



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue Room N758-ES Indianapolis, Indiana 46204 PHONE: (855) 463-6848

Eric Holcomb, Governor Michael Smith, Commissioner

Date: February 17, 2022

To: Site Assessment & Management (SAM)

Environmental Policy Office - Environmental Services Division (ESD)

Indiana Department of Transportation (INDOT)

100 N Senate Avenue, Room N758-ES

Indianapolis, IN 46204

From: Peter Putzier

Lochmueller Group, Inc. 6200 Vogel Road Evansville, IN 47715 PPutzier@lochgroup.com

Re: RED FLAG INVESTIGATION

DES # 1900291 & 2001057, State Project Slide Correction & Culvert Replacement

State Road (SR) 237, 0.35 Mile South of I-64 Interchange to 0.57 Mile South of I-64/SR 237 jct.

Crawford County, Indiana

PROJECT DESCRIPTION

Brief Description of Project: The Indiana Department of Transportation (INDOT), proposes to proceed with a slide correction and culvert replacement on SR 237 between approximately 0.35 mile south of the I-64 interchange and 0.67 mile south of the I-64 interchange. The proposed project is anticipated to correct the slide with the use of a 310-foot soil nailed wall or by using Geopier plate piles, which are shallow vertical elements driven into the ground to correct the slide. Pavement work is anticipated to consist of a mill and overlay along the roadway with 4-foot hot mix asphalt widening along the northbound lane to accommodate the construction of guardrail. Some ditch regrading is expected along the southbound lane throughout the project limits. At the small structure replacement, pavement work is anticipated to consist of subgrade treatment Type ID underneath the placement of approximately 10.5-inches of asphalt pavement. The project will repair the slide (Des 1900291) and replace culvert CV 237-013-028.920 (Des 2001057) according to the "Small Culvert Design Process" guidelines, thereby improving mobility and increasing public safety. Bridge and/or Culvert Project: Yes ⊠ No □ Structure #(s) CV 237-013-028.920 - not in BIAS If this is a bridge project, is the bridge Historical? Yes \square No \boxtimes , Select \square Non-Select \square (Note: If the project involves a historical bridge, please include the bridge information in the Recommendations Section of the report). Proposed right of way: Temporary □ # Acres ___ Permanent □ # Acres 1.9, Not Applicable □ Type and proposed depth of excavation: An open cut trench located over the culvert and across the roadway to 15 feet below ground surface for the culvert replacement and excavation extending 60 ft east of the roadway and 15 feet deep for the slide repair. Maintenance of traffic (MOT): A road closure and detour will be employed. Access for local traffic will be provided. Work in waterway: Yes oxtimes No oxtimes Below ordinary high water mark: Yes oxtimes No oxtimes

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Des. Nos. 1900291 & 2001057

State Project: ⊠ LPA: □

Any other factors influencing recommendations: N/A

INFRASTRUCTURE TABLE AND SUMMARY

Infrastructure Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:										
Religious Facilities N/A Recreational Facilities N/A										
Airports ¹	N/A	Pipelines	N/A							
Cemeteries	N/A	Railroads	N/A							
Hospitals	Hospitals N/A Trails N/A									
Schools N/A Managed Lands 1										

¹In order to complete the required airport review, a review of public airports within 3.8 miles (20,000 feet) is required.

Explanation:

Managed Lands: One (1) managed land is located within the 0.5 mile search radius. The Hoosier National Forest is located 0.25 mile north of the project area. No impact is expected.

WATER RESOURCES TABLE AND SUMMARY

Water Resources Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:											
NWI - Points N/A Canal Routes - Historic N/A											
Karst Springs	N/A	NWI - Wetlands	19								
Canal Structures – Historic	N/A	Lakes	8								
NPS NRI Listed	1	Floodplain - DFIRM	1								
NWI-Lines	1	Cave Entrance Density	1								
IDEM 303d Listed Streams and Lakes (Impaired)	N/A	Sinkhole Areas	N/A								
Rivers and Streams	Rivers and Streams 8 Sinking-Stream Basins N/A										

Explanation:

NPS NRI Listed: One (1) NPS NRI Listed feature is located within the 0.5 mile search radius. The nearest NPS NRI Listed feature is located 0.32 mile northeast of the project area. No impact is expected.

NWI-Lines: One (1) NWI-Line segment is located within the 0.5 mile search radius. The nearest NWI-line segment is located 0.31 mile northeast of the project area. No impact is expected.

Rivers and Streams: Eight (8) river and stream segments are located within the 0.5 mile search radius. One (1) river and stream segment, associated with a tributary of Little Blue River, is located within the project area. A Waters of the US Report will be prepared and coordination with INDOT ESD Ecology and Waterway Permitting will occur.

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NWI-Wetlands: Nineteen (19) NWI wetlands are located within the 0.5 mile search radius. The nearest wetland is located 0.06 mile west of the project area. No impact is expected.

Lakes: Eight (8) Lakes are located within the 0.5 mile search radius. The nearest lake is located 0.08 mile east of the project area. No impact is expected.

Floodplains-DFIRM: One (1) Floodplain polygon is located within the 0.5 mile search radius. The nearest floodplain polygon is located 0.29 mile northeast of the project area. No impact is expected.

Cave Entrance Density: One (1) cave entrance density polygon is located within the 0.5 mile search radius. The nearest cave entrance density polygon is located 0.32 mile south of the project area. Coordination with INDOT ESD Ecology and Waterway Permitting will occur.

MINING AND MINERAL EXPLORATION TABLE AND SUMMARY

Mining/Mineral Exploration Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:											
Petroleum Wells	Petroleum Wells N/A Mineral Resources N/A										
Mines – Surface N/A Mines – Underground N/A											

Explanation: No Mining/Mineral Exploration features were identified within the 0.5 mile search radius.

HAZARDOUS MATERIAL CONCERNS TABLE AND SUMMARY

Hazardous Material Concerns Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:										
Superfund	N/A									
RCRA Generator/ TSD	N/A	Open Dump Waste Sites	N/A							
RCRA Corrective Action Sites	N/A	Restricted Waste Sites	N/A							
State Cleanup Sites	N/A	Waste Transfer Stations	N/A							
Septage Waste Sites	N/A	Tire Waste Sites	N/A							
Underground Storage Tank (UST) Sites	N/A	Confined Feeding Operations (CFO)	N/A							
Voluntary Remediation Program	N/A	Brownfields	N/A							
Construction Demolition Waste	N/A	Institutional Controls	N/A							
Solid Waste Landfill	N/A	NPDES Facilities	N/A							
Infectious/Medical Waste Sites	N/A	NPDES Pipe Locations	N/A							
Leaking Underground Storage (LUST) Sites	1	Notice of Contamination Sites	N/A							

Unless otherwise noted, site specific details presented in this section were obtained from documents reviewed on the Indiana Department of Environmental Management (IDEM) Virtual File Cabinet (VFC).

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Explanation:

Leaking Underground Storage (LUST) Sites: One (1) leaking underground storage tank site is located within the 0.5 mile search radius. The site, associated with Ole Country Store at 7 West HWY-62, Sulphur, IN 47174 (Agency Interest ID 2446), is located 0.35 mile south of the project area. According to the 11/18/1999 Site Closure document, in 1992 three underground storage tanks were removed from the site. Analysis of one soil sample during tank removal indicated the presence of total petroleum hydrocarbons (TPH). An initial incident was reported to IDEM and after additional excavation, follow-up soil sampling occurred. Analysis of follow-up soil samples indicated TPH concentration less than 20 mg/kg, which is below the maximum allowable TPH concentration in soil for closure. Groundwater contamination was not identified. No impact is expected.

ECOLOGICAL INFORMATION SUMMARY

The Crawford County listing of the Indiana Natural Heritage Data Center information on endangered, threatened, or rare (ETR) species and high quality natural communities can be found at https://www.in.gov/dnr/nature-preserves/files/np_crawford.pdf. A preliminary review of the Indiana Natural Heritage Database by INDOT ESD did not indicate the presence of ETR species within the 0.5 mile search radius. Coordination with USFWS and IDNR will occur.

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The project is located in a rural area surrounded by forest, farm fields, and rural residences. The culvert, CV 237-013-028.920, is not mapped in the INDOT Bridge Inspection Application System (BIAS), and therefore bat inspection information is not available. Additional investigation to confirm the presence or absence of bats in the culvert will be necessary. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

RECOMMENDATIONS SECTION

Include recommendations from each section. If there are no recommendations, please indicate N/A:

INFRASTRUCTURE: N/A

WATER RESOURCES:

Rivers and Streams: One (1) river and stream segment, associated a tributary of Little Blue River, is located within the project area. A Waters of the US Report will be prepared and coordination with INDOT ESD Ecology and Waterway Permitting will occur.

Cave Entrance Density: One (1) cave entrance density polygon is located 0.32 mile south of the project area. Coordination with INDOT ESD Ecology and Waterway Permitting will occur.

MINING/MINERAL EXPLORATION: N/A

HAZARDOUS MATERIAL CONCERNS: N/A

ECOLOGICAL INFORMATION: Coordination with USFWS and IDNR will occur. Additional investigation to confirm the presence or absence of bats in the culverts will be necessary. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

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Des. Nos. 1900291 & 2001057

Appendix E: Red Flag Investigation

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Breting

Digitally signed by Nicole Fohey Nicole Fohey-Breting Date: 2022.02.17 03:57:25 -05'00'

INDOT Environmental Services concurrence:

(Signature)

Prepared by:

Peter Putzier

Environmental Geologist, LPG Lochmueller Group, Inc.

Graphics:

A map for each report section with a 0.5 mile search radius buffer around all project area(s) showing all items identified as possible items of concern is attached. If there is not a section map included, please change the YES to N/A:

SITE LOCATION: YES

INFRASTRUCTURE: YES

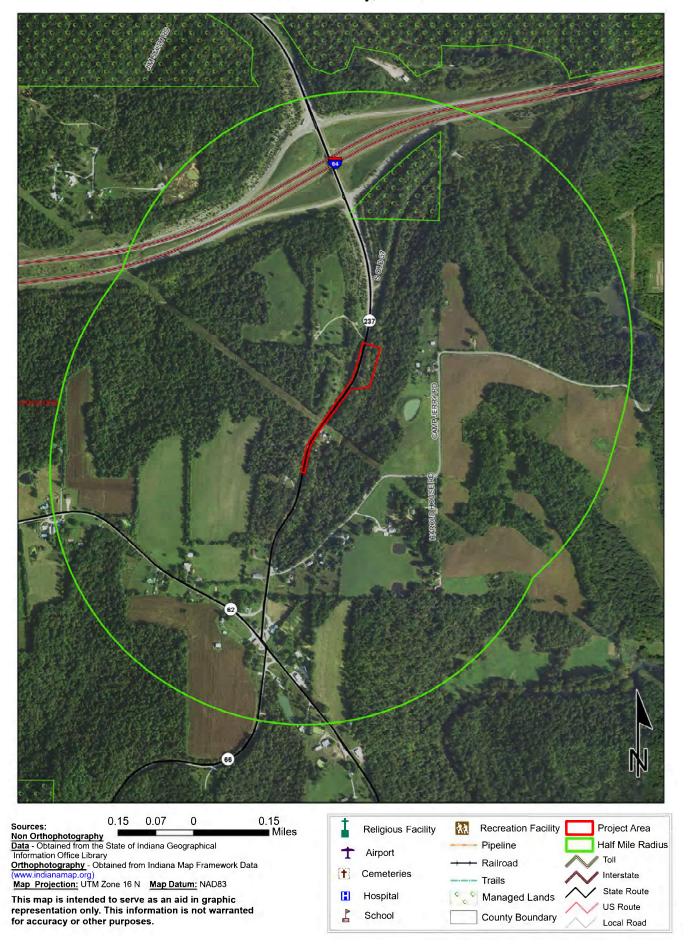
WATER RESOURCES: YES

MINING/MINERAL EXPLORATION: N/A

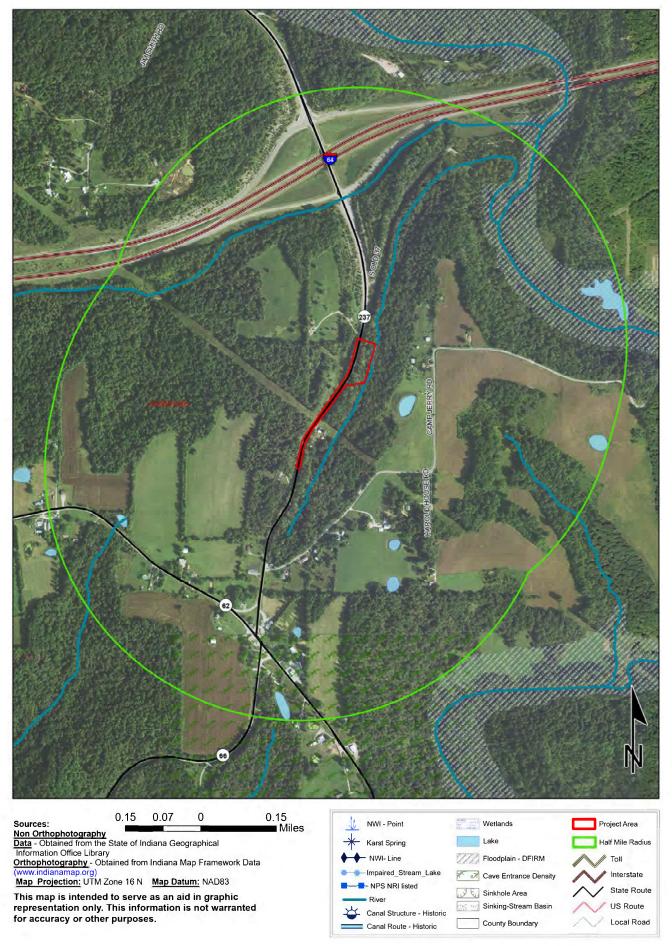
HAZARDOUS MATERIAL CONCERNS: YES

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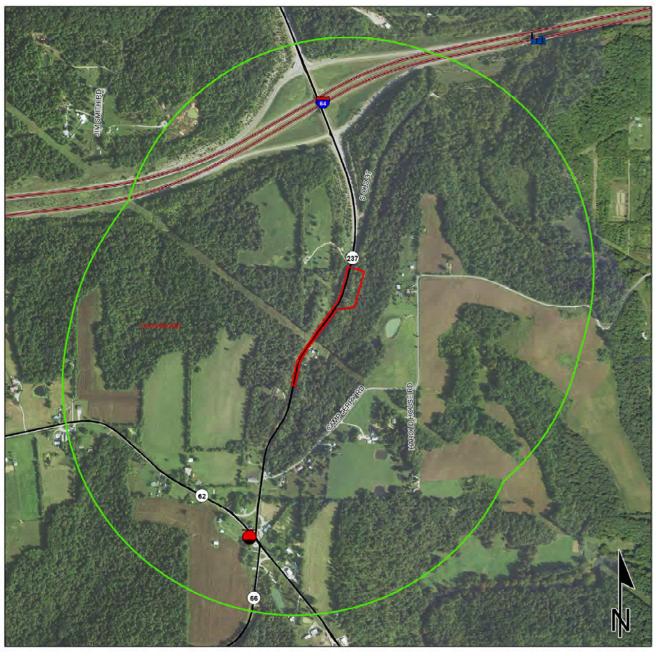
Red Flag Investigation - Infrastructure SR 237, 0.35 Mile South of I-64 Interchange Des. Nos.1900291 and 2001057, Slide Correction and Culvert Replacement Crawford County, Indiana

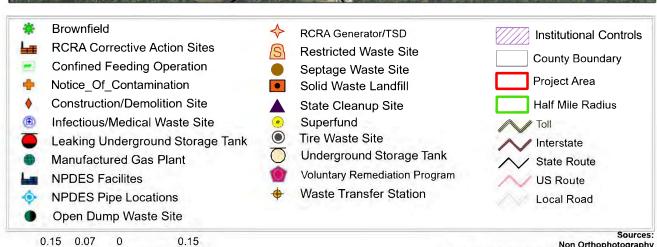


Red Flag Investigation - Water Resources SR 237, 0.35 Mile South of I-64 Interchange Des. Nos. 1900291 and 2001057, Slide Correction and Culvert Replacement Crawford County, Indiana



Red Flag Investigation - Hazardous Material Concerns SR 237, 0.35 Mile South of I-64 Interchange Des. Nos. 1900291 and 2001057, Slide Correction and Culvert Replacement Crawford County, Indiana





This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

Non Orthophotography

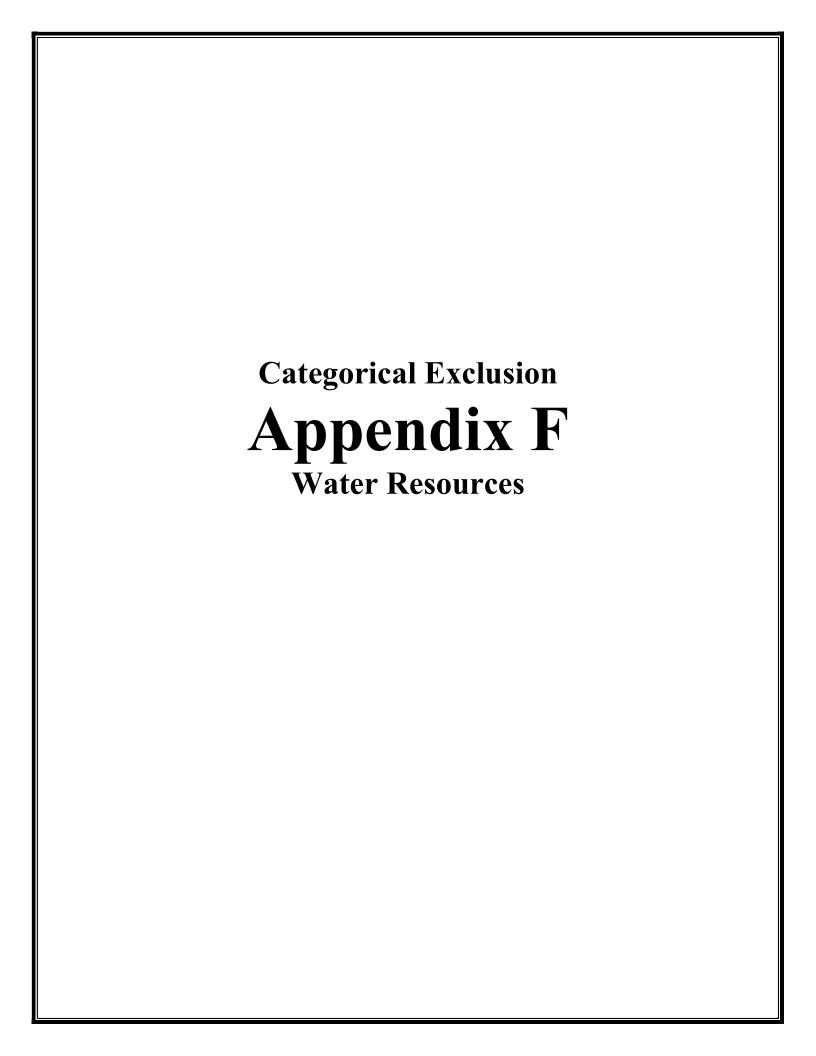
<u>Data</u> - Obtained from the State of Indiana Geographical
Information Office Library

Orthophotography - Obtained from Indiana Map Framework Data

(www.indianamap.org)

Map Projection: UTM Zone 16 N Map Datum: NAD83

Appendix E: Red Flag Investigation



Mary M. Moffett Approved 4/21/2023

SR 237 SLIDE CORRECTION & SMALL STRUCTURE REPLACEMENT PROJECT CRAWFORD COUNTY, IN

April 14, 2023 Waters of the U.S. Report Prepared by: Peter Putzier

Des. No.: 1900291 & 2001057

Contract No.: R-42199



Lochmueller Group, Inc.

6200 Vogel Road

Evansville, Indiana 47715

Phone: 812.479.6200

Waters of the U.S. Determination SR 237 in Crawford County Slide Correction Project, Des. No. 1900291 Small Structure Replacement, Des. No. 2001057

Date(s) of Field Reconnaissance

September 29, 2021 and September 27, 2022

Location

The project is located on State Road (SR) 237 in Crawford County, Indiana (Page A1).

- Union Township, Crawford County, Indiana
- Sections 24 and 25, Township 3 South, Range 1 West
- Beechwood 1:24,000 United States Geological Survey (USGS) Quadrangle (Pages A2 and A3)
- Latitude / Longitude: 38.234452 / -86.468091

Project Description

The slide correction project, Des. No. 1900291, is located on SR 237 approximately 0.35 mile south of the I-64 interchange in Crawford County, IN. The proposed slide correction will repair the shallow downslope slide on the northbound lane of SR 237 with the use of a 310 foot soil nailed wall or by Geopier plate piles, which are shallow vertical elements driven into the ground. Excavation will take place to a depth of 15 feet and extend 60 feet east of the roadway. Pavement work will include a mill and overlay with 4-foot hot mix asphalt.

The small structure replacement project, Des. No. 2001057, is located on SR 237 approximately 0.57 mile south of the I-64 interchange in Crawford County, IN. The proposed work will replace the 15-inch diameter culvert, CV 237-013-028.920, in accordance with the "Small Culvert Design Process" guidelines (Page A15, Photo 17 and 18). An open cut trench will be excavated to a depth of 15 feet to replace the culvert. Pavement work above the small structure replacement will include subgrade treatment and approximately 10.5 inches of asphalt pavement.

The Waters of the U.S. (WOTUS) investigation survey area limits were defined as approximately 1,415 feet in length. The survey area is approximately 90 feet wide near culvert, CV 237-013-028.920, at the southernmost 130 feet. The survey area is 35 feet wide along the central and southcentral section where it is limited to the SR 237 roadway. The survey area is 195 feet wide at the slide correction in the northern section. Survey limits were chosen to include the area where proposed work has the potential to impact surrounding water resources. The landscape surrounding the survey area is predominantly forested land, rural residential, and electric utility right-of-way.

Soils

According to the Soil Survey Geographic (SSURGO) Database dated June 2020 for Crawford County, Indiana, the survey area does not contain nationally listed hydric soils (Page A5).

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Table 1. Soil Summary Table

Soil Name	Map Abbreviation	Map Abbreviation NRCS Flooding Frequency Class Ca		NRCS Hydric Soil Category	SSURGO Hydric Rating
Wellston silt loam, 12 to 18 percent slopes, severely eroded	WhfD3	None	Well Drained	Non-hydric (0%)	0%
Tipsaw-Adyeville complex, 25 to 75 percent slopes	TblG	None	Somewhat Excessively Drained	Non-hydric (0%)	0%
Corydon stony silt loam, 20 to 60 percent slopes	CqyG	None	Well Drained	Non-hydric (0%)	0%
Adyeville silt loam, 18 to 25 percent slopes, eroded	AbqE2	None	Somewhat Excessively Drained	Non-hydric (0%)	0%

National Wetlands Inventory (NWI) Information

There is a NWI linear water feature (R4SBC) associated with UNT to Little Blue River identified within the survey area (Page A6). The nearest U.S. Fish and Wildlife Service (USFWS) mapped NWI feature beyond the survey area limits is a PUBGh located 0.06 mile to the west.

Table 2. NWI Summary Table

Wetland Type	Vetland Type Description					
R4SBC	Riverine, Intermittent, Streambed, Seasonally Flooded	Within survey area (UNT				
K43BC	Riverine, intermittent, Streambed, Seasonally Flooded	to Little Blue River)				
PUBGh	Palustrine, Unconsolidated Bottom, Intermittently Exposed,	0.06 mile west of the				
PUBGII	Diked/impounded	survey area				

12-Digit HUC (Hydrologic Unit Code)

The SR 237 over Slide Correction and Small Structure Replacement Project is within the 051401041105 12-Digit HUC (City of Grantsburg-Little Blue River) (Page A2 and A3). The watershed area for the portion of UNT to Little Blue River in the survey area was determined to be 0.16 square mile using USGS StreamStats (https://water.usgs.gov/osw/streamstats) (Page A7).

FEMA Floodway/Floodplain

The Federal Emergency Management (FEMA) Flood Map Service Center (https://msc.fema.gov/portal/home) and the Indiana Floodplain Information Portal (https://indnr.maps.arcgis.com/apps/webappviewer) Best Available Flood Zone data indicates that the survey area is not mapped within an IDNR floodway (Page A8).

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Attached Documents

- Location Map
- USGS Topographic Map (1:12,000)

Removed to avoid duplication; see Appendix B

- USGS Topographic Map (1:24,000)
- Karst Region Map
- United States Department of Agriculture (USDA) SSURGO Soils Map
- USFWS NWI Features Map
- USGS StreamStats Watershed Map
- Best Available Flood Hazard Map
- Water Resources Map
- Photo Location Map and Project Photos

Removed to avoid duplication; see Appendix B

USACE Pre-Jurisdictional Determination Form

Field Reconnaissance

This field survey was conducted within the growing season. For those features that displayed bed and bank, the ordinary high-water mark (OHWM) width and depth was measured at the average dimension observed beyond the influence of bridge and culvert structures. OHWM measurements were also documented for any stream features observed in the field that were not included as blue-line or NHD features.

Stream Feature(s)

The USGS Beechwood 1:24,000 topographic quadrangle includes a dashed blue-line stream feature within the survey area for the SR 237 Slide Correction and Small Structure Replacement Project (Pages A2 and A3). The NHD GIS dataset includes one classified flow line segment associated with UNT to Little Blue River and one unclassified flow line segment associated with an erosional feature in the survey area. The field investigation identified that UNT to Little Blue River has bed, bank and OHWM. The field investigation determined that the unclassified NHD line, which is associated with the subject culvert, did not display bed and bank with OHWM and therefore is not considered a stream (Page A8).

UNT to Little Blue River

UNT to Little Blue River is an intermittent stream feature that enters the survey area from the south, flows within the survey area for 34 feet, and exits the survey area to the northeast (Page A9). UNT to Little Blue River flows south to northeast through the survey area. Approximately 390 feet of UNT to Little Blue River flows immediately adjacent to the northeast limit of the survey area (Page A3). UNT to Little Blue River appears to be predominantly rainwater fed with seasonal groundwater contribution; therefore, it would be classified as intermittent. The USFWS NWI Map identifies this feature as a riverine, intermittent, streambed, seasonally flooded (R4SBC) system (Page A5). According to USGS StreamStats (https://water.usgs.gov/osw/streamstats/) the drainage area upstream of UNT to Little Blue River is approximately 0.16 square mile (Page A6). According to Indiana Floodplain Information Portal 2.0 (https://indnr.maps.arcgis.com/apps/webappviewer), there is no IDNR floodway associated with UNT to Little Blue River (Page A8).

UNT to Little Blue River has a medium width streambed that is predominantly riffle, run habitat with slightly deeper pool areas. The substrate is dominated by bedrock (50%) with lesser components of cobble (30%) and gravel (20%). The stream displays moderate sinuosity and a moderate to severe

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gradient. Riparian vegetation is comprised primarily of white oak (*Quercus alba*, FACU), sugar maple (*Acer saccharum*, FACU), sycamore (*Platanus occidentalis*, FACW), Christmas fern (*Polystichum acrostichoides*, FACU), white snakeroot (*Ageratina altissima*, FACU), and black cohosh (*Actaea racemosa*, UPL). The OHWM at the survey area boundary was measured at 15 feet wide and 1 foot deep. Photos 4 and 5 (Page A11-A12) indicates streambed, and bank conditions for this reach of UNT to Little Blue River. UNT to Little Blue River is considered to exhibit excellent quality based on substrate composition, maximum pool depth, and bankfull width.

UNT to Little Blue River is considered to be a non-relatively permanent waterway (non-RPW) with a connection to a traditionally navigable waterway (TNW), the Little Blue River. Therefore, UNT to Little Blue River is subject to USACE jurisdiction under Section 404 of the Clean Water Act. This stream is not subject to USACE jurisdiction under Section 10 of the River and Harbors Act.

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Des. No. 1900291 and 2001057 Crawford County, Indiana Waters of the U.S. Report

Table 3. Stream Summary Table

Stream Name	Lat/Long	Photo Map (Page) Photo Pages Photo Number	Stream Flow Regime	Length in Study Area (ft)	USGS Blueline / NHD Line	Quality	Riffles/ Pools?	OHWM Width (ft) Depth (ft)	Substrate	Drainage Area (sq. mi.)	Notes	Likely Waters of U.S.?
UNT to Littl Blue River	38.234979 -86.466915	Photo Map (Page A10) Photo Page A11, A12 Photo #s 4, 5	Intermittent R4SBC	34	Yes, Dashed; Yes, Stream/River	Excellent	Riffles Pools		Bedrock 50% Cobble 30% Gravel 20%	0.16	Excellent Quality based on substrate, OHWM, and level of disturbance	Yes Flows to the Little Blue River, a TNW

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Wetlands

No wetland features were identified within the SR 237 Slide Correction and Small Structure Replacement survey area. The dominant vegetation within the survey area is maintained SR 237 right-of-way consisting of tall redtop (*Tridens flavus*, FACU), Japanese bristle grass (*Setaria faberi*, UPL), hairy crab grass (*Digitaria sanguinalis*, FACU). Based on the dominant upland species observed, lack of suitable hydrology, and lack of hydric soils; there were no potential wetlands identified within the survey area.

Open Water

There are no open water areas for consideration as WOTUS or non-WOTUS features within the survey area.

Roadside Ditch

Two (2) roadside ditch (RSD) features within the survey area limits were evaluated and documented.

RSD1

RSD1 is a grass lined ditch along the west side of SR 237 that receives drainage from the roadway and adjacent forested land and drains northeast and eventually under the roadway through pipes to UNT to Little Blue Creek beyond the survey area. Photos 1, 2, 6, 7, 8, 9, and 10 (Page A11-A13) indicate conditions along RSD1. The length of RSD1 within the survey area is 747 linear feet (Page A9). The roadside ditch does not exhibit bed and bank with OHWM and is not a realigned segment of a natural stream. RSD1 is not considered a jurisdictional feature.

RSD2

RSD2 is a grass and concrete lined ditch along the west side of SR 237 that receives drainage from the roadway and drains northeast. RSD2 then drains east through pipes under SR 237 and to UNT to Little Blue River. Photos 11 and 14 (Pages A13 and A14) indicate conditions along RSD2. RSD2 is near the west edge of the survey area with portions inside and outside of the survey area. The length of RSD2 within the survey area is 45 feet (Page A9). The roadside ditch does not exhibit bed and bank with OHWM and is not a realigned segment of a natural stream. RSD2 is not considered a jurisdictional feature.

Conclusions

The Waters of the U.S. investigation conducted for the SR 237 Slide Correction and Small Structure Replacement Project concludes that there are no wetland features and no WOTUS or non-WOTUS open water features identified within the survey area. The two roadside ditches in the survey area lacked bed and bank with an OHWM and were identified as non-jurisdictional flow line features. One intermittent stream feature (UNT to Little Blue River) was identified within the survey area. UNT to Little Blue River is likely to be considered under USACE jurisdiction per Section 404 of the Clean Waters Act (CWA). There are no water resources under USACE jurisdiction per Section 10 of the Rivers and Harbors Act within the survey area limits.

The project is located in the southern portion of the Crawford Uplands, an area of ridges and valleys with up to 300 feet of topographic relief that have developed in Mississippian age shale, sandstone, and limestone (Page A4). In the Crawford Upland, sinkholes and caves can occur where limestone is present.

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However, no surface karst features were identified within or adjacent to the survey area during the field investigation.

Every effort should be taken to avoid and minimize impact to the waterways. If impacts are necessary, then mitigation may be required. The INDOT Environmental Services Division should be contacted immediately if impacts will occur. The final determination of jurisdictional waters is ultimately made by the U.S. Army Corps of Engineers. This report is our best judgment based on the guidelines set forth by the Corps.

Wildlife Resources

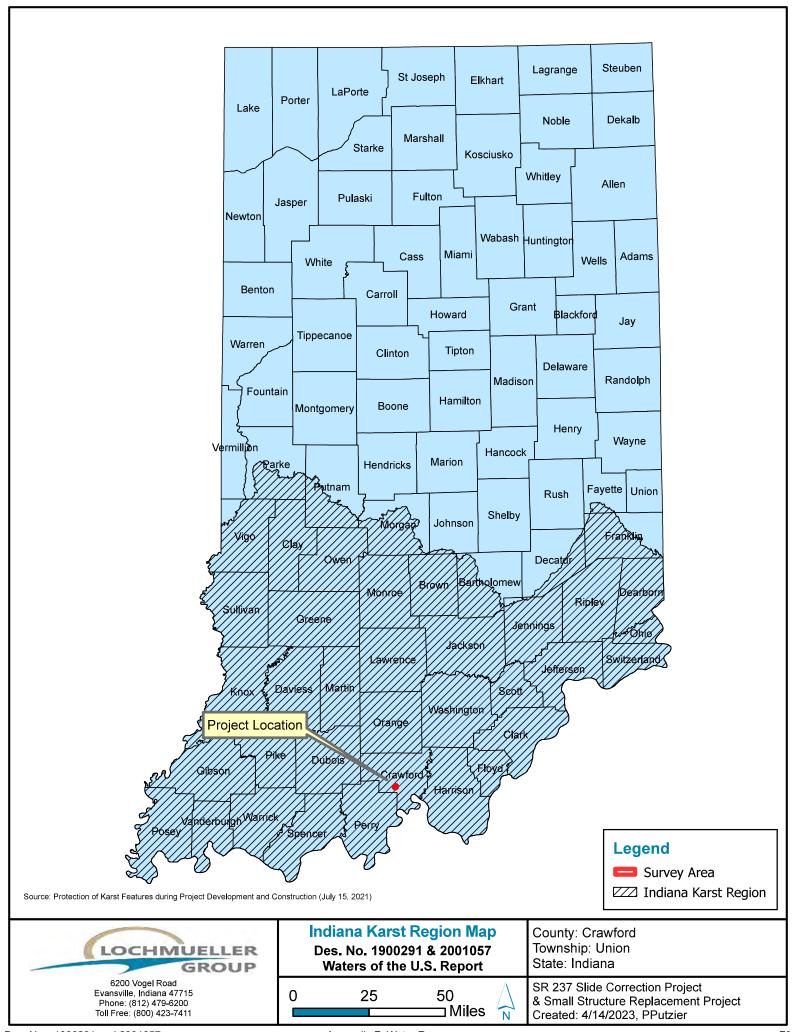
The SR 237 Culvert (CV 237-013-028.920) was examined on September 29, 2021 for the presence of bats and birds. No structures were found to show direct or indirect signs of occupation by bats. Birds were not observed nesting on structures or in areas that will be impacted. No additional wildlife or wildlife signs (e.g. tracks, scat, fur, etc.) were observed; however use by wildlife, especially small mammals, should be considered possible for culvert CV 237-013-028.920.

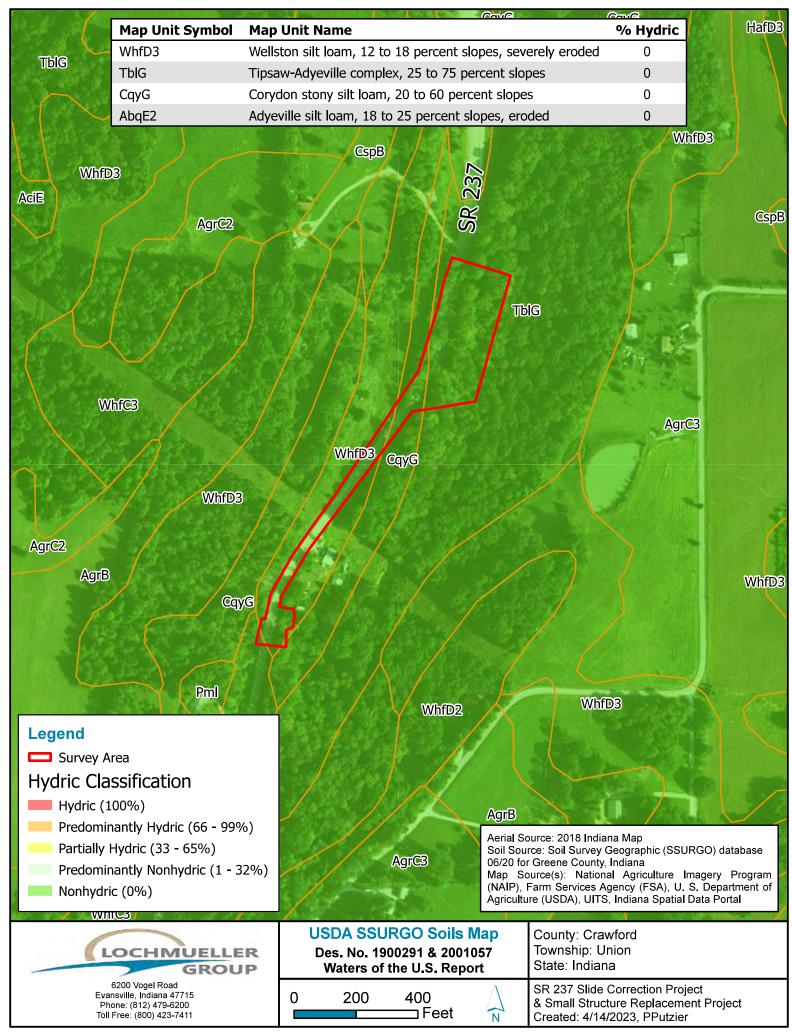
Acknowledgement

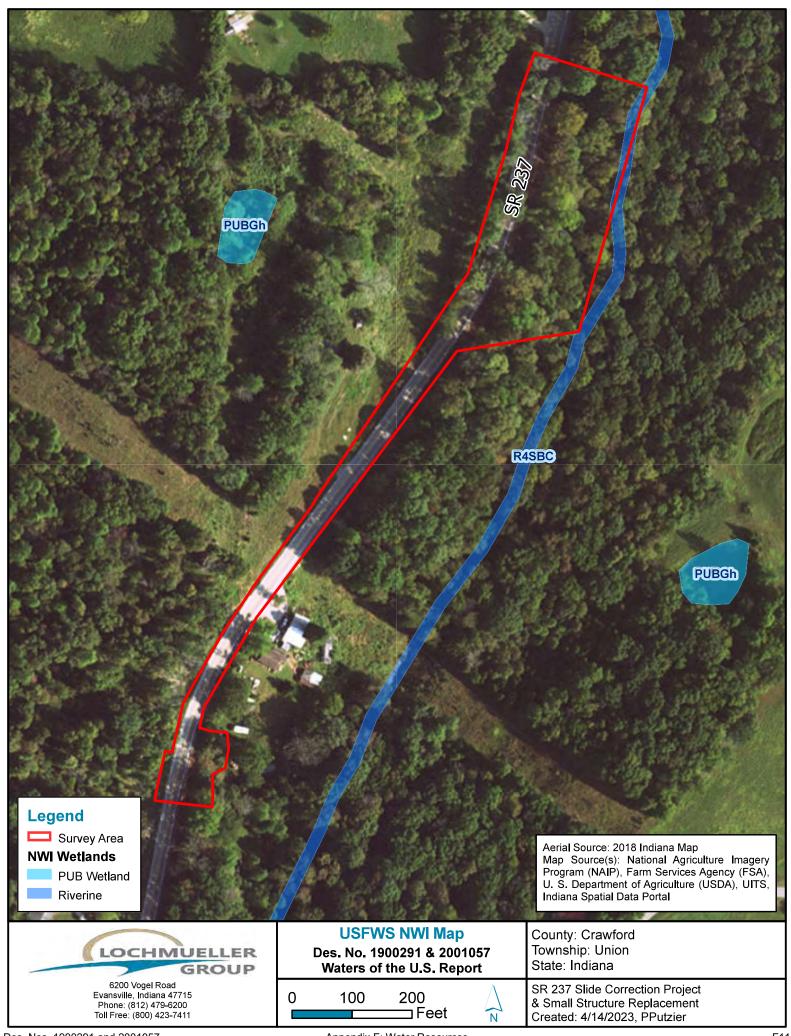
This waters determination has been prepared based on the best available information, interpreted in the light of the investigator's training, experience and professional judgement in conformance with the 1987 *Corps of Engineers Wetlands Delineation Manual*, the appropriate regional supplement, the USACE *Jurisdictional Determination Form Instructional Guidebook*, and other appropriate agency guidelines.

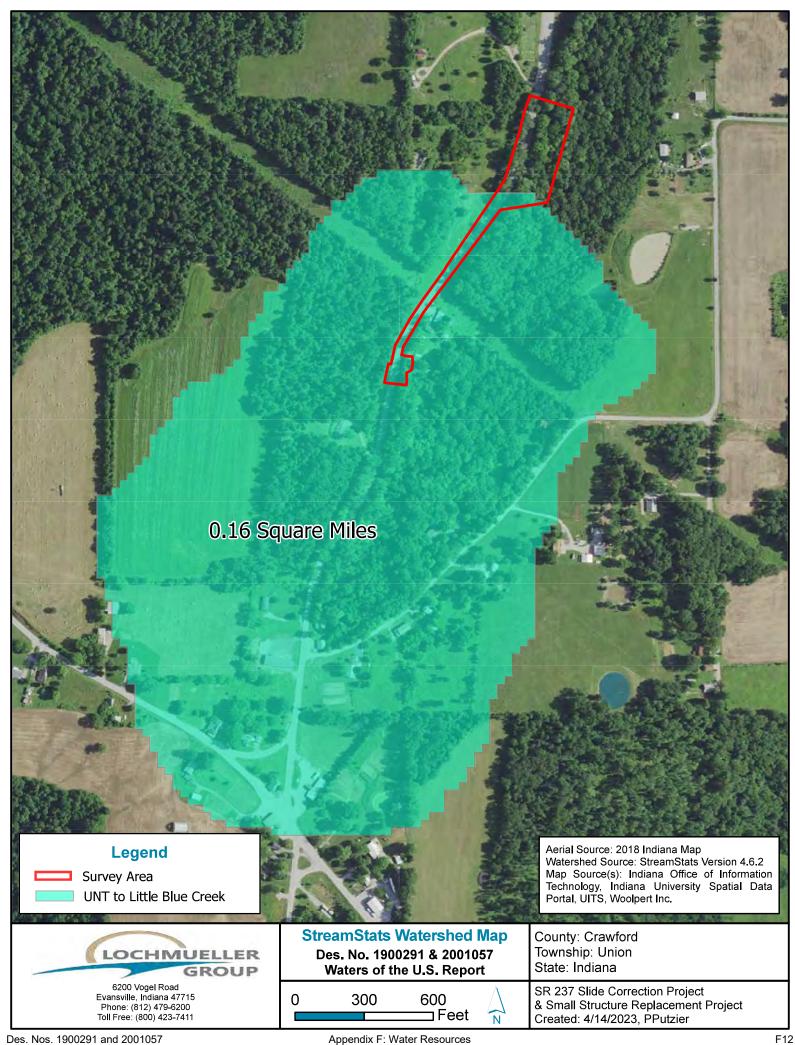
Peter Putzier

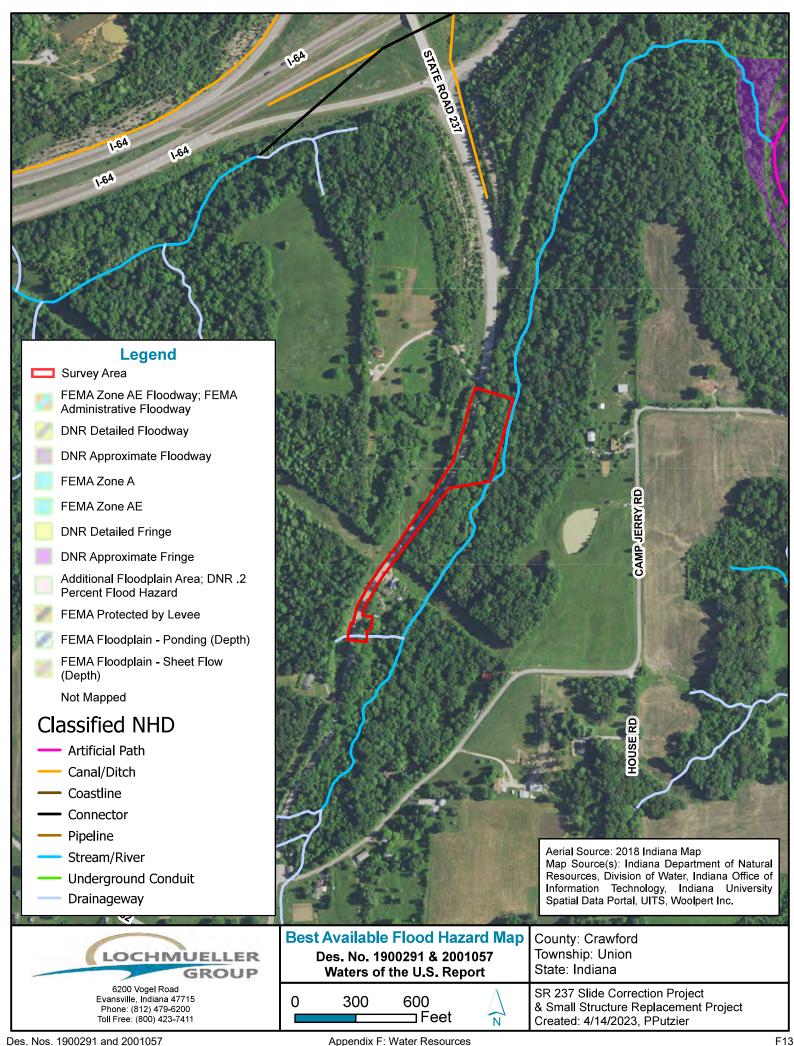
Environmental Specialist Lochmueller Group, Inc.

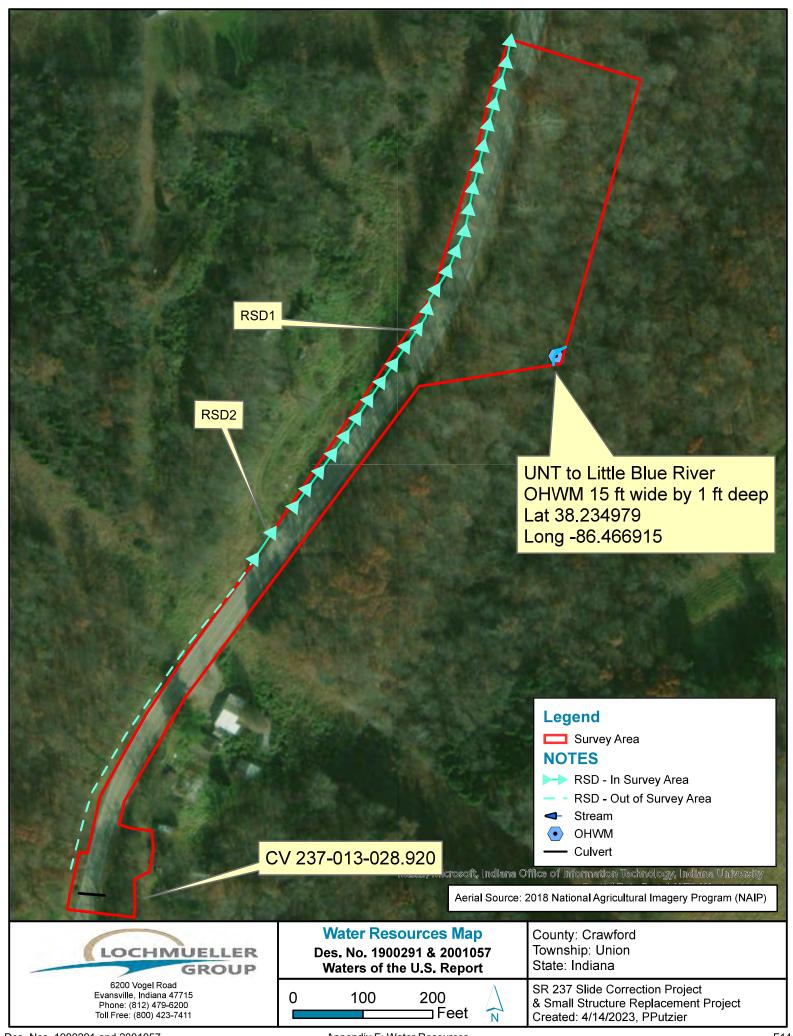












Appendix 2 - PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

BACKGROUND INFORMATION

- A. REPORT COMPLETION DATE FOR PJD: April 14, 2023
- B. NAME AND ADDRESS OF PERSON REQUESTING PJD: Peter Putzier, Lochmueller Group, 6200 Vogel Road, Evansville, IN 47715
- C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:

The project, Des. No. 1900291 and 2001057, is located on SR 237 approximately 0.35 to 0.57 mile south of the I-64 interchange in Crawford County, IN. The proposed work includes a slide correction and small structure replacement. The slide correction will repair the shallow downslope slide on the northbound lane of SR 237 with a 310-foot soil nailed wall or by shallow vertical elements driven into the ground. Excavation will take place to a depth of 15-feet and extend 60-ft east of the roadway. Pavement work will include a mill and overlay with hot mix asphalt. The culvert, CV 237-013-028.920, will be replaced in accordance with the "Small Culvert Design Process", guidelines. An open cut trench will be excavated to a depth of 15-feet to replace the culvert. Pavement work above the new culvert will include sub-grade treatment and approximately 10.5-inches of asphalt pavement. One intermittent stream feature (UNT to Little Blue River) was identified in the survey area.

(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES)

State: Indiana	County/parish/borough: (Crawford County	/ City: near S	Sulphui
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Center coordinates of site (lat/long in degree decimal format):

Lat.: 38,234452 Long.: -86.468091

Universal Transverse Mercator: 16S, 546551E, 4231962N

Name of nearest waterbody: Little Blue River

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY): Office (Desk) Determination. Date: Field Determination. Date(s):

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION.

Site number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resource (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
UNT to Little Blue River	38.234979	-86.466915	34 feet / 0.012 Acre	non-wetland	Section 404

- 1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.
- 2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "preconstruction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there "may be" waters of the U.S. and/or that there "may be" navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

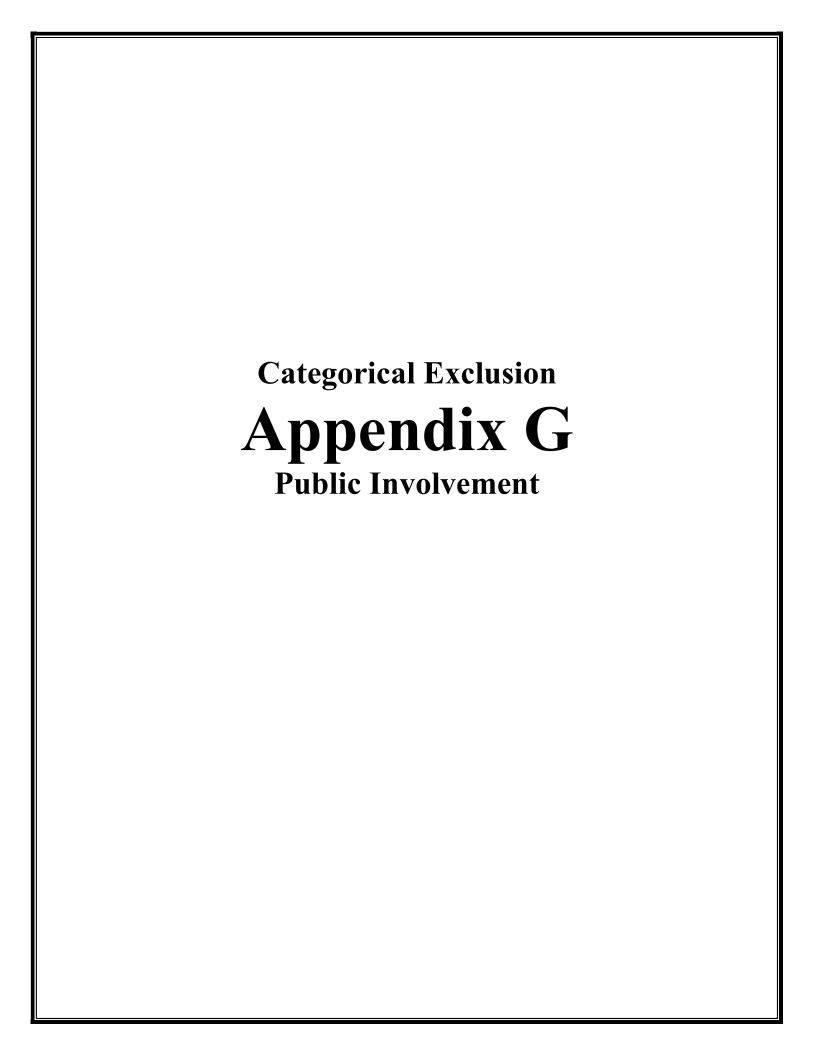
SUPPORTING DATA. Data reviewed for PJD (check all that apply)

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items: Maps, plans, plots or plat submitted by or on behalf of the PJD requestor: Map:Location map, topographic, soils, NWI, floodplain, aerial Data sheets prepared/submitted by or on behalf of the PJD requestor. Office concurs with data sheets/delineation report. Office does not concur with data sheets/delineation report. Rationale: Data sheets prepared by the Corps: ______ ☐ Corps navigable waters' study: ______ U.S. Geological Survey Hydrologic Atlas: https://maps.indiana.edu/arcgis/rest/services/Hydrology/Watersheds_HUC12_2009/MapServer USGS NHD data. ■ USGS 8 and 12 digit HUC maps. ■ U.S. Geological Survey map(s). Cite scale & quad name: Beechwood 1:24,000 Natural Resources Conservation Service Soil Survey. Citation: _https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm National wetlands inventory map(s). Cite name: https://www.fws.gov/wetlands/Data/Mapper.html ☐ State/local wetland inventory map(s): FEMA/FIRM maps: FIRM Map Number 18025C0300C ____.(National Geodetic Vertical Datum of 1929) 100-year Floodplain Elevation is: _____ Photographs: Aerial (Name & Date): _2018 National Agricultural Imagery Program Other (Name & Date): Ground photos Sept. 29, 2021 & Sept. 27, 2022 Previous determination(s). File no. and date of response letter: ______ ☐ Other information (please specify): IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations. Peter Putzier Digitally signed by Peter Putzier Date: 2023.04.14 14:26:34 -05'00' Signature and date of Signature and date of Regulatory staff member person requesting PJD completing PJD (REQUIRED, unless obtaining

the signature is impracticable)¹

Des. Nos. 1900291 and 2001057 Appendix F: Water Resources F18

¹ Districts may establish timeframes for requestor to return signed PJD forms. If the requestor does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.



November 3, 2020

Sample Notice of Survey

NOTICE OF SURVEY

RE: S.R. 237 Slide Correction Project:

• At RP 30-0.84, 0.35 miles South of I-64 Interchange in Crawford County, Indiana.

o Loch Group Project No.: 120-0008-03H

o INDOT Des. No. 1900291

Dear Property Owner:

Research of county records indicates that you own or occupy property(s) near this proposed Slide Correction Project. Our employees will be doing a survey of the project area(s) in the near future. It may be necessary for them to come onto your property to complete this work. These procedures are allowed by Indiana Code IC 8-23-7-26. If you are available, our surveyors will show identification before coming onto your property. If you have sold this property, or it is occupied by someone else, please advise us of the name and address of the current owner/occupant so that we may contact them about the survey.

At this stage we do not know what effect, if any, our project may eventually have on your property. If we determine later that your property is involved, we will contact you with additional information.

The survey work will include mapping the location of features such as buildings, trees, fences and drives, as well as obtaining ground elevations. The survey work may include the identification and mapping of wetlands and streams, and various other environmental studies. This work is necessary for the proper planning and design of this proposed Slide Correction Project.

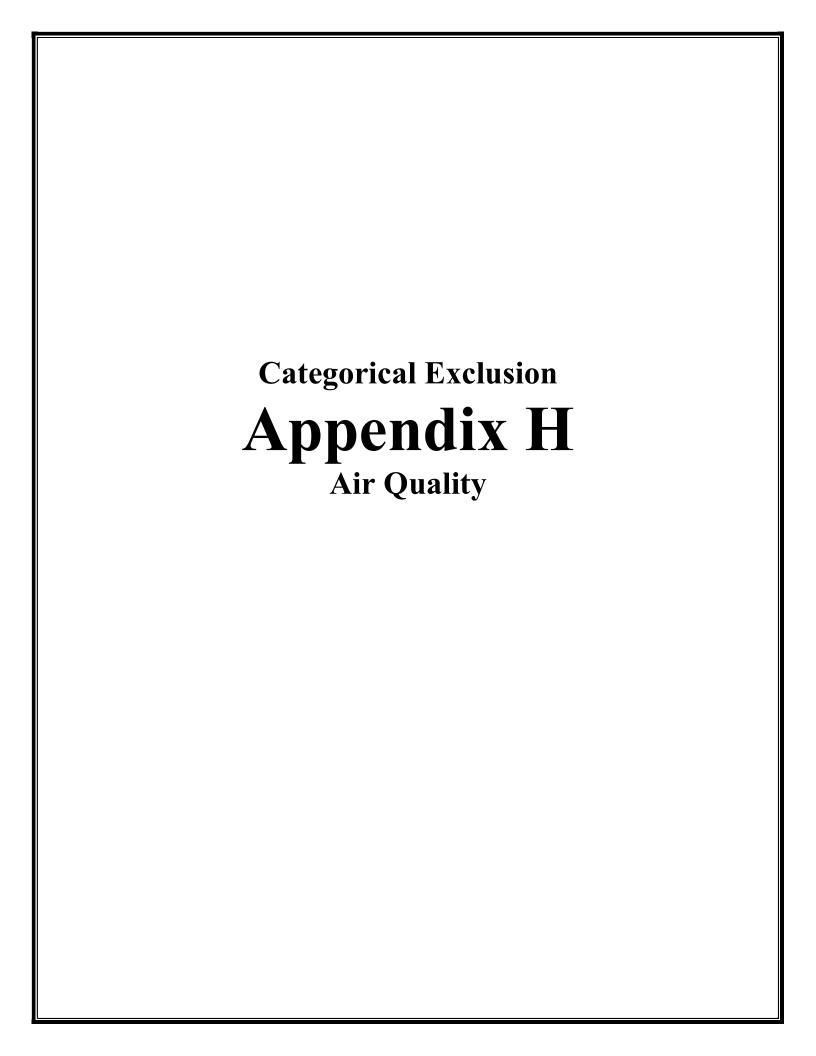
Please be assured of our sincere desire to cause you as little inconvenience as possible during this survey. If any problems do occur, please contact our field crew or call me at **(812-479-6200)**, or write to me at the above address. Thank you in advance for your cooperation.

Sincerely yours,

LOCHMUELLER GROUP, INC.

Sean L. Suttles, P.S. Chief of Surveying

Des. Nos. 1900291 & 2001057 Appendix G: Public Involvement G1



Indiana Department of Transportation (INDOT)

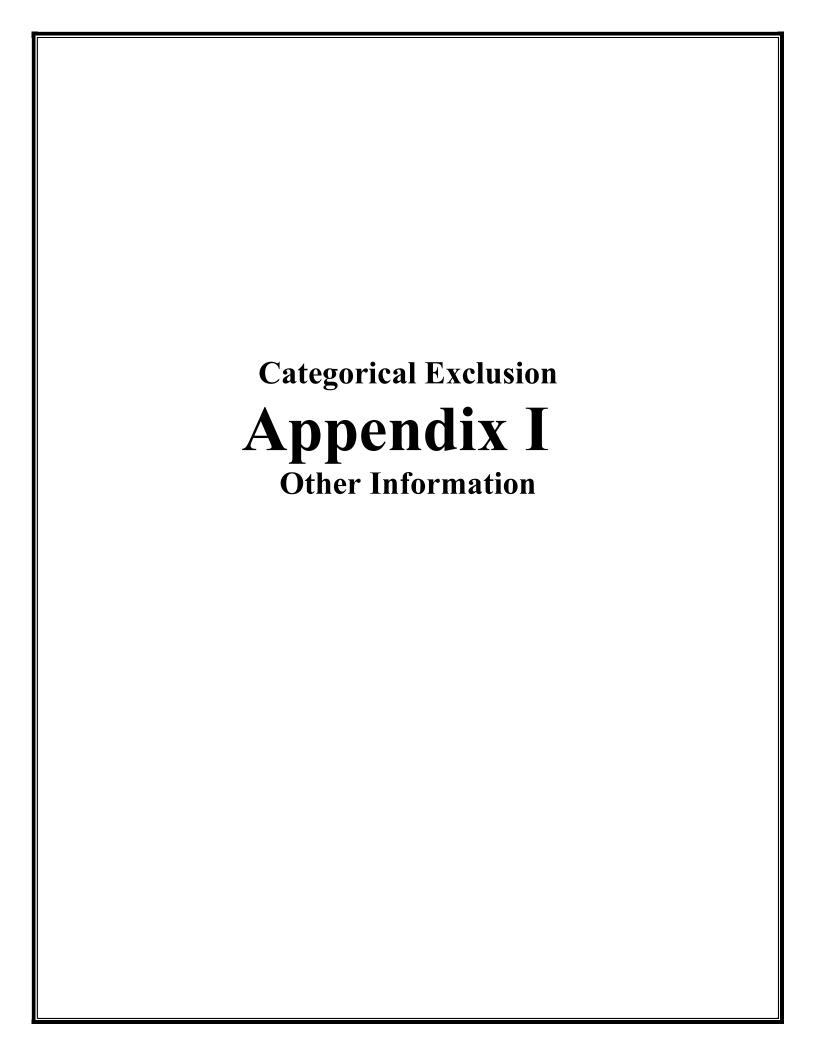
				cts FY 2024 - 2028				_									
SPONSOR	CONTR ACT#/	STIP NAME	ROUTE	WORK TYPE	DISTRICT	MILES	FEDERAL CATEGORY	Total Cost of	PROGRAM	PHASE	FEDERAL	MATCH	2024	2025	2026	2027	2028
	LEAD DES	NAME					CATEGORY	Project*									
Spencer County																ļ	
Indiana Department	1902677	Init.	164	Rest Area Modernization	Vincennes	.66	NHPP	\$21,658,000.00		CN	\$17,820,000.00	\$1,980,000.00		\$19,800,000.00			
of Transportation									Construction								
Performance Measure	e Impacted:	Reliability	and Freigh	I nt Reliability					<u> </u>	1							
Location: Nancy Hank	ks Rest Area	- WB															
Indiana Department	1902702	Init.	US 231	Bridge Maintenance And Repair	Vincennes	.48	NHPP	\$3,838,000.00	Bridge	CN	\$2,000,000.00	\$500,000.00	\$2,500,000.00				
of Transportation									Construction				,-,,				
Performance Measure	e Impacted:	Bridge Co	ndition	l													
Location: US 231 Ove				mont to KVTC													
				Bridge Inspections	Vincennes		STBG	8252 000 00	l. In:	PE	\$147,000.00	\$0.00					
Spericer County	2100134	11111.	IK 1001	Bridge Inspections	Vincennes	"	3166	\$352,000.00	Local Bridge Program	""	\$ 147,000.00	\$0.00	\$6,000.00	\$135,000.00	\$6,000.00		
									Local Funds	PE	\$0.00	\$38,000.00	\$2,000.00	\$34,000.00	\$2,000.00		
Performance Measure	e Impacted:	Bridge Co	ondition														
Location: Countywide	Bridge Insp	ection an	d Inventory	Program for Cycle Years 2022-2025													
Spencer County	2300134	Init.	IR 1005	Bridge Inspections	Vincennes	0	STBG	\$388,000.00	Local Funds	PE	\$0.00	\$39,000.00				\$37,000.00	\$2,000.00
	•		<u> </u>				ı		Local Bridge	PE	\$155,000.00	\$0.00				\$148,000.00	\$7,000.00
									Program								
Performance Measure	e Impacted:	Bridge Co	ndition														
Location: Countywide	Bridge Insp	ection an	d Inventory	Program for Cycle Years 2026-2029													
Indiana Department	39085 /	Init.	SR 161	Bridge Deck Overlay	Vincennes	0	STBG	\$2,225,000.00	Bridge	CN	\$900,000.00	\$225,000.00	\$1,125,000.00		1		
of Transportation	1592457			,					Construction				Ψ1,120,000.00				
Desferment Messey	- 1	D:: 0:															
Performance Measure				0 1 0 100													
			e Unio RV,	Owensboro - Pay to KY													
Comments:Include DE			Ion co	IOEd- OE	h.c	1 0	lozno	L 640 744 740 00	I	Lou	fo 475 000 00	#0.000.000.00					
Indiana Department of Transportation	42199 / 1900300	Init.	SR 66	Slide Correction	Vincennes	0	STBG	\$12,741,713.00	Road Construction	CN	\$9,175,200.00	\$2,293,800.00	\$11,469,000.00				
									Road Consulting	PE	\$101,600.00	\$25,400.00	\$127,000.00				
									Bridge	CN	\$134,400.00	\$33,600.00	\$168,000.00				
									Construction								
									Bridge Consu l ting	PE	\$40,000.00	\$10,000.00	\$50,000.00		1		
Performance Measure	e Impacted:	Safety							I		l .						
Location: 2.05 miles W																	
			1900294	1900295, 1900300, 2000129, 2001057													
	43515 /	Init.		Slide Correction	Vincennes	0	STBG	\$11,442,007.00	Road	CN	\$8,043,200.00	\$2,010,800.00		\$10,054,000.00	Т		
of Transportation	2000131								Construction					1.0,00-1,000.00			

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Des. Nos. 1900291 & 2001057 Appendix H: Air Quality

Н1

^{*}Estimated Costs left to Complete Project column is for costs that may extend beyond the four years of a STIP. This column is not fiscally constrained and is for information purposes.



Land and Water Conservation Fund (LWCF) County Property List for Indiana (Last Updated March 2022)

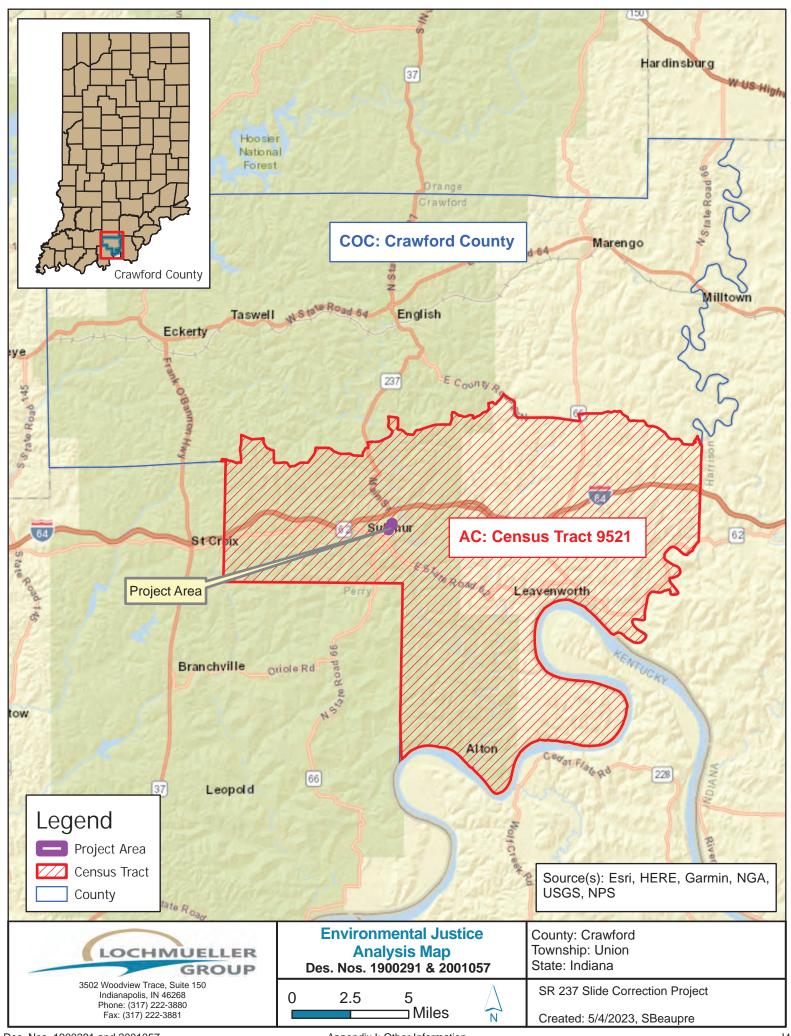
ProjectNumber	SubProjectCode	County	Property
1800024	1800024	Crawford	Wyandotte Caves
1800304	1800304F	Crawford	Yellow Birch Ravine Nature Preserve
1800405	1800405N	Crawford	Leavenworth Barrens Nature Preserve
1800405	1800405Z	Crawford	Yellow Birch Ravine Nature Preserve

^{*}Park names may have changed. If acquisition of publically owned land or impacts to publically owned land is anticipated, coordination with IDNR, Division of Outdoor Recreation, should occur.

	COC	AC 1
	Crawford County, Indiana	Census Tract
LOW-INCOME POPULATION		
Total Population for Whom Poverty Status is Determined	10,370	2,595
Total Population Below Poverty Level	1,990	320
Percent Low-Income	19.2%	12.3%
125 Percent of COC	24.0%	
AC Percent Low-Income Greater Than 125 Percent of COC?		No
AC Percent Low-Income Greater Than 50 Percent?		No
Population of EJ Concern?		No
MINORITY POPULATION		
Total Population	10,511	2,677
Minority Population	481	111
Percent Minority	4.6%	4.1%
125 Percent of COC	5.7%	
AC Percent Minority Greater Than 125 Percent of COC?		No
AC Percent Minority Greater Than 50 Percent?		No
Population of EJ Concern?		No

SR 237 Slide Correction - EJ Analysis

		coc	AC 1
		Crawford County, Indiana	Census Tract 9521, Crawford County, Indiana
	LOW INCOME		
B17001001	Population for whom poverty status is determined: Total	10,370	2,595
B17001002	Population for whom poverty status is determined: Income in past 12 months below poverty level	1,990	320
	Percent Low-Income	19.2%	12.3%
	125% Reference Increment (Applied to COC Only and Compared Against the AC)	24.0%	AC > 125% COC
	AC Percent Low-Income > 125% of COC?		NO
	AC Percent Low-Income > 50%?		NO
	Elevated Low-Income Population Present?		NO
	MINORITY		
B03002001	MINORITY Total Population: Total	10,511	2,677
	Total Population: Not Hispanic or Latino	10,418	2,647
B03002003	· · · · · · · · · · · · · · · · · · ·	10,030	2,566
B03002004	· · · · · · · · · · · · · · · · · · ·	49	4
B03002005	Total Population: Not Hispanic or Latino; American Indian or Alaska Native Alone	0	0
B03002006	Total Population: Not Hispanic or Latino; Asian Alone	0	0
B03002007	Total Population: Not Hispanic or Latino; Native Hawaiian and Other Pacific Islander Alone	0	0
B03002008	Total Population: Not Hispanic or Latino; Some Other Race Alone	16	0
B03002009	,	323	77
	Total Population: Hispanic or Latino	93	30
	Total Population: Hispanic or Latino; White Alone	14 0	0
	Total Population: Hispanic or Latino; Black or African American Alone	26	0
B03002013	Total Population: Hispanic or Latino; American Indian or Alaska Native Alone Total Population: Hispanic or Latino; Asian Alone	0	0
	Total Population: Hispanic or Latino; Native Hawaiian and Other Pacific Islander Alone	0	0
B03002016	Total Population: Hispanic or Latino; Some Other Race Alone	29	29
B03002017	Total Population: Hispanic or Latino; Two or More Races	24	1
	Number Non-White / Minority (Sum B03002004 thru B03002010)	481	111
	Percent Non-White / Minority	4.6%	4.1%
	125% Reference Increment (Applied to COC Only and Compared Against the AC)	5.7%	AC > 125% COC
	AC Percent Minority > 125% of COC?		NO
	AC Percent Minority > 50%?		NO
	Elevated Minority Population Present?		NO



	Crawford County, Indiana		Census Tract 9521, Crawford County, Indiana	
Label	Estimate	Margin of Error	Estimate	Margin of Error
Total:	10,511	****	2,677	±447
Not Hispanic or Latino:	10,418	±67	2,647	±442
White alone	10,030	±27	2,566	±434
Black or African American alone	49	±53	4	±8
American Indian and Alaska				
Native alone	0	±19	0	±12
Asian alone	0	±19	0	±12
Native Hawaiian and Other				
Pacific Islander alone	0	±19	0	±12
Some other race alone	16	±23	0	±12
Two or more races:	323	±85	77	±77
Two races including Some				
other race	13	±15	0	±12
Two races excluding Some				
other race, and three or more				
races	310	±84	77	±77
Hispanic or Latino:	93	±67	30	±45
White alone	14	±20	0	±12
Black or African American alone	0	±19	0	±12
American Indian and Alaska				
Native alone	26	±38	0	±12
Asian alone	0	±19	0	±12
Native Hawaiian and Other				
Pacific Islander alone	0	±19	0	±12
Some other race alone	29	±44	29	±44
Two or more races:	24	±36	1	±2
Two races including Some				
other race	0	±19	0	±12

Table: ACSDT5Y2021.B03002

	Crawford County, Indiana		Crawford County, Indiana Census Tract 9521, Crawford County, Indi		wford County, Indiana
Label	Estimate	Margin of Error	Estimate	Margin of Error	
Two races excluding Some other race, and three or more					
races	24	±36	1	±2	

16

	Crawford County, Indiana		Census Tract 9521, Crawford County, Indiana		
Label	Estimate	Margin of Error	Estimate	Margin of Error	
Total:	10,370	±116	2,595	±445	
Income in the past 12 months					
below poverty level:	1,990	±513	320	±233	
Male:	854	±250	85	±73	
Under 5 years	81	±56	6	±10	
5 years	2	±13	2	±13	
6 to 11 years	167	±123	2	±14	
12 to 14 years	36	±30	3	±6	
15 years	0	±19	0	±12	
16 and 17 years	10	±12	0	±12	
18 to 24 years	72	±46	4	±6	
25 to 34 years	125	±67	14	±22	
35 to 44 years	81	±53	6	±6	
45 to 54 years	52	±34	9	±15	
55 to 64 years	102	±62	7	±12	
65 to 74 years	95	±54	20	±19	
75 years and over	31	±26	12	±15	
Female:	1,136	±306	235	±187	
Under 5 years	127	±85	2	±4	
5 years	0	±19	0	±12	
6 to 11 years	80	±45	5	±12	
12 to 14 years	138	±129	20	±31	
15 years	50	±49	0	±12	
16 and 17 years	13	±26	9	±26	
18 to 24 years	54	±41	7	±6	
25 to 34 years	72	±48	6	±19	
35 to 44 years	284	±111	82	±102	
45 to 54 years	56	±40	18	±23	
55 to 64 years	156	±62	27	±23	
65 to 74 years	22	±20	10	±12	

	Crawford County, Indiana		Census Tract 9521, Crawford County, Indiana	
Label	Estimate	Margin of Error	Estimate	Margin of Error
75 years and over	84	±50	49	±55
Income in the past 12 month	s at or			
above poverty level:	8,380	±502	2,275	±389
Male:	4,482	±271	1,256	±245
Under 5 years	224	±48	95	±49
5 years	22	±22	0	±12
6 to 11 years	202	±100	76	±77
12 to 14 years	176	±81	0	±12
15 years	131	±47	30	±36
16 and 17 years	63	±43	40	±41
18 to 24 years	343	±72	55	±51
25 to 34 years	489	±61	153	±68
35 to 44 years	539	±58	179	±79
45 to 54 years	624	±34	136	±56
55 to 64 years	758	±62	188	±90
65 to 74 years	615	±88	208	±87
75 years and over	296	±36	96	±45
Female:	3,898	±281	1,019	±174
Under 5 years	130	±68	35	±30
5 years	21	±21	7	±13
6 to 11 years	271	±85	64	±43
12 to 14 years	137	±79	98	±76
15 years	33	±34	19	±29
16 and 17 years	105	±60	0	±12
18 to 24 years	307	±59	51	±52
25 to 34 years	459	±39	187	±56
35 to 44 years	311	±104	50	±39
45 to 54 years	609	±40	109	±46
55 to 64 years	635	±62	140	±54
65 to 74 years	580	±27	159	±70

Table: ACSDT5Y2021.B17001

Crawford County, Indiana		Census Tract 9521, Crawford County, Indiana		
Label	Estimate	Margin of Error	Estimate	Margin of Error
75 years and over	300	±50	100	±41

19