

October 12, 2026

Subject: Invitation to Bid 27043-B: Lake McIntosh Dam Structural Repairs

Gentlemen/Ladies:

Fayette County, Georgia is seeking bids from qualified vendors for structural concrete repairs to the Lake McIntosh Dam spillway structure. You are invited to submit a bid in accordance with the information contained herein.

A mandatory pre-bid conference will be held on **Thursday, November 5, 2026, at 10:00 a.m. at 3501 TDK Boulevard in Peachtree City, Georgia** to provide an opportunity for you to become more familiar with the project, and to ask questions. Companies that attend will be invited to submit quotes for this project.

Questions concerning this Invitation to Bid should be addressed to Colette Cobb, Contract Administrator, in writing via email to ccobb@fayettecountyga.gov. **Questions will be accepted until 3:00 p.m., Monday, November 9, 2026.**

Purchasing Department office hours are Monday through Friday 8:00 a.m. to 5:00 p.m. The office telephone number is (770) 305-5420.

Please return your response to the following address:

Fayette County Purchasing Department
140 Stonewall Avenue West, Suite 204
Fayetteville, Georgia 30214

Bid Number: 27043-B
Bid Name: *Lake McIntosh Dam Structural Repairs*

Your envelope *must* be sealed and should show your company's name and address.

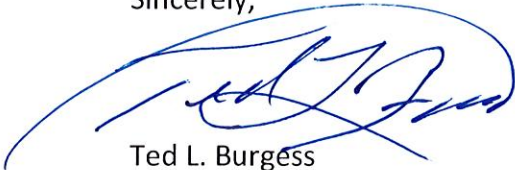
Bids will be received at the above address until 3:00 p.m., Thursday, November 19, 2026, in the Purchasing Department, Suite 204. Bids will be opened at that time.

Bids must be signed to be considered. Late bids cannot be considered. Faxed bids or emailed bids cannot be considered.

If you download this Invitation to Bid from the County's web site, it will be your responsibility to check the web site for any addenda that might be issued for this solicitation. The County cannot not be responsible for a vendor not receiving information provided in any addendum.

Thank you for participating in the solicitation process.

Sincerely,

A handwritten signature in blue ink, appearing to read "Ted L. Burgess", with a large, sweeping flourish extending from the left side.

Ted L. Burgess
Chief Procurement Officer

GENERAL TERMS AND CONDITIONS
ITB 27043-B: Lake McIntosh Dam Structural Repairs

1. **Definitions:**
 - a. **Bidder:** A company or individual who submits a bid in response to this Invitation to Bid.
 - b. **Successful Bidder:** The company or individual that is awarded a contract.
 - c. **Contractor:** The Successful Bidder, upon execution of the contract.
 - d. **County:** Fayette County, Georgia.
2. **Bid is Offer to Contract:** Each bid constitutes an offer to become legally bound to a contract with the County, incorporating the Invitation to Bid and the bidder's bid. The binding offer includes compliance with all terms, conditions, special conditions, specifications, and requirements stated in the Invitation to Bid, except to the extent that a bidder takes written exception to such provisions, and the County agrees to the exception. All such terms, conditions, special conditions, specifications, and requirements will form the basis of the contract. The bidder should take care to answer all questions and provide all requested information, and to note any exceptions in the bid submission. Failure to observe any of the instructions or conditions in this Invitation to Bid may result in rejection of the bid.
3. **Binding Offer:** To allow sufficient time for a contract to be awarded, each bid shall constitute a firm offer that is binding for ninety (90) days from the date of the bid opening to the date of award.
4. **Bidder's Questions:** As appropriate, the County will post answers to questions and/or other information concerning the Invitation to Bid in the form of an addendum on the County's website at www.fayettecountyga.gov. It is the responsibility of the prospective bidder to check the website for any addenda issued for this Invitation to Bid.
5. **References:** Include with your bid a list of three (3) jobs that your company has done that are of the same or similar nature to the work described in this Invitation to Bid on the form provided. Include all information as requested on the form.
6. **Bid Submission:** Submit your bid, along with any addenda issued by the County, in a *sealed* opaque envelope. Mail or deliver one (1) original bid, signed in ink by a company official authorized to make a legal and binding offer, and one (1) copy on a flash drive, to:

Fayette County Government
Purchasing Department
140 Stonewall Avenue West, Suite 204
Fayetteville, GA 30214

Bid Number: 27043-B

Bid Name: *Lake McIntosh Dam Structural Repairs*

Also show your company name on the envelope. You may submit sealed bids in person, by U.S. mail, or by a commercial carrier. Do not submit bids by facsimile, e-mail, or other electronic means. Once submitted, all bids become the property of Fayette County.

7. **Bid Preparation Costs:** The bidder shall bear all costs associated with preparing the bid.
8. **Late Bids:** Bids not received in the Purchasing Department by the time and date of the scheduled bid opening will not be considered.
9. **More than One Bid:** Do not submit alternate bids or options, unless requested or authorized by the County in the Invitation to Bid. If a responder submits more than one bid without being requested or authorized to do so, the County may disqualify the bids from that responder, at the County's option.
10. **Bid Corrections or Withdrawals:** The bidder may correct a mistake, or withdraw a bid, before the bid opening by sending written notification to the Director of Purchasing. Bids may be withdrawn after the bid opening only with written authorization from the Director of Purchasing.
11. **Defects or Irregularities in Bids:** The County reserves the right to waive any defect or irregularity in any bid received. In case of a discrepancy between unit prices and extended prices, the unit price will govern unless the facts or other considerations indicate another basis for correction of the discrepancy.
12. **Brand Name:** If items in this Invitation to Bid have been identified, described, or referenced by a brand name or trade name description, such identification is intended to be descriptive, but not restrictive and is to indicate the quality and characteristics of products that may be offered. Alternative products may be considered for award if clearly identified in the bid. Items offered must meet required specifications and must be of a quality which will adequately serve the use and purpose for which intended.
13. **Bidder Substitutions:** Bidders offering substitutions or deviations from specifications stated in the Invitation to Bid, shall list such substitutions on the "Exceptions to Specifications" sheet provided, or on a separate sheet to be submitted with the bid. The absence of such list shall indicate that the bidder has taken no exception to the specifications. The evaluation of bids and the determination as to equality and acceptability of products or services offered shall at the discretion of the County.
14. **Samples:** When the County requires samples as part of the bid and vendor selection process, bidders must provide requested samples within the time allotted, and at no cost to the County unless otherwise specified. Any goods provided under contract shall conform to the sample submitted. The County will return samples only at the bidder's request, and at the bidder's expense, if they are not destroyed by testing.
15. **Non-Collusion:** By responding to this Invitation to Bid, the bidder represents that the bid is not made in connection with any competing bidder, supplier, or service provider submitting a separate response to this Invitation to Bid and is in all respects fair and

without collusion or fraud.

16. **Bid Evaluation:** Award will be made to the lowest responsive, responsible bidder, taking into consideration payment terms, vendor qualifications and experience, quality, references, any exceptions listed, and/or other factors deemed relevant in making the award. The County may make such investigation as it deems necessary to determine the ability of the bidder to perform, and the bidder shall furnish to the County all information and data for this purpose as the County may request. The County reserves the right to reject any bid item, any bid, or all bids, and to re-advertise for bids.
17. **Payment Terms and Discounts:** The County's standard payment terms are Net 30. Any deviation from standard payment terms must be specified in the resulting contract, and both parties must agree on such deviation. Cash discounts offered will be a consideration in awarding the bid, but only if they give the County at least 15 days from receipt of invoice to pay. For taking discounts, time will be computed from the date of invoice acceptance by the County, or the date a correct invoice is received, whichever is the later date. Payment is deemed made, for the purpose of earning the discount, on the date of the check.
18. **Trade Secrets – Confidentiality:** If any person or entity submits a bid or proposal that contains trade secrets, an affidavit shall be included with the bid or proposal. The affidavit shall declare the specific included information which constitutes trade secrets. Any trade secrets must be either (1) placed in a separate envelope, clearly identified and marked as such, or (2) at a minimum, marked in the affidavit or an attached document explaining exactly where such information is, and otherwise marked, highlighted, or made plainly visible. See O.C.G.A. § 50-18-72 (A)(34).
19. **Trade Secrets – Internal Use:** In submitting a bid, the bidder agrees that the County may reveal any trade secret materials contained in the bid to all County staff and officials involved in the selection process, and to any outside consultant or other third parties who may assist in the selection process. The bidder agrees to hold harmless the County and each of its officers, employees, and agents from all costs, damages, and expenses incurred in connection with refusing to disclose any material which the bidder has designated as a trade secret.
20. **Ethics – Disclosure of Relationships:** Before a proposed contract in excess of \$10,000.00 is recommended for award to the Board of Commissioners or the County Administrator, or before the County renews, extends, or otherwise modifies a contract after it has been awarded, the Contractor must disclose certain relationships with any County Commissioner or County Official, or their spouse, mother, father, grandparent, brother, sister, son or daughter related by blood, adoption, or marriage (including in-laws). A relationship that must be reported exists if any of these individuals is a director, officer, partner, or employee, or has a substantial financial interest in the business, as described in Fayette County Ordinance Chapter 2, Article IV, Division 3 (Code of Ethics).

If such relationship exists between your company and any individual mentioned above, relevant information must be presented in the form of a written letter to the Director of

Purchasing. You must include the letter with any bid, proposal, or price quote you submit to the Purchasing Department.

In the event that a Contractor fails to comply with this requirement, the County will take action as appropriate to the situation, which may include actions up to and including rejection of the bid or offer, cancellation of the contract in question, or debarment or suspension from award of a County contract for a period of up to three years.

21. **Contract Execution & Notice to Proceed:** After the Board of Commissioners makes an award, all required documents are received by the County, and the contract is fully executed with signature of both parties, the County will issue a written Notice to Proceed. The County shall not be liable for payment of any work done or any costs incurred by any bidder prior to the County issuing the Notice to Proceed.
22. **Unavailability of Funds:** This contract will terminate immediately and absolutely at such time as appropriated and otherwise unobligated funds are no longer available to satisfy the obligations of the County under the contract.
23. **Insurance:** The Successful Bidder shall procure and maintain the following insurance, to be in effect throughout the term of the contract, in at least the amounts and limits as follows:
 - a. **General Liability Insurance:** \$1,000,000 combined single limit per occurrence, including bodily and personal injury, destruction of property, and contractual liability.
 - b. **Automobile Liability Insurance:** \$1,000,000 combined single limit each occurrence, including bodily injury and property damage liability.
 - c. **Worker's Compensation & Employer's Liability Insurance:** Workers Compensation as required by Georgia statute.

Before a contract with the Successful Bidder is executed, the Successful Bidder shall provide Certificates of Insurance for all required coverage. The Successful Bidder can provide the Certificate of Insurance after award of the contract but must be provided prior to execution of the contract document by both parties. The certificate shall list an additional insured as follows:

Fayette County, Georgia
140 Stonewall Avenue West
Fayetteville, GA 30214

24. **Bid Bond:** Bidder shall include a bid bond with your bid, equal to five percent (5%) of the total amount bid. Bid bonds shall be provided by a surety which appears on the U.S. Treasury's list of approved bond sureties (Circular 570).
25. **Performance and Payment Bonds:** Prior to execution of a contract, the Successful

Bidder shall submit performance, and payment bonds each equal to 100 percent of the contract value, provided by a surety which appears on the U.S. Treasury's list of approved bond sureties (Circular 570).

26. **Building Permits:** Work performed for the County requiring building permits by licensed Contractors will not have permit fees assessed, although any re-inspection fees for disapproved inspections will be the responsibility of the Contractor prior to final inspections and the Certificate of Occupancy or Certificate of Completion being issued.
27. **Unauthorized Performance:** The County will not compensate the Contractor for work performed unless the work is authorized under the contract, as initially executed, or as amended.
28. **Assignment of Contract:** Assignment of any contract resulting from this Invitation to Bid will not be authorized, except with express written authorization from the County.
29. **Indemnification:** The Contractor shall indemnify and save the County and all its officers, agents and employees harmless from all suits, actions, or other claims of any character, name and description brought for or on account of any damages, losses, or expenses to the extent caused by or resulting from the negligence, recklessness, or intentionally wrongful conduct of the Contractor or other persons employed or utilized by the Contractor in the performance of the contract. The Contractor shall pay any judgment with cost which may be obtained against the County growing out of such damages, losses, or expenses.
30. **Severability:** The invalidity of one or more of the phrases, sentences, clauses or sections contained in the contract shall not affect the validity of the remaining portion of the contract. If any provision of the contract is held to be unenforceable, then both parties shall be relieved of all obligations arising under such provision to the extent that the provision is unenforceable. In such case, the contract shall be deemed amended to the extent necessary to make it enforceable while preserving its intent.
31. **Delivery Failures:** If the Contractor fails to deliver contracted goods or services within the time specified in the contract or fails to replace rejected items in a timely manner, the County shall have authority to make open-market purchases of comparable goods or services. The County shall have the right to invoice the Contractor for any excess expenses incurred or deduct such amount from monies owed the Contractor. Such purchases shall be deducted from contracted quantities.
32. **Substitution of Contracted Items:** The Contractor shall be obligated to deliver products awarded in this contract in accordance with terms and conditions specified herein. If the Contractor is unable to deliver the products under the contract, it shall be the Contractor's responsibility to obtain prior approval of the ordering agency to deliver an acceptable substitute at the same price quoted in the Contractor's original bid. In the event the Contractor consistently needs to substitute or refuses to substitute products, the County reserves the right to terminate the contract or invoke the "Delivery Failures" clause stated herein.

33. **Inspection and Acceptance of Deliveries:** The County reserves the right to inspect all goods and products delivered. The County will decide whether to accept or reject items delivered. The inspection shall be conclusive except with respect to latent defects, fraud, or such gross mistakes as shall amount to fraud. Final inspection resulting in acceptance or rejection of the products will be made as soon as practicable, but failure to inspect shall not be construed as a waiver by the County to claim reimbursement or damages for such products which are later found to be in non-conformance with specifications. Should public necessity demand it, the County reserves the right to use or consume articles delivered which are substandard in quality, subject to an adjustment in price to be determined by the Purchasing Director.
34. **Termination for Cause:** The County may terminate the contract for cause by sending written notice to the Contractor of the Contractor's default in the performance of any term of this agreement. As appropriate, the County will compensate the Contractor for completed performance, and for any partially completed performance as determined by the County to be adequately performed. Termination shall be without prejudice to any of the County's rights or remedies by law.
35. **Termination for Convenience:** The County may terminate the contract for its convenience at any time with 10 days' written notice to the Contractor. In the event of termination for convenience, the County will pay the Contractor for services performed. The County will compensate partially completed performance based upon a signed statement of completion submitted by the Contractor, which shall itemize each element of performance completed.
36. **Force Majeure:** Neither party shall be deemed to be in breach of the contract to the extent that performance of its obligations is delayed, restricted, or prevented by reason of any act of God, natural disaster, act of government, or any other act or condition beyond the reasonable control of the party in question.
37. **Governing Law:** This agreement shall be governed in accordance with the laws of the State of Georgia. The parties agree to submit to the jurisdiction in Georgia, and further agree that any cause of action arising under this agreement shall be required to be brought in the appropriate venue in Fayette County, Georgia.

Checklist of Required Documents

***(Be Sure to Return This Checklist and
the Required Documents in the order listed below)***

ITB 27043-B: Lake McIntosh Dam Structural Repairs

Company information – on form provided _____

Contractor Affidavit under O.C.G.A. § 13-10-91(b)(1) – on form provided _____

Pricing sheet* - on form provided _____

Bid Bond* _____

List of exceptions, if any – on form provided _____

References – on form provided _____

Addenda signed, if any are issued _____

***FAILURE TO INCLUDE THIS ITEM WILL RESULT IN DISQUALIFICATION**

COMPANY NAME: _____

Contractor Affidavit under O.C.G.A. § 13-10-91(b)(I)

The undersigned contractor ("Contractor") executes this Affidavit to comply with O.C.G.A § 13-10-91 related to any contract to which Contractor is a party that is subject to O.C.G.A. § 13-10-91 and hereby verifies its compliance with O.C.G.A. § 13-10-91, attesting as follows:

- a) The Contractor has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program;
- b) The Contractor will continue to use the federal work authorization program throughout the contract period, including any renewal or extension thereof;
- c) The Contractor will notify the public employer in the event the Contractor ceases to utilize the federal work authorization program during the contract period, including renewals or extensions thereof;
- d) The Contractor understands that ceasing to utilize the federal work authorization program constitutes a material breach of Contract;
- e) The Contractor will contract for the performance of services in satisfaction of such contract only with subcontractors who present an affidavit to the Contractor with the information required by O.C.G.A. § 13-10-91(a), (b), and (c);
- f) The Contractor acknowledges and agrees that this Affidavit shall be incorporated into any contract(s) subject to the provisions of O.C.G.A. § 13-10- 91 for the project listed below to which Contractor is a party after the date hereof without further action or consent by Contractor; and
- g) Contractor acknowledges its responsibility to submit copies of any affidavits, drivers' licenses, and identification cards required pursuant to O.C.G.A. § 13-10-91 to the public employer within five business days of receipt.

Federal Work Authorization User Identification Number

Date of Authorization

27043-B: Lake McIntosh Dam Structural
Repairs

Name of Contractor

Name of Project

Fayette County, Georgia

Name of Public Employer

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on _____, _____, 2026 in _____ (city), _____ (state).

Signature of Authorized Officer or Agent

Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME

ON THIS THE _____ DAY OF _____, 2026.

NOTARY PUBLIC

My Commission Expires: _____

COMPANY INFORMATION
ITB 27043-B: Lake McIntosh Dam Structural Repairs

A. COMPANY

Company Name: _____

Physical Address: _____

Mailing Address (if different): _____

Website (if applicable): _____

B. AUTHORIZED REPRESENTATIVE

Signature: _____

Printed or Typed Name: _____

Title: _____

E-mail Address: _____

Phone Number: _____ Fax Number: _____

C. PROJECT CONTACT PERSON

Name: _____

Title: _____

Phone Number: _____

E-mail Address: _____

REFERENCES

ITB 27043-B: Lake McIntosh Dam Structural Repairs

Please list three (3) references for current or recent customers who can verify the quality of service your company provides. Projects of similar size and scope are preferable.

1. Government/Company Name _____

City & State _____

Work or Service Provided _____

Approximate Completion Date _____

Contact Person and Title _____

Phone _____ Email _____

2. Government/Company Name _____

City & State _____

Work or Service Provided _____

Approximate Completion Date _____

Contact Person and Title _____

Phone _____ Email _____

3. Government/Company Name _____

City & State _____

Work or Service Provided _____

Approximate Completion Date _____

Contact Person and Title _____

Phone _____ Email _____

COMPANY NAME _____

Pricing Sheet
ITB 27043-B: Lake McIntosh Dam Structural Repairs

Responder agrees to perform all the work described in the Contract documents for the following prices:

Bid Lake McIntosh Dam Structural Repairs	\$ _____
Contingency Allowance	\$ <u>15,000.00</u> _____
Total Bid	\$ _____

NOTES:

1. All applicable charges shall be included in your total quoted amount, including but not limited to materials, equipment, installation, labor, and any other amounts. No additional charges will be allowed after the quote received by date.
2. All warranties shall be included in your total quoted amount.

State time needed to commence work after Notice to Proceed is issued _____ Days.

State length of time needed to complete project _____ Days.

State, List or Attach the terms of your warranty (minimum 1-year warranty on all work provided): _____

COMPANY NAME _____

SCOPE AND SPECIFICATION
ITB 27043-B: Lake McIntosh Dam Structural Repairs

INTRODUCTION

Fayette County Water System is seeking bids from qualified vendors for structural concrete repairs to the Lake McIntosh Dam spillway structure. The work is based on the Lake McIntosh and Lake Kedron Dam Spillway Walls Structural Assessment prepared by Arcadis U.S., Inc., dated October 27, 2023, and the associated Lake McIntosh Dam Spillway Structure Photograph Log. The work generally includes repair of non-structural and structural cracks, repair of leakage locations, patching of concrete surface deterioration and form-tie locations, and restoration of affected areas.

BACKGROUND

During the September 22, 2023 structural assessment, Arcadis observed multiple vertical and diagonal cracks, surface deterioration, leakage, and vegetation growth on the Lake McIntosh Dam spillway walls. The assessment concluded that the overall structural integrity of the Lake McIntosh spillway walls appeared to be sound; however, identified defects were recommended for repair within the following year. The assessment and photograph log document conditions on the north and south spillway walls, including the interior and exterior faces and the labyrinth weir wall.

Crack widths documented in the assessment range from 0.008 inches to 0.025 inches. Cracks greater than 0.01 inches are identified for repair using the recommended non-structural crack repair system, while cracks less than 0.01 inches are generally to be monitored. Diagonal cracks identified as potential shear cracks are to be repaired using the structural crack repair system.

SCOPE OF WORK

Lake McIntosh Dam Spillway Structural Repairs

1. Travel to Lake McIntosh Dam and coordinate access and work activities with Fayette County Water System (FCWS).
2. Provide all labor, supervision, materials, equipment, access equipment, protection, cleanup, and incidentals necessary to complete the work described in this Scope of Work and the referenced repair specifications.
3. Review the Arcadis Structural Evaluation Report, crack mapping figures, and Attachment A – Lake McIntosh Dam Spillway Structure Photograph Log before beginning work. The crack maps and photographs shall be used to identify and locate the repair areas.
4. Prepare and repair non-structural cracks greater than 0.01 inches in width on the north and south spillway walls in accordance with the non-structural crack and leakage repair system specified in the Repair Specifications.
5. Repair leakage locations associated with construction joints, form ties, formwork joints, and other documented leakage paths on the north and south wall interior faces and labyrinth weir wall. Refer to Photographs 28 through 37 and the crack mapping figures for representative locations.
6. Repair diagonal cracks identified as potential shear cracks on the north and south spillway walls using the structural crack repair system specified in the Repair Specifications. The

contractor shall repair all observed diagonal shear-type cracks identified in the Arcadis assessment and associated photograph log, including the closely spaced diagonal cracking in the sloped wall areas.

7. Repair cracks that overlap or propagate from formwork tie holes. These areas shall be properly prepared and patched in accordance with the Repair Specifications.
8. Repair concrete surface deterioration, including minor spalling, voids, bug holes, and exposed aggregate, where identified in the assessment and photograph log. Representative conditions are shown in Photographs 24 through 27.
9. Repair and patch concrete at the wall-to-slab joint areas where minor spalling or unsound concrete is present, using the specified concrete repair mortar system.
10. Cracks less than 0.01 inches in width that are identified by the Arcadis assessment as monitor-only conditions shall not be repaired unless directed by FCWS. The contractor shall document such conditions encountered during the work and notify FCWS of any crack that appears to have changed materially from the documented condition.
11. Because portions of the exterior wall were inaccessible during the Arcadis assessment due to backfill material, the contractor shall notify FCWS if additional access, excavation, or other work is determined to be necessary to complete a repair. No excavation or removal of backfill shall be performed without prior written authorization from FCWS.
12. Protect existing structures, pedestrian bridge components, drain outlets, gates, piping, coatings, and other site features from damage during the work.
13. Perform surface preparation in accordance with applicable NACE, ICRI, and ACI guidelines and the repair product manufacturer's written instructions.
14. Install all repair materials in strict accordance with the manufacturer's written installation requirements, including substrate preparation, mixing, placement, curing, temperature limitations, and required dry or wet conditions.
15. Provide product data sheets, technical data, safety data sheets, installation procedures, and any other requested submittals for FCWS approval before installation of repair materials.
16. Inspect completed repairs with FCWS and address any deficient, incompletely bonded, improperly finished, or otherwise unacceptable work at no additional cost to FCWS.
17. Remove all construction debris and excess materials from the spillway structure and surrounding work area. Leave the site clean and suitable for return to service.
18. Provide photographic documentation of completed repairs, including representative before-and-after photographs and identification of repaired locations.
19. Coordinate completion of the work so that the spillway structure can be returned to service in accordance with FCWS direction.

REPAIR SPECIFICATIONS

The repair systems, materials, and performance requirements listed below are based on Section 4 of the Arcadis Lake McIntosh and Lake Kedron Dam Spillway Walls Structural Assessment dated October 27, 2023. These requirements may be provided as Attachment B – Structural Repair Specifications with the RFQ. Where a product is identified, an approved equal may be proposed for FCWS approval.

Non-Structural Crack and Leakage Repair System

- Hydrophobic polyurethane chemical grout forming a flexible gasket. Acceptable products include SikaFix HH LV by Sika Chemical Company, Hydro Active Flex SLV by De Neef Construction Chemicals, Inc., or approved equal.
- Hydrophobic polyurethane shall have a shrinkage limit not exceeding 4.0 percent in accordance with ASTM D1042, minimum elongation of 250 percent in accordance with ASTM D3574, and minimum tensile strength of 150 psi in accordance with ASTM D3574.
- Hydrophilic acrylate-ester resin forming a flexible gasket and increasing in volume by at least 50 percent when in contact with water. Acceptable product includes Duroseal Multigel 850 by BBZ USA, Inc., or approved equal.

Structural Crack Repair System

- Epoxy injection shall be a low-viscosity, high-modulus, moisture-insensitive type.
- Acceptable products include Sikadur 35, Hi-Mod L.V. and Sikadur 31, Hi-Mod Gel by Sika Corporation; Eucopoxy Injection Resin by Euclid Chemical Company; or approved equal.

Surface Deterioration Repair

- Provide a prepackaged, cement-based repair mortar specifically formulated for repairing concrete surface defects.
- Acceptable products include SikaTop 122 Plus, SikaTop 123 Plus, SikaTop 126 Plus by Sika Corporation; DuralTop Gel or DuralTop Flowable Mortar by Euclid Chemical Company; or approved equal.
- Repair mortar shall be a two-component, polymer-modified Portland cement, fast-setting, trowel-grade mortar enhanced with a penetrating corrosion inhibitor.
- Minimum one-day compressive strength: 2,000 psi in accordance with ASTM C109.
- Minimum 28-day compressive strength: 6,000 psi in accordance with ASTM C109.
- Minimum 28-day bond strength: 1,800 psi in accordance with ASTM C882, modified for use with repair mortars.
- Where the least dimension of the placement in width or thickness exceeds four inches, extend repair mortar by adding aggregate as recommended by the repair mortar manufacturer.

Patching of Concrete Holes Less Than Four Inches

- Provide a prepackaged, non-shrink, non-metallic, 100 percent solids, solvent-free, moisture-insensitive, three-component epoxy grouting system.
- Minimum seven-day compressive strength shall be 14,000 psi when tested in accordance with ASTM C579.
- Acceptable products include Euco High Strength Grout by Euclid Chemical Company, Sikadur 42 Grout Pak by Sika Corporation, Five Star Epoxy Grout by Five Star Products, Inc., or approved equal.
- **Surface Preparation and General Requirements**
- Surface preparation shall follow applicable NACE, ICRI, and ACI guidelines and the repair product manufacturer's written instructions.
- Remove unsound, loose, contaminated, or otherwise unsuitable concrete and prepare repair areas to provide a sound substrate suitable for the selected repair system.

- Contractor shall be responsible for compatibility of all repair materials used together and shall follow the manufacturer's requirements for application and curing.
- Equivalent products or systems shall not be used without prior written approval from FCWS.

ADDITIONAL WORK

- Vendor shall report to FCWS any additional work, concealed damage, or site condition needed to complete the repairs that is not specifically covered above. No additional work shall be performed without prior written authorization from FCWS.
- Any contingency allowance included in the pricing shall be for the sole use of FCWS and shall only be used with prior written authorization by the County.
- Vendor shall coordinate all work requiring restricted access, spillway drainage, water level control, or other operational measures with FCWS. FCWS will determine when the spillway structure is available for the required work.
- Vendor shall provide manufacturer documentation and repair product submittals for FCWS approval before use.
- Vendor agrees to provide a minimum 1-year warranty on all work provided. Warranty shall include labor and materials and shall cover repair failures attributable to defective materials or workmanship.
- Vendor shall maintain the site in a safe and orderly condition and shall comply with all applicable safety requirements while working at the dam and spillway structure.

REFERENCE DOCUMENTS

- Lake McIntosh and Lake Kedron Dam Spillway Walls Structural Assessment, Structural Evaluation Report, Arcadis U.S., Inc., dated October 27, 2023.
- Attachment A – Lake McIntosh Dam Spillway Structure Photograph Log, Arcadis U.S., Inc., dated September 22, 2023.
- Lake McIntosh crack mapping figures included in the Structural Evaluation Report: Figure 1 – North Wall Exterior Face; Figure 2 – North Wall Interior Face; Figure 3 – South Wall Exterior Face; and Figure 4 – South Wall Interior Face.

ITB 27043-B: Lake McIntosh Dam Structural Repairs

Please list below any exceptions or clarifications to the specifications of this bid. Explain any exceptions in full.

[illegible]

COMPANY NAME



Fayette County Water System (FCWS)

LAKE MCINTOSH DAM AND LAKE KEDRON DAM SPILLWAY WALLS STRUCTURAL ASSESSMENT

Structural Evaluation Report

October 27, 2023

Structural Evaluation Report

Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment

Fayette County Water System (FCWS)

PIYUSH LUNKAD

Piyush Lunkad, PE
Structural Engineer II



Duncan Donnell, PE, SE
AVP / Regional Structural Lead

**LAKE McINTOSH DAM
AND LAKE KEDRON DAM
SPILLWAY WALL
STRUCTURAL
ASSESSMENT**

Structural Evaluation Report

Prepared for:

Vanessa Tigert, PG
Director
Fayette County Water Systems
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FCWS Project No.

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CONTENTS

1. Introduction.....	1
2. Methods and Procedure.....	1
3. Structural Assessment Findings.....	1
3.1 Lake McIntosh Spillway Walls Observations.....	1
3.1.1 Vines on Concrete Wall.....	1
3.1.2 Wall Cracks.....	2
3.1.3 Surface Deterioration.....	3
3.1.4 Signs of Leakage.....	3
3.2 Lake Kedron Spillway Walls Observations.....	3
3.2.1 Wall Joints.....	3
3.2.2 Wall Cracks.....	4
3.2.3 Surface Deterioration.....	5
4. Repair Recommendations.....	5
4.1 Crack Repair.....	5
4.2 Surface Deterioration Repair.....	6
4.3 Joint Repair.....	7
5. References.....	8

FIGURES

Figure 1. Lake McIntosh Crack Mapping: North Wall Exterior Face

Figure 2. Lake McIntosh Crack Mapping: North Wall Interior Face

Figure 3. Lake McIntosh Crack Mapping: South Wall Exterior Face

Figure 4. Lake McIntosh Crack Mapping: South Wall Interior Face

Figure 5. Lake Kedron Crack Mapping: East Wall Interior Face

Figure 6. Lake Kedron Crack Mapping: West Wall Interior Face

ATTACHMENT

Attachment A. Lake McIntosh Dam Spillway Structure Photograph Log

Attachment B. Lake Kedron Dam Spillway Structure Photograph Log

1 Introduction

During the biennial dam inspection of Lake McIntosh and Lake Kedron, the Engineer of Record observed cracks on the principal and emergency spillway structure concrete walls. As a result, a recommendation for a structural assessment was made in the dam inspection report (Q1 2022 Inspection Report Dated April 21st, 2022). To proceed with this assessment, Fayette County Water System (FCWS) issued a Work Authorization to Arcadis US, Inc. (Arcadis) on September 13, 2023, under the on-call services task order.

On Friday, September 22, 2023, the Arcadis Structural Engineering team, Donnell Duncan, PE, SE and Piyush Lunkad, PE, conducted a site visit to assess the structural condition of the reinforced concrete spillway walls at both Lake McIntosh Dam and Lake Kedron Dam. Ben Martin from FCWS was also present during the site visit. Both spillway structures were drained and made available for the structural assessment.

The purpose of this evaluation is to assess the current structural condition of the spillway walls and this report presents the findings of the structural evaluation conducted on the concrete spillway walls at Lake McIntosh Dam and Lake Kedron Dam site.

2 Methods and Procedure

The primary investigative method consisted of conducting visual examinations supplemented with digital photographs. The structural assessment focused on identifying any signs of distress, such as cracks, deformations, or deterioration, which may compromise the structural integrity of the spillway walls.

The Arcadis team sounded areas of the spillway walls during the visual evaluation. Sounding a surface refers to tapping the concrete surface with a chipping hammer and listening for sound disparities behind the surface. The concrete was sounded with the hammer at areas of apparent delaminated concrete and at crack vicinities to check for loose concrete surfaces, chipping, and for hollow sounds.

3 Structural Assessment Findings

This section summarizes the observations from the visual structural assessment of the spillway walls at Lake McIntosh Dam and Lake Kedron Dam. Refer to Attachment A for the Lake McIntosh Dam spillway structure photograph log and Attachment B for the Lake Kedron Dam spillway structure photograph log.

3.1 Lake McIntosh Dam Spillway Walls Observations

The following types of defects were found during the structural evaluation of the spillway side walls:

3.1.1 Vines on Concrete Wall:

Vines were observed on both the exterior and interior sides of the north wall close to the pedestrian bridge and drain outlet pipe opening location. See Photographs 1 to 3 for reference. These vines have grown significantly on the exterior side. Vines generally grow on concrete surfaces and work their way

into small cracks or crevices in the concrete. As the vines continue to grow, they can exert pressure on the concrete, causing the cracks to widen or expand. Over time, this can lead to further deterioration of the concrete structure. Additionally, vines can hold moisture against the concrete surface, promoting moisture retention and potential water damage. To prevent damage from vines, it is recommended to regularly inspect and remove any vines that are growing on concrete walls or structures. Regular maintenance and cleaning can help preserve the integrity of the concrete and prevent potential damage caused by vines.

3.1.2 Wall Cracks:

During the assessment, multiple vertical and diagonal cracks were observed on the North and South spillway walls. These cracks exhibited variations in their width, length, and depth. Some cracks were observed on both sides of the walls, extending through the entire thickness of the concrete. However, certain cracks appeared on one face of the wall and did not appear on the opposite face. It was observed that some cracks had been patched from the interior side and at some locations these cracks showed signs of efflorescence including those that appear to have self-healed over time. Refer to Photographs 16 to 18.

Crack maps were developed to better portray their extent and severity. See Figure 1 and Figure 2 for crack maps of the exterior and interior faces of the north wall, respectively. Similarly, refer to Figure 3 and Figure 4 for the interior and exterior south wall crack map. These cracks vary between 0.008" and 0.016" in width. The crack widths and referenced photographs are shown under each figure.

Based on the observation, all vertical cracks appear to be shrinkage and temperature-type cracks and show signs of efflorescence. Cracks showing efflorescence generally result from the dissolution of salts contained in the cement matrix, which are leached out of the concrete and crystallized upon consequent evaporation of fluid. These minor cracks and efflorescence deposits are common and do not pose any structural threat, however, crack widths greater than 0.01 inches need to be repaired. For these, refer to the non-structural crack repair method discussed in section 4.1. Crack widths less than 0.01 inches shall be monitored annually to identify any changes or developments and are not recommended for repair at this time.

Diagonal cracks were observed on both the north and south walls in the area where the wall slopes down from EL. 793.00 to EL. 780.00. On the south wall, these diagonal cracks were closely spaced and appear to be due to shear and represent potential structural distress. Additionally, the presence of these diagonal cracks could be attributed to the lack of reentrant corner rebars or the insufficient rebars placed along the wall slope. For visual reference of the observed diagonal cracks, please refer to Photographs 49 to 55, 65, and 66. For these shear cracks, refer to the structural crack repair method discussed in section 4.1.

Minor vertical and diagonal cracks were commonly observed around several pipe and drain outlet openings. These cracks are cosmetic in nature and do not pose any significant structural damage or concerns. See Photographs 14, 15, and 60. However, as mentioned earlier, for crack widths greater than 0.01 inches, refer to the non-structural crack repair method discussed in section 4.1.

It should be noted that the extent of cracks observed on the exterior face of the walls could not be fully accessed due to the presence of backfill material.

It was observed that at multiple locations cracks overlap with the formwork tie holes and propagate from them. All the formwork ties and formwork lines formed during the construction are clearly visible on both walls. The presence of cracks overlapping with the formwork tie holes suggests a weakened area in the concrete that needs to be patched and repaired.

3.1.3 Surface Deterioration

Minor spalling was observed in multiple locations along the joints between the walls and slab. Additionally, surface defects such as bug holes and exposed aggregate were commonly observed on both spillway side walls. Refer to Photographs 24 to 27. While these surface defects do not pose any structural risk, they have appeared due to improper construction practices. These surface defects, such as spalling, bug holes, and exposed aggregate, are typically cosmetic in nature and do not impact the structural integrity of the walls. However, they can affect the aesthetic appearance of the surfaces. They are typically a result of improper consolidation or curing processes during the construction phase. The presence of bug holes, which are small cavities or voids on the concrete surface, and exposed aggregate, where the coarse aggregate is visible, can be attributed to issues during the concrete placement, curing, and finishing stages. If desired, remedial measures such as patching, or surface treatments can be considered to improve the visual quality. Refer to Section 4.2 for concrete surface deterioration repair information.

3.1.4 Signs of Leakage

Signs of leakage were observed on the interior face of both the north and south walls, primarily through the construction joints, form ties, and formwork joints. Additionally, similar leakage was observed on the labyrinth walls. Refer to Photographs 28 to 37. These locations should be sealed and repaired to ensure proper waterproofing and to maintain the integrity of the wall. Refer to Section 4.1 for non-structural crack and leakage repair information.

Overall, the structural integrity of the Lake McIntosh spillway walls appears to be in sound condition and defects shall be repaired within the next year as stated in each section above.

3.2 Lake Kedron Dam Spillway Walls Observations

The following types of defects were found during the structural evaluation of the spillway side walls:

3.2.1 Wall Joints

Based on site observations, it has been noted that the location of slab and wall joints match one another. A visible gap was observed in what appear to be matching control joints in the east and west walls located at the beginning of the stilling basin area. Refer to Photographs 8 to 12, which depict the condition of the joint on the east wall, and Photograph 41, which shows the joint condition at the top of the

west wall. This issue was also observed at the west wall keyway construction joint located at the inlet area. Refer to Photographs 67 and 68.

The observed gap in the joint can occur due to various factors such as movement, thermal expansion, and settlement. These joints should be repaired and sealed properly to maintain the structural integrity of the wall. Refer to Section 4.3.A for east wall joint repair and Section 4.3.B. for west wall joint repair information.

Furthermore, it has been noted that previous repairs and sealing of joints have been conducted at multiple locations in the past. Refer to Photographs 24, 25, 35, 57, 59, 67, and 68. In light of this, it is advisable to closely monitor all the joints in the walls annually to assess any potential structural distress or movement in the future. Regular annual monitoring will help identify any changes or issues that may require further attention to ensure the stability and integrity of the wall.

3.2.2 Wall Cracks

During the assessment, numerous vertical and diagonal cracks were identified on both the east and west sides of the spillway wall. These cracks displayed variations in their width, length, and depth. Crack maps were developed to better convey their extent and severity. See Figures 5 and 6 for crack maps of the interior face of the east and west walls, respectively. These cracks vary between 0.008" and 0.025" in width. The crack widths and referenced photographs are shown under each figure. It is important to note that the assessment could only be conducted on one face of the wall due to the presence of backfill material on the other side.

Based on the assessment, the vertical cracks observed on the wall surface and top of the wall are indicative of shrinkage and temperature cracks. Refer to Photographs 1 to 4, 36, 43, 48, 49 to 51, and 69. Additionally, vertical cracks have been identified primarily at multiple drainage outlet openings on both the east and west walls. Refer to Photographs 13, 14, 17 to 23, 33, 38 to 40, 55 to 57, 60 to 62, 64 to 66. It is important to note that not all cracks observed at the drainage outlets have been included in the recorded crack mapping figures. Furthermore, it has been observed that certain cracks have been previously repaired. Refer to Photographs 21, 23, 26 to 31, 58, and 59. Therefore, it is recommended to conduct annual monitoring of the cracks observed at the drainage outlets that have undergone previous repairs and cracks that have not been repaired to identify any changes or developments. Continual annual monitoring will help assess the effectiveness of the repairs and identify any potential issues or structural changes that may require further attention. Crack widths greater than 0.01 inches need to be repaired. Refer to non-structural crack repair method discussed in section 4.1. Crack widths less than 0.01 inches shall be monitored annually to identify any future changes or developments.

During the assessment, diagonal cracks were observed on both the east and west walls at the inlet and outlet areas. Notably, at the outlet area on the west wall, the diagonal cracks appeared to converge at the wall face change, indicating shear cracks. Refer to Photographs 44 to 47. Similarly, the diagonal cracks observed at the inlet area on both the east and west walls also exhibited characteristics of shear cracks. Refer to Photographs 32 and 65. Considering the nature of these diagonal shear cracks, it is recommended that all observed diagonal cracks be repaired. Repairing these cracks will help restore the

structural integrity of the walls and prevent any further progression or potential issues associated with shear forces. Refer to structural crack repair method discussed in section 4.1.

3.2.3 Surface Deterioration

Concrete surface deterioration was observed at multiple drainage outlet openings due to spillage of water on the wall surface. These defects are cosmetic in nature and do not pose any structural damage. If desired, surface treatments such as resurfacing or patching can be considered to improve visual quality. Refer to Section 4.2 for concrete surface deterioration repair information.

Overall, the structural integrity of the Lake Kedron Dam Spillway walls is in sound condition and defects shall be repaired within the next year as mentioned in the above sections.

4 Repair Recommendations

Based on the visual assessment observations discussed in section 3, the following repair methods and products are recommended for the respective defects noted. Surface preparation following National Association of Corrosion Engineers (NACE), International Concrete Repair Institute (ICRI), and American Concrete Institute (ACI) guidelines needs to be strictly followed along with the repair product manufacturer's written instructions.

4.1 Crack Repair

A. Non-structural Crack and Leakage Repair System:

1. Hydrophobic Polyurethane Chemical Grout:
 - a. Provide hydrophobic polyurethane that forms a flexible gasket.
 - b. Products and Manufacturers: Provide one of the following:
 - 1) SikaFix HH LV, by Sika Chemical Company.
 - 2) Hydro Active Flex SLV, by De Neef Construction Chemicals, Inc.
 - 3) Or approved equal.
 - c. Shrinkage limit shall not exceed 4.0 percent in accordance with ASTM D1042.
 - d. Minimum elongation of 250 percent in accordance with ASTM D3574.
 - e. Minimum tensile strength of 150 psi in accordance with ASTM D3574.
2. Hydrophilic Acrylate-Ester Resin:
 - f. Hydrophilic crack repair system shall be acrylate-ester resin that forms a flexible gasket and increase in volume by at least 50 percent when in contact with water.
 - g. Products and Manufacturers: Provide one of the following:
 - 1) Duroseal Multigel 850, manufactured by BBZ USA, Inc.
 - 2) Or approved equal.

Structural Evaluation Report
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)

B. Structural Crack Repair System:

1. Epoxy for injection shall be low-viscosity, high-modulus moisture insensitive type.
2. Products and Manufacturers: Provide one of the following:
 - h. Sikadur 35, Hi-Mod L.V. and Sikadur 31, Hi-Mod Gel, by Sika Corporation.
 - i. Eucopoxy Injection Resin, by Euclid Chemical Company.
 - j. Or approved equal.

4.2 Surface Deterioration Repair

- A. Product Description: Repair mortar shall be prepackaged, cement-based product specifically formulated for repairing concrete surface defects.
- B. Products and Manufacturers: Provide one of the following:
 1. SikaTop 122 Plus, SikaTop 123 Plus, or SikaTop 126 Plus, by Sika Corporation.
 2. DuralTop Gel, DuralTop Flowable Mortar by Euclid Chemical Company.
 3. Or approved equal.
- C. Materials:
 1. Provide a two-component, polymer-modified, Portland cement, fast-setting, trowel-grade mortar. Repair mortar shall be enhanced with penetrating corrosion inhibitor, and shall have the following properties:

Physical Property	Value	ASTM Standard
Minimum Compressive Strength at One Day	2,000 psi	C109
Minimum Compressive Strength at 28 Days	6,000 psi	C109
Minimum Bond Strength at 28 Days	1,800 psi	C882*
* Modified for use with repair mortars.		

2. Where the least dimension of the placement in width or thickness exceeds four inches, extend repair mortar by adding aggregate as recommended by repair mortar manufacturer.
- D. Patching of holes in concrete (holes less than four inches)
1. Pre-packaged, non-shrink, non-metallic, 100 percent solids, solvent-free, moisture-insensitive, three-component epoxy grouting system.
 2. Minimum Seven-day Compressive Strength: 14,000 psi, when tested in accordance with ASTM C579.
 3. Products and Manufacturers: Provide one of the following:
 - a. Euco High Strength Grout, by Euclid Chemical Company.
 - b. Sikadur 42, Grout Pak, by Sika Corporation.
 - c. Five Star Epoxy Grout, by Five Star Products, Inc.

- d. Or approved equal.

4.3 Joint Repair

A. East Wall Control Joint Repair at Lake Kedron Dam (Refer to Attachment B - Photograph 8 to 12)

- a. Mechanically remove existing sealant and backer rod where applicable.
- b. Clean joint surfaces of residual sealant and other contaminants capable of affecting sealant bond to joint surface.
- c. Allow joint surfaces to dry before installing new sealants.
- d. Products:
 - 1) Sikaflex -2c NS EZ Mix
 - 2) Or approved equal

B. West Wall Joint Repair at Lake Kedron Dam (Refer to Attachment B – Photograph 67 and 68)

- a. Surface Preparation: Remove the following from surfaces to be repaired: laitance, foreign material, and unsound concrete. Remove by chipping, abrasive blasting, or hydro blasting. Additional surface preparation, if required, shall be as recommended by expansion joint repair system manufacturer.
- b. Installation: Installation shall be as recommended by expansion joint repair system manufacturer.
- c. System Description: Joint repair system shall consist of two components: an epoxy resin adhesive and hypalon sheeting.
- d. Products and Manufacturers: Provide one of the following:
 - 1) Sikadur Combiflex, by Sika Corporation.
 - 2) Or approved equal.

- e. Epoxy Resin Adhesive: Provide two-component epoxy resin as follows:

Component “A” shall be modified epoxy resin of epichlorohydrin bisphenol-A type containing suitable viscosity control agents and pigments. Resin shall not contain butyl glycidyl ether.

Component “B” shall be primarily a reaction product of selected amine blend with epoxy resin of epichlorohydrin bisphenol-A type containing suitable viscosity control agents, pigments, and accelerators.

- f. Hypalon Sheeting:

Provide sheeting of hypalon rubber, perforated along bonding edge to provide mechanical key. Sheeting shall have ability to be vulcanized with hydrocarbon solvent for adhesion to an epoxy resin adhesive.

Structural Evaluation Report

Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment

Fayette County Water System (FCWS)

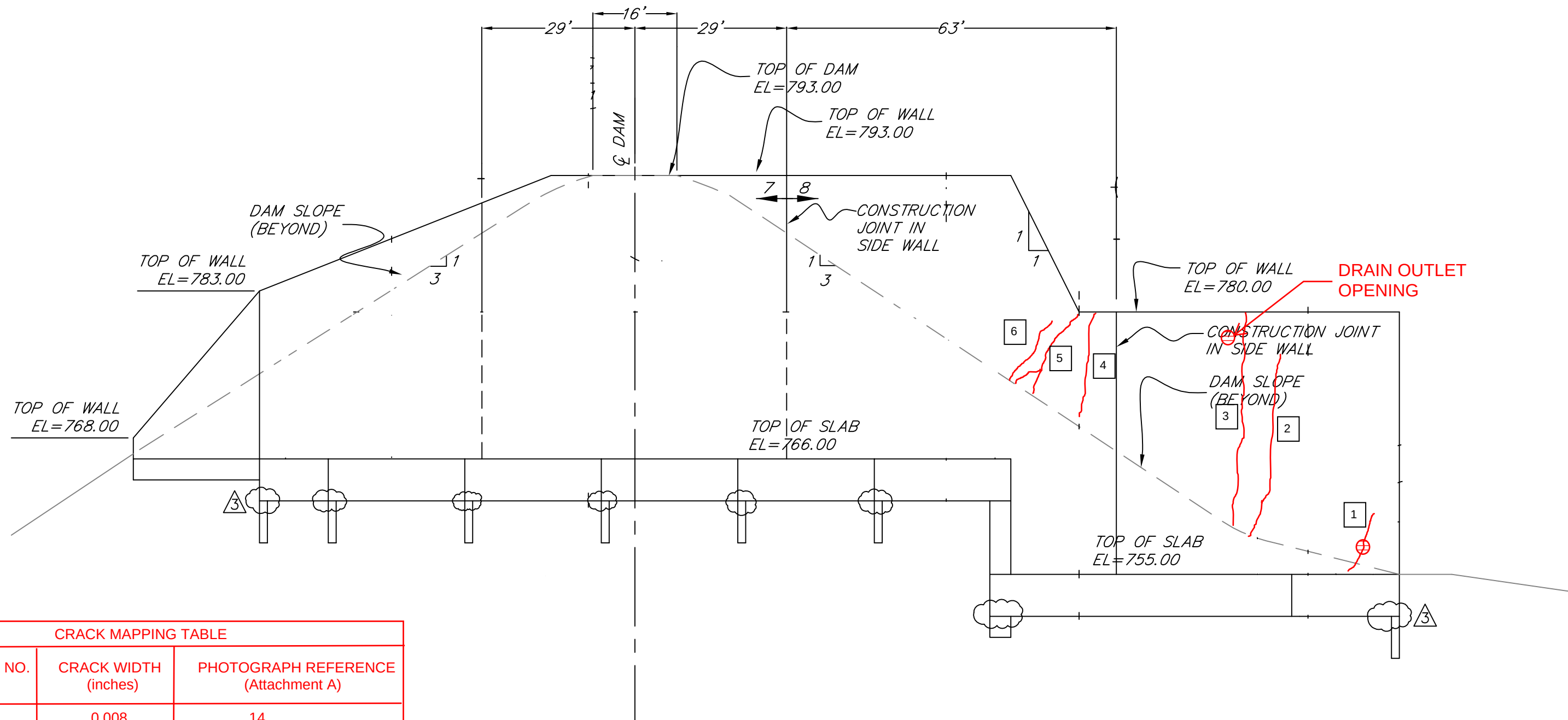
Provide sheeting in 12-inch width with thickness of 40 mils.

Sheeting shall be able to be lapped or seamed by heat or by anaromatic hydrosolvent strip.

Provide sheeting with removable center expansion strip.

5 References

1. 1984.06 Kedron Dam Water System Improvements Fayette Co. Contract 2
2. 2009.12 McIntosh Dam and Reservoir Construction Set

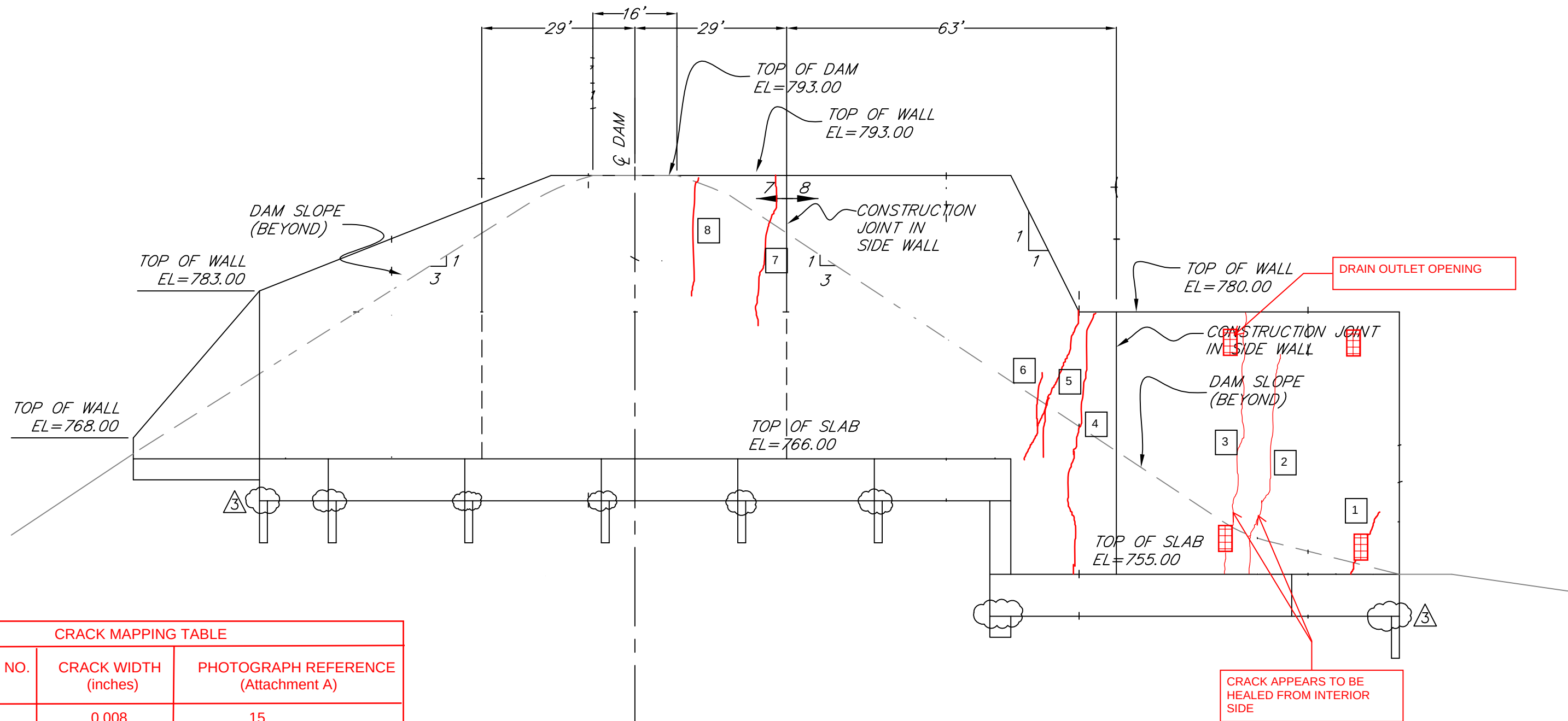


CRACK MAPPING TABLE		
CRACK NO.	CRACK WIDTH (inches)	PHOTOGRAPH REFERENCE (Attachment A)
1	0.008	14
2	0.012	12, 13
3	0.012	10, 11
4	0.015	4, 9
5	0.015	4 TO 8
6	0.010	4 TO 8

SPILLWAY - SECTION A
 HORIZ SCALE: 1" = 20'
 VERT SCALE: 1" = 10'

- NOTES:
1. THE CRACKS DEPICTED ABOVE ARE NOT DRAWN TO SCALE BUT ARE SHOWN TO REPRESENT THEIR EXTENT, PATTERN, AND APPROXIMATE LOCATIONS.
 2. IT SHOULD BE NOTED THAT FULL EXTENT OF CRACK IS NOT SHOWN DUE TO BACKFILL MATERIAL ON WALL EXTERIOR SIDE.
 3. THE WALL SECTION PRESENTED ABOVE HAS BEEN EDITED FROM THE RECORD DRAWING TO REPRESENT BETTER CRACK MAPPING ON THE WALL.

REF:



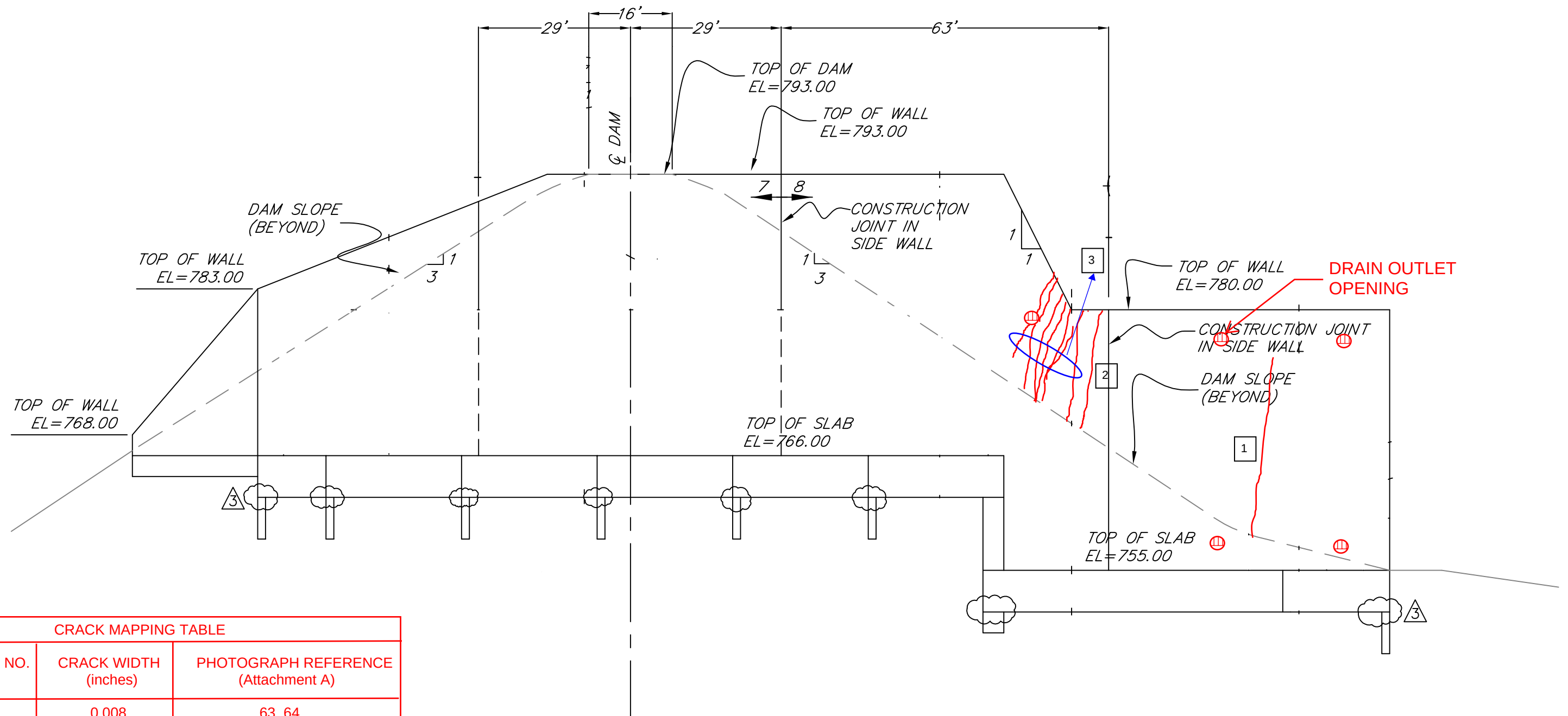
CRACK MAPPING TABLE		
CRACK NO.	CRACK WIDTH (inches)	PHOTOGRAPH REFERENCE (Attachment A)
1	0.008	15
2	*	16, 18
3	*	16, 17, 18
4	0.015	19, 20
5	0.015	19, 20, 21
6	0.015	19, 21
7	0.015	22
8	NA	23

* = CRACK APPEARS TO BE HEALED
NA= NOT ACCESSIBLE

SPILLWAY – SECTION A
HORIZ SCALE: 1" = 20'
VERT SCALE: 1" = 10'

- NOTES:
1. THE CRACKS DEPICTED ABOVE ARE NOT DRAWN TO SCALE BUT ARE SHOWN TO REPRESENT THEIR EXTENT, PATTERN, AND APPROXIMATE LOCATIONS.
 2. IT SHOULD BE NOTED THAT FULL EXTENT OF CRACK IS NOT SHOWN DUE TO BACKFILL MATERIAL ON WALL EXTERIOR SIDE.
 3. THE WALL SECTION PRESENTED ABOVE HAS BEEN EDITED FROM THE RECORD DRAWING TO REPRESENT BETTER CRACK MAPPING ON THE WALL.

REF:

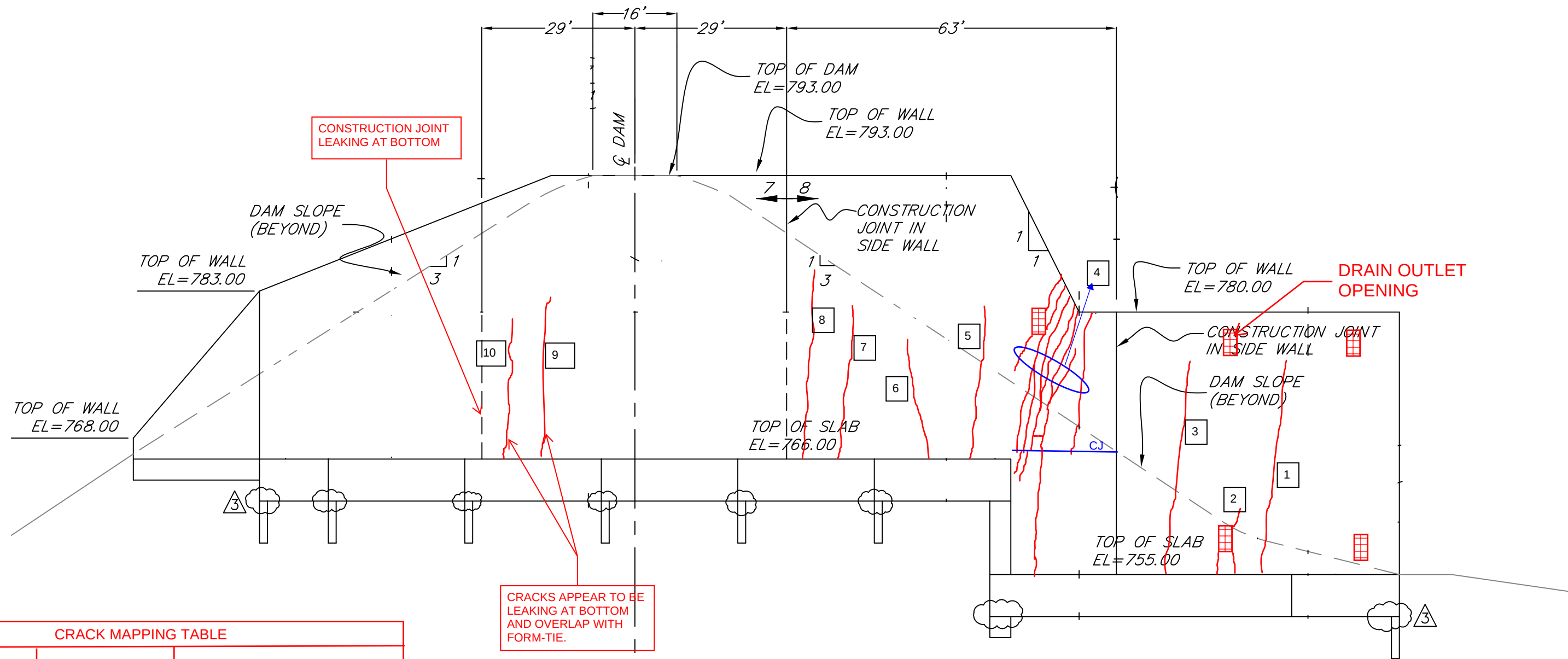


CRACK MAPPING TABLE		
CRACK NO.	CRACK WIDTH (inches)	PHOTOGRAPH REFERENCE (Attachment A)
1	0.008	63, 64
2	0.004	65
3	0.016	65, 66,

SPILLWAY - SECTION A
 HORIZ SCALE: 1" = 20'
 VERT SCALE: 1" = 10'

- NOTES:
1. THE CRACKS DEPICTED ABOVE ARE NOT DRAWN TO SCALE BUT ARE SHOWN TO REPRESENT THEIR EXTENT, PATTERN, AND APPROXIMATE LOCATIONS.
 2. IT SHOULD BE NOTED THAT FULL EXTENT OF CRACK IS NOT SHOWN DUE TO BACKFILL MATERIAL ON WALL EXTERIOR SIDE.
 3. THE WALL SECTION PRESENTED ABOVE HAS BEEN EDITED FROM THE RECORD DRAWING TO REPRESENT BETTER CRACK MAPPING ON THE WALL.

REF:

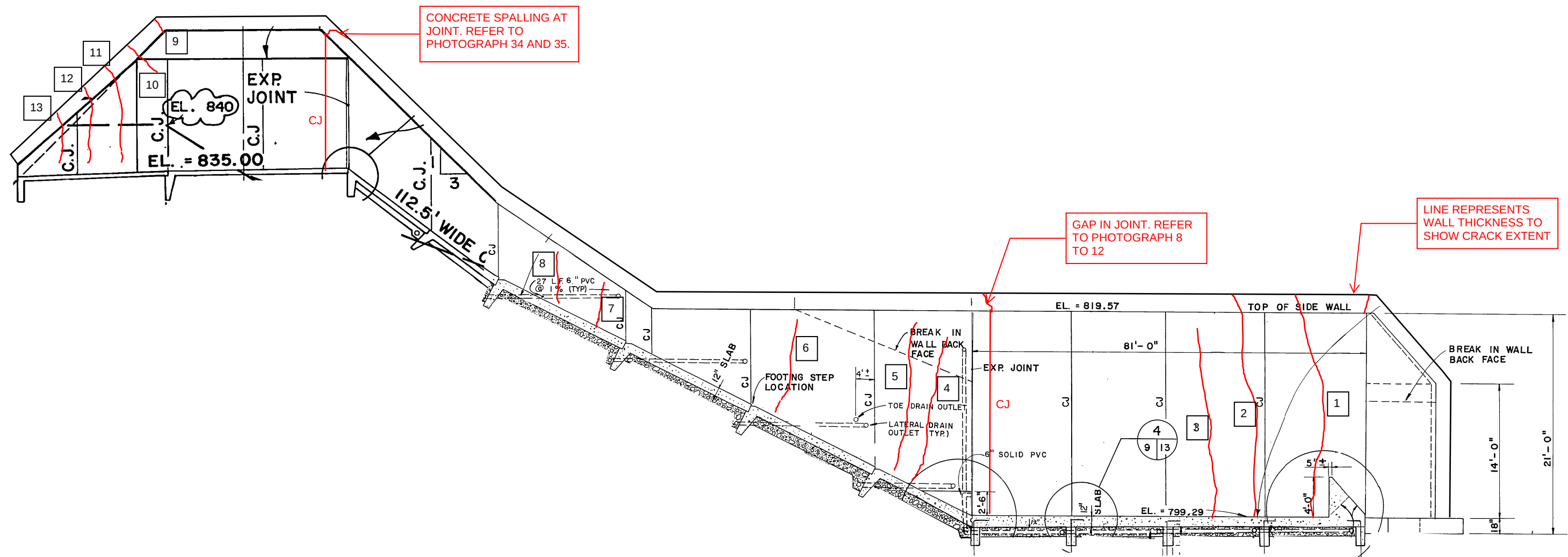


CRACK MAPPING TABLE		
CRACK NO.	CRACK WIDTH (inches)	PHOTOGRAPH REFERENCE (Attachment A)
1	0.008	61, 62
2	0.008	60
3	0.012	56 TO 59
4	0.025	49 TO 55
5	0.012	46, 47, 48
6	0.012	43, 44, 45
7	0.016	40, 41, 42
8	0.016	38, 39, 41
9	0.008	36, 37
10	0.008	35, 37

SPILLWAY - SECTION A
 HORIZ SCALE: 1" = 20'
 VERT SCALE: 1" = 10'

NOTES:
 1. THE CRACKS DEPICTED ABOVE ARE NOT DRAWN TO SCALE BUT ARE SHOWN TO REPRESENT THEIR EXTENT, PATTERN, AND APPROXIMATE LOCATIONS.
 2. IT SHOULD BE NOTED THAT FULL EXTENT OF CRACK IS NOT SHOWN DUE TO BACKFILL MATERIAL ON WALL EXTERIOR SIDE.
 3. THE WALL SECTION PRESENTED ABOVE HAS BEEN EDITED FROM THE RECORD DRAWING TO REPRESENT BETTER CRACK MAPPING ON THE WALL.

REF:



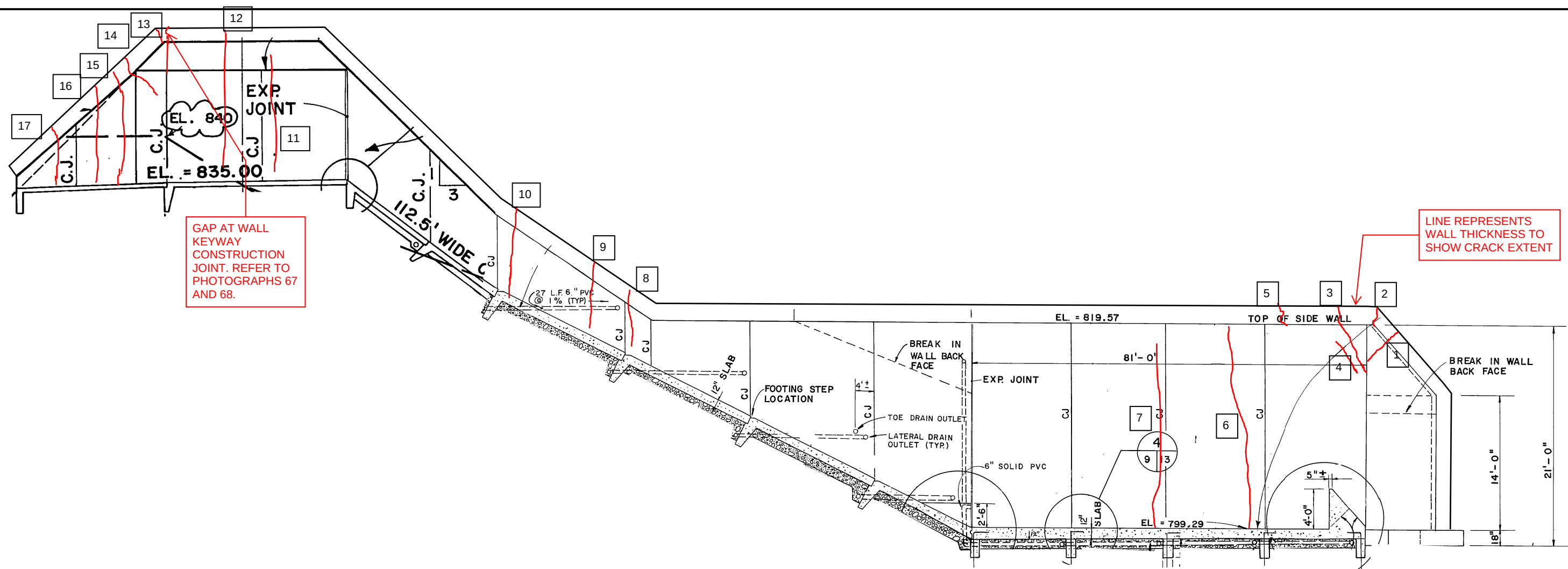
SPILLWAY EAST WALL ELEVATION

CRACK MAPPING TABLE		
CRACK NO.	CRACK WIDTH (inches)	PHOTOGRAPH REFERENCE (Attachment B)
1	0.014*	1, 2, 4
2	0.014*	1, 5
3	0.014*	1
4	M	13, 14, 15
5	M	15, 16, 17
6	M	18, 19
7	M	20
8	M	22
9	0.05	36
10	0.05	32
11, 12, 13	M	37 TO 40

* = CRACK WIDTH MEASURED AT TOP OF WALL
M = MONITOR CRACK WIDTH AT DRAINAGE OUTLET

NOTES:
1. THE CRACKS DEPICTED ABOVE ARE NOT DRAWN TO SCALE BUT ARE SHOWN TO REPRESENT THEIR EXTENT, PATTERN, AND APPROXIMATE LOCATIONS.
2. IT SHOULD BE NOTED THAT FULL EXTENT OF CRACK IS NOT SHOWN DUE TO BACKFILL MATERIAL ON WALLS EXTERIOR SIDE.
3. CRACKS HAVE BEEN OBSERVED PRIMARILY AT MULTIPLE DRAIN OUTLET ON THE WALL AND SHOULD BE MONITORED. NOT ALL CRACKS ARE RECORDED AND DOCUMENTED.
4. THE WALL SECTION PRESENTED ABOVE HAS BEEN EDITED FROM THE RECORD DRAWING TO ILLUSTRATE CRACK MAPPING ON THE WALL.
5. ALL WALL JOINTS SHALL BE MONITORED.

REF:



SPILLWAY WEST WALL ELEVATION

CRACK MAPPING TABLE		
CRACK NO.	CRACK WIDTH (inches)	PHOTOGRAPH REFERENCE
1	0.025	44, 47
2	0.012	43
3	NA	44, 45, 46
4	NA	44, 45, 46
5	0.012	46, 47, 48
6	NA	48, 49, 50
7	NA	51
8, 9, 10	M	55 TO 58
11	M	60, 61
12	M	62
13	0.012	69
14	0.012	63
15, 16, 17	M	64, 65, 66

NA = NOT ACCESSIBLE

M = MONITOR CRACK WIDTH AT DRAINAGE OUTLET

- NOTES:
1. THE CRACKS DEPICTED ABOVE ARE NOT DRAWN TO SCALE BUT ARE SHOWN TO REPRESENT THEIR EXTENT, PATTERN, AND APPROXIMATE LOCATIONS.
 2. IT SHOULD BE NOTED THAT FULL EXTENT OF CRACK IS NOT SHOWN DUE TO BACKFILL MATERIAL ON WALLS EXTERIOR SIDE.
 3. CRACKS HAVE BEEN OBSERVED PRIMARILY AT MULTIPLE DRAIN OUTLETS ON THE WALL AND SHOULD BE MONITORED. NOT ALL CRACKS ARE RECORDED AND DOCUMENTED.
 4. THE WALL SECTION PRESENTED ABOVE HAS BEEN EDITED FROM THE RECORD DRAWING TO ILLUSTRATE CRACK MAPPING ON THE WALL.
 5. ALL WALL JOINTS SHALL BE MONITORED.

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Lake McIntosh Dam Spillway Structure Photograph Log



Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 1

Description:

Vines on the spillway wall

Location:

Lake McIntosh Dam
Spillway Structure –
North wall exterior face

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023



Photograph: 2

Description:

Vines on the spillway wall

Location:

Lake McIntosh Dam
Spillway Structure –
North wall exterior face

Photograph taken by:

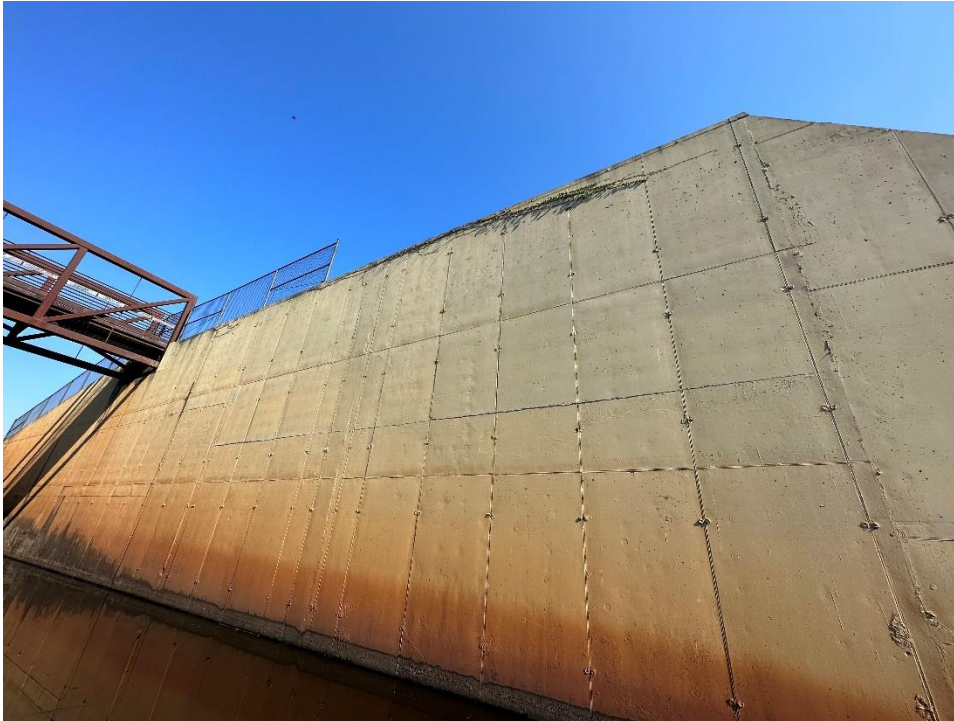
Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log



Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 3

Description:

Vines on the spillway wall

Location:

Lake McIntosh Dam
Spillway Structure –
North wall interior face

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023



Photograph: 4

Description:

Crack on the north wall
exterior face

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log

Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 5

Description:

Crack on the north wall
exterior face

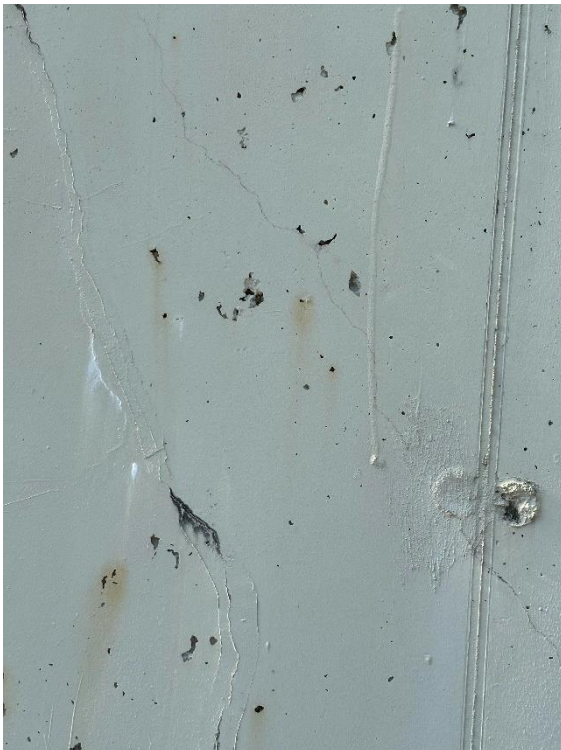
Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023



Photograph: 6

Description:

Crack on the north wall
exterior face

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log

Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 7

Description:

Crack on the north wall
exterior face

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023



Photograph: 8

Description:

Crack on the north wall
exterior face

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log

Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 9

Description:

Crack on the north wall
exterior face

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023



Photograph: 10

Description:

Crack on the north wall
exterior face

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log

Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 11

Description:

Crack on the north wall
exterior face

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log

Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 12

Description:

Crack on the north wall
exterior face

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log

Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 13

Description:

Crack on the north wall
exterior face

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log

Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 14

Description:

Crack on the north wall
exterior face

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log

Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 15

Description:

Crack on the north wall
interior face

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log

Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 16

Description:

Cracks appeared to be healed on the north wall interior face

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log



Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 17

Description:

Crack appeared to be healed on the north wall interior face

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023



Photograph: 18

Description:

Crack on the north wall interior face

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log

Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 19

Description:

Crack on the north wall
interior face

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023



Photograph: 20

Description:

Crack on the north wall
interior face

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log

Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 21

Description:

Crack on the north wall
interior face

Location:

Lake McIntosh Dam
Spillway Structure

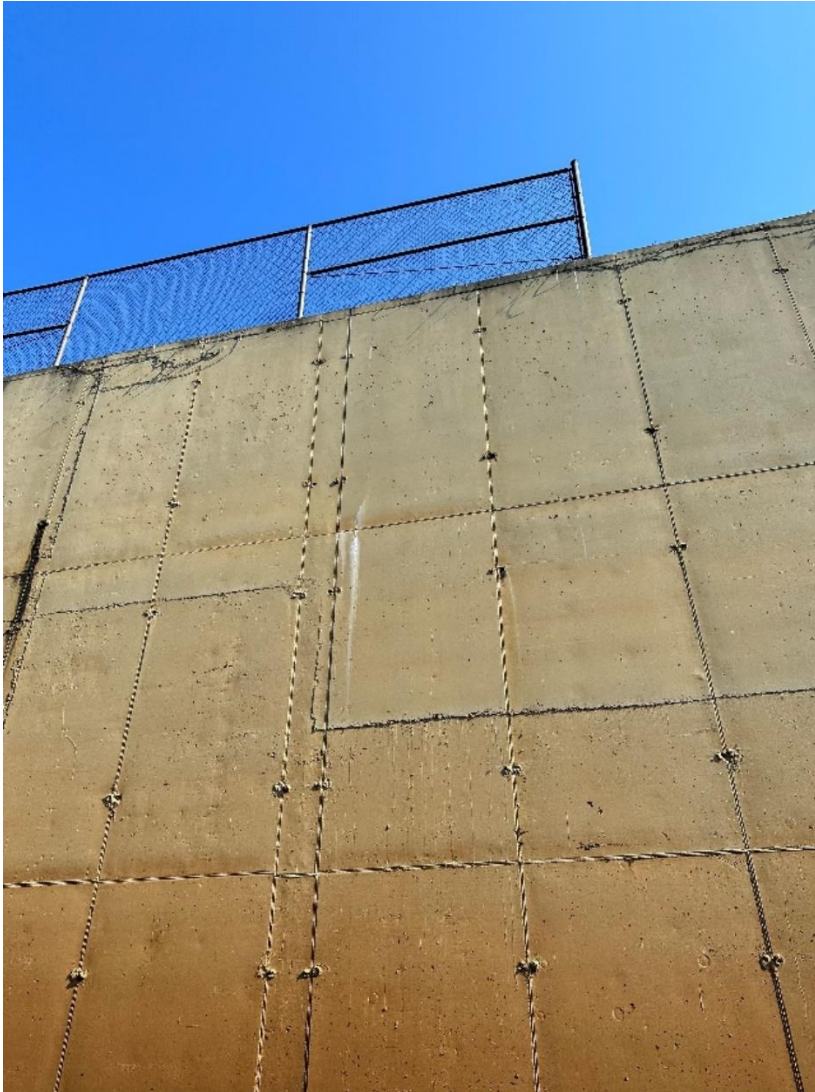
Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log

Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 22

Description:

Crack on the north wall
interior face

Location:

Lake McIntosh Dam
Spillway Structure

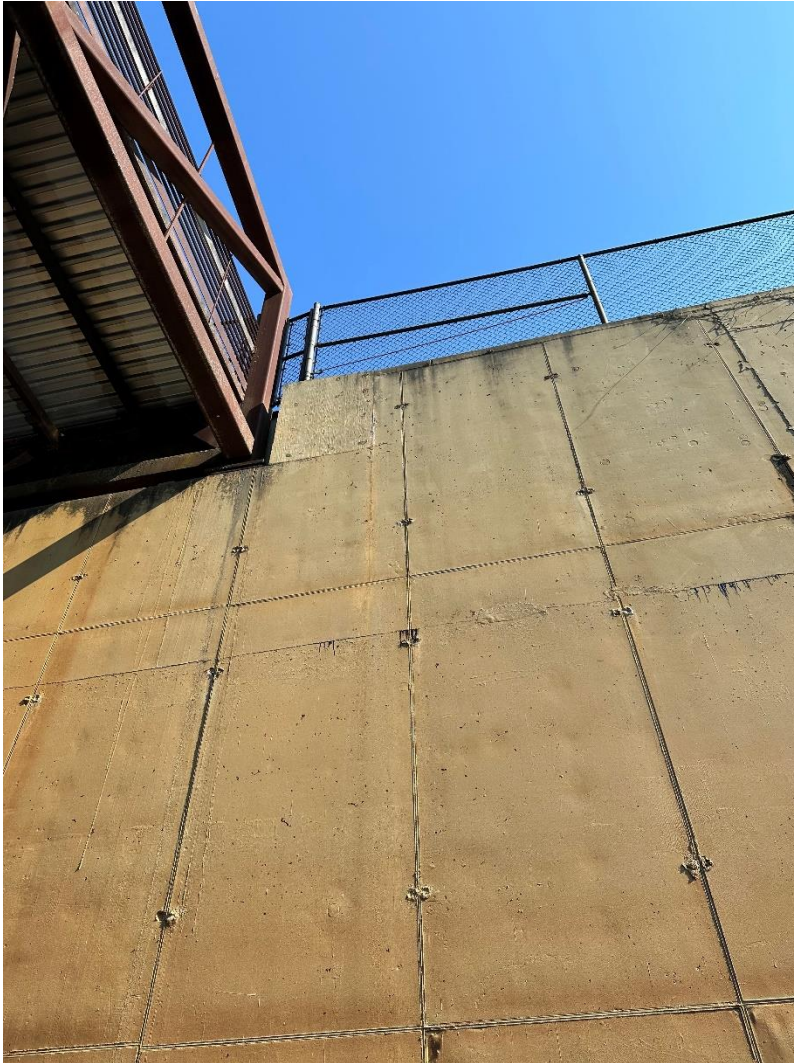
Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log

Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 23

Description:

Crack on the north wall
interior face near
bridge support due to
reentrant corner

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log



Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 24

Description:

Typical voids and bug holes on north wall exterior face

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023



Photograph: 25

Description:

Surface deterioration on north wall interior face

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log



Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 26

Description:

Surface deterioration
on north wall interior
face

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023



Photograph: 27

Description:

Surface deterioration
on north wall interior
face

Location:

Lake McIntosh Dam
Spillway Structure

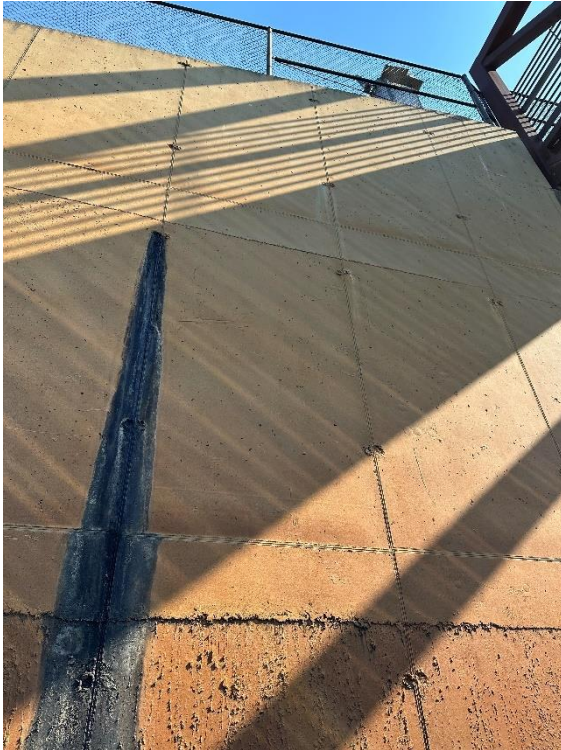
Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log

Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 28

Description:

Signs of leakage on
north wall interior face

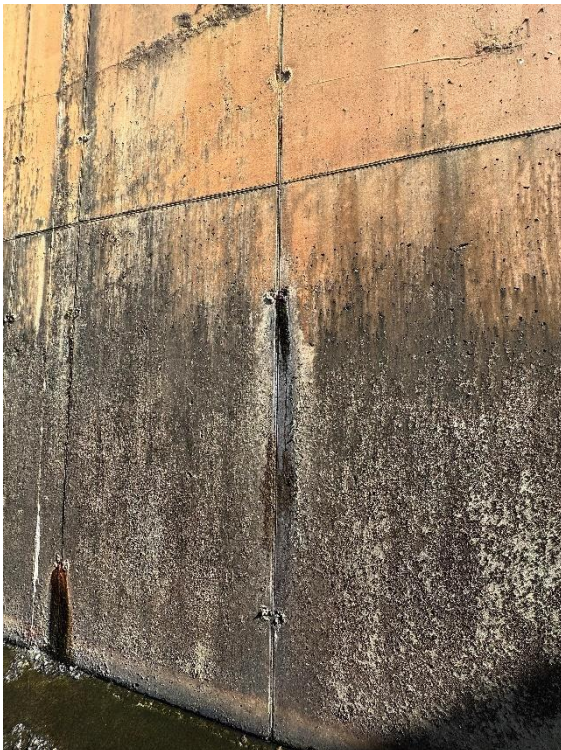
Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023



Photograph: 29

Description:

Signs of leakage on
north wall interior face

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log

Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 30

Description:

Vertical crack and signs of leakage on the labyrinth weir wall

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023



Photograph: 31

Description:

Vertical crack and signs of leakage on the labyrinth weir wall

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log



Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 32

Description:

Vertical crack and signs of leakage on the labyrinth weir wall

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023



Photograph: 33

Description:

Construction joint showing signs of leakage at the bottom of south wall interior face

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log



Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 34

Description:

Construction joint showing signs of leakage at the bottom of south wall interior face

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log

Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 35

Description:

Crack showing signs of leakage at the bottom of south wall interior face

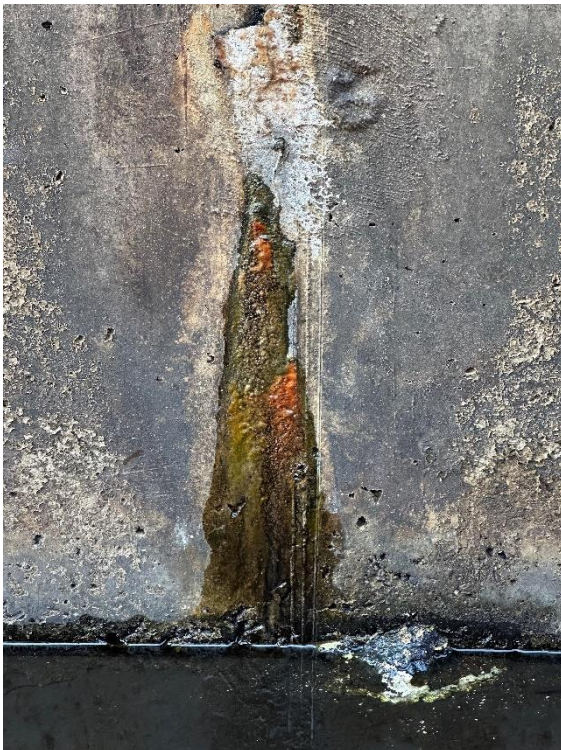
Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023



Photograph: 36

Description:

Crack on the south wall interior face with signs of leakage

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log



Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 37

Description:

Crack on the south wall interior face with signs of leakage

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023



Photograph: 38

Description:

Crack on the south wall interior face with signs of efflorescence

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log

Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 39

Description:

Crack on the south wall
interior face with signs
of efflorescence

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log

Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 40

Description:

Crack on the south wall
interior face with signs
of efflorescence

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log

Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 41

Description:

Crack on the south wall
interior face with signs
of efflorescence

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log

Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 42

Description:

Crack on the south wall
interior face with signs
of efflorescence

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log

Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 43

Description:

Crack on the south wall
interior face with signs
of efflorescence

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log



Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 44

Description:

Crack on the south wall
interior face with signs
of efflorescence

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log

Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 45

Description:

Crack on the south wall interior face with signs of efflorescence

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023



Photograph: 46

Description:

Crack on the south wall interior face with signs of efflorescence

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log

Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 47

Description:

Crack on the south wall
interior face with signs
of efflorescence

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log



Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 48

Description:

Crack on the south wall interior face with signs of efflorescence

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023



Photograph: 49

Description:

Cracks on the south wall interior face with signs of efflorescence

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log

Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 50

Description:

Cracks on the south wall interior face with signs of efflorescence

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023



Photograph: 51

Description:

Cracks on the south wall interior face with signs of efflorescence

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

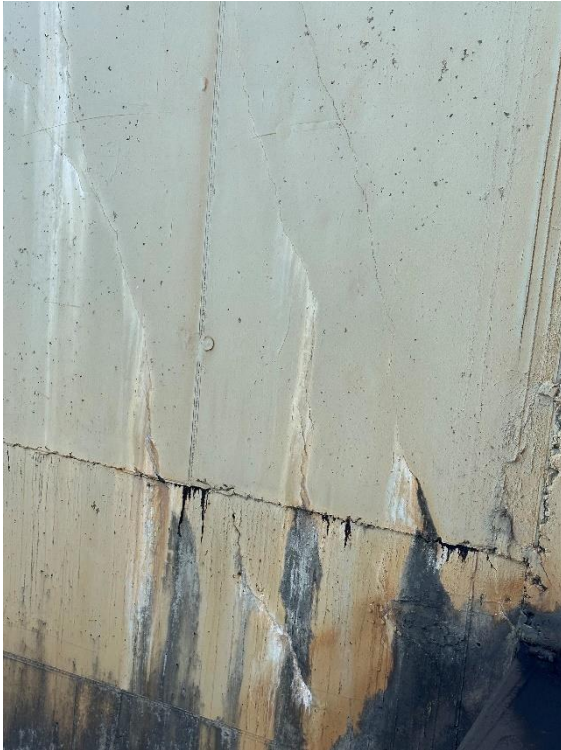
Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log



Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 52

Description:

Cracks on the south wall interior face with signs of efflorescence

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023



Photograph: 53

Description:

Cracks on the south wall interior face with signs of efflorescence

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log



Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 54

Description:

Cracks on the south wall interior face with signs of efflorescence

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023



Photograph: 55

Description:

Cracks on the south wall interior face with signs of efflorescence

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log

Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 56

Description:

Crack on the south wall
interior face

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log

Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 57

Description:

Crack on the south wall
interior face

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log

Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 58

Description:

Crack on the south wall
interior face

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023



Photograph: 59

Description:

Crack on the south wall
interior face

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log

Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 60

Description:

Crack on the south wall
interior face

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023



Photograph: 61

Description:

Crack on the south wall
interior face with signs
of efflorescence

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log

Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 62

Description:

Crack on the south wall interior face with signs of efflorescence

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023



Photograph: 63

Description:

Crack on the south wall exterior face with signs of efflorescence

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log

Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 64

Description:

Crack on the south wall exterior face with signs of efflorescence

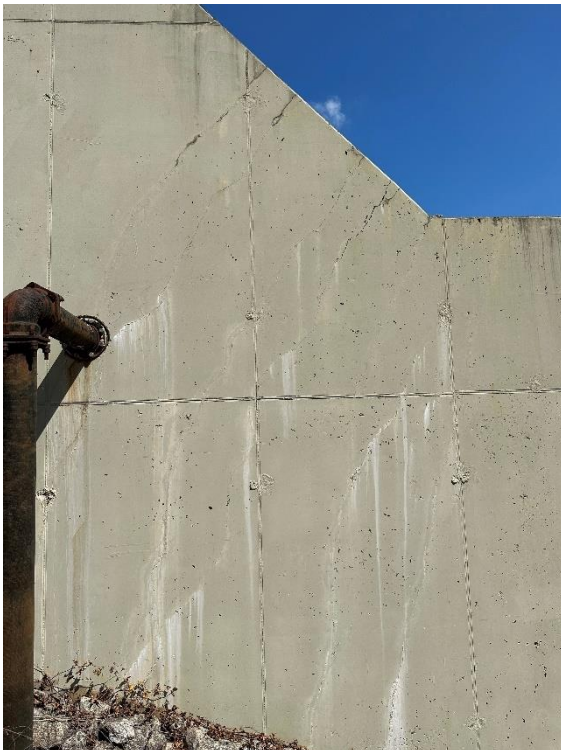
Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023



Photograph: 65

Description:

Cracks on the south wall exterior face with signs of efflorescence

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log



Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 66

Description:

Cracks on the south wall exterior face with signs of efflorescence

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023



Photograph: 67

Description:

Typical voids and bug holes on south wall exterior face

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023

Lake McIntosh Dam Spillway Structure Photograph Log



Structural Evaluation Report – Attachment A Photograph Log
Lake McIntosh and Lake Kedron Dam Spillway Wall Structural Assessment
Fayette County Water System (FCWS)



Photograph: 68

Description:

Typical voids and bug holes on south wall exterior face

Location:

Lake McIntosh Dam
Spillway Structure

Photograph taken by:

Piyush Lunkad

Date: 9/22/2023