



HARVARD WATER - SEWER COMMISSION

MINUTES

Thursday, March 2, 2023

Virtual Meeting Held in accordance with Governors Executive Order Suspending
Certain Provisions of the Open Meeting Law

Cindy Russo, Chair

Kyle Hedrick

Richard Maiore

Present

Cindy Russo, Chair; Kyle Hedrick, Commissioner; Rick Maiore, Commissioner; Tim Bragan, Town Administrator; Tim Kilhart, DPW Director; Tom Mahana and Mary Danielson, Tighe & Bond. Also attending: Jim Farrell, Joan Eliyesil.

1. Cindy called the meeting was called to order at 8:30 a.m.
2. The Minutes of February 8, 2023 were approved without correction.
3. Tom and Mary explained as follows: Tom presented a \$130K contract for preliminary design, including a \$30,000 allowance for geotechnical: soil borings etc. Survey, preliminary layout of pump station, preliminary railroad crossing application. The conservative cost to complete the work necessary for the loan application, after the \$130K, is an additional \$335,000, after application of \$75,000 would be \$260,000. (So total pre-loan engineering cost to town is approximately \$465,000/ \$390,000 after application of One Stop for Growth grant. Tom believes this is a conservative number and expects it to be lower.)

Permits will be required. These are (1) Mass Historical – required by SRF Loan, (2) MassDEP Technical permits (review of water main and pump station), (3) Possibly Planning Board Site Plan Approval and (4) Conservation Commission because crossing brook and resource areas. Railroad for crossing.

The cost for Tighe and Bond's services for bidding and construction services are includable for SRF reimbursement.

There is a lot of work to get done over the next 7 months to meet the October 13 loan application deadline.

2. Tom also presented a proposal for full design services (including the preliminary work in the \$130,000 proposal) to complete the grant application for \$330,000.
3. Rick said it would be helpful to have a timeline.

4. Kyle asked if the Railroad is likely to be a real problem and asked for regular updates on the progress. Mary wants to get started on railroad immediately. She has been in touch with them and no red flags so far. There are design standards on the website but review timeline is a concern. Tom points out that we wouldn't lose out if we don't have permit from Railroad in hand but can't go out to bid without it. Expect to go out to bid by early 2024, so would need permit in hand by the end of 2023.

5. Commission voted unanimously to approve 130K contract based on the proposal dated Feb 7.

6. Commission will work on public education. Handout for Town Meeting distribution and opinion piece for newspaper were discussed.

The meeting was adjourned at 8:55.

Devens Water System Interconnection Project – Final Design Budget

To: Tim Bragan, Town Administrator
Tim Kilhart, DPW Director

COMPANY: Town of Harvard

FROM: Tom Mahanna

DATE: February 22, 2023

Tighe & Bond is pleased to provide the Town of Harvard with a recommended budget for engineering services to complete the final design and permitting of the Devens Water System Interconnection Project. Our original proposal to the Town, dated February 7, 2003, included Preliminary Design Services for the water main and pump station/meter building. The scope of services under that agreement included completing the field survey of the water main route, preliminary design of the water main, and developing the pump station layout, proposed building elevations and site plans.

It is our understanding that the Town would like an estimated budget to complete the final design and permitting of the project so that these funds can be appropriated. Design and permitting of the project will need to be substantially completed by the end of this year. The Town will need to submit the completed State Revolving Fund Loan application to MassDEP by the October 13, 2023 deadline. Public bidding of the project will begin in early 2024, and construction could begin by spring 2024. We estimate that the new water main and pump station could be completed and placed on-line by summer of 2025.

The following table provides a summary of the tasks that are included in this budget and our estimated fee for each:

Task No.	Description	Budget
1	Geotechnical Investigation Allowance	\$30,000
2	Final Design Services	\$250,000
	Water Main Contract (estimated 15 sheets)	
	Pump Station/Meter Building (estimated 35 sheets)	
	Technical Specifications	
3	Permitting Services	\$40,000
	Massachusetts Historical Commission	
	MassDEP Technical Permits	
	Planning Board – Site Plan Approval	

	Conservation Commission – Notice of Intent	
	Railroad Crossing	
4	State Revolving Fund Assistance	\$15,000
	Loan Application	
	TOTAL FEE BUDGET	\$335,000
	ONE STOP FOR GROWTH GRANT	\$75,000
	ADDITIONAL FUNDING REQUIRED	\$260,000

We will prepare a detailed proposal including a scope of services for the tasks listed above and will provide a draft copy for the Town to review. Please note that this budget should be considered conservative and only used for planning purposes. We can provide a more accurate estimate of our fees once the preliminary design phase has been completed. Also, this budget does not include bidding or construction services. These services are considered an eligible cost under the SRF program. We will include these services as part of a separate agreement that will be included in the SRF loan application.

We trust this information meets your requirements for the budget planning for this project. Please let me know if you have any questions or require any additional information. Tighe & Bond is prepared to begin work immediately upon authorization to proceed.

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17-1776-012
February 7, 2023

Timothy B. Kilhart, DPW Director
Harvard Public Works Department
47 Depot Road
Harvard, MA 01451

**Re: Proposal for Preliminary Design Services
Harvard-Devens Water System Interconnection Project**

Dear Mr. Kilhart:

Tighe & Bond is pleased to provide this proposal to the Town of Harvard (Town) Department of Public Works for preliminary design services for the proposed Harvard-Devens Water System Interconnection Replacement Project. This project includes construction of a water system interconnection between the Town of Harvard and Devens. The project will include installation of approximately 8,500 l.f. (1.6 miles) of new ductile iron water main and appurtenances. The project will also include construction of a meter building with booster pumps that will be located near the town line.

Scope of Services

We recommend that the Town consider the following Scope of Services for this project:

Task 1 – Field Survey and Base Plans

Our scope of work for preliminary design services is described in the following tasks.

- 1.1 Conduct Kick-Off Meeting** – Coordinate a project kick-off meeting between key Tighe & Bond project team members, Department of Public Works staff, and Devens Utilities staff. The purpose of the kick-off meeting will be to introduce personnel, discuss project goals and objectives, and discuss specific project concerns, such as schedule, deliverables, standard materials, etc. We will provide a Preliminary Project Schedule and provide copies to all attendees. Following the meeting, we will conduct a site walk of the project route. Summary notes of the meeting will be prepared and distributed to all attendees.
- 1.2 Review Existing Utility Information** – Obtain and review available existing information for the existing water mains, service connections, and other utilities adjacent to the work including drain, gas, electric, cable and telephone (as applicable), and utility company record drawings.
- 1.3 Perform Field Survey** – Tighe & Bond will retain a professional land surveying subconsultant to collect information on visible aboveground, underground, and overhead utility structures, as well as topographic information for final design drawings. Information to be collected shall include point data for utility structures (manholes, catch basins, water valves and boxes, hydrants, gas valves and boxes, utility poles) as well as curbs, sidewalks, driveways, walls, fences, mailboxes, and trees/shrubs within the right-of-way. Property lines, street lines, and building locations will be obtained from the Town's GIS database. Pipe invert elevations shall be collected at all drain catch basins and manholes. All survey plans will conform to the Massachusetts State Plan coordinate system and NAVD88 vertical datum.



- 1.4 Wetlands Delineation** – Tighe & Bond will provide a wetland scientist to delineate wetland resource areas within approximately 100 feet of the proposed limits of work along the water main route. The delineation will be conducted in accordance with the Massachusetts Wetlands Protection Act (MAWPA; M.G.L. chapter 131 § 40), and the Town of Harvard’s Conservation Commission Bylaw and Federal criteria. Each wetland flag location will be GPS located and added to the site plans for design and permitting purposes. Approximate locations of wetland resource areas (i.e. vegetated wetlands, streams) will be noted for erosion control purposes during construction
- 1.5 Geotechnical Services** – Tighe & Bond will subcontract with a geotechnical drilling firm to perform 10-foot-deep soil/rock probes along the entire proposed pipeline route on Depot Road in the Town of Harvard. The probes will assist in identifying subsurface conditions and will be included in the construction bid documents. Tighe & Bond will provide a member of our staff to monitor the drilling services.

Task 2 – Water Main Preliminary Design

Tighe & Bond will prepare preliminary design drawings, details, and specifications for the proposed project. We will meet with the Department of Public Works and Devens Utilities staff during the 75% design phase to review the project and discuss any comments. A summary of each task and their associated deliverables is as follows:

- 2.1 Prepare Base Plans** – Prepare base plans of the project at an appropriate scale using the available mapping resources and results from the survey and utility record plans. Add wetland resource areas from available MassGIS mapping data. The base maps will show the existing utilities, and will include locations of all known water main gate valves, hydrants, and water services. The base plans will also show existing features such as drain, gas, edge of pavement, driveways, retaining walls, stonewalls, buildings, property lines, and utility poles.
- 2.2 Prepare 75% Design** - Prepare design drawings to the 75% design level. Plans will indicate location of proposed water main improvements and will identify any potential conflicts or construction issues. We anticipate that approximately fourteen (14) design drawings will be developed for this task. A preliminary list of the design drawings as shown on the following table:

Sheet No.	Drawing Title
Sheet 1	Title Sheet
Sheet 2	Abbreviations, Legend, General Notes, and Index
Sheets 3 - 4	Devens Cross-Country Water Main
Sheets 5 - 10	Depot Road Water Main Extension
Sheet 11	Railroad Crossing Detail
Sheets 12 and 13	Water Main Details
Sheet 14	Traffic Management Plan

Traffic management plans will be prepared in accordance with the latest version of the Manual on Uniformed Traffic Control Devices (MUTCD). Traffic management plans will incorporate road closure and detour plans that will maintain access to residents in the project area.

Specifications – Prepare front end and technical specifications to the 75% design level. The technical specifications shall conform to applicable Department of Public Works, AWWA, and Massachusetts Department of Environmental Protection (MassDEP) standards.

2.3 Develop Opinion of Probable Construction Cost – We will develop an itemized Preliminary Opinion of Probable Construction Cost for the entire project. Cost opinion will be developed based on progress of design and will include appropriate contingencies.

2.4 Conduct Progress Meeting – We will coordinate and conduct a meeting with the Town Departments and Devens Utilities Staff to review the 75% design submittal. Progress Meeting will discuss the design details of the proposed water main improvements, review a list of anticipated design constraints, review project schedule and the preliminary opinion of probable construction cost. Tighe & Bond will prepare summary notes and distribute to all meeting attendees.

Task 3 – Pump Station Preliminary Design

Tighe & Bond will complete preliminary design services for the proposed pump station and meter building that will located at the interconnection of the two water systems. Our services under this task is described below.

3.1 Preliminary Design Memorandum - Tighe & Bond will prepare a Technical Memorandum that provides a summary of the proposed design criteria for the pump station. This will include an evaluation of the alternative locations for the building, specifications for the booster pumps and master meter, and other process equipment requirements. The memorandum will also include an updated project schedule that will identify the schedule to complete the final design, permitting, bidding and construction of the project. We will also provide a preliminary opinion of probable construction cost that will be based on the progress of the design to date.

3.2 Preliminary Design Drawings – We will prepare preliminary design drawings for the proposed pump station. These drawings will be developed to approximately the 30% design completion level. We estimate that fifteen (15) design drawings will be developed for each treatment facility. A preliminary list of the drawings for each facility is shown on the following table.

Pump Station Preliminary Design (30%) Drawing List

Sheet No.	Description
1	Cover
2	General Notes
3	Existing Conditions Site Plan
4	Erosion Control and Site Preparation Plan
5	Site Grading and Drainage Plan
6	Site Utility Plan
7	Proposed Architectural Floor Plan
8	Proposed Building Elevations
9	Process Piping and Pumps Plan
10	Process Piping Sections and Details
11	Electrical Site Plan
12	Electrical Floor Plan

- 3.3 Progress Meetings** – We will coordinate and attend periodic meetings with the Department of Public Works to review the progress of the Preliminary Design Memorandum and Preliminary Design Drawings and address any comments or questions. We will incorporate all comments received into the design drawings. We estimate that two (2) meetings will be held. Meetings are expected to be held via a virtual platform.

Task 4 – Permitting Services

- 4.1 Railroad Crossing Permit Application** – The interconnection to the Devens water distribution system will require crossing the existing railroad tracks at the end of Depot Road. It is our understanding that the rail line is owned by CSX. Tighe & Bond will prepare the application to install a new utility beneath the rail line. This application will include a description of the proposed work, method of installation, and specifications for the water main carrier and casing pipe. It is anticipated the new water main will be installed by jacking a new 42-inch steel casing pipe across the railroad Right-of-Way and installing the new water main inside the casing. Permit application will include the proposed crossing design plan and details which will conform to CSX’s design guidelines for pipeline crossings.

Exclusions

We have not included the following services in our proposal:

- Police details that may be needed for the field survey
- Notification of DigSafe for the field survey
- Preparation of easement plans or certified plot plans
- Permit Application Fees
- Preparation of State Revolving Fund Loan Program Financial Application
- Final Design, Permitting, Bidding, and Construction Services. Tighe & Bond will provide the Town with a separate amendment for these services at the appropriate time in the project. Bidding and construction services are eligible for reimbursement under the SRF Loan Program.

Schedule

Our team is prepared to begin work immediately upon receipt of authorization to proceed. We have therefore prepared the following proposed schedule for consideration:

- | | |
|-----------------------------------|----------------------------|
| • Authorization to Proceed | February 15, 2023 |
| • Topographic Survey | February 2023 – April 2023 |
| • Water Main Preliminary Design | January – April 2023 |
| • Pump Station Preliminary Design | March – June 2023 |
| • Permitting Services | February - June 2023 |

Fee

Tighe & Bond will perform these services for a lump sum fee of **\$130,000**, invoiced monthly based on percentage complete. In the event that the scope of work is increased for any reason, the lump sum fee to complete the work shall be mutually revised by written amendment.

For information purposes, the below summary provides the anticipated break out of the project. The summary is presented to give the Town of Harvard a better understanding of how the project budget was developed. Invoices will be submitted based on the total project fee and not individual line-item budgets.

Fee Summary

Task	Description	Fee
1	Field Survey, Wetlands Delineation, and Base Plans	\$15,000
	Licensed Survey Subconsultant	\$35,000
	Drilling Subcontractor	\$7,000
2	Water Main Preliminary Design	\$30,000
3	Pump Station Preliminary Design	\$35,000
4	Permitting Services	\$8,000
Total Fee		\$130,000

The included schedule and fees are based on the above scope of work and assumptions. The schedule includes reasonable allowances for review and approval times by applicable parties. This schedule may need to be adjusted as the project progresses, allowing for changes in scope, character or size of the project requested by the Town of Harvard, or for delays or other causes beyond our reasonable control.

Thank you for the opportunity to provide this proposal for engineering services to the Town of Harvard on this important project. If this proposal is acceptable, please return one signed copy to my attention. If you have any questions or require any additional information, please contact me at tjmahanna@tighebond.com or at (978) 846-0675.

Very truly yours,

TIGHE & BOND, INC.



Thomas J. Mahanna, PE
Vice President
tjmahanna@tighebond.com

Copy: Timothy Bragan, Town Administrator

ACCEPTANCE:

On behalf of the Town of Harvard, the scope, fee, and terms of this proposal are hereby accepted.

Timothy Bragan, Town Administrator

Date

“CLIENT” is defined in the acceptance line of the accompanying proposal letter or the name the proposal is issued to; Tighe & Bond, Inc. is hereby referenced as “CONSULTANT”; “PROJECT” is defined in the accompanying proposal letter

1. SCHEDULE OF PAYMENTS

1.1 Invoices will generally be submitted once a month for services performed during the previous month. Payment will be due within 30 days of invoice date. Monthly payments to CONSULTANT shall be made on the basis of invoices submitted by CONSULTANT and approved by CLIENT. If requested by CLIENT, monthly invoices may be supplemented with such supporting data as reasonably requested to substantiate them.

1.2 In the event of a disagreement as to billing, the CLIENT shall pay the agreed portion.

1.3 Interest will be added to accounts in arrears at the rate of one and one-half (1.5) percent per month (18 percent per annum) or the maximum rate allowed by law, whichever is less, of the outstanding balance. In the event counsel is retained to obtain payment of an outstanding balance, CLIENT will reimburse CONSULTANT for all reasonable attorney's fees and court costs.

1.4 If CLIENT fails to make payment in full within 30 days of the date due for any undisputed billing, CONSULTANT may, after giving seven days' written notice to CLIENT, suspend services and retain work product until paid in full, including interest. In the event of suspension of services, CONSULTANT will have no liability to CLIENT for delays or damages caused by such suspension.

2. SUCCESSORS AND ASSIGNS

2.1 CLIENT and CONSULTANT each binds itself, its partners, successors, assigns and legal representatives to the other parties to this Agreement and to the partners, successors, assigns and legal representatives of such other parties with respect to all covenants of this Agreement. CONSULTANT shall not assign, sublet or transfer its interest in this Agreement without the written consent of CLIENT, which consent shall not be unreasonably withheld.

2.2 This Agreement represents the entire and integrated Agreement between CLIENT and CONSULTANT and supersedes all prior negotiations, representations or Agreements, whether written or oral. This Agreement may be amended only by written instrument signed by both CLIENT and CONSULTANT. References to this agreement include these Terms & Conditions, any accompanying proposal or description of services, as well as any other documents referenced or incorporated therein. In the event one or more provisions of any of the foregoing documents conflict with the provisions of these Terms & Conditions, the provisions of these Terms & Conditions shall control.

2.3 Nothing contained in this Agreement shall create a contractual relationship or cause of action in favor of a third party against CLIENT or against CONSULTANT.

3. STANDARD OF CARE

3.1 In providing services, CONSULTANT will use that degree of care and skill ordinarily exercised under similar circumstances by individuals providing such services in the same or similar locality for similar projects.

4. TERMINATION

4.1 This Agreement may be terminated by either party upon seven days' written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof through no fault of the terminating party. In addition, CLIENT may terminate this Agreement for its convenience at any time by giving written notice to CONSULTANT. In the event of any termination, CLIENT will pay CONSULTANT for all services rendered and reimbursable expenses incurred under the Agreement to the date of termination and all services and expenses related to the orderly termination of this Agreement.

5. RECORD RETENTION

5.1 CONSULTANT will retain pertinent records relating to the services performed for the time required by law, during which period the records will be made available upon reasonable request and upon reimbursement for any applicable retrieval/copying charges.

5.2 Samples - All soil, rock and water samples will be discarded 30 days after submission of CONSULTANT's report, unless mutually agreed otherwise or unless CONSULTANT's customary practice is to retain for a longer period of time for the specific type of services which CONSULTANT has agreed to perform. Upon request and mutual agreement regarding applicable charges, CONSULTANT will ship, deliver and/or store samples for CLIENT.

6. OWNERSHIP OF DOCUMENTS

6.1 All reports, drawings, specifications, computer files, field data, notes, and other documents, whether in paper or electronic format or otherwise (“documents”), are instruments of service and shall remain the property of CONSULTANT, which shall retain all common law, statutory and other reserved rights including, without limitation, the copyright thereto. CLIENT's payment to CONSULTANT of the compensation set forth in the Agreement shall be a condition precedent to the CLIENT's right to use documents prepared by CONSULTANT.

6.2 Documents provided by CONSULTANT are not intended or represented to be suitable for reuse by CLIENT or others on any extension or modification of this PROJECT or for any other projects or sites. Documents provided by CONSULTANT on this PROJECT shall not, in whole or in part, be disseminated or conveyed to any other party, nor used by any other party, other than regulatory agencies, without the prior written consent of CONSULTANT. Reuse of documents by CLIENT or others on extensions or modifications of this project or on other sites or use by others on this PROJECT, without CONSULTANT's written permission and mutual agreement as to scope of use and as to compensation, if applicable, shall be at the user's sole risk, without liability on CONSULTANT's part, and CLIENT agrees to indemnify and hold CONSULTANT harmless from all claims, damages, and expenses, including attorney's fees, arising out of such unauthorized use or reuse.

6.3 Electronic Documents - CONSULTANT cannot guarantee the authenticity, integrity or completeness of data files supplied in electronic writeable format. If CONSULTANT provides documents in writeable electronic format for CLIENT's convenience, CLIENT agrees to waive any and all claims against CONSULTANT resulting in any way from the unauthorized use, alteration, misuse or reuse of the electronic documents, and to defend, indemnify, and hold CONSULTANT harmless from any claims, losses, damages, or costs, including attorney's fees, arising out of the unauthorized use, alteration, misuse or reuse of any electronic documents provided to CLIENT.

6.4 Electronic Data Bases – In the event that CONSULTANT prepares electronic data bases, geographical information system (GIS) deliverables, or similar electronic documents, it is acknowledged by CLIENT and CONSULTANT that such PROJECT deliverables will be used and perhaps modified by CLIENT and that CONSULTANT's obligations are limited to the deliverables and not to any subsequent modifications thereof. Once CLIENT accepts the delivery of maps, databases, or similar documents developed by CONSULTANT, ownership is passed to CLIENT. CONSULTANT will retain the right to use the developed data and will archive the data for a period of three years from the date of PROJECT completion.

7. INSURANCE

7.1 CONSULTANT will retain Workmen's Compensation Insurance, Professional Liability Insurance with respect to liabilities arising from negligent errors and omissions, Commercial General Liability Insurance, Excess Liability, Unmanned Aircraft, Cyber Liability, and Automobile Liability during this PROJECT. CONSULTANT will furnish certificates at CLIENT's request.

7.2 Risk Allocation - To the fullest extent permitted by law, and notwithstanding any other provision of this Agreement, the total liability, in the aggregate, of the CONSULTANT to the CLIENT and anyone claiming by or through the CLIENT, for any and all claims, losses, costs or damage, of any nature whatsoever, the liability of CONSULTANT to all claimants with respect to this PROJECT will be limited to an aggregate sum not to exceed \$100,000 or CONSULTANT's compensation for consulting services, whichever is greater. It is intended that this limitation apply to any and all liability or cause of action however alleged or arising, unless otherwise prohibited by law.

7.3 Damages – Notwithstanding any other provision of this Agreement, and to the fullest extent permitted by law, neither CLIENT nor CONSULTANT, their respective officers, directors, partners, employees, contractors or subconsultants shall be liable to the other or shall make any claim for any incidental, indirect or consequential damages arising out of or connected in any way to the PROJECT or to this Agreement. This mutual waiver of certain damages shall include, but is not limited to, loss of use, loss of profit, loss of business, loss of income, loss of reputation and any other consequential damages that may be incurred from any cause of action including negligence, strict liability, breach of contract and breach of strict or implied warranty. Both CLIENT and CONSULTANT shall require similar waivers of consequential damages protecting all the entities or persons named herein in all contracts and subcontracts with others involved in this PROJECT.

7.4 CLIENT agrees that any and all limitations of CONSULTANT's liability or waivers of damages by CLIENT to CONSULTANT shall include and extend to those individuals and entities CONSULTANT retains for performance of the services under this Agreement, including but not limited to CONSULTANT's officers, partners, and employees and their heirs and assigns, as well as CONSULTANT's subconsultants and their officers, employees, and heirs and assigns.

8. DISPUTE RESOLUTION

8.1 In the event of a disagreement arising out of or relating to this Agreement or the services provided hereunder, CLIENT and CONSULTANT agree to attempt to resolve any such disagreement through direct negotiations between senior, authorized representatives of each party. If any disagreement is not resolved by such direct negotiations, CLIENT and CONSULTANT further agree to consider using mutually acceptable non-binding mediation service in order to resolve any disagreement prior to proceeding to litigation.

9. SITE ACCESS

9.1 Right of Entry - Unless otherwise agreed, CLIENT will furnish right-of-entry on the land for CONSULTANT to make any surveys, borings, explorations, tests or similar field investigations. CONSULTANT will take reasonable precautions to limit damage to the land from use of equipment, but the cost for restoration of any damage that may result from such field investigations is not included in the agreed compensation for CONSULTANT. If restoration of the land is required greater than those included in the scope of work, upon mutual agreement this may be accomplished as a reimbursable additional service at cost plus ten percent.

9.2 Damage to Underground Structures - Reasonable care will be exercised in locating underground structures in the vicinity of proposed subsurface explorations. This may include contact with the local agency coordinating subsurface utility information and/or a review of plans provided by CLIENT or CLIENT representatives for the site to be investigated. CONSULTANT shall be entitled to rely upon any information or plans prepared or made available by others. In the absence of physically confirmed underground structure locations, CLIENT agrees to accept the risk of damage and costs associated with repair and restoration of damage resulting from the exploration work.

10. OIL AND HAZARDOUS MATERIALS

10.1 If, at any time, evidence of the existence or possible existence of asbestos, oil, or other hazardous materials or substances is discovered, outside of any agreed scope of work or greater than those anticipated in any agreed scope of work, CONSULTANT reserves the right to renegotiate the fees for CONSULTANT's services and CONSULTANT's continued involvement in the PROJECT. CONSULTANT will notify CLIENT as soon as practical if evidence of the existence or possible existence of such hazardous materials or substances is discovered.

10.2 The discovery of the existence or possible existence of hazardous materials or substances, outside or greater than any proposed in the agreed scope of work, may make it necessary for CONSULTANT to take accelerated action to protect human health and safety, and/or the environment. CLIENT agrees to compensate CONSULTANT for the cost of any and all measures that in its professional opinion are appropriate to preserve and/or protect the health and safety of the public, the environment, and/or CONSULTANT's personnel. To the full extent permitted by law, CLIENT waives any claims against CONSULTANT and agrees to indemnify, defend and hold harmless CONSULTANT from any and all claims, losses, damages, liability, and costs, including but not limited to cost of defense, arising out of or in any way connected with the existence or possible existence of such hazardous materials substances at the site.

11. SITE INVESTIGATIONS

11.1 In soils, groundwater, soil gas, indoor air, or other investigations, conditions may vary between successive test points and sample intervals and for locations at or between where observations, exploration, and investigations have been made. Because of the variability of conditions and the inherent uncertainties in such evaluations, explorations, or investigations, changed or unanticipated conditions may occur that may affect overall PROJECT costs and/or execution. These variable conditions and related impacts on cost and PROJECT execution are not the responsibility of CONSULTANT.

11.2 CLIENT recognizes that special risks occur whenever engineering or related disciplines are applied to provide

information regarding subsurface conditions. Even an agreed sampling and testing program, implemented with appropriate equipment and personnel with the assistance of a trained professional performing in accordance with the applicable professional standard of care, may provide data or information which differs significantly from that discovered or encountered subsequently. Environmental, geological, and geotechnical conditions, that CONSULTANT may infer to exist between sampling points may differ significantly from those discovered or encountered subsequently. The passage of time also should be considered, and CLIENT recognizes that due to natural occurrences or direct, or indirect human intervention at or near the site, actual conditions may quickly change. CONSULTANT shall not be responsible for the identification of emerging contaminants for which no current regulatory provisions exists nor shall CONSULTANT be held liable for not identifying or discussing these compounds even if those compounds are detected at a later date. CLIENT realizes that these risks cannot be eliminated. The services included in this agreement are those agreed to, or selected, consistent with CLIENT's risk preferences and other considerations including cost and schedule.

11.3 By authorizing CONSULTANT to proceed with the site investigation services, CLIENT confirms that CONSULTANT has not created nor contributed to the presence of any existing hazardous substances or conditions at or near the site. CLIENT recognizes that there is an inherent risk in drilling, borings, punching or driving probes, excavating trenches or implementing other methods of subsurface exploration at or near a site contaminated by hazardous materials. Further, CLIENT recognizes that these are inherent even through the exercise of the Standard of Care. CLIENT accepts the risk and agrees to defend, indemnify, and hold CONSULTANT and each of CONSULTANT's subcontractors, consultants, officers, directors, and employees harmless against and all claims for damages, costs, or expenses direct or consequential, in connection with a release of hazardous substances, except to the extent that such claims, damages, or losses are adjudicated to have resulted from CONSULTANT's gross negligence or willful misconduct in the performance of the services.

12. FEDERAL AND STATE REGULATORY AGENCY AUDITS

12.1 For certain services rendered by CONSULTANT, documents filed with federal and state regulatory agencies may be audited after the date of filing. In the event that CLIENT's PROJECT is selected for an audit, CLIENT agrees to compensate CONSULTANT for time spent preparing for and complying with an agency request for information or interviews in conjunction with such audit. CLIENT will be notified at the time of any such request by an agency, and CONSULTANT will invoice CLIENT based on its standard billing rates in effect at the time of the audit.

13. CLIENT'S RESPONSIBILITIES

13.1 Unless otherwise stated in the Agreement, CLIENT will obtain, arrange, and pay for all notices, permits, and licenses required by local, state, or federal authorities; and CLIENT will make available the land, easements, rights-of-way, and access necessary for CONSULTANT's services or PROJECT implementation.

13.2 CLIENT will examine CONSULTANT's studies, reports, sketches, drawings, specifications, proposals, and other documents and communicate promptly to CONSULTANT in the event of disagreement regarding the contents of any of the foregoing. CLIENT, at its own cost, will obtain advice of an attorney, insurance counselor, accountant, auditor, bond and financial advisors, and other consultants as CLIENT

deems appropriate; and render in writing decisions required by CLIENT in a timely manner.

14. OPINIONS OF COST, FINANCIAL ANALYSES, ECONOMIC FEASIBILITY PROJECTIONS, AND SCHEDULES

14.1 CONSULTANT has no control over cost or price of labor and materials required to implement CLIENT's PROJECT, unknown or latent conditions of existing equipment or structures that may affect operation or maintenance costs, competitive bidding procedures and market conditions, time or quality of performance by operating personnel or third parties, and other economic and operational factors that may materially affect the ultimate PROJECT cost or schedule. Therefore, CONSULTANT makes no warranty, expressed or implied, that CLIENT's actual PROJECT costs, financial aspects, economic feasibility, or schedules will not vary from any opinions, analyses, projections, or estimates which may be provided by CONSULTANT. If CLIENT wishes additional information as to any element of PROJECT cost, feasibility, or schedule, CLIENT at its own cost will employ an independent cost estimator, contractor, or other appropriate advisor.

15. CONSTRUCTION PHASE PROVISIONS

The following provisions shall be applicable should the CONSULTANT be retained to provide Construction Phase Services in connection with the PROJECT:

15.1 CLIENT and Contractor - The presence of CONSULTANT's personnel at a construction site, whether as onsite representatives or otherwise, does not make CONSULTANT or CONSULTANT's personnel in any way responsible for the obligations, duties, and responsibilities of the CLIENT and/or the construction contractors or other entities, and does not relieve the construction contractors or any other entity of their respective obligations, duties, and responsibilities, including, but not limited to, all construction methods, means, techniques, sequences, and procedures necessary for coordinating and completing all portions of the construction work in accordance with the construction contract documents and for providing and/or enforcing all health and safety precautions required for such construction work.

15.2 Contractor Control - CONSULTANT and CONSULTANT's personnel have no authority or obligation to monitor, to inspect, to supervise, or to exercise any control over any construction contractor or other entity or their employees in connection with their work or the health and safety precautions for the construction work and have no duty for inspecting, noting, observing, correcting, or reporting on health or safety deficiencies of the construction contractor(s) or other entity or any other persons at the site except CONSULTANT's own personnel.

15.3 On-site Responsibility - The presence of CONSULTANT's personnel at a construction site is for the purpose of providing to CLIENT an increased degree of confidence that the completed construction work will conform generally to the construction documents and that the design concept as reflected in the construction documents generally has been implemented and preserved by the construction contractor(s). CONSULTANT neither guarantees the performance of the construction contractor(s) nor assumes responsibility for construction contractor's failure to perform work in accordance with the construction documents.

15.4 Payment Recommendations - Recommendations by CONSULTANT to CLIENT for periodic construction progress payments to the construction contractor(s) are based on CONSULTANT's knowledge, information, and belief from selective observation that the work has progressed to the point indicated. Such recommendations do not represent that

continuous or detailed examinations have been made by CONSULTANT to ascertain that the construction contractor(s) have completed the work in exact accordance with the construction documents; that the final work will be acceptable in all respects; that CONSULTANT has made an examination to ascertain how or for what purpose the construction contractor(s) have used the moneys paid; that title to any of the work, materials, or equipment has passed to CLIENT free and clear of liens, claims, security interests, or encumbrances; or that there are no other matters at issue between CLIENT and the construction contractors that affect the amount that should be paid.

15.5 Record Drawings - Record drawings, if required as part of CONSULTANT's agreed scope of work, will be prepared, in part, on the basis of information compiled and furnished by others, and may not always represent the exact location, type of various components, or exact manner in which the PROJECT was finally constructed. CONSULTANT is not responsible for any errors or omissions in the information from others that are incorporated into the record drawings.

16. DESIGN WITHOUT CONSTRUCTION PHASE SERVICES

The following provisions shall be applicable should the CONSULTANT be retained to provide design services but not be retained to provide Construction Phase Services in connection with the PROJECT:

16.1 It is understood and agreed that the CONSULTANT's Scope of Services under this proposal does not include project observation or review of the Contractor's performance or any other construction phase services, and that such services will be provided by the CLIENT or others. The CLIENT assumes all responsibility for interpretation of the Contract Documents and for construction observation, and the CLIENT waives any claims against the CONSULTANT that may be in any way connected thereto.

16.2 In addition, the CLIENT agrees, to the fullest extent permitted by law, to indemnify and hold harmless the CONSULTANT, its officers, directors, employees and subconsultants (collectively, CONSULTANT) against all damages, liabilities or costs, including reasonable attorney's fees and defense costs, arising out of or in any way connected with the performance of such services by other persons or entities and from any and all claims arising from modifications, clarifications, interpretations, adjustments or changes made to the Contract Documents to reflect changed field or other conditions, except for claims arising from the sole negligence or willful misconduct of the CONSULTANT.

17. SCHEDULE

17.1 The CLIENT agrees that the CONSULTANT is not responsible for damages arising directly or indirectly from any delays for causes beyond the CONSULTANT's reasonable control. For purposes of this Agreement, such causes include, but are not limited to, strikes or other labor disputes; severe weather disruptions or other natural disasters, pandemics, or acts of God; fires, riots, war or other emergencies; failure of any government agency to act in timely manner; failure of performance by the CLIENT or the CLIENT's contractors or consultants.

17.2 The CONSULTANT's schedule includes reasonable allowances for review and approval times required by the CLIENT, performance of services by the CLIENT's consultants, and review and approval times required by public authorities having jurisdiction over the PROJECT. This schedule shall be equitably adjusted as the PROJECT progresses, allowing for changes in scope, character or size

of the PROJECT requested by the Client, or for delays or other causes beyond the Consultant's reasonable control.

18. MISCELLANEOUS TERMS

18.1 GOVERNING LAW - The CLIENT and the CONSULTANT agree that this Agreement and any legal actions concerning its validity, interpretation and performance shall be governed by the laws of the jurisdiction where the PROJECT is located, without regard to any conflict of laws provisions, which may apply the laws of other jurisdictions.

18.2 LENDERS' REQUIREMENTS - The CONSULTANT shall not be required to execute any documents subsequent to the signing of this Agreement that in any way might, in the sole judgment of the CONSULTANT, increase the CONSULTANT's contractual or legal obligations or risks, or adversely affect the availability or cost of its professional or general liability insurance.

18.3 CORPORATE PROTECTION - Notwithstanding anything to the contrary contained herein, the CLIENT agrees that as the CLIENT's sole and exclusive remedy, any claim, demand or suit shall be directed and/or asserted only against the CONSULTANT, a Massachusetts corporation, and not against any of the CONSULTANT's individual employees, officers or directors.

18.4 TITLES - The section headings used in this Agreement are intended principally for convenience and shall not be used in interpreting this Agreement or in determining any of the rights or obligations of the parties to this Agreement.

18.5 Upon execution, these terms as incorporated into the accompanying proposal represent the final intent of the parties. Any modification, rescission, or waivers of these terms shall only be effective and binding if agreed to in writing by the parties.