Hull & associates, inc.

February 19, 2013

Ms. Heather Allamon
Ohio EPA, Division of Surface Water
Northwest District Office
347 North Dunbridge Road
Bowling Green, OH 43402

RE: Ohio EPA ID No. 134087; Revised Application for §401 Water Quality Certification (WQC) including Alternatives Analysis for the Indian Mill Road Slope Stabilization Project, City of Upper Sandusky, Wyandot County, Ohio; CUS021.300.0002.

Dear Mr. Queen:

Enclosed please find the revised application for a §401 Water Quality Certification (WQC) including Alternatives Analysis for the proposed Indian Mill Road Slope Stabilization Project in the City of Upper Sandusky, Wyandot County, Ohio (Appendix A, Figure 1). This application has been revised and completed in response to your February 12, 2013 letter.

Hull looks forward to coordinating with your agency on this revised and complete application package. If you have any questions, or wish to schedule a site visit, feel free to contact me at (614) 793-8777 or hcrowell@hullinc.com.

Sincerely,

Hugh F. Crowell, PWS
Senior Project Manager

Enclosure

ct: Mayor Scott Washburn, City of Upper Sandusky
Allen Boes, City of Upper Sandusky
Mark Scalabrino, US Army Corps of Engineers, Buffalo, NY
Shawn McGee, Hull & Associates, Inc., Bedford, OH

INDIAN MILL ROAD SLOPE STABILIZATION PROJECT

§404 Preconstruction Notification
§401 Water Quality Certification Application

ALTERNATIVES ANALYSIS

FOR THE:
INDIAN MILL ROAD SLOPE
STABILIZATION PROJECT
CITY OF UPPER SANDUSKY,
WYANDOT COUNTY, OHIO

PREPARED FOR:
CITY OF UPPER SANDUSKY
119 NORTH 7TH STREET
UPPER SANDUSKY, OHIO 43351

JANUARY 2013

Hull & associates, inc.

CONTENTS

§404
Preconstruction Notification

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT
(33 CFR 325)

OMB APPROVAL NO. 0710-0003
EXPIRES: 31 August 2012

DCN

Public reporting burden for this collection of information is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters, Executive Services and Communications Directorate, Information Management Division and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This Information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME: Mr. Allen Boes City of Upper Sandusky	8. AUTHORIZED AGENT'S NAME AND TITLE (an agent is not required) Hugh F. Crowell, PWS Senior Project Manager; Hull & Associates, Inc. hcrowell@hullinc.com
6. APPLICANT'S ADDRESS. City of Upper Sandusky 119 North 7th Street Upper Sandusky, Ohio 43351	9. AGENT'S ADDRESS Hull & Associates, Inc. 6397 Emerald Parkway, Suite 200 Dublin, OH 43016
7. APPLICANT'S PHONE NOs. W/AREA CODE. a. Residence- NA b. Business- (419) 294-3862 c. Fax	10. AGENT'S PHONE NOs. W/AREA CODE a. Cell- (614)-579-8666 b. Business- (614) 793-8777 c. Fax – (614) 793-9070

STATEMENT OF AUTHORIZATION

11. I hereby authorize Hugh F. Crowell and Hull & Associates, Inc. to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

_____

APPLICANT'S SIGNATURE DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions)

Indian Mill Road Slope Stabilization Project

13. NAME OF WATERBODY, IF KNOWN (if applicable), Sandusky River (HUC 04100011)	14. PROJECT STREET ADDRESS (if applicable) N/A
15. LOCATION OF PROJECT: Latitude: N 40°50'49.30" Longitude: W-83.°16'20.31"	See Figure 1, Site Location Map, Appendix A.

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)

The project is located along the south side of Indian Mill Road in the City of Upper Sandusky in central Wyandot County, Ohio (Appendix A, Figure 1) at the intersection of Indian Mill Road and Kimmel Court. It includes an approximately 150-foot-long section of slope along the north bank of the Sandusky River that has failed (Appendix A, Figure 2, Sheet C-101-P)

17. DIRECTIONS TO THE SITE: From Buffalo, New York, travel west on Interstate Route (IR) 90 to IR-271 east of Cleveland, Ohio (approximately 160 miles). Take the IR-271S exit to IR-71S (approximately 40 miles). Proceed south on IR-71S for approximately 44 miles to Exit 176/US 30. Take exit ramp to right/US 30W towards Mansfield. Travel approximately 47 miles on US 30W. Keep straight on US 30W/US 23N for 3 miles. Left on County Highway 50/Indian Mill Road. Project approximately 0.6 mile on left (south) side of Indian Mill Road at intersection with Kimmel Court (Appendix A, Figure 1).

18. Nature of Activity (Description of project, include all features)

The project consists of stabilizing a section of failed slope on a meander bend of the Sandusky River along the south side of Indian Mill Road. The failed area includes an approximately 150-foot-long section of steep slope along Indian Mill Road at its intersection with Kimmel Court (Appendix A, Figure 2, Sheet C-101-P; Appendix C, Photos 1 through 3). The slope measures approximately 50 vertical feet from the top of the slope to the surface of the Sandusky River. Proposed measures for remediating the failed slope include: removal of all unconsolidated sediment/sloughed soil on the slope and in the river channel; reconstructing the slope at 2'H:1'V; placement of geotextile matting and rip-rap to stabilize and reconstruct the slope; vegetation plantings on the slope, including areas stabilized with rock (joint plantings); placement of rip-rap, rock-filled gabion boxes and large stone to stabilize the river bank below the Ordinary High Water Mark (OHWM); and placement of stone and/or log flow deflectors up- and downstream of the failed slope to redirect flow away from the stabilized shoreline (Appendix A, Sheets C-101-P, C-501, C-502). Site access would be from the south across the river on a temporary in-stream causeway underlain by three 48-inch-HDPE culverts; a temporary in-stream work area along the base of the slope would provide access to the stream bank over the length of the site.

19. Project Purpose (Describe the reason or purpose of the project, see Instructions)

The failed slope threatens the integrity of Indian Mill Road and a Columbia Gas pipeline located south of and parallel to the road. A portion of the roadbed has been undercut by the slope failure and the guardrail is collapsing. Because of the public safety hazard created, Indian Mill Road is currently closed to vehicular traffic and will remain so until the slope can be reconstructed and stabilized and the road repaired. Sediment from the failed slope is reducing water quality in the State Scenic Sandusky River. Remediation measure will stabilize the slope and reduce sedimentation of the river.

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

In order to stabilize the failed slope, the northern bank of the Sandusky River requires stabilization with a combination of rip-rap, large rock, rock-filled gabion baskets, and longitudinal rock/log flow defectors that would be deposited below the OHWM. Access to the slope would require construction of a temporary in-stream causeway and work area consisting of rip-rap underlain by HDPE culverts deposited below the OHWM (Appendix A, Sheets C-101-P, C-501, C-502). Unconsolidated soil and sediment originating from the failed slope would be excavated from the river channel and lower slope below the OHWM. The northern stream bank would be excavated for slope reconstruction and to anchor stabilization structures; the southern stream bank would be excavated to construct a ramp accessing the in-stream causeway.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

	Area	Fill Volume	Fill Material
Permanent	0.059 acre	380 cubic yards	Large rock, rip-rap, rock-filled gabion baskets
Temporary	0.140 acre	340 cubic yards	Rip-rap
Permanent (excavation)	0.098 acre	1,100 cubic yards	Unconsolidated soil/sediment from failed slope and original riverbank substrate

Permanent fill volume per linear foot: 1.69 cubic yards

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

The proposed action will result in the discharge of permanent fill material in 0.059 acre of the Sandusky River channel below the OHWM. Temporary fill will be placed in 0.140 acre of the Sandusky River channel below the OHWM; temporary fill will be removed from below the OHWM upon project construction. No wetlands will be filled. (Appendix B, Table 1).

23. Description of Avoidance, Minimization, and Compensation (see instructions)

No wetlands will be impacted by this proposed project, therefore no wetland mitigation is proposed.

Permanent bank stabilization measures will utilize natural materials, including large stone and boulders, and upon project completion, will contribute to improved water quality in the river by stabilizing the river bank. These materials will also provide suitable in-stream habitat features including interstitial rock spaces and fish refuge. River bank and slope stabilization measures will also include revegetation with native species that will aid in soil stabilization and contribute to wildlife habitat development along the riparian corridor. In addition, removal of the unconsolidated soil and debris from the river channel, combined with stabilization and revegetation of the terrestrial portion of the failed slope will eliminate a significant source of sediment input to the river. Therefore, because project implementation will result in an overall net improvement in water quality in and habitat condition along the river, and because permanent impacts to waters to the U.S. will be less than 0.10 acre (0.059 acre), no mitigation for permanent impacts is proposed.

Temporary impacts to in-stream habitat and the south bank of the river due to construction of an access road and staging areas will be mitigated by restoring impacted areas to preconstruction condition. Any temporary sediment discharge during construction activities will be avoided and minimized by employing BMPs and implementation of a storm water pollution and prevention plan, including silt curtains to minimize downstream movement of sediment during in-stream project activities. BMPs and a storm water pollution and prevention plan will be implemented to minimize sediment deposition off-site to the maximum extent practicable.

24. Is Any Portion of the Work Already Complete? Yes __ No _X__ IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (If more than can be entered here, please attach a supplemental list).

The C.H. McCarthy Corporation 14234 County Highway 60, Upper Sandusky, Ohio 43351
Christine B. Cope 497 S. Sandusky Avenue, Upper Sandusky, Ohio 43351

25. List of Other Certifications or Approvals/Denials Received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED
Ohio EPA	§401 Water Quality Certification Application submitted concurrently				
Ohio EPA	Stormwater General Permit to be submitted 45 days prior to project commencement				
Wyandot County Engineer	Floodplain Permit				

27. Application is hereby made for a permit or permits to authorize the work described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT DATE SIGNATURE OF AGENT DATE

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.

§401
Water Quality Certification Application

APPLICATION FOR OHIO EPA
SECTION 401 WATER QUALITY CERTIFICATION

Effective October 1, 1996
Revised August, 1998

This application must be completed whenever a proposed activity requires an individual Clean Water Act Section 401 Water Quality Certification (Section 401 certification) from Ohio EPA. A Section 401 certification from the State is required to obtain a federal Clean Water Act Section 404 permit from the U.S. Army Corps Engineers, or any other federal permits or licenses for projects that will result in a discharge of dredged or fill material to any waters of the State. To determine whether you need to submit this application to Ohio EPA, contact the U.S. Army Corps of Engineers District Office with jurisdiction over your project, or other federal agencies reviewing your application for a federal permit to discharge dredged or fill material to waters of the State, or an Ohio EPA Section 401 Coordinator at (614) 644-2001.

The Ohio EPA Section 401 Water Quality Certification Program is authorized by Section 401 of the Clean Water Act (33 U.S.C. 1251) and the Ohio Revised Code Section 6111.03(P). Ohio Administrative Code (OAC) Chapter 3745-32 outlines the application process and criteria for decision by the Director of Ohio EPA. In order for Ohio EPA to issue a Section 401 certification, the project must comply with Ohio's Water Quality Standards (OAC 3745-1) and not potentially result in an adverse long-term or short-term impact on water quality. Included in the Water Quality Standards is the Antidegradation Rule (OAC Rule 3745-1-05), effective October 1, 1996, revised October, 1997 and May, 1998. The Rule includes additional application requirements and public participation procedures. **Because there is a lowering of water quality associated with every project being reviewed for Section 401 certification, every Section 401 certification applicant must provide the information required in Part 10 (pages 3 and 4) of this application**. In addition, applications for projects that will result in discharges of dredged or fill material to wetlands must include a wetland delineation report approved by the Corps of Engineers, a wetland assessment with a proposed assignment of wetland category (ies), official documentation on evaluation of the wetland for threatened or endangered species, and appropriate avoidance, minimization, and mitigation as prescribed in OAC 3745-1-50 to 3745-1-54. Ohio EPA will evaluate the applicant's proposed wetland category assignment and make the final assignment.

Information provided with the application will be used to evaluate the project for certification and is a matter of public record. If the Director determines that the application lacks information necessary to determine whether the applicant has demonstrated the criteria set forth in OAC Rule 3745-32-05(A) and OAC Chapter 3745-1, Ohio EPA will inform the applicant in writing of the additional information that must be submitted. The application will not be accepted until the application is considered complete by the Section 401 Coordinator. An Ohio EPA Section 401 Coordinator will inform you in writing when your application is determined to be complete.

Please submit the following to "Section 401 Supervisor, Ohio EPA/DSW, P.O. Box 1049, Columbus, Ohio 43216-1049:

- Four (4) sets of the completed application form, including the location of the project (preferably on a USGS quadrangle) and 8-1/2 x 11" scaled plan drawings and sections.
- One (1) set of original scaled plan drawings and cross-sections (or good reproducible copies).

(See Application Primer for detailed instructions)

1. The federal permitting agency has determined this project: (check appropriate box and fill in blanks)

   a.___ requires an individual 404 permit/401 certification- Public Notice # (if known)_____

   b.__X__ requires a Section 401 certification to be authorized by Nationwide Permit #13

   c.____ requires a modified 404 permit/401 certification for original Public Notice #

   d.____ requires a federal permit under _____ jurisdiction identified by #

   e.____ requires a modified federal permit under_____ jurisdiction identified by #

2. Application number (to be assigned by Ohio EPA):

3. Name and address of applicant:
City of Upper Sandusky
Attn: Mayor Scott Washburn
119 North 7th Street
Upper Sandusky, Ohio 43351

Telephone number during business hours:
( ) N/A (Residence)
(419) 294-3862 (Office)

3a. Signature of Applicant: Scott D Washburn Date: 2-12-13

4. Name, address and title of authorized agent:
Mr. Hugh F. Crowell, PWS
Hull & Associates, Inc.
6397 Emerald Parkway, Suite 200
Dublin, Ohio 43016

Telephone number during business hours:
(614) 579-8666 (Cell)
(614) 793-8777 (Office)

4a. Statement of Authorization: I hereby designate and authorize the above-named agent to act in my behalf in the processing of this permit application, and to furnish, upon request, supplemental information in support of the application.

Signature of Applicant: Scott D Washburn Date: 2-12-13

5. Location on land where activity exists or is proposed. Indicate coordinates of a fixed reference point at the impact site (if known) and the coordinate system and datum used.

Address: **Continued; see attached Exhibit 1; see also Appendix A, Figure 1**

Intersection of Indian Mill Road and Kimmel Court.
Approximate project center: Latitude: 40°50'49.30" N Longitude: -83°16'20.31" W

Street, Road, Route, and Coordinates, or other descriptive location

HUC 04100011	Wyandot	City of Upper Sandusky	Ohio	43351
Watershed	County	City or Township	State	Zip Code

6. Is any portion of the activity for which authorization is sought complete? ___ Yes _X_ No
If answer is "yes," give reasons, month and year activity was completed. Indicate the existing work on the drawings.

7. List all approvals or certifications and denials received from other federal, interstate, state or local agencies for any structures, construction, discharge or other activities described in this application.

Issuing Agency	Type of Approval	Identification No.	Date of Application	Date of Approval

See attached Exhibit 2

8. DESCRIPTION OF THE ACTIVITY (fill in information in the following four blocks - 8a, 8b, 8c & 9)

8a. Activity: Describe the Overall Activity:
The project consists of stabilizing a section of failed slope on a meander bend of the Sandusky River along the south side of Indian Mill Road. The failed area includes an approximately 150-foot-long section of steep slope along Indian Mill Road at its intersection with Kimmel Court.

Continued; see attached Exhibit 3; see also Appendix A, Figure 2, Sheets C-101-P, C-501, C-502; Appendix C, Photos 1 through 3

8b. Purpose: Describe the purpose, need and intended use of the activity:

The purpose of this proposed project is to stabilize a failed slope that is undermining Indian Mill Road and an adjacent natural gas pipeline.

Continued; see attached Exhibit 4

8c. Discharge of dredged or fill material: Describe type, quantity of dredged material (in cubic yards), and quantity of fill material (in cubic yards). **(OAC 3745-1-05(B)(2)(a))**

The location of the Sandusky River is shown on Figure 1 (Appendix A). The proposed slope stabilization project will include impacting an area that extends approximately 225 linear feet along the north bank of the Sandusky River (Appendix A, Figure 2, Sheet C-101-P). Permanent stream impacts associated with the Preferred Alternative would total 225 linear feet of stream channel (Table 1, Appendix B); an additional 265 linear feet of stream channel would be temporarily impacted by the Preferred Alternative due to construction access. Stream areal fill impacts and cubic yardage of fill quantities from the Preferred Alternative are summarized in Table 2 (Appendix B) and include 380 cubic yards of permanent fill deposited over an area of 2,580 square feet and 1,100 cubic yards of material to be excavated from an area of 4,250 square feet. Another 340 cubic yards of fill would be deposited over an area of 6,100 square feet for construction access, but would be removed from the project area upon project completion.

No wetlands were identified within the project area work limits.

9. Waterbody and location of waterbody or upland where activity exists or is proposed, or location in relation to a stream, lake, wetland, wellhead or water intake (if known). Indicate the distance to, and the name of any receiving stream, if appropriate.

A single stream, the Sandusky River, is located in the project area is (Appendix A, Figure 1). No wetlands were identified within the project area during site reconnaissance.

Continued: See Attached Exhibit 5; see also Appendix A, Figures 1 and 2, Sheets C-101-P and C-502

10. To address the requirements of the Antidegradation Rule, your application must include a report evaluating the:

- Preferred Design (your project) and Mitigative Techniques
- Minimal Degradation Alternative(s) (scaled-down version(s) of your project) and Mitigative Techniques
- Non-Degradation Alternative(s) (project resulting in avoidance of all waters of the state)

At a minimum, item a) below must be completed for the Preferred Design, the Minimal Degradation Alternative(s), and the Non-Degradation Alternative(s), followed by completion of item b) for each alternative, and so on, until all items have been discussed for each alternative (see Primer for specific instructions). (Application and review requirements appear at **OAC 3745-1-05(B)(2), OAC 3745-1-05(C)(6), OAC 3745-1-05(C)(1) and OAC 3745-1-54**).

See Attached Exhibit 6, pp. 13-23 for Antidegradation Rule Discussion

10a) Provide a detailed description of any construction work, fill or other structures to occur or to be placed in or near the surface water. Identify all substances to be discharged, including the cubic yardage of dredged or fill material to be discharged to the surface water. **(OAC 3745-1-05(B)(2)(b))**

10b) Describe the magnitude of the proposed lowering of water quality. Include the anticipated impact of the proposed lowering of water quality on aquatic life and wildlife, including threatened and endangered species (include written comments from Ohio Department of Natural Resources and U.S. Fish and Wildlife Service), important commercial or recreational sport fish species, other individual species, and the overall aquatic community structure and function. Include a Corps of Engineers approved wetland delineation. **(OAC 3745-1-05(C)(6)(a, b) and OAC 3745-1-54)**

10c) Include a discussion of the technical feasibility, cost effectiveness, and availability. In addition, the reliability of each alternative shall be addressed (including potential recurring operational and maintenance difficulties that could lead to increased surface water degradation.) **(OAC 3745-1-05(C)(6)(h, j-k) and OAC 3745-1-54)**

10d) For regional sewage collection and treatment facilities, include a discussion of the technical feasibility, cost effectiveness and availability, and long-range plans outlined in state or local water quality management planning documents and applicable facility planning documents. **(OAC 3745-1-05(C)(6)(I))**

10e) To the extent that information is available, list and describe any government and/or privately sponsored conservation projects that exist or may have been formed to specifically target improvement of water quality or enhancement of recreational opportunities on the affected water resource. **(OAC 3745-1-05(B)(2)(g))**

10f) Provide an outline of the costs of water pollution controls associated with the proposed activity. This may include the cost of best management practices to be used during construction and operation of the project. **(OAC 3745-01-05(C)(6)(g))**

10g) Describe any impacts on human health and the overall quality and value of the water resource. **(OAC 3745-1-05(C)(6)(c) and OAC 3745-1-54)**

10h) Describe and provide an estimate of the important social and economic benefits to be realized through this project. Include the number and types of jobs created and tax revenues generated and a brief discussion on the condition of the local economy. **(OAC 3745-1-5(B)(2)(e), and OAC 3745-1-05(C)(6)(I))**

10i) Describe and provide an estimate of the important social and economic benefits that may be lost as a result of this project. Include the effect on commercial and recreational use of the water resource, including effects of lower water quality on recreation, tourism, aesthetics, or other use and enjoyment by humans. **(OAC 3745-1-05(B)(2)(e,f), and OAC 3745-1-05(C)(6)(e))**

10j) Describe environmental benefits, including water quality, lost and gained as a result of this project. Include the effects on the aquatic life, wildlife, threatened or endangered species. **(OAC 3745-1-05 (B)(2)(e,f), OAC 3745-1-05 (C)(6)(b) and OAC 3745-1-54)**

10k) Describe mitigation techniques proposed (except for the Non-Degradation Alternative):

- " Describe proposed Wetland Mitigation (see **OAC 3745-1-54** and Primer)
- " Describe proposed Stream, Lake, Pond Mitigation (see Primer)

11. Application is hereby made for a Section 401 Water Quality Certification. I certify that I am familiar with the information contained in this application and, to the best of my knowledge and belief, such information is true, complete and accurate. I further certify that I possess the authority to undertake the proposed activities or I am acting as the duly authorized agent of the applicant.

Scott D. Wachler — 2-12-13 — Signature of Applicant — Date

[signature] — 2-19-13 — Signature of Agent

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in Block 3 has been filled out and signed.

Do not send a certification processing fee with this application. The appropriate fee will be assessed when a certification is issued.

EXHIBIT 1

401 APPLICATION: BLOCK 5

5. Location on land where activity exists or is proposed. Indicate coordinates of a fixed reference point at the impact site (if known) and the coordinate system and datum used.

The project is located along Indian Mill Road in the City of Upper Sandusky in central Wyandot County, Ohio (Appendix A, Figure 1). The project is located at the intersection of Indian Mill Road and Kimmel Court and includes an approximately 150-foot-long section of slope along the Sandusky River that has failed (Appendix A, Figure 2, Sheet C-101-P). Based on the U.S. Geological Survey (USGS 1971) Upper Sandusky, Ohio 7.5-minute quadrangle, the approximate mid-point of this project is located at 40°50'49.30"N latitude and -83°16'20.31"W longitude.

The project site is located on the mainstem of the Sandusky River at River Mile 80.35 (OEPA 2006). The project site is within the Sandusky River watershed (Hydrologic Unit Code [HUC] 04100011) and the Town of Upper Sandusky-Sandusky River sub-watershed (HUC 04100011-0702).

EXHIBIT 2

401 APPLICATION: BLOCK 7

7. List all approvals or certifications and denials received from other federal, interstate, state or local agencies for any structures, construction, discharge or other activities described in this application.

A U.S. Army Corps of Engineers (USACE) Section 404 Nationwide Permit application will be submitted concurrently to this Section 401 Water Quality Certification application. This project would affect the Sandusky River floodplain, and therefore, a permit from the local floodplain manager (Wyandot County Engineer) will be necessary. An Ohio Environmental Protection Agency Stormwater General Permit application will be submitted forty-five days prior to commencement of project construction.

EXHIBIT 3

401 APPLICATION: BLOCK 8a

8a. Activity: Describe the Overall Activity:

The project consists of stabilizing a section of failed slope on a meander bend of the Sandusky River along the south side of Indian Mill Road. The failed area includes an approximately 150-foot-long section of steep slope along Indian Mill Road at its intersection with Kimmel Court (Appendix A, Figure 2, Sheet C-101-P; Appendix C, Photos 1 through 3). The slope measures approximately 50 vertical feet from the top of the slope to the surface of the Sandusky River. The failed slope threatens the integrity of Indian Mill Road and a Columbia Gas pipeline located south of and parallel to the road. A portion of the roadbed has been undercut by the slope failure and the guardrail is collapsing (Appendix C, Photo 1). Because of the public safety hazard created, Indian Mill Road is currently closed to vehicular traffic and will remain so until the slope can be reconstructed and stabilized and the road repaired.

Proposed measures for remediating the failed slope include: removal of all unconsolidated sediment/sloughed soil on the slope and in the river channel: reconstructing the slope at 2'H:1'V; placement of geotextile matting and rock to stabilize and re-establish the slope; vegetation plantings on the slope in areas not stabilized with rock; placement of rock-filled gabion boxes and large stone to stabilize the river shoreline; and placement of stone buffers/deflectors up- and downstream of the failed slope to redirect flow away from the shoreline (Appendix A, Sheets C-101-P, C-501, C-502). Slope and shoreline stabilization measures would include placement of stone, rock-filled gabions and/or log buffers/deflectors below the Ordinary High Water Mark (OHWM) of the Sandusky River (805 feet above mean seal level).

It should be noted that toe erosion appears to be the cause of the embankment failure. However, if an additional potential cause of the embankment failure is identified during construction, the additional cause will be investigated. The investigation may include the advancement of additional soil borings and additional analyses, which may result in a remediation design change.

EXHIBIT 4

401 APPLICATION: BLOCK 8b

8b. Purpose: Describe the purpose, need and intended use of the activity:

The following information provides the documented purpose, need, and intended use of the proposed project as it pertains to the preferred alternative.

8b-1. Purpose of the Project

The purpose of the proposed action is to:

- Re-construct and stabilize a failed portion of a steep slope and bank along the Sandusky River;
- Reduce soil erosion and sedimentation of the Sandusky River;
- Protect and ensure the integrity of Indian Mill Road;
- Protect and ensure the integrity of a Columbia Gas pipeline located along the south side of Indian Mill Road;
- Restore riparian habitat along the Sandusky River.

8b-2. Need for the Project

The need for the proposed project is to:

- Improve water quality in the Sandusky River by minimizing sediment inputs from the failing slope at the project site. The City of Sandusky (2012) estimates that approximately 171 tons of sediment per year is being transported into the river from the failed slope. The Ohio Environmental Protection Agency (OEPA 2004) lists sedimentation due to overland transport and bank erosion as one of the primary causes of water quality impairment in the Upper Sandusky River watershed.
- Ensure public safety by repairing and stabilizing the compromised portion of Indian Mill Road above the failed slope. Repair and stabilization of the road is not feasible without reconstruction and stabilization of the failed slope. This portion of Indian Mill Road is currently closed to vehicular traffic and will remain so until the slope and road are stabilized. Closure of Indian Mill Road also precludes the use of this roadway as an alternative route for both emergency service vehicles and general vehicular traffic.
- Provide for public safety by ensuring the integrity of the Columbia Gas pipeline located along the south side of Indian Mill Road (Figure 2). The failing slope compromises the integrity of the pipeline; failure to stabilize the slope could result in a public safety hazard were the pipeline to become damaged.
- The project area is within the portion of the Sandusky River that is designated as 'Scenic' by the Ohio Scenic Rivers Act. Restoration of the riparian habitat on the failed slope will enhance and protect terrestrial and aquatic wildlife habitat and the aesthetic quality of the State Scenic Sandusky River. Restoration of streamside forest is one of the most effective means for maintaining the health of the river. Riparian vegetation stabilizes the soil, reduces sediment and pollutant inputs into the river, mediates water temperature, and provides food and cover for terrestrial and aquatic organisms.

8b-3. Intended Use of the Project

The City of Sandusky intends to reconstruct and stabilize the failing slope and stabilize the bank along the Sandusky River. The completed project will contribute to a reduction in sedimentation and improvement in water quality in the Sandusky River. Stabilization of the failing slope will also allow for the repair of Indian Mill Road and ensure the long-term integrity of the road and the adjacent Columbia Gas pipeline.

EXHIBIT 5

401 APPLICATION: BLOCK 9

9. Waterbody and location of waterbody or upland where activity exists or is proposed, or location in relation to a stream, lake, wetland, wellhead or water intake (if known). Indicate the distance to, and the name of any receiving stream, if appropriate.

The location of the Sandusky River is identified in Figure 1 (Appendix A). The Sandusky River has a drainage area of 1,850 mi^2 and flows north into Lake Erie approximately 80 river miles downstream of the project area. The Town of Upper Sandusky-Sandusky River HUC basin has a drainage area of 28.99 mi^2. Ohio Water Quality Standards designates the reach of the Sandusky River in the project area as Warm Water Habitat (WWH; Ohio EPA 2011).

Stabilization of the failing slope along the south side of Indian Mill Road will necessitate permanently impacting a total of 225 feet of the north bank of the Sandusky River below the OHWM. The proposed impacts are derived from approximately 150 linear feet of shoreline where rip-rap (ODOT Type C), large stone, and rock-filled gabion boxes will be placed below the OHWM to stabilize the failing slope river bank (Appendix A, Sheets C-101-P and C-502). Stone toe deflectors to deflect flow away from the slope will be placed along the bank at specified intervals below OHWM. These flow deflectors will be installed within the 150-foot stabilization zone, as well as over a distance of approximately 30 to 40 feet up- (west) and downstream (east) of the stabilized zone (Appendix A, Sheet C-101-P) resulting in an additional 75 feet of permanent impacts.

No isolated or non-isolated wetlands were identified during reconnaissance surveys of the project area.

EXHIBIT 6

401 APPLICATION: BLOCK 10

10. To address the requirements of the Antidegradation Rule, your application must include a report evaluating the:

- Preferred Design (your project) and Mitigative Techniques
- Minimal Degradation Alternative(s) (scaled-down version(s) of your project) and Mitigative Techniques
- Non-Degradation Alternative(s) (project resulting in avoidance of all waters of the state)

At a minimum, item a) below must be completed for the Preferred Design, the Minimal Degradation Alternative(s), and the Non-Degradation Alternative(s), followed by completion of item b) for each alternative, and so on, until all items have been discussed for each alternative (see Primer for specific instructions). (Application and review requirements appear at **OAC 3745-1-05(B)(2), OAC 3745-1-05(C)(6), OAC 3745-1-05(C)(1) and OAC 3745-1-54)**.

The following is a discussion of alternatives considered for the proposed project. The alternatives identified and described below have been considered during the project design phases and a combination of issues including the project's purpose and need, site, cost, and social constraints were the driving forces in choosing the preferred alternative.

The proposed project involves the stabilization of a failing slope along the Sandusky River below Indian Mill Road in the City of Upper Sandusky. The entire project area is approximately 225 feet in length.

10a-1. Preferred Alternative

The Preferred Alternative is shown in Appendix A, Sheets C-101, C-501, and C-502). The Preferred Alternative involves stabilizing a failed slope along the State Scenic Sandusky River. The failed slope would be stabilized by: removing unconsolidated sediment and sloughing soils from the slope; reconstructing the slope at 2'H:'V1 and stabilizing it with erosion control matting, stone fill (ODOT #1 and #2), and vegetative plantings; re-establishing the original river bank and channel form by excavation of sloughed soil from the river channel that originated from the failed slope; stabilizing the river bank with large stone, rip-rap (ODOT Type C) and rock-filled gabion boxes; and installation of stone flow deflectors in the river channel along the base of the slope. Indian Mill Road, located at the top of the slope, is being undermined by the slope failure and is at risk of collapse. The integrity of a Columbia Gas pipeline adjacent to/south of and paralleling Indian Mill Road is also compromised by the slope failure.

Construction access to the project site would be from the south side of the river and require construction of a temporary causeway across the river channel and a temporary construction work area at the base of the slope (Appendix C, Photos 4 through 6). Access from the south side of the river is preferred for the following reasons: the land on the opposite side of the river is a flat agricultural field with easy access from the south(Appendix A, Figures 1 and 2; Appendix C, Photos 7 and 8); the length of the access route at the site would be minimized; impacts to riparian forest would be minimized due to the narrow riparian corridor on the south side of the river (Appendix C, Photos 4, 6, and 8); further destabilization of additional portions of the steep slope along the north side of the river would be avoided; and construction time and cost would be reduced (Appendix B, Table 3). Because of the steepness of this northern slope, accessing the project work area from Indian Mill Road would necessitate construction of an access road approximately 550 feet long on the side of the slope (see Minimum-Degradation Alternative; Appendix A, Sheet C-101-P) and require clearing trees from the forested slope (Appendix C, Photo 9). Restoration of the forest on the steep slope to preconstruction condition would take years during which time impacted portions of the slope would be more vulnerable to soil erosion and additional slope failure. In addition, there would be an aesthetic impact that must be considered along this Scenic River. Portions of the slope adjacent to the project site even now appear vulnerable to activities that would further destabilize the slope. Signs of instability, including slope settling and sloughing and deep erosion channels, were observed on the forested slopes up- and downstream of the project site (Appendix C, Photos 10 and 11), including the area proposed for access road construction under the Minimum Degradation and Non-Degradation Alternatives.

In total, the built project would result in permanent impacts to approximately 225 linear feet of stream channel and bank below the OHWM of the Sandusky River associated with installation of bank stabilization structures (Appendix A, Sheet C-101; Table 1). Removal of soil that originated from the failed slope and installation of bank stabilization structures immediately below the failed slope would require excavation of approximately 965 cubic yards of soil and sediment from below the OHWM along 150 linear feet of the stream channel (Appendix B, Table 2). Another 23 cubic yards of material would be excavated from the stream bank for anchoring flow deflectors up- and downstream of the failed slope. Silt fences/curtains would be placed downstream of the project site during excavation of the soil and sediment from the river channel and bank to minimize downstream transport of sediment.

The total volume of permanent fill placed below the OHWM for the Preferred Alternative would be 380 cubic yards (Appendix A, Sheets C-101-P and C-502; Appendix B, Table 2). Construction of the stream bank stabilization structure would require permanent placement of 328 cubic yards of material below the OHWM, including 133 cubic yards of large stone, 150 cubic yards of rock-filled gabion boxes, and 45 cubic yards of rip-rap at the base of the slope. An additional 52 cubic yards of large rock would be placed in the stream channel for flow deflector construction. Approximately five flow deflectors would be installed at approximately 50-foot-intervals along 225 linear feet of stream channel.

Construction equipment access to the failed slope from the south side of the river would require excavation of the river bank and bank re-contouring at a 2'H:"V1 slope to create a 20-foot-wide ramp leading to the access causeway. One hundred-twelve (112) cubic yards of material would be excavated from the river bank below the OHWM for ramp construction (Appendix B, Table 2). Construction of a temporary access causeway across the river and work area at the base of the failed slope would require placement of approximately 340 cubic yards of rip-rap (ODOT Type C) in the river channel below the OHWM (Appendix A, Sheet C-502 Appendix B; Table 2). This material would be removed from river channel upon project completion. The causeway would cross the river channel at 90 degrees and be approximately 70 feet long, 20 feet wide, and 6 feet thick. Three 48-inch HDPE culverts would be installed through the center of the causeway to maintain stream flow during project construction (Appendix A, Sheets C-101-P and C-502). The temporary construction work area at the base of the failed slope would be approximately 25 feet wide, 6 feet deep, and extend the length of the project site (225 linear feet).

Upon project completion, all fill material used for construction of the causeway and work area will be removed from the project site. The portion of the south river bank that was excavated for project access will be returned to pre-construction contours and stabilized by armoring with a portion of the rip-rap used for causeway construction.

10a-2. Minimal Degradation Alternative

The Minimal Degradation Alternative differs from the Preferred Alternative only in the location of construction access to the failed slope (Appendix A, Figure 2, Sheet C-101-MD). Construction access for the Minimal-Degradation Alternative would be from Indian Mill Road and require construction of an approximately 550-foot-long temporary access road along the slope west of the project site. Reconstruction and stabilization of the failed slope under the Minimal-Degradation Alternative would involve the same design and construction methods as detailed for the Preferred Alternative (see section 10a-1) and include:

- excavation of approximately 965 cubic yards of soil and sediment from below the OHWM (Appendix B, Table 2) along 150 linear feet of the stream channel to remove soil that originated from the failed slope and for installation of bank stabilization structures immediately below the failed slope would require;
- excavation of 23 cubic yards of material from the stream bank for anchoring flow deflectors up- and downstream of the failed slope (Appendix B, Table 2); and
- placement of a total of 380 cubic yards of permanent fill below the OHWM for construction of the stream bank stabilization structure (328 cubic yards) and flow deflectors (52 cubic yards) (Appendix A, Sheet C-101-MD; Appendix B; Table 2).

Access road construction would require clearing and grading of a 15-foot wide by 540-foot-long corridor that would traverse the slope west of the project site from Indian Mill Road to the failed slope. Construction of this road would not result in direct impacts to the Sandusky River channel or bank below the OHWM. However, approximately 0.19 acre of second growth hardwood forest would be cleared. As discussed in Section 10a-1, clearing and grading of the steep slope adjacent to the project site could further destabilize an area that is currently exhibiting signs of impending slope failure (Appendix C, Photos 10 and 11), in addition to creating an aesthetic impact along a Scenic River.

10a-3. Non-Degradation Alternative

The Non-Degradation Alternative is presented in Appendix A, Sheet C-101-ND. The Non-Degradation Alternative would involve reconstruction and stabilization of the failed slope above the Sandusky River at elevations above the OHWM only. The objective of this alternative would be to stabilize the failed slope at the highest elevation practicable while ensuring the long-term stability and integrity of Indian Mill Road once repaired, along with the adjacent Columbia Gas pipeline. Slope stabilization would be accomplished by construction of a drilled shaft and soldier pile wall at an elevation of approximately 830 feet above msl. The Non-Degradation Alternative would not include slope or shoreline reconstruction or stabilization measures below the road stabilization structure/retaining wall. It would also not include removal of sediment, soil, and other debris originating from the failed slope from the Sandusky River channel, nor require construction of a temporary construction access causeway or work areas in the river channel.

Construction access to the failed portion of the slope under the Non-Degradation Alternative would require construction of a temporary access road that would traverse the slope to the west from Indian Mill Road to the project site. Due to the steep grade of the slope, access road construction would require clearing and grading of a 15-foot wide by 535-foot-long corridor from an elevation of approximately 850 feet msl to 830 feet msl. Approximately 0.18 acre of second growth hardwood forest would be cleared for access road construction. As discussed in

Section 10a-1, clearing and grading of the steep slope adjacent to the project site could further destabilize an area that is currently exhibiting signs of impending slope failure (Appendix C, Photos 10 and 11)), in addition to creating an aesthetic impact along a Scenic River.

Because all slope stabilization measures/structures and construction access would be constructed above the OHWM of the Sandusky River, no direct project-related impacts to the Sandusky River would occur due to implementation of the Non-Degradation Alternative. While avoiding direct, project-related impacts to the Sandusky River, this alternative would not address slope failure and bank erosion below the proposed retaining wall. Without reconstruction and stabilization of the slope below this retaining structure, it is likely that the portions of the slope down-gradient of this structure in the project area would continue to fail and contribute to sedimentation of the river. Continued failure of the lower portion of the slope could potentially compromise the long-term integrity of the proposed retaining wall as well.

10b. IMPACTS ON WATER QUALITY AND AQUATIC LIFE BY ALTERNATIVE

Impacts on water quality, aquatic life, and terrestrial wildlife species can be expected from the Preferred and Minimal Degradation Alternatives. Impacts from the Non-Degradation Alternative would be limited to terrestrial wildlife species. Correspondence from the U.S. Fish and Wildlife Service (USFWS 2012a) and Ohio Department of Natural Resources (ODNR 2012) regarding potentially occurring rare, threatened, endangered and special interest species (RTE) indicate that the following RTE species have been reported from Wyandot County: Indiana bat (*Myotis sodalis*), federal and state endangered; rayed bean (*Villosa fabalis*), federal and state endangered; eastern massasauga (*Sistrurus catenatus catenatus*), federal candidate and state endangered; plains clubtail (*Gomphus externus*), state endangered; and bald eagle (*Haliaeetus leucocephalus*), federal species of concern and state threatened species (Appendix D). In addition, the project site is located in the Sandusky River Important Bird Area (IBA; USFWS 2012a).

Site reconnaissance did not reveal the presence of any federally or state-listed RTE species in the project area. There is, however, suitable habitat in the project area to potentially support several of these species. A discussion of potentially occurring RTE species follows, including the likelihood of their occurrence in the project area. Potential impacts to these species and/or their habitat resulting from project implementation is presented for each project alternative in the following sections 10b-1 through 10b-3.

The Indiana bat is listed as endangered by the USFWS and ODNR and potentially occurs in every county in Ohio. The ODNR (2012) has no records of Indiana bat capture locations within a five-mile radius of the project site, nor any records of hibernacula within a ten-mile radius (Appendix D). According to the USFWS (2012a), the project site is within the known range of the Indiana bat. Trees in the forested riparian corridor along the Sandusky River could potentially serve as summer habitat for the Indiana bat. Numerous trees with suitable summer roost features, including exfoliating bark, split trunks and cavities, adequate solar exposure and adjacency to travel corridors were observed on both the north and south banks of the river. This riparian forest could also function as a movement corridor or foraging habitat for the endangered bat. If tree clearing is required for project implementation the USFWS has requested further coordination to determine if focused surveys to determine the presence or absence of the Indiana bat on the project site are warranted (Appendix D; USFWS 2012a).

The project site is located within the range of the rayed bean, a species of freshwater mussel that typically inhabits smaller headwater streams, but records exist from larger rivers such as the Sandusky. The rayed bean is typically found in or near shoal or riffle areas in sand or gravel substrates and often within, and buried under, the roots of aquatic vegetation, including water willow (*Justicia americana*) and water milfoil (*Myriophyllum* sp.; USFWS 2012a, 2012c). The project site is located on an outer meander bend of the Sandusky River in an area characterized by relatively deep channel pools and no riffles. While these conditions are not optimal for the rayed bean, focused surveys to determine the presence or absence of freshwater mussels in general or this species in particular may be necessary prior to initiation of project activities that would impact in-stream habitat. The USFWS has requested that any such surveys be conducted in coordination with the Endangered Species Coordinator for the agency's Ohio Field Office (Appendix D, USFWS 2012a). The ODNR has no records of rayed bean finds from the project site or surrounding areas (Appendix D; ODNR 2012).

The eastern massasauga rattlesnake is a federal candidate for listing as threatened or endangered and a state-listed endangered species that has been reported from Wyandot County (USFWS 2012a, 2012b). This docile rattlesnake inhabits wet meadows and marshes adjacent to drier upland grassland and forest habitats (ODNR undated (a)). The ODNR (2012) currently has no records of eastern massasauga from the project site or surrounding areas (Appendix D). Due to the lack of suitable habitat, this rattlesnake is unlikely to occur in the project area (Appendix D; USFWS 2012a).

The plains clubtail is a state-listed endangered dragonfly that occurs near large, slow-moving streams and rivers with muddy bottoms. The ODNR (2012) reported an occurrence of the plains clubtail from along the Sandusky River less than 0.5 mile upstream of the project site (Appendix D). No plains clubtail were observed during site reconnaissance. Due to the limited extent of permanent impacts to the river, the potential for impact to this species is assumed to be very low.

The bald eagle is currently listed as a species of concern by the USFWS (2012a, 2012b) and is afforded protection under the federal Bald and Golden Eagle Protection Act and Migratory Bird Treaty Act. It is also listed as a threatened species in Ohio by the ODNR (2012). Bald eagles prefer to nest in mature riparian habitat near lakes, large rivers, and sea coasts. Neither the USFWS (2102a) nor the ODNR (2012) have records of bald eagle nest sites from the project site or surrounding areas (Appendix D).

The project site is located in the Sandusky River IBA (USFWS 2012a), which is an area that provides essential habitat for one or more species of breeding, wintering, and/or migratory birds. The riparian forest along the Sandusky River represents potential nesting habitat for migratory songbirds which typically nest in the project area from April 1 through July 15. The USFWS (2012a) encourages that any project-related tree clearing be done outside of the nesting season to prevent impacts to migratory birds (Appendix D).

The reach of the Sandusky River that occurs within the project area is designated as an Ohio State Scenic River under the state Scenic Rivers Act (ODNR undated (b)). Because the project site is within the City of Upper Sandusky municipal corporation limits, project activities do not require approval from the ODNR Scenic Rivers Program (ORC 1547.82). Ohio Water Quality Standards designates the reach of the Sandusky River in the project area as Warm Water Habitat (WWH; Ohio EPA 2011).

Terrestrial habitats that would be impacted by the proposed project consist of disturbed roadside habitat, riparian hardwood forest on the slope adjacent to the failed area, and riparian forest and agricultural cropland on the property on the south side of the river. Impacts to forested habitat would be due to construction of access road(s) to the failed slope and are therefore temporary. All temporary access routes would be re-contoured and revegetated upon project completion with the goal of re-establishing preconstruction vegetation communities and habitat. Impacts to agricultural land would also be temporary, with all disturbed agricultural land being returned to preconstruction contours.

Construction activities may result in the temporary displacement of common bird and wildlife species; however, these species are likely to be tolerant of disturbance, and should relocate to suitable similar habitat available outside of the project area. Measures will be taken to avoid impacts to any RTE species that may potentially be found in the project area and to minimize effects to their habitat. Tree clearing could result in the loss of potential habitat for the Indiana bat and migratory songbirds. If possible, trees would be cleared outside of the period when forested habitat would be used by Indiana bat and migratory songbirds. The USFWS would require surveys for the Indiana bat if tree clearing were to occur between April 1 and September 30.

Where practicable, the reconstructed and stabilized slope would be planted with vegetation to aid in slope stabilization and erosion control. Native plant species would be used to the extent feasible for revegetating the reconstructed slope. Most of the failed portions of the slope currently lack significant vegetative cover. Implementation of the proposed project would improve habitat and opportunities for wildlife use of the project area over current conditions.

The total length of the Sandusky River in the project area is approximately 225 linear feet. The Preferred Alternative would temporarily impact flow of surface water in the Sandusky River due to construction of a temporary causeway across the river channel for site access from the south (Appendix A, Figure 2, Sheets C-101-P, C-502). A temporary construction work area requiring placement of fill material in the river channel at the base of the failed slope would also be required for the Preferred Alternative as well. Three 48-inch HDPE culverts would be placed through the center of the causeway to accommodate low flow in the river during project construction. All material used for construction of the causeway and work areas would be removed from the river channel immediately following project completion and all disturbed portions of the river channel and banks returned to preconstruction contours.

No wetlands were identified within the project site; therefore, no wetlands will be impacted by any of the Alternatives.

Potential water quality impacts affecting the Sandusky River are expected to be siltation resulting from the proposed construction activities on the failed slope above the river and in the river channel, as well as the degradation of near shore aquatic habitat along the north shore of the river due to the placement of slope and shoreline stabilization structures at and below the OHWM. Existing sediment inputs to the Sandusky River from the failed slope are significantly greater than what would be expected to result from project construction. Failed portions of the slope currently lack vegetative cover and contain a significant volume of unconsolidated soil and sediment that is extremely vulnerable to erosion. Implementation of the proposed project would result in a significant long-term improvement over current conditions due to slope stabilization measures, reduction in soil erosion, and improved water quality in the Sandusky River.

Implementation of the proposed slope stabilization project would incorporate Best Management Practices (BMPs) to minimize further slope erosion and river sedimentation during construction. An erosion and sedimentation control plan which will be incorporated into the final construction plans will minimize short-term construction impacts on the water quality by use of silt barriers, silt fences, and/or other BMPs appropriately placed around the construction site. Temporary silt curtains will be placed across the river channel downstream of the project area to reduce turbidity during construction activities (Appendix A, Sheets C-101-P, C-101-MD). Long-term measures to remediate soil erosion include removal of unconsolidated soil and sediment, slope reconstruction, and slope and river shoreline stabilization using geotextile matting, stone, rock-filled gabion boxes, vegetative plantings, and flow deflector structures (Appendix A, Sheet C-502).

Permanent impacts to aquatic habitat in the Sandusky River would be limited to the immediate shoreline below the OHWM at the base of the failed slope area and would only include structures necessary to stabilize the failed slope and river bank. Stabilization structures include large stone and rock-filled gabion boxes; stone flow deflectors would also be placed along the river bank up- and downstream of the slope and bank stabilization structures to dissipate stream energy and reduce erosional forces from the river (Appendix A, Sheets C-101-P, C-101-MD). Stabilization and flow deflector structures would extend into the river channel no more than 30 feet from the reconstructed bank. Therefore, the permanent loss of aquatic habitat in the Sandusky River would be negligible. The stone structures placed below OHWM will have a limited amount of aquatic habitat (e.g., interstitial spaces and limited fish refuge), and so these structures do not represent a complete loss of near-shore aquatic habitat.

Excavation of soil and sediment originating from the failed slope from the river channel could potentially result in discharge of sediment that would be transported into downstream portions of the Sandusky River. This construction-related discharge will be minimized using an effective erosion and sediment control plan in compliance with the Ohio construction stormwater general permit. A significantly greater amount of sediment would likely have been transported downstream without project implementation. Excavation of the river bank for placement of slope and shoreline stabilization structures and placement and removal of the temporary causeway will also also result in discharge of sediment into the river, although this impact will be minimized by conducting construction activities during a period of low flow and implementing BMPs under the Ohio construction stormwater general permit to control sediment discharge.

The aquatic habitat alterations discussed above should not substantially limit habitat for species residing in the Sandusky River watershed, and it is unlikely that the disturbance will result in the permanent loss of any species. Impacts associated with the temporary causeway and sediment inputs resulting from construction of the proposed bank stabilization project may reduce species diversity and abundance in the immediate project area during construction and for an unknown time afterward. However, sediment and erosion control BMPs will be utilized to minimize impacts to the aquatic biota. Once areas disturbed by construction have become stabilized it is expected that the construction area will no longer be a source of additional silt loadings to the stream. Silts that have accumulated over the pre-construction stream substrates will be transported from the project area (moved downstream and deposited in flood prone areas) during periods of increased flow. The amount of time it will take to return the stream substrate to preconstruction conditions is unknown, and is dependent on factors such as extent of the disturbance and fluctuations in duration and intensity of stream flows. Impacts resulting from siltation are considered to be temporary, although it may take several years for the stream substrates to recover following construction. Once the project is completed, it is expected that the aquatic species will eventually recolonize disturbed stream segments from upstream and downstream locations returning the aquatic community to near pre-construction conditions in those segments.

Of particular concern for projects resulting in increased sediment loads and loss of aquatic habitat is the presence of federally-listed or state-listed aquatic RTE species. Both the federal and state-listed endangered rayed bean mussel and state endangered plains clubtail dragonfly could potentially occur in or near the Sandusky River channel in the vicinity of the project site. If either of these species were to occur in the project area, they could be directly impacted by the proposed project either by the direct loss of individuals due to construction of the temporary in-water causeway and work areas and during excavation of the river bank and channel. Temporary increased sediment loads in the immediate vicinity of the project site could also result in the loss of rayed bean mussels if present.

10b-1. Preferred Alternative

The Preferred Alternative is not expected to adversely impact terrestrial animal life or plant communities. The failed slope is largely devoid of vegetation and the wooded slopes adjacent to the project area would not be affected by project construction. Over the long-term, terrestrial wildlife would benefit from project implementation as the reconstructed slope will be revegetated with native plant species and will eventually develop habitat suitable for wildlife species currently utilizing adjacent areas.

Approximately ten to fifteen trees would be cleared on the south bank of the river for temporary access road construction. Several of these trees contain features suitable for summer roosting of the Indiana bat (Appendix C, Photo 13). Clearing of these trees during the exclusionary period of October 1 thru March 31 would avoid potential direct impacts to the Indiana bat, and due to the small number of potential roost trees to be cleared, impacts to the bat's habitat would be negligible. Tree clearing outside of the exclusionary period would require coordination with the USFWS (2012a)a and an emergence survey to determine whether bats are utilizing these trees for roosting. If bats are found to be using these trees, a determination of the presence or probable absence of the Indiana bat in the project area would need to be conducted, possibly including Anabat deployment and mist netting. . Trees on the south bank of the river could also provide habitat for migratory songbirds. Tree clearing during the songbird breeding season of April 1 through July 15 would be avoided if possible. Upon project completion, the impacted portion of the south river bank will be returned to pre-construction condition and revegetated with native tree species.

The location of impacts to aquatic habitat in the Sandusky River and project design details for the Preferred Alternative is provided in Appendix A, Figures 2, Sheets C-101-P, C-502). Stream impact areas and quantities of fill (cubic yardage) are provided in Appendix B, Table 2.

The Preferred Alternative will permanently alter approximately 2,580 square feet (0.059 acre) of aquatic habitat along 225 feet of the north bank of the Sandusky River due to placement of slope and bank stabilization structures. At the toe of the failed slope, approximately 1,875 square

feet (0.043 acre) of natural stream bank would be replaced with rock and rock-filled gabion baskets along 150 feet of shoreline. Rock-filled gabion boxes and large stone would be placed along the river bank extending from just below the OHWM into the channel approximately 10 to 15 feet. Stone flow deflectors would be constructed along the stabilized portion bank and along an additional 75 feet of shoreline at 50-foot intervals and result in the partial loss of an additional of 530 square feet of aquatic habitat. Temporary impacts to aquatic habitat in the river would occur due to construction of a causeway and staging area for construction access from the south side of the river. Causeway construction would result in the excavation of approximately 220 square feet (0.005 acre) of the south bank of the river along 20 feet of channel. Construction of a causeway across the river channel and work area at the base of the failed slope would require deposition of approximately 340 cubic yards of rip-rap in the channel over an area of 6,100 square feet (0.140 acre). Three 48-inch HDPE culverts would be placed through the causeway to maintain stream flow during project construction.

Prior to implementing slope stabilization activities, unconsolidated soil and debris from the failed slope will be cleared from the slope and the river channel. In addition to soil, several large downed trees, logs, and branches have accumulated at the base of the failed slope (Appendix C, Photo 3). The soil and other debris will be removed from the river channel as construction of the causeway proceeds and this material can be accessed from the causeway. All soil and debris will be hauled offsite by truck and disposed of at a permitted disposal facility. Upon completion of the causeway and in-channel staging/work area, unconsolidated soil on remaining portions of the failed slope will be removed and disposed of as indicated above.

Upon completion of bank stabilization activities, all materials used for construction of the in-channel causeway and staging/work area, including stone, rip-rap and culverts, will be removed from the project site and the streambed and south river bank returned to pre-construction contours. A small amount of rip-rap used to construct the causeway will be used to armor the excavated portion of the southern river bank. The bank on the south side of the river will be revegetated using native tree species occurring in the adjacent riparian habitat, including joint planting the outer, rip-rapped portion of the bank.

Excavation and placement of the stabilization structures and construction access features will likely cause limited evacuation and mortality of both fish and aquatic macroinvertebrates. Downstream impacts to the Sandusky River would likely be caused by siltation from construction activities. This siltation may reduce species diversity and abundance during construction and for an unknown period of time afterward; however, it is unlikely that these disturbances will result in the permanent loss of any fish or macroinvertebrate species. Any downstream sedimentation will be temporary and sedimentation will be minimized through the use of erosion and sediment control BMPs, including installation of silt curtains across the river channel. Recovery of the affected stream reach is expected to occur rapidly following completion of construction and restoration.

10b-2. Minimal Degradation Alternative

The Minimal Degradation Alternative differs from the Preferred Alternative only by the route for construction access to the failed slope (Appendix A, Figure 2, Sheets C-101-P, C-101-MD). Whereas construction access for the Preferred Alternative would be from the south and across the Sandusky River channel, access under the Minimal Degradation Alternative would be from Indian Mill Road and require construction of a temporary access road traversing the steep, forested slope west of the failed slope.

The Minimal Degradation Alternative would result in the loss of approximately 8,120 square feet (0.19 acre) of terrestrial woody plant communities on the north bank of the Sandusky River due to construction of a temporary construction access road. Habitat in this area consists primarily of second growth hardwood forest (Appendix C, Photos 9 and 12). Although the access road would be revegetated with native species upon project completion, restoration of the forest to pre-construction vegetation conditions would take many years. In addition, clearing and grading could further destabilize the steep slope adjacent to the existing failed area, portions of which are currently displaying preliminary signs of slope failure (Appendix C, Photos 10 and 11).

Removal of trees for access road construction would not result in significant, long-term impacts to resident wildlife species that could relocate to adjacent habitat areas. However, a number of the trees in this portion of the project site contain suitable roost features for the endangered Indiana bat (Appendix C, Photo 14). Clearing of these trees would eliminate a relatively small number of potential bat roost trees and small area (0.19 acre) of habitat for foraging and use as a travel corridor. Clearing of trees for access road construction outside of the exclusionary period of October 1 through March 31 would require surveys coordinated with the USFWS to determine the presence or absence of Indiana bats from the project site. In addition, the riparian forest onsite is within the Sandusky River IBA and provides migratory, foraging, and nesting habitat for migratory songbirds. Tree clearing between April 1 and July 15 could impact nesting songbirds and should be avoided if possible.

The Minimal Degradation Alternative will permanently alter the same amount of aquatic habitat along the north bank of the Sandusky River as the Preferred Alternative (2,580 square feet [0.059 acre]; Appendix B, Table 2). Construction of slope and bank stabilization structures at the toe of the failed slope will require the following materials be deposited below the OHWM: rock, rock-filled gabion baskets, and rip-rap along 150 feet of shoreline; and stone flow deflectors along the same area plus an additional 100 feet of shoreline at approximately 50-foot intervals. Temporary impacts to aquatic habitat associated with construction of an in-stream causeway and work area for construction equipment access

would not be necessary under the Minimum Degradation Alternative due to access along the north bank of the river from Indian Mill Road (Appendix A, Figure 2, Sheet C-101-MD).

Excavation and placement of the stabilization structures and construction access features will likely cause limited evacuation and mortality of both fish and aquatic macroinvertebrates. Downstream impacts to the Sandusky River would likely be caused by siltation from construction activities. This siltation may reduce species diversity and abundance during construction and for an unknown period of time afterward; however, it is unlikely that these disturbances will result in the permanent loss of any fish or macroinvertebrate species. Any downstream sedimentation will be temporary and sedimentation will be minimized through the use of erosion and sediment control BMPs, including installation of silt curtains across the river channel. Recovery of the affected stream reach is expected to occur rapidly following completion of construction and restoration.

10b-3. Non-Degradation Alternative

The Non-Degradation Alternative differs from the Preferred Alternative by the method of stabilizing the failed slope and the route of construction access to the failed slope (Appendix A, Figure 2, Sheets C-101-P, C-101-ND). The Non-Degradation Alternative would avoid all direct impacts to the Sandusky River below the OHWM by constructing a drilled shaft and soldier pile wall at an elevation of approximately 830 feet above msl, approximately mid-way down the failed slope. To the extent feasible, portions of the failed slope below the sheet pile wall and above the OHWM will be stabilized by removing unconsolidated soil and sediment and placing joint-planted rip-rap on the slope as for the Preferred and Minimal Degradation Alternatives. However, access to the lower portion of the slope under the Non-Degradation Alternative will be limited by the location of the construction access road. Construction access under the Non-Degradation Alternative would be similar to that used for the Minimal Degradation Alternative and consist of an approximately 15-foot-wide by 540-foot-long temporary access road originating at Indian Mill Road and traversing the slope to the west to the project site.

The Non-Degradation Alternative would result in the loss of approximately 8,120 square feet (0.18 acre) of terrestrial animal life or plant communities on the north bank of the Sandusky River due to construction of a temporary construction access road. Habitat in this area consists primarily of second growth hardwood forest (Appendix C, Photos 9 and 12). Although the access road would be revegetated with native species upon project completion, restoration of the forest to pre-construction conditions could take many years. In addition, clearing and grading could further destabilize the steep slope adjacent to the existing failed area, portions of which are currently displaying preliminary signs of slope failure (Appendix C, Photos 10 and 11).

Removal of trees for access road construction would not result in significant, long-term impacts to resident wildlife species that could relocate to adjacent habitat areas. However, a number of the trees in this portion of the project site contain suitable roost features for the endangered Indiana bat (Appendix C, Photo 14). Clearing of these trees would eliminate a relatively small number of potential bat roost trees and small area (0.18 acre) of habitat for foraging and use as a travel corridor. Clearing of trees for access road construction outside of the exclusionary period of October 1 through March 31 would require surveys coordinated with the USAFS to determine the presence or absence of Indiana bats from the project site. In addition, the riparian forest onsite is within the Sandusky River IBA and provides migratory, foraging, and nesting habitat for migratory songbirds. Tree clearing between April 1 and July 15 could impact nesting songbirds and should be avoided if possible.

The Non-Degradation Alternative would avoid direct impacts to aquatic habitat in the Sandusky River because slope reconstruction and stabilization measures, as well as construction access, would be limited to areas above the OHWM (Appendix A, Figure 2, Sheet C-101-ND). BMPs would be implemented to minimize soil erosion during and after project construction; therefore, direct project-related impacts to aquatic organisms would be negligible. The Non-Degradation Alternative does not, however, include removal of unconsolidated soil from or stabilization of the failed slope below the OHWM, including the Sandusky River channel. The lower-most portions of the failed slope above the OHWM will not be re-constructed and stabilized due to lack of construction equipment access. Consequently, the unconsolidated soil and underlying substrate at the base of the failed slope and along the river bank will continue to be susceptible to erosion and provide a source of excess sediment into the Sandusky River. Increases in the sediment load and turbidity in the river will have a direct effect on aquatic organisms, particularly in the vicinity of the failed slope. Aquatic macroinvertebrates, including insects and freshwater mussels, are especially vulnerable to excessive sedimentation. Species such the federally and state-endangered rayed bean mussel and the state-endangered plains clubtail dragonfly, if present, could be directly affected by the continued erosion and failure of the slope below the slope stabilization structure proposed under the Non-Degradation Alternative.

10c. TECHNICAL FEASIBILITY AND COST EFFECTIVENESS BY ALTERNATIVE

The following section (10c-1) discusses the feasibility, availability, reliability, and operations and maintenance difficulties associated with each alternative. Section 10c-2 discusses the cost effectiveness of each alternative. Table 4 summarizes each of these categories by alternative.

10c-1. Technical feasibility, availability to construct, reliability and operational maintenance difficulties.

Technical feasibility, availability to construct, reliability and operational maintenance difficulties for each of the project alternatives is summarized in Appendix B, Table 3.

The Preferred Alternative has been advanced to the detailed engineering design stage. All structures and project footprint have been developed to be technically feasible and available to construct. This Alternative is deemed reliable with no known maintenance or operational difficulties. It avoids potential destabilizing effects to adjacent slope areas by accessing the failed slope from the south by constructing a temporary construction access causeway across the Sandusky River.

The Minimal Degradation Alternative is also technically feasible, available and reliable with no foreseen operational difficulties; however, locating the construction access road on the steep slope west of the failed slope area could threaten the long-term integrity of adjacent slope areas. Portions of the adjacent slopes are currently exhibiting signs of impending slope failure, such as relatively deep erosion channels and soil slumping. Construction of an access road on this slope could exacerbate current conditions and expedite further slope failure.

The Non-Degradation Alternative is also technically feasible, available and reliable with no foreseen operational difficulties. However, this alternative does not address slope and river bank stabilization on the lower-most portions of the failed slope. While it would partially meet project objectives of stabilizing the upper slope, thereby allowing for repair and stabilization of Indian Mill Road and the adjacent natural gas line, the lower portions of the slope would continue to fail and contribute to sedimentation of the Sandusky River. Continued bank and slope erosion down-gradient of the Non-Degradation Alternative retaining structure could shorten the life of this project alternative. As with the Minimal Degradation Alternative, construction of an access road on the adjacent slope to the west could exacerbate current conditions and expedite further slope failure.

10c-2. Cost Effectiveness

Cost associated with construction of each of the project alternatives is summarized in Appendix B, Table 4.

Estimated costs for implementing the Preferred Alternative would be $245,045, while the Minimal Degradation Alternative costs would be $366,119. Differences in line item costs between these two alternatives are attributed primarily to the different access routes proposed for the alternatives. Costs associated with accessing the failed slope from the south across the Sandusky River are offset by increased costs associated with constructing an access road across the slope north of the river for the Minimal Degradation Alternative.

The Non-Degradation Alternative estimated cost of $592,511 would be significantly greater than the cost of both the Preferred Alternative and the Minimal Degradation Alternative due to construction of the drilled shaft and soldier pile retaining wall (Appendix B, Table 4). Increased costs would be primarily due to retaining wall construction and temporary access road construction.

The City of Upper Sandusky was awarded an Ohio Public Works Commission State Capital Improvement Program Project Grant in the amount of $210,848 to complete project-related activities as proposed under the Preferred Alternative. A copy of the Ohio Public Works Commission grant agreement is included in Appendix E.

10d. THIS SECTION NOT APPLICABLE TO THIS PROJECT

10e. CONSERVATION PROJECTS TARGETING THE WATER RESOURCE

The Wyandot Soil and Water Conservation District was contacted to determine the extent, if any, of environmental or recreation improvement projects targeting the Sandusky River. No environmental or recreational improvement projects were identified which target the surface waters to be impacted (E. Kuenzli, pers. comm.).

10f. COST OF WATER PROTECTION CONTROLS BY ALTERNATIVE

Best Management Practices will be followed while constructing the proposed project. A storm water pollution prevention plan has been designed based on the Preferred Alternative and would cost approximately $8,065 to implement (Appendix B, Table 4). The cost of storm water pollution and prevention control measures are expected to be significantly higher for the Minimal Degradation Alternative ($15,550) and the Non-Degradation Alternative ($18,275) primarily due to construction of a temporary access road on the slope west of and adjacent to the failed slope. Clearing the existing vegetation from and grading the steep slope for access road construction will require implementation of BMPs for minimizing soil erosion during and after project construction, including post-project access road revegetation.

The Non-Degradation Alternative water protection costs will be slightly higher than those for the Minimal Degradation Alternative due to higher levels of soil disturbance associated with construction of the soldier pile retaining wall. This activity will require that additional measures to control soil erosion be implemented during project construction.

10g. IMPACTS ON HUMAN HEALTH AND OVERALL WATER RESOURCE QUALITY BY ALTERNATIVE

The following assessment of impacts on human health has been generalized to address all Alternatives.

10g-1. Impacts on Human Health

Overall, implementation of the proposed slope reconstruction and stabilization project is not expected to lower water quality to the point of affecting human health. Conversely, the project would improve long-term water quality by reducing erosion and sediment inputs into the Sandusky River from the failed slope. Any temporary lowering of water quality during construction of the project is expected to be similar for the Preferred and Minimal Degradation Alternatives. The Non-Degradation Alternative would not directly result in lower water quality; however, long-term reduction in erosion and sediment inputs into the Sandusky River would be less than for the Preferred and Minimal Degradation Alternatives due to the lack of lower slope and bank stabilization with the Non-Degradation Alternative.

10g-2. Impacts on Overall Quality and Value of the Water Resource

The Preferred and Minimal Degradation Alternatives are expected to directly impact surface waters. The following conclusions have been made regarding impacts on water quality for the Preferred Alternative.

Permanent stream impacts caused by the proposed project will occur due to excavation of the Sandusky River bed and bank during slope reconstruction and placement of slope and bank stabilization structures and flow deflectors. Construction of the Preferred Alternative and the Minimal Degradation Alternative as currently designed will result in approximately 225 linear feet of permanent impacts.

Temporary impacts to the Sandusky River bed and bank will occur as a result of construction of the in-stream causeway and construction work area in order to access the project site from the south side of the river for the Preferred Alternative only. These impacts include approximately 105 linear feet between the north and south banks of the river for temporary causeway construction and 225 linear feet for construction of the temporary work area along the north bank of the river.

No direct, permanent impacts to surface waters are expected due to implementation of the Non-Degradation Alternative.

Additional temporary impacts to water resources from each of the three alternatives would consist of sediment inputs to the Sandusky River due to construction-related soil disturbance. BMPs will be employed to minimize soil disturbance and sediment inputs to the river from construction activities. For the Preferred and Minimal Degradation Alternatives, sediment curtains will be placed immediately downstream of the project site during excavation of the streambank and the unconsolidated soil originating from the failed slope. Re-contouring and revegetation of disturbed soil surfaces will ensure soil stability upon project completion.

10h. SOCIAL AND ECONOMIC BENEFITS TO BE REALIZED BY ALTERNATIVE

Social and economic benefits realized by this proposed project related to stabilizing the failed slope down-gradient of Indian Mill Road includes the ability to repair, stabilize, and re-open Indian Mill Road and would be the same for all three alternatives. The predominant traveler within the project area is a resident of the City of Upper Sandusky. Each of the alternatives would also provide the added social and economic benefit of improved water quality in the Sandusky River due to reconstruction and stabilization of the entire failed slope in the project area.

The number of jobs to be created (directly or indirectly) is not known. State and local tax revenues to be generated by the proposed project is unknown; however, it is unlikely to result in substantial overall tax revenue.

The following information is a brief description of the local economy of Wyandot County and was obtained from the U.S. Census Bureau (2010). In 2010, Wyandot County had a population of 22,615 people comprised of Caucasians (97.7%), Asians (0.8%), and Hispanics (2.3%); less than 1.0% of the population was African American, Native American, or some other race. The project area is located in the City of Upper Sandusky which had a population of 6,596 in 2010. The median household income for Wyandot County was $47,216 per year between 2006 and 2010 and $39,615 per year for Upper Sandusky between 2006 and 2010. The five-year (2006 through 2010) employment estimate for the civilian labor force in Wyandot County was 92.6 percent and the largest employer was in the manufacturing sector, employing an average of 3,454 people. In the City of Upper Sandusky, the five-year (2006 through 2010) employment estimate for the civilian labor force was 94.4 percent,

with the manufacturing (28.4%) and educational services/health care and social assistance (22.5%) sectors employing an average of 1,594 people in the City.

The proposed project is not expected to directly or indirectly increase property values. Commercial or recreational use of the Sandusky River in the vicinity of the project is limited to sport fishing and non-motorized, recreational boating (e.g., canoeing); however, the project will have no effect on sport fishing or recreational boating on the river. No known businesses will be positively impacted by the proposed project. Positive aesthetics would likely be realized once the slope has been reconstructed and stabilized, and particularly over the long-term as planted vegetation becomes established and develops into functional wildlife habitat.

10i. SOCIAL AND ECONOMIC BENEFITS TO BE LOST BY ALTERNATIVE

The number of jobs to be lost (directly or indirectly) for the Preferred, Minimal-Degradation, and Non-Degradation Alternatives is unknown; however, it is not expected that the construction of any of the alternatives will result in job losses. Also, state and local tax revenues to be lost by the proposed project are unknown and unlikely. For a brief description of the local economy of Wyandot County and the City of Upper Sandusky, refer to the previous section (10h).

The water resources within the project area are known to have recreational or commercial value as a sport fishery. However, none of the three alternatives is expected to negatively affect these resources.

No businesses are expected to be negatively impacted by the proposed project. Future land use and development surrounding the project area should not be affected by the proposed project.

10i-1. Preferred Alternative, Minimal-Degradation Alternative, and Non-Degradation Alternative

No known social and/or economic benefits would be lost by the selection of any of the three proposed alternatives. However, implementation of each of these alternatives would permit Indian Mill Road to be reopened to vehicular traffic and provide a social benefit in travel time and expense saved. Stabilization of the slope would also ensure the integrity of the natural gas line adjacent to Indian Mill Road. Preventing damage to the natural gas line avoids the potential loss of natural gas delivery and associated negative economic consequences, as well as avoids potential public safety issues related to a failed gas line.

10j. ENVIRONMENTAL BENEFITS TO BE LOST AND GAINED BY ALTERNATIVE

10j-1. Environmental Benefits to be Lost

The project site is not known to harbor rare, threatened or endangered species. Potential summer roosting habitat for the federally and state-listed endangered Indiana bat is present in the project area. The City of Upper Sandusky is willing to accept the assumption that Indiana bat utilizes the project area for summer roosting and nesting. In order to avoid direct impacts to this species, all project-related tree-clearing for will be conducted during the winter hibernation period of October 1 through March 31. Indirect impacts to the Indiana bat associated with the loss of potential habitat are expected to be negligible due to the relatively small area of forest to be cleared. For the Preferred Alternative, only 10 to 15 trees on the south bank of the Sandusky River would be cleared. For the Minimal Degradation Alternative and Non-Degradation Alternative, approximately 0.19 acre and 0.18 acre, respectively, of forest would be cleared. Any Indiana bats utilizing the project are outside of this exclusionary period would find ample suitable habitat in the forested areas adjacent to the project site.

The state endangered plains clubtail dragonfly has been reported from an area less than 0.5 mile upstream on the Sandusky River. The direct loss of aquatic larvae (nymphs) of the plains clubtail dragonfly could occur due to in-water project activities if this species occurs on the project site. Larval dragonflies inhabiting the aquatic environment would be susceptible to stream bank excavation and in-stream causeway/staging area construction activities. For the Preferred Alternative and Minimal Degradation Alternative, approximately 225 linear feet of stream bank and bed would be permanently lost due to bank stabilization on the north side of the river. Another 20 linear feet of stream bank would be temporarily impacted on the south side of the river under the Preferred Alternative and 340 linear feet of stream bed would be temporarily buried due to causeway and work area construction. During summer months, plains clubtails present as adult dragonflies that could move out of the immediate project area and avoid project activities. Upon project completion, temporarily impacted habitat of the dragonfly would likely be re-inhabited. For the Non-Degradation Alternative, no direct impacts to plains clubtail habitat would occur.

The federally and state-listed rayed bean mussel has been reported from the Sandusky River in Wyandot County. Although suitable habitat for the rayed bean does not appear to be present on the project site or immediate vicinity, additional focused surveys may be necessary to determine the presence or absence of this species onsite. Only the Preferred and Minimal Degradation Alternatives would directly affect potential habitat for the rayed bean.

For the Non-Degradation Alternative, the lower-most portions of the failed slope down-gradient of the proposed retaining wall will be left unvegetated. In addition, the unconsolidated soil from the failed slope will be left in place and continue to contribute to sedimentation and degradation of the river's water quality. Construction of a soldier pile retaining wall on the middle of the failed slope will further detract from the aesthetic quality of the riparian corridor along the river. For the Minimum Degradation and Non-Degradation Alternatives, construction of an approximately 540-foot-long temporary access road across the north river bank would require clearing approximately 0.2 acre of second growth hardwood riparian forest. Although this access road would be replanted with native forest species, recovery time of this area to pre-construction conditions would be considerable. Lost benefits due to construction of these access roads would be a loss of habitat for resident and migratory wildlife species and a reduction in the aesthetic quality of the Scenic River corridor.

The Preferred, Minimal Degradation Alternatives, and Non-Degradation Alternatives would all have temporary environmental impacts during construction activities. Temporary environmental impacts resulting from the Preferred and Minimal Degradation Alternatives includes increased sediment loading during removal of the unconsolidated substrate from the failed slope and excavation of the river bed and banks associated with slope stabilization structures (north bank) and site access (south bank, Preferred Alternative only). For the Minimal Degradation Alternative and Non-Degradation Alternative, clearing and grubbing of hardwood forest along with slope excavation for temporary access road and staging area construction on the north embankment of the river would disturb the soil and could lead to temporary increases in sediment loading of the river.

Best Management Practices and implementation of a storm water pollution and prevention plan will prevent siltation of non-impacted portions of the stream and minimize sediment deposition off-site to the maximum extent practicable.

10j-2. Environmental Benefits to be Gained

The reach of the Sandusky River that includes the project site is designated as State Scenic River. The failed slope in its current condition detracts from the aesthetic quality of the river due to the lack of native vegetation on the slope and the debris pile located at the base of the slope. For the Preferred and Minimal-Degradation Alternatives, slope stabilization measures will include removal of the unconsolidated soil on the slope and in the river channel, including the debris pile, and revegetating the slope with native woody species that occur in adjacent forested areas. Not only will these measures improve project area aesthetics, but they will also improve the condition of the riparian corridor as wildlife habitat over the long-term. Reductions in sedimentation and turbidity levels in the river will also be realized from slope and bank stabilization due to a reduction in soil erosion. This will improve the overall health of the river and benefit resident aquatic organisms.

Any natural sediment-moving capabilities provided by the Sandusky River would not be negatively affected by any of the proposed alternatives. Each of the alternatives would allow for positive drainage without impeding current flow characteristics of the stream. In addition, due to the absence of wetlands within the study area, it is not expected that pollutant filtering or assimilation capacity will be affected.

10k. MITIGATION TECHNIQUES PROPOSED

No wetlands will be impacted by any of the alternatives of this proposed project, therefore no wetland mitigation is proposed.

Both the Preferred and the Minimal Degradation Alternatives will impact in-stream habitat in the Sandusky River. Permanent bank stabilization measures will utilize natural materials, including large stone and boulders, and upon project completion, will contribute to improved water quality in the river by stabilizing the river bank. These materials will also provide suitable in-stream habitat features including interstitial rock spaces and fish refuge. River bank and slope stabilization measures will also include revegetation with native species that will aid in soil stabilization and contribute to wildlife habitat development along the riparian corridor. In addition, removal of the unconsolidated soil and debris from the river channel, combined with stabilization and revegetation of the terrestrial portion of the failed slope will eliminate a significant source of sediment input to the river. Therefore, because implementation of either the Preferred or Minimal Degradation Alternative will result in an overall net improvement in water quality in and habitat condition along the river, no mitigation for permanent impacts is proposed.

Temporary impacts to in-stream habitat and the south bank of the river due to construction of an access road and staging areas from the Preferred Alternative will be mitigated by restoring impacted areas to preconstruction condition. Any temporary sediment discharge during construction activities will be avoided and minimized by employing BMPs and implementation of a storm water pollution and prevention plan, including silt curtains to minimize downstream movement of sediment during in-stream project activities.

The Non-Degradation Alternative will not directly impact any in-stream habitat, therefore no mitigation is proposed. Temporary impacts associated with construction of a temporary access road for the Minimal Degradation and Non-Degradation Alternatives will be mitigated by re-contouring the impacted areas to pre-construction condition and revegetating with native forest species. BMPs and a storm water pollution and prevention plan will be implemented to minimize sediment deposition off-site to the maximum extent practicable.

EXHIBIT 7

REFERENCES CITED

City of Upper Sandusky. 2012. 2012 Surface Water Improvement Fund Grant Application, Indian Mill Road Sandusky River Streambank Stabilization. Ohio Environmental Protection Agency, Division of Surface Water.

Kuenzli, E. 2012. Personal communication. District Secretary, Wyandot County Soil and Water Conservation District. Upper Sandusky, Ohio. November 14.

Ohio Department of Natural Resources (ODNR). 2012. Natural Heritage Database report for the Indian Mill Road Bank Stabilization Project. Division of Wildlife. Columbus, OH. September 13.

Ohio Department of Natural Resources (ODNR). Undated (a). Life history notes: eastern massasauga rattlesnake. Publ. No. 374 (399). Division of Wildlife. Columbus, OH.

Ohio Department of Natural Resources (ODNR). Undated (b). Sandusky State Scenic River. Division of Watercraft – Scenic River website. Available at: http://ohiodnr.com/watercraft/sr/tabid/2566/Default.aspx. Columbus, OH.

Ohio Environmental Protection Agency (OEPA). 2011. Use designations for water bodies in the Sandusky river drainage basin. Ohio Administrative Code, Ohio Water Quality Standards, Chapter 3745-1-12. Columbus, OH. June 16.

Ohio Environmental Protection Agency (OEPA). 2006. Sandusky River mile map. Upper Sandusky quadrangle. Division of Surface Water. Columbus, OH.

Ohio Environmental Protection Agency (OEPA). 2004. Total Maximum Daily Loads for the Upper Sandusky River Watershed. Final Report. Division of Surface Water. Columbus, OH. August 10.

U.S. Census Bureau. 2010. U.S. census data available at: http://factfinder2.census.gov. Wyandot County and the City of Upper Sandusky, Ohio.

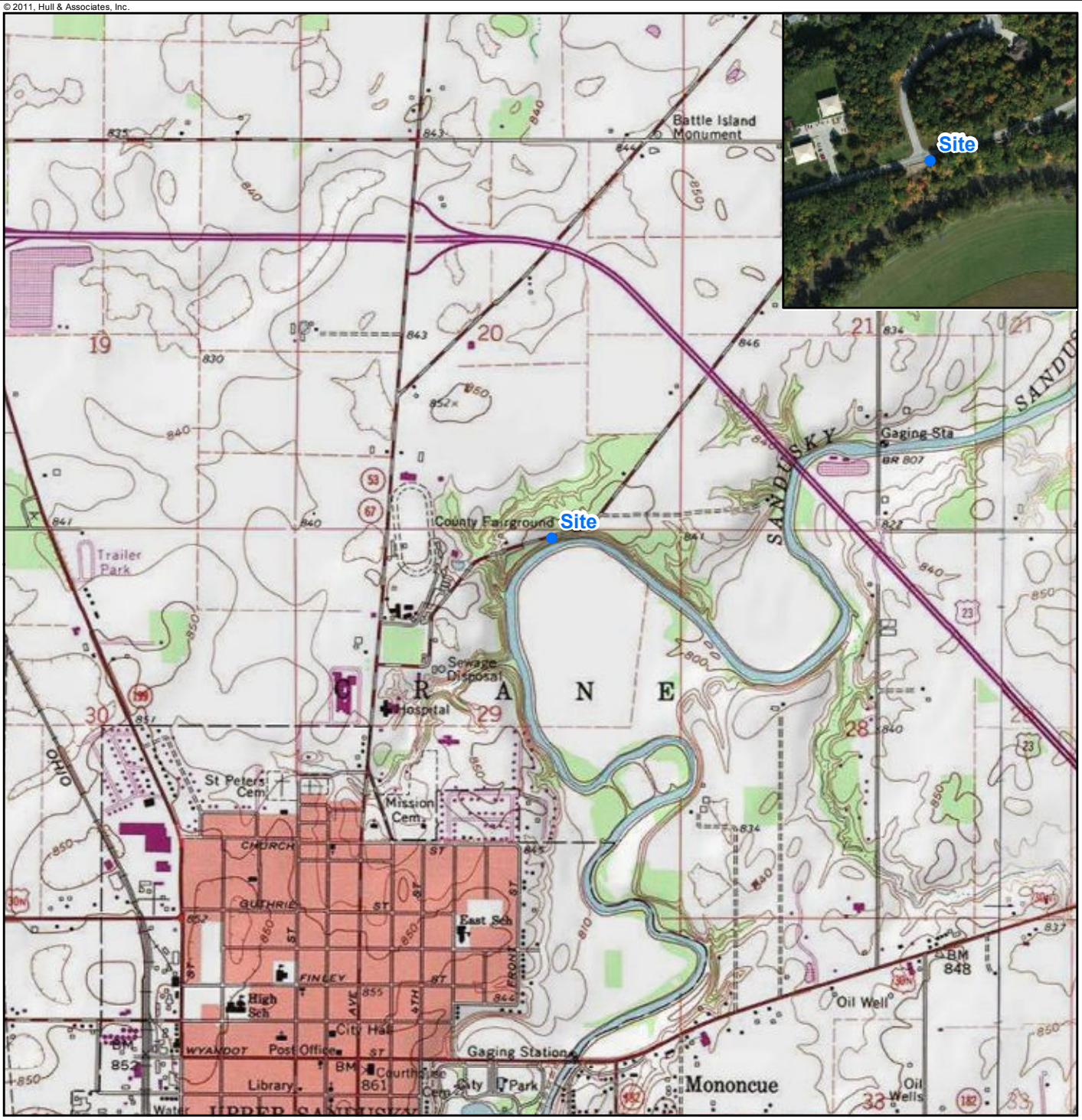
U.S. Fish and Wildlife Service (USFWS). 2012a. Response to data request for the Indian Mill Road Slope Stabilization Project, City if Upper Sandusky, Wyandot County, Ohio, U.S. Department of Interior, Ecological Services. Columbus, OH. October 24.

U.S. Fish and Wildlife Service (USFWS). 2012b. Federally Listed Species by Ohio County. U.S. Department of Interior. Columbus, OH. April 5.

U.S. Fish and Wildlife Service (USFWS). 2012c. Fact Sheet. Rayed Bean (*Villosa fabalis*). U.S. Department of Interior. Bloomington, MN. January.

U.S. Geological Survey (USGS). 1971. 7.5-minute quadrangle map, Upper Sandusky, OH. 1960, photo revised 1971. Washington, D.C.

Appendix A
Figures



Legend

- Site Location

Source: The topographic map was acquired through the OGRIP/OIT ArcIMS website, http://gis1.oit.ohio.gov. Quadrangle name: Upper Sandusky and Nevada, Ohio, all revised in 1971, published in 1972.

The aerial photo was obtained from the Ohio Geographically Referenced Imagery Program and is courtesy of the Ohio Statewide Imagery Program and is dated 2006.

0 500 1,000 2,000 Feet

1:24,000

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Indian Mill Road Slope Stabilization

Site Location Map

Upper Sandusky, Wyandot County, Ohio

Date:

December 2012

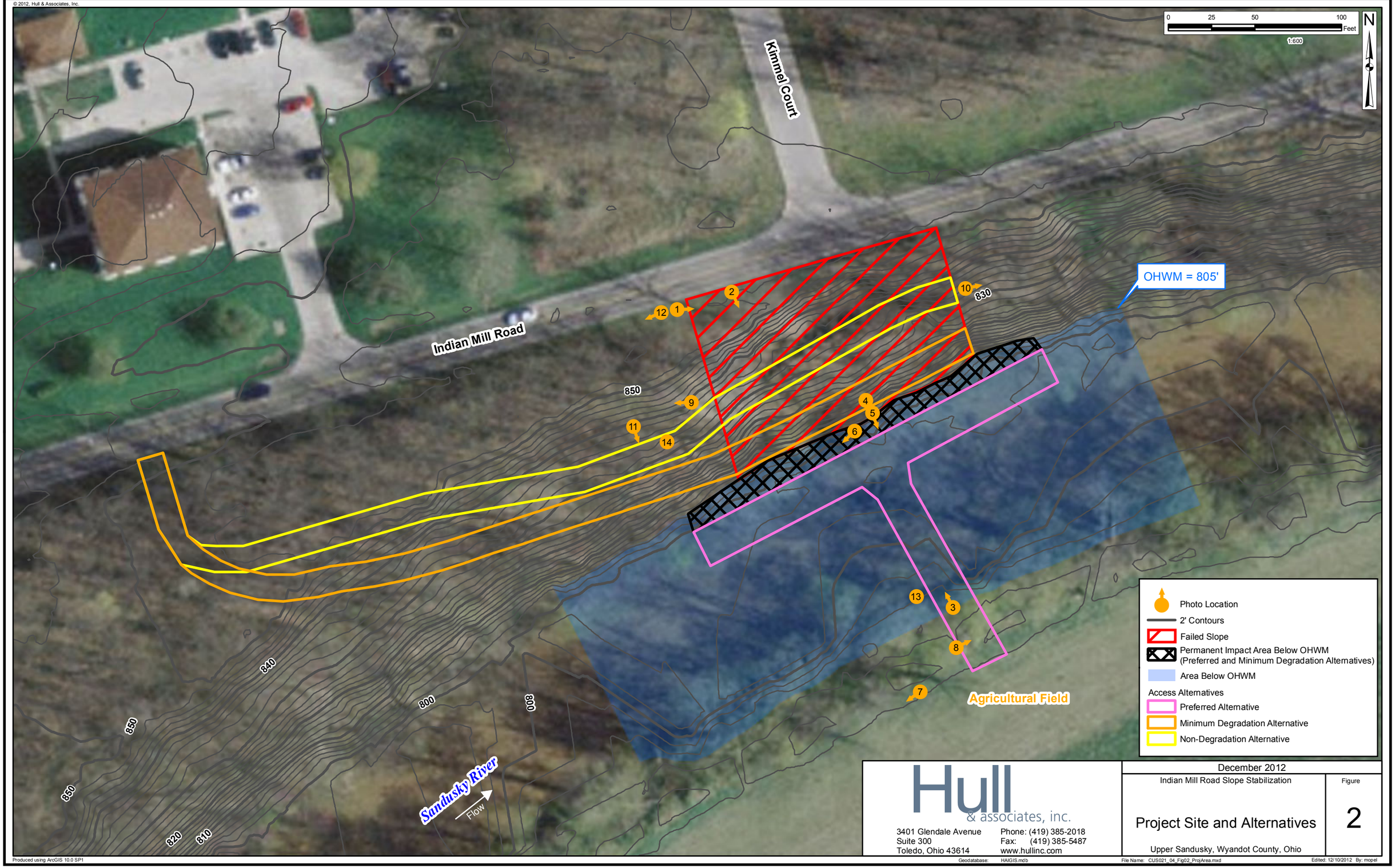
File Name:
CUS021_04_Fig01_SiteLocMap.mxd

Edited: 12/10/2012 By: mopel

Figure

1

Produced using ArcGIS 10.0 SP1



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December 2012

Indian Mill Road Slope Stabilization

Project Site and Alternatives

Upper Sandusky, Wyandot County, Ohio

Figure 2

Produced using ArcGIS 10.0 SP1
Geodatabase: HAIGIS.mdb
File Name: CUS021_04_Fig02_ProjArea.mxd
Edited: 12/10/2012 By: mopel

PROJECT OBJECTIVES:

THE FAILED SLOPE APPEARS TO HAVE OCCURRED DUE TO EROSION OF THE SLOPE TOE, MOVEMENT OF THE EMBANKMENT SOILS AND WATER FLOWING THROUGH THE EMBANKMENT SOILS. THE FOLLOWING PRESENTS CONCEPTUAL CONSTRUCTION STEPS FOR STABILIZATION OF THE SLOPE.

1) REMOVE UNCONSOLIDATED MATERIAL FROM FAILED AREA OF SLOPE.

2) EXCAVATE ROCK ARMORING KEYS INTO SLOPE AT THE TOP AND BOTTOM OF THE SLOPE.

3) INSTALL GABION BASKETS AND LARGE STONE AT TOE OF SLOPE.

4) INSTALL ROCK ARMORING ON THE SLOPE.

CONSTRUCTION ACCESS NOTES:

1) LOWER CONSTRUCTION ACCESS TO BE THROUGH THE SANDUSKY RIVER FROM THE SOUTH DURING LOW FLOW EVENTS.

2) ACCESS PAD TO BE CONSTRUCTED OF ODOT #1 AND #2 STONE.

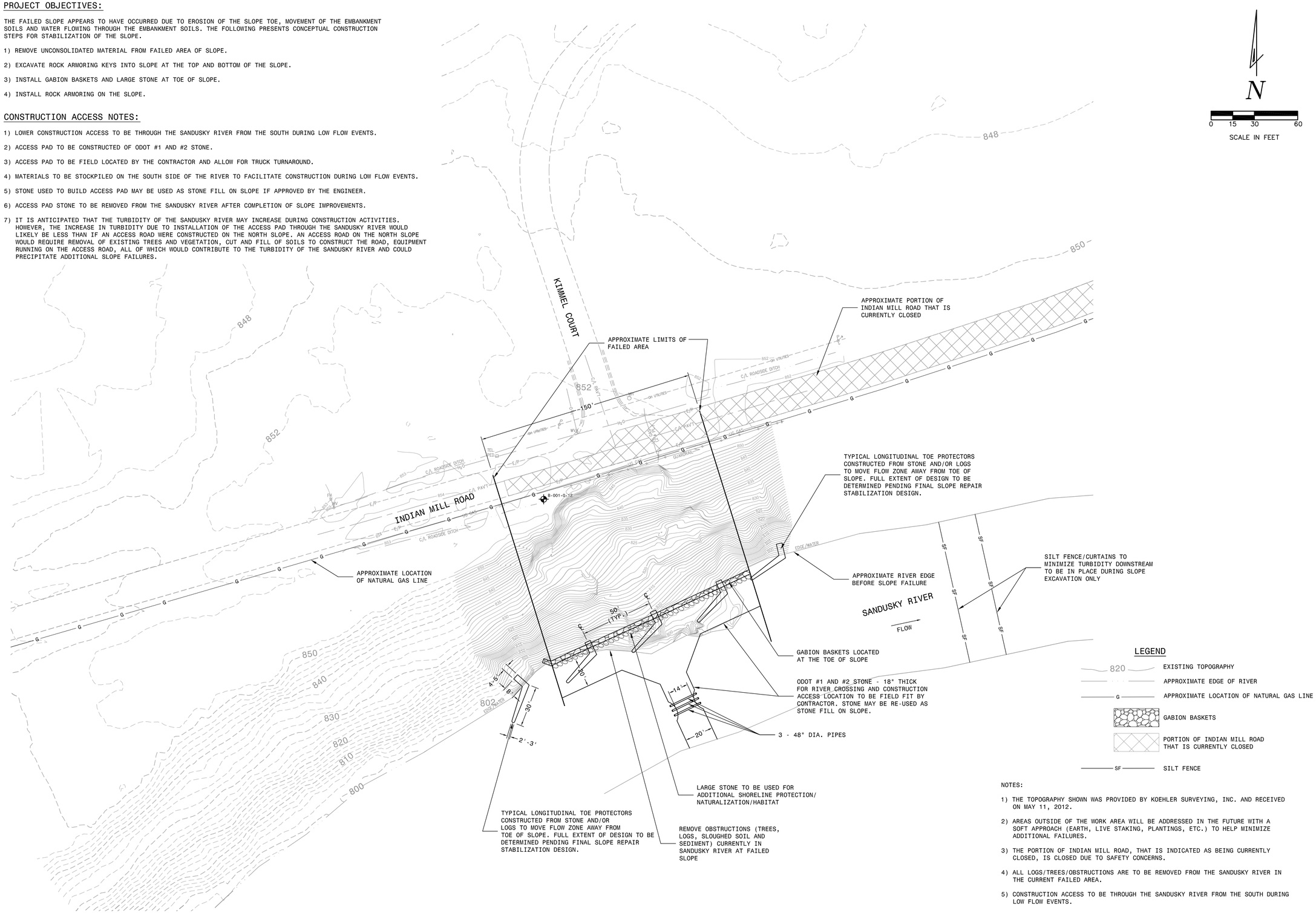
3) ACCESS PAD TO BE FIELD LOCATED BY THE CONTRACTOR AND ALLOW FOR TRUCK TURNAROUND.

4) MATERIALS TO BE STOCKPILED ON THE SOUTH SIDE OF THE RIVER TO FACILITATE CONSTRUCTION DURING LOW FLOW EVENTS.

5) STONE USED TO BUILD ACCESS PAD MAY BE USED AS STONE FILL ON SLOPE IF APPROVED BY THE ENGINEER.

6) ACCESS PAD STONE TO BE REMOVED FROM THE SANDUSKY RIVER AFTER COMPLETION OF SLOPE IMPROVEMENTS.

7) IT IS ANTICIPATED THAT THE TURBIDITY OF THE SANDUSKY RIVER MAY INCREASE DURING CONSTRUCTION ACTIVITIES. HOWEVER, THE INCREASE IN TURBIDITY DUE TO INSTALLATION OF THE ACCESS PAD THROUGH THE SANDUSKY RIVER WOULD LIKELY BE LESS THAN IF AN ACCESS ROAD WERE CONSTRUCTED ON THE NORTH SLOPE. AN ACCESS ROAD ON THE NORTH SLOPE WOULD REQUIRE REMOVAL OF EXISTING TREES AND VEGETATION, CUT AND FILL OF SOILS TO CONSTRUCT THE ROAD, EQUIPMENT RUNNING ON THE ACCESS ROAD, ALL OF WHICH WOULD CONTRIBUTE TO THE TURBIDITY OF THE SANDUSKY RIVER AND COULD PRECIPITATE ADDITIONAL SLOPE FAILURES.



LEGEND

- 820 — EXISTING TOPOGRAPHY
- APPROXIMATE EDGE OF RIVER
- G — APPROXIMATE LOCATION OF NATURAL GAS LINE
- GABION BASKETS
- PORTION OF INDIAN MILL ROAD THAT IS CURRENTLY CLOSED
- SF — SILT FENCE

NOTES:

1) THE TOPOGRAPHY SHOWN WAS PROVIDED BY KOEHLER SURVEYING, INC. AND RECEIVED ON MAY 11, 2012.

2) AREAS OUTSIDE OF THE WORK AREA WILL BE ADDRESSED IN THE FUTURE WITH A SOFT APPROACH (EARTH, LIVE STAKING, PLANTINGS, ETC.) TO HELP MINIMIZE ADDITIONAL FAILURES.

3) THE PORTION OF INDIAN MILL ROAD, THAT IS INDICATED AS BEING CURRENTLY CLOSED, IS CLOSED DUE TO SAFETY CONCERNS.

4) ALL LOGS/TREES/OBSTRUCTIONS ARE TO BE REMOVED FROM THE SANDUSKY RIVER IN THE CURRENT FAILED AREA.

5) CONSTRUCTION ACCESS TO BE THROUGH THE SANDUSKY RIVER FROM THE SOUTH DURING LOW FLOW EVENTS.

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Professional Seal:

Name:

Date:

Project Title:

CITY OF UPPER SANDUSKY
INDIAN MILL ROAD SLOPE FAILURE STABILIZATION PRELIMINARY DESIGN
PREFERRED ALTERNATIVE PLAN

Owner:
CITY OF UPPER SANDUSKY

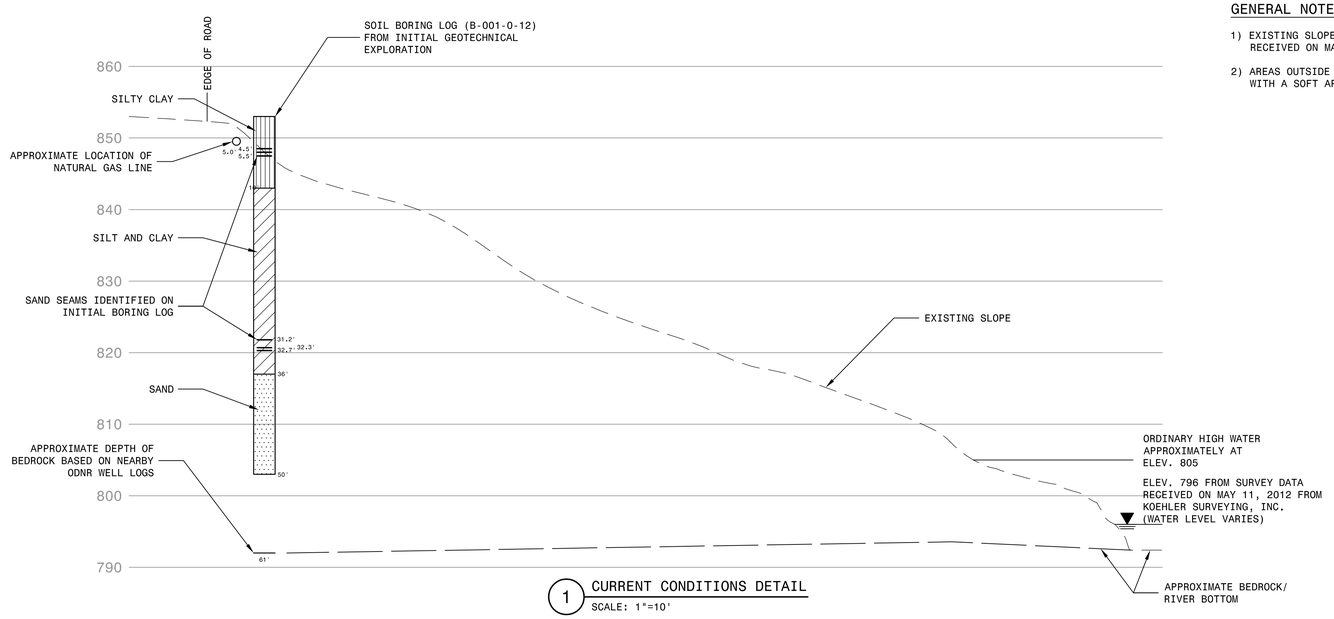
119 NORTH 7th STREET
UPPER SANDUSKY, OHIO
43351

Mark	Description	Date

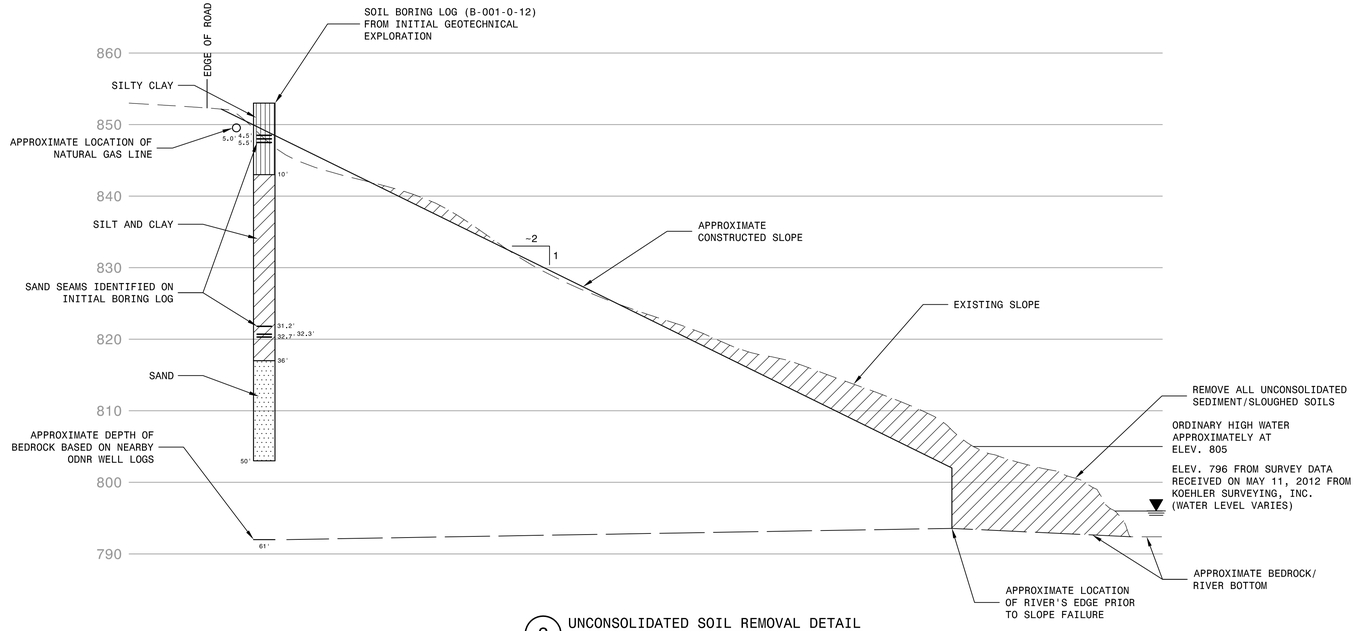
Project No.:	CUS021
CAD DWG File:	CUS021.100.0008
Plot Date:	11/15/12
Layout By:	CAS
Drawn By:	GAC
Check By:	CAS/JHH
Scale:	AS NOTED
Issue Date:	NOVEMBER 2012

Sheet Title:
PREFERRED ALTERNATIVE PLAN

Sheet Number:
C-101-P



1 CURRENT CONDITIONS DETAIL
SCALE: 1"=10'



2 UNCONSOLIDATED SOIL REMOVAL DETAIL
SCALE: 1"=10'

NOTE:

LOWER SLOPE ACCESS TO BE THROUGH THE SANDUSKY RIVER FROM THE SOUTH. SEE CONSTRUCTION ACCESS NOTES ON SHEET C-101.

GENERAL NOTES:

1) EXISTING SLOPE TAKEN FROM SURVEY DATA PROVIDED BY KOEHLER SURVEYING, INC., RECEIVED ON MAY 11, 2012.

2) AREAS OUTSIDE OF THE IMMEDIATE FAILURE ZONE WILL BE ADDRESSED IN THE FUTURE WITH A SOFT APPROACH TO HELP MINIMIZE ADDITIONAL FAILURES.

PRELIMINARY: NOT TO BE USED FOR CONSTRUCTION

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CITY OF UPPER SANDUSKY
INDIAN MILL ROAD SLOPE FAILURE
TOE STABILIZATION DESIGN

Owner:
CITY OF UPPER SANDUSKY

119 NORTH 7th STREET
UPPER SANDUSKY, OHIO
43351

Mark	Description	Date

Project No.:	CUS021
CAD DWG File:	CUS021.100.0010
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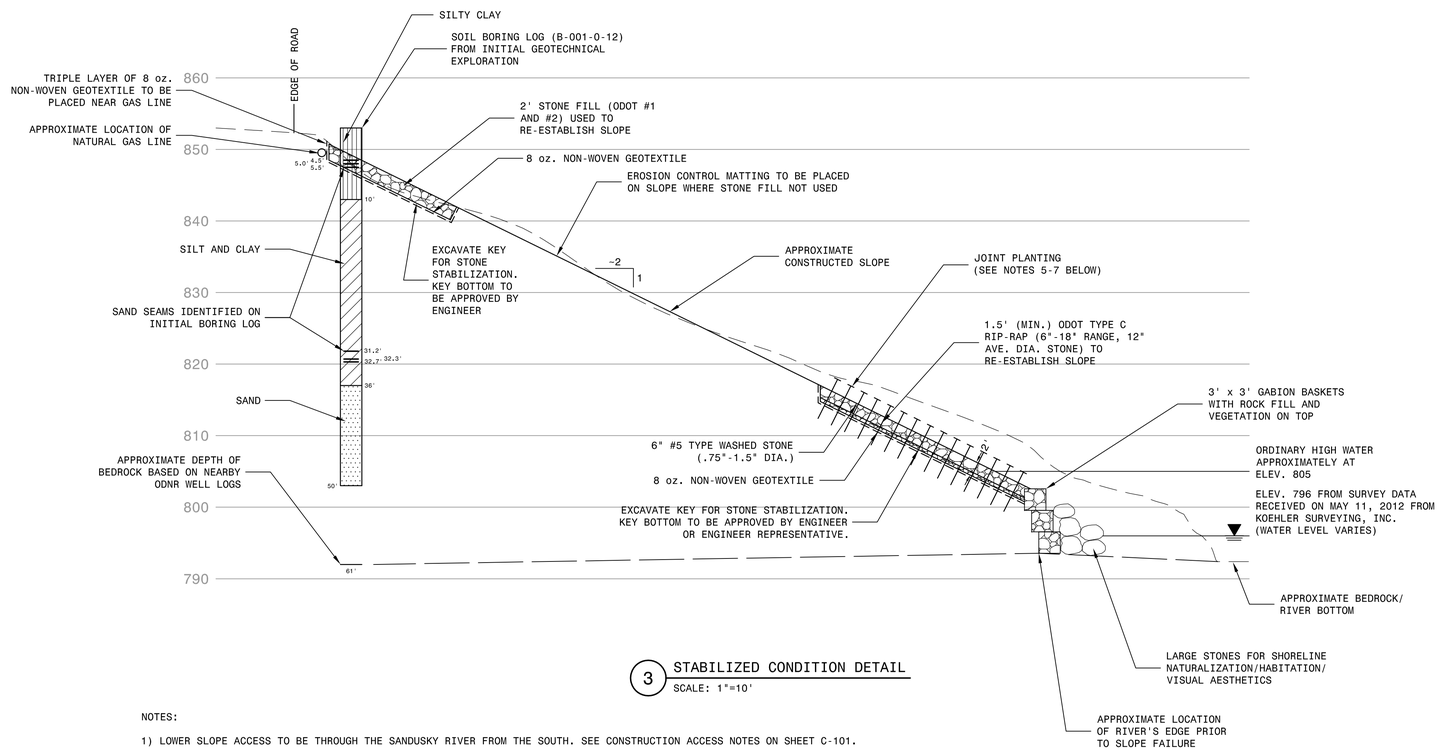
Scale:	AS NOTED
Issue Date:	NOVEMBER 2012

Sheet Title:
TYPICAL DETAILS

Sheet Number:
C-501



3 STABILIZED CONDITION DETAIL
SCALE: 1"=10'

NOTES:

1) LOWER SLOPE ACCESS TO BE THROUGH THE SANDUSKY RIVER FROM THE SOUTH. SEE CONSTRUCTION ACCESS NOTES ON SHEET C-101.

2) THE TOE STABILIZATION CONFIGURATION (GABION BOXES, LARGE STONE AND CONSTRUCTION ACCESS ROAD) MAY BE ALTERED IN THE FIELD BASED ON CONDITIONS AT TIME OF CONSTRUCTION.

3) EROSION CONTROL MATTING TO BE PLACED ON FINAL SLOPES, WHERE APPLICABLE.

4) NATIVE VEGETATION TO BE PLANTED ON SLOPES WHERE STONE FILL NOT USED.

5) JOINT PLANTING INVOLVES TAMPING LIVE STAKES OR POLES OF ROOTABLE PLANT MATERIAL OR ROOTED CUTTINGS INTO SOIL IN THE INTERSTICES OF POROUS REVETMENTS, RIPRAP, OR OTHER RETAINING STRUCTURES. JOINT PLANTING IS USEFUL FOR ADDING A COVER OF VEGETATION TO AN OTHERWISE INERT BANK SURFACE SUCH AS RIP-RAP AND FOR AESTHETICS. THE PURPOSE MIGHT BE FOR HABITAT VALUE OR FOR EROSION CONTROL VALUE, OR BOTH. THE INSERTION OF LONG STEM CUTTINGS MAY PROVIDE STRUCTURAL STABILITY OF THE BANK. USING A SYSTEM OF LIVE STAKES OR POLES CREATES A ROOT MAT THAT HELPS TO BIND THE SOIL AND TO MINIMIZE SEDIMENT LOSS BETWEEN AND BELOW THE ROCKS, AND THE ROOTED VEGETATION HELPS ANCHOR THE STRUCTURE TO THE SLOPE. STAKE ESTABLISHMENT CAN IMPROVE AESTHETICS AND PROVIDE WILDLIFE HABITAT.

6) POLES SHOULD BE OF WILLOW OR COTTONWOOD, 1.5'-3.5" IN DIAMETER, AND 4'-8' IN LENGTH. USE HEALTHY, STRAIGHT AND LIVE WOOD, AT LEAST 1 YEAR OLD. MAKE MAKE CLEAN CUTS AND DO NOT DAMAGE STAKES OR SPLIT ENDS DURING INSTALLATION. USE A PILOT BAR IN FIRM SOILS. SOAK CUTTINGS FOR 24 HOURS (MIN.) PRIOR TO INSTALLATION. TAMP THE SOIL AROUND THE STAKE. MAKE AN ANGLED CUT AT THE BUTT-END AND PLANT THE STAKE BUTT-END DOWN.

7) BE CARFEUL NOT TO DAMAGE THE BUDS, STRIP THE BARK OR SPLIT THE STAKE DURING INSTALLATION. STAKES MUST NOT BE ALLOWED TO DRY OUT, AND MUST BE INSTALLED THE SAME DAY AS THEY ARE CUT. STAKES SHOULD NOT BE PLANTED IN ROWS OR AT REGULAR INTERVALS, BUT AT RANDOM IN THE MOST SUITABLE PLACES AT A RATE OF 2-5 CUTTINGS PER SQUARE YARD. SET THE STAKES AS DEEP AS POSSIBLE INTO THE SOIL, PREFERABLY WITH 80 PERCENT OF ITS LENGTH INTO THE SOIL AND IN CONTACT WITH MID-SUMMER MOIST SOILS. AT LEAST 2 BUDS AND/OR BUD SCARS SHALL BE ABOVE THE GROUND AFTER PLANTING.

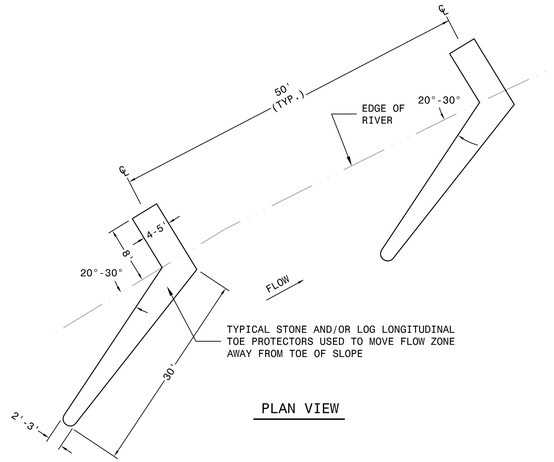
8) TREES AND LOGS CURRENTLY IN THE SANDUSKY RIVER NEAR FAILED SLOPE TO BE REMOVED BY THE CONTRACTOR.

GENERAL NOTES:

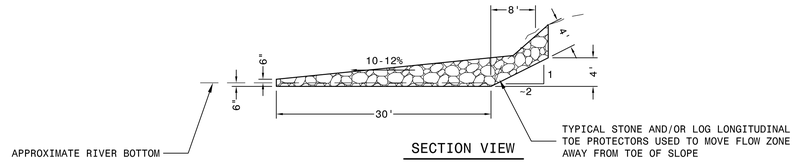
1) EXISTING SLOPE TAKEN FROM SURVEY DATA PROVIDED BY KOEHLER SURVEYING, INC., RECEIVED ON MAY 11, 2012.

2) AREAS OUTSIDE OF THE IMMEDIATE FAILURE ZONE WILL BE ADDRESSED IN THE FUTURE WITH A SOFT APPROACH TO HELP MINIMIZE ADDITIONAL FAILURES.

3) EXTREME CAUTION TO BE USED WHEN PERFORMING WORK IN AREA NEAR GAS LINE AT TOP OF SLOPE.



PLAN VIEW

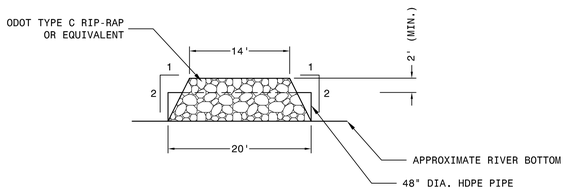


SECTION VIEW

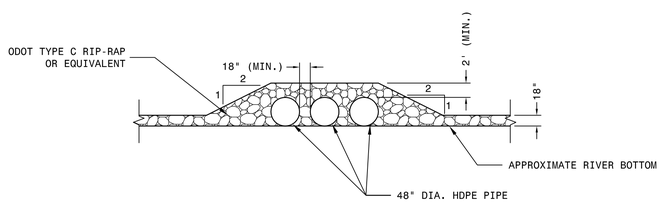
4 LONGITUDINAL TOE PROTECTORS - TYPICAL ORIENTATION
SCALE: 1"=10'

NOTE:

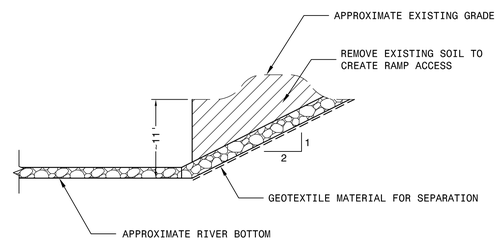
FULL EXTENT OF THE DESIGN OF LONGITUDINAL TOE PROTECTORS TO BE DETERMINED PENDING FINAL SLOPE STABILIZATION DESIGN.



5 CAUSEWAY PIPE CROSS-SECTION
SCALE: 1"=10'



7 CAUSEWAY PIPE DETAIL
SCALE: 1"=10'



8 SOUTH BANK ACCESS DETAIL
SCALE: 1"=10'

NOTES:

1) STOCKPILE EXISTING SOIL THAT IS REMOVED FOR FUTURE USE.

2) AFTER COMPLETION OF PROJECT, THE SOUTH BANK IS TO BE RE-CONSTRUCTED. SOIL BACKFILL IS TO BE COMPACTED WITH A MINIMUM OF 6 PASSES OF A SHEEPSFOOT COMPACTOR AND KEYED INTO THE SIDEWALLS.

PRELIMINARY: NOT TO BE USED FOR CONSTRUCTION

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CITY OF UPPER SANDUSKY
INDIAN MILL ROAD SLOPE FAILURE
TOE STABILIZATION DESIGN

Owner:
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119 NORTH 7th STREET
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Layout By:	CAS
Drawn By:	GAC
Check By:	CAS/JHH
Scale:	AS NOTED
Issue Date:	NOVEMBER 2012

Sheet Title:
TYPICAL DETAILS

Sheet Number:
C-502

PROJECT OBJECTIVES:

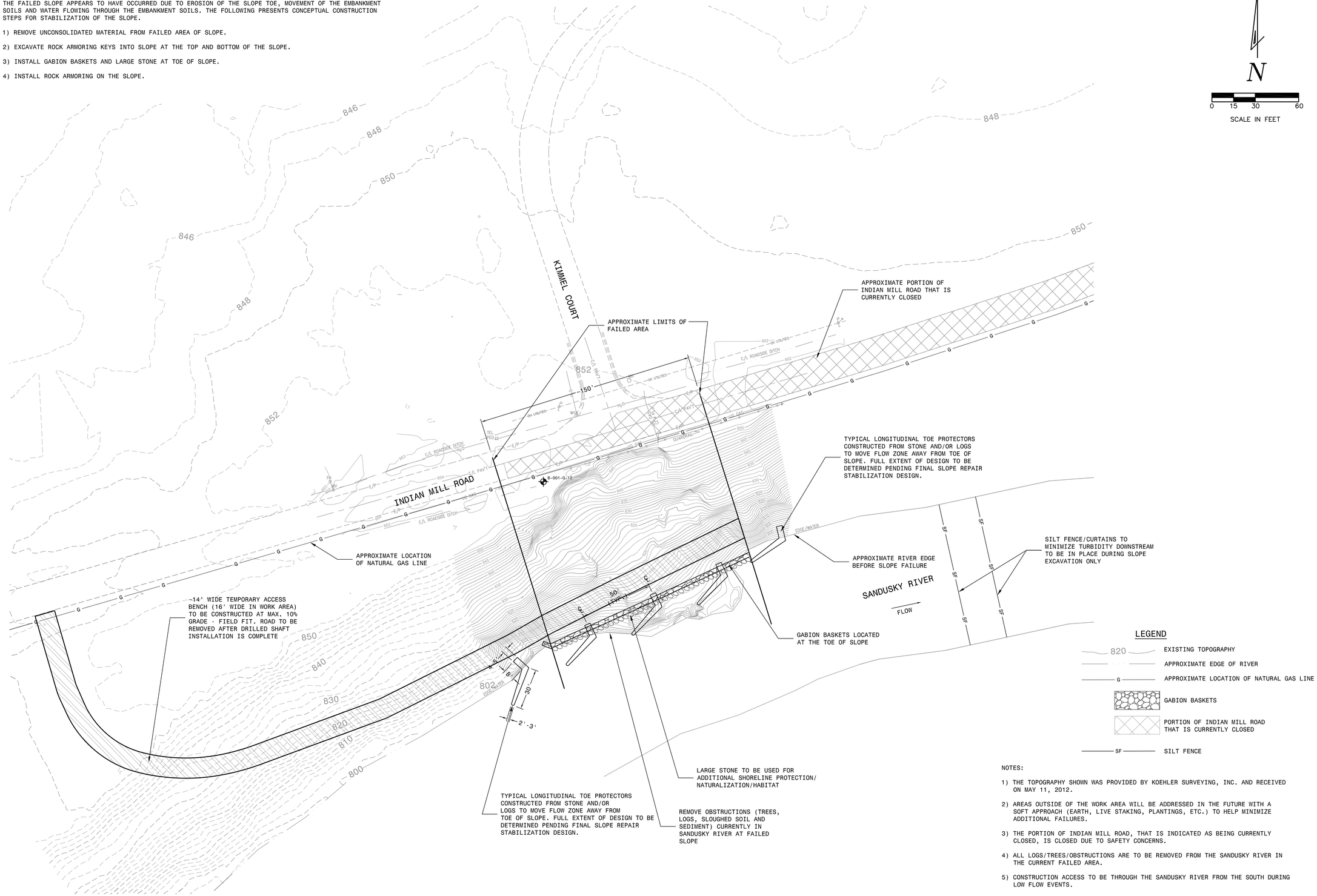
THE FAILED SLOPE APPEARS TO HAVE OCCURRED DUE TO EROSION OF THE SLOPE TOE, MOVEMENT OF THE EMBANKMENT SOILS AND WATER FLOWING THROUGH THE EMBANKMENT SOILS. THE FOLLOWING PRESENTS CONCEPTUAL CONSTRUCTION STEPS FOR STABILIZATION OF THE SLOPE.

1) REMOVE UNCONSOLIDATED MATERIAL FROM FAILED AREA OF SLOPE.

2) EXCAVATE ROCK ARMORING KEYS INTO SLOPE AT THE TOP AND BOTTOM OF THE SLOPE.

3) INSTALL GABION BASKETS AND LARGE STONE AT TOE OF SLOPE.

4) INSTALL ROCK ARMORING ON THE SLOPE.



LEGEND

- 820 — EXISTING TOPOGRAPHY
- APPROXIMATE EDGE OF RIVER
- G — APPROXIMATE LOCATION OF NATURAL GAS LINE
- GABION BASKETS
- PORTION OF INDIAN MILL ROAD THAT IS CURRENTLY CLOSED
- SF — SILT FENCE

NOTES:

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Date:

Project Title:

CITY OF UPPER SANDUSKY
INDIAN MILL ROAD SLOPE FAILURE STABILIZATION PRELIMINARY DESIGN
MINIMUM DEGRADATION ALTERNATIVE PLAN

Owner:
CITY OF UPPER SANDUSKY

119 NORTH 7th STREET
UPPER SANDUSKY, OHIO
43351

Mark	Description	Date

Project No.:	CUS021
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Check By:	CAS/JHH
Scale:	AS NOTED
Issue Date:	NOVEMBER 2012

Sheet Title:
MINIMUM DEGRADATION ALTERNATIVE PLAN

Sheet Number:
C-101-MD

PROJECT OBJECTIVES:

THE FAILED SLOPE APPEARS TO HAVE OCCURRED DUE TO EROSION OF THE SLOPE TOE, MOVEMENT OF THE EMBANKMENT SOILS AND WATER FLOWING THROUGH THE EMBANKMENT SOILS. THE FOLLOWING PRESENTS A CONCEPTUAL CONSTRUCTION STEPS FOR STABILIZATION OF THE SLOPE THROUGH A NON-DEGRADATION ALTERNATIVE.

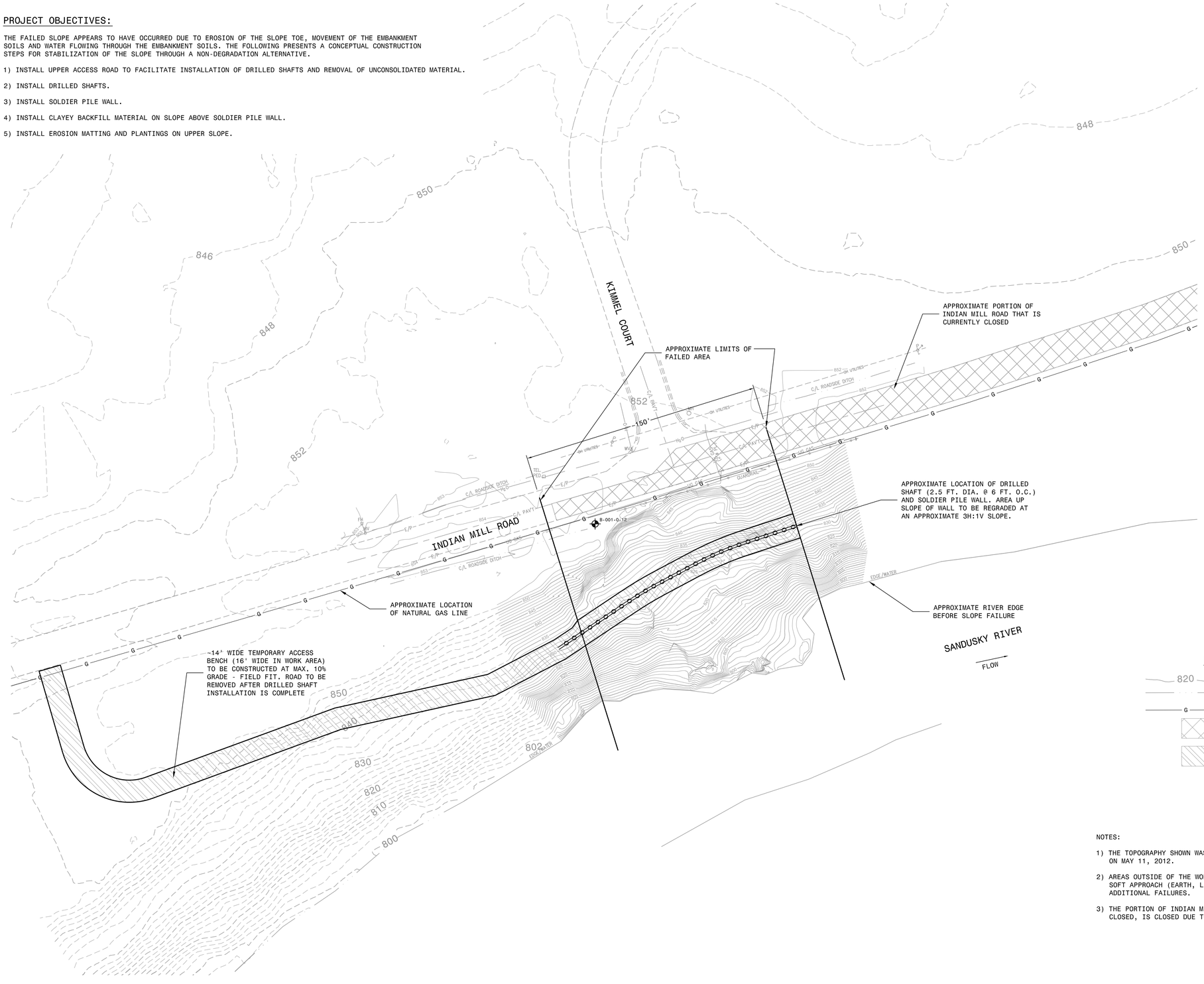
1) INSTALL UPPER ACCESS ROAD TO FACILITATE INSTALLATION OF DRILLED SHAFTS AND REMOVAL OF UNCONSOLIDATED MATERIAL.

2) INSTALL DRILLED SHAFTS.

3) INSTALL SOLDIER PILE WALL.

4) INSTALL CLAYEY BACKFILL MATERIAL ON SLOPE ABOVE SOLDIER PILE WALL.

5) INSTALL EROSION MATTING AND PLANTINGS ON UPPER SLOPE.



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0 15 30 60

SCALE IN FEET

LEGEND

- 820 — EXISTING TOPOGRAPHY
- APPROXIMATE EDGE OF RIVER
- G — APPROXIMATE LOCATION OF NATURAL GAS LINE
- PORTION OF INDIAN WILL ROAD THAT IS CURRENTLY CLOSED
- CONSTRUCTION ACCESS BENCH

NOTES:

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CITY OF UPPER SANDUSKY
INDIAN MILL ROAD SLOPE FAILURE
STABILIZATION PRELIMINARY DESIGN
NON-DEGRADATION ALTERNATIVE PLAN

Owner:

CITY OF UPPER SANDUSKY

119 NORTH 7th STREET
UPPER SANDUSKY, OHIO
43351

Mark	Description	Date

Project No.:	CUS021
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Scale:	AS NOTED
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Sheet Title:

NON-DEGRADATION ALTERNATIVE PLAN

Sheet Number:

C-101-ND

Appendix B
Tables

Table 1. Summary of Linear Feet of Permanent and Temporary Stream Impacts by Alternative. Values are linear feet of impact below the OHWM.

Project Activity/Component	Preferred Alternative	Minimum Degradation Alternative	Non-Degradation Alternative
Permanent Impacts			
Slope stabilization structure at toe of slope (rip-rap, large stone, and rock-filled gabion baskets)	150 ft	150 ft	n/a
Flow deflectors along base of slope (large stone and/or logs)	75 ft	75 ft	n/a
Total Permanent Impacts	**225 ft**	**225 ft**	**0 ft**
Temporary Impacts*			n/a
Construction access causeway across the river (rip-rap and 48-inch HDPE culverts)	20 ft**	n/a	n/a
Work area at base of slope (rip-rap)	225 ft	n/a	n/a
South river bank excavation for construction access across the river	20 ft	n/a	n/a
Total Temporary Impacts	**265 ft**	**0 ft**	**0 ft**

*All fill material used in temporary impact areas will be removed from the project area upon project completion and impacted areas returned to preconstruction contours.

**The construction access causeway will cross the Sandusky River at 90° and be 20 feet wide (linear footage along the river channel) by 70 feet long (linear footage across the river channel).

Table 2. Summary of Project Area Stream Impacts by Alternative. Values are total area in square feet (ft^2) and (total volume in cubic yards [yd^3]) of fill material and excavated material below the OHWM.

Project Activity/Component	Preferred Alternative	Minimum Degradation Alternative	Non-Degradation Alternative
Fill Activities			
Rip-rap for temporary causeway and work area	6,100 ft^2 (340 yd^3)*	n/a	n/a
Large stone at toe of slope	600 ft^2 (133 yd^3)	600 ft^2 (133 yd^3)	n/a
Rock-filled gabion baskets at toe of slope	675 ft^2 (150 yd^3)	675 ft^2 (150 yd^3)	n/a
Rip-rap on reconstructed slope	600 ft^2 (45 yd^3)	600 ft^2 (45 yd^3)	n/a
Large stone for flow deflector construction	705 ft^2 (52 yd^3)	705 ft^2 (52 yd^3)	n/a
Total Fill Material	**8,680 ft^2 (720 yd^3)**	**2,580 ft^2 (380 yd^3)**	**0 ft^2 (0 yd^3)**
Excavation Activities			n/a
Removal of soil originating from failed slope**	3,850 ft^2 (965 yd^3)	3,850 ft^2 (965 yd^3)	n/a
Keying in longitudinal flow deflectors	180 ft^2 (23 yd^3)	180 ft^2 (23 yd^3)	n/a
South river bank excavation	220 ft^2 (112 yd^3)	n/a	n/a
Total Excavated Material	**4,250 ft^2 (1,100 yd^3)**	**4,030 ft^2 (988 yd^3)**	**0 ft^2 (0 yd^3)**

*Temporary fill material for construction of causeway and work area to be removed upon project completion.

**Includes material excavated for keying in gabion baskets and large rock at toe of slope.

Table 3. Technical Feasibility, Cost Effectiveness, Availability, and Reliability by Alternative

	Alternative Description	Technically Feasible?	Cost Effective?	Alternative Available?	Alternative Reliable?
Preferred Alternative	Preferred Alternative for Upgrade Stabilizes Slope and Streambank Eliminates Sediment Input to Sandusky River	Yes	Yes	Yes	Yes
Minimal-Degradation Alternative	Not Preferred Alternative Stabilizes Slope and Streambank Eliminates Sediment Input to Sandusky River	Yes	No Engineering Costs Significantly Higher	Yes	Yes
Non-Degradation Alternative	Not Preferred Alternative Stabilizes Upper Slope; Lower Slope and Streambank Not Stabilized Sediment Input to Sandusky River Continues	Yes Purpose and Need Partially Met	No Engineering Costs Significantly Higher	Yes	No Shorter Project Life

Table 4. Estimate of Cost to Build by Project Alternative.

Item Description	Preferred Alternative	Minimal Degradation Alternative	Non-Degradation Alternative
Engineering	$19,630	$19,630	$26,000
Access and Temporary Stone River Crossing	$32,125	$32,100	-
Mobilize/Demobilize	$8,000	$12,000	$15,000
Excavation of Unconsolidated Material	$8,800	$8,800	-
Spoils Removal	$8,495	$8,500	-
Rock Slope	$39,785	$39,785	-
Roadway Work	$10,650	$10,650	$10,650
Toe Stabilization	$40,000	$40,000	-
Longitudinal Toe Protectors	$4,875	$4,875	-
Erosion and Sediment Control/Seeding and Planting	$8,065	$15,500	$18,275
Access Road and Work Area on Slope*	-	$115,530	$115,530
Drilled Shaft Wall	-	-	$224,000
Drilled Shaft Spoils Removal	-	-	$5,000
H-Piles	-	-	$14,000
Soldier Pile Wall	-	-	$16.875
Soil Backfill	-	-	$10,450
Premium Shift Work	$10,800	$10,800	$20,000
Construction Over-site & Administration	$10,000	$11,500	$15,000
Total	**$201,225**	**$302,120**	**$490,780**
Performance Bond (5%)	$10,061.25	$15,106.00	$24,539.00
Contingency (15%)	$30,183.75	$45,318.00	$73,617.00
401 Water Quality Certification Permit Application Fee**	$3575	$3575	$3575
Grand Totals	**$245,045**	**$366,119**	**$592,511**

* A definitive cost for the access road and work area are not possible at this time. The competency of the embankment to support the access road and work area has not been completed to date. Construction of the access road and work area may lead to additional sediment loading and stability issues that would likely require an additional geotechnical exploration, analyses, design and additional construction cost. The cost provided is an estimate of potential cost to construct the access road. However, the actual cost will vary depending on the competency of the embankment slope at the time of construction.

**401 Water Quality Certification Permit Application Fee includes a $200.00 application fee and a review fee of $15.00 per linear foot of perennial stream impact.

Appendix C
Photographs

PHOTO 1: Failed slope; view to east from Indian Mill Road.

PHOTO 2: Failed slope; view to south from Indian Mill Road.

Hull & associates, inc.
4 Hemisphere Way
Bedford, Ohio 44146
Phone: (440) 232-9945
Fax: (440) 232-9946
www.hullinc.com

Indian Mill Road Slope Stabilization Project
404/401 Permit Application

Site Photographs

Indian Mill Road
Upper Sandusky, Wynadot County, Ohio

Date:
DECEMBER 2012

Project Number: CUS021
File Name:
CUS021.600.0006.XLS

PHOTO 3: Failed slope; view to north from south bank of Sandusky River.

PHOTO 4: South bank and channel of Sandusky River at proposed Preferred Alternative river crossing; view to south.

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PHOTO 5: South bank and channel of Sandusky River at proposed Preferred Alternative river crossing; view to south.

PHOTO 6: Sandusky River at proposed Preferred Alternative river crossing; view upstream to west.

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Indian Mill Road Slope Stabilization Project
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PHOTO 7: Agricultural land, south side of Sandusky River at proposed Preferred Alternative river crossing; view to southwest.

PHOTO 8: Riparian forest, south bank of Sandusky River at proposed Preferred Alternative river crossing; view to east.

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PHOTO 9: Riparian forest on north bank of Sandusky River, west of failed slope. View to west.

PHOTO 10: Failing portion of slope in forested area adjacent to project site; view to east.

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Indian Mill Road Slope Stabilization Project
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Site Photographs

Indian Mill Road
Upper Sandusky, Wynadot County, Ohio

Date:
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PHOTO 11: Erosion channel in forested area adjacent to project site; view downslope to south.

PHOTO 12: Forested slope west of failed slope; view to west along Indian Mill Road.

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Bedford, Ohio 44146
Phone: (440) 232-9945
Fax: (440) 232-9946

www.hullinc.com

Indian Mill Road Slope Stabilization Project
404/401 Permit Application

Site Photographs

Indian Mill Road
Upper Sandusky, Wynadot County, Ohio

Date:
DECEMBER 2012

Project Number: CUS021
File Name:
CUS021.600.0006.XLS

PHOTO 13: Potential Indiana bat roost tree (sugar maple), south bank of the Sandusky River.

PHOTO 14: Potential Indiana bat roost tree (shagbark hickory), north slope of the Sandusky River.

Hull & associates, inc.
4 Hemisphere Way
Bedford, Ohio 44146
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Indian Mill Road Slope Stabilization Project
404/401 Permit Application

Site Photographs

Indian Mill Road
Upper Sandusky, Wynadot County, Ohio

Date:
DECEMBER 2012

Project Number: CUS021
File Name:
CUS021.600.0006.XLS

Appendix D
Resource Agency Correspondence

Hull & associates, inc.

September 12, 2012

Ms. Debbie Woischke, Data Specialist
ODNR, Division of Wildlife
Ohio Biodiversity Database Program
2045 Morse Road, Building G-3
Columbus, Ohio 43229-6693

RE: Data Request for the Indian Mill Road Slope Stabilization Project, City of Upper Sandusky, Wyandot County, Ohio.

Hull Project # CUS021 – Indian Mill Road

Dear Ms. Woischke:

Hull is under contract to prepare a Clean Water Act Sections 401 and 404 permit application for the proposed Indian Mill Road Slope Stabilization Project in the City of Upper Sandusky, Wyandot County, Ohio. The proposed project would involve re-contouring and stabilization of a failed slope along the Sandusky River that is threatening the integrity of Indian Mill Road. Slope stabilization and construction access would necessitate implementation of activities below the Ordinary High Water Mark of the Sandusky River and therefore require Sections 401 and 404 permits. The proposed project is located at: 40°50'49.30" N, 83°16'20.31" W.

This letter is a request to the Ohio Department of Natural Resources, Division of Wildlife's Ohio Biodiversity Database Program for records within a one mile radius of the proposed project site. Attached is a completed Ohio Biodiversity Database Data Request form and a copy of the Upper Sandusky, Ohio quadrangle identifying the proposed project site (Figure 1). In addition to the standard data requested on the form, we are also requesting all known Indiana bat hibernacula locations and Indiana bat capture locations within a 5-mile radius of the proposed project. Should you require additional information or have questions concerning this request, please contact me at the number below or by email at dkelly@hullinc.com.

Sincerely,

Hull & Associates, Inc.

Daniel O. Kelly
Scientist II

Ct: Hugh Crowell, Hull & Associates, Inc.

Attachments

4 Hemisphere Way Bedford, Ohio 44146
440.232.9945 fax 440.232.9946 www.hullinc.com

DATA REQUEST FORM

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WILDLIFE
OHIO BIODIVERSITY DATABASE PROGRAM
2045 MORSE RD., BLDG. G-3
COLUMBUS, OHIO 43229-6693
PHONE: 614-265-6452; FAX: 614-267-3096

INSTRUCTIONS:

Please complete both sides of this form, sign and return it to the address or fax number given above along with: **(1)** a brief letter describing your project, and **(2)** a map detailing the boundaries of your project site. A copy of the pertinent portion of a USGS 7.5 minute topographic map is preferred but other maps are acceptable. Our turnaround time is two weeks, although we can often respond more quickly. If you fax in your request you do not need to mail the original unless otherwise requested.

FEES:

As of June 2010, we have temporarily suspended charging a fee until a review of the data request process has been completed.

WHAT WE PROVIDE: The Biodiversity Database is the most comprehensive source of information on the location of Ohio's rare species and significant natural features. Records for the following will be provided: plants and animals (state and federal listed species), high quality plant communities, geologic features, breeding animal concentrations and unprotected significant natural areas. We also provide locations for managed areas including federal, state, county, local and non-profit sites, as well as state and national scenic rivers. A minimum one mile radius around the project site will automatically be searched. Because the data is sensitive information, it is our policy to provide only the data needed to complete your project.

****

Date: 09/06/2012 Company name: Hull & Associates, Inc.
Name of person response letter should be addressed to: Mr. ☑ Ms.
Daniel O. Kelly
Address: 4 Hemisphere Way
City/State/Zip: Bedford, OH 44146
Phone: 440-232-9945 Fax: 440-232-9946
E-mail address: dkelly@hullinc.com

Project Name: Indian Mill Road Slope Stabilization Project

Project Number: CUS021 – Indian Mill Road

Project Site Address: Project is located on Indian Mill Road at intersection with Kimmel Court.

Project County: Wyandot County

Project City/Township: City of Upper Sandusky

Project site is located on the following USGS 7.5 minute topographic quad(s):
Upper Sandusky, OH

Description of work to be performed at the project site: Re-contouring and stabilization of a failed slope

How do you want your data reported? (Both formats provide exactly the same data. The only difference is in the format of our response. The manual search is most appropriate for small scale projects or for those who do not have GIS capabilities. **Please choose only one option**.)

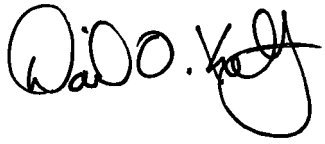
Printed list and map (manual search) ☑ **OR** GIS shapefile (computer search) ____

Additional information you require: Indiana bat hibernacula locations and Indiana bat capture records/locations within a 5-mile radius of the proposed project.

How will the information be used? To support preparation of a Clean Water Act Sections 401 and 404 permit application

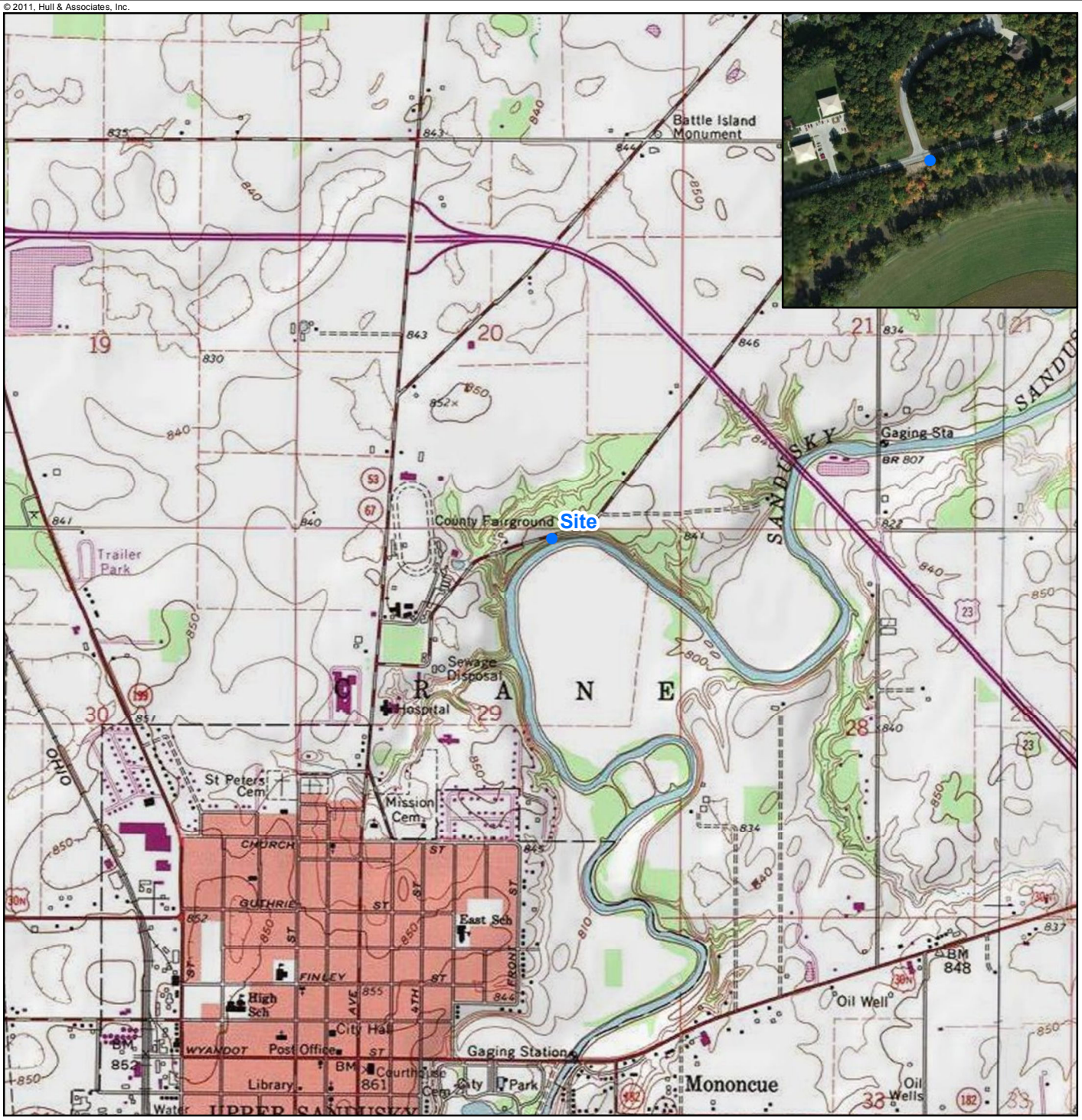
I certify that data supplied by the Ohio Biodiversity Database Program will not be published without crediting the ODNR Division of Wildlife as the source of the material. In addition, I certify that electronic datasets will not be distributed to others without the consent of the Division of Wildlife, Ohio Biodiversity Program.

Signature



Date: 09/06/2012

DNR 5203
REV 8/2010



Legend

- Site Location

Source: The topographic map was acquired through the OGRIP/OIT ArcIMS website, http://gis1.oit.ohio.gov. Quadrangle name: Upper Sandusky and Nevada, Ohio, all revised in 1971, published in 1972.

The aerial photo was obtained from the Ohio Geographically Referenced Imagery Program and is courtesy of the Ohio Statewide Imagery Program and is dated 2006.

0 500 1,000 2,000 Feet

1:24,000

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Hull & associates, inc.

3401 Glendale Avenue
Suite 300
Toledo, Ohio 43614

Phone: (419) 385-2018
Fax: (419) 385-5487
www.hullinc.com

Initial Geotechnical Exploration For the City of Upper Sandusky

Site Location Map

Upper Sandusky, Wyandot County, Ohio

Date: September 2012

File Name: CUS021_04_Fig01_SiteLocMap.mxd

Edited: 9/12/2012 By: jsheridan

Figure 1

Produced using ArcGIS 10.0 SP1

Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR — JAMES ZEHRINGER, DIRECTOR

Ohio Division of Wildlife
Scott Zody, Chief
2045 Morse Rd., Bldg. G
Columbus, OH 43229-6693
Phone: (614) 265-6300

September 13, 2012

Daniel Kelly
Hull & Associates
4 Hemisphere Way
Bedford, OH 44146

Dear Mr. Kelly,

I have reviewed the Natural Heritage Database for the Indian Mill Road Slope Stabilization Project area, including a one mile radius, in the City of Upper Sandusky, Wyandot County, Ohio. We have a record in your search area. A map showing the location of this element is provided with this letter.

This project is located within 1000 feet of the state designated Sandusky Scenic River. The approval of the Director of ODNR may be required in accordance with Ohio Revised Code section 1547.82. Please contact Scenic River Program Manager Bob Gable at 614-265-6814 for further information.

We are unaware of any additional unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, nature preserves, parks or forests, national wildlife refuges, parks or forests, or other protected natural areas within a one mile radius of the project area. We also have no records for Indiana Bat (*Myotis sodalis*) capture locations within a five mile radius or hibernacula within a ten mile radius of the project site.

Our inventory program has not completely surveyed Ohio and relies on information supplied by many individuals and organizations. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Please note that although we inventory all types of plant communities, we only maintain records on the highest quality areas.

This letter only represents a review of rare species and natural features data within the Ohio Natural Heritage Database. It does not fulfill coordination under the National Environmental Policy Act (NEPA) or the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S. C. 661 et seq.) and does not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

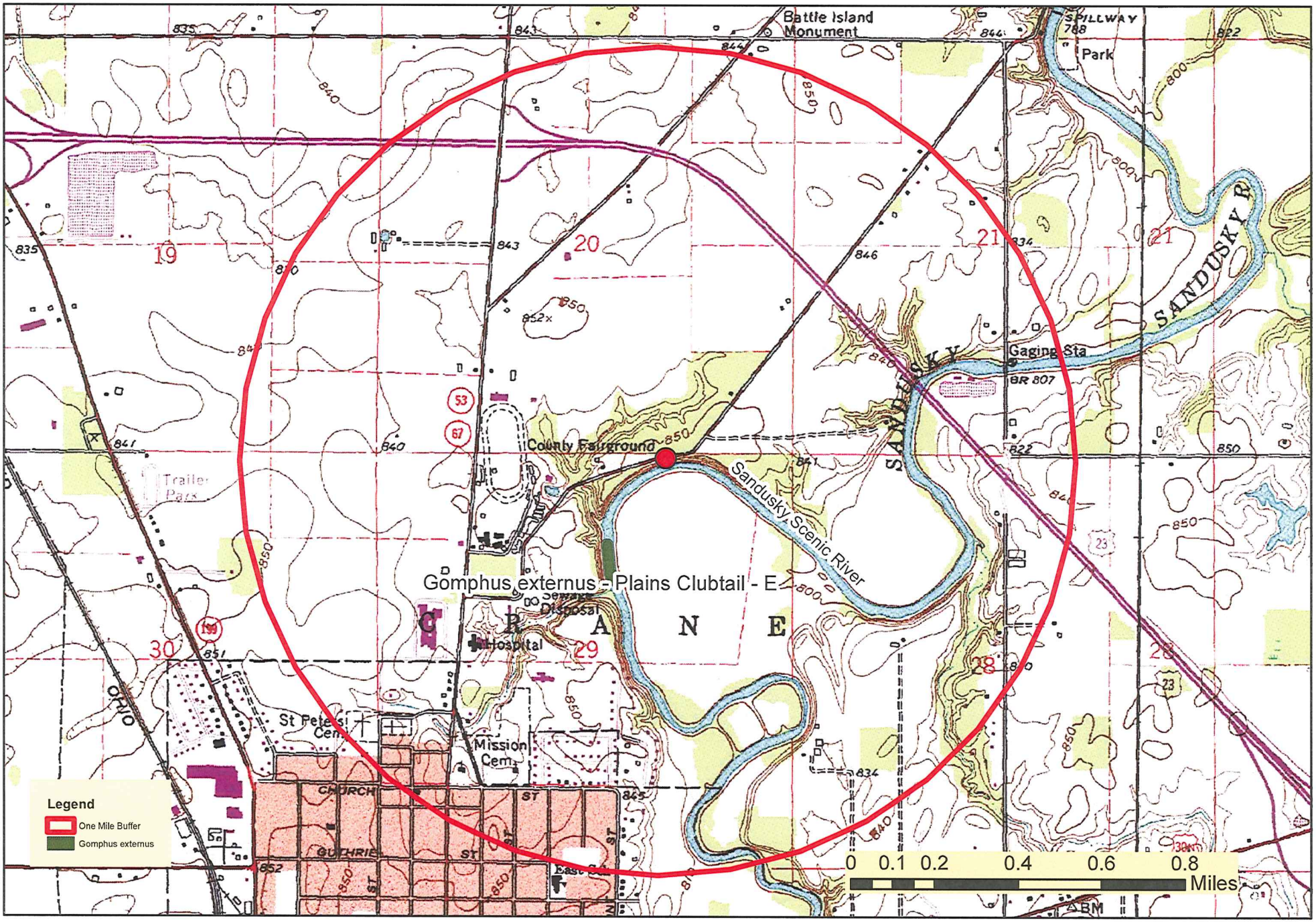
Please contact me at 614-265-6452 if I can be of further assistance.

Sincerely,

Greg Schneider

Greg Schneider, Administrator
Ohio Natural Heritage Program

Indian Mill Road Slope Stabilization Project



Hull & associates, inc.

September 12, 2012

Mary Knapp, Ph.D.
Supervisor
Division of Ecological Services
U.S. Fish & Wildlife Service
4625 Morse Rd. Suite 104
Columbus, Ohio 43230

RE: Data Request for the Indian Mill Road Slope Stabilization Project, City of Upper Sandusky, Wyandot County, Ohio.

Hull Project # CUS021 – Indian Mill Road

Dear Dr. Knapp:

Hull is under contract to prepare a Clean Water Act Sections 401 and 404 permit application for the proposed Indian Mill Road Slope Stabilization Project in the City of Upper Sandusky, Wyandot County, Ohio. The proposed project would involve re-contouring and stabilization of a failed slope along the Sandusky River that is threatening the integrity of Indian Mill Road. Slope stabilization and construction access would necessitate implementation of activities below the Ordinary High Water Mark of the Sandusky River and therefore require Sections 401 and 404 permits. The project site shown on Figure 1 (see attachment) is located at the following coordinates: 40°50'49.30" N, 83°16'20.31" W (Upper Sandusky, Ohio USGS quadrangle).

Hull requests from the USFWS information on all documented threatened and endangered species occurring within and in the vicinity of the project site, including specific information on location, if available. If such information exists, please inform us if the proposed project has the potential to impact protected species. Please also include any information that you may have on Bald Eagle nest sites within a one-mile radius of the project site.

Thank you in advance for your attention to this request. Should you require additional information or have questions concerning this request, please feel free to contact me at the number below or by e-mail at dkelly@hullinc.com.

Sincerely,

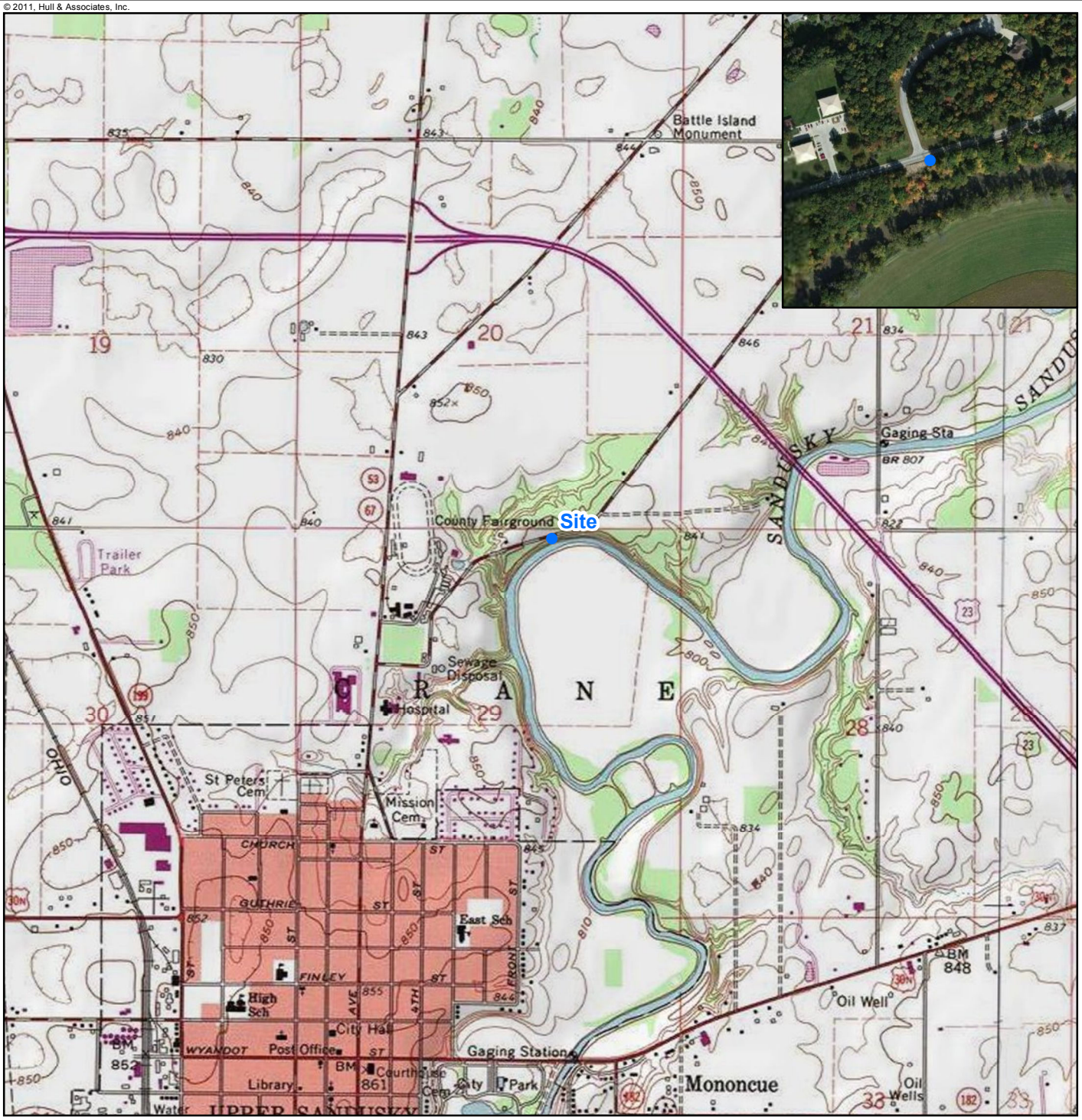
Hull & Associates, Inc.

Daniel O. Kelly
Scientist II

Ct: Hugh Crowell, Hull & Associates, Inc.

Attachment

4 Hemisphere Way, Bedford, Ohio 44146
440.232.9945 fax 440.232.9946 www.hullinc.com



Legend

- Site Location

Source: The topographic map was acquired through the OGRIP/OIT ArcIMS website, http://gis1.oit.ohio.gov. Quadrangle name: Upper Sandusky and Nevada, Ohio, all revised in 1971, published in 1972.

The aerial photo was obtained from the Ohio Geographically Referenced Imagery Program and is courtesy of the Ohio Statewide Imagery Program and is dated 2006.

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1:24,000

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Hull & associates, inc.

3401 Glendale Avenue
Suite 300
Toledo, Ohio 43614

Phone: (419) 385-2018
Fax: (419) 385-5487
www.hullinc.com

Initial Geotechnical Exploration For the City of Upper Sandusky

Site Location Map

Upper Sandusky, Wyandot County, Ohio

Date: September 2012

File Name: CUS021_04_Fig01_SiteLocMap.mxd

Edited: 9/12/2012 By: jsheridan

Figure 1

Produced using ArcGIS 10.0 SP1

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
4625 Morse Road, Suite 104
Columbus, Ohio 43230
(614) 416-8993 / FAX (614) 416-8994

October 24, 2012

Tails: 03E15000-2012-TA-1417

Mr. Daniel Kelly
Hull & Associates Inc.
4 Hemisphere Way
Bedford, OH 44146

Re: Data Request for the Indian Mill Road Slope Stabilization Project, City of Upper Sandusky, Wyandot County, Ohio.

Hull Project #CUS021 – Indian Mill Road

Dear Mr. Kelly:

This is in response to the September 12, 2012 correspondence, that what read by our office on September 17, requesting information about threatened and endangered species. The proposed project site is located at 40°50'49.30" N, 83°16'20.31" W in Wyandot County, Ohio. Project plans include the proposed re-contouring and stabilization of a failed slope along the Sandusky River that is threatening the integrity of Indian Mill Road. The site currently exists as a forested stream bank within a rural and suburban matrix.

There are no Federal wilderness areas, wildlife refuges, or designated Critical Habitat within the vicinity of the proposed site.

STREAM & WETLAND COMMENTS:
The U.S. Fish and Wildlife Service recommends that proposed activities minimize water quality impacts and impacts to quality fish and wildlife habitat, such as forests, streams, and wetlands. Riparian zone habitat should be preserved wherever possible. Vegetated areas along streams and rivers stabilize the banks, provide fish and wildlife habitat, filter pollutants and excess nutrients, store excess water during storm events, and minimize sedimentation. Best Management Practices (BMP's) should be utilized to minimize sedimentation and erosion. All disturbed areas should be mulched and revegetated with native woody and herbaceous species.

MIGRATORY BIRD COMMENTS:
The site is located within the Sandusky River Important Bird Area. An IBA is an area that provides essential habitat for one or more species of bird. IBAs include sites for breeding, wintering, and/or migrating birds. The typical nesting season for migratory songbirds in the area of the proposed project ranges from April 1 through July 15. The Service encourages any tree removal to occur outside the nesting season to prevent impacts to migratory birds.

ENDANGERED SPECIES COMMENTS:

The proposed project lies within the range of the **rayed bean** (*Villosa fabalis*), a federally listed endangered species. The Sandusky River, within Wyandot County, has the potential for rayed bean presence. The rayed bean is generally known from smaller, headwater creeks, but records exist in larger rivers. They are usually found in or near shoal or riffle areas, and in the shallow, wave-washed areas of lakes. Substrates typically include gravel and sand, and they are often associated with, and buried under the roots of, vegetation, including water willow (*Justicia americana*) and water milfoil (*Myriophyllum* sp.). Should the proposed project directly or indirectly impact any of the habitat types described above, we recommend that a survey be conducted to determine the presence or probable absence of rayed bean mussels in the vicinity of the proposed site. Any survey should be designed and conducted in coordination with the Endangered Species Coordinator for this office.

The proposed project lies within the range of the **Indiana bat** (*Myotis sodalis*), a federally listed endangered species. Since first listed as endangered in 1967, their population has declined by nearly 60%. Several factors have contributed to the decline of the Indiana bat, including the loss and degradation of suitable hibernacula, human disturbance during hibernation, pesticides, and the loss and degradation of forested habitat, particularly stands of large, mature trees. Fragmentation of forest habitat may also contribute to declines. During winter, Indiana bats hibernate in caves and abandoned mines. Summer habitat requirements for the species are not well defined but the following are considered important:

(1) dead or live trees and snags with peeling or exfoliating bark, split tree trunk and/or branches, or cavities, which may be used as maternity roost areas;
(2) live trees (such as shagbark hickory and oaks) which have exfoliating bark;
(3) stream corridors, riparian areas, and upland woodlots which provide forage sites.

The proposed site contains a forested riparian corridor. Forested riparian corridors are important for bat foraging. You have indicated that specific project plans are still being determined and there is potential for tree clearing of up to a half acre. We recommend that the habitat and surrounding trees be saved wherever possible. If the trees must be cut, further coordination with this office is requested to determine if surveys are warranted. We recommend including the following information:

1. A map of the site with all forested areas indicated, and a general description of the habitat, including acreage, dominant species composition, age, density of understory, and canopy cover, and representative photos of these areas.
2. A map identifying the location of any exposed bedrock that supports caves, crevices, fissures, or sinkholes, or abandoned mines of any kind, and representative photos of these areas.
3. A map indicating the location of suitable roost trees (dead or live trees with peeling bark, cracks, or crevices), and describe species, condition (live or dead), size (dbh), and canopy cover. In particular, potential maternity roost trees should be located and quantified. Potential maternity roosts are typically large diameter trees with peeling bark that receive solar exposure for at least half the day. Please include representative photos of these trees.
4. A map indicating the location of any wetlands, streams, ponds, and cleared paths or trails.

5. A description and quantification of any forested parcels and potential roost trees onsite that will be preserved and those that will be removed.
6. A description of any other forested properties within the vicinity of the project that are protected in perpetuity (ex. parks, conservation easements, etc.).
7. A description of the connectivity of forested areas onsite and other adjacent forested parcels.
8. A list of avoidance and minimization measures to protect the bat and its habitat (such as preservation of suitable habitat, seasonal tree clearing, etc.).
9. Using the information above as justification, please include your determination of whether or not the project is likely to adversely affect the Indiana bat.

Based on this information, the Service will evaluate potential impacts to the Indiana bat from the proposed project. Depending on the extent of impacts to suitable Indiana bat habitat, we may recommend mist net or emergence surveys to determine bat usage of the project area. These surveys must be designed and conducted in coordination with this office, and *may only be completed between May 15 and August 15*. In lieu of first providing the above information for Service evaluation, the Applicant may elect to forgo a habitat evaluation and conduct a mist net survey on the property. If this option is selected, the Applicant should contact this office immediately for a list of permitted Indiana bat surveyors, and to ensure that the appropriate survey protocol is implemented. Furthermore, if the habitat evaluation and/or mist net surveys do not provide sufficient information to document a "not likely to adversely affect" determination, formal consultation under section 7 of the Endangered Species Act of 1973, as amended, will be necessary.

The project lies within the range of the following species: the **eastern massasauga** (*Sistrurus catenatus*), a small, docile rattlesnake that is currently a Federal candidate species, and the **bald eagle** (Haliaeetus leucocephalus), a species protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. Due to the project type, location, and onsite habitat, these two species would not be expected within the project area, and no impact to these two species is expected.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the Endangered Species Act of 1973 (ESA), as amended, and are consistent with the intent of the National Environmental Policy Act of 1969 and the U. S. Fish and Wildlife Service's Mitigation Policy. This letter provides technical assistance only and does not serve as a completed section 7 consultation document. If you have questions, or if we may be of further assistance in this matter, please contact Nicole Haas at extension 32 in this office.

Sincerely,

Mary Knapp, Ph.D.
Field Supervisor

cc: ODNR, DOW, SCEA Unit, Columbus, OH

Appendix E
Ohio Public Works Commission
State Capital Improvement Program
Project Grant Agreement

OHIO PUBLIC WORKS COMMISSION

PROJECT GRANT AGREEMENT

STATE CAPITAL IMPROVEMENT PROGRAM

'ursuant to Ohio Revised Code 164.05 and Ohio Administrative Code 164-1-21, this Project Agreement is entered nto **September 12, 2012** by and between the State of Ohio, acting by and through the Director of the Ohio Public Vorks Commission (hereinafter variously referred to as the "Director" or the "OPWC"), located at 65 East State treet, Suite 312, Columbus, Ohio 43215, and **The City of Upper Sandusky, Wyandot County** (hereinafter eferred to as the "Recipient"), located at **119 N. Seventh Street, Upper Sandusky, OH 43351-** , in respect of the roject named **Indian Mill Road Slope**, and as described in Appendix A of this Agreement (hereinafter referred) as the "Project") to provide an amount not to exceed **Two Hundred Ten Thousand, Eight Hundred Forty-ight Dollars** ($210,848) for the sole and express purpose of financing or reimbursing costs of the Project as more ılly set forth in this Agreement and the Appendices attached hereto.

ubdivision Code :**175-79044**

OPWC Grant Project Control No. **CU46O**

WHEREAS, to implement the policies set forth in Section 2m, Article VIII of the Ohio Constitution, and in Chapter 164 of the Revised Code, the General Assembly, pursuant to Revised Code Section 164.02, created the Ohio Public Works Commission (the "OPWC");

WHEREAS, pursuant to Section 164.05 of the Revised Code, the Director of the OPWC is empowered to (i) approve requests for financial assistance from District Public Works Integrating Committees (as hereinafter defined); (ii) enter into agreements with one or more Local Subdivisions to provide loans, grants, and local debt support and credit enhancements for Capital Improvement Projects; and (iii) authorize payments to Local Subdivisions or their Contractors (as hereinafter defined) for costs incurred for Capital Improvement Projects which have been approved by the Director;

WHEREAS, Sections 164.05 and 164.06 of the Revised Code permit a grant of funds, or other forms of financial assistance, for such a Capital Improvement Project to be expended or provided only after the District has submitted a request to fund the Project to the Director outlining the Recipient's planned use of the funds, and subsequent approval of the request by the Director;

WHEREAS, the Recipient desires to engage in the acquisition, construction, reconstruction, improvement, planning, or equipping of the Capital Improvement Project (the "Project") described in Appendix A of this Agreement;

WHEREAS, the Project described in Appendix A of this agreement has been duly recommended to the Director pursuant to Section 164.06 of the Revised Code by the District Public Works Integrating Committee of the Recipient;

NOW, THEREFORE, in consideration of the promises and covenants herein contained, the undersigned agree as follows:

SECTION 1. Definitions and General Provisions. The following words and terms as hereinafter used in this Agreement shall have the following meanings unless otherwise herein provided and unless the context or use clearly indicates another or different meaning or intent.

"Act" means Section 2m of Article VIII of the Ohio Constitution, Chapter 164 of the Revised Code, enacted and amended thereunder, together with Chapter 164-1 of the Ohio Administrative Code (the "Administrative Code").

"Bond Counsel" means an attorney or firm of attorneys of nationally recognized standing on the subject of municipal bonds satisfactory to the Director.

"Business Day" means a day of the year on which banks located in Columbus, Ohio and in New York, New York are not required or authorized by law to remain closed and on which The New York Stock Exchange is not closed.

"Capital Improvement" or "Capital Improvement Project" means the acquisition, construction, reconstruction, improvement, planning and equipping of roads and bridges, waste water treatment systems, water supply systems, solid waste disposal facilities, and storm water and sanitary collection, storage and treatment facilities of Local Subdivisions, including real property, interests in real property, and facilities and equipment of Local Subdivisions related or incidental thereto.

"Chief Executive Officer" means the Chief Executive Officer of the Recipient and as designated pursuant to Section 6 hereof or his authorized designee as per written notification to the Director.

"Chief Fiscal Officer" means the Chief Fiscal Officer of the Recipient and as designated pursuant to Section 6 hereof or his authorized designee as per written notification to the Director.

"Code" means the Internal Revenue Code of 1986, as amended. Each reference to a section of the Code herein shall be deemed to include the United States Treasury Regulations in effect, whether temporary or final, with respect thereto and applicable to the Infrastructure Bonds or the use of the proceeds thereof.

"Contractor" means a person who has a direct contractual relationship with the Recipient and is (i) the manufacturer of

and express purpose of paying or reimbursing the costs certified to the OPWC under this Agreement for the completion of the Project described in Appendix A of this Agreement.

SECTION 3. Local Subdivision Contribution. The Recipient shall, at a minimum, contribute to the Project (the "Local Subdivision Contribution") the Local Subdivision Participation Percentage as set forth in Appendix D of this Agreement. The Local Subdivision Contribution to the Project shall be for the sole and express purpose of paying or reimbursing the costs certified to the OPWC under this Agreement for the completion of the Project as defined and described in Appendix A of this Agreement.

SECTION 4. Notice to Proceed. Work shall not commence on this Project until the Director has issued a written Notice to Proceed to the Recipient. Such Notice will not be issued until the Director is assured that the Recipient has complied with the Recipient's responsibilities concerning OEPA plan approval, when applicable. A Notice to Proceed shall be required for all project prime contractors or direct procurement initiated by the Recipient following execution of this Agreement.

SECTION 5. Project Schedule. Construction must begin within 30 days of the date set forth in Appendix A, Page 2 for the start of construction, or this Agreement may become null and void, at the sole option of the Director. However, the Recipient may apply to the Director in writing for an extension of the date to initiate construction. The Recipient shall specify the reasons for the delay in the start of construction and provide the Director with a new start of construction date. The Director will review such requests for extensions and may extend the start date, providing that the Project can be completed within a reasonable time frame.

SECTION 6. Disbursements. All payments made by the OPWC shall be made directly to the Contractor that performed the work and originated the invoice, unless the OPWC expressly authorizes Recipient to use the reimbursement method specified in Paragraph (A)(4)(b) of Rule 164-1-22 of the Administrative Code.

(a) Project Administration Designation. Pursuant to Paragraph (B) of Rule 164-1-21 of the Administrative Code, the Recipient shall designate its Chief Executive Officer, Chief Fiscal Officer and Project Manager as set forth in Appendix B of this Agreement.

(b) Disbursements to Contractors to Pay Costs of the Project. The Recipient shall require that as work on the Project and as specified in its contract is performed a Contractor shall promptly submit a detailed project specific invoice to the Project Manager. Within three (3) Business Days following receipt of such invoice from a Contractor, the Project Manager shall review the invoice and, if found to be accurate, shall so certify in writing, forwarding said certification together with a copy of the invoice to the Chief Fiscal Officer. Within five (5) Business Days following receipt of such invoice and certification from the Project Manager, the Chief Fiscal Officer shall conduct such reviews as he considers appropriate and, if he approves such invoice, shall submit to the Director a Disbursement Request together with the information and certifications required by this Section 6(b). The dollar amount set forth in the Disbursement Request shall be calculated based on the Participation Ratio as set forth originally in Appendix D of this Agreement or as may be adjusted from time to time to account for changed conditions in the project financing scheme. Within five (5) Business Days following receipt of the Disbursement Request and all required information and certifications, the Director shall, if such items are deemed by the Director to be accurate and complete, initiate a voucher in accordance with applicable State requirements for the payment of the amount set forth in the Disbursement Request. Upon receipt of a warrant from the Auditor of State drawn in connection with a voucher initiated in accordance with the terms of the preceding sentence, the Director shall forward it, by regular, first class, United States mail or electronic funds transfer, to the contractor or other authorized recipient designated in the Disbursement Request.

Prior to any disbursement from the OPWC, the following documents shall be submitted to the Director by the Recipient:

(1) If the request is for disbursement to a Contractor, an invoice submitted to the Recipient by the Contractor which invoice requests payment of such sums in connection with its performance of the Project;

(2) If the request is for disbursement to the Recipient pursuant to Paragraph (A)(4)(b) of Rule 164-1-22 of the Administrative code, a bill of sale, paid invoice or other evidence satisfactory to the Director that payment of such sums has been

amounts from payments to be made to Contractors and the deposit of such amounts into an escrow account established pursuant to Section 153.63 of the Revised Code. Upon written notification to and approval of the Director, Recipient may use its legally applicable construction contract requirements for the project, including, but not limited to, its legally applicable requirements, if any, for the retaining of certain amounts from payments to be made to contractors in lieu of the requirements of Section 153.12, 153.13, 153.14, and 153.63 of the Revised Code. All such amounts deposited into the escrow account established pursuant to Section 153.63 of the Revised Code if applicable or as required by any other applicable law shall be paid by the Recipient from the Local Subdivision Contribution, or other local source of funds, and shall not be paid from the moneys provided to the Recipient pursuant to Section 2 hereof.

SECTION 8. Conditions to Financial Assistance and its Disbursement. The OPWC's obligations hereunder, including its obligation to make financial assistance available to the Recipient pursuant to the terms of this Agreement, are contingent upon compliance by the Recipient with the following conditions:

(a) Recipient's acquisition and commitment of the Local Subdivision Contribution necessary for the completion of the Project, its compliance with all other provisions of this Agreement, and its compliance with the provisions of Chapter 164 of the Revised Code and Chapter 164-1 of the Administrative Code. The Recipient shall set forth in Appendix D of this Agreement, a description of the manner or mechanisms of providing its local share of Project funds pursuant to division (D) of Section 164.05 of the Revised Code and Rule 164-1-21 (B)(6) of the Administrative Code.

(b) Recipient shall execute any and all other documents and certificates as deemed necessary by the Director, subject to the opinion of counsel to the Director, as well as any required by changes in State or Federal law, on the date hereof or at any time hereafter in connection with the financial assistance and disbursement of moneys pursuant to this Agreement, including any amendments to this Agreement.

SECTION 9. Representations, Warranties and Covenants of Recipient. The Recipient represents, warrants and covenants for the benefit of the OPWC as follows:

(a) Recipient is a Local Subdivision of the State with all the requisite power and authority to construct, or provide for the construction of, and operate the Project under the laws of the State and to carry on its activities as now conducted;

(b) Recipient has the power to enter into and perform its obligations under this Agreement and has been duly authorized to execute and deliver this Agreement;

(c) This Agreement is the legal, valid and binding obligation of the Recipient, subject to certain exceptions in the event of bankruptcy and the application of general principles of equity;

(d) Recipient has complied with all procedures, prerequisites, and obligations for Project application and approval under Chapter 164 of the Revised Code and Chapter 164-1 of the Administrative Code;

(e) Recipient is not the subject of nor has it initiated any claim or cause of action that would give rise to any liability which would in any way inhibit Recipient's ability to carry out its performance of this Agreement according to its terms;

(f) Use of Project.

(i) General. The Recipient shall not use the Project or suffer or permit the Project to be used for any Private Business Use. For purposes of the preceding sentence, use pursuant to a contract that satisfies the criteria of paragraphs (ii) or (iii) of this subsection shall not be regarded as a Private Business Use.

(ii) Management Contracts. The Recipient agrees that from the date hereof until the date on which none of the Infrastructure Bonds, of which the proceeds were used to pay or reimburse the costs of the Project, remain outstanding (the "Agreement Term"):

(1) The Recipient will not contract with any Private Person to manage the Project or any portion thereof

(g) Use of Proceeds. With respect to the Project to be financed by moneys provided pursuant to Section 2 hereof:

(i) The total cost of the Project shall not and will not include any cost which does not constitute "Costs of Capital Improvements," as defined in the Act;

(ii) All of the Project is owned, or will be owned, by the Recipient or another Tax-Exempt organization;

(iii) The Recipient shall not use any of the moneys to pay or reimburse the Recipient for the payment of or to refinance costs incurred in connection with the acquisition, construction, improvement and equipping of property that is used or will be used for any Private Business Use; and

(iv) The Recipient may depart from any of its agreements contained in subparagraph (iii) if it delivers to the Director, at the Recipient's expense, an opinion of Bond Counsel that to do so would not adversely affect the exclusion of interest on the Infrastructure Bonds from gross income for federal income tax purposes and such opinion is accepted by the Director.

(h) General Tax Covenant. The Recipient shall not take any action or fail to take any action which would adversely affect the exclusion of interest on the Infrastructure Bonds from gross income for federal income tax purposes;

(i) Sufficiency of Moneys. The Recipient has sufficient moneys in addition to those provided to Recipient pursuant to Section 2 of this Agreement to fund the Project to completion;

(j) Ohio Preference. The Recipient shall, to the extent practicable, use, and shall cause all of its Contractors and subcontractors to use, Ohio products, materials, services and labor in connection with the Project;

(k) Equal Employment Opportunity. Recipient shall require that all contractors and subcontractors working on the Project comply with the equal employment opportunity requirements for the utilization of minorities and females pursuant to Chapter 123 of the Administrative Code, the Governor's Executive Order of 1972, and Governor's Executive Order 84-9;

(l) Prevailing Wage. Recipient shall comply, and shall require that all Contractors and subcontractors working on the Project comply, with the prevailing wage requirements contained in Sections 4115.03 to 4115.16 of the Revised Code; and

(m) Construction Bonds, Insurance and Supervision.

(i) The Recipient shall require that each of its construction contractors furnish a performance and payment bond in an amount at least equal to 100 percent of its contract price as security for the faithful performance of its contract.

(ii) The Recipient shall require that each of its construction contractors and each subcontractor maintain during the life of its contract or subcontract, Workers Compensation Insurance, Public Liability, Property Damage and Vehicle Liability Insurance.

(iii) The Recipient shall provide and maintain competent and adequate project management covering the supervision and inspection of the development and construction of the Project and bearing the responsibility of ensuring that construction conforms with the approved surveys, plans, profiles, cross sections and specifications and certifying to the OPWC and the Recipient at the completion of construction that construction is in accordance with the approved surveys, plans, profiles, cross sections and specifications or approved amendments thereto.

SECTION 10. Progress Reports. The Recipient shall submit to the OPWC, at the OPWC's request, summary reports detailing the progress of the Project pursuant to this Agreement and any additional reports containing such information as the OPWC may from time to time reasonably require. The Recipient shall submit to the OPWC a final report on forms prescribed by the OPWC, detailing the results of the Project and the expenditure of funds made pursuant to this Agreement. The Recipient shall submit the final report to the OPWC no later than 90 days after completion of the Project.

communications between the parties relating to the subject matter of this Agreement, whether such shall be oral or written.

SECTION 18. Captions. Captions contained in this Agreement are included only for convenience of reference and do not define, limit, explain or modify this Agreement or its interpretation, instruction or meanings and are in no way intended to be construed as part of this Agreement.

SECTION 19. Notices. Except as otherwise provided hereunder, any notices required hereunder shall be in writing and shall be deemed duly given when deposited in the mail, postage prepaid, return receipt requested, by the sending party to the other party at the addresses set forth below or at such other addresses as party may from time to time designate by written notice to the other party.

SECTION 20. No Waiver. If either party hereto at any time fails to require performance by the other of any provision of this Agreement, such failure shall in no way affect the right to require such performance at any time thereafter, nor shall the waiver by either party of a breach or default under any provision of this Agreement, be construed to be a waiver of any subsequent breach or default under that provision or any other provision of this Agreement.

SECTION 21. Acceptance by Recipient. This Agreement must be signed by the Chief Executive Officer of the Recipient and returned to, and received by, the OPWC within forty-five (45) days of the date written on the first page of this Agreement. Failure of the Recipient to return a fully executed copy of this Agreement to the OPWC within the forty-five (45) day limit described herein will result in this Agreement being declared null and void, and the OPWC funds committed herein will be returned to the District Public Works Integrating Committee for reallocation. However, upon the Recipient presenting the Director with a written explanation of the need to extend this forty-five (45) day limit, the Director, in his sole discretion, may extend the forty-five (45) day limit.

SECTION 22. Assignment. Neither this Agreement nor any rights, duties or obligations described herein shall be assigned by either party hereto without the prior written consent of the other party.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement for Project # **CU46O** as of the date first written above.

RECIPIENT

Hon. Scott Washburn, Mayor

The City of Upper Sandusky
119 N. Seventh Street
Upper Sandusky, OH 43351-

WITNESS

GRANTOR

STATE OF OHIO, OHIO PUBLIC WORKS COMMISSION

By:
Michael Miller, Director

Ohio Public Works Commission
65 East State Street
Suite 312
Columbus, OH 43215

WITNESS

APPROVED
FINANCE & ADMINISTRATION

APPENDIX A

PROJECT DESCRIPTION AND COMPLETION SCHEDULE

1) PROJECT DESCRIPTION / PHYSICAL SCOPE:

The Project, for which the provision of financial assistance is the subject of this Agreement, is hereby defined and described as follows:

a) PROJECT NAME: **Indian Mill Road Slope**

b) SPECIFIC LOCATION: **The project area is immediately below the south side of Indian Mill Road near the intersection of Kimmel Court. It is approximately 0.75 mile north of downtown Upper Sandusky, about 1/3 mile east of the County Fairgrounds and is between US Route 23 and State Routes 53/67.**

(Project Location Zip Code - 43351-)

c) PROJECT TYPE; MAJOR COMPONENTS: **The project includes slope stabilization (excavation of unconsolidated material 2200 Cy excavation of Rock Keys, 465 CY; near site spoils placement, 2410 CY, off site spoils removal, 230 CY; geotextile fabric - Rock Keys 950 SY; 24" ODOT #1 & #2 Stone - Rock Keys, 1,176 ton; (stone placement); Roadway work (removal of guardrail, road and shoulder repair; guardrail installation; toe stabilization (gabion blocks installed, 155 CY; Armor Stone protection, 285 tons); Erosion and Sediment Control (seeding; erosion matting,920 SY; silt fence, 450 LF). See engineer's estimate in project application for approved bid items and quantities.**

d) PHYSICAL DIMENSIONAL CHARACTERISTICS: **Excavation, 2,665 CY; Near site spoils placement 2,410 CY; off iste spoils removal, 230 CY; Geotextile Fabric 950 SY; 1,176 Ton 24" ODOT #1 & #2 stone; stone placement; removal of guardrail; road and shoulder repair; guardrail installation; 155 CY gabion blocks installed; 285 tons armor stone protection; seeding; erosion matting; silt fence.**

2) PROJECT SCHEDULE:

The Project, for which the provision of financial assistance is the subject of this Agreement, shall be pursued and completed in accordance with the following schedule:

ACTIVITY	START DATE	COMPLETION DATE
Final Design	**06/01/2012**	**07/23/2012**
Bidding Process	**07/23/2012**	**08/20/2012**
Construction	**08/20/2012**	**05/31/2013**

NOTE: Construction must begin within 30 days of the date set forth herein for the start of construction, or this Agreement may become null and void, at the sole option of the Director. However, the Recipient may apply to the Director in writing for an extension of the date to initiate construction. The Recipient shall specify the reasons for the delay in the start of construction and provide the Director with a new start of construction date. The Director will review such requests for extensions and may extend the start date, providing that the Project can be completed within a reasonable time frame.

The information detailed in this Appendix A shall serve as the basis for Project monitoring purposes and for determining Project acceptance upon its completion. In the event that circumstances require a change in physical scope, such changes must be approved through the execution of a formal Amendment to this Project Agreement.

APPENDIX B

PROJECT ADMINISTRATION DESIGNATION

The Project Administration Designation required by Section 6(a) of this Agreement, and in accordance with the definitions set forth in Section 1 of this Agreement, for the sole purpose of administering the Project, as defined and described in Appendix A of this Agreement, under Chapter 164 of the Revised Code and Chapter 164-1 of the Administrative Code is hereby established as follows:

The Recipient designates:

1.) **Hon. Scott Washburn/Mayor** to act as the Chief Executive Officer;

2.) **Carolyn Frederick/Auditor** to act as the Chief Fiscal Officer; and

3.) **Hon. Scott Washburn/Mayor** to act as the Project Manager.

NOTE: **Upon any change in such a designation, the Recipient shall immediately provide written notification to the OPWC.**

APPENDIX C

PROVISION OF FINANCIAL ASSISTANCE

As authorized by Section 2 of this Agreement for the sole and express purpose of financing the Project defined and described in Appendix A of this Agreement, the estimated costs of which are set forth and described in Appendix D of this Agreement, the OPWC hereby agrees to provide financial assistance, subject to the terms and conditions contained in this Agreement, from the State Capital Improvements Fund which constitutes the proceeds of the Infrastructure Bonds, in an amount not to exceed **Two Hundred Ten Thousand, Eight Hundred Forty-Eight Dollars ($210,848).** This financial assistance shall be provided in the form of a **Grant. The OPWC Grant Control No.** is **CU46O.**

Joint Funded Project with the Ohio Department of Transportation

In the event that the Recipient does not have contracting authority over project engineering, construction, or right-of-way, the Recipient and the OPWC hereby assign certain responsibilities to the Ohio Department of Transportation, an authorized representative of the State of Ohio. Notwithstanding Sections 4, 6(a), 6(b), 6(c), and 7 of the Project Agreement, Recipient hereby acknowledges that upon notification by the Ohio Department of Transportation, all payments for eligible project costs will be disbursed by the Grantor directly to the Ohio Department of Transportation. A Memorandum of Funds issued by the Ohio Department of Transportation shall be used to certify the estimated project costs. Upon receipt of a Memorandum of Funds from the Ohio Department of Transportation, the OPWC shall transfer funds directly to the Ohio Department of Transportation via an Intra-State Transfer Voucher. The amount or amounts transferred shall be determined by applying the Participation Percentages defined in Appendix D to those eligible project costs within the Memorandum of Funds. In the event that the Project Scope is for right-of-way only, notwithstanding Appendix D, the OPWC shall pay for 100% of the right-of-way costs not to exceed the total financial assistance provided in Appendix C.

APPENDIX D

LOCAL SUBDIVISION CONTRIBUTION, PROJECT FINANCING AND EXPENSES SCHEME AND DISBURSEMENT RATIO

) OPWC/LOCAL SUBDIVISION PARTICIPATION PERCENTAGES: For the sole and express purpose of financing/reimbursing costs of ıe Project defined and described in Appendix A of this Agreement, the estimated costs of which are set forth and described in this Appendix ', the Recipient hereby designates its Local Subdivision Percentage Contribution as amounting to a minimum total value of **20**% percent of the ɔtal Project Cost. The OPWC participation percentage shall be **80**% percent. However, in the event of a cost over-run, the maximum OPWC ollar contribution shall not exceed the amount identified in Appendix C.

) PROJECT FINANCING AND EXPENSES SCHEME: The Recipient further designates the Project's estimated financial resources nd estimated costs certified to the OPWC under this Agreement for the Project as defined and described in Appendix A of this Agreement to ɔnsist of the following components:

a) PROJECT FINANCIAL RESOURCES:	
i) Local In-kind Contributions	**$0**
ii) Local Public Revenues	**$52,712**
iii) Local Private Revenues	**$0**
iv) Other Public Revenues:	
- ODOT	**$0**
- FmHA	**$0**
- OEPA	**$0**
- OWDA	**$0**
- CDBG	**$0**
- Other_____	**$0**
SUBTOTAL	**$52,712**
v) OPWC Funds:	
- Grant	**$210,848**
- Loan	
- Loan Assistance	**$0**
SUBTOTAL	**$210,848**
TOTAL FINANCIAL RESOURCES	**$263,560**
b) PROJECT ESTIMATED COSTS:	
i) Project Engineering Costs:	
- Preliminary Engineering	**$12,500**
- Final Design	**$12,500**
- Other Engineering Services	**$9,600**
ii) Acquisition Expenses:	
- Land	**$10,000**
- Right-of-Way	**$0**
iii) Construction Costs	**$173,095**
iv) Equipment Costs	**$0**
v) Other Direct Expenses	**$19,900**
vi) Contingencies	**$25,965**
TOTAL ESTIMATED COSTS	**$263,560**

OHIO PUBLIC WORKS COMMISSION
APPENDIX E - DISBURSEMENT REQUEST FORM AND CERTIFICATION

DISBURSEMENT REQUEST NUMBER: _____

STATEMENT REQUESTING THE DISBURSEMENT OF FUNDS FROM THE OPWC PURSUANT TO SECTION 6 OF THE PROJECT AGREEMENT (the "Agreement") EXECUTED BETWEEN THE DIRECTOR OF THE OHIO PUBLIC WORKS COMMISSION (the "Director") AND **The City of Upper Sandusky, (175-79044), Wyandot County** (the "Recipient"), DATED **September 12, 2012,** FOR THE SOLE AND EXPRESS PURPOSE OF FINANCING THE CAPITAL IMPROVEMENT PROJECT DEFINED AND DESCRIBED IN APPENDIX A OF THE AGREEMENT (the "Project") AND NAMED AND NUMBERED AS **Indian Mill Road Slope, CU46O.**

EXPENDITURES PROGRESS:	(1) AS PER AGREEMENT	(2) PAID PRIOR TO THIS DRAW	(3) AS PART OF THIS DRAW	(4) PAID TO DATE (Column 2 + 3)
A) Project Engineering Costs				
1) Preliminary Engineering	**$12,500**	$_____	$_____	$_____
2) Final Design	**$12,500**	$_____	$_____	$_____
3) Other Engineering Services	**$9,600**	$_____	$_____	$_____
B) Acquisition Expenses				
1) Land	**$10,000**	$_____	$_____	$_____
2) Right-of-Way	**$0**	$_____	$_____	$_____
C) Construction Costs	**$173,095**	$_____	$_____	$_____
D) Equipment Costs	**$0**	$_____	$_____	$_____
E) Other Direct Expenses	**$19,900**	$_____	$_____	$_____
F) Contingencies	**$25,965**	$ N/A	$ N/A	$ N/A
G) Totals	**$263,560**	$_____	$_____	$_____

FINANCING PROGRESS:	(1) AS PER AGREEMENT	(2) USED PRIOR TO THIS DRAW	(3) AS PART OF THIS DRAW	(4) USED TO DATE (Column 2 + 3)
H) OPWC Funds	**$210,848**	$_____	$_____	$_____
I) Local Share				
1) In-kind Contributions	**$0**	$_____	$_____	$_____
2) Public Revenues	**$52,712**	$_____	$_____	$_____
3) Private Revenues	**$0**	$_____	$_____	$_____
K) Other Public Revenues				
1) ODOT	**$0**	$_____	$_____	$_____
2) FmHA	**$0**	$_____	$_____	$_____
3) OEPA	**$0**	$_____	$_____	$_____
4) OWDA	**$0**	$_____	$_____	$_____
5) CDBG	**$0**	$_____	$_____	$_____
6) Other _____	**$0**	$_____	$_____	$_____
L) Total Local and Other Public Revenues	**$52,712**	$_____	$_____	$_____
M) Totals (H+L for each column)	**$263,560**	$_____	$_____	$_____

[NOTE: Column totals for Line M must be equal to the column totals for Line G.]

OPWC FUNDS DISBURSEMENT PROGRESS:

Disbursement Request #_____

Is this the final request for disbursement of OPWC funds? ..... _____YES _____NO
If the answer is YES, skip to the section entitled "FINAL DISBURSEMENT REQUEST and PROJECT COMPLETION REPORT".

N) Total project costs claimed as part of this draw (Total in G(3)) ..... $_____
O) Disbursement Ratio ..... _____%
P) Amount of OPWC funds hereby requested for Disbursement (N x O) (Becomes H(3)) ..... $_____

FINAL DISBURSEMENT REQUEST and PROJECT COMPLETION REPORT: Project Completion Date ____/____/____

By completing this section the subdivision certifies that the project is completed and no additional invoices will be submitted to the OPWC.

Q) Total project costs (G(2) +G(3)) [if G(2) + G(3) > G(1) use the amount on G(1)] ..... $_____
R) Subdivision Percentage Participation Level (if cost overrun, percentage does not apply) 20%
S) Subdivision minimum dollar contribution (QxR) ..... $_____
T) Subdivision costs paid to date (Total in L(2)) ..... $_____
U) Total still owed toward Local Share (S-T) ..... $_____
V) Total project costs claimed as part of this draw(Total in G (3)) ..... $_____
W) Total still owed toward Local Share (U) ..... $_____
X) Amount of OPWC funds hereby requested for Disbursement (V-W) ..... $_____
(Becomes H(3))

Construction funds currently held in escrow by the subdivision and not reported on the previous page ..... $_____

[NOTE: Total in H(4) (sum of H(2) + H(3)) may not exceed total in H(1) (refer to instructions).]

PROJECT MANAGER CERTIFICATION:

I hereby certify that the work items invoiced and included herein are exclusively associated with the Project, have been completed in a satisfactory manner, and are otherwise in accord with the terms and conditions of the Agreement. This request reflects project completion at an estimated _____%.

_____ _____/_____/_____ (___)_____-_____
Hon. Scott Washburn/Mayor Date Phone

CHIEF EXECUTIVE OFFICER AND CHIEF FINANCIAL OFFICER CERTIFICATION:

Pursuant to Section 6(b) and 6(c) of the Agreement, the undersigned Chief Executive Officer and Chief Fiscal Officer of the Recipient, as both are designated in Appendix B of the Agreement, hereby request the Director to disburse financial assistance moneys made available to Project in Appendix C of the Agreement (inclusive of any amendment thereto) to the payee as identified below in the amount so indicated which amount equals the product of the Disbursement Ratio and the dollar value of the attached cost documentation which was properly billed to the Recipient in exclusive connection with the performance of the Project, or, in the case of a final disbursement request, the amount entered at Line V of this Appendix E. The undersigned further certify that:

1) Each item of project cost documentation attached hereto is properly payable by the OPWC in accordance with the terms and conditions of the Agreement, and none of the items for which payment is requested has formed the basis of any payment heretofore made from the OPWC;

2) Each item for which payment is requested hereunder is or was necessary in connection with the performance of the project;

3) In the event that any of the money disbursed to the Recipient pursuant to this request is to be used to pay Project costs based on an invoice submitted by a contractor of which the Recipient's share is yet to be paid, the Recipient shall expend such money to pay such contractor for the Project costs within twenty-four (24) hours after receipt thereof. Recipient shall hold such money uninvested pending payment to the contractor;

4) This statement and attachments hereto shall be conclusive as evidence of the facts and statements set forth herein and shall constitute full warrant, protection, and authority to the Director for any actions taken pursuant hereto; and

5) This document evidences the approval of the undersigned Chief Executive Officer and Chief Fiscal Officer of each payment hereby requested and authorized.

IN WITNESS WHEREOF, the undersigned have executed this Disbursement Request Form and Certification as of this _____ day of _____, 20____. **Note: All signatures must be original and in color ink.**

_____
Carolyn Frederick/Auditor

CFO Phone: (___)_____-_____

_____
Hon. Scott Washburn/Mayor

CONTRACTOR/VENDOR PAYEE IDENTIFICATION:

Set forth the appropriate portion(s) of this Disbursement Request amount (all or part of the amount from H(3)) that is to be paid to each of the contractors/vendors (or Subdivision) identified below, and as are supported through accompanying copies of invoices or other evidence of expense.

1) AMOUNT TO BE PAID CONTRACTOR/VENDOR BY the OPWC ..... $_____
PAYEE: _____
Address: _____
_____
Phone: (_____)_____-_____
Federal Tax ID #: _____

2) AMOUNT TO BE PAID CONTRACTOR/VENDOR BY the OPWC ..... $_____
PAYEE: _____
Address: _____
_____
Phone: (_____)_____-_____
Federal Tax ID #: _____

3) AMOUNT TO BE PAID CONTRACTOR/VENDOR BY the OPWC ..... $_____
PAYEE: _____
Address: _____
_____
Phone: (_____)_____-_____
Federal Tax ID #: _____

4) AMOUNT TO BE PAID CONTRACTOR/VENDOR BY the OPWC ..... $_____
PAYEE: _____
Address: _____
_____
Phone: (_____)_____-_____
Federal Tax ID #: _____

OPWC Use Only

Accounting:_____ (initial)

MBE: _____ (initial)

Approval by: _____ (signature)

Auditor: _____ (initial)

Other: _____ (initial)

Date: ___/___/___