

CUYAHOGA VALLEY NATIONAL PARK  
Environmental Assessment for Tinkers Creek Aqueduct – Phase II

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**Appendix A**  
**Laws (Statutes), Executive Orders, Regulations, Policies and Guidelines**

Following are descriptions for some of the laws, executive orders, regulations, and policies that are referenced in the Environmental Assessment.

Antiquities Act of 1906 provided for protection of historic, prehistoric, and scientific features on federal lands, with penalties for unauthorized destruction or appropriation of antiquities; authorized the President to proclaim nation monuments; authorized scientific investigation of antiquities on federal lands subject to permit and regulations.

Archaeological and Historic Preservation Act of 1974 (P.L. 93-291; 88 Stat. 174) amended the 1960 Reservoir Salvage Act; provided for the preservation of significant scientific, prehistoric, historic and archaeological materials and data that might be lost or destroyed as a result of federally sponsored projects; provided that up to one percent of project costs could be applied to survey, data recovery, analysis, and publication.

Archaeological Resources Protection Act (ARPA) of 1979 (P.L. 96-95; 93 Stat. 712) defined archaeological resources as any material remains of past human life or activities that are of archaeological interest and at least 100 years old; required federal permits for their excavation or removal and set penalties for violators; provided for preservation and custody of excavated materials, records, and data; provided for confidentiality of archaeological site locations; encouraged cooperation with other parties to improve protection of archaeological resources. Amended in 1988 to require development of plans for surveying public lands for archaeological resources and systems for reporting incidents of suspected violations.

The Clean Water Act CWA) of 1977 is an amendment to the Federal Water Pollution Control Act of 1972, enacted by Congress to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. The CWA created three permit programs - Section 401 as a certification mechanism, and Section 402 and Section 404 to regulate the point-source discharge of pollutants into waters of the U.S.

The Endangered Species Act of 1973, as amended, prohibits federal actions from jeopardizing the existence of federally-listed threatened or endangered species or adversely affecting designated critical habitat. Federal agencies must consult with the U.S. Fish and Wildlife Service to determine the potential for adverse effects. Federal agencies are also responsible for improving the status of listed species.

Historic Sites Act of 1935, declared it a national policy to preserve historic sites, buildings, and objects for public use and authorized the NPS to “restore, reconstruct, rehabilitate, preserve, and

maintain historic and prehistoric sites, buildings, objects, and properties of national historical or archaeological significance.”

The National Environmental Policy Act of 1969 (NEPA), as amended, requires detailed and documented environmental analysis of proposed federal actions that may affect the quality of the human environment.

The National Historic Preservation Act (NHPA) of 1966, as amended, declared historic preservation as a national policy and authorized the Secretary of the Interior to expand and maintain a National Register of Historic Places that would include properties of national, state, and local historic significance. The Act recommends that federal agencies proposing action consult with the State Historic Preservation Officer regarding the existence and significance of cultural and historical resource sites.

National Park Service Organic Act of 1916 established the National Park Service “to promote and regulate the use of the Federal areas known as national parks, monuments, and reservations hereinafter specified, except as are under the jurisdiction of the Secretary of the Army, as provided by law, by such means and measures as conform to the fundamental purpose to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment for the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.”

National Park System General Authorities Act of 1970 has as its purpose to include all areas administered by the National Park Service in one National Park System and to clarify the authorities applicable to the system.

The Native American Graves Protection and Repatriation Act (NAGPRA) of 1990. These regulations address the rights of lineal descendants, Indian tribes, and native Hawaiian organizations to Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony. They require federal agencies and institutions that receive federal funds to provide information about Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony to lineal descendants, Indian tribes, and native Hawaiian organizations and, upon presentation of a valid request, dispose of or repatriate these objects to them.

Public Law 93-555 is enabling legislation that established the Cuyahoga Valley National Recreation Area

Executive Order (EO) 11593 (Protection and Enhancement of the Cultural Environment) instructs all federal agencies to support the preservation of cultural properties and directs them to identify and nominate to the National Register cultural properties under their jurisdiction and to “exercise caution...to assure that any federally-owned property that might qualify for nomination is not inadvertently transferred, sold, demolished, or substantially altered.”

EO 11988 directs federal agencies to protect, preserve, and restore the natural resources and functions of floodplains; avoid the long- and short-term environmental effects associated with the occupancy and modification of floodplains; and avoid direct and indirect support of

floodplain development and actions that could adversely affect the natural resources and functions of floodplains or increase flood risks.

EO 11990 (Protection of Wetlands) directs federal agencies to minimize impacts and mitigate the destruction, loss, or degradation of wetlands; preserve, enhance and restore the natural and beneficial values of wetlands; and avoid direct and indirect support of new construction in wetlands unless there are no practicable alternatives and the proposed action includes all practicable measures to minimize harm to wetlands. NPS policies for implementing EO 11990 are found in Director's Order 77-1 "Wetland Protection" and the associated Procedural Manual. This order requires that parks assess all direct or indirect impacts, including whether each alternative "supports, encourages, or otherwise facilitates additional wetland development."

EO 13112 requires that federal agencies act to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause.

EO 13186 (Responsibilities of Federal Agencies to Protect Migratory Birds) directs Federal agencies to avoid taking actions that have a measurable negative effect on migratory bird populations. If such actions are taken, the EO directs agencies "to develop and implement within two years a Memorandum of Understanding with the U.S. Fish and Wildlife Service that shall promote the conservation of migratory bird populations." This EO also defines migratory bird "species of concern" as "those species listed in the periodic report Migratory Nongame Birds of Management Concern in the United States, priority migratory bird species as documented by established plans [such as Bird Conservation Regions in the North American Bird Conservation Initiative or Partners in Flight physiographic areas], and those species listed in 50 CFR 17.11 [Endangered Species Act]".

Part 36 of the Code of Federal Regulations (CFR) provides for the proper use, management, government, and protection of persons, property, and natural and cultural resources within areas under the jurisdiction of the NPS.

- ❑ 36 CFR 60 (NHPA and EO 11593), "National Register of Historic Places," addresses concurrent state and federal nominations, nominations by federal agencies, and removal of properties from the National Register.
- ❑ 36 CFR 63 (NHPA and EO 11593), "Determinations of Eligibility for inclusion in the National Register of Historic Places," establishes process for federal agencies to obtain determinations of eligibility on properties.
- ❑ 36 CFR 65 (Historic Sites Act of 1935), "National Historic Landmarks Program," establishes criteria and procedures for identifying properties of national significance, designating them as national historic landmarks, revising landmark boundaries, and removing landmark designations.

- ❑ 36 CFR 68 (NHPA) contains the Secretary of the Interior's standards for historic preservation projects, including acquisition, protection, stabilization, restoration, and reconstruction.
- ❑ 36 CFR 79 (NHPA and ARPA), "Curation of Federally-owned and Administered Archeological Collections," provides standards, procedures and guidelines to be followed by federal agencies in preserving and providing adequate long-term curatorial services for archeological collections of prehistoric and historic artifacts and associated records that are recovered under Section 110 of the NHPA, the Reservoir Salvage Act, ARPA and the Antiquities Act.
- ❑ 36 CFR 800 (NHPA and EO 11593), "Protection of Historic and Cultural Properties," includes regulations of the Advisory Council on Historic Preservation to implement Section 106 of the NHPA as amended, and presidential directives issued pursuant thereto.

40 CFR 1500-1508 (Council on Environmental Quality NEPA regulations of 1978) - provides Regulations for Implementing the Procedural Provisions of NEPA.

43 CFR 3 (Antiquities Act) establishes procedures to be followed for permitting the excavation or collection of prehistoric and historic objects on federal lands.

43 CFR 7, Subparts A and B (ARPA, as amended), "Protection of Archaeological Resources, Uniform Regulations" and "Department of the Interior Supplemental Regulations," provides definitions, standards, and procedures for federal land managers to protect archaeological resources and provides further guidance for Interior bureaus on definitions, permitting procedures, and civil penalty hearings.

The NPS Management Policies (NPS 2006) provide general guidance for managing natural resources.

Cuyahoga Valley National Park's General Management Plan (NPS, 1977) provides the overall concept for management and resource preservation for compatible recreational use.

CUYAHOGA VALLEY NATIONAL PARK  
Environmental Assessment for Tinkers Creek Aqueduct – Phase II

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**Appendix B**

**Public Involvement/Scoping**

**CONTENTS**

Scoping Letter

List of Recipients of Scoping Letter

CUYAHOGA VALLEY NATIONAL PARK  
Environmental Assessment for Tinkers Creek Aqueduct – Phase II

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**Appendix B**

**Public Involvement/Scoping**

SCOPING LETTER



# United States Department of the Interior

## NATIONAL PARK SERVICE

Cuyahoga Valley National Park

15610 Vaughn Road

Brecksville, Ohio 44141-3097

IN REPLY REFER TO: L7617

### **PUBLIC INPUT SOUGHT ON TINKERS CREEK AQUEDUCT REPLACEMENT**

The National Park Service is in the process of preparing an Environmental Assessment (EA) for the replacement of the Tinkers Creek Aqueduct. The EA will include discussions of the proposed project's potential impacts on the environment. This document is being prepared in accordance with the National Environmental Policy Act and the regulations of the Council on Environmental Quality (40 CFR 1508.9).

We cordially invite you to provide input regarding alternatives, environmental impact topics and the scope of this EA. Your participation ensures that we fully understand the interests and needs of our friends and neighbors as part of our natural heritage, cultural traditions, and community surroundings.

The Tinkers Creek Aqueduct is a functioning component of the Ohio & Erie (O&E) Canal within Cuyahoga Valley National Park. In 2000, due to the advanced state of deterioration of the existing metal aqueduct, the towpath trail was rerouted onto an adjacent roadway and temporary PVC pipes were installed to allow water to pass through in order to maintain water in the canal. In 2007, the park accomplished Phase 1 of the project. A new pedestrian bridge was installed, the failed PVC pipes were removed, and, through a Memorandum of Agreement with the State Historic Preservation Officer, the historic metal aqueduct superstructure was removed and a revised conveyance system of steel pipes and overflows was installed. This project represents Phase 2 of the work. The EA will compare a No Action Alternative (status quo) to a Proposed Action Alternative which includes the installation of new aqueduct structure (girder and a new trough), a pile foundation system, the rehabilitation of the abutments and center pier and the removal of the temporary conveyance system of steel pipes and overflows.

A draft plan for the Proposed Action can be found on the National Park Service's Planning Environment and Public Comment (PEPC) website at <http://parkplanning.nps.gov/cuva>. Comments can be submitted via PEPC regarding this project through July 31, 2009.

We encourage you to provide comments via the PEPC web site. However, written comments can be mailed to the address below:

Superintendent  
Cuyahoga Valley National Park  
15610 Vaughn Road  
Brecksville, OH 44141

Our practice is to make comments, including names, home addresses, home phone numbers, and email addresses of respondents, available for public review. Individual respondents may request that we withhold their names and/or home addresses, etc., but if you wish us to consider withholding this information you must state this prominently at the beginning of your comments. In addition, you must present a rationale for withholding this information. This rationale must demonstrate that disclosure would constitute a clearly unwarranted invasion of privacy. Unsupported assertions will not meet this

burden. In the absence of exceptional, documentable circumstances, this information will be released. We will also make submissions from organizations and businesses, and from individuals identifying themselves as representatives of or officials of organizations or businesses, available for public inspection in their entirety.



CUYAHOGA VALLEY NATIONAL PARK  
Environmental Assessment for Tinkers Creek Aqueduct – Phase II

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**Appendix B**

**Public Involvement/Scoping**

LIST OF RECIPIENTS OF SCOPING LETTER

Sr. Mariellen Phelps  
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Washington, DC 20515-0001

The Honorable Dennis Kucinich  
1730 Longworth House Office Building  
Washington, DC 20515-0001  
The Honorable Steven LaTourette  
2453 Rayburn House Office Building  
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The Honorable Ralph S. Regula  
2306 Rayburn House Office Building  
Washington, DC 20515-0001

The Honorable Timothy Ryan  
222 Cannon House Office Building  
Washington, DC 20515-0001

The Honorable Stephanie Tubbs-Jones  
1009 Longworth House Office Building  
Washington, DC 20515-0001

The Honorable Sherrod Brown  
Courtyard Russell Senate Office Building  
Washington, DC 20510-0001

The Honorable George Voinovich  
524 Hart Senate Office Building  
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The Honorable Marlene B. Anielski  
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The Honorable Mike Kaplan  
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The Honorable John Krum  
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The Honorable William J. Roth  
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The Honorable Randall Westfall  
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Jeff Ruch  
Public Employees for Environmental  
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Wyandotte, OK 74370

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Kathleen Mitchell  
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The Seneca-Iroquois National Museum  
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Ottawa Tribe of Oklahoma  
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Miami, OK 74355-01

CUYAHOGA VALLEY NATIONAL PARK  
Environmental Assessment for Tinkers Creek Aqueduct – Phase II

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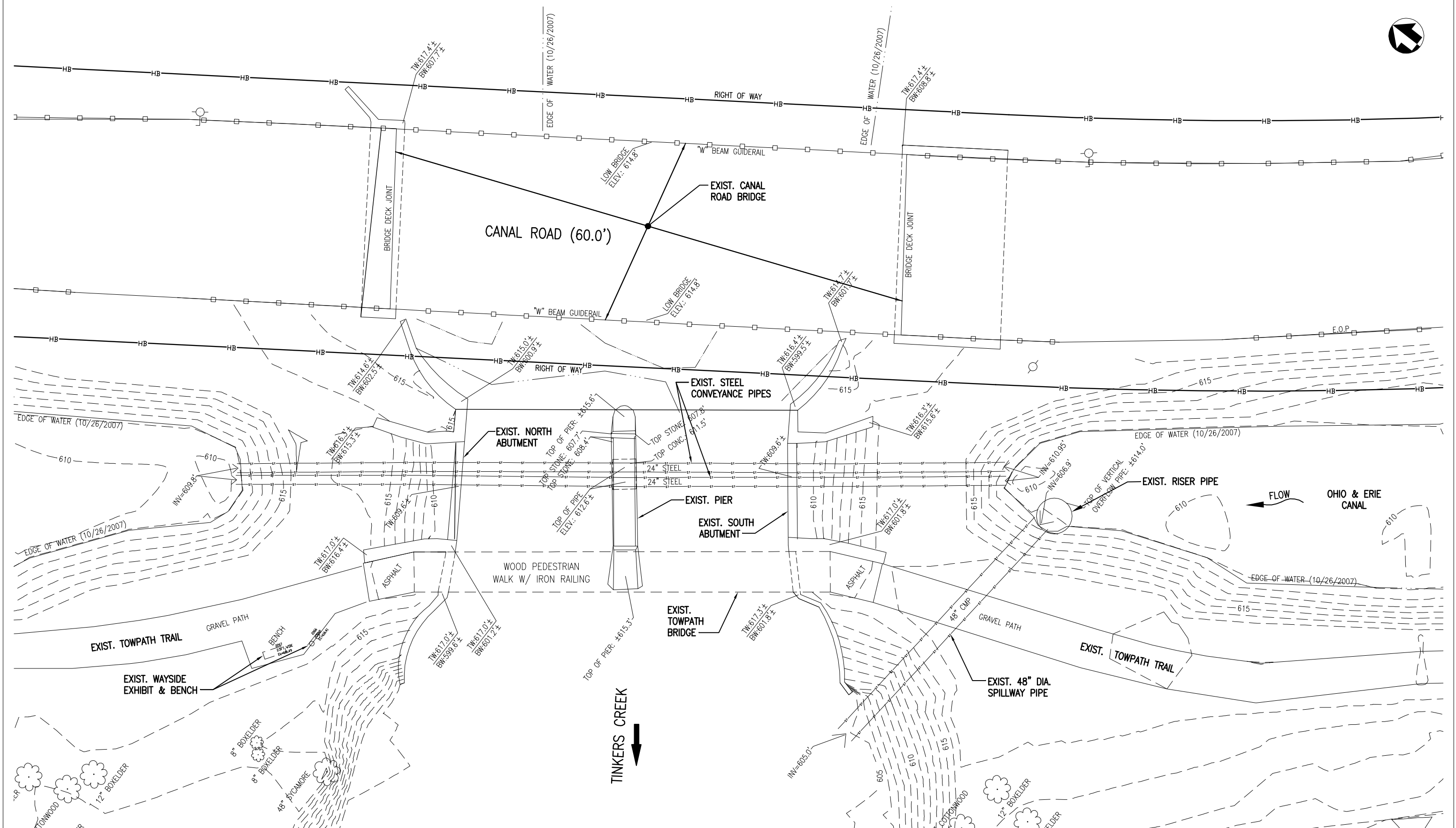
**Appendix C**

**Drawings**

**CONTENTS**

Drawing 1 – (Alternative 1) – No Action


Drawing 2 – (Alternative 2) – Construct New Aqueduct Structure

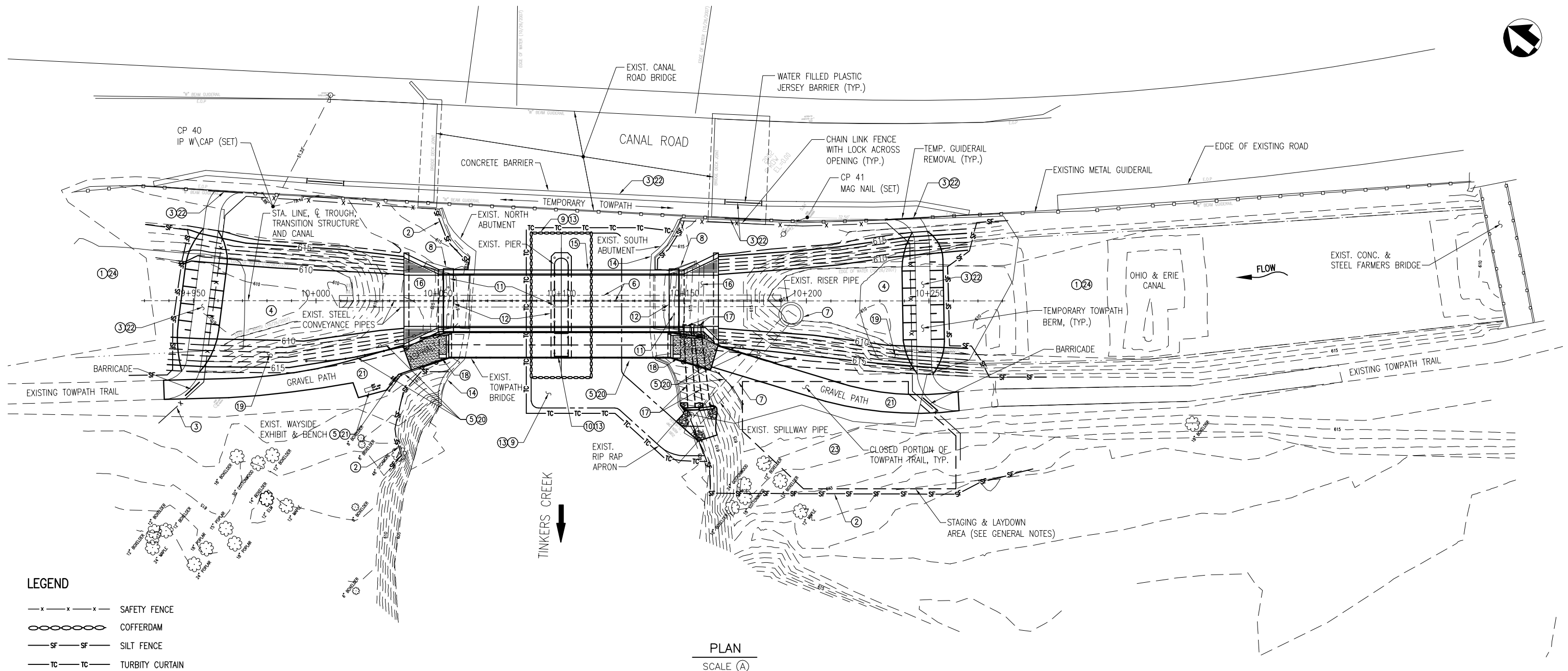


PLAN  
SCALE (A)



DRAWING 1- (ALTERNATIVE 1) - NO ACTION

 <b>BERGMANN</b> associates Engineers / Architects / Surveyors <small>300 West Federal Plaza 38 East Main Street, Rochester, New York 14614 585.589.5135 / 585.589.4633 fax</small>	DESIGNED: JFB		TITLE OF SHEET <b>EXISTING CONDITIONS SITE PLAN</b> CUYAHOGA VALLEY NATIONAL PARK ENVIRONMENTAL ASSESSMENT FOR TINKERS CREEK AQUEDUCT - PHASE 2  CUYAHOGA VALLEY NATIONAL PARK		DRAWING NO. 644 60,561	
	DRAWN: TSH				PKG. NO.	SHEET
	TECH REVIEW: KRA				—	1
	DATE: SEPT. 2009				—	OF 2



#### LEGEND

- x — x — x — SAFETY FENCE
- o — o — o — COFFERDAM
- SF — SF — SILT FENCE
- TC — TC — TURBIDITY CURTAIN

#### CONSTRUCTION SEQUENCE:

- ① COORDINATE WITH NPS TO DRAIN THE OHIO AND ERIE CANAL BETWEEN LOCK #37 AND LOCK #38.
- ② INSTALL TEMPORARY EROSION AND SEDIMENT CONTROL FEATURES.
- ③ INSTALL TEMPORARY CONCRETE BARRIER ALONG CANAL ROAD AND INSTALL OPENING IN EXISTING GUIDERAILING FOR TOWPATH DETOUR AND CONTRACTOR ACCESS. INSTALL TEMPORARY TOWPATH BERMS AND SAFETY FENCE AROUND PERIMETER OF WORK SITE. CLOSE TOWPATH AT WORK LIMITS.
- ④ DEWATER WORK AREA INTO ADJACENT CANAL NORTH AND SOUTH OF TEMPORARY BERMS.
- ⑤ REMOVE AND STORE EXISTING TOWPATH BRIDGE, BEARINGS, APPROACH METAL/TIMBER RAILING, AND WAYSIDE EXHIBIT AND BENCH.
- ⑥ EXCAVATE AND REMOVE TWO EXISTING STEEL CONVEYANCE PIPES AND ASSOCIATED CONCRETE SUPPORTS.
- ⑦ REMOVE EXISTING RISER PIPE TO BELOW GRADE. REMOVE OUTLET END OF SPILLWAY PIPE TO CLEAR NEW OUTFALL PIPES. FILL REMAINDER OF SPILLWAY PIPE WITH CONTROLLED LOW STRENGTH FILL.
- ⑧ REMOVE EXISTING CONCRETE TRANSITION STRUCTURE WALLS AT FOUR CORNERS AND REMOVE TOWPATH BRIDGE ABUTMENTS. EXCAVATE FOR NEW ABUTMENTS AND TRANSITION STRUCTURES.
- ⑨ INSTALL TURBIDITY CURTAIN, CAUSEWAY AND COFFERDAM AROUND PIER.
- ⑩ DISMANTLE EXISTING MASONRY PIER DOWN TO TIMBER MAT, AND STORE STONES.
- ⑪ INSTALL MICRO PILES FOR PIER AND ABUTMENTS.
- ⑫ CONSTRUCT CONCRETE PIER AND AQUEDUCT ABUTMENT PILE CAPS.
- ⑬ REASSEMBLE MASONRY PIER, BACKFILL AND REMOVE COFFERDAM AND CAUSEWAY.
- ⑭ REHABILITATE EXISTING MASONRY ABUTMENTS.
- ⑮ INSTALL SHORING FOR FORM WORK AND CONSTRUCT CONCRETE TROUGH.
- ⑯ CONSTRUCT CONCRETE TRANSITION STRUCTURES ON GRADE.
- ⑰ INSTALL SLUICE GATES AND OUTFALL PIPES AND PLACE STONE APRON AT END OF OUTFALL PIPES.
- ⑱ CONSTRUCT NEW TOWPATH BRIDGE ABUTMENTS.
- ⑲ BACKFILL AROUND TRANSITION STRUCTURES AND GRADE FINAL CANAL SLOPES.
- ⑳ REINSTALL TOWPATH BRIDGE, RAILINGS AND SPLIT RAIL FENCE.
- ㉑ CONSTRUCT ASPHALT AND GRAVEL TOWPATH. RE-SET EXISTING WAYSIDE EXHIBIT AND BENCH.
- ㉒ CLOSE GUIDERAIL OPENINGS, REMOVE TEMPORARY CONCRETE BARRIER FROM CANAL ROAD, REMOVE TEMPORARY TOWPATH BERMS AND OPEN TOWPATH ON FINISHED ALIGNMENT.
- ㉓ RESTORE SITE, PLACE TOPSOIL AND SEEDING.
- ㉔ COORDINATE WITH NPS TO OPEN BRECKSVILLE FEEDER GATES AND REWATER THE CANAL.



**BERGMANN**  
**associates**  
Engineers / Architects / Surveyors  
300 First Federal Plaza  
38 East Main Street, Rochester, New York 14614  
585.589.5135 / 585.589.4633 fax

DESIGNED:  
JFB  
DRAWN:  
TSH  
TECH REVIEW:  
KRA  
DATE:  
SEPT. 2009



#### DRAWING 2- (ALTERNATIVE 2) - CONSTRUCT NEW AQUEDUCT STRUCTURE

TITLE OF SHEET  
**SITE PLAN AND  
CONSTRUCTION SEQUENCE**  
CUYAHOGA VALLEY NATIONAL PARK  
ENVIRONMENTAL ASSESSMENT FOR  
TINKERS CREEK AQUEDUCT - PHASE 2

CUYAHOGA VALLEY NATIONAL PARK

DRAWING NO.  
644  
60,561  
PKG.  
NO.  
SHEET  
2  
OF  
2



CUYAHOGA VALLEY NATIONAL PARK  
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**Appendix D**

**Ohio Historic Preservation Office Coordination**

**CONTENTS**

Review Submittal

Comments Received

CUYAHOGA VALLEY NATIONAL PARK  
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**Appendix D**

**Ohio Historic Preservation Office Coordination**

REVIEW SUBMITTAL



United States Department of the Interior  
NATIONAL PARK SERVICE  
Cuyahoga Valley National Park  
15610 Vaughn Road  
Brecksville, Ohio 44141-3097

IN REPLY REFER TO:  
H4217

**CERTIFIED MAIL – RETURN RECEIPT REQUESTED**

July 17, 2009

Justin M. Cook  
History Reviews Manager  
Resource Protection and Review  
Ohio Historic Preservation Office  
1982 Velma Avenue  
Columbus, Ohio 43211-2497

Project Name: Tinkers Creek Aqueduct – Phase II [CUVA-09-19]

Dear Mr. Cook:

The intent of this correspondence is to continue consultation with your office for the undertaking of replacing Tinkers Creek Aqueduct.

The National Park Service (NPS) and the Ohio Historic Preservation Office (OHPO) previously concurred that the demolition of Tinkers Creek Aqueduct would adversely affect historic properties. Pursuant to 36 CFR Section 800.6(b)(1)(iv), NPS and OHPO negotiated a Memorandum of Agreement (MOA) to resolve the adverse effect.

In accordance with Stipulation III of the MOA, we are submitting for your review plans for Phase II of the project which includes making repairs to the historic abutments and pier and constructing a new aqueduct to provide for the conveyance of canal water over the creek.

The National Park Service has evaluated this proposal, and if implemented as planned, we find that the proposed project successfully minimizes the adverse effect of the project on historic properties. The new aqueduct has been designed to be sympathetic to the historic canal-related resources throughout the park, yet is easily identifiable as new construction.

We respectfully request your comments on our determination. Please provide comments to the attention of Historical Architect Paulette Cossel, the park Section 106 Coordinator. If you have any questions regarding this matter, please contact Mrs. Cossel at 440.546.5973.

Sincerely,

Paul J. Stoehr **SGD/PAUL J. STOEHR**  
Acting Superintendent

Enclosures

CUVA:PCossel:07.17.09:ext5973:Compliance/MISC/TCA P2.SHPO

## A. DESCRIPTION OF UNDERTAKING

1. Park: Cuyahoga Valley National Park

Date: 28 May, 2009

2. Work/Project Description:

a. Project name: Rehabilitate/Replace Tinkers Creek Aqueduct-Phase 2

b. Describe project and area of potential effects (as defined in 36 CFR Part 800.2(c)); explain why work/project is needed.

Because of availability of funding and the urgent need to move forward on this project, the park and Midwest Regional Office have decided to complete this project in two phases.

Phase One is complete:

- removed (demolish) existing Tinkers Creek Aqueduct;
- moved Towpath (bicycle and pedestrian) traffic off of Canal Road onto a new permanent structure over Tinkers Creek;
- provided a temporary conveyance of canal water over Tinkers Creek and;
- installed a temporary spillway structures to prevent flooding of Canal Road from canal during high water events until a new aqueduct is in place.

Phase Two includes:

- removing the temporary flow conveyances / spillways.
- installing new pile and pile cap foundation behind the existing sandstone abutments
- installing new pile and pile cap foundation below the existing sandstone center pier
- rehabilitating the existing sandstone center pier as needed
- installing new concrete aqueduct and water control structure

3. Has the area of potential effects been surveyed to identify cultural resources?

☐ No☒ Yes Source or Reference National Historic Landmark (listed 1983)☐ Check here if no known cultural resources will be affected. (If area has been disturbed in the past, please explain or attach additional sheets to describe nature, extent, and intensity of disturbance.)

4. Affected Resource(s): Ohio &amp; Erie Canal (HS-100) and Tinkers Creek Aqueduct (HS-123)

Name and number(s): HS-100 (Ohio &amp; Erie Canal)

Location: Tract 101-33

NR status: 1, Ohio &amp; Erie Canal

5. The proposed action will: (Check as many as apply.)

- ☒ Destroy, remove, or alter features/elements from a historic structure
- ☒ Replace historic features/elements in kind
- ☒ Add nonhistoric features/elements to a historic structure
- ☐ Alter or remove features/elements of a historic setting or environment (inc. terrain)
- ☐ Add nonhistoric features/elements (inc. visual, audible, or atmospheric) to a historic setting or cultural landscape
- ☒ Disturb, destroy, or make archeological resources inaccessible, or alter terrain
- ☒ Potentially affect presently unidentified cultural resources
- ☐ Begin or contribute to deterioration of historic fabric, terrain, setting, landscape elements, or archeological resources
- ☐ Involve a real property transaction (exchange, sale, or lease of land or structures)
- ☐ Other (please specify)

6. Measures to prevent or minimize loss or impairment of historic/prehistoric fabric, setting, integrity, or data:

All work will be performed in a manner as to minimize impact on historic fabric. New elements will be compatible with, yet distinguishable from, historic fabric.

7. Supporting Study Data: (attach if feasible; if action is in a plan, give name and project or page number): Preliminary design drawings prepared by Bergmann Associates (April 2009); photos of existing conditions and photo-simulation of proposed new aqueduct structure.

8. Attachments: ☐ Maps ☐ Archeological Survey, if applicable ☒ Drawings ☐ Specifications ☒ Photographs ☒ Site plan

FORM FOR ASSESSMENT OF ACTIONS HAVING AN EFFECT ON CULTURAL RESOURCES

Park project CUYA-09-19

☒ Scope of Work ☐ List of Materials ☐ Samples ☐ Other

Prepared by: Robert W. Bobel

Date: 28 May, 2009

Title: Civil Engineer

Telephone 440.546.5972

**B. REVIEWS BY CULTURAL RESOURCE SPECIALISTS**

The park 106 coordinator requested review by the park's cultural resources specialists/advisors as indicated by the check-off boxes.

**SPECIALISTS:** Your comments here (or attached show that you have reviewed this proposal for conformity with requirements of Section 106, with the 1995 Servicewide Programmatic Agreement (if applicable), and applicable parts of the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, NPS Management Policies, and NPS-28, and have given your best professional advice about this project and the issues relevant to the Section 106 process, including identification and evaluation of historic properties and further consultation needs.

☒ **ARCHEOLOGIST**Name: *Don Benmuntz*Date: *7/7/09*Comments: *See attached Archeological Review Comments*

Check if project does not involve ground disturbance [ ]

Assessment of Effect: ☐ No Effect ☒ No Adverse Effect ☐ Adverse Effect ☐ Programmatic Exclusion

Recommendations for conditions or stipulations:

☒ **HISTORICAL ARCHITECT**Name: *Paula Cossel*Date: *29 MAY 09*

Comments:

Assessment of Effect: ☐ No Effect on historic structures ☒ No Adverse Effect ☐ Adverse Effect ☐ Programmatic Exclusion

Check if project meets Secretary's Standards [ ]

Recommendations for conditions or stipulations:

☐ **CURATOR**

Name:

Date:

Comments

Assessment of Effect: ☐ No Effect ☐ No Adverse Effect ☐ Adverse Effect ☐ Programmatic Exclusion

Recommendations for conditions or stipulations:

FORM FOR ASSESSMENT OF ACTIONS HAVING AN EFFECT ON CULTURAL RESOURCES

Park project CUVA-09-19

☐ ETHNOGRAPHER

Name:

Date:

Comments:

Assessment of Effect: ☐ No Effect ☐ No Adverse Effect ☐ Adverse Effect ☐ Programmatic Exclusion

Recommendations for conditions or stipulations:

☒ HISTORICAL LANDSCAPE ARCHITECT

Name:

Date:

Comments:

*James Kellin*  
6/1/09

Assessment of Effect: ☐ No Effect on historic/cultural landscapes ☒ No Adverse Effect ☐ Adverse Effect ☐ Programmatic Exclusion

Check if project meets Secretary's Standards [ ]

Recommendations for conditions or stipulations:

☒ HISTORIAN

Name:

Date:

Comments:

*Ron Cochereau*  
6-12-09

*Project requires standard review by Ohio SHPO*

Assessment of Effect: ☐ No Effect ☒ No Adverse Effect ☐ Adverse Effect ☒ No Programmatic Exclusion

Recommendations for conditions or stipulations:

☐ OTHER ADVISERS

Name:

Title or area of specialty:

Date:

Comments:

Assessment of Effect: ☐ No Effect ☐ No Adverse Effect ☐ Adverse Effect ☐ Programmatic Exclusion

Recommendations for conditions or stipulations:

**C. PARK 106 COORDINATOR REVIEW AND RECOMMENDATIONS**

(completed by the park Section 106 coordinator)

**1. Assessment of Effect :**

\_\_\_\_\_ No Effect      ✓ No Adverse Effect      \_\_\_\_\_ Adverse Effect

**2. Compliance requirements:** (The following is the park's assessment of Section 106 process needs and requirements for this undertaking.):

☒ **A. STANDARD 36 CFR PART 800 CONSULTATION**  
Further consultation under 36 CFR Part 800 is needed.

☐ **B. STREAMLINED REVIEW UNDER THE 2008 SERVICEWIDE PROGRAMMATIC AGREEMENT (PA)**  
The above action meets all conditions for a Streamlined Review under Stipulation III of the 2008 Servicewide PA for Section 106 compliance.

APPLICABLE CRITERIA: III \_\_\_\_\_ [Specify 1-16]

☐ **C. PLAN-RELATED UNDERTAKING**  
Consultation and review of the proposed undertaking were completed in the context of a plan review process, in accordance with the 2008 Servicewide PA and 36 CFR Part 800. Specify plan/EA/EIS:

☐ **D. UNDERTAKING RELATED TO ANOTHER AGREEMENT**  
The proposed undertaking is covered for Section 106 purposes under another document such as a statewide agreement established in accord with 36 CFR Part 800.7 or counterpart regulations. Specify:

☐ **E. STIPULATIONS/CONDITIONS**  
Following are listed any stipulations or conditions necessary to ensure that the assessment of effect above is consistent with 36 CFR Part 800 criteria of effect or to avoid or reduce potential adverse effects.

Recommended by:

Paulette Cossel 17 JULY 09  
Paulette Cossel, Historical Architect  
Park Section 106 Coordinator

**D. SUPERINTENDENT'S APPROVAL**

The proposed work conforms to NPS Management Policies and NPS-28 and I have reviewed and approve the recommendations, stipulations or conditions noted in Section C of this form.

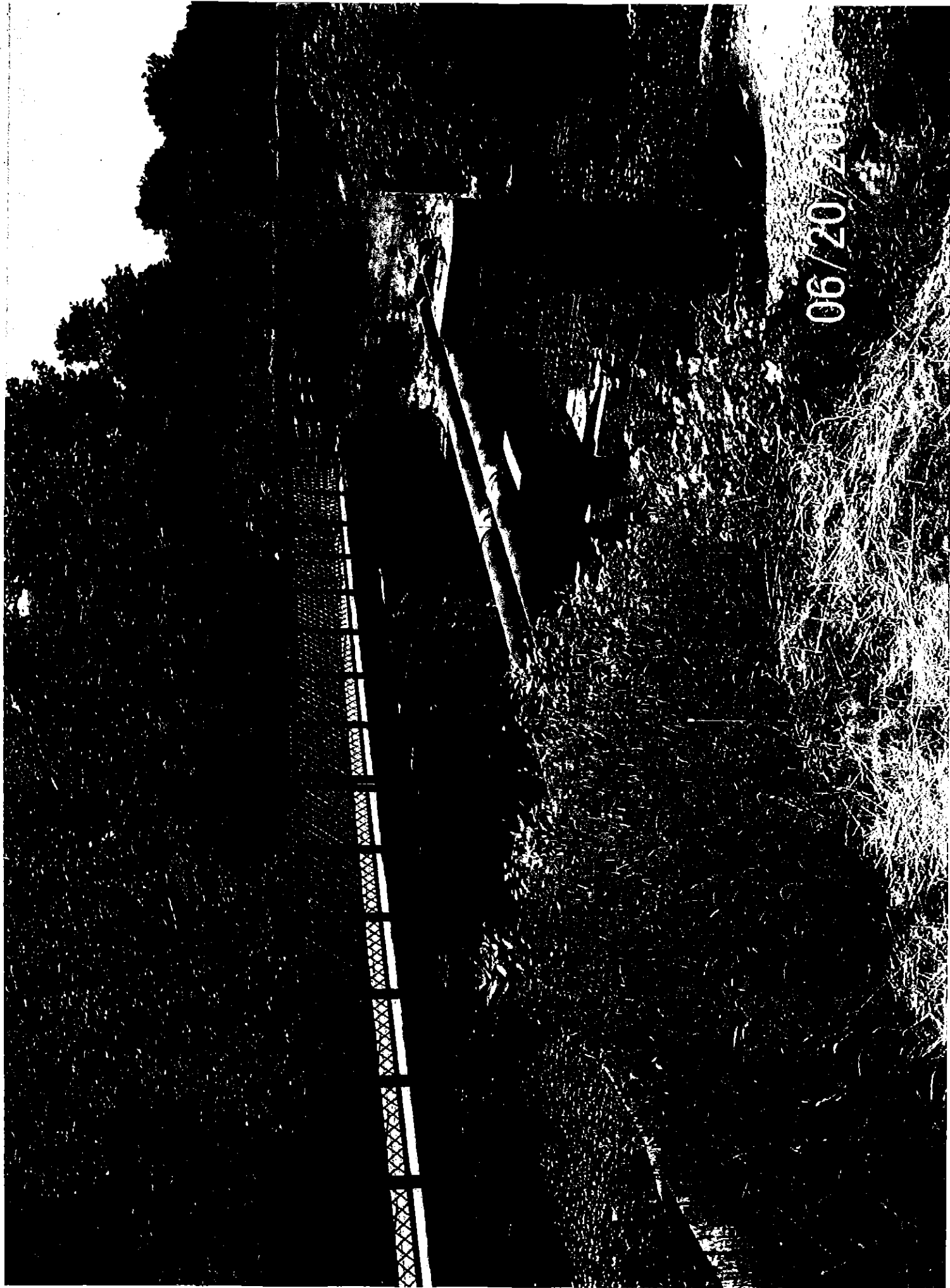
Signature of Superintendent

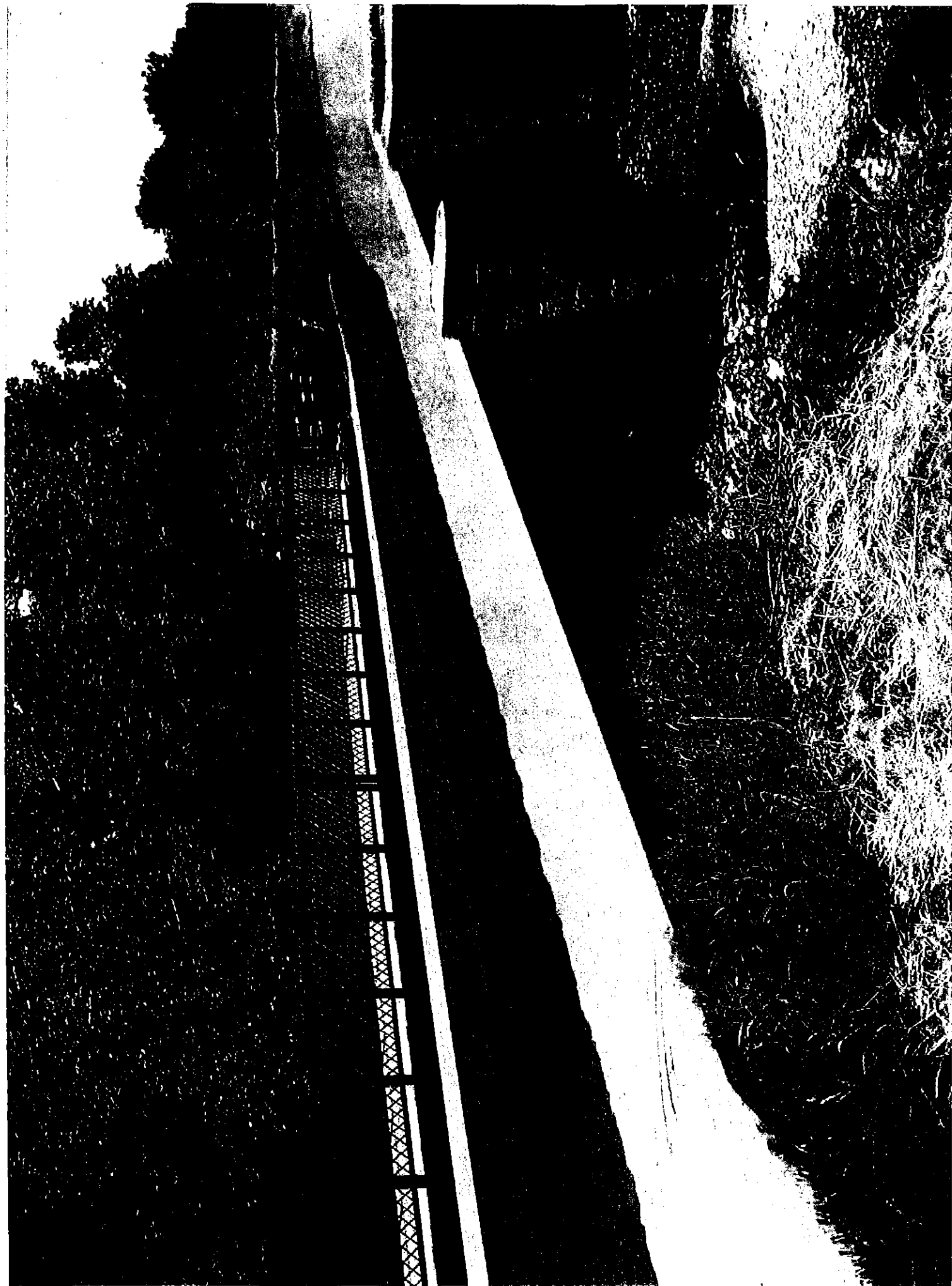
\_\_\_\_\_  
John P. Debo, Jr., Superintendent Cuyahoga Valley NP

Date \_\_\_\_\_



06/20/2008





Archeological Review Comments (CUVA-09-19)  
Rehabilitate/Replace Tinkers Creek Aqueduct-Phase 2

The proposed undertaking (Project CUVA-09-19) involves the rehabilitation and replacement of the Tinkers Creek Aqueduct (HS-123, NR-79000296) on the Ohio & Erie Canal (HS-100, NR-66000607), located within Cuyahoga Valley National Park. The project area is in the northern portion of the park, just south of the Canal and Tinkers Creek Roads intersection (Figure 1). The aqueduct and canal are both listed on the National Register of Historic Places (NRHP), the former recognized for its significance under the topics of engineering, transportation, exploration/settlement, and commerce for the period of 1825-1849; and the latter is significant for its impact on industry and commerce from 1825-1849 and 1850-1874.

The project will require limited ground disturbance associated with the installation of new pile and pile cap foundations behind the existing sandstone abutments, and below the existing sandstone center pier. The excavation zones will be confined entirely to the original excavation footprints of the abutments and pier, areas which were previously impacted during the initial installation of the aqueduct components and where there is no potential for intact buried resources. The area was previously surveyed for archeological resources in 1990 during a survey conducted along the Ohio and Erie Canal Towpath (Noble 1990, 1991). That effort resulted in the identification of site 33CU349, comprised of a dressed-stone foundation typical of 19<sup>th</sup> century construction and a surface scatter of early 20<sup>th</sup> century artifacts. Nobel indicated there was insufficient data to make a determination of site significance and NRHP eligibility. Site 33CU349 is located west of the project area and will in no way be impacted during the undertaking. As a precautionary measure, the site location should be flagged and all access within 75' of the site prohibited.

We find that the proposed rehabilitation and restoration of the Tinkers Creek Aqueduct would have no adverse effect on any archeological sites included in or eligible for the NRHP, or on the qualities for which the historic structures are recognized. Excavation would be limited to previously disturbed areas and would not impact any undisturbed terrain or areas where there is any possibility of encountering intact buried resources. It is our recommendation that the proposed undertaking may proceed without any additional archeological work.

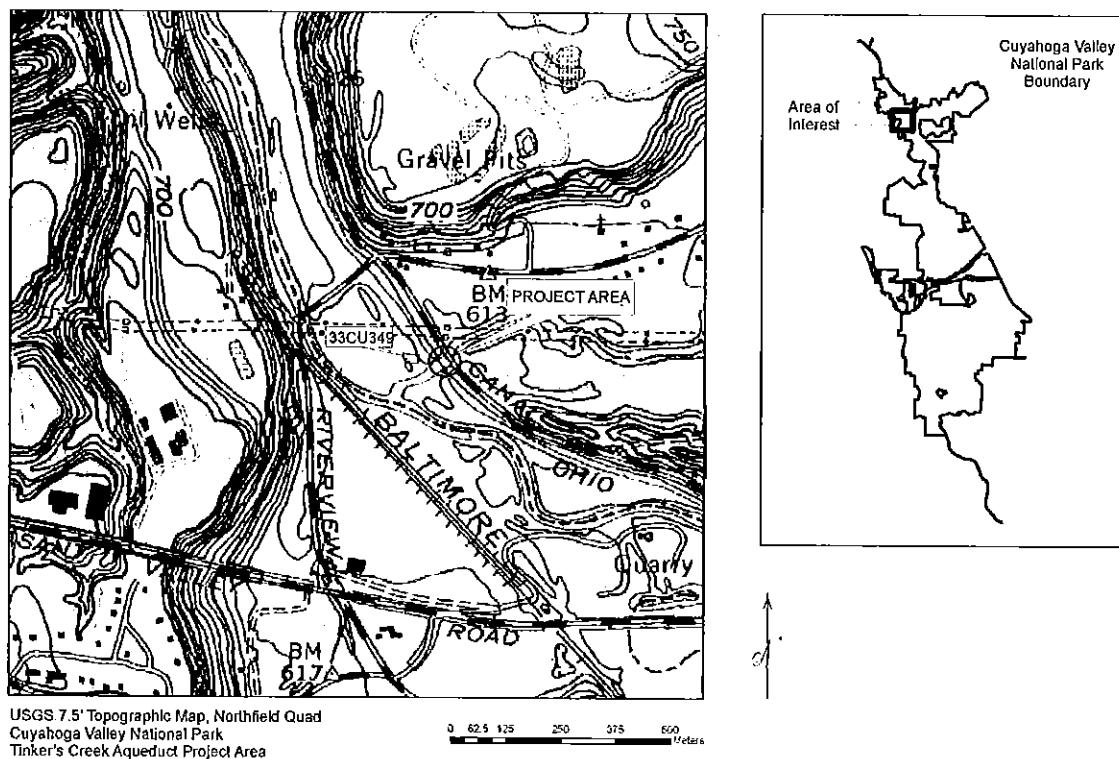
Ann Bauermeister, Archeologist  
National Park Service  
Midwest Archeological Center  
7/7/2009

## REFERENCES CITED:

Noble, Vergil E.

- 1990 Preliminary Report on the 1990 Archeological Survey along Sections of the Ohio and Erie Canal Towpath, Cuyahoga Valley National Recreation Area, Cuyahoga and Summit Counties, Ohio. Manuscript on file, National Park Service, Midwest Archeological Center, Lincoln, Nebraska.
- 1991 Final Report on a Phased Archeological Survey along the Ohio and Erie Canal Towpath in Cuyahoga Valley National Recreation Area, Summit and Cuyahoga Counties, Ohio. Manuscript on file, National Park Service, Midwest Archeological Center, Lincoln, Nebraska.

FIGURE 1.



Location of the project area (CUVA-09-19) for the Tinkers Creek Aqueduct Rehabilitation and Restoration Project, Phase 2.

CUYAHOGA VALLEY NATIONAL PARK  
Environmental Assessment for Tinkers Creek Aqueduct – Phase II

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**Appendix D**

**Ohio Historic Preservation Office Coordination**

COMMENTS RECEIVED

**From:** Rob\_Bobel@nps.gov [mailto:Rob\_Bobel@nps.gov]  
**Sent:** Wed 1/16/2008 3:24 PM  
**To:** Avery, Ken  
**Subject:** Fw: Tinker's Creek Aqueduct

from SHPO.

I don't see anything here that is at odds with the direction we are already going.

Rob

Robert W. Bobel, P.E.  
Park Engineer  
Cuyahoga Valley National Park  
15610 Vaughn Road  
Brecksville, Ohio 44141  
440-546-5972  
440-546-5982 (fax)

----- Forwarded by Rob Bobel/CUYA/NPS on 01/16/2008 03:23 PM -----

		Paulette Cossel	
		01/16/2008 02:25	
		PM EST	

To:	Rob Bobel/CUYA/NPS@NPS		
cc:			
Subject:	Fw: Tinker's Creek Aqueduct		

from Justin...

Cuyahoga Valley National Park 15610 Vaughn Road Brecksville, Ohio 44141

2/16/2008

Paulette Cossel, Architect - 440.546.5973 - e-mail  
paulette\_cossel@nps.gov

----- Forwarded by Paulette Cossel/CUVA/NPS on 01/16/2008 02:25 PM -----

"Justin Cook"  
<jcook@ohiohistor  
y.org> To  
<Paulette\_Cossel@nps.gov>  
01/16/2008 01:13 cc  
PM EST  
Subject  
RE: Tinker's Creek Aqueduct

Hi Paulette,

My comments regarding the Tinkers Creek Aqueduct meeting minutes are attached. Give me a call if you'd like to discuss. Thanks.

Justin Cook  
History Reviews Manager  
Resource Protection and Review  
Ohio Historic Preservation Office  
567 East Hudson Street  
Columbus, Ohio 43211-1030  
Email: jcook@ohiohistory.org  
Phone: (614) 298-2000  
Fax: (614) 298-2037

-----Original Message-----

From: Paulette\_Cossel@nps.gov [mailto:Paulette\_Cossel@nps.gov]  
Sent: Wednesday, January 16, 2008 8:01 AM  
To: Justin Cook  
Subject: [BULK] Tinker's Creek Aqueduct  
Importance: Low

Hi Justin,

Attached are the final notes from the meeting re: Tinker's Creek Aqueduct.. The notes correspond to the drawings and photos which I forwarded to you earlier. On pages 12 and 13 there is a list of items on which the consultant wanted your feedback. I believe that we have discussed each item. A very brief recap...

1. Dismantling and rebuilding the pier around piles is acceptable.
2. Placing a structural cap on the pier is acceptable.
3. Installation of modern waste gates is acceptable.
4. Utilization of a truss superstructure is acceptable.
5. Construction of a higher structure is acceptable if the difference is

2/16/2008

modest.

6. Section of lowered towpath may be retained.
7. Utilization of sheet piling for transition walls may be acceptable, but it is not desirable.
8. Replacement of the concrete transition walls is acceptable.

The questions do not reflect a preferred treatment. The intent was to eliminate unacceptable actions from consideration during the value analysis. Please let me know if you have any concerns. Thanks, Paulette,

(See attached file: CVNP TO47 Tinkers Aqueduct 12-11-07 Mtg Minutes\_Pg1\_13.pdf)

Cuyahoga Valley National Park 15610 Vaughn Road Brecksville, Ohio 44141  
Paulette Cossel, Architect - 440.546.5973 - e-mail  
paulette\_cossel@nps.gov

(See attached file: 01.16.08 - Valley View - SHPO comments regardnig Tinkers Creek Aqueduct Meeting Minutes.doc)



Hi Paulette,

Before addressing the eight items to be "confirmed with SHPO" as presented 10.b.iv (pp. 12-13), I have the following comments regarding information presented elsewhere in the meeting minutes:

- 3.a. states that "All proposed work must be in accordance with (the existing) MOA (between OHPO and NPS) unless an amendment is made." It should be noted that the existing MOA contains very little in the way of design guidelines. Frankly, I am embarrassed that I neglected to require a reference to the Secretary of the Interior's Standards for the Treatment of Historic Properties in Stipulation III of the MOA. As written, the MOA contains absolutely nothing that dictates terms regarding the design/engineering of the new structure. The plus side is that this gives us a lot of leeway. The downside is that it does nothing to establish basic parameters for the project.
- 3.b. states that "the preliminary SHPO ruling is that the replacement structure will be a new structure with no need to re-create the look and/or materials of the previous aqueduct." I would like to emphasize that not only is there no "need" for the new structure to replicate the previous aqueduct, a design that did so would not be approved by OHPO under Stipulation III of the MOA.
- 3.c. questions whether SHPO is concerned with maintaining the height relationship between the towpath trail and the superstructure of the new aqueduct. My primary concern regarding this issue is that effort should be made to ensure that the new system (towpath bridge + aqueduct) has an acceptable degree of historical accuracy. The height relationship between the deck of the towpath bridge and the superstructure of the aqueduct is, in my mind, less relevant than the same relationship between the deck of the towpath bridge and the top of the trough that conveys water across the aqueduct. The trough is essentially part of the canal prism, and historically the towpath trail was at the same height as the top of the prism. I would prefer to see that spatial relationship maintained...especially if the towpath user will be able to look through the superstructure of the aqueduct and see the trough (i.e. a truss system is employed).
- The tables presented in 5.c-g are very helpful and do an excellent job of relating relevant information. I am a bit concerned with what is perhaps a perceived emphasis on ease of maintenance. I appreciate tight budgets and a desire to spend limited funds on things that are "sexier" than cleaning and painting. But completing basic maintenance is a fundamental principle of preservation and it must not be forgotten that this feature must fit in with the National Historic Landmark district that it is a part of. As a result, the final design may not be as "low maintenance" as the park would like.
- 7.a.i-ii and 7.b.iv. discuss the possibility of leaving the existing abutments and center pier in place but eliminating them as functional components of the new aqueduct. Under such a scenario, to the casual observer (and perhaps even the trained eye) the abutments and center pier would appear to support load but would actually be rendered functionally useless by new concrete stub abutments with piles built behind the existing abutments, perhaps coupled with a single span aqueduct, the load associated with could be supported solely by the abutments. I applaud CVNP's desire to retain the existing abutments and central pier and I appreciate that rehabilitating these features to ensure that they are capable of handling the load associated with the new aqueduct may increase the project's cost. But there is something about allowing these historic features



to more or less be presented to the average visitor as functional components of the aqueduct while in reality they are little more than the ruins of a historic property that has been demolished. Admittedly, these are only my initial thoughts on this matter and I haven't had much time to process this information. Perhaps you could investigate whether similar approaches have been employed elsewhere and whether it was determined that such approaches conformed with the Standards. Initially, I am concerned that such an approach may violate the spirit of Rehab Standard 3, which essentially warns against trying to fool the public. I guess what I am saying is that perhaps we should have a discussion about the appropriateness of the treatments proposed in 7.a.i-ii and 7.b.iv. vis-a-vis creating a marked differentiation between the new and old abutments and clearly interpreting the non-functionality of the central pier by leaving it disengaged from the aqueduct. I'm not convinced that level of differentiation is necessary. And I also understand that the treatments proposed in 7.a.i-ii and 7.b.iv. are only possibilities and that it may be decided to make the existing features functional. I just think it may be helpful to have some dialogue on this matter so that we can think it through from a preservation perspective.

- SHPO has no concerns regarding the replacement of the canal-to-aqueduct transitional structures described in 8.a.i.
- 8.b.iv expresses uncertainty regarding SHPO reaction to the inclusion of new waste gates in the aqueduct. As far as I'm concerned, the superstructure and trough of the aqueduct will be entirely new features, so I have no problem with the waste gates being new as well. Certainly, if CVNP wanted to incorporate the old waste gates into the structure – in the same spirit as re-using the central pier and abutments – we would not object, but we do not feel that doing so is necessary.

Now, on to items 10.b.iv.1-8 on pages 12-13:

**1. Piece mark, dismantle and rebuild the existing stone pier after pile driving operations are complete. Replace all cracked stones.**

The proposed treatment would meet the Standards and would be approved by SHPO under the terms of Stipulation III of the MOA.

**2. Cap the stone pier with a 4-foot deep structural pier cap to distribute the loads into the pile foundation.**

Provided that there is a clear differentiation (likely in terms of materials) between the pier cap and the pier itself, this treatment would likely be approved by SHPO under the terms of Stipulation III of the MOA. Our concern would be that the cap be clearly identifiable as new construction.

**3. Install modern waste gates in the aqueduct walls vs. rehabilitating the old gates and making them functional.**

See SHPO comments regarding 8.b.iv. above.

**4. Truss superstructure.**

Not sure what the question is here, but my preference remains a prefabricated truss similar to those shown in the pictures included in your December 19, 2007 email.

**5. Relationship between top of previous aqueduct and towpath (e.g. can new structure be higher?).**

See SHPO comments regarding 3.c. above.

**6. Can the lowered towpath constructed in Phase I be retained or must it be returned to original conditions.**

Again, my primary concern regarding the height of the towpath and aqueduct is that the relationship between the two be historically accurate to the greatest extent practical. I don't want the towpath to be significantly above or below the top of the trough that conveys the waters of the canal across the aqueduct.

**7. Use of sheetpiling for the transitional walls.**

I would prefer that the transitional walls be made from concrete, but if sheetpiling is needed to ensure proper engineering (e.g. the "steel to steel" connection referenced in 8.a.ii.), I can live with it.

**8. Can the existing concrete transition structure be removed and replaced with a new concrete structure?**

Yes.