LAKE JUNALUSKA DAM REPAIR PROJECT

Request for Proposals — Dam Repair & Rehabilitation

RFP

Lake Junaluska Assemblym Inc

RFP Number	RFP-2025-LJA 001
Issue Date	5/8/2026
Proposal Due Date	6/22/2026 — 2:00 PM EST
Project Location	Lake Junaluska Assembly, Inc, Lake Junaluska, NC 28745
Owner / Issuing Authority	Town of Lake Junaluska, NC
Project Manager	Junior Woody, 828-452-5911 Email: cwoody@lakejunaluska.com
Estimated Engineering Budget	Not to exceed $190,000.00
Anticipated Contract Type	Lump Sum Agreement
Site Visit	Mandatory Must be scheduled with the project manager. Meet at Dam Access Gate

1. Introduction & Project Background

The Lake Junaluska Assembly, Inc., a Not-for Profit Corporation Located at Lake Junaluska, North Carolina (hereinafter "Owner"), invites qualified civil engineering firms to submit proposals for professional engineering services for the repair of the Lake Junaluska Dam. This RFP solicits full-service proposals covering investigation, design, permitting, and preparation of construction documents.

Lake Junaluska Dam is a composite structure located at Lake Junaluska, NC that impounds approximately 200 acres of water. The dam was originally constructed in 1913 and consists of a 300-foot-long embankment section and a 550-foot-long concrete slab-and-buttress section, which includes a 220-foot-wide ogee spillway. Atop both portions of the dam is a roadway, as shown in Figure 1. The concrete structure has undergone only major improvements in 1977 and 2004. The work scope described relates to the concrete portions of the 550-foot-wide dam, which is buttress and slab construction with a 220-foot-wide ogee spillway. The 1977 work installed a new dam face upstream of the 1977 face, shown, in Figure 2, and the 2004 work encased the buttresses except those under the spillway. The bottom outlet valves (or gates) are original to the 1913 construction.

Concrete dam table of information. Figure 3 shows the numbering in a schematic from below the dam.

Item	Description	Comments
Right abutment		
Slabs 1 to 6	Slabs, Figure 5-7	Slab 3 contains a disused and broken valve to be removed and blanked. (Figure 7) An opening in the original slab was made during the 1977 refacing.
Slabs 7-19	Under spillway	No action required
Slab 20	Location of bottom outlet valves	
Slab 21	Slab	
Slab 22-23	Disused power house	
Slab 23-24		
Slab 25-34-	Slab	An opening in the original slab was made during the 1977 refacing.
Left abutment		

North Carolina Dam safety inspections have identified several areas requiring immediate attention, as outlined in a recent inspection report dated December 2025.

This project includes multiple deliverable phases, each requiring engineered drawings and technical specifications sufficient for permit submission and competitive bidding by licensed contractors.

2. Project Scope of Work

2.1 Overview

The firm in this section refers to the firm submitting a proposal. The priority ordering is in order of presentation except that item 2.1.5 is the last item of work.

2.1.1. Downstream Face of Dam Resurfacing

The Firm shall prepare an engineering evaluation and design package for repair and resurfacing of the exposed downstream face of the 1913 dam. The work shall address conditions identified during the most recent inspection, including items noted in the Dam Safety Office’s Notice of Deficiency. These conditions include, but are not limited to, small areas of exposed reinforcing steel, the valve in Bay 3, and two penetrations through the original dam face that were introduced during the 1977 construction. The current condition is shown if Figures 5-8 as examples. The Firm shall evaluate whether additional mitigation measures are required to restore structural integrity and public confidence in the facility.

The Firm shall assess minor seepage observed at several locations along the dam face, including evaluation of the pressure-relief seepage ports. The Firm shall also evaluate the probable cause or causes of concrete spalling prior to finalizing repair recommendations, to the extent necessary to support selection of a durable and effective resurfacing system.

The Firm shall prepare a complete engineering package, including drawings, technical specifications, and other supporting documentation, suitable for permitting and issuance as a contractor bid package. The design documents shall identify each slab requiring repair and shall clearly define the scope of work required for each slab by number.

The Firm shall establish repair criteria for removal of spalled, delaminated, or otherwise unsound material. Anticipated removal methods may include hand tools, pneumatic tools, high-pressure water blasting in excess of 10,000 psi, and hydro-scaling, as appropriate. The design documents shall define criteria for material removal, reinforcing steel preparation, descaling, substrate acceptance, inspection requirements, and acceptance procedures to be satisfied prior to resurfacing.

The Firm shall specify the resurfacing system and all related material and installation requirements. Resurfacing is anticipated to include a pneumatically applied concrete mixture, commonly referred to as Gunite or dry-mix shotcrete. The Firm shall define the required material properties, mix composition, surface preparation requirements, placement procedures, curing requirements, and applicable quality standards necessary to achieve a durable repair. This task shall include, at a minimum, slabs 1 through 6, slab 21, and slabs 25 through 34. (reference Figure 3 for numbering system)

2.1.2. Bottom Outlet Valve Renewal

The Firm shall evaluate and develop design recommendations for renewal or replacement of the three existing bottom outlet valves, which are original 1913 slide-gate installations with operating control rods passing through the dam face. The evaluation shall address significant leakage around one or more gates and leakage through the control-rod penetrations. The Firm shall also address the absence of trash racks on the existing installations and the associated risk that submerged logs or other debris may impair valve operation. The Firm shall consider the operational requirement that these valves are used for cold-water release during summer months in accordance with permit requirements.

The Firm shall review available underwater inspection information, including diver observations, and shall develop a recommended concept for installation of new gates and control mechanisms at or over the approximately 10-foot by 10-foot opening in the newer dam face, as depicted in Figure 8. The recommended design shall provide improved sealing, an appropriately sized valve or valves for summer water release, and sufficient discharge capacity for lake level lowering and dam operations.

The Firm shall design or specify a trash rack system to protect the gates from blockage or impaired closure caused by debris accumulation. The design shall identify the proposed materials of construction and configuration. Materials shall be selected to provide a service life of not less than 75 years, taking into account corrosion resistance, structural demands, and mechanical durability. Bar spacing should be evaluated for suitability and is anticipated to be less than 6 inches, subject to final engineering determination. The design shall provide adequate structural rigidity and shall include provisions for underwater inspection and maintenance by divers, as appropriate.

The Firm shall address the disposition, removal, abandonment, or continued use of the existing gates, as applicable to the recommended design. The Firm shall also prepare a construction planning outline addressing crane location, critical lift sequencing, anticipated load weights, lifting radii, and rigging positions.

The Firm shall evaluate the number and size of sluice gate valves required. The design shall include at least two valves probably three unless a different configuration is justified by engineering analysis, to ensure capacity and consequences of component failure. The Firm shall perform an analysis to determine whether the preferred arrangement should consist of two larger valves for lake level lowering and one separate valve for summer cold-water discharge, or another configuration that best satisfies operational and regulatory requirements.

2.1.3. Survey of Critical Dam Dimensions

The Firm shall perform or obtain a survey of critical dam dimensions, including the location and elevation of each section of the spillway crest. The purpose of the survey shall be to identify differences in the elevations of the blank slabs and to support a more accurate calculation of spillway capacity.

2.1.4. Addressing Seepage at the Right End of the Dam

The Firm shall evaluate seepage observed downstream of the right end of the dam, as identified in the Notice of Deficiency and illustrated in Figure 9. As an initial step, the Firm shall confer with dam safety inspection officials to confirm that the Owner's and the Firm's understanding of the cited deficiency is complete and accurate. The Firm shall prepare a sketch in PowerPoint format for use in correspondence with the applicable dam safety officials to confirm the interpretation of the observed condition.

The Firm shall investigate the seepage condition to determine, to the extent practicable, the probable source of the seepage. This investigation shall consider whether the seepage originates from water moving underground from the buttress or another structural source, or whether the seepage is passing through the underlying rock formation.

Based on the findings of the investigation, the Firm shall develop an engineering plan and technical specifications for intercepting the drainage and routing it to a lower elevation in a manner that allows continued observation and monitoring of the flow. The Firm shall identify permitting requirements associated with the proposed work and shall prepare materials necessary to support permit application.

2.1.5. Review of the Operations and Maintenance Plan

The Firm shall review the current Operations and Maintenance Manual, which was prepared in late 2024 and is approximately 50 pages in length. The manual was developed using locally available knowledge and the best understanding of applicable requirements at the time of preparation and has since undergone internal review by the Owner. The Firm shall perform an independent professional review of the manual and shall provide recommendations for improvement.

The review shall address the overall organization, technical adequacy, clarity, completeness, and consistency of the document. The Firm shall identify recommended revisions necessary to improve the manual and to support ongoing use by the Owner. The Firm shall recognize that the manual may require future updates as facility conditions, operations, or regulatory requirements change.

2.1.6 Cost estimates for each of numbered items above

For each project listed above, the Firm shall prepare an opinion of probable construction cost based on the recommended scope of work, anticipated construction methods, and current available pricing information. The cost estimate shall be developed at a level of detail appropriate to the phase of design and shall identify major cost components, assumptions, allowances, and contingencies. In addition, for each project, the Firm shall provide a separate estimate of Phase D-6 engineering costs for final design, preparation of contract documents, permitting support, bidding support, and engineering services during construction, as applicable to the specific project. Each estimate shall be presented in a clear format suitable for the Owner's budgeting, funding, and project planning purposes.

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The selected engineering firm shall provide complete professional services for all phases of dam repair including but not limited to:

- Geotechnical investigation and subsurface assessment, related to item 3
- Preparation of 30%, 60%, 90%, and Final (100%) Construction Documents
- Technical specifications conforming to CSI MasterFormat
- Regulatory permitting support (NCDEQ Dam Safety, USACE Section 404/401, etc.)

The following are NOT included in the proposal

- Construction administration, inspection, and materials testing oversight
- As-built documentation and record drawings

2.2 Project Deliverables

The project is structured in the following sequential deliverable phases. Item D-6 is not included in this PROPOSL. Each phase must be completed and approved by the Owner before proceeding to the next:

The proposal should include a phase timeline using the description below for each item outlined in section 2.1. All activities must be complete by 3/6/2027.

#	Deliverable	Description	Required Submittals
D-1	**Phase 1: Site Investigation & Condition Assessment**	Geotechnical borings, underwater inspection, seepage/instrumentation review, dam safety inspection report	Investigation Report, Boring Logs, Survey Data, Photo Documentation
D-2	**Phase 2: Preliminary Engineering (30% Design)**	Identify repair alternatives, recommend preferred approach, preliminary cost estimate, hydrology/hydraulics update	30% Dwgs (Plan/Profile/Sections), Alternatives Analysis, Prelim. Cost Estimate
D-3	**Phase 3: Design Development (60% Design)**	Advance preferred alternative, structural calcs, geotechnical recommendations incorporated, agency coordination	60% Construction Drawings, Outline Specs, Updated Cost Estimate, Agency Comment Responses
D-4	**Phase 4: Construction Documents (90% Design)**	Near-final drawings and full specifications, permitting package, QA/QC review	90% Dwgs & Full Specs, prepare Permit Applications, QA/QC Review Memo
D-5	**Phase 5: Final Bid Documents (100% Design)**	Finalized bid-ready construction documents, and permit submission.	Final Stamped Dwgs, Technical Specs, Bid Form, Permit submission
D-6	**NOT in Proposal Phase 6: Construction Administration**	Bid phase services, shop drawing review, RFI responses, site visits, pay app review, punchlist	CA Reports, RFI Log, Submittal Log, Field Observation Reports, As-Builts

2.3 Drawing Requirements

All engineering drawings shall be prepared in AutoCAD Civil 3D (or approved equivalent) and submitted in both .DWG and .PDF formats. At minimum, the following drawing sheets are expected in the final construction document set:

- Cover Sheet — Project title block, location map, vicinity map, index of drawings, general notes
- Existing Conditions / Demolition Plan
- Overall Site Plan (plan view of dam, impoundment, spillway, access)
- Seepage/Drainage Improvements Details
- Structural Details (reinforcing, connections, anchor bolts)
- Electrical / Mechanical (if applicable — gate actuators, instrumentation)

All drawings shall carry a licensed NC Professional Engineer's stamp and signature. The title block shall include the owner's name, the project name, the drawing number, the revision history, the scale, and the date.

4.4 Technical Approach

Provide a brief narrative (3–5 pages) describing the firm's technical approach to the following:

- Dam condition assessment and investigation methodology
- Design approach for embankment and spillway repair
- Permitting strategy (NCDEQ Dam Safety, USACE, local)
- Quality control process for engineering documents

4.5 Schedule

Provide a preliminary schedule showing anticipated duration for each deliverable phase from Notice to Proceed to submittal of Final Construction Documents.

4.6 Insurance & Licensing Confirmation

- Confirm the firm holds active NC Certificate of Authorization to practice engineering
- Confirm the firm can provide Professional Liability (E&O) coverage of not less than $1,000,000
- Confirm the firm can provide General Liability coverage of not less than $1,000,000

3. Mandatory Site Visit

A mandatory pre-proposal site visit will be held on [Date] at [Time]. All prospective proposers must attend. Meeting point: [Dam Access Gate / Parking Area Address]. The site visit will include access to the dam crest, upstream and downstream slopes, spillway, and outlet works. Background documents (prior inspection reports, as-built drawings where available) will be distributed at the site visit.

Proposers who do not attend the mandatory site visit will be disqualified from submitting a proposal. Questions arising from the site visit must be submitted in writing to Junior Woody awoody@lakejunaluska.com no later than 6/8/2026.

4. Proposal Requirements

4.1 Technical Proposal

- Cover letter (1 page max) — firm name, principal contact, license number(s)
- RFQ--Firm qualifications — minimum 5 years dam engineering experience, list of similar projects
- RFQ--Project team — resumes for key personnel, identify PE of record
- Technical approach — narrative describing approach to each deliverable phase
- Project schedule — Gantt chart or equivalent showing milestones for each deliverable
- References — minimum 3 dam or hydraulic structure projects of similar scope

4.2 Fee Proposal

Fee proposals shall be submitted in a separate sealed envelope (or separate PDF) and shall include:

- Lump sum fee by deliverable phase (D-1 through D-5)
- Hourly rate schedule for out-of-scope additional services
- Reimbursable expense allowance (subconsultants, travel, printing, borings)
- Total not-to-exceed contract value of $198,000.00

5. Evaluation Criteria

Proposals will be evaluated using the following weighted criteria:

Evaluation Criterion	Weight
Firm Qualifications & Relevant Dam Experience	25%
Key Personnel Experience (PE of Record, Project Manager)	20%
Technical Approach & Understanding of Scope	25%
Proposed Project Schedule	10%
Fee Proposal	20%
TOTAL	**100%**

6. Submittal Instructions

Submission Deadline: 6/22/2026, 2:00 PM Eastern Standard Time

Delivery Method: Electronic PDF submission to Junior Woody, 828-452-5911 Email: cwoody@lakejunaluska.co//m WITH a follow-up phone call or reply email

Late proposals will not be accepted. The Owner reserves the right to reject any or all proposals, to waive informalities, and to accept the proposal deemed most advantageous to the public interest.

7. Terms & Conditions

- This RFP does not obligate the Owner to award a contract.
- All proposal materials become the property of the Owner upon submission.
- Proposers shall bear all costs of proposal preparation.
- The selected firm must maintain Professional Liability, General Liability, and Workers' Compensation insurance per Owner requirements.
- The contract will be based on the Owner's standard Professional Services Agreement.
- The project is subject to NC General Statutes Chapter 143, Article 3D (Engineering Services Procurement).

Questions & Clarifications Junior Woody, 828-452-5911 Email: by 6/8/2026

Addenda, if issued, will be distributed to all registered plan holders and posted at [website/location].