

August 8, 2023

Revised August 21, 2023

Scott Langford  
Town of Tyrone  
Public Works Director/Town Engineer  
950 Senoia Road  
Tyrone, Georgia 30290

(via email: slangford@tyrone.org)

**Subject: Schnabel Reference 23170077.00P, Proposal for Engineering Services, Preliminary Engineering Evaluation of Dams, Town of Tyrone, Georgia**

Dear Mr. Langford:

**SCHNABEL ENGINEERING, LLC** (Schnabel) is pleased to present this proposal to the Town of Tyrone (Town) for preliminary engineering evaluation services for three dams located within the Town. This proposal presents the background information, outlines the scope of services and specifies the fees for our work.

## **PROJECT BACKGROUND**

Schnabel understands that the Town has an interest in making improvements to three dams located within the town limits. The Town owns or is a partial owner of the dams. The following sections briefly describe the location of the dams and Schnabel's understanding of the Town's planned activities associated with them.

### ***Adams Lake Dam (a.k.a. Adams Tract Lake Dam)***

Adams Lake Dam is located approximately ½ mile southwest of the intersection of Dogwood Trail and Joel Cowan Parkway. More specifically, the dam is located at Latitude North 33° 26' 50.0" and Longitude West 84° 35' 40.8". The dam is located on Gin Branch and consists of an earthen embankment with a maximum height of approximately 25 feet. The total crest length of the embankment is on the order of 600 feet. An asphaltic concrete paved public road, Adams Lake Drive, traverses the crest of the embankment.

Schnabel is familiar with the dam given that our personnel were involved in the design and construction of the dam renovation, which was completed in 2004. The renovation consisted of the installation of a siphon spillway, regrading of the downstream slope, construction of an auxiliary spillway, and installation of a subsurface drainage system. The subject dam is currently classified as a Category II. This means that failure or improper operation of the dam would not result in the probable loss of human life. Category

**Town of Tyrone**  
**Preliminary Engineering Evaluation for Three Dams**

II dams are not regulated by the Georgia Safe Dams Program (SDP). However, the renovation design measures were designed to meet the requirements of a Category I structure being regulated by the SDP.

Schnabel understands the Town is interested in acquiring portions of the properties adjacent to the dam in order to become the sole owner/operator of the structure. There are approximately 6 parcels, not including the public right-of-way, that may contain portions of the earthen embankment and/or spillway system of the dam. Additionally, Schnabel understands that the Town is concerned with trees and other inappropriate vegetation that have established on and adjacent to the dam over the years due to lack of routine maintenance, as well as an erosion feature located near the upstream right abutment of the dam.

***Shamrock Park Dam***

Shamrock Park Dam is located to the east of the Tyrone Public Library. More specifically, the dam is located at Latitude North 33° 28' 35.9" and Longitude West 84° 35' 33.5". The dam is located on an unnamed tributary of Flat Creek and is generally oriented in a north-south direction on the east side of the pond. Shamrock Park's asphalt walking path traverses the crest of the dam. Due to the size of the dam, it is not included on the dam inventory list maintained by the SDP. Based on preliminary conversations with you, Schnabel understands that the principal spillway is potentially clogged, and the normal pool is elevated as a result. The Town is concerned with trees and other inappropriate vegetation that have established on and adjacent to the dam over the years due to lack of routine maintenance. A railroad embankment and stream crossing in the form of a culvert also appear to be located immediately downstream of the dam.

***Handley Park Dam***

Handley Park Dam is located about ½ mile northeast of the intersection of Tyrone Road and Joel Cowan Parkway. More specifically, the dam is located at Latitude North 33° 28' 58.0" and Longitude West 84° 34' 37.8". The dam is ¼ mile upstream of Lake Pendleton, is generally oriented in a north-south direction on the east side of the pond, and impounds an unnamed tributary of Flat Creek. Similarly to Shamrock Park Dam, this dam is not included on the dam inventory list. Schnabel understands that the Town is concerned with trees and other inappropriate vegetation that have established on and adjacent to the dam over the years due to lack of routine maintenance, as well as with the condition and functionality of the existing spillway system.

**SCOPE OF SERVICES**

Our scope of services will involve the following tasks:

- Visual Evaluation
- Topographic and Boundary Survey
- Hydrologic and Hydraulic Analysis

The following sections present the intended work to be performed by Schnabel.

**Visual Evaluation**

Schnabel personnel, with at least one engineer registered in the state of Georgia who is also certified as an Engineer-of-Record by the SDP, will perform the visual evaluations of the three dams. Based on our observations and past experiences, we will evaluate the condition of the dams, and submit our opinion/evaluation to you in a short letter, to include standard inspection forms and photographic logs.

**Town of Tyrone**  
**Preliminary Engineering Evaluation for Three Dams**

Our evaluation and report will include the following:

- Visual evaluation of the embankment
  - Observation of vegetation on the embankment
  - Observation of embankment seepage concerns, if any
  - Observation of embankment slope stability concerns, if any
  - Observation of existing drainage systems and/or monitoring wells, if any
- Visual evaluation of outlet works
  - Observation of principal spillway system
  - Visual evaluation of outlet channel
  - Observation of auxiliary spillway

We note that our work associated with the visual evaluations does not include any subsurface exploration, material testing, engineering calculations/analytical work or preparation of plans. Our letter may recommend such additional studies if actions are needed to address observed deficiencies with the dam. Any dimensions provided in the report should be considered approximate. Additionally, our work does not include observations of the interior of the principal spillway conduits for the dams. Based on conversations with you, we understand that the Town may utilize a pole camera on the scheduled date of the visual evaluations to observe the interior of one or more of the conduits for the dams.

For Adams Lake Dam, Schnabel representatives will operate/test the siphon system to determine the functionality of the drawdown spillway. Schnabel takes no responsibility for any damages or malfunctions that may occur during the operation of the siphon spillway. Schnabel assumes that a Town representative will meet our representatives on-site during the operation of the siphon, and will coordinate the testing of the siphon with representatives of the Maple Shade homeowners' association. Prior to the scheduled date of the inspection, the Town will confirm what equipment/tools are required to operate the valve for the siphon, as well as submit photograph(s) to Schnabel of the valve so that our personnel can prepare sufficiently for the siphon system testing.

Schnabel will coordinate access to the dams with you prior to the scheduled date of the visual evaluations. As of the date of this proposal, Schnabel will plan to perform the visual evaluations in September 2023. Schnabel will coordinate a specific date and time for the visual evaluations with you upon receipt of the signed proposal. We assume that the visual evaluations will be performed on the same date.

**Topographic and Boundary Survey**

Utilizing the services of a licensed professional land surveyor, registered in the state of Georgia as a subconsultant to us, Schnabel will perform a topographic survey of Adams Lake Dam, Shamrock Park Dam and Handley Park Dam. The surveys will include topographic information related to the dams, spillway outlet works, and areas in the immediate vicinity. The survey will include the upstream and downstream slopes, the abutments of the embankment, the associated outlet works, and underground utilities. Trees within the topographic survey limits with diameters at breast height (DBH) greater than or equal to 18 inches will be indicated on the surveys. The information obtained from the topographic survey will be utilized to develop the hydraulic model of the dams and spillway outlet works.

**Town of Tyrone**  
**Preliminary Engineering Evaluation for Three Dams**

Based on preliminary conversations with you, Schnabel understands that a topographic survey of the Shamrock Park Dam may have been completed recently by others. Based on the Town's planned course of action for this dam, Schnabel assumes that the Town will provide survey information for Shamrock Park Dam to us for use in developing hydraulic modeling, as requested or provide authorization to perform a topographic survey.

Schnabel understands that the Town is interested in acquiring portions of properties in the vicinity of Adams Lake Dam in order to become the sole owner/operator of this structure. In consideration of this, Schnabel's surveying subconsultant will perform a boundary survey of the properties upon which portions of the dam and spillway outlet works are located. Schnabel notes that the Town of Tyrone shall be responsible for coordinating with adjacent property owners for access during the topographic and boundary surveys of Adams Lake Dam. No bathymetric survey (survey of elevation data below the normal pool elevation) will be performed as part of our work for any of the three dams described herein. To determine the extents of the upstream slope of the dam for Adams Lake, Schnabel will utilize records from our past engagements for the dam to establish the limits of the embankment.

After the topographic and boundary surveys for Adams Lake Dam are completed, Schnabel will coordinate with the Town to develop proposed property boundaries around the extents of the dam footprint. After these proposed boundaries are established, Schnabel will utilize the services of the surveyor that is planned to perform the field work to produce exhibits of the resulting properties with legal descriptions for property acquisition purposes. Additionally, the surveyor will stake out the resulting property boundaries for the dam property only so that adjacent property owners can visualize the changes to the property boundaries. Schnabel will perform a site visit to review the preliminary stakeout with the Town and surveyor. After the property boundaries are finalized, Schnabel's surveyor will set permanent property pins at new boundary corners.

### **Hydrologic & Hydraulic Analyses**

Utilizing the topographic survey information provided by our subconsultant or the Town, Schnabel will perform hydrological and hydraulic analyses of the existing dams and spillway outlet works for Shamrock Park Dam and Handley Park Dam. Schnabel notes that no hydrologic and hydraulic analysis will be performed for Adams Lake Dam. Where field-run topographic data is not available, Schnabel will supplement topographic information with the best available GIS topographic data within the public domain.

Schnabel will create a hydrologic and hydraulic model for the dams within the United States Corps of Engineer's (USACE) computer program, HEC-HMS. Rainfall runoff will be estimated utilize methods developed by the Natural Resources Conservation Service (NRCS). We will utilize this HEC-HMS model to route the runoff associated with the 2-, 5-, 10-, 25-, 50-, and 100-year, 24-hour storm events through each of the dams and spillways to determine the existing peak flood elevations and spillway discharges associated with these storms. If either dam is determined to have an earthen auxiliary spillway, Schnabel will also evaluate the 50-year, 6-hour storm event.

Schnabel will also evaluate the dams for the appropriate fraction of the Probable Maximum Precipitation (PMP) design storm event, based on SDP size requirements. This design storm event is based on the size of the impoundment and dam. For the preliminary evaluation, hydraulic models will be developed

**Town of Tyrone**  
**Preliminary Engineering Evaluation for Three Dams**

based only upon the existing land use conditions within the watershed. A summary of the hydrologic and hydraulic analysis, as well as supporting calculations necessary to develop the models, will be included in the summary reports of the respective dams.

At a minimum, Schnabel recommends that dams (regardless of classification) are capable of passing an appropriate fraction of the PMP with adequate freeboard. In the event that the dams are incapable of safely storing and passing one or more of the storm events analysis, Schnabel is capable of providing alternatives to improve the capacity of the dams and spillway outlet works in a future agreement.

**EXCLUSIONS**

Schnabel Scope of Work associated with this proposal does not include any of the following activities:

- Spillway Rehabilitation Alternatives Analyses and/or Planning
- Final Design of the Dams and Spillway Systems
- Operation & Maintenance Manuals
- Emergency Action Plans
- Development of Construction Plans and Specifications
- Local, State, and/or Federal Permitting
- Bid Phase and/or Contractor Selection Services
- Construction Phase Services

**SCHEDULE**

Following the receipt of authorization from the Town, Schnabel shall complete the Scope of Services within the durations as identified in the table below.

**Task Duration Table**

<b>Task Name</b>	<b>Duration</b>
Visual Evaluation	Within 2 Months
Topographic and Boundary Survey	Within 3 Months
Hydrologic & Hydraulic Analyses	Within 4 Months

**COMPENSATION**

We will perform the work described in the Scope of Services for the lump sum fees listed below. For your convenience, the tasks/subtask have been itemized so that they may be authorized, as desired. Please initial and date next to each task that is desired to be completed to provide authorization.

**Authorization**

**Task 1 – Adams Lake Dam**

- |                                                   |         |       |
|---------------------------------------------------|---------|-------|
| • Task 1A – Visual Evaluation & Siphon Operation* | \$3,500 | _____ |
| • Task 1B – Topographic Survey                    | \$8,500 | _____ |

**Town of Tyrone**  
**Preliminary Engineering Evaluation for Three Dams**

• Task 1C – Boundary Survey	\$11,500	_____
• Task 1D – Proposed Parcel Exhibits and Descriptions	\$5,000	_____
• Task 1E – Preliminary Stakeout of Dam Parcel	\$3,750	_____
• Task 1F – Property Pinset for Parcels	\$2,250	_____

**Task 2 – Shamrock Park Dam**

• Task 2A – Visual Evaluation*	\$3,000	_____
• Task 2B – Topographic Survey	\$7,000	_____
• Task 2C – H&H Analysis**	\$7,000	_____

**Task 3 – Handley Park Dam**

• Task 3A – Visual Evaluation*	\$3,000	_____
• Task 3B – Topographic Survey	\$7,000	_____
• Task 3C – H&H Analysis of Handley Park Dam***	\$7,500	_____

\*The visual evaluation lump sum fees (for Tasks 1A, 2A, & 3A) are contingent on authorization for all three visual evaluations simultaneously. If only two visual evaluations are selected, the fee for both selected visual evaluations shall increase by \$500. If only one visual evaluation is selected, the fee for the selected visual evaluation shall increase by \$1,000.

\*\*Completion of Task 2C contingent upon provision of topographic survey to Schnabel by Town or authorization and completion of Task 2B.

\*\*\*Completion of Task 3C contingent upon authorization and completion of Task 3B.

Authorized work performed outside the specified Scope of Services, to included meetings and/or lengthy client consultations, will be performed on a unit rate basis in accordance with the attached Schedule of Fees. Coordination with the Town's legal counsel regarding changes to the property boundaries in the vicinity of Adams Lake Dam is anticipated. Because the nature and extent of this coordination, on the part of both Schnabel and our surveying subconsultant, is difficult to quantify at the time of this proposal, Schnabel proposes to provide consultation services for this activity on a unit rate basis. We recommend establishing a unit rate budget of \$4,000 for consultations and meetings.

Our invoices will be submitted monthly, with a final invoice submitted after completion of our services. Payment for undisputed work will be due upon receipt of our invoices and will be considered past due 30 days from the date of the invoice. Interest at 1.5 percent a month will be charged on all undisputed overdue amounts.

**Town of Tyrone**  
**Preliminary Engineering Evaluation for Three Dams**

The attached Schedule of Fees and Standard Contract Terms and Conditions will apply to services to be provided under this proposed agreement. The rates on the Schedule of Fees and all remaining budgets will be maintained throughout the duration of the work described and authorized herein, with the remaining terms unchanged. However, if the ability for Schnabel to progress and complete the authorized work is delayed beyond March 1, 2024 due to inactivity, indecision, or any other reason on the part of the Town, Schnabel reserves the right to suspend any remaining work to be complete and renegotiate the rates on the Schedule of Fees and all remaining budgets prior to completing any remaining work.

**AUTHORIZATION**

To formalize our agreement, we request that you indicate the authorized tasks by initialing and dating in the spaces provided above, sign in the space provided below, and return one copy of this proposal and attachments for our files. Please note that the Schedule of Fees and Terms and Conditions are a part of this agreement. This proposal is valid for 30 days from the date shown.

We appreciate the opportunity to present this proposal and look forward to working with you on these projects.

Sincerely,

**SCHNABEL ENGINEERING, LLC**



J. Tyler Coats, PE  
Associate

MCG:JTC

**Enclosures:** Schedule of Personnel Fees 17-23.02 Dams  
Standard Terms and Conditions (two sheets)

The terms and conditions of this proposal, including the attached Standard Contract Terms and Conditions are:

**ACCEPTED BY:** \_\_\_\_\_

**SIGNATURE:** \_\_\_\_\_

**PRINTED NAME:** \_\_\_\_\_

**TITLE:** \_\_\_\_\_ **DATE:** \_\_\_\_\_



**SCHEDULE OF PERSONNEL FEES – SCHNABEL ALPHARETTA**  
**Effective until December 31, 2023**

Senior Consultant	\$307.00/hr
Principal	\$303.00/hr
Senior Associate	\$275.00/hr
Associate	\$244.00/hr
Senior Engineer/Technologist/Scientist	\$205.00/hr
Project Engineer/Technologist/Scientist	\$177.00/hr
Construction Resident Engineer/Resident Project Representative	\$177.00/hr
Senior Staff Engineer/Technologist/Scientist	\$157.00/hr
Staff Engineer/Technologist/Scientist	\$136.00/hr
Senior Technician II/Construction Resident Technician	\$129.00/hr
Senior Technician I	\$109.00/hr
Technician III	\$ 95.00/hr
Technician II	\$ 79.00/hr
Technician I	\$ 70.00/hr
CAD Tech III	\$145.00/hr
CAD Tech II	\$131.00/hr
CAD Tech I	\$110.00/hr
Administrative	\$ 84.00/hr

**NOTES:**

1. Engineering fees will be based upon the actual hours charged for personnel multiplied by the appropriate hourly rate.
2. Travel by auto to and from jobs will be charged at the current IRS prevailing rate. All travel expenses, including mileage, will be marked up 15% to cover the cost of handling, insurance, and overhead.
3. Special pickup and delivery expenses will be billed at cost plus 15%, or our prevailing hourly and mileage rates for our own personnel.
4. Overtime for Technicians is time for work on Saturday, Sunday, and Federal holidays, time in excess of 8 hours per day and time between the hours of 7:00 P.M. and 7:00 A.M. A surcharge of \$15/hr. is added to the above rate for overtime.
5. Subcontracts for subsurface exploration, bulldozers, surveys, etc. are marked up 15% to cover the cost of handling, insurance and overhead.
6. Preparation time for deposition and trial testimony, as well as actual time for deposition and trial testimony will be charged at the hourly rate multiplied by 1.5.
7. Per Diem Rates for out-of-town or overnight travel will be in accordance with U.S. General Services Administration rates published on website [www.GSA.gov](http://www.GSA.gov) for the area in which the project is located, unless otherwise stated in the proposal.
8. Schedule of Fees will increase on January 1, 2024 and not less frequently than annually thereafter based on the Consumer Price Index as provided by the U.S. Department of Labor, Bureau of Labor Statistics – All Urban Consumers – U.S. City Average.



**SCHNABEL ENGINEERING, LLC**  
**STANDARD CONTRACT TERMS AND CONDITIONS**

1. DEFINITIONS
  - 1.1 Schnabel Engineering, LLC, the "Engineer," agrees to provide Professional Services, as delineated in the attached Proposal. "Engineer" means Engineer and its employees, and subcontractors.
  - 1.2 The "Client" is the other party to this "Agreement."
  - 1.3 The "Contractor" is the responsible party providing construction for the subject Project.
2. ENTIRE AGREEMENT, SCOPE OF WORK
  - 2.1 The Agreement between Engineer and Client consists of the Proposal, these Standard Contract Terms and Conditions, and any other exhibits or attachments referenced in the Proposal. Together these elements will constitute the entire Agreement, superseding all prior written or oral negotiations, statements, representations, correspondence, and/or agreements. The Services to be provided by Engineer pursuant to this Agreement are described in the attached Proposal and include the Scope of Work. Both Client and Engineer must mutually acknowledge any changes to this Agreement in writing. All work performed by Engineer on or relating to the Project is subject to the terms and limitations of this Agreement.
  - 2.2 If work is performed, but the parties do not reach agreement concerning modifications to the Scope of Work or compensation, then the terms and conditions of this Agreement apply to such work. Disputes concerning modifications to Scope of Work or compensation shall be resolved pursuant to Article 12, "Dispute Resolution."
3. STANDARD OF CARE, DISCLAIMER OF WARRANTIES
  - 3.1 Engineer will strive to perform Services under this Agreement in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions. No other representation and no warranty or guarantee, either express or implied, is included or intended by this Agreement.
4. SITE ACCESS, SITE CONDITIONS, SAMPLES.
  - 4.1 Client will provide rights of entry and access for Engineer to perform its Services.
  - 4.2 Engineer will take reasonable precautions to avoid damage or injury to subterranean structures or utilities in the prosecution of his work. Client agrees to advise Engineer of known or suspected underground features in the area of the work, and Engineer will not be responsible for damage to below grade features not brought to its attention, or incorrectly shown on plans provided.
  - 4.3 Client shall promptly pay and be responsible for the removal and lawful disposal of contaminated samples and cuttings, and hazardous substances, unless other arrangements are mutually agreed in writing.
5. OWNERSHIP OF DOCUMENTS, RESTRICTIONS ON REUSE
  - 5.1 All documents, including opinions, conclusions, certificates, reports, drawings and specifications and other documents, prepared or furnished by Engineer and Engineer's independent professional consultants pursuant to this Agreement (collectively "Documents") are instruments of Service. Engineer retains all ownership and property interests in the Documents, including all common law, statutory and other reserved rights, including copyrights, whether or not the Project is completed. Client may make and retain copies of them for information and reference in connection with the use and occupancy of the Project; however, such copies are not intended or represented to be suitable for reuse by others, and may not be used on other projects or for additions to this Project outside the Scope of the Work.
  - 5.2 At Client's request, client may negotiate with Engineer to acquire ownership of Documents for a mutually agreed amount. If Client acquires ownership of Documents prepared by Engineer, Client agrees: a) that any subsequent reuse or modification of them by Client or any party obtaining them through Client will be at Client's sole risk and without liability to Engineer, and b) client will defend, indemnify and hold harmless Engineer from and against any claims, damages, and liabilities arising from or related to any use, reuse or modification of Documents by Client or any party obtaining them through Client. Client agrees that Engineer may retain copies of all documents for its files.
  - 5.3 Electronic communications and CADD data transferred by Email, websites or computer disks (collectively "E-Data") are provided only as an accommodation by Engineer for the benefit of Client. Signed paper prints of documents constitute the contract deliverables. Client assumes the risk that E-Data may differ from the paper deliverables. Client agrees to indemnify and hold harmless Engineer from and against claims, damages, and liabilities for defects or inappropriate use of E-Data created or transmitted by Engineer.
6. THIRD PARTY RELIANCE UPON DOCUMENTS
  - 6.1 Engineer's performance of the Services, as set forth in this Agreement, is intended solely and exclusively for the Client's benefit and use. No party may claim under this Agreement as a third party beneficiary. Client agrees not to distribute, publish or otherwise disseminate Engineer's Documents, without first obtaining Engineer's prior written consent.
  - 6.2 No third party may rely upon Engineer's Documents including, but not limited to, opinions, conclusions, certificates, reports, drawings and specifications unless Engineer has agreed to such reliance in advance and in writing.

**SCHNABEL ENGINEERING, LLC**  
**STANDARD CONTRACT TERMS AND CONDITIONS**

**7. ASSIGNMENT, SUBCONTRACTING**

- 7.1 Neither Client nor Engineer may delegate, assign, sublet, or transfer all or any part of this Agreement, including its duties or interest in this Agreement without the written consent of the other party.
- 7.2 Notwithstanding Section 7.1, Engineer may subcontract subsurface exploration, testing, and other supplemental services and assign accounts receivable as security for financial obligations without notification or consent of Client.

**8. TERMINATION, SUSPENSION**

- 8.1 Either party upon 7 days' written notice may terminate this Agreement for convenience or material breach of Agreement. In the event of termination for convenience or material breach of Agreement, Engineer shall be paid for Services performed to the termination date, plus reasonable termination expenses.

**9. ALLOCATION OF RISK**

- 9.1 Engineer's total cumulative liability to Client (including, but not limited to, attorneys' fees and costs awarded under this Agreement) irrespective of the form of action in which such liability is asserted by Client or others, shall not exceed the total compensation received by Engineer under this Agreement or \$25,000, whichever is less. Upon Client's written request, Engineer may negotiate an increase to this limitation in exchange for an additional agreed consideration for the increased limit.
- 9.2 Client and Engineer agree to limit each's liability to the other in the following respects: Neither party will have liability to the other for any special, consequential, incidental, exemplary, or penal losses or damages including but not limited to losses, damages or claims related to the unavailability of the other party's property or facility, shutdowns or service interruptions, loss of use, lost profits or revenue, inventory or use, charges or cost of capital or claims of the other party's customer.
- 9.3 The limitations of liability of this Agreement shall survive the expiration or termination of this Agreement.

**10. INDEMNIFICATION**

- 10.1 Indemnification of Client. Subject to the provisions and limitations of this Agreement, Engineer agrees to indemnify and hold harmless Client, its shareholders, officers, directors, employees, and agents from and against any and all claims, suits, liabilities, damages, expenses (including without limitation reasonable attorney's fees and costs of defense) or other losses (collectively "Losses") to the extent caused by Engineer's negligent performance of its Services under this Agreement.
- 10.2 Indemnification of Engineer. Subject to the provisions and limitations of this Agreement, Client agrees to indemnify and hold harmless Engineer from and against any and all Losses to the extent caused by the negligence of Client, its employees, agents and contractors. In addition, except to the extent caused by Engineer's sole negligence, Client expressly agrees to defend, indemnify and hold harmless Engineer Entities from and against any and all Losses arising from or related to the existence, disposal, release, discharge, treatment or transportation of Hazardous Materials, or the exposure of any person to Hazardous Materials, or the degradation of the environment due to the presence, discharge, disposal, release of or exposure to Hazardous Material.

**11. INVOICES, PAYMENTS**

- 11.1 Payment is due without retainage upon presentation of invoice and is past due thirty (30) days from invoice date, and will not be contingent upon receipt of funds from third parties. Client agrees to pay a service charge of one and one-half percent (1-1/2%) per month or fraction thereof on past due payments under this Agreement.
- 11.2 It is further agreed that in the event a lien or suit is filed to enforce overdue payments under this Agreement, Engineer will be reimbursed by Client for all costs of such lien or suit and reasonable Attorney's fees in addition to accrued service charges, where the court of appropriate jurisdiction enters a finding in favor of Engineer.

**12. DISPUTE RESOLUTION**

- 12.1 Claims, disputes, and other matters in controversy between Engineer and Client caused by or any way related to this Agreement will be submitted to non-binding mediation as a condition precedent to litigation. The cost for mediation including the mediator's fees, reproduction of documents, and miscellaneous out-of-pocket expenses will be borne equally by each party to this Agreement.
- 12.2 The law of the Commonwealth of Virginia will govern the validity of these terms, their interpretation and performance. Client and Engineer agree that venue for any litigation will be in the courts of the Commonwealth of Virginia and Engineer and Client both hereby waive any right to initiate any action in, or remove any action to, any other jurisdiction.

**13. SEVERABILITY**

- 13.1 This Agreement reflects the entire agreement of the parties with respect to its terms and supersedes all prior agreements, whether written or oral. If any portion of this Agreement is void or voidable, such portion will be deemed stricken and the Agreement reformed to as closely approximate the stricken portions as the law allows.