

**MEMORANDUM OF AGREEMENT  
AMONG  
THE U.S. ARMY CORPS OF ENGINEERS, LOUISVILLE DISTRICT,  
THE ILLINOIS STATE HISTORIC PRESERVATION OFFICER,  
THE KENTUCKY STATE HISTORIC PRESERVATION OFFICER, THE OSAGE  
NATION, AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION  
REGARDING**

**THE REMOVAL OF MARINE FEATURES FOR  
OHIO RIVER LOCK AND DAM 53  
BALLARD COUNTY KY AND PULASKI COUNTY, ILLINOIS**

**WHEREAS**, the U.S. Army Corps of Engineers, Louisville District (Corps) has determined that that the Marine Elements of Ohio River Lock and Dam 53 (L&D 53), a property considered eligible for listing in the National Register of Historic Places (NRHP), pose a life and safety hazard to navigation along the river due to the Marine Elements close proximity to the Olmsted Project's construction area; and

**WHEREAS**, The Corps has determined that the Marine Elements must be demolished in order to eliminate the safety hazard (undertaking); and

**WHEREAS**, the Corps is currently consulting on the replacement of Ohio River Locks and Dams 52 and 53 as part of the Olmsted Locks and Dam Project (Project) but has determined that, due to the imminent nature of the safety hazard, demolition of the Marine Elements of L&D 53 must be completed prior to the conclusion of that consultation; and

**WHEREAS**, the Marine Elements of L&D 53 are defined as: the 1200 foot temporary lock chamber and associated sheetpile; the filling and emptying valves; all timber and steel wickets; all bear trap gate leafs and components above elevation 280.0 feet; miter gates and operating equipment; all timber, sheet, pipe, and H piling at elevation 280.0 and below; access bridge and bulkhead between lock chambers to elevation 280.0; the concrete access road below elevation 320.0; shop-fabricated metal items; mechanical equipment, fixtures and piping from the connection to the lock structure, connections to miter gates and filling/emptying valves; hydraulic and compressed air piping between elevations 306.0 and 275.0; and any electrical equipment, fixtures and wiring associated with the previous elements.

**WHEREAS**, the Area of Potential Effect (APE) is defined as the footprint of the concrete access road below elevation 320.0, the footprint of the Marine Elements below elevation 320.0 and located within the Ohio River, and any staging and access areas associated with the removal of the Marine Elements (see Appendix B for full APE description); and

**WHEREAS**, the Corps has determined that the demolition of the Marine Elements of L&D 53 will have an adverse effect upon NRHP-eligible L&D 53 (including the lock, dam and land based structures); and

**WHEREAS**, the Corps has consulted with the Illinois State Historic Preservation Officer (IL-SHPO) and the Kentucky State Historic Preservation Officer (KY-SHPO) in accordance with Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended (54 USC 306108: Historic Preservation (formerly 16 U.S.C. 470f) and its implementing regulations [36 C.F.R. 800.6(b)(1)] to resolve the adverse effects of the undertaking on historic properties; and

**WHEREAS**, the communities of Brookport, Metropolis, and Olmsted, Illinois together with the Olmsted Historical Society, the River Discovery Center, Landmarks Illinois and the Pulaski County Board of Commissioners also participated in the consultation and have been invited to concur in this Memorandum of Agreement (MOA); and

**WHEREAS**, the Corps understands that L&D 53 is located within a section of the Ohio River that encompasses the water route of the Trail of Tears and the removal route of the Miami Nation and will take appropriate measures to ensure that any concerns of Native American Tribes are addressed; and

**WHEREAS**, the Corps has consulted with the following Native American Tribes who have provided comments: Absentee Shawnee, Cherokee Nation, the Delaware Nation, and the Miami Tribe; and

**WHEREAS**, the Absentee Shawnee, Cherokee Nation, Miami Tribe, and the Delaware Nation have been invited to concur in the MOA; and

**WHEREAS**, the Osage Nation have been invited to sign the MOA as an Invited Signatory: and

**WHEREAS**, in accordance with 36 C.F.R. § 800.6(a)(1), the Corps has notified the Advisory Council on Historic Preservation (ACHP) of its adverse effect determination with specified documentation, and the ACHP has chosen to participate in the consultation pursuant to 36 CFR § 800.6(a)(1)(iii); and

**WHEREAS**, the Corps will continue its on-going consultation with the IL-SHPO, the KY-SHPO, the ACHP and other consulting parties regarding the Olmsted Locks and Dam Project, which will include measures to mitigate for adverse effects to L&Ds 52 and the land elements of L&D 53; and

**NOW, THEREFORE**, the Corps, the ACHP, IL-SHPO and the KY-SHPO agree that the project shall be implemented in accordance with the following stipulations in order to take into account the effect of the undertaking on historic properties.

## Stipulations

The Corps, subject to receiving funds appropriated by the Congress of the United States, shall provide project funds for fulfilling mitigation requirements. The Corps shall ensure that the following measures are carried out:

### I. LOCKS AND DAM 53

#### A. Recordation

1. The Corps shall provide, or contract with a cultural resources consultant that meets or exceeds the Secretary of the Interior's Standards for Professional Qualification to document the demolition of the Marine Elements of L&D 53 through digital photography:
  - a) Photodocumentation shall include prints from digital images showing the marine structural elements pre-demolition, demolition of the marine elements as it occurs, post-demolition views, and views of the surrounding environmental setting. The Corps shall print a set of black and white prints on archival quality, acid-free paper and label each photograph with the resource name, specific element, and direction in pencil or archival pen. A digital copy of the photographs and the photograph log shall be saved on a compact disc (CD).
2. Additionally, in order to preserve a record of L&D 53's history, the Corps shall within twelve (12) months of the execution of the MOA:
  - a) Review/update as needed the Illinois Architectural and Historical Survey Form and the Kentucky Historic Resources Individual Survey Form (KHC 91-1) for L&D 53;
  - b) Create a catalog of scanned photographs from the initial construction of L&D 53 and its demolition providing date, photo direction and subject when available;
  - c) Make copies of the available as-builts for L&D 53; and
  - d) Distribute copies of the above items to the entities listed in Appendix A. The entities will be provided with a CD with digital copies of the items.

#### B. Additional Mitigation

1. The Corps shall direct the demolition contractor to retain any steel wickets greater than 50 percent intact and shall offer them to the Olmsted Historical Society (OHS) and the River Discovery Center (RDC) for display:
  - a) If no metal wickets are salvageable, and if the OHS and RDC request it, the Corps shall provide them with photographs, video, or drawn representation of the wickets within twelve (12) months of the execution of the MOA.
2. The Corps shall prepare a list of salvageable items available for excessing and provide it to the OHS and RDC prior to the completion of the Olmsted Project Consultation. The list shall be provided to the OHS and RDC in pdf format.

### **C. Archaeological Monitoring**

1. The Corps shall provide, or contract with, an archaeologist that meets or exceeds the Secretary of the Interior's Standards for Professional Qualification to monitor the removal of the concrete access ramp below elevation 320.0.
2. The undertaking is located along the water route of the Trail of Tears; therefore, if the consulting Tribes request that a tribal monitor be present for the removal of the concrete access ramp, the Corps shall provide funds for travel, food, and lodging for the duration of the access ramp removal for one monitor agreed upon by the consulting Tribes.

## **II. POST REVIEW DISCOVERY**

- A. If, during the implementation of the Undertaking, a previously unidentified cultural resource is encountered, the Corps will ensure that work stops within 100 feet of this newly discovered cultural resource.
  1. If human remains and/or funerary objects are discovered during the implementation of the Undertaking the Corps shall ensure that all earthmoving activities within 300 feet of the remains shall immediately cease and the Olmsted Project Manager shall be notified. Within one business day of the discovery, the Corps shall notify the SHPO, consulting Tribes, and consulting parties and initiate coordination to develop a treatment plan.
- B. Upon discovery of a previously unknown resource, the Corps will notify/consult with the IL-SHPO, the KY-SHPO, the ACHP and consulting parties to evaluate the newly identified resource and/or develop an appropriate treatment plan, as necessary, pursuant to 36 C.F.R. Part 800, and the Secretary of the Interior's "Standards and Guidelines for Archeology and Historic Preservation."

## **III. DISPUTE RESOLUTION**

- A. Should any signatory or invited signatory that signs the MOA object at any time in writing to the Corps regarding any action carried out or proposed with respect to the Undertaking or to the manner in which the terms of this MOA are implemented, the Corps shall consult with such party to resolve the objection. The Corps shall also notify the other signatories, invited signatories, and concurring parties to this MOA of such objection and provide them the opportunity to participate in any consultations to resolve the objection. If the Corps determines that such objection cannot be resolved, the Corps will:
  1. Forward all documentation relevant to the dispute, including the Corps' proposed resolution, to the ACHP. The ACHP shall provide the Corps with its advice on the resolution of the objection within thirty (30) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, the Corps shall prepare a written response that takes into account any timely advice or

comments regarding the dispute from the ACHP, signatories, and concurring parties, and provide them with a copy of this written response.

2. If the ACHP does not provide its advice regarding the dispute within the thirty (30) day time period, the Corps may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, the Corps shall prepare a written response that takes into account any timely comments regarding the dispute from the Signatories and concurring parties to the MOA, and provide them and the ACHP with a copy of such written response.

The Corps will then proceed with its final decision.

- B. The Corps' responsibility to carry out all other actions subject to the terms of this MOA that are not the subject of the dispute remains unchanged.

#### **IV. TERMINATION**

- A. If the Corps determines that the terms of this agreement cannot be implemented as stipulated or a signatory or invited signatory that signs the MOA determines that the agreement is not being properly implemented, such party may propose to the other signatories to the agreement that it be terminated in accordance with 36 C.F.R. § 800.6 (c)(1) and (8).
- B. The party proposing to terminate this agreement shall so notify all parties to this agreement, including the concurring parties, explaining the reasons for termination and affording the parties at least thirty (30) days to consult and seek alternatives to termination.
- C. If, after the expiration of thirty (30) days an agreement to avoid termination cannot be reached, the Corps or other signatory or invited signatory that signs the MOA may terminate this agreement by notifying all parties in writing.
- D. Should this agreement be terminated, the Corps shall either:
  - 1. Consult with all parties in accordance with 36 C.F.R. § 800.6 to develop a new MOA: or
  - 2. Request the comments of the ACHP pursuant to 36 C.F.R. § 800.7.

#### **V. AMENDMENTS**


- A. Any signatory or invited signatory to this agreement that signs the MOA may propose to the Corps that the agreement be amended, whereupon the Corps shall consult with the other parties to this agreement to consider such an amendment. The execution of any such agreement shall be governed by 36 C.F.R. § 800.6(c)(1). The signatures of all of the signatories shall be required for any amendment to take effect.

## VI. DURATION

- A. All Stipulations must be completed within two (2) years of the execution of this MOA. If the terms of this agreement have not been satisfied within the specified time frame, the Corps shall so notify the parties to this agreement and the Corps shall re-initiate review of the Undertaking in accordance with 36 C.F.R. Part 800.
- B. This agreement shall be effective upon signature of the ACHP and shall remain in effect until the earliest of the following occurs: all of its terms are satisfied, it is amended or terminated and replaced, the one (1) year time limit has expired, or the Corps notifies the parties to the agreement the Corps has re-initiated review of the Undertaking.
- C. Execution of this agreement and implementation of its terms shall demonstrate that the Corps has afforded the ACHP an opportunity to comment on the proposed Undertaking and its effects on historic properties and that the Corps has taken into account the effects of the proposed Undertaking on historic properties.

## SIGNATORIES:

### U.S. ARMY CORPS OF ENGINEERS, LOUISVILLE DISTRICT

  
\_\_\_\_\_  
Antoinette R. Gant  
Colonel, U.S. Army  
District Commander

4 June 2018  
Date

### KENTUCKY STATE HISTORIC PRESERVATION OFFICER

  
\_\_\_\_\_  
Craig Potts  
Executive Director and State Historic Preservation Officer  
Kentucky Heritage Council

6-26-18  
Date

Approved as to form and legality:

  
\_\_\_\_\_  
William H. Adams II  
Legal Counsel  
Tourism, Arts & Heritage Cabinet

June 26, 2018  
Date

Memorandum of Agreement  
Marine Elements Lock and Dam 53  
Ballard Co, KY and Pulaski Co, IL

ILLINOIS STATE HISTORIC PRESERVATION OFFICER

  
\_\_\_\_\_

Rachel Leibowitz  
Deputy State Historic Preservation Officer  
Illinois Department of Natural Resources

7/30/18  
\_\_\_\_\_  
Date

ADVISORY COUNCIL ON HISTORIC PRESERVATION

  
\_\_\_\_\_

John M. Fowler  
Executive Director

8/2/18  
\_\_\_\_\_  
Date

**INVITED SIGNATORY:**

**Osage Nation**

  
\_\_\_\_\_  
Geoffrey Standing Bear  
Principal Chief

7-11-18  
Date



Memorandum of Agreement  
Marine Elements Lock and Dam 53  
Ballard Co, KY and Pulaski Co, IL

**CONCUR:**

**Miami Nation**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Douglas Lankford, Chief

Memorandum of Agreement  
Marine Elements Lock and Dam 53  
Ballard Co, KY and Pulaski Co, IL

**Absentee Shawnee Tribe**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Edwina Butler-Wolfe, Governor

**Cherokee Nation**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Bill John Baker, Principal Chief

Memorandum of Agreement  
Marine Elements Lock and Dam 53  
Ballard Co, KY and Pulaski Co, IL

**Delaware Nation**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Deborah Dotson, President

Memorandum of Agreement  
Marine Elements Lock and Dam 53  
Ballard Co, KY and Pulaski Co, IL

**Brookport, Illinois**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Tami Wessel, Mayor

JUL 30 2018

JUL 30 1

**Metropolis, Illinois**

By: Billy McDaniel  
Billy McDaniel, Mayor

Date: 7/24/18

JUL 10 2018

Memorandum of Agreement  
Marine Elements Lock and Dam 53  
Ballard Co, KY and Pulaski Co, IL

**Olmsted, Illinois**

By:  Date: 07/05/2018  
Curtis Marshall, Mayor

Memorandum of Agreement  
Marine Elements Lock and Dam 53  
Ballard Co, KY and Pulaski Co, IL

**Olmsted Historical Society**

By: Marilyn Turner Date: 07/05/2018  
Marilyn Turner, President



Memorandum of Agreement  
Marine Elements Lock and Dam 53  
Ballard Co, KY and Pulaski Co, IL

**River Discovery Center**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Julie Harris, Executive Director

JUL 24 2018

**Landmarks Illinois**

By: Bonnie McDonald Date: 7/16/2018  
Bonnie McDonald, President and CEO

Memorandum of Agreement  
Marine Elements Lock and Dam 53  
Ballard Co, KY and Pulaski Co, IL

**Pulaski County Board of Commissioners**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Monte Russell, Chairman

## Appendix A

**Distribution List for L&D 53 Marine Element Documentation**

IL-SHPO  
KY-SHPO  
Olmsted Historical Society  
River Discovery Center

## **Appendix B**

Area of Potential Effects for the  
Removal of Lock and Dam 53 Marine Elements on the Ohio River in  
Pulaski County, Illinois and Ballard County, Kentucky

This Area of Potential Effects (APE) is being prepared as a result of the immediate need to remove the Marine Elements of Ohio River Locks and Dam 53 (L&D 53). L&D 53 is included in the APE for the Olmsted Project, which will replace Ohio River Locks and Dams 52 and 53 with two new lock chambers and a new dam. Initially, the Corps intended to demolish both L&D 52 and 53 once Olmsted became operational; however, the Corps has determined that the Marine Elements of L&D 53 pose an unacceptable risk to safe navigation and potential loss of life due to L&D 53's close proximity to the Olmsted Project's construction area.

Daily river level values from January 1, 2014 to July, 1 2017 show that river levels at L&D 53 have been above the elevation of the lock walls (295.0) 72.9% of the time. These values also show that 70.5% of this same time period the levels at L&D 53 have been above the pool elevation (295.3) Olmsted L&D will hold once it is operational. At these water elevations, the L&D 53 Marine Elements are submerged navigation hazards.

All tow traffic must clear the Olmsted Locks' nose pier before initiating a turn, therefore a typical tow would be at least one tow-length (approximately 1200 feet) upstream of Olmsted before it could begin to execute any turn to avoid submerged obstructions at L&D 53. Tows do not turn easily or quickly and tows must make shallow turns or risk turning too far crosswise to the flow of the river, causing the tow to come loose or break apart. Since the barges that make up the tow are not manned or powered, a loose barge upstream of the Olmsted L&D could follow the current downstream, striking the locks or the dam and damaging them. The demolition of the L&D 53 Marine Elements before Olmsted becomes operational is essential for safe navigation through this area and to ensure the safety of the Olmsted L&D and construction workers.

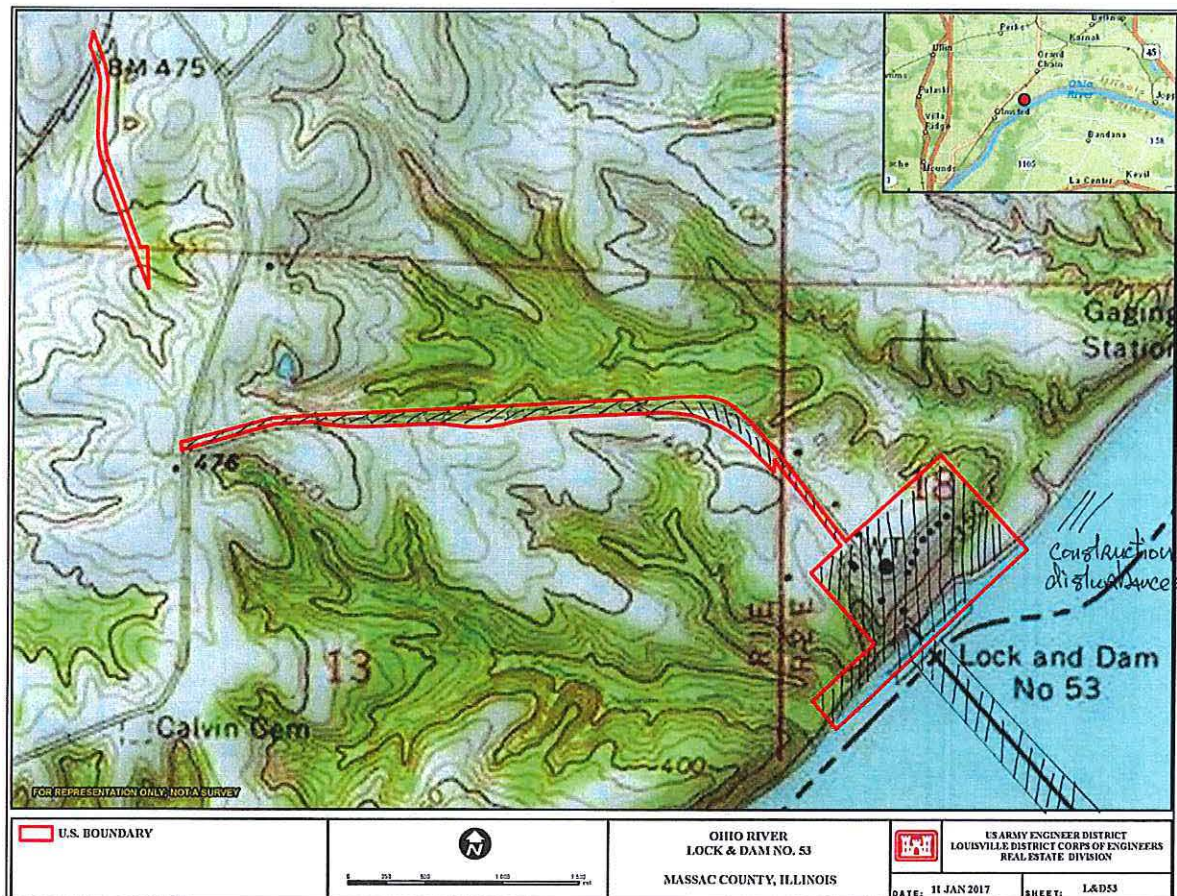
In order to facilitate the immediate removal of the L&D 53 Marine Elements the Corps has prepared an APE focused on the Marine Elements of L&D 53. The APE is defined as the footprint of the concrete access road below elevation 320.0, the footprint of the Marine Elements below elevation 320.0 located within the Ohio River, and any staging and access areas associated with the removal of the Marine Elements. The land-based elements of L&D 53 will remain part of the Olmsted Project APE.

The primary impacts of removing the Marine Elements of L&D 53 are demolition and disposal of the demolition material. The removal of the access ramp and the buried cabling below elevation 320.0 will involve some ground disturbance. No potential viewshed impacts have been identified. This is due to the isolated location of the facility (Figure 1) well away from densely populated areas.

**L&D 53 Marine Elements** – The Marine Elements of L&D 53 to be demolished include: the 1200 foot temporary lock chamber and associated sheetpile; the filling and emptying valves; all timber and steel wickets; all bear trap gate leafs and components above elevation 280.0; miter gates and operating equipment; all timber and steel wickets; all timber, sheet, pipe, and H piling

at elevation 280.0 and below; access bridge and bulkhead between lock chambers to elevation 280.0; the concrete access road below elevation 320.0; shop-fabricated metal items; mechanical equipment, fixtures and piping from the connection to the lock structure, connections to miter gates and filling/emptying valves; hydraulic and compressed air piping between elevations 306.0 and 275.0; and any electrical equipment, fixtures and wiring associated with the previous elements. The demolition work to be undertaken will be accomplished from the river and much of the demolition will likely occur underwater due to river levels.

Figure 1 – Location of L&D 53 Fee Held Land.



If any steel wickets are salvageable, they will be retained and stored onsite until the Olmsted Project consultation is completed. All other metal material recovered during demolition will be loaded on barges and taken to be scrapped. Concrete and rock generated by demolition will be placed in the 600' lock chamber against the 600' lock land wall and will also be used to fill a scour hole located just downstream (south) of the dam.

Draft figures of the proposed demolition are attached (Figures 2-5). These figures, while considered draft, do show what sections of the locks and dam will be demolished and to what elevation they will be taken down to in order to not be a navigation hazard. They also show the contractor work area as well as where the concrete and rock materials will be disposed of within



the work area (600' lock chamber and scour hole). The majority of the contractor work area will be staging for floating work barges.

Construction photographs (Figures 6-9) from the initial construction show that a very wide corridor of river bottom was exposed and disturbed during construction. Therefore the demolition of L&D 53 would occur within a highly disturbed area and the potential for undisturbed archaeological sites is low.

Figure 2 – Footprint of Marine Elements

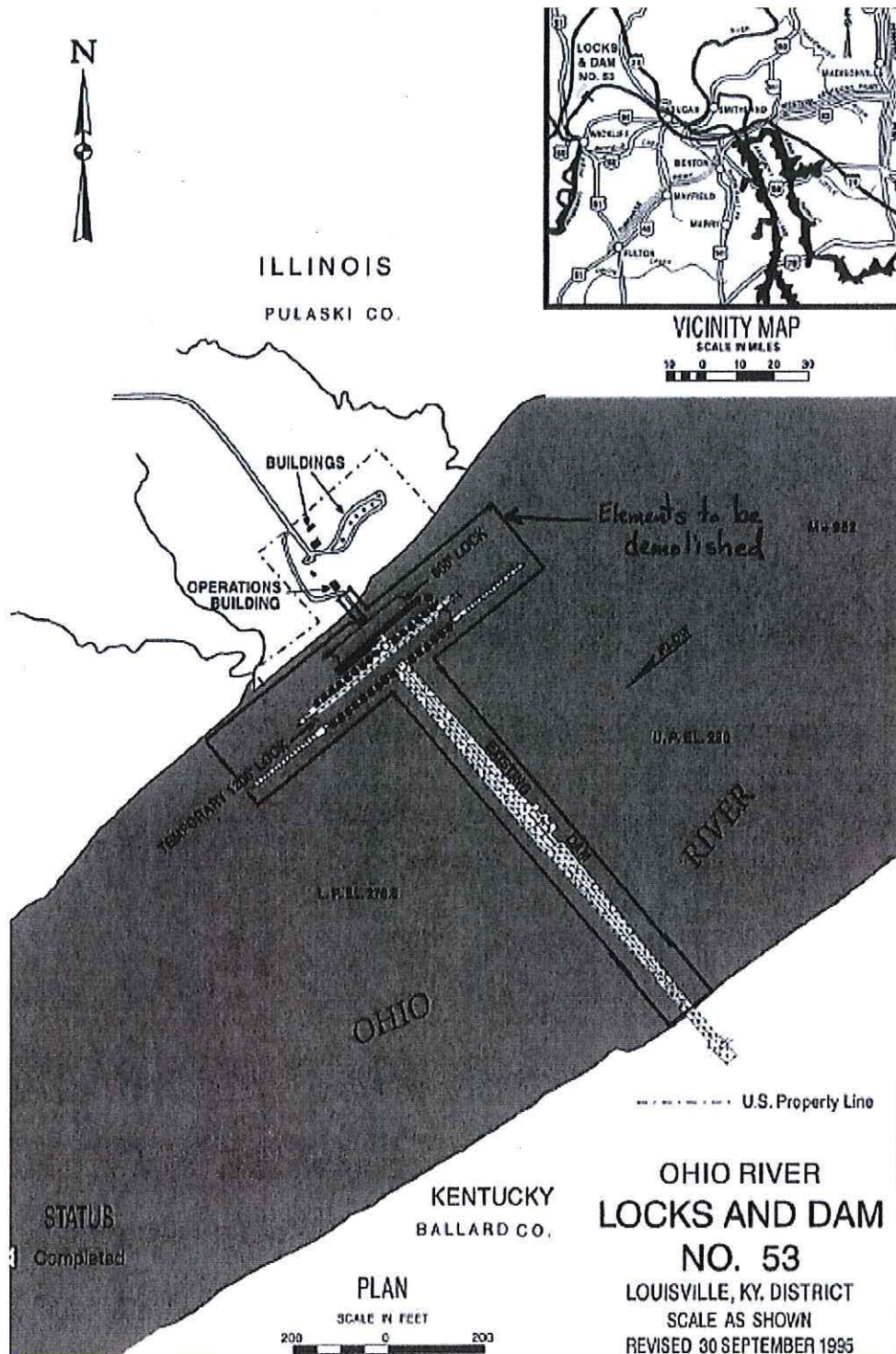


Figure 3. Access Ramp and Utility Corridor Where Demolition Will Occur (Cross Hatched Area)

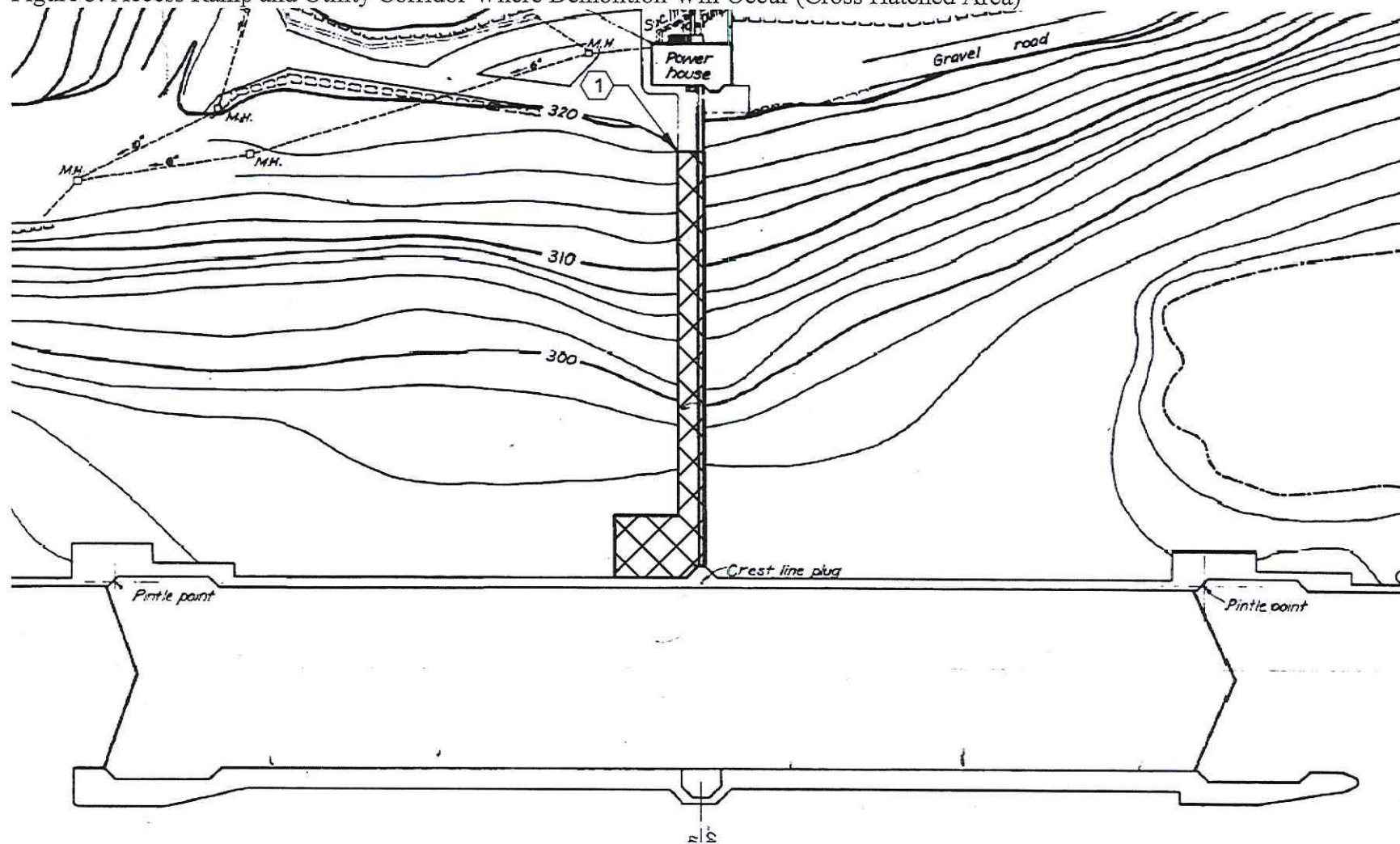


Figure 4. L&D 53 Profile Showing Elevations To Which Elements Will be Removed

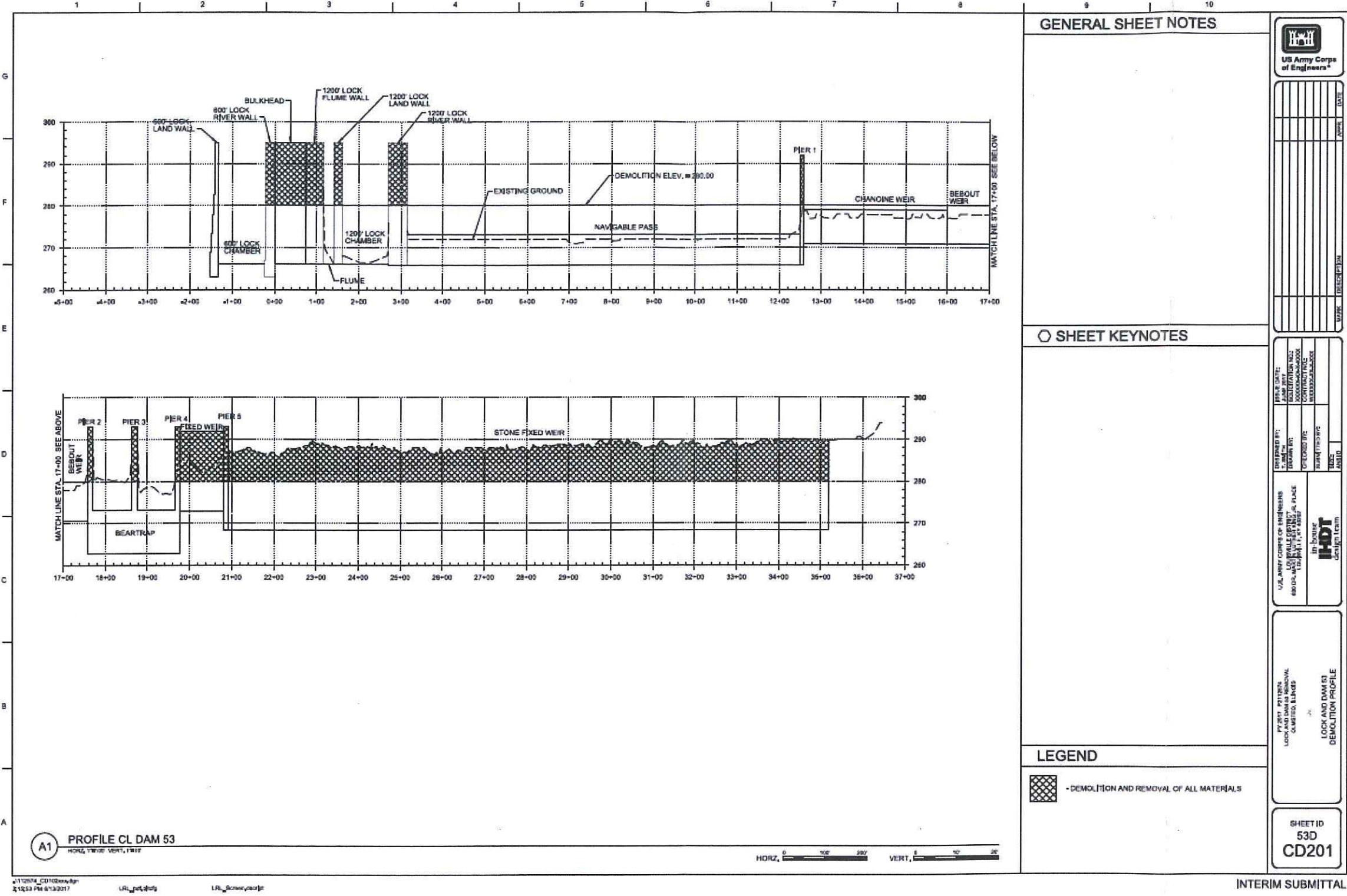
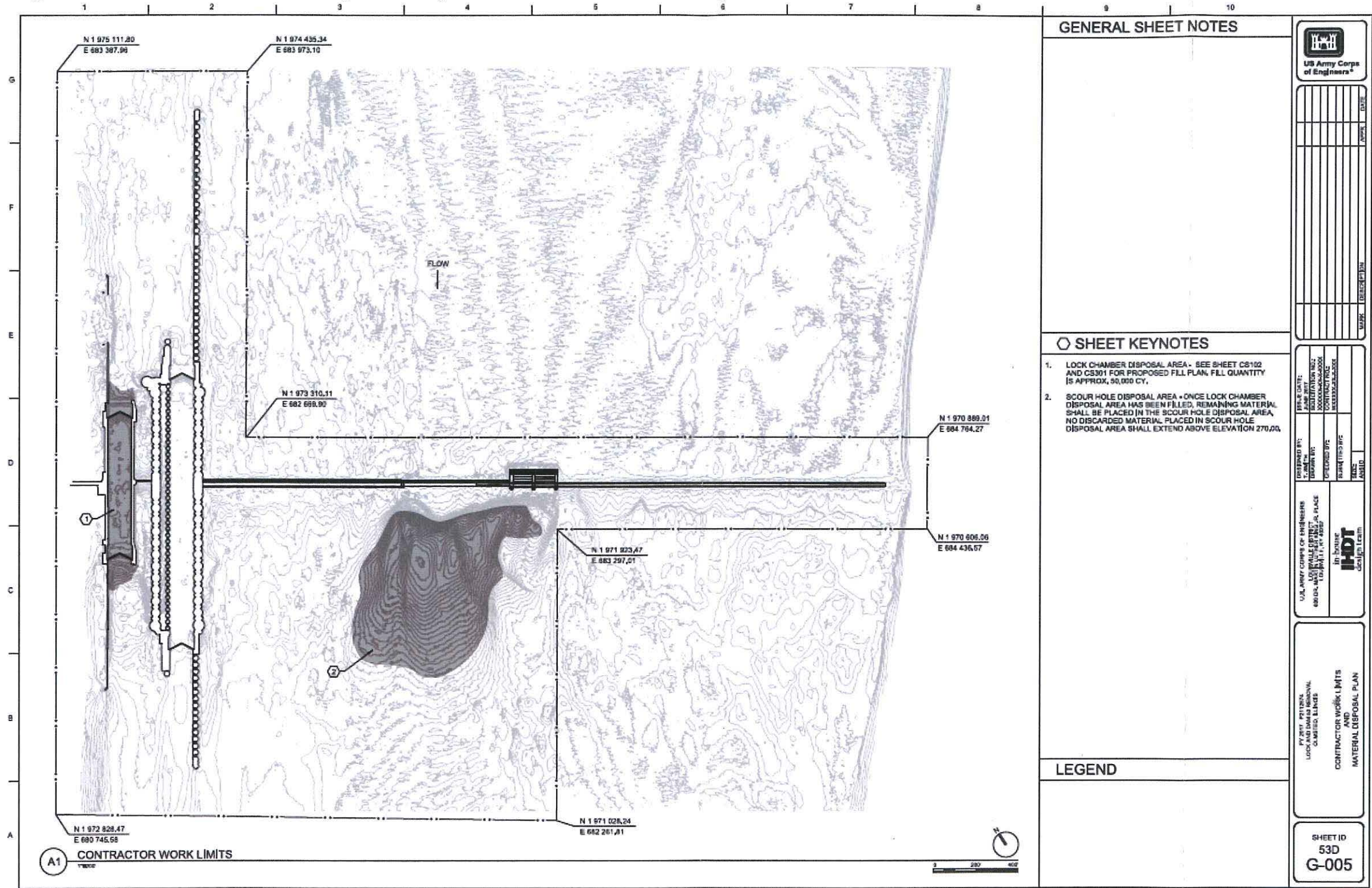


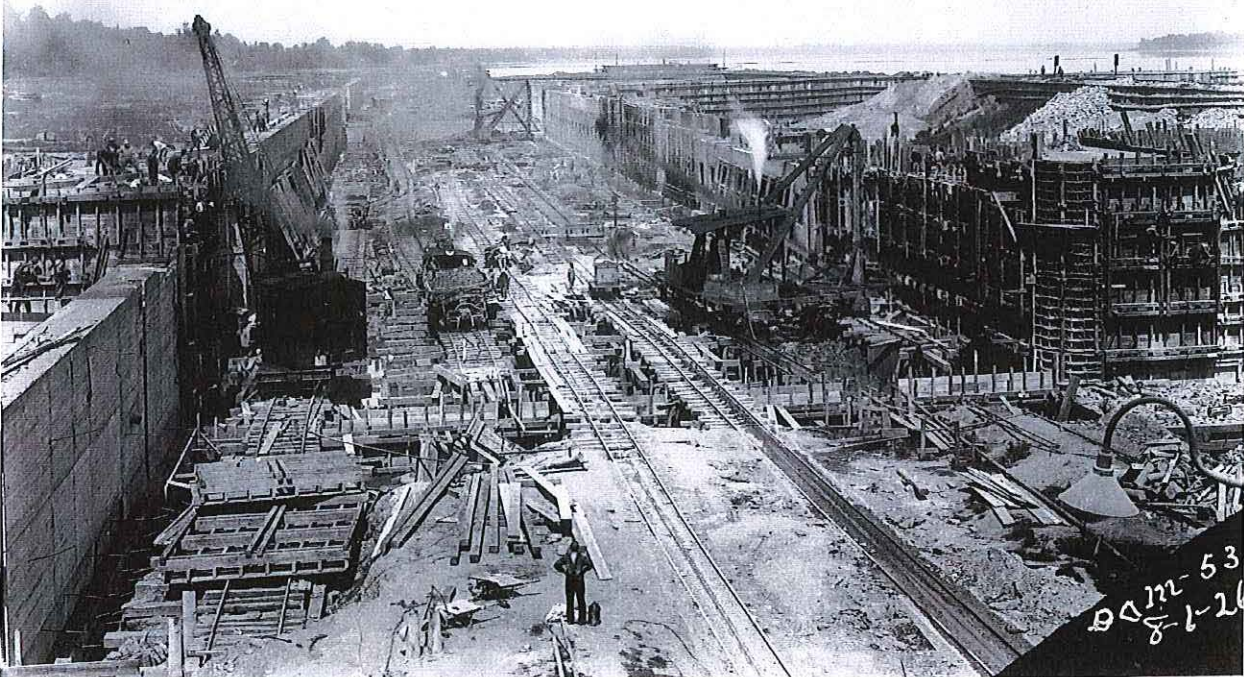
Figure 5. Contractor Work Limits and Disposal Areas (600' Lock Chamber and Scour Hole)



11/20/14 CS102.dwg  
 11/20/14 11:13:00 AM  
 LRJ\_jed,ldp  
 LRJ\_schwer,pcd

Memorandum of Agreement  
Olmsted Locks and Dam  
Ballard County, KY and  
Pulaski County, IL

Figure 6 - Marine Based Construction Activity at L&D 53



Memorandum of Agreement  
Olmsted Locks and Dam  
Ballard County, KY and  
Pulaski County, IL

Figure 7 - Marine Based Construction Activity at L&D 53

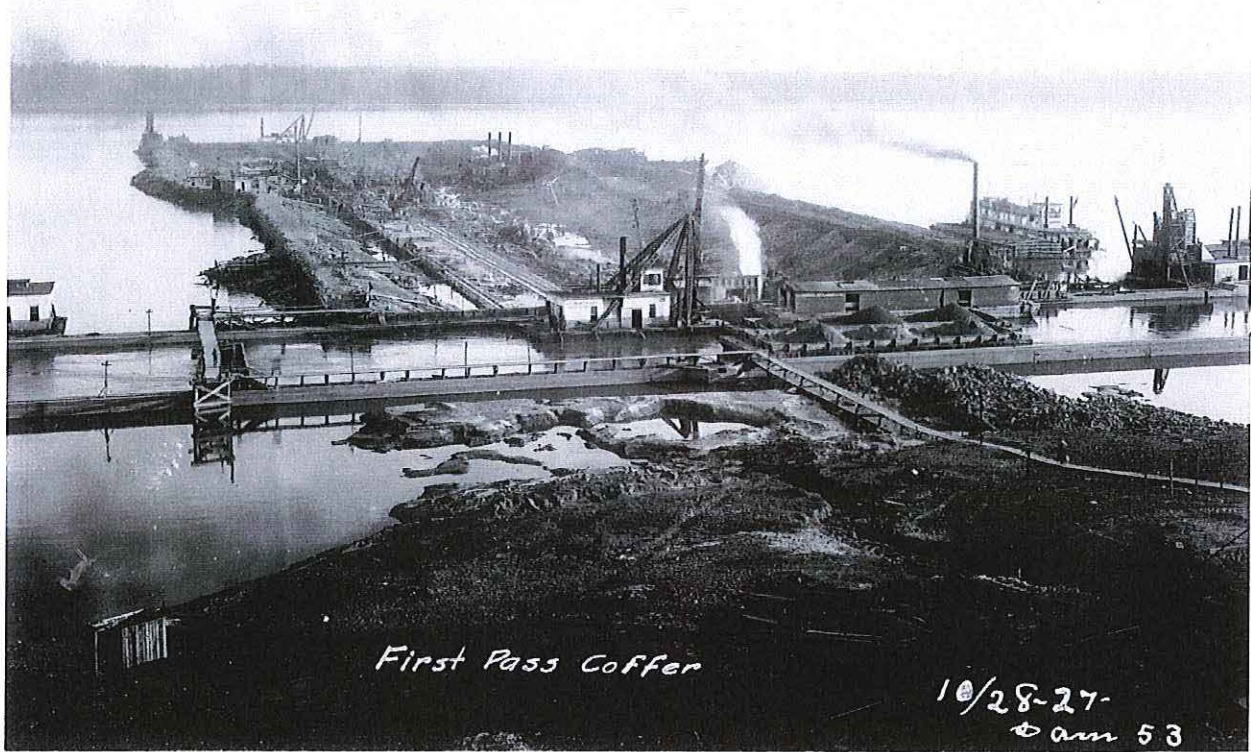
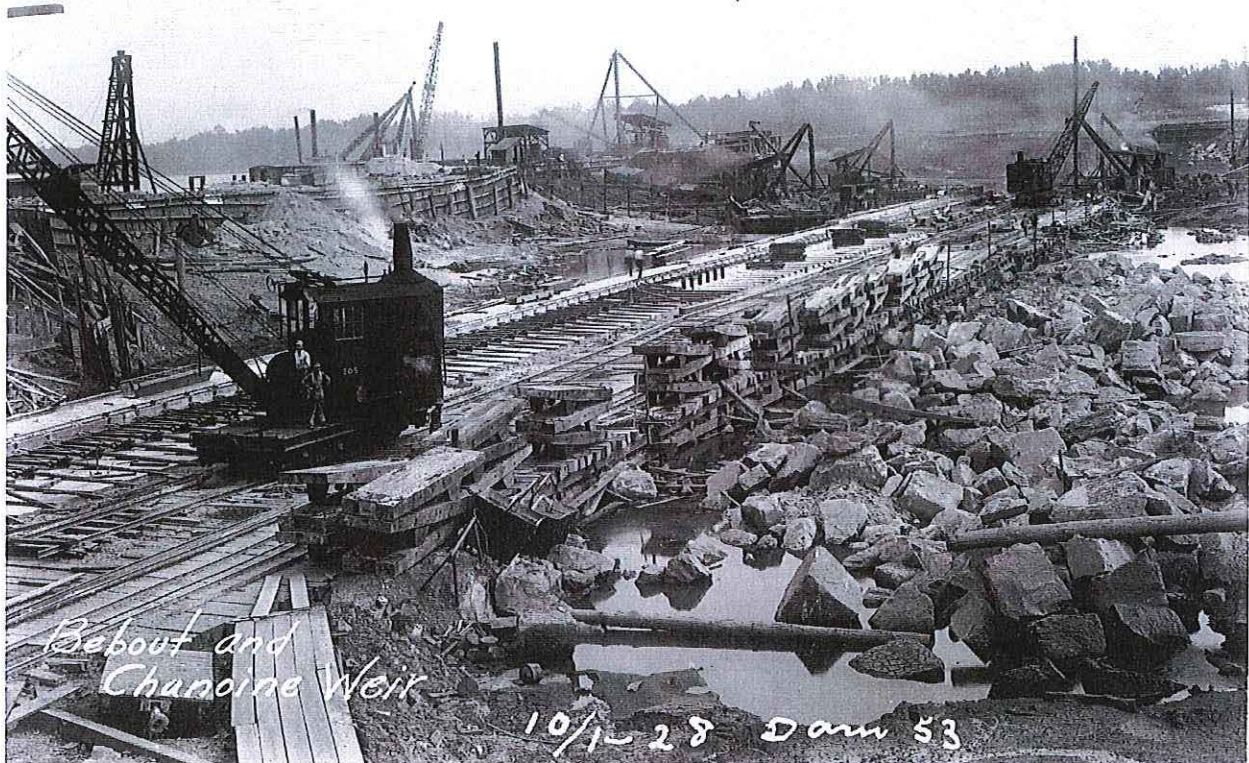


Figure 8 - Marine Based Construction Activity at L&D 53



Memorandum of Agreement  
Olmsted Locks and Dam  
Ballard County, KY and  
Pulaski County, IL

Figure 9 - Marine Based Construction Activity at L&D 53

