

FHWA-Indiana Environmental Document
CATEGORICAL EXCLUSION / ENVIRONMENTAL ASSESSMENT FORM
GENERAL PROJECT INFORMATION

Road No./County:	State Road (SR) 62, Crawford County
Designation Number(s):	Des No. 1601040
Project Description/Termini:	Slide correction on SR 62, approximately 2.44 miles west of SR 237.

X	Categorical Exclusion, Level 2 – Required Signatories: INDOT DE and/or INDOT ESD
	Categorical Exclusion, Level 3 – Required Signatories: INDOT ESD
	Categorical Exclusion, Level 4 – Required Signatories: INDOT ESD and FHWA
	Environmental Assessment (EA) – Required Signatories: INDOT ESD and FHWA
	Additional Investigation (AI) – The proposed action included a design change from the original approved environmental document. Required Signatories must include the appropriate environmental approval authority

Approval

_____	_____
INDOT DE Signature and Date	INDOT ESD Signature and Date

FHWA Signature and Date	

Release for Public Involvement

 _____	7/14/2021 _____
INDOT DE Initials and Date	INDOT ESD Initials and Date

Certification of Public Involvement

INDOT Consultant Services Signature and Date

INDOT DE/ESD Reviewer Signature and Date: _____

Name and Organization of CE/EA Preparer: _____

Payton Parke - Lochmueller Group, Inc.

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Part I – Public Involvement

Every Federal action requires some level of public involvement, providing for early and continuous opportunities throughout the project development process. **The level of public involvement should be commensurate with the proposed action.**

Does the project have a historic bridge processed under the Historic Bridges PA*?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
If No, then: Opportunity for a Public Hearing Required?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

*A public hearing is required for all historic bridges processed under the Historic Bridges Programmatic Agreement between INDOT, FHWA, SHPO, and the ACHP.

Discuss what public involvement activities (legal notices, letters to affected property owners and residents (i.e. notice of entry), meetings, special purpose meetings, newspaper articles, etc.) have occurred for this project.

Notice of Entry letters were mailed to potentially affected property owners near the project area on December 17, 2017 notifying them about the project and that individuals responsible for land surveying and field activities may be seen in the area. A sample copy of the Notice of Entry letter is included in Appendix G, page 1.

The project will meet the minimum requirements described in the current *Indiana Department of Transportation (INDOT) Public Involvement Manual* which requires the project sponsor to offer the public an opportunity to submit comments and/or request a public hearing. Therefore, a legal notice will appear in a local publication contingent upon the release of this document for public involvement. This document will be revised after the public involvement requirements are fulfilled.

Public Controversy on Environmental Grounds

Discuss public controversy concerning community and/or natural resource impacts, including what is being done during the project to minimize impacts.

At this time, there is no substantial public controversy concerning impacts to the community or to natural resources.

Part II - General Project Identification, Description, and Design Information

Sponsor of the Project: Indiana Department of Transportation (INDOT) INDOT District: VincennesLocal Name of the Facility: SR 62Funding Source (mark all that apply): Federal State Local Other*

*If other is selected, please identify the funding source: _____

PURPOSE AND NEED:

The need should describe the specific transportation problem or deficiency that the project will address. The purpose should describe the goal or objective of the project. The solution to the traffic problem should NOT be discussed in this section.

Des No. 1601040 is located on SR 62, approximately 2.44 miles west of SR 237 in Crawford County, Indiana. The need for this project is due to the landslide activity occurring along the westbound lane of SR 62, causing the pavement and roadside embankment to deteriorate and fail. Soils in this location often exhibit limestone or sandstone dissolution fractures, voids, karst flow paths, and groundwater seeps. The overlying layers of soil on top of this type of stratum are therefore prone to landslide activity. The primary observable pavement distress crosses the road diagonally in the western portion of the project area. A portion of the westbound lane about 200 feet in length has been resurfaced, which could be covering up additional pavement distresses. The landslide movement is likely due to a combination of the high plasticity of the soil and shale and the groundwater level being within approximately two to eight feet of the toe of the slope. A shallow, secondary mechanism may be a result of the steep embankment slopes.

This is page 2 of 20 Project name: SR 62 Slide Correction Date: July 12, 2021

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The purpose of the project is to restore this section of SR 62 which was damaged by the landslide activity, and reinforce the failed slope, which will reduce the potential for future landslide activity, resulting in improved traffic mobility and safety for the traveling public.

PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Crawford Municipality: N/A

Limits of Proposed Work: SR 62, 2.44 miles west of SR 237

Total Work Length: 0.065 Mile(s) Total Work Area: 0.71 Acre(s)

Is an Interstate Access Document (IAD)¹ required?
 If yes, when did the FHWA provide a Determination of Engineering and Operational Acceptability?

Yes ¹	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>
Date: <input style="width: 100%;" type="text"/>	

¹If an IAD is required; a copy of the approved CE/EA document must be submitted to the FHWA with a request for final approval of the IAD.

Describe location of project including township, range, city, county, roads, etc. Existing conditions should include current conditions, current deficiencies, roadway description, surrounding features, etc. Preferred alternative should include the scope of work, anticipated impacts, and how the project will meet the Purpose and Need. Logical termini and independent utility also need discussed.

The Federal Highway Administration (FHWA) and INDOT propose to proceed with a slide correction on SR 62; this project is a part of a bundled group of slide repair projects under contract R-39919, lead Des No. 1601032.

Des No. 1601040 is located on SR 62 in Crawford County, Indiana, approximately 2.44 miles west of SR 237. Specifically, the project is located in Section 27, Township 3 South, and Range 1 West in Union Township as depicted on the Branchville U.S. Geological Survey 1:24,000 scale quadrangle (Appendix B, page 2).

Within the project area, SR 62 is functionally classified as a rural major collector. No driveways or approaches are present within the project limits. The typical cross section consists of two 10-foot travel lanes accompanied by 2-foot paved shoulders. This section of SR 62 has been damaged by landslide activity and pavement distress is evident within the project area. Please see Purpose and Need section above for details. Adjacent land use consists of scattered rural residences, agricultural lands, and wooded areas.

The preferred alternative will correct the slide by constructing a row of cantilevered drilled shafts with a center-to-center spacing of 8 feet for 344 feet along the westbound lane of SR 62. The shafts will be drilled to a depth of 10 feet below the bedrock surface and will have a diameter of 2.5 feet. Above the bedrock, the pier diameter will be 3 feet and extend 6 feet above the bedrock surface. The entire shaft depth will be filled with Class C concrete and a steel W-beam H-pile will be placed in the shaft. The area above the concrete shaft with the W-beam will be backfilled with flowable fill. Placement of riprap will occur at a 3 to 1 slope along the westbound lane. The roadway will be milled and overlaid for a length of 344 feet along the slide correction to repair damaged pavement. Mill and Hot Mix Asphalt (HMA) overlay depth will be 1.5 inches. Additional work includes shoulder widening and embankment construction. An existing 24-inch culvert is located within the project limits and will be extended by 10 feet to accommodate the proposed widening of the shoulder. Please refer to Appendix B for maps depicting the project area (pages 1-4), photographs of the project area (pages 5-9), and the Preliminary Design Plans (page 10-16).

Anticipated impacts include 0.40 acre of tree clearing. Every effort to avoid, minimize, and/or mitigate project impacts will be made.

The proposed maintenance of traffic (MOT) plan includes a road closure with an official detour. The detour will utilize SR 37, I-64, and SR 237. Please refer to the Maintenance of Traffic section of this document for full details. The MOT will be implemented per the *Indiana Design Manual* guidelines.

The project will meet the objectives of the purpose and need by reinforcing the failed slope and restoring the section of SR 62 that was damaged by the slide activity, thereby improving safety and mobility along SR 62.

The project is not dependent upon the completion of any other project to meet the objectives of its purpose and need; therefore, the

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project exhibits independent utility. The project termini are logical because they only encompass the section of SR 62 affected by the landslide damage and resulting pavement failure.

OTHER ALTERNATIVES CONSIDERED:

Provide a header for each alternative. Describe all discarded alternatives, including the No Build Alternative. Explain why each discarded alternative was not selected. Make sure to state how each alternative meets or does not meet the Purpose and Need and why.

No Build:

This alternative would not repair the slide. While this alternative eliminates costs and any environmental impacts, it would not have met the objectives of the purpose and need of the project. Therefore, this alternative was discarded from further consideration.

Soil Nailed Wall:

This alternative would have involved the construction of a soil nailed wall with an average height of 15 feet. An additional 25 feet of incidental construction would have been required at the beginning and end of the slide correction limits for grading and tie-in work. This alternative also required guardrail installation due to the steep sideslope of the soil nailed wall. Ditch regrading in certain locations would have also been required. Although this alternative would have met the purpose and need of the project, it would have resulted in the need for additional investigation and considerably higher costs than the preferred alternative; therefore, it was discarded from further consideration.

The No Build Alternative is not feasible, prudent or practicable because (Mark all that apply):

It would not correct existing capacity deficiencies;

It would not correct existing safety hazards;

It would not correct the existing roadway geometric deficiencies;

It would not correct existing deteriorated conditions and maintenance problems; or

It would result in serious impacts to the motoring public and general welfare of the economy.

Other (Describe):

X

ROADWAY CHARACTER:

If the proposed action includes multiple roadways, complete and duplicate for each roadway.

Name of Roadway	<u>SR 62</u>			
Functional Classification:	<u>Rural Major Collector</u>			
Current ADT:	<u>317</u>	VPD (2021)	Design Year ADT:	<u>317</u> VPD (2041)
Design Hour Volume (DHV):	<u>3.13</u>	Truck Percentage (%)	<u>2.52</u>	
Designed Speed (mph):	<u>45</u>	Legal Speed (mph):	<u>45</u>	

	Existing		Proposed	
Number of Lanes:	2		2	
Type of Lanes:	Travel		Travel	
Pavement Width:	10	ft.	10	ft.
Shoulder Width:	2	ft.	2	ft.
Median Width:	N/A	ft.	N/A	ft.
Sidewalk Width:	N/A	ft.	N/A	ft.

Setting:	<input type="checkbox"/> Urban	<input type="checkbox"/> Suburban	<input checked="" type="checkbox"/> Rural
Topography:	<input type="checkbox"/> Level	<input checked="" type="checkbox"/> Rolling	<input type="checkbox"/> Hilly

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BRIDGES AND/OR SMALL STRUCTURE(S):

If the proposed action includes multiple structures, complete and duplicate for each bridge and/or small structure. Include both existing and proposed bridge(s) and/or small structure(s) in this section.

Structure/NBI Number(s): _____ Sufficiency Rating: _____
 (Rating, Source of Information)

	Existing	Proposed
Bridge/Structure Type:		
Number of Spans:		
Weight Restrictions:	ton	ton
Height Restrictions:	ft.	ft.
Curb to Curb Width:	ft.	ft.
Outside to Outside Width:	ft.	ft.
Shoulder Width:	ft.	ft.

Describe impacts and work involving bridge(s), culvert(s), pipe(s), and small structure(s). Provide details for small structure(s): structure number, type, size (length and dia.), location and impacts to water. Use a table if the number of small structures becomes large. If the table exceeds a complete page, put it in the appendix and summarize the information below with a citation to the table.

No bridges are located in the project area. An existing 24-inch unnamed culvert is located within the project limits (Appendix B, page 3). The culvert drains storm water from a roadside ditch on the south side of SR 62 to the north where drainage flow meets UNT to Little Blue River. The culvert will be extended by 10 feet to accommodate the proposed widening of the shoulder.

MAINTENANCE OF TRAFFIC (MOT) DURING CONSTRUCTION:

	Yes	No
Is a temporary bridge proposed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is a temporary roadway proposed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will the project involve the use of a detour or require a ramp closure? (describe below)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Provisions will be made for access by local traffic and so posted.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Provisions will be made for through-traffic dependent businesses.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Provisions will be made to accommodate any local special events or festivals.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Will the proposed MOT substantially change the environmental consequences of the action?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is there substantial controversy associated with the proposed method for MOT?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discuss closures and/or facilities (if any) that will be provided for maintenance of traffic. Any known impacts from these temporary measures should be quantified to the extent possible, particularly with respect to properties such as Section 4(f) resources and wetlands. Any local concerns about access and traffic flow should be detailed as well.

The MOT for the project will require a road closure with an official INDOT detour. The detour will utilize SR 37, I-64, and SR 237 for an additional 0.4 mile (Appendix B, page 15). Adjacent property owners will retain access to their properties throughout the construction process.

The closure will pose a temporary inconvenience to traveling motorists (including school buses and emergency services); however, no significant delays are anticipated, and all inconveniences will cease upon project completion. Delays may occur during construction but will cease upon project completion.

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ESTIMATED PROJECT COST AND SCHEDULE:

Engineering: \$ N/A (20--) Right-of-Way: \$ 360,000* (2020) Construction: \$ 6,630,006* (2021)

*This is the bundled cost for 12 projects, lead Des No. 1601032.

Anticipated Start Date of Construction: Spring 2022

RIGHT OF WAY:

Land Use Impacts	Amount (acres)	
	Permanent	Temporary
Residential	0.38	0.00
Commercial	0.00	0.00
Agricultural	0.00	0.00
Forest	0.31	0.00
Wetlands	0.00	0.00
Other:	0.00	0.00
Other:	0.00	0.00
TOTAL	0.69	0.00

Describe both Permanent and Temporary right-of-way and describe their current use. Typical and Maximum right-of-way widths (existing and proposed) should also be discussed. Any advance acquisition, reacquisition or easements, either known or suspected, and their impacts on the environmental analysis should be discussed.

For this project, the recorded existing right-of-way (ROW) extends to the edge of pavement. An area along the westbound lane of SR 62 extending approximately 13 feet north of the existing pavement was not recorded legally and must be reacquired. This reacquisition area consists of wooded roadside and is approximately 0.14 acre. 0.06 acre of the reacquisition area will be obtained through reacquisition from a private owner and 0.08 acre will be obtained through reacquisition as permanent easement from the Hoosier National Forest.

Following acquisition and reacquisition, ROW will reach a maximum of 85 feet north of the edge of pavement and will remain at the edge of pavement on the south side of SR 62.

A total of 0.69 acre of ROW will be required for this project. 0.55 acre is new permanent ROW and 0.14 acre is reacquired ROW. The total 0.55 acre of new ROW includes approximately 0.24 acre of new permanent ROW to be acquired from private owners and 0.31 acre of new permanent easement to be acquired from the Hoosier National Forest. No temporary ROW will be required.

Approximately 0.14 acre of ROW is anticipated to be reacquired, including 0.06 acre as permanent ROW from a private owner and 0.08 acre as permanent easement from the Hoosier National Forest. Impacts within reacquired ROW are included in the environmental analysis.

If the scope of work or permanent or temporary ROW amounts change, the INDOT Environmental Services Division (ESD) and the INDOT District Environmental Section will be contacted immediately.

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Part III – Identification and Evaluation of Impacts of the Proposed Action

SECTION A - EARLY COORDINATION:

List the date(s) coordination was sent and all resource agencies that were contacted as a part of the development of this Environmental Study. Also, include the date of their response or indicate that no response was received.

Early coordination letters were sent on January 14, 2020. Due to expansion of the project area, an addendum letter was sent on February 17, 2021 (Appendix C, pages 1-7).

Agency	Date Sent	Date Response Received	Appendix
United States Fish and Wildlife Service (USFWS)	January 14, 2020 February 17, 2021	January 16, 2020 April 7, 2021	Appendix C, pages 29-31
Indiana Department of Natural Resources (IDNR)	January 14, 2020 February 17, 2021	January 14, 2020 February 18, 2021	Appendix C, pages 32-34
Indiana Department of Environmental Management (IDEM)	January 14, 2020 February 17, 2021	February 18, 2021	Appendix C, pages 35-40
United States Forest Service	January 14, 2020 February 17, 2021	April 3, 2020 February 18, 2021 February 22, 2021	Appendix C, pages 41-43
INDOT Vincennes District	January 14, 2020 February 17, 2021	January 21, 2020 February 18, 2021	Appendix C, page 44-45
Indiana Geological and Water Survey (IGWS)	January 14, 2020 February 17, 2021	February 23, 2021	Appendix C, pages 47-49
Natural Resource Conservation Service (NRCS)	January 14, 2020 February 17, 2021	January 21, 2020 February 25, 2021	Appendix C, page 50
FHWA	January 14, 2020 February 17, 2021	No response received	
United States Department of Housing and Urban Development (USHUD)	January 14, 2020 February 17, 2021	No response received	
National Park Service	January 14, 2020 February 17, 2021	No response received	
INDOT Office of Public Involvement	January 14, 2020	No response received	
United States Army Corps of Engineers (USACE)	January 14, 2020 February 17, 2021	No response received	
Crawford County Board of Commissioners	January 14, 2020 February 17, 2021	No response received	
Crawford County Council	January 14, 2020 February 17, 2021	No response received	
Crawford County Highway Department	January 14, 2020 February 17, 2021	No response received	
Crawford County Surveyor	January 14, 2020 February 17, 2021	No response received	
Crawford County Emergency Management Agency	January 14, 2020 February 17, 2021	No response received	
Crawford County Community School Corporation	January 14, 2020 February 17, 2021	No response received	
Crawford County Sheriff's Department	January 14, 2020 February 17, 2021	No response received	
Leavenworth Fire Department	January 14, 2020 February 17, 2021	No response received	
Crawford County Soil and Water	January 14, 2020	No response received	

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Conservation District (SWCD)	February 17, 2021		
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All applicable recommendations are included in the Environmental Commitments section of this CE Document.

SECTION B – ECOLOGICAL RESOURCES:

Streams, Rivers, Watercourses & Other Jurisdictional Features

- Federal Wild and Scenic Rivers
- State Natural, Scenic or Recreational Rivers
- Nationwide Rivers Inventory (NRI) listed
- Outstanding Rivers List for Indiana
- Navigable Waterways

Presence

Impacts

Yes	No

Total stream(s) in project area: _____ Linear feet Total impacted stream(s): _____ Linear feet

Stream Name	Classification	Total Size in Project Area (linear feet)	Impacted linear feet	Comments (i.e. location, flow direction, likely Water of the US, appendix reference)

Describe all streams, rivers, watercourses and other jurisdictional features adjacent or within the project area. Include whether or not impacts (both permanent and temporary) will occur to the features identified. Include if the streams or rivers are listed on any federal or state lists for Indiana. Include if features are subject to federal or state jurisdiction. Discuss measures to avoid, minimize, and mitigate if impacts will occur.

Based on the desktop review, the aerial map of the project area, and the RFI report (Appendix E, page 9) there are 5 rivers and streams within the combined 0.5 mile search radius. That number could not be confirmed or updated by the site visit on September 15, 2020 by Lochmueller Group, Inc., as the field work for the project did not encompass the entire 0.5 mile search radius. There are no streams, rivers, watercourses, or other jurisdictional features present within or adjacent to the project area.

A *Waters of the U.S. Determination / Wetland Delineation* report was completed for the project and approved by INDOT Ecology and Waterway Permitting Office (EWPO) on June 22, 2021. Please refer to Appendix F, pages 2-17 for the *Waters of the U.S. Determination / Wetland Delineation Report*. It was determined that one stream, an unnamed tributary (UNT) to Little Blue River, is located within the waters survey area; however, UNT to Little Blue River is located outside the project area. Two non-jurisdictional roadside ditches, RSD1 and RSD2 that lack bed and bank with an ordinary high water mark (OHWM), are located within the project area. The USACE makes all final determinations regarding jurisdiction.

Open Water Feature(s)

- Reservoirs
- Lakes
- Farm Ponds
- Retention/Detention Basin
- Storm Water Management Facilities
- Other: _____

Presence

Impacts

Yes	No

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Describe all open water feature(s) identified adjacent or within the project area. Include whether or not impacts (both permanent and temporary) will occur to the features identified. Include if features are subject to federal or state jurisdiction. Discuss measures to avoid, minimize, and mitigate if impacts will occur.

Based on the desktop review, the aerial map of the project area, and the RFI report (Appendix E, page 9) there are eight open water features within the combined 0.5 mile search radius. That number could not be confirmed or updated by the site visit on September 15, 2020 by Lochmueller Group, Inc., as the field work for the project did not encompass the entire 0.5 mile search radius. No open water features are present within or adjacent to the project area; therefore, no impacts are expected.

A *Waters of the U.S. Determination / Wetland Delineation* report was completed for the project and approved by INDOT Ecology and Waterway Permitting Office (EWPO) on June 22, 2021. Please refer to Appendix F, pages 2-17 for the *Waters of the U.S. Determination / Wetland Delineation Report*. No open water features were identified. The USACE makes all final determinations regarding jurisdiction.

	Presence	Impacts	
	<input type="checkbox"/>	Yes	No
Wetlands	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Total wetland area: _____ Acre(s) Total wetland area impacted: _____ Acre(s)

(If a determination has not been made for non-isolated/isolated wetlands, fill in the total wetland area impacted above.)

Wetland No.	Classification	Total Size (Acres)	Impacted Acres	Comments (i.e. location, likely Water of the US, appendix reference)

Wetlands (Mark all that apply)

- Wetland Determination
- Wetland Delineation
- USACE Isolated Waters Determination

Documentation

ESD Approval Dates

Improvements that will not result in any wetland impacts are not practicable because such avoidance would result in (Mark all that apply and explain):

- Substantial adverse impacts to adjacent homes, business or other improved properties;
- Substantially increased project costs;
- Unique engineering, traffic, maintenance, or safety problems;
- Substantial adverse social, economic, or environmental impacts, or
- The project not meeting the identified needs.

Describe all wetlands identified adjacent or within the project area. Include whether or not impacts (both permanent and temporary) will occur to the features identified. Include if features are subject to federal or state jurisdiction. Discuss measures to avoid, minimize, and mitigate if impacts will occur.

Based on the desktop review, the aerial map of the project area, and the RFI report (Appendix E, page 9) there are eighteen wetlands within the combined 0.5 mile search radius. That number could not be confirmed or updated by the site visit on September 15, 2020 by Lochmueller Group, Inc., as the field work for the project did not encompass the entire 0.5 mile search radius. There are no wetlands present within or adjacent to the project area; therefore, no impacts are expected.

A *Waters of the U.S. Determination / Wetland Delineation* report was completed for the project and approved by INDOT Ecology and Waterway Permitting Office (EWPO) on June 22, 2021. Please refer to Appendix F, pages 2-17 for the *Waters of the U.S. Determination / Wetland Delineation Report*. No wetlands were identified. The USACE makes all final determinations regarding jurisdiction.

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Terrestrial Habitat

Presence

Impacts

Yes	No
<input checked="" type="checkbox"/>	<input type="checkbox"/>

Total terrestrial habitat in project area: 1.07 Acre(s) Total tree clearing: 0.40 Acre(s)

Describe types of terrestrial habitat (i.e. forested, grassland, farmland, lawn, etc.) adjacent or within the project area. Include whether or not impacts will occur to habitat identified. Include total terrestrial habitat impacted and total tree clearing that will occur. Discuss measure to avoid, minimize, and mitigate if impacts will occur.

Based on a desktop review, a site visit on September 15, 2020 by Lochmueller Group, Inc., and the aerial map of the project area (Appendix B, page 3) there is maintained roadside and forested habitat present. Approximately 0.09 acre of impacts to the maintained roadside habitat are anticipated. Dominant tree species within the forested habitat consist of red oak (*Quercus rubra*), sugar maple (*Acer saccharum*), shagbark hickory (*Carya ovata*), white pine (*Pinus strobus*), and redbud (*Cercis canadensis*). A total of 0.49 acre of terrestrial habitat disturbance will occur. A total of 0.40 acre of tree removal is anticipated to occur for this project. Tree species to be removed include redbud (*Cercis canadensis*), dogwood (*Cornus sp.*), and sugar maple (*Acer saccharum*). Tree removal will occur between October 2022 and March 2023 (during the inactive season). Avoidance and Minimization Measures (AMMs) considered for this project include General AMM 1, Tree Removal AMM 1, Tree Removal AMM 2, Tree Removal AMM 3, and Tree Removal AMM 4. AMMs are included as firm commitments in the Environmental Commitments section of this document. Mitigation is not anticipated.

The IDNR Division of Fish and Wildlife (IDNR DFW) responded on January 14, 2020 and February 18, 2021 with recommendations to avoid or minimize impacts to fish, botanical, and wildlife resources (Appendix C, page 32-34). IDNR DFW recommendations included mitigating for impacts to non-wetland forests and revegetating all bare and disturbed areas. All applicable IDNR DFW recommendations are included in the Environmental Commitments section of this CE document.

The USFWS responded on April 7, 2021 and January 16, 2020 with recommendations to avoid, minimize, or mitigate for impacts to fish and wildlife resources to the greatest extent possible (Appendix C, pages 29-31). Recommendations included restricting tree clearing and implementing temporary erosion and sediment control methods. All applicable USFWS recommendations are included in the Environmental Commitments section of this CE document.

Protected Species

Federally Listed Bats

Information for Planning and Consultation (IPaC) determination key completed
 Section 7 informal consultation completed (IPaC cannot be completed)
 Section 7 formal consultation Biological Assessment (BA) required

Yes	No
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>

Determination Received for Listed Bats from USFWS: NE NLAA LAA

Other Species not included in IPaC

Additional federal species found in project area (based on IPaC species list)
 State species (not bird) found in project area (based upon consultation with IDNR)

Yes	No
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>

Migratory Birds

Known usage or presence of birds (i.e. nests)
 State bird species based upon coordination with IDNR

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discuss IDNR coordination and species identified. Describe USFWS Section 7 consultation and determination received for Indiana bat and northern long-eared bat impacts. Discuss if other federally listed species were identified. If so, include consultation that has occurred and the determination that was received. Discuss if migratory birds have been observed and any impacts.

Based on a desktop review and the RFI report (Appendix E, pages 4-5) completed by Lochmueller Group, Inc. on August 16, 2018, the IDNR Crawford County Endangered, Threatened and Rare (ETR) Species List has been checked. According to the IDNR DFW early coordination response letter dated February 11, 2020 (Appendix C, pages 32-34), the Natural Heritage Program's Database has been checked and the state endangered Henslow's sparrow (*Ammodramus henslowii*), state species of special concern Broad-

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winged Hawk (*Buteo platypterus*), and state species of special concern Worm-eating Warbler (*Helminthos vermivorus*) have been documented within 0.5 mile of the project area. Suitable habitat for Henslow's Sparrow does not exist in or near the project area, so impacts to this species are not expected as a result of this project. However, removal of trees in the permanent ROW for the proposed project may significantly impact Broad-winged Hawk and Worm-eating Warbler, which are both forest nesting species. To reduce potential impacts to these species, tree removal should occur outside of the breeding season, which occurs between early May and late August. Coordination with INDOT ESD on May 11, 2021 stated to include the tree cutting restriction as a firm commitment (Appendix C, page 46). This commitment is included as a for further consideration commitment in the Environmental Commitments section of this CE document.

Project information was submitted through the USFWS's Information for Planning and Consultation (IPaC) portal, and an official species list was generated (Appendix C, pages 8-13). The project is within the range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (NLEB) (*Myotis septentrionalis*). Other species were identified in the IPaC species list along with the Indiana bat and northern long-eared bat. Refer to paragraph below.

Although the USFWS's Information for Planning and Consultation (IPaC) portal lists Crawford County as final critical habitat for the Indiana bat, the USFWS response to early coordination dated January 16, 2020 stated that this project is outside of the buffer area generally considered for further coordination; therefore, no impacts to critical habitat are expected.

The project qualifies for the *Range-wide Programmatic Informal Consultation for the Indiana bat and northern long-eared bat (NLEB)*, dated May 2016 (revised February 2018), between FHWA, Federal Railroad Administration (FRA), Federal Transit Administration (FTA), and USFWS. A bridge inspection occurred on October 15, 2019 and concluded that no bats or indicators of bat occupation was found within the project area (Appendix C, page 27). An effect determination key was completed on March 8, 2021, and based on the responses provided, the project was found to "may affect, but is not likely to adversely affect (NLAA)" the Indiana bat and/or the NLEB (Appendix C, pages 14-28). INDOT reviewed and verified the effect finding on March 11, 2021 and requested USFWS's review of the finding. On April 7, 2021, the USFWS concurred with the effect finding (Appendix C, pages 29-31). USFWS recommendations included General AMM 1, Tree Removal AMM 1, Tree Removal AMM 2, Tree Removal AMM 3, Tree Removal AMM 4 and Hibernacula AMM 1. AMMs are included as firm commitments in the Environmental Commitments section of this document. Avoidance and Minimization Measures (AMMs) and/or commitments are included as firm commitments in the Environmental Commitments section of this document.

The official species list generated from IPaC indicated one other species present within the project area. The project is within the range of the federally endangered gray bat (*Myotis grisescens*). The project qualifies for the USFWS Interim Policy; therefore, no further coordination is necessary.

This precludes the need for further consultation on this project as required under Section 7 of the Endangered Species Act, as amended. If new information on endangered species at the site becomes available or if project plans are changed, USFWS will be contacted for consultation.

IDNR DFW responded on January 14, 2020 and February 18, 2021 with recommendations to avoid or minimize impacts to fish, botanical, and wildlife resources (Appendix C, page 32-34). IDNR DFW recommendations included limiting tree removal to outside of the bird breeding season and providing a mitigation plan for any unavoidable habitat impacts. All applicable IDNR DFW recommendations are included in the Environmental Commitments section of this CE document.

The U.S. Forest Service wildlife and fisheries biologists, along with the botanist from the Hoosier National Forest, assessed the proposed ROW area located on federal land during August-September 2020 for the presence of Regional Forester Sensitive Species (RFSS). No impacts or effects to RFSS aquatic or terrestrial animals or plants associated with the proposed ROW were identified within the project area.

Geological and Mineral Resources

- Project located within the Potential Karst Features Area of Indiana
- Karst features identified within or adjacent to the project area
- Oil/gas or exploration/abandoned wells identified in the project area

Yes	No
X	
	X
	X

Date Karst Study/Report reviewed by INDOT EWPO (if applicable): March 4, 2021

Discuss if project is located in Potential Karst Features Area of Indiana and if any karst features have been identified in the project area (from RFI). Discuss response received from IGWS coordination. Discuss if any mines, oil/gas, or exploration/abandoned wells

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were identified and if impacts will occur. Describe if any impacts will occur to any karst features. Include discussion of karst study/report was completed and results. (Karst investigation must comply with the current Karst MOU and coordinated and reviewed by INDOT EWPO)

Based on a desktop review, the project is located inside the designated karst region of Indiana as outlined in the October 13, 1993 Karst Memorandum of Understanding (MOU). According to the topo map of the project area (Appendix B, page 2), the RFI report (Appendix E, page 9), and the Karst Report prepared for the project (Appendix I, pages 9-20), there are no karst features identified within or adjacent to the project area. In the approval email for the Karst Report, INDOT Ecology and Waterway Permitting Office (EWPO) provided the following unique special provision (USP): If an unknown karst feature is discovered during construction, all work within 100 feet of the feature will stop, the Engineer will be notified immediately, and the feature will be protected from sedimentation runoff. This USP (Appendix I, page 21) is included as a firm commitment in the Environmental Commitments section of this document. In the early coordination response on February 23, 2021, the IGWS did not indicate that karst features exist in the project area (Appendix C, pages 47-49). The response did indicate a low potential for encountering bedrock resources and the presence of industrial mineral quarries within the vicinity. The response from IGWS was communicated with the designer on March 3, 2021.

SECTION C – OTHER RESOURCES

Drinking Water Resources

- Wellhead Protection Area(s)
- Source Water Protection Area(s)
- Water Well(s)
- Urbanized Area Boundary
- Public Water System(s)

Presence

X

Impacts

Yes	No
X	

- Is the project located in the St. Joseph Sole Source Aquifer (SSA):
- If Yes, is the FHWA/EPA SSA MOU Applicable?
- If Yes, is a Groundwater Assessment Required?

Yes	No
	X

Check the appropriate boxes and discuss each topic below. Provide details about impacts and summarize resource-specific coordination responses and any mitigation commitments. Reference responses in the Appendix.

The project is located in Crawford County, which is not located within the area of the St. Joseph Sole Source Aquifer, the only legally designated sole source aquifer in the state of Indiana. Therefore, the FHWA/EPA Sole Source Aquifer Memorandum of Understanding (MOU) is not applicable to this project, a detailed groundwater assessment is not needed, and no impacts are expected.

The Indiana Department of Environmental Management's Wellhead proximity Determinator website (<http://www.in.gov/idem/cleanwater/pages/wellhead/>) was accessed on February 17, 2021 by Lochmueller Group, Inc. This project is not located within a Wellhead Protection Area or Source Waster Area. No impacts are expected.

The IDNR Water Well Record Database website (<https://www.in.gov/dnr/water/3595.htm>) was accessed on April 15, 2021 by Lochmueller Group, Inc. No wells are located near this project. Therefore, no impacts are expected.

Based on a desktop review of the INDOT MS4 website (<https://entapps.indot.in.gov/MS4/>) this project is not located in an Urban Area Boundary. No impacts are expected.

Based on a desktop review, a site visit on September 15, 2020 by Lochmueller Group, Inc., the aerial map of the project area (Appendix B, page 3), and the design plans (Appendix B, pages 10-16), this project is located where there is a public water system. Impacts to the public water system may occur and will be dependent on water line depth. Coordination with Patoka Lake Regional Water & Sewer District is ongoing as part of Design.

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Floodplains	Presence	Impacts	
		Yes	No
Project located within a regulated floodplain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Longitudinal encroachment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transverse encroachment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Homes located in floodplain within 1000' up/downstream from project	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If applicable, indicate the Floodplain Level?

Level 1 Level 2 Level 3 Level 4 Level 5

Use the IDNR Floodway Information Portal to help determine potential impacts. Include floodplain map in appendix. Discuss impacts according to the classification system. If encroachment on a flood plain will occur, coordinate with the Local Flood Plain Administrator during design to insure consistency with the local flood plain planning.

The IDNR Indiana Floodway Information Portal website (<http://dnrmaps.dnr.in.gov/appsphp/fdms/>) was accessed on March 18, 2021 by Lochmueller Group, Inc. The project is not located in a regulatory floodplain as determined from approved IDNR floodplain maps (Appendix F, page 1). Therefore, it does not fall within the guidelines for the implementation of 23 CFR 650, 23 CFR 771, and 44 CFR. No impacts are expected.

Farmland	Presence	Impacts	
		Yes	No
Agricultural Lands	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prime Farmland (per NRCS)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Total Points (from Section VII of CPA-106/AD-1006*) N/A
 *If 160 or greater, see CE Manual for guidance.

Discuss existing farmland resources in the project area, impacts that will occur to farmland, and mitigation and minimization measures considered.

Based on a desktop review, a site visit on September 15, 2020 by Lochmueller Group, Inc., and the aerial map of the project area (Appendix B, page 3) there is no land that meets the definition of farmland under the Farmland Protection Policy Act (FPPA) within or adjacent to the project area. The requirements of the FPPA do not apply to this project; therefore, no impacts are expected. Early coordination letters were sent on January 14, 2020 and February 17, 2021 to Natural Resources Conservation Services (NRCS). NRCS responded on February 25, 2021 that the project will not cause a conversion of prime farmland (Appendix C, page 50).

SECTION D – CULTURAL RESOURCES

Minor Projects PA **Category(ies) and Type(s)** A-3, A-4, A-9, B-10 **INDOT Approval Date(s)** April 1, 2021 **N/A**

Full 106 Effect Finding
 No Historic Properties Affected No Adverse Effect Adverse Effect

Eligible and/or Listed Resources Present
 NRHP Building/Site/District(s) Archaeology NRHP Bridge(s)

Documentation Prepared (mark all that apply)	ESD Approval Date(s)	SHPO Approval Date(s)
APE, Eligibility and Effect Determination	<input type="checkbox"/>	<input type="checkbox"/>
800.11 Documentation	<input type="checkbox"/>	<input type="checkbox"/>
Historic Properties Report or Short Report	<input type="checkbox"/>	<input type="checkbox"/>

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Archaeological Records Check and Assessment	<input checked="" type="checkbox"/>	March 4, 2020	N/A
Archaeological Phase Ia Survey Report	<input checked="" type="checkbox"/>	March 4, 2020	N/A
Archaeological Phase Ic Survey Report			
Other:			

Memorandum of Agreement (MOA) **MOA Signature Dates** (List all signatories)

If the project falls under the MPPA, describe the category(ies) that the project falls under and any approval dates. If the project requires full Section 106, use the headings provided. The completion of the Section 106 process requires that a Legal Notice be published in local newspapers. Please indicate the publication date, name of the paper(s) and the comment period deadline. Include any further Section 106 work which must be completed at a later date, such as mitigation from a MOA or avoidance commitments.

On April 1, 2021 the INDOT Cultural Resource Office (CRO) determined that this project falls within the guidelines of Category A, Types 3, 4, and 9 and Category B, Type 10 under the Minor Projects Programmatic Agreement, (Appendix D, pages 1-4). Category A, Type 3 covers replacement, repair, lining, or extension of culverts and other drainage structures that do not exhibit wood, stone or brick structures or parts therein and are in previously disturbed soils. Category A, Type 4 covers roadway work associated with surface replacement, reconstruction, rehabilitation, or resurfacing projects. Category A, Type 9 covers installation, repair, or replacement of erosion control measures along roadways, waterways and bridge piers within previously disturbed soils. Category B, Type 10 covers slide corrections, slope repairs, and other erosion control measures, in undisturbed soils.

An archeological survey was required due to proposed work in undisturbed soil. The Indiana Archaeological Short Report prepared for the project stated that 4 previously recorded archeological sites are recorded within 1.0 mile of the site; however, none of the sites are located within or adjacent to the project area. The archeological investigation found no archeological sites within the project area. No further consultation is required. This completes the Section 106 process and the responsibilities of the FHWA under Section 106 have been fulfilled.

SECTION E – SECTION 4(f) RESOURCES/ SECTION 6(f) RESOURCES

	<u>Presence</u>	<u>Use</u>	
		Yes	No
Parks and Other Recreational Land			
Publicly owned park	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Publicly owned recreation area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (school, state/national forest, bikeway, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Wildlife and Waterfowl Refuges			
National Wildlife Refuge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
National Natural Landmark	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State Wildlife Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State Nature Preserve	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Historic Properties			
Site eligible and/or listed on the NRHP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Evaluations Prepared

Programmatic Section 4(f)	<input type="checkbox"/>
"De minimis" Impact	<input type="checkbox"/>
Individual Section 4(f)	<input type="checkbox"/>
Any exception included in 23 CFR 774.13	<input type="checkbox"/>

Discuss Programmatic Section 4(f) and "de minimis" Section 4(f) impacts in the discussion below. Individual Section 4(f) documentation must be included in the appendix and summarized below. Discuss proposed alternatives that satisfy the requirements of Section 4(f). FHWA has identified various exceptions to the requirement for Section 4(f) approval. Refer to 23 CFR § 774.13 - Exceptions.

Section 4(f) of the U.S. Department of Transportation Act of 1966 prohibits the use of certain public and historic lands for federally funded transportation facilities unless there is no feasible and prudent alternative. The law applies to significant publicly owned

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parcs, recreation areas, wildlife / waterfowl refuges, and NRHP eligible or listed historic properties regardless of ownership. Lands subject to this law are considered Section 4(f) resources.

Based on a desktop review, the aerial map of the project area (Appendix B, page 3), and the RFI report (Appendix E, page 8), there is one potential 4(f) resource located within the 0.5 mile search radius. According to the site visit on September 15, 2020 by Lochmueller Group, Inc. there is one 4(f) resource located within or adjacent to the project area. The project area is within the boundary of the Hoosier National Forest (HNF) and 0.31 acre of a permanent easement will be needed to complete the project. The Hoosier National Forest is a public multi-use property. Only the portions of the property designated as a recreation area are eligible for protection under Section 4(f). According to coordination with the Hoosier National Forest, there are no recreational facilities within or adjacent to the project area (Appendix C, page 42). Therefore, the project will not impact any portion of the property protected under Section 4(f). Therefore, no use is expected.

Section 6(f) Involvement

Presence

Use

Section 6(f) Property

Yes

No

Discuss Section 6(f) resources present or not present. Discuss if any conversion would occur as a result of this project. If conversion will occur, discuss the conversion approval.

The U.S. Land and Water Conservation Fund Act of 1965 established the Land and Water Conservation Fund (LWCF), which was created to preserve, develop, and assure accessibility to outdoor recreation resources. Section 6(f) of this Act prohibits conversion of lands purchased with LWCF monies to a non-recreation use.

A review of 6(f) properties on the INDOT ESD website (<https://www.in.gov/indot/2523.htm>) revealed a total of four properties in Crawford County (Appendix I, page 1). None of these properties are located within or adjacent to the project area. Therefore, there will be no impacts to 6(f) resources.

SECTION F – Air Quality

STIP/TIP and Conformity Status of the Project

Yes

No

Is the project in the most current STIP/TIP?

Is the project located in an MPO Area?

Is the project in an air quality non-attainment or maintenance area?

If Yes, then:

Is the project in the most current MPO TIP?

Is the project exempt from conformity?

If No, then:

Is the project in the Transportation Plan (TP)?

Is a hot spot analysis required (CO/PM)?

Location in STIP:

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Name of MPO (if applicable):

Location in TIP (if applicable):

Level of MSAT Analysis required?

Level 1a

Level 1b

Level 2

Level 3

Level 4

Level 5

Describe if the project is listed in the STIP and if it is in a TIP. Describe the attainment status of the county(ies) where the project is located. Indicate whether the project is exempt from a conformity determination. If the project is not exempt, include information about the TP and TIP. Describe if a hot spot analysis is required and the MSAT Level.

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This Fiscal Year (FY) 2020-2024 State Transportation Improvement Program (STIP) is listed based on the lead Des number in the contract. The lead Des number for this contract is 1061032. The FY 2020-2024 STIP includes DES number 1601040 by reference with the contract number R-39919.

This project is located in Crawford County, which is currently in attainment for all criteria pollutants according to the Environmental Protection Agency's Green Book website (<https://www.epa.gov/green-book>). Therefore, the conformity procedures of 40 CFR 93 do not apply.

This project is of a type qualifying as a categorical exclusion (Group 1) under 23 CFR 771.117(c) or exempt under the Clean Air Act conformity rule under 40 CFR 93.126, and as such, a Mobile Source Air Toxics analysis is not required.

SECTION G - NOISE

Noise

Yes No

Is a noise analysis required in accordance with FHWA regulations and INDOT's traffic noise policy?

Date Noise Analysis was approved/technically sufficient by INDOT ESD: _____

Describe if the project is a Type I or Type III project. If it is a Type I project, describe the studies completed to date and if noise impacts were identified. If noise impacts were identified, describe if abatement is feasible and reasonable and include a statement of likelihood.

This project is a Type III project. In accordance with 23 CFR 772 and the current *Indiana Department of Transportation Traffic Noise Analysis Procedure*, this action does not require a formal noise analysis.

SECTION H – COMMUNITY IMPACTS

Regional, Community & Neighborhood Factors

- Will the proposed action comply with the local/regional development patterns for the area?
- Will the proposed action result in substantial impacts to community cohesion?
- Will the proposed action result in substantial impacts to local tax base or property values?
- Will construction activities impact community events (festivals, fairs, etc.)?
- Does the community have an approved transition plan?
- If No, are steps being made to advance the community's transition plan?
- Does the project comply with the transition plan? (explain in the discussion below)

Yes	No
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

Discuss how the project complies with the area's local/regional development patterns; whether the project will impact community cohesion; and impact community events. Discuss how the project conforms with the ADA Transition Plan.

The project will ultimately be beneficial to local businesses and properties due to improvements of deteriorating roadway conditions. Overall, the negative impacts to property owners and local businesses within the project area will be minimal and will consist primarily of short-term construction impacts due to the road closure and resulting detour. No relocations are expected. Property owners will be provided access throughout the duration of the project to reduce impacts as much as possible. The project is not anticipated to result in substantial impacts to community cohesion, because it will not change access to properties within the area. The proposed project is not expected to impact the surrounding community or cause economic impacts to the surrounding area. Therefore, this project will have minimal or no negative impacts to the community or local economy.

According to the Fairs and Festivals website (www.fairsandfestivals.net), accessed on April 16, 2021 by Lochmueller Group, Inc., there are not fairs or festivals scheduled within 10 miles of the project.

The MOT may pose delays and temporary inconveniences to traveling motorists (including school buses and emergency services); however, all inconveniences will cease upon project completion. The MOT for the project is not anticipated to impact access to community events. The project sponsor will be responsible for contacting school districts and emergency services at least two weeks prior to any construction activities that would limit access, this is included as a firm commitment in the Environmental Commitments section of this CE document.

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Crawford County does not have an approved Americans with Disabilities Act (ADA) transition plan; however, due to the type of project (slide correction), ADA compliance is not applicable.

Public Facilities and Services

Discuss what public facilities and services are present in the project area and impacts (such as MOT) that will occur to them. Include how the impacts have been minimized and what coordination has occurred. Some examples of public facilities and services include health facilities, educational facilities, public and private utilities, emergency services, religious institutions, airports, transportation or public pedestrian and bicycle facilities.

Based on a desktop review, the aerial map of the project area (Appendix B, page 3), and the RFI report (Appendix E, page 8), there are two cemeteries located within the combined 0.5 mile search radius. That number could not be confirmed or updated by the site visit on September 15, 2020 by Lochmueller Group, Inc., as the field work for the project did not encompass the entire 0.5 mile search radius. Dubois Rural Electric Cooperative (Dubois REC) and Frontier Communications have facilities within the project area. Dubois REC has overhead powerlines on the south side of SR 62. Utilities for Frontier Communications are attached to the Dubois REC poles. The construction area of the slide repair is clear of Dubois REC's poles and no work will occur beyond the southern edge of pavement near the telephone lines; therefore, no impacts are expected. Access to all properties will be maintained during construction.

Environmental Justice (EJ) (Presidential EO 12898)

During the development of the project were EJ issues identified?

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>

Does the project require an EJ analysis?

If YES, then:

Are any EJ populations located within the project area?

<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>

Will the project result in adversely high and disproportionate impacts to EJ populations?

Indicate if EJ issues were identified during project development. If an EJ analysis was not required, discuss why. If an EJ analysis was required, describe how the EJ population was identified. Include if the project has a disproportionately high and adverse effect on EJ populations and explain your reasoning. If yes, describe actions to avoid, minimize and mitigate these effects.

Under FHWA Order 6640.23A, FHWA and the project sponsor, as a recipient of funding from FHWA, are responsible to ensure that their programs, policies, and activities do not have a disproportionately high and adverse effect on minority or low-income populations. Per the current INDOT Categorical Exclusion manual, an Environmental Justice (EJ) Analysis is required for any project that has two or more relocations or 0.5 acre of additional permanent ROW. Excluding reacquisition, the project will require 0.55 acre of additional permanent ROW. Therefore, an EJ Analysis is required.

Potential EJ impacts are detected by locating minority and low-income populations relative to a reference population to determine if populations of EJ concern exists and whether there could be disproportionately high and adverse impacts to them. The reference population may be a county, city, or town and is called the community of comparison (COC). In this project, the COC is Crawford County. The community that overlaps the project area is called the affected community (AC). In this project, the AC is Census Tract 9521. An AC has a population of concern for EJ if the population is more than 50% minority or low-income or if the low-income or minority population is 125% of the COC. Data from the 2019 American Community Survey 5 Year Estimates was obtained from the US Census Bureau Website <https://data.census.gov/cedsci/> on April 9, 2021 by Lochmueller Group, Inc. The data collected for minority and low-income populations within the AC are summarized in the below table.

Table: Minority and Low-Income Data (2015-2019 American Community Survey 5-Year Estimates)		
	COC Crawford County, Indiana	AC-1 Census Tract 9521 Crawford County, Indiana
Percent Minority	3.95%	3.20%
125% of COC	4.94%	AC<125% COC
EJ Population of Concern		No
Percent Low-Income	17.93%	19.23%
125% of COC	22.41%	AC<125% COC
EJ Population of Concern		No

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AC-1, Census Tract 9521, has a percent minority of 3.20% which is below 50% and is below the 125% COC threshold. Therefore, the AC does not contain minority populations of EJ concern.

AC-1, Census Tract 9521, has a percent low-income of 19.23% which is below 50% and is below the 125% COC threshold. Therefore, the AC does not contain low-income populations of EJ concern.

The census data sheets, map, and calculations can be found in Appendix I, pages 2-8. No further environmental justice analysis is warranted.

Relocation of People, Businesses or Farms

Will the proposed action result in the relocation of people, businesses or farms?
Is a BIS or CSRS required?

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>

Number of relocations: Residences: _____ Businesses: _____ Farms: _____ Other: _____

Discuss any relocations that will occur due to the project. If a BIS or CSRS is required, discuss the results in the discussion below.
No relocations of people, businesses, or farms will take place as a result of this project.

SECTION I – HAZARDOUS MATERIALS & REGULATED SUBSTANCES

Hazardous Materials & Regulated Substances (Mark all that apply)

Documentation

- Red Flag Investigation (RFI)
- Phase I Environmental Site Assessment (Phase I ESA)
- Phase II Environmental Site Assessment (Phase II ESA)
- Design/Specifications for Remediation required?

<input checked="" type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

Date RFI concurrence by INDOT SAM (if applicable): August 16, 2018

Include a summary of the potential hazardous material concerns found during review. Discuss in depth sites found within, directly adjacent to, or ones that could impact the project area. Refer to current INDOT SAM guidance. If additional documentation (special provisions, pay quantities, etc.) will be needed, include in discussion. Include applicable commitments.

Based on a review of GIS and available public records, an RFI was approved on August 16, 2018 by INDOT Site Assessment & Management (SAM) (Appendix E, pages 1-16). No sites with hazardous material concerns (hazmat sites) or sites involved with regulated substances were identified in or within the combined 0.5 mile search radius. Due to the amount of time that has passed since approval of the RFI, a desktop GIS review was completed on April 19, 2021 by Lochmueller Group, Inc. No new features were identified. Further investigation for hazardous material concerns or regulated substances is not required at this time.

Part IV – Permits and Commitments

PERMITS CHECKLIST

Permits (mark all that apply)

Likely Required

Army Corps of Engineers (404/Section10 Permit)

- Nationwide Permit (NWP)
- Regional General Permit (RGP)
- Individual Permit (IP)
- Other

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

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**IN Department of Environmental Management
(401/Rule 5)**

Nationwide Permit (NWP)	<input type="checkbox"/>
Regional General Permit (RGP)	<input type="checkbox"/>
Individual Permit (IP)	<input type="checkbox"/>
Isolated Wetlands	<input type="checkbox"/>
Rule 5	<input type="checkbox"/>
Other	<input type="checkbox"/>

IN Department of Natural Resources

Construction in a Floodway	<input type="checkbox"/>
Navigable Waterway Permit	<input type="checkbox"/>
Other	<input type="checkbox"/>

Mitigation Required

US Coast Guard Section 9 Bridge Permit

Others (Please discuss in the discussion below)

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

List the permits likely required for the project and summarize why the permits are needed, including permits designated as "Other."

No permits are anticipated for this project. Applicable recommendations provided by resource agencies are included in the Environmental Commitments section of this document. If permits are found to be necessary, the conditions of the permit will be requirements of the project and will supersede these recommendations.

It is the responsibility of the project sponsor to identify and obtain all required permits.

ENVIRONMENTAL COMMITMENTS

List all commitments and include the name of agency/organization requesting/requiring the commitment(s). Listed commitments should be numbered.

Firm:

- 1) If the scope of work or permanent or temporary right-of-way amounts change, the INDOT Environmental Services Division (ESD) and the INDOT District Environmental Section will be contacted immediately. (INDOT ESD and INDOT Vincennes District)
- 2) It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction that would block or limit access. (INDOT ESD).
- 3) General AMM 1: Ensure all operators, employers, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs. (USFWS)
- 4) Hibernacula AMM 1: For projects located within karst areas, on-site personnel will use best management practices, secondary containment measures, or other standard spill prevention and countermeasures to avoid impacts to possible hibernacula. Where practicable, a 300 foot buffer will be employed to separate fueling areas and other major containment risk activities from caves, sinkholes, losing streams, and springs in karst topography. (USFWS)
- 5) Tree Removal AMM 1: Modify all phases/ aspects of the project (e.g. temporary work areas, alignments) to avoid tree removal. (USFWS)
- 6) Tree Removal AMM 2: Apply time of year restrictions for tree removal when bats are not likely to be present, or limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/rail surface and **outside of documented** roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed. (USFWS)
- 7) Tree Removal AMM 3: Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g. install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits). (USFWS)
- 8) Tree Removal AMM 4: Do not remove **documented** Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 miles of roosts, or **documented** foraging habitat any time of year. (USFWS)

Indiana Department of Transportation

County Crawford

Route SR 62

Des. No. 1601040

- 10) USFWS Bridge/Structure Assessment shall take place no earlier than two (2) years prior to the start of construction. If construction will begin after October 15, 2021, an inspection of the structure by a qualified individual, must be performed. Inspection of the structure should check for presence of bats/bat indicators and/or presence of birds. If signs of bats or birds are documented during the inspection, the INDOT District Environmental Manager must be contacted immediately. (INDOT)
- 11) If unknown karst features are discovered during construction, all work within 100 ft of the feature shall stop and the Engineer shall be notified immediately. Karst features include, but are not limited to voids, caves, sinking streams, and sinkholes. The Department will provide the treatment measures to be incorporated for the feature. The karst feature shall be protected from sedimentation runoff. Work shall not resume in the area until directed by the Engineer. (INDOT EWPO)

For Further Consideration:

- 1) Minimize the extent of hard armor (riprap) in bank stabilization by using bioengineering techniques whenever possible. If riprap is utilized for bank stabilization, extend it below low-water elevation to provide aquatic habitat. (USFWS)
- 2) Evaluate wildlife crossings under bridge/culverts projects in appropriate situations. Suitable crossings include flat areas below bridge abutments with suitable ground cover, high water shelves in culverts, amphibian tunnels and diversion fencing. (USFWS)
- 3) Do not cut any trees suitable for Indiana bat or Northern Long-eared bat roosting (greater than 5 inches dbh, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30. (IDNR DFW)
- 4) Removal of trees in the permanent ROW for the proposed project may significantly impact Broad-winged Hawk and Worm-eating Warbler, which are both forest nesting species. To reduce potential impacts to these species, tree removal should occur outside of the breeding season, which occurs between early May and late August. (IDNR DFW)

Appendix A: INDOT Supporting Documentation

CE Level Threshold Chart..... 1

Appendix B: Graphics

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Categorical Exclusion

Appendix A

INDOT Supporting Documentation

Categorical Exclusion Level Thresholds

	PCE	Level 1	Level 2	Level 3	Level 4 ¹
Section 106	Falls within guidelines of Minor Projects PA	“No Historic Properties Affected”	“No Adverse Effect”	-	“Adverse Effect” Or Historic Bridge involvement ²
Stream Impacts³	No construction in waterways or water bodies	< 300 linear feet of stream impacts	≥ 300 linear feet of stream impacts	-	USACE Individual 404 Permit ⁴
Wetland Impacts³	No adverse impacts to wetlands	< 0.1 acre	-	< 1.0 acre	≥ 1.0 acre
Right-of-way⁵	Property acquisition for preservation only or none	< 0.5 acre	≥ 0.5 acre	-	-
Relocations	None	-	-	< 5	≥ 5
Threatened/Endangered Species (Species Specific Programmatic for Indiana bat & northern long eared bat)*	“No Effect”, “Not likely to Adversely Affect” (With select AMMs ⁶)	“Not likely to Adversely Affect” (With any AMMs or commitments)	-	“Likely to Adversely Affect”	Project does not fall under Species Specific Programmatic ⁷
Threatened/Endangered Species (Any other species)*	Falls within guidelines of USFWS 2013 Interim Policy or “No Effect”	“Not likely to Adversely Affect”	-	-	“Likely to Adversely Affect”
Environmental Justice	No disproportionately high and adverse impacts	-	-	-	Potential ⁸
Sole Source Aquifer	No Detailed Groundwater Assessment	-	-	-	Detailed Groundwater Assessment
Floodplain	No Substantial Impacts	-	-	-	Substantial Impacts
Section 4(f) Impacts	None	-	-	-	Any ⁹
Section 6(f) Impacts	None	-	-	-	Any
Permanent Traffic Alteration	None	-	-	-	Any
Noise Analysis Required	No	-	-	-	Yes
Air Quality Analysis Required	No	-	-	-	Yes ¹⁰
Approval Level <ul style="list-style-type: none"> • District Env. (DE) • Env. Serv. Div. (ESD) • FHWA 	Concurrence by DE or ESD	DE or ESD	DE or ESD	DE and/or ESD	DE and/or ESD; and FHWA

¹ Coordinate with INDOT Environmental Services Division. INDOT will then coordinate with the appropriate FHWA Environmental Specialist.

² Any involvement with a bridge processed under the Historic Bridge Programmatic Agreement.

³ Total permanent impacts to streams (linear feet) and wetlands (acres).

⁴ US Army Corps of Engineers Individual 404 Permit

⁵ Total permanent and temporary right-of-way. This does not include reacquisition of existing apparent right-of-way.

⁶ Avoidance and Mitigation Measures (AMMs) determined by the IPAC determination key to be required that are not tree AMMs, bridge AMMs, or structure AMMs.

⁷ Projects that do not fall under a Species Specific Programmatic and results in a “Likely to Adversely Affect”. Other findings can be processed as a lower level CE.

⁸ Potential for causing a disproportionately high and adverse impact.

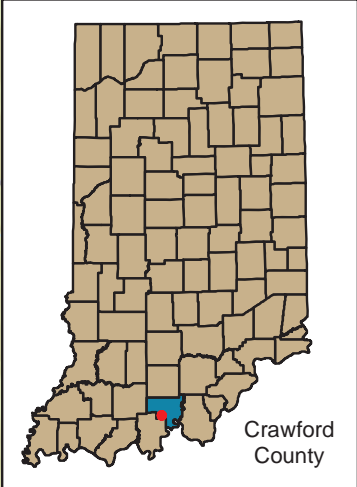
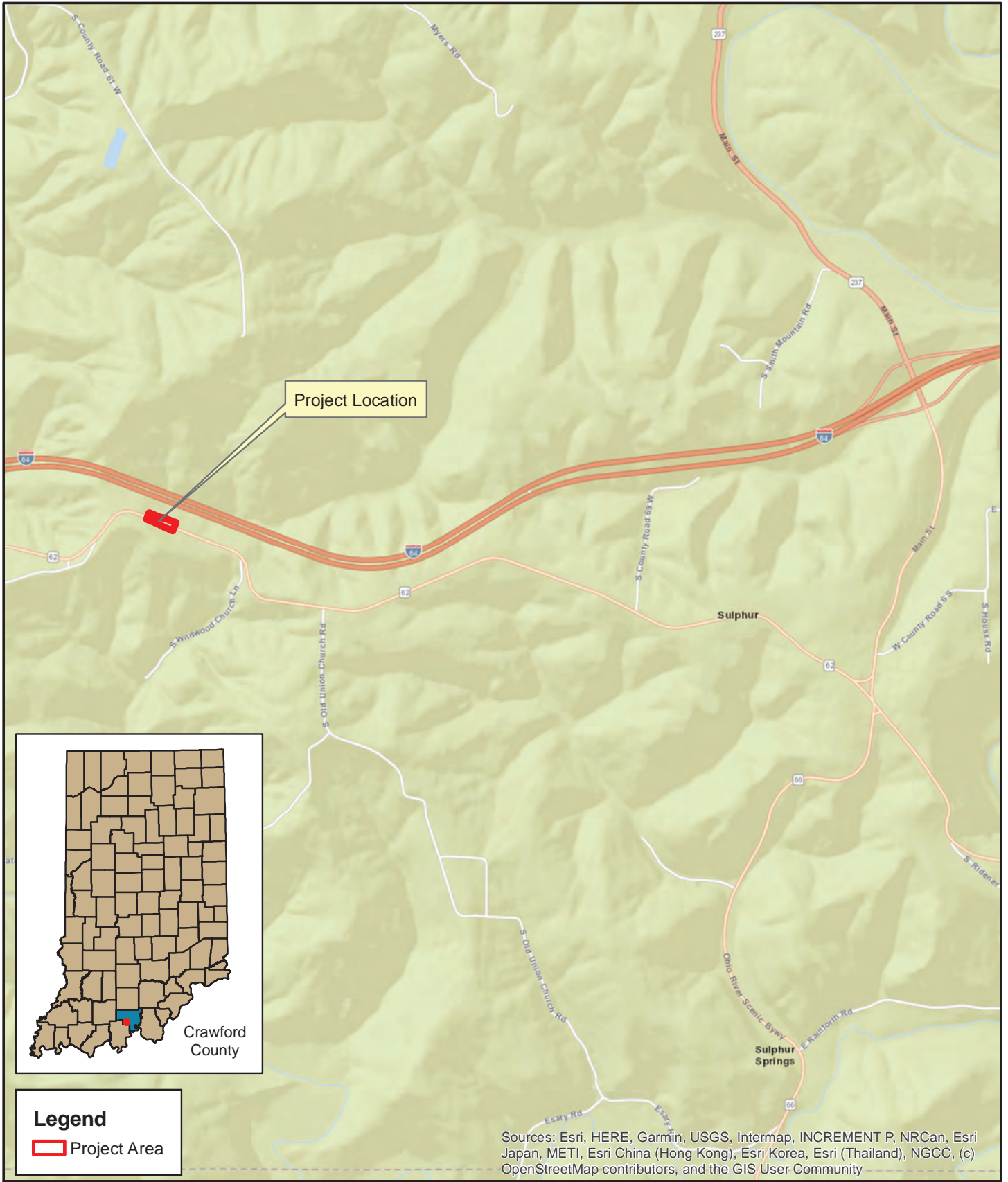
⁹ Section 4(f) use resulting in an Individual, Programmatic, or *de minimis* evaluation. The only exception is a *de minimis* evaluation for historic properties (Effective January 2, 2020). If a historic property *de minimis* and no other use, mark the *None* column.

¹⁰ Hot Spot Analysis and/or MSAT Quantitative Emission Analysis.

* Includes the threatened/endangered species critical habitat

Note: Substantial public or agency controversy may require a higher-level NEPA document.

Categorical Exclusion
Appendix B
Graphics



Crawford County

Legend

Project Area

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

6200 Vogel Road
 Evansville, IN 47715
 Phone: (812) 479-6200
 Fax: (812) 479-6262

General Location Map

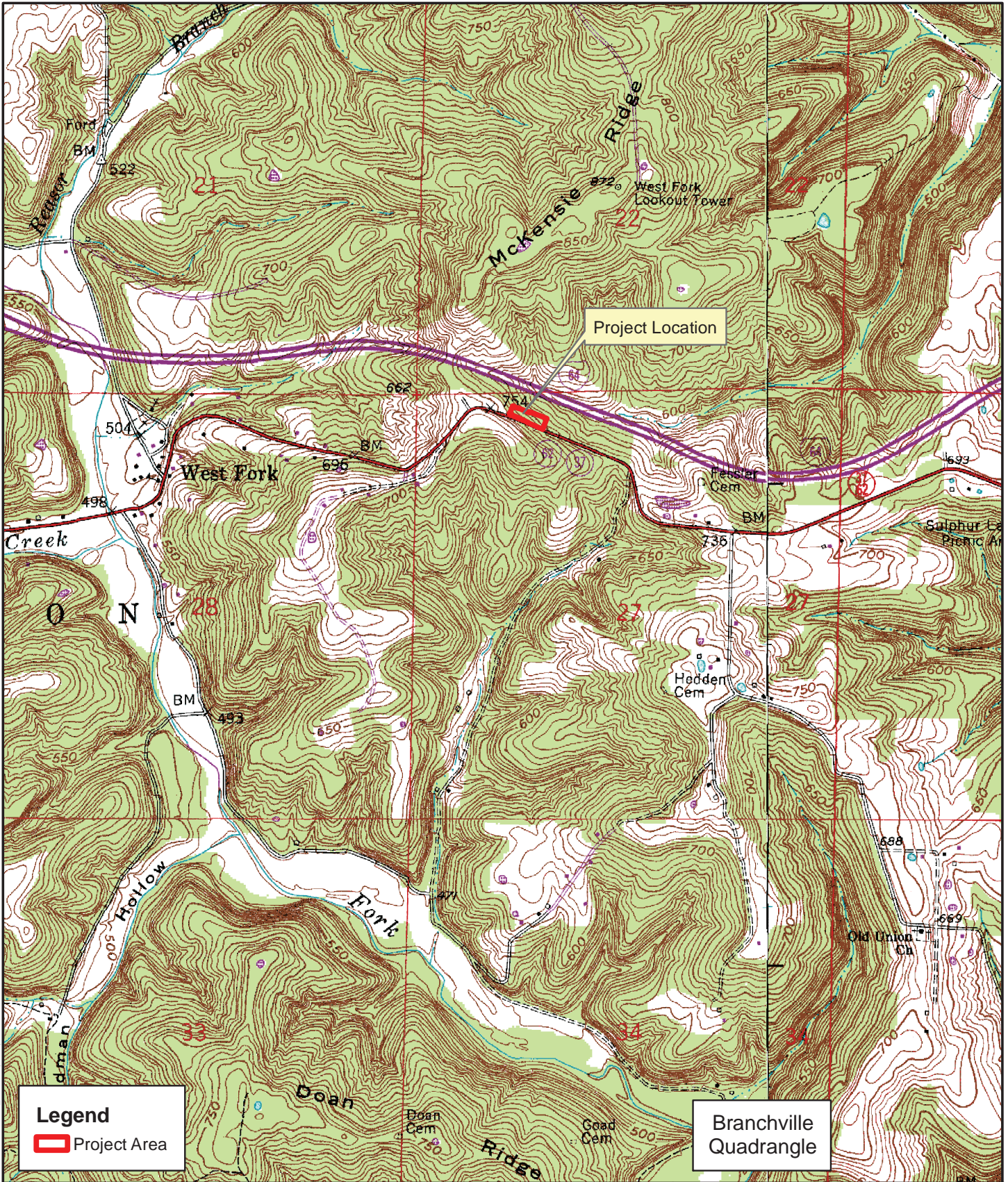
Des No. 1601040

0 0.25 0.5
 Miles

County: Crawford
 Township: Union

SR 62, 2.44 miles W of SR 237
 Slide Correction
 Created: 3/18/2021, P. Parke

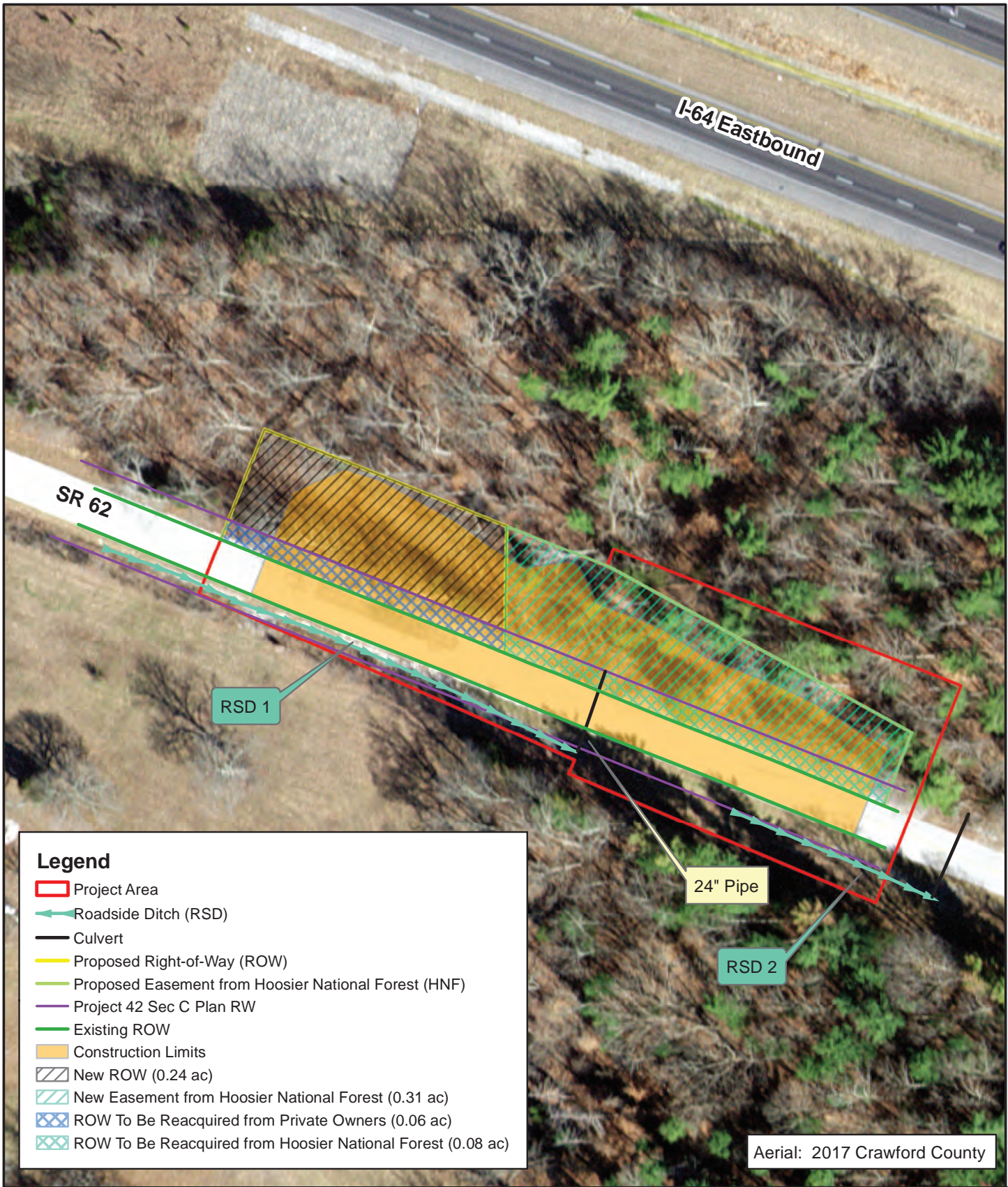
S:\2017\117-0035\117-0035\117-0035\Map\CE_Access\CE_Access\Map\Map.mxd



Legend
 Project Area

Branchville
 Quadrangle

 6200 Vogel Road Evansville, IN 47715 Phone: (812) 479-6200 Fax: (812) 479-6262	USGS Topographic Map Des No. 1601040	County: Crawford Township: Union
	 0 0.25 0.5 Miles	 SR 62, 2.44 miles W of SR 237 Slide Correction Created: 3/18/2021, P. Parke



Legend

- Project Area
- ← Roadside Ditch (RSD)
- Culvert
- Proposed Right-of-Way (ROW)
- Proposed Easement from Hoosier National Forest (HNF)
- Project 42 Sec C Plan RW
- Existing ROW
- Construction Limits
- New ROW (0.24 ac)
- New Easement from Hoosier National Forest (0.31 ac)
- ROW To Be Reacquired from Private Owners (0.06 ac)
- ROW To Be Reacquired from Hoosier National Forest (0.08 ac)


24" Pipe

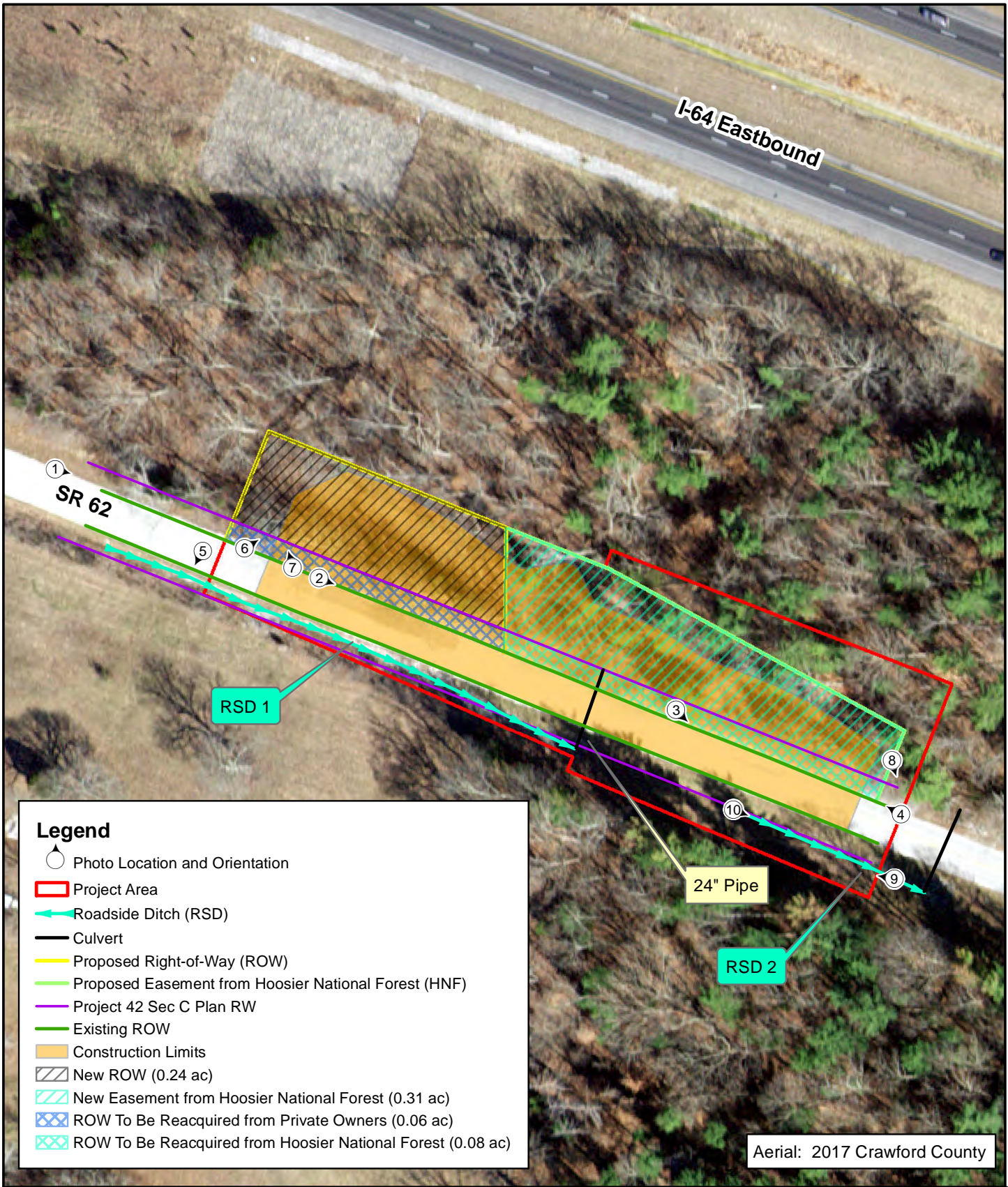
RSD 2

RSD 1

Aerial: 2017 Crawford County

S:_2017\117-0035\HYDRO\Maps\CECE_ProjectMap.mxd

 6200 Vogel Road Evansville, IN 47715 Phone: (812) 479-6200 Fax: (812) 479-6262	Project Map Des. No. 1601040	County: Crawford Township: Union
	0 50 100 Feet <div style="display: inline-block; vertical-align: middle; text-align: center;"> ↑ N </div>	SR 62, 2.44 miles W of SR 237 Slide Correction Created: 5/11/2021, P. Parke



Legend

- Photo Location and Orientation
- Project Area
- Roadside Ditch (RSD)
- Culvert
- Proposed Right-of-Way (ROW)
- Proposed Easement from Hoosier National Forest (HNF)
- Project 42 Sec C Plan RW
- Existing ROW
- Construction Limits
- New ROW (0.24 ac)
- New Easement from Hoosier National Forest (0.31 ac)
- ROW To Be Reacquired from Private Owners (0.06 ac)
- ROW To Be Reacquired from Hoosier National Forest (0.08 ac)

24" Pipe

Aerial: 2017 Crawford County

WFS01\Share_\2017\117-0035\HYE\Enviro\Maps\CECE_PhotoLocationMap.mxd

<p>LOCHMUELLER GROUP</p> <p>6200 Vogel Road Evansville, IN 47715 Phone: (812) 479-6200 Fax: (812) 479-6262</p>	<p>Photo Location Map Des. No. 1601040</p>	<p>County: Crawford Township: Union</p>
	<p>0 50 100 Feet</p>	<p>SR 62, 2.44 miles W of SR 237 Slide Correction Created: 6/24/2021, P. Parke</p>



1. Looking southeast into project area



2. Looking southeast at new temporary overlay in project area



3. Looking southeast at recent temporary overlay in project area



4. Looking northwest across project



5. Looking southwest across SR 62



6. Looking northeast towards proposed new and reacquired ROW



7. Looking northwest towards proposed new and reacquired ROW



8. Looking southeast at SR 62 embankment



9. View of roadside ditch, looking west



10. View of roadside ditch, looking east

PROJECT	DESIGNATION
1601040	1601040
CONTRACT	BRIDGE FILE
R-39919	-----

INDIANA DEPARTMENT OF TRANSPORTATION



KIN PROJECT INFORMATION

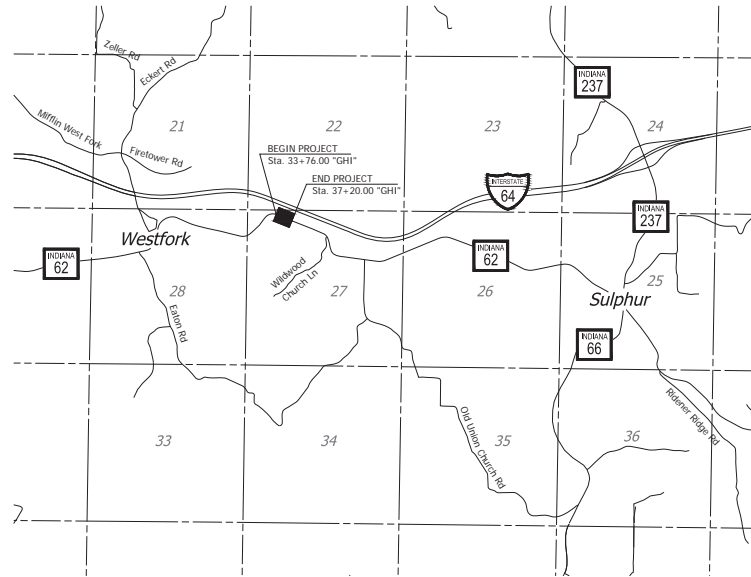
DESIGNATION	PROJECT DESCRIPTION
* 1601032	Slide Correction along SR 62, Approximately 2.0 miles E of SR-237
1601033	Slide Correction along SR 62, Approximately 2.51 miles W of SR-66N
1601034	Slide Correction along SR 62, Approximately 0.88 miles E of SR-37
1601035	Slide Correction along SR 62, Approximately 1.18 miles E of SR-37
1601036	Slide Correction along SR 62, Approximately 2.78 miles E of SR-37
1601037	Slide Correction along SR 62, Approximately 3.40 miles W of SR-237
1601038	Slide Correction along SR 62, Approximately 2.85 miles W of SR-237
1601039	Slide Correction along SR 62, Approximately 2.68 miles W of SR-237
1601041	Slide Correction along SR 62, Approximately 2.10 miles W of SR-237
1601042	Slide Correction along SR 62, Approximately 1.95 miles W of SR-237
1601043	Slide Correction along SR 62, Approximately 0.70 miles E of SR-237

* LEAD DESIGNATION

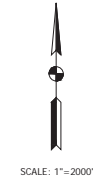
ROAD PLANS

PROJECT NO. 1601040 P.E.
 PROJECT NO. 1601040 R/W
 PROJECT NO. 1601040 CONST.
 ROUTE: S.R. 62 AT: RP 96+36

Slide Correction is Located Along S.R. 62, Approximately 2.44 Miles West of S.R. 237, in Section 27, T35, R1W in Union TWP, Crawford County Indiana.



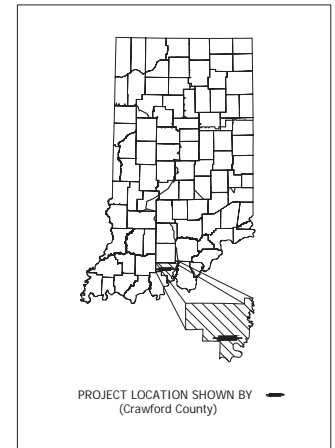
LOCATION MAP



SCALE: 1"=2000'

TRAFFIC DATA	
A.A.D.T. (2021)	317 V.P.D.
A.A.D.T. (2041)	317 V.P.D.
D.H.V. (2041)	32 V.P.H.
DIRECTIONAL DISTRIBUTION	50.47 %
TRUCKS	2.52% A.A.D.T.
	3.13% D.H.V.

DESIGN DATA	
DESIGN SPEED	45 M.P.H.
PROJECT DESIGN CRITERIA	3R (Non-Freeway)
FUNCTIONAL CLASSIFICATION	State Collector
RURAL/URBAN	Rural
TERRAIN	Rolling
ACCESS CONTROL	None



PROJECT LOCATION SHOWN BY (Crawford County)

LATITUDE: 38°14'08" N	LONGITUDE: 86°30'39" W
BRIDGE LENGTH: ----- MI.	
ROADWAY LENGTH: 0.065 MI.	
TOTAL LENGTH: 0.065 MI.	
MAX. GRADE: 8.25 %	
H.U.C. 14	05140104180100 05140104180080

STAGE 3 PLANS
 --/--/21

INDIANA DEPARTMENT OF TRANSPORTATION
 STANDARD SPECIFICATIONS DATED 2022
 TO BE USED WITH THESE PLANS

Plans Prepared By:
LOCHMUELLER GROUP
 6200 Vogel Road
 Evansville, Indiana 47715
 Phone: 812.479.6200
 Toll Free: 800.423.7411

SOIL CONSULTANTS
 EARTH EXPLORATION, INC
 7770 WEST NEW YORK STREET
 INDIANAPOLIS, INDIANA 46214

Preliminary

PLANS PREPARED BY: -----	(---) ----- PHONE NUMBER
CERTIFIED BY: -----	---/---/--- DATE
APPROVED FOR LETTING: -----	----- DATE
INDIANA DEPARTMENT OF TRANSPORTATION	

BRIDGE FILE	
DESIGNATION 1601040	
SURVEY BOOK	
1	of ---
SHEETS	
CONTRACT R-39919	
PROJECT 1601032	

UTILITIES

ELECTRIC

Dubois Rural Electric Cooperative, Inc.
 Greg Dilger
 gdilger@duboisrec.com
 Office: 812-482-1188
 1400 Energy Drive
 Jasper, IN 47547

COMMUNICATIONS

Frontier Communications
 Phil Nash
 phil.nash@ftr.com
 Office: 574-875-3796
 24373 County Road 45
 Elkhart, IN 46516

WATER

Patoka Lake Regional Water & Sewer District
 Josh Dixon
 josh@plrws.net
 Office: 812-678-8325
 2647 N. SR 545
 Dubois, IN 47527



GENERAL NOTES

** REPRESENTS GENERAL NOTES REQUIRED

INDEX

SHEET NO.	DRAWINGS INDEX
1	TITLE
2	INDEX AND GENERAL NOTES
3	TYPICAL CROSS SECTIONS
4	PLAT 1
5	GEOMETRIC TIE-UP
6	MAINTENANCE OF TRAFFIC
7-8	PLAN & PROFILE SHEET
9-13	SOIL BORING LOCATIONS
14	WALL PROFILE
15	DRILLED PIER DETAILS
16	DRILLED PIER INSPECTION RECORD
17	EROSION & SEDIMENT CONTROL PLANS
18	PROPOSED PAVEMENT MARKING DETAILS
19	MISCELLANEOUS TABLES
20	APPROACH & STRUCTURE DATA TABLES
21-30	CROSS SECTIONS

REVISIONS

SHEET NO.	DATE	REVISED

Date: Jun 24, 2021, 8:13am User Name: chris File: S:\307117\0055191\0055191\0055191\0055191\IND01002.dwg

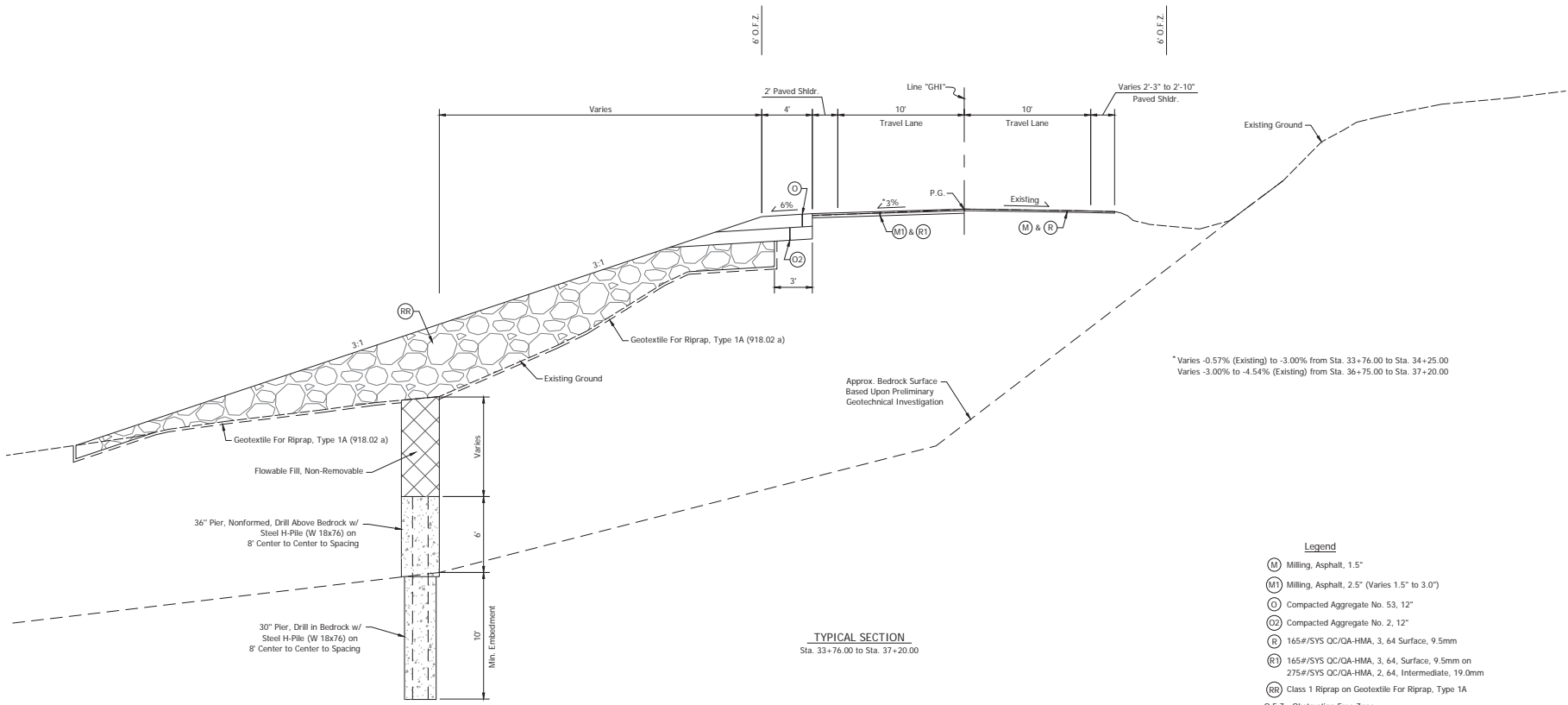
Preliminary

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: NAW	DRAWN: CCW	
CHECKED: JAW	CHECKED: NAW	

INDIANA DEPARTMENT OF TRANSPORTATION
INDEX SHEET

HORIZONTAL SCALE	BRIDGE FILE
No Scale	-
VERTICAL SCALE	DESIGNATION
-	1601040
SURVEY BOOK	SHEETS
-	2 of --
CONTRACT	PROJECT
R-39919	1601032

Date: Jun 24, 2021, 8:33am User Name: chris File: S:\307171\160104\160104\160104\160104\Typical Section.dwg



*Varies -0.57% (Existing) to -3.00% from Sta. 33+76.00 to Sta. 34+25.00
Varies -3.00% to -4.54% (Existing) from Sta. 36+75.00 to Sta. 37+20.00

- Legend**
- (M) Milling, Asphalt, 1.5"
 - (M1) Milling, Asphalt, 2.5" (Varies 1.5" to 3.0")
 - (D) Compacted Aggregate No. 53, 12"
 - (D2) Compacted Aggregate No. 2, 12"
 - (R) 165#/SYS OC/OA-HMA, 3, 64 Surface, 9.5mm
 - (R1) 165#/SYS OC/OA-HMA, 3, 64, Surface, 9.5mm on 275#/SYS OC/OA-HMA, 2, 64, Intermediate, 19.0mm
 - (RR) Class 1 Riprap on Geotextile For Riprap, Type 1A
- O.F.Z. Obstruction Free Zone

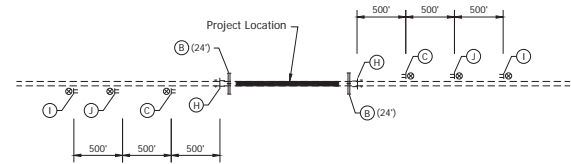
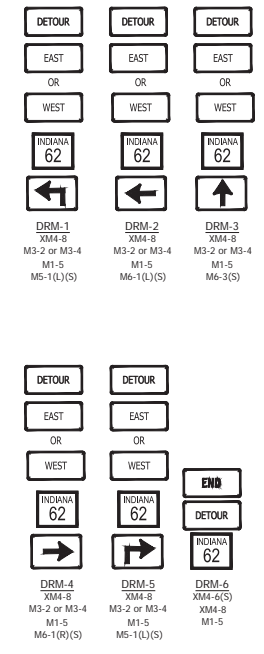
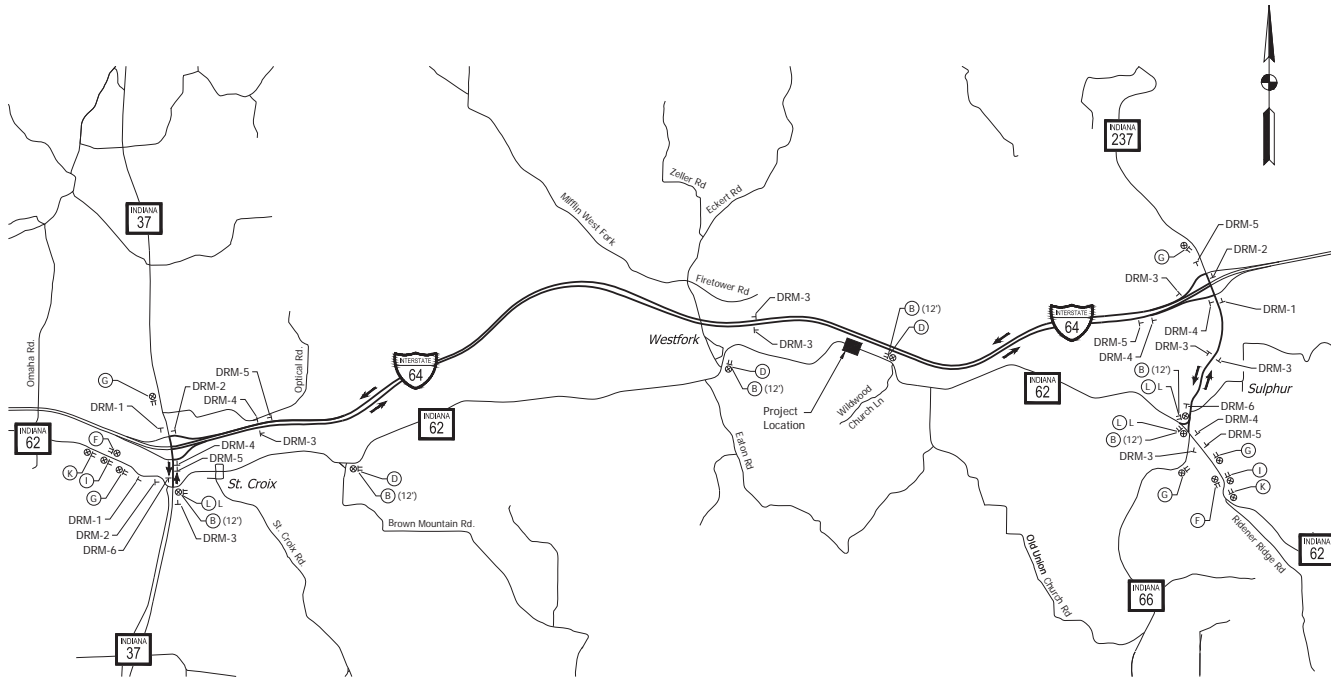
Preliminary

RECOMMENDED FOR APPROVAL _____ DATE _____	
DESIGN ENGINEER	
DESIGNED: NAW	DRAWN: CCW
CHECKED: JAW	CHECKED: NAW

**INDIANA
DEPARTMENT OF TRANSPORTATION**

**TYPICAL SECTION
LINE "GHI"**

HORIZONTAL SCALE	BRIDGE FILE
1/4" = 1'-0"	
VERTICAL SCALE	DESIGNATION
---	1601040
SURVEY BOOK	SHEETS
	3 of --
CONTRACT	PROJECT
R-39919	160103Z



Detour

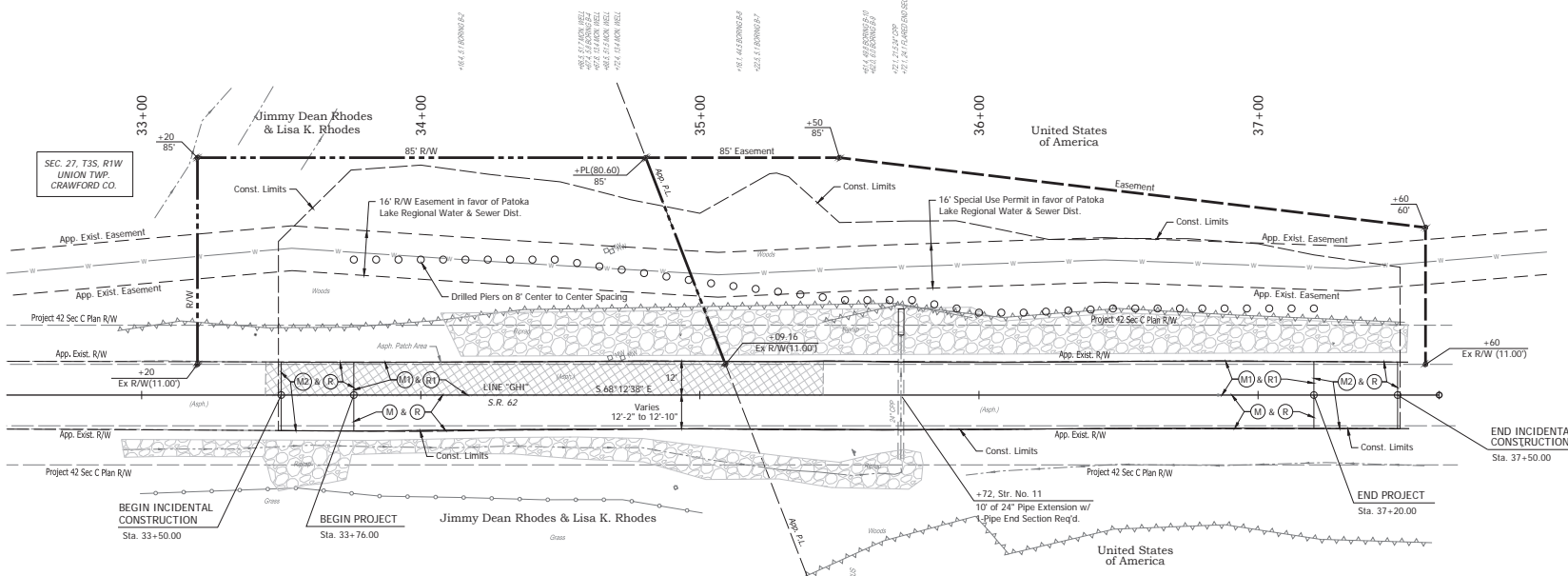
1. Project Area Along S.R. 62 Shall Be Closed To Thru Traffic. Detour Westbound Thru Traffic North On S.R. 237 To I-64, West On I-64 To S.R. 37, & South On S.R. 37 to S.R. 62. Detour Eastbound Traffic North On S.R. 37 To I-64, East On I-64 To S.R. 237, & South On S.R. 237 To S.R. 62.
2. Detour Shall Remain In Place Throughout Construction.
3. Contractor Shall Maintain Temporary Access To All Properties During Construction.
4. Location of Signs Are Approximate & Shall Be Field Verified By Contractor.

MAINTENANCE OF TRAFFIC QUANTITIES						
	Construction Sign, A	Road Closure Sign Assembly	Barricade, III-B	Detour Route Marker Assembly	Portable, Changeable Message Sign	Temporary Pavement Marking 4"
	Each	Each	LFT	Each	Each	LFT
TOTAL	17	8	120	26	4	800

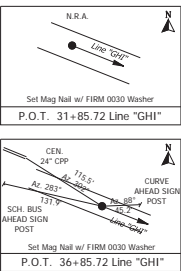
- Legend**
- (B) Std. Barricade, Type III-B (Feet Req'd.)
 - (C) Construction Sign A, XG20-3 (Road Closed 500 Feet.)
 - (D) Road Closure Sign Assembly: R11-3 (Road Closed xx Miles Ahead)
 - (E) Construction Sign A, XG20-2 (End Construction)
 - (F) Construction Sign A, XW20-2 (Detour Ahead)
 - (G) Road Closure Sign Assembly: R11-2 (Road Closed)
 - (H) Construction Sign A, XG20-3 (Road Closed Ahead)
 - (I) Construction Sign A, XG20-3 (Road Closed 1000 Feet)
 - (L) Construction Sign, A, XW2-6-A (Worksite Penalty)
 - (M) Road Closure Sign Assembly: R11-3 (Road Closed X.X Miles Ahead) w/ M4-10 (L or R) (Detour Arrow)
 - T Detour Route Marker
 - TT Construction Sign
 - ⊗ Construction Warning Light, A
 - ⊕ Construction Warning Light, B
 - Std. Barricade
 - Work Area
 - Detour Route

Preliminary

RECOMMENDED FOR APPROVAL _____ DATE _____	DESIGN ENGINEER _____ DATE _____	INDIANA DEPARTMENT OF TRANSPORTATION		HORIZONTAL SCALE	BRIDGE FILE
		MAINTENANCE OF TRAFFIC DETOUR		1"=200'	DESIGNATION
DESIGNED: NAW	DRAWN: CCW	MAINTENANCE OF TRAFFIC DETOUR		VERTICAL SCALE	1601040
CHECKED: JAW	CHECKED: NAW			SURVEY BOOK	SHEETS
				CONTRACT	PROJECT
				R-39919	1601032



SEC. 27, T3S, R1W
UNION TWP.
CRAWFORD CO.



Bm #27001: Rrs In S Side Joint Pole No # 12" Up
Elev. 703.80, N 167347.1 E 784625.6

Bm #27002: Chis X On Top S Most Fh Bolt
Elev. 764.30, N 167686.2 E 783718.3

EARTHWORK SUMMARY (Cu. Yards)						
LOCATION	EXCAVATION	FILL AVAILABLE	BENCHING	BENCHING +25%	FILL	FILL +25%
LINE "GHI"	85	85	0	0	0	0
TOTAL	85	85	0	0	0	0

COMMON EXCAVATION		WASTE	
	85 CYD	Fill Available	85
		Fill Required	- 0
			85

- LEGEND**
- (M) Milling, Asphalt, 1.5"
 - (M1) Milling, Asphalt, 2.5" (Varies 1.5" to 3.0")
 - (M2) Milling, Transition
 - (R) 165#/SYS QC/QA-HMA, 3, 64 Surface, 9.5mm
 - (R1) 165#/SYS QC/QA-HMA, 3, 64, Surface, 9.5mm on 275#/SYS QC/QA-HMA, 2, 64, Intermediate, 19.0mm
 - (X) Exist. Asphalt Patch Area

ALL R/W ON THIS SHEET TO BE AS SHOWN.
ALL R/W ON THIS SHEET DESCRIBED FROM
LINE "GHI" EXCEPT AS SHOWN.

- Notes:**
- 1) Station/Offset Topnotes, Benchmarks, & Right-of-Way Described from Line "GHI".
 - 2) See Geometric Tie-Up Sheet for Line "GHI" Alignment Information.
 - 3) All Stationing off of Line "GHI" Unless Otherwise Noted.

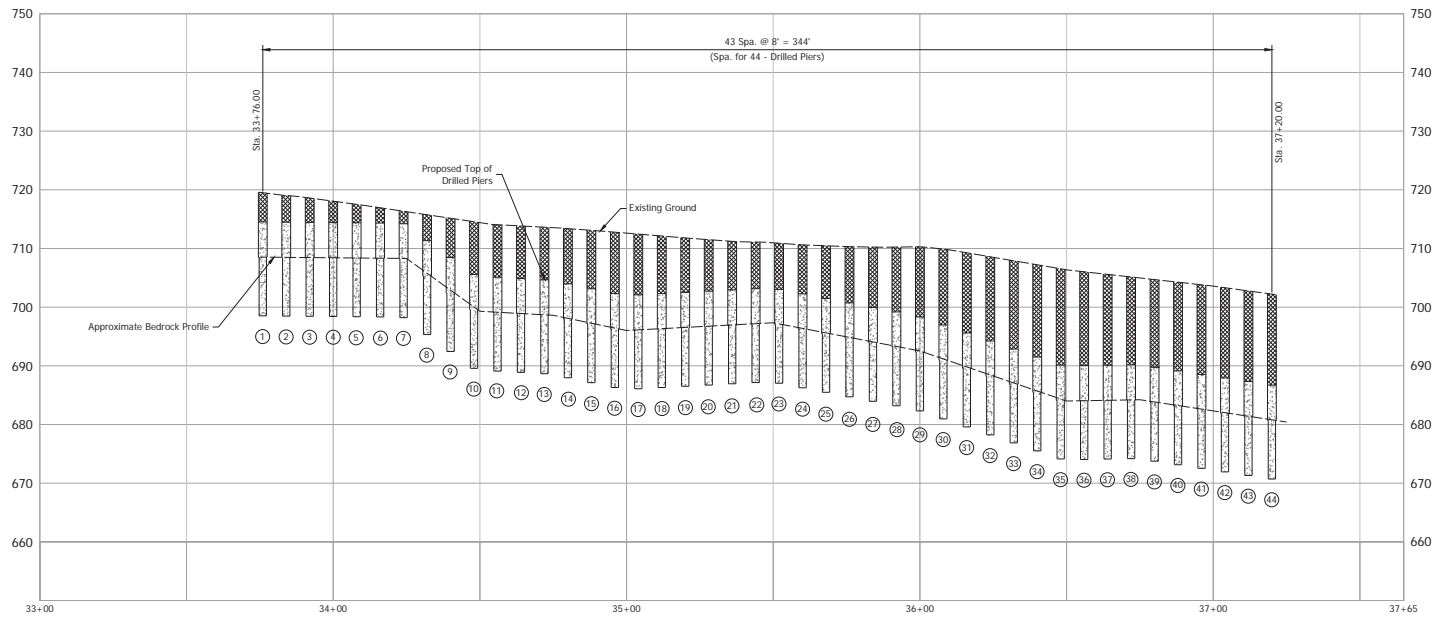
Preliminary

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: NAW	DRAWN: CCW	
CHECKED: JAW	CHECKED: NAW	

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN
LINE "GHI"

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	
VERTICAL SCALE	DESIGNATION
---	1601040
SURVEY BOOK	SHEETS
	7 of ...
CONTRACT	PROJECT
R-39919	1601032



Preliminary

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: G.C.J.	DRAWN: TAM	
CHECKED: ACS	CHECKED: ACS	

INDIANA
DEPARTMENT OF TRANSPORTATION

WALL PROFILE

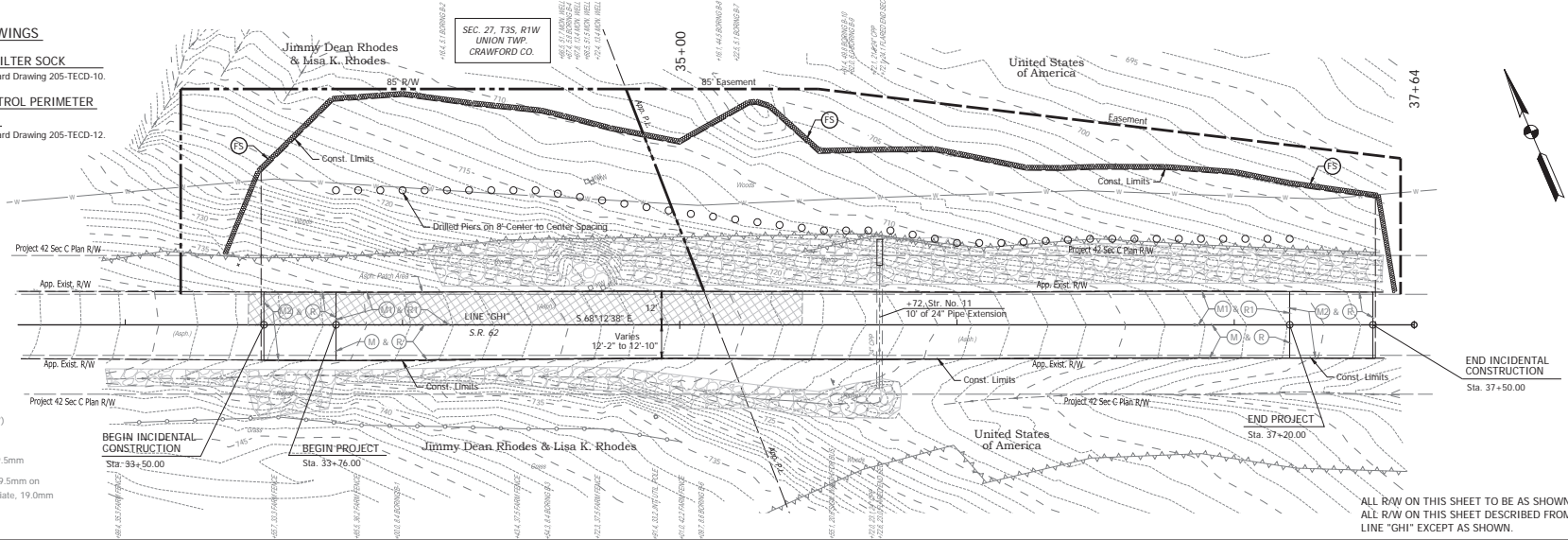
HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	DESIGNATION
VERTICAL SCALE	1601040
1" = 10'	
SURVEY BOOK	SHEET
	14 of ...
CONTRACT	PROJECT
R-39919	1601032

STANDARD INDOT DRAWINGS

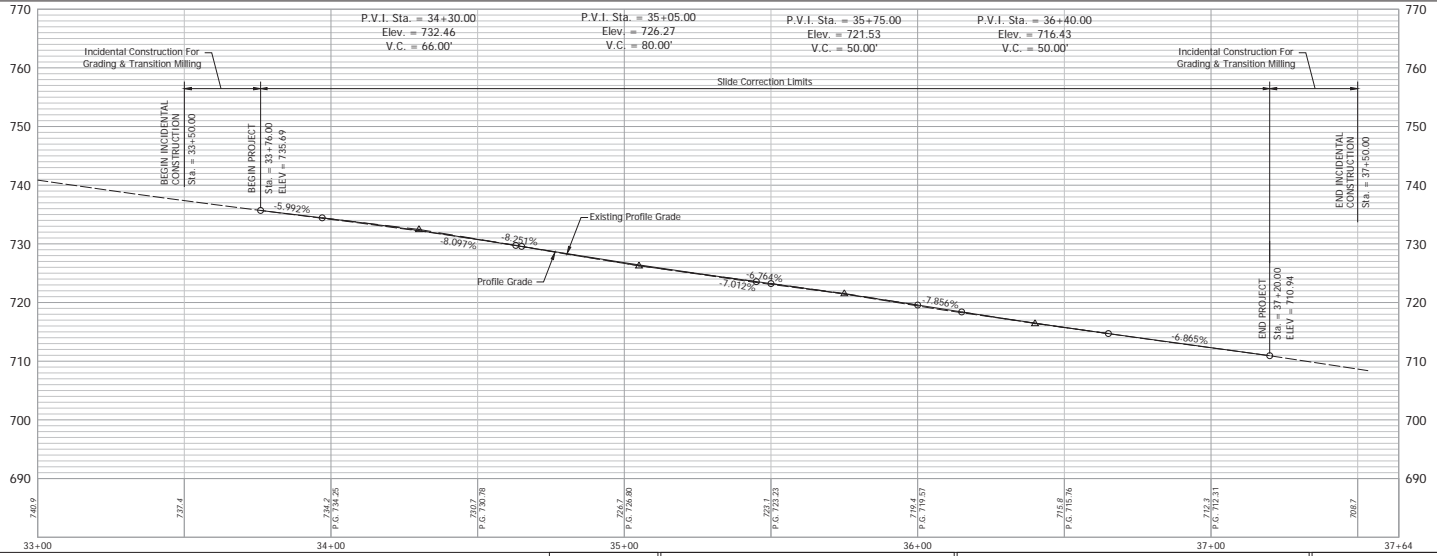
- (FS) PERIMETER PROTECTION, FILTER SOCK
Installation shall be per INDOT Standard Drawing 205-TECD-10.
- (CE) TEMPORARY EROSION CONTROL PERIMETER CONSTRUCTION ENTRANCE
Installation shall be per INDOT Standard Drawing 205-TECD-12.

LEGEND
(FS) Filter Sock

- LEGEND**
- (M) Milling, Asphalt, 1.5"
 - (M1) Milling, Asphalt, 2.5" (Varies 1.5" to 3.0")
 - (M2) Milling, Transition
 - (R) 165#/SYS QC/OA-HMA, 3, 64 Surface, 9.5mm
 - (R1) 165#/SYS QC/OA-HMA, 3, 64, Surface, 9.5mm on 275#/SYS QC/OA-HMA, 2, 64, Intermediate, 19.0mm



ALL R/W ON THIS SHEET TO BE AS SHOWN.
ALL R/W ON THIS SHEET DESCRIBED FROM LINE "GHI" EXCEPT AS SHOWN.



- Notes:**
- 1) Station/Offset Topnotes, Benchmarks, & Right-of-Way Described from Line "GHI".
 - 2) See Geometric Tie-Up Sheet for Line "GHI" Alignment Information.
 - 3) All Stationing off of Line "GHI" Unless Otherwise Noted.

Preliminary

RECOMMENDED FOR APPROVAL		DESIGN ENGINEER		DATE		INDIANA DEPARTMENT OF TRANSPORTATION		HORIZONTAL SCALE 1"=20'		BRIDGE FILE	
DESIGNED: NAW		DRAWN: CCW		CHECKED: NAW		LINE "GHI"		VERTICAL SCALE 1"=10'		DESIGNATION 1601040	
CHECKED: JAW		CHECKED: NAW						SURVEY BOOK		SHEETS	
								CONTRACT R-39919		17 of ...	
										PROJECT 1601032	

Categorical Exclusion
Appendix C
Early Coordination



January 14, 2020

Sample Early Coordination Letter (ECL)

Re: Des. No. 1601040
Slide Correction Project
State Project
State Road (SR) 62, Approximately 2.44 miles W of SR 237 at RP 96.36
Crawford County, Indiana

Dear XXXX,

The Federal Highway Administration (FHWA) and the Indiana Department of Transportation (INDOT) Vincennes District propose to proceed with a slide correction project on SR 62, 2.44 miles west of SR 237 at RP 96.36 (Des. No. 1601040).

This letter is part of the early coordination phase of the environmental review. At this time, we are requesting comments from your area of expertise regarding any possible environmental effects (social and natural) associated with this project. **Please use the above Des. No. and project description in your reply.** Your comments will be incorporated into the formal environmental study. Your cooperation in this endeavor is appreciated.

Project Location and Existing Conditions

The proposed project is located on SR 62 in Crawford County, Indiana, approximately 2.44 miles west of SR 237 at RP 96.36. More specifically, the project is located in Section 27, Township 3 south, and Range 1 west in Union Township as depicted on the Branchville U.S. Geological Survey 1:24,000 scale quadrangle. Adjacent land uses consist of scattered rural residences, agricultural lands, and wooded areas.

Within the project area, SR 62 is functionally classified as a rural major collector. The typical cross section consists of two 10-foot travel lanes accompanied by 2-foot paved shoulders. The length of the project is approximately 310-feet. Please see attachments for maps and photographs of the proposed project area.

Draft Purpose and Need

The need for this project is due to the land slide occurring along the westbound lane of SR 62, causing the pavement and roadside embankment to deteriorate and fail. The pavement failure is occurring in both lanes but is more prominent in the westbound lane. The purpose of the project is to correct the slope failure, resulting in improved safety and mobility along SR 62.

Proposed Project

The proposed project is a slide correction on SR 62, 2.44 miles west of SR 237 at RP 96.36 in Crawford County. The slide will be corrected by constructing a 175-foot long riprap buttress fill with cantilevered stub pile wall on 8-foot center to center spacing. Additional work outside the slide correction length will include shoulder widening, embankment construction, and Hot Mix Asphalt (HMA) mill and overlay construction. An existing 24-inch culvert is located within the project limits, but no work is anticipated to be required as part of the project.

6200 Vogel Road
Evansville, Indiana 47715
PHONE: 812.479.6200 • TOLL FREE: 800.423.7411

The maintenance of traffic (MOT) will be a detour which will utilize SR 37, I-64, and SR 237. It is anticipated the project will be bundled with 11 other slide correction projects along SR 62, thus access will need to be maintained for local traffic. It is anticipated multiple project sites will not be allowed to be constructed concurrently to maintain access for local traffic.

Construction is anticipated to begin in Fiscal Year (FY) 2021.

Right-of-Way (ROW)

This project is anticipated to require approximately 0.4 acre of permanent ROW; no temporary ROW is anticipated to be required. Additionally, approximately 0.2 acre of easement is anticipated to be required from the Hoosier National Forest (United States of America). Tree clearing is anticipated within the proposed ROW.

Environmental Resources

A combined Red Flag Investigation (RFI) was performed within a 0.5-mile radius of the project area (Des. No. 1601040) and two additional slide correction project areas on SR 62 (Des. No. 1601041 and Des. No. 1601042). Please note that this early coordination is only for Des. No. 1601040; early coordination for Des. No. 1601041 and Des. No. 1601042 will be completed separately. Several "Red Flags" were identified within the 0.5-mile search radius; however, not all will impact the proposed project. The project area is within the Hoosier National Forest, a managed land. Due to the proximity of culverts, it is likely that additional water resources, such as unnamed tributaries, regulated drains, wetlands, and roadside ditches are located in the project area. A Waters of the US Report will be prepared. This project is located within the Karst Memorandum of Understanding Potential Karst Features Region. A Karst Report will be prepared. Coordination with INDOT Ecology and Waterway Permitting will occur.

Section 106

The National Register of Historic Places (National Register) and the Indiana Register of Historic Sites and Structures (State Register) were reviewed using the State Historic Architectural and Archaeological Research Database (SHAARD) and SHAARD Geographic Information Systems (GIS). No National Register-listed resources were identified within the project vicinity. The *Crawford County Interim Report* (2006) was examined, and it was determined that there are no previously surveyed properties within the vicinity of the project area. The Indiana Historic Bridge Inventory Volume 2: Listing of Historic and Non-Historic Bridges (February 2009) by Mead & Hunt was reviewed. No bridges listed in or eligible for listing in the National Register are located near the project area. No cemeteries are located within the vicinity of the project area. As the project area includes undisturbed soils, an archaeological field review is recommended. Section 106 coordination with INDOT Cultural Resources Office, the State Historic Preservation Officer (SHPO), and other identified consulting parties will be conducted.

Range-Wide Informal Programmatic Consultation

Crawford County is within the range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (*Myotis septentrionalis*). The U.S. Fish and Wildlife Service (USFWS) Range-wide Programmatic Informal Consultation for the Indiana bat and northern long-eared bat (NLEB) will be completed for this project.

Early Coordination

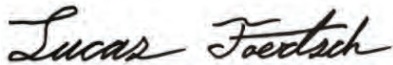
This letter is part of the early coordination review process. You are asked to review this information and provide any comments you may have relative to anticipated impacts of the project on areas in which you have jurisdiction or special expertise. We will incorporate your comments into a study of the project's

environmental impacts. To facilitate the development of this project, you are asked to reply within **30 calendar days** of receipt of this letter. If no response is received by that date, it will be assumed you have no comments at the present time.

If you have any questions regarding this project, please feel free to contact me at (812) 479-6200 or at Lfoertsch@lochgroup.com. Additionally, should you want to contact the sponsor for this project, INDOT Vincennes District, please contact the Project Manager, Kyanna Moon at (812) 203-2009 or kmoon1@indot.IN.gov.

Thank you in advance for your input.

Sincerely,



Lucas Foertsch
Environmental Biologist
Lochmueller Group, Inc.

Attachments:

NOTE: Attachments have been removed to avoid duplication and reduce file size

- General Location Map
- USGS Topographic Map
- Red Flag Investigation Maps
- Photo Location Map
- Photographs
- Preliminary Design Plans

Distribution List:

- FHWA – Indiana Division (electronic submission)
- USFWS, Bloomington Field Office (electronic submission)
- Natural Resources Conservation Service, Indianapolis Office (electronic submission)
- U.S. Housing and Urban Development (electronic submission)
- National Park Service
- U.S Forest Service, Hoosier National Forest (electronic Submission)
- IDNR, Division of Fish and Wildlife (electronic submission)
- IDEM (online submission)
- IDEM, Groundwater Section (online submission)
- Indiana Geological Survey (online submission)
- INDOT, Office of Public Involvement (electronic submission)
- INDOT, Vincennes District (electronic submission)
- U.S. Army Corps of Engineers, Louisville District (electronic submission)
- Crawford County Highway Department
- Crawford County Council
- Crawford County Commissioners

- Crawford County Community Schools
- Crawford County Surveyor (electronic submission)
- Crawford County EMA (electronic submission)
- Crawford County Sheriff's Department
- Leavenworth Fire Department
- Crawford County Soil and Water Conservation District



INDIANA DEPARTMENT OF TRANSPORTATION

February 17, 2021

Sample Addendum Early Coordination Letter

«Name»
«Title»
«Address1»
«Address2»
«City», «State» «Zip»

Re: Addendum to Early Coordination Letter
Des. No. 1601040
Slide Correction Project
State Project
State Road (SR) 62, Approximately 2.44 miles W of SR 237
Crawford County, Indiana

Dear «Salu»,

The Federal Highway Administration (FHWA) and the Indiana Department of Transportation (INDOT) Vincennes District are proceeding with a slide correction project on SR 62, 2.44 miles west of SR 237 (Des. No. 1601040). Early coordination for Des. No. 1601040 was initiated on January 14, 2020. This addendum is being sent to recipients of the Des. No. 1601040 early coordination package to update the *Proposed Project* and *Right of Way (ROW)* sections. The project area has been expanded and additional ROW will be necessary.

This letter is part of the early coordination phase of the environmental review. At this time, we are requesting comments from your area of expertise regarding any possible environmental effects (social and natural) associated with this project. **Please use the above Des. No. and project description in your reply.** Your comments will be incorporated into the formal environmental study. Your cooperation in this endeavor is appreciated.

Proposed Project

The proposed project is a slide correction on SR 62, 2.44 miles west of SR 237 in Crawford County. The slide will be corrected by constructing a row of cantilevered drilled shafts with a center-to-center spacing of 8-feet for 325 feet along the westbound lane of SR 62. The shafts will be drilled to a depth of 10 feet below the bedrock surface and will have a diameter of 2.5 feet. Above the bedrock, the pier diameter will be 3 feet and extend 6 feet above the bedrock surface. The entire shaft depth will be filled with Class A concrete and a steel H-pile will be placed in the shaft. The area above the concrete shaft with the H-Pile will be backfilled with flowable fill. Riprap will be placed at a 3 to 1 slope along the westbound lane. The roadway will be milled and overlaid for a length of 325 feet along the slide correction to repair damaged pavement. Mill and Hot Mix Asphalt (HMA) overlay depth will be 1.5 inches. An existing 24-inch culvert is located within the project limits but no work is anticipated to be required as part of the project.

The maintenance of traffic (MOT) will be a detour which will utilize SR 37, I-64, and SR 237. It is anticipated the project will be bundled with 11 other slide correction projects along SR 62, thus access will need to be maintained for local traffic. It is anticipated multiple project sites will not be allowed to be constructed concurrently to maintain access for local traffic.

Construction is anticipated to begin in Fiscal Year (FY) 2022.

Right-of-Way (ROW)

This project is anticipated to require approximately 0.24 acre of permanent ROW and 0.14 acre of re-acquired ROW; no temporary ROW is anticipated to be required. Additionally, approximately 0.31 acre of easement is anticipated to be required from the Hoosier National Forest (United States of America). Tree clearing (0.4 acre) is anticipated within the proposed ROW.

Early Coordination

This letter is part of the early coordination review process. You are asked to review this information and provide any comments you may have relative to anticipated impacts of the project on areas in which you have jurisdiction or special expertise. We will incorporate your comments into a study of the project's environmental impacts. To facilitate the development of this project, you are asked to reply within **30 calendar days** of receipt of this letter. If no response is received by that date, it will be assumed you have no comments at the present time.

If you have any questions regarding this project, please feel free to contact me at (812) 479-6200 or at PParke@lochgroup.com. Additionally, should you want to contact the sponsor for this project, INDOT Vincennes District, please contact the Project Manager, Kyanna Wheeler at (812) 203-2009 or kwheeler@indot.IN.gov.

Thank you in advance for your input.

Sincerely,

Payton Parke
Environmental Specialist
Lochmueller Group, Inc.

Attachments:

Note: Attachments have been removed to avoid duplication and reduce file size

- General Location Map
- USGS Topographic Map
- Project Area Map
- Photographs
- Preliminary Plan Sheet

Distribution List:

- FHWA – Indiana Division (electronic submission)
- USFWS, Bloomington Field Office (electronic submission)
- Natural Resources Conservation Service, Indianapolis Office (electronic submission)
- U.S. Housing and Urban Development (electronic submission)
- National Park Service
- U.S Forest Service, Hoosier National Forest (electronic Submission)
- IDNR, Division of Fish and Wildlife (electronic submission)
- IDEM (online submission)
- IDEM, Groundwater Section (online submission)
- Indiana Geological and Water Survey (online submission)
- INDOT, Vincennes District (electronic submission)
- U.S. Army Corps of Engineers, Louisville District (electronic submission)
- Crawford County Highway Department (electronic submission)

- Crawford County Council
- Crawford County Commissioners
- Crawford County Community Schools
- Crawford County Surveyor (electronic submission)
- Crawford County EMA (electronic submission)
- Crawford County Sheriff's Department
- Leavenworth Fire Department
- Crawford County Soil and Water Conservation District



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Indiana Ecological Services Field Office

620 South Walker Street

Bloomington, IN 47403-2121

Phone: (812) 334-4261 Fax: (812) 334-4273

<http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html>



In Reply Refer To:

March 02, 2021

Consultation Code: 03E12000-2020-SLI-0558

Event Code: 03E12000-2021-E-04175

Project Name: Des 1601040 SR 62 at RP 96.36 Slide Project Crawford County

Subject: Updated list of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The attached species list identifies any federally threatened, endangered, proposed and candidate species that may occur within the boundary of your proposed project or may be affected by your proposed project. The list also includes designated critical habitat if present within your proposed project area or affected by your project. This list is provided to you as the initial step of the consultation process required under section 7(c) of the Endangered Species Act, also referred to as Section 7 Consultation.

Section 7 of the Endangered Species Act of 1973 requires that actions authorized, funded, or carried out by Federal agencies not jeopardize federally threatened or endangered species or adversely modify designated critical habitat. To fulfill this mandate, Federal agencies (or their designated non-federal representative) must consult with the Service if they determine their project "may affect" listed species or critical habitat.

Under 50 CFR 402.12(e) (the regulations that implement Section 7 of the Endangered Species Act) the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally. You may verify the list by visiting the ECOS-IPaC website <http://ecos.fws.gov/ipac/> at regular intervals during project planning and implementation and completing the same process you used to receive the attached list. As an alternative, you may contact this Ecological Services Field Office for updates.

Please use the species list provided and visit the U.S. Fish and Wildlife Service's Region 3 Section 7 Technical Assistance website at - <http://www.fws.gov/midwest/endangered/section7/s7process/index.html>. This website contains step-by-step instructions which will help you determine if your project will have an adverse effect on listed species and will help lead you through the Section 7 process.

For all **wind energy projects** and **projects that include installing towers that use guy wires or are over 200 feet in height**, please contact this field office directly for assistance, even if no federally listed plants, animals or critical habitat are present within your proposed project or may be affected by your proposed project.

Although no longer protected under the Endangered Species Act, be aware that bald eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*) and Migratory Bird Treaty Act (16 U.S.C. 703 *et seq.*), as are golden eagles. Projects affecting these species may require measures to avoid harming eagles or may require a permit. If your project is near an eagle nest or winter roost area, see our Eagle Permits website at <http://www.fws.gov/midwest/midwestbird/EaglePermits/index.html> to help you determine if you can avoid impacting eagles or if a permit may be necessary.

We appreciate your concern for threatened and endangered species. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Indiana Ecological Services Field Office

620 South Walker Street

Bloomington, IN 47403-2121

(812) 334-4261

Project Summary

Consultation Code: 03E12000-2020-SLI-0558
Event Code: 03E12000-2021-E-04175
Project Name: Des 1601040 SR 62 at RP 96.36 Slide Project Crawford County
Project Type: TRANSPORTATION
Project Description: The proposed project is a slide correction on SR 62, 2.44 miles west of SR 237 at RP 96.36 in Crawford County. The slide will be corrected by constructing a row of cantilevered drilled shafts with a center to center spacing of 8' for 325' along SR 62. The shafts will be drilled to a depth of 10' below the bedrock surface and will have a diameter of 2.5'. Above the bedrock, the pier diameter will be 3' and extend 6' above the bedrock surface. The entire shaft depth will be filled with Class A concrete and a steel H-pile will be placed in the shaft. The area above the concrete shaft with the H-Pile will be backfilled with flowable fill. This alternative also includes the placement of riprap at a 3 to 1 slope along the westbound lane of SR 62. Additional work outside the slide correction length will include shoulder widening, embankment construction, and Hot Mix Asphalt (HMA) mill and overlay construction of the roadway for a length of 325' along the slide correction to repair damaged pavement. An existing 24" culvert is located within the project limits and will be extended by 10" to accommodate the proposed widening of the shoulder. Adjacent land use consists of mature woodlands as well as residences. This is considered suitable summer habitat. 0.40 acre of tree clearing is expected. Dominate species to be removed include Redbud, Dogwood, and Sugar Maple. The timing of tree clearing will be October to March (outside of the active season). A review of the USFWS database by INDOT Vincennes District staff on March 2, 2021 did not indicate the presence of endangered bat species in or within 0.5-mile of the project area. A Bridge/Structure Assessment Form dated October 15th, 2019 states no evidence of bats was found. The timing of work will be from Spring 2022 to Spring 2024. No temporary or permanent lighting is anticipated.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@38.23566155,-86.51033650436992,14z>



Counties: Crawford County, Indiana

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Gray Bat <i>Myotis grisescens</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6329	Endangered
Indiana Bat <i>Myotis sodalis</i> There is final critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> ▪ Incidental take of the NLEB is not prohibited here. Federal agencies may consult using the 4(d) rule streamlined process. Transportation projects may consult using the programmatic process. See www.fws.gov/midwest/endangered/mammals/nleb/index.html Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Indiana Bat <i>Myotis sodalis</i> https://ecos.fws.gov/ecp/species/5949#crithab	Final



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Indiana Ecological Services Field Office

620 South Walker Street

Bloomington, IN 47403-2121

Phone: (812) 334-4261 Fax: (812) 334-4273

<http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html>



In Reply Refer To:

March 11, 2021

Consultation code: 03E12000-2020-I-0558

Event Code: 03E12000-2021-E-04416

Project Name: Des 1601040 SR 62 at RP 96.36 Slide Project Crawford County

Subject: Concurrence verification letter for the 'Des 1601040 SR 62 at RP 96.36 Slide Project Crawford County' project under the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

To whom it may concern:

The U.S. Fish and Wildlife Service (Service) has received your request to verify that the **Des 1601040 SR 62 at RP 96.36 Slide Project Crawford County** (Proposed Action) may rely on the concurrence provided in the February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C 1531 *et seq.*).

Based on the information you provided (Project Description shown below), you have determined that the Proposed Action is within the scope and adheres to the criteria of the PBO, including the adoption of applicable avoidance and minimization measures, and may affect, but is not likely to adversely affect (NLAA) the endangered Indiana bat (*Myotis sodalis*) and/or the threatened Northern long-eared bat (*Myotis septentrionalis*).

The Service has 14 calendar days to notify the lead Federal action agency or designated non-federal representative if we determine that the Proposed Action does not meet the criteria for a NLAA determination under the PBO. If we do not notify the lead Federal action agency or designated non-federal representative within that timeframe, you may proceed with the Proposed Action under the terms of the NLAA concurrence provided in the PBO. This verification period allows Service Field Offices to apply local knowledge to implementation of the PBO, as we may identify a small subset of actions having impacts that were unanticipated. In such instances, Service Field Offices may request additional information that is necessary to verify inclusion of the proposed action under the PBO.

For Proposed Actions that include bridge/structure removal, replacement, and/or maintenance activities: If your initial bridge/structure assessments failed to detect Indiana bats, but you later detect bats during construction, please submit the Post Assessment Discovery of Bats at Bridge/Structure Form (User Guide Appendix E) to this Service Office. In these instances, potential incidental take of Indiana bats may be exempted provided that the take is reported to the Service.

If the Proposed Action is modified, or new information reveals that it may affect the Indiana bat and/or Northern long-eared bat in a manner or to an extent not considered in the PBO, further review to conclude the requirements of ESA Section 7(a)(2) may be required. If the Proposed Action may affect any other federally-listed or proposed species, and/or any designated critical habitat, additional consultation between the lead Federal action agency and this Service Office is required. If the proposed action has the potential to take bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act may also be required. In either of these circumstances, please contact this Service Office.

The following species may occur in your project area and **are not** covered by this determination:

- Gray Bat *Myotis grisescens* Endangered

Project Description

The following project name and description was collected in IPaC as part of the endangered species review process.

Name

Des 1601040 SR 62 at RP 96.36 Slide Project Crawford County

Description

The proposed project is a slide correction on SR 62, 2.44 miles west of SR 237 at RP 96.36 in Crawford County. The slide will be corrected by constructing a row of cantilevered drilled shafts with a center to center spacing of 8' for 325' along SR 62. The shafts will be drilled to a depth of 10' below the bedrock surface and will have a diameter of 2.5'. Above the bedrock, the pier diameter will be 3' and extend 6' above the bedrock surface. The entire shaft depth will be filled with Class A concrete and a steel H-pile will be placed in the shaft. The area above the concrete shaft with the H-Pile will be backfilled with flowable fill. This alternative also includes the placement of riprap at a 3 to 1 slope along the westbound lane of SR 62. Additional work outside the slide correction length will include shoulder widening, embankment construction, and Hot Mix Asphalt (HMA) mill and overlay construction of the roadway for a length of 325' along the slide correction to repair damaged pavement. An existing 24" culvert is located within the project limits and will be extended by 10" to accommodate the proposed widening of the shoulder. Adjacent land use consists of mature woodlands as well as residences. This is considered suitable summer habitat. 0.40 acre of tree clearing is expected. Dominate species to be removed include Redbud, Dogwood, and Sugar Maple. The timing of tree clearing will be October to March (outside of the active season). A review of the USFWS database by INDOT Vincennes District staff on March 2, 2021 did not indicate the presence of endangered bat species in or within 0.5-mile of the project area. A Bridge/Structure Assessment Form dated October 15th, 2019 states no evidence of bats was found. The timing of work will be from Spring 2022 to Spring 2024. No temporary or permanent lighting is anticipated.

Determination Key Result

Based on your answers provided, this project(s) may affect, but is not likely to adversely affect the endangered Indiana bat and/or the threatened Northern long-eared bat, therefore, consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required. However, also based on your answers provided, this project may rely on the concurrence provided in the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

Qualification Interview

1. Is the project within the range of the Indiana bat^[1]?

[1] See [Indiana bat species profile](#)

Automatically answered

Yes

2. Is the project within the range of the Northern long-eared bat^[1]?

[1] See [Northern long-eared bat species profile](#)

Automatically answered

Yes

3. Which Federal Agency is the lead for the action?

A) *Federal Highway Administration (FHWA)*

4. Are *all* project activities limited to non-construction^[1] activities only? (examples of non-construction activities include: bridge/abandoned structure assessments, surveys, planning and technical studies, property inspections, and property sales)

[1] Construction refers to activities involving ground disturbance, percussive noise, and/or lighting.

No

5. Does the project include *any* activities that are **greater than** 300 feet from existing road/rail surfaces^[1]?

[1] Road surface is defined as the actively used [e.g. motorized vehicles] driving surface and shoulders [may be pavement, gravel, etc.] and rail surface is defined as the edge of the actively used rail ballast.

No

6. Does the project include *any* activities **within** 0.5 miles of a known Indiana bat and/or NLEB hibernaculum^[1]?

[1] For the purpose of this consultation, a hibernaculum is a site, most often a cave or mine, where bats hibernate during the winter (see suitable habitat), but could also include bridges and structures if bats are found to be hibernating there during the winter.

No

7. Is the project located **within** a karst area?

Yes

8. Will the project include *any* type of activity that could impact a **known** hibernaculum^[1], or impact a karst feature (e.g., sinkhole, losing stream, or spring) that could result in effects to a **known** hibernaculum?

[1] For the purpose of this consultation, a hibernaculum is a site, most often a cave or mine, where bats hibernate during the winter (see suitable habitat), but could also include bridges and structures if bats are found to be hibernating there during the winter.

No

9. Is there *any* suitable^[1] summer habitat for Indiana Bat or NLEB **within** the project action area^[2]? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

[1] See the Service's [summer survey guidance](#) for our current definitions of suitable habitat.

[2] The action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR Section 402.02). Further clarification is provided by the [national consultation FAQs](#).

Yes

10. Will the project remove *any* suitable summer habitat^[1] and/or remove/trim any existing trees **within** suitable summer habitat?

[1] See the Service's [summer survey guidance](#) for our current definitions of suitable habitat.

Yes

11. Will the project clear more than 20 acres of suitable habitat per 5-mile section of road/rail?

No

12. Have presence/probable absence (P/A) summer surveys^{[1][2]} been conducted^{[3][4]} **within** the suitable habitat located within your project action area?

[1] See the Service's [summer survey guidance](#) for our current definitions of suitable habitat.

[2] Presence/probable absence summer surveys conducted within the fall swarming/spring emergence home range of a documented Indiana bat hibernaculum (contact local Service Field Office for appropriate distance from hibernacula) that result in a negative finding requires additional consultation with the local Service Field Office to determine if clearing of forested habitat is appropriate and/or if seasonal clearing restrictions are needed to avoid and minimize potential adverse effects on fall swarming and spring emerging Indiana bats.

[3] For projects within the range of either the Indiana bat or NLEB in which suitable habitat is present, and no bat surveys have been conducted, the transportation agency will assume presence of the appropriate species. This assumption of presence should be based upon the presence of suitable habitat and the capability of bats to occupy it because of their mobility.

[4] Negative presence/probable absence survey results obtained using the [summer survey guidance](#) are valid for a minimum of two years from the completion of the survey unless new information (e.g., other nearby surveys) suggest otherwise.

No

13. Does the project include activities **within documented Indiana bat habitat**^{[1][2]}?

[1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

[2] For the purposes of this key, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) treed corridors located directly between documented roosting and foraging habitat.

No

14. Will the removal or trimming of habitat or trees occur **within** suitable but **undocumented Indiana bat** roosting/foraging habitat or travel corridors?

Yes

15. What time of year will the removal or trimming of habitat or trees **within** suitable but **undocumented Indiana bat** roosting/foraging habitat or travel corridors occur^[1]?

[1] Coordinate with the local Service Field Office for appropriate dates.

B) During the inactive season

16. Does the project include activities **within documented NLEB habitat**^{[1][2]}?

[1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

[2] For the purposes of this key, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) treed corridors located directly between documented roosting and foraging habitat.

No

17. Will the removal or trimming of habitat or trees occur **within** suitable but **undocumented NLEB** roosting/foraging habitat or travel corridors?

Yes

18. What time of year will the removal or trimming of habitat or trees **within** suitable but **undocumented NLEB** roosting/foraging habitat or travel corridors occur?

B) During the inactive season

19. Will *any* tree trimming or removal occur **within** 100 feet of existing road/rail surfaces?

Yes

20. Will *any* tree trimming or removal occur **between** 100-300 feet of existing road/rail surfaces?

No

21. Are *all* trees that are being removed clearly demarcated?
Yes
22. Will the removal of habitat or the removal/trimming of trees include installing new or replacing existing **permanent** lighting?
No
23. Does the project include wetland or stream protection activities associated with compensatory wetland mitigation?
No
24. Does the project include slash pile burning?
No
25. Does the project include *any* bridge removal, replacement, and/or maintenance activities (e.g., any bridge repair, retrofit, maintenance, and/or rehabilitation work)?
Yes
26. Is there *any* suitable habitat^[1] for Indiana bat or NLEB **within** 1,000 feet of the bridge? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)
Yes
27. Has a bridge assessment^[1] been conducted **within** the last 24 months^[2] to determine if the bridge is being used by bats?
Yes

[1] See the Service's current [summer survey guidance](#) for our current definitions of suitable habitat.

[1] See [User Guide Appendix D](#) for bridge/structure assessment guidance

[2] Assessments must be completed no more than 2 years prior to conducting any work below the deck surface on all bridges that meet the physical characteristics described in the Programmatic Consultation, regardless of whether assessments have been conducted in the past. Due to the transitory nature of bat use, a negative result in one year does not guarantee that bats will not use that bridge/structure in subsequent years.

Yes

SUBMITTED DOCUMENTS

- *Des 1601040 Bridge Culvert Bat Assessment Form update_signed_print.pdf* <https://ecos.fws.gov/ipac/project/DWXDPOXPBHC3AHYLS4Y3H66EI/projectDocuments/100041185>

28. Did the bridge assessment detect *any* signs of Indiana bats and/or NLEBs roosting in/under the bridge (bats, guano, etc.)^[1]?

[1] If bridge assessment detects signs of *any* species of bats, coordination with the local FWS office is needed to identify potential threatened or endangered bat species. Additional studies may be undertaken to try to identify which bat species may be utilizing the bridge prior to allowing *any* work to proceed.

Note: There is a small chance bridge assessments for bat occupancy do not detect bats. Should a small number of bats be observed roosting on a bridge just prior to or during construction, such that take is likely to occur or does occur in the form of harassment, injury or death, the PBO requires the action agency to report the take. Report all unanticipated take within 2 working days of the incident to the USFWS. Construction activities may continue without delay provided the take is reported to the USFWS and is limited to 5 bats per project.

No

29. Will the bridge removal, replacement, and/or maintenance activities include installing new or replacing existing **permanent** lighting?

No

30. Does the project include the removal, replacement, and/or maintenance of *any* structure other than a bridge? (e.g., rest areas, offices, sheds, outbuildings, barns, parking garages, etc.)

No

31. Will the project involve the use of **temporary** lighting *during* the active season?

No

32. Will the project install new or replace existing **permanent** lighting?

No

33. Does the project include percussives or other activities (**not including tree removal/trimming or bridge/structure work**) that will increase noise levels above existing traffic/background levels?

Yes

34. Will the activities that use percussives (**not including tree removal/trimming or bridge/structure work**) and/or increase noise levels above existing traffic/background levels be conducted *during* the active season^[1]?

[1] Coordinate with the local Service Field Office for appropriate dates.

No

35. Are *all* project activities that are **not associated with** habitat removal, tree removal/trimming, bridge and/or structure activities, temporary or permanent lighting, or use of percussives, limited to actions that DO NOT cause any additional stressors to the bat species?

Examples: lining roadways, unlighted signage, rail road crossing signals, signal lighting, and minor road repair such as asphalt fill of potholes, etc.

Yes

36. Will the project raise the road profile **above the tree canopy**?

No

37. Are the project activities that use percussives (not including tree removal/trimming or bridge/structure work) and/or increase noise levels above existing traffic/background levels consistent with a No Effect determination in this key?

Automatically answered

Yes, because the activities are within 300 feet of the existing road/rail surface, greater than 0.5 miles from a hibernacula, and conducted during the inactive season

38. Is the habitat removal portion of this project consistent with a Not Likely to Adversely Affect determination in this key?

Automatically answered

Yes, because the tree removal/trimming that occurs outside of the Indiana bat's active season occurs greater than 0.5 miles from the nearest hibernaculum, is less than 100 feet from the existing road/rail surface, includes clear demarcation of the trees that are to be removed, and does not alter documented roosts and/or surrounding summer habitat within 0.25 miles of a documented roost.

39. Is the habitat removal portion of this project consistent with a Not Likely to Adversely Affect determination in this key?

Automatically answered

Yes, because the tree removal/trimming that occurs outside of the NLEB's active season occurs greater than 0.5 miles from the nearest hibernaculum, is less than 100 feet from the existing road/rail surface, includes clear demarcation of the trees that are to be removed, and does not alter documented roosts and/or surrounding summer habitat within 0.25 miles of a documented roost.

40. Is the bridge removal, replacement, or maintenance activities portion of this project consistent with a No Effect determination in this key?

Automatically answered

Yes, because the bridge has been assessed using the criteria documented in the BA and no signs of bats were detected

41. **General AMM 1**

Will the project ensure *all* operators, employees, and contractors working in areas of known or presumed bat habitat are aware of *all* FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable Avoidance and Minimization Measures?

Yes

42. **Hibernacula AMM 1**

Will the project ensure that on-site personnel will use best management practices^[1], secondary containment measures, or other standard spill prevention and countermeasures to avoid impacts to possible hibernacula?

[1] Coordinate with the appropriate Service Field Office on recommended best management practices for karst in your state.

Yes

43. **Hibernacula AMM 1**

Will the project ensure that, where practicable, a 300 foot buffer will be employed to separate fueling areas and other major containment risk activities from caves, sinkholes, losing streams, and springs in karst topography?

Yes

44. **Tree Removal AMM 1**

Can *all* phases/aspects of the project (e.g., temporary work areas, alignments) be modified, to the extent practicable, to avoid tree removal^[1] in excess of what is required to implement the project safely?

Note: Tree Removal AMM 1 is a minimization measure, the full implementation of which may not always be practicable. Projects may still be NLAA as long as Tree Removal AMMs 2, 3, and 4 are implemented and LAA as long as Tree Removal AMMs 3, 5, 6, and 7 are implemented.

[1] The word “trees” as used in the AMMs refers to trees that are suitable habitat for each species within their range. See the USFWS’ current summer survey guidance for our latest definitions of suitable habitat.

Yes

45. **Tree Removal AMM 3**

Can tree removal be limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits)?

Yes

46. **Tree Removal AMM 4**

Can the project avoid cutting down/removal of *all* (1) **documented**^[1] Indiana bat or NLEB roosts^[2] (that are still suitable for roosting), (2) trees **within** 0.25 miles of roosts, and (3) documented foraging habitat any time of year?

[1] The word documented means habitat where bats have actually been captured and/or tracked.

[2] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

Yes

Project Questionnaire

1. Have you made a No Effect determination for *all* other species indicated on the FWS IPaC generated species list?

No

2. Have you made a May Affect determination for *any* other species on the FWS IPaC generated species list?

No

3. How many acres^[1] of trees are proposed for removal between 0-100 feet of the existing road/rail surface?

[1] If described as number of trees, multiply by 0.09 to convert to acreage and enter that number.

0.40

4. Please describe the proposed bridge work:

An existing 24" culvert is located within the project limits and will be extended by 10" to accommodate the proposed widening of the shoulder.

5. Please state the timing of all proposed bridge work:

Spring 2022 to Spring 2024

6. Please enter the date of the bridge assessment:

10/15/2019

Avoidance And Minimization Measures (AMMs)

This determination key result includes the commitment to implement the following Avoidance and Minimization Measures (AMMs):

TREE REMOVAL AMM 1

Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal.

TREE REMOVAL AMM 2

Apply time of year restrictions for tree removal when bats are not likely to be present, or limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/rail surface and **outside of documented** roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed.

TREE REMOVAL AMM 3

Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits).

TREE REMOVAL AMM 4

Do not remove **documented** Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 miles of roosts, or **documented** foraging habitat any time of year.

GENERAL AMM 1

Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs.

HIBERNACULA AMM 1

For projects located within karst areas, on-site personnel will use best management practices, secondary containment measures, or other standard spill prevention and countermeasures to avoid impacts to possible hibernacula. Where practicable, a 300 foot buffer will be employed to

separate fueling areas and other major containment risk activities from caves, sinkholes, losing streams, and springs in karst topography.

Determination Key Description: FHWA, FRA, FTA Programmatic Consultation For Transportation Projects Affecting NLEB Or Indiana Bat

This key was last updated in IPaC on December 29, 2020. Keys are subject to periodic revision.

This decision key is intended for projects/activities funded or authorized by the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), and/or Federal Transit Administration (FTA), which may require consultation with the U.S. Fish and Wildlife Service (Service) under Section 7 of the Endangered Species Act (ESA) for the endangered **Indiana bat** (*Myotis sodalis*) and the threatened **Northern long-eared bat** (NLEB) (*Myotis septentrionalis*).

This decision key should only be used to verify project applicability with the Service's [February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects](#). The programmatic biological opinion covers limited transportation activities that may affect either bat species, and addresses situations that are both likely and not likely to adversely affect either bat species. This decision key will assist in identifying the effect of a specific project/activity and applicability of the programmatic consultation. The programmatic biological opinion is not intended to cover all types of transportation actions. Activities outside the scope of the programmatic biological opinion, or that may affect ESA-listed species other than the Indiana bat or NLEB, or any designated critical habitat, may require additional ESA Section 7 consultation.

Bridge/Structure Bat Assessment Form

Date & Time of Assessment October 15, 2019 9:00am EDT	DOT Project Number Des 1601040	Route/Facility Carried SR 62	County Crawford
Federal Structure ID Culvert at Long -86.510439 Lat 38.235546	Structure Coordinates (latitude and longitude) 38.235546, -86.510439 38.235306, -86.509667	Structure Height (approximate) 2 at 24-inch	Structure Length 52 feet 58 feet
Structure Type (check one)		Structure Material (check all that apply)	
<i>Bridge Construction Style</i>		<i>Deck Material</i>	<i>Beam Material</i> / <i>End/Back Wall Material</i>
<input type="radio"/> Cast-in-place	<input type="radio"/> Pre-stressed Girder	<input type="checkbox"/> Metal	<input type="checkbox"/> None / <input type="checkbox"/> Concrete
<input type="radio"/> Flat Slab/Box	<input type="radio"/> Steel I-beam	<input type="checkbox"/> Concrete	<input type="checkbox"/> Concrete
<input type="radio"/> Truss	<input type="radio"/> Covered	<input type="checkbox"/> Timber	<input type="checkbox"/> Steel
<input type="radio"/> Parallel Box Beam	<input type="radio"/> Other: _____	<input type="checkbox"/> Open grid	<input type="checkbox"/> Timber
		<input type="checkbox"/> Other: _____	<input type="checkbox"/> Other: _____
<i>Culvert Type</i>	<i>Other Structure</i>	<i>Culvert Material</i>	<i>Creosote Evidence</i>
<input type="radio"/> Box	<input type="radio"/> _____	<input type="checkbox"/> Metal	<input type="radio"/> Yes <input type="radio"/> No
<input checked="" type="radio"/> Pipe/Round		<input checked="" type="checkbox"/> Concrete	<input type="radio"/> Unknown
<input type="radio"/> Other: _____		<input checked="" type="checkbox"/> Plastic	<i>Notes:</i>
		<input type="checkbox"/> Stone/Masonry	
		<input type="checkbox"/> Other: _____	
Crossings Traversed (check all that apply)		Surrounding Habitat (check all that apply)	
<input type="checkbox"/> Bare ground	<input type="checkbox"/> Open vegetation	<input checked="" type="checkbox"/> Agricultural	<input type="checkbox"/> Grassland
<input checked="" type="checkbox"/> Rip-rap	<input type="checkbox"/> Closed vegetation	<input type="checkbox"/> Commercial	<input type="checkbox"/> Ranching
<input type="checkbox"/> Flowing water	<input type="checkbox"/> Railroad	<input type="checkbox"/> Residential-urban	<input type="checkbox"/> Riparian/wetland
<input type="checkbox"/> Standing water	Road/trail - Type: _____	<input type="checkbox"/> Residential-rural	<input type="checkbox"/> Mixed use
<input type="checkbox"/> Seasonal water	<input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Woodland/forested	<input type="checkbox"/> Other: _____
Areas Assessed (check all that apply)			
Check all areas that apply. If an area is not present in the structure, check the "not present" box. Document all bat indicators observed during the assessment. Include the species present, if known, and provide photo documentation as indicated.			
Area (check if assessed)	Assessment Notes	Evidence of Bats (include photos if present)	
<input type="checkbox"/> All crevices and cracks: Bridges/culverts: rough surfaces or imperfections in concrete Other structures: soffits, rafters, attic areas	<input type="checkbox"/> Not present No bats or indicators of bat occupation found.	<input type="checkbox"/> Visual - live #	<input type="checkbox"/> dead #
<input checked="" type="checkbox"/> Concrete surfaces (open roosting on concrete)	<input type="checkbox"/> Not present No bats or indicators of bat occupation found.	<input type="checkbox"/> Audible	<input type="checkbox"/> Species
<input type="checkbox"/> Spaces between concrete end walls and the bridge deck	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Odor	
<input type="checkbox"/> Crack between concrete railings on top of the bridge deck 	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Guano	
<input type="checkbox"/> Vertical surfaces on concrete I-beams	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Photos	
<input type="checkbox"/> Spaces between walls, ceiling joists	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Staining	
<input type="checkbox"/> Weep holes, scupper drains, and inlets/pipes	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Visual - live #	<input type="checkbox"/> dead #
<input type="checkbox"/> All guiderails	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Audible	<input type="checkbox"/> Species
<input type="checkbox"/> All expansion joints	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Odor	
		<input type="checkbox"/> Guano	
		<input type="checkbox"/> Photos	
		<input type="checkbox"/> Staining	
Name: Danika Fleck		Signature:	

From: [Falls, Ryan G](#)
To: [Payton Parke](#); [Wright, Kristy](#)
Cc: [Holly Hume](#)
Subject: RE: Request for IPaC Finding Review - Des 1601040 - NLAA
Date: Thursday, March 11, 2021 9:38:52 AM
Attachments: [image006.jpg](#)
[image007.jpg](#)
[image008.jpg](#)
[image001.jpg](#)

The document's finding of May Effect, NLAA-With AMMs for DES 1601040 has been deemed sufficient. It has been verified and submitted to USFWS. The Service has 14 days after the "Not Likely to Adversely Affect" determination letter is generated. They will review that information once it is received; if you do not receive a response within 14 days, they have no additional comments for the two bats covered under the programmatic. The NEPA document submittal may not occur until this review period has ended. The Official Species List, Consistency Letter, and Concurrence Verification Letter are all now immediately available for your use. It is suggested that these documents be downloaded at this time. This concludes the IPaC phase of coordination with the Vincennes environmental office.

Ryan Falls

Capital Program Management-Senior Environmental Manager Supervisor

Indiana Department of Transportation

3650 South US Highway 41

Vincennes, IN 47591

Email: rfalls@indot.IN.gov

Cell: 812-582-1387

Office: 812-895-7326

INDOT4U



From: Payton Parke <PParke@lochgroup.com>
Sent: Wednesday, March 10, 2021 7:45 AM
To: Falls, Ryan G <RFalls@indot.IN.gov>; Wright, Kristy <KWright@indot.IN.gov>
Cc: Holly Hume <HHume@lochgroup.com>
Subject: RE: Request for IPaC Finding Review - Des 1601040 & 3rd Comments

****** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ******

Mr. Falls,

The date on the inspection form has been corrected. Please let me know if you need anything else.

Thank you,
Payton

Payton Parke

From: [McWilliams, Robin](#)
To: [Payton Parke](#)
Subject: Re: [EXTERNAL] RE: Early Coordination Addendum, Des 1601040, SR 62, at RP 96.36 Slide Correction, Crawford County, IN
Date: Wednesday, April 7, 2021 1:33:37 PM

Dear Payton,

Thank you for notifying us of changes in the scope of the original project (and sorry my response is so late). Based on the revised project information, our previous comments are still applicable. I don't remember if forest land was being affected based on the original project, but Section 4(f) of the Transportation Act of 1966 requires that land from a publicly owned park, recreation area or wildlife or waterfowl refuge or any significant public or private historical site shall not be used by the Federal Highway Administration for highway right-of-way unless a determination is made that there is no feasible and prudent alternative to the use of land from such property. Further, the proposed action must include all possible planning to minimize harm to the property which results from such use. A Section 4(f) determination concerning project impacts may be necessary as part of the environmental review process if federal funds are utilized.

Let me know if you have any other questions or concerns.

Sincerely,
Robin

Robin McWilliams Munson
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
620 South Walker Street
Bloomington, IN 46142
812-334-4261

[Mon-Tues 8-3:30p](#)
[Wed-Thurs 8:30-3p Telework](#)

From: Payton Parke <PParke@lochgroup.com>
Sent: Wednesday, February 17, 2021 4:12 PM
To: McWilliams, Robin <robin_mcwilliams@fws.gov>
Cc: Daniel Townsend <DTownsend@lochgroup.com>
Subject: [EXTERNAL] RE: Early Coordination Addendum, Des 1601040, SR 62, at RP 96.36 Slide Correction, Crawford County, IN

This email has been received from outside of DOI - Use caution before clicking on

Foertsch, Lucas

From: McWilliams, Robin <robin_mcwilliams@fws.gov>
Sent: Thursday, January 16, 2020 3:15 PM
To: Foertsch, Lucas
Subject: Re: [EXTERNAL] Early Coordination, Des 1601040, SR 62, at RP 96.36 Slide Correction, Crawford County, IN

Dear Mr. Foertsch,

This responds to your recent letter requesting our comments on the aforementioned project.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et. seq.) and are consistent with the intent of the National Environmental Policy Act of 1969, the Endangered Species Act of 1973, and the U. S. Fish and Wildlife Service's Mitigation Policy.

The project is within the range of the Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*) and according to your email has followed the new Indiana bat/northern long-eared bat programmatic consultation process and received a Not Likely to Adversely Affect determination from the IPAC determination key. We have no further comments on that finding.

The project is also within the range of the gray bat (*Myotis grisescens*). The species should have shown up on your IPAC-generated species list. Gray bats are year-round cave obligates, roosting in caves both during hibernation and summer maternity season; they may also occasionally use structures for roosting. Foraging habitat of gray bats is generally correlated with rivers, streams, lakes or reservoirs and associated shorelines and riparian areas. They use forested corridors and tree cover to travel between caves and foraging areas. We do not anticipate any impacts to gray bats as a result of your project.

Your email mentions being within designated Critical Habitat for the Indiana bat. While there is Critical Habitat for the Indiana bat in Crawford County, your project is outside of the buffer area we generally consider for further coordination; therefore, no impacts are expected to occur.

Based on a review of the information you provided, the U.S. Fish and Wildlife Service has no objections to the project as currently proposed. However, should new information arise pertaining to project plans or a revised species list be published, it will be necessary for the Federal agency to reinitiate consultation. Standard recommendations are provided below.

We appreciate the opportunity to comment at this early stage of project planning. If project plans change such that fish and wildlife habitat may be affected, please re-coordinate with our office as soon as possible. If you have any questions about our recommendations, please call (812) 334-4261 x. 207.

Sincerely,
Robin McWilliams Munson

Standard Recommendations:

1. Do not clear trees or understory vegetation outside the construction zone boundaries. **(This restriction is not related to the “tree clearing” restriction for potential Indiana Bat habitat.)**
2. Restrict below low-water work in streams to placement of culverts, piers, pilings and/or footings, shaping of the spill slopes around the bridge abutments, and placement of riprap.

Culverts should span the active stream channel, should be either embedded or a 3-sided or open-arch culvert, and be installed where practicable on an essentially flat slope. When an open-bottom culvert or arch is used in a stream, which has a good natural bottom substrate, such as gravel, cobbles and boulders, the existing substrate should be left undisturbed beneath the culvert to provide natural habitat for the aquatic community.
3. Restrict channel work and vegetation clearing to the minimum necessary for installation of the stream crossing structure.
4. Minimize the extent of hard armor (riprap) in bank stabilization by using bioengineering techniques whenever possible. If riprap is utilized for bank stabilization, extend it below low-water elevation to provide aquatic habitat.
5. Implement temporary erosion and sediment control methods within areas of disturbed soil. All disturbed soil areas upon project completion will be vegetated following INDOT’s standard specifications.
6. Avoid all work within the inundated part of the stream channel (in perennial streams and larger intermittent streams) during the fish spawning season (April 1 through June 30), except for work within sealed structures such as caissons or cofferdams that were installed prior to the spawning season. No equipment shall be operated below Ordinary High Water Mark during this time unless the machinery is within the caissons or on the cofferdams.
7. Evaluate wildlife crossings under bridge/culverts projects in appropriate situations. Suitable crossings include flat areas below bridge abutments with suitable ground cover, high water shelves in culverts, amphibian tunnels and diversion fencing.

Robin McWilliams Munson

U.S. Fish and Wildlife Service
 620 South Walker Street
 Bloomington, Indiana 46403
 812-334-4261 x. 207 Fax: 812-334-4273

Monday, Tuesday - 7:30a-3:00p
 Wednesday, Thursday - telework 8:30a-3:00p
 Robin McWilliams Munson

U.S. Fish and Wildlife Service
 620 South Walker Street
 Bloomington, Indiana 46403
 812-334-4261 x. 207 Fax: 812-334-4273

Monday, Tuesday - 7:30a-3:00p
 Wednesday, Thursday - telework 8:30a-3:00p

On Tue, Jan 14, 2020 at 4:14 PM Foertsch, Lucas <LFoertsch@lochgroup.com> wrote:

THIS IS NOT A PERMIT

State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Fish and Wildlife
Early Coordination/Environmental Assessment

DNR #: ER-22132

Request Received: January 14, 2020

Requestor: Lochmueller Group Inc
Lucas Foertsch
6200 Vogel Road
Evansville, IN 47715

Project: SR 62 slide correction, about 2.44 miles west of SR 237 at RP 96.36; Des #1601040

County/Site info: Crawford

The Indiana Department of Natural Resources has reviewed the above referenced project per your request. Our agency offers the following comments for your information and in accordance with the National Environmental Policy Act of 1969.

If our agency has regulatory jurisdiction over the project, the recommendations contained in this letter may become requirements of any permit issued. If we do not have permitting authority, all recommendations are voluntary.

Regulatory Assessment: Formal approval by the Department of Natural Resources under the regulatory programs administered by the Division of Water is not required for this project.

Natural Heritage Database: The Natural Heritage Program's data have been checked. Hoosier National Forest is located within 1/2 mile of the project area. Also, the bird species below have been documented within 1/2 mile of the project area.

1. Henslow's Sparrow (*Ammodramus henslowii*), state endangered
2. Broad-winged Hawk (*Buteo platypterus*), state special concern
3. Worm-eating Warbler (*Helmitheros vermivorus*), state special concern

Fish & Wildlife Comments: Avoid and minimize impacts to fish, wildlife, and botanical resources to the greatest extent possible, and compensate for impacts. The following are recommendations that address potential impacts identified in the proposed project area:

1) Birds:

Suitable habitat for Henslow's Sparrow does not exist in or near the project area, so impacts to this species are not expected as a result of this project. However, removal of trees in the permanent right-of-way for the proposed project may significantly impact Broad-winged Hawk and Worm-eating Warbler, which are both forest nesting species. To reduce potential impacts to these species, tree removal should occur outside of the breeding season, which occurs between early May and late August.

2) Forested/Riparian Habitat:

We recommend a mitigation plan be developed for any unavoidable habitat impacts that will occur. The mitigation site should be located preferably as close to the impact site as possible and adjacent to existing forested habitat. The DNR's Floodway Habitat Mitigation guidelines (and plant lists) can be found online at:
<http://www.in.gov/legislative/iac/20190130-IR-312190041NRA.xml.pdf>.

Impacts to non-wetland forest of one (1) acre or more should be mitigated at a minimum 2:1 ratio. If less than one acre of non-wetland forest is removed in a rural setting, replacement should be at a 1:1 ratio based on area. Impacts to non-wetland forest under one (1) acre in an urban setting should be mitigated by planting five trees, at least 2 inches in diameter-at-breast height (dbh), for each tree which is removed that is 10" dbh or greater (5:1 mitigation based on the number of large trees).

THIS IS NOT A PERMIT

State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Fish and Wildlife
Early Coordination/Environmental Assessment

The additional measures listed below should be implemented to avoid, minimize, or compensate for impacts to fish, wildlife, and botanical resources:

1. Revegetate all bare and disturbed areas with a mixture of native grasses, sedges, wildflowers, and also native hardwood trees and shrubs if any woody plants are disturbed during construction as soon as possible upon completion. Do not use any varieties of Tall Fescue or other non-native plants, including prohibited invasive species (see 312 IAC 18-3-25).
2. Minimize and contain within the project limits all tree and brush clearing.
3. Do not cut any trees suitable for Indiana bat or Northern Long-eared bat roosting (greater than 5 inches dbh, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30.
4. Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the stream or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.
5. Seed and protect all disturbed streambanks and slopes not protected by other methods that are 3:1 or steeper with erosion control blankets that are heavy-duty, biodegradable, and net free or that use loose-woven / Leno-woven netting to minimize the entrapment and snaring of small-bodied wildlife such as snakes and turtles (follow manufacturer's recommendations for selection and installation); seed and apply mulch on all other disturbed areas.

Contact Staff:

Christie L. Stanifer, Environ. Coordinator, Fish & Wildlife
Our agency appreciates this opportunity to be of service. Please contact the above staff member at (317) 232-4080 if we can be of further assistance.



Date: February 11, 2020

Christie L. Stanifer
Environ. Coordinator
Division of Fish and Wildlife

From: [DNR Environmental Review](#)
To: [Payton Parke](#)
Cc: [Daniel Townsend](#)
Subject: RE: Early Coordination Addendum, Des 1601040, SR 62, at RP 96.36 Slide Correction, Crawford County, IN; ER-22132
Date: Thursday, February 18, 2021 2:33:40 PM
Attachments: [ER-22132letter.pdf](#)

Hi, Payton. With this minor change in the project, the recommendations in our previous letter dated February 11, 2020 (copy attached), still apply.

Sincerely,

Christie L. Stanifer
Environmental Coordinator
Indiana Department of Natural Resources
Division of Fish & Wildlife
402 West Washington St, Room W273
Indianapolis, IN 46204
cstanifer@dnr.in.gov
Direct: (317) 232-8163
www.dnr.IN.gov

*** Please let us know about the quality of our service by taking this brief [customer survey](#).**

From: Payton Parke <PParke@lochgroup.com>
Sent: Wednesday, February 17, 2021 3:06 PM
To: DNR Environmental Review <environmentalreview@dnr.IN.gov>
Cc: Daniel Townsend <DTownsend@lochgroup.com>
Subject: RE: Early Coordination Addendum, Des 1601040, SR 62, at RP 96.36 Slide Correction, Crawford County, IN

****** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ******

Dear Environmental Coordinator,

Attached is an addendum to the early coordination initiated on January 14, 2020 for the SR 62, 2.44 miles west of SR 237 slide correction project, Des 1601040 (IDNR response included ER-22132). This addendum corrects the *Proposed Project* and *Right of Way (ROW)* sections of the original early coordination letter. The proposed project area has changed. Please let me know if you have any questions.

Thank you,
Payton



Indiana Department of Environmental Management

We Protect Hoosiers and Our Environment.

100 North Senate Avenue - Indianapolis, IN 46204
(800) 451-6027 - (317) 232-8603 - www.idem.IN.gov

INDOT
Kyanna Wheeler
3650 S US 41
Vincennes , IN 47591
Date

Lochmueller Group Inc.
Payton Parke
6200 Vogel Rd
Evansville , IN 47715

To Engineers and Consultants Proposing Roadway Construction Projects:

RE: The Federal Highway Administration (FHWA) and the Indiana Department of Transportation (INDOT) Vincennes District propose to proceed with a slide correction project on SR 62, 2.44 miles west of SR 237 at RP 96.36 (Des. No. 1601040). The proposed project is located on SR 62 in Crawford County, Indiana, approximately 2.44 miles west of SR 237 at RP 96.36. More specifically, the project is located in Section 27, Township 3 south, and Range 1 west in Union Township as depicted on the Branchville U.S. Geological Survey 1:24,000 scale quadrangle. Adjacent land uses consist of scattered rural residences, agricultural lands, and wooded areas. Within the project area, SR 62 is functionally classified as a rural major collector. The typical cross section consists of two 10-foot travel lanes accompanied by 2-foot paved shoulders. The length of the project is approximately 1 feet. Please see attachments for maps and photographs of the proposed project area. The need for this project is due to the land slide occurring along the westbound lane of SR 62, causing the pavement and roadside embankment to deteriorate and fail. The pavement failure is occurring in both lanes but is more prominent in the westbound lane. The purpose of the project is to correct the slope failure, resulting in improved safety and mobility along SR 62. The proposed project is a slide correction on SR 62, 2.44 miles west of SR 237 in Crawford County. The slide will be corrected by constructing a row of cantilevered drilled shafts with a center-to-center spacing of 8-feet for 325 feet along the westbound lane of SR 62. The shafts will be drilled to a depth of 10 feet below the bedrock surface and will have a diameter of 2.5 feet. Above the bedrock, the pier diameter will be 3 feet and extend 6 feet above the bedrock surface. The entire shaft depth will be filled with Class A concrete and a steel H-pile will be placed in the shaft. The area above the concrete shaft with the H-Pile will be backfilled with flowable fill. Riprap will be placed at a 3 to 1 slope along the westbound lane. The roadway will be milled and overlaid for a length of 325 feet along the slide correction to repair damaged pavement. Mill and Hot Mix Asphalt (HMA) overlay depth will be 1.5 inches. An existing 24-inch culvert is located within the project limits but no work is anticipated to be required as part of the project. This project is anticipated to require approximately 0.24 acre of permanent ROW and 0.14 acre of re-acquired ROW; no temporary ROW is anticipated to be required. Additionally, approximately 0.31 acre of easement is anticipated to be required from the Hoosier National Forest (United States of America). Tree clearing (0.4 acre) is anticipated within the proposed ROW.

This letter from the Indiana Department of Environmental Management (IDEM) serves as a standardized response to enquiries inviting IDEM comments on roadway construction, reconstruction, or other improvement projects within existing roadway corridors when the proposed scope of the project is beneath the threshold requiring a formal National Environmental Policy Act-mandated Environmental Assessment or Environmental Impact Statement. As the letter attempts to address all roadway-related environmental topics of potential concern, it is possible that not every topic addressed in the letter will be applicable to your particular roadway project.

For additional information on specific roadway-related topics of interest, please visit the appropriate Web pages cited below, many of which provide contact information for persons within the various program areas who can answer questions not fully addressed in this letter. Also please be mindful that some environmental requirements may be subject to change and so each person intending to include a copy of this letter in their project documentation packet is advised to download the most recently revised version of the letter; found at: <http://www.in.gov/idem/5283.htm> (<http://www.in.gov/idem/5283.htm>).

To ensure that all environmentally-related issues are adequately addressed, IDEM recommends that you read this letter in its entirety, and consider each of the following issues as you move forward with the planning of your proposed roadway construction, reconstruction, or improvement project:

WATER AND BIOTIC QUALITY

1. Section 404 of the Clean Water Act requires that you obtain a permit from the U.S. Army Corps of Engineers (USACE) before discharging dredged or fill materials into any wetlands or other waters, such as rivers, lakes, streams, and ditches. Other activities regulated include the relocation, channelization, widening, or other such alteration of a stream, and the mechanical clearing (use of heavy construction equipment) of wetlands. Thus, as a project owner or sponsor, it is your responsibility to ensure that no wetlands are disturbed without the proper permit. Although you may initially refer to the U.S. Fish and Wildlife Service National Wetland Inventory maps as a means of identifying potential areas of concern, please be mindful that those maps do not depict jurisdictional wetlands regulated by the USACE or

the Department of Environmental Management. A valid jurisdictional wetlands determination can only be made by the USACE, using the 1987 Wetland Delineation Manual.

USACE recommends that you have a consultant check to determine whether your project will abut, or lie within, a wetland area. To view a list of consultants that have requested to be included on a list posted by the USACE on their Web site, see USACE Permits and Public Notices (<http://www.lrl.usace.army.mil/orf/default.asp>) (<http://www.lrl.usace.army.mil/orf/default.asp>) and then click on "Information" from the menu on the right-hand side of that page. Their "Consultant List" is the fourth entry down on the "Information" page. Please note that the USACE posts all consultants that request to appear on the list, and that inclusion of any particular consultant on the list does not represent an endorsement of that consultant by the USACE, or by IDEM.

Much of northern Indiana (Newton, Lake, Porter, LaPorte, St. Joseph, Elkhart, LaGrange, Steuben, and Dekalb counties; large portions of Jasper, Starke, Marshall, Noble, Allen, and Adams counties; and lesser portions of Benton, White, Pulaski, Kosciusko, and Wells counties) is served by the USACE District Office in Detroit (313-226-6812). The central and southern portions of the state (large portions of Benton, White, Pulaski, Kosciusko, and Wells counties; smaller portions of Jasper, Starke, Marshall, Noble, Allen, and Adams counties; and all other Indiana counties located in north-central, central, and southern Indiana) are served by the USACE Louisville District Office (502-315-6733).

Additional information on contacting these U.S. Army Corps of Engineers (USACE) District Offices, government agencies with jurisdiction over wetlands, and other water quality issues, can be found at <http://www.in.gov/idem/4396.htm> (<http://www.in.gov/idem/4396.htm>). IDEM recommends that impacts to wetlands and other water resources be avoided to the fullest extent.

2. In the event a Section 404 wetlands permit is required from the USACE, you also must obtain a Section 401 Water Quality Certification from the IDEM Office of Water Quality Wetlands Program. To learn more about the Wetlands Program, visit: <http://www.in.gov/idem/4384.htm> (<http://www.in.gov/idem/4384.htm>).
3. If the USACE determines that a wetland or other water body is isolated and not subject to Clean Water Act regulation, it is still regulated by the state of Indiana. A State Isolated Wetland permit from IDEM's Office of Water Quality (OWQ) is required for any activity that results in the discharge of dredged or fill materials into isolated wetlands. To learn more about isolated wetlands, contact the OWQ Wetlands Program at 317-233-8488.
4. If your project will involve over a 0.5 acre of wetland impact, stream relocation, or other large-scale alterations to water bodies such as the creation of a dam or a water diversion, you should seek additional input from the OWQ Wetlands Program staff. Consult the Web at: <http://www.in.gov/idem/4384.htm> (<http://www.in.gov/idem/4384.htm>) for the appropriate staff contact to further discuss your project.
5. Work within the one-hundred year floodway of a given water body is regulated by the Department of Natural Resources, Division of Water. The Division issues permits for activities regulated under the follow statutes:
 - o IC 14-26-2 Lakes Preservation Act 312 IAC 11
 - o IC 14-26-5 Lowering of Ten Acre Lakes Act No related code
 - o IC 14-28-1 Flood Control Act 310 IAC 6-1
 - o IC 14-29-1 Navigable Waterways Act 312 IAC 6
 - o IC 14-29-3 Sand and Gravel Permits Act 312 IAC 6
 - o IC 14-29-4 Construction of Channels Act No related code

For information on these Indiana (statutory) Code and Indiana Administrative Code citations, see the DNR Web site at: <http://www.in.gov/dnr/water/9451.htm> (<http://www.in.gov/dnr/water/9451.htm>). Contact the DNR Division of Water at 317-232-4160 for further information.

The physical disturbance of the stream and riparian vegetation, especially large trees overhanging any affected water bodies should be limited to only that which is absolutely necessary to complete the project. The shade provided by the large overhanging trees helps maintain proper stream temperatures and dissolved oxygen for aquatic life.

6. For projects involving construction activity (which includes clearing, grading, excavation and other land disturbing activities) that result in the disturbance of one (1), or more, acres of total land area, contact the Office of Water Quality – Watershed Planning Branch (317/233-1864) regarding the need for of a Rule 5 Storm Water Runoff Permit. Visit the following Web page
 - o <http://www.in.gov/idem/4902.htm> (<http://www.in.gov/idem/4902.htm>)

To obtain, and operate under, a Rule 5 permit you will first need to develop a Construction Plan (<http://www.in.gov/idem/4917.htm#constreq> (<http://www.in.gov/idem/4917.htm#constreq>)), and as described in 327 IAC 15-5-6.5 (<http://www.in.gov/legislative/iac/T03270/A00150> [PDF] (<http://www.in.gov/legislative/iac/T03270/A00150.PDF>), pages 16 through 19). Before you may apply for a Rule 5 Permit, or begin construction, you must submit your Construction Plan to your county Soil and Water Conservation District (SWCD) (<http://www.in.gov/isda/soil/contacts/map.html> (<http://www.in.gov/isda/soil/contacts/map.html>)).

Upon receipt of the construction plan, personnel of the SWCD or the Indiana Department of Environmental Management will review the plan to determine if it meets the requirements of 327 IAC 15-5. Plans that are deemed deficient will require re-submittal. If the plan is sufficient you will be notified and instructed to submit the verification to IDEM as part of the Rule 5 Notice of Intent (NOI) submittal. Once construction begins, staff of the SWCD or Indiana Department of Environmental Management will perform inspections of activities at the site for compliance with the regulation.

Please be mindful that approximately 149 Municipal Separate Storm Sewer System (MS4) areas are now being established by various local governmental entities throughout the state as part of the implementation of Phase II federal storm water requirements. All of these MS4 areas will eventually take responsibility for Construction Plan review, inspection, and enforcement. As these MS4 areas obtain program approval from IDEM, they will be added to a list of MS4 areas posted on the IDEM Website at: <http://www.in.gov/idem/4900.htm> (<http://www.in.gov/idem/4900.htm>).

If your project is located in an IDEM-approved MS4 area, please contact the local MS4 program about meeting their storm water requirements. Once the MS4 approves the plan, the NOI can be submitted to IDEM.

Regardless of the size of your project, or which agency you work with to meet storm water requirements, IDEM recommends that appropriate structures and techniques be utilized both during the construction phase, and after completion of the project, to minimize the impacts associated with storm water runoff. The use of appropriate planning and site development and appropriate storm water quality measures are recommended to prevent soil from leaving the construction site during active land disturbance and for post construction water quality concerns. Information and assistance regarding storm water related to construction activities are available from the Soil and Water Conservation District (SWCD) offices in each county or from IDEM.

7. For projects involving impacts to fish and botanical resources, contact the Department of Natural Resources - Division of Fish and Wildlife (317/232-4080) for addition project input.
8. For projects involving water main construction, water main extensions, and new public water supplies, contact the Office of Water Quality - Drinking Water Branch (317-308-3299) regarding the need for permits.
9. For projects involving effluent discharges to waters of the State of Indiana , contact the Office of Water Quality - Permits Branch (317-233-0468) regarding the need for a National Pollutant Discharge Elimination System (NPDES) permit.
10. For projects involving the construction of wastewater facilities and sewer lines, contact the Office of Water Quality - Permits Branch (317-232-8675) regarding the need for permits.

AIR QUALITY

The above-noted project should be designed to minimize any impact on ambient air quality in, or near, the project area. The project must comply with all federal and state air pollution regulations. Consideration should be given to the following:

1. Regarding open burning, and disposing of organic debris generated by land clearing activities; some types of open burning are allowed (<http://www.in.gov/idem/4148.htm> (<http://www.in.gov/idem/4148.htm>)) under specific conditions. You also can seek an open burning variance from IDEM.

However, IDEM generally recommends that you take vegetative wastes to a registered yard waste composting facility or that the waste be chipped or shredded with composting on site (you must register with IDEM if more than 2,000 pounds is to be composted; contact 317/232-0066). The finished compost can then be used as a mulch or soil amendment. You also may bury any vegetative wastes (such as leaves, twigs, branches, limbs, tree trunks and stumps) onsite, although burying large quantities of such material can lead to subsidence problems, later on.

Reasonable precautions must be taken to minimize fugitive dust emissions from construction and demolition activities. For example, wetting the area with water, constructing wind barriers, or treating dusty areas with chemical stabilizers (such as calcium chloride or several other commercial products). Dirt tracked onto paved roads from unpaved areas should be minimized.

Additionally, if construction or demolition is conducted in a wooded area where blackbirds have roosted or abandoned buildings or building sections in which pigeons or bats have roosted for 3-5 years precautionary measures should be taken to avoid an outbreak of histoplasmosis. This disease is caused by the fungus *Histoplasma capsulatum*, which stems from bird or bat droppings that have accumulated in one area for 3-5 years. The spores from this fungus become airborne when the area is disturbed and can cause infections over an entire community downwind of the site. The area should be wetted down prior to cleanup or demolition of the project site. For more detailed information on histoplasmosis prevention and control, please contact the Acute Disease Control Division of the Indiana State Department of Health at (317) 233-7272.

2. The U.S. EPA and the Surgeon General recommend that people not have long-term exposure to radon at levels above 4 pCi/L. (For a county-by-county map of predicted radon levels in Indiana, visit: <http://www.in.gov/idem/4145.htm> (<http://www.in.gov/idem/4145.htm>.)

The U.S. EPA further recommends that all homes (and apartments within three stories of ground level) be tested for radon. If in-home radon levels are determined to be 4 pCi/L, or higher, EPA recommends a follow-up test. If the second test confirms that radon levels are 4 pCi/L, or higher, EPA recommends the installation of radon-reduction measures. (For a list of qualified radon testers and radon mitigation (or reduction) specialists visit: http://www.in.gov/isdh/regsvcs/radhealth/pdfs/radon_testers_mitigators_list.pdf (http://www.in.gov/isdh/regsvcs/radhealth/pdfs/radon_testers_mitigators_list.pdf.) It also is recommended that radon reduction measures be built into all new homes, particularly in areas like Indiana that have moderate to high predicted radon levels.

To learn more about radon, radon risks, and ways to reduce exposure visit: <http://www.in.gov/isdh/regsvcs/radhealth/radon.htm> (<http://www.in.gov/isdh/regsvcs/radhealth/radon.htm>), <http://www.in.gov/idem/4145.htm> (<http://www.in.gov/idem/4145.htm>), or <http://www.epa.gov/radon/index.html> (<http://www.epa.gov/radon/index.html>).

3. With respect to asbestos removal: all facilities slated for renovation or demolition (except residential buildings that have (4) four or fewer dwelling units and which will not be used for commercial purposes) must be inspected by an Indiana-licensed asbestos inspector prior to the commencement of any renovation or demolition activities. If regulated asbestos-containing material (RACM) that may become airborne is found, any subsequent demolition, renovation, or asbestos removal activities must be performed in accordance with the proper notification and emission control requirements.

If no asbestos is found where a renovation activity will occur, or if the renovation involves removal of less than 260 linear feet of RACM off of pipes, less than 160 square feet of RACM off of other facility components, or less than 35 cubic feet of RACM off of all facility components, the owner or operator of the project does not need to notify IDEM before beginning the renovation activity.

For questions on asbestos demolition and renovation activities, you can also call IDEM's Lead/Asbestos section at 1-888-574-8150.

However, in all cases where a demolition activity will occur (even if no asbestos is found), the owner or operator must still notify IDEM 10 working days prior to the demolition, using the form found at <http://www.in.gov/icpr/webfile/formsdiv/44593.pdf> (<http://www.in.gov/icpr/webfile/formsdiv/44593.pdf>).

Anyone submitting a renovation/demolition notification form will be billed a notification fee based upon the amount of friable asbestos containing material to be removed or demolished. Projects that involve the removal of more than 2,600 linear feet of friable asbestos containing materials on pipes, or 1,600 square feet or 400 cubic feet of friable asbestos containing material on other facility components, will be billed a fee of \$150 per project; projects below these amounts will be billed a fee of \$50 per project. All notification remitters will be billed on a quarterly basis.

For more information about IDEM policy regarding asbestos removal and disposal, visit: <http://www.in.gov/idem/4983.htm> (<http://www.in.gov/idem/4983.htm>).

4. With respect to lead-based paint removal: IDEM encourages all efforts to minimize human exposure to lead-based paint chips and dust. IDEM is particularly concerned that young children exposed to lead can suffer from learning disabilities. Although lead-based paint abatement efforts are not mandatory, any abatement that is conducted within housing built before January 1, 1978, or a child-occupied facility is required to comply with all lead-based paint work practice standards, licensing and notification requirements. For more information about lead-based paint removal visit: <http://www.in.gov/isdh/19131.htm> (<http://www.in.gov/isdh/19131.htm>).
5. Ensure that asphalt paving plants are permitted and operate properly. The use of cutback asphalt, or asphalt emulsion containing more than seven percent (7%) oil distillate, is prohibited during the months April through October. See 326 IAC 8-5-2, Asphalt Paving Rule (<http://www.ai.org/legislative/iac/T03260/A00080.PDF>) (<http://www.ai.org/legislative/iac/T03260/A00080.PDF>).
6. If your project involves the construction of a new source of air emissions or the modification of an existing source of air emissions or air pollution control equipment, it will need to be reviewed by the IDEM Office of Air Quality (OAQ). A registration or permit may be required under 326 IAC 2 (View at: www.ai.org/legislative/iac/t03260/a00020.pdf (<http://www.ai.org/legislative/iac/t03260/a00020.pdf>)). New sources that use or emit hazardous air pollutants may be subject to Section 112 of the Clean Air Act and corresponding state air regulations governing hazardous air pollutants.
7. For more information on air permits visit: <http://www.in.gov/idem/4223.htm> (<http://www.in.gov/idem/4223.htm>), or to initiate the IDEM air permitting process, please contact the Office of Air Quality Permit Reviewer of the Day at (317) 233-0178 or OAMPROD atdem.state.in.us.

LAND QUALITY

In order to maintain compliance with all applicable laws regarding contamination and/or proper waste disposal, IDEM recommends that:

1. If the site is found to contain any areas used to dispose of solid or hazardous waste, you need to contact the Office of Land Quality (OLQ) at 317-308-3103.
2. All solid wastes generated by the project, or removed from the project site, need to be taken to a properly permitted solid waste processing or disposal facility. For more information, visit <http://www.in.gov/idem/4998.htm> (<http://www.in.gov/idem/4998.htm>).

3. If any contaminated soils are discovered during this project, they may be subject to disposal as hazardous waste. Please contact the OLQ at 317-308-3103 to obtain information on proper disposal procedures.
4. If PCBs are found at this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding management of any PCB wastes from this site.
5. If there are any asbestos disposal issues related to this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding the management of asbestos wastes (Asbestos removal is addressed above, under Air Quality).
6. If the project involves the installation or removal of an underground storage tank, or involves contamination from an underground storage tank, you must contact the IDEM Underground Storage Tank program at 317/308-3039. See: <http://www.in.gov/idem/4999.htm> (<http://www.in.gov/idem/4999.htm>).

FINAL REMARKS

Should you need to obtain any environmental permits in association with this proposed project, please be mindful that IC 13-15-8 requires that you notify all adjoining property owners and/or occupants within ten days your submittal of each permit application. However, if you are seeking multiple permits, you can still meet the notification requirement with a single notice if all required permit applications are submitted with the same ten day period.

Should the scope of the proposed project be expanded to the extent that a National Environmental Policy Act Environmental Assessment (EA) or Environmental Impact Statement (EIS) is required, IDEM will actively participate in any early interagency coordination review of the project.

Meanwhile, please note that this letter does not constitute a permit, license, endorsement or any other form of approval on the part of the Indiana Department of Environmental Management regarding any project for which a copy of this letter is used. Also note that it is the responsibility of the project engineer or consultant using this letter to ensure that the most current draft of this document, which is located at <http://www.in.gov/idem/5284.htm> (<http://www.in.gov/idem/5284.htm>), is used.

Signature(s) of the Applicant

I acknowledge that the following proposed roadway project will be financed in part, or in whole, by public monies.

Project Description

The Federal Highway Administration (FHWA) and the Indiana Department of Transportation (INDOT) Vincennes District propose to proceed with a slide correction project on SR 62, 2.44 miles west of SR 237 at RP 96.36 (Des. No. 1601040). The proposed project is located on SR 62 in Crawford County, Indiana, approximately 2.44 miles west of SR 237 at RP 96.36. More specifically, the project is located in Section 27, Township 3 south, and Range 1 west in Union Township as depicted on the Branchville U.S. Geological Survey 1:24,000 scale quadrangle. Adjacent land uses consist of scattered rural residences, agricultural lands, and wooded areas. Within the project area, SR 62 is functionally classified as a rural major collector. The typical cross section consists of two 10-foot travel lanes accompanied by 2-foot paved shoulders. The length of the project is approximately 1 feet. Please see attachments for maps and photographs of the proposed project area. The need for this project is due to the land slide occurring along the westbound lane of SR 62, causing the pavement and roadside embankment to deteriorate and fail. The pavement failure is occurring in both lanes but is more prominent in the westbound lane. The purpose of the project is to correct the slope failure, resulting in improved safety and mobility along SR 62. The proposed project is a slide correction on SR 62, 2.44 miles west of SR 237 in Crawford County. The slide will be corrected by constructing a row of cantilevered drilled shafts with a center-to-center spacing of 8-feet for 325 feet along the westbound lane of SR 62. The shafts will be drilled to a depth of 10 feet below the bedrock surface and will have a diameter of 2.5 feet. Above the bedrock, the pier diameter will be 3 feet and extend 6 feet above the bedrock surface. The entire shaft depth will be filled with Class A concrete and a steel H-pile will be placed in the shaft. The area above the concrete shaft with the H-Pile will be backfilled with flowable fill. Riprap will be placed at a 3 to 1 slope along the westbound lane. The roadway will be milled and overlaid for a length of 325 feet along the slide correction to repair damaged pavement. Mill and Hot Mix Asphalt (HMA) overlay depth will be 1.5 inches. An existing 24-inch culvert is located within the project limits but no work is anticipated to be required as part of the project. This project is anticipated to require approximately 0.24 acre of permanent ROW and 0.14 acre of re-acquired ROW; no temporary ROW is anticipated to be required. Additionally, approximately 0.31 acre of easement is anticipated to be required from the Hoosier National Forest (United States of America). Tree clearing (0.4 acre) is anticipated within the proposed ROW.

With my signature, I do hereby affirm that I have read the letter from the Indiana Department of Environment that appears directly above. In addition, I understand that in order to complete that project in which I am interested, with a minimum of impact to the environment, I must consider all the issues addressed in the aforementioned letter, and further, that I must obtain any required permits.

Date: 2/18/2021

Signature of the INDOT

Project Engineer or Other Responsible Agent

Kyanna Wheeler

Kyanna Wheeler

Date: Feb. 17, 2021

Signature of the
For Hire Consultant 

Payton Parke

From: [Amick, Kevin -FS](#)
To: [Payton Parke](#)
Cc: [Daniel Townsend](#)
Subject: RE: Early Coordination Addendum, Des 1601040, SR 62, at RP 96.36 Slide Correction, Crawford County, IN
Date: Thursday, February 18, 2021 10:47:20 AM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)

The project (Des. No. 1601040) is located on or adjacent to National Forest System (NFS) land and it appears that temporary and/or permanent Right-of-Way will be needed for the project. Accordingly, INDOT will need to request a Federal Land Transfer through the Federal Highway Administration. In addition, since the NEPA for the construction/reconstruction project will also need to cover the ROW conveyance from the United States, this should be considered an additional proposed action. The U.S. Forest Service will need to be directly involved with review of the draft environmental documents, as well. **Please contact Ron Scott, Lands Program Manager for the Hoosier NF, at (812) 276-4742 or by email at ron.scott@usda.gov for additional information regarding the Federal Land Transfer process.**



Kevin Amick
Environmental Coordinator
Forest Service
Hoosier National Forest

p: 812-276-4746
f: 812-279-3423
kevin.amick@usda.gov

811 Constitution Ave.
Bedford, IN 47421
www.fs.fed.us



Caring for the land and serving people

From: Payton Parke <PParke@lochgroup.com>
Sent: Wednesday, February 17, 2021 2:44 PM
To: Amick, Kevin -FS <kevin.amick@usda.gov>
Cc: Daniel Townsend <DTownsend@lochgroup.com>
Subject: RE: Early Coordination Addendum, Des 1601040, SR 62, at RP 96.36 Slide Correction, Crawford County, IN

Dear Mr. Amick,

Attached is an addendum to the early coordination initiated on January 14, 2020 for the SR 62, 2.44 miles west of SR 237 slide correction project, Des 1601040. This addendum corrects the *Proposed Project* and *Right of Way (ROW)* sections of the original early coordination letter. The proposed project area has changed.

Please let me know if you have any questions.

From: [Amick, Kevin R -FS](#)
To: [Foertsch, Lucas](#)
Cc: [Scott, Ron -FS](#); [Hume, Holly](#); [Townsend, Daniel](#)
Subject: RE: Section 4(f) Requirements for Slide Projects located in Crawford County (Des. 1601035, 1601036, 1601040, 1601043)
Date: Friday, April 3, 2020 10:30:19 AM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)

Mr. Foertsch,

You are correct, there are no public facilities within these five slide projects.



Kevin Amick
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Forest Service
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Caring for the land and serving people

From: Foertsch, Lucas <LFoertsch@lochgroup.com>
Sent: Thursday, April 2, 2020 4:23 PM
To: Amick, Kevin R -FS <kevin.amick@usda.gov>
Cc: Scott, Ron -FS <ron.scott@usda.gov>; Hume, Holly <HHume@lochgroup.com>; Townsend, Daniel <DTownsend@lochgroup.com>
Subject: RE: Section 4(f) Requirements for Slide Projects located in Crawford County (Des. 1601035, 1601036, 1601040, 1601043)

Hello Mr. Amick,

I would like to follow up with you about five of the slide projects in Crawford County: Des 1601035, 1601036, 1601040, 1601041, and 1601043. Each of these projects will require some amount of permanent right-of-way (ROW) within the Hoosier National Forest. Based on our review, there are no public facilities that will be impacted. Could you please confirm that no facilities exist within the attached project areas. Feel free to contact me with any questions.

Thank You

Lucas Foertsch
Environmental Biologist

From: [Scott, Ron- FS](#)
To: [Payton Parke](#)
Cc: [Daniel Townsend](#); [Nicholas Will](#)
Subject: RE: Des No 1601040, SR 62 Side Correction, Crawford County
Date: Monday, February 22, 2021 3:39:38 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)

Payton – Thanks for passing along the attached information. I will review and let you know if we have any comments or concerns. And yes, USFS biology staff reviewed the proposed (original and expanded) ROW for Des No 1601040, and determined there would be no effects to RFSS. So please include the same verbiage as you referenced in your email below.

Thanks,



Ron Scott
Lands & Minerals Program Manager
Forest Service
Hoosier National Forest

Office: 812-276-4742
Mobile: 812-278-0004
fax: 812-279-3423
ron.scott@usda.gov

811 Constitution Avenue
Bedford, IN 47421
www.fs.fed.us



Caring for the land and serving people

From: Payton Parke <PParke@lochgroup.com>
Sent: Monday, February 22, 2021 4:33 PM
To: Scott, Ron- FS <Ronald.Scott@usda.gov>
Cc: Daniel Townsend <DTownsend@lochgroup.com>; Nicholas Will <NWill@lochgroup.com>
Subject: Des No 1601040, SR 62 Side Correction, Crawford County

Ron,

I received your voice mail and wanted to follow up by sending you the updated project area, construction limits, and proposed ROW shapefiles (attached) for Des No 1601040, SR 62 Slide Correction project in Crawford County, which is located adjacent to Hoosier National Forest. Will you please confirm if a Regional Forester Sensitive Species assessment has been completed for the 1601040 project area to include in the Draft CE document? We would like to include language similar to what you provided below for the Des 1601035, 1601036, and 1601043 project areas:

U.S. Forest Service wildlife and fisheries biologists, along with the botanist from the Hoosier

From: [Falls, Ryan G](#)
To: [Payton Parke](#)
Cc: [Daniel Townsend](#)
Subject: RE: Vincennes Early Coordination Addendum Response , Des 1601040, SR 62, at RP 96.36 Slide Correction, Crawford County, IN
Date: Thursday, February 18, 2021 7:05:39 AM
Attachments: [image002.jpg](#)

Payton Parke,

At this time, our office has no additional comments on this project. Thank you for re-coordinating and the opportunity to respond to early coordination.

Ryan Falls

Capital Program Management-Senior Environmental Manager Supervisor

Indiana Department of Transportation
3650 South US Highway 41
Vincennes, IN 47591

Email: rfalls@indot.IN.gov

Cell: 812-582-1387

Office: 812-895-7326



From: Payton Parke <PParke@lochgroup.com>
Sent: Wednesday, February 17, 2021 2:59 PM
To: Falls, Ryan G <RFalls@indot.IN.gov>
Cc: Daniel Townsend <DTownsend@lochgroup.com>
Subject: RE: Early Coordination Addendum, Des 1601040, SR 62, at RP 96.36 Slide Correction, Crawford County, IN

****** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ******

Dear Mr. Falls,

Attached is an addendum to the early coordination initiated on January 14, 2020 for the SR 62, 2.44 miles west of SR 237 slide correction project, Des 1601040. This addendum corrects the *Proposed Project* and *Right of Way (ROW)* sections of the original early coordination letter. The proposed project area has changed.

Please let me know if you have any questions.

Thank you,
Payton

Payton Parke

Foertsch, Lucas

From: Falls, Ryan G <RFalls@indot.IN.gov>
Sent: Tuesday, January 21, 2020 1:06 PM
To: Foertsch, Lucas
Cc: Townsend, Daniel; Wright, Kristy; Ridgley, Brad
Subject: Vincennes Early Coordination Response, Des 1601040, SR 62, at RP 96.36 Slide Correction, Crawford County, IN

Lucas Foertsch,

At this time, our office has no comment on this project. Thank you for the opportunity to respond to early coordination.

Ryan Falls

Capital Program Management-Senior Environmental Manager Supervisor

Indiana Department of Transportation

3650 South US Highway 41

Vincennes, IN 47591

Office: 812-895-7326

Cell: 812-582-1387

Fax: 812-895-7474

Cisco: 14605

Email: rfalls@indot.IN.gov



From: Foertsch, Lucas [mailto:LFoertsch@lochgroup.com]
Sent: Tuesday, January 14, 2020 4:14 PM
To: Falls, Ryan G <RFalls@indot.IN.gov>
Cc: Townsend, Daniel <DTownsend@lochgroup.com>
Subject: Early Coordination, Des 1601040, SR 62, at RP 96.36 Slide Correction, Crawford County, IN

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Dear Mr. Falls,

We are working on the environmental document for the SR 62, 2.44 miles west of SR 237 at RP 96.36 Slide Correction project in Crawford County, IN (Des 1601040). Please find the early coordination package for your review and comment. Please let me know if you have any questions.

Thank you

Lucas Foertsch

Environmental Biologist

Lochmueller Group

6200 Vogel Road, Evansville, IN 47715

812.759.4114 (direct)

LFoertsch@lochgroup.com

Holly Hume

From: Bales, Ronald <rbales@indot.IN.gov>
Sent: Tuesday, May 11, 2021 3:08 PM
To: Payton Parke
Cc: Miller, Brandon; Daniel Townsend
Subject: RE: Des No 1601040 SR 62 Slide Correction Project - State Special Concern and State Endangered Bird Coordination
Attachments: 2020-02-11 IDNR Environmental Assessment ER-22132 letter.pdf

This should be a firm commitment for the tree cutting restriction. Thank you for coordinating with our office.

Ron Bales

INDOT-Environmental Services Division

Office: (317) 515-7908

Email: rbales@indot.in.gov

From: Payton Parke <PParke@lochgroup.com>
Sent: Tuesday, May 11, 2021 11:24 AM
To: Bales, Ronald <rbales@indot.IN.gov>
Cc: Miller, Brandon <BraMiller1@indot.IN.gov>; Daniel Townsend <DTownsend@lochgroup.com>
Subject: Des No 1601040 SR 62 Slide Correction Project - State Special Concern and State Endangered Bird Coordination

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Ron,

We are currently working through the environmental process for Des No 1601040 Slide Correction Project on SR 62, approximately 2.44 miles west of SR 237. The project will construct a cantilevered stub pile wall and repair the damaged pavement in the project area. Anticipated impacts include 0.40 acre of tree clearing. According to the IDNR DFW early coordination response letter dated February 11, 2020 (attached) the Natural Heritage Program's Database has been checked and the state endangered Henslow's sparrow (*Ammodramus henslowii*), state species of special concern Broad-winged Hawk (*Buteo platypterus*), and state species of special concern Worm-eating Warbler (*Helminthos vermivorus*) have been documented within 0.5 mile of the project area. Suitable habitat for Henslow's Sparrow does not exist in or near the project area, so impacts to this species are not expected as a result of this project. However, removal of trees in the permanent ROW for the proposed project may significantly impact Broad-winged Hawk and Worm-eating Warbler, which are both forest nesting species. IDNR DFW recommendations included limiting tree removal to outside of the bird breeding season and providing a mitigation plan for an unavoidable habitat impacts.

We are following up with you per the instructions in the Guidance Language to see if Central Office has any additional recommendations or if additional coordination is necessary. Please let me know if you have any questions.

Thank you,
Payton

Payton Parke
Envir Specialist I



Organization and Project Information

Project ID: INDOT
Des. ID: 1601040
Project Title: SR 62 Slide Correction, 2.44 miles west of SR 237
Name of Organization: Lochmueller Group Inc.
Requested by: Payton Parke

Environmental Assessment Report

1. Geological Hazards:
 - Floodway
2. Mineral Resources:
 - Bedrock Resource: Low Potential
 - Sand and Gravel Resource: None documented in the area
3. Active or abandoned mineral resources extraction sites:
 - Abandoned Industrial Minerals Quarries

*All map layers from Indiana Map (maps.indiana.edu)

DISCLAIMER:

This document was compiled by Indiana University, Indiana Geological Survey, using data believed to be accurate; however, a degree of error is inherent in all data. This product is distributed "AS-IS" without warranties of any kind, either expressed or implied, including but not limited to warranties of suitability to a particular purpose or use. No attempt has been made in either the design or production of these data and document to define the limits or jurisdiction of any federal, state, or local government. The data used to assemble this document are intended for use only at the published scale of the source data or smaller (see the metadata links below) and are for reference purposes only. They are not to be construed as a legal document or survey instrument. A detailed on-the-ground survey and historical analysis of a single site may differ from these data and this document.

This information was furnished by Indiana Geological Survey

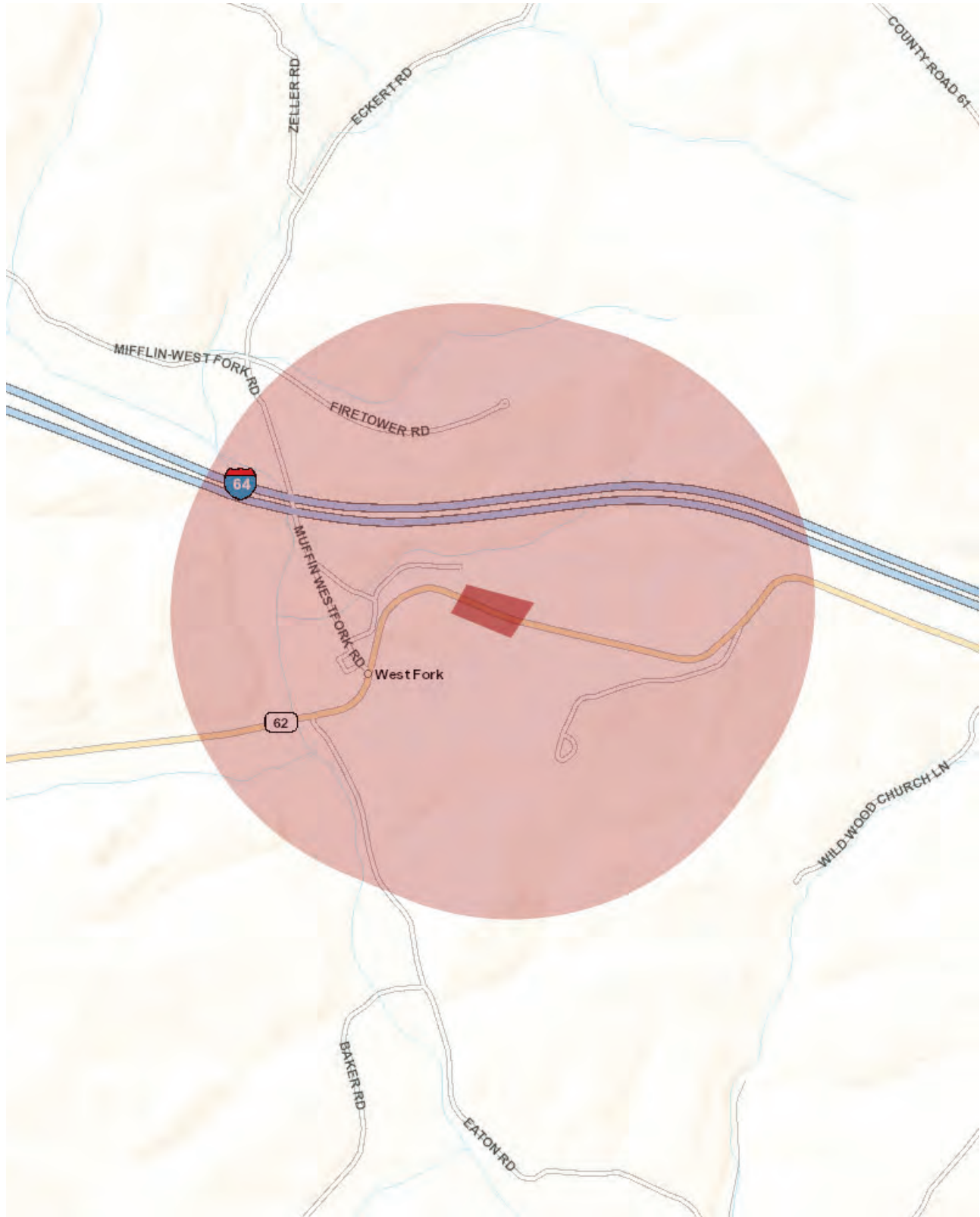
Address: 420 N. Walnut St., Bloomington, IN 47404

Email: IGSEnvir@indiana.edu

Phone: 812 855-7428

Date: February 23, 2021







Metadata:

- https://maps.indiana.edu/metadata/Geology/Industrial_Minerals_Quarries_Abandoned.html
- https://maps.indiana.edu/metadata/Hydrology/Floodplains_FIRM.html
- https://maps.indiana.edu/metadata/Geology/Bedrock_Geology.html

February 25, 2021

Payton Parke
Lochmueller Group, Inc.
3502 Woodview Trace, Suite 150
Indianapolis, Indiana 46268

Dear Mr. Parke:

The proposed project to proceed with a slide correction along State Road 62 in Crawford County, Indiana, (Des No 1601040), as referred to in your letter received February 17, 2021, will not cause a conversion of prime farmland.

If you need additional information, please contact John Allen at 317-295-5859.

Sincerely,

RICHARD
NEILSON
RICK NEILSON
State Soil Scientist

Digitally signed by
RICHARD NEILSON
Date: 2021.02.25
15:14:29 -05'00'



Categorical Exclusion

Appendix D

**Section 106 of the National Historic
Preservation Act (NHPA)**

Minor Projects PA Project Assessment Form – Category B Projects with Archaeology Work

Date: 3/3/20 Updated 4/1/21

Project Designation Number: 1601040

Route Number: SR 62

Project Description: Slide Correction, approximately 2.44 miles west of SR 237

The proposed project is a slide correction on SR 62, 2.44 miles west of SR 237 at RP 96.36 in Crawford County. The slide will be corrected by constructing a 175-foot long riprap buttress fill with cantilevered stub pile wall on 8-foot center to center spacing. Excavation is anticipated to occur to a maximum depth of 26 feet below ground surface for the installation of the support piers. The riprap fill will be placed at a 3:1 slope beginning at the edge of the proposed shoulder. Additional work outside the slide correction length will include shoulder widening, embankment construction, and Hot Mix Asphalt (HMA) mill and overlay. An existing 24-inch culvert is located within the project limits, but no work is anticipated to be required as part of the project. The total project length for the project is approximately 180-feet.

The Maintenance of Traffic (MOT) will be a detour which will utilize SR 37, I-64, and SR 237. It is anticipated the project will be bundled with 11 other slide correction projects along SR 62, thus access will need to be maintained for local traffic.

This project is anticipated to require approximately 0.4 acre of permanent right-of-way from one parcel. Additionally, approximately 0.2 acre of easement is anticipated to be required from a second parcel, the Hoosier National Forest (United States of America). Tree clearing is anticipated within the proposed right-of-way.

On March 31, 2021 INDOT, CRO was notified of a change in the project's scope. According to the updated description, the preferred alternative will correct the slide by constructing a row of cantilevered drilled shafts with a center-to-center spacing of 8 feet for 325 feet along the westbound lane of SR 62. The shafts will be drilled to a depth of 10 feet below the bedrock surface and will have a diameter of 2.5 feet. Above the bedrock, the pier diameter will be 3 feet and extend 6 feet above the bedrock surface. The entire shaft depth will be filled with Class A concrete and a steel H-pile will be placed in the shaft. The area above the concrete shaft with the H-pile will be backfilled with flowable fill. Placement of riprap will occur at a 3 to 1 slope along the westbound lane. The roadway will be milled and overlaid for a length of 325 feet along the slide correction to repair damaged pavement. Mill and Hot Mix Asphalt (HMA) overlay depth will be 1.5 inches. Additional work includes shoulder widening and embankment construction. An existing 24 inch culvert is located within the project limits and will be extended by 10 inches to accommodate the proposed widening of the shoulder. The total work length of the project is 0.095 mile (508.9 feet).

New ROW/Easement Amounts:

- New permanent ROW – 0.237 acre
- Reacquired ROW – 0.056 acre
- New easement – 0.309 acre
- Reacquired easement – 0.076 acre

No additional archaeology is recommended for the expanded project area because of excessive slopes and lack of rockshelters as documented in the previous study (Bundy and Martin 2020). In addition, the expanded project area does not change the results of the original above-ground assessment. Therefore, there are no new cultural resource concerns.

Feature crossed (if applicable):

Township: Union Township

City/County: Crawford County

Information reviewed (please check all that apply):

- General project location map USGS map Aerial photograph Interim Report
- Written description of project area General project area photos Soil survey data
- Previously completed historic property reports Previously completed archaeology reports
- Bridge Inspection Information SHAARD SHAARD GIS Streetview Imagery

Other (please specify): Indiana Historic Building, Bridges, and Cemeteries (IHBBC) map; County GIS data (accessed via <https://beacon.schneidercorp.com/?site=CrawfordCountyIN>)

Bundy, Paul D. and Andrew V. Martin

2020 A Phase Ia Archaeological Reconnaissance Survey for a Proposed Slide Correction Along SR 62 Approximately 2.44 miles west of SR 237 in Crawford County, Indiana (INDOT Des. No.

1601040). Report on file, Indiana Department of Transportation, Cultural Resources Office, Indianapolis, In.

Results of the Records Review for Above-Ground Resources:

With regard to above-ground resources, an INDOT-Cultural Resources Office (CRO) historian, who meets the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61, first performed a desktop review, checking the Indiana Register of Historic Sites and Structures (State Register) and National Register of Historic Places (National Register) lists for Crawford County. No listed resources are present within 0.25 mile of the project area, a distance that would serve as a more than adequate area of potential effects (APE) given the scope of the project and the surrounding terrain.

The Indiana Historic Sites and Structures Inventory (IHSSI) was also consulted via the Indiana State Historic Architectural and Archaeological Research Database (SHAARD) and the Indiana Historic Buildings, Bridges, and Cemeteries (IHBBC) map. No IHSSI sites are recorded within 0.25 mile of the project.

The APE on the south side of SR 62 is primarily heavily wooded. The APE on the north side of SR 62 is crossed by the I-64 corridor with heavily wooded land north of I-64. The only parcels with buildings within the APE are two located to the southwest of the project area. As observed through online street-level photography, they contain mobile homes, barns, and outbuildings, and do not appear to possess any historical or architectural significance.

No properties that may be historic will have view of this project area. Based on the available information, as summarized above, no above-ground concerns exist as long as the project scope does not change.

Archaeology Report Author/Date:

Paul D. Bundy and Andrew V. Martin/February 5, 2020

Summary of Archaeology Investigation Results:

An archaeological records check and Phase Ia reconnaissance survey of the project area were conducted by a qualified professional archaeologists from Cultural Resource Analysts (CRA) (Bundy and Martin 2020). The records check found that no previous surveys have covered any portion of the project area, and no previously recorded sites have been identified within or adjacent to the project area. A 0.6-acre survey area was examined through a combination of systematic shovel probing (n=4) and visual inspection of steep slopes and disturbed areas. All level areas on the north side of SR 62 within the project aera were subject to systematic shovel probe survey. The remainder of the project area was walked over to look for rock shelters and caves. No archaeological sites were found to be present within the survey area, and no additional investigation was recommended.

The report was reviewed by INDOT Cultural Resources personnel who meet the Secretary of the Interior’s Professional Qualification Standards as per 36 CFR Part 61. It is our opinion that the report is acceptable, and we concur with the evaluations and recommendations made by CRA (Bundy and Martin 2020). Therefore, there are no archaeological concerns.

Does the project appear to fall under the Minor Projects PA? yes no

If yes, please specify category and number (applicable conditions are highlighted):

A-3. Replacement, repair, lining, or extension of culverts and other drainage structures that do not exhibit wood, stone or brick structures or parts therein and are in previously disturbed soils; and

A-4. Roadway work associated with surface replacement, reconstruction, rehabilitation, or resurfacing projects, including overlays, shoulder treatments, pavement repair, seal coating, pavement grinding, and pavement marking within previously disturbed soils where replacement, repair, or installation of curbs, curb ramps or sidewalks will not be required; and

A-9. Installation, repair, or replacement of erosion control measures along roadways, waterways and bridge piers within previously disturbed soils; and

B-10. Slide corrections, slope repairs, and other erosion control measures, in undisturbed soils under the conditions listed below [*BOTH Condition A, which pertains to Archaeological Resources, and Condition B, which pertains to Above-Ground Resources, must be satisfied*]:

Condition A (Archaeological Resources)

An archaeological investigation conducted by the applicant and reviewed by INDOT Cultural Resources Office determines that no National Register-listed or potentially National Register-eligible archaeological resources are present within the project area. If the archaeological investigation locates National Register listed or potentially National Register eligible archaeological resources, then full Section 106 review will be required. Copies of any reports will be provided to the DHPA and any archaeological site form information will be entered directly into the SHAARD by the applicant. The archaeological reports will also be available for viewing (by Tribes only) on INSCOPE.

Condition B (Above-Ground Resources)

Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource.

If no, please explain:

Additional comments: If any archaeological artifacts or human remains are uncovered during construction, demolition, or earth moving activities, construction within 100 ft of the find will be stopped, and the INDOT Cultural Resources Office and the Division of Historic Preservation and Archaeology will be notified immediately.

INDOT Cultural Resources staff reviewer(s): Mary Kennedy and Shaun Miller

****Be sure to attach this form to the National Environmental Policy Act documentation for this project. Also, the NEPA documentation shall reference and include the description of the specific stipulation in the PA that qualifies the project as exempt from further Section 106 review.*

Hannah Blad

From: Miller, Shaun (INDOT) <smiller@indot.IN.gov>
Sent: Thursday, April 1, 2021 7:56 AM
To: Hannah Blad
Cc: Chad Costa; Gary Quigg; Daniel Townsend; MBullock1; Kennedy, Mary; Falls, Ryan G; amartin
Subject: RE: SR 62 Slide Correction, Des. No. 1601040, MPPA Determination Form update
Attachments: Minor Projects PA determination form_A-4andB-10_Des1601040_updated.pdf

Hi Hannah,

Thank you for notifying us of the expansion of the project area. We've reviewed the change in scope and determined that the MPPA remains applicable. We've updated the form to include the new r/w amounts and added categories A-3 and A-9 for the culvert work and installation of rip rap. Please be sure to use this version of the form in the CE document.

Thanks again,

Shaun Miller
INDOT, Cultural Resources Office
Archaeology Team Lead
(317)416-0876

From: Hannah Blad <HBlad@lochgroup.com>
Sent: Wednesday, March 31, 2021 5:29 PM
To: Miller, Shaun (INDOT) <smiller@indot.IN.gov>; Kennedy, Mary <MKENNEDY@indot.IN.gov>
Cc: Branigin, Susan <SBranigin@indot.IN.gov>; Chad Costa <CCosta@lochgroup.com>; Gary Quigg <gquigg@lochgroup.com>; Daniel Townsend <DTownsend@lochgroup.com>; Bullock, Matthew K <MBullock1@indot.IN.gov>
Subject: SR 62 Slide Correction, Des. No. 1601040, MPPA Determination Form update

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Hi Shaun and Mary,

Since the determination form for the MPPA was issued for the above-mentioned project, there have been developments on the design of the project. The construction limits and ROW have been revised (see attached map). CRA already had a discussion with Shaun about the archaeology and no additional archaeology was recommended.

Here is the updated project description: The preferred alternative will correct the slide by constructing a row of cantilevered drilled shafts with a center -to-center spacing of 8 feet for 325 feet along the westbound lane of SR 62. The shafts will be drilled to a depth of 10 feet below the bedrock surface and will have a diameter of 2.5 feet. Above the bedrock, the pier diameter will be 3 feet and extend 6 feet above the bedrock surface. The entire shaft depth will be filled with Class A concrete and a steel H-pile will be placed in the shaft. The area above the concrete shaft with the H-pile will be backfilled with flowable fill. Placement of riprap will occur at a 3 to 1 slope along the westbound lane. The roadway will be milled and overlaid for a length of 325 feet along the slide correction to repair damaged pavement. Mill and Hot Mix Asphalt (HMA) overlay depth will be 1.5 inches. Additional work includes shoulder widening and embankment construction. An existing 24 inch culvert is located within the project limits and will be extended by 10

Categorical Exclusion

Appendix E

**Red Flag Investigation
& Hazardous Materials**



INDIANA DEPARTMENT OF TRANSPORTATION

Driving Indiana's Economic Growth

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204-2216 (317) 232-5348 FAX: (317) 233-4929

Eric Holcomb, Governor
Joe McGuinness, Commissioner

Date: August 15, 2018

To: Site Assessment & Management Unit
Environmental Services
Indiana Department of Transportation
100 N Senate Avenue, Room N642
Indianapolis, IN 46204

From: Matthew Brendel
Lochmueller Group, Inc.
6200 Vogel Road
Evansville, IN 47715
mbrendel@lochgroup.com

Re: RED FLAG INVESTIGATION
DES #1601040, 1601041 and 1601042
SR 62 Multiple Slide Corrections
Crawford County, Indiana

NOTE: The following Red Flag Investigation (RFI) document was prepared for Des 1601040, Des 1601041, and Des 1601042. This CE Document only covers Des 1601040. Des 1601041 and Des 1601042 CE documents were completed separately.

Note: Due to the age of the RFI document, the RFI report was re-examined on April 19, 2021. No new information was identified.

PROJECT DESCRIPTION

Brief Description of Projects:

The proposed slide correction projects will be designed in accordance with the Indiana Design Manual (IDM) Chapter 55 – Geometric Design of Existing Non-Freeway (3R) standards and in accordance with the Geotechnical Report.

- Des No. 1601040: The slide correction project is located along SR 62 approximately 2.44 miles west of SR 237 in Crawford County at RP 96.36. Alternatives for the 170' slide correction include the construction of a soldier pile wall, a soil nailed wall, a drilled pier wall with tiebacks, and the reconstruction of the slide area with rock fill. Additional work outside the slide correction length may include guardrail construction, roadside ditch grading, and pavement construction to correct any profile deficiencies due to the slide. An existing 24" cross culvert is located within the project limits, but no work is anticipated to be required as part of the project.
- Des No. 1601041: The slide correction project is located along SR 62 approximately 2.10 miles west of SR 237 in Crawford County at RP 96.7. The 300' project is anticipated to include replacement of an 18" culvert with associated pavement reconstruction, guardrail construction, and failed paved side ditch replacement.
- Des No. 1601042: The slide correction project is located along SR 62 approximately 1.95 miles west of SR 237 in Crawford County at RP 96.85. It is anticipated that the 450' slide correction will be a soil nailed wall. Additional work outside the slide correction length may include guardrail construction, roadside ditch grading, and pavement construction to correct any profile deficiencies due to the slide. An existing 15" cross culvert is located within the project limits, but no work is anticipated to be required as part of the project.

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Bridge and/or Culvert Project: Yes No Structure # No assigned structure number in INDOT's system

If this is a bridge project, is the bridge Historical? Yes No , Select Non-Select

(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 * *Right of way (RW) acquisition is anticipated due to no existing RW grants being found along SR 62, however the amount of permanent RW is unknown at this time.

Type of excavation:

- 1601040: Up to 25 feet deep for construction of a corrective wall
- 1601041: Up to 20 feet deep for 18" culvert replacement
- 1601042: Up to 20 feet deep for construction of a corrective wall
- Minor excavation associated with guardrail construction, roadside ditch grading, and pavement construction

Maintenance of traffic: Full road closure and detour

Work in waterway: Yes No Above ordinary high water mark: Yes No

State Project: LPA:

Any other factors influencing recommendations: Preferred alternative selection and design is not yet complete.

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	2	Railroads	N/A
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:

Cemeteries: Two (2) cemeteries are mapped within the 0.5 mile search radius. However, the cemetery icon for Hedden Cemetery appears to be mislocated and should be 0.5 mile to the south as shown on the USGS Topo map. The nearest cemetery, Fessler Cemetery, is located approximately 0.08 mile northeast of the 1601042 project area. No impact is expected.

Managed Lands: One (1) managed land is located within the 0.5 mile search radius. Hoosier National Forest is within the 1601040 and 1601041 project areas. Coordination with the U.S. Forest Service is recommended.

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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	3	Canal Routes - Historic	N/A
Karst Springs	N/A	NWI - Wetlands	18
Canal Structures – Historic	N/A	Lakes	8
NPS NRI Listed	N/A	Floodplain - DFIRM	N/A
NWI-Lines	2	Cave Entrance Density	N/A
IDEM 303d Listed Streams and Lakes (Impaired)	N/A	Sinkhole Areas	N/A
Rivers and Streams	5	Sinking-Stream Basins	N/A

Explanation:

NWI – Points: Three (3) NWI points are located within the 0.5 mile search radius. One NWI point is located within the 1601042 project area. This point likely represents the pond (also mapped in wetlands and lakes) that is adjacent to the project to the north. A Waters of the US Report will be prepared and coordination with INDOT ES Ecology and Waterway Permitting will occur.

NWI – Line: Two (2) NWI line segments are located within the 0.5 mile search radius. The nearest NWI line segment is located approximately 0.43 mile northeast of the 1601042 project area. No impact is expected.

Rivers and Streams: Five (5) stream segments are located within the 0.5 mile search radius. The nearest stream segment, a tributary of the Little Blue River, is located approximately 0.06 mile northeast of the 1601040 project area. Due to the proximity of culverts in each project area, it is likely that additional water resources, such as unnamed tributaries, regulated drains, wetlands, and roadside ditches are located in the project areas. A Waters of the US Report will be prepared and coordination with INDOT Ecology and Waterway Permitting will occur.

NWI – Wetlands: Eighteen (18) NWI wetlands are located within the 0.5 mile search radius. The nearest NWI wetland is located adjacent to the 1601042 project area. A Waters of the US Report will be prepared and coordination with INDOT ES Ecology and Waterway Permitting will occur.

Lakes: Eight (8) lakes are located within the 0.5 mile search radius. The nearest lake is located adjacent to the 1601042 project area. A Waters of the US Report will be prepared and coordination with INDOT ES Ecology and Waterway Permitting will occur.

URBANIZED AREA BOUNDARY SUMMARY

Explanation: N/A

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	1	Mineral Resources	N/A
Mines – Surface	N/A	Mines – Underground	N/A

Explanation:

Petroleum Wells: One (1) petroleum well is located within the 0.5 mile search radius. The petroleum well is located approximately 0.36 mile south of the 1601042 project area. No impact is expected.

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	Manufactured Gas Plant Sites	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	N/A	Notice of Contamination Sites	N/A

Explanation: No hazardous material concern resources were identified within the 0.5 mile search radius.

ECOLOGICAL INFORMATION SUMMARY

The Crawford listing of the Indiana Natural Heritage Data Center information on endangered, threatened, or rare (ETR) species and high quality natural communities is attached with ETR species highlighted. A preliminary review of the Indiana Natural Heritage Database by INDOT Environmental Services did not indicate the presence of endangered species. 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 areas. Project 1601041, located in a rural area surrounded by farm fields and forests, replaces a culvert that is 18 inches in diameter. An inspection report for this culvert was not available in the Bridge Inspection Application System (BIAS). Therefore there is no information about whether bats are present or absent in the culvert. Additional investigation to confirm the presence or absence of bats in the culvert will be necessary. The range-wide programmatic

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consultation for the Indiana Bat and Northern Long-eared Bat will need to be completed according to "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

An inquiry using the USFWS Information for Planning and Consulting (IPaC) website did not indicate the presence of the federally endangered species, the Rusty Patched Bumblebee, in or within 0.5 mile of the project area. No impact is expected.

RECOMMENDATIONS SECTION

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

INFRASTRUCTURE:

Managed Lands: One (1) managed land, Hoosier National Forest, is within the 1601040 and 1601041 project areas. Coordination with the U.S. Forest Service is recommended.

WATER RESOURCES:

The presence of the following water resources will require the preparation of a Waters of the US Report and coordination with INDOT ES Ecology and Waterway Permitting:

- One (1) NWI point within the 1601042 project area
- One (1) NWI wetland adjacent to the 1601042 project area
- One (1) lake adjacent to the 1601042 project area

URBANIZED AREA BOUNDARY: N/A

MINING/MINERAL EXPLORATION: N/A

HAZMAT CONCERNS: N/A

ECOLOGICAL INFORMATION:

- Coordination with USFWS and IDNR will occur.
- Additional investigation for DES 1601041 to confirm the presence or absence of bats in the 18" culvert will be necessary.
- The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

INDOT Environmental Services concurrence: _____ (Signature)
Ronald E. Bulea Date: 2018.08.16
16:18:49 -04'00'

Prepared by:

Matthew J. Brendel
Matthew Brendel
Environmental Technician
Lochmueller Group, Inc.

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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

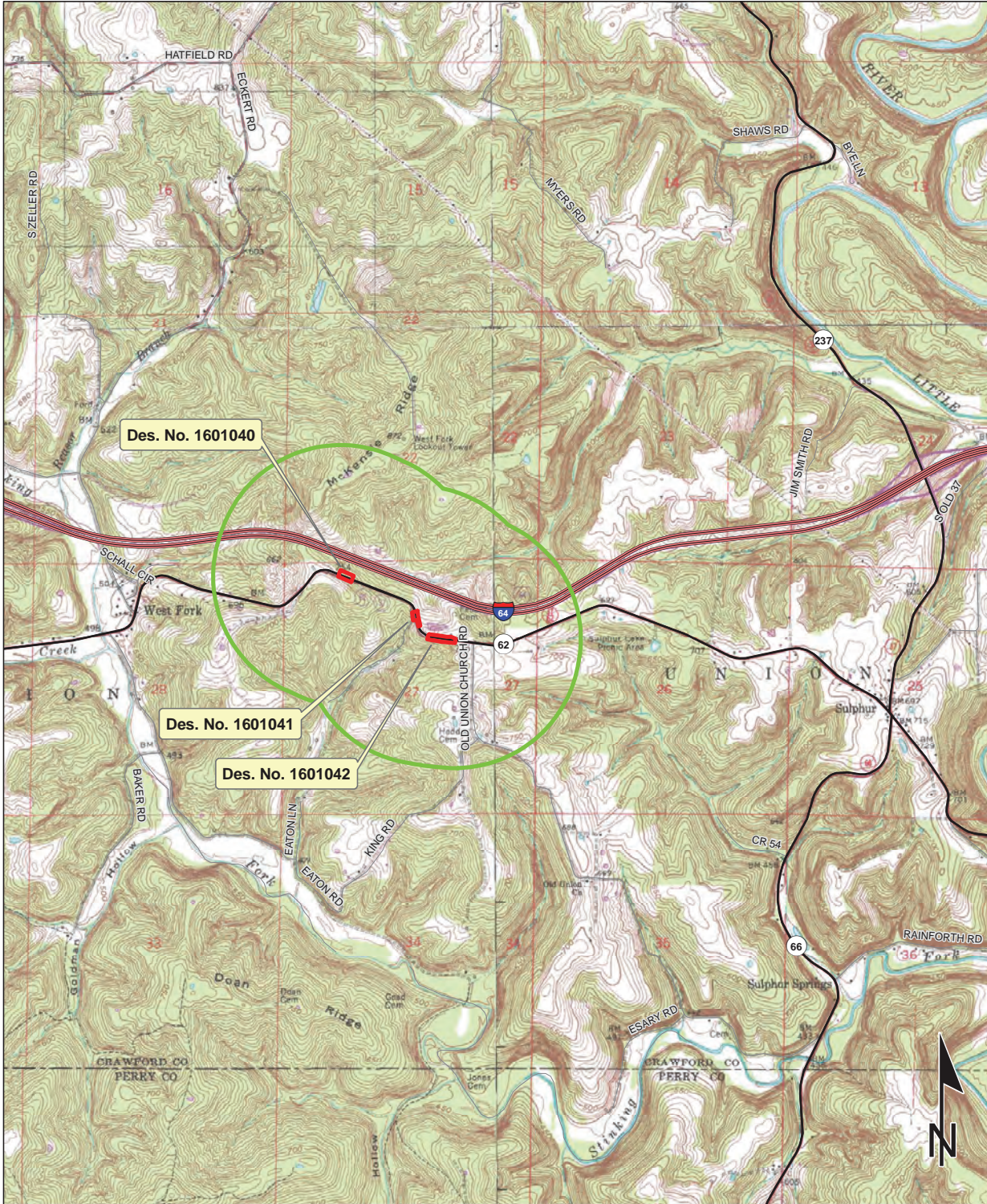
WATER RESOURCES: YES

URBANIZED AREA BOUNDARY: N/A

MINING/MINERAL EXPLORATION: YES

HAZMAT CONCERNS: N/A

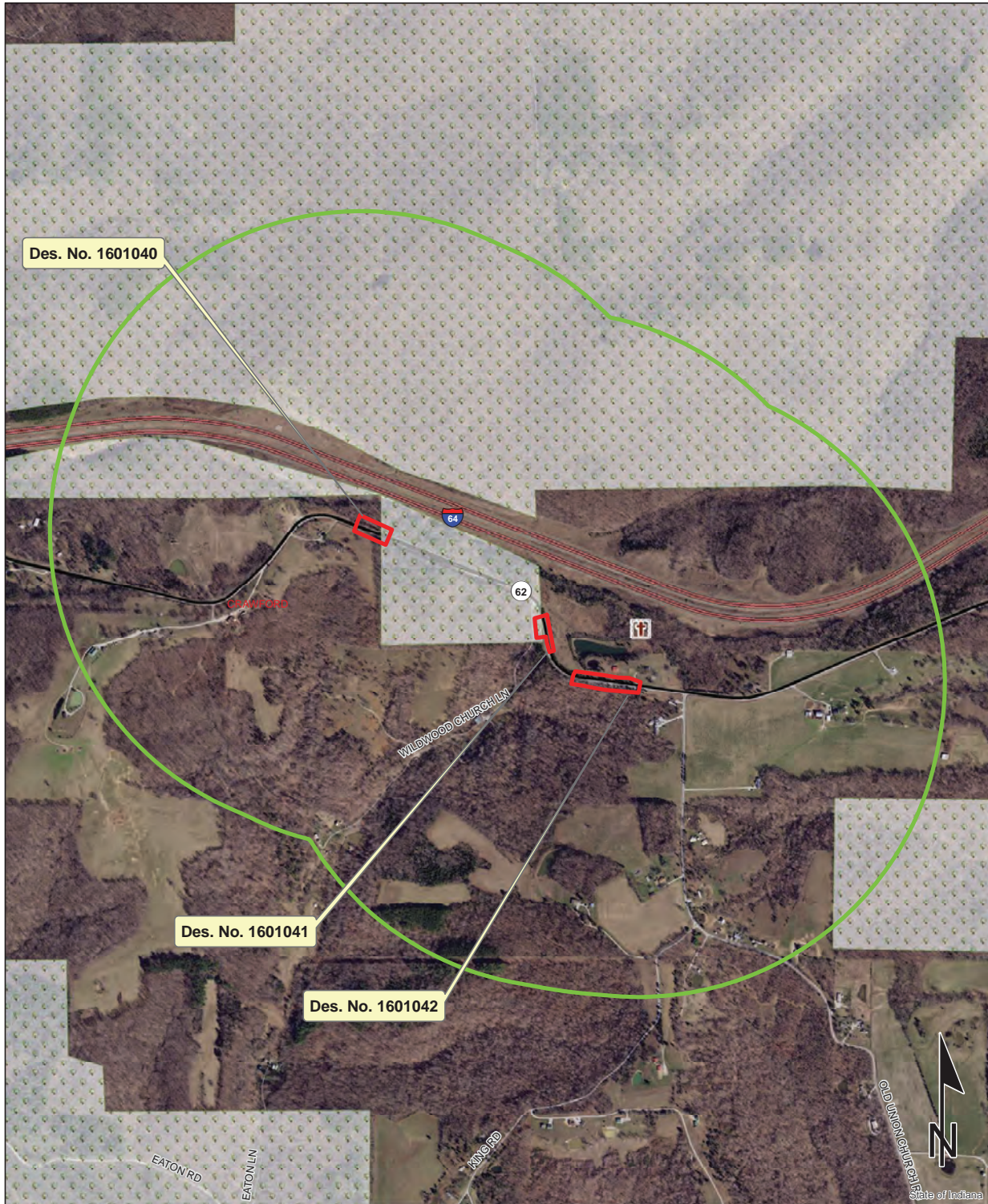
Red Flag Investigation - Site Location
 SR 62 Slide Corrections
 Des. No. 1601040, 1601041 & 1601042
 Crawford County, Indiana



Sources: 0.5 0.25 0 0.5 Miles
Non Orthophotography
Data - 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
 This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

BRANCHVILLE & BEECHWOOD
 QUADRANGLES
 INDIANA
 7.5 MINUTE SERIES
 (TOPOGRAPHIC)

Red Flag Investigation - Infrastructure
 SR 62 Slide Corrections
 Des. No. 1601040, 1601041 & 1601042
 Crawford County, Indiana



Sources: 0.2 0.1 0 0.2 Miles

Non Orthophotography
 Data - 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

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	Religious Facility		Recreation Facility		Project Area
	Airport		Pipeline		Half Mile Radius
	Cemeteries		Railroad		Toll
	Hospital		Trails		Interstate
	School		Managed Lands		State Route
			County Boundary		US Route
					Local Road

Red Flag Investigation - Water Resources
 SR 62 Slide Corrections
 Des. No. 1601040, 1601041 & 1601042
 Crawford County, Indiana



Sources: 0.2 0.1 0 0.2 Miles

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NWLI - Point	Wetlands	Project Area
Karst Spring	Lake	Half Mile Radius
NWLI - Line	Floodplain - DFIRM	Toll
Impaired_Stream_Lake	Cave Entrance Density	Interstate
NPS NRI listed	Sinkhole Area	State Route
River	Sinking-Stream Basin	US Route
Canal Structure - Historic	County Boundary	Local Road
Canal Route - Historic		

Red Flag Investigation - Mining/Mineral Exploration
 SR 62 Slide Corrections
 Des. No. 1601040, 1601041 & 1601042
 Crawford County, Indiana



Sources:
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Oil and Gas Wells	County Boundary	Toll
Mineral Resources	Project Area	Interstate
Mine - Surface	Half Mile Radius	State Route
Mine - Underground		US Route
		Local Road

Indiana County Endangered, Threatened and Rare Species List

County: **Crawford**

Species Name	Common Name	FED	STATE	GRANK	SRANK
Platyhelminthes (Flatworms)					
<i>Sphalloplana weingartneri</i>	Weingartner's Cave Flatworm		WL	G4	S3
Diplopoda					
<i>Pseudotremia indianae</i>	Blue River Cave Milliped		WL	G4	S4
<i>Pseudotremia salisae</i>	Salisa's Cave Milliped	SE		G1G2	S1
Crustacean: Malacostraca					
<i>Caecidotea jordani</i>	Jordan's groundwater isopod	SE		G2G3	S1
<i>Crangonyx packardi</i>	Packard's Cave Amphipod		WL	G4	S3
<i>Miktoniscus barri</i>	Barr's Terrestrial Isopod		WL	G2G4	SNR
<i>Orconectes inermis inermis</i>	A Troglotic Crayfish		WL	G5T4	S3
Crustacean: Copepoda					
<i>Cauloxenus stygius</i>	Northern Cavefish Commensal Copepod		SE	G1G2	S1
<i>Diacyclops jeanneli</i>	Jeannel's Cave Copepod		ST	G3G4	S2
<i>Diacyclops yeatmani</i>	Yeatman's groundwater isopod		SE	G2G3	S1
<i>Megacyclops donaldsoni</i>	Donaldson's Cave Copepod		SE	G3G4	S1
Crustacean: Ostracoda					
<i>Pseudocandona jeanneli</i>	Jeannel's Cave Ostracod		SE	G2	S1
<i>Pseudocandona marengoensis</i>	Marengo Cave Ostracod		SE	G1G2	S1
<i>Sagittocythere barri</i>	Barr's Commensal Cave Ostracod		WL	G5	S3S4
Mollusk: Bivalvia (Mussels)					
<i>Epioblasma triquetra</i>	Snuffbox	LE	SE	G3	S1
<i>Fusconaia subrotunda</i>	Longsolid	C	SE	G3	SX
<i>Lampsilis fasciola</i>	Wavyrayed Lampmussel		SSC	G5	S3
<i>Lampsilis ovata</i>	Pocketbook			G5	S2
<i>Ligumia recta</i>	Black Sandshell			G4G5	S2
<i>Obovaria subrotunda</i>	Round Hickorynut	C	SE	G4	S1
<i>Pleurobema clava</i>	Clubshell	LE	SE	G1G2	S1
<i>Pleurobema cordatum</i>	Ohio Pigtoe		SSC	G4	S2
<i>Pleurobema pyramidatum</i>	Pyramid Pigtoe		SE	G2G3	SX
<i>Ptychobranchus fasciolaris</i>	Kidneyshell		SSC	G4G5	S2
<i>Simpsonia ambigua</i>	Salamander Mussel	C	SSC	G3	S2
<i>Villosa lienosa</i>	Little Spectaclecase		SSC	G5	S3
Mollusk: Gastropoda					
<i>Antroselatus spiralis</i>	Shaggy Cave Snail		SR	G3	S3
<i>Carychium riparium</i>	Floodplain Thorn			G2	SNR
<i>Fontigens cryptica</i>	Hidden Springs Snail		SE	G1	S1
Ellipluran: Collembola					
<i>Arrhopalites ater</i>	Black Medusa Cave Springtail		ST	G2	S2
<i>Arrhopalites lewisi</i>	Lewis' Cave Springtail		ST	GNR	S2

Indiana Natural Heritage Data Center
Division of Nature Preserves
Indiana Department of Natural Resources
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Indiana County Endangered, Threatened and Rare Species List

County: Crawford

Species Name	Common Name	FED	STATE	GRANK	SRANK
Hypogastrura lucifuga	Wyandotte Cave Springtail		SE	GNR	S1
Onychiurus casus	Fallen Springtail		WL	GNR	S4
Onychiurus reluctus	A Springtail		WL	GNR	S4
Onychiurus subtenuis	Slender Springtail		WL	GNR	SNR
Pseudosinella fonsa	Fountain Cave Springtail		ST	G3G4	S2
Sinella alata	Springtail		WL	G5	S4
Sinella cavernarum	A Springtail		WL	G5	S3
Insect: Coleoptera (Beetles)					
Aleochara lucifuga	Rove beetle		WL	GNR	S4
Aloconota insecta	A rove beetle			GNR	S2
Pseudanophthalmus eremita	Cave Beetle		SE	G1G2	S1
Pseudanophthalmus stricticollis	Marengo Cave Ground Beetle		WL	G4	S3
Pseudanophthalmus tenuis	Cave Beetle		WL	G4	S4
Pseudanophthalmus youngi	Young's cave ground beetle		SR	G3G4	S2
Trimiomelba dubia	Ant beetle			GNR	S2
Insect: Homoptera					
Bruchomorpha extensa	The Long-nosed Elephant Hopper		SR	GNR	S2S3
Chlorotettix vacuna	The Vacant Chlorotettix		SR	GNR	S1S2
Flexamia reflexus	Indiangrass Flexamia		ST	GNR	S2S3
Polyamia dilata	The Short-winged Panic Grass Leafhopper		SE	GNR	S1
Polyamia herbida	The Prairie Panic Grass Leafhopper		ST	GNR	S1S3
Insect: Lepidoptera (Butterflies & Moths)					
Amblyscirtes hegon	Salt-and-pepper Skipper		SR	G5	S2
Amblyscirtes vialis	Common Roadside-skipper		SR	G5	S3
Artogeia virginiensis	West Virginia White		SR	G3?	S3
Atrytonopsis hianna	Dusted Skipper		ST	G4G5	S1S2
Calephelis muticum	Swamp Metalmark		ST	G3	S2
Calycopis cecrops	Red-banded Hairstreak		SR	G5	S2S3
Catocala flebilis	The Black-dashed Underwing Moth		SR	G5	S1S3
Cyllopsis gemma	Gemmed Satyr		SR	G4G5	S2
Grammia figurata	The Figured Grammia		SR	G5	S2S3
Grammia phyllira	The Sand Barrens Grammia		SR	G4	S2S3
Hermeuptychia sosybius	Carolina Satyr		SR	G5	S1S2
Herpetogramma thestealis			SR	GNR	S2S3
Hesperia leonardus	Leonard's Skipper		SR	G5	S2
Holomelina opella	The Smokey Holomelina		SR	G5	S2S3
Hyperaeschra georgica	A Prominent Moth			G5	S2

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Indiana County Endangered, Threatened and Rare Species List

County: Crawford

Species Name	Common Name	FED	STATE	GRANK	SRANK
Lesmone detrahens	A Moth		SR	G5	S2
Leucania inermis	A Moth		SR	G5	S2S3
Paectes abrostolella	The Barrens Paectes Moth		SR	G4	S2S3
Pagara simplex	A Moth		SR	G5	S2S3
Pangrapta decoralis	The Multicolored Huckleberry Moth		ST	G5	S2
Pyrausta laticlavia	The Southern Purple Mint Moth		SR	GNR	S1S2
Schinia sanguinea	Bleeding Flower Moth			G4	S2S3
Spilosoma latipennis	The Red-legged Tussock Moth		SR	G4	S2S3
Tampa dimediatella	Red-striped Panic Grass Moth		ST	GNR	S2S3
Thorybes pylades	Northern Cloudywing		SR	G5	S2S3
Insect: Orthoptera					
Melanoplus tepidus	The Fearful Barrens Locust		SR	GU	S1S3
Arachnida					
Calymmaria cavicola	Cave Funnel-web Spider			GNR	S1
Cicurina arcuata	A Funnel-web Weaver			G5	S1
Dolomedes scriptus	Lined Nursery Web Spider			G5	S1?
Hesperochernes mirabilis	Southeastern Cave Pseudoscorpion		WL	G5	S4
Kleptochthonius packardi	Packard's Cave Pseudoscorpion		SE	G2G3	S2
Nesticus carteri	Carter's Cave Spider			GNR	S1
Veigaia bakeri	Baker's Cave Mite			G1	S1
Veigaia wyandottensis	Wyandotte Cave Mite		SE	G1	S1
Fish					
Amblyopsis hoosieri	Hoosier cavefish	C	SE	G2	S1
Esox masquinongy	Ohio River Muskellunge		SSC	G5	S1
Etheostoma maculatum	Spotted Darter		SSC	G2G3	S2S3
Etheostoma variatum	Variagate Darter		SE	G5	S1
Notropis ariommus	Popeye Shiner			G3	SX
Amphibian					
Aneides aeneus	Green Salamander	C	SE	G3G4	S1
Cryptobranchus alleganiensis alleganiensis	Eastern Hellbender	C	SE	G3G4T3T4	S1
Reptile					
Terrapene carolina carolina	Eastern Box Turtle		SSC	G5T5	S3
Bird					
Accipiter striatus	Sharp-shinned Hawk		SSC	G5	S2B
Aimophila aestivalis	Bachman's Sparrow			G3	SXB
Ammodramus henslowii	Henslow's Sparrow		SE	G4	S3B
Buteo lineatus	Red-shouldered Hawk		SSC	G5	S3
Buteo platypterus	Broad-winged Hawk		SSC	G5	S3B

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Indiana County Endangered, Threatened and Rare Species List

County: Crawford

Species Name	Common Name	FED	STATE	GRANK	SRANK
Coragyps atratus	Black Vulture			G5	S1N,S2B
Haliaeetus leucocephalus	Bald Eagle		SSC	G5	S2
Helmitheros vermivorus	Worm-eating Warbler		SSC	G5	S3B
Mniotilta varia	Black-and-white Warbler		SSC	G5	S1S2B
Pandion haliaetus	Osprey		SE	G5	S1B
Setophaga cerulea	Cerulean Warbler		SE	G4	S3B
Wilsonia citrina	Hooded Warbler		SSC	G5	S3B
Mammal					
Myotis austroriparius	Southeastern Bat		SSC	G4	SH
Myotis grisescens	Gray Bat	LE	SE	G4	S1
Myotis leibii	Eastern Small-footed Myotis		SSC	G4	SU
Myotis lucifugus	Little Brown Bat	C	SSC	G3	S2
Myotis septentrionalis	Northern Long Eared Bat	LT	SSC	G1G2	S2S3
Myotis sodalis	Indiana Bat or Social Myotis	LE	SE	G2	S1
Neotoma magister	Allegheny Woodrat		SE	G3G4	S2
Nycticeius humeralis	Evening Bat		SE	G5	S1
Perimyotis subflavus	Tricolored Bat		SSC	G2G3	S2S3
Sorex hoyi	Pygmy Shrew		SSC	G5	S2
Vascular Plant					
Acalypha deamii	Mercury		SR	G4?	S2
Asplenium bradleyi	Bradley's Spleenwort		SE	G4	S1
Asplenium montanum	Mountain Spleenwort		SE	G5	S1
Asplenium ruta-muraria	Wallrue Spleenwort		SR	G5	S2
Bacopa rotundifolia	Roundleaf Water-hyssop		ST	G5	S1
Baptisia australis	Wild False Indigo		SR	G5	S2
Calamagrostis porteri ssp. porteri	Porter's reedgrass		SE	G4T4	S1
Carex eburnea	Ebony Sedge		SR	G5	S2
Carex pedunculata	Longstalk Sedge		SR	G5	S2
Castanea dentata	American Chestnut		WL	G4	S3
Chamaelirium luteum	Devil's-bit		SE	G5	S1
Cheilanthes lanosa	Hairy Lipfern		SR	G5	S2
Cirsium carolinianum	Carolina Thistle		SR	G5	S2
Cypripedium parviflorum var. pubescens	Large Yellow Lady's-slipper		WL	G5T5	S3
Dodecatheon frenchii	French's Shootingstar		SR	G3	S2
Eupatorium incarnatum	Pink Thoroughwort		ST	G5	S2
Euphorbia serpens	Matted Broomspurge		SE	G5	S1
Gaura filipes	Slender-stalked Gaura		ST	G5	S2
Gentiana alba	Yellow Gentian		SR	G4	S2
Gentiana puberulenta	Downy Gentian		ST	G4G5	S2
Hedyotis nigricans	Narrowleaf Summer Bluets		SR	G5	S2

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SRANK: State Heritage Rank: S1 = critically imperiled in state; S2 = imperiled in state; S3 = rare or uncommon in state; G4 = widespread and abundant in state but with long term concern; SG = state significant; SH = historical in state; SX = state extirpated; B = breeding status; S? = unranked; SNR = unranked; SNA = nonbreeding status unranked

Indiana County Endangered, Threatened and Rare Species List

County: Crawford

Species Name	Common Name	FED	STATE	GRANK	SRANK
Heliotropium tenellum	Slender Heliotrope		ST	G5	S2
Hexalectris spicata	Crested Coralroot		SR	G5	S2
Hydrastis canadensis	Golden Seal		WL	G3G4	S3
Hypericum dolabriforme	Stragglng St. John's-wort		SR	G4	S2
Isoetes engelmannii	Appalachian Quillwort		SE	G4	S1
Juglans cinerea	Butternut		WL	G4	S3
Lilium canadense	Canada Lily		SR	G5	S2
Lycopodium dendroideum	Treelike Clubmoss		SE	G5	S1
Magnolia tripetala	Umbrella Magnolia		SE	G5	S1
Matelea obliqua	Angle Pod		SR	G4?	S2
Melica nitens	Three-flower Melic Grass		ST	G5	S2
Melothria pendula	Creeping Cucumber		SE	G5?	S1
Najas gracillima	Thread-like Naiad		ST	G5?	S1
Nothoscordum bivalve	Crow-poison		SR	G4	S2
Oenothera perennis	Small Sundrops		SR	G5	S2
Ophioglossum engelmannii	Limestone Adder's-tongue		SR	G5	S2
Oxalis illinoensis	Illinois Woodsorrel		WL	G4Q	S2
Pachysandra procumbens	Allegheny Spurge		SE	G4G5	S1
Panax quinquefolius	American Ginseng		WL	G3G4	S3
Panicum yadkinense	A Panic-grass		SE	G4Q	S2
Penstemon deamii	Deam Beardtongue		SR	G1	S1
Phlox amplifolia	Large-leaved Phlox		SR	G3G5	S2
Platanthera lacera	Green-fringe Orchis		WL	G5	S3
Pleopeltis polypodioides	Resurrection Fern		SR	G5	S2
Prenanthes aspera	Rough Rattlesnake-root		SR	G4?	S2
Pteridium aquilinum var. pseudocaudatum	Bracken Fern		SX	G5T5	SX
Rubus centralis	Illinois Blackberry		SE	G2?Q	S1
Rubus deamii	Deam Dewberry		SX	G4?	SX
Rubus enslenii	Southern Dewberry		SE	G4G5Q	S1
Rubus odoratus	Purple Flowering Raspberry		ST	G5	S2
Rudbeckia fulgida var. fulgida	Orange Coneflower		WL	G5T4?	S2
Sanicula smallii	Small's Snakeroot		SR	G5	S2
Satureja vulgaris var. neogaea	American Wild Basil		WL	G5	S3
Saxifraga virginiana	Virginia Saxifrage		WL	G5	S3
Scirpus purshianus	Weakstalk Bulrush		SR	G4G5	S2
Scutellaria parvula var. australis	Southern Skullcap		WL	G4T4?	S2
Scutellaria saxatilis	Rock Skullcap		SE	G3	S1
Sedum telephioides	Allegheny Stonecrop		SR	G4	S2
Selaginella apoda	Meadow Spike-moss		WL	G5	S1
Sparganium androcladum	Branching Bur-reed		ST	G4G5	S2

Indiana Natural Heritage Data Center
Division of Nature Preserves
Indiana Department of Natural Resources
This data is not the result of comprehensive county surveys.

Fed: LE = Endangered; LT = Threatened; C = candidate; PDL = proposed for delisting
State: SE = state endangered; ST = state threatened; SR = state rare; SSC = state species of special concern; SX = state extirpated; SG = state significant; WL = watch list
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Indiana County Endangered, Threatened and Rare Species List

County: Crawford


Species Name	Common Name	FED	STATE	GRANK	SRANK
<i>Spiranthes vernalis</i>	Grassleaf Ladies'-tresses		WL	G5	S2
<i>Styrax grandifolius</i>	Large-leaf Snowbell		SE	G5	S1
<i>Symphyotrichum oblongifolium</i>	Aromatic Aster		SR	G5	S2
<i>Synandra hispidula</i>	Gyandotte Beauty		WL	G4	S3
<i>Thalictrum pubescens</i>	Tall Meadowrue		ST	G5	S2
<i>Tragia cordata</i>	Heart-leaved Noseburn		WL	G4	S2
<i>Trichomanes boschianum</i>	Filmy Fern		SE	G4	S1
<i>Verbesina virginica</i>	White Crownbeard		SE	G5?	S1
<i>Viburnum molle</i>	Softleaf Arrow-wood		SR	G5	S2
<i>Vitis rupestris</i>	Sand Grape		SE	G3	S1
<i>Vittaria appalachiana</i>	Appalachian Vittaria		SR	G4	S2
<i>Waldsteinia fragarioides</i>	Barren Strawberry		SR	G5	S2
<i>Wisteria macrostachya</i>	Kentucky Wisteria		SR	G5	S2
<i>Zizia aptera</i>	Golden Alexanders		SR	G5	S2
High Quality Natural Community					
Barrens - bedrock limestone	Limestone Glade		SG	G4	S2S3
Forest - floodplain mesic	Mesic Floodplain Forest		SG	G3?	S1
Forest - upland dry Shawnee Hills	Shawnee Hills Dry Upland Forest			GNR	S2
Forest - upland dry-mesic Shawnee Hills	Shawnee Hills Dry-mesic Upland Forest			GNR	S3
Forest - upland mesic Shawnee Hills	Shawnee Hills Mesic Upland Forest			GNR	S3
Primary - cave terrestrial	Terrestrial Cave		SG	GNR	SNR
Primary - cliff limestone	Limestone Cliff		SG	GU	S1
Primary - cliff overhang	Sandstone Overhang		SG	G4	S2
Primary - cliff sandstone	Sandstone Cliff		SG	GU	S3
Primary - wash gravel	Gravel Wash		SG	GU	S1
Other Significant Feature					
Freshwater Mussel Concentration Area	Mussel Bed		SG	G3	SNR
Geomorphic - Nonglacial Erosional Feature - Water Fall and Cascade	Water Fall and Cascade			GNR	SNR

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Indiana Department of Natural Resources
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Categorical Exclusion
Appendix F
Water Resources

INdiana Floodplain Information Portal



Find an address
Example: 300 Michigan Avenue, Auburn, IN, 46706

Go To Address

Jump to a county

- or - Select your county from below

Adams ▼

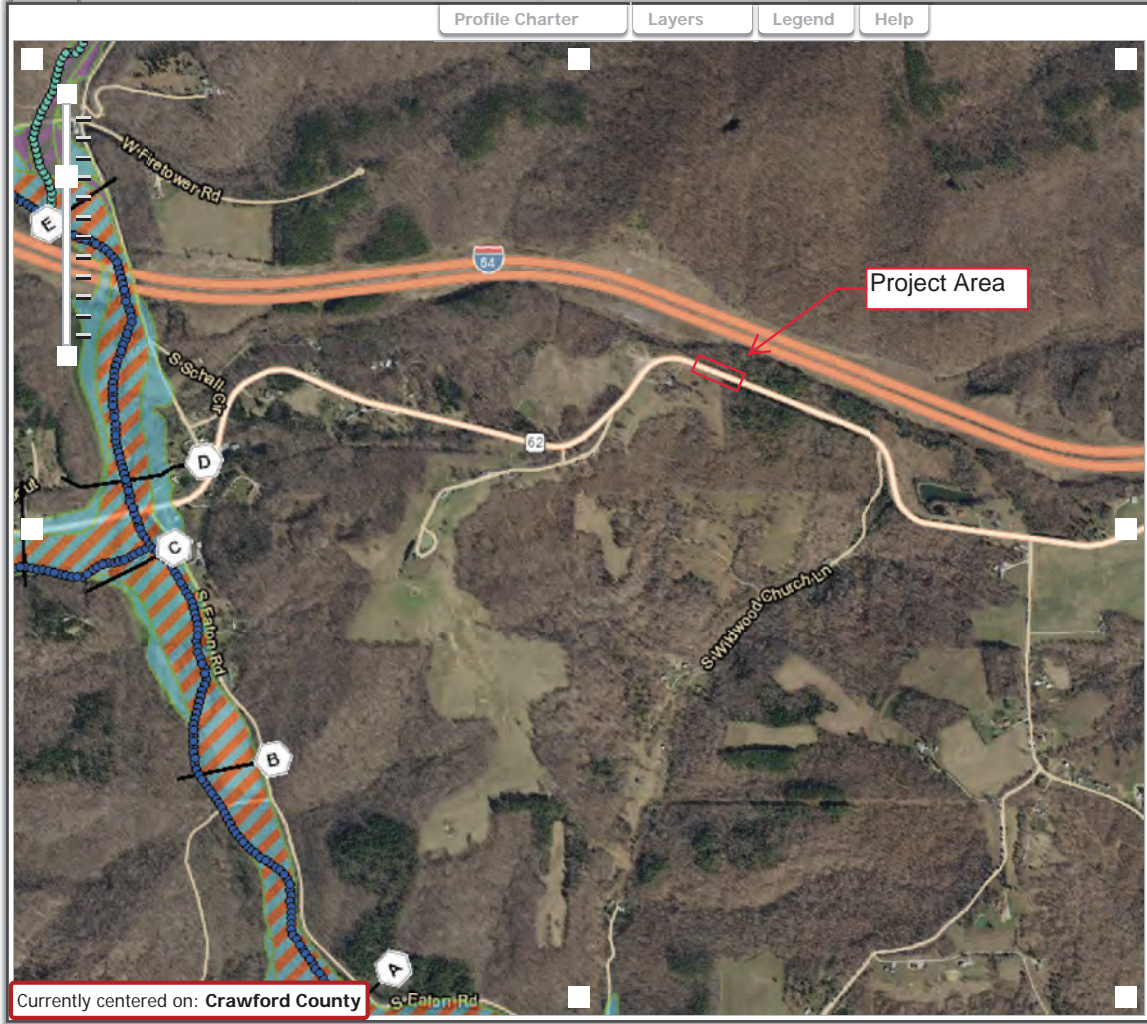
View your county's [Flood Insurance Study](#).

For the best feel and performance, use [Firefox 3.5+](#), [Internet Explorer 8+](#), [Chrome](#), or [Safari 4+](#).

[< Previous Tips](#) [Next Tips >](#)

Map
FEMA Flood Insurance Study
Floodplain Layers
Frequently Asked Questions

Minimize



Follow instructions under "How to navigate the map" to select a Point of Interest.

What does INFIP do?

The Indiana Floodplain Information Portal, INFIP, is a mapping application that provides floodplain information for waterways to help citizens determine flood risk in an effort to minimize flood damage. INFIP utilizes FEMA published floodplain data and floodplain data from various, IDNR approved resources in order to provide the most available, comprehensive coverage of floodplain information for the State of Indiana.

The main functions of INFIP enables you to:

- select a Point of Interest (i.e. residence or tract of land) to view floodplain mapping and the Base Flood Elevations (BFE)
- print a floodplain map for a Point of Interest
- submit a request for a Floodplain Analysis / Regulatory Assessment (FARA) from the Division of Water using the eFARA (electronic

[Click to learn how to navigate the map](#)

[Click to learn how to submit eFARA](#)

[Click to learn about Special Flood Hazard Areas \(SFHA\) and Base Flood Elevations \(BFE\)](#)

[Click to learn about flood insurance](#)

[Click to learn about local community floodplain ordinance](#)

Download Report

To generate a report, please zoom in and select a point of interest on the map by clicking on a location.

SR 62 SLIDE CORRECTION CRAWFORD COUNTY, IN

May 4, 2021

Waters of the U.S. Report

Prepared by: Danika Fleck

Des. No.: 1601040

Contract No.: R-39919

Prepared for: INDOT

Approved 6.22.2021 by:

Maryssa Engstrom



Lochmueller Group, Inc.

6200 Vogel Road

Evansville, Indiana 47715

Phone: 812.479.6200

Waters of the U.S. Report
SR 62 Slide Correction in Crawford County
Des. No. 1601040

Date(s) of Field Reconnaissance

October 15, 2019 and September 15, 2020

Location

The proposed project is a slide correction on SR 62, 2.44 miles west of SR 237 at RP 96.36 in Crawford County. (Pages A1 through A3).

- Union Township, Crawford County, Indiana
- Section 27, Township 3 South, Range 1 West
- Branchville 1:24,000 United States Geological Survey (USGS) Quadrangle (Pages A2 and A3)
- Latitude: 38.235736° N; Longitude: -86.510798° W

Project Description

The proposed project is a slide correction on SR 62, 2.44 miles west of SR 237 at RP 96.36 in Crawford County. The preferred alternative will construct a row of cantilevered drilled shafts with a center-to-center spacing of 8-feet for 325 feet along SR 62. The shafts will be drilled to a depth of 10-feet below the bedrock surface and will have a diameter of 2.5-feet. Above the bedrock, the pier diameter will be 3-feet and extend 6-feet above the bedrock surface. The entire shaft depth will be filled with Class A concrete and a steel H-pile will be placed in the shaft. The area above the concrete shaft with the HPile will be backfilled with flowable fill. This alternative also includes the placement of riprap at a 3 to 1 slope along the westbound lane. The roadway will be milled and overlaid for a length of 325 feet along the slide correction to repair damaged pavement. Mill and Hot Mix Asphalt (HMA) overlay depth will be 1.5 inches.

The Waters of the U.S. (WOTUS) investigation survey area limits were defined as the area approximately 130 to 140 feet northeast and 80 to 90 feet southwest of the SR 62 centerline for a distance of approximately 545 feet along the roadway. The surrounding landscape of the survey area is exclusively forested habitat north of the roadway and a combination of pasture and forest habitat to the south of the roadway. The project is located within the southern portion of the Crawford Upland physiographic region of Indiana, an area of stream incised bedrock hills in sandstone and limestone formations with karst surface features and subterranean cavern flow path drainage (Page A4). However, a karst field review completed on September 25, 2020 did not identify any karst features within the survey area limits.



Soils

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

Soil Name	Map Abbreviation	Hydric Range
Wellston silt loam, 12 to 18 percent slopes, eroded	WhfD2	Not Hydric (0%)

National Wetlands Inventory (NWI) Information

There are no wetlands or linear water features identified within the survey area (Page A6). The nearest NWI wetlands beyond the survey area limits are 0.04 mile to the northeast and 0.09 mile to the southwest of the survey area.

Wetland Type	Description	Location
R4SBC	Riverine, intermittent, streambed, seasonally flooded	0.04 mile northeast
PUBGh	Palustrine, unconsolidated bottom, intermittently exposed, diked/impounded	0.09 mile southwest

12-Digit HUC (Hydrologic Unit Code)

The SR 62 Slide Correction is within the 051401041105 12-Digit HUC (City of Grantsburg-Little Blue River) (Page A2 and A3). A watershed area for the survey area could not be determined 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://dnrmapping.dnr.in.gov/appsphp/fdms/>) Best Available Flood Zones data indicate that the SR 62 Slide Correction is not within any mapped floodway or floodway fringe areas (Page A8).

Attached Documents

- ~~Location Map~~
- ~~USGS Topographic Map (1:24,000)~~
- ~~USGS Topographic Map (1:12,000)~~
- ~~Karst MOU Region Map~~
- USDA SSURGO Soils Map
- USFWS NWI Features Map
- USGS StreamStats Watershed Map
- IDNR, Division of Water - Best Available Flood Hazard Map
- Water Resources ~~and Photo Index~~ Maps
- ~~Project Photos~~

Note: A portion of the attachments have been removed to avoid duplication and reduce file size.

Field Reconnaissance

WETS (NRCS National Water and Climate Center <http://agacis.rcc-acis.org/>) data for Crawford County was not available to determine the growing season. Therefore, data from Perry County was used to approximate the growing season for Crawford County based on a 50 percent probability of 28°F or



higher air temperatures in spring and fall in accordance with the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region Version 2.0* (U.S. Army Corps of Engineers 2012). For the period of record from 1902 to 2019, the Perry County growing season is from March 25 to November 10. This field survey was conducted within the growing season. For those features that displayed bed and bank, the OHWM width and depth was measured at the maximum 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 Branchville 1:24,000 topographic quadrangle does not include any blue-line stream features within the survey area for the SR 62 Slide Correction (Pages A2 and A3). The NHD GIS dataset does not include any flow line features within the survey area (Page A8). One stream feature was identified within the survey area during the field reconnaissance.

UNT to Little Blue River

UNT to Little Blue River is an ephemeral stream feature that begins approximately 15 feet from the outlet of a 24-inch culvert under SR 62 on the north side of the roadway and flows to the northeast and beyond the limits of the survey area. The source of water to UNT to Little Blue River originates from the drainage of storm water through the culvert from a roadside ditch on the south side of SR 62.

Approximately 31 feet of the stream is within the survey area (Page A9). This stream feature is not included on the USFWS NWI Map (Page A6). The drainage area for UNT to Little Blue River at SR 62 was not available and the upstream drainage area is assumed to be less than 1.0 square mile using USGS *StreamStats* (<https://water.usgs.gov/osw/streamstats/>). According to the Indiana Floodplain Information Portal (<https://dnrm.dnr.in.gov/appsphp/fdms/>), there are no mapped floodways or floodplains associated with UNT to Little Blue River (Page A8).

UNT to Little Blue River has a U-shaped channel that lacks defined riffle/run/pool habitat. The substrate is dominated by silt with some gravel components. This headwater reach stream displays good sinuosity downstream. Riparian vegetation is comprised primarily of sugar maple (*Acer saccharum*-FACU), American beech (*Fagus grandifolia*-FACU), and tuliptree (*Liriodendron tulipifera*-FACU) with sparse herbaceous cover. This reach of UNT to Little Blue River is considered to exhibit poor quality based on infrequent flow and lack of riffle/run/pool structure. The OHWM was measured at 3 feet wide and 0.3 feet deep. Photos 36 and 37 (Page A15-A16) indicate stream and bank conditions for this reach.

UNT to Little Blue River is considered to be a non-relatively permanent waterway (NRPW) with a connection to the Ohio River, a traditionally navigable waterway (TNW), via the Little Blue River. In accordance with the Navigable Waters Protection Rule (85 FR 22250-22342) relating to 33 CFR 328, this ephemeral stream feature would not be considered a jurisdictional feature subject to Section 404 regulation under the Clean Water Act. INDOT acknowledges that this stream would likely not meet the definition of a Waters of the US. However, INDOT is requesting that the USACE take jurisdiction of the stream. This stream is not subject to USACE jurisdiction under Section 10 of the River and Harbors Act.



Stream Summary Table

Water Feature Name	Photo	Lat/Long	OHW Width (ft)	OHW Depth (ft)	USGS Blue-line? Type?	Riffles? Pools?	Quality	Substrate	Likely Waters of U.S.?
UNT to Little Blue River	36-37	38.235459/ -86.509550	3	0.3	No Ephemeral	No No	Poor	Silt, gravel	Yes

Wetlands

No wetland features were identified within the SR 62 Slide Correction survey area. The dominant trees within the survey area consisted of red oak (*Quercus rubra*-FACU), sugar maple (FACU), shagbark hickory (*Carya ovata*-FACU), white pine (*Pinus strobus*-FACU), and redbud (*Cercis canadensis*-FACU). Locally, SR 62 follows along a moderately steep northeast aspect hillslope; therefore, water sheet flows downhill towards the road and sheet flows downhill from the road toward I-64. Based on the dominant upland species observed, lack of suitable hydrology, and no mapped hydric soils, there was no suspicion of potential wetlands within the survey area.

Open Water

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

Other Features

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

RSD1 is a riprap-lined ditch along the southwest side of SR 62 that flows southeast for a distance of 290 feet within the survey area to the inlet of a 24-inch concrete culvert that conveys water to the north side of SR 62 (Photos 7, 11, and 12 on Page A12). This roadside ditch does not exhibit a bed and bank with an OHWM and is not a realigned segment of a natural stream.

RSD2 is a grass and riprap-lined ditch along the southwest side of SR 62 that flows southeast for a distance of 131 feet within the survey area to the inlet of a 24-inch plastic culvert that conveys water to the north side of SR 62 (Photos 25 through 28 on Page A15). This roadside ditch does not exhibit a bed and bank with an OHWM and is not a realigned segment of a natural stream.

Conclusions

The Waters of the U.S. investigation conducted for the SR 62 Slide Correction project concludes that there are no wetland features and one stream, UNT to Little Blue River, within the survey area. No WOTUS or non-WOTUS open water features were identified within the survey area. Two roadside ditches that lacked bed and bank with an OHWM was identified as a non-jurisdictional flow line feature along SR 62. There are no water resources under USACE jurisdiction per Section 10 of the Rivers and Harbors Act within the survey area.

These waterways are likely Waters of the U.S. Every effort should be taken to avoid and minimize impacts 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.

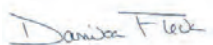
The following drainage structures within the survey area were examined on September 15, 2020 for the presence of bats and were found to show no direct or indirect signs of occupation.

- 24-inch concrete pipe under SR 62
- 24-inch plastic pipe under SR 62

Acknowledgement

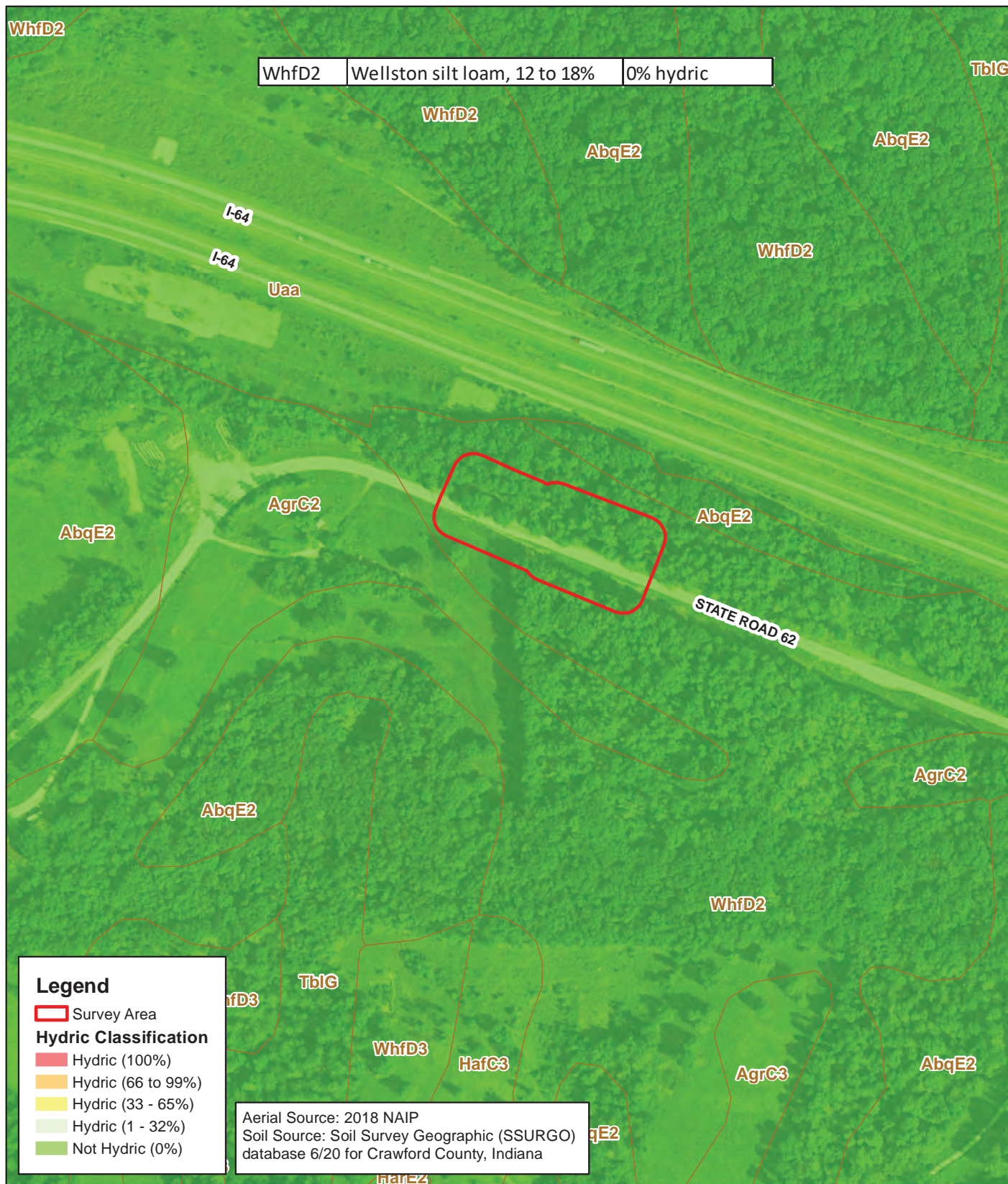
This waters determination has been prepared based on the best available information, interpreted in the light of the investigator's training, experience and professional judgement in conformance with the 1987 *Corps of Engineers Wetlands Delineation Manual*, the appropriate regional supplement, the USACE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

Danika Fleck



Environmental Biologist
Lochmueller Group, Inc.





WhfD2 Wellston silt loam, 12 to 18% 0% hydric

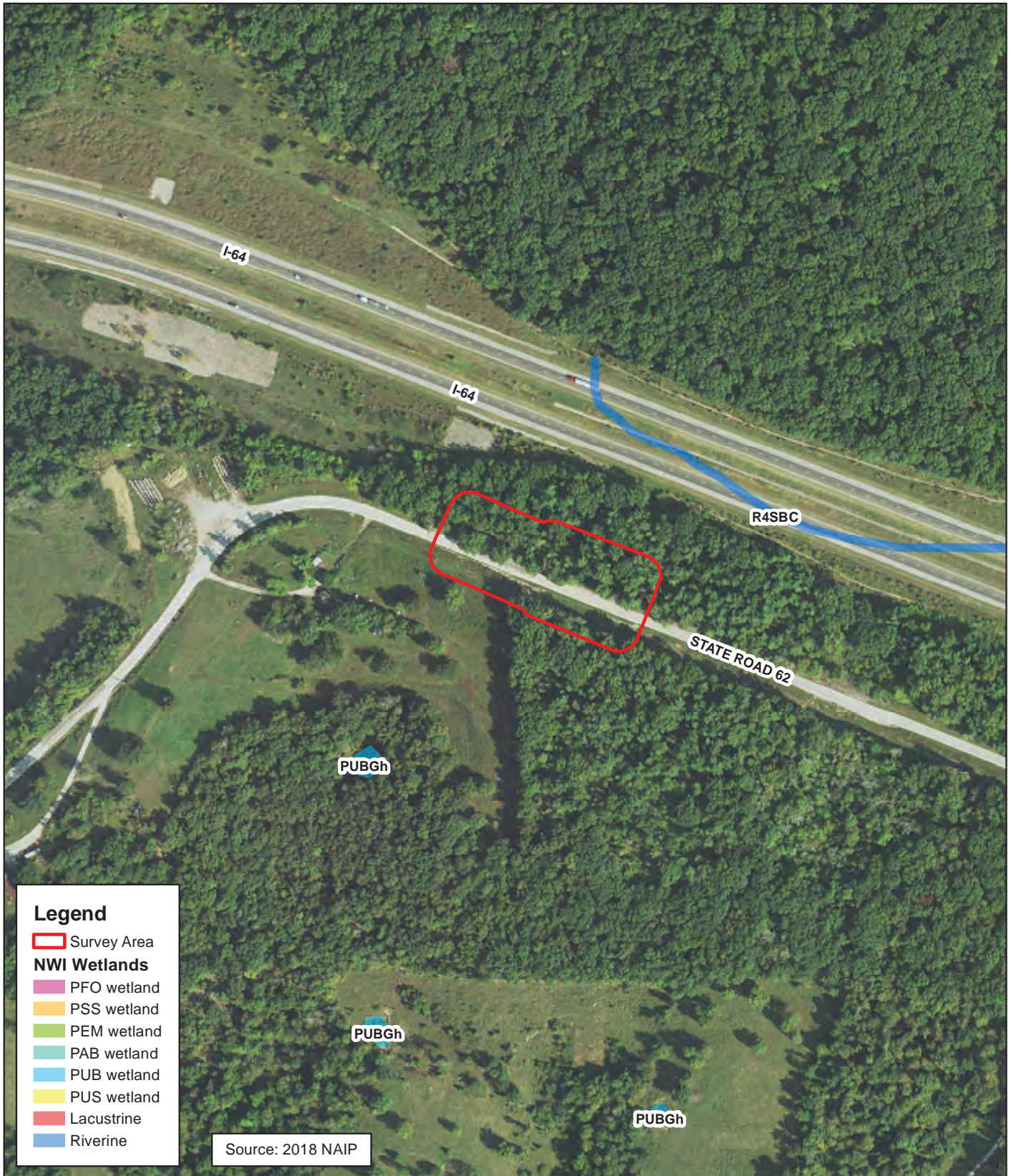
6200 Vogel Road
 Evansville IN, 47715
 Phone: (812) 479-6200
 Toll Free: (800) 423-7411

USDA SSURGO Soils Map
 Des. No. 1601040
 Waters of the U.S. Report

0 200 400 Feet

County: Crawford
 Township: Union
 State: Indiana

SR 62 Slide Correction
 Created: 9/9/2020, D.Fleck



<p>6200 Vogel Road Evansville IN, 47715 Phone: (812) 479-6200 Toll Free: (800) 423-7411</p>	<p>USFWS NWI Project Map Des. No. 1601040 Waters of the U.S. Report</p>	<p>County: Crawford Township: Union State: Indiana</p>
	<p>0 200 400 Feet</p>	<p>SR 62 Slide Correction Created: 9/9/2020, D.Fleck</p>

No watershed area available through StreamStats for survey area



Legend
[Red Box] Survey Area

Source: NAIP 2018
Watershed Source: StreamStats Version 4

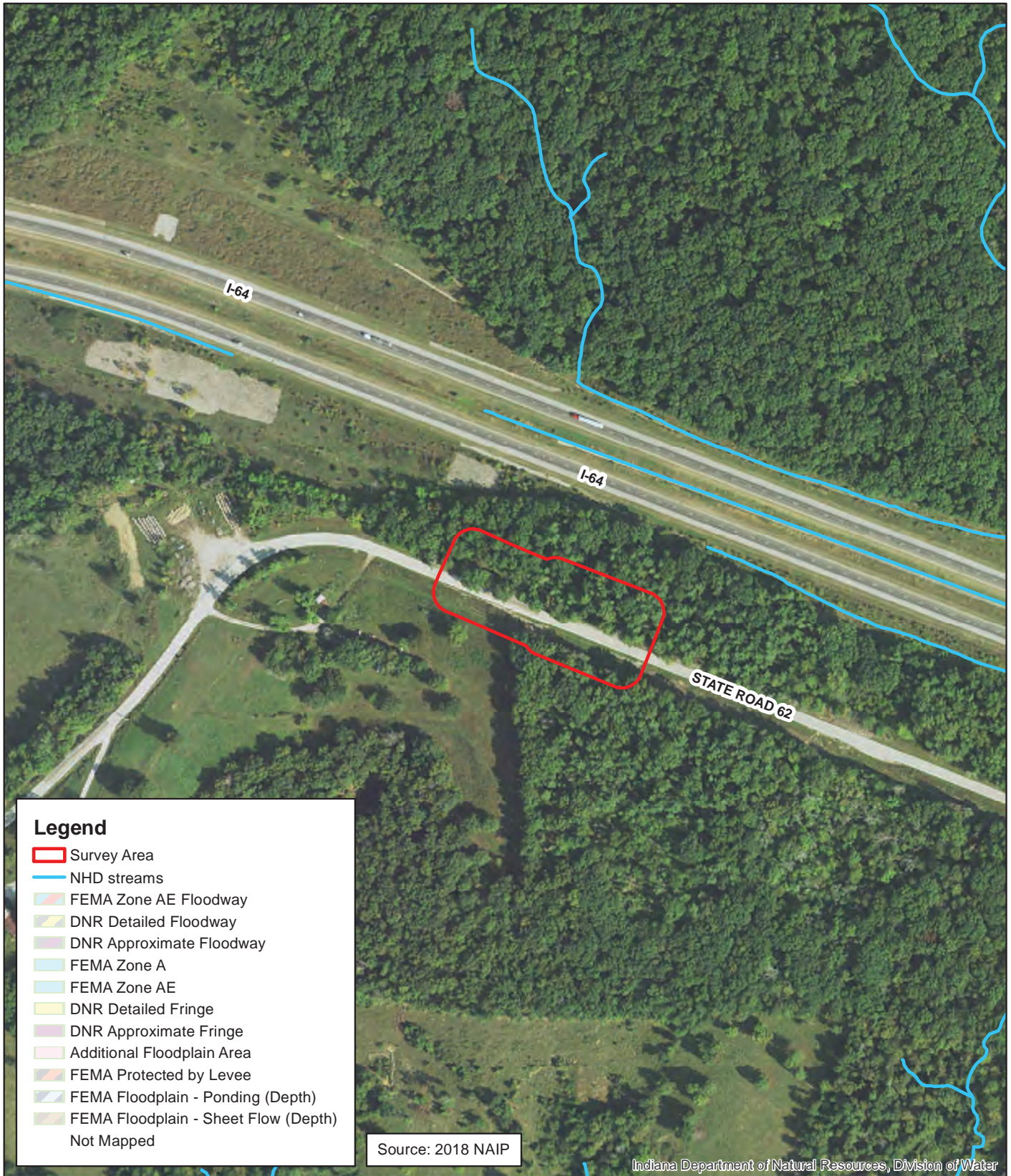
LOCHMUELLER GROUP
6200 Vogel Road
Evansville IN, 47715
Phone: (812) 479-6200
Toll Free: (800) 423-7411

StreamStats Watershed Map
Des. No. 1601040
Waters of the U.S. Report

0 600 1,200 Feet

County: Crawford
Township: Union
State: Indiana

SR 62 Slide Correction
Created:9/9/2020, D.Fleck


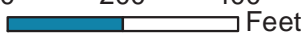



Legend

- Survey Area
- NHD streams
- FEMA Zone AE Floodway
- DNR Detailed Floodway
- DNR Approximate Floodway
- FEMA Zone A
- FEMA Zone AE
- DNR Detailed Fringe
- DNR Approximate Fringe
- Additional Floodplain Area
- FEMA Protected by Levee
- FEMA Floodplain - Ponding (Depth)
- FEMA Floodplain - Sheet Flow (Depth)
- Not Mapped

Source: 2018 NAIP

Indiana Department of Natural Resources, Division of Water



 6200 Vogel Road Evansville IN, 47715 Phone: (812) 479-6200 Toll Free: (800) 423-7411	Best Available Flood Hazard Map Des. No. 1601040 Waters of the U.S. Report	County: Crawford Township: Union State: Indiana
	0 200 400  Feet	



Legend

- Survey Area
- OHWM Location
- Flow lines**
- Stream
- RSD
- Structures**
- Culvert

Source: 2018 NAIP

 6200 Vogel Road Evansville IN, 47715 Phone: (812) 479-6200 Toll Free: (800) 423-7411	Water Resources Map Des. No. 1601040 Waters of the U.S. Report	County: Crawford Township: Union State: Indiana
	0 50 100 Feet	

Appendix 2 - PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD: May 4, 2021

B. NAME AND ADDRESS OF PERSON REQUESTING PJD: Danika Fleck, 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 1601040) is on SR 62, 2.44 miles west of SR 237 at RP 96.36 in Crawford County. The preferred alternative will construct a row of cantilevered drilled shafts with a center-to-center spacing of 8-feet for 325 feet along the north side of SR 62. The shafts will be drilled to a depth of 10-feet below the bedrock surface and will have a diameter of 2.5-feet. Above the bedrock, the pier diameter will be 3-feet and extend 6-feet above the bedrock surface. The entire shaft depth will be filled with Class A concrete and a steel H-pile will be placed in the shaft. The area above the concrete shaft with the HPile will be backfilled with flowable fill. This alternative also includes the placement of riprap at a 3 to1 slope along the westbound lane. The roadway will be milled and overlaid for a length of 325 feet along the slide correction to repair damaged pavement. Mill and Hot Mix Asphalt (HMA) overlay depth will be 1.5 inches. +

(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 Sulphur**

Center coordinates of site (lat/long in degree decimal format):

Lat.: **38.235736** Long.: **-86.510798**

Universal Transverse Mercator: **16S, 542813E, 4232084N**

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	38.235459	-86.509550	0.002 acre/31linear feet	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 "pre-construction 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: _____.
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: Branchville 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 18025C0260C.
- 100-year Floodplain Elevation is: _____.(National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): NAIP 2018
or Other (Name & Date): Ground photos October 15, 2019 and September 15, 2020.
- 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.

Signature and date of
Regulatory staff member
completing PJD

Danika Fleck Digitally signed by Danika Fleck
Date: 2021.05.04 08:32:00 -04'00'

Signature and date of
person requesting PJD
(REQUIRED, unless obtaining
the signature is impracticable)¹

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.

Holly Hume

From: Engstrom, Maryssa H <MEngstrom@indot.IN.gov>
Sent: Tuesday, June 22, 2021 10:36 AM
To: MBullock1; Danika Fleck
Cc: Rehder, Crystal; Daniel Townsend; Jeremy Kieffner; Nicholas Will; Payton Parke
Subject: RE: Approved Waters Report and Permit Determination Questions for Des 1601040 SR 62 Slide Correction
Attachments: 1601040 Waters Report Approved 6.22.2021.pdf

Hello Danika,

Thank you for submitting the waters report for **SR 62 Slide Correction in Crawford County, Des. No. 1601040**. Your most recent submission has been reviewed and approved. For the INDOT PM, the approved report can be found on Projectwise through this link: [Des. No. 1601040 Waters Report - Final](#). It is the responsibility of the Project Manager to forward a copy of this report to the Project Designer.

The information in this report should be used by the Project Designer to determine if waters of the U.S. will be impacted by the project. Avoidance and minimization of impacts must occur before mitigation will be considered. If mitigation is required, the Project Manager or Project Designer must coordinate with the Ecology and Waterway Permitting Office to discuss how adequate compensatory mitigation will be provided.

The Project Manager should notify the Ecology and Waterway Permitting Office if there is any change to the project footprint presented in this report. Such changes may require additional fieldwork and submittal of an updated waters report covering areas not previously investigated. This report is only valid for a period of five years from the date of earliest fieldwork. If the report expires prior to waterway permit application submittal, additional fieldwork and a revised waters report will be required.

It will not be sent to the United States Army Corps of Engineers (USACE) or the Indiana Department of Environmental Management (IDEM) until the waterways permit applications are submitted to these agencies.

For the above referenced project, please get me answers to the following questions so that I may complete the permit determination.

- Will work be confined to the existing pavement? Please bear in mind that full-depth replacement and shoulder work is soil disturbance. If the answer to this is yes, then the remaining questions do not need answered.
- What kind of structure work is associated with this project (replacement, painting, scour protection, etc.)? If a pipe liner project, please specify the type and include an INDOT hydraulics memo if available.
- What is the estimated total soil disturbance associated with this project in acres? Disturbance includes (among other items):
 - Full-depth replacement;
 - Shoulder work;
 - Construction entrances;
 - Riprap drainage turnouts riprap around bridge cones;

Categorical Exclusion
Appendix G
Public Involvement

December 13, 2017

Sample Notice of Survey

NOTICE OF SURVEY

RE: S.R. 62. Slide Correction Projects:

- Approximately 2.85 miles West of S.R. 237 in Crawford County, Indiana.
 - Loch Group Project No.: 117-0035-GHY
- Approximately 2.68 miles West of S.R. 237 in Crawford County, Indiana.
 - Loch Group Project No.: 117-0035-HHY
- Approximately 2.44 miles West of S.R. 237 in Crawford County, Indiana.
 - Loch Group Project No.: 117-0035-IHY

Dear Property Owner:

Research of county records indicates that you own or occupy property(s) near this proposed Slide Correction Projects. 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.

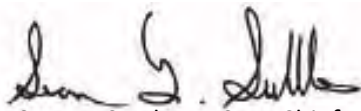
At this stage we do not know what effect, if any, our project may eventually have on your property. If we determine later that your property is involved, we will contact you with additional information.

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 Projects.

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

Categorical Exclusion
Appendix H
Air Quality

Note: This project is bundled with 11 other slide correction projects. The projects were bundled and incorporated into the STIP under the lead Des No 1601032.

Indiana Department of Transportation (INDOT)
State Preservation and Local Initiated Projects FY 2020 - 2024

SPONSOR	CONTR ACT # / LEAD DES	STIP NAME	ROUTE	WORK TYPE	LOCATION	DISTRICT	MILES	FEDERAL CATEGORY	Total Cost of Project*	PROGRAM	PHASE	FEDERAL	MATCH	2020	2021	2022	2023	2024
Crawford County																		
Crawford County	1592981	Init.	VA VARI	Bridge Inspections	Countywide Bridge Inspection and Inventory Program for Cycle Years 2019-2022	Vincennes	0	Multiple		Local Funds	PE	\$0.00	\$127,287.20	\$31,372.00	\$15,407.00	\$72,512.49	\$7,995.71	
										Local Bridge Program	PE	\$509,148.78	\$0.00	\$125,488.00	\$61,628.00	\$290,049.95	\$31,982.83	
Performance Measure Impacted: Bridge Condition																		
Crawford County	37710 / 1400804	Init.	IR 1014	Bridge Replacement, Steel	0.32 miles North of East Buzzards Roost Road over Mill Creek (Bridge 42)	Vincennes	.19	STBG		Local Funds	CN	\$0.00	\$609,918.26		\$609,918.26			
										Local Bridge Program	CN	\$2,439,673.04	\$0.00		\$2,439,673.04			
Performance Measure Impacted: Bridge Condition																		
Crawford County	37711 / 1400825	Init.	IR 1017	Bridge Replacement	0.7 miles North of Beechwood Way (Bridge 43)	Vincennes	.21	STBG		Demonstration Fund Program	CN	\$1,260,851.69	\$0.00	\$1,260,851.69				
										Local Funds	CN	\$0.00	\$493,114.10	\$493,114.10				
										Local Bridge Program	CN	\$711,604.70	\$0.00	\$711,604.70				
Performance Measure Impacted: Bridge Condition																		
Crawford County	37711 / 1400825	M 01	IR 1017	Bridge Replacement	0.7 miles North of Beechwood Way (Bridge 43)	Vincennes	.21	STBG	\$3,034,370.00	Local Funds	CN	\$0.00	\$104,873.90	(\$462,114.10)	\$566,988.00			
										Local Bridge Program	CN	\$1,683,547.30	\$0.00	(\$584,404.70)	\$2,267,952.00			
Performance Measure Impacted: Bridge Condition																		
Comments:Modify 2020-2024 STIP. Leaving FY20 CN Federal \$127,200.00, FY20 CN Local \$31,800.00 and moving rest of CN to FY21. No longer Demo Funds on this project. Funding is now Federal Bridge. No MPO.																		
Indiana Department of Transportation	37942 / 1401374	Init.	SR 66	HMA Overlay, Preventive Maintenance	From SR 62 to 0.58 mile South of SR 64	Vincennes	11.665	STBG		Road Construction	CN	\$2,299,290.40	\$574,822.60		\$2,874,113.00			
Performance Measure Impacted: Pavement Condition																		
Indiana Department of Transportation	39919 / 1601032	Init.	SR 62	Slide Correction	Approximately 2.0 miles E of SR-237	Vincennes	0	STBG		Road Construction	CN	\$5,304,004.80	\$1,326,001.20		\$6,630,006.00			
Performance Measure Impacted: Safety																		
Indiana Department of Transportation	39919 / 1601032	A 04	SR 62	Slide Correction	Approximately 2.0 miles E of SR-237	Vincennes	0	NHPP	\$6,990,006.00	Road ROW	RW	\$288,000.00	\$72,000.00	\$360,000.00				
Performance Measure Impacted: Safety																		
Comments:Amend 2020-2024 STIP. Adding RW FY20 \$360,000.00. No MPO.																		
Indiana Department of Transportation	40074 / 1700007	Init.	I 64	Bridge Deck Overlay	Over Little Blue River, 00.49 miles E SR-37, EBL	Vincennes	0	NHPP		Bridge Construction	CN	\$5,153,188.50	\$572,576.50	\$5,725,765.00				
Performance Measure Impacted: Bridge Condition																		
Indiana Department of Transportation	40539 / 1700172	Init.	SR 237	Small Structure Pipe Lining	2.33 miles N Jct I-64	Vincennes	0	STBG		Bridge Construction	CN	\$348,434.40	\$87,108.60			\$435,543.00		

*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.

Categorical Exclusion
Appendix I
Other Information

Land and Water Conservation Fund (LWCF) County Property List for Indiana (Last Updated July 2020)

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

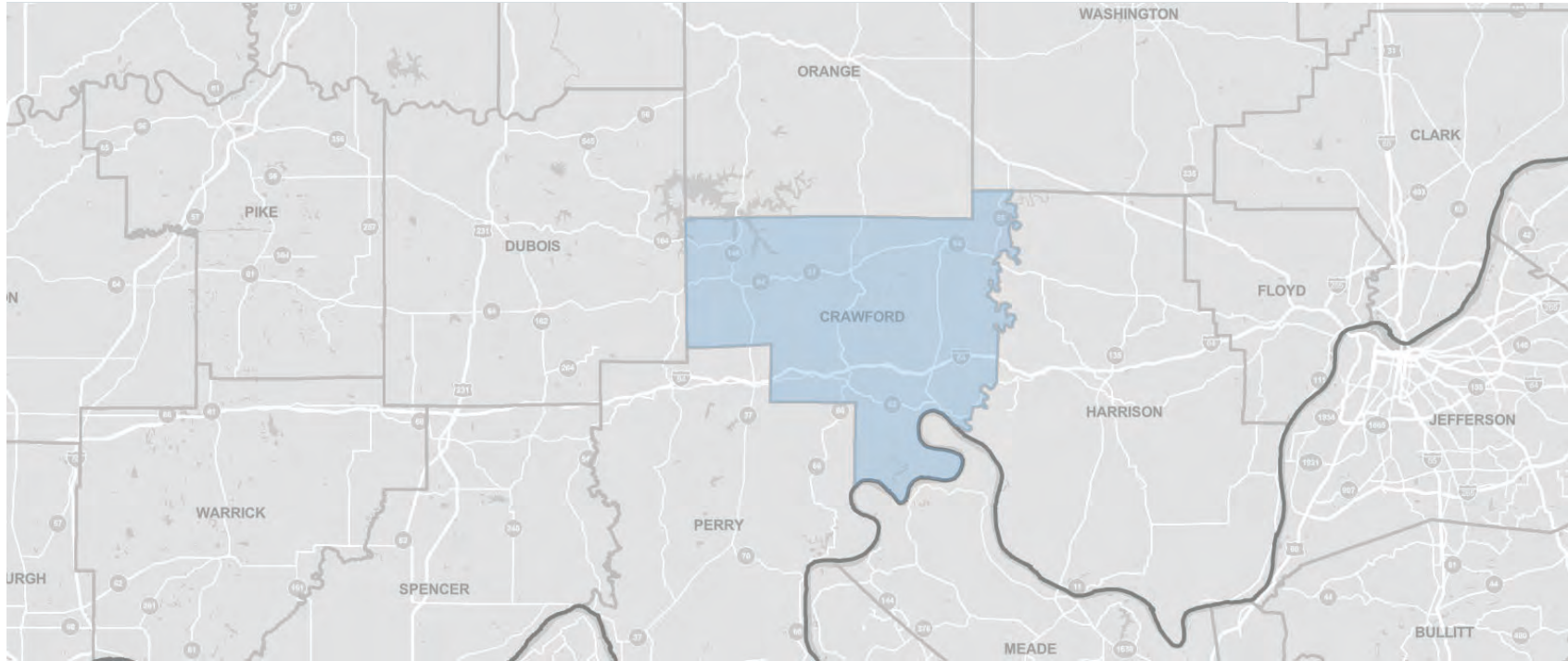
*Park names may have changed. If acquisition of publically owned land or impacts to publically owned land is anticipated, coordination with IDNR, Division of Outdoor Recreation, should occur.

County Selection Map

Geographies: County

Year: 2019

Select Clear Geos Table Notes



LEGEND		YEAR: 2019
Selected Geographies		7

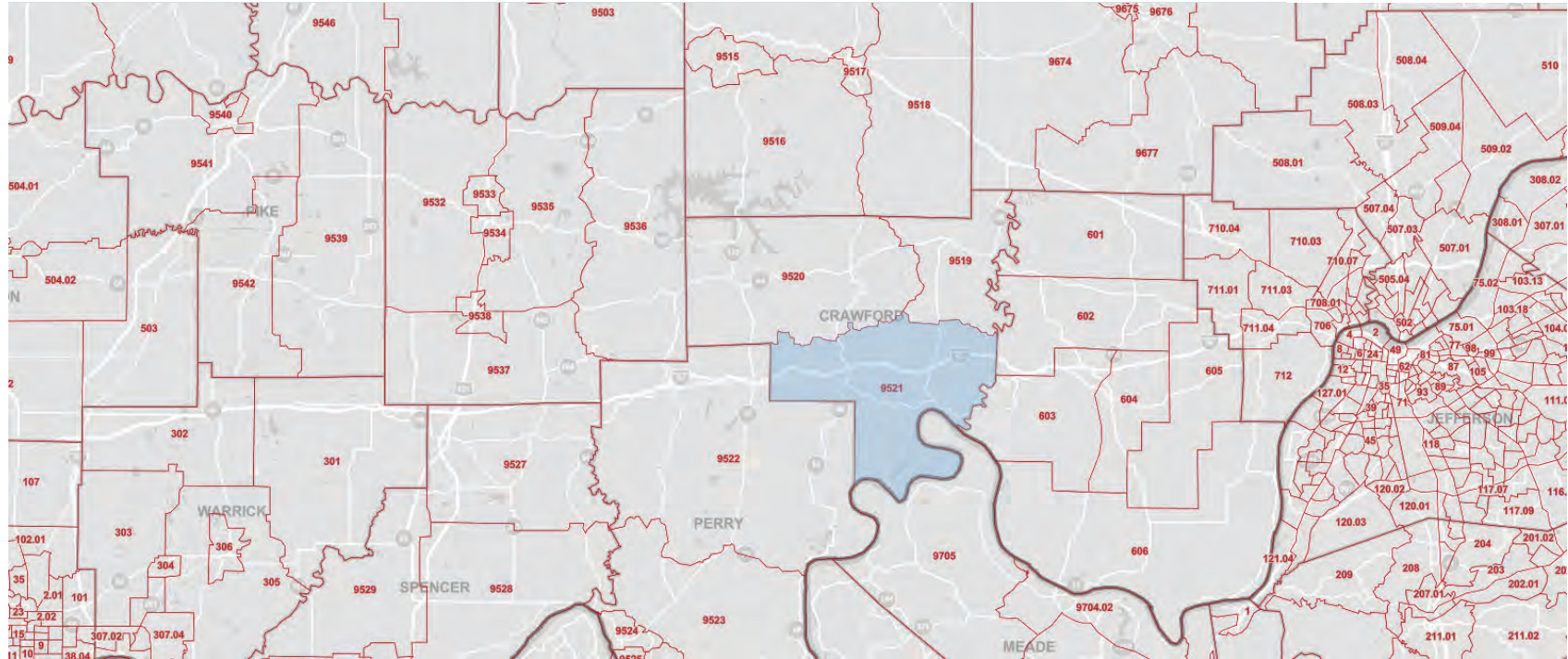
5 mi

Census Tract Selection Map

Geographies: Census Tract

Year: 2019

Select Clear Geos Table Notes



LEGEND		YEAR: 2019
Selected Geographies		7

5 mi



POVERTY STATUS IN THE PAST 12 MONTHS BY SEX BY AGE

Note: This is a modified view of the original table produced by the U.S. Census Bureau. This download or printed version may have missing information from the original table.

Label	Crawford County, Indiana		Census Tract 9521, Crawford County, Indiana	
	Estimate	Margin of Error	Estimate	Margin of Error
▼ Total:	10,363	±138	2,584	±337
▼ Income in the past 12 months below poverty level:	1,858	±326	497	±237
▼ Male:	891	±171	251	±121
Under 5 years	20	±12	9	±9
5 years	36	±41	36	±41
6 to 11 years	115	±48	35	±32
12 to 14 years	41	±40	0	±12
15 years	26	±37	0	±12
16 and 17 years	35	±32	0	±12
18 to 24 years	106	±67	27	±27
25 to 34 years	85	±33	33	±27
35 to 44 years	121	±63	54	±44
45 to 54 years	123	±45	23	±23
55 to 64 years	82	±37	7	±9
65 to 74 years	80	±50	16	±17
75 years and over	21	±17	11	±14
▼ Female:	967	±207	246	±127
Under 5 years	57	±41	7	±8
5 years	3	±5	0	±12
6 to 11 years	122	±63	38	±41
12 to 14 years	28	±23	20	±21
15 years	49	±41	0	±12
16 and 17 years	34	±29	31	±30
18 to 24 years	108	±70	10	±10
25 to 34 years	65	±30	25	±24
35 to 44 years	136	±64	36	±38
45 to 54 years	134	±71	32	±25
55 to 64 years	130	±52	18	±15
65 to 74 years	56	±32	21	±20
75 years and over	45	±23	8	±13
▼ Income in the past 12 months at or above poverty level:	8,505	±359	2,087	±279
▼ Male:	4,358	±179	1,094	±153
Under 5 years	269	±30	89	±43
5 years	66	±48	0	±12
6 to 11 years	218	±67	50	±39

Table Notes**POVERTY STATUS IN THE PAST 12 MONTHS BY SEX BY AGE****Survey/Program:**

American Community Survey

Universe:

Population for whom poverty status is determined

Year:

2019

Estimates:

5-Year

Table ID:

B17001

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

Source: U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see ACS Technical Documentation). The effect of nonsampling error is not represented in these tables.

The 2015-2019 American Community Survey (ACS) data generally reflect the September 2018 Office of Management and Budget (OMB) delineations of metropolitan and micropolitan statistical areas. In certain instances, the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB delineation lists due to differences in the effective dates of the geographic entities.

Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Explanation of Symbols:

An "***" entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.

An "-" entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution, or the margin of error associated with a median was larger than the median itself.

An "-" following a median estimate means the median falls in the lowest interval of an open-ended distribution.

An "+" following a median estimate means the median falls in the upper interval of an open-ended distribution.

An "***" entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.

An "*****" entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.

An "N" entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.

An "(X)" means that the estimate is not applicable or not available.

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.



HISPANIC OR LATINO ORIGIN BY RACE

Note: This is a modified view of the original table produced by the U.S. Census Bureau. This download or printed version may have missing information from the original table.

Label	Crawford County, Indiana		Census Tract 9521, Crawford County, Indiana	
	Estimate	Margin of Error	Estimate	Margin of Error
▼ Total:	10,569	*****	2,656	±336
▼ Not Hispanic or Latino:	10,411	*****	2,615	±328
White alone	10,151	±15	2,571	±329
Black or African American alone	41	±54	10	±9
American Indian and Alaska Native alone	9	±15	9	±15
Asian alone	0	±19	0	±12
Native Hawaiian and Other Pacific Islander alone	0	±19	0	±12
Some other race alone	10	±15	0	±12
▼ Two or more races:	200	±55	25	±25
Two races including Some other race	0	±19	0	±12
Two races excluding Some other race, and three or more races	200	±55	25	±25
▼ Hispanic or Latino:	158	*****	41	±52
White alone	107	±54	40	±53
Black or African American alone	0	±19	0	±12
American Indian and Alaska Native alone	28	±32	0	±12
Asian alone	0	±19	0	±12
Native Hawaiian and Other Pacific Islander alone	0	±19	0	±12
Some other race alone	0	±19	0	±12
▼ Two or more races:	23	±35	1	±2
Two races including Some other race	0	±19	0	±12
Two races excluding Some other race, and three or more races	23	±35	1	±2

Table Notes

HISPANIC OR LATINO ORIGIN BY RACE

Survey/Program:

American Community Survey

Universe:

Total population

Year:

2019

Estimates:

5-Year

Table ID:

B03002

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

Source: U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see ACS Technical Documentation). The effect of nonsampling error is not represented in these tables.

The 2015-2019 American Community Survey (ACS) data generally reflect the September 2018 Office of Management and Budget (OMB) delineations of metropolitan and micropolitan statistical areas. In certain instances, the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB delineation lists due to differences in the effective dates of the geographic entities.

Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

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An "-" entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution, or the margin of error associated with a median was larger than the median itself.

An "-" following a median estimate means the median falls in the lowest interval of an open-ended distribution.

An "+" following a median estimate means the median falls in the upper interval of an open-ended distribution.

An "***" entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.

An "*****" entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.

An "N" entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.

An "(X)" means that the estimate is not applicable or not available.

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

2015-2019 American Community Survey 5-Year Estimates

		<u>COC</u>	<u>AC</u>
		Crawford County, Indiana	Census Tract 9521, Crawford County, Indiana
B17001	Low-Income		
001	Population for whom poverty status is determined: Total	10,363	2,584
002	Population for whom poverty status is determined: Income in past 12 months below poverty level	1,858	497
	Percent Low-income (002/001 x 100)	17.93%	19.23%
	125 Percent of COC	22.41%	AC < 125% COC
	Potential Low-income EJ Impact?		No

B03002	Minority		
001	Total Population: Total	10,569	2,656
002	Total Population: Not Hispanic or Latino	10,411	2,615
003	Total Population: Not Hispanic or Latino; White alone	10,151	2,571
004	Total Population: Not Hispanic or Latino; Black or African American alone	41	10
005	Total Population: Not Hispanic or Latino; American Indian and Alaska Native alone	9	9
006	Total Population: Not Hispanic or Latino; Asian alone	0	0
007	Total Population: Not Hispanic or Latino; Native Hawaiian and Other Pacific Islander alone	0	0
008	Total Population: Not Hispanic or Latino; Some other race alone	10	0
009	Total Population: Not Hispanic or Latino; Two or more races	200	25
010	Total Population: Hispanic or Latino	158	41
011	Total Population: Hispanic or Latino; White alone	107	40
012	Total Population: Hispanic or Latino; Black or African American alone	0	0
013	Total Population: Hispanic or Latino; American Indian and Alaska Native alone	28	0
014	Total Population: Hispanic or Latino; Asian alone	0	0
015	Total Population: Hispanic or Latino; Native Hawaiian and Other Pacific Islander alone	0	0
016	Total Population: Hispanic or Latino; Some other race alone	0	0
017	Total Population: Hispanic or Latino; Two or more races	23	1
	Number Non-white/minority (001-003)	418	85
	Percent Non-white/Minority (001-003/001 x 100)	3.95%	3.20%
	125 Percent of COC	4.94%	AC < 125% COC
	Potential Minority EJ Impact?		No

KARST REPORT SR 62 SLIDE CORRECTION CRAWFORD COUNTY, IN

March 4, 2021

Karst Report

Prepared by: Garre Conner

Des. No.: 1601040

Contract No.: R-39919

Prepared for: INDOT



Lochmueller Group, Inc.

6200 Vogel Road

Evansville, Indiana 47715

Phone: 812.479.6200

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NOTE: Some graphics have been removed to avoid duplication and reduce file size.



Karst Report
SR 62 Slide Correction Project
Crawford County, Indiana
Des No. 1601040

Dates of Karst Investigation

September 25, 2020 & October 15, 2020

Location

The project is located on State Road (SR) 62 in Crawford County, Indiana (Attachment A1).

- Union Township, Crawford County, Indiana
- Section 27, Township 3 South, Range 1 West
- Branchville 1:24,000 United States Geological Survey (USGS) Quadrangle (Attachments A4 and A5)
- Latitude: 38.235736° N; Longitude: 86.510798° W

Project Description

The proposed project is a slide correction on SR 62, 2.44 miles west of SR 237 at RP 96.36 in Crawford County. The preferred alternative will construct a row of cantilevered drilled shafts with a center-to-center spacing of 8-feet for 325 feet along SR 62. The shafts will be drilled to a depth of 10-feet below the bedrock surface and will have a diameter of 2.5 feet. Above the bedrock, the pier diameter will be 3 feet and extend 6-feet above the bedrock surface. The entire shaft depth will be filled with Class A concrete and a steel H-pile will be placed in the shaft. The area above the concrete shaft with the H-pile will be backfilled with flowable fill. This alternative includes the placement of riprap at a 3 to 1 slope along the westbound lane. The roadway will be milled and overlaid for the length of the 325 feet along the slide correction to repair damaged pavement. Mill and Hot Mix Asphalt (HMA) overlay depth will be 1.5 inches. An existing 24" culvert is present within the project limits, but no work on this culvert is anticipated as a part of the project.

This project is anticipated to require approximately 0.4 acre of permanent right-of-way (ROW). Additionally, approximately 0.2 acre of easement from the Hoosier National Forest (United States of America) will be necessary. Tree clearing is anticipated within the proposed ROW.

Karst Red Flag Investigation and Literature Review

The project area is within the "Potential Karst Features Region" per the Karst Memorandum of Understanding (MOU) dated October 13, 1993 (Attachment A2). A Karst Red Flag Investigation and literature search for the project shows the nearest mapped karst spring to the project area is located 3.6 miles to the northwest of the project boundary (Attachment A3). The nearest cave as indicated by the Cave Density Layer tile is located 1.0 mile to the east of the project boundary. The Cave Density Layer tile indicates a one square kilometer area encompassing one cave. The Cave Density Layer does not give the confidential name or location of the cave. The nearest mapped sinkhole is located 3.6 miles to the northeast of the project boundary (Attachments A4 and A5).



The project is located within the southern portion of the Crawford Upland physiographic region of Indiana, an area of stream incised bedrock hills in sandstone and limestone formations with karst surface features and subterranean cavern flow path drainage. Soil covering over bedrock has a layer of soils including reddish clays often related to surface karst features. The bedrock is identified as the Pennsylvanian age Raccoon Creek Group on the summits and upper slopes. The Mississippian age Buffalo Wallow Group lies below in the middle slopes. The Mississippian age Stephensport Group lies below the Buffalo Wallow Group in the lower slopes and channels. These bedrock groups include sandstone, shale, thin coals, and thin limestone formations. Bedrock units dip generally 35 feet per mile to the southwest (approximately 0.5 degrees) and regional strike is approximately 25 degrees to the west of north (Attachment A6). The thin limestones do not typically develop large cave rooms or walking stream passages. They are generally covered by soils but have dissolution fractures, karst flow paths, and springs or groundwater seeps. They potentially have cave biota including federal or state species. The nearest northern long-eared bat hibernaculum is located 11.65 miles east of the project boundary. The nearest Indiana bat hibernaculum is located 10.75 miles northeast of the project boundary.

Soils

The Soil Survey Geographic (SSURGO) database for Crawford County includes the following mapped soil series within the SR 62 karst survey area (Attachment A7).

- **Wellston silt loam (WhfD2)** slopes 12 to 18 percent, eroded. The hydric range for this soil is 0% (not hydric).
- **Apalona-Zanesville silt loam (AgrC2)** slopes 6 to 12 percent, eroded. The hydric range for this soil is 0% (not hydric)
- **Adyeville silt loam (AbqE2)** slopes 6 to 12 percent slopes, eroded. The hydric range for this soil is 0% (not hydric)

The literature search for the project area was conducted by a Lochmueller Group licensed geologist with karst terrain experience. GIS data for caves, sinkholes, sinking stream basins and springs were examined for the project area (Attachment A3) along with the Branchville 1:24,000 USGS Quadrangle (Attachments A4 and A5). Additional supplemental environmental maps are provided showing Lidar Topography (Attachment A8) and Historical Aerials (Attachment A9).

Field Reconnaissance

A karst survey by a professional geologist was recommended because the project is within the Karst MOU Potential Karst Features Region and karst features are mapped within the vicinity of the project area. An onsite karst inspection was completed for the project survey area on September 25, 2020 by a Lochmueller Group licensed professional geologist. Additional photographs were taken on October 15, 2020. The inspection was completed at the beginning of the fall after a relatively wet summer season. Field conditions at the time of inspection were relatively dry.

The surface drainage surrounding the project area generally flows southwest into Stinking Fork and northeast into Little Blue River which is a losing and gaining karst stream in its downstream extents. Photos of the project area can be found in Attachment A11 (page a11-a15). No karst features were identified during the survey. Recommendations are made at the conclusion of this report.



Proposed Activities, Direct Impacts

The proposed slide correction construction involves disturbance of the surface in the ROW adjacent to the existing roadway, embankment, ditches, and utilities. This disturbance will occur below an elevation of 735 to 705 feet. Geotech borings in this range found shale and weathered, fractured, shale below the roadway.

Early coordination concerning the timing of tree removal in the ROW may be necessary in order to minimize direct impacts to the Indiana bat and northern long-eared bat.

Recommendations

Based on the completed surface karst inspection, there is minimal potential for direct impacts to karst from the planned construction. Soil covered or otherwise unknown karst features in bedrock may be found during construction with possible direct impacts to the underlying karst system. Appropriate erosion and sediment control measures should be implemented and maintained throughout the construction period to protect the underlying karst system.

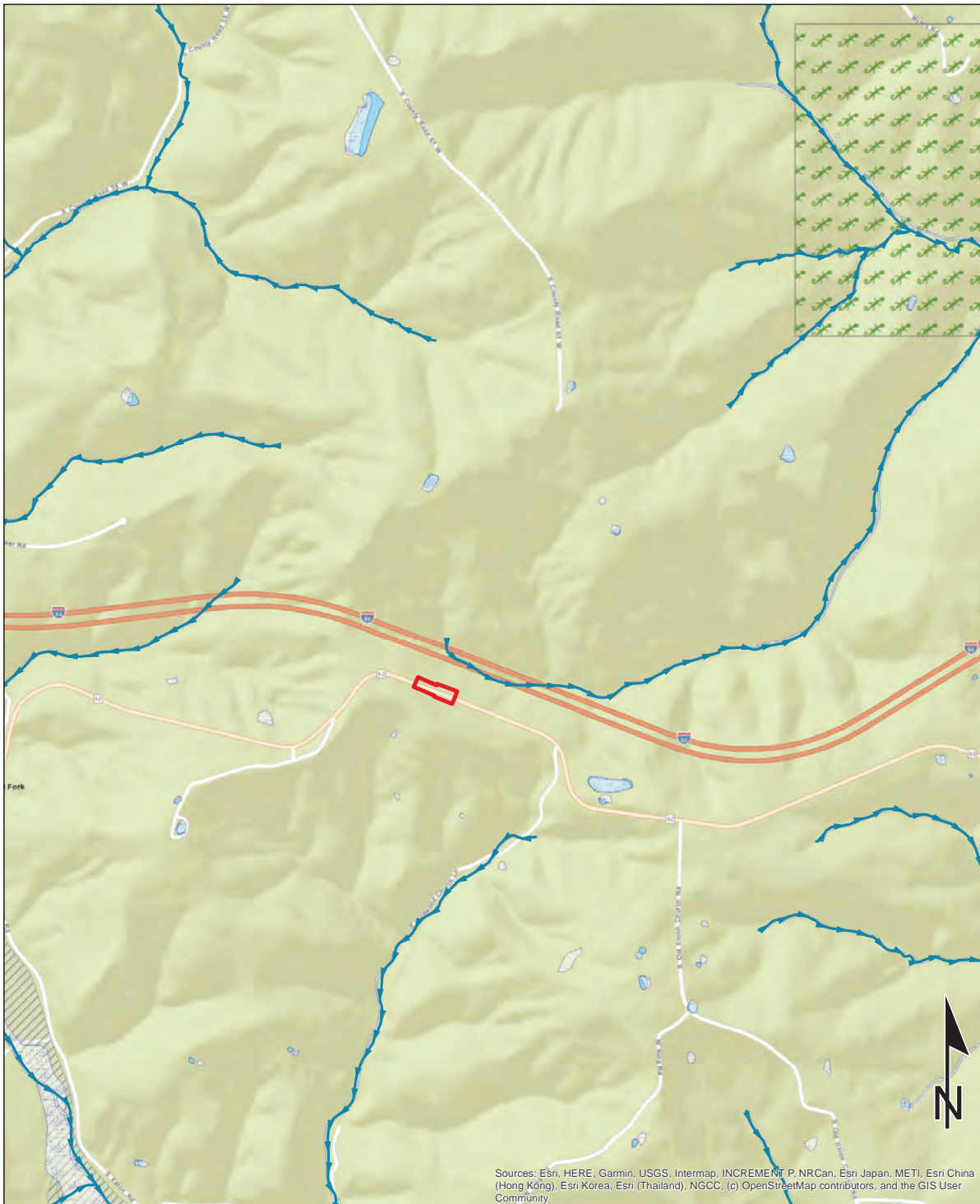
In the event a bedrock void, karst flow path, or troglobitic species is encountered during construction, work should be stopped in the immediate area and a karst qualified geologist should be contacted immediately to determine if additional karst investigations are needed and to address the stipulations of the Karst MOU.

Preparers

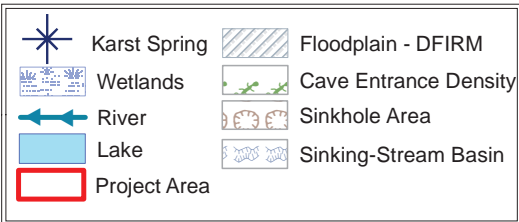
Lochmueller Group, Inc. Staff	Position	Contributing Effort
Garre Conner	Licensed Professional Geologist	Field Data Collection Report Preparation
Peter Putzier	Environmental Scientist	Mapping and Report Preparation
Jeremy Kieffner	Environmental Manager	Report Preparation



Attachments






Sources:
Non Orthophotography Data - 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
 This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.



<p>LOCHMUELLER GROUP 6200 Vogel Road Evansville, Indiana 47713 PHONE: 812.479.0200 TOLL FREE: 800.423.7413</p>	<p>A3 - Karst and Water Resources Map Des. No. 1601040 Karst Report</p>	<p>Township: Union County: Crawford State: Indiana</p>
	<p>0.25 0.125 0 0.25 Miles</p>	<p>SR 62, 2.44 miles W of SR 237 Slide Correction Created: 10/22/2020, H.Hume</p>

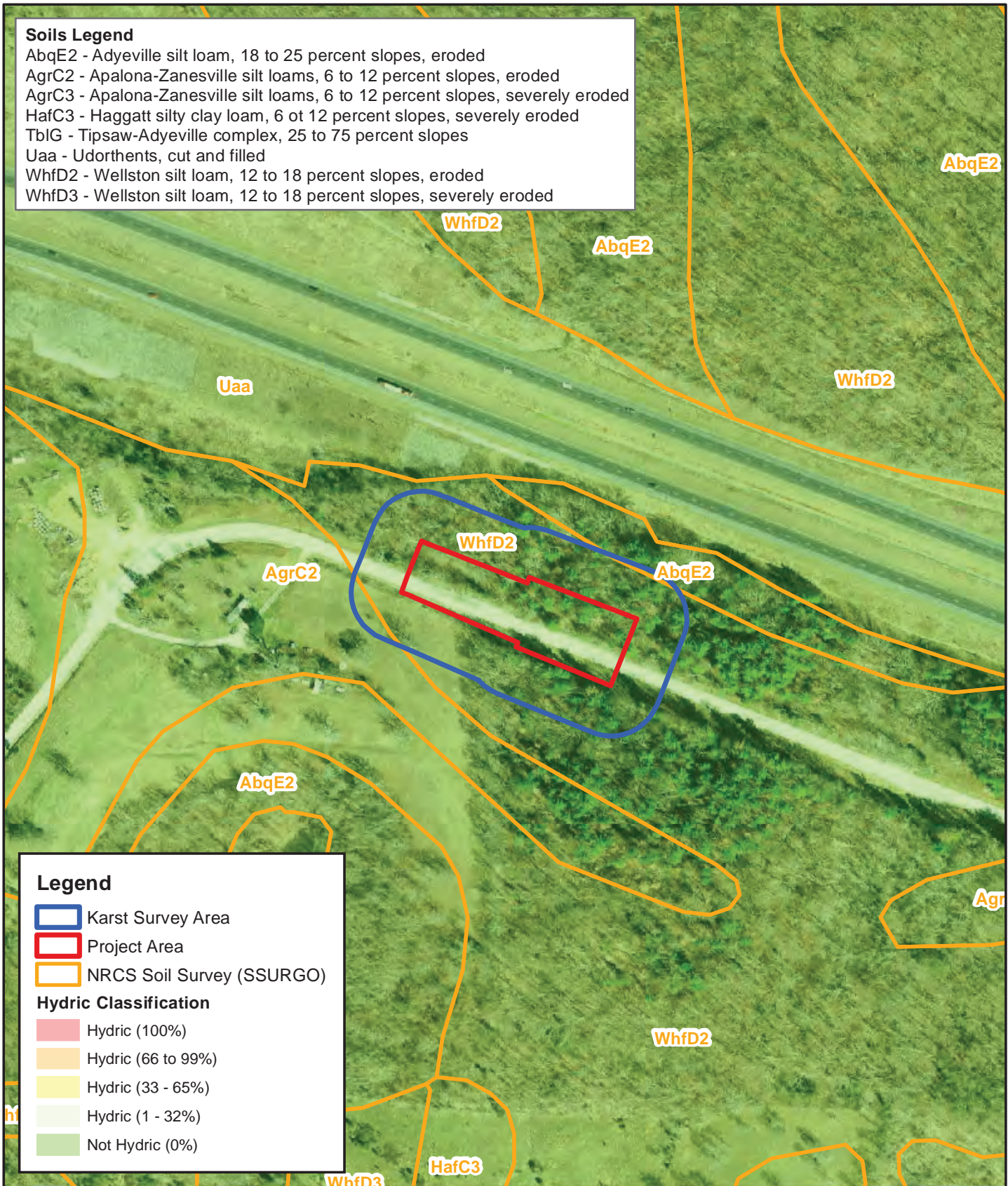


S:\2017\117-00-05\HW\Environ\Map\Karst Maps - Updated\Project Area\A6 Bedrock Map_Das. No. 1601040.mxd

 LOCHMUELLER GROUP 6200 Vogel Road Evansville, Indiana 47715 PHONE: 812.479.6200 TOLL FREE: 800.423.7411	A6 - Bedrock Map Des. No. 1601040 Karst Report	Township: Union County: Crawford State: Indiana
	0 400 800  Feet	

Soils Legend

AbqE2 - Adyeville silt loam, 18 to 25 percent slopes, eroded
 AgrC2 - Apalona-Zanesville silt loams, 6 to 12 percent slopes, eroded
 AgrC3 - Apalona-Zanesville silt loams, 6 to 12 percent slopes, severely eroded
 HafC3 - Haggatt silty clay loam, 6 to 12 percent slopes, severely eroded
 TblG - Tipsaw-Adyeville complex, 25 to 75 percent slopes
 Uaa - Udorthents, cut and filled
 WhfD2 - Wellston silt loam, 12 to 18 percent slopes, eroded
 WhfD3 - Wellston silt loam, 12 to 18 percent slopes, severely eroded



Legend

- Karst Survey Area
- Project Area
- NRCS Soil Survey (SSURGO)

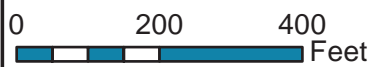
Hydric Classification

- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 - 65%)
- Hydric (1 - 32%)
- Not Hydric (0%)

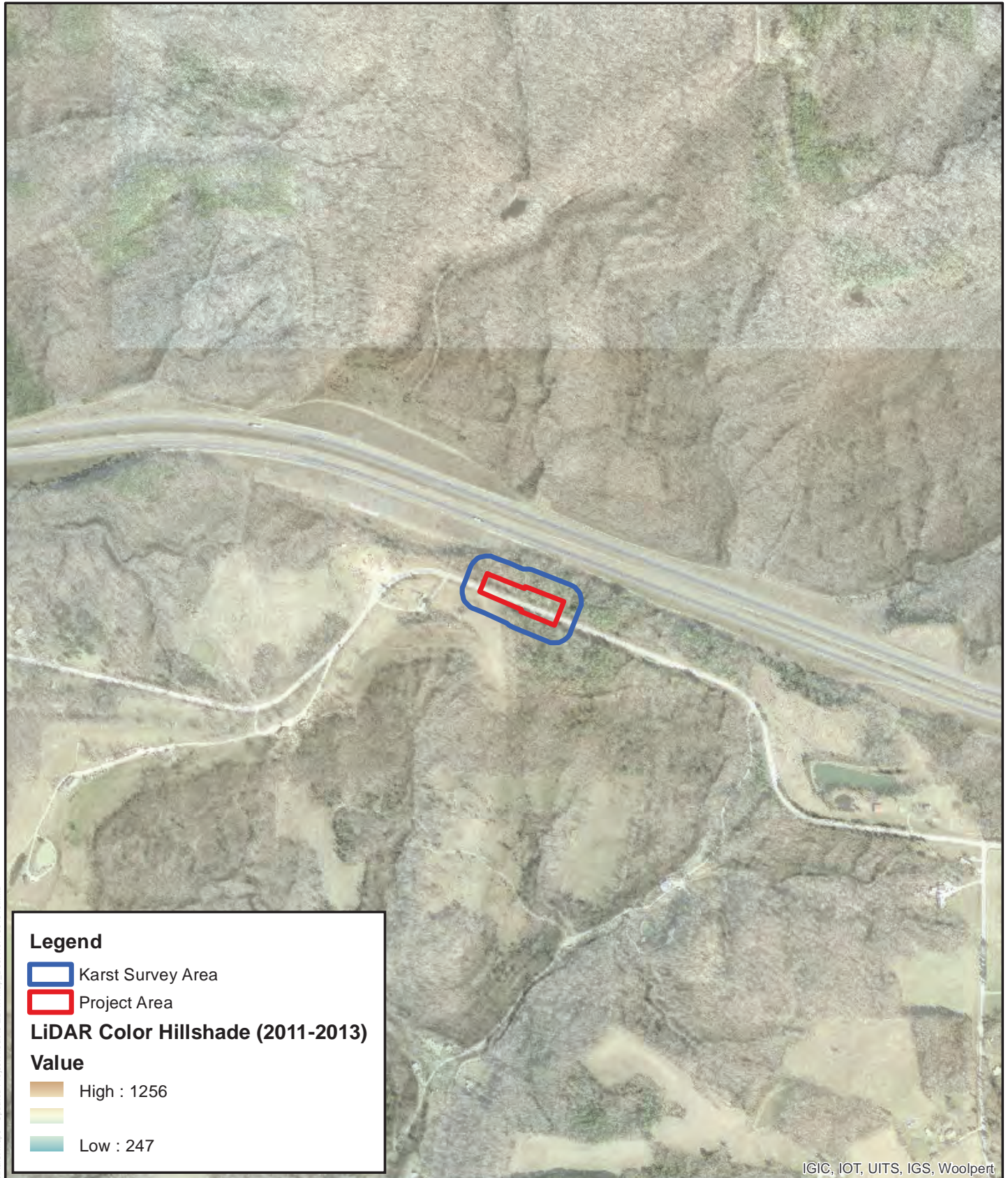
LOCHMUELLER GROUP
 6200 Vogel Road
 Evansville, Indiana 47715
 PHONE: 812.479.6200
 TOLL FREE: 800.423.7411

A7 - Soils Map
 Des. No. 1601040
 Karst Report

Township: Union
 County: Crawford
 State: Indiana





SR 62, 2.44 miles W of SR 237
 Slide Correction
 Created: 2/2/2021, P. Putzier





IGIC, IOT, UITS, IGS, Woolpert

Legend

-  Karst Survey Area
-  Project Area

LiDAR Color Hillshade (2011-2013)

Value

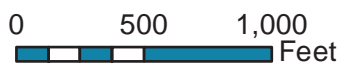
-  High : 1256
- 
-  Low : 247

S:_2017\117-0036\HW\Evansville\Karst\Map - Updated Project Area\A8 - LiDAR Map - Des. No. 1601040.mxd

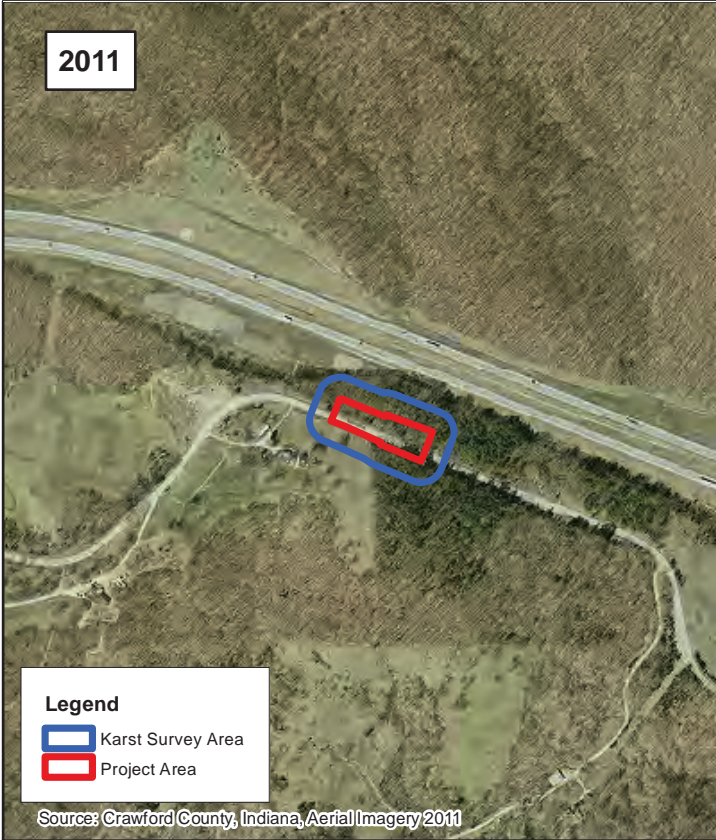
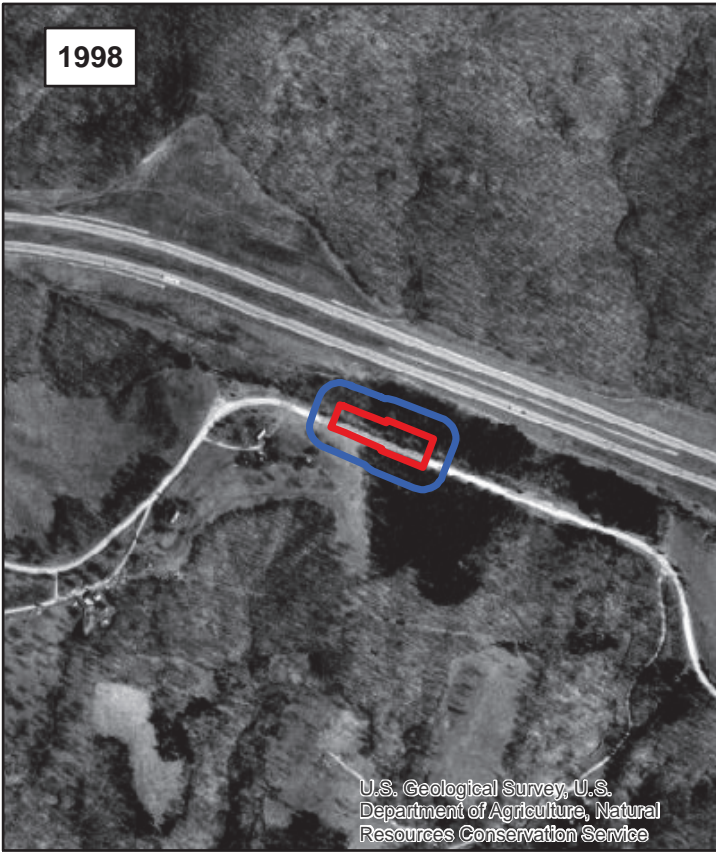


A8 - LiDAR Hillshade Map
Des. No. 1601040
Karst Report

Township: Union
County: Crawford
State: Indiana



SR 62, 2.44 miles W of SR 237 at RP 96.36
Slide Correction
Created: 2/1/2021, P.Putzier



Legend

- Karst Survey Area
- Project Area

Source: Crawford County, Indiana, Aerial Imagery 2011

Source: Crawford County, Indiana, Aerial Imagery 2017



A9 - Historic Aerials Map

Des. No. 1601040
 Karst Report

Township: Union
 County: Crawford
 State: Indiana



SR 62, 2.44 miles W of SR 237
 Slide Correction
 Created: 2/2/2021, P. Putzier

From: [McGill, Justus](#)
To: [Peter Putzier](#); [Garre Conner](#)
Cc: [Engstrom, Maryssa H](#); [Rehder, Crystal](#); [Wheeler, Kyanna](#)
Subject: RE: Draft Karst Report 1601040
Date: Thursday, March 4, 2021 12:36:42 PM
Attachments: [image001.png](#)
[1601040 Karst Report ES 3.4.21.pdf](#)
[108_USP_DISCOVERY OF KARST FEATURES.docx](#)

Hi Peter,

Thank you for submitting the amended karst report for **SR 62 Slide Correction, DES 1601040**. The approved report is attached and can also be found on Projectwise through this link: [1601040 Karst Report ES 3.4.21.pdf](#). It is the responsibility of the Project Manager to forward a copy of this report to the Project Designer.

Additionally, I have include EWPO USP for discovery of new karst features. Please include this information into the project commitments.

Please contact me with questions.

Thanks,

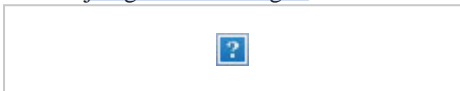
Justus McGill

Ecology and Waterway Permitting Office (Crawfordsville District)
100 N Senate Ave. Indianapolis, IN 46204

Office: (317)-509-7296

Office Hours: Mon to Fri 6:30am to 2:30pm.

Email: jmcgill@indot.in.gov



From: Peter Putzier <PPutzier@lochgroup.com>
Sent: Thursday, March 4, 2021 9:23 AM
To: McGill, Justus <JMcgill@indot.IN.gov>; Garre Conner <GConner@lochgroup.com>
Cc: Engstrom, Maryssa H <MEngstrom@indot.IN.gov>
Subject: RE: Draft Karst Report 1601040

****** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ******

Good morning Justus,

A revised karst report for Des. No. 1601040 is attached.

Sincerely,

DISCOVERY OF KARST FEATURES

If unknown karst features are discovered during construction, all work within 100 ft of the feature shall stop and the Engineer shall be notified immediately. Karst features include, but are not limited to voids, caves, sinking streams, and sinkholes. The Department will provide the treatment measures to be incorporated for the feature. The karst feature shall be protected from sedimentation runoff. Work shall not resume in the area until directed by the Engineer.