The State of New Hampshire
Department of Environmental Services

Robert R. Scott, Commissioner

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October 15, 2021

His Excellency, Governor Christopher T. Sununu
and The Honorable Council
State House
Concord, NH 03301

REQUESTED ACTION

Authorize the Department of Environmental Services (NHDES) to enter into an Agreement with GZA GeoEnvironmental, Inc., Norwood, MA (Vendor Code #174515-B001), in an amount not to exceed $78,345.51 to provide engineering services for a condition assessment of the measuring flume at the Lakeport Dam in Laconia, NH, effective upon Governor and Council approval through June 30, 2023. 100% Capital (General) Funds.

Funding is available in the account listed below.

	FY 2022
03-44-44-440030-12670000-034-500161	$78,345.51

Dept. Environmental Services, 19-146:1:VI-A Dam Repair & Reconstruction, Capital Projects

EXPLANATION

NHDES operates and maintains a measuring flume just upstream from the Lakeport Dam to monitor flows being released from the dam. The condition of the measuring flume has deteriorated over time, and the resultant variation in the geometry of the flume has compromised the ability to accurately measure the flow from the dam. Flows from the Lakeport Dam impact water levels throughout the Winnipesaukee River Basin, including Winnipesaukee, Opechee, Winnisquam and Silver Lakes; and the flow from the dam needs to be measured accurately to ensure that it meets the requirements of water users with deeded water rights downstream. The measurement flume needs to be fully evaluated and, based on the results of the evaluation, either repaired, replaced or abandoned in favor of alternative methods of accurately measuring the flow from the dam.

NHDES issued a Request For Proposals (RFP) on April 23, 2021 from qualified engineers to provide a condition assessment and recommendations for repair, replacement or abandonment for the measuring flume. NHDES posted the RFP on the Department of Administrative Services and the NHDES websites.

NHDES received proposals from the following interested parties:

- Stephens Associates Consulting Engineers – Brentwood, NH
- Civilworks New England – Dover, NH
- Dubois & King, Inc. – Gilford, NH
- Gomez and Sullivan Engineers, Henniker, NH
- GZA GeoEnvironmental, Inc. – Norwood, MA
- Schnabel Engineering – Clifton Park, NY
- SLR International Corporation – Bedford, NH

The procurement process for this Agreement, further detailed in Attachment A, was conducted in accordance with NH RSA 21-I:22. NHDES established an internal selection committee to review and rank the responses. The responses were ranked with respect to the following criteria:

- professional experience, including specific projects, with the engineering assessment of dams and marine structures of similar size and located in similar aquatic environments,
- professional experience with design, water control, and construction of dams and marine structures,
- professional experience with the assessment, specification and installation of electronic equipment for measuring water and flow parameters in riverine or marine environments,
- quality and content of proposed scope of services, and
- the timeline for completion based on the number of weeks following approval of an Agreement with NHDES.

The selection committee was unanimous in its selection of GZA GeoEnvironmental as the most qualified for providing engineering services for a condition assessment and recommendations for repair or replacement of the measuring flume at the Lakeport Dam. NHDES has negotiated terms and conditions for the services to be provided, billing rates and conditions, and a not-to-exceed cost for this Agreement with GZA GeoEnvironmental.

The total charges to this contract shall not exceed $78,345.51. The agreement has been approved by the Office of the Attorney General as to form, execution, and content.

We respectfully request your approval.

Robert R. Scott, Commissioner

Notice: This agreement and all of its attachments shall become public upon submission to Governor and Executive Council for approval. Any information that is private, confidential or proprietary must be clearly identified to the agency and agreed to in writing prior to signing the contract.

AGREEMENT

The State of New Hampshire and the Contractor hereby mutually agree as follows:

GENERAL PROVISIONS

1. IDENTIFICATION.

1.1 State Agency Name NH Department of Environmental Services		1.2 State Agency Address PO Box 95 – 29 Hazen Drive, Concord, NH 03302-0095	
1.3 Contractor Name GZA GeoEnvironmental, Inc.		1.4 Contractor Address 249 Vanderbilt Avenue, Norwood, MA 02062	
1.5 Contractor Phone Number (781) 278-3818	1.6 Account Number 03-44-442030-1267-034-500161	1.7 Completion Date June 30, 2023	1.8 Price Limitation $78,345.51
1.9 Contracting Officer for State Agency James W. Gallagher, Jr., P.E.		1.10 State Agency Telephone Number (603) 271-1961	
1.11 Contractor Signature Date: 10-6-2021		1.12 Name and Title of Contractor Signatory James P. Guarente, P.E. – Associate Principal	
1.13 State Agency Signature Date: 10-15-21		1.14 Name and Title of State Agency Signatory Robert R. Scott, Commissioner	

1.15 Approval by the N.H. Department of Administration, Division of Personnel *(if applicable)*

By: Director, On:

1.16 Approval by the Attorney General (Form, Substance and Execution) *(if applicable)*

By: On: 10/26/2021

1.17 Approval by the Governor and Executive Council *(if applicable)*

G&C Item number: G&C Meeting Date:

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Date 10-6-2021

2. SERVICES TO BE PERFORMED. The State of New Hampshire, acting through the agency identified in block 1.1 ("State"), engages contractor identified in block 1.3 ("Contractor") to perform, and the Contractor shall perform, the work or sale of goods, or both, identified and more particularly described in the attached EXHIBIT B which is incorporated herein by reference ("Services").

3. EFFECTIVE DATE/COMPLETION OF SERVICES.

3.1 Notwithstanding any provision of this Agreement to the contrary, and subject to the approval of the Governor and Executive Council of the State of New Hampshire, if applicable, this Agreement, and all obligations of the parties hereunder, shall become effective on the date the Governor and Executive Council approve this Agreement as indicated in block 1.17, unless no such approval is required, in which case the Agreement shall become effective on the date the Agreement is signed by the State Agency as shown in block 1.13 ("Effective Date").

3.2 If the Contractor commences the Services prior to the Effective Date, all Services performed by the Contractor prior to the Effective Date shall be performed at the sole risk of the Contractor, and in the event that this Agreement does not become effective, the State shall have no liability to the Contractor, including without limitation, any obligation to pay the Contractor for any costs incurred or Services performed. Contractor must complete all Services by the Completion Date specified in block 1.7.

4. CONDITIONAL NATURE OF AGREEMENT.

Notwithstanding any provision of this Agreement to the contrary, all obligations of the State hereunder, including, without limitation, the continuance of payments hereunder, are contingent upon the availability and continued appropriation of funds affected by any state or federal legislative or executive action that reduces, eliminates or otherwise modifies the appropriation or availability of funding for this Agreement and the Scope for Services provided in EXHIBIT B, in whole or in part. In no event shall the State be liable for any payments hereunder in excess of such available appropriated funds. In the event of a reduction or termination of appropriated funds, the State shall have the right to withhold payment until such funds become available, if ever, and shall have the right to reduce or terminate the Services under this Agreement immediately upon giving the Contractor notice of such reduction or termination. The State shall not be required to transfer funds from any other account or source to the Account identified in block 1.6 in the event funds in that Account are reduced or unavailable.

5. CONTRACT PRICE/PRICE LIMITATION/ PAYMENT.

5.1 The contract price, method of payment, and terms of payment are identified and more particularly described in EXHIBIT C which is incorporated herein by reference.

5.2 The payment by the State of the contract price shall be the only and the complete reimbursement to the Contractor for all expenses, of whatever nature incurred by the Contractor in the performance hereof, and shall be the only and the complete compensation to the Contractor for the Services. The State shall have no liability to the Contractor other than the contract price.

5.3 The State reserves the right to offset from any amounts otherwise payable to the Contractor under this Agreement those liquidated amounts required or permitted by N.H. RSA 80:7 through RSA 80:7-c or any other provision of law.

5.4 Notwithstanding any provision in this Agreement to the contrary, and notwithstanding unexpected circumstances, in no event shall the total of all payments authorized, or actually made hereunder, exceed the Price Limitation set forth in block 1.8.

6. COMPLIANCE BY CONTRACTOR WITH LAWS AND REGULATIONS/ EQUAL EMPLOYMENT OPPORTUNITY.

6.1 In connection with the performance of the Services, the Contractor shall comply with all applicable statutes, laws, regulations, and orders of federal, state, county or municipal authorities which impose any obligation or duty upon the Contractor, including, but not limited to, civil rights and equal employment opportunity laws. In addition, if this Agreement is funded in any part by monies of the United States, the Contractor shall comply with all federal executive orders, rules, regulations and statutes, and with any rules, regulations and guidelines as the State or the United States issue to implement these regulations. The Contractor shall also comply with all applicable intellectual property laws.

6.2 During the term of this Agreement, the Contractor shall not discriminate against employees or applicants for employment because of race, color, religion, creed, age, sex, handicap, sexual orientation, or national origin and will take affirmative action to prevent such discrimination.

6.3. The Contractor agrees to permit the State or United States access to any of the Contractor's books, records and accounts for the purpose of ascertaining compliance with all rules, regulations and orders, and the covenants, terms and conditions of this Agreement.

7. PERSONNEL.

7.1 The Contractor shall at its own expense provide all personnel necessary to perform the Services. The Contractor warrants that all personnel engaged in the Services shall be qualified to perform the Services, and shall be properly licensed and otherwise authorized to do so under all applicable laws.

7.2 Unless otherwise authorized in writing, during the term of this Agreement, and for a period of six (6) months after the Completion Date in block 1.7, the Contractor shall not hire, and shall not permit any subcontractor or other person, firm or corporation with whom it is engaged in a combined effort to perform the Services to hire, any person who is a State employee or official, who is materially involved in the procurement, administration or performance of this Agreement. This provision shall survive termination of this Agreement.

7.3 The Contracting Officer specified in block 1.9, or his or her successor, shall be the State's representative. In the event of any dispute concerning the interpretation of this Agreement, the Contracting Officer's decision shall be final for the State.

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8. EVENT OF DEFAULT/REMEDIES.

8.1 Any one or more of the following acts or omissions of the Contractor shall constitute an event of default hereunder ("Event of Default"):

8.1.1 failure to perform the Services satisfactorily or on schedule;

8.1.2 failure to submit any report required hereunder; and/or

8.1.3 failure to perform any other covenant, term or condition of this Agreement.

8.2 Upon the occurrence of any Event of Default, the State may take any one, or more, or all, of the following actions:

8.2.1 give the Contractor a written notice specifying the Event of Default and requiring it to be remedied within, in the absence of a greater or lesser specification of time, thirty (30) days from the date of the notice; and if the Event of Default is not timely cured, terminate this Agreement, effective two (2) days after giving the Contractor notice of termination;

8.2.2 give the Contractor a written notice specifying the Event of Default and suspending all payments to be made under this Agreement and ordering that the portion of the contract price which would otherwise accrue to the Contractor during the period from the date of such notice until such time as the State determines that the Contractor has cured the Event of Default shall never be paid to the Contractor;

8.2.3 give the Contractor a written notice specifying the Event of Default and set off against any other obligations the State may owe to the Contractor any damages the State suffers by reason of any Event of Default; and/or

8.2.4 give the Contractor a written notice specifying the Event of Default, treat the Agreement as breached, terminate the Agreement and pursue any of its remedies at law or in equity, or both.

8.3. No failure by the State to enforce any provisions hereof after any Event of Default shall be deemed a waiver of its rights with regard to that Event of Default, or any subsequent Event of Default. No express failure to enforce any Event of Default shall be deemed a waiver of the right of the State to enforce each and all of the provisions hereof upon any further or other Event of Default on the part of the Contractor.

9. TERMINATION.

9.1 Notwithstanding paragraph 8, the State may, at its sole discretion, terminate the Agreement for any reason, in whole or in part, by thirty (30) days written notice to the Contractor that the State is exercising its option to terminate the Agreement.

9.2 In the event of an early termination of this Agreement for any reason other than the completion of the Services, the Contractor shall, at the State's discretion, deliver to the Contracting Officer, not later than fifteen (15) days after the date of termination, a report ("Termination Report") describing in detail all Services performed, and the contract price earned, to and including the date of termination. The form, subject matter, content, and number of copies of the Termination Report shall be identical to those of any Final Report described in the attached EXHIBIT B. In addition, at the State's discretion, the Contractor shall, within 15 days of notice of early termination, develop and submit to the State a Transition Plan for services under the Agreement.

10. DATA/ACCESS/CONFIDENTIALITY/ PRESERVATION.

10.1 As used in this Agreement, the word "data" shall mean all information and things developed or obtained during the performance of, or acquired or developed by reason of, this Agreement, including, but not limited to, all studies, reports, files, formulae, surveys, maps, charts, sound recordings, video recordings, pictorial reproductions, drawings, analyses, graphic representations, computer programs, computer printouts, notes, letters, memoranda, papers, and documents, all whether finished or unfinished.

10.2 All data and any property which has been received from the State or purchased with funds provided for that purpose under this Agreement, shall be the property of the State, and shall be returned to the State upon demand or upon termination of this Agreement for any reason.

10.3 Confidentiality of data shall be governed by N.H. RSA chapter 91-A or other existing law. Disclosure of data requires prior written approval of the State.

11. CONTRACTOR'S RELATION TO THE STATE. In the performance of this Agreement the Contractor is in all respects an independent contractor, and is neither an agent nor an employee of the State. Neither the Contractor nor any of its officers, employees, agents or members shall have authority to bind the State or receive any benefits, workers' compensation or other emoluments provided by the State to its employees.

12. ASSIGNMENT/DELEGATION/SUBCONTRACTS.

12.1 The Contractor shall not assign, or otherwise transfer any interest in this Agreement without the prior written notice, which shall be provided to the State at least fifteen (15) days prior to the assignment, and a written consent of the State. For purposes of this paragraph, a Change of Control shall constitute assignment. "Change of Control" means (a) merger, consolidation, or a transaction or series of related transactions in which a third party, together with its affiliates, becomes the direct or indirect owner of fifty percent (50%) or more of the voting shares or similar equity interests, or combined voting power of the Contractor, or (b) the sale of all or substantially all of the assets of the Contractor.

12.2 None of the Services shall be subcontracted by the Contractor without prior written notice and consent of the State. The State is entitled to copies of all subcontracts and assignment agreements and shall not be bound by any provisions contained in a subcontract or an assignment agreement to which it is not a party.

13. INDEMNIFICATION. Unless otherwise exempted by law, the Contractor shall indemnify and hold harmless the State, its officers and employees, from and against any and all claims, liabilities and costs for any personal injury or property damages, patent or copyright infringement, or other claims asserted against the State, its officers or employees, which arise out of (or which may be claimed to arise out of) the acts or omission of the

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Contractor, or subcontractors, including but not limited to the negligence, reckless or intentional conduct. The State shall not be liable for any costs incurred by the Contractor arising under this paragraph 13. Notwithstanding the foregoing, nothing herein contained shall be deemed to constitute a waiver of the sovereign immunity of the State, which immunity is hereby reserved to the State. This covenant in paragraph 13 shall survive the termination of this Agreement.

14. INSURANCE.

14.1 The Contractor shall, at its sole expense, obtain and continuously maintain in force, and shall require any subcontractor or assignee to obtain and maintain in force, the following insurance:

14.1.1 commercial general liability insurance against all claims of bodily injury, death or property damage, in amounts of not less than $1,000,000 per occurrence and $2,000,000 aggregate or excess; and

14.1.2 special cause of loss coverage form covering all property subject to subparagraph 10.2 herein, in an amount not less than 80% of the whole replacement value of the property.

14.2 The policies described in subparagraph 14.1 herein shall be on policy forms and endorsements approved for use in the State of New Hampshire by the N.H. Department of Insurance, and issued by insurers licensed in the State of New Hampshire.

14.3 The Contractor shall furnish to the Contracting Officer identified in block 1.9, or his or her successor, a certificate(s) of insurance for all insurance required under this Agreement. Contractor shall also furnish to the Contracting Officer identified in block 1.9, or his or her successor, certificate(s) of insurance for all renewal(s) of insurance required under this Agreement no later than ten (10) days prior to the expiration date of each insurance policy. The certificate(s) of insurance and any renewals thereof shall be attached and are incorporated herein by reference.

15. WORKERS' COMPENSATION.

15.1 By signing this agreement, the Contractor agrees, certifies and warrants that the Contractor is in compliance with or exempt from, the requirements of N.H. RSA chapter 281-A *("Workers' Compensation")*.

15.2 To the extent the Contractor is subject to the requirements of N.H. RSA chapter 281-A, Contractor shall maintain, and require any subcontractor or assignee to secure and maintain, payment of Workers' Compensation in connection with activities which the person proposes to undertake pursuant to this Agreement. The Contractor shall furnish the Contracting Officer identified in block 1.9, or his or her successor, proof of Workers' Compensation in the manner described in N.H. RSA chapter 281-A and any applicable renewal(s) thereof, which shall be attached and are incorporated herein by reference. The State shall not be responsible for payment of any Workers' Compensation premiums or for any other claim or benefit for Contractor, or any subcontractor or employee of Contractor, which might arise under applicable State of New Hampshire Workers' Compensation laws in connection with the performance of the Services under this Agreement.

16. NOTICE. Any notice by a party hereto to the other party shall be deemed to have been duly delivered or given at the time of mailing by certified mail, postage prepaid, in a United States Post Office addressed to the parties at the addresses given in blocks 1.2 and 1.4, herein.

17. AMENDMENT. This Agreement may be amended, waived or discharged only by an instrument in writing signed by the parties hereto and only after approval of such amendment, waiver or discharge by the Governor and Executive Council of the State of New Hampshire unless no such approval is required under the circumstances pursuant to State law, rule or policy.

18. CHOICE OF LAW AND FORUM. This Agreement shall be governed, interpreted and construed in accordance with the laws of the State of New Hampshire, and is binding upon and inures to the benefit of the parties and their respective successors and assigns. The wording used in this Agreement is the wording chosen by the parties to express their mutual intent, and no rule of construction shall be applied against or in favor of any party. Any actions arising out of this Agreement shall be brought and maintained in New Hampshire Superior Court which shall have exclusive jurisdiction thereof.

19. CONFLICTING TERMS. In the event of a conflict between the terms of this P-37 form (as modified in EXHIBIT A) and/or attachments and amendment thereof, the terms of the P-37 (as modified in EXHIBIT A) shall control.

20. THIRD PARTIES. The parties hereto do not intend to benefit any third parties and this Agreement shall not be construed to confer any such benefit.

21. HEADINGS. The headings throughout the Agreement are for reference purposes only, and the words contained therein shall in no way be held to explain, modify, amplify or aid in the interpretation, construction or meaning of the provisions of this Agreement.

22. SPECIAL PROVISIONS. Additional or modifying provisions set forth in the attached EXHIBIT A are incorporated herein by reference.

23. SEVERABILITY. In the event any of the provisions of this Agreement are held by a court of competent jurisdiction to be contrary to any state or federal law, the remaining provisions of this Agreement will remain in full force and effect.

24. ENTIRE AGREEMENT. This Agreement, which may be executed in a number of counterparts, each of which shall be deemed an original, constitutes the entire agreement and understanding between the parties, and supersedes all prior agreements and understandings with respect to the subject matter hereof.

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EXHIBIT A
SPECIAL PROVISIONS

There are no Special Provisions.

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EXHIBIT B
SERVICES

Under this Agreement, the Contractor (GZA GeoEnvironmental, Inc., hereinafter referred to as GZA) is to provide inspection and engineering services including a conditions assessment of the existing flume and associated flume elements. The primary deliverable under this Contract consists of a report summarizing the inspection data, and associated discussion of possible repair/replacement options and methods to address the problems identified as the best options for repair or replacement required for each element. The work includes inspection services and report preparation as specified below:

1. Project Management/Pre-inspection Services Tasks – Project management and pre-inspection services tasks shall include the following:

   1.1. Project Coordination/Management

   GZA will provide internal and external project management and coordination. Project coordination will include coordination between subcontractors and NHDES. GZA will coordinate, manage, assist, and act as the quality assurance and quality control (QA/QC) manager for the inspection services performed by its team of subcontractors. GZA will subcontract Collins Engineers, Inc. (Collins) for the underwater inspection services, Accusonic, a Brand of ADS, LLC. (Accusonic) for the equipment inspection services, and Civil Design Consultants, Inc. for the site survey services.

   1.2. Project Kick-off Meeting

   GZA will conduct and participate in a video conference call kick-off meeting using a platform such as Zoom, Microsoft Teams, or another acceptable available platform. The purpose of the kickoff meeting will be to review project objectives and milestones, communications, project reporting, security/access requirements, and invoicing procedures.

   1.3. Existing Data Review

   GZA will coordinate with NHDES, local authorities, and the Department of Transportation to review existing files and gather an understanding of available documents, local geology, recent instrumentation data, and other pertinent information prior to performing the visual inspections. These will be reviewed prior to the inspections in order to document the status of previously identified deficiencies more efficiently and/or recommendations made in any previous inspection reports, as well as to identify conditions that may affect safety.

   1.4. Project Specific Health and Safety Plan

   GZA will create a Project Specific Health and Safety Plan (HASP). The GZA HASP will describe the personnel, equipment, anticipated hazards, and procedures that will be utilized by GZA during the field portions of the project. GZA's HASP will include general information about the site, our objectives while in the field, emergency medical facility locations and contact information, a site-specific overview and assessment of potential hazards. The HASP will be submitted to NHDES for review prior to the start of the work.

   Prior to performing their inspection, Collins will prepare a dive operation plan and job safety analysis (JSA), which will be submitted for review and approval prior to dive operations. Accusonic and Civil Design Consultants will prepare and follow their own HASPs.

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2. Inspection Services

GZA will coordinate, manage, assist, and act as the quality assurance and quality control (QA/QC) manager for the underwater inspection performed by Collins Engineers under subcontract with GZA. Accusonic will also be under subcontract with GZA and will inspect/assess the existing electronic instrumentation and hardware. The inspections will include the on-site visual inspection of the measuring flume which includes an underwater inspection of the submerged elements, photographic and video documentation, and technical descriptions of the condition of all measuring flume elements.

The visual inspections will be performed in the company of NHDES personnel. The inspection of the structure will be conducted in accordance with the requirements of the Project Specific Health and Safety Plan and the Dive Safety and Management Plan (Dive Operations Plan).

Task 1 is subdivided into three subtasks, Task 1A: Underwater Inspection, Task 1B: Equipment Inspection, Task 1C: Site Survey, and Task 1D: GZA Site Observations and Above Water Inspection.

2.1. Underwater Inspection

Under subcontract with GZA, Collins will provide a three-person team of professional engineer/divers and equipment necessary to perform a routine level underwater inspection of the earthen embankment, masonry structures, timber facing, and PVC conduits that house the flow meter and transducers on the measuring flume. A visual and tactile inspection will be conducted along the accessible portions of the masonry structures and wood cladding between the left and right flume abutments. The inspection will be extended to the channel banks so as to include the wood-cladding perpendicular to the flow and the earth embankment portion. The overall condition and discrete locations of significant defects will be identified and qualified. Collins will provide measurements of the flume structure and will observe the overall condition of the timber lined floor of the flume noting any significant deterioration and silt/debris accumulation. Collins will complete a visual condition evaluation of the instrumentation, considering overall condition and assessment of its connections. A visual inspection of the earthen embankment will also be completed. The intent of the visual and tactile inspection is to assess the general condition of the structure, assign a condition assessment rating in accordance with ASCE MOP 130 – Waterfront Facilities Inspection and Assessment, provide recommendations for future repairs and maintenance, and develop an engineer's opinion of probable repair cost. During the inspection, Collins will document existing conditions with photographs and audio/video.

The inspection report will include:

1. A summary of the results of the visual inspection. This portion of the report will reference specific photographs taken during the inspection to document key features and provide historical continuity with previous inspections if available. Photographs to document key observed conditions will also be included.
2. A summary of the results of the available instrument condition (underwater portions).
3. Conclusions and recommendations for any short-term or long-term maintenance/remedial activities or investigations, including a recommended timetable for completion.

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An anticipated table of contents for the Underwater Inspection Report has been provided below:

1. GENERAL DESCRIPTION OF STRUCTURE
2. METHOD OF INSPECTION
3. INSPECTION FINDINGS
   a. Overall
   b. Flume Structure
   c. Masonry Walls
   d. Embankment
   e. Instrumentation
4. EVALUATION AND RECOMMENDATIONS

We note that based on information obtained from NHDES during our May 11, 2021 site visit, GZA and our Subcontractors understand that the Owner can close the outfall to the Lakeport Dam and reduce the flow to near zero or otherwise reduce flow so that it is safe for a dive inspection of the flume ad flume area. (i.e. we anticipate the inspection to be completed when there is little to no flow). Collins and GZA will coordinate with the Owner/Client to confirm that all active intakes, outfalls, and pumps will be locked out and tagged out prior to performing the inspection. All diving operations will be completed using surface supplied air diving equipment in accordance with OSHA 29 CFR 1910 Subpart T, Commercial Diving Operations and will be staged from the earthen embankment of the measuring flume.

GZA will provide general oversite and assistance to Collins during this task. GZA will also review the underwater inspection report from a QA/QC standpoint. The inspection report will be included as an attachment to the technical report.

2.2. Equipment Inspection

Accusonic will be retained by GZA to perform an assessment of the existing Accusonic Model 7510 Flowmeter. The assessment will include a review of Accusonic's files for information pertaining to the original installation. Accusonic will also provide an on-site field service technician to test and attempt to repair technical issues that may be observed while on-site for the assessment. The field service technician will specifically perform an inspection on the following:

Flowmeter console:

1. Check input supply voltage to the meter and ensure the front panel display is operational.
2. Check filter jumpers to ensure they are in the correct position.
3. Check all ribbon cable connectors, ensure they are still fully engaged and inspect if there is any damage.
4. Inspect transducer cables to ensure that they are still terminated and labeled. Megger (test for resistance) all cables and record data.
5. Check level input signal(s) and their configurations.
6. Check operation of handheld device.
7. Examine and record all path data: Gain (dB), detection method, V-sound, Gain %, signal/noise ratio, 1st negative values and peak to peak values.
8. Download configuration file from flowmeter.

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With NHDES assistance, Accusonic will download the file and review as a quality assurance check of the existing system. A copy of the configuration file will be included in the report.

The Accusonic technician will also check the following on the transducers:

1. Remove each assembly pole (4 total) from mounting rack/support to visually inspect.
2. Check transducer faces (8 transducers total) and remove any debris/build-up.
3. Check mounting assemblies for damage.
4. Check alignment and re-align transducers if possible.
5. Inspect cables and/or cable housing for damage.

Accusonic will summarize their inspection notes and recommendations into a letter report to GZA, which will be included as an attachment to GZA final technical report.

2.3. Site Survey

A topographic and bathymetric survey will be performed by Civil Design Consultants (CDC) under subcontract with GZA.

GZA and CDC will review the survey limits with NHDES with consideration to operational and safety requirements. The survey will be performed using: 1) UAS (drone) technology, 2) eco-sounding from an unmanned boat, and 3) conventional land surveying techniques.

The aerial drone portion of the survey will be performed using an Autel EVO 2 Pro (or equivalent) equipped with 360-degree obstacle avoidance and a 20-MP RGB camera. The camera will collect a high resolution, geo-referenced image. For underwater portions (bathymetry), a 200 BL Single Beam echosounder (or equivalent) will be used. Prior to conducting this portion of the survey, a flight plan will be prepared to ensure drone operations will take place at a safe distance from vehicular and pedestrian traffic.

Once the survey data is gathered, the aerial imagery will be processed using a Pix4D software which will create a three-dimensional, colorized, densified, georeferenced point cloud and high resolution orthophoto. The corrected point files from both the aerial and bathymetric portions of the survey will be combined to create a three-dimensional draft existing conditions plan. A field crew will return to the project site to set control points throughout the area of interest. Each control point will be located with a Leica GPS RTK unit. The field crew will also perform a field check of the draft existing conditions plan, locate all site features obscured from the aerial or bathymetric survey, and check critical elevations and locations through conventional survey techniques. This information will be reviewed and stamped by a Professional Land Surveyor licensed in the State of New Hampshire.

2.4. GZA Site Observations and Above Water Inspection

GZA will provide a three-person team and the necessary equipment to perform a routine level inspection of the above water flume structures that were previously listed in Task 2.1. Two members of the team will use a boat to assess the structures on the water. The third member of the team will assess the structures from land and provide support for subcontractors as needed. The overall condition and discrete locations of significant defects will be identified and qualified. During the inspection, GZA will document existing conditions with photographs and audio/video (as applicable).

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GZA will provide a summary of the results of the visual inspection in the Task 3 Technical Report. The summary will reference specific photographs taken during the inspection to document key features and observed conditions.

3. Technical Report

GZA will prepare a Technical Report for the flume structure as described herein. At a minimum, the Technical Report will include:

- A summary of available existing records and files, from NHDES and others, for the gauging station, measuring bridge, access walkway, and general site layout.
- Engineering evaluation, including budgetary cost estimates, for at least three options for providing the means to monitor flows just upstream of the dam. One of the options will be the repair/reconstruction of the existing measuring flume, and another option will be removal of the flume.
- Alternative options will include a technical discussion of the final disposition of the existing measuring flume structure(s).
- Technical discussion of the means and methods for water control and conducting the repairs.

GZA will gather, review, and organize the deliverables from the three subconsultants into a summary to be included in the Technical Report. The inspection report will include a summary of the work, findings, observations, photos, and sketches showing approximate defect locations. Accusonic will provide a summary report that will be summarized in the technical report and included as an attachment. CDC's site survey will be in electronic AutoCAD format as well as a PDF stamped by a licensed surveyor registered in New Hampshire.

The above-mentioned items will be incorporated into the Technical Report to be prepared by GZA. An anticipated table of contents has been provided below.

Anticipated Table of Contents:

1. EXECUTIVE SUMMARY
2. PREFACE
3. PROJECT INFORMATION
    a. General
    b. Authority
    c. Purpose of Work
    d. Definitions
    e. Description of Project
    f. General
    g. Location
    h. Owner/Operator
    i. Purpose of Structure
    j. Description of the Structure and Appurtenances
    k. Pertinent Data
4. ENGINEERING DATA
    a. General
    b. Drainage Area

Contractor Initials JRH
Date 10-6-2021

   c. Reservoir Information
   d. Discharges at the Site
   e. General Elevations (feet)
   f. Flume Structure
   g. Design and Construction Records
5. INSPECTION
   a. Inspection Report Summary
   b. Topographic Survey
   c. Bathymetric Survey
   d. Wetland and Resource Area Discussion
6. OPERATIONAL PROCEDURES
   a. Maintenance Procedures
7. ASSESSMENTS, RECOMMENDATIONS, AND REMEDIAL MEASURES
   a. Flume Assessments
   b. Routine Activities
   c. Additional Studies and Analyses
   d. Required Maintenance and Repairs
   e. Remedial Measures
   f. Alternatives Analysis
   g. Flume Removal
   h. Impractical Alternatives
   i. Opinion of Probable Construction Costs
   j. Tables
   k. Figures
   l. Appendices

One draft copy of the report will be submitted electronically to NHDES for review and comment. Upon receiving comments, the final report will be prepared and sealed by a New Hampshire Professional Engineer. The final report will be submitted electronically in PDF format.

Contractor Initials JPJ
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			TASK 2.4		TASK 3: TECHNICAL REPORT TASK 3.1			
			te Observations and Water Inspection		Technical Report			
LABOR	Units			Fee	Qty.	Fee	Man-hours	Fee
GZA Labor Categories								
Engineering Principal	hr.	$64.9	2	$400.03	8	$1,600.12	31	$6,200.47
Senior Technical Specialist	hr.	$59.0	4	$726.88	8	$1,453.76	12	$2,180.64
Project Manager	hr.	$45.0	0	$2,772.00	55	$7,623.00	116	$16,077.60
Project Engineer	hr.	$34.0	0	$4,188.80	60	$6,283.20	132	$13,823.04
Dam Engineering CAD Draftsman	hr.	$29.0		$0.00	40	$3,572.80	40	$3,572.80
Administrative Assistant	hr.	$26.5		$0.00	2	$163.24	8	$852.96
LABOR PRICE TOTAL			$	$8,087.71	173	$20,696.12	339	$42,507.51

REIMBURSABLE EXPENSES	Units			Fee	Qty.	Fee		
Mileage	mi.		0	$275.00		$0.00	500	$275.00
Field Equipment & Materials	l.s.		0	$500.00		$0.00	500	$500.00
CAD Computer Charge	hr.			$0.00		$0.00	0	$0.00
Reproduction	l.s.		0	$50.00	50	$50.00	300	$300.00
Cadd Bond Paper	sq. ft.			$0.00		$0.00	0	$0.00
RE Per Diem Expenses	day			$0.00		$0.00	0	$0.00
SUBCONTRACTOR COSTS	Units			Fee	Qty.	Fee		
Collins Engineering, Inc.	l.s.			$0.00		$0.00	12,500	$12,500.00
Accousonic	l.s.			$0.00		$0.00	6,205	$6,205.00
Civil Design Consultants, Inc.	l.s.			$0.00		$0.00	12,800	$12,800.00
				$0.00		$0.00		
				$0.00		$0.00		
				$0.00		$0.00		
10% Mark-Up on Qualified Expenses				$82.50		$5.00		$3,258.00
EXPENSES TOTAL				$825.00		$50.00		$32,580.00
EXPENSES TOTAL (with mark-up)				$907.50		$55.00		$35,838.00
TOTAL				$8,995.21		$20,751.12		$78,345.51

Project Management Services	$12,589.22
Inspection Services	$45,005.17
Technical Report	$20,751.12

Contractor Initials GPJ

Date 10-6-2021

TABLE C-1

Unit rate is established at individual hourly rate multiplied by a factor of 1.75 to account for overhead and fridge benefits plus and additional 12% profit multiplier.

LABOR	Units		Unit Rate	Man Hours	Fee
GZA Labor Categories					
Dam Engineering Principal	hr.	$64.94	$200.02	31	$6,200.47
Senior Technical Specialist	hr.	$59.00	$181.72	12	$2,180.64
Project Manager	hr.	$45.00	$138.60	116	$16,077.60
Project Engineer	hr.	$34.00	$104.72	132	$13,823.04
Dam Engineering CAD Draftsman	hr.	$29.00	$89.32	40	$3,572.80
Administrative Assistant	hr.	$26.50	$81.62	8	$652.96
				Total Labor	**$42,507.51**

REIMBURSABLE EXPENSES	Units	Unit Rate		
Mileage	mi.	$0.55	500	$275.00
Field Equipment & Materials	l.s.	$1.00	500	$500.00
CAD Computer Charge	hr.	$12.00	0	$0.00
Reproduction	l.s.	$1.00	300	$300.00
Cadd Bond Paper	sq. ft.	$0.15	0	$0.00
RE Per Diem Expenses	day	$146.00	0	$0.00
			Total Reimbursible Expenses	$1,075.00

SUBCONTRACTOR COSTS			
Collins Engineering, Inc.	l.s.		$12,500.00
Accousonic	l.s.		$6,205.00
Civil Design Consultants, Inc.	l.s.		$12,800.00
		Total SubContractor Costs	$31,505.00
10% Mark-Up on Qualified Expenses		10%	$3,258.00
		PROJECT TOTAL	**$78,345.51**

Contractor Initials GPS
Date 10-6-2021

EXHIBIT C
CONTRACT PRICE AND METHOD OF PAYMENT

All services shall be performed to the satisfaction of DES before payment is made. All payments shall be made upon receipt and approval of stated outputs and upon receipt of an associated invoice. The billing is to be done on a monthly basis as a percentage completion of tasks as per the work program detailed in Exhibit B. Table B-1 in Exhibit B provides a detailed breakdown of costs for the project.

A detailed itemization of the cost by task and personnel category is contained in the attached Table C-1. Billing will be based on a time and materials basis. Hourly labor rates (i.e. fully loaded) are based on direct labor rates with an effective multiplier (DS + OH + fee) of 3.08.

The total cost of the contract shall not to exceed $78,345.51. DES agrees to pay the invoices as submitted by the Contractor. Invoices are subject to the approval of the Contract Officer before payment is processed.

Contractor Initials JRJ
Date 10-6-2021

State of New Hampshire
Department of State

CERTIFICATE

I, William M. Gardner, Secretary of State of the State of New Hampshire, do hereby certify that GZA GEOENVIRONMENTAL, INC. is a Massachusetts Profit Corporation registered to transact business in New Hampshire on October 28, 1981. I further certify that all fees and documents required by the Secretary of State's office have been received and is in good standing as far as this office is concerned.

Business ID: **9876**

Certificate Number: **0005367127**

IN TESTIMONY WHEREOF,
I hereto set my hand and cause to be affixed
the Seal of the State of New Hampshire,
this 13th day of May A.D. 2021.

William M. Gardner
Secretary of State

GZA GeoEnvironmental, Inc.

SECRETARY'S CERTIFICATE

I, Bradford W. Roberts, Secretary of GZA GeoEnvironmental, Inc. (the "Company"), herby certify

that James P. Guarente is an Associate Principal and Vice President of the Company and, pursuant to a vote adopted by the unanimous written consent of the Board of Directors of the Company on July 14, 2021 , he is authorized to execute and deliver contracts, bonds, and other documents related to the performance of professional services for the Engineering Technical Services for Condition and Repair Technical Report for the Measuring Flume at the Lakeport Dam Project for the New Hampshire Department of Environmental Services in the name and on behalf of the Company, and to affix the Corporate Seal thereto, if and as required.

I further certify that the aforesaid unanimous written consent and the authority vested thereby

have not been amended or revoked and are still in full force and effect.

WITNESS my hand and seal of the Corporation this 5th day of October 2021.

(S

Bradford W. Roberts, Secretary

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 10/5/2021

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Risk Strategies Company
160 Federal St. 4th Floor
Boston, MA 02110

CONTACT NAME:
PHONE (A/C, No, Ext): 617-330-5700 FAX (A/C, No): 617-439-3752
E-MAIL ADDRESS:

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A: Great Divide Insurance Company/ Nautilus Ins Group	25224
INSURER B: The First Liberty Insurance Corp	33588
INSURER C:	
INSURER D: Commerce & Industry Insurance Company	19410
INSURER E: Liberty Mutual Fire Insurance Company	23035
INSURER F:	

INSURED
GZA GeoEnvironmental, Inc.
249 Vanderbilt Avenue (Corporate)
Norwood MA 02062

COVERAGES **CERTIFICATE NUMBER:** 64404869 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	✓ COMMERCIAL GENERAL LIABILITY			GLP2007957-18	2/28/2021	2/28/2022	EACH OCCURRENCE	$ 1,000,000
	☐ CLAIMS-MADE ✓ OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 500,000
	✓ Deductible - $25,000						MED EXP (Any one person)	$ 10,000
	☐ per occurence BI/PD						PERSONAL & ADV INJURY	$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 2,000,000
	✓ POLICY ☐ PRO-JECT ☐ LOC						PRODUCTS - COMP/OP AGG	$ 2,000,000
	☐ OTHER:							$
B	AUTOMOBILE LIABILITY			AS6-Z11-261208-011	2/28/2021	2/28/2022	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	☐ ANY AUTO						BODILY INJURY (Per person)	$
	✓ OWNED AUTOS ONLY ☐ SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	✓ HIRED AUTOS ONLY ✓ NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
								$
	☐ UMBRELLA LIAB ☐ OCCUR						EACH OCCURRENCE	$
	☐ EXCESS LIAB ☐ CLAIMS-MADE						AGGREGATE	$
	☐ DED ☐ RETENTION $							$
E	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY			WC2-Z11-261208-041	2/28/2021	2/28/2022	✓ PER STATUTE ☐ OTH-ER	
	ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N N (Mandatory in NH)	N/A					E.L. EACH ACCIDENT	$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000
D	Contractors Pollution Liability			CPO 11710520	2/28/2021	2/28/2022	Each Claim/ $1,000,000 Aggregate $1,000,000	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Re: Job #03.P000069.21, Engineering Technical Services fo Condition and Repair Technical Report for the Measuring Flume at the Lakeport Dam, Engineering Services, Laconia, NH.

CERTIFICATE HOLDER

03.P000069.21

NH Department of Environmental Services
Attn: James Gallagher
29 Hazen Drive
Concord NH 03302

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

RSC Insurance Brokerage

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Attachment A
Procurement Process

The procurement process for this contract was conducted as follows:

The New Hampshire Department of Environmental Services (NHDES) operates and maintains a measuring flume just upstream from the Lakeport Dam to monitor flows being released from the dam. NHDES issued a Request For Proposals (RFP) on April 23, 2021 from qualified engineers to provide a condition assessment and recommendations for repair, replacement or abandonment in a technical report for the measuring flume. NHDES posted the RFP on the Department of Administrative Services and the NHDES websites. Attendance at an on-site meeting was a prerequisite for submitting a proposal, and NHDES held the meeting on May 11, 2021.

NHDES received proposals from the following interested parties:

- Stephens Associates Consulting Engineers – Brentwood, NH
- Civilworks New England – Dover, NH
- Dubois & King, Inc. – Gilford, NH
- Gomez and Sullivan Engineers, Henniker, NH
- GZA GeoEnvironmental, Inc. – Norwood, MA
- Schnabel Engineering – Clifton Park, NY
- SLR International Corporation – Bedford, NH

The procurement process for this Agreement, was conducted in accordance with NH RSA 21-I:22. NHDES established an internal selection committee to review and rank the responses to the RFP. The committee consisted of James W. Gallagher, Jr., P.E., the Chief Engineer for the Dam Bureau with more than 45 years of experience with dam design, contracting, construction and safety; Daniel Mattaini, P.E., Administrator of the Operations & Maintenance Section of the Dam Bureau who has over 30 years of experience as an engineer for hydrologic and dam related projects for the U.S. Geological Survey and the Dam Bureau; and Kent R. Finemore, P.E., Assistant Chief Engineer of the Dam Bureau, who has over 25 years of experience as an engineer for civil design and construction.

Members of the selection committee reviewed the proposals, and ranked the seven firms. Rankings were based on:

- Professional experience, including specific projects, with the engineering assessment of dams and marine structures of similar size and located in similar aquatic environments
- Professional experience with design, water control, and construction of dams and marine structures
- Professional experience with the assessment, specification and installation of electronic equipment for measuring water and flow parameters in riverine or marine environments
- Quality and content of proposed scope of services
- Timeline for completion based on the number of weeks following approval of an Agreement with NHDES

The firm ranked first by the majority of the members of the Selection Committee would be the selected firm with whom NHDES would negotiate a final scope of work and price.

A scoring summary is provided in Table AT-1. As shown in the summary, all three members of the Selection Committee chose GZA GeoEnvironmental, Inc., as the most qualified and they were selected. Following the selection, NHDES commenced negotiations with GZA GeoEnvironmental, Inc., to establish a fee schedule for the Statement of Work as approved by NHDES. The negotiated fees are fair and reasonable for the approved Statement of Work.

Table AT-1
Firm Rankings

Consultant Firm	Reviewer 1	Reviewer 2	Reviewer 3	Final Rank
Stephens Associates Consulting Engineers	4	5	4	6
Civilworks New England	2	4	4	4
Dubois & King, Inc.	3	2	2	2
Gomez and Sullivan Engineers	4	3	5	5
GZA GeoEnvironmental, Inc.	1	1	1	1
Schnabel Engineering	5	4	5	7
SLR International Corporation	3	3	3	3