agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
 - b) Momentum, in all solicitations or advertisements for employees placed by or on behalf of Momentum, will state that Momentum is an equal employment 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.
 - d) Momentum will include the provisions of the foregoing paragraphs 1, 2, and 3 in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor.
4. Pursuant to Virginia Code § 2.2-4354:
 - 1) Within seven (7) days after receipt of amounts paid to Momentum by the City:
 - a) Momentum will pay subcontractor, if any, for the proportionate share of the

total payment received from the City attributable to the work performed by subcontractor under the Contract; or

- b) Notify the City and subcontractor, if any, of Momentum's intention to withhold all or a part of subcontractor's payment with the reason for nonpayment.
- 2) Momentum shall provide its federal employer identification number to the City.
- 3) Momentum shall pay interest to the subcontractor, if any, on all amounts owed to subcontractor that remain unpaid after seven (7) days following receipt by Momentum of payment from the City for work performed by subcontractor under the Contract, except for amounts withheld as allowed in section 1(b) above.
- 4) Unless otherwise provided under the terms of this Contract, interest shall accrue at the rate of one (1) percent per month.
- 5) Momentum shall include in each of its subcontracts a provision requiring each subcontractor to include the same payment and interest requirements as set forth herein with respect to each lower-tier subcontractor, if any.
- 6) Momentum's obligation to pay an interest charge to a subcontractor pursuant to this section shall not be construed to be an obligation of the City.
- 7) Momentum's consortium partners shall not be construed to be subcontractors for the purposes of this section.

(c) Notices. All notices and demands by either party to the other shall be given in writing and sent by a nationally recognized overnight courier or by United States certified mail, postage prepaid, return receipt requested, and addressed as follows:

To City: City Manager
409 South Main Street
Harrisonburg, VA 22801

With a copy to: Director of Public Works
320 East Mosby Road
Harrisonburg, VA 22801

To Private Entity: Momentum Earthworks, LLC
Attention Hans Harman

1500 Pleasants Drive
Harrisonburg, VA 22801

(d) Binding Effect. Subject to the limitations of subsection (a) above, this Agreement shall be binding upon and shall inure to the benefit of the parties hereto and their respective legal representatives, successors and permitted assigns, and wherever a reference in this Agreement is made to any of the parties hereto, such reference also shall be deemed to include, wherever applicable, a reference to the legal representatives, successors and permitted assigns of such party, as if in every case so expressed.

(e) Relationship of Parties. The relationship of Momentum to the City shall be one of an independent contractor, not an agent, partner, joint venturer or employee, and the City shall have no rights to direct or control the activities of Momentum in its performance under this Agreement except as specifically set forth herein or in the Contract Documents.

(f) Third-Party Beneficiaries. Nothing contained in this Agreement is intended or shall be construed as creating or conferring any rights, benefits or remedies upon, or creating any obligations of the parties hereto toward, any person or entity not a party to this Agreement.

(g) Waiver. No waiver by any party of any right or remedy under this Agreement of the other Contract Documents shall be deemed to be a waiver of any other or subsequent right or remedy under this Agreement or the other Contract Documents. The consent by one party to any act by the other party requiring such consent shall not be deemed to render unnecessary the obtaining of consent to any subsequent act for which consent is required, regardless of whether similar to the act for which consent is given. No provision of this Agreement shall be deemed to have been waived unless such waiver shall be in writing signed by the party to be charged.

(h) Severability. If any term or provision of this Agreement shall be determined to be invalid or unenforceable in any respect, it shall be replaced with a substantially similar provision to the greatest extent possible, and the Agreement shall remain in full force and effect.

(i) Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but both of which such counterparts together shall be deemed to be one and the same instrument. It shall not be necessary in making proof of this Agreement or any counterpart hereof to produce or account for the other counterpart.

(j) Entire Agreement. This Agreement, the other Contract Documents, and the exhibits attached hereto and forming a part hereof set forth all the covenants, promises, agreements, conditions and understandings between Momentum and the City concerning the Project, and there are no covenants, promises, agreements, conditions or understandings, either oral or written, between them other than are herein set forth. No alteration, amendment, change or addition to this Agreement shall be binding upon either party unless reduced to writing and signed by each party.

(k) Headings. The section and paragraph headings appearing in this Agreement are for convenience of reference only, and shall not be deemed to alter or affect the meaning or interpretation of any provision hereof.

(l) Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the Commonwealth of Virginia.

IN WITNESS WHEREOF, the parties have executed this Comprehensive Agreement as of the day and year first above written.

CITY OF HARRISONBURG, a Virginia Municipal

Corporation

Alexander Banks, VI, Interim City Manager

STATE OF VIRGINIA,
COMMONWEALTH AT LARGE,
COUNTY/CITY OF HARRISONBURG, to-wit:

The foregoing instrument was acknowledged before me in the aforesaid jurisdiction
this ____ day of _____, 2022, by Alexander Banks, VI, Interim City Manager of
the City of Harrisonburg, a Virginia municipal corporation, on behalf of said city.

My commission expires: _____

Registration number: _____

Notary Public

Momentum Earthworks, LLC
A Virginia limited liability company

BY:
IT'S:

STATE OF VIRGINIA,
COMMONWEALTH AT LARGE,
COUNTY/CITY OF HARRISONBURG, to-wit:

The foregoing instrument was acknowledged before me in the aforesaid jurisdiction
this _____ day of _____, 2018, by _____, as
_____ for Momentum Earthworks, LLC, a Virginia limited liability
company.,

My commission expires: _____

Registration number: _____

Notary Public

A photograph of a stream flowing through a grassy field with trees in the background. The stream is the central focus, with water flowing over rocks. The surrounding area is lush with green grass and tall reeds. In the background, there is a dense line of trees under a clear sky.

UNSOLICITED PPEA PROPOSAL BLACKS RUN STREAM RESTORATION AND NUTRIENT REDUCTION

2021012-PW-PPEA

CITY OF HARRISONBURG, VIRGINIA

Unsolicited PPEA Proposal Blacks Run Stream Restoration And Nutrient Reduction

2021012-PW-PPEA

Prepared for:

City of Harrisonburg
Purchasing Office
409 South Main Street, Third Floor
Harrisonburg, VA 22801

Prepared by:



1500 Pleasants Drive
Harrisonburg, VA 22801
hans@momentumearthworks.com
540.746.8826

In partnership with:



October 23, 2020

City of Harrisonburg
Purchasing Department
409 South Main Street, Third Floor, Harrisonburg, VA 22801

RE: 2021012-PW-PPEA – Blacks Run Stream Restoration and Nutrient Reduction

Dear Selection Committee,

Momentum Earthworks is pleased to submit this proposal in response to the unsolicited PPEA proposal, 2021012-PW-PPEA – Blacks Run Stream Restoration and Nutrient Reduction. We are excited for this opportunity to further our relationship with the City of Harrisonburg and contribute to the legacy of environmental stewardship that the City has already accomplished.

In preparation of this response, our Team has visited the project site, reviewed the RFP information, conducted a desktop review of available geospatial and natural resource database information, conducted GIS basemapping, and completed a preliminary BANCS assessment. Specific results and observations have been detailed in this response package.


Our experience designing and constructing the Northend Greenway-Blacks Run Project, our working relationships with City Staff, and our local presence has prepared us to accomplish the goals of this Project efficiently and effectively. Our Team includes Momentum Earthworks, LLC, Ecosystem Services, LLC, and Kee Mapping and Survey. Our Team will be led locally by Hans Harman, the primary contact and authorized contract signatory.

The following proposal details our approach to the project, including timeline and financing. As a Team, we have worked carefully to create a high value project for the City and its citizens. [REDACTED]

We hope that the competitive cost per pound of phosphorus reduction combined with the security of working with a team that is deeply invested in the local community will instill confidence in the City that partnering with our Team is the best solution to restore Blacks Run.

We appreciate your consideration of our proposal and look forward to the opportunity to work with you.

Sincerely,
Hans Harman



Design-Build Principle | President
Momentum Earthworks LLC

Kip Mumaw, PE



Principal Engineer
Ecosystem Services, LLC

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- Attachment A. Staff Resumes
- Attachment B. Recent Project Experience
- Attachment C. Conceptual Plan (Proprietary Information)
- Attachment D. Preliminary BANCS Information (Proprietary Information)
- Attachment E. 2019 Financials (Proprietary Information)
- Attachment F. Signed Addendums

SECTION 1. QUALIFICATIONS AND EXPERIENCE

Legal Structure of the Firm and Team (PPEA Guidelines IV.D.1.a.)

Momentum Earthworks, LLC (Momentum) has assembled a well-qualified Project Team (Team) for the design and construction of the Blacks Run Stream Restoration and Nutrient Reduction Project (Project) located in the City of Harrisonburg.

Through the development of a formal teaming agreement, the Team of Momentum Earthworks, LLC (Momentum), and Ecosystem Services, LLC (Ecosystem Services) and their sub-consultant Kee Mapping and Surveying (Kee), offers the City of Harrisonburg (City) proven design and construction services with the technical skills needed to meet project objectives in a cost-effective manner. We are organized to operate as an integrated Team, able to draw knowledge and strengths from individuals and firms. At the same time, we are able to provide the City with single source responsibility for the project with leadership that will get the job done.

Momentum will serve as the design-builder (“Prime Contractor”) and hold the contract with the City of Harrisonburg and is the ultimate party responsible for the management and execution of this PPEA proposal. Ecosystem Services is our dedicated subcontractor and design engineer for the project.

Organizational Structure (PPEA Guidelines IV.D.1.a)

Momentum will serve as the primary point of contact with the City of Harrisonburg during the Conceptual Review and Detailed Review Phases of the PPEA review process. Following the review and selection process, Momentum will be the private entity to enter into the Interim and Comprehensive agreements as the prime contractor with the City.

Momentum’s primary responsibility is for overall project oversight, including management, construction, schedule, estimates, and coordination of the supporting team members. Momentum will be actively involved in design development, constructability reviews, cost estimates, as well as performing the construction portion of the project, as proposed. Ecosystem Services will lead the assessment, engineering, permitting, and pollutant reduction reporting, and monitoring efforts for the Team. Kee will provide survey services for the existing conditions topographic, construction stakeout, and as-built surveys.

Since the proposed work capitalizes on Momentum’s, Ecosystem Services’ and Kee’s collective knowledge, resources and strengths, we can assure the City that our team’s capabilities will allow for a quick, efficient, and cost effective execution of the Blacks Run Stream Restoration and Nutrient Reduction Project. Furthermore, through this contract structure, we have removed the silos that often leave an owner at risk when design and construction firms are working separately on the same project. By removing these risks and through the collaborative culture of each firm, we will deliver the best value to the community and the City.

An overall organizational structure chart showing how each partner and major subcontractor fits into the overall team can be found below.

Figure 1. Project Team Organizational Chart

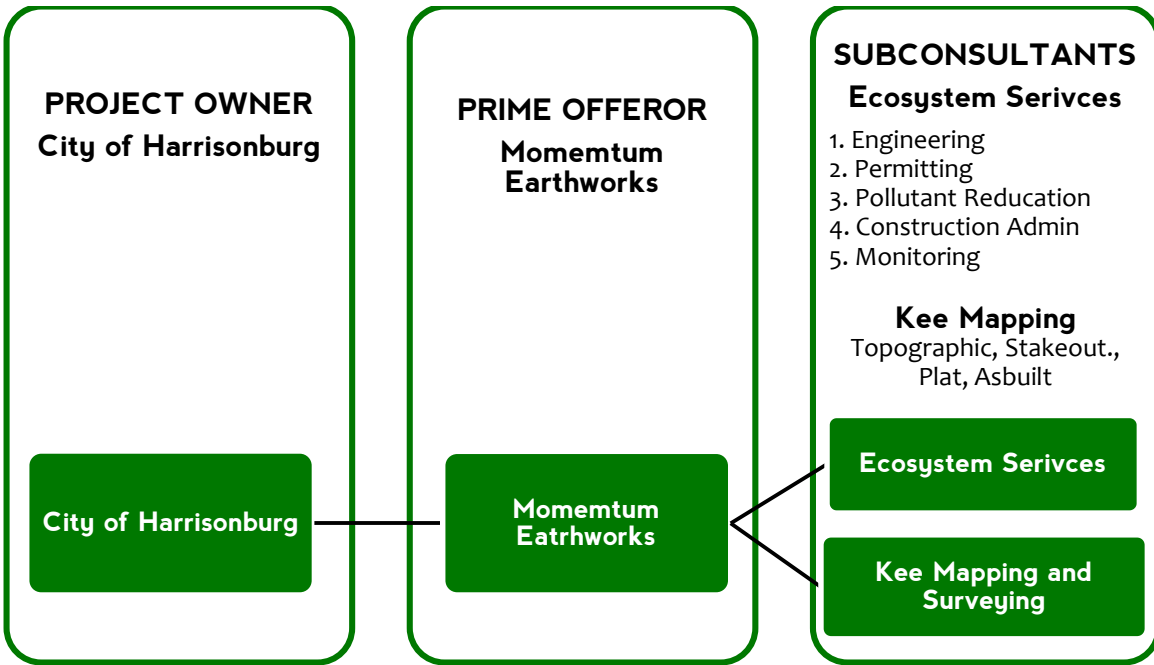


Table 1. Design-Build Team Members

Role	Firm	Lead Contact
Prime Proposer & Contractor	Momentum Earthworks	Hans Harman, Owner 540-746-8826 hans@momentumearthworks.com
Engineering, Permitting & Monitoring	Ecosystem Services, LLC	Kip Mumaw, PE, Principal Engineer (540) 239-1428 kip@ecosystems-services.us
Survey	Kee Mapping & Survey	Dan Pettingill, VA Survey Lead (828) 575-9021 dan@keemap.com

Management Approach (PPEA Guidelines IV.D.1.a)

The proposed Design-Build Team has been carefully assembled to provide the City with a single entity that can address all aspects of the Blacks Run Stream Restoration and Nutrient Reduction project. Team members have been selected for the unique contribution each has to offer. The result is an integrated Design-Build Project Team that can provide the City with confidence that a project meeting the City's objectives can be implemented within an acceptable budget and within the desired schedule. Our team brings together strong construction management skills, extensive design experience, and local knowledge of the City and the resources necessary to allow the project to move forward. We assembled our team based on the value that our combined innovative resources can offer and our proven track record of providing the City with similar services.

Momentum has developed an approach to completing Design-Build projects that has proven successful on many other projects completed by alternative procurement methods. Our management approach is focused on making all parties, including the Owner, a partner and stakeholder in the project outcome by establishing shared goals (quality, timely delivery, performance and safety) and balancing these goals with individual objectives (cost, ease of operation, service life). Team members must possess a solid reputation, shared vision, and a can-do attitude. More importantly the integration of Momentum and Ecosystem Services will allow for creativity and innovation to solve problems quickly, definitively and at the least cost and greatest value.

The success of this collaborative approach depends upon trust, open communication, and respect for other team members. Each party will actively participate in the entire design-build process from conceptual design through substantial completion to allow the design and construction effort to proceed concurrently. By operating in this manner, the team can react quickly to unforeseen conditions and arrive at timely win-win solutions that balance the best interests of the owner with those of the designer and the contractors.

Momentum will lead the overall Design-Build effort and the construction phase consultant coordination. We understand that unless the development of the project is well thought out and well executed, the project will not be successful. The leadership and the individuals assigned during the scope and cost development stages of this project will determine its ultimate success.

Ecosystem Services will lead the design effort and will be pro-active and innovative in managing design phase sub-consultants and coordinating with the City and other Design-Build Team members.

The Design-Build Team will initially meet with the City of Harrisonburg to review the project details, scope, and goals. The Team would propose to have meetings with the City of Harrisonburg monthly at a minimum to review status of the design and to receive any input from the City. Upon commencement of construction, bi-weekly meetings would be held onsite to review construction, upcoming work, and any activities that would affect the City's facilities and adjacent property owners. Ecosystem Services would oversee all design with input from the team, as well as the permitting coordination with all regulatory agencies, and post-construction monitoring.

Our project philosophy emphasizes your involvement and interaction in the planning, design, and construction process. We treat each project as a unique challenge and recognize that each client has its own goals, objectives, and preferences. We will actively seek out the opinions of your personnel to complete the project on time, within budget, and to provide a facility that is flexible, easy to operate and maintain, and that is neighbor-friendly. This project delivery system, by its very nature, allows for a high degree of owner input in the project scope, based on the actual impact of cost and schedule.

Subcontractors (PPEA Guidelines IV.D.1.a)

As stated above, Momentum is partnered with two subcontractors, Ecosystem Services, LLC and Kee Mapping and Survey. Subcontractor qualifications are discussed below in Team Experience.

Team Experience (PPEA Guidelines IV.D.1.b.)

The Team's extensive experience will guarantee that this project will be the beneficiary and of the highest standards of performance with regards to safety, quality, and schedule. The following pages include each firm's background and experience as well as information on the key personnel proposed for this project. *Staff Resumes are provided in Attachment A. Reference Project Sheets are provided in Attachment B.*

Momentum Construction Company, Inc.- Prime Offeror

Momentum Earthworks was founded in 2011 by President/CEO Hans Harman after he completed an asset purchase of another longstanding local entity formerly known as Quality Excavating. Hans Harman hails from a proud family business tradition of over 80 years of leadership in the Harrisonburg area and greater Shenandoah Valley. Momentum has quickly grown and been recognized as a local leader and reputable brand working for notable entities including but not limited to RMH/Sentara, Eastern Mennonite University, James Madison University, University of Virginia, Merck, Augusta Healthcare, The Smithsonian Institute Front Royal, Towns of Timberville, Broadway, Grottoes and the City of Harrisonburg, Rockingham and Augusta County. Momentum has grown from 7 full-time employees in 2011 to a steady workforce of around eighty (80) employees in 2020. We are also very proud to have several long-tenured employees that carry a combined 100+ years of management experience and expertise in our field.

Momentum’s President, Hans Harman, and other key personnel are very active in the community and construction industry at large. Harman sits on the board of directors for the AGC of Virginia Valley District as well as the Shenandoah Valley Builders Association. Beside the construction industry, Harman and other key personnel sit on the boards of several local church-based and civic organizations.

Our team has a proven track record of managing and maintaining schedules in complex environments. Our team utilizes state of the art takeoff software (Insite) which allows for dynamic site balancing and 3D imagery. Operationally our company typically self performs over 80% of our work. Our headquarters is in Harrisonburg Virginia and perform projects all over the Shenandoah Valley as well as the Albemarle/Piedmont region.

In Table 3 below you will find a short list of projects that our team has completed. At request we are happy to provide a full list of completed projects and projects currently under construction. In 2020 our firm anticipates an approximate total volume of 16 million in gross revenues with an average project size of approximately \$900,000.

Table 2. Staffing Plan

Task	Principal Staff Lead
Senior Project Management	Hans Harman
Primary Project Manager	Logan Nelson
Director Of Safety/Equipment	Josh Lohr
General Superintendent	Bobby Shifflett
Primary Project Superintendent	Bubby Huffer
Secondary Project Superintendent	Kevin Williams
Director of Estimating and Preconstruction	Drew Vrolijk

Table 3. Similar Project Experience

Project Name & Design Element	Client	Work Completed
Northend Greenway-Blacks Run Stream Restoration	City of Harrisonburg	Streambank grading, instream structure installation
Ivy Creek Culvert Bridge Project	Private Landowner	Culvert removal, bridge installation, instream structure installation
Crozet/Albemarle Library	County of Albemarle	Grading, utilities, concrete, and paving
Rt. 256 Waterline Town of Grottoes	Town of Grottoes,	Prime Contractor – New water main, concrete and paving
Coyote Run Subdivision	Town of Broadway	Grading, utilities, concrete, and paving
Town of Broadway Central Street Improvements	Town of Broadway	Demolition, retaining walls, water service installs, grading, curbing and sidewalk.
Rockingham County Pleasant Valley Waterline	Rockingham County Public Works	Grading, utilities, VDOT coordination
SCBI Utility Update Ph. II	Smithsonian Institute	Sanitary sewer, storm sewer, environmental controls, and electrical duct bank, demo and restoration of a parking lot and roadway, maintenance of traffic, utility relocations and landscaping throughout
James Madison University Gibbons Hall Utilities Ph 1 and Ph.2	James Madison University	Demolition, sanitary sewer, water main, duct bank, concrete, and paving

Safety

Accountability for the safety of our employees, partners, and customers starts with our Owner and is embraced by all levels within our organization. With our Safety Program, Project Zero, we have put safety above all other aspects of our business, including schedule and production, even to the extent that we allow each and every individual the authority and responsibility to stop work without fear of reprisal should they question the safety of any given activity. This has led to a consistently outstanding safety record as illustrated by our EMR (Experience Modifier Rate) of 0.81.

The Director of Safety, Mr. Josh Lohr, is the company’s ultimate safety resource and is completely autonomous from all project operations. His responsibilities include conducting and reviewing site hazard surveys, providing technical assistance to the project teams, reviewing and monitoring subcontractor activities, ensuring corrective action when required, and safety training and orientation. Steve is also responsible for championing site specific safety plans and programs in concert with the project Teams.

Furthermore, all Superintendent level and up personnel, who are involved with daily operations, are required to have a minimum of OSHA 10-Hour Training, and all Utility Foreman level personnel are required to have a minimum of OSHA 10-Hour training as well as competent trench and confined space training. Additionally, Momentum continuously trains our personnel in areas such as; VDOT’s Work Zone Traffic Control Training Program (WZTCTP), Federal AHA Heartsaver Training, and VDOT’s Erosion and Sediment Control Contractor Certification Program (ESCCC).

Team’s Experience (PPEA Guidelines IV.D.1.b.)

Ecosystem Services, LLC – Engineering Subcontractor

Ecosystem Services (“ES”) was founded in 2011 to assist with the growing need to develop and implement watershed management programs to reduce impacts to waterways and restore stream systems to meet MS4 permit requirements and the Chesapeake Bay and local TMDLs requirements. Our founders were quick to realize the role of degraded stream systems as a major source and conveyor of pollutants and the cost effectiveness of stream restoration for water quality improvements. They have built a team and a company vision around this mission to reduce impacts to waterways and implement on-the-ground restoration.

ES offers the full range of assessment, permitting, design, construction administration, and monitoring services. Staff permitting specialists employ the most current regulatory and scientific methodologies to ensure data integrity, regulatory clarity, and expediency. Our ecological restoration design team has been trained in Rosgen methodology, North Carolina State University Stream Restoration Program, and Utah State University Sediment Transport training among other specialized programs.

Ecosystem Services has developed a reputation as a leader in the water resources industry based on quality work products and a proven track record of successful projects. We design site specific projects to ensure long-term resiliency to minimize life-cycle maintenance costs. Our seven (7) technical staff members have experience working on thirty-five (35) stream restoration projects, including fourteen (14) projects for MS4 permit compliance, totaling over eighteen (18) miles of restoration work. Notably, Ecosystem Services permitted and designed the first two (2) stream restoration nutrient banks in the Commonwealth of Virginia. The first, Mossy Creek Nutrient Bank, received 100% credit release in 2019 after three (3) years of monitoring. From this experience, our staff have helped to develop industry standard assessment methods, local and state engineering standards and specifications, and design methods, existing planning documents, and local permit requirements.

Since 2017, greater than 70% of our revenue has been from municipal work for MS4 and TMDL design and compliance projects. From our work with current and past clients, including Albemarle County, City of Charlottesville, City of Roanoke, Town of Dumfries, and City of Harrisonburg, among others, our staff have become adept at managing multiple concurrent projects and coordinating interdisciplinary project teams to create quality, timely deliverables.

Ten (10) of our recent stream restoration projects have been funded through the Department of Environmental Quality’s Stormwater Local Assistance Fund (SLAF). We also have experience managing five (5) design-build projects totaling 12,313 linear feet of restoration. Two (2) of our recent projects were stream restoration nutrient banks. Both projects have met success criteria for credit release. One recent project, Blacks Run, is a public-private partnership with the City of Harrisonburg. The City is the beneficiary of the pollutant reduction and our design-build team was responsible for design, permitting, construction, and monitoring.

Team’s Experience (PPEA Guidelines IV.D.1.b.)

COMPANY HIGHLIGHTS	<ul style="list-style-type: none">• Designed & permitted the first TWO stream restoration nutrient banks authorized in the state of Virginia.• Designed the Northend Greenway- Blacks Run Stream Restoration and Nutrient Reduction Project, located in the City of Harrisonburg• Designed and permitted 14 recent stream restoration projects for MS4 permit compliance.• Project Manager-Principal Engineer, Kip Mumaw serves as a member of Stream Restoration Verification Expert Panel and the Stream Health Workgroup for the Chesapeake Bay Program.
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Ecosystem Services, LLC – Engineering Subcontractor

Similar Project Experience

The following list documents Ecosystem Services’ experience providing local governments and MS4 permit holders with engineering, design, and consulting services related to stream restoration projects. Additionally, stream restoration for nutrient banking projects are included to demonstrate experience reporting pollutant reduction and certifying pollutant reduction credits. Select projects are detailed further in the project example sheets within this RFP response.

Table 4. Similar Project Experience

Project Name & Design Element	Client	Maintenance
Blue Leaf Stream Restoration	Town of Christiansburg, VA	Vegetative
Murray Run Restoration	Roanoke County, VA	Minor
Washington Park Restoration of Lick Run	City of Roanoke, VA	None
Mountain View Drive Stream Restoration	City of Harrisonburg, VA	Not installed
Blacks Run Stream Restoration	City of Harrisonburg, VA	None
Town of Kilmarnock Outfall Restoration	Town of Kilmarnock, VA	Vegetative
Quantico Creek Restoration	Town of Dumfries, VA	None
South Fork Shenandoah River Restoration	Town of Elkton, VA	Vegetative
Linville Creek Restoration	Town of Broadway, VA	None
River Run Stream Restoration	Albemarle County, VA	Vegetative
Stream Stabilization Projects	City of Gastonia, NC	None
Edith J. Carrier Arboretum Stream Restoration	James Madison University	Minor
Arey Farm Stream Restoration Nutrient Bank	Private Landowner	Vegetative
Ivy Creek Stream Restoration Nutrient Bank	Private Landowner	Vegetative
Linville Creek Stream Restoration Nutrient Bank	Private Landowner	Not installed

Staffing Plan

We have prepared a Team of progressive professionals to provide the City with the requested services. Each Team member has a wealth of experience and knowledge. The information below identifies principal and support staff and their role. Ecosystem Services assures that the continuity of the proposed staff will be maintained.

Table 5. Staffing Plan

Task	Principal Staff Lead	Support Staff
Engineering	Kip Mumaw, PE Principal Engineer	Kyle Ashmun- Lead Designer Amy Longcrier- Senior Designer Jason Thomas- Lead Drafter
Pollutant Reduction Calculations		
Construction Administration		
Assessment	Jon Roller Principal Environmental Scientist	Annemarie Abbondanzo- Senior Environmental Scientist Dan Richardson- Field Technician
Subcontractor Coordination		
Permitting		
Monitoring		

Team’s Experience (PPEA Guidelines IV.D.1.b.)

Kee Mapping and Survey – Survey Subcontractor

Kee Mapping and Surveying was founded in 2007 with the goal of becoming one of the southeast top Professional Land Surveying and Mapping organizations. Kee Mapping and Surveying has office locations in North Carolina and Virginia. They specialize in GIS mapping, boundary, topographic and easement surveys for a wide variety of projects, including stream restoration projects. With an in-depth knowledge of local, state, and federal requirements, their team provides sound advice and accurate results in an efficient manner.

Ecosystem Services has partnered with Kee since 2012 on six stream restoration projects totaling 9,975 linear feet of stream (Graves Mill for the City of Lynchburg, Harpine Stream Restoration Nutrient Bank for a private landowner, City Point and Mathis Park for the City of Hopewell, Meadow Creek for The Nature Conservancy, Washington Park for the City of Roanoke, and the South Fork Shenandoah for the Town of Elkton). As a partner, Kee Mapping and Surveying has always provided detailed and accurate results in an efficient manner. Kee Mapping & Surveying has four personnel who primarily work in the Virginia office, led by Dan Pettingill (resume attached). Should more employees be needed, there is a total of 25 employees in the company who are available to assist with the Project.

Quality Assurance

Driven by increased need for higher quality and flexibility, Kee has honed a strategy for improving products and services for clients, while maintaining a cost-effective approach. The strategy relies on employee competency, cooperation, and commitment to reach goals and improve on products and processes. Key personnel leading the Virginia survey crew are qualified, licensed professional surveyors with 15+ years of experience in selecting methods, procedures and tolerances of field work and data process as well as reviewing and approving accuracy of work products. A series of detailed checks, including redundant measurements are used in the field to assure that the intended accuracy is being achieved. All deliverables are internally reviewed and checked to ensure they meet survey criteria, drafting standards, and internal checklists for all technical and administrative aspects of the project. The result is that all products, services, and processes conform to industry standards and meet client expectations.

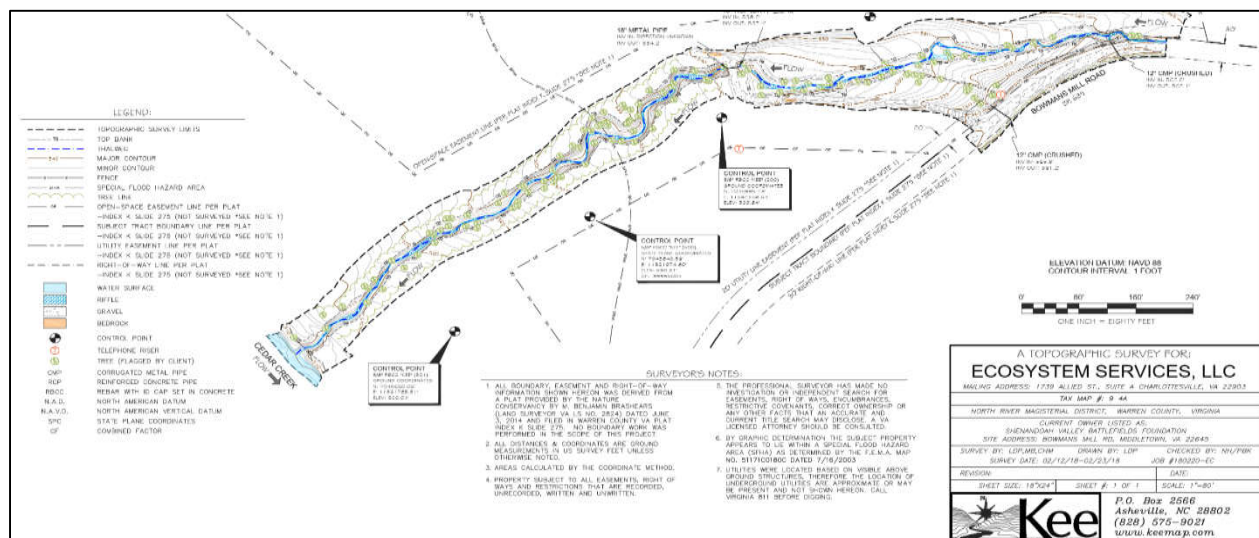


Figure 2. Representative deliverable for Topographic Survey

Contact Information (PPEA Guidelines IV.D.1.c.)

Mr. Hans Harman
Momentum Earthworks
1500 Pleasants Drive
Harrisonburg, VA 22801
Phone: 540-746-8826
Fax: 540-564-1317
Email: hans@momentumearthworks.com

Most Recently Audited Financial Statement (IV.D.1.d.) *(Proprietary Information)*

Financial statements for Momentum are provided in Attachment C.

Conflict of Interest Statement (IV.D.1.e.& IV.E.10)

Momentum Construction, Ecosystem Services and Kee are unaware of anyone on our Team who would be obligated to disqualify themselves from participation in any contract arising from this PPEA proposal. No Conflict of Interest to our knowledge exists with the Project (Blacks Run Stream Restoration and Nutrient Reduction PPEA project) or with the City of Harrisonburg.

SECTION 2. PROJECT CHARACTERISTICS

Description of the Project (IV.D.2.a)

The Blacks Run Stream Restoration and Nutrient Reduction PPEA Project as proposed follows the general design concepts and alignment as shown on the Blacks Run Conceptual map and as outlined in this section.

Blacks Run is within the South Fork Shenandoah Watershed (02070005), a major tributary of the Potomac River, before ultimately draining to the Chesapeake Bay. Blacks Run cuts through the center of Harrisonburg, draining approximately 13 square mile area at the downstream point of the project site. The drainage area is approximately 36 percent impervious, 14 percent agricultural, 9 percent forested, and the remainder includes pervious land such as lawn or open water features.

Our Team proposes restoration on approximately 4,800 contiguous linear feet of Blacks Run across four parcels owned by the City of Harrisonburg as shown on the attached conceptual plan. The overall goal of the restoration work is to create a reach that does not significantly degrade or aggrade over time and can support native vegetative and aquatic communities. As part of the restoration work, the Team will quantify and validate pollutant reductions that will be owned by the City and used for MS4 permit compliance.

Our Team investigated the approximately 1,485 linear feet from Stone Spring Road to our proposed start (roughly behind the Harrisonburg Public Works Building). From field and desktop investigations, we found that 335 linear feet were within the Western Railway right-of-way and that the remaining stretch was too confined by existing industrial land uses and existing bank armoring to qualify for restoration that would generate meaningful nutrient reductions. This determination was made based on previous project experience and the most recent revisions to the expert panel guidance, which limits the pollutant reductions that can be claimed when armoring techniques are used predominately¹.

Existing Conditions

Blacks Run flows generally southward across the parcels within the project area. It is laterally confined and within a FEMA regulated floodway. There are two outfalls that will require stabilization. In areas where bank grading and stabilization are proposed, the streambanks exhibit medium to high bank erodibility with high bank heights, low root density, high bank angles, and little surface protection. The majority of the restoration reach was noted for lacking bedform diversity, and field measurements indicated that areas were over widened by 10 to 15 feet. Broadly, the reach is characterized as unstable with high bank erosion rates, especially in areas that lack a vegetative buffer.

¹ Wood, David et al. "Consensus Recommendations for Improving the Application of the Prevented Sediment Protocol for Urban Stream Restoration Projects Built for Pollutant Removal Credit". Chesapeake Stormwater Network. February 27, 2020

Strategic Objectives

The overall goal of the restoration work is to maximize the potential to generate pollutant removal credit while creating a stream that does not significantly degrade or aggrade over time and can support native vegetative and aquatic communities. The following strategies have been identified to support the overall goal.

Objective #1

Maximize Pollutant Removal Credit Generation

- Utilize three protocols for credit generation: Protocol 1 (Prevented Sediment), Protocol 2 (Instream and Riparian Nutrient Processing During Base Flow), and Protocol 3 (Floodplain Reconnection)

Reduce bank erosion rates by creating bankfull benches to improve floodplain connectivity and to alleviate tractive forces causing channel incision.

Create a stream-wetland complex by grading pocket wetlands in the floodplain to enhance nitrogen reductions.

Create a baseflow channel designed to access the floodplain more frequently.

Objective #2

Create A Stable Reach That Does Not Degrade Or Aggrade Over Time

- Reduce bank erosion rates by creating bankfull benches on both sides to improve floodplain connectivity and to alleviate tractive forces causing channel incision.
- Install a combination of structures to provide grade control and to redirect channel flows away from the banks.
- Realign torturous meander bends while minimizing tree disturbance.
- Install bank stabilization measures including toe protection and erosion matting.

Objective #3

Create A Stable Reach That Can Support Native Vegetation And Aquatic Communities

- Prepare the site (invasive treatment) and then plant a larger stock trees in combination with livestakes, herbaceous, and native seed mixes to create native riparian buffer.
- Install riffle-pool sequencing and select habitat structures to diversify instream habitat.
- Treat invasives and maintain plantings for a three-year period to ensure establishment.

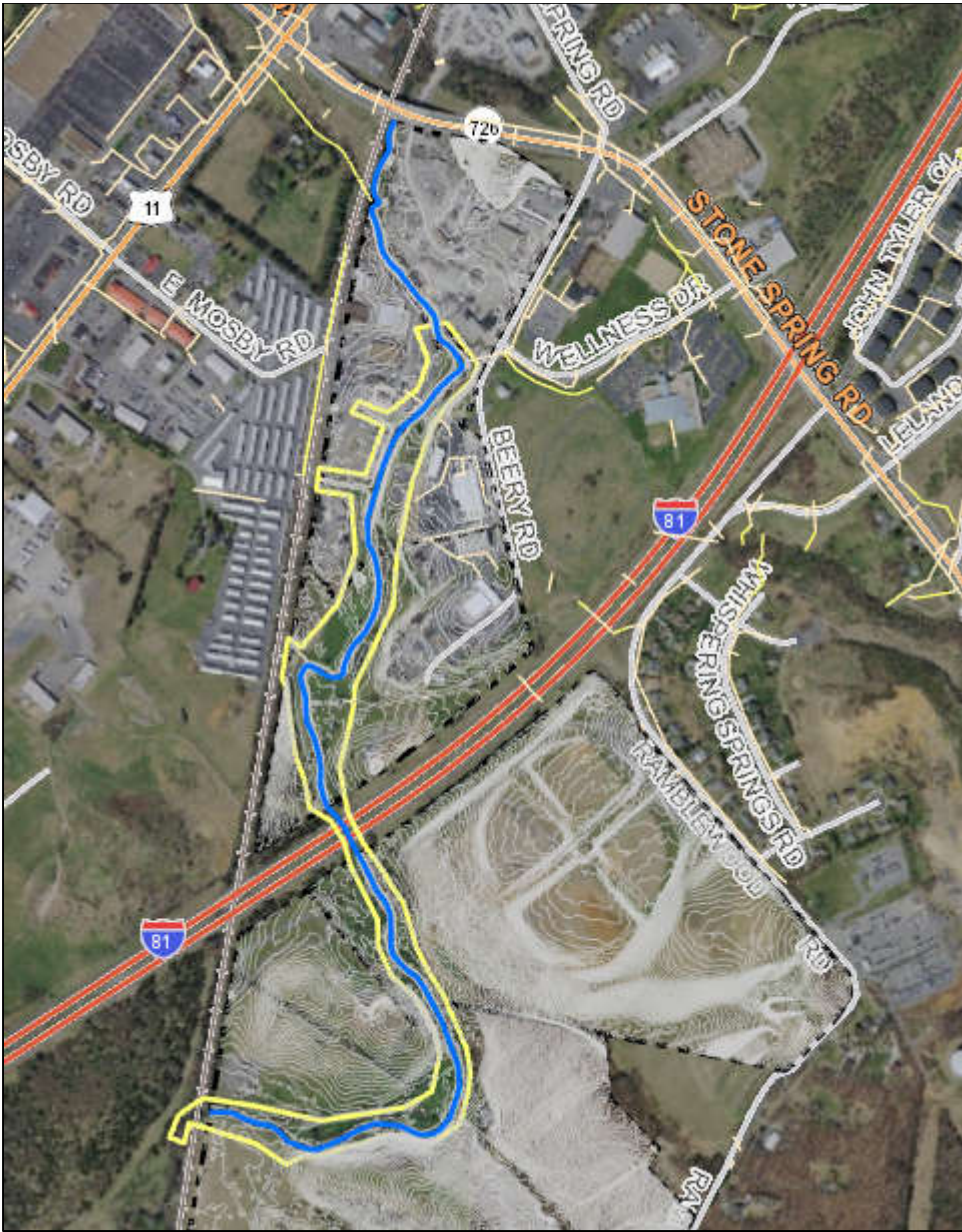


Figure 3. Overview of Restoration Reach (Blacks Run indicated by the blue line and the project area outlined with a yellow polygon)

Restoration Approach

Our restoration design reflects the project goals and site-specific conditions with an emphasis on the geomorphic conditions. The stream restoration design includes features that protect the channel from erosion, build channel complexity, and habitat quality and diversity. Work will include shifts in stream alignment, stabilization-in-place with grade control structures, outfall stabilization, streambank and bench grading to create floodplain storage, and bioengineering and native planting.

At this preliminary stage, we’ve utilized reference reach data that provides dimensionless ratios scaled by bankfull characteristics to create conceptual design parameters for the stream shape (bankfull width, bankfull area, bankfull depths, etc.) and planform parameters (pool spacing, location of in-stream structures, etc.). During the assessment and design phases, the conceptual plans will be further refined based on existing conditions.

Table 6. below details design elements that will be further refined based on stakeholder input on critical issues including resiliency, environment, implementation, budget, and schedule to create the most technically sound and practicable design. The table provides both function-based parameters and the measurement methods that will be used to develop, communicate, and prioritize design criteria beyond the conceptual phase.

Table 6. Restoration Function-Based Parameters and Measurement Methods

Function/Level	Function-Based Parameter	Measurement Method
Hydrology	Channel Forming Discharge	<ul style="list-style-type: none"> Bankfull Regional Curves Hydraulic Resistance Equations
	Precipitation Runoff Relationship	<ul style="list-style-type: none"> Regional Regression Equations Hydrologic Model (PCSWMM) Precipitation & Flow Monitoring
Hydraulics	Floodplain Connectivity	<ul style="list-style-type: none"> Bank Height Ratio Entrenchment Ratio Stage-Discharge Curve
	Flow Dynamics	<ul style="list-style-type: none"> Velocity profiling (1D & 2D eco-hydraulics)
	Sediment Transport	<ul style="list-style-type: none"> Competency & Bed Stability Shear Stress Analysis FLOWSED/POWERSED / BAGS Capacity Supply Reach (CSR) Analysis Continuous Simulation Bed Form Modeling (HEC-RAS)
Geomorphology	Bank Migration/Lateral Stability	<ul style="list-style-type: none"> BEHI/NBS BSTEM Boundary Thresholds Photographic & Remote Sensing Analysis
	Bed Material Characterization	<ul style="list-style-type: none"> Wolman Pebble Counts Bulk Sample Sieve Analysis
	Bed Form Diversity	<ul style="list-style-type: none"> Percent Riffle & Pool Facet Slope Pool to Pool Spacing Depth Variability

Approach to Scope of Work

Planning, Engineering, And Permitting

From recent project experience, including the Blacks Run Stream Restoration project, which delivered TMDL pollutant reduction credit to the City of Harrisonburg, our Team has become well-versed with the technical and reporting requirements of stream restoration projects for TMDL crediting. Ecosystem Services (ES) has been involved in the development of many of the standards and have provided technical guidance at the Chesapeake Bay and local level.

Our goal for stream restoration projects is to create a design that reflects the restoration objectives and site-specific conditions to create a self-sustaining system. Typically, we start a project with detailed planning and scoping of project priorities to address qualifying conditions, costs, pollutant reduction, ecological uplift, and schedule. This provides the trajectory for the entire project and is revisited throughout the design process. The assessment phase includes an investigation of existing conditions that covers the project area and watershed. Stream assessments and analyses are needed to evaluate channel processes and the sources of impairment. This provides the basis for defining measurable success criteria and initial conceptual designs. A topographic survey and Bank Assessment for the Nonpoint Consequences of Sediment (BANCS) analysis is completed during the assessment stage, to quantify Protocol 1 erosion rates. The bank assessment includes field Bank Erosion Hazard Index (BEHI) and Near Bank Stress (NBS) assessments in accordance with the standards set forth by the Chesapeake Bay Field Office (USFWS A, 2004 & USFWS B, 2004). Bulk density and nutrient concentrations are sampled along the restoration reach for inclusion in the Protocol 1 estimates. Erosion rates are estimated using the erosion rate curve developed for projects in the Chesapeake Bay and then used to estimate sediment, phosphorus, and nitrogen load reductions as a result of restoration.

Conceptual plans are developed next to evaluate alternatives and opportunities for credit generation. These plans are refined based on assessment findings and hydrologic and hydraulic modeling to produce 60% design plans. 60% plans communicate preliminary grading, erosion and sediment control, details, and restoration planting to project stakeholders and permitting agencies. The Nationwide Permit Application, which includes the Joint Permit Application (JPA) is submitted with the 60% plans to the Corps, VMRC, and DEQ. A flood study is completed at the 60% stage and submitted to the local floodplain administrator, as needed. Final restoration design parameters will incorporate geomorphic findings and hydrologic and hydraulic modeling to refine appropriate ranges for stream geometries and characteristics. All this information and feedback from regulators and the client are then integrated into the final construction plans. These plans, along with supporting engineering calculations, will be submitted to the City of Harrisonburg, to obtain the Land Disturbance Permit and Construction General Permit. Pollutant reduction calculations are refined with 100% design to reflect final proposed grading.

Construction, Asbuilt, Pollutant Reduction Reporting, And Monitoring

Before construction starts, an onsite pre-construction meeting will be held with all project partners. Prior to any earthwork all erosion and sediment control measures will be installed. Kee Mapping will provide construction stakeout to establish and mark offsets in the field. ES will be responsible for the documentation and inspection of construction activities. Following construction, Kee will conduct an as-built survey. ES will provide a comparison of design and as-built conditions and provide credit calculation reporting for Protocols 2 and 3. Section 5 of the Expert Panel Guidance outlines the methodology for calculating nitrogen reductions from increased hyporheic exchange between the stream channel and the floodplain rooting zone (Protocol 2) and for calculating sediment and nutrient reduction credit by quantifying floodplain connection over a wide range of storm events (Protocol 3). Long-term monitoring will be conducted during the growing season in Years 1, 2, and 3 in accordance with guidelines provided by the USACE and DEQ for similar projects.

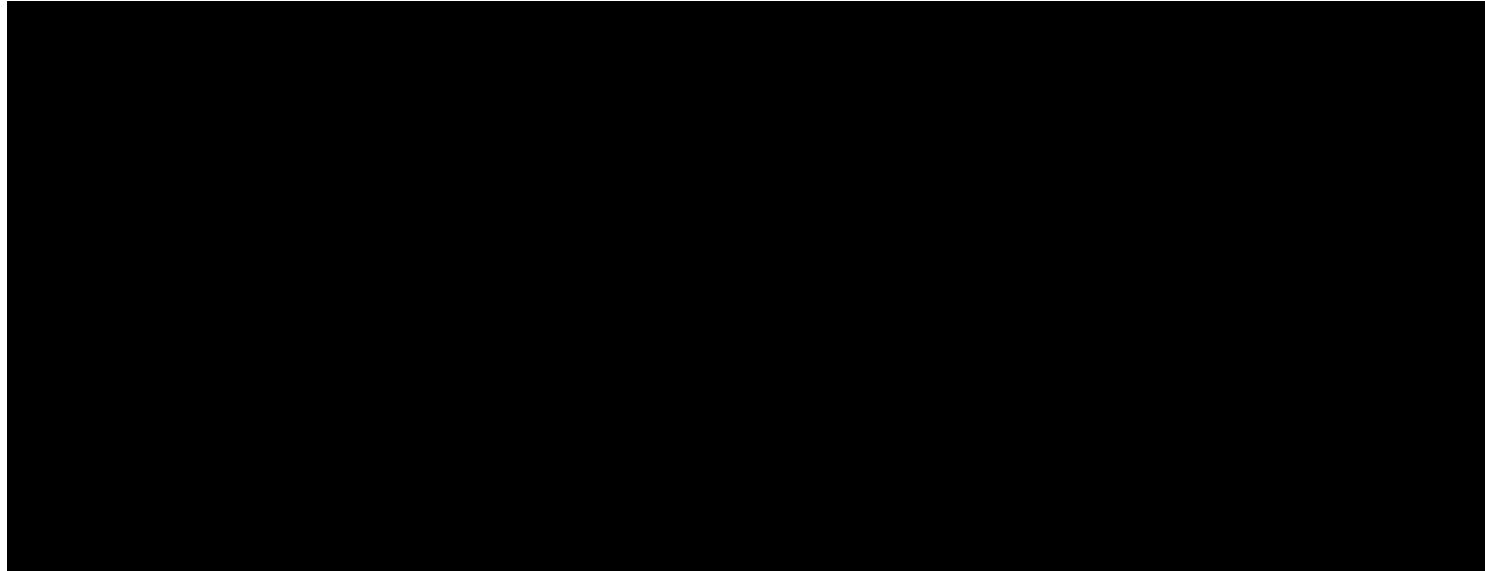
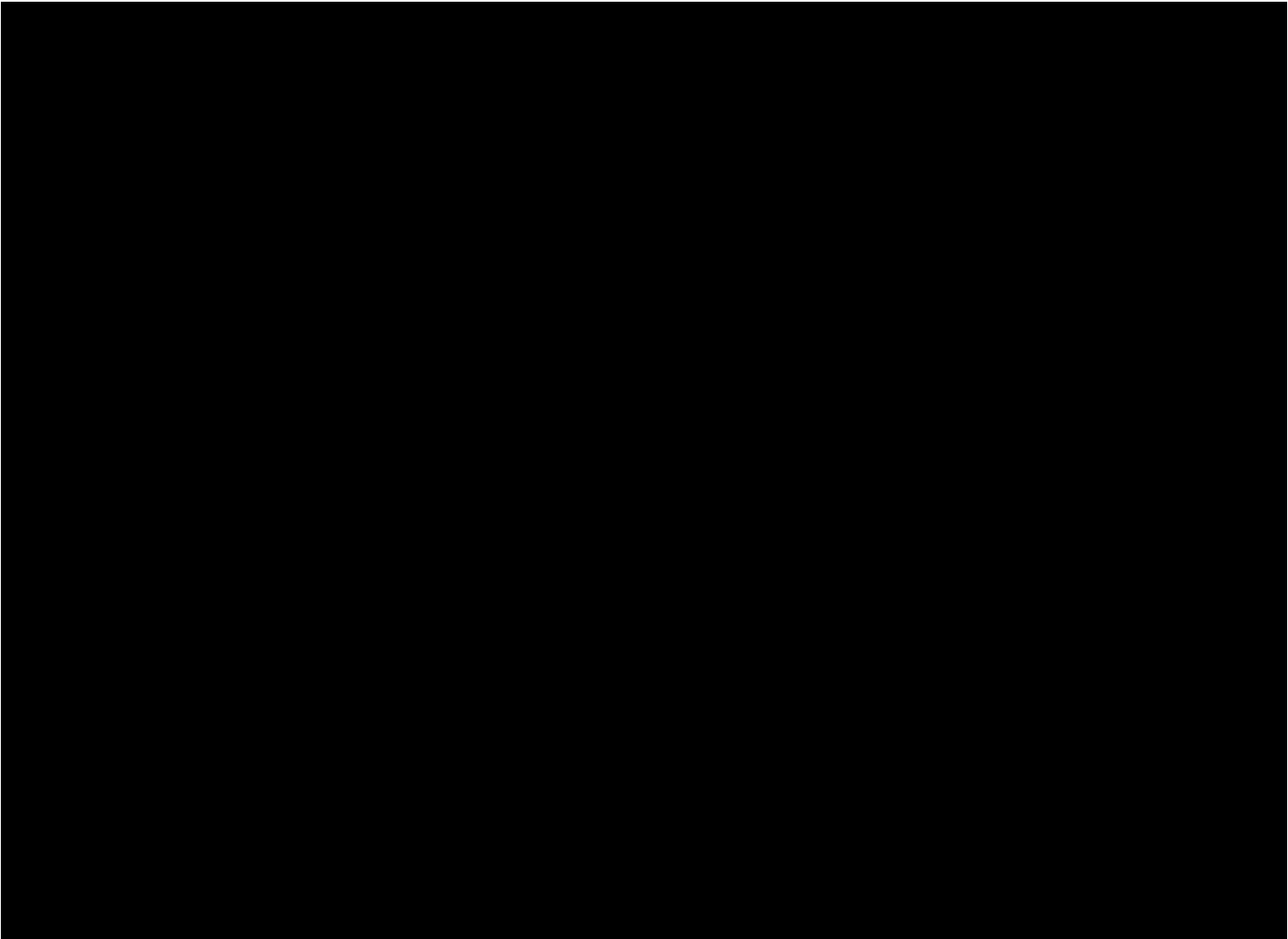
Proposed Concept Design (Proprietary Information)

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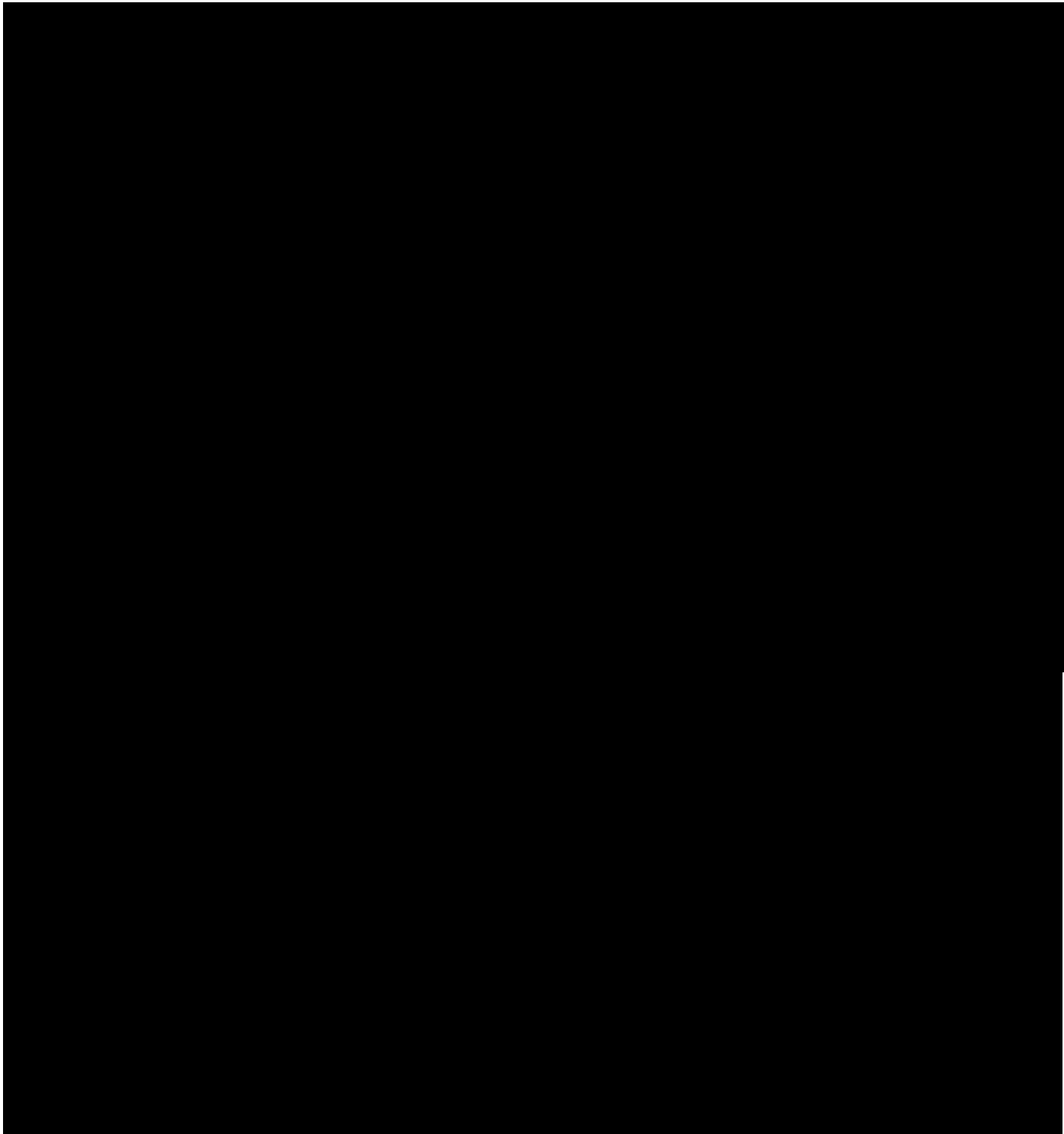
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Nutrient and Sediment Reduction Opportunities (Proprietary Information)



² Recommendations of the Expert Panel to Define Removal Rates for Individual Stream Restoration Projects, September 2014

Work to be Performed City of Harrisonburg (IV.D.2.b.)

The City of Harrisonburg will be responsible for the following work:

1. Review and approval of contract documents within a mutually agreeable time schedule.
2. Assistance in expediting reviews with outside agencies.
3. Assistance in the coordination with utility companies.
4. Final review and approval of all design, appurtenances/equipment, and material selection within a mutually agreeable time schedule.
5. Any third-party reviews of the proposal, design documents, or additional inspection will be the responsibility of the City of Harrisonburg.
6. Provide Ecosystem Services with access to all City GIS files.
7. Provide city permits at no cost to the project
8. Provide any required protective easements both temporary and permanent, although none are anticipated
9. Assist construction team with material staging and site access needs

Permits and Approvals Required (IV.D.2.c.)

The project Team will obtain all of the necessary permits and pay for the appropriate permitting fees. Permitting is a critical path activity that can significantly impact the project schedule due to the required coordination and review process of the various agencies. Construction delays will be minimized wherever possible by the early engagement and involvement of the various regulatory agencies with project jurisdiction. Early involvement and collaborative “over the shoulder reviews” will help gain early endorsement of design and mitigation concepts which will reduce the likelihood of substantial and costly late-stage design changes that would impact the overall project schedule.

The project Team anticipates the following permits and approvals:

1. *Delineation of Waters of the U.S. [wetlands and streams]* – Ecosystem Services will delineate Waters of the U.S. and State Water features within the proposed project corridor. The boundary of such features will be field-flagged and GPS-located. Deliverables include a wetland delineation map, associated field data station documentation, a brief memo summarizing the findings of our delineation, and a confirmation request letter to USACE to review and confirm the jurisdictional boundary. Also included is a confirmation site visit to review the findings of the delineation in the field with the regulatory agencies. The Preliminary Jurisdictional Determination will be provided to the City once received.
2. A completed *Joint Permit Application (JPA) or Nationwide Permit 27* application will be prepared and submitted to the Virginia Marine Resource Commission (VMRC) who distributes the application to USACE, DEQ, and other environmental agencies for further comment and coordination. As part of the JPA, Ecosystem Services will review and include information regarding threatened and endangered species, if any, as well as documented historical sites known to exist within the project area. ES anticipates the need to obtain both a Virginia Marine Resources Commission permit and Nationwide Permit 27 through the Charlottesville Field Office of the U.S. Army Corps of Engineers – Norfolk District. The approved permit(s) will be provided to the City once received.
3. *Land Disturbance Permit*–Ecosystem Services will coordinate with the City staff and file an erosion and sediment control plan and land disturbance permit application as required with the City.
4. *Virginia Stormwater Management Permit*- Ecosystem Services will file a Registration Statement and submit a VSMP application and fee to the City and Virginia Department of Environmental Quality as necessary.
5. *Stormwater Pollution Prevention Plan* – Ecosystem Services will develop a Stormwater Pollution Prevention Plan for the project and submit to the City for their records.
6. *Local Floodplain Compliance*: Ecosystem Services shall provide the necessary Flood Studies and coordinate with all applicable regulatory officials including local floodplain managers and FEMA as required.
7. This work does not include optional services such as Phase I Cultural Resource Surveys, VDOT permits, special use permits or site access permits. We do not anticipate the need to access or utilize any VDOT right-of-way for the completion of this project.

Adverse Social, Economic, and Environmental Impacts (IV.D.2.d.)

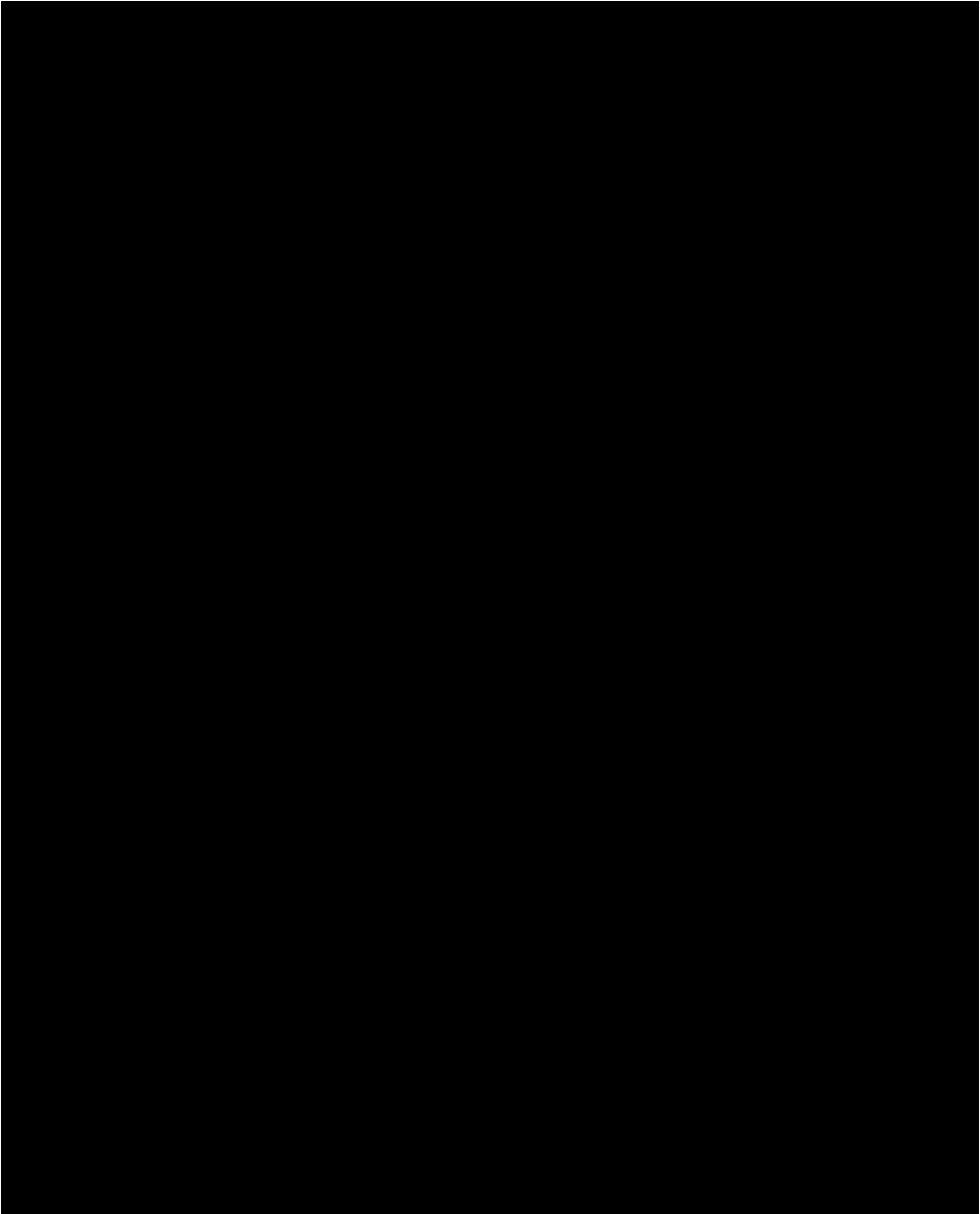
The proposed Blacks Run Stream Restoration and Nutrient Reduction PPEA Project will have no anticipated adverse social or economic impacts. However, as with normal land disturbance activities during construction operations, there will be minor environmental impacts. Our project team will address these environmental impacts by avoiding and minimizing impacts to nontidal wetlands and waters of the United States and designing and installing proper erosion and sediment controls throughout the project area. Strict adherence to erosion and sediment control measures and stormwater permit requirements will mitigate these impacts.

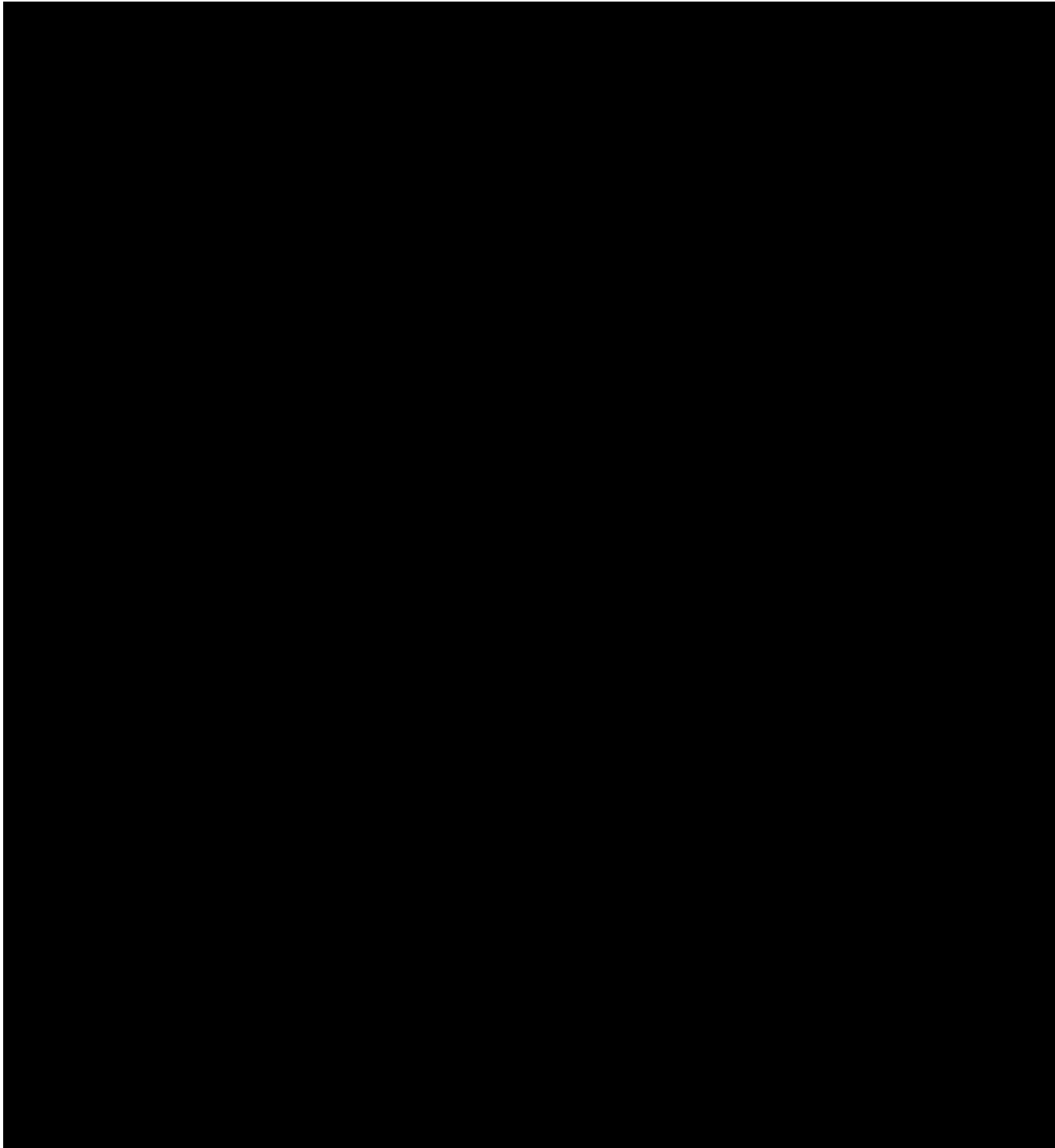
Positive Social, Economic, and Environmental Impacts (IV.D.2.e.)

The proposed Project is anticipated to have positive social, economic, and environmental impacts. Improving water quality in the City and contributing the overall reductions needed to meet the Chesapeake Bay TMDL are the overarching benefits of the project. The project is a cost-effective way to meet the City’s TMDL permit requirements while protecting open space and natural resources. The linear nature of the project offers the potential for a future walking path and the planting of a riparian buffer will enhance the overall viewshed and create a wildlife corridor. The City’s Comprehensive Plan (2018 Update) lays out specific and measurable goals that are in alignment with this project.

Proposed Schedule (IV.D.2.f.) *(Proprietary Information)*

A table with 10 rows and 1 column, all of which are completely redacted with black boxes.





Allocation of Risk and Liability (IV.D.2.g.)

Our Team has a proven track record for providing high quality work on time and within budget. To that end and by the design for this procurement method, Momentum will assume the risk and liability for both the design and construction aspects of the project. This significantly moves risk away from the City of Harrisonburg.

During final contract negotiations, a mutually acceptable schedule will be agreed upon by the Team and the City to ensure timely completion of the project. Terms of proposed incentives and/or liquidated damages can be negotiated into a contract should the City choose. Once the project proceeds, our Team will accept the risk and liability for schedule delays that are within our own control and expect the City to grant an equitable adjustment to the contract for delays beyond the control of our Team.

The single most significant financial risk to an Owner could be default by the Contractor. Momentum will provide surety in the form of Performance and Payment Bonds to guarantee satisfactory completion of the work and payment of all subcontractors and suppliers. Should Momentum default on the contract or otherwise fail to pay its subcontractors and suppliers, the Surety will assume the outstanding contractual obligations to the City, and the subcontractors and suppliers to ensure the project will be completed.

Furthermore, a three (3) year guarantee and warrantee will be in effect upon completion of the work. Any outstanding or persisting issues will be remedied by the project Team during the three-year monitoring period.

Ownership and Operational Assumptions & Restrictions (IV.D.2.h.)

Once the Blacks Run Stream Restoration is completed, approved and pollutant reduction credit is validated, the City will have full ownership of the facilities and will be responsible to operate and maintain the system. However, Momentum will guarantee the work for three (3) years upon the completion of the work. Any outstanding or persisting issues within that period will be remedied by the project Team.

Phased or Partial Openings (IV.D.2.i.)

Our overall goal is to meet the City’s desired goals in a sequence that benefits the City and as agreed to by logical design and construction sequencing. Our current Team approach is to design and construct this project in one two consecutive phases with the potential to complete the project in one phase, if necessary. However, we understand that certain constraints, legal, financial, or regulatory, may require additional alternatives to the project phasing. Our Team is prepared to address the design and construction of the project, and project options and alternates, as preferred by the City. The City can assume beneficial use of each project section as they are completed and accepted by the City.

Standards (IV.D.2.j.)

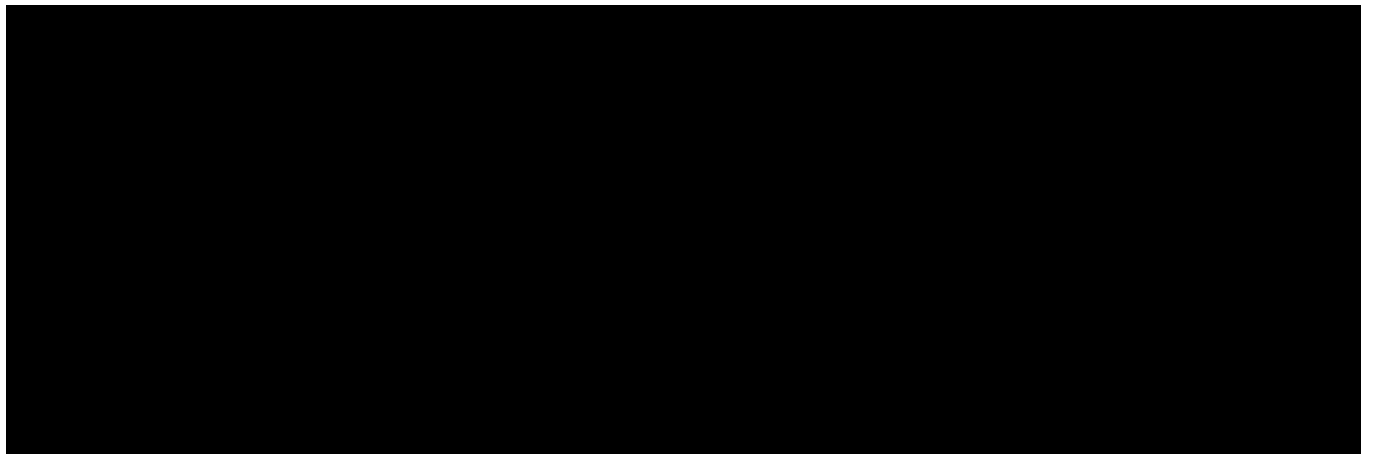
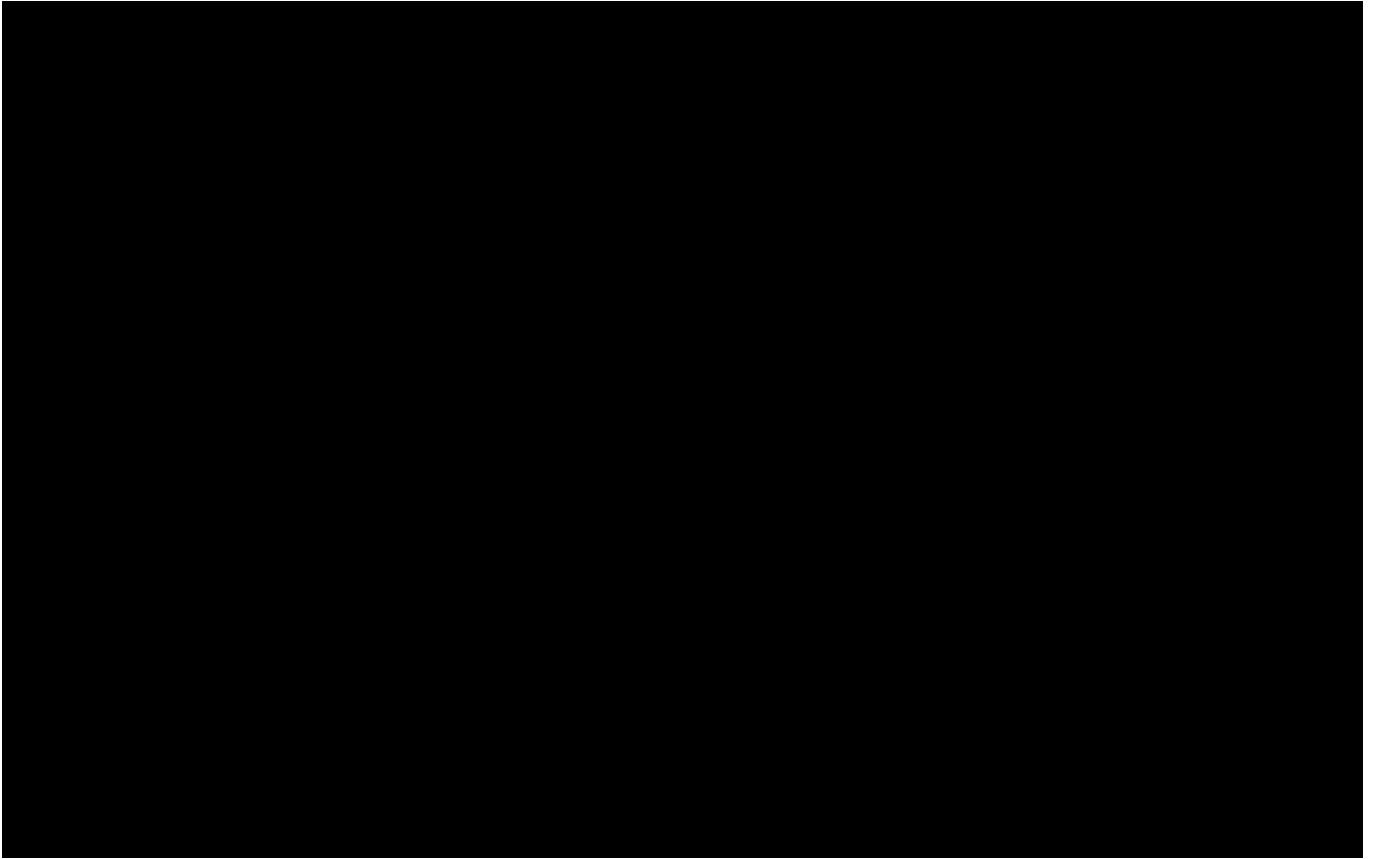
The Project will be designed and constructed in accordance with the requirements of planning and permitting documents and comply with all standards and specifications for similar projects including City of Harrisonburg’s site development guidelines for stormwater management, erosion and sediment control, and design and construction standards. Specifically, this project will be developed in accordance with the City of Harrisonburg Design & Construction Standards Manual, Chesapeake Stormwater Network’s Expert Panel Report to Define Removal Rates for Individual Stream Restoration Projects, and all associated Virginia DEQ and Army Corps of Engineers rules and regulations for stream restoration.

Contingencies (IV.D.2.k.)

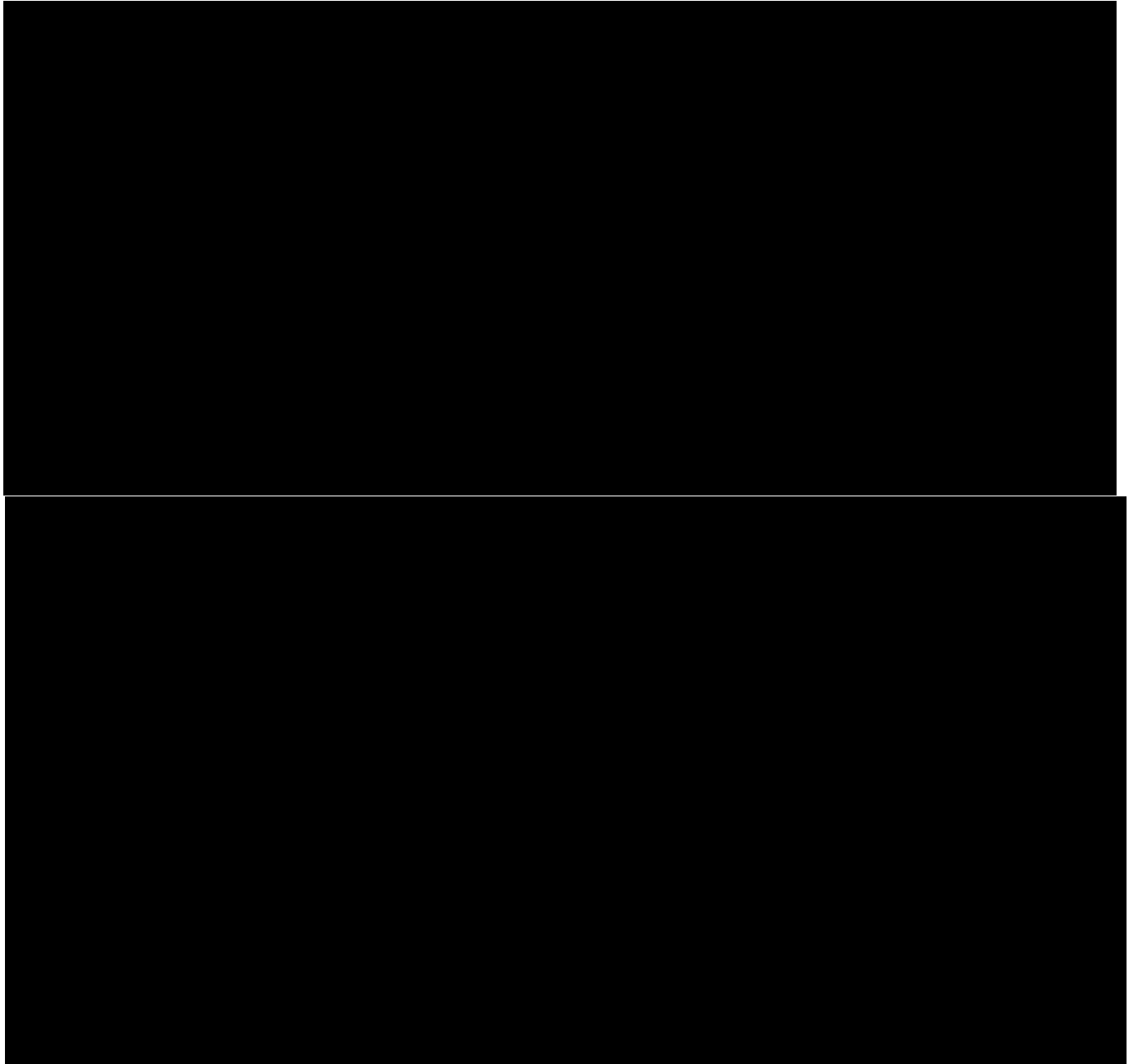
Elements of the restoration design are dependent on the desires of the City of Harrisonburg. Therefore, the conceptual configuration is considered preliminary in order to establish a proposal price. However, our team has a high degree of confidence in the technical feasibility, efficacy and constructability of the project, options and alternates. The final configuration and pricing of these facilities will be based on efforts performed during an Interim Agreement of the PPEA project and will incorporate comments and desires of the City of Harrisonburg.

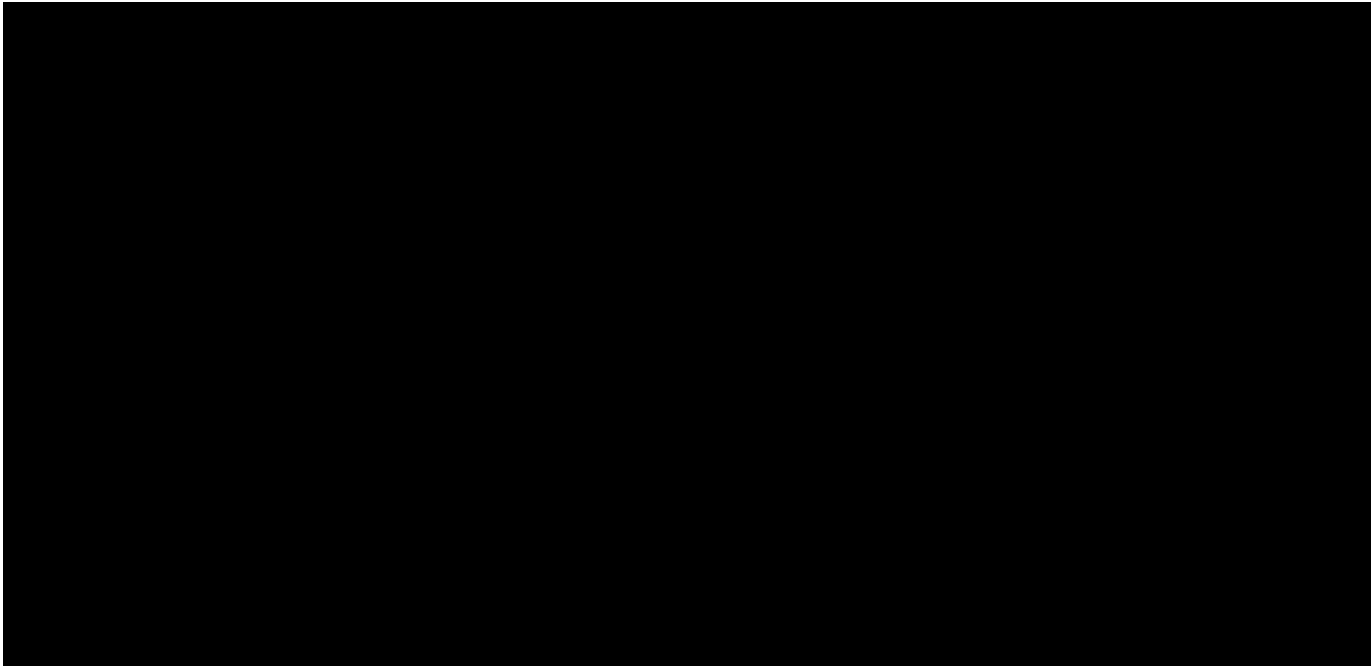
In order for our team to meet and/or exceed our estimated project schedule, all regulatory agencies and/or City staff must commit to meeting review and approval deadlines in order for this project to be successful as it relates to our estimated schedule.

SECTION 3. PROJECT FINANCING (*PROPRIETARY INFORMATION*)



Development, Financing, and Operation Plan (IV.D.3.b.) *(Proprietary Information)*





List and Discussion of Assumptions (IV.D.3.c.)

The Project Team assumes that the City will provide 100% of the funds required for the project through the various funding sources available to projects of this nature, including the Stormwater Utility Fund.

Our Team has made the following assumptions regarding this PPEA proposal:

1. The Project Team assumes that the City will provide 100% of the funds required for the project through the various funding sources available to projects of this nature.
2. We currently do not anticipate, or have considered in this proposal, third party utility conflicts, such as cable, telecommunications, power, or gas. Our primary objective is avoidance of these utilities. Upon entering the interim agreement, we will conduct a thorough survey of the existing utilities, identify any potential conflicts, and develop an avoidance or mitigation plan. We have assumed that utility relocation will not be necessary.
3. We have assumed that no cultural resources or threatened/endangered species surveys will be necessary.
4. We have assumed that the only applicable time of year restriction will be for the Northern long-eared bat, which may limit tree clearing from June 1 to July 31.
5. The Project Team assumes that the Project will be designed and implemented under current guidance from the Chesapeake Bay Program's Expert Panel Report to Define Removal Rates for Individual Stream Restoration Projects, and all associated Virginia DEQ and Army Corps of Engineers rules and regulations for stream restoration. Any changes to the current guidance may require a reconsideration of costs and pollutant reduction crediting.

Risk Factors (IV.D.3.d.)

First and foremost, by entering into a design-build contract for the work, the City of Harrisonburg significantly reduces its risk by eliminating its exposure to increased construction costs and delays resulting from design errors and omissions. The Team will work closely with the City of Harrisonburg and other project stakeholders to identify any problems during the design phase. These problems will be dealt with and solutions found prior to the start of construction.

As previously stated, the single most significant financial risk to an Owner could be default by the Contractor. Momentum will provide surety in the form of Performance and Payment Bonds to guarantee satisfactory completion of the work and payment of all subcontractors and suppliers. Should Momentum default on the contract or otherwise fail to pay its subcontractors and suppliers, the Surety will assume the outstanding contractual obligations to the City, and the subcontractors and suppliers to ensure the project will be completed.

Local, State, or Federal Resource Commitments (IV.D.3.e.)

As previously noted, we propose to utilize The City of Harrisonburg's Stormwater Utility Fund for the development of the Project. It is assumed that other improvements or betterments sought by the City, that the City will use local, state or federal funds commonly used to fund capital improvement and maintenance projects of this nature. The City will be responsible for monthly progress payments submitted by Momentum and mutually agreed to by the City. The progress payments will be submitted monthly with payment due within 30 days. The project has been phased in an attempt to keep progress payments in line with available funding.

Based on the estimated total of the stormwater utility fund, the project Team does not contemplate seeking additional funds for project financing from any local, state or federal sources to finance the design or construction of the project and other improvements.

Other local, state and federal commitments and resources relevant to the project requested by this Team are as follows:

City of Harrisonburg shall:

1. Post public notices and hold public hearings during the PPEA Review and Selection Process an prior to entering into a Comprehensive Agreement with the preferred provider.
2. Provide access during the design phase and prior to the start of the Construction Phase.
3. Review the design documents and issue necessary permits at the conclusion of the Design Phase and prior to the start of the Construction Phase.
4. Periodically inspect the work during the construction phase.
5. Review the design documents and issue stormwater and land disturbing permits at the conclusion of the design phase and prior to any land disturbing activities.
6. Attend meetings and provide input during the Design, Construction, and Monitoring Phases.

The City of Harrisonburg Police and Fire Department may be requested to

1. Assist with loss control by increasing patrols in areas where stored materials and equipment are staged and stored
2. Coordinate or suspend training activities in work areas adjacent to the project boundaries
3. Assist with securing the project perimeter boundaries from trespassers and other users

The Commonwealth of Virginia shall:

1. Issue a Virginia Stormwater Management Program (VSMP) permit prior to the start of any land disturbing activities.

The Virginia Marine Resources Commission and the U.S. Army Corps of Engineers shall:

1. Provide coverage under a VMRC permit and the Nationwide Permit for any proposed wetlands or other waters of the United States impacts.

Third Party Financing Commitments (IV.D.3.f.)

There are no known third-party revenue sources associated with this project.

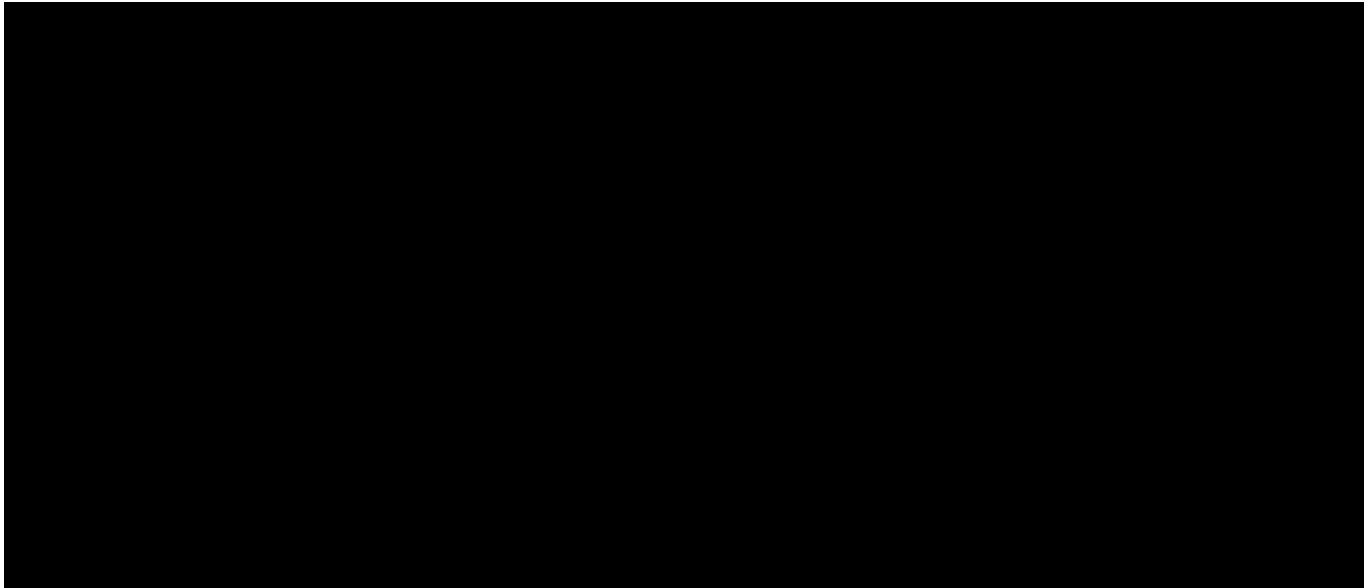
Tax-Exempt Financing (IV.A.3.g.)

No known aspect of the project will disqualify the project from obtaining tax-exempt financing.

SECTION 4. PROJECT BENEFIT AND COMPATIBILITY

Social, Economic, and Environmental Benefits (IV.D.4.a.) *(Proprietary Information)*

Providing the City's citizens and visitors with improved water quality is the overarching benefit of the Blacks Run Stream Restoration project. Primarily the benefits are the protection of open space and natural resources.



Social Benefit – Restored streams are more attractive than degraded ones, particularly for social and recreational activities such as walking. The project has the potential to support a walking path upon the completion of construction. The restored reach and associated native riparian planting will also offer an opportunity for plant lovers and local photographers to enjoy the reach. In addition, the project offers a tangible project that exemplifies the positive impact of the stormwater utility fee.

Environmental Benefit – The Blacks Run TMDL study identified sediment as a primary stressor adversely affecting benthic organisms. By addressing the eroding, the streambanks and prevent future accelerate erosion, the Project will be an important contribution to the Blacks Run TMDL Implementation Plan. In addition, by protecting a valuable riparian corridor, creating pocket wetland and planting a buffer along Blacks Run, the project will greatly reduce soil erosion and will aid in filtering pollutants caused by road and development run-off before they enter the stream.

Private or Public Support or Opposition (IV.D.4.b.)

There is no known general public support or opposition for the Project. It is our understanding the Project has been previously identified by the City of Harrisonburg Public Works Department as a good candidate for stream restoration given the location on publicly-owned land, the observable restoration need, and the cost effectiveness of sediment and nutrient reductions.

Public and Stakeholder Involvement (IV.D.4.c.)

Our Design-Build Team will prepare for and conduct a public meeting (or meetings) on a date (or dates) designated by the City to develop consensus and support from citizens, community members, business and other stakeholders. The overall timeline would need to be reviewed and mutually agreed on by the Team and the City.

Our Team will work closely with the City and City departments to ensure the final design takes into account and carefully considers ownership and operational challenges and costs. In order to gain project acceptance in the shortest time possible, we would like to develop a project team made up of key City staff (and community members if necessary) to assist in the final design and approval of the project.

Attracting and Maintaining Industries and Businesses (IV.D.4.d.)

Stormwater management, including stream restoration, has become a multi-billion-dollar market in the United States. Growing investments towards water infrastructure and management systems, and increasing focus on green stormwater management can fuel the City’s stormwater management market and maintain existing engineering, construction, and planting contractors, while attracting new businesses to plan, implement and monitor similar projects. Funding the Blacks Run Stream Restoration and Nutrient Reduction Project further demonstrates the City’s commitment to maintaining and improving local water quality within the City, the Blacks Run watershed, and downstream receiving waters.

Compatibility with City’s Comprehensive Plan (IV.D.4.e.)

As stated in the City’s comprehensive plan, the City of Harrisonburg presents its vision for the future as follows: The City of Harrisonburg – where citizens are inspired to work together to create a great place to live, to raise a family, to learn, to work and to prosper. The Blacks Run Stream Restoration and Nutrient Reduction Project helps to accomplish the vision by helping to improve the environment and manage stormwater.

The project is most compatible with items discussed in in Chapter 10 (Environmental Stewards and Sustainability) and Chapter 13 (Community Infrastructure, Services, Safety, and Health) of the City’s 2018 Comprehensive Plan. Chapter 10 discusses water quality and the TMDL program, including the Blacks Run TMDL. In addition, the Chapter outlines the objective to protect and increase tree canopy cover in the city (Objective 11.5). Chapter 13 mentions the City adopted Stormwater Improvement Plan that identifies projects to meet MS4 permit requirements as well as opportunities for public-private partnership to manage stormwater. The Blacks Run Stream Restoration and Nutrient Reduction Project will help to manage stormwater, contribute to the Blacks Run TMDL Implementation Plan, and increase tree canopy cover with riparian buffer planting.

DBE Participation Plan (IV.D.4.c.)

Momentum Earthworks and Ecosystem Services are both Virginia Department of Minority Business Enterprise (DMBE) Certified SWaM firms. In addition to already utilizing these SWaM firms, we will continue to seek other subcontracting and material procurement opportunities that will allow greater participation by SWaM firms.

Attachment A. Staff Resumes

When Ben Sweetland quoted “Success is a Journey, not a destination” He struck a harmonic balance with leaders everywhere including Hans Harman President of Momentum Earthworks. Hans began to develop a passion for the built world during a 5-year period in Jackson Wyoming after completing undergraduate studies in business. He moved to Wyoming with a business degree but completed graduate course work in fly fishing for trophy trout, as well as skiing powder! In Wyoming Hans was introduced to great design and modern thinking and saw that certain well thought out spaces could inspire, change a mood, or set a stage for a great home, entertainment venue, or workplace. Hans loves the construction and development process because of its challenges and continual change, no two projects are the same, there is always a new angle, twist, or turn, and to succeed it takes patience and perseverance. Now as a husband and father of 3 Hans continues to cultivate that passion in both personal and professional life.

In 2008 Hans found his way home to his native Virginia to lead a new vision that could be integrated with his families past formulas for success. Hans has quickly been recognized for his talent and passion receiving both local and national recognition for some of his work. Hans has also been a local leader in the emergence of LEED construction and green building. He personally oversaw the construction of 3 separate projects at Eastern Mennonite University in 2009-11 that have received LEED certification Hans currently serves as President of the AGC of Virginia Valley District Executive Board. He also serves Shenandoah Valley Builders Association Board, Harrisonburg Downtown Renaissance, and VMRC foundation boards. He is also very involved in several church based and civic organizations. Momentum Earthworks has truly unique diverse tools and relationships which make them competitive. Hans’ goal with every project is to build lasting relationships with the people he works with. In 2017 Hans was recognized as the Harrisonburg Rockingham Chamber’s Entrepreneur of the year, as well as being listed in the Shenandoah Valley Business Journal’s “Top 10 under 40” innovative leaders.

Education & Certifications

EASTERN MENNONITE UNIVERSITY (HARRISONBURG, VA) — BS in Business Administration, 2002
Minors in Marketing and Finance, graduated with high honors (3.96) GPA

Employer Summary

MOMENTUM EARTHWORKS LLC (Harrisonburg, VA) — President and CEO, 7/11 to Present. Completed company asset acquisition in 2011 and have managed all phases of site excavating company. Grew company from 7 FT employees to 30 FT employees and grew revenues over 300% in first 36 months. Roles include new client relationships and business development, financial management, marketing and branding, subordinate training and oversight, estimating and project management.

VELOCITY PROPERTY GROUP (Harrisonburg, VA) — President, 4/09 to Present. Managed all phases of small development company including, zoning and local government relations, property acquisitions, networking, marketing, and branding. Managed all phases of development process.

HARMAN CONSTRUCTION INC. (Harrisonburg, VA) — Construction Project Manager, 4/08 to 7/11 Successfully managed over 40 million dollars of new construction projects, tasks included critical path scheduling, cost control oversight of field supervision, construction contracts and documentation, shop drawing and submittal review.

Notable Projects

- Packaging Corporation of America Plant Expansion Pleasant Valley, VA (2011)
- James Madison University
 - Memorial Hall 2013
 - Newman Lake Dam and Newman Lake Trail 2014
 - Gibbons Hall Utilities Phase 1 and Phase 2 2015
 - Grace St. Student Housing
- Town of Timberville water and sewer improvements (2013)
- Town of Broadway Streetscape and sidewalk improvements (2013)
- Crozet Library, Crozet VA targeted for LEED Gold (2013)
- Campus View Condominiums Harrisonburg VA (2013)
- Valley Pediatrics Medical Office Building, Verona VA (2013) and Ph. III 2016
- Truck Thermo King Headquarters, Harrisonburg VA (2014)
- Quaker Steak and Lube Restaurant, Harrisonburg VA (2011)
- Coyote Run Subdivision Broadway, VA (2013)
- Eastern Mennonite University
 - Cedarwood Dormitory LEED Gold (2008)
 - Elmwood Dormitory LEED Gold (2010)
 - Maplewood Dormitory LEED Gold (2010)
 - Performing arts and theater renovation (2009)
- 17th and Gordon Apartments, Charlottesville VA (2010)
- Wolfe Modern Townhomes Harrisonburg VA (2010)
- Cargill Dayton Ground Turkey plant Expansion, Dayton, VA (2008)
- Smithsonian Institute Utility Upgrade Front Royal, VA (2015)
- Town of Broadway Street Improvements (2014/2015)
- Harrisonburg City Hall (2014/15)
- Augusta Health Stuarts Draft Medical Center
- University Center Harrisonburg

Hard Work. Integrity. Quality. and Fun. These are a few of Momentum's core values that Bobby Shifflett Site Superintendent embodies. Bobby is truly "old school" in the most positive sense of the term and is unfortunately part of a dwindling pool of true "tradesman". Bobby's work ethic and passion for what he does are truly contagious. When most highly effective and successful individuals are interviewed about attributes that have made them who they are almost all of them say that "work" is simply a noun but their success comes from the enjoyment and fulfillment they receive from their craft, and this certainly describes Bobby. If the modern media culture chose to embrace excavation superintendents the way they prop up sports figures, we would compare Bobby to the likes of a John Stockton, continually preparing for the game before he steps onto the court and all of his teammates know to be ready for the ball as soon as the game starts. Bobby is consistently challenging himself and others to outperform their achievements of the day or week before. If he moves 10,000 yards of dirt today, he wants to move 12,000 yards tomorrow, he truly reflects our name "Momentum".

Bobby travelled far and wide in his early career working all over the east coast for Atlantic Coast Contractors a company specializing in utility installation of all types. He even oversaw a project that included **40 miles** of sewer piping in Lincoln County North Carolina! After the unfortunate and untimely death of his young wife Bobby was forced to move closer to home as he found himself a single parent of 3 youngsters. He then flourished as a site superintendent for Falconer Construction for over 16 years working on some very significant projects. We are extremely blessed to have Bobby on the Momentum team.

Bobby resides on a small farm in Shenandoah where you will find him doing what he loves... **working!** When Bobby does slow down for a few days he enjoys spending time outside camping, fishing, and riding horses. He is also very proud of his three children and grandchildren that reside in the Harrisonburg area.

Education & Certifications

Elkton High School (Elkton, VA) — **General Studies**, 1978
OSHA 10 Hour Certification

Employer Summary

MOMENTUM EARTHWORKS. (Harrisonburg, VA) — **Project Superintendent**, 4/12 to Present Daily management of 27 FT field employees at Momentum Earthworks. Scheduling, Project coordination, specializes in grading and site utilities.

FAULCONER CONSTRUCTION (Charlottesville, VA) — **Project Superintendent**, 1991-2008. Daily management of 3-30 FT field employees, grading, and site utilities

ATLANTIC COAST CONTRACTORS (Richmond, VA) — **Project Superintendent**, 1983-1991. Managed all phases of significant utility and trenching projects including slip lining, pipe bursting, sewer rehabs, new installations.

Notable Projects

- Town of Warrenton Sewer Rehab, Warrenton VA
- University of Virginia Scott Stadium Expansion, Charlottesville VA
- Quantico Marine Base Sewer Rehab, Stafford VA
- Lincoln/Mecklenburg county sewer rehab, Lincoln/Mecklenburg County NC
- National Ground Intelligence Center, Charlottesville VA
- Rt. 29 North Expansion, Charlottesville to Ruckersville VA
- Redwood Lakes 300 lot subdivision, Culpeper VA
- Campus View Condominiums, Harrisonburg VA
- JMU Memorial Hall addition
- City of Harrisonburg East Market Street Waterline Extension
- Truck Thermo King Harrisonburg VA
- Harrisonburg City Hall, Harrisonburg, VA
- Aldi Grocery-Waynesboro, VA
- Augusta Health Center-Stuarts Draft, VA
- North End Greenway, Harrisonburg VA
- University Center Retail Harrisonburg, VA

Drew is a life-long resident of Rockingham County, Virginia. Growing up on a farm, he started his experience with operating equipment and cultivating the earth at an early age. Drew is an avid sports competitor, and especially enjoys soccer, track, basketball and baseball. He received 10 letters for competition in high school sports. This gave him a strong background in hard work, competition, leadership, and perseverance.

The day after Drew turned 18 he was contacted by Hans Harman about the possibility of doing field work for Momentum Earthworks, and he started a few months later. Drew worked at Momentum Earthworks the summers of 2013, 2014, 2015 and 2016 while in college. He worked in the field on many projects during that time and gained valuable experience and knowledge of the construction and excavation industry. Management saw great potential in his abilities and in late 2016, he was transitioned from the field to the office as an Estimator.

Drew is a driven professional. He brings a positive attitude, dependability and efficiency to all of his projects. Drew brings a unique perspective to his role as an Estimator because he can utilize his knowledge and experience from his time working in the field. Drew looks to build lasting relationships through his work.

Education

Graduate of Eastern Mennonite University (2012)

Working on a BA in Business Administration from Eastern Mennonite University

Notable Projects

- North End Greenway/Blacks Run Stream Restoration
- Merck B89C, Cold Storage
- Bridgewater Fields
- Dairy Central Phase I and II
- Smithsonian Institute, Front Royal
- Crozet Library
- Hollymead Town Center
- Signature Aviation, Charlottesville airport
- Campus View Apartments, Harrisonburg

Elmer (Bubby) learned high standards for himself and his work growing up on a farm in Augusta County. His attention to detail is well known by anyone who has worked with him. His philosophy is “if you attempt to do something right, it should be as close to perfect as you are capable of achieving.” His work technique and drive come from being part of a family with an artistic bent, who celebrated craftsmanship. He also brings his 15 years of martial arts training to his approach to work, visualizing and mentally preparing for each task beforehand.

Bubby takes pride in completing projects, and enjoys when others take note of excellent workmanship, which they often do. One recent satisfied customer noted that Bubby and the Momentum team had “knocked it out of the park” on a project and that he had never seen the survey of finished elevations come back so close to specifications.

Bubby is not all work though. When asked what he is most proud of Bubby pivots to talking about his adult daughter. For him family is how he keeps everything in balance.

Education & Certifications

BUFFALO GAP HIGH SCHOOL (SWOOPE, VA) — **General Studies**
BLUE RIDGE COMMUNITY COLLEGE (WEYERS CAVE, VA) – **Computer Systems**
OSHA 10 Hour Certification
Erosion & Sediment Control Contractor
Responsible Land Disturber (RLD)

Employment Summary

MOMENTUM EARTHWORKS. (Harrisonburg, VA) — **Foreman**, 6/15 to Present

HOWDYSHELL EXCAVATING (Mt Solon, VA) — **Lead Operator**, 15 years Heavy equipment operator, site development, grading and utilities installation. Daily management of field employees, grading, and site utilities

A&J DEVELOPMENT AND EXCAVATION (Mt Crawford, VA) — **Heavy Equipment Operator**, 2 years Heavy equipment operator, site development, grading and utilities installation

MOBILITY SYSTEMS INC (Bridgewater, VA) — **Quality and Production Supervisor**, 16 years Direct product testing throughout production cycles. Monitor performance of quality control systems to ensure effectiveness and efficiency. Supervise all staff engaged in testing activities

Notable Projects

- Northend Greenway, Harrisonburg VA
- Blacks Run Stream Restoration, Harrisonburg VA
- Getaway DC Phases 1,2,3,4, Standardsville, VA
- Port Road Emergency Services, Harrisonburg VA
- Hyatt Hotel, Harrisonburg VA
- Dairy Central Phase 1, Charlottesville, VA

Logan is a life-long resident of Harrisonburg, Virginia. He is an outdoors enthusiast who enjoys fishing, snowboarding and spending time at Smith Mountain Lake. His grandfather introduced him to woodworking at an early age. This hobby gave him an interest in building and construction. While in college, he spent four summers working as a Recreation Manager at Massanutten Resort in McGaheysville, Virginia.

Logan joined Momentum Earthworks in 2017 as a Project Manager. He enjoys the challenges that the construction and excavation industries bring. He is a problem solver and “thinks outside the box” to get things done. He feels a great sense of accomplishment watching projects from start to finish. He has proven himself to be an asset to Momentum Earthworks with a positive “can do” attitude, his professionalism and a strong work ethic.

Education

Graduate of Spotswood High School

Graduate of Bridgewater College with a Bachelor’s in Business Administration with a concentration in Management

Certifications

Responsible Land Disturber (RLD)

Notable Projects

- Campus View Apartments Phase IV (2017)
- Get-A-Way DC Phase 2 (2017)
- Blue Ridge Community College Bio-Science Building (2018)
- Autozone (2017)
- UVA Board Head Inn Renovation (2017)

References (Professional)

- Mr. Ed Blackwell- Blackwell Engineering, Harrisonburg, VA 540-432-9555
ed@blackwellengineering.com
- Mr. Craig Kotarski- Timmons Group, Charlottesville, VA 434-964-7148
Craig.Kotarski@timmons.com
- Mr. Bill Moore- Balzer and Associates, Harrisonburg, VA 540-294-0258 wmoore@balzer.cc

References (Customer/Contractor)

- Mr. Guy Blundon-Davis Mill LLC- Orange VA 804-248-2205 c blundon@hotmail.com
- Mr. Louis Lopez “LJ” Principal-Milestone Partners Charlottesville, VA
llopez@milestonepartners.com 434-409-1005
- Mr. Tyler Atkins DPR Construction Richmond, VA 804-516-8832 TylerAt@DPR.com
- Mr. Thomas Moomaw- Nielsen Construction- Harrisonburg, VA 540-476-0811
tmoomaw@nielsen-inc.com
- Mr. Kyle Obrien, Town Manager- Town of Broadway ,VA 540-896-5152
kdobrien@town.broadway.va.us
- Mr. Wayne Witmer,President- Harman Construction- Harrisonburg, VA 540-434-4459
wwitmer@harmanconstruction.com



ECOSYSTEM SERVICES

KIP MUMAW, PE

Principal Engineer | Team Facilitator

Bio: ecosystemsolutions.us/about/meet-the-team/kip-mumaw/



PROFILE

Kip is a water resources engineer and cofounder of Ecosystem Services. His technical expertise includes ecological restoration design, nutrient and sediment reduction calculations, and modeling. Kip has overseen 38 stream restoration projects.

FOR THIS PROJECT, Kip will serve as a Team Facilitator. In this role, he will ensure that the team has a full understanding of the project goals and technical requirements. He will also be responsible for identifying and providing in-house resources to staff and assist with project troubleshooting to ensure timely processing of quality project deliverables. Kip will also QA/QC all engineering deliverables, including pollutant reduction reporting.

SELECTED PROJECT EXPERIENCE

- 2018-2020 Meadow Creek Stream Corridor Restoration (Charlottesville, VA): Project Management, Assessment, Design, Construction Oversight, Monitoring. **Tags: Failure Analysis, Urban Stream Restoration, The Nature Conservancy**
- 2018-2020 River Run Dam Removal and Stream Restoration (Albemarle County, VA): Project Management, Design, Construction Oversight. **Tags: Urban Stream Restoration, Local Government, MS4 Permit Compliance, Grant Funded**
- 2018-2019 South Fork Shenandoah River Stabilization (Elkton, VA): Project Management, Grant Administration, Assessment, Design, Construction Oversight. **Tags: Big River Restoration, TMDL, NRDC, SLAF**
- 2018-2020 Washington Park-Lick Run Stream Restoration Project (City of Roanoke, VA): Team Facilitator/Engineer on Record. Assessment, Design, Construction Oversight. **Tags: Urban Stream Restoration, Local Government, MS4 Permit Compliance, Grant Funded**
- 2018-2020 Northend Greenway-Blacks Run Stream Restoration (City of Harrisonburg, VA) Team Facilitator/Engineer on Record. Assessment, Design, Construction Oversight. **Tags: Urban Stream Restoration, Local Government, MS4 Permit Compliance, Pollutant Reduction Reporting**

Virginia Office
1739A Allied St., Charlottesville, VA

E: kip@ecosystemsolutions.us

C: 540.239.1428

Years with Ecosystem Services: 9

Years of professional experience: 13

EDUCATION

B.S. Civil & Environmental Engineering, Virginia Polytechnic Institute and State University

Virginia Natural Resource Leadership Institute, University of Virginia

TRAINING & CERTIFICATION

Professional Engineer, VA, MD, NC, WV, PA

Certified Combined Administrator, DEQ Stormwater Management

River Course 302 – Hydraulic Modeling for Stream Restoration, NCSU

PROFESSIONAL SPOTLIGHT

Recommendations of the Expert Panel to Define Removal Rates for Erosion & Sediment Control Practices (2013), CBP Expert

Stream Restoration Verification Workgroup (2019), CBP Co-Author

Chesapeake Bay Stormwater Retreat (2019, 2017), Presenter, Panel Member

American Ecological Engineering Society Conference (2017), Presenter



ECOSYSTEM SERVICES

JON ROLLER, PSS

Principal Environmental Scientist

Bio: ecosystems-services.us/about/meet-the-team/jon-roller/



PROFILE

Jon is Principal Environmental Scientist and Cofounder of Ecosystem Services. He oversees field operations and assists the firm's clients with navigating the vast regulatory permitting framework for restoration projects, including nutrient and mitigation bank projects. He manages sales for both mitigation and nutrient credits.

FOR THIS PROJECT Jon will serve as the lead for field operations and permitting. In this role, Jon will QA/QC all permit applications and monitoring reports and conduct site visits with regulatory staff.

SELECTED PROJECT EXPERIENCE

- 2019-2020 Linville Creek Stream Restoration Nutrient Bank (Private Landowner), Assessment, Permitting, Landowner Outreach. **Tags: Stream Restoration, Pollutant Reduction Reporting, Bank Establishment**
- 2018-2020 Quantico Creek Stream Restoration Phase I (Town of Dumfries, VA), Project Management, Assessment, Permitting, Construction Oversight. **Tags: Urban Stream Restoration, SLAF, Design-Build**
- 2018-2020 Mountain View Drive Stream Restoration (City of Harrisonburg, VA), Project Management, Assessment, Permitting. **Tags: Urban Stream Restoration, SLAF, Local Government**
- 2017-2020 Washington Park-Lick Run Stream Restoration (City of Roanoke, VA), Assessment, Permitting. **Tags: Urban Stream Restoration, SLAF, Local Government**
- 2018-2020 City Park and Mathis Park Stream Restoration (City of Hopewell), Project Management, Assessment, Permitting. **Tags: Urban Stream Restoration, SLAF, Local Government**
- 2018-2020 Northend Greenway-Blacks Run Stream Restoration (City of Harrisonburg, VA) Landowner Outreach, Permitting. **Tags: Urban Stream Restoration, Local Government, MS4 Permit Compliance, Pollutant Reduction Reporting**

Virginia Office

1739A Allied Street, Charlottesville, VA

E: jon@ecosystems-services.us

C: 540.578.4296

Years with Ecosystem Services: 9

Years of professional experience: 16

EDUCATION

B.S. Crop Soil and Environmental Science, Virginia Polytechnic Institute and State University

TRAINING & CERTIFICATION

Professional Soil Scientist, Virginia (#312)

Master Alternative Onsite Soil Evaluator, Virginia (#1363)

Certified Nutrient Management Planner (Urban/Ag), Virginia (#593)

DEQ ESC Inspector, Virginia (#4131)

PROFESSIONAL SPOTLIGHT

Qualified Wetlands Expert (2008 – Present)

Certified Prescribed Burn Manager, Department of Forestry (2005-Present)

Virginia Wetlands Law Seminar (2020), Featured Speaker, "Understanding Federal and Virginia Wetland Laws and Enforcement,"



ECOSYSTEM SERVICES

KYLE ASHMUN

Ecological Restoration Specialist | Design Lead

Bio: ecosystems-services.us/about/meet-the-team/kyle-ashmun/



PROFILE

Kyle is an ecological restoration specialist with technical expertise in stream restoration assessment, design, and construction.

FOR THIS PROJECT, Kyle will serve as the Lead Stream Restoration Designer. In this role, Kyle will be responsible for coordinating across disciplines to ensure the quality of technical reports and modeling results to ensure the production of effective construction plans. In addition, Kyle will assist the PM during all phases of construction and asbuilt reporting.

Virginia Office

1739A Allied St., Charlottesville, VA

E: kyle@ecosystems-services.us

C: 443.875.7804

Years with Ecosystem Services: 6

Years of professional experience: 14

SELECTED PROJECT EXPERIENCE

2019 - 2020 Mathis Park Stream Restoration (City of Hopewell, VA). Project Management, Design, Construction Oversight. **Tags: Urban Stream Restoration, Parks**

2018 - 2020 Mountain View Drive Stream Restoration (City of Harrisonburg, VA). Assessment, Design, Construction Oversight. **Tags: Urban Stream Restoration, Karst**

2018-2020 Quantico Creek Stream Restoration (Dumfries, VA). Assessment, Design, Construction Oversight. **Tags: Urban Stream Restoration, SLAF, American Shad Habitat**

2018-2020 McGill Run Stream Restoration – State Highway Administration Full Delivery (Baltimore County, MD), Assessment, Design, Permitting, Construction Oversight. **Tags: TMDL, Trout Habitat**

2017-2019 Sandyford Mitigation Bank (Prince Edward County, VA). Assessment, Design, Construction Oversight. **Tags: Stream and Wetland Restoration, Mitigation Banking**

2016 - 2020 Cedar Creek Stream and Wetland Restoration (Warren County, VA). Assessment, Design, Construction Oversight, Asbuilt, Monitoring. **Tags: The Nature Conservancy, Historic Battlefield, VDOT, Wetland Restoration, Stream Restoration, Wood Turtle Habitat**

EDUCATION

B.A. Environmental Science,
Randolph Macon College

TRAINING & CERTIFICATION

Professional Certificate in Geographic Information Systems, George Mason University

River Courses 101, 201, 302, 401 – Stream Restoration Institute, NCSU

Sediment Transport in Stream Assessment and Design, Utah State University

PROFESSIONAL SPOTLIGHT

The Ivy Creek Restoration Project highlights Kyle’s commitment to designing multi-benefit projects that focus on creating aquatic and terrestrial habitat improvements, while also maximizing water quality benefits and pollutant reductions. During construction, Kyle directed efforts to source and salvage onsite woody and streambed material to retain a source of carbon and build invertebrate habitats and refugia.



AMY LONGCRIER, PE

Senior Water Resources Engineer

Bio: ecosystems-services.us/about/meet-the-team/amy-longcrier/



PROFILE

Amy is a Senior Water Resources Engineer specializing with technical expertise in stream restoration using natural channel design (NCD) principles. Her approach to design is to balance the bio-physical and socio-political conditions at each site by prioritizing communication and teamwork.

FOR THIS PROJECT, Amy will support the PM and Design Lead to QA/QC all engineering deliverables from assessment through final design.

North Carolina Office
1 Haywood St., Asheville, NC

E: amy@ecosystems-services.us
C: 828.767.9456

Years with Ecosystem Services: 1
Years of professional experience: 15

SELECTED PROJECT EXPERIENCE

- 2019-2020 Armstrong Creek Restoration (City of Gastonia, NC)
Project Management, hydraulic modeling, and design.
Tags: Urban Stream Restoration

- 2019-2020 Thompson Place Stream and Wetland Mitigation Bank
(Montgomery County, VA)
Wetland restoration design and Stream and Wetland
Restoration plan production. Project includes over 3,000
linear feet of stream and 8 acres of wetlands
Tags: Stream Mitigation, Wetland Mitigation

- 2019-2020 Hopewell Outfall Restoration (City of Hopewell, VA)
Responsible for outfall and gully restoration design,
hydraulic modeling, assessment, and plan production.
Project includes Step-pool or Regenerative Stormwater
Conveyance designs of 9 highly eroding outfalls.
Tags: OGSP, Local Government, TMDL

- 2015-2019 Seven Courts Stream Restoration (Baltimore County,
MD) Design Lead responsible for stream restoration
design, engineering, and plan production. Project
includes restoration of over 3,000 linear feet of highly
eroding urban stream channel with several outfalls,
utility conflicts, and road crossings. (Designed while
working at Biohabitats) **Tags: Urban Stream Restoration,
TMDL**

- 2016-2018 Irvine Nature Center Stream and Wetland Restoration
(Baltimore County, MD) Design Lead responsible for
stream restoration, wetland restoration, engineering,
and plan production as well as permitting and
construction oversight. Project includes restoration of
over 6,800 linear feet of eroding urban stream channel
and restoration of adjacent riparian wetlands. (Designed
while working at Biohabitats) **Tags: Stream Restoration,
Habitat Enhancement**

EDUCATION

B.S. Biosystems Engineering from The University of Tennessee

TRAINING & CERTIFICATION

Professional Engineer, Virginia, Maryland, North Carolina, South Carolina, Georgia, Arkansas

River Course 101 – Stream Morphology Assessment, NCSU

River Course 201 – Natural Channel Design Principles

PROFESSIONAL SPOTLIGHT

American Ecological Engineering Society Conference (2017), Presenter



ECOSYSTEM SERVICES

JASON THOMAS

Ecological Restoration Technician | Drafting Lead

Bio: ecosystems-services.us/about/meet-the-team/jason-thomas/



PROFILE

Jason is an ecological restoration technician. His technical expertise includes, drafting, UAS operations, photogrammetry, and project documentation using videography and photography.

FOR THIS PROJECT, Jason will lead drafting and UAS operations. Jason will complete drafting for the 30%, 60%, 100%, As-built, and Monitoring Plans to ensure that drawings contain all information necessary to describe existing conditions, site grading, erosion and sediment control, and planting. Jason will work with the Lead Designer to QA/QC drawings for clarity and completeness.

Virginia Office

1739A Allied St., Charlottesville, VA

E: jason@ecosystems-services.us

C: 304.415.1062

Years with Ecosystem Services: 3

Years of professional experience: 21

SELECTED PROJECT EXPERIENCE

2017-2019 Blacks Run Restoration & Northend Greenway (Harrisonburg, VA), Task Manager, Drafting, Survey. **Tags: Urban Stream Restoration, MS4 Compliance, Trail Design**

2017-2019 Bolton Branch (Huntly, VA), Task Manager, Drafting, UAS Operations, Survey, photogrammetry, videography. **Tags: Dam Removal, Trout, Stream Restoration**

2016-2019 Washington Park (Roanoke, VA), Task Manager, Drafting, Concept Plans. **Tags: Urban Stream Restoration, Local Government MS4 Permit Compliance**

2016-2019 Kinsey Run (Graves Mill, VA), Task Manager, Drafting, UAS Operations, Photogrammetry, Videography. **Tags: Trout, Stream Restoration**

2016-2018 River Run Stream Restoration (Albemarle County, VA), Drafting, Survey, Videography. **Tags: Urban Stream Restoration, Local Government, NFWF, SLAF**

2016-2018 Liberty Hall (Albemarle County, VA), Drafting, Survey. **Tags: Dam Removal, Urban Stream Restoration**

EDUCATION

B.S. Sociology & Anthropology, West Virginia University

Fisheries Sciences, Oregon State University (post-baccalaureate studies)

TRAINING & CERTIFICATION

2018 Rosgen Basic Survey Course, Asheville, NC

2018 FAA Part 207, Small UAS Remote Pilot Certificate

PROFESSIONAL SPOTLIGHT

Drone pilot expertise applied to riverine environments.

Experience teaching Civil 3D professional courses.



ECOSYSTEM SERVICES

ANNEMARIE ABBONDANZO, MS

Senior Environmental Scientist

Bio: ecosystems-services.us/about/meet-the-team/annemarie-abbondanzo/



PROFILE

Annemarie is a Senior Environmental Scientist with experience in every aspect of restoration from initial assessment through regulatory coordination, construction, and post construction monitoring. She has completed Rosgen Training through Level II.

FOR THIS PROJECT, Annemarie will assist the Project Manager to develop workplans and coordinate teams to ensure that project sequencing supports design and construction schedules. Annemarie will lead field investigations, provide permitting and reporting materials, and assist with subcontractor coordination and monitoring reporting.

SELECTED PROJECT EXPERIENCE

- 2019-2020 Linville Creek Stream Restoration Nutrient Bank (Private Landowner), Project Management, Assessment, Permitting. **Tags: Stream Restoration, Pollutant Reduction Reporting, Bank Establishment**
- 2019-2020 Liberty Hall Stream Restoration (Private Landowner). Project Management, Permitting, Construction Oversight. **Tags: Stream Restoration, Floodplain Reconnection, Dam Removal**
- 2018-2020 Rivanna Prioritization Study and Capacity Building Project (Charlottesville, VA) Project Management, Grant Administration, Outreach, Environmental Reporting. **Tags: NFWF, Watershed Planning, Partnership Development**
- 2018-2020 SH-6 Cedar Creek Design-Build Stream & Wetland Restoration (Warren, Virginia) Project Management, Environmental Reporting, Permitting. **Tags: Design-Build, The Nature Conservancy, Mitigation Bank, Wood Turtle Habitat**
- 2018-2020 Heritage Park Linville Creek Stream Restoration (Broadway, Virginia), Project Management, Permitting, Educational Outreach, Grant Administration, Construction Oversight. **Tags: Public Park, Big River Restoration, Grant Funded, Educational Outreach**
- 2018-2020 Bolton Branch Fish Passage and Stream Restoration (Madison, Virginia) Project Management, Permitting, Construction Oversight, Partnership Development. **Tags: Fish Passage, Culvert Replacement, Floodplain reconnection, Trout Habitat**
- 2018-2020 Washington Park Design-Build Stream Restoration (City of Roanoke, Virginia) Project Management, Permitting, Survey, Construction Oversight. **Tags: Urban Stream Restoration, SLAF, Local Government**

Virginia Office

1739A Allied St., Charlottesville, VA

E: annemarie@ecosystems-services.us

C: 434-987.2422

Years with Ecosystem Services: 4

Years of professional experience: 8

EDUCATION

M.S. Environmental Science and Planning, Johns Hopkins University

B.A. Government | Environmental Science, College of William & Mary

TRAINING & CERTIFICATION

Rosgen Levels I & II: Fluvial Morphology & River Morphology Applications

NC State Aquatic Insect Taxonomy

NC State Stream Morphology Assessment

ESC & SWM Combined Inspector

PROFESSIONAL SPOTLIGHT

Virginia Native Plant Society, Newsletter Editor (2020)

Virginia Lakes & Watershed Assoc (2017), Presenter, "Stream Restoration Nutrient Banking"

Chesapeake Watershed Forum (2019), Presenter, "Creating Strategic Initiatives".

EcoStream Conference (2016), Presenter, "Working Collaboratively on Multi Benefit Projects".



ECOSYSTEM SERVICES

DAN RICHARDSON

Environmental Scientist

Bio: ecosystems-services.us/about/meet-the-team/dan-richardson/



PROFILE

Dan is an environmental scientist with 8 years experience in waters of the U.S. delineations, Clean Water Act permitting, and threatened and endangered species surveys including endangered bat, fish, reptile, and plant surveys.

He works to provide accurate assessments and data to facilitate engineering and design for ecological restoration projects.

FOR THIS PROJECT, Dan will assist the Project Manager to provide permitting documentation, mapping, and field data collection for assessment and monitoring.

Virginia Office
1739A Allied St, Charlottesville, VA

E: dan@ecosystems-services.us

C: 434-953-0735

Years with Ecosystem Services: 3

Years of professional experience: 8

SELECTED PROJECT EXPERIENCE

- 2019- Hopewell Stream Restoration Projects (Hopewell, VA), Delineation, Permitting, Survey, BANCS Assessment, Tree Inventory, Invasive Species Inventory. **Tags: Urban Stream Restoration, Parks, Local Government**
- 2019- Harpine Stream Restoration Nutrient Bank (Rockingham, VA), Delineation, Permitting, BANCS Assessment, Hydrologic Monitoring. **Tags: Nutrient Banking, Stream Restoration, Instream Habitat Creation**
- 2017-2019 Washington Park Stream Restoration (Roanoke, VA), Delineation, Permitting, Tree Inventory, Invasive Species Inventory, Survey. **Tags: Urban Stream Restoration, SLAF, Local Government, Parks**
- 2017-2020 Blacks Run Restoration & Northend Greenway (Harrisonburg, VA), Delineation, Permitting, BANCS Assessment, Hydrologic Monitoring, Survey. **Tags: Urban Stream Restoration, SLAF, Local Government**
- 2020 Warm Springs Farm Nutrient Bank (Warm Springs, VA), Site Assessment, Permitting. **Tags: Nutrient Banking, Reforestation**
- 2017-2019 Ivy Creek Nutrient Bank (Charlottesville, VA), Survey, Riparian Buffer Monitoring, Geomorphology Survey, Hydrologic Monitoring. **Tags: Stream Restoration, Nutrient Banking**

EDUCATION

B.A. Biology, High Point University

TRAINING & CERTIFICATION

Erosion and Sediment Control Inspector, Virginia DEQ

NC SAM Certification Training, North Carolina Association of Environmental Professionals

Wetland Delineation and Regional Supplement Training, The Swamp School, LLC

PROFESSIONAL SPOTLIGHT

Professional Wetland Scientist (PWS) in training

Daniel Pettingill, PLS

Virginia Survey Crew Lead



PROFILE

Dan has 15 years of experience in land surveying and project oversight in Virginia. He has a wide-range of experience as a survey professional and specializes in control, topographic, and stream surveys.

FOR THIS PROJECT, Dan will lead the field surveys and serve as the single point of contact. He will establish control, and provide topographic survey, construction stakeout, and asbuilt survey services.

SELECTED PROJECT EXPERIENCE

- 2019 Washington Park Stream Restoration (City of Roanoke, VA). Mr. Pettingill performed a control network survey and a Geomorphic survey for the Washington Park Project. This was a Build Stream Restoration Project. The total stream length was approximately 700'. The total survey area was approx. 5 acres

- 2019 South Fork Shenandoah River Project (Town of Elkton, VA) Mr. Pettingill performed a control network survey and a topographic survey for the South Fork Shenandoah River Project. The project involved 1500 linear feet including the main stem and back flow channel of the South Fork River. The top survey area included 7 acres.

- 2018 Cedar Creek Project (Strasburg, VA)
Mr. Pettingill performed a control network survey and a topographic survey on the stream corridors. He was also Project Manager for the Shenandoah River Project. This survey consisted of approximately 1,400 linear feet of stream channel and 4.5 acres of topographic data.

139 SLATE HILL RD,
WEYERS CAVE, VA, 24486

E: dan@keemap.com

C: 276.608.2494

Years with SSW: 4

Years of professional experience: 15

EDUCATION

B.S. Geography, 2001

TRAINING & CERTIFICATION

Professional Land Surveyor VA-3267
KY-4046

PROFESSIONAL SPOTLIGHT

Daniel joined the Kee Mapping and Surveying, PA team in June of 2016, where he took on the role of Project Manager. He now runs the Kee Mapping & Surveying office in Damascus, Virginia.

Attachment B. Recent Project Experience



BLACKS RUN RESTORATION & NORTHEND GREENWAY HARRISONBURG, VIRGINIA

Stream Restoration | Greenway Trail Design | Water Quality | MS4

CHALLENGE

Both the tributary and Blacks Run were experiencing lateral and vertical degradation as a response to livestock access/use and an increased volume and magnitude of stormwater runoff due to a rapidly developing watershed. A community lead greenway trail had been conceptually planned and would address a need for safe biking and walking corridors in the northern portion of the City. Restoration would also contribute towards meeting the City’s MS4 permit and local TMDL requirements.

SOLUTION

Both empirical and analytic methods were employed to assess existing and proposed stream morphology, hydraulic and hydrologic processes. 2D modeling was conducted to validate the design conditions and ensure non-erosive conditions. Restoration measures included removing livestock, restoration of two channels, and planting of a mixed meadow-forest riparian corridor. The stream and greenway were designed concurrently to ensure that the path and stream functioned in a mutually compatible way both aesthetically and hydraulically. The greenway was designed to blend with the natural topography and included drainage improvements and a split-rail fence delineating the riparian buffer.

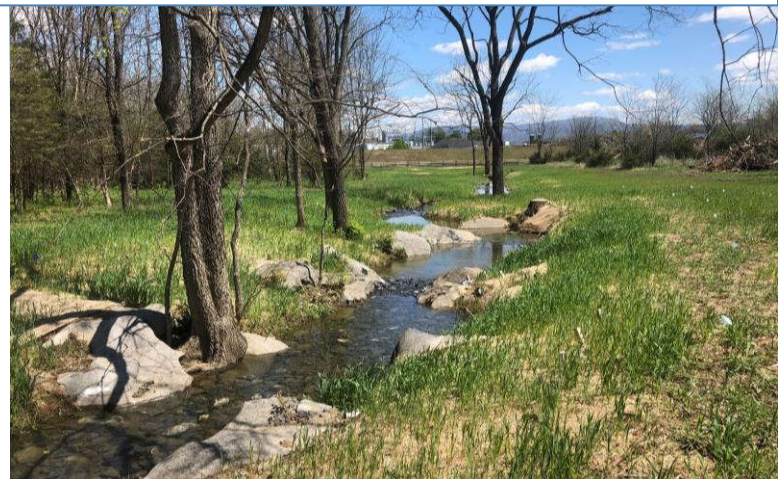
Project Dates: 2017- 2020 (Includes greenway trail construction)
Project Costs: Design \$182,500 | Construction \$1,568,500

SERVICES

- Assessment
- Ecological Restoration Design
- Engineering Design
- Permitting
- Grant Support
- Nutrient & Sediment Reduction Calculations
- Bid Support
- Construction Administration
- Monitoring

CLIENT CONTACT

Rebecca Stimson
Public Works Environmental Compliance Manager
City of Harrisonburg
409 South Main Street
Harrisonburg, Virginia 22801



After

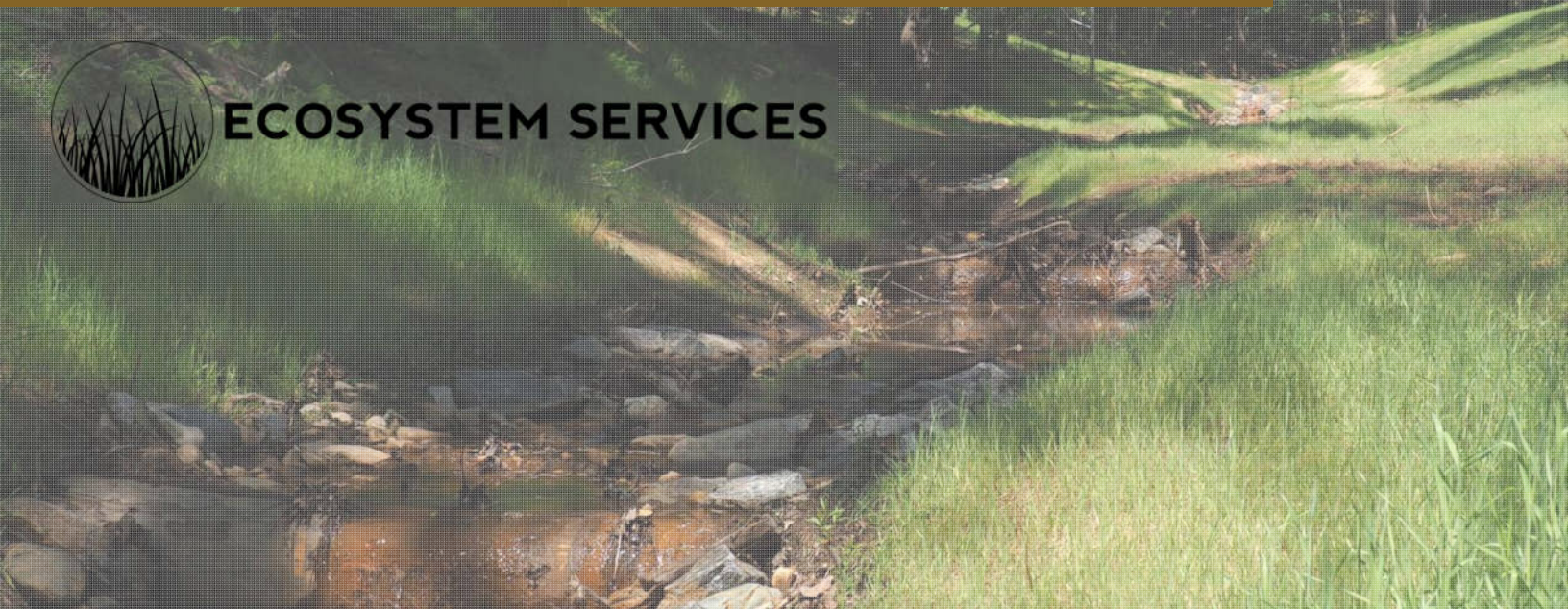


Before

Virginia Office
540.239.1428
1739A Allied Street
Charlottesville, VA 22903

North Carolina Office
828.767.9456
1 Haywood St., 4th Floor
Asheville, NC 28801

See more projects: <https://ecosystems-services.us/projects/>



RIVER RUN DAM REMOVAL & STREAM RESTORATION CITY OF CHARLOTTESVILLE, VIRGINIA

Public Park | Dam Removal | Floodplain Reconnection | Aquatic Habitat

CHALLENGE

Within Pen Park, the project site consisted of an existing, failing dry detention basin, a severely incised downstream channel, and a historic farm pond dam. The stream was eroding laterally along both left and right stream banks. The dam of the historic farm pond had partially breached and was contributing excessive sediment and nutrients to the downstream receiving bodies. The proposed restoration work was a collaborative partnership between Albemarle County and the City of Charlottesville to assist with their MS4 permits and TMDL Action Plans.

SOLUTION

Funding was provided by a grant from the Stormwater Local Assistance Fund (SLAF) through the Virginia Department of Environmental Quality and the localities Stormwater Program fees. The project involved decommissioning the two existing, earthen embankments and restoring the historic channel extending approximately 560 linear feet. The design involved a combination of Priority 1 and 2 restoration, which required excavation or grading of a new channel and filling of the existing channel. Material generated from the dam removal was used to fill the existing channel and trees within the limits of clearing were used for instream grade control structures to create a step-pool channel. The streambank zone was planted with native grasses and the floodplain was planted with grasses, shrubs, and trees.

Project Dates: 2017- 2020 (Includes SLAF funding approval process)

Project Costs: Design \$69,591 | Construction \$344,000

SERVICES

- Site Assessment
- Ecological Restoration Design
- Permitting
- Cost Estimate & Bid Support
- Construction Oversight
- Nutrient & Sediment Reduction Calculations
- Post Construction Monitoring

CLIENT CONTACT

Stavros Calos – Water Resources Engineer
County of Albemarle
401 McIntire Road, Charlottesville, VA 22902
Email: scalos@albemarle.org



After



Before

Virginia Office

540.239.1428

1739A Allied Street

Charlottesville, VA 22903

North Carolina Office

828.767.9456

1 Haywood St., 4th Floor

Asheville, NC 28801

See more projects: <https://ecosystemsolutions.us/projects/>



IVY CREEK STREAM RESTORATION NUTRIENT BANK

Stream Restoration | Nutrient Bank | Natural Channel Design

CHALLENGE

The project property had been maintained as an agricultural pasture property from 2005 to the present day. The existing stream was experiencing vertical instability in the form of eroding banks. Instability was increased by stormwater runoff associated with upstream development activities in combination with steep slopes, and a confined stream corridor. The stream was overrun with invasives, lacked an adequate buffer, and had lost instream habitat diversity and floodplain connectivity.

SOLUTION

The restoration was funded privately by establishing the second nutrient bank permitted by the DEQ to use stream restoration as a method for generating nutrient credits.

The project consisted of restoring four tributaries of Ivy Creek including removal of legacy sediment, development of floodplain benches, and natural channel design elements. Stream energy was dissipated through increasing roughness, increasing flow area, reducing slopes and creating flood plain connection. The restoration design utilized both rock and log structures to provide grade control, transition steep slopes, and deflect erosive flow. Bioengineering measures including toe wood, root wads, and soil lifts were utilized for the dual purpose of stability and habitat creation. The riparian corridor was planted with native trees, shrubs, and grasses.

Project Dates: Mar 2016- May 2017

Project Costs: Design \$105,000 | Construction \$345,329.75

SERVICES

- Nutrient Bank Establishment
- Ecological Restoration Design
- Permitting
- Construction Administration
- Nutrient and Sediment Reduction Calculations
- Success Monitoring

CLIENT CONTACT

Ivy Creek Nutrient Bank, LLC (Private)
Albemarle, Virginia



After



Before

Virginia Office

540.239.1428

1739A Allied Street

Charlottesville, VA 22903

North Carolina Office

828.767.9456

1 Haywood St., 4th Floor

Asheville, NC 28801

See more projects: <https://ecosystemsolutions.us/projects/>



WASHINGTON PARK STREAM RESTORATION CITY OF ROANOKE, VIRGINIA

Design-Build | Urban Stream Restoration | Public Park

CHALLENGE

To meet local TMDL Action Plan requirements, a restoration project was proposed on 850 linear feet of Lick Run. An urban restoration project, the reach begins at a box culvert headwall and flows northwest through a public park to a headwall of a large discharge pipe that runs under an old landfill. The restoration reach was experiencing lateral and vertical instability in the form of eroding bed and banks. The vertical and lateral instability led to unstable stream banks and formation of midchannel bars and islands as well as a disconnection from the stream's floodplain.

SOLUTION

Quantifiable design objectives were based on project goals, constraints, and the restoration potential of the reach. Design parameters were established using multiple lines of evidence including published regional curve data, compiled stream type-specific regional curve data, regime equations, reference condition data, monitoring data, and hydraulic geometry data. Both Rosgen Natural Channel Design (NCD), and Analytical Design (AD) procedures were included in the methodology. The restoration included activities to reduce instream energy, distribute flow flows to an adjacent floodplain, and address the current and future sediment and hydrologic regime. The restoration also included riparian buffer enhancement, installation of instream structures, and modifications to the pattern, profile, and geometry of the stream to emulate natural systems.

Project Dates: Nov. 2018 – Jan. 2020

Project Costs: Design \$60,876 | Construction \$235,347

SERVICES

- Assessment
- Permitting
- Community Outreach
- Ecological Restoration Design
- Planting Plan
- Nutrient and Sediment Reduction Calculations
- Construction Oversight

CLIENT CONTACT

Curry McWilliams, EIT, ENV SP, CFM
Civil Engineer 1- Biological Systems
City of Roanoke, Stormwater Division
Email: curry.mcwilliams@roanokeva.gov | Office: 540.853.5921



After

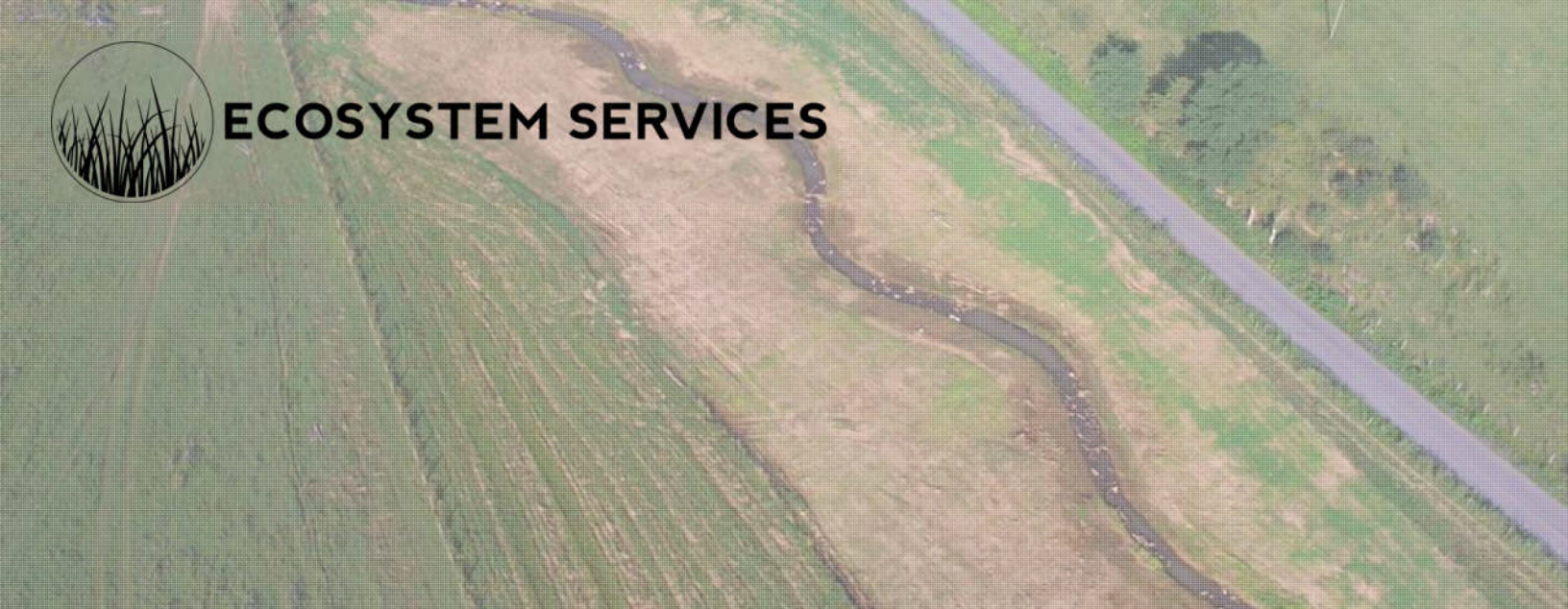


Before

Virginia Office
540.239.1428
1739A Allied Street
Charlottesville, VA 22903

North Carolina Office
828.767.9456
1 Haywood St., 4th Floor
Asheville, NC 28801

See more projects: <https://ecosystemservices.us/projects/>



NORTH RIVER – MOSSY CREEK ENVIRONMENTAL BANK AUGUSTA COUNTY, VIRGINIA

Stream Restoration | Environmental Bank | Meadow Restoration

CHALLENGE

Streams within the project area were altered from their natural condition due to manmade alterations (inline pond for livestock watering and vegetation removal) and impacts from livestock. Impairment included over-widening, a simplification of the bed-form, a reduction of hyporheic exchange, fine sediment aggradation, and excessive channel erosion from lateral migration, and down-cutting to degrade quality of habitat and prevent trout spawning.

SOLUTION

Hydraulic analysis and channel morphology were measured in the field, modeled, and assessed at the reference reaches to aid in the creation of a design plan to optimize functional improvement. Restoration involved in-channel manipulation and rerouting of the channel to restore the channel planform to enhance other geomorphic and hydrologic processes, including reduced erosion, increased floodplain connectivity, and decreased sediment aggregation. The channel itself was narrowed to facilitate increased flow speeds to transport accumulated sediments. The sinuosity was increased to form a more meandering planform appropriate for the given slope of the valley. Onsite wood was harvested for structures to retain carbon in the system, increases organic content, and diversify organism habitat. Native herbaceous and woody vegetation were planted along the banks and within the riparian area to support habitat for wildlife.

Project Dates: 2013-2016
(Significant permitting delays since the project was the first of its kind)
Project Costs: Design \$50,000 | Construction \$235,000

SERVICES

- Assessment
- Permitting
- Ecological Restoration Design
- Bid Support
- Construction Administration
- Nutrient and Sediment Reduction Calculations
- Success Monitoring

CLIENT CONTACT

Private Landowner
Mt. Solon, Virginia



After



Before

Virginia Office
540.239.1428
1739A Allied Street
Charlottesville, VA 22903

North Carolina Office
828.767.9456
1 Haywood St., 4th Floor
Asheville, NC 28801

See more projects: <https://ecosystems-services.us/projects/>

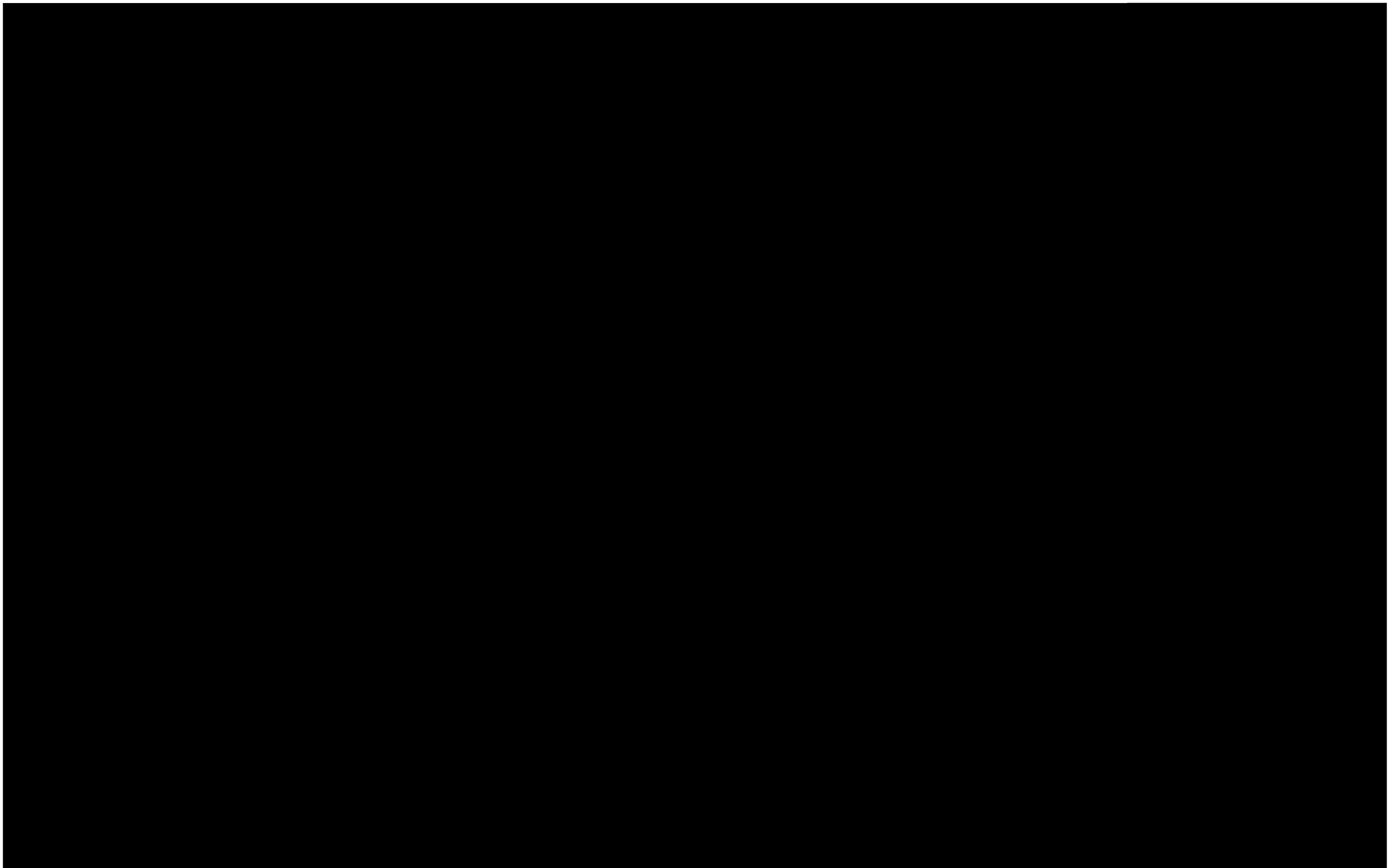
Significant Project List	Address	Owner	Contractor	Architect/Engineer	Contract Value	Scope of work	Project Completion
Packaging Corporation of America Plant Expansion	Pleasant Valley Rd. Harrisonburg VA	PCA of America C/O Mark Gibson 540-810-3665	Harman Construction Inc. C/O Wayne Witmer President 540-434-4459	Blackwell Engineering C/O Ed Blackwell 540-432-9555	626,477	Grading, Utilities, Concrete, Paving	06/01/12
Quaker Steak and Lube New Restaurant	350 University BLVD Harrisonburg VA	University QS&L LLC C/O Carl Harman 540-746-5858	Harman Construction Inc. C/O Wayne Witmer President 540-434-4460	Blackwell Engineering C/O Ed Blackwell 540-432-9555	334,736	Grading, Utilities, Concrete, Paving	04/01/12
Forrest Hills Manor Apartments	Sully Dr. Harrisburg VA	Mohammad Aslam 540-246-6666	N/A contract direct with owner	Blackwell Engineering C/O Ed Blackwell 540-432-9555	185,000	Grading, Utilities, Concrete, Paving	12/31/12
Campus View Condominiums	2475 Campus View Dr.	Guy Blundon 804-248-2205	Contract direct with Owner GC on site SRC Construction C/O Mike Young 804-641-9638	Blackwell Engineering C/O Ed Blackwell 540-432-9555	\$ 950,000	Grading, Utilities, Concrete, Paving	05/15/14
Coyote Run 35 lot subdivision	Acme Company St. Broadway Virginia	Jim Monger 540-421-4230	N/A contract direct with owner	Hamrick Engineering C/O Brasil Hamrick 540-248-7407	438,013	Grading, Utilities, Concrete, Paving	11/15/12
Rt. 256 Waterline Town of Grottoes	Rt. 256 Grottoes Virginia	Town of Grottoes VA C/O Charlie Stickle 540-271-1741	N/A contract direct with owner	Brunk and Hylton Engineering C/O Jerry Brunk 540-234-9112	160,028	New water Main, concrete, paving	02/01/13
Crozet/Albemarle Library	Library Avenue Crozet, VA	County of Albemarle VA C/O Ron Lilley 434-872-4501 ex. 3247	MB Contractors Stewart Bradley PM 540-342-6758	PHR&A C/O John Reno 540-434-0202	\$ 463,096	Grading, Utilities, Concrete, Paving	07/15/13
Timberville main and church st. utilities	Main and Church Street Timberville, VA	Town of Timberville VA C/O Austin Garber 540-896-7058	N/A Owner direct	Blackwell Engineering C/O Ed Blackwell 540-432-9555	\$540,000	Water, Sewer, concrete, paving	10/15/13
James Madison University Memorial Hall	Virginia Avenue Harrisonburg, VA	James Madison University	Harrisonburg Construction C/O Chris Stoneham 540-434-9560	Engineering Solutions C/O Scott Sellers 540-442-8787	\$ 65,000	Grading, Utilities, Concrete, Paving, retaining walls	10/01/13
Eastern Mennonite University Smith Ave.	1200 Park Rd. Harrisonburg VA	Eastern Mennonite University C/O Eldon Kurtz 540-432-4000	N/A Owner direct	N/A Design Build	\$ 45,000	Grading, Paving and Concrete	07/01/13
Town of Broadway street improvements	Main St. Broadway VA	Town of Broadway VA C/O Kyle Obrien 540-896-5152	N/A Owner direct	Wiley Wilson C/O Thomas Hammock 434-947-1901	\$ 180,000	Grading, Utilities, Concrete, Paving	12/31/13
Valley Pediatrics	Commerce rd. Verona VA	Dr. Steven Mumbauer	Harman Construction Inc. PM Kevin Bailey 540-434-4459	Balzer and Associates C/O Bill Moore 540-248-3220	\$ 250,000	New water Main, concrete, paving	10/15/13
James Madison University Grace Street Housing	Grace St. Harrisonburg, VA	James Madison University	Faulconer Construction C/O Mindy Colden 434-566-7985	VHB/Moseley	Unit Price Est. \$350,000	Storm Sewer, Import, Export, Demo	TBD
UVA Alderman Rd. Housing #6	Alderman Rd. Charlottesville, VA	University of Virginia	Faulconer Construction C/O Pete Morris 434-906-5380	Draper/Aden Charlottesville 434-295-0700	\$ 38,950	Domestic and Fire Line installations	04/01/14
James Madison University Newman Lake Dam	Port Rd. Harrisonburg	James Madison University	Faulconer Construction C/O Pete Morris 434-566-7985	Timmons	\$ 230,000	Erosion Control and Grading	10/01/14
EMU Suter Science Center	Park Rd. Harrisonburg	Eastern Mennonite University C/O Eldon Kurtz 540-432-4000	Harman Construction Inc. C/O Wayne Witmer President 540-434-4460	Blackwell Engineering C/O Ed Blackwell 540-432-9555	100,000	Grading, Utilities, Concrete, Paving	04/01/12
Famy Dollar Chicago Avenue	Chicago Ave Harrisonburg	Private Developer	Primax Construction C/O Tony Bornhorst	Blackwell Engineering C/O Nathan Blackwell 540-432-9555	\$ 262,000	Grading, Utilities, Concrete, Paving	07/01/14
Truck Thermo King New Headquarters	Rt. 11 Mt. Crawford	Truck Thermo King Inc.	N/A Owner direct	Blackwell Engineering C/O Ed Blackwell 540-432-9555	\$ 550,000	Grading, Utilities, Concrete, Paving	07/02/14
Tri SigmaNat. Headquarters	Muhlenberg st. Woodstock	Tri Sigma	Harman Construction Inc. PM Seth Lind 540-434-4460	Water Street Studios C/O Alan Franklin 434-977-4480	\$ 195,000	Demo, Grading, Utilities, Concrete, Paving	02/01/13
Harrisonburg City Hall	Main St. Harrisonburg VA	City of Harrisonburg	Nielsen Builders Inc. PM Jacob Hull 540-271-0102	Blackwell Engineering C/O Ed Blackwell 540-432-9555	\$ 508,000	Site Demo, Grading, Utilities	09/15/15
James Madison University Newman Lake Trail	Port. Rd. Harrisonburg VA	James Madison University	Faulconer Construction C/O Jon Elliot 434-566-7985	VHB/Moseley	\$ 110,000	Grading, Utilities, Erosion Control	12/15/14
Augusta Health Center Stuarts Draft	Rt. 340 Stuarts Draft VA	Augusta Health	RE Lee construction C/O Dick Abidin 434-989-6770	Timmons CO/ John Hash	\$ 597,000	Grading, Utilities, Concrete, Paving	02/01/15
Minnick School	Harrisonburg VA	Lutheran Family Services	N/A Owner direct	Coleman Engineering CO Gil Coleman	\$ 109,000	Grading, Concrete, Paving	08/31/14
Stanley Landfill/Leachate piping improvements	Stanley, Page County VA	Page County VA C/O Lynda Minke	N/A Owner direct	SCS Engineers	\$ 40,000	Utilities and grading	08/31/14
University Center Harrisonburg Virginia	Harrisonburg, VA	Bo Carrington Seven Development	Lantz Construction Co. C/O Chris Weaver 540-896-8911	Blackwell Engineering C/O Ed Blackwell 540-432-9555	\$ 610,000	Grading, Utilities, Paving, Ret. Walls	01/15/15
Aldi Grocery Store	Waynesboro, VA	Aldi Inc.	Teel Construction C/O Keith Thompson 248-255-8984	Kimley Horn C/O David Ellington 804-673-3882	\$ 535,000	Grading, Utilities, Paving, Ret. Walls	03/15/15
Town of Broadway 2015 street improvements	Broadway VA	Town of Broadway VA C/O Kyle Obrien 540-896-5152	N/A Owner direct	N/A Design Build	\$ 425,000	Grading, Concrete, Paving	04/15/15

SCBI Utility Upgrade Ph. II	Front Royal, VA	The Smithsonian Institution	Associated Builders Inc. C/O Matthew Buck 301-864-5300	RK&K C/O Kevin Anderson	\$ 1,925,000	Grading, Utilities, Concrete, Paving	03/15/16
Plow and Hearth Warehouse Expansion	Madison, VA	Plow and Hearth Inc.	Harman Construction Inc. C/O Wayne Witmer President 540-434-4459	Blackwell Engineering C/O Ed Blackwell 540-432-9555	\$ 225,000	Grading, Utilities, Concrete, Paving	12/01/15
Greenport Subdivision Ph. III	Harrisonburg, VA	Greenport Group LLC	Kevin Bailey R&D Construction	Blackwell Engineering C/O Ed Blackwell 540-432-9555	\$ 375,000	Grading, Utilities, Concrete, Paving	03/01/16
James Madison University Gibbons Hall Utilities	Harrisonburg, VA	James Madison University C/O Mike Derrrow PM	Mike Derrrow James Madison University	VHB/Moseley	\$ 510,000	Utilities, Duct Bank, Concrete and Paving	08/01/15
Town Of Broadway Holly Hills Street Improvements	Broadway, VA	Town of Broadway VA C/O Kyle Obrien 540-896-5152	NA/Owner direct	Wiley Wilson C/O Thomas Hammock 434-947-1901	\$ 385,000	Grading, Utilities, Concrete, Paving	10/01/15
Montevideo Middle School Parking Improvements	Harrisonburg, VA	Rockingham County Public Schools	Mark Klosinski Rockingham County	Owner Design/Build	\$ 352,000	Grading, Utilities, Concrete, Paving	08/15/15
Pleasant Valley Waterline	Mt. Crawford, VA	Rockingham County Public Works	Phillip Rhodes Rockingham County	PEED and Bortz C/O Martin Jansons	\$ 1,748,000	16" Water Main, 3 underground bores	04/01/16
Villages of Staunton	Staunton, VA	Robbin Miller Associates C/O Chris Blake	NA/Owner direct	Balzer and Associates C/O Bill Moore 540-248-3220	\$ 395,000	Grading, Utilities, Paving, Ret. Walls, Concrete	04/01/16
James Madison University Gibbons Hall Ph. II	Harrisonburg, VA	James Madison University C/O Mike Derrrow PM	Mike Derrrow James Madison University	VHB/Moseley	\$ 325,000	Utilities, Duct Bank, Concrete and Paving	04/01/16
Merck QO Lab	Elkton	Merck Corp. Elkton, VA	David Gaudin Mathers Construction Waynesboro	Mainstay Engineering Group 215-646-5595	\$ 380,000	Grading, Utilities, Concrete, Paving	06/15/16
HollyMeade Towncenter Block C4	Charlottesville, VA	Town Properties C/O Katurah Roell 434-906-2702	NA/Owner direct	Dominion Engineering C/O Mike Myers 434-906-3161	\$ 370,000	Grading, Utilities, Concrete, Site Electrical	06/15/16
Signature Aviation	Charlottesville, VA	Charlottesville-Albemarle Airport Authority	Harman Construction Inc. Dustin Harper 540-434-4459	Balzer and Associates C/O Bill Moore 540-248-3220	\$ 285,815	Grading, Utilities, Concrete, Paving	12/15/16
Robinson Park Apartments	Harrisonburg, VA	SEGM VA, LLC	WB Properties & Construction C/O Steve Work 540-442-8384	Balzer and Associates C/O Bill Moore 540-248-3221	\$ 1,418,292	Grading, Utilities, Paving, Ret. Walls, Concrete	05/15/17
Campus View Condominiums Phase III	2475 Campus View Dr.	Guy Blundon 804-248-2205	N/A Owner direct	Blackwell Engineering C/O Ed Blackwell 540-432-9555	\$ 850,000	Grading, Utilities, Concrete, Paving, Retaining Walls	05/15/14
Dunlora Phase V	Dunlora Dr. Charlottesville, VA	Milestone Partners C/O Louis Lopez "LJ" 434-409-1005	N/A Owner direct	Timmons CO/ Craig Kotarski 434-964-7148	\$ 720,000	Grading, Utilities, Concrete, Paving,	12/01/16
Hidden Springs Assisted Living	Bentonville, VA	Daryl Davison	Harman Construction Inc. Kevin Campbell 540-434-4459	Blackwell Engineering C/O Ed Blackwell 540-432-9555	\$ 547,423	Grading, Utilities, Concrete, Paving, Retaining Walls	06/01/17
American Tire Distributors	Harrisonburg, VA	American Tire	Hill Building Corp C/O Chris Hill 252-205-5218	Balzer and Associates C/O Bill Moore 540-248-3221	\$ 623,000	Grading, Utilities, Concrete, Paving,	02/01/17
Virginia Mennonite Retirement Community	Harrisonburg, VA	VMRC Board	Harman Construction Inc. Zack Fletchall 540-434-4459	Blackwell Engineering C/O Nathan Blackwell 540-432-9555	\$ 854,464	Grading, Utilities, Concrete, Paving,	07/07/17
Elon Rhodes Early Education Center	Harrisonburg, VA	City of Harrisonburg Public Schools	Nielsen Builders Inc. PM Thomas Burkholder 540-271-0713	Gay and Neel	\$ 746,170	Grading, Utilities, Concrete, Paving,	07/01/17
Broadway Central St. Improvements	Broadway, VA	Town of Broadway VA C/O Kyle Obrien 540-896-5152	NA/Owner direct	Brunk and Hylton Engineering C/O Jerry Brunk 540-234-9112	\$ 363,770	Grading, Utilities, Concrete, Paving,	09/01/16
Olive Garden Restaurant	Harrisonburg, VA	Harman Properties LLC C/O Orden Harman 540-421-6302	Belisle Construction C/O Brian Belisle 941-400-5331	The Roberts Group C/O Erik Merlino 304-544-8632	\$ 572,000	Grading, Utilities, Concrete, Paving,	05/15/17
Bridgewater Retirement Community Oasis	Bridgewater, VA	Bridgewater Retirement Community C/O Rodney Alderfer 540-830-7470	Harman Construction Inc. Dustin Harper 540-434-4459	Valley Engineering Services C/O Carl Snyder 540-434-6365	\$ 125,000	Grading, Utilities, Decorative Concrete	05/15/17
Park View Waterline	Harrisonburg VA	City Of Harrisonburg CO Ed Roach	NA/Owner direct	Coleman Engineering CO Gil Coleman	\$ 160,000	Utilities, Concrete, Paving	08/01/17
Baywood Hotels/Home 2 Suites	Charlottesville, VA	Baywood Hotels C/O Dan Hampton 301-345-8700 ext. 270	DD&B Construction C/O Gary Harris 757-710-5790	Bohler Engineering C/O Daniel Hines	\$ 860,000	Demo, Grading, Utilities, Concrete, Paving	07/04/18
Augusta Healthcare Emergency Expansion	Fishersville, VA	Augusta Health	DPR Construction (CM at risk) C/O Tyler Atkins 804-420-3025	Timmons CO/ Craig Kotarski 434-964-7148	\$ 480,000	Demo, Grading, Utilities, Concrete, Paving	07/15/18
Ariake Food Phase 2 Expansion	Harrisonburg, VA	Ariake Foods	Nielsen Builders Inc. C/O Thomas Moomaw 540-476-0811	Valley Engineering Services C/O Carl Snyder 540-434-6365	\$ 450,000	Site Demo, Grading, Utilities, Concrete, Paving	06/01/18
Bridgeport Subdivision	Waynesboro, VA	Oak Tree Builders C/O Sarah Yoder 540-607-6433	NA/Owner direct	Balzer and Associates C/O Bill Moore 540-248-3221	\$ 1,600,000	Clearing, Grading, Utilities, Concrete, Paving	07/01/18
Aldi Grocery and Retail Site	Harrisonburg, VA	Aldi Inc. C/O Jim Reels 540-843-2507	Harman Construction Inc. Gary McBride 540-434-4459	Kimley Horn C/O Mark Boyd 804-673-3882	\$ 2,300,000	Clearing, Grading, Utilities, Concrete, Paving	07/30/18
UVA Foundation Boars Head Inn renovation	Charlottesville, VA	UVA Foundation C/O Chris Schooley 434-989-9752	WE Bowman Construction C/O Jerry Baker 804-291-3899	Dewberry	\$750,000	Clearing, Grading, Utilities, Concrete, Permeable Paving	06/01/18
Campus View Condominiums Phase IV	2475 Campus View Dr.	Guy Blundon 804-248-2205	N/A Owner direct	Blackwell Engineering C/O Ed Blackwell 540-432-9555	\$ 700,000	Grading, Utilities, Concrete, Paving, Retaining Walls	08/01/18
Froehling and Robertson Office	Crozet, VA	F&R C/O Clyde Simmons	Martin Horn C/O Josh Horton 434-906-5430	Balzer and Associates C/O Bill Moore 540-248-3221	\$ 300,000	Clearing, Grading, Utilities, Concrete, Paving	04/01/18
Blue Ridge Community College Bioscience	Weyers Cave, VA	Blue Ridge Community College	Kjellstrom and LEE C/O Ryan Amos 540-416-3488	SFCS C/O Robert Wampler	\$ 550,000	Clearing, Grading, Utilities, Concrete, Paving	08/01/19

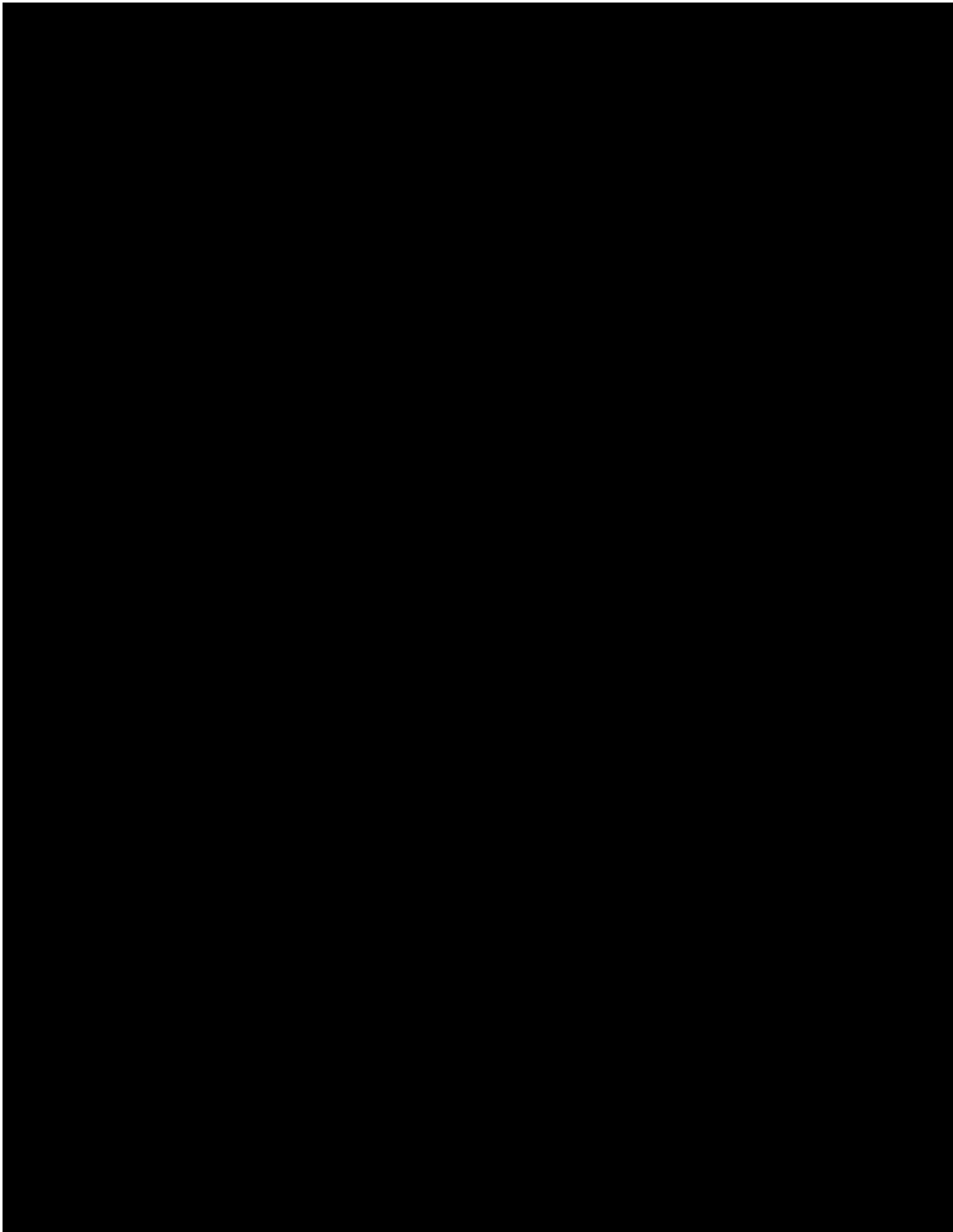
Myers Corner Retail	Fishersville, VA	Crescent Development C/O Scott Williams	N/A Owner direct	Balzer and Associates C/O Bill Moore 540-248-3221	\$ 350,000	Clearing, Grading, Utilities, Concrete, Paving	04/01/18
CMA Volvo	Charlottesville, VA	Carter Myers Auto Group	Loughridge Construction C/O Worth Bugg 804-237-1307	Collins Engineering 434-293-3719	\$ 700,000	Clearing, Grading, Utilities, Concrete, Paving	06/01/19
Quirk Hotel	Charlottesville, VA	Quirk Hotels	Martin Horn C/O Josh Horton 434-906-5430	Timmons CO/ Craig Kotarski 434-964-7148	\$ 550,000	Demo, Grading, Utilities, Concrete, Paving	07/01/19
600 W. Main Street Mixed Use	Charlottesville, VA	Grayson Consulting	WM Jordan C/O Bob Bear	Timmons CO/ Craig Kotarski 434-964-7149	\$ 600,000	Demo, Grading, Utilities, Concrete, Paving	09/01/19
Getaway House Virginia Expansion Phases 1 and 2	Standardsville, VA	Getaway House C/O Addison Godine 617-922-1399	N/A Owner direct	Timmons CO/ Clint Shifflett 434-964-7149	\$ 650,000	clearing, grading, septic, water, site electrical, cabin staging	07/25/18
Sunbelt Rentals	Harrisonburg, VA	Harman Development C/O Carl Harman 540-746-5858	Harman Construction Inc. Kevin Campbell 540-434-4459	Blackwell Engineering C/O Ed Blackwell 540-432-9555	\$ 550,000	Clearing, Grading, Utilities, Concrete, Paving	10/30/18
Autozone	Harrisonburg, VA						
Waynesboro Discount Tire	Waynesboro, VA						
Ruckersville Elementary Expansion	Ruckersville, VA	Greene County Schools	Branch Construction C/O Brent Harlow	Timmons CO/ Clint Shifflett 434-964-7149	\$ 300,000	Demo, Grading, Utilities, Concrete, Paving	07/01/19
UVA Physicians Group Waynesboro, VA	Waynesboro, VA	UVA Physicians Group C/O Gary Lowe	RL Flint Construction C/O Bo Flint 540-292-4198	Timmons CO/ John Hash	\$ 380,000	Demo, Grading, Utilities, Concrete, Paving	06/01/19
Dairy Central	Charlottesville, VA	Hourigan Construction C/O Mike Castle 804-201-6707	Stony Point Design Build C/O Josh Batman	Timmons CO/ Craig Kotarski 434-964-7148	\$ 1,300,000	Demo, Grading, Utilities, Concrete, Paving	01/01/20
South Main Travel Center	Harrisonburg, VA	Holtzman Corp	Dexter Mumaw -Cabin Hill	Blackwell Engineering C/O Ed Blackwell 540-432-9555	\$ 550,000	Demo, Grading, Utilities, Concrete, Paving	10/30/19
North End Greenway Phase 1	Harrisonburg, VA	City Of Harrisonburg	Tom Hartman Director Public Works	Ecosystem Services C/O Kip Mumaw	\$ 980,000	Clearing, Grading, Concrete, Paving	09/30/19
Blacks Run Stream Restoration	Harrisonburg, VA	City Of Harrisonburg	Tom Hartman Director Public Works	Ecosystem Services C/O Kip Mumaw	\$ 1,150,000	Grading, Stream Restoration and plantings	06/01/20
Rockingham County Fire EMS	Harrisonburg, VA	Rockingham County Fire	Harman Construction Inc. C/O Wayne Witmer President 540-434-4459	Valley Engineering Services C/O Carl Snyder 540-434-6365	\$ 850,000	Demo, Grading, Utilities, Concrete, Paving	06/01/20
Connexions Senior Living	Fishersville, VA		Integrated Construction C/O Jeff Hawkins	Balzer and Associates C/O Bill Moore 540-248-3221	\$ 700,000	Demo, Grading, Utilities, Concrete, Paving	10/01/19
Merck B89 Expansion	Elkton, VA	Merck Corp. Elkton, VA	David Gaudin Mathers Construction Waynesboro	Jacobs Engineering	\$ 6,000,000	Demo, Grading, Utilities, Concrete, Paving	TBD
Albemarle County Service Authority Stair Access	Charlottesville, VA	ACSA	Alex Morrison Engineer	Dewberry	\$ 260,000	Grading, Concrete, Site Electrical and Landscape	11/01/19
Ready Kids School Expansion	Charlottesville, VA	RE LEE Construction	Dick Abidin President		\$ 260,000	Demo, Grading, Utilities, Concrete, Paving	12/01/19
SOCA indoor soccer facility	Charlottesville, VA	Martin Horn	Jeff Sims PM	Draper/Aden Charlottesville 434-295-0700	\$ 700,000	Grading, Utilities, Concrete, Paving	08/01/20
Peabody School Addition	Charlottesville, VA	Kjellstrom and LEE	Carl Schneider PM	Timmons CO/ Craig Kotarski 434-964-7148	\$ 315,000	Demo, Grading, Utilities, Concrete, Paving	05/01/20
Hyatt Place Hotel	Harrisonburg, VA	Harman Construction	Harman Construction Inc. Zack Fletchall 540-434-4459	Blackwell Engineering C/O Ed Blackwell 540-432-9555	\$ 1,600,000	Grading, Utilities, Concrete, Paving, retaining walls	09/01/20
Towns on Imperial	Fishersville, VA	Countryside Real Estate Services	John Reno Owners Rep	Owner Design/Build	\$ 1,500,000	Demo, Grading, Utilities, Concrete, Paving, drill and blast	07/01/20

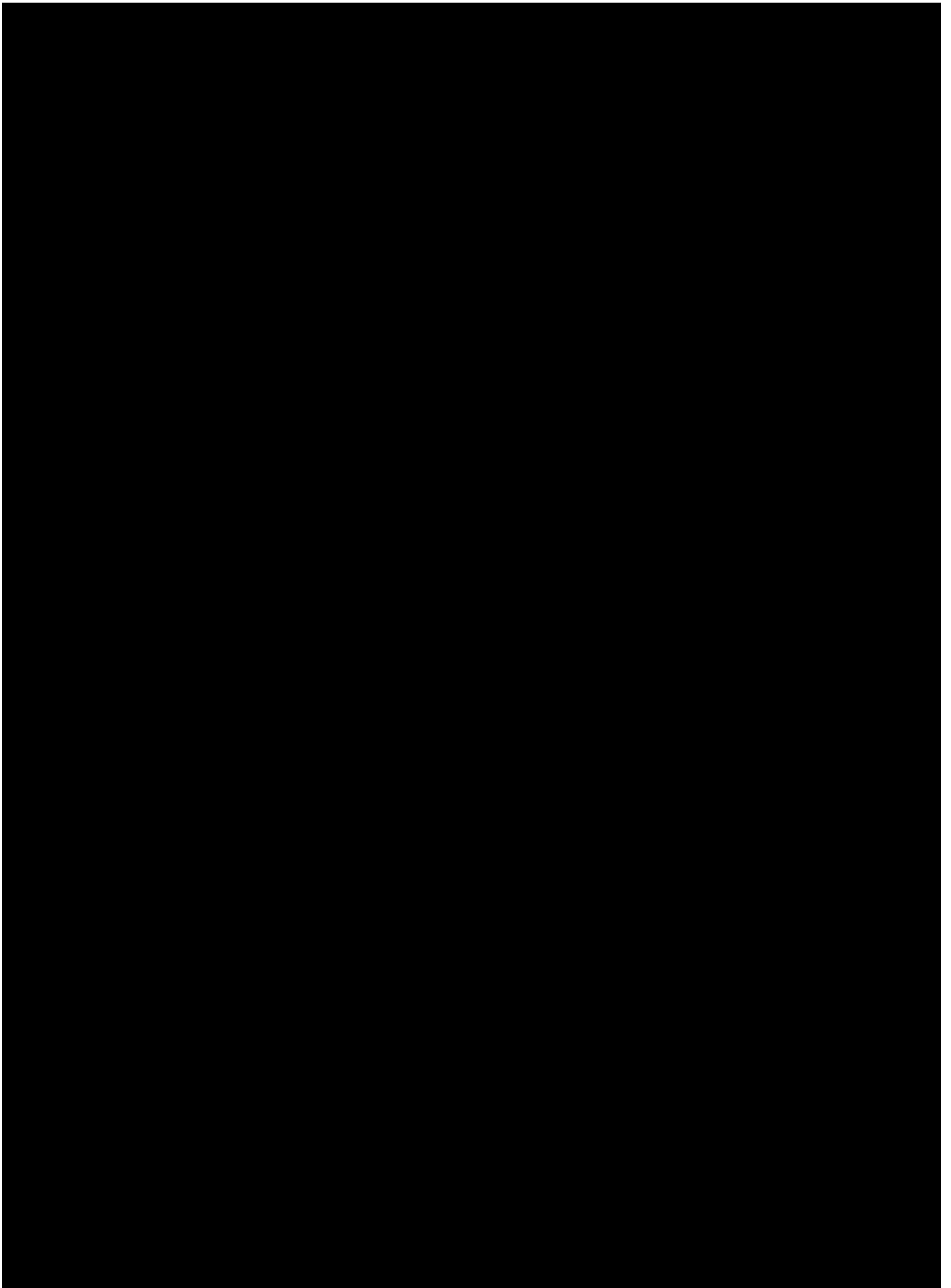
** Please note this list only features significant projects only

Attachment C. Conceptual Plan (*Proprietary Information*)



Attachment D. Preliminary BANCS Information (*Proprietary Information*)





Attachment E. 2019 Financials (Proprietary Information)



September 17, 2019

328 S. Main Street
PO Box 929
Harrisonburg, VA 22801
540 437-1300

Momentum Earthworks LLC
1500 Pleasants Drive
Harrisonburg, VA 22801

RE: Hourigan Construction Corporation
411 East Franklin Street Suite 400
Richmond VA 23219

To Whom It May Concern:

Please find below the three year experience history for Momentum Earthworks LLC. The policy renewal date is 7/18/19.

2019 .81
2018 .82
2017 .86
2016 .89

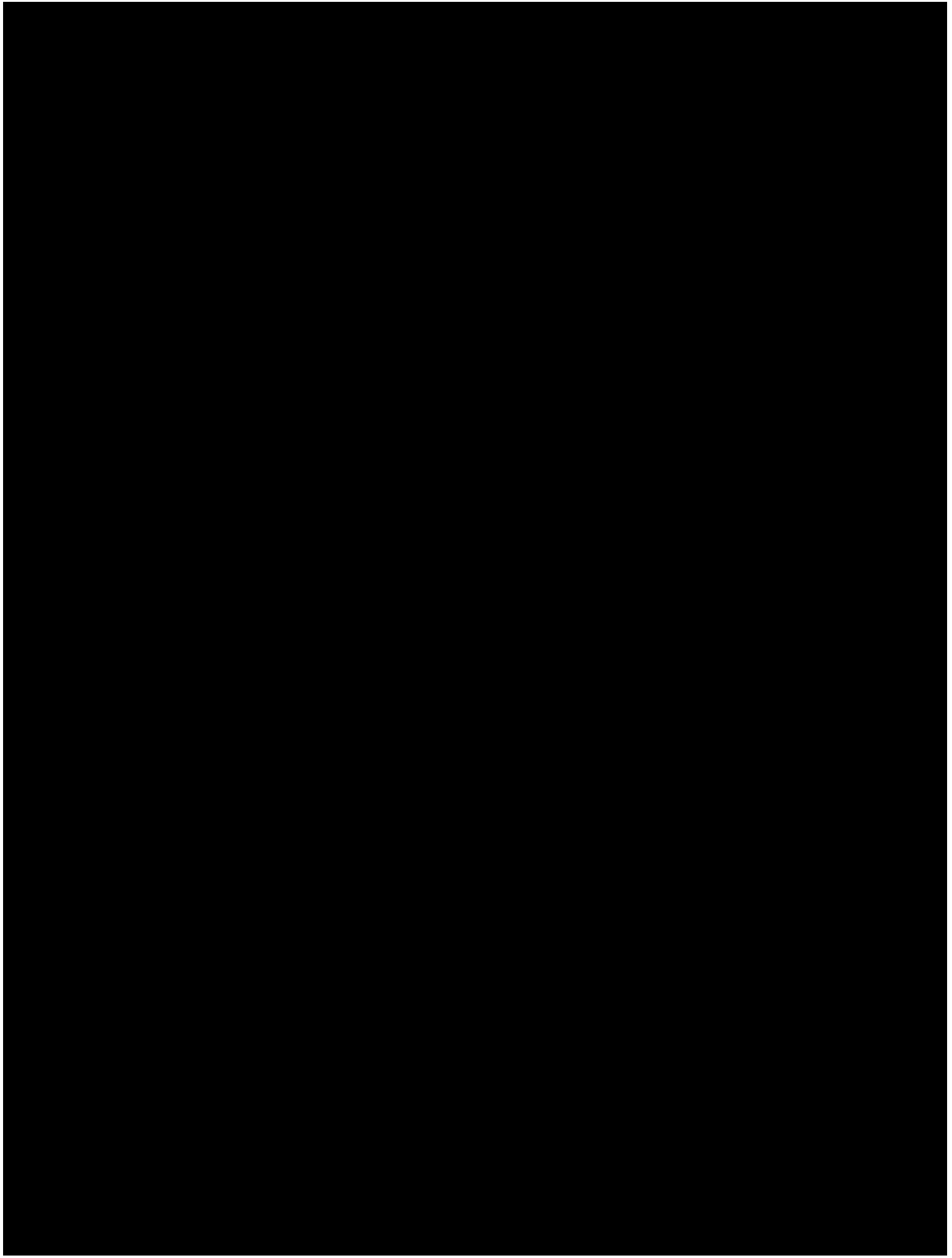
If you need additional information, please let us know.

Sincerely,

A handwritten signature in black ink that reads "Lori Smiley".

Lori K. Smiley ACSR CISR
Client Service Agent
P: 540 437-1322
E: LSmiley@mcgriffinsurance.com

Enclosure



Attachment F. Signed Addendums



ADDENDUM #1

2021012-PW-PPEA Blacks Run Stream Restoration and Nutrient Reduction

DATE: September 14, 2020

TO: All Potential Bidders/Offerors

City of Harrisonburg's PPEA is modified as follows:

1. Question: Is the City looking for a competitive bid identical to the services proffered by RES in their unsolicited proposal?

Answer: We anticipate proposals will provide substantially similar services or outcomes.

All other requirements, terms and conditions remain unchanged.

Addendum page must be signed and returned with your proposal to acknowledge receipt of this addendum.

Authorized Signature

By: Pat Hilliard, CPPB
Procurement Manager



ADDENDUM #2

2021012-PW-PPEA Blacks Run Stream Restoration and Nutrient Reduction

DATE: September 17, 2020

TO: All Potential Bidders/Offerors

City of Harrisonburg's PPEA is modified as follows:

1. Question: Could the City please provide their most up to date MS4 Chesapeake Bay TMDL Allocations including progress per permit cycle and remaining allocation accounting for planned/budgeted projects?

Answer: See attached

All other requirements, terms and conditions remain unchanged.

Addendum page must be signed and returned with your proposal to acknowledge receipt of this addendum.

A handwritten signature in black ink, appearing to read "Pat Hilliard", written over a light gray rectangular background.

Authorized Signature

By: Pat Hilliard, CPPB
Procurement Manager

Progress towards Chesapeake Bay TMDL

TMDL Action Plan: The City of Harrisonburg has developed a Chesapeake Bay TMDL Action Plan and it is available at <http://www.harrisonburgva.gov/MS4-permit-program>.

List of Control Measures Implemented During the Reporting Period: Street Sweeping, Homeowner BMPs, Septic to Sanitary Sewer Connections, Land Conversion

Estimate Reduction Achieved by Each Control:

Type of BMP	Project Name	Location	Reductions (lbs/yr)		
			TP	TN	TSS
Permanent Water Quality Trading Credits	As Needed	Nutrient Credit Market	8	59.44	571.44
North End Greenway – Permanent Water Quality Credits	North End Greenway Stream Restoration	North End Greenway	70.00	151.999	24,133.183
Street Sweeping	Street Sweeping (annual)	Harrisonburg, VA	21.95	90.18	33,475.39
Storm Drain Cleaning	Storm Drain Cleaning (annual)	Harrisonburg, VA	9.77	43.96	0
Septic to Sanitary Sewer Connections	Septic to Sanitary Sewer Connections (since 2006)	Harrisonburg, VA	0	471.5	0
Homeowner BMPs	Homeowner BMPs	Harrisonburg, VA	10.65	135.18	0
Bioreactor	Bioreactor	Harrisonburg, VA	0	Pending	0
Urban Tree Canopy Expansion	New Tree Planting	Harrisonburg, VA	3.01	13.55	415.03
Land Conversion: Turf to Mixed Open	Pollinator Habitats	Harrisonburg, VA	0.89	4.1	0
Total			124.27	969.909	58,595.043
Amount Needed by 2023			354	2,684	303,897
Amount Needed by 2028			885	6,711	757,697



ADDENDUM #3

2021012-PW-PPEA Blacks Run Stream Restoration and Nutrient Reduction

DATE: October 8, 2020

TO: All Potential Bidders/Offerors

City of Harrisonburg's PPEA is modified as follows:

1. Question: Is a proposal review fee required for proposals submitted in response to the PPEA or only for the initial unsolicited proposal submittal?

Answer: Yes, the review fee should be included in your proposal.

2. Question: If a Proposal Review Fee was submitted with the initial unsolicited proposal, what was the amount the city deemed necessary for the review of the proposal?

Answer: Unknown. All unused fees will be returned to the proposer.

3. Question: Please clarify the proposal phase (conceptual vs detailed) and whether a proposal submitted in response to the PPEA should be formatted in accordance with Section IV.D or IV.E of the City of Harrisonburg PPEA Guidelines.

Answer: The format outlined in Sections IV.B and D should be submitted.

4. Question: Would the PPEA result in the city foregoing all the proposed projects in its December 2017 Stormwater Improvement Plan and on page xiv of the approved FY21-25 CIP?

Answer: Unknown at this time. The Stormwater Improvement Plan and CIP are planning documents and those projects have yet to receive funding.

5. Question: Are any of the projects in the CIP under contract and if so what will be the remaining needed credits upon their completion?

Answer: The Northend Greenway is the only CIP project with funding commitments. Please see Addendum #2 for nutrient removal needs.

6. Question: Is this project intended to satisfy VSMP credits in addition to the Chesapeake Bay TMDL requirements?

Answer: No.

7. Question: Does the City intend to use this project to also meet the full requirements of the Blacks Run/Cooks Creek Local TMDL?

Answer: No.

8. Question: Can we assume that the funding available to the City to cover the project is what is stated in the CIP, the total available from the Stormwater Fund less the 20-21 budgeted amount (\$3,699,400 less \$694,900 or \$3,004,500)? Would it be available on the annual basis as listed? This is necessary to better understand funding and how we can propose the best financial structure to the City that meets its anticipated budget over the next 4 years.

Answer: No, this assumption should not be made. The proposer should submit project cost and financing as they see fit, and the City will evaluate and discuss if that proposal is advanced to the negotiation phase of the PPEA process.

9. Question: Is there a price range beyond that described in the CIP for this project that the City considers viable and cost-effective?

Answer: This project is not currently listed in the CIP.

10. Question: Section V. A-D Proposal Evaluation and Selection Criteria of City of Harrisonburg's adopted PPEA regulations. How are Section V. A-D evaluated? Are criteria weighted? What weighting is V.C (project financing) given?

Answer: The City will evaluate all received proposals following the adopted PPEA guidelines.

11. Question: Please provide the City's standard contract language/prime agreement.

Answer: Typically, the proposers submit draft agreements consistent with Section VI of the guideline and the PPEA.

12. Question: Does the City have a desired SWAM participation goal?

Answer: No.

13. Question: Please provide detail on required or contemplated easements referenced in Section 3 of the PPEA proposal and Section IV.E.3 of the PPEA Guidelines.

Answer: This project is located completely on City owned and maintained property, therefore easements are not anticipated.

14. Question: The proposed project appears to include stream restoration on private property. Please confirm and clarify whether the city has secured access to the private property for the project or if it is the contractor's responsibility.

Answer: We are unaware of private property impacts.

15. Question: Is the City interested in expanding the project beyond the City-owned properties if easements can be acquired?

Answer: That is a decision for the proposing firm to determine and if beneficial provide in their response.

16. Question: What type or form of restrictive covenants is preferred by the City?

Answer: These are not anticipated to be needed for this project, as the City owns all of the property associated with this project.

17. Question: What is the City's vision for the property? Is additional restoration and enhancement beyond bank stabilization and riparian buffer plantings desired?

Answer: A shared use path is envisioned somewhere near this area, but that project is not funded and only in the conceptual phase. Any work performed under this project would take priority over the shared use path.

18. Question: Has the City completed any assessment or conceptual design on the subject reaches of Blacks Run? If so, please provide any work completed to date by the City.

Answer: No.

19. Question: Is there any available information on the Blacks Run Interceptor project listed in the CIP? Will work be done in the potential project area? Please provide the Wiley Wilson study.

Answer: The construction plans for this project have been included as an attachment to this addendum.

20. Question: The proposal documents describe an 85% efficiency rate for the stream stabilization (p23). Is this the maximum efficiency rate for the stream restoration project that the City is comfortable using for sediment and nutrient reductions?

Answer: The City has not provided any input regarding the efficiency rate, and would rely on the proposer obtaining DEQ approval and not City input.

21. Question: Is site-specific soil data, specifically total nitrogen, total phosphorous, and bulk density available for the proposed project?

Answer: No.

22. Question: Is there a Long-Term Management requirement or will the City of Harrisonburg assume long-term management?

Answer: Following a post-construction period the City would assume maintenance responsibilities.

23. Question: If the City will assume long-term management, is the project responsible for establishing and funding a long-term management endowment?

Answer: No.

24. Question: Is the on-site (within the contemplated project area) placement of soil excavated during the restoration acceptable?

Answer: Unknown at this time, but potentially.

25. Question: When this area floods and the banks wash out, whose responsibility is it to bring it back up to the intended standard? And for how long does the responsibility carry?

Answer: The overall intent of stream restorations is to prevent soil loss during flooding events. See section 3 on page 19 of the RES proposal, included with this solicitation, for their proposed approach to this question.

26. Question: Since the roughness coefficient will be changed due to the addition of trees and bank alterations, will an update to the city's flood model be required?

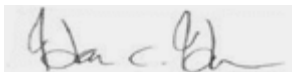
Answer: Stream projects such as this, which change the floodway and flood plain generally require updates to the FEMA maps.

27. Question: Is the City of Harrisonburg or DEQ overseeing the Erosion Sediment Control of this project?

Answer: The project would be required to obtain a land disturbing permit from the City of Harrisonburg, which would include erosion and sediment control plans and inspections.

All other requirements, terms and conditions remain unchanged.

Addendum page must be signed and returned with your proposal to acknowledge receipt of this addendum.



Authorized Signature

By: Pat Hilliard, CPPB
Procurement Manager

INTERIM AGREEMENT

This INTERIM AGREEMENT ("Interim Agreement") dated as of 15th day of June, 2021, is made between the City of Harrisonburg, Virginia (the "City" or "Owner"), a municipal corporation of the Commonwealth of Virginia and a Responsible Public Entity under the Public-Private Education Facilities and Infrastructure Act of 2002 ("PPEA") and Momentum Earthworks, LLC, a Virginia limited liability company ("PPEA Contractor" or "Contractor"; collectively, the "Parties").

WHEREAS, Owner contemplates development of the following Project ("Project") identified as: **2021012-PW-PPEA Blacks Run Stream Restoration and Nutrient Reduction Project**; and

WHEREAS, the PPEA Contractor submitted its PPEA Proposal ("Proposal") on or about March 2, 2021, in order to form a public-private partnership to provide Owner certain design, permitting, and construction services in connection with the Project; and

WHEREAS, Owner subsequently determined the Proposal to be a qualifying project, and advised PPEA Contractor that Owner intended to proceed with negotiations through an Interim Agreement for the design and construction of the Project; and

WHEREAS, Owner and PPEA Contractor desire to commence, on the terms and subject to the conditions set forth in this Agreement, the certain design, engineering, and other preliminary services, as defined below, while the parties are negotiating the definitive Comprehensive Agreement for PPEA Contractor's full performance of the construction of the Project (the "Comprehensive Agreement").

NOW, THEREFORE, in consideration of the Recitals set forth above, which are expressly incorporated herein, the mutual promises set forth below, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

1. PPEA Contractor's Responsibilities.

- A. Under this Interim Agreement, PPEA Contractor shall provide all Services necessary for the PPEA Contractor to proceed with construction of the Project, all as more particularly set forth in the Proposal.
- B. PPEA Contractor shall provide the Services in accordance with the schedule set forth in "Interim Agreement Scope of Work" and attached hereto as **Exhibit A**.
- C. Owner and PPEA Contractor shall use their best efforts to maintain the Interim Agreement Schedule, attached hereto as **Exhibit B**, which can be modified by mutual written agreement of the Parties as circumstances warrant.
- D. The parties intend to use a design-build approach for the design and construction of the Facilities.

2. Owner's Responsibilities.

In addition to making timely payment for the services rendered by the PPEA Contractor as herein set forth, the Owner agrees to cooperate with the PPEA contractor in the performance of this Contract, including having progress meetings between staff for the PPEA Contractor and City staff not less frequently than once monthly.

3. Interim Agreement Price and Payments.

- A. The PPEA Contractor shall submit invoices to the Owner monthly, detailing the work actually done and the person or persons who actually did the work. The schedule of values for accomplishment of specific tasks is set forth in in **Exhibit C**.
- B. Payment shall be made within 21 days of receipt of an invoice by the Owner. Any invoice not paid within 45 days after receipt, unless under dispute as set forth herein, shall be paid with interest, to accrue at a 5.0% annualized rate.
- C. In the event that the Owner disputes any charge, Owner shall give notice to the PPEA Contractor within seven days of receipt of the invoice of the disputed charge(s), detailing the reason(s) therefor. Owner shall have authority to withhold only such portion of the payment that is in dispute.
- D. In the event of a dispute as set forth herein, the Owner and the PPEA Contractor shall engage in good-faith negotiations for not less than 30 days in order to resolve such dispute.

4. Prompt Payment to Subcontractors.

- A. Within seven days of payment by the Owner, the PPEA Contractor shall, with respect to any subcontractor, either:
 - i. Pay the subcontractor its proportionate share of the total payment received from the agency attributable to the work performed by the subcontractor under that contract; or
 - ii. Notify the Owner and subcontractor, in writing, of its intention to withhold all or a part of the subcontractor's payment with the reason for nonpayment.
- B. Failure to satisfy the requirement under sub-section A shall not, of itself, constitute breach or grounds to terminate this Interim Agreement.
- C. The PPEA Contractor's partners in submitting the Proposal shall not be construed to be contractors for the purposes of this section.

5. Public Procurement Act Required Provisions.

- A. PPEA Contractor represents and warrants to the Owner that during the performance of this Interim Agreement it:

- a. Will comply and conform with the provisions of the Civil Rights Act of 1964, as amended, the Virginia Fair Employment Contracting Act of 1975, as amended, and the Virginia Human Rights Act, as amended, where applicable;
 - b. Not employ illegal alien workers or otherwise violate the provisions of the Immigration Reform and Control Act of 1986, as amended; and
 - c. Comply with all federal, state, and local laws and regulations applicable to the performance of the services or supply of the goods procured.
- B. PPEA Contractor agrees during the period of performance of this Interim Agreement that it:
- a. Will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability, or other basis prohibited by local, state, or federal law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of the PPEA Contractor;
 - b. Will state, in all solicitations and advertisements for employees placed by or on behalf of the PPEA Contractor during the Contract Period, that the PPEA Contractor is an Equal Opportunity Employer;
 - c. Provide a drug-free workplace for its employees;
 - d. 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 its workplace and specify the actions that will be taken against any employee for a violation;
 - e. State in all of its solicitations or advertisements for employees that PPEA Contractor maintains a drug-free workplace. For the purposes of this subparagraph, "drug-free workplace" means a site for the performance of work done in connection with the scope of work set forth in this Interim Agreement;
 - f. In addition to the provisions contained herein, the PPEA Contractor must comply with the Drug Free Workplace Act of 1988, as amended;
 - g. Shall maintain its certificate of authority to transact business in the Commonwealth, if such is required by law;
 - h. Will include the provisions of the foregoing subparagraphs in every subcontract or purchase order exceeding \$10,000 issued by the PPEA Contractor in order to fulfill its obligations under this Interim Agreement, so that the provisions will be binding on each subcontractor or subvendor employed by the PPEA Contractor.
- C. The PPEA Contractor certifies that its PPEA proposal:

- a. Has been prepared without prior participation, understanding, agreement, or connection with any corporation, firm or other person that is also submitting a bid or proposal in response to the same Solicitation;
 - b. Is in all respects fair, without misrepresentations of fact, and free from collusion or fraud;
 - c. Is in full compliance with the Virginia Conflict of Interests Act, Chapter 31 of Title 2.2 of the Code of Virginia, 1950, as amended, and all provisions relating to ethics in public contracting;
 - d. Is or is intended to be competitive and free from any collusion with any person, firm or corporation; and
 - e. Has been prepared without the benefit of being provided information not available to the general public.
- D. The PPEA Contractor certifies that it has not offered or received any kickback from any other bidder, proposer, or offeror, supplier, manufacturer, or subcontractor in connection with the bid/proposal on the PPEA Proposal. A kickback is defined as an inducement for the award of a contract, subcontract, or order, in the form of any payment, loan, subscription, advance, deposit of money, services or anything else, present or promised, unless consideration of substantially equal or greater value is exchanged. Further, no person may demand or receive any payment, loan, subscription, advance, and deposit of money, services or anything of value in return for an agreement not to compete on a public contract.
- E. The PPEA Contractor certifies that it is not a party to nor has it participated in nor is it obligated or otherwise bound by agreement, arrangement, or other understanding with any person, firm or corporation relating to the exchange of information concerning bids, prices, terms, or conditions upon which the contract resulting from the acceptance of his bid proposal is to be performed.
- F. The PPEA Contractor certifies that it understands that collusive bidding is a violation of the Virginia Governmental Frauds Act as well as federal law, and can result in fines, prison sentences, and civil damage awards and agrees to abide by all conditions of this proposal.
- G. The PPEA Contractor certifies that it understands that collusive bidding is a violation of the Virginia Governmental Frauds Act as well as federal law, and can result in fines, prison sentences, and civil damage awards and agrees to abide by all conditions of this proposal.

6. Ownership of Materials.

Ownership of and title to all data, materials, and documentation originated and prepared for the City pursuant to this Agreement shall transfer to the City upon payment by the City in accordance with Exhibit C without necessity of further documentation of transfer. Title to specific data, materials, and documentation shall transfer upon payment for such deliverables. For example, upon payment by the City for the 60% Design Plans, title to

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those plans and all underlying data and documentation shall transfer to the City. This Interim Agreement requires the Parties to make their best efforts to finalize a Comprehensive Agreement as described herein. In the event the Parties fail to enter into such a Comprehensive Agreement the City agrees that it will not use the data, materials, and documentation transferred pursuant to this section as part of an Invitation to Bid, Request for Proposal, or a PPEA agreement with a third party, for a period of two years from the completion of this Interim Agreement. Completion of this Interim Agreement shall be deemed to occur on the date of the City's final payment to the PPER Contractor hereunder.

7. Insurance.

At all times during the performance of the work under this Agreement, PPEA Contractor shall take out and maintain each of the following insurance:

- A. Workers' Compensation and Employers' Liability Insurance for all of its employees engaged in work on the Project in an amount not less than the minimum required by Va. Code §§ 2.2-4332 and 65.2-100 *et seq.*, and, in case any of such work on the Project is sublet, PPEA Contractor shall require each subcontractor similarly to provide Workers' Compensation Insurance for all of the latter's employees to be engaged in such work. The coverage must be with an insurer licensed to conduct business in the Commonwealth of Virginia.
- B. Commercial General Liability of \$2,000,000 for each occurrence and Professional Liability of \$1,000,000 for each claim and aggregate.
 - i. Coverage is to be on an occurrence basis with an insurer licensed to conduct business in the Commonwealth of Virginia. The insurer must have an A. M. Best rating of A- or better. **The insurer must list the City of Harrisonburg as an additional insured. The endorsement must be issued by the insurance company. A notation on the certificate of insurance is not sufficient.**
 - ii. The contractor will maintain professional liability insurance with a limit of at least \$1,000,000. It is preferred that the coverage be on an occurrence basis. If the policy is on a claims made basis, this should be noted. If the contractor has professional liability insurance on a claims made basis, agreement must be made that coverage will be maintained for at least three years beyond the expiration date of the policy in force at the time of this contract. Coverage is to be with a company licensed to conduct business in the Commonwealth of Virginia and have an A. M. Best rating of A- or better.
- C. The contractor/vendor will maintain automobile liability insurance with limits of at least \$1,000,000. The coverage is to be written with a symbol "1". The insurer must be licensed to conduct business in the Commonwealth of Virginia. The insurer must have an A. M. Best rating of A- or better

D. In no event may the PPEA Contractor's liability under this Interim Agreement exceed the limits of its insurance as set forth herein.

8. Comprehensive Agreement.

The Parties will make best efforts to finalize the Comprehensive Agreement in accordance with **Exhibit B**.

9. Notices.

All requests, notices and other communications required or permitted to be given under the Contract Documents shall be in writing. Delivery of a notice shall be deemed to have been made when such notice is either:

- (1) Duly mailed by first-class mail, postage prepaid, return receipt requested, or any comparable or superior postal or air courier service then in effect; or
- (2) Transmitted by hand delivery, telegram, telex, telecopy or facsimile transmission, to the party entitled to receive the same at the address indicated below or at such other address as such party shall have specified by written notice to the other party. Notices to the Owner shall be sent to:

Brian Shull
City Manager's Office
409 South Main St
Harrisonburg, VA 22801
Brian.shull@harrisonburgva.gov

To PPEA Contractor:

Hans Harman, President
Momentum Earthworks, Inc.
1500 Pleasants Dr.
Harrisonburg, Virginia 22801
hans@momentumearthworks.com

Any party may, upon prior notice to the others, specify a different address for the giving of notice with necessity of a formal amendment to this Interim Agreement. Notices shall be effective one (1) day after sending if sent by overnight courier or five (5) days after sending if sent by certified U.S. Mail, return receipt requested.

10. Successors and Assigns.

Except as expressly otherwise provided, all of the terms, covenants and conditions hereof shall be binding upon and inure to the benefit of the Parties hereto and their respective successors and assigns. This Interim Agreement may not be assigned by PPEA Contractor without the prior written consent of Owner.

11. Independent Contractor.

The parties understand and agree that PPEA Contractor, in performing its obligations under this Interim Agreement, shall be deemed an independent contractor and not an agent, employee, partner, or co-venturer of Owner.

12. Counterparts.

This Interim Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but both of such counterparts together shall be deemed to be one and the same instrument. It shall not be necessary in making proof of this Interim Agreement or any counterpart hereof to produce or account for the other counterpart.

13. Choice of Law and Forum Selection.

This Interim Agreement is made and entered under the laws of the Commonwealth of Virginia, and is to be construed in accordance with the laws thereof without reference to its principles of conflicts of law. Any suit, at law or in equity, to enforce or interpret the terms hereof shall be brought in the Virginia state courts for the City of Harrisonburg, Virginia, and in no other.

14. Exhibits and Attachments.

The following are attached hereto and made part of this Interim Agreement as if fully set forth herein:

- Exhibit A**—Interim Agreement Scope of Work
- Exhibit B**—Interim Agreement Schedule
- Exhibit C**—Schedule of Prices

IN WITNESS WHEREOF the undersigned have executed this contract on the dates set forth beside their respective signatures.

PPEA CONTRACTOR:
MOMENTUM EARTHWORKS, INC.



Hans Harman, President

Dated: 6-16-21

OWNER:

CITY OF HARRISONBURG, VIRGINIA



Eric D. Campbell, City Manager

Dated: 6/15/2021

Approved as to legal form:

 GCB
G. Chris Brown, City Attorney

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EXHIBIT A: INTERIM AGREEMENT SCOPE OF SERVICES

The scope of services below represents a summary for all tasks to be completed as part of the Interim Agreement. The contractor agrees to complete these tasks in accordance with the preliminary work schedule provided in Exhibit B. All services not explicitly stated are excluded from this scope of work.

A. Assessment

The implementation of stream restoration projects require that sufficient assessment data are conducted to understand the current geomorphology, constraints, ecological potential, surrounding environment, and to provide baseline aquatic resource data for regulatory permitting. This task will include several analyses. The initial steps of assessment include conducting stream and wetland delineation and tree survey. The stream and wetland delineation will be used to submit a Preliminary Jurisdictional Determination (PJD) to the US Army Corps of Engineers (USACE). This is necessary for the future Nationwide permit application. The tree survey in conjunction with the PJD, will characterize the native and non-native vegetative communities and identify trees that may be impacted during construction. A topographic survey of the stream corridor and establishment of survey control points will be conducted as a next step. The survey will be used to characterize the geomorphology of the stream in combination with specific stream measurements. Stream bed and bank material sampling will be conducted and used for future hydraulic and erosion analyses. A soils assessment will be conducted and will consist of bulk density measurements for future use in quantifying pollutant reduction estimates, an erodibility analysis, and a fertility analysis for use in specifying any soil amendments for plan establishment. Two (2) stream gages are proposed to be installed to characterize the upstream and downstream hydrology in the project reach. A precipitation gage will also be installed to ensure local precipitation data is used to calibrate the model. A UAS (i.e. drone) survey is proposed to document the existing conditions for use in analyses as well as for communication purposes to regulators and the public. The results of this analysis will provide input to the design. The assessment phase will also produce a recommendation of functional goals associated with the proposed restoration.

- DELIVERABLE: Preliminary Jurisdictional Determination Package (PDF)
- DELIVERABLE: Survey Control Points & Topographic Survey (PDF, dwg, .shp)
- DELIVERABLE: Existing Conditions Technical Report (PDF)

B. 30% Design

As a first step, we propose to coordinate with City staff to review project objectives, existing conditions information, and coordinate for construction access needs. After incorporation of any feedback and collection of additional site data as needed, we will begin the design process. A hydrologic analysis of the watershed will be performed and a precipitation-runoff relationship for design storms will be developed. Model updates will occur during this task and the subsequent task depending on the occurrence of significant storm events needed for calibration. Hydraulic analyses of the existing conditions will be prepared for stability analysis as well as for future flood studies. Existing and reference geomorphological information collected in Task A and hydraulic modeling

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results will be used to develop the design criteria and preliminary channel dimensions and profile. The 30% Engineering Report will document watershed and stream characteristics, risk factors, and recommendations regarding design approach and construction access. Upon submittal of these items, our Team will be available for a meeting to review the results and plan for subsequent tasks.

- DELIVERABLE: 30% Design Plans (PDF)
- DELIVERABLE: 30% Design Technical Report (PDF)
- DELIVERABLE: Presentation Materials for Public Outreach

C. 60% Design

The proposed restoration plan developed in the 30% Design task will be evaluated using hydraulic analyses and natural channel design (NCD) principles. The goal of hydraulic modeling will be to calibrate proposed stream and floodplain morphology to produce stable conditions and evaluate energy at different frequencies to align conditions to ranges that are functional and tolerable for the widest array of beneficial species appropriate to the site considering topography, soils, stream flow, and watershed position. This process is iterative and will result in a validated preliminary stream restoration design. Updates the hydrologic model based on processing monitoring data will occur during this task. The proposed restoration plan will be used to develop a preliminary Pollution Reduction Report.

A site walk with the plans will be conducted at the completion of this stage. Upon completion of the 60% Design Plan set, a Joint Permit Application for a Nationwide Permit 27 will be submitted to the Virginia Marine Resources Commission (VMRC), the Charlottesville Field Office of the U.S. Army Corps of Engineers – Norfolk District (USACE), and the Virginia Department of Environmental Quality (DEQ). It is anticipated that permits from both VMRC and USACE will be needed.

- DELIVERABLE: Hydrologic Technical Report (PDF)
- DELIVERABLE: Hydraulic Technical Report (PDF)
- DELIVERABLE: Pollution Reduction Report (PDF)
- DELIVERABLE: 60% Design Plans (PDF)
- DELIVERABLE: JPA/Nationwide 27 Permit Application (PDF)

D. Final Design

The final design will build on previous tasks and incorporate all design and regulatory content needed for construction and permitting. Our Team will focus on finalizing documentation of key site data, design assumptions and decisions to ensure that plans comply with local, state, and federal regulations for stream restoration and can be used for regulatory permitting.

Final plans will incorporate engineering data and display design elements including grading, staging areas, erosion and sediment control, and cross-sections with all the relevant site features. All supporting engineering analyses and calculations will be provided with the plans.

An on-site field review of the final plans will be scheduled to ensure that the design is consistent with project goals, objectives, and standards. As appropriate, follow-up correspondence will be scheduled to resolve specific concerns. Final reporting, technical specifications, and construction plans will be finalized and submitted for permitting.

- DELIVERABLE: Final Construction Plans (DWG & PDF)
- DELIVERABLE: Final Design Technical Report (PDF)
- DELIVERABLE: Revised Pollution Reduction Report (PDF)
- DELIVERABLE: Technical Specifications (PDF)
- DELIVERABLE: Construction General Permit Application & SWPPP (PDF)
- DELIVERABLE: Land Disturbance Permit Application (PDF)
- DELIVERABLE: Flood Study (PDF)

EXHIBIT B: INTERIM AGREEMENT SCHEDULE

PLANNING (JUNE 2021)

- Goal Setting and Work Schedule for Key Milestones
- Early Engagement with Stakeholders and Regulators

ASSESSMENT (JUNE 2021-AUGUST 2021)

- Preliminary Jurisdictional Determination Package (PJD)
- Constraints Analysis - Field & Desktop Mapping
- Existing Conditions & Reference Surveys (Topographic and Geomorphic)
- Monitoring Equipment Install
- BANCS Field Data Collection
- UAS Survey
- Existing Conditions Technical Report

30% DESIGN (JULY 2021- SEPT. 2021)

- Existing Conditions Drawings
- Existing Conditions Hydrology & Hydraulics
- Identification of Stream Restoration Design Criteria
- Conceptual Design Plans & Technical Report

60% DESIGN (SEPT. 2021 – OCT. 2021)

- Preliminary Pollutaion Reduction Calculations
- Engineering Calculations (Multi-dimensional Modeling)
- 60% Plan Production (Profile, Typical Sections, Details)
- Constructability Review
- JPA/Nationwide Permit Application
- 60% Technical Reports

100% DESIGN (OCT. 2021 – JAN. 2022)

- Final Design Technical Report
- Final Construction Plans & Specifications
- Construction General Permit Application & SWPPP
- Land Disturbance Permit Application
- Flood Study
- Pollutant Reduction Reporting (Design)

Exhibit C
Interim Agreement Schedule of Prices
Blacks Run Stream Restoration
and Nutrient Reduction

PPEA Proposal Fee, Contract Preparation, General Conditions	\$ 35,000.00
Assessment and Reporting	\$ 105,790.00
30% Design Plans	\$ 90,849.00
60% Design Plans	\$ 138,137.00
100% Design Plans	\$ 72,855.00
Total	\$ 442,631.00

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**CITY OF HARRISONBURG, VIRGINIA
CONTRACT BETWEEN OWNER AND DESIGN BUILD CONTRACTOR**

This Contract, dated this _____ day of _____, 2022, between the **City of Harrisonburg, Virginia**, a municipal corporation of the Commonwealth of Virginia ("Owner") and **Momentum Earthworks, LLC**, a Virginia limited liability company ("Contractor"), is binding among and between these parties as of the date of the Owner's signature.

RECITALS

I. The legal address for the Owner and for the Contractor and the addresses for delivery of Notices and other project documents are as follows:

Owner- City of Harrisonburg, Virginia
Attn- City Manager
Address- 409 South Main Street
City, State, Zip- Harrisonburg, Virginia 22801
Telephone (540) 432-7701 FAX (540) 432-7778

Contractor – Momentum Earthworks, LLC
Attn- Hans Harman, President
Address- 1500 Pleasants Drive
City, State, Zip- Harrisonburg, Virginia 22801
Telephone (540) 746-8826 FAX (540) 564-1317
Contractor's Virginia License #:
FEIN/SSN:
SCC ID #:

II. The Project is identified as:

Project Title – Blacks Run Stream Restoration and Nutrient Reduction, 2021012-PW-PPEA, City of Harrisonburg (“Project” or “Work”)

General Project Description –Restoration on approximately 4,800 contiguous linear feet of Blacks Run across four parcels, quantifying and validating pollutant reductions that will be owned by the City and used for MS4 permit compliance.

III. The Virginia licensed Architect / Engineer who will design the Project is identified as:

Architect/Engineer –

Address -

City, State, Zip-

Telephone FAX

IV. Pursuant to the Virginia Public-Private Education Facilities and Infrastructure Act of 2002 (Virginia Code §§ 56-575.1 et seq.) Contractor is awarded this Contract to perform the Work described by the Contract Documents for the above-described project ("the Project").

THEREFORE, in consideration of the Recitals set forth above, and good and valuable consideration as set forth below, the parties agree as follows:

1. **STATEMENT OF WORK:** The Contractor shall furnish all labor, equipment, and materials and perform all Work for the design and the construction of the Project in accordance with the Contract Documents.
2. **CONTRACT DOCUMENTS:** The Contract shall consist of the documents referenced in the Comprehensive Agreement between the City of Harrisonburg, Virginia, and Momentum Earthworks, LLC ("Comprehensive Agreement"). All of the documents itemized as Contract Documents in the Comprehensive Agreement are incorporated herein by reference.
3. **TIME FOR COMPLETION:** The Work shall be commenced on a date to be specified in a written order of the Owner and shall be Substantially Completed within the time set forth in a project schedule to be agreed upon by the parties or not later than the Contract Completion Date which is June 30, 2023, **unless extended by the Owner, for reasons not due to the fault of the Contractor.** The Work shall be finally completed within 30 days after the date of Substantial Completion of the Work.
4. **COMPENSATION:** The Owner agrees to pay and the Contractor agrees to accept as just and adequate compensation for the performance of the Work in accordance with the Contract Documents the sum of:

Three Million, Four Hundred Thirteen Thousand, Two Hundred Sixty and 00/100 Dollars (\$3,413,260.00) ("Contract Price").
5. **PAYMENTS:** The procedures for establishing a Schedule of Values for the Work, for requesting monthly progress payments for Work in place, and for requesting payments for properly stored materials are stated in the General Conditions. Unless otherwise provided under the Contract Documents, interest on payments due the Contractor shall accrue at the rate of one

percent per month. § 2.2-4355 of the Code of Virginia.

- 6. **CONTRACTUAL CLAIMS:** Any contractual claims shall be submitted in accordance with the contractual dispute procedures set forth in Section 47 of the General Conditions and in the Supplementary Conditions, if any.
- 7. **NON-DISCRIMINATION:** §2.2-4311 of the Code of Virginia applies to this contract. See Section 4 of the General Conditions.
- 8. **AUTHORIZATION TO TRANSACT BUSINESS**
Contractor certifies that, if it is organized as a stock or nonstock corporation, limited liability company, business trust, or limited partnership or registered as a registered limited liability partnership, it is authorized to transact business in the Commonwealth as a domestic or foreign business entity if so required by Title 13.1 or Title 50 of the Code of Virginia, or as otherwise required by law, and that it shall not allow its existence to lapse or its certificate of authority or registration to transact business in the Commonwealth, if so required under Title 13.1 or Title 50, to be revoked or cancelled at any time during the term of the Contract. The Contractor understands and agrees that the Owner may void this Contract if the Contractor fails to comply with these provisions.
- 9. **DEBARMENT AND ENJOINMENT:** By signing contract, the undersigned certifies that this Contractor or any officer, director, partner or owner is not currently barred from bidding on contracts by any Agency of the Commonwealth of Virginia, the City of Harrisonburg, Virginia, or any public body or agency of another state, or any agency of the federal government, nor is this Contractor a subsidiary or affiliate of any firm/corporation that is currently barred from bidding on contracts by any of the same.

IN WITNESS WHEREOF, the parties hereto on the day and year written below have executed this agreement in three (3) counterparts, each of which shall, without proof or accountancy for the other counterparts, be deemed an original thereof.

For the Contractor:
Momentum Earthworks, LLC

For the Owner:
City of Harrisonburg, Virginia

By: _____ By: _____

Name: _____ Name: _____

Title: _____ Title: _____

APPROVED AS TO FORM

City Attorney

Attachments:

- Technical Proposal submitted by the Contractor
- Cost Proposal submitted by the Contractor
- Proposal Modifications, if any
- Performance Bond
- Labor and Material Payment Bond

**GMP Schedule of Values
Blacks Run South
Blacks Run Stream Restoration**

1	General Conditions includes Mobilization, Bonding, Supervision, preconstruction costs, on site facilities, temp fencing, admin	\$ 173,000.00
2	Engineering Construction Admin- Construction Oversight and reporting weekly reports and photographs	\$ 87,000.00
3	Post Construction Engineering- as built survey and reporting, pollutant reduction reporting, FEMA Flood	\$ 105,000.00
4	Project Contingency (Shared PPEA)	\$ 75,000.00
5	Project Demolition and selective clearing	\$ 210,000.00
6	Stream Flow Maintenance	\$ 142,000.00
7	Basic E&S control Measures and Maintenance and Site Access roads	\$ 192,000.00
8	unclassified mass excavation and export	\$ 687,000.00
9	Flood Plain Bench Fine Grading	\$ 135,505.00
10	Stream Channel Structures Cross Vanes, Brush Toe, constructed riffles, embricated stone	\$ 388,000.00
11	Select Channel Grading	\$ 118,000.00
12	Stream Bank Stabilization Bank Seeding and Coir Matting and staking	\$ 380,000.00
13	Seeding of other site areas	\$ 30,000.00
14	Plantings includes addition of tree tubes and 1132 shrubs in floodplain zone as 3-5 gallon all other plantings to be bareroot.	\$ 214,805.00
15	New Materials Storage area 3600 SF 6" Slab with WWF includes 4' high 8" thick poured wall around perimeter (190 LF) Dimensions 30x130. Includes excavation prep of subgrade and 6" compacted 21A stone underneath	\$ 82,470.00
16	Furnish and install 14'x60' bridge with HS25 Loading (90,000) lb's Steel Girder Construction, L/400 Deflection, Southern Yellow Pine Decking Standard 20" 12 Ga Galvanized Guardrails. Bridge will be placed on precast abutments with steel embed channels and hold down plates	\$ 129,000.00
	Total base price	\$ 3,148,780.00

	Post Construction Items (all items include a 3 year service term)	
	Engineering Services Post Construction Monitoring year 1	\$ 35,990.00
	Engineering Services Post Construction Monitoring year 2	\$ 35,990.00
	Engineering Services Post Construction Monitoring year 3	\$ 102,500.00
	Annual Maintenance Allowance (\$30,000/Year)	\$ 90,000.00
	Total Post Construction Items	\$ 264,480.00
	Total All Items	\$ 3,413,260.00

**CITY OF HARRISON, VIRGINIA
MOMENTUM EARTHWORKS, LLC**

GENERAL CONDITIONS OF THE DESIGN-BUILD CONTRACT

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1. DEFINITIONS

Whenever used in these General Conditions of the Design Build Contract ("General Conditions") or in the Contract Documents, the following terms have the meanings indicated, which are applicable to both the singular and plural and the male and female gender thereof:

Architect, Engineer, Architect/Engineer, or A/E: The term used to designate the duly Virginia licensed persons or entities designated by the Design-Build Contractor to perform and provide the Architectural and Engineering design and related services in connection with the Work.

Beneficial Occupancy: The condition after Substantial Completion but prior to Final Completion of the Project at which time the Project, or portion thereof, is sufficiently complete and systems operational such that the Owner could, after obtaining necessary approvals and certificates, occupy and utilize the space for its intended use. Guarantees and warranties applicable to that portion of the Work begin on the date the Owner accepts the Project, or a portion thereof, for such Beneficial Occupancy, unless otherwise specified in the Supplemental General Conditions or by separate agreement.

Change Order: A document issued on or after the effective date of the Contract which is agreed to by the Contractor and approved by the Owner, and which authorizes an addition, deletion, or revision in the Work, including any adjustment in the Contract Price and/or the Contract Completion Date. The term Change Order shall also include written orders to proceed issued pursuant to Section 38(a)(3). A Change Order, once signed by all parties, is incorporated into and becomes a part of the Contract.

Code of Virginia: 1950 Code of Virginia as amended. Sections of the Code referred to herein are noted by § xx-xx.

Construction: The term used to include new construction, reconstruction, renovation, restoration, major repair, demolition, and all similar work upon buildings and ancillary facilities, including any draining, dredging, excavation, grading or similar work upon real property.

Contract: The Contract between Owner and Design-Build Contractor, Modified DGS-30-065 (10/15) (Form CO-9DB) hereinafter referred to as the Contract.

Contract Completion Date: The date by which the Work must be Substantially Complete, which is set forth in the Contract between Owner and Design Build Contractor.

Contract Documents: The Contract between Owner and Design-Build Contractor signed by the Owner and the Contractor and any documents expressly incorporated therein, and all modifications including addenda and subsequent Change Orders.

Contract Price: The total compensation payable to the Contractor for performing the Work, subject to modification by Change Order.

Contractor or Design-Build Contractor: The person or entity with whom the Owner has entered into a contract to do the Work.

Date of Commencement: the date as indicated in the written Notice to Proceed, the receipt of the earliest Building Permit, or a date mutually agreed to between the Owner and Contractor in writing, whichever is the latest.

Day(s): Calendar day(s) unless otherwise noted.

Defective: An adjective which, when modifying the word Work, refers to Work that is unsatisfactory, faulty, deficient, does not conform to the Contract Documents or does not meet the requirements of inspections, standards, tests or approvals required by the Contract Documents, or Work that has been damaged prior to the final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion or Beneficial Occupancy).

Design-Build Proposal: The Technical Proposal and the Cost Proposal including modifications submitted by the Design-Build Contractor in response to the Owner's RFP setting forth the design concepts, design criteria, pricing requirements, and other conditions of the Work to be performed.

Drawing: A page or sheet of the Plans which presents a graphic representation, usually drawn to scale, showing the technical information, design, location, and dimensions of various elements of the Work. The graphic representations include, but are not limited to, plan views, elevations, transverse, and longitudinal sections, large and small scale sections and details, isometrics, diagrams, schedules, tables and/or pictures.

Emergency: Any unforeseen situation, combination of circumstances, or a resulting state that poses imminent danger to health, life or property.

Field Order: A written order issued by the A/E which clarifies or explains the plans or specifications, or any portion or detail thereof, without changing the design, the Contract Price, the Time for Completion, or the Contract Completion Date.

Final Completion Date: The date of the Owner's acceptance of the Work from the Contractor upon confirmation from the Contractor that the Work is totally complete in accordance with Section 44(b).

Final Payment: The final payment that the Contractor receives pursuant to the applicable provisions of Section 36, except in the event no final payment is made due to termination of the Contract under either Sections 41 or 42. In the event of a termination for cause under Section 41, the Final Payment shall be when the termination became effective. In the event of a termination for convenience under Section 42, the Final Payment shall be either the

payment of compensation for termination that the Contractor receives according to the provisions of Subsection 42, or the Owner's determination that no compensation for termination is due the Contractor under Subsection 42, as the case may be.

Float: The excess time included in a construction schedule to accommodate such items as inclement weather and associated delays, equipment failures, and other such unscheduled events. It is the contingency time associated with a path or chain of activities and represents the amount of time by which the early finish date of an activity may be delayed without impacting the critical path and delaying the overall completion of the Project. Any difference in time between the Contractor's approved early completion date and the Contract Completion Date shall be considered a part of the Project float.

Float, Free: The time (in days) by which an activity may be delayed or lengthened without impacting upon the start day of any activity following in the chain.

Float, Total: The difference (in days) between the maximum time available within which to perform an activity and the duration of an activity. It represents the time by which an activity may be delayed or lengthened without impacting the Time for Completion or the Contract Completion Date.

Notice: All written notices, including demands, instructions, claims, approvals and disapprovals, required or authorized under the Contract Documents. Any written notice by either party to the Contract shall be sufficiently given by any one or combination of the following, whichever shall first occur: (1) delivered by hand to the last known business address of the person to whom the notice is due; (2) delivered by hand to the person's authorized agent, representative or officer wherever they may be found; or (3) enclosed in a postage prepaid envelope addressed to such last known business address and delivered to a United States Postal Service official or mailbox; or (4) email. Notice is effective upon such delivery. All notices to the Owner should be directed to the Project Manager. All notices shall be titled as to their purpose in the subject line (i.e. "notice," "demand," "claim," "instruction," "approval," and "disapproval"). The notice must be dated and should clearly state whether the notice is one required under the contract documents.

Notice to Proceed: A written notice given by the Owner to the Contractor (with a copy to A/E) fixing the date on which the Contract time will commence for the Contractor to begin the prosecution of the Work in accordance with the requirements of the Contract Documents. The Notice to Proceed will customarily identify a Contract Completion Date.

Owner: The public body with whom the Contractor has entered into a contractual agreement and for whom the Work or services is to be provided.

Person: This term includes any individual, corporation, partnership, association, company, business, trust, joint venture, or other legal entity.

Plans: The term used to describe the group or set of project-specific drawings prepared by the Design Build Contractor's A/E and acceptable to the Owner which describe the

proposed Work in sufficient detail and provide sufficient information for the Building Official, Virginia Department of Health, Soil Erosion, and Sediment Control Officials, to determine code compliance and for the Contractor to perform the Work and which are included in the Contract Documents.

Project: The term used instead of the specific or proper assigned title of the entire undertaking which includes, but is not limited to, the "Work" described by the Contract Documents, including any specific Phases or Subphases of such Work.

Project Inspector: One or more persons employed by the Owner to inspect the Work for the Owner and/or to document and maintain records of activities at the Site to the extent required by the Owner. The Owner shall notify the Contractor in writing of the appointment of such Project Inspector(s). The scope of the Project Inspector's authority with respect to the Contractor is limited to that indicated in Section 16(e) and (f) and as supplemented by the Owner in writing to the Project Inspector and to the Contractor.

Project Manager: The Project Manager as used herein shall be the Owner's designated representative on the Project. The Project Manager shall be the person through whom the Owner generally conveys written decisions and notices. All notices due the Owner and all information required to be conveyed to the Owner shall be conveyed to the Project Manager. The scope of the Project Manager's authority is limited to that authorized by the Owner, who shall provide written information to the Contractor at the Preconstruction meeting defining those limits. Upon receipt of such information, the Contractor shall be on notice that it cannot rely on any decisions of the Project Manager outside the scope of his authority. Nothing herein shall be construed to prevent the Owner from issuing any notice directly to the Contractor. The Owner may change the Project Manager from time to time and may, in the event that the Project Manager is absent, disabled or otherwise temporarily unable to fulfill his duties, appoint an interim Project Manager.

Provide: Shall mean furnish and install ready for its intended use.

Schedule of Values: The schedule prepared by the Contractor and acceptable to the Owner which indicates the value of that portion of the Contract Price to be paid for each trade or major component of the Work.

Site: Shall mean the location at which the Work is performed or is to be performed.

Specifications: That part of the Contract Documents prepared by the Design-Build Contractor's A/E and acceptable to the Owner which contain the written design parameters and the technical descriptions of materials, equipment, construction systems, standards, and workmanship which describe the proposed Work in sufficient detail and provide sufficient information for the Building Official, Virginia Department of Health, Soil Erosion, and Sediment Control Officials, and City of Harrisonburg personnel to determine code compliance and for the Contractor to perform the Work. (The General Conditions, any Supplemental General Conditions, various bidding information and instructions, and

blank copies of various forms to be used during the execution of the Work are usually bound with the Specifications.)

Subcontractor: A person having a direct contract with Contractor or with any other Subcontractor for the performance of the Work. Subcontractor includes any person who provides on-site labor but does not include any person who only furnishes or supplies materials for the Project.

Submittals: All shop, fabrications, setting and installation drawings, diagrams, illustrations, schedules, samples, and other data required by the Contract Documents which are specifically prepared by or for the Contractor to illustrate some portion of the Work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a Supplier and submitted by the Contractor to illustrate material or equipment conformance of some portion of the Work with the requirements of the Contract Documents.

Substantial Completion or Substantially Complete: The condition when the Owner agrees that the Work, or a specific portion thereof is sufficiently complete, in accordance with the Contract Documents, so that it can be utilized by the Owner for the purposes for which it was intended. The Owner at its sole discretion may, after obtaining the necessary approvals and certificates, take Beneficial Occupancy at this time or choose to wait to occupy until after Final Completion is achieved.

Supplemental General Conditions: That part of the Contract Documents which amends or supplements the General Conditions.

Supplier: A manufacturer, fabricator, distributor, materialman or vendor who provides material for the Project but does not provide on-site labor.

Time for Completion: The number of consecutive calendar days following the Date of Commencement which the Contractor has to substantially complete all Work required by the Contract.

Underground Facilities: All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities which are or have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems, or water.

Work: The services performed under this Contract including, but not limited to, furnishing labor, and furnishing and incorporating materials and equipment into the construction. The Work also includes the entire completed construction, or the various separately identifiable parts thereof, required to be provided under the Contract Documents or which may reasonably be expected to be provided as part of a complete, code compliant, and

functioning system for those systems depicted in the plans and specifications and described in the project description of the Design Build Contract.

2. CONTRACT DOCUMENTS

- (a) The Comprehensive Agreement between Owner and Contractor lists the Contract Documents. The Contract Documents shall also include the Workers' Compensation Certificate of Coverage, the Performance Bond, the Labor and Material Payment Bond, the Schedule of Values and Certificate for Payment, the Affidavit of Payments of Claims, the Contractor's Certificate of Substantial Completion, and the Contractor's Certificate of Completion, which are forms incorporated in these Design-Build General Conditions by reference and are made a part hereof. They must be used by the Contractor for their respective purposes.
- (b) All time limits stated in the Contract Documents, including but not limited to the Time for Completion of the Work, are of the essence of the Contract.
- (c) The Contract between Owner and Design-Build Contractor shall be signed by the Owner and the Design Build Contractor in as many original counterparts as may be mutually agreed upon, each of which shall be considered an original.
- (d) To the extent required, the City of Harrisonburg's Design Construction Standards Manual (DCSM) current edition, the Virginia Department of Transportation "Road & Bridge Specifications", current edition, Virginia Erosion and Sediment Control and Stormwater Management regulations and standards, and AASHTO standards are included by reference and shall be used by the Contractor's A/E as the referenced standards for the design of the paths and other site work.
- (e) Anything called for by one of the Contract Documents and not called for by the others shall be of like effect as if required or called for by all, except that a provision clearly designed to negate or alter a provision contained in one or more of the other Contract Documents shall have the intended effect. In the event of conflicts among the Contract Documents, the Contract Documents shall take precedence in the following order: the Contract between Owner and Contractor; the Supplemental General Conditions; the General Conditions; the Special Conditions; the approved specifications with attachments; and the approved plans.
- (f) All correspondence, invoices, memoranda, submittals and other documents related to this Project whether generated by the Owner, the A/E, the Contractor or others should be clearly identified at the beginning of the document with the project name and number. Additional identification such as a job number, purchase order number or such may also be shown at the generator's option.
- (g) If any provision of this Contract shall be held invalid by any court of competent jurisdiction, such holding shall not invalidate any other provision.

- (h) The Virginia Soil Erosion and Sediment Control Requirements are included by reference as if fully set forth herein and shall be complied with for the design and construction of the project.

3. LAWS AND REGULATIONS

- (a) The Contractor shall comply with all laws, ordinances, rules, regulations and lawful orders of any public authority bearing on the performance of the Work and shall give all notices required thereby. The Contractor shall assure that all Subcontractors and tradesmen who perform Work on the project are properly licensed by the Department of Professional and Occupational Regulation as required by Title 54.1, Chapter 11, Articles 1 and 3 and by applicable regulations.
- (b) This Contract and all other contracts and subcontracts are subject to the provisions of Articles 3 and 5, Chapter 4, Title 40.1, Code of Virginia, relating to labor unions and the "right to work." The Contractor and its Subcontractors, whether residents or nonresidents of the Commonwealth, who perform any Work related to the Project shall comply with all of the said provisions.
- (c) IMMIGRATION REFORM AND CONTROL ACT OF 1986: By signing this Contract, the Contractor certifies that it does not and will not during the performance of this Contract violate the provisions of the Federal Immigration Reform and Control Act of 1986, which prohibits employment of illegal aliens.
- (d) The provisions of all rules and regulations governing safety as adopted by the Safety Codes Commission of the Commonwealth of Virginia and as issued by the Department of Labor and Industry under Title 40.1 or the Code of Virginia shall apply to all Work under this Contract. Inspectors from the Department of Labor and Industry shall be granted access to the Work for inspection without first obtaining a search or administrative warrant.
- (e) Permits and Compliance with Specific Regulations: All work will be designed, constructed, and commenced in accordance with all applicable laws, standards, regulations, and permits. Such permits and regulations include, but are not necessarily limited to, the Virginia Department of Environmental Quality (DEQ) requirements and permits, the Soil Erosion and Sediment Control Regulations and permits, the Virginia Uniform Statewide Building Code and building permits, and any applicable requirements of the Code of the City of Harrisonburg.
- (f) The Contractor will obtain approvals in order to satisfy the requirements of all agencies that require approvals and permits overseeing the project (see partial list in Permits and Regulations above). This may require testing data, operations manuals, maintenance manuals, as-built drawings, and certifications of completion as required by each agency. The Contractor is fully responsible for completion of the Work necessary for obtaining such approvals.

- (g) The 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 in Subsections (a), (b), and (c) of Section 37 of these General Conditions with respect to each lower-tier Subcontractor and Supplier.
- (h) The Contractor, if not licensed as an asbestos abatement contractor in accordance with § 54.1-514, Code of Virginia, shall have all asbestos-related Work performed by subcontractors who are duly licensed as asbestos contractors appropriate for the Work required.
- (i) Lead Based Paint Activities: If the Contract Documents indicate that lead based paint is present on existing materials, components, or surfaces, the Contractor shall conform to the following:
 - (1) The requirements set forth in 59 Federal Register 45,872 (September 2, 1994) Proposed Rule) - Lead: Requirements for Lead based Paint Activities (Proposed Rules) in selecting and performing the means, methods and procedures for performing the Work. This includes, but is not limited to, training of personnel, lead abatement, encapsulation of lead containing materials, removal and handling of lead containing materials, and methods of disposal. When the Final Rule, to be codified at 40 CFR 745, supersedes the Proposed Rule, the Contractor shall be responsible for conforming to the Final Rule, as of the effective date set forth therein.
 - (2) The requirements for employee protection contained in 29 CFR Part 1926, Subpart D, and the requirements for record-keeping contained 29 CFR Part 1910.
 - (3) The Virginia Department of Labor and Industry's (DLI) Emergency Regulation published in the May 27, 1996 Virginia Register, requiring, among other things, that a permit be issued to the lead abatement contractor, or any subsequent regulation issued by DLI.
- (j) If the Contractor violates laws or regulations that govern the Project, the Contractor shall take prompt action to correct or abate such violation and shall indemnify and hold the Owner harmless against any fines and/or penalties that result from such violation. To the extent that such violation is the result of negligence or other actionable conduct of the Contractor, the Contractor shall indemnify and hold the Owner harmless against any third party claims, suits, awards, actions, causes of action or judgments, including but not limited to attorney's fees and costs incurred thereunder, that arise or result from such violation.

4. NONDISCRIMINATION

(a) §2.2-4311 of the Code of Virginia shall be applicable. It provides as follows:

1. 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, national origin, age, disability, or other basis prohibited by 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.
 - 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.
2. The Contractor will include the provisions of the foregoing paragraphs a, b, and c in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.
- (b) Where applicable, the Virginians with Disabilities Act and the Federal Americans with Disabilities Act shall apply to the Contractor and all Subcontractors.

5. PROHIBITION OF ALCOHOL AND OTHER DRUGS

- (a) § 2.2-4312 of the Code of Virginia shall be applicable. It provides as follows:
- “During the performance of this contract, 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) include the provisions of the foregoing clauses in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor. For the purposes of this section, "drug-free workplace" means a site for the performance of work done in connection with a specific contract awarded to a contractor in accordance with this chapter, the employees of whom 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 contract.”

- (b) The Contractor shall also establish, maintain and enforce policies which prohibit the following acts by all Contractor, Subcontractor and Supplier personnel at the Site:
 - (1) the manufacture, distribution, dispensation, possession, or use of alcohol, marijuana or other drugs, except possession and medically prescribed use of prescription drugs; and
 - (2) the impairment of judgment or physical abilities due to the use of alcohol, marijuana or other drugs, including impairment from prescription drugs.

6. TIME FOR COMPLETION

- (a) The Time for Completion for the project including any dates for completion of any designated Phase or Sub-phase shall be as stated in the Contract as agreed upon by the Owner and Contractor, subject to Change Orders or written mutual agreement of Owner and Contractor. The Work must be substantially completed by the Time for Completion or the Contract Completion Date. Unless otherwise specified, the Contractor shall achieve Final Completion within thirty (30) days after the date of Substantial Completion.
- (b) The Time for Completion shall be stated in the Contract between Owner and Design Build Contractor and shall become a binding part of the Contract upon which the Owner may rely in planning the use of the facilities to be constructed and for all other purposes. If the Contractor fails to substantially complete the Work within the Time for Completion or Contract Completion Date, as set forth in the Contract, he shall be subject to payment of actual damages incurred by the Owner or liquidated damages, if provided for in the Contract.
- (c) The Contractor, in submitting his proposal, acknowledges that he has taken into consideration normal weather conditions. For purposes of this Section, normal weather is defined as that which is not considered extraordinary or catastrophic and is not reasonably conducive to the Contractor progressively prosecuting critical path work under the Contract. Weather events considered extraordinary or catastrophic include, but are not limited to tornados, hurricanes, earthquakes, and floods that exceed a 25-year storm event as defined by National Oceanic and Atmospheric Administration (NOAA) for the NOAA data gathering location that is nearest the project site. No additional compensation will be paid to the Contractor because of adverse weather conditions; however, an extension of time for abnormal weather will be considered by the Owner under the following conditions, all of which must be strictly complied with by the contractor:
 - (1) The request for additional time shall be further substantiated by independent weather data collected during the period of delay at the Site affected by the alleged weather delay.

- (2) The extension requested must be supported by a delay in completion of the entire Project shown on the critical path of the accepted CPM Schedule required for the Project. Extensions will be granted only for delays in completion of the Project, not for that portion of any delay which consumes only "float" time.
- (3) A request for extension of time based on abnormal weather, and supporting data, must be made within thirty (30) days of the date of the alleged abnormal weather at the Site.
- (d) The failure by the Contractor to comply with any and all of the conditions in (c) above shall constitute a waiver of claims for the extension of time for abnormal weather.
- (e) The Contractor represents and agrees that he has taken into account in his proposal the requirements of the bid documents, the Contract Documents, local conditions, availability of materials, equipment, and labor, and any other factors which may affect the performance of the Work.

7. CONDITIONS AT SITE

- (a) The Contractor shall have visited the Site prior to submitting its proposal and is totally responsible for having ascertained pertinent local conditions such as location, accessibility and general character of the Site, and the character and extent of existing conditions, improvements, and work within or adjacent to the Site. Claims, which result from the Contractor's failure to do so, will be deemed waived.
- (b) Contractor acknowledges and agrees that is has performed due diligence, surface, and subsurface explorations at the site during the period covered by the Interim Comprehensive Agreement and has identified site conditions that may potentially impede progress, cause delays, or increase costs as a result of added time and materials. These conditions are included in the Contract Price and Contractor shall not request additional time or compensation due to site conditions, rock, or other materials encountered during construction.

8. CONTRACT SECURITY

- (a) Contractor shall deliver to the Owner or its designated representative, a Performance Bond and Labor and Material Payment Bond, each fully executed by the Contractor and one or more surety companies legally licensed to do business in Virginia and each in an amount equal to one hundred percent (100%) of the accepted proposal. If more than one Surety executes a bond, each shall be jointly and severally liable to the Owner for the entire amount of the bond. Sureties shall be selected by the Contractor, subject to approval by the Owner. No payment on

the Contract shall be due and payable to the Contractor until the bonds have been approved by the Owner. The power of attorney from the surety company to its agent who executes the bond shall be attached to the bond.

- (b) For the purposes of all Labor and Material Payment Bonds entered into, 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 (referred to in §2.2-4337(A)(2) of the Code of Virginia as the "prime contractor"), whether such contractor had a direct contract with the Contractor (prime contractor) or whether there were one or more other intervening Subcontractors contractually positioned between it and the Contractor (prime contractor).
- (c) See § 2.2-4338 of the Code of Virginia, for alternative forms of security for payment and/or performance bonds.

9. SUBCONTRACTS

- (a) The Contractor shall, as soon as practicable after the signing of the Contract, notify the Owner in writing of the names of all Subcontractors proposed for the principal parts of the Work and of such others as the Owner may direct. Where the specifications establish qualifications or criteria for Subcontractors, manufacturers, or individuals performing Work on the Project, the Contractor shall be responsible for ascertaining that those proposed meet the criteria or qualifications. The Contractor shall not employ any Subcontractor that the Owner may, within a reasonable time, object by written notice to Contractor to as unsuitable.
- (b) The Owner shall, on request, furnish to any Subcontractor, if practicable, the amounts of payments made to the Contractor, the Schedule of Values, and Requests for Payment submitted by the Contractor and any other documentation submitted by the Contractor which would tend to show what amounts are due and payable by the Contractor to the Subcontractor.
- (c) The Contractor shall be fully responsible to the Owner for all acts and omissions of his agents and employees and all succeeding tiers of Subcontractors and Suppliers performing or furnishing any of the Work. Nothing in the Contract Documents shall create any contractual relationship between Owner and any such Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of Owner to pay for or to see to the payment of any moneys due any such Subcontractor, Supplier or other person or organization, except as may otherwise be required by law.
- (d) The Contractor shall be fully responsible for his invitees at the Site and for those of his Subcontractors, Suppliers, and their employees, including any acts or omissions of such invitees.

- (e) The Contractor agrees that he alone is responsible for all dealings with his Subcontractors and Suppliers, and their subcontractors, employees and invitees.

10. SEPARATE CONTRACTS

- (a) The Owner reserves the right to let other contracts in connection with the Project, the Work under which may proceed simultaneously with the execution of this Contract. The Contractor shall afford other separate contractors reason able opportunity for the introduction and storage of their materials and the execution of their work. The Contractor shall cooperate with them and shall take all reasonable action to coordinate his Work with theirs. If the Owner has listed other separate contracts in the Requests for Proposals which it expects to proceed simultaneously with the Work of the Contractor, and has included the estimated timing of such other Contracts in the Requests for Proposals, the Contractor shall integrate the schedule of those separate contracts into his scheduling. The Contractor shall make every reasonable effort to assist the Owner in maintaining the schedule for all separate contracts. If the work performed by the separate contractor is defective or performed so as to prevent or threaten to prevent the Contractor from carrying out his Work according to the Contract, the Contractor shall immediately notify the Owner upon discovering such conditions.
- (b) If a dispute arises between the Contractor and any separate contractor(s) as to their responsibility for cleaning up as required by Sections 31(c) and 31(d) of these General Conditions, the Owner may clean up and charge the cost thereof to the respective contractors in proportion to their responsibility. If a Contractor disputes the Owner's apportionment of clean-up costs, it shall be that contractor's burden to demonstrate and prove the correct apportionment.

11. CONTRACTOR'S AND SUBCONTRACTOR'S INSURANCE

- (a) The Contractor shall not commence Work under this Contract until he has obtained all the insurance required hereunder from an insurer authorized to do business in Virginia and such insurance has been approved by the Owner; nor shall the Contractor allow any Subcontractor to commence Work on his subcontract until the same types of insurance in an appropriate amount have been obtained by the Subcontractor and approved by the Contractor. Approval of insurance by the Owner shall not relieve or decrease the liability of the Contractor hereunder.
- (b) The Contractor shall take out and shall maintain in force at all times during the performance of the Work Workers' Compensation and Employers' Liability Insurance for all of his employees engaged in the Work in an amount not less than the minimum required by § 2.2-4332 and § 65.2-100 et seq. of the Code of Virginia, and, in case any of the Work is sublet, the Contractor shall require each Subcontractor similarly to provide Workers' Compensation and Employers' Liability Insurance for all of the latter's employees to be engaged in the Work.

Contractor shall submit, on the form provided by the Owner, a Certificate of Coverage verifying Workers' Compensation coverage. The Contractor shall likewise obtain a Certificate of Coverage for Workers' Compensation coverage from each subcontractor prior to awarding the subcontract and shall provide a copy to the Owner.

- (c) During the performance of the Work under this Contract, that: Contractor shall maintain commercial general liability insurance to include Premises/Operations Liability, Products and Completed Operations Coverage, Independent Contractor's Liability, Owner's and Contractor's Protective Liability, and Personal Injury Liability, which shall insure him against claims of personal injury, including death, as well as against claims for property damage, which may arise from operations under this Contract, whether such operations be by himself or by any Subcontractor, or by anyone directly or indirectly employed by either of them. The amounts of general liability insurance shall be not less than **\$1,000,000** per occurrence and **\$2,000,000** aggregate combined limit.
- (d) During the performance of the Work under this Contract, the Contractor shall maintain automobile liability insurance which shall insure him against claims of personal injury, including death, as well as against claims for property damage, which may arise from operations under this Contract, whether such operations be by himself or by any Subcontractor, or by anyone directly or indirectly employed by either of them. The amounts of automobile insurance shall be not less than **\$1,000,000** combined limit for bodily injury and property damage per occurrence.
- (e) The Contractor's Architect/Engineer responsible for the design portion of the Work shall obtain and maintain in force during the contract period and for a period of 5 years after the final completion of the Work professional liability and errors and omission insurance in the amount of **\$1,000,000** per claim occurrence and **\$1,000,000** aggregate combined claims limit. Contractor shall cause each A/E to agree in writing to indemnify and hold harmless the Owner from claims, losses, or damages, to the extent caused by (i) the errors or omissions in the services performed by the A/E or (ii) claims of patent infringement, copyright infringement, or similar claims arising from such services. Contractor shall furnish the Owner with evidence of the errors and omissions policy or policies of the A/E.
- (f) Contractor shall obtain and maintain throughout the performance of this Contract, umbrella/excess liability insurance with minimum coverage (single limit) of **\$2,000,000**, supplementing the Commercial General Liability and Automobile Liability Insurance.

12. "ALL RISK" BUILDER'S RISK INSURANCE—Not Applicable.

13. TAXES, FEES AND ASSESSMENTS

The Contractor shall, without additional expense to the Owner, pay all applicable federal, state, and local taxes, fees, and assessments except the taxes, fees and assessments on the real property comprising the Site of the project.

14. PATENTS

The Contractor shall obtain all licenses necessary to use any invention, article, appliance, process or technique of whatever kind and shall pay all royalties and license fees. The Contractor shall hold the Owner, its officers, agents and employees, harmless against any loss or liability for or on account of the infringement of any patent rights in connection with any invention, process, technique, article or appliance manufactured or used in the performance of the Contract, including its use by the Owner. If, before using any invention, process, technique, article, or appliance specifically named in the specifications or plans as acceptable for use in carrying out the Work, the Contractor has or acquires information that the same is covered by letters of patent making it necessary to secure the permission of the patentee, or other, for the use of the same, he shall promptly advise the Owner. The Owner may direct that some other invention, process, technique, article or appliance be used. Should the Contractor have reason to believe that the invention, process, technique, article, or appliance so specified is an infringement of a patent, and fail to inform the Owner, he shall be responsible for any loss or liability due to the infringement.

15. ARCHITECT/ENGINEER'S STATUS

- (a) The Design Build Contractor's Architect/Engineer shall be duly and properly licensed by the Virginia Department of Professional and Occupational Regulation to provide these services in Virginia. The Architect/Engineer shall provide the professional services to design the Work in conformance with the applicable standards indicated below.
- (b) The Architect/Engineer shall have authority to endeavor to secure the faithful performance by Owner and Design Build Contractor of the Work under the Contract. He shall review the Contractor's Submittals for conformance to the requirements of the Contract Documents and return copies to the Contractor with appropriate notations. He shall interpret the requirements of the plans and specifications and issue Field Orders to the Contractor as may be required. He shall recommend to the Owner suspension of the Work (in whole or in part) whenever such suspension may be necessary to ensure the proper execution of the Contract. He shall have authority to reject, in writing, Work, including material, installation, or workmanship, which does not conform to the requirements of the plans and specifications. He shall determine the progress and quality of the Work, subject to the right of the Owner to make an overriding decision to the contrary. Upon request

by the Contractor, the Architect/Engineer shall confirm in writing within fourteen (14) days, any oral order or determination made by him.

- (e) (c) To the extent required under the scope of the Contract Documents, the DCSM, the Virginia Department of Transportation "Road & Bridge Specifications", current edition, Virginia Erosion and Sediment Control and Stormwater Management regulations and standards, and AASHTO standards are included by reference and shall be used by the Contractor's A/E as the referenced standards for the design of the paths and other site work.
- (d) Any building design shall conform to the requirements of the Virginia Uniform Statewide Building Code, the DCSM, and Virginia Soil Erosion and Sediment Control Regulation. The current edition of the regulations and specifications in effect at the time the construction documents are submitted shall be the applicable for each phase of the project.
- (e) The Commonwealth of Virginia "Construction and Professional Services Manual", current edition, including any revisions to the Manual which may be issued (CPSM or the Manual) is included by reference. See these General Conditions, Section 2(e).
- (a) The Architect/Engineer shall have no authority to approve or order changes in the Work which alter the approved plans and specifications which were the basis of the Building Permit, Soil Erosion Permit, or other permit without obtaining approval of the appropriate Official.
- (b) The provisions of this section are included as information only to describe the relationship between the Owner, A/E, and Contractor. No failure of the A/E to act in accordance with this section shall relieve the Contractor from his obligations under the Contract or create any rights in favor of the Contractor.

16. INSPECTION

- (a) All material and workmanship shall be subject to inspection, examination and testing by the Owner, its Project Inspector, authorized inspector's, and authorized independent testing entities at any and all times during manufacture and/or construction. The Owner shall have authority to reject defective material and workmanship and require its correction. Rejected workmanship shall be satisfactorily corrected and rejected material shall be satisfactorily replaced with proper material without charge therefore, and the Contractor shall promptly segregate and remove the rejected material from the Site. If the Contractor fails to proceed at once with replacement of rejected material and/or the correction of defective workmanship, the Owner may, by contract or otherwise, replace such material and/or correct such workmanship and charge the cost to the Contractor, or may terminate the right of the Contractor to proceed as provided in Section 41 of these General Conditions, the Contractor and surety being liable for any damage to the same extent as provided in Section 41 for termination thereunder.

- (b) Site inspections, tests conducted on Site, or tests of materials gathered on Site, which the Contract requires to be performed by independent testing entities, shall be contracted for by Contractor and paid for by the Owner and shall follow the acceptance testing as shown in the QC/QA plan entitled "Independent Assurance Tolerances" attached hereto. The Contractor shall promptly furnish, without additional charge, all reasonable facilities, labor and materials necessary and convenient for making such tests. Except as provided in (d) below, whenever such examination and testing finds defective materials, equipment or workmanship, the Contractor shall reimburse the Owner for the cost of reexamination and retesting. Although conducted by independent testing entities, the Owner will not contract and pay for tests or certifications of materials, manufactured products or assemblies which the Contract, codes, standards, etc., require to be tested and/or certified for compliance with industry standards such as Underwriters Laboratories, Factory Mutual or ASTM. If fees are charged for such tests and certifications, they shall be paid by the Contractor. The Contractor shall also pay for all inspections, tests, and certifications which the Contract specifically requires him to perform or to pay, together with any inspections and tests which he chooses to perform for his own purposes, but are not required by the Contract.
- (c) Where Work is related to or dependent on the Defective Work, the Contractor shall stop such related or dependent Work until the Defective Work or deficiency is corrected or an alternative solution is presented that is satisfactory to the Owner. Where Work is rejected because of defective material or workmanship, the Contractor shall stop like Work in other areas or locations on the Project until the matter is resolved and the Owner has approved corrective measures.
- (d) Should it be considered necessary or advisable by Owner at any time before final acceptance of the entire Work to make an examination of any part of the Work already completed, by removing or tearing out portions of the Work, the Contractor shall on request promptly furnish all necessary facilities, labor and material to expose the Work to be tested to the extent required. If such Work is found to be defective in any respect, due to the fault of the Contractor or his Subcontractors, the Contractor shall bear all the expenses of uncovering the Work, of examination and testing, and of satisfactory reconstruction. If, however, such Work is found to meet the requirements of the Contract, the actual cost of the Contractor's labor and material necessarily involved in uncovering the Work, the cost of examination and testing, and Contractor's cost of material and labor necessary for replacement including a markup of fifteen (15%) percent for overhead and profit shall be paid to the Contractor and he shall, in addition, if completion of the Work has been delayed thereby, be granted suitable extension of time. Notwithstanding the foregoing, the Contractor shall be responsible for all costs and expenses in removing and replacing the Work if the Contractor had covered the Work prior to any inspection or test contrary to the instructions of the A/E, Owner, or Project Inspector.

- (e) The Project Inspector has the authority to recommend to the Owner that the Work be suspended when in his judgment the Contract Documents are not being followed. Any such suspension shall be continued only until the matter in question is resolved to the satisfaction of the Owner. The cost of any such Work stoppage shall be borne by the Contractor unless it is later determined that no fault existed in the Contractor's Work.

- (g) The Project Inspector has the right and the authority to:
 - (1) Inspect all construction materials, equipment, and supplies for quality and for compliance with the Contract Documents and/or approved shop drawings and Submittals.
 - (2) Inspect workmanship for compliance with the standards described in the Contract Documents.
 - (3) Observe and report on all tests and inspections performed by the Contractor.
 - (4) Recommend rejection of Work which does not conform to requirements of the Contract Documents.
 - (5) Keep a record of construction activities, tests, inspections, and reports.
 - (6) Attend all joint Site construction meetings and inspections held by the Owner and/or the A/E with the Contractor.
 - (7) Check materials and equipment, together with documentation related thereto, delivered for conformance with approved Submittals and the Contract.
 - (8) Check installations for proper workmanship and conformance with shop drawing and installation instructions.
 - (9) Assist in the review and verification of the Schedule of Values & Certificate for Payment, submitted by the Contractor each month.
 - (10) Do all things for or on behalf of the Owner as the Owner may subsequently direct in writing.

- (h) The Project Inspector has no authority to:
 - (1) Authorize deviations from the Contract Documents;
 - (2) Enter into the area of responsibility of the Contractor's superintendent;

- (3) Issue directions relative to any aspect of construction means, methods, techniques, sequences or procedures, or in regard to safety precautions and programs in connection with the Work;
 - (4) Authorize or suggest that the Owner occupy the Project, in whole or in part; or
 - (5) Issue a certificate for payment.
- (i) The duties of the Project Inspector are for the benefit of the Owner only and not for the Contractor. The Contractor may not rely upon any act, statement, or failure to act on the part of the Project Inspector, nor shall the failure of the Project Inspector to properly perform his duties in any way excuse Defective Work or otherwise improper performance of the Contract by the Contractor.

17. SUPERINTENDENCE BY CONTRACTOR

- (a) The Contractor shall have a competent foreman or superintendent, satisfactory to the Owner, on the Site at all times during the progress of the Work. The superintendent or foreman shall be familiar with and be able to read and understand the plans and specifications, and be capable of communicating orally and in writing with the Owner's inspectors and the Contractor's workers. The Contractor shall be responsible for all construction means, methods, techniques, sequences and procedures, for coordinating all portions of the Work under the Contract except where otherwise specified in the Contract Documents, and for all safety and worker health programs and practices. The Contractor shall notify the Owner, in writing, of any proposed change in superintendent, including the reason therefore, prior to making such change.
- (b) The Contractor shall, at all times, enforce strict discipline and good order among the workers on the Project, and shall not employ on the Work, or contract with, any unfit person, anyone not skilled in the Work assigned to him, or anyone who will not work in harmony with those employed by the Contractor, the Subcontractors, the Owner or the Owner's separate contractors and their subcontractors.
- (c) The Owner may, in writing, require the Contractor to remove from the Site any employee or Subcontractor's employee the Owner deems to be incompetent, careless, not working in harmony with others on the Site, or otherwise objectionable, but the Owner shall have no obligation to do so.
- (d) Contractor shall train the superintendent, foreman, and senior technicians for the crews that will work on the Project on the proper installation of the major components of the Project. Contractor will work with the Owner's Project Manager to develop material for this training.

18. CONSTRUCTION SUPERVISION, METHODS, AND PROCEDURES

- (a) The Contractor shall be solely responsible for supervising and directing the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract. The Contractor shall be solely responsible for the means, methods, techniques, sequences and procedures of construction and for coordinating all portions of the Work under the Contract, except where otherwise specified in the Contract Documents. The Contractor, in performing as the Design Build Contractor, shall also be responsible to the Owner for the design or selection of any specific means, method, technique, sequence or procedure of construction which is indicated in and required by the Contract Documents. The Contractor is solely responsible to the Owner that the finished Work complies with the Contract Documents.

The Contractor shall be solely responsible for health and safety precautions and programs for workers and others in connection with the Work. No inspection by, knowledge on the part of, or acquiescence by the Architect or Engineer, the Project Inspector, the Owner, the Owner's employees and agents, or any other entity whatever shall relieve the Contractor from its sole responsibility for compliance with the requirements of the Contract or its sole responsibility for health and safety programs and precautions.

- (b) The Contractor shall be fully responsible to the Owner for all acts and omissions of all succeeding tiers of A/E's, Subcontractors, and Suppliers performing or furnishing any of the Work just as the Contractor is responsible for the Contractor's own acts and omissions. Nothing in the Contract Documents shall create any contractual relationship between the Owner and any Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of the Owner to pay for or see to payment of any moneys due any such Subcontractor, Supplier, or other person or organization except as may otherwise be required by law.

19. SCHEDULE OF THE WORK

- (a) **General:** The Contractor is responsible for the scheduling and sequencing of the Work, for coordinating the Work, for monitoring the progress of the Work, and for taking appropriate action to keep the Work on schedule. The Contractor may attempt to achieve Substantial Completion on or before the Time for Completion or the Contract Completion Date established by the Contract and receive payment in accordance with Section 36 for the Work completed each period. However, the date established by the Contract Documents as the deadline for achieving Substantial Completion must be used in all schedules as the date on which Substantial Completion will be achieved. The time (in days) between the Contractor's planned early completion and the contracted Time for Completion is

part of the Project "Total Float" time and will be used as such. Extensions of time pursuant to Sections 38, 39, and 43, damages for delay, and all other matters between the Owner and the Contractor will be determined using the contractually required Substantial Completion date, not an early Substantial Completion date planned by the Contractor.

Within two (2) weeks after the Contractor signs the Contract, but at least seven (7) days before beginning work, unless otherwise extended by the Owner at the time of the signing, the Contractor shall prepare and submit to the Owner a preliminary bar graph schedule for accomplishing the Work based upon the Time for Completion stated in the Contract. The preliminary schedule shall be in sufficient detail to show the sequencing of the various trades for each floor level, wing or work area. The Owner will notify the Contractor of its acceptance of or objections to the preliminary schedule within fifteen (15) days of receipt by the Owner. A fully complete Project schedule for accomplishing the Work must be submitted in like manner no later than sixty (60) days after the Contract is signed by the Owner.

The Owner's failure to reject or its acceptance of any schedule, graph, chart, recovery schedule, updated schedule, plan of action, etc. shall not constitute a representation or warranty by the Owner, including but not limited to a representation or warranty that the schedule is feasible or practical nor shall any such acceptance or failure to reject relieve the Contractor from sole responsibility for completing the Work within the time allowed. No progress payments will be payable to the Contractor until after it has submitted a preliminary schedule which is acceptable to the Owner. Neither the second progress payment nor any subsequent payment shall be payable to the Contractor until it has submitted a fully complete Project schedule accepted by the Owner. Nor shall subsequent progress payments be payable to the Contractor unless and until he submits the monthly bar graphs or status reports required by Section 19(d) herein or unless and until he provides any recovery schedule pursuant to Section 19(e) herein.

Failure to provide a satisfactory preliminary or fully complete Project schedule within the time limits stated above shall be a breach of contract for which the Owner may terminate the Contract in the manner provided in Section 41 of these General Conditions.

The fully complete Project schedule for accomplishing the Work shall be a Critical Path Method (CPM) schedule which shall be utilized to control the planning and scheduling of the Work. The CPM schedule shall be the responsibility of the Contractor and shall be paid for by the Contractor.

It is the Contractor's responsibility to submit a schedule that shows Substantial Completion of the Work by the Contract Time for Completion or the Contract Completion Date and any interim deadlines established by the Contract.

- (b) **CPM Schedule:** The CPM shall be in the time-scaled precedence format using the Contractor's logic and time estimates. The CPM schedule shall be drawn or plotted with activities grouped or zoned by Work area or subcontract as opposed to a random (or scattered) format.

The CPM schedule shall be time-scaled on a weekly basis and shall be drawn or plotted at a level of detail and logic which will schedule all salient features of the Work, including not only the actual construction Work for each trade, but also the submission of shop drawings and other Submittals for approval, approval of shop drawings by the Contractor's A/E, placing of orders for materials, the manufacture and delivery of materials, the testing and installation of materials and equipment, and all Work activities to be performed by the Contractor. Failure to include any element of Work required for the performance of this Contract shall not excuse the Contractor from completing all Work required within the Time for Completion, Contract Completion Date and any interim deadlines established by the Contract.

The Contractor shall allow sufficient time in his schedule for his A/E to conduct whatever associated reviews or inspections as may be required. Each Work activity will be assigned a time estimate by the Contractor. One day shall be the smallest time unit used. It is the Contractor's responsibility to submit a schedule that shows Substantial Completion of the Work by the Contract Time for Completion or the Contract Completion Date and any interim deadlines established by the Contract.

When completed, the CPM schedule shall be submitted to the Owner for review. The CPM schedule will identify and describe each activity, state the duration of each activity, the calendar dates for the early and late start and the early and late finish of each activity, and clearly highlight all activities on the critical path. "Total float" and "free float" shall be indicated for all activities. Float time, whether "free float" or "total float" as defined in Section I, shall not be considered for the exclusive use or benefit of either the Owner or the Contractor, but must be allocated in the best interest of completing the Work within the Time for Completion or the Contract Completion Date. Extensions to the Time for Completion or the Contract Completion Date, when granted by Change Order, will be granted only when equitable time adjustment exceeds the Total Float in the activity or path of activities affected by the change, provided that the Owner has reasonably provided information necessary to allow for the orderly progression of the Work. The CPM schedule shall also show what part of the Contract Price (expressed in U.S. dollars) is attributable to each activity on the schedule and shall be in agreement with the schedule of values, the sum of which for all activities shall equal the total Contract Price. The CPM schedule shall have no line-item activities longer than thirty (30) days in duration, and activities shall be included to provide sufficient detail for effectively managing the sequence of the Work. When acceptable to the Owner and Architect/Engineer as to compliance with the requirements of this Section, the schedule shall become the CPM schedule for the Project. Acceptance of the schedule by the Owner does not indicate agreement with nor responsibility for the proposed or actual duration of any activity or logic shown on the accepted schedule.

- (c) **Monthly Project Reports:** The Contractor shall review progress not less than each month, but as often as necessary to properly manage the Project and stay on schedule. The Contractor shall collect and preserve information on Change Orders, including extensions of time. The Contractor shall evaluate this information and update the latest accepted schedule as often as necessary to finish within the Contract Time for Completion or before the Contract Completion Date. The Contractor shall submit to the Owner along with his monthly request for payment a copy of the bar graph schedule annotated to show the current progress. For projects requiring a CPM schedule, the Contractor shall submit a monthly report of the status of all activities. The bar graph schedule or monthly status report submitted with each periodic request for payment shall show the Work completed to date in comparison with the Work scheduled for completion, including but not limited to the dates for the beginning and completion of the placing of orders; the manufacture, testing and installation of materials, supplies and equipment. The form shall be approved by the Owner; however, a bar graph or a CPM schedule marked, colored or annotated to reflect the above will usually satisfy this requirement. If any elements of the Work are behind schedule, regardless of whether they may prevent the Work from being completed on time, the Contractor must indicate in writing in the report what measures he is taking and plans to take to bring each such element back on schedule and to ensure that the Time for Completion or Contract Completion Date is not exceeded.
- (d) **Progress Delay:** Should any of the following conditions exist, the Owner may require the Contractor to prepare, at no extra cost to the Owner, a plan of action and a recovery schedule for completing the Work by the Contract Time for Completion or the Contract Completion Date:
- (1) The Contractor's monthly project report indicates delays that are, in the opinion of the Owner, of sufficient magnitude that the Contractor's ability to complete the Work by the scheduled Time for Completion or the Contract Completion Date is brought into question;
 - (2) The CPM schedule sorted by early finish shows the Contractor to be thirty (30) or more days behind the critical path schedule at any time during construction up to thirty (30) days prior to scheduled Substantial Completion date;
 - (1) The Contractor desires to make changes in the logic (sequencing of Work) or the planned duration of future activities of the CPM schedule which, in the opinion of the Architect/Engineer or the Owner, are of a major nature.

The plan of action and recovery schedule, when required, shall explain and display how the Contractor intends to regain compliance with the current accepted, fully completed, Project CPM schedule, as updated by approved change orders.

The plan of action, when required, shall be submitted to Owner for review within five (5) business days or the Contractor receiving the Owner's written demand. The recovery schedule, when required, shall be submitted to the Owner within five (5) business days of the Contractor's receiving the Owner's written demand.

- (e) **Early Completion of Project:** The Contractor may attempt to achieve Substantial Completion on or before the Time for Completion or the Contract Completion Date. However, such planned early completion shall be for the Contractor's convenience only and shall not create any additional rights of the Contractor or obligations of the Owner under this Contract, nor shall it change the Time for Completion or the Contract Completion Date. The Contractor shall not be required to pay damages to the Owner because of its failure to achieve Substantial Completion by its planned earlier date. Likewise, the Owner shall not pay the Contractor any additional compensation for achieving Substantial Completion early nor will the Owner owe the Contractor any compensation should the Owner, its officers, employees, or agents cause the Contractor not to achieve Substantial Completion earlier than the date required by the Contract Documents. If the Contractor seeks to change the Time for Completion or the Contract Completion Date to reflect an earlier completion date, he may request or propose such a change. The Owner may, but is not required to, accept such proposal. However, a change in the Time for Completion or the Contract Completion Date shall be accomplished only by Change Order. If the Contractor's proposal to change the Time for Completion or the Contract Completion Date is accepted, a Change Order will be issued stating that all references in the Contract, including these General Conditions, to the Time for Completion or the Contract Completion Date shall thereafter refer to the date as modified, and all rights and obligations, including the Contractor's liability for actual damages, delay damages and/or liquidated damages, shall be determined in relation to the date, as modified.

20. SCHEDULE OF VALUES AND CERTIFICATE FOR PAYMENT

- (a) Before submittal of the first partial payment request under the Contract, the Contractor shall prepare for review and approval of the Owner, a schedule of the estimated values listed by trades or by specification sections of the Work, totaling the Contract Price. Where the total project has multiple parts or phases, the Contractor shall prepare appropriate schedules of values to facilitate reviews and justifications for payments.

All requests for payment shall be made on the City's standard Application and Certificate for Payment. Where a computerized spreadsheet is used, one copy of the entire Schedule of Values shall be provided to the Owner in an agreed electronic format (e.g. EXCEL) with the initial request for payment.

- (b) If the Contractor requests, or intends to request, payment for materials stored in an approved and secure manner, the Schedule of Values must indicate the amount for

labor and the amount for materials, and in a supplement thereto must include an itemized list of materials for that trade or Work section. The material breakdown shall be in sufficient detail to allow verification of the quantities required for the Project, the quantities delivered, the Work completed, and the quantities stored on or off Site. Owner shall have the right to inspect all stored materials and documentation related thereto for verification.

- (c) The "Value of Work Completed" portion of the Application and Certificate for Payment shall be completed, the Contractor's certification completed and signed, and the appropriate substantiating material attached to each Application and Certificate for Payment. Such substantiating material includes, but is not limited to, invoices for materials, delivery tickets, time sheets, payroll records, daily job logs/records, and similar materials which, in the opinion of the Owner, are necessary or sufficient to justify payment of the amount requested.
- (d) The labor progress for any task or activity shall be calculated based upon the percentage of Work complete up to fifty percent (50%) of the completion of the task or activity. Thereafter, the evaluation of labor progress will be based upon the effort required to complete that task or activity. The material progress shall be calculated as the invoiced dollar cost of materials used in relationship to the amount estimated as necessary to complete a particular element of Work. When calculating material progress, credit shall be given for installed material as well as that stored on the Site and any material stored off Site which has been certified in accordance with Section 36 of these General Conditions.
- (e) Should Work included in previous Application and Certificate for Payment submittals, and for which payment has been made, subsequently be identified, by tests, inspection, or other means, as not acceptable or not conforming to Contract requirements, the "Value of Work Completed" portion of the first Application and Certificate for Payment submitted after such identification shall be modified to reduce the "completed" value of that Work by deleting the value of that which has been identified as not acceptable or nonconforming.

21. ACCESS TO WORK

The Owner, the Project Manager, the Owner's inspectors and other testing personnel, inspectors from the Department of Labor and Industry, and others authorized by the Owner, shall have access to the Work at all times. The Contractor shall provide proper facilities for access and inspection.

22. SURVEYS AND LAYOUT

- (a) The Contractor shall provide competent surveying and engineering services to execute the Work in accordance with the Contract and shall be responsible for the accuracy of these surveying and engineering services.

23. PLANS AND SPECIFICATIONS

- (a) The general character and scope of the Work are illustrated by the plans and the specifications prepared by the Contractor's Architect/Engineer and in the Contractor's PPEA submission. The level of detail shown on the plans and stipulated in the specifications shall be sufficient to clearly demonstrate to the Director of Public Works that the design conforms to the requirements of the CPSM, DCSM, VDOT and AASHTO, as appropriate. The Contractor shall carry out the Work in accordance with the plans and specification and any additional detail drawings and instructions provided by the A/E.
- (b) Measurements or dimensions shown on the drawings for Site features, utilities, and structures shall be verified at the Site by the Contractor before commencing the Work. The Contractor shall not scale measurements or dimensions from the drawings. If there are discrepancies, the Architect/Engineer shall be consulted. If new Work is to connect to, match with or be provided in existing Work, the Contractor shall verify the actual existing conditions and necessary dimensions prior to ordering or fabrication.
- (c) As-Built Drawings: The Contractor shall maintain at the Site for the Owner one copy of all drawings, specifications, addenda, approved shop or setting drawings, Change Orders and other modifications (collectively referred to herein as "As-Built Drawings") in good order and marked to record all changes as they occur during construction. These shall be available to the Owner, the Project Inspector, the Owner's other inspectors and to the Owner's testing personnel. The drawings shall be neatly and clearly marked in color during construction to record all variations made during construction. The representation of such variations shall include such supplementary notes, symbols, legends, and details as may be necessary to clearly show the as-built construction.
- (d) Record Drawings: Upon completion of the Work and prior to the final inspection, the Contractor shall deliver to the Owner five complete sets of "As-Built Drawings" and Operations, Maintenance, and Training Manuals in reproducible form along with electronic version. Additionally, "As-Built Drawings" along with Operations Manuals will be provided to the appropriate permitting agencies as required by each agency.

24. SUBMITTALS

- (a) Shop drawings, setting drawings, product data, and samples generated by the Design Build Contractor shall be known as submittals. Three copies of all submittals shall be provided to the Owner when generated.

- (b) Submittals shall be approved by the Design Build Contractor and its licensed professional designer and by the Director of Public Works for conformance with the required codes, standards, and provisions of the Contract. Three copies of all approved submittals shall be provided to the Owner. One copy of the "Approved" shop drawings/submittals shall be on file in the construction trailer for use by Inspectors.
- (c) Any submittal material, assembly, or product which deviates from the approved contract documents and Project Plans shall be submitted to the Director of Public Works for approval prior to use or installation..
- (d) The Work shall be in accordance with all permits and Contract documents as detailed by the approved submittals.

25. FEES, SERVICES AND FACILITIES

- (a) The Contractor shall obtain all permits and pay for all fees and charges necessary for temporary access and public right-of-way blockage or use, for temporary connections to utilities and for the use of property (other than the Site) for storage of materials and other purposes unless otherwise specifically stated in the Contract Documents.
- (b) The Contractor shall be responsible for providing required connections, temporary wiring, piping, etc. to these services in a safe manner and in accordance with applicable codes. All temporary wire, pipe, etc. shall be removed before the Substantial Completion inspection. Acceptance by the Contractor of the use of Owner's water and electricity constitutes a release to the Owner of all claims and of all liability to the Contractor for whatever damages which may result from power and water outages or voltage variations.
- (c) The Owner shall pay any connection charges for permanent utility connections directly to the utility Supplier. The Contractor shall coordinate such connections with the utility Supplier.
- (d) It is understood that, except as otherwise specifically stated in the Contract Documents, the Contractor, either directly or through his Subcontractors, shall provide and pay for all material, labor, tools, equipment, water, light, power, telephone and other services or facilities of every nature whatsoever necessary to execute completely and deliver the Work within the Contract Time for Completion or before the Contract Completion Date.

26. EQUALS

- (a) **Brand names:** Unless otherwise stated in the Proposal, the name of a certain brand, make or manufacturer denotes the characteristics, quality, workmanship, economy of operation and suitability for the intended purpose of the article desired, but does not restrict the Contractor to the specific brand, make, or manufacturer; it is set forth to convey to the Contractor the general style, type, character and quality of the article specified.
- (b) **Equal materials, equipment or assemblies:** Whenever in these Contract Documents, a particular brand, make of material, device or equipment is shown or specified, such brand, make of material, device or equipment shall be regarded merely as a standard. Any other brand, make or manufacturer of a product, assembly or equipment which in the opinion of the Owner is the equal of that specified, considering quality, capabilities, workmanship, configuration, economy of operation, useful life, compatibility with design of the Work, and suitability for the intended purpose, will be accepted unless rejected by the Owner as not being equal.
- (c) **Substitute materials, equipment or assemblies:** The Contractor may propose to substitute a material, product, equipment, or assembly which deviates from the requirements of the approved plans and specifications but which the Contractor deems will perform the same function and have equal capabilities, service life, economy of operations, and suitability for the intended purpose. The proposal must include any cost differentials proposed. If the proposed substitute is acceptable to the Owner, a Change Order will be proposed to the Contractor to accept the substitute and to deduct the proposed cost savings from the Contract Price. The Owner shall have the right to limit or reject substitutions at its sole discretion.
- (d) The Contractor shall be responsible for making all changes in the Work necessary to adapt and accommodate any equal or substitute product which it uses. The necessary changes shall be made at the Contractor's expense.

27. AVAILABILITY OF MATERIALS

If a brand name, product, or model number included in the Contract Documents is not available on the present market, alternate equal products or model numbers may be proposed by the Contractor for approval by the Owner. Also submit data to the Building Official for approval of products, materials, and assemblies regulated by the VUSBC.

28. CONTRACTOR'S TITLE TO MATERIALS

No materials or supplies for the Work shall be purchased by the Contractor, or by any Subcontractor or Supplier, subject to any security interest, installment or sales contract or any other agreement or lien by which an interest is retained by the seller or is given to a

secured party. The Contractor warrants that he has clear and good title to all materials and supplies which he uses in the Work or for which he accepts payment in whole or in part.

29. STANDARDS FOR MATERIALS INSTALLATION & WORKMANSHIP

- (a) Unless otherwise specifically provided in the Contract, all equipment, material, and accessories incorporated in the Work are to be new and in first class condition.
- (b) Unless specifically approved by the Owner or required by the Contract, the Contractor shall not incorporate into the Work any materials containing asbestos or any material known by the industry to be hazardous to the health of building construction workers, maintenance workers, or occupants. If the Contractor becomes aware that a material required by the Contract contains asbestos or other hazardous materials, he shall notify the Owner immediately and shall take no further steps to acquire or install any such material without first obtaining Owner approval.
- (c) All workmanship shall be of the highest quality found in the building industry in every respect. All items of Work shall be done by craftsmen or tradesmen skilled in the particular task or activity to which they are assigned. In the acceptance or rejection of Work, no allowance will be made for lack of skill on the part of workmen. Poor or inferior workmanship (as determined by the Architect/Engineer, the Owner or other inspecting authorities) shall be removed and replaced at Contractor's expense such that the Work conforms to the highest quality standards of the trades concerned, or otherwise collected to the satisfaction of the Owner, or other inspecting authority, as applicable.
- (d) Under the various sections of the plans or specifications, where specified items are supplied with the manufacturer's printed instructions, recommendations, or directions for installation, or where such instructions, recommendations, or directions are available, installation of the specified items shall be in strict accordance with the manufacturer's printed instructions.
- (e) Under the various sections of the plans or specifications, where reference is made to specific codes or standards governing the installation of specified items, installation shall in all cases be in strict accordance with the referenced codes and standards. Where no reference is made to specific codes or standards, installation shall conform to the generally recognized applicable standards for first-class installation of the specific item to be installed. Contractors are expected to be proficient and skilled in their respective trades and knowledgeable of the the DCSM, the Virginia Department of Transportation "Road & Bridge Specifications", current edition, Virginia Erosion and Sediment Control and Stormwater Management regulations and standards, and AASHTO standards and

other codes and standards applicable to installations and associated work by his trade.

- (f) Where the manufacturer's printed instructions are not available for installation of specific items, where specific codes or standards are not referenced to govern the installation or specific items, or where there is uncertainty on the part of the Contractor concerning the installation procedures to be followed or the quality of workmanship to be maintained in the installation of specific items, the Contractor shall consult the Architect/Engineer for approval of the installation procedures or the specific standards governing the quality of workmanship the Contractor proposes to follow or maintain during the installation of the items in question.
- (g) During and/or at the completion of installation of any items, the tests designated in the plans or specifications necessary to assure proper and satisfactory functioning for its intended purpose shall be performed by the Contractor or by its Subcontractor responsible for the completed installation. All costs for such testing are to be included in the Contract Price. If required by the Contract Documents, the Contractor shall furnish prior to final inspection the manufacturers' certificates evidencing that products meet or exceed applicable performance, warranty and other requirements, and certificates that products have been properly installed and tested.

30. WARRANTY OF MATERIALS AND WORKMANSHIP

- (a) The Contractor warrants that, unless otherwise specified, all materials and equipment incorporated in the Work under the Contract shall be new, in first class condition, and in accordance with the Contract Documents. The Contractor further warrants that all workmanship shall be of the highest quality and in accordance with the Contract Documents and shall be performed by persons qualified at their respective trades.
- (b) Work not conforming to these warranties shall be considered defective.
- (c) This Warranty of materials and workmanship is separate and independent from and in addition to any of the Contractor's other guarantees or obligations in the Contract or under Virginia law.

31. USE OF SITE AND REMOVAL OF DEBRIS

- (a) The Contractor shall:
 - (1) Perform the Work in such a manner as not to interrupt or interfere with the operation of any existing activity on, or in proximity to, the Site or with the Work of any other separate contractor;

- (2) Store his apparatus, materials, supplies and equipment in such orderly fashion at the Site of the Work as will not unduly interfere with the progress of his Work or the work of any other separate contractor; and
 - (3) Place upon the Work or any part thereof only such loads as are consistent with the safety of that portion of the Work.
- (b) The Contractor expressly undertakes, either directly or through his Subcontractor(s), to effect all cutting, filling or patching of the Work required to make the same conform to the plans and specifications, and, except with the consent of the Owner, not to cut or otherwise alter the Work of any other separate contractor. The Contractor shall not damage or endanger any portion of the Work or Site, including existing improvements, unless called for by the Contract.
 - (c) The Contractor expressly undertakes, either directly or through his Subcontractor(s), to clean up frequently all refuse, rubbish, scrap materials and debris caused by his operations, to the end that at all times the Site shall present a neat, orderly and workmanlike appearance. No such refuse, rubbish, scrap material and debris shall be left within the completed Work nor buried on the building Site, but shall be removed from the Site and properly disposed of in a licensed landfill or otherwise as required by law.
 - (d) The Contractor expressly undertakes, either directly or through his Subcontractor(s), before Final Payment or such prior time as the Owner may require, to remove all surplus material, false Work, temporary structures, including foundations thereof. plants of any description and debris of every nature resulting from his operations and to put the Site in a neat, orderly condition; to thoroughly clean and leave reasonably dust free all finished surfaces including all equipment, piping, etc., on the interior of all buildings included in the Contract; and to clean thoroughly all glass installed under the Contract, including the removal of all paint and mortar splatters and other defacements.

If the Contractor fails to clean up at the time required herein, the Owner may do so and charge the costs incurred thereby to the Contractor in accordance with Section 10 (b) of these General Conditions.

- (e) The Contractor shall have, On-Site, an employee certified by the Department of Environmental Quality as a Responsible Land Disturber who shall be responsible for the installation, inspection and maintenance of erosion control and stormwater management measures and devices. The Contractor shall prevent Site soil erosion, the runoff of silt and/or debris carrying water from the Site, and the blowing of debris off the Site in accordance with the applicable requirements and standards of the Contract and the Virginia Department of Environmental Quality's Erosion and Sediment Control Regulations and the Virginia Stormwater Management Regulations.

32. TEMPORARY ROADS

Temporary roads, if required, shall be established and maintained until permanent roads are accepted, then removed and the area restored to the conditions required by the Contract Documents. Crushed rock, paving and other road materials from temporary roads shall not be left on the Site unless permission is received from the Owner to bury the same at a location and depth approved by the Owner.

33. SIGNS

The Contractor may, at his option and without cost to the Owner, erect signs acceptable to the Owner on the Site for the purpose of identifying and giving directions to the job. No signs shall be erected without prior approval of the Owner as to design and location.

34. PROTECTION OF PERSONS AND PROPERTY

- (a) The Contractor expressly undertakes, both directly and through his Subcontractors, to take every reasonable precaution at all times for the protection of all persons and property which may come on the Site or be affected by the Contractor's Work.
- (b) The Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Any violation of these requirements or duties or any potential safety hazard that is brought to the attention of the Contractor by the Architect/Engineer, the Owner, or any other persons shall be immediately abated.
- (c) The provisions of all rules and regulations governing health and safety as adopted by the Safety Codes Commission of the Commonwealth of Virginia, issued by the Department of Labor and Industry under Title 40.1 of the Code of Virginia, shall apply to all Work under this Contract.
- (b) The Contractor shall continuously maintain adequate protection of all his Work from damage and shall protect the Owner's property from injury or loss arising in connection with this Contract. He shall make good any such damage, injury or loss, except as may be directly and solely due to errors in the Contract Documents or caused by agents or employees of the Owner. The Contractor shall adequately protect adjacent property to prevent any damage to it or loss of use and enjoyment by its owners. The Contractor shall provide and maintain all passageways, guard fences, lights and other facilities for protection as required by public authority, local conditions, or the Contract.
- (c) In an emergency affecting the health, safety or life of persons or of the Work, or of the adjoining property, the Contractor, without special instruction or authorization from the Owner, shall act, at his discretion, to prevent such threatened loss or injury.

Also, should he, to prevent threatened loss or injury, be instructed or authorized to act by the Owner, he shall so act immediately, without appeal. Any additional compensation or extension of time claimed by the Contractor on account of any emergency work shall be determined as provided by Section 38 of these General Conditions.

- (d) When necessary for the proper protection of the Work, temporary heating of a type compatible with the Work must be provided by the Contractor at the Contractor's expense, unless otherwise specified.

35. CLIMATIC CONDITIONS

The Contractor shall suspend activity on and protect any portion of the Work that may be subject to damage by climatic conditions.

36. PAYMENTS TO CONTRACTOR

- (a) Unless otherwise provided in the Contract, the Owner will make partial payments to the Contractor on the basis of a duly certified and approved Schedule of Values and Certificate for Payment, showing the estimate of the Work performed during the preceding calendar month or work period. When evaluating the Contractor's Payment Form, the Owner will consider the value of the Work in place, the value of approved and properly stored materials, the status of the Work on the critical path with regard to the Time for Completion, and the estimated value of the Work necessary to achieve Final Completion. The Owner will schedule a monthly pay meeting to occur no earlier than the 25th day of the month represented by the payment request or not later than the 5th day of the following month. The Contractor will submit his monthly estimate of Work completed Form in accordance with the Contract between the Owner and Contractor so that it is received by the Owner's Project Manager at least one work day prior to the date scheduled for the monthly pay meeting. The Owner will review the estimate with the Contractor at the monthly pay meeting, which shall be considered the receipt date, and may approve any or all of the estimate of Work for payment. In preparing estimates, the material delivered to the Site and preparatory Work done shall be taken into consideration, if properly documented as required by Section 20 of these General Conditions, or as may be required by the Owner so that quantities may be verified. In addition to material delivered to the Site, material such as large pieces of equipment and items purchased specifically for the Project, but stored off the Site within the Commonwealth of Virginia, may be considered for payment, provided all of the following are accomplished prior to the submission of the monthly payment request in which payment for such materials is requested:

- (1) The Contractor must notify the Owner in writing, at least ten (10) days prior to the submission of the payment request that specific items will be stored off Site in a designated, secured place within the Commonwealth of

Virginia. The Schedule of Values must be detailed to indicate separately both the value of the material and the labor/installation for trades requesting payment for stored materials. By giving such notification and by requesting payment for material stored off Site, the Contractor warrants that the storage location is safe and suitable for the type of material stored and that the materials are identified as being the property of the Contractor, and agrees that loss of materials stored off the Site shall not relieve the Contractor of the obligation to timely furnish these types and quantities of materials for the Project and meet the Time for Completion or Contract Completion Date, subject to Section 43 (b) or these General Conditions. If the storage location is more than 20 miles from the Site, the Contractor may be required to reimburse the Owner for the cost incurred for travel to the storage location to verify the Contractor's request for payment for materials stored off Site. A Supplementary Agreement shall be required for payment by the Owner to the Contractor for materials or equipment that is stored offsite at a location that is not within the Commonwealth of Virginia.

- (2) Such notification, as well as the payment request, shall:
 - (a) itemize the quantity of such materials and document with invoices showing the cost of said materials;
 - (b) indicate the identification markings used on the materials, which shall clearly reference the materials to the particular project;
 - (c) identify the specific location of the materials, which must be within reasonable proximity to the Site and within the Commonwealth of Virginia:
- (3) Owner has a right to request:
 - (a) include a letter from the Contractor's Surety which confirms that the Surety on the Performance Bond and the Labor and Material Payment Bond has been notified of the request for payment of materials stored off the Site and agrees that the materials are covered by the bond; and
 - (b) include a certificate of all-risk builder's risk insurance in an amount not less than the fair market value of the materials, which shall name the Owner and the Contractor as co-insureds.
- (4) The Contractor's Architect/Engineer shall indicate, in writing, to the Owner that Submittals for such materials have been reviewed and meet the requirements of the Contract Documents, that the stored materials meet the requirement of the plans and specifications, and that such materials conform to the approved Submittals. Should the A/E deem it necessary to visit the

storage site to make such review, the Contractor shall bear the costs incurred therewith.

- (5) The Owner shall notify the Contractor in writing of its agreement to prepayment for materials.
- (6) The Contractor shall notify the Owner in writing when the materials are to be transferred to the Site and when the materials are received at the Site.
 - (a) Payment will not be made for materials or equipment stored on or off the Site which are not scheduled for incorporation into the Work within the six months next following submission of the request for payment, unless the Contractor has the prior consent of the Owner, which consent may be granted or withheld by the Owner in its discretion if, in the opinion of the Owner, it is not necessary to procure the materials more than six months in advance of use to assure their availability when needed.
 - (b) No payment shall be made to the Contractor until:
 - i. The Contractor furnishes to the Owner its Social Security Number (SSN) if an individual, or its Federal Employer Identification Number (FEIN) if a proprietorship, partnership, corporation or other legal entity.
 - ii. Certificates of Insurance or other satisfactory evidence of compliance by the Contractor with all the requirements of Section 11 (and Section 12 if applicable) of these General Conditions have been delivered to the Owner.
 - iii. Copies of any certificates of insurance required of a Subcontractor under Section 11 have been delivered to the Owner for payments based on Work performed by a Subcontractor
 - iv. The Contractor has (i) submitted a preliminary schedule which is acceptable to the Owner in accordance with Section 19(a), (ii) submitted a fully complete Project schedule accepted by the Owner in accordance with Section 19(a), (iii) maintained the monthly bar graphs or status reports required by Section 19(d), or (iv) provided a recovery schedule pursuant to Section 19(e), as each of them may be required.
 - v. The Contractor shall determine the impact on warranties as a result of the early delivery of materials on site or off site and report this information to the Owner. Warranties that will be shortened by early delivery will need to be remedied by the Contractor either through

extension of the warranty or assumption of the warranty by the Contractor.

- (d) In making such partial payments, five percent (5%) of each payment to the Contractor shall be retained until Final Completion and acceptance of all Work covered by the Contract, unless otherwise provided by any law, regulation or program of the federal government. Such retain age shall be held to assure faithful performance of the Contract and may also be used as a fund to deduct amounts due to or claimed by the Owner, including, but not limited to, payment to the Owner of all moneys due for deductive change orders, credits, uncorrected Defective Work, interest, damages, and the like. (§2.2-4333 of the Code of Virginia) The Owner may, at its sole discretion, agree on an item by item basis to release the retainage on items which are fully 100% complete, and which have accepted by the Owner as being tested and complete, and on which no further action or work will be required. Retainage which is released by the Owner shall be distributed by the Contractor in conformance with Section 37 of these General Conditions.
- (e) All material and Work for which partial payments are made shall thereupon become the sole property of the Owner, but this provision shall not relieve the Contractor from the sole responsibility for all materials and Work, including those for which payment has been made, or for the restoration of any damaged materials or Work. Nor shall this provision serve as a waiver of the right of the Owner to require the fulfillment of all of the terms and conditions of the Contract.
- (f) The Final Payment, which shall include the retainage, less any amounts due to or claimed by the Owner, shall not become due until the Owner agrees that Final Completion has been achieved and until the Contractor shall deliver to the Owner a Certificate of Completion by the Contractor and an Affidavit of Payment of Claims stating that all Subcontractors and Suppliers of either labor or materials have been paid all sums claimed by them for Work performed or materials furnished in connection with this Project that are due and owing, less retainage. Amounts due the Owner which may be withheld from the Final Payment may include, but are not limited to, amounts due pursuant to Section 3(i), Section 16(a)-(d), Section 31(d), costs incurred to repair or replace Defective Work, costs incurred as a result of the Contractor's negligent acts or omissions or omissions of those for whom the Contractor is responsible, delay damages under Section 43(h), and any liquidated or actual damages. If all Subcontractors and Suppliers of labor and materials have not been paid the full amount claimed by them, the Contractor shall list each to which an agreed amount of money is due or which has a claim in dispute, with respect to all such Subcontractors and Suppliers, the Contractor shall provide to the Owner an affidavit from each such Subcontractor and Supplier stating the amount of their subcontract or supply contract, the percentage of completion, the amounts paid to them by the Contractor and the dates of payment, the amount of money still due if any, any interest due the Subcontractor or Supplier pursuant to Section 37(h) below, and whether satisfactory arrangements have been made for the payment of undisputed amounts. Nothing in this Section shall be construed as

creating any obligation or contractual relationship between the Owner and any Subcontractor or Supplier, and the Owner shall not be liable to any Subcontractor or Supplier on account of any failure or delay of the Owner in complying with the terms hereof.

- (g) Upon successful completion of the final inspection and all Work required by the Contract, including but not limited to the delivery of As-Built reproducible Record Drawings, equipment manuals, written warranties, acceptance of the Work by the Owner and the delivery of the affidavits required in Section 36(f) of these General Conditions, the Contractor shall deliver the written Certificate of Completion by the Contractor to the Owner stating the entire amount of Work performed and compensation earned by the Contractor, including extra work and compensation therefore. The Owner may accept the Work for occupancy or use while asserting claims against the Contractor; disputing the amount of compensation due to the Contractor; disputing the quality of the Work, its completion, or its compliance with the Contract Documents; or any other reason.
- (h) The Owner shall pay to the Contractor all approved amounts and work not in dispute, less all prior payments and advances whatsoever to or for the account of the Contractor. In the case of final payment, the Certificate of Completion by the Contractor shall accompany the final Schedule of Values and Application and Certificate of Payment which is forwarded to the Owner for payment. Payment shall be due within 30 days of approval of Application and Certificate for Payment. The date on which payment is due shall be referred to as the Payment Date. Payment shall be made on or before the Payment Date for amounts and Work not in dispute, subject to any set offs claimed by the Owner, provided, however in instances where further appropriations are required, in which case, payment shall be made within (30) days after the effective date of such appropriation or within thirty (30) days after the receipt of bond proceeds by the Owner. All prior estimates and payments including those relating to extra Work may be collected and adjusted in any payment and shall be corrected and adjusted in the Final Payment. In the event that any request for payment by the Contractor contains a defect or impropriety, the Owner shall notify the Contractor of any defect or impropriety which would prevent payment by the Payment Date, within five (5) days after receipt of the Application and Certificate for Payment by the Owner.
- (i) Interest shall accrue on all amounts owed by the Owner to the Contractor which remain unpaid seven (7) days following the Payment Date. Said interest shall accrue at the rate of two percent (2%) per annum. Nothing contained herein shall be interpreted, however, to prevent the withholding of retainage to assure faithful performance of the Contract. These same provisions relating to payment of interest to the Contractor shall apply also to the computation and accrual of interest on any amounts due from the Contractor to the Owner for deductive change orders and to amounts due on any claims by the Owner. The date of mailing of any payment by the U.S. Mail is deemed to be the date of payment to the addressee.

- (j) The acceptance by the Contractor of the Final Payment shall be and operate as a release to the Owner of all claims by the Contractor, its Subcontractors and Suppliers, and of all liability to the Contractor whatever, including liability for all things done or furnished in connection with this Work, except for things done or furnished which are the subject of unresolved claims for which the Contractor has filed a timely written notice of intent, provided a claim is submitted no later than sixty (60) days after Final Payment. Acceptance of any interest payment by the Contractor shall be a release of the Owner from claims by the Contractor for late payment.
- (k) No certificate for payment issued, and no payment, final or otherwise, no certificate of completion, nor partial or entire use or occupancy of the Work by the Owner, shall be an acceptance of any Work or materials not in accordance with the Contract, nor shall the same relieve the Contractor of responsibility for faulty materials or Defective Work or operate to release the Contractor or his Surety from any obligation under the Contract, the Standard Performance Bond and the Standard Labor and Material Payment Bond.

37. PAYMENTS BY CONTRACTOR (§2.2-4354, Code of Virginia)

Under §2.2-4354, Code of Virginia, the Contractor is obligated to:

- (a) Within seven (7) days after receipt of amounts paid to the Contractor by the Owner for Work performed by the Subcontractor or Supplier under this Contract,
 - (1) Pay the Subcontractor or Supplier for the proportionate share of the total payment received from the Owner attributable to the Work performed by the Subcontractor or the materials furnished by the Supplier under this Contract; or
 - (2) Notify the Subcontractor or Supplier, in writing, of his intention to withhold all or a part of the Subcontractor or Supplier's payment with the reason for nonpayment;
- (b) Pay interest to the Subcontractor or Supplier on all amounts owed by the Contractor that remain unpaid after seven (7) days following receipt by the Contractor of payment from the Owner for Work performed by the Subcontractor or materials furnished by the Supplier under this contract, except for amounts withheld as allowed under subsection (a) (2) of this Section.
- (c) Include in each of his subcontracts a provision requiring each Subcontractor to 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. Each Subcontractor shall include with its invoice to, or request for payment from, the Contractor, a certification that that Subcontractor has paid each of its suppliers and lower tier subcontractors their

proportionate share of previous payments received from the Contractor attributable to the Work performed or the materials furnished by it under this Contract.

The Contractor's obligation to pay interest to the Subcontractor or Supplier pursuant to subsection (b) of this Section is not an obligation of the Owner. A modification to this Contract shall not be made for the purpose of providing reimbursement for such interest charge. A Contractor's cost reimbursement claim shall not include any amount for reimbursement of such interest charge.

38. CHANGES IN THE WORK

- (a) The Owner may at any time, by written order utilizing a Change Order Form and without notice to the sureties, make changes in the Work which are within the general scope of the Contract, except that no change will be made which will increase the total Contract Price to an amount more than twenty percent (20%) in excess of the original Contract Price without notice to sureties. At the time of the Pre-construction Meeting described in Section 50(b), the Contractor and the Owner shall advise each other in writing of their designees authorized to accept and/or approve changes to the Contract Price and of any limits to each designee's authority. Should any designee or limits of authority change during the time this Contract is in effect, the Contractor or Owner with such a charge shall give written notice to the other within seven (7) calendar days, utilizing the procedures set forth in these General Conditions. The Contractor agrees and understands that the authority of the Owner's designee is limited by Virginia Code §2.2-4309 and any other applicable statute.

In making any change, the charge or credit for the change shall be determined by one of the following methods as selected by the Owner:

- (1) **Fixed Price:** By a mutually agreed fixed amount change to the Contract Price and/or time allowed for completion of the Work. The Change Order shall be substantiated by documentation itemizing the estimated quantities and costs of all labor, materials, and equipment required as well as any mark-up used. The price change shall include the Contractor's reasonable overhead and profit, including overhead for any unreasonable delay arising from or related to the Change Order and/or the change in the Work. See Subsections (d), (e), and (f) below.
- (2) **Unit Price:** By using unit prices and calculating the number of net units of Work in each part of the Work which is changed, either as the Work progresses or before Work on the change commences, and by then multiplying the calculated number of units by the applicable unit price set forth in the Contract or multiplying by a mutually agreed unit price if none was provided in the Contract. No additional percentage markup for overhead or profit shall be added to the unit prices.

- (3) **Cost Reimbursement:** By ordering the Contractor to perform the changed Work on a cost reimbursement basis by issuing two Change Orders citing this Subsection, an initiating Change Order, authorizing the changed Work, and a continuing Change Order approving the additional cost and time for the changed Work. The initiating Change Order shall:
- (i) Describe the scope or parameters of the change in the Work;
 - (ii) Describe the cost items to be itemized and verified for payment and the method of measuring the quantity of work performed;
 - (iii) Address the impact on the schedule for Substantial Completion;
 - (iv) Order the Contractor to proceed with the change to the Work;
 - (v) Order the Contractor to keep in a form acceptable to the Owner, an accurate, itemized account of the actual (cost of the change in the Work, including, but not limited to, the actual costs of labor, materials, equipment, and supplies;
 - (vi) Order the Contractor to annotate a copy of the Project schedule to accurately show the status of the Work at the time this first Change Order is issued, to show the start and finish dates of the changed Work, and the status of the Work when the changed Work is completed; and
 - (vii) State that a confirming Change Order will be issued to incorporate the cost of the ordered change in the Work into the Contract Price and any change in the Contract Time for Completion or Contract Completion Date.

The Contractor shall sign the initiating Change Order acknowledging he has been ordered to proceed with the change in the Work. The Contractor's signature on each initiating Change Order citing this Subsection 38(a)(3) as the method for determining the cost of the Work shall not constitute the Contractor's agreement on the cost or time impact of the ordered Work.

The Owner shall be permitted to verify such records and may require such additional records as are necessary to determine the cost of the change to the Work.

Contractor shall submit its costs for the changed Work as part of its monthly payment request to the Owner. Within fourteen (14) days after the conclusion of such ordered Work, the Contractor and the Owner shall reach agreement on (i) the total cost for the ordered Work, based on the records kept and the Contractor's allowance for overhead and profit determined in

accordance with the provisions set forth in Subsections 38(d), (e) and (f) below; and (ii) the change in the Contract Time for Completion or Contract Completion Date, if necessary, as a result of the ordered Work. Such costs and time shall be incorporated into a confirming Change Order which references the initiating Change Order. If agreement on the cost and time of the changed Work cannot be reached within the fourteen (14) days allotted, the Contractor may submit notice of its intent to file a claim for the disputed cost or time as provided for in Section 47.

- (4) By issuing a unilateral change order in the amount the Owner believe is the Contractor's reasonable additional cost for the change. If the Owner and Contractor disagree as to the amount or scope of the change order, the Owner shall pay Contractor the amount the Owner believes is the Contractor's additional cost for the change, and the Contractor may, within the 14 days of the date of the change order, file a notice of intent to file a claim for the disputed amount as provided for in section 47.
- (b) The Contractor shall review any change requested or directed by the Owner and shall respond in writing within fourteen (14) days after receipt of the proposed change (or such other reasonable time as the Owner may direct), stating the effect of the proposed change upon his Work, including any increase or decrease in the time and price. The Contractor shall furnish to the Owner an itemized breakdown of the quantities and prices used in computing the proposed change in Contract Price.

The Owner shall review the Contractor's proposal and respond to the Contractor within fourteen (14) days of receipt. If a change to the Contract Price and Time for Completion or Contract Completion Date are agreed upon, both parties shall sign the Change Order. If the Contract Price and Time for Completion or Contract Completion Date are not agreed upon, the Owner may direct the Contractor to proceed under Subsection 38(a)(3) above. Change Orders shall be effective when signed by both parties, unless approval by the City Council or its designee is required, in which event the Change Orders shall be effective when signed by the Harrisonburg City Manager or designee.

- (c) In figuring changes, any instructions for measurement of quantities set forth in the Contract shall be followed.
- (d) Overhead and profit for both additive and deductive changes in the Work (other than changes covered by unit prices) shall be paid by applying the specified percentage markups only on the net cost of the changed Work (i.e. difference in cost between original and changed Work excluding overhead and profit). Said percentages for overhead and profit shall reasonably approximate the Contractor's overhead and profit, but shall not exceed the percentages for each category listed below:

- (1) If a Subcontractor does all or part of the changed Work, the Subcontractor's mark-up for overhead and profit on the Work it performs shall be a maximum of fifteen percent (15%). The Contractor's mark-up for overhead and profit on the Subcontractor's price shall be a maximum of ten percent (10%).
 - (2) If the Contractor does all or part of the changed Work, its markup for overhead and profit on the changed Work it performs shall be a maximum of fifteen percent (15%).
 - (3) If a Sub-subcontractor at any tier does all or part of the changed Work, the Sub-subcontractor's markup for overhead and profit on that Work shall be a maximum of fifteen percent (15%). The markup of a sub-subcontractor's Work by the Contractor and all intervening tiers of Subcontractors shall not exceed a total of ten percent (10%).
 - (4) Where Work is deleted from the Contract prior to commencement of that Work without substitution of other similar Work, one hundred percent (100%) of the Contract Price attributable to that Work shall be deducted from the Contract Price. However, in the event that material Submittals have been approved and orders placed for said materials, a lesser amount, but in no case less than eighty percent (80%) of the Contract Price attributable to that Work, shall be deducted from the Contract Price. The credit to the Owner for reduced premiums on labor and material bonds and performance bonds shall in all cases be one hundred percent (100%).
- (e) Allowable costs for changes in the Work may include but are not limited to the following:
- (1) Labor costs for employees directly employed in the change in the Work, including salaries and wages plus the cost of payroll charges and fringe benefits and overtime premiums, if such premiums are explicitly authorized by the Owner.
 - (2) Materials incorporated into the change to the Work, including costs of transportation and storage, if applicable. If applicable, all cash discounts shall accrue to the Contractor, unless the Owner deposits funds with the Contractor to make such payments, and all trade discounts, rebates, refunds, and returns from the sale of surplus materials shall accrue to the Owner.
 - (3) Equipment incorporated in the changed Work or equipment used directly in accomplishing the Work. If rented expressly for accomplishing the change in the Work, the cost shall be the rental rate according to the terms of the rental agreement, which the Owner shall have the right to approve. If owned by the Contractor, the costs shall be a reasonable price based upon the life

expectancy of the equipment and the purchase price of the equipment, if applicable, transportation costs may be included.

- (4) Costs of increases in premiums for the Standard Labor and Material Payment Bond and the Standard Performance Bond, provided coverage for the cost of the change in the Work results in such increased costs. At the Owner's request, the Contractor shall provide proof of his notification to the Surety of the change in the Work and of the Surety's agreement to include such change in its coverage. The cost of the increase in premium shall be an allowable cost but shall not be marked up.
- (5) Contractor and Subcontractor overhead costs as set forth in Subsection (d) markups above.
- (6) **Agreed Compensation for Overhead for Changes to Time for Completion or Contract Completion Date for Changes to the Work:** If the change in the Work also changes the Time for Completion or the Contract Completion Date by adding days to complete the Work, an itemized accounting of the following direct Site overhead and home office overhead and other indirect overhead expenses set forth in subparagraphs (i) and (ii) below may be considered as allowable costs for compensation in addition to those shown above:
 - (i) **Direct Site Overhead Expenses:**

The Contractor's per diem expenses, as shown by the itemized accounting, for the following allowable direct Site overhead expenses: The Site superintendent's pro-rata salary, temporary Site office trailer, and temporary Site utilities including basic telephone service, electricity, heat, water, and sanitary/toilet facilities for each day added. All other direct expenses are covered by and included in the Subsection 38(d) markups above.
 - (ii) **Home Office and Other Indirect Overhead Expenses:** A five percent (5%) markup on the above direct Site overhead expenses will be allowed as compensation for the Contractor's home office overhead and all other direct or indirect overhead expenses for days added to the Time for Completion or the Contract Completion Date for a change in the Work. All other overhead and other direct or indirect overhead expenses are covered by and included in this markup and the Subsection (d) markups above.
- (7) Any other costs directly attributable to the change in the Work with the exception of those set forth in Subsection 38(f) below.

(f) Allowable costs for changes in the Work shall not include the following:

- (1) Costs due to the negligence of the Contractor, any Subcontractor, Supplier, their employees or other persons for whom the Contractor is responsible, including, but not limited to, costs for the correction of Defective Work, for improper disposal of material, for equipment wrongly supplied, for delay in performing the Work, or for delay in obtaining materials or equipment.
 - (2) Home office expenses including payroll costs for the Contractor's officers, executives, administrators, accountants, counsel, timekeepers, clerks, and other similar administrative personnel employed by the Contractor, whether at the Site or in the Contractor's principal or branch office for general administration of the Work. These costs are deemed overhead included in the percentage markups allowable in Subsections 38(d) above.
 - (3) Home office, and field office expenses not itemized in Subsection 38(e)(6) above. Such items include, but are not limited to, expenses of Contractor's home and branch offices, Contractor's capital expenses, interest on Contractor's capital used for the Work, charges for delinquent payments, small tools, incidental job costs, rent and other general overhead expenses.
- (g) All Change Orders, except the "initial" Change Orders authorizing work citing Subsection 38(a)(3) procedures, must state that the Contract Time for Completion or Contract Completion Date is not changed or is either increased or decreased by a specific number of days. The old Time for Completion and, if changed, the new Time for Completion must be stated.

If the Contractor requests an extension to the Time for Completion or a later Contract Completion Date, he must provide written justification for the extension to the Architect/Engineer and to the Owner. The written justification must demonstrate an anticipated actual increase in the time required to complete the Work beyond that allowed by the Contract as adjusted by prior change orders or amendments to the Contract, not just an increase or decrease in the time needed to complete some portion of the total Work. When a CPM schedule is required by the Contract, no extension to the Time for Completion or Contract Completion Date shall be allowed unless, and then only to the extent that, the additional or changed Work increases the length of the critical path beyond the Time for Completion or Contract Completion Date. If approved, the increase in time required to complete the Work shall be added to the Time for Completion or Contract Completion Date.

The Owner may decrease, by Change Order, the Time for Completion or Contract Completion Date when an Owner-requested deletion from the Work results in a decrease in the actual time required to complete the Work as demonstrable on the Bar Graph Schedule or on the CPM Schedule, whichever is appropriate. The Contractor may submit a request to decrease, by Change Order, the Time for Completion or Contract Completion Date under the procedures and subject to the considerations set forth in Section 19(f). No request for such decrease shall be

considered for approval unless the proposed shorter schedule is otherwise acceptable under Sections 19(b) or (c), whichever is applicable. The Change Order decreasing the Time for Completion or changing the Contract Completion Date must be signed by both the Owner and the Contractor.

With the exception of Change Orders under Subsection 38(a)(3), which shall arrive at a change to the Contract Price and any change to time using the procedures set forth therein, each Change Order shall include all time and monetary impacts of the change, whether the Change Order is considered alone or with all other changes during the course of the Project. Failure to include a change to time and changes in the Contract Price attributable to the change in time under Subsections 38(a)(1) or (2) shall waive any change to the time and Contract Price unless the parties mutually agree in writing to postpone a determination of the time related impacts of the change. Such a determination may be postponed not more than forty-five (45) days to give the Contractor an opportunity to demonstrate a change in the time and price needed to complete the Work. During any such postponement, the Work shall proceed, unless the Owner agrees otherwise.

If at any time there is a delay in the critical path of the Work due to postponement, due to the Contractor's efforts to justify an extension of the time or an increase in the Contract Price, or due to the Contractor's refusal to proceed with any of the Work, pending agreement on a change in time or price, such delay and any Contractor costs resulting from it shall not serve as the basis for the extension of the Time for Completion or Contract Completion Date or for an increase in the Contract Price.

- (h) The acceptance by the Contractor of any payment made by the Owner under a Change Order shall be and operate as a release to the Owner of all claims by the Contractor and of all liability owing to the Contractor for all things done or furnished in connection with the Work described in the Change Order, except for any claims that are timely submitted in accordance with Section 47. The execution of any Change Order by the Owner shall not be an acceptance of any Work or materials not in accordance with the Contract Documents, nor shall it relieve the Contractor of responsibility for faulty materials or workmanship or operate to release the Contractor or his surety from any obligation arising under the Contract or the Standard Performance Bond or Standard Labor and Material Payment Bond.
- (i) If a dispute arises as to payment under Subsection 38(a)(2) and 38(a)(3), the Owner may require any or all of the following documentation to be provided by the Contractor.

For Work performed on a Unit Price basis:

- (1) certified measurements of authorized and approved excavations, over-excavations, fills and/or backfills, and similar work; and/or

- (2) certified measurements of piling installed, caissons installed, and similar work; and/or
- (3) daily records of waste materials removed from the Site and/or fill materials imported to the Site.

For Work performed on a Subsection 38(a)(3) basis:

- (1) certified payroll records showing the name, classification, date, daily hours, total hours, rate, and extension for each laborer, foreman, supervisor or other worker;
- (2) equipment type & model, dates, daily hours, total hours, rental rate, or other specified rate, and extension for each unit of equipment;
- (3) invoices for materials showing quantities, prices, and extensions;
- (4) daily records of waste materials removed from the Site and/or fill materials imported to the Site;
- (5) certified measurements or over-excavations, piling installed and similar work; and/or
- (6) transportation records for materials, including prices, loads, and extensions.

When requested by the Owner, requests for payment shall be accompanied and supported by invoices for all materials used and for all transportation charges claimed. If materials come from the Contractor's own stock, then an affidavit may be furnished, in lieu of invoices, certifying quantities, prices, etc. to support the actual cost.

- (j) When the variation between the estimated quantity and the actual quantity of a unit-priced item is increased or decreased more than 25 percent of the original Contract quantity, the Contract Price and/or unit price of the item shall be increased or decreased to account for the Contractor's increased or decreased cost. The Contractor's increased or decreased cost shall be calculated only on that quantity in excess of 125 percent of the original contract bid item quantity, or, if there is a decrease in quantity of more than 25 percent, on that quantity below 75 percent of the original contract bid item quantity.

39. EXTRAS

If the Contractor claims that any instructions given to him by the Owner, by drawings or otherwise, involve extra Work which increases the scope of the Contract, then, except in emergencies endangering life or property, he shall give the Owner written notice thereof before proceeding to execute the Work. Said notice shall be given promptly enough to

avoid delaying the Work and in no instance later than fourteen (14) days after the receipt of such instructions. Should it not be immediately clear to the Contractor that the change involves extra Work outside the scope of the Contract, written notice shall be sufficient if given as soon as possible after such realization, but in no event later than fourteen (14) days after the start of such Work. If the Owner agrees, a Change Order shall be issued as provided in Section 38 of these General Conditions, and any additional compensation shall be determined by one of the three (3) methods provided in Subsection 38(a), as selected by the Owner. If the Owner does not agree, then any claims for compensation for the extra Work shall be filed in accordance with Section 47.

40. CONTRACTOR'S RIGHT TO STOP WORK OR TERMINATE THE CONTRACT

If the Work should be stopped under an order of any court or other public authority for a period of ninety (90) days through no fault of the Contractor or anyone employed by him, or if the Owner should fail to pay to the Contractor within thirty (30) days any sum certified by the Owner when no dispute exists as to the sum due or any provision of the Contract, then the Contractor may, upon ten (10) calendar days written notice to the Owner, stop Work or terminate the Contract and recover from the Owner payment for the cost of the Work actually performed, together with overhead and profit thereon, but profit on the Work performed shall be recovered only to the extent that the Contractor can demonstrate that he would have had profit on the entire Contract if he had completed the Work. The Contractor may not receive profit or any other type of compensation for parts of the Work not performed. The Contractor may recover the reasonable cost of physically closing down the Site, but no other costs of termination. The Owner may offset any claims it may have against the Contractor against the amounts due to the Contractor. In no event shall termination of the Contract by the Contractor terminate the obligations of the Contractor's surety on its payment and performance bonds.

41. OWNER'S RIGHT TO TERMINATE THE CONTRACT FOR CAUSE

- (a) If the Contractor should be adjudged as bankrupt, or if he should make a general assignment for the benefit of his creditors, or if a receiver should be appointed on account of his insolvency, or if the Contractor should refuse or should repeatedly fail, except in cases for which extension of time is provided, to supply enough properly skilled workmen or proper materials and equipment, or if he should fail to perform the Work in a diligent, efficient, workmanlike, skillful and careful manner, or if he should fail or refuse to perform the Work in accordance with the Contract Documents, or if he should fail to make prompt payment to Subcontractors or Suppliers of material or labor, or if he should disregard laws, ordinances or the written instructions of the Architect/Engineer or the Owner, or otherwise be in substantial violation of any provision of the Contract, then the Contractor shall be in default of the Contract.

- (b) The Owner shall give the Contractor and his surety written notice of any default in the manner provided in Section 1 (definition of "Notice") of these General Conditions and allow ten (10) days, during which the Contractor and/or his surety may rectify the basis for the notice if default. If the default is rectified to the reasonable satisfaction of the Owner within said ten (10) days, the Owner shall rescind its notice of default. If not, the Owner may terminate the Contract for cause by providing written notice of termination to the Contractor. In the alternative, the Owner may, in writing, postpone the effective date of the termination for cause, at its sole discretion, if it should receive reassurances from the Contractor and/or its surety that the default will be remedied in a time and manner which the Owner finds acceptable. If at any time after such postponement, the Owner determines that Contractor and/or its surety has not or is not likely to rectify the default in an acceptable manner within the time allowed, then the Owner may immediately terminate the Contract for cause, without the necessity of providing a further notice of default, by notifying the Contractor and his surety in writing of the termination. If Owner postpones the effective date of the termination, and Contractor subsequently rectifies the default to the reasonable satisfaction of the Owner, the Owner shall rescind its notice of default. In no event shall termination for cause terminate the obligations of the Contractor's surety on its payment and performance bonds.
- (c) Upon termination of the Contract becoming effective, the Owner shall take possession of the Site and of all materials, and make arrangements with Contractor and any rental companies for the assignment of any lease agreement relating to tools and equipment.
- (1) **No Security Provided:** If no security has been provided pursuant to Section 8 herein, the Owner shall finish the Work by whatever method he may deem expedient. If the expense of finishing the Work, including compensation for additional managerial and administrative services, shall exceed the unpaid balance of the Contract Price, the Contractor shall pay the difference to the Owner, together with any other expenses of terminating the Contract and having it completed by others.
- (2) **Security Provided:** If security has been provided pursuant to Section 8 herein, the Owner shall provide Notice to the Surety that termination of the Contract became effective and proceed as set forth in the Performance Bond and the Terms and Conditions therein. If the expense of finishing the Work, including compensation for additional managerial and administrative services, shall exceed the unpaid balance of the Contract Price and the penal amount of the Standard Performance Bond, the Contractor shall pay the difference to the Owner, together with any other expenses of terminating the Contract and having it completed by others.
- (d) If it should be judicially determined that the Owner improperly terminated this Contract for cause, then the termination shall be deemed to be a termination for the

convenience of the Owner, and the Contractor's rights and remedies shall be solely limited to those provided by Section 42 of these General Conditions.

- (e) Termination of the Contract under this Section is in addition to and without prejudice to any other right or remedy of the Owner. Any actions by the Owner permitted herein shall not be deemed a waiver of any other right or remedy of the Owner under the Contract or under the law. The Owner may offset any claims it may have against the Contractor against the amounts due to the Contractor. The provisions of this Section shall survive termination of the Contract.

42. TERMINATION BY OWNER FOR CONVENIENCE

- (a) The Owner may terminate this Contract, in whole or in part, at any time without cause upon giving the Contractor written notice of such termination in the manner provided in Section I (definition of "Notice") or these General Conditions. Upon such termination, the Contractor shall immediately cease Work and remove from the Site all of its labor forces, equipment, and such of its materials as Owner elects not to purchase or to assume in the manner hereinafter provided. Upon such termination, the Contractor shall take such steps as Owner may require to assign to the Owner the Contractor's interest in all Subcontracts and purchase orders designated by Owner. After all such steps have been taken to Owner's satisfaction, the Contractor shall receive as full compensation for termination and assignment the following:
 - (1) Amounts due for Work performed in accordance with the Contract subsequent to the latest approved Schedule or Values and Certificate for Payment through the date of termination; and
 - (2) All amounts then otherwise due under the terms of this Contract associated with the Work performed prior to the date of termination; and
 - (3) Reasonable compensation for the actual cost of demobilization incurred by the Contractor as a direct result of such termination.

The Contractor shall not be entitled to any compensation or damages for lost profits or for any other type of contractual compensation or damages other than those provided in Subsection 42(a). The Owner may offset any claims it may have against the Contractor against the amounts due to the Contractor. Upon payment of the foregoing, Owner shall have no further obligations to Contractor of any nature. The Contractor agrees to waive all claims against the Owner for any consequential damages that may arise from or relate to the Owner's termination of the Contract including, but not limited to, damages for loss of revenue, income, profit, business, reputation, or bonding capacity.

- (b) In no event shall termination for the convenience of the Owner terminate the obligations of the Contractor's surety on its payment and performance bonds.

- (c) Any actions by the Owner permitted herein shall not be deemed a waiver of any other right or remedy of the Owner under the Contract or under the law. The provisions of this Section shall survive termination of the Contract.

43. DAMAGES FOR DELAYS; EXTENSION OF TIME

- (a) **Excusable Non-Compensable Delays:** If and to the extent that the Contractor is delayed at any time in the progress of the Work by strikes, fires, unusual delays in transportation or unavoidable casualties, or other causes outside the control of the Owner or the Contractor, with the exception of delays caused by weather provided for in Section 6, for which the Contractor intends to request an extension of either the Time for Completion or the Contract Completion Date, as the case may be, then the Contractor shall give the Owner written notice of the delay within fourteen (14) days of the inception of the delay. The Contractor shall also give written notice to the Owner and Architect/Engineer of the termination of the delay not more than fourteen (14) days after such termination. If the Owner agrees with the existence and the impact of the delay, the Owner shall extend the Time for Completion, the Contract Completion Date or Final Completion Date, as the case may be, for the length of time that the date for Substantial Completion or Final Completion was actually delayed thereby, and the Contractor shall not be charged with liquidated for delay during the period of such extension nor shall the Contractor be due compensation or damages of any kind, under any theory of law, as a result of such delay, the impact of such delay, or acceleration of Work as a result of such delay. In the event a CPM schedule is required by the Contract, no extension of the Time for Completion or Contract Completion Date shall be granted unless the Contractor demonstrates a delay in the critical path of the approved CPM schedule.
- (b) **Excusable Compensable Delays:** If and to the extent that the Contractor is unreasonably delayed at any time in the progress of the Work by any acts or omissions of the Owner, its agents, or employees, and due to causes within the Owner's control, and the Contractor intends to request an extension of either the Time for Completion or the Contract Completion Date, as the case may be, and/or additional compensation for damages, if any, caused by the delay, then the Contractor shall notify the Owner written notice of the delay within fourteen (14) days after inception of the delay. The Contractor's written notice shall specify the nature of the delay claimed by the Contractor, the cause of the delay and the impact of the delay on the Contractor's Work schedule. The Owner shall then have seven (7) working days to respond to the Contractor's notice with a resolution, remedy, direction to alleviate the delay, or rejection of the existence of delay. The Owner's failure to respond within the time required shall be deemed to be Owner's rejection of the existence of a delay. If and to the extent that a delay is caused by or due to the Owner taking any actions permitted or required by the Contract, the Contractor shall be entitled to an extension of time or additional compensation only for the portion of the delay that is unreasonable, if any.

- (c) Non-Excusable Non-Compensable Delays: The Contractor shall not be entitled to an extension of the Time for Completion or Contract Completion Date or to any additional compensation for delays if and to the extent they are (1) caused by acts, omissions, fault, or negligence of the Contractor or his Subcontractors, agents or employees or due to foreseeable causes within their control, including, but not limited to, delays resulting from Defective Work including workmanship and/or materials, from rejected work which must be corrected before dependent work can proceed, from Defective Work or rejected work for which corrective action must be determined before like work can proceed, from incomplete, incorrect" or unacceptable Submittals or samples, or from the failure to furnish enough properly skilled workers, proper materials or necessary equipment to diligently perform the work in a timely manner in accordance with the Project schedule; or (2) due to causes that would entitle the Owner to recover delay costs or damages.
- (d) No extension of time or additional compensation, if applicable, will be granted for any delay unless the claimed delay directly affects the critical path of the approved CPM schedule or the schedule shown on the approved bar graph schedule, whichever is applicable, and any float has been consumed. No extension of time or additional compensation shall be given for a delay if the Contractor failed to give notice in the manner and within the time prescribed in Subsections 43(a) or (b) above, whichever applies. Furthermore, no extension of time or additional compensation shall be given for any delay unless a written request therefor is made in writing to the Owner within twenty (20) days of the end of the delay. The request shall state the cause of the delay, the number of days of extension requested, and any additional compensation requested by the Contractor. Failure to give written notice of either the inception or the termination of the cause of delay or failure to present a claim for extension of time and/or monetary compensation within the times prescribed shall constitute a waiver of any claim for extension or additional compensation based upon that cause.
- (e) Requests for extensions of time and/or compensation for delays pursuant to Subsection 43(b) above must be substantiated by itemized data and records clearly showing that the Work delayed was on the critical path of the approved CPM schedule or on the sequence of Work on the approved bar graph schedule, as modified, whichever applies, and that the additional time and/or costs incurred by the Contractor are directly attributable to the delay in the Work claimed. Furthermore, compensation for delay shall be calculated from the contractual Time for Completion or Contract Completion Date, as adjusted by Change Order, and shall not be calculated based on any early completion planned or scheduled by the Contractor, unless a Change Order has been executed pursuant to Section 19(t) changing the Time for Completion or the Contract Completion Date to reflect such early completion. See Section 19 for procedures for the Contractor to follow if he plans early completion of the Work and wishes to request a Change Order reflecting the early completion date.

Agreed Compensation/Liquidated Damages for Owner Delay:

If and to the extent that the Contractor is entitled to an extension in the Time for Completion or the Contract Completion Date and additional compensation purely as a result of delay under Subsection 43(b) and not as a result of a change in the Work under Section 38, the agreed compensation and liquidated damages due the Contractor for days added to the Time for Completion or the Contract Completion Date for each day of such delay shall be the per diem expenses as determined from an itemized accounting or the direct Site overhead expenses and home office and other indirect overhead expenses only as specified in Subsections 38(e)(6)(i) and (ii). These expenses shall exclude any and all expenses specified in Subsection 38(1).

- (f) If the Contractor submits a claim for delay damages pursuant to Subsection 43(b) above, the Contractor shall be liable to the Owner for a percentage of all costs incurred by the Owner in investigating, analyzing, negotiating and litigating or arbitrating the claim, which percentage shall be equal to the percentage of the Contractor's total delay claim which is determined through litigation or arbitration to be false or to have no basis in law or in fact. (Section 2.2-4335, Code of Virginia)
- (g) Any change in the Contract Time for Completion or Contract Completion Date shall be accomplished only by issuance of a Change Order.
- (h) **Agreed Compensation/Liquidated Damages for Contractor Delay:** If the Contractor fails to complete the Work within the Time for Completion or the Contract Completion Date, the Contractor shall be liable to the Owner in the amounts set forth in the Supplemental General Conditions, if any, not as a penalty, but as fixed, agreed and liquidated damages for delay until the Work is substantially or finally completed as the case may be. If liquidated damages are not so fixed in the Supplemental General Conditions, the Contractor shall be liable for any and all actual damages sustained as a result of delay. In addition to damages for delay, whether liquidated or actual, the Contractor shall also be liable for any and all actual damages sustained by the Owner as a result of any other breach of the Contract, including, but not limited to, Defective Work and abandonment of the Contract.
- (i) If liquidated damages are provided by the Supplemental General Conditions, the following provisions apply:
 - (1) If the Work is not substantially complete by the Time for Completion or Contract Completion Date, the Contractor shall owe to the Owner, not as a penalty but as Step One liquidated damages, the sum stated in the Supplemental General Conditions for Step One liquidated damages for each and every partial or total calendar day of delay in Substantial Completion.
 - (2) Once the Work is substantially complete, the accrual of Step One liquidated damages shall cease and the Contractor shall have thirty (30) calendar days in which to achieve Final Completion of the Work.

- (3) If Final Completion of the Work is not achieved on or before the thirtieth (30th) calendar day after Substantial Completion, and if the Owner has not granted any extension of time, the Contractor shall owe to the Owner, not as a penalty but as Step Two liquidated damages, the sum stated in the Supplemental General Conditions as Step Two liquidated damages for each and every partial or total calendar day of delay in Final Completion.
- (j) The Contractor waives any and all defenses as to the validity of any liquidated damage provisions in the General Conditions or other Contract Documents, or of any liquidated damages assessed against the Contractor, on the grounds that such damages are void as penalties or are not reasonably related to actual damages.

44. INSPECTION FOR SUBSTANTIAL COMPLETION & FINAL COMPLETION

- (a) The Contractor shall notify the Owner, in writing on the Certificate of Partial or Substantial Completion by the Contractor of the date when the Work or designated portion thereof, will be, in his opinion, substantially complete and ready for inspection and testing to determine if it has reached Substantial Completion. The notice shall be given at least ten (10) days in advance of said date. Inspection and testing shall take place at a time(s) mutually agreeable to the Contractor and the Owner.

The inspection shall include a demonstration by the Contractor that all equipment, systems and operable components of the project function properly and in accordance with the Contract Documents. The Contractor shall furnish access for the inspection and testing as provided in Section 21 of these General Conditions. The inspection and testing shall determine whether Substantial Completion has been accomplished and shall result in a written list of unfinished Work and Defective Work, commonly referred to as a "punch list", which must be finished and corrected to obtain Final Completion.

After successful completion of the testing and the Director of Public Works determines that, in his opinion, the Work, either in whole or in part, is substantially complete, the Director of Public Works shall notify the Contractor, in Writing, of the date the Owner accepts the Work. or the specified portion thereof, as substantially complete or the Owner shall notify the Contractor of the deficiencies to be corrected or completed before such Work will be accepted as substantially complete.

- (b) The Contractor shall notify the Owner, in writing on the Certificate of Completion by the Contractor of the date when the Work has reached or will reach Final Completion and will be ready for final inspection and testing. The notice shall be given at least five (5) days in advance of said date. That inspection and any

necessary testing shall be conducted in the same manner as the inspection for Substantial Completion. When the Work is finally and totally complete, including the elimination of all defects, the Work shall be finally accepted by the Owner and Final Payment shall be made in accordance with Section 36 of these General Conditions.

- (c) Representatives of the appropriate permitting Officials will participate in the Substantial Completion Inspection. The Owner may elect to have other persons of its choosing also participate in the inspections. If one or more Substantial or Final Completion re-inspections are required through the fault of the Contractor, the Contractor shall reimburse the Owner for all costs of re-inspection or, at the Owner's option, the costs may be deducted from payments due to the Contractor.
- (d) A representative of the City Department of Public Works will either be present at the Substantial and Final Completion inspections or otherwise inspect the completed Work and advise the Owner whether the Work meets the fire safety requirements of the applicable building code.
- (e) Approval of Work as a result of any inspection required herein shall not release the Contractor or his surety from responsibility for complying with the Contract.

45. GUARANTEE OF WORK

- (a) Except as otherwise specified, all Work shall be, and is hereby, guaranteed by the Contractor against defects resulting from the use of materials, equipment or workmanship, which are defective, inferior, or not in accordance with the terms of the Contract, for one (1) year from the date of Final Completion of the entire Project by the Owner. Equipment and facilities which have seasonal limitations on their operation (e.g. heating or air conditioning units) shall be guaranteed for one (1) full year from the date of seasonally appropriate tests and acceptance, in writing, by the Owner. Where the Owner agrees to accept a portion or phase of the Work which has been determined to be substantially complete before the entire Work is finally completed, the guarantees for the materials, equipment and workmanship in that portion or phase shall begin on the date that the Owner accepts, unless otherwise specified in the Supplemental General Conditions, Special Conditions, or by separate agreement. At six (6) months and eleven (11) months after substantial completion, the Contractor shall meet with the Owner to review the status of and assign value to any unresolved warranty, guarantee, and punch list items.
- (b) If, within any guarantee period, Work which is not in accordance with the Contract, Defective Work, or inferior material, equipment or workmanship is noted by the Owner which requires or renders necessary repairs or changes in connection with the guaranteed Work, the Contractor shall, promptly upon receipt or notice from the Owner, such notice being given no later than two weeks after the guarantee period expires, and without expense to the Owner:

- (1) Place in satisfactory condition in every particular all of such guaranteed Work and correct all defects, inferior materials, equipment or workmanship therein;
 - (2) Make good all damage to the structure or Site or equipment or contents thereof, which, in the opinion of the Owner, is the result or the list of materials, equipment or workmanship which are inferior, defective or not in accordance with the terms of the Contract; and
 - (3) Make good any Work or materials or the equipment and contents of structures and/or Site disturbance that results from fulfilling the provisions of this Section.
- (c) In any case, when in fulfilling the requirements of the Contract and this guarantee or any other guaranty or warranty, the Contractor disturbs any work performed by a separate contractor, he shall restore such work to a condition satisfactory to the Owner and guarantee such restored work to the same extent as if it was guaranteed under this Contract.
 - (d) If the Contractor, after notice, fails to proceed promptly to comply with the terms of the guarantee as set forth in this Section, the Owner may have the defects or inferior materials, equipment or workmanship corrected and the Contractor and his surety shall be liable for all expense incurred.
 - (e) All special warranties and guarantees applicable to definite parts of the Work that may be stipulated in or required by the Contract Documents shall be subject to the terms of this Section during the first year of the life of such special warranty or guarantee.
 - (f) The guarantee of this Section shall be in addition to and not in lieu of all other warranties, express or implied, applicable to or arising from this Contract or by law.
 - (g) Nothing contained in this Section shall be construed to establish a period of limitation with respect to any other obligation which the Contractor might have under the Contract Documents, including liability for Defective Work Linder Section 30. This Section relates only to the specific obligation of the Contractor as set forth in this Section to correct the Work and does not limit the time within which his obligation to comply with the Contract Documents may be sought to be enforced, nor the time within which proceedings may be commenced to establish the Contractor's liability with respect to his other obligations under the Contract Documents.
 - (h) In the event the Work of the Contractor is to be modified by another contractor, either before or after the Final Inspection provided by Section 44 of the General Conditions, the first Contractor shall remain responsible in all respects under this Section's Guarantee of Work and under any other warranties or guarantees, express

or implied, applicable to or arising from this Contract or by law. However, the Contractor shall not be responsible for any defects in material or workmanship introduced by the contractor modifying his Work. The first Contractor and the contractor making the modifications shall each be solely responsible for his respective work. The contractor modifying the earlier Work shall be responsible for any damage to or defect introduced into the Work by his modification. If the first contractor claims that a subsequent contractor has introduced defects of materials and/or workmanship into his Work, it shall be the burden of the contractor making the claim to demonstrate clearly the nature and extent of such introduced defects and the other contractor's responsibility for those defects. Any contractor modifying the work of another shall have the same burden if he asserts that defects in his work were caused by the contractor whose work he is modifying.

- (i) The Contractor shall indemnify and hold harmless Owner and Owner's consultants, representatives, agents and employees from and against any and all claims, causes of action, losses, costs, expenses or damages, including but not limited to attorney's fees, of any kind or nature whatsoever, arising from or relating to any bodily injury, including sickness, disease or death, or any property damage, that result from or arise out of the work performed by the Contractor, or by or in consequence of any neglect in safeguarding the Work, through the use of unacceptable materials in the Work, or resulting from any act, omission, negligence, or misconduct of the Contractor, any of his subcontractors, anyone directly or indirectly employed by them or anyone for whose acts they may be liable. To the extent Contractor fails or refuses to indemnify or hold harmless Owner from any such claims, the Owner may retain as much of the moneys due the Contractor under the Contract as the Owner considers necessary to ensure that a fund will be available to pay a settlement or judgment of such suits, actions, or claims. If insufficient monies are or will become due, the Contractor's surety and/or insurers will not be released from liability until all such claims and actions have been settled and suitable evidence to that effect has been furnished the Owner.

46. ASSIGNMENTS

Neither party to the Contract shall assign the Contract in whole or any part without the written consent of the other, nor shall the Contractor assign any moneys due or to become due to him hereunder, without the prior written consent of the Owner. Consent to assignment shall not be unreasonably withheld. No assignment shall relieve any party from its obligations under the Contract.

47. CONTRACTUAL DISPUTES (§2.2-4363, Code of Virginia)

- (a) Contractual claims, whether for money or for other relief, shall be submitted, in writing, no later than sixty (60) days after Final Payment; however, written notice of the Contractor's intention to file such claim must be given within fourteen (14) days of the time of the occurrence or beginning of the Work upon which the claim

is based. Such notice shall state that it is a "notice of intent to file a claim" and include a written statement describing the act or omission of the Owner or its agents that allegedly caused or may cause damage to the Contractor and the nature of the claimed damage. The submission of a timely notice is a prerequisite to recovery under this Section. Failure to submit such notice of intent within the time and in the manner required shall be a conclusive waiver of the claim by the Contractor. Oral notice, the Owner's actual knowledge, or a written notice given after the expiration of fourteen (14) days of time of the occurrence or beginning of the Work upon which the claim is based, shall not be sufficient to satisfy the requirements of this Section. The Contractor is not prevented from submitting claims during the pendency of the Work, and the Owner shall not be obligated to render a final written decision on any claim until after Final Payment. All claims shall state that they are "claims" pursuant to this Section, be submitted along with all practically available supporting evidence and documentation and the certification required by Subsection 47(f), and request a final decision. Certificates for payment, applications for payment, vouchers, invoices and similar requests for payment submitted for work done by the Contractor in accordance with the expected contract performance are routine submissions and shall not be considered claims under this Section. Proposed or requested change orders, demands for money compensation or other relief, and correspondence and e-mails to the Owner or its representatives, which do not strictly comply with the requirements of this Section, shall not be considered claims under this Section.

- (b) No written decision denying a claim or addressing issues related to the claim shall be considered a denial pursuant to this Section unless the written decision makes express reference to this Section and is signed by the City Manager or his designee. The Contractor may not institute legal action prior to receipt of the Owner's final written decision on the claim unless the Owner fails to render such a decision within ninety (90) days of submission of the claim, at which time the claim shall be deemed denied.
- (c) The decision of the City Manager 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 Owner to render a decision within 90 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 Owner's failure to render a decision within 90 days 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 been established for contractual claims under this Contract.
- (d) Deleted.
- (e) In the event that a dispute, claim or controversy between the Owner and the Contractor arises regarding the requirements of the Contract, the performance of the Work, payment due the Contractor, the terms of any Change Order, or

otherwise, the Contractor shall not stop, suspend or delay the Work or any part of the Work to be performed under the Contract, or under any Change Order, or as ordered by the Owner. The Contractor shall continue to diligently prosecute the Work to completion, including work required in any Change Order or as directed by the Owner.

- (f) Along with a claim submitted under this Section, the Contractor shall submit a notarized statement under penalty of perjury certifying that the claim is a true and accurate representation of the claim. Claims submitted without the statement shall not constitute a proper claim and, if not submitted with the certification within the time required, shall be deemed to be waived.
- (g) The remedies provided in these General Conditions, including costs, expenses, damages or extensions of time, shall be the Contractor's sole remedies for the acts, omissions or breaches of the Owner, which shall survive termination or breach of the Contract.

48. ASBESTOS – NOT APPLICABLE

49. TRAINING, OPERATION AND MAINTENANCE OF EQUIPMENT

- (a) As a part of the Work, the Contractor in conjunction with his Subcontractors and Suppliers shall provide the Owner's operations and maintenance personnel with adequate instruction and training in the proper operation and maintenance of any equipment, systems, and related controls provided or altered in the Work. The training requirements may be further defined in the specifications.
- (b) The Contractor shall provide the Owner with five copies of operating, maintenance and parts manuals for all equipment and systems provided in the Work. Additionally, Contractor will provide all necessary copies of documents required by regulatory agencies for their review and approval. Further specific requirements may be indicated in the specifications.

50. PROJECT MEETINGS

- (a) The intention of this Section is that the Contractor and the Owner have timely exchange of information and cooperate to accomplish the Work as required by the Contract Documents. The Contractor is responsible for managing the Work, obtaining approvals and requesting clarifications on a timely, reasonable basis. The Owner is responsible for making a reasonable effort to provide timely responses to the Contractor.
- (b) **Preconstruction Meeting:**

Prior to the start of construction and no later than 15 calendar days after the Notice to Proceed, a "Preconstruction" meeting shall be held with attendees to include the Owner's Project Manager and Project Inspector, the Architect/Engineer's project manager and representatives of each design discipline involved in the Project, the Director of Public Works or designee, the Contractor's project manager and superintendent (and scheduler, if Contractor desires), and representatives of the Contractor's major Subcontractors. The purpose of the meeting is to clarify and discuss the specifics related to, but not limited to, the following:

- (1) Persons involved from each entity and their chain of authority including the names of persons authorized to sign Change Orders and any limits to their authority. Name of Contractor's on-site certified Responsible Land Disturber.
- (2) Names, addresses, telephone numbers, email addresses and FAX numbers to be used for Requests for Information (RFI), Requests for Clarification (RFC), Requests for Proposals (RFP), shop drawings, Submittals, and notices.
- (3) Contractor's proposed construction schedule and Owner's sequencing requirements, if any.
- (4) Application and Certificate for Payment requirements and procedures.
- (5) Procedures for shop drawings, product data and Submittals.
- (6) Procedures for handling Field Orders and Change Orders.
- (7) Procedures for Contractor's request for time extension, if any.
- (8) Construction Site requirements, procedures and clarifications to include:
 - Manner of conducting the Work
 - Site specialties such as dust and erosion control, stormwater management, project signs, clean up and housekeeping, temporary facilities, utilities, security, and traffic Safety
 - Layout of the Work
 - Quality control, testing, inspections and notices required
 - Site visits by the A/E and others
 - Owner's Project Inspector duties
 - Running Punch List
 - As-Built Drawings
- (9) Procedures and documentation of differing or unforeseen Site conditions
- (10) Monthly Progress Meeting

- (11) Assignment of responsibility for generation of meeting minutes of all project meetings.
 - (12) Project Close-Out requirements and procedures
 - (13) Project records
- (c) **Monthly Pay Meeting:**
Section 36 establishes the requirement for a monthly pay meeting which will usually be held at or near the Site. In addition to Owner and Contractor representatives, the following representatives, at a minimum, should be available to attend portions of the meeting, as applicable or necessary:

SUPPLEMENTARY CONDITIONS
TO GENERAL CONDITIONS OF THE DESIGN- BUILD CONTRACT

Supplementary Conditions

These Supplementary Conditions amend or supplement the General Conditions of the Design-Build Contract between Harrisonburg, Virginia ("Owner") and Momentum Earthworks, LLC ("Contractor") and other provisions of the Contract Documents as indicated below. All provisions, which are not so amended or supplemented, remain in full force and effect.

SC-1

All references to the Commonwealth of Virginia "Construction and Professional Services Manual" ("CPSM") do not apply to this Contract and should be disregarded.

SC-2

All references to the Uniform Statewide Building Code (USBC) and the Building Official do not apply to this Contract and should be disregarded.

End of Section

GENERAL TERMS AND CONDITIONS OF THE CITY OF HARRISONBURG, VA

These General Terms & Conditions shall apply to all purchases and be a part of every contract awarded by the City of Harrisonburg unless otherwise specified in writing. Bidders/Offerors are expected to inform themselves fully as to the conditions, requirements and specifications before submitting bids/proposals. Procurement by the City is subject to the Virginia Public Procurement Act (VPPA) Title 2.2, Chapter 43 of the Code of Virginia and the provisions of The Purchasing and Contracting Policy Manual for the City of Harrisonburg and any revisions thereto. If an inconsistency exists between the VPPA and the Purchasing and Contracting Policy Manual for the City, the VPPA Virginia Code sections take precedence.

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DEFINITIONS

- ADDENDUM/ADDENDA:** Addition(s) or supplement(s) to a solicitation to clarify, modify or support information which becomes part of the contract.
- BID:** The offer of a prospective vendor/supplier to an Invitation To Bid to provide specific goods or services at specified prices and/or other conditions specified in the solicitation.
- BIDDER/OFFEROR:** Any individual, company, firm, corporation, partnership or other organization who submits a response to an Invitation to Bid or a Request for Proposal and offering to enter into a contract with the City.
- COLLUSION:** A secret agreement or cooperation between two or more parties to accomplish a fraudulent, deceitful, or unlawful purpose.
- CONFLICT OF INTEREST:** An actual or potential situation in which the personal interests of a vendor, employee or public official are, or appear to be, in conflict with the best interests of the City.
- CONTRACTOR:** The entity that has a direct contract with the City to furnish goods, services or construction for a certain price.
- CITY or OWNER:** City of Harrisonburg, Virginia.
- DAY(S):** Defined as calendar days unless otherwise specified as business days.
- INFORMALITY:** A minor defect or variation of a bid or proposal from the exact requirements of the Invitation to Bid or Request for Proposal which does not affect the price, quality, quantity or delivery schedule for the goods, services or construction being procured.
- INVITATION TO BID (ITB):** A formal request which is made to prospective suppliers (bidders) for their quotation on goods, services, or construction desired by the City. The issuance of an ITB will contain or incorporate by reference the specifications and contractual terms and conditions applicable to the procurement.

PROFESSIONAL SERVICES: Any type of professional service performed by an independent contractor within the practice of accounting, actuarial services, architecture, dentistry, land surveying, landscape architecture, law, medicine, optometry, pharmacy, or professional engineering (which shall be procured as set forth in the Code of Virginia). **2.2-4301**

PROPOSAL: The document submitted by the offeror in response to the RFP to be used as the basis for negotiations for entering into a contract.

PURCHASING AGENT: The individual employed and given authority by the Harrisonburg City Council by adoption of the City of Harrisonburg Purchasing and Contracting Policy Manual. Purchasing Agent may also be referred to as Procurement Manager.

REQUEST FOR PROPOSAL (RFP): A formal request for a proposal from prospective offerors which will indicate the general terms which are sought to be procured from the offeror and where negotiations are conducted to come to a final contract. The RFP will specify the evaluation criteria to be used and will contain or incorporate by reference other contractual terms and conditions applicable to the procurement.

RESPONSIBLE BIDDER/OFFEROR: An individual, company, firm, corporation, partnership or other organization having the capability in all respects to perform fully the contract requirements, and also having the moral and business integrity and reliability which will assure good faith performance.

RESPONSIVE BIDDER/OFFEROR: An individual, company, firm, corporation, partnership or other organization having submitted a bid/proposal which conforms in all material respects to the ITB or RFP.

SOLICITATION: A formal document issued by the City with the intent to purchase goods, services or construction. Can be either an Invitation To Bid or a Request For Proposal.

SWAM: Small, Women, and Minority-owned businesses.

SUBCONTRACTOR: A business entity that has a contract to supply labor or materials to the prime contractor to whom the contract was awarded or to any subcontractor in the performance of the work provided for in such contract.

CONDITIONS OF BIDDING

BID PRICE CURRENCY: Unless stated otherwise in the solicitation, bidders/offerors shall state bid/proposal prices in US dollars.

BID/PROPOSAL ACCEPTANCE PERIOD: Unless otherwise specified, all bids/proposals submitted shall be binding and may not be withdrawn for sixty (60) days following the bid/proposal opening date and time, unless extended by mutual consent of all parties. If the bid/proposal is not withdrawn at that time it remains in effect until an award is made or the solicitation is cancelled.

CANCELLATION OF SOLICITATIONS: **2.2-4319** An ITB, RFP or any other solicitation may be cancelled or rejected, but shall not be cancelled or rejected solely to avoid awarding a contract to a particular responsive and responsible bidder/offeror. The reasons for cancellation shall be made part of the contract file.

CITY HALL CLOSURE: If City Hall is closed for business at the time scheduled for the bid opening, for whatever reasons, sealed bid/proposal will be accepted and opened on the next business day of the City, at the original scheduled hour.

CLARIFICATION of TERMS: **2.2-4316** If any prospective bidder/offeror has questions about the specifications or other solicitation documents, the prospective bidder/offeror should contact the person identified in the solicitation no later than five (5) business days before the due date. Any revisions to the solicitation will be made only by addendum issued by the City.

CONFLICT OF INTEREST/COLLUSION: Contractor certifies by signing their bid/proposal submission to the City, that no conflict of interest or collusion exists between the Contractor and City that interferes with fair competition and no conflict of interest or collusion exists between Contractor and any other person or organization that constitutes a conflict of interest with respect to the contract with the City.

DEBARMENT STATUS: By signing their bid/proposal, the bidders/offerors certify that they are not currently debarred from submitting bids/proposals on contracts from any agency, public entity/locality or authority of the Commonwealth of Virginia.

DISCRIMINATION PROHIBITED: **2.2-4310** In the solicitation or awarding of a contract the City shall not discriminate against a bidder/offeror because of race; religion; color; sex; national origin; age; disability; status as a small, women-owned, minority-owned, or service disabled veteran-owned; employment services organization; or any other basis prohibited by state law relating to discrimination in employment. The City encourages the participation of these entities in public procurement activities. Towards that end, the City encourages contractors to provide for the participation of these entities through partnerships, joint ventures, subcontracts, and other contractual opportunities.

ERRORS IN BIDS/PROPOSALS: When an error is made in extending total prices, the unit price will govern. Bidders/Offerors are cautioned to recheck their bids/proposals for possible errors prior to submission.

ETHICS IN PUBLIC CONTRACTING: 2.2-4371 By submitting their bids/proposals, the bidders/offerors certify that their bids/proposals are made without collusion or fraud and that they have not offered or received any kickbacks or inducements from any other bidder/offeror, supplier, manufacturer or subcontractor in connection with their bid/proposal, and that they have not conferred on any public employee having official responsibility for this procurement transaction any payment, loan, subscription, advance, deposit of money, services or anything of more than nominal or minimal value, present or promised, unless consideration of substantially equal or greater value was exchanged.

EXCUSABLE DELAY: The City shall not be in default of any failure in performance of this agreement in accordance with its terms if such failure arises out of causes beyond its reasonable control and without the fault of or negligence of the City. Such causes may include, but are not restricted to acts of God or the public enemy, fires, flood, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather, but in every case the failure to perform must be beyond the reasonable control and without the fault or negligence of the City.

LICENSES, PERMITS and FEES: All proposals submitted shall have included in price the cost of any business or professional licenses, permits or fees required by the City of Harrisonburg or the Commonwealth of Virginia. At or prior to delivery of the signed contract, the bidder/offeror to whom the contract is awarded shall deliver to the City a copy of their City Business License (if applicable). The bidder/offeror shall ensure that the Business License indicates a basis amount equal to or greater than the awarded Contract value. For information on City Business Licenses contact the Harrisonburg Commissioner of the Revenue's office at 540-432-7704. The bidder/offeror must have all necessary licenses to perform the services in the Commonwealth of Virginia and, if practicing as other than an individual, be authorized to do business in the Commonwealth of Virginia.

MANDATORY USE of CITY FORMS AND TERMS and CONDITIONS for ITBs AND RFPs: Failure to submit a bid/proposal on the official City form(s) provided or in the format identified, for that purpose shall be a cause for rejection of the bid/proposal. Unauthorized modification of or additions to any portion of the ITB or RFP may be cause for rejection of the bid/proposal. The City reserves the right to decide, on a case by case basis, in its sole discretion, whether to reject any bid/proposal which has been modified. As a precondition to its acceptance of an ITB response, the City may, in its sole discretion, request that the bidder withdraw or modify nonresponsive portions of a bid which do not affect quality, quantity, price, or delivery. No modification to the provisions of the contract shall be effective unless the modification is incorporated into the contract document.

MODIFICATION & WITHDRAWAL OF BIDS/PROPOSALS: 2.2-4330

1. A bidder for a public construction contract, other than a contract for construction or maintenance of public highways, may withdraw his 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 a 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.

If a bid contains both clerical and judgment mistakes, a bidder may withdraw his bid from consideration if the price bid would have been substantially lower than the other bids due solely to the clerical mistake, that was an unintentional arithmetic error or an unintentional omission of a quantity of work, labor or material made directly in the compilation of a bid that shall 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.

2. The bidder shall give notice in writing of his claim of right to withdraw his bid within two business days after the conclusion of the bid opening procedure and shall submit original work papers with such notice.
3. No bid shall be withdrawn under this section when the result would be the awarding of the contract on another bid of the same bidder or of another bidder in which the ownership of the withdrawing bidder is more than five percent.
4. If a bid is withdrawn in accordance with this section, the lowest remaining bid shall be deemed to be the low bid.
5. 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.
6. The public body shall notify the bidder in writing within five business days of its decision regarding the bidder's request to withdraw its bid. If the public body denies the withdrawal of a bid under the provisions of this section, it shall state in such notice the reasons for its decision and award the contract to such bidder at the bid price, provided such bidder is a responsible and responsive bidder. At the same time that the notice is provided, the public body shall return all work papers and copies thereof that have been submitted by the bidder.
7. These procedures also apply for the withdrawal of bids for other than construction contracts.
8. A bidder/offeror may modify or withdraw his bid/proposal, either personally or by written request to the Purchasing office at any time prior to the scheduled time for opening of bids/proposals.

PUBLIC INSPECTION OF CERTAIN RECORDS: 2.2-4342 Public inspection of all records is strictly governed by Code of Virginia 2.2-4342 and in accordance with the Virginia Freedom of Information Act (VA Code 2.2-3700 et seq). Any inspection of procurement transactions shall be subject to reasonable restrictions to ensure the security and integrity of the records. Cost estimates relating to a proposed procurement transaction prepared by or for a public body shall not be open to public inspection.

REVISIONS to the OFFICIAL ITB/RFP: No bidder/offeror shall modify, revise, edit or make any unauthorized change(s) to the original official ITB/RFP. The official solicitation document and the Addenda(um) are the documents posted on the eVA website (www.eva.virginia.gov). Any such violation as stated above may result in rejection of the ITB/RFP response. In addition, violations may result in the debarment of the bidder/offeror by the City of Harrisonburg.

TAXES: Sales to the City of Harrisonburg are normally exempt from State sales tax. Virginia Sales and Use Tax Certificate of Exemption, Form ST-12, will be issued upon request. The City may also be exempt from other taxes and fees.

AWARD

CONTRACT AWARD

For ITB: The award(s) made in response to an ITB will be made to the lowest responsive and responsible bidder(s) for each item, or group of items indicated in the bid. The City reserves the right to make the sole determination of whether the product and/or options offered meet the minimum specifications and is acceptable in accordance with the specifications. The City's decision shall be final. The City reserves the right to make a separate award for each item, a group of items or all items, and to make awards either in whole or in part, whichever is deemed by the City to be in its best interest. Delivery time lines may be a factor in making an award.

For RFP: The award(s) made in response to an RFP will be made to the highest qualified offeror whose proposal is determined to be the most advantageous to the City, taking into consideration the evaluation criteria set forth in the RFP. After negotiations, the offeror who has made the best proposal and provides the best value shall be awarded the contract.

Professional services shall be procured and awarded by competitive negotiation as set forth in **2.2-4302.2 A 4**.

The City reserves the right to cancel a solicitation at any time and to reject any or all bids/proposals, in whole or in part, to waive any informality and to delete items prior to making the award(s), whenever it is deemed in the sole opinion of the City to be in its best interest.

NEGOTIATION WITH THE LOWEST BIDDER: 2.2-4318 Unless all bids are canceled or rejected, the City reserves the right to negotiate with the lowest responsive and responsible bidder to obtain a contract price within the funds available to the City whenever such low bid exceeds the City's available funds for the project. The City shall initiate such negotiations by written notice to the lowest responsive, responsible bidder that its bid exceeds the available funds and the City wishes to negotiate a lower contract price. The times, places and manner of negotiating shall be agreed to by the City and the lowest responsive, responsible bidder.

PRECEDENCE of TERMS: General Terms and Conditions shall apply in all instances with the exceptions for projects funded by the Federal Highway Administration (FHWA) and by the Federal Transportation Administration (FTA). In the event there is a conflict between the General Terms and Conditions and any Federal, Special, Standard, or Supplementary Terms and Conditions in this solicitation, the Federal, Special, Standard, or Supplementary Terms and Conditions shall apply.

QUALIFICATIONS of BIDDERS/OFFERORS: The City may make such reasonable investigations as deemed proper and necessary to determine the responsibility and ability of the bidder/offeror to perform the services/furnish the goods and the bidder/offeror shall furnish to the City all such information and data for this purpose as may be requested. The City reserves the right to inspect bidder's/offeror's physical facilities prior to award to satisfy questions regarding the bidder's/offeror's capabilities. The City further reserves the right to reject any bid/proposal if the evidence submitted by, or investigations of, such bidder/offeror fails to satisfy the City that such bidder/offeror is properly qualified to carry out the obligations of the contract and to provide the services and/or furnish the goods contemplated therein.

SELECTION PROCESS/NOTICE OF AWARD: Upon the award or the announcement of the decision to award a contract as a result of this solicitation, the Purchasing office will publicly post such notice and/or will notify all responsive bidders/offerors and records are available for public inspection in accordance with the VA Freedom of Information Act (VA Code 2.2-3700 et seq). The City posts all Notice of Awards on eVA at www.eva.virginia.gov.

CONTRACT PROVISIONS

ANTI-DISCRIMINATION: 2.2-4311 By submitting their bids/proposals, bidders/offerors certify to the City that they will conform to the provisions of the Federal Civil Rights Act of 1964, as amended, as well as the Virginia Fair Employment Contracting Act of 1975, as amended, where applicable, the Virginians With Disabilities Act, the Americans With Disabilities Act. In every contract over \$10,000 the provisions below apply:

1. 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, national origin, age, disability, or any other basis prohibited by 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.
 - 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 these requirements.
2. The contractor will include the provisions of 1. above in every subcontract or purchase order over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.

ANTITRUST: By entering into a contract, the contractor conveys, sells, assigns, and transfers to the City all rights, title and interest in and to all causes of action it may now have or hereafter acquire under the antitrust laws of the United States and the Commonwealth of Virginia, relating to the particular goods or services purchased or acquired by the City under said contract.

APPLICABLE LAWS and COURTS: This solicitation and any resulting contract shall be governed in all respects by the laws of the Commonwealth of Virginia, excluding its conflict of laws provisions, and venue for litigation with any respect thereto shall be proper only in the Circuit Court of Rockingham County, Virginia. The contractor shall comply with all applicable federal, state and local laws, rules and regulations.

ASSIGNMENT of CONTRACT: A contract shall not be assignable by the contractor in whole or in part without the written consent of the City.

CHANGES to the CONTRACT: Changes can be made to the contract in any of the following ways:

1. The parties by mutual agreement in writing, to modify the terms, conditions or scope of the contract subject to item 2. below. Any additional goods or services to be provided shall be of a sort that is ancillary to the contract goods or services, or within the same broad product or service categories as were included in the contract award. Any increase or decrease in the price of the contract resulting from such modification shall be agreed to by the parties as a part of their written agreement to modify the scope of the contract.
2. A public contract may include provisions for modification of the contract during performance, but no fixed-price contract may be increased by more than twenty-five percent (25%) of the amount of the contract or \$50,000, whichever is greater, without the advance written approval of the Harrisonburg City Council. In no event may the amount of any contract, without adequate consideration, be increased for any purpose, including, but not limited to, relief of a bidder/offeror from the consequences of an error in its (bid/offer). **2.2-4309**
3. The Procurement Manager (or City delegated agent) may order changes within the general scope of the contract at any time by written notice to the contractor. Changes within the scope of the contract include, but are not limited to, things such as services to be performed, the method of packing or shipment, and the place of delivery or installation. The contractor shall comply with the notice upon receipt unless the contractor intends to claim an adjustment to compensation, schedule, or other contractual impact that would be caused by complying with such notice, in which case the contractor shall, in writing, promptly notify the City of the adjustment to be sought, and before proceeding to comply with the notice, shall await the City's written decision affirming, modifying, or revoking the prior written notice. If the City decides to issue a notice that requires an adjustment to compensation, the contractor shall be compensated for any additional costs incurred as the result of such order and shall give the City a credit for any savings. Said compensation shall be determined by one of the following methods:
 - a. By mutual agreement between the parties in writing; or
 - b. By agreeing upon a unit price or using a unit price set forth in the contract, if the work to be done can be expressed in units, and the contractor accounts for the number of units of work performed, subject to the City's right to audit the contractor's records and/or to determine the correct number of units independently; or
 - c. By ordering the contractor to proceed with the work and keep a record of all costs incurred and savings realized. A markup for overhead and profit may be allowed if provided by the contract. The same markup shall be used for determining a decrease in price as the result of savings realized. The contractor shall present the City with all vouchers and records of expenses incurred and savings realized. The City shall have the right to audit the records of the contractor as it deems necessary to determine costs or savings. Any claim for an adjustment in price under this provision must be asserted by written notice to the City within thirty (30) days from the date of receipt of the written order from the City. If the parties fail to agree on an amount of adjustment, the question of an increase or decrease in the contract price or time for performance shall be resolved in accordance with the procedures for resolving disputes provided by the Disputes Clause of this contract or, if there is none, in accordance with the disputes provisions of the City of Harrisonburg Purchasing and Contracting Policy Manual. Neither the existence of a claim nor a dispute resolution process, litigation or any other

provision of this contract shall excuse the contractor from promptly complying with the changes ordered by the City or with the performance of the contract generally.

CONTRACT EXECUTION: Per City Code (Sec 3-1-2, 3-1-1), the City Manager and the Deputy City Manager shall have authority to execute all contracts and agreements on behalf of the City except as otherwise directed by the Harrisonburg City Council in specific instances.

CONTRACTUAL DISPUTES: Contractual claim procedures shall be as per Code of VA **2.2-4363**.

COOPERATIVE PROCUREMENT: 2.2-4304 This procurement is being conducted in accordance with the provisions of 2.2-4304 Code of VA. Except for contracts for architectural and engineering services, if agreed to by the contractor, other public bodies may utilize this contract. The Contractor shall deal directly with any public body it authorizes to use the contract. The City, its officials and staff are not responsible for placement of orders, invoicing, payments, contractual disputes, or any other transactions between the Contractor and any other public bodies, and in no event shall the City, its officials or staff be responsible for any costs, damages or injury resulting to any party from use of a City Contract. The City assumes no responsibility for any notification of the availability of the contract for use by other public bodies, but the Contractor may conduct such notification. Other public bodies desiring to use this contract must make their own legal determination as to whether the use of this contract is consistent with their laws, regulations, and other policies

DEFAULT: In case of failure to deliver goods or services in accordance with the contract terms and conditions, the City, after due oral or written notice, may procure items of a comparable quality from other sources and hold the contractor responsible for any resulting additional costs above the contract price when purchases are made in the open market. This remedy shall be in addition to any other remedies, which the City may have.

DRUG-FREE WORKPLACE: 2.2-4312 During the performance of this contract, 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) include the provisions of the foregoing clauses in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.

IMMIGRATION REFORM and CONTROL ACT OF 1986: 2.2-4311.1 By submitting their bids/proposals, bidders/offerors certify that they do not and will not during the performance of this contract employ illegal alien workers or otherwise violate the provisions of the federal Immigration Reform and Control Act of 1986.

INDEMNIFICATION: Contractor agrees to indemnify, defend and hold harmless the City, its officers, agents, volunteers, and employees against any and all liability, losses, damages, claims, causes of action, suits of any nature, cost, and expenses, including attorney's fees, resulting from or arising out of Contractor's or its agent's and subcontractor's negligent activities or omissions, or from which the Contractor would have legal liability outside of contract.

INSURANCE: By signing and submitting a bid/proposal under this solicitation, the bidder/offeror certifies that if awarded the contract, it will have insurance coverages per the solicitation document at the time of contract execution. For construction contracts, if any subcontractors are involved, the subcontractor will have workers' compensation insurance in accordance with **2.2-4332** and **65.2-800** et seq. of the Code of Virginia. The bidder/offeror further certifies that the contractor and any subcontractors will maintain these insurance coverages during the entire term of the contract and that all insurance coverages will be provided by insurance companies authorized to sell insurance in Virginia by the Virginia State Corporation Commission.

LIABILITY AND LITIGATION: The City shall not indemnify or hold harmless any contractor or other third party. The City does not waive any right or release any party from liability, whether on its own behalf or on behalf of any boards, employees or agents. The City does not waive the right to trial by jury for any cause of action arising from the contract and shall not submit any contract claim to binding arbitration or mediation. The City shall not be liable to contractor for any special, punitive or exemplary damages arising from the performance of the contract, including, but not limited to, incidental damages, and lost profit and lost wages, even if such special damages are reasonably foreseeable. Any provision(s) in the contract contrary to these statements is/are hereby deleted and rendered void.

NONDISCRIMINATION OF CONTRACTORS: 2.2-4343.1H A bidder, offeror, or contractor shall not be discriminated against in the solicitation or award of this contract because of race, religion, color, sex, national origin, age, disability, faith-based organizational status, any other basis prohibited by state law relating to discrimination in employment or because the bidder or offeror employs ex-offenders unless the state agency, department or institution has made a written determination that employing ex-offenders on the specific contract is not in its best interest. If the award of this contract is made to a faith-based organization

and an individual, who applies for or receives goods, services, or disbursements provided pursuant to this contract objects to the religious character of the faith-based organization from which the individual receives or would receive the goods, services, or disbursements, the public body shall offer the individual, within a reasonable period of time after the date of his objection, access to equivalent goods, services, or disbursements from an alternative provider.

PAYMENT: 2.2-4352 – 2.2-4354

1. To Prime Contractor:

Invoices for items ordered, delivered and accepted shall be submitted by the contractor directly to the payment address shown on the purchase order/contract. Any payment terms requiring payment in less than 45 days will be regarded as requiring payment 45 days after invoice or delivery, whichever occurs last. This shall not affect offers of discounts for payment in less than 45 days, however. All goods or services provided under this contract or purchase order, that are to be paid for with public funds, shall be billed by the contractor at the contract price.

The following shall be deemed to be the date of payment: the date of postmark in all cases where payment is made by mail, or the date of offset when offset proceedings have been instituted as authorized under the Virginia Debt Collection Act. Individual contractors shall provide their social security numbers, and proprietors, partnerships, and corporations shall provide the City with a federal employer identification number, prior to receiving any payment from the City. The City requires an updated IRS Form W-9 be filed with the Purchasing Office at or before the contract is signed.

Unreasonable Charges: Under certain emergency procurements and for most time and material purchases, final job costs cannot be accurately determined at the time orders are placed. In such cases, contractors should be put on notice that final payment in full is contingent on a determination of reasonableness with respect to all invoiced charges. Charges which appear to be unreasonable will be researched and challenged, and that portion of the invoice held in abeyance until a settlement can be reached. Upon determining that invoiced charges are not reasonable, the City shall promptly notify the contractor, in writing, as to those charges which it considers unreasonable and the basis for the determination. A contractor may not institute legal action unless a settlement cannot be reached within thirty (30) days of notification.

The provisions of this section do not relieve the City of its prompt payment obligations with respect to those charges which are not in dispute (2.2.4363).

2. To Subcontractors:

A contractor awarded a contract under this solicitation is hereby obligated to pay the subcontractor(s) within seven (7) days of the contractor's receipt of payment from the City for the proportionate share of the payment received for work performed by the subcontractor(s) under the contract; or;

Notify the City and the subcontractor(s), in writing, of the contractor's intention to withhold payment and the reason. The contractor is obligated to pay the subcontractor(s) interest at the rate of one percent per month (unless otherwise provided under the terms of the contract) on all amounts owed by the contractor that remain unpaid seven (7) days following receipt of payment from the City, except for amounts withheld as stated in (2) above. The date of mailing of any payment by U. S. Mail is deemed to be payment to the addressee. These provisions apply to each sub-tier contractor performing under the primary contract. A contractor's obligation to pay an interest charge to a subcontractor may not be construed to be an obligation of the City. Any such contract awarded shall further require the contractor to 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. A contractor's obligation to pay an interest charge to a subcontractor may not be construed to be an obligation of the City.

SAFETY and OSHA STANDARDS: All parties performing services for the City shall comply with all Occupational Safety and Health Administration (OSHA), State Occupational Health Standards, and any other applicable rules and regulations. All parties shall be held responsible for the training, supervision, and safety of their employees. Any unsafe acts or hazardous conditions that may cause injury or damage to any persons or property within and around the work site areas under this contract shall be remedied per the regulatory agency's guidelines.

TERMINATION: Subject to the provisions below, the contract may be terminated by the City upon thirty (30) days advance written notice to the other party. Any contract cancellation notice shall not relieve the contractor of the obligation to deliver and perform on all outstanding orders issued prior to the effective date of cancellation.

1. Termination for Convenience: In the event that the contract is terminated upon request and for the convenience of the City, without the required thirty (30) days advance notice, then the City shall be responsible for payment of services up to the termination date.
2. Termination for Cause: Termination by the City for cause, default or negligence on the part of the contractor shall be excluded from the foregoing provision; termination costs, if any shall not apply. However, the City may hold the contractor responsible

for any resulting additional purchase and administrative costs. The thirty (30) day advance notice requirement is waived in the event of Termination for Cause.

3. **Termination Due to Unavailability of Funds:** Agreements are made subject to the appropriation of funds (including grant funds, gifts or donations) by the Harrisonburg City Council and are null and void in the event of non-appropriation by the City Council. Non-appropriation of funds shall not be deemed a cancellation and shall terminate this agreement without recourse and with no liability on the part of the City.

SPECIFICATIONS

CONDITION OF ITEMS: Unless otherwise specified in the solicitation, all items shall be new, latest edition/model in first class condition.

FORMAL SPECIFICATIONS: When a solicitation contains a specification which states no substitutes, no deviation therefrom will be permitted and the bidder will be required to furnish articles in conformity with that specification.

USE OF BRAND NAMES: 2.2-4315 Unless otherwise provided in this solicitation, the name of a certain brand, make or manufacturer does not restrict bidders/offerors to the specific brand, make or manufacturer named, but conveys the general style, type, character, and quality of the article desired. Any article which the public body, in its sole discretion, determines to be the equal of that specified, considering quality, workmanship, economy of operation, and suitability for the purpose intended, shall be accepted. The bidder/offeror is responsible to clearly and specifically identify the product being offered and to provide sufficient descriptive literature, catalog cuts and technical detail to enable the City to determine if the product offered meets the requirements of the solicitation. This is required even if offering the exact brand, make or manufacturer specified. Normally in competitive sealed bidding only the information furnished with the bid will be considered in the evaluation. Failure to furnish adequate data for evaluation purposes may result in declaring a bid nonresponsive. Unless the bidder/offeror clearly indicates in its bid/proposal that the product offered is an "equal" product, such bid/proposal will be considered to offer the brand name product referenced in the solicitation. The City reserves the right to determine the suitability of substituted items for those specified and to accept in whole or in part any and all bids/proposals received.

DELIVERY

DEFECTS OR IMPROPRIETIES: In instances where there is a defect or impropriety in an invoice or in the goods or services received, the City shall notify the supplier of the defect or impropriety, if the defect or impropriety would prevent payment by the payment date. The notice shall be sent within (30) thirty days after receipt of the invoice or the goods or services.

TESTING AND INSPECTION: 2.2-4302.1 The City reserves the right to conduct any test/inspection it may deem advisable to assure goods and services conform to the specifications. Materials or components that have been rejected by the City, in accordance with the terms of the contract, shall be replaced by the Contractor at no cost to the City.

TRANSPORTATION AND PACKAGING: All materials shipped to the City must be shipped Free On Board (FOB) Destination unless otherwise stated in the contract. By submitting their bids/proposals, all bidders/offerors certify and warrant that the price offered for FOB destination includes only the actual freight rate costs at the lowest and best rate and is based upon the actual weight of the goods to be shipped. Except as otherwise specified herein, standard commercial packaging, packing and shipping containers shall be used. All shipping containers shall be legibly marked or labeled on the outside with purchase order number, commodity description, and quantity.

NOTICE OF PUBLIC HEARING ON THE
PPEA FOR BLACKS RUN
STREAM REMEDIATION
APRIL 12, 2022 At 7:00 pm

The City of Harrisonburg received an unsolicited proposal through the Public-Private Education Facilities and Infrastructure Act (PPEA) concerning Blacks Run stream remediation with the goal of providing full-delivery restoration of a section of Blacks Run to generate nutrient and sediment load reduction for the City's compliance with Chesapeake Bay Total Maximum Daily Load (TMDL) requirements. After soliciting for competing proposals, Harrisonburg received one additional proposal from Momentum Earthworks. City staff entered into an Interim Agreement with Momentum Earthworks in June 2021 for this project. City staff have negotiated a Comprehensive Agreement with Momentum Earthworks that is available for review and public comment for the next 30 days, or until May 10, 2022.

The draft Comprehensive Agreement can be found here:
<https://www.harrisonburgva.gov/bids-proposals>
Comments can be submitted to
Brian.Shull@harrisonburgva.gov

All persons interested will have an opportunity to express their views at this public hearing.

Any person requiring auxiliary aids, including signers, in connection with this public hearing shall notify the City Manager at least five (5) days prior to the time of the hearing.

CITY OF HARRISONBURG