

# ADDENDUM No. 1

## RFP #22-58

### Hydroelectric Dams – FERC Ninth Part 12D Inspections and other Engineering Services

**Due: August 9, 2022 at 2:00 P.M. (local time)**

The information contained herein shall take precedence over the original documents and all previous addenda (if any) and is appended thereto. **This Addendum includes four (4) pages of text and twelve (12) pages of attachments.**

The Offeror is to acknowledge receipt of this Addendum No. 1, including all attachments in its Proposal by so indicating in the proposal that the addendum has been received. Proposals submitted without acknowledgement of receipt of this addendum may be considered non-conforming.

The following forms provided within the RFP Document should be included in submitted proposal:

- Attachment C - Non-Discrimination Declaration of Compliance
- Attachment D - Living Wage Declaration of Compliance
- Attachment E - Vendor Conflict of Interest Disclosure Form

**Proposals that fail to provide these completed forms listed above upon proposal opening may be rejected as non-responsive and may not be considered for award.**

#### I. CORRECTIONS/ADDITIONS/DELETIONS

Changes to the RFP documents which are outlined below are referenced to a page or Section in which they appear conspicuously. Offerors are to take note in its review of the documents and include these changes as they may affect work or details in other areas not specifically referenced here.

#### Section/Page(s)

#### Change

I.0 / 8

*Revise the following date in the schedule:*

~~Tentative Interviews (if needed) — September 2022~~

Tentative Interviews (if needed) August/September 2022

II.5 / 17

*Revise the structural analysis requirement:*

- Structural analysis of spillways.
  - Review previous analyses
  - ~~○ Build Rational Structural Analysis model that will serve as a tool for determining the criticality of concrete damage and help prioritize future repair efforts.~~
  - ~~○ Model shall be useful for performing threshold analysis on structural elements that can be used in future inspections to trigger repair actions.~~
  - ~~○ Provide completed model with report explaining model and current results.~~

- In view of current findings (concrete inspections, core samples, etc.) perform analyses as required to support the Concrete Repair Plan.

*Add the following requirements for BOTH dams:*

- Perform external audit of the Owner's Dam Safety Program (ODSP), which covers both Barton Dam and Superior Dam. External audit shall be according to the document *FERC Guidance for ODSP External Audits*, latest version (the 5/14/2018 version is made available for reference), and other applicable FERC requirements. In the proposal, the Consultant shall comment on its ability meet the qualification requirements of an external auditor.
- Survey Settlement and Alignment Monuments on the spillway, powerhouse, and embankments, horizontal and vertical. Compare to previous location data on a single drawing.
- Perform bathymetry upstream and downstream of spillway and powerhouse. Compare results with last survey. Develop monitoring thresholds for bottom grade elevations.
- Update the Dam Safety Surveillance and Monitoring Plan (DSSMP) with newest bathymetry, any new or revised thresholds, ranges of pond and tailwater sensors, HW and TW alarm levels at both dams, piezometer top of casing elevations, etc.
- Comment on amp draw data and trends for all hoists.

*II.5 / 18*

*Add the following requirements for Barton Dam:*

- Survey crest of right embankment, every 50 feet maximum, including existing monuments in the embankment and visible low areas, if any.
- Survey top of piezometer standpipes (approximately 10 total).
- Consider whether a filter should be added at weep drain WH7 (in the spillway right retaining wall, accessible from inside the gallery at Bay #10) and advise accordingly.
- Inspect the brick superstructure of the powerhouse and comment on its condition. Up-close inspection required only on floor and mezzanine-accessible areas inside the building. Remainder shall be inspected from nearby standing areas, using magnified optics as appropriate to see detail.

*II.5 / 18*

*Add the following requirements for Superior Dam:*

- Survey top of piezometer standpipes (4 total).
- Perform stability analysis of right embankment.
- Examine thresholds for all four piezometers and revise based on stability calculations for submittal and approval by FERC.
- Perform wave run-up calculation for Superior pond, in view of IDF freeboard.

*III.6 / 19*

*Delete the following from the schedule:*

- ~~January, 2023~~ ~~Part 12D Inspection Plan~~  
*Note: The Part 12D Inspection Plan should be submitted together with the proposal.*

Revise the following schedule entry:

- ~~• April 28, 2023 Complete structural analyses and reports.~~
- May 30, 2024 Complete other analyses and reports.

III.A/ 20

Add the following requirement:

4. As part of the proposal, submit a Part 12D Inspection Plan as per the requirements of Section 16-3 of FERC's latest *Engineering Guidelines for the Evaluation of Hydropower Projects* document. Include team qualifications other required content of the Part 12D Inspection Plan.

*Note: This proposal requirement is due to FERC's long lead time (180 days) of submitting this information before the field inspection may take place. To allow the field inspection to take place as soon as possible in 2023, the Part 12D Inspection Plan of the apparent awardee will be sent to FERC in advance of Council award.*

III.D/ 21

Delete the following line items from the fee proposal schedule:

- ~~• Structural analysis of spillways.~~
- ~~• Topographic survey of Superior embankments.~~

*Notes: Analysis that may be required shall be included under the Concrete repair plan fee line item. The Superior survey scope is not being deleted, only the cost proposal breakdown is changing.*

Add the following line items to the fee proposal schedule:

- External audit of ODSP.
- Topographic survey and monument survey (both dams).
- Bathymetric survey (both dams).
- Other inspections, analyses and documentation.

## II. QUESTIONS AND ANSWERS

*The following questions are based on queries received from prospective bidders and/or were composed following from an information need identified internally during the proposal process.*

1. Q: What kind of analyses are required for Barton and Superior spillways?  
A: Perform analyses as needed to support the Concrete Repair Plan.
2. Q: ASTM requires three cores to be taken at each location for strength reliability. Are three separate cores required at each location?  
A: No. The cores are primarily to look for depth of cracking/deterioration and for petrograph testing for ASR and other deleterious effects. But strength tests are still required on the cores that are removed.
3. Q: Should scanning be done on concrete to avoid rebar?  
A: Yes.
4. Q: Is Bathymetric survey required for upstream and downstream of both dams?  
A: Yes. Please see attached sketches for locations.

### *Barton Dam*

5. Q: Should concrete core sampling include a minimum of eight (8) samples total?  
A: Yes. Approximately two (2) of the eight will be in the spillway right wall and the remaining six (6) will be in the spillway piers.
6. Q: Are any of the six (6) core samples in the powerhouse right wall to be taken from the draft tube or wet well? Are all sample locations accessible from inside the powerhouse?  
A: The six (6) samples all will be taken from the wall itself. No cores are to be taken from active forebay walls. It may be necessary to use a boat to access one or more sample locations from the outside of the wall near the waterline.
7. Q: Will a power source be provided at the site for concrete core sampling.  
A: 120VAC outlets are available along the spillway at walkway level, at a maximum spacing of approximately 40 feet. There are outlets inside the powerhouse in the lower and intermediate level rooms adjacent to the interior of the right wall.

### *Superior Dam*

8. Q: Are the six (6) core samples to be taken only from the interior of the spillway?  
A: Yes.
9. Q: Are the four (4) core samples to be taken from the water side of the walls?  
A: Yes, or other location as deemed appropriate.
10. Q: Is power source provided for coring?  
A: Yes. There is a 120VAC receptacle in the hoist cabinet on the sluiceway.
11. Q: Is the gated sluiceway with its upstream and downstream walls included in the structural analysis of the spillway?  
A: Include analysis of sluiceway as required to support the Concrete Repair Plan.

### **III. ADDITIONAL INFORMATION**

1. The following are attached to this Addendum:
  - a. Pre-proposal meeting sign-in.
  - b. Sketches showing approximate location of concrete inspections and dive inspections.
  
2. The following additional documents have been uploaded to the share site.
  - odsp\_guidance.pdf
  - aa\_odsp\_20181203.pdf
  - 20220601 03152 Superior P12 Reminder Letter.docx.pdf
  - 20220601 03142 Barton P12 Reminder Letter.docx.pdf
  - 20220330\_superior dam – sluiceway stability analysis.pdf
  - 20210330\_Barton 0314202018 8<sup>th</sup> CSIR Review Ltr C46057.pdf
  - 20201125\_Superior 03152 2018 CSIR Review Ltr C46058.pdf
  - 20101203 TEC concrete report.pdf

To obtain access to the share site, the prospective bidder must submit a signed copy of the Non-Disclosure Agreement (Attachment A in the RFP).

Offerors are responsible for any conclusions that they may draw from the information contained or referenced in the Addendum.

END OF ADDENDUM

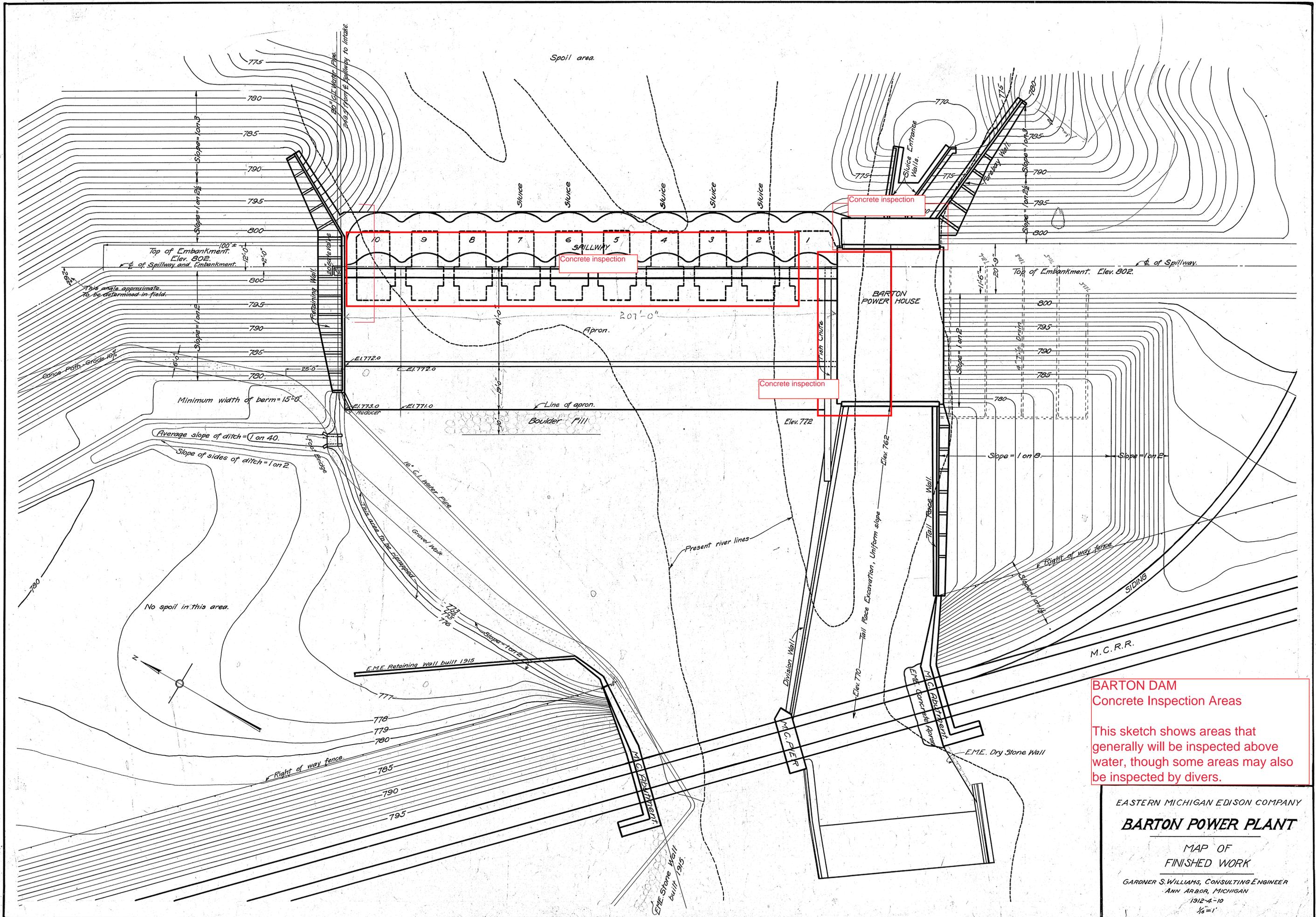
Addendum-1-4



CITY OF ANN ARBOR – RFP #22-58  
Hydroelectric Dams – FERC Ninth Part 12D Inspections and other Engineering Services  
Pre-Proposal Meeting Attendance  
Wednesday, July 13, 2022, 9:00 AM

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Dom Drkulec RIZZO Int! dom.drkulec@rizzointl.com 215-459-8688

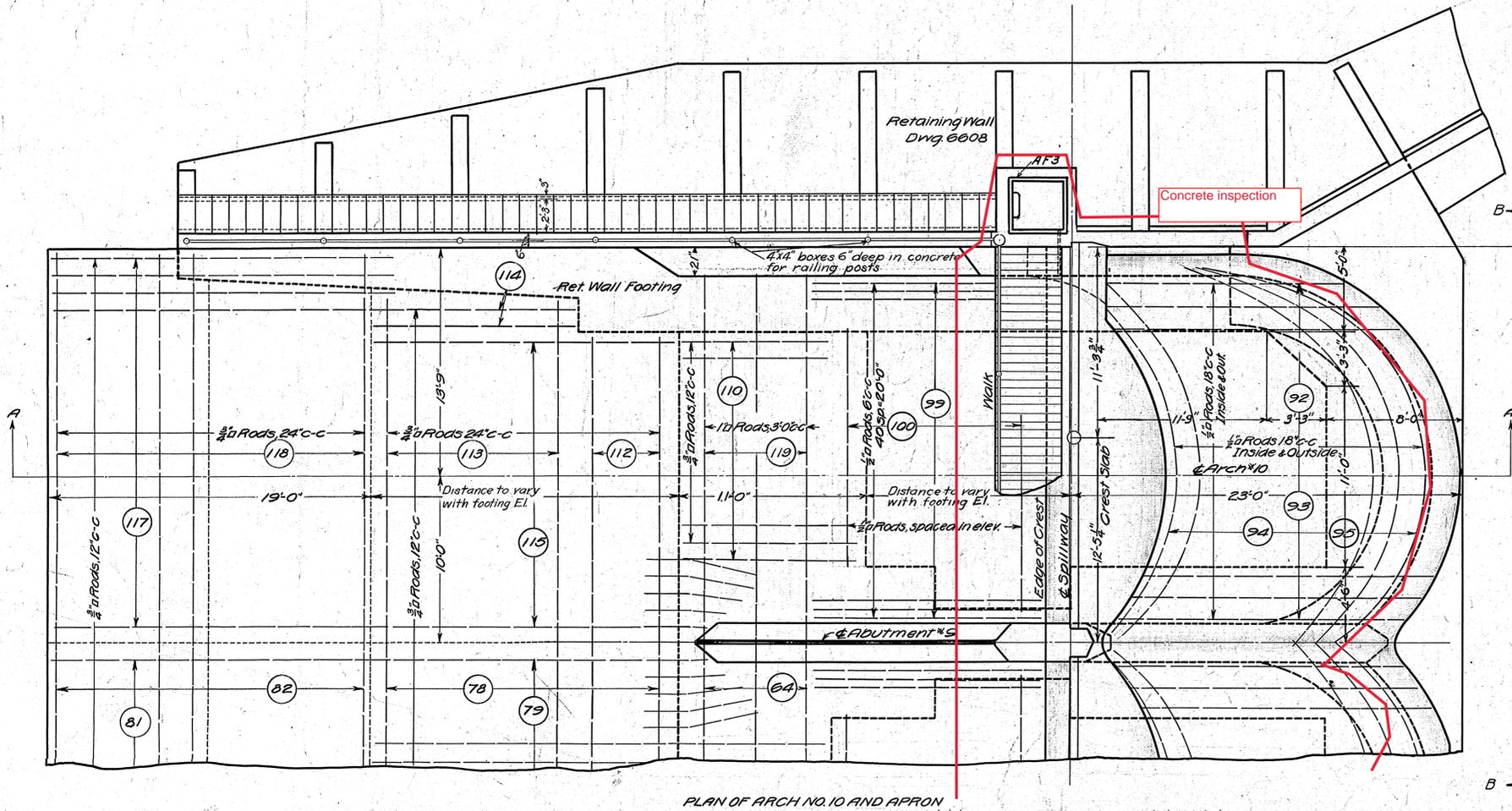
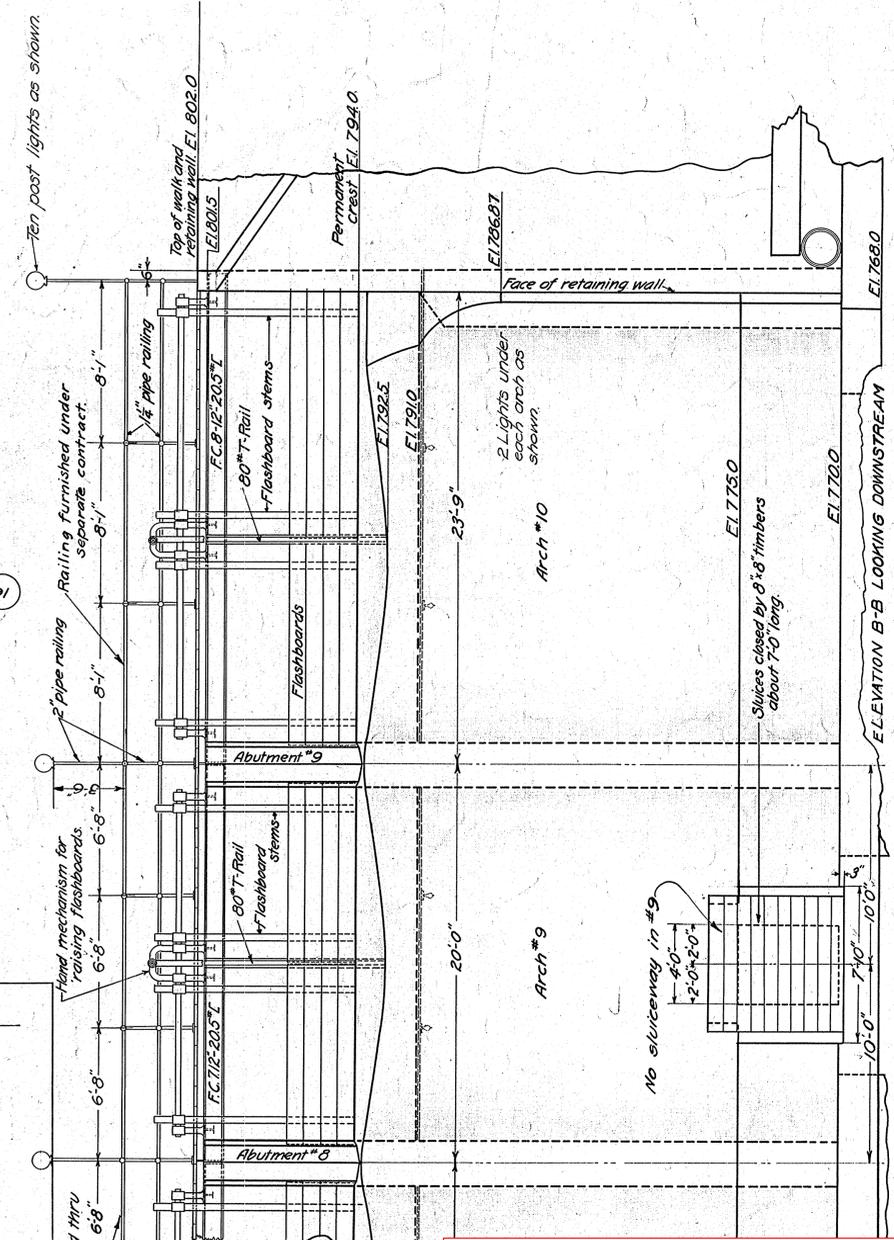
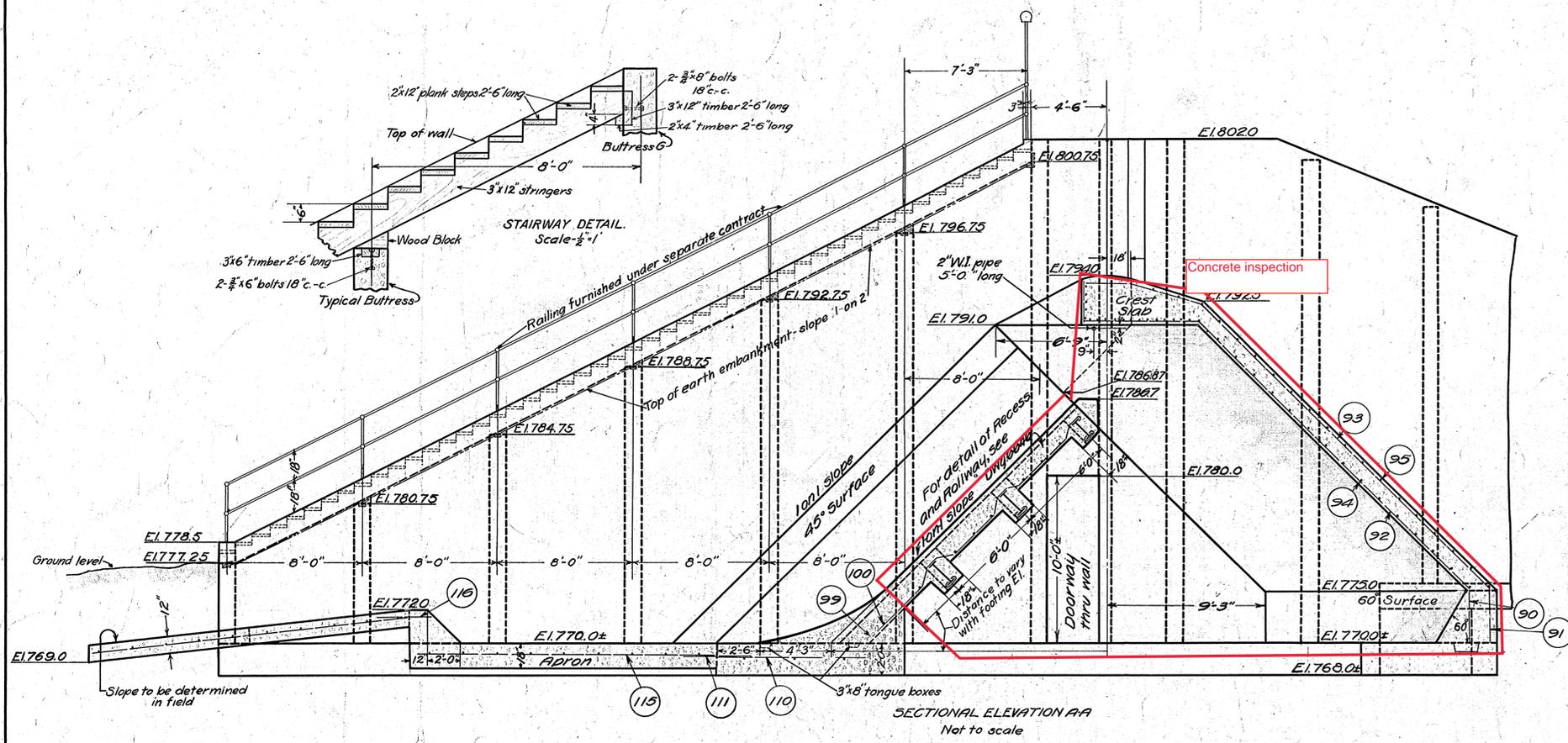


**BARTON DAM**  
**Concrete Inspection Areas**

This sketch shows areas that generally will be inspected above water, though some areas may also be inspected by divers.

EASTERN MICHIGAN EDISON COMPANY  
**BARTON POWER PLANT**  
 MAP OF  
 FINISHED WORK  
 GARDNER S. WILLIAMS, CONSULTING ENGINEER  
 ANN ARBOR, MICHIGAN  
 1912-A-10  
 1/8" = 1'

6554-4



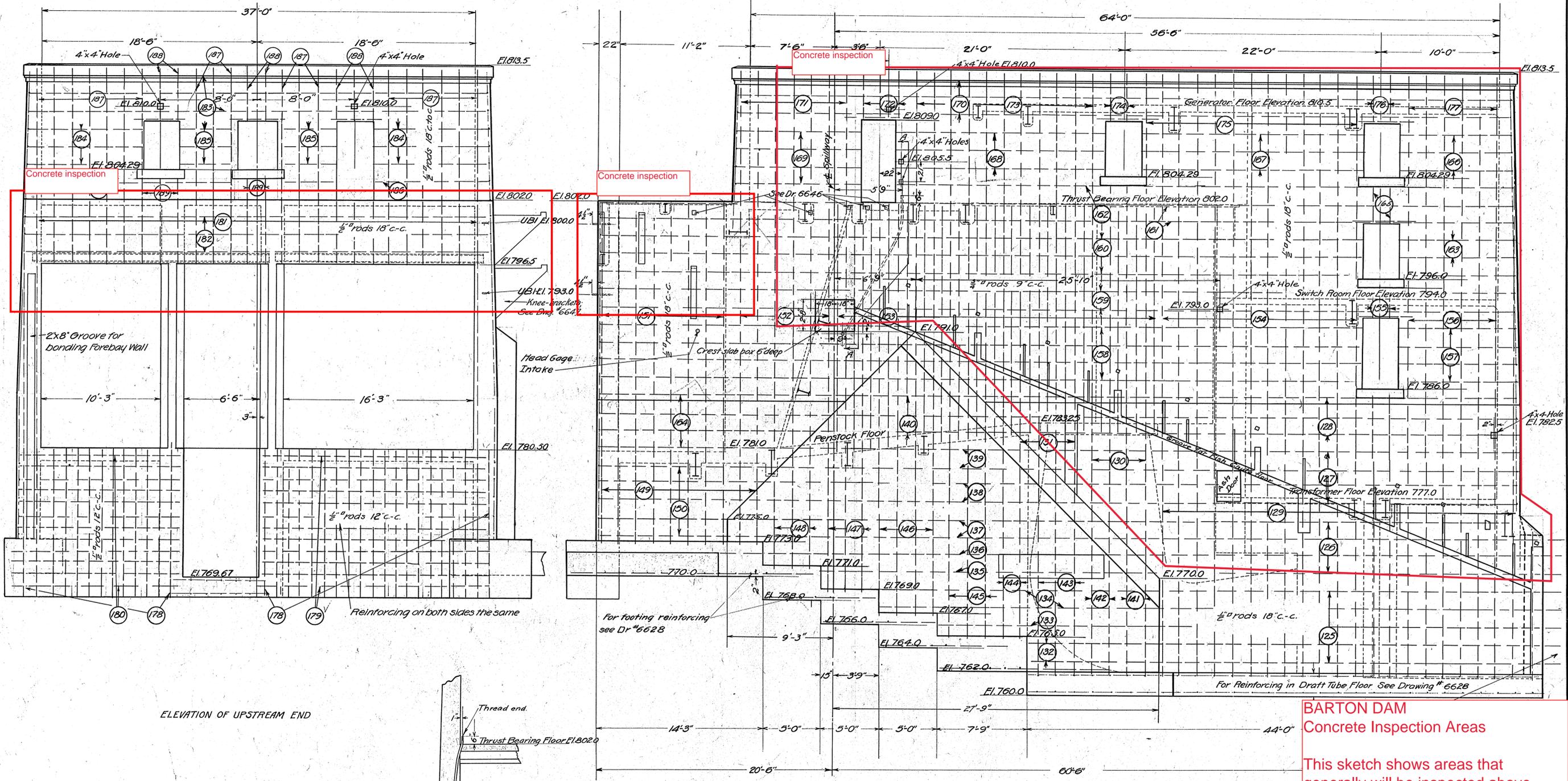
**BARTON DAM**  
Concrete Inspection Areas

This sketch shows areas that generally will be inspected above water, though some areas may also be inspected by divers.

EASTERN MICHIGAN EDISON COMPANY  
**BARTON POWER PLANT**  
ARCH NO. 10 AND  
APRON REINFORCING  
GARDNER S. WILLIAMS, CONSULTING ENGINEER  
ANN ARBOR, MICHIGAN  
1912-6-20  
Scale #1

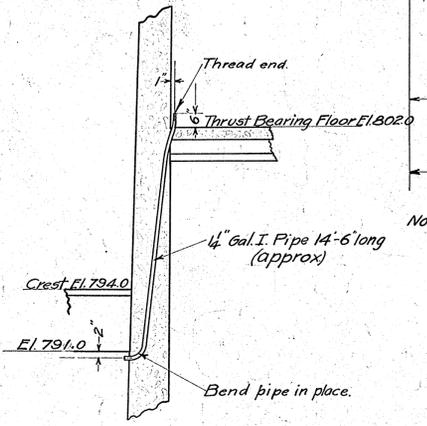
Chk. W.F. 8-20-12  
Corrected 1914-10-28

6554-4



ELEVATION OF UPSTREAM END

ELEVATION OF SPILLWAY SIDE



Section AA.

Note: -2 rods above openings = (235)  
 For reinforcing on inside of Penstock wall, see Dr. #6627, sec. 66.

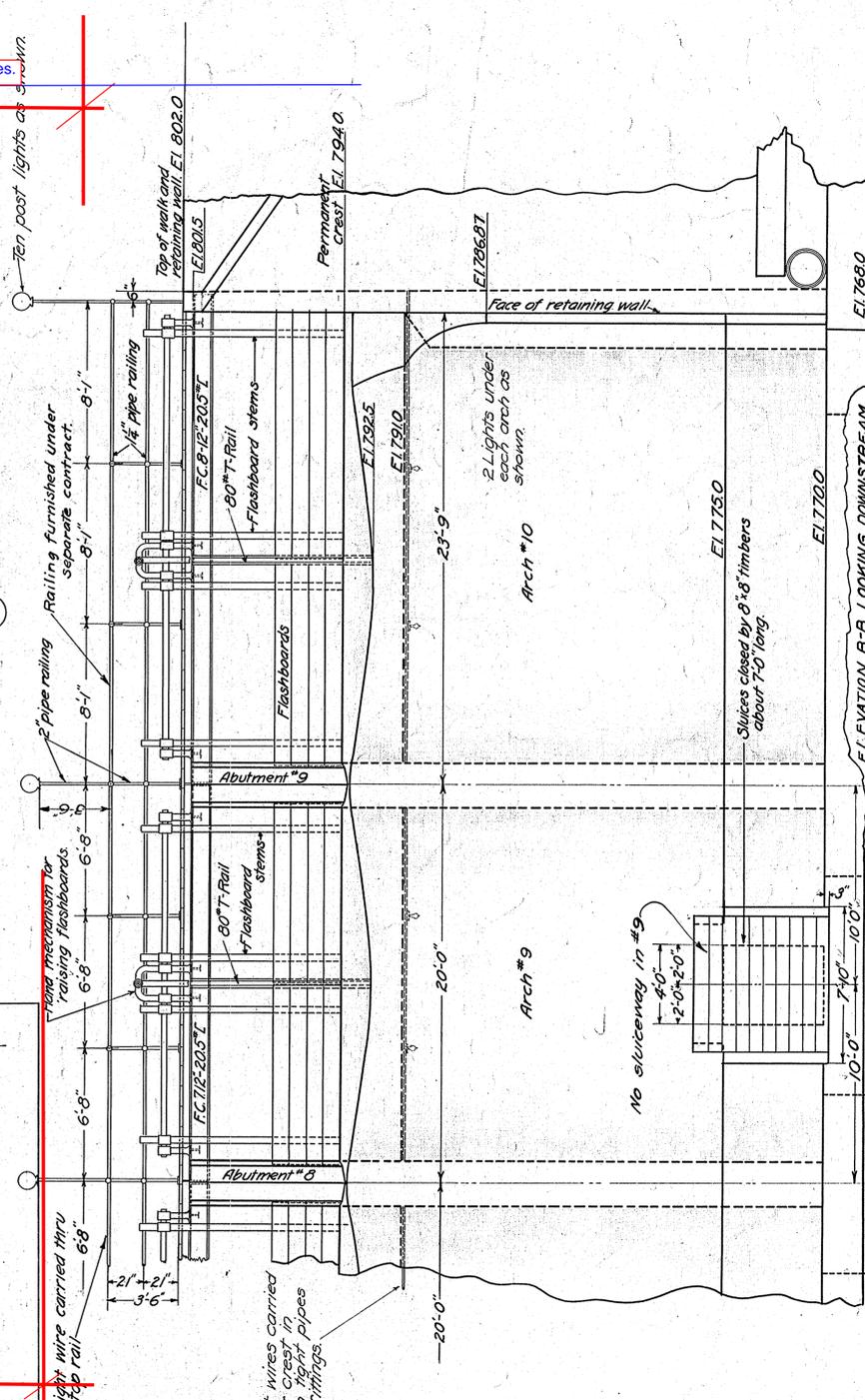
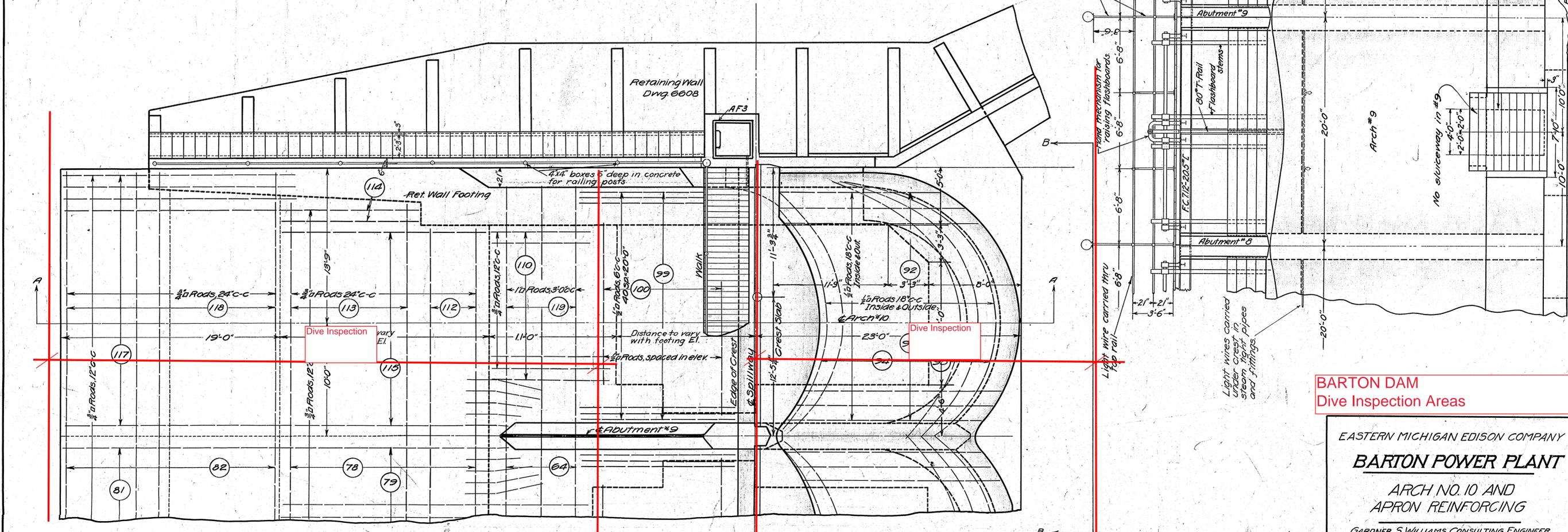
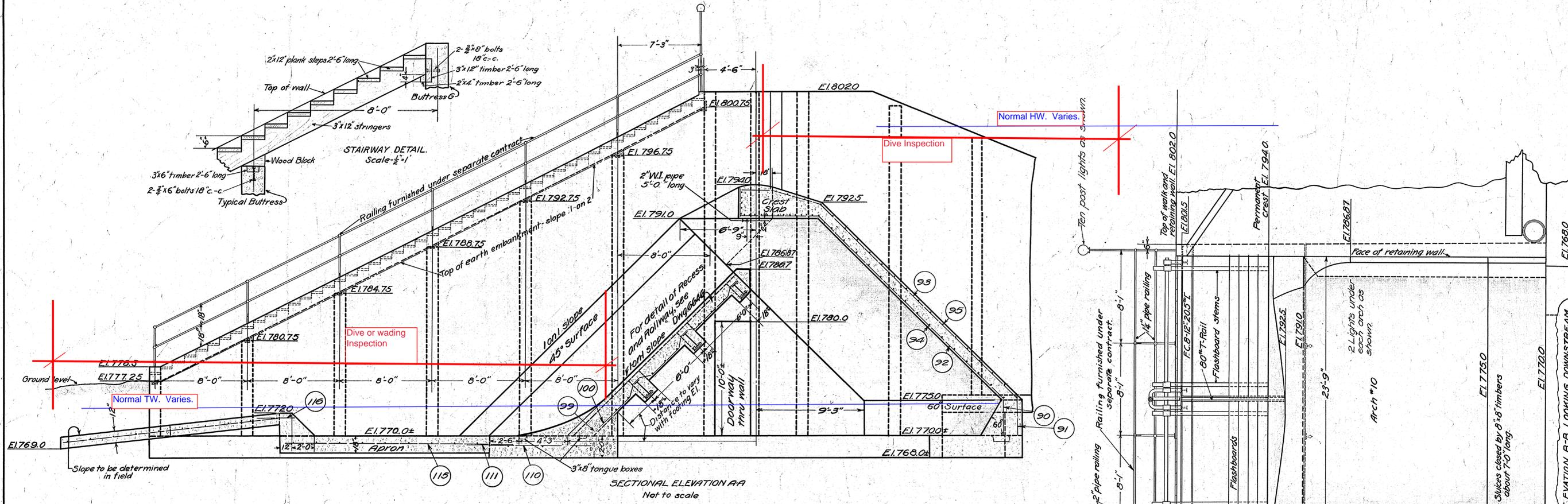
**BARTON DAM**  
**Concrete Inspection Areas**

This sketch shows areas that generally will be inspected above water, though some areas may also be inspected by divers.

EASTERN MICHIGAN EDISON COMPANY  
**BARTON POWER PLANT**  
 SUBSTRUCTURE ELEVATIONS  
 GARDNER S. WILLIAMS, CONSULTING ENGINEER  
 ANN ARBOR, MICHIGAN  
 1912-4-8  
 Scale 1/4"=1'



6554-4

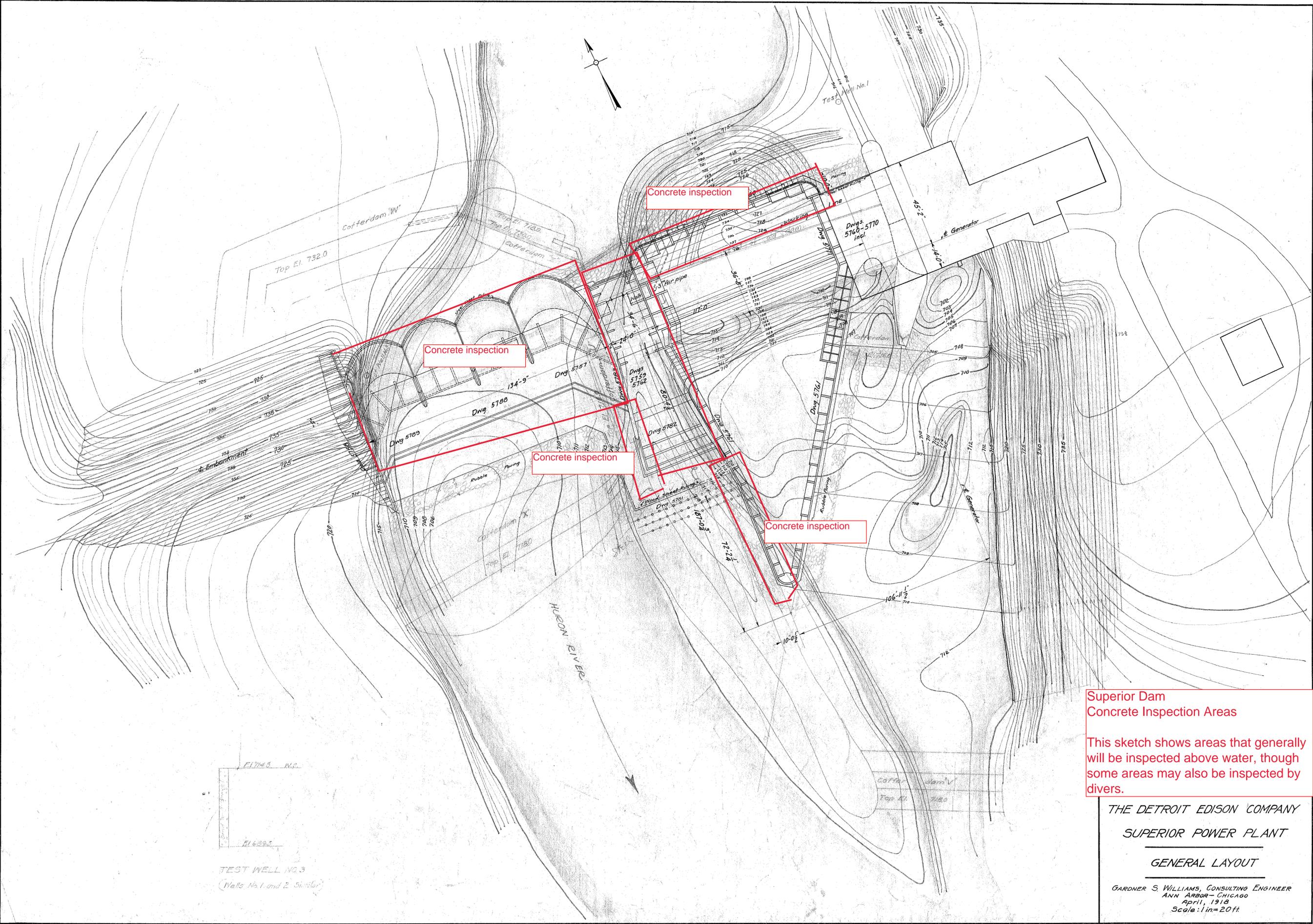


**BARTON DAM**  
Dive Inspection Areas

EASTERN MICHIGAN EDISON COMPANY  
**BARTON POWER PLANT**  
ARCH NO. 10 AND  
APRON REINFORCING  
GARDNER S. WILLIAMS, CONSULTING ENGINEER  
ANN ARBOR, MICHIGAN  
1912-6-20  
Scale #1

Chk. W.F. 8-20-12  
Corrected 1914-10-28

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Concrete inspection

Concrete inspection

Concrete inspection

Concrete inspection

Superior Dam  
Concrete Inspection Areas

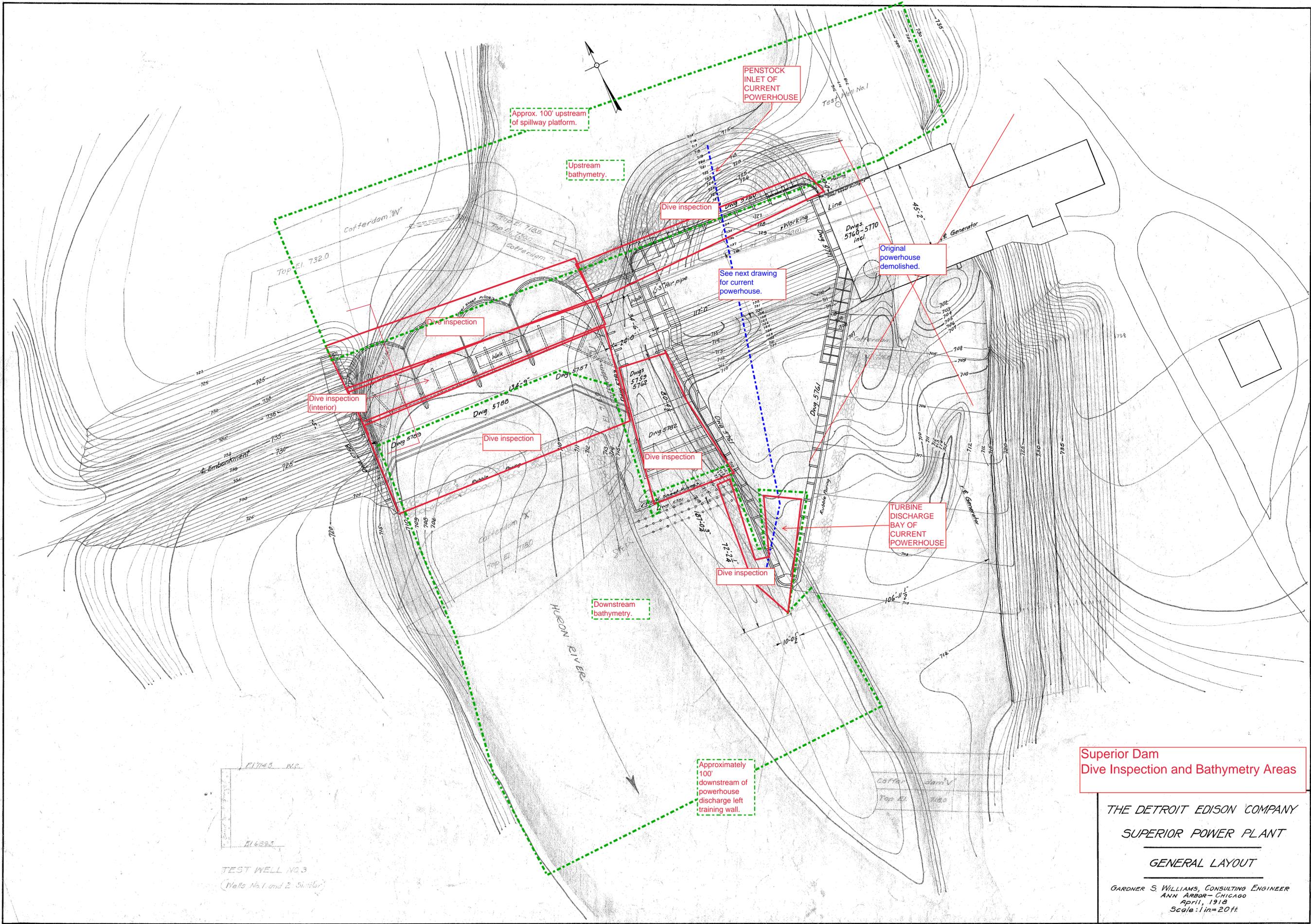
This sketch shows areas that generally will be inspected above water, though some areas may also be inspected by divers.

TEST WELL NO. 3  
(Wells No. 1 and 2 Similar)

THE DETROIT EDISON COMPANY  
SUPERIOR POWER PLANT  
GENERAL LAYOUT  
GARDNER S. WILLIAMS, CONSULTING ENGINEER  
ANN ARBOR - CHICAGO  
April, 1918  
Scale: 1 in = 20 ft



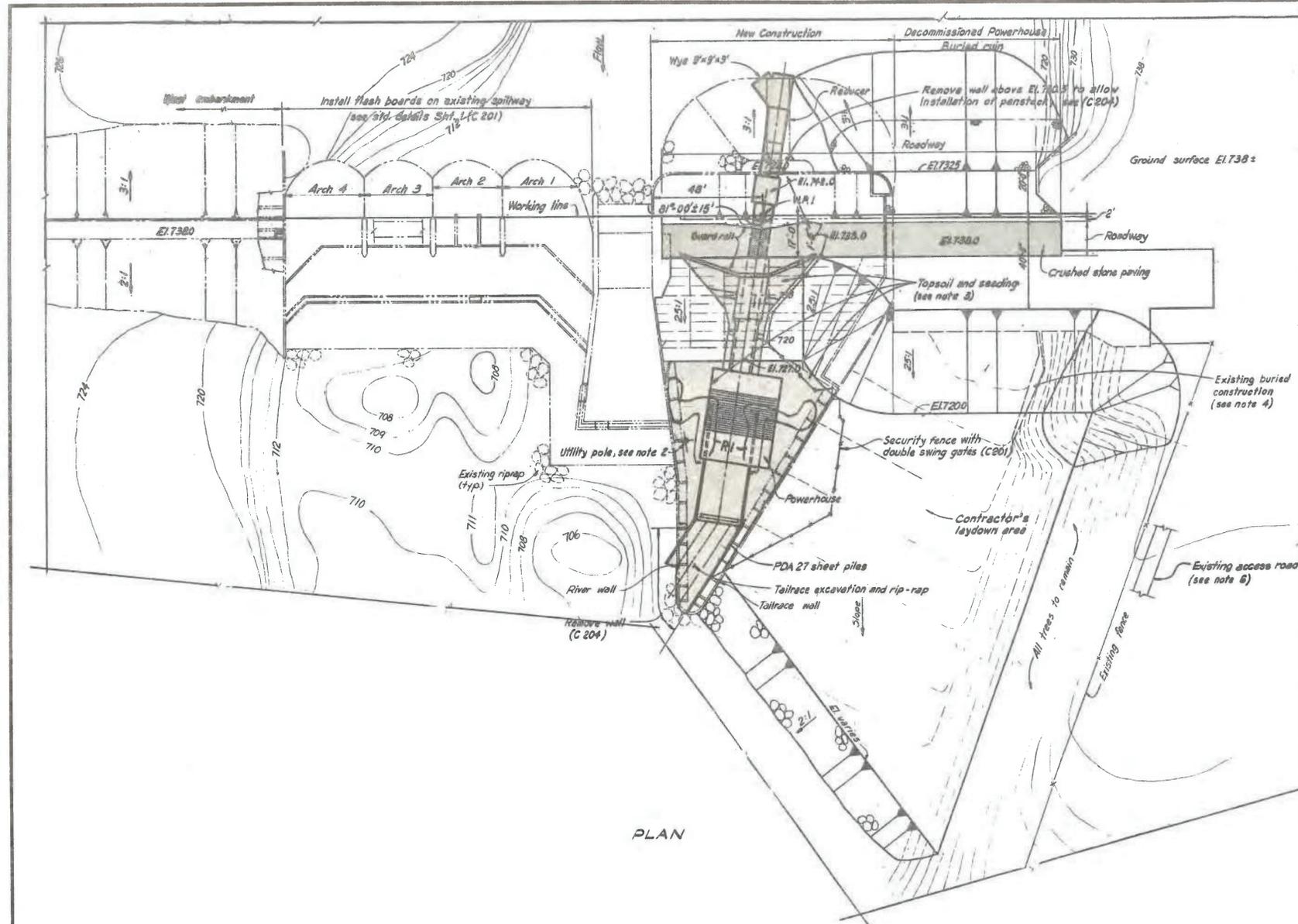




TEST WELL NO. 3  
 (Wells No. 1 and 2 Similar)

**Superior Dam  
 Dive Inspection and Bathymetry Areas**

THE DETROIT EDISON COMPANY  
 SUPERIOR POWER PLANT  
 GENERAL LAYOUT  
 GARDNER S. WILLIAMS, CONSULTING ENGINEER  
 ANN ARBOR - CHICAGO  
 April, 1918  
 Scale: 1 in = 20 ft



PLAN

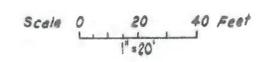


BM 11 N, El. 836.068 - About 25' south of Washtenaw Ave, 1/4 mile east of Carpenter Rd. between Dayton Dr. & Carlton Dr., about 12' east of a fire hydrant.  
 BM 11 V, El. 765.021 - At the northwest corner of the intersection of Forest, about 4' west of a fire hydrant.

REFERENCE DRAWINGS:  
 Work this drawing with 1520 C 201 thru C 211.

- NOTES:
1. CONDITIONS AND DIMENSIONS OF EXISTING PROJECT FEATURES ARE AS SHOWN TO THE CITY. CONTRACTOR SHOULD VERIFY CONDITIONS AND DIMENSIONS IN THE FIELD PRIOR TO THE START OF ANY WORK.
  2. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE INTEGRITY AND OPERABILITY OF THE EXISTING UTILITY POLE. RELOCATION WILL BE DONE ONLY WITH APPROVAL OF THE APPROPRIATE AUTHORITIES AND AT THE COST OF THE CONTRACTOR.
  3. CONTRACTOR SHALL PLACE TOPSOIL AND SEED ALL AREAS AROUND PERISTOCK FILL AND POWERHOUSE CONSTRUCTION TO MATCH EXISTING GRASS COVERED AREAS.
  4. EXISTING BURIED CONSTRUCTION IS DETAILED ON ORIGINAL CONSTRUCTION DRAWINGS AND ON DAM REHABILITATION DRAWINGS.
  5. SHADING [shaded area] INDICATES AREAS OF WORK COVERED IN THIS CONTRACT.
  6. EXISTING ACCESS ROAD TO BE MAINTAINED IN GOOD CONDITION AND KEPT CLEAR FOR DETROIT EDISON TRAFFIC DURING THE LENGTH OF THIS CONTRACT.

Superior Dam  
 Location of current power house



REVIEWED	
DESIGN: JS	
CHKD: WRS	CIVIL
DWR: JM	MECH.
CHKD: WRS	ELECT.
SUBM: WRS	

1	11-20-84	Sheet pile location	JS	WRS
REV. NO.	DATE	NATURE OF REVISION	BY	CHKD. APPD.

CITY OF ANN ARBOR  
 ANN ARBOR MICHIGAN

SUPERIOR DAM POWERSTATION

LOCATION MAP

CONSULTING ENGINEERS  
 HARZA ENGINEERING COMPANY

APPROVED: [Signature]  
 DATE: OCT. 1984  
 DRAWING NO.: 1520 C 200 RI  
 CHICAGO, ILLINOIS

