Indiana Department of Transportation

County Fountain Route US 41 Des. No. 1601078

FHWA-Indiana Environmental Document

CATEGORICAL EXCLUSION / ENVIRONMENTAL ASSESSMENT FORM

GENERAL PROJECT INFORMATION

Road No./County:	**US 41 / Fountain County**
Designation Number:	**1601078**
Project Description/Termini:	**US 41 over Coal Creek Bridge Replacement, from approximately 375 feet north to 430 feet south of the center of the US 41 Bridge**

After completing this form, I conclude that this project qualifies for the following type of Categorical Exclusion (FHWA must review/approve if Level 4 CE):

X	**Categorical Exclusion, Level 2** – The proposed action meets the criteria for Categorical Exclusion Manual Level 2 - table 1, CE Level Thresholds. Required Signatories: ESM (Environmental Scoping Manager)
	Categorical Exclusion, Level 3 – The proposed action meets the criteria for Categorical Exclusion Manual Level 3 - table 1, CE Level Thresholds. Required Signatories: ESM, ES (Environmental Services Division)
	Categorical Exclusion, Level 4 – The proposed action meets the criteria for Categorical Exclusion Manual Level 4 - table 1, CE Level Thresholds. Required Signatories: ESM, ES, FHWA
	Environmental Assessment (EA) – EAs require a separate FONSI. Additional research and documentation is necessary to determine the effects on the environment. Required Signatories: ES, FHWA

Note: For documents prepared by or for Environmental Services Division, it is not necessary for the ESM of the district in which the project is located to release for public involvement or sign for approval.

Approval _____ _____ _____ _____
ESM Signature Date ES Signature Date

_____ _____
FHWA Signature Date

Release for Public Involvement

N/A _____ REB 4-14-2020
ESM Initials Date ES Initials Date

Certification of Public Involvement _____ _____
Office of Public Involvement Date

Note: Do not approve until after Section 106 public involvement and all other environmental requirements have been satisfied.

INDOT ES/District Env.
Reviewer Signature: _____ Date: _____

Name and Organization of CE/EA Preparer: Eric Jagger – Parsons Transportation Group

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.**

	Yes	No
Does the project have a historic bridge processed under the Historic Bridges PA*?		X
If No, then: Opportunity for a Public Hearing Required?	X	

**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.

Remarks: Notice of Entry letters were mailed to potentially affected property owners near the project area on May 10, 2018 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 G-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 comment 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	Yes	No
Will the project involve substantial controversy concerning community and/or natural resource impacts?		X

Remarks: 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: INDOT INDOT District: Crawfordsville

Local Name of the Facility: US 41 over Coal Creek Bridge Replacement

Funding Source (*mark all that apply*): Federal [X] State [X] Local [ ] Other* [ ]

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

PURPOSE AND NEED:

Describe the transportation problem that the project will address. The solution to the traffic problem should NOT be discussed in this section. (Refer to the CE Manual, Section IV.B.2. Purpose and Need)

The need for this project is due to the deteriorating condition of the existing structure, INDOT Structure 041-23-03885 A. In the *Abbreviated Engineering Assessment* dated June 21, 2019, numerous widespread issues were noted, including wide transverse cracks throughout the wearing surface, substandard bridge railings, deep spalls, efflorescence, and exposed rebar on both bridge spans. Additionally, channel scour was observed on the east end of one of the piers. Due to the vertical curvature of the existing structure, the north end of the bridge is at the minimum height above freeboard for hydraulics. The purpose of this project is to provide a hydraulically sufficient crossing of US 41 over Coal Creek.

PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Fountain Municipality: Unincorporated area

Limits of Proposed Work: US 41, from approximately 375 feet north to 430 feet south of the center of the US 41 Bridge

Total Work Length: 0.044 Mile(s) Total Work Area: 1.4 Acre(s)

	Yes[1]	No
Is an Interchange Modification Study / Interchange Justification Study (IMS/IJS) required?		X
If yes, when did the FHWA grant a conditional approval for this project?	Date: N/A	

[1]*If an IMS or IJS is required; a copy of the approved CE/EA document must be submitted to the FHWA with a request for final approval of the IMS/IJS.*

In the remarks box below, describe existing conditions, provide in detail the scope of work for the project, including the preferred alternative. Include a discussion of logical termini. Discuss any major issues for the project and how the project will improve safety or roadway deficiencies if these are issues.

INDOT is planning a bridge replacement project on US 41 over Coal Creek, located 2.52 miles south of SR 55 in Fountain County, Indiana (Appendix B, page B-1). Specifically, the project is located in the United States Geological Survey (USGS) Topographic Mellott Quadrangle Map, in Sections 5, 6, 7, and 8 of Township 20 North, Range 7 West (Appendix B, page B-2). The project is located along a rural section of US 41. Land adjacent to the bridge consists of maintained right-of-way (ROW), woodlands, a farmstead, and row-crop fields.

The existing conditions along this section of US 41 include one 12-foot travel lane in either direction with 7-foot shoulders. The existing structure, INDOT Structure No. 041-23-03885 A, is a two-span reinforced concrete arch bridge constructed in 1924 and widened in 1967. The bridge is approximately 106 feet long and 46 feet wide. US 41 is oriented north to south over Coal Creek, which flows generally from east to west. Existing conditions are shown on aerial photographs (Appendix B, pages B-3 to B-5) and project photographs (Appendix B, pages B-8 to B-9). The INDOT *Historic Bridge Inventory* determined that this bridge, National Bridge Inventory (NBI) #15280, is not eligible for listing in the National Register (Appendix D, page D-2).

The preferred alternative for this project includes replacing the existing structure with a three-span continuous composite prestressed concrete bulb-tee beam bridge measuring approximately 188 feet long and 40 feet wide (Appendix B, pages B-15 to B-17). The profile grade will be raised by approximately 2.8 feet, and riprap scour protection will be added along the end bents and at drainage turnouts. Guardrail will be upgraded and extended. The existing bridge piers, including one within the stream channel, will be removed up to 2-feet below grade; however, the foundations will remain in-place. In order to accommodate the raised bridge profile, side-slopes will be re-graded, and approaches will be reconstructed to match existing grades.

Approximately 0.95 acre of permanent ROW will be acquired due to the change in bridge profile. This section of US 41 over Coal

Creek will be closed during construction, and an official INDOT detour will be provided. This detour is approximately 19 miles and utilizes US 136, SR 341, and SR 55 (Appendix B, page B-14).

The project termini are from 375 feet north to 430 feet south of the center of the US 41 bridge. As described in the Purpose and Need section, this project will address existing deficiencies along this section of US 41; therefore, it has independent utility with logical termini.

This project will impact approximately 0.76 acre of terrestrial habitat, including approximately 0.2 acre of trees. Additionally, approximately 57 linear feet of streams, and approximately 0.031 acre of wetlands will be impacted.

The preferred alternative will meet the project's purpose and need by providing a hydraulically sufficient crossing of US 41 over Coal Creek.

OTHER ALTERNATIVES CONSIDERED:

Describe all discarded alternatives, including the Do-Nothing Alternative and an explanation of why each discarded alternative was not selected.

Alternative 1 – No Build (Do-Nothing): The No Build alternative would leave the bridge in its current state and would not impact any environmental resources or require any additional ROW. However, the bridge would continue to deteriorate, and the scour issues would remain and possibly worsen. Although this alternative would not incur any costs or environmental impacts, the No Build alternative does not meet the project's purpose and need. Therefore, it was dismissed from further consideration.

Alternative 2 – Prestressed Box Beam Bridge: This alternative would replace the existing bridge with a concrete box girder bridge with three-spans. According to the life cycle analysis in the January 8, 2020 *Structure Size and Type Report*, although this is the least-cost alternative ($3,181,620) and the ecological, water resources, and terrestrial impacts would be the same as the preferred alternative, the life-cycle costs are close to the preferred alternative ($3,318,930). This alternative lacks ease of inspection and would require more maintenance. Therefore, this alternative was dismissed from further consideration.

Alternative 3 – Wide Flange Steel Girder: This alternative would replace the current structure with a composite wide flange steel girder bridge with three spans. According to the life cycle analysis in the January 8, 2020 *Structure Size and Type Report*, although this alternative ($3,295,821) would cost less than the preferred alternative ($3,318,930), and the ecological, water resources, and terrestrial impacts would be the same as the preferred alternative, it would have less structure depth and require more maintenance. Therefore, this alternative was dismissed from further consideration.

Alternative 4 – Twin Cell Precast Arches: This alternative would replace the existing bridge with twin cell precast concrete arches. According to the life cycle analysis in the January 8, 2020 *Structure Size and Type Report*, although this alternative ($3,207,242) would cost less than the preferred alternative ($3,318,930), it would require a significant change to the roadway profile, which would expand the project area. Since this alternative would require more impacts to ecological, water, and terrestrial resources compared to the preferred alternative, it was dismissed from further consideration.

Due to the level of deterioration and substandard elements, a rehabilitation would not address the need of the project; therefore, it was dismissed from further consideration.

The Do Nothing 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	X
It would result in serious impacts to the motoring public and general welfare of the economy.	
Other (Describe)	

ROADWAY CHARACTER:

Functional Classification: Minor arterial
Current ADT: 3,459 VPD (2021) Design Year ADT: 3,529 VPD (2041)
Design Hour Volume (DHV): 376 Truck Percentage (%) 14.18%
Designed Speed (mph): 55 Legal Speed (mph): 55

	Existing		Proposed	
Number of Lanes:	2		2	
Type of Lanes:	Through		Through	
Pavement Width:	28-43	ft.	37.3	ft.
Shoulder Width:	2-7	ft.	6.6	ft.
Median Width:	N/A	ft.	N/A	ft.
Sidewalk Width:	N/A	ft.	N/A	ft.

Setting:		Urban		Suburban	X	Rural
Topography:	X	Level		Rolling		Hilly

If the proposed action has multiple roadways, this section should be filled out for each roadway.

DESIGN CRITERIA FOR BRIDGES:

US 41 over Coal Creek Bridge

Structure/NBI Number(s): 041-23-03885 A (existing) 041-23-10200 (proposed)
Sufficiency Rating: 70.1 (October 29, 2018 Bridge Inspection Report)
(Rating, Source of Information)

	Existing		Proposed	
Bridge Type:	Reinforced concrete arch bridge		Continuous composite prestressed concrete bulb-tee beam bridge	
Number of Spans:	2		3	
Weight Restrictions:	N/A	ton	N/A	ton
Height Restrictions:	N/A	ft.	N/A	ft.
Curb to Curb Width:	43	ft.	37.3	ft.
Outside to Outside Width:	45.8	ft.	40.3	ft.
Shoulder Width:	9.5	ft.	6.6	ft.
Length of Channel Work:			57	ft.

Describe bridges and structures; provide specific location information for small structures.

Remarks: The existing structure will be replaced with a three-span continuous composite prestressed concrete bulb-tee beam bridge measuring approximately 188 feet long and 40 feet wide. The profile grade will be raised by approximately 2.8 feet. The INDOT *Historic Bridge Inventory* determined that this bridge, NBI #15280, is not eligible for listing in the National Register (Appendix D, page D-2).

In order to replace the bridge and add scour protection, approximately 57 linear feet of Coal Creek, and approximately 0.031 acre of wetlands will be impacted.

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	Yes	No	N/A
Will the structure be rehabilitated or replaced as part of the project?	X		

If the proposed action has multiple bridges or small structures, this section should be filled out for each structure.

MAINTENANCE OF TRAFFIC (MOT) DURING CONSTRUCTION:

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

Remarks:

This section of US 41 over Coal Creek will be closed during construction, and an official INDOT detour will be provided. The proposed detour route will utilize US 136 between US 41 and SR 341, SR 341 between US 136 and SR 55, and SR 55 between SR 341 and US 41. Signage will be provided at the detour points to notify drivers that access to US 41 is restricted. The detour route is approximately 19 miles long (Appendix B, page B-14).

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 would occur during construction but will cease with project completion. School corporations and emergency services will be notified at least two weeks prior to any construction activity that will block or limit access. This is included in the Environmental Commitments section.

ESTIMATED PROJECT COST AND SCHEDULE:

Engineering: $ 267,770.50 (2019) Right-of-Way: $ 25,000 (2019) Construction: $ 5,844,683* (2022)

*bundled in Contract B-40580 under lead Des. 1701589

Anticipated Start Date of Construction: Summer 2021

Date project incorporated into STIP July 2, 2019 (Appendix H, page H-1)

	Yes	No
Is the project in an MPO Area?		X

If yes,

Name of MPO _____

Location of Project in TIP _____

Date of incorporation by reference into the STIP _____

RIGHT OF WAY:

Land Use Impacts	Amount (acres) Permanent	Temporary
Residential	0.02	N/A
Commercial	N/A	N/A
Agricultural	0.73	N/A
Forest	0.17	N/A
Wetlands	0.03	N/A
Other:	N/A	N/A
Other:	N/A	N/A
TOTAL	0.95	N/A

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 or reacquisition, either known or suspected, and there impacts on the environmental analysis should be discussed.

Remarks:

The existing ROW widths range from approximately 12 to 63 feet from the US 41 roadway centerline (Appendix B, pages B-13 and B-15). It consists of maintained grassy roadsides, agricultural land, and trees.

The project requires approximately 0.95 acre of permanent ROW on the east and west sides of US 41. The proposed ROW widths range from approximately 23 to 63 feet from the US 41 roadway centerline (Appendix B, pages B-13 and B-15). It consists of maintained grassy roadsides, agricultural land, wetlands, and trees.

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.

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

SECTION A – ECOLOGICAL RESOURCES

	Presence	Impacts Yes	Impacts No
Streams, Rivers, Watercourses & Jurisdictional Ditches	X	X	
Federal Wild and Scenic Rivers			
State Natural, Scenic or Recreational Rivers			
Nationwide Rivers Inventory (NRI) listed			
Outstanding Rivers List for Indiana			
Navigable Waterways			

Remarks:

Based on a desktop review, a site visit on October 8, 2019 by Parsons, the 2018 aerial map of the project area (Appendix B, pages B-4 to B-5), and the water resources map in the Red Flag Investigation (RFI) report (Appendix E, page E-7), there is one stream, Coal Creek, located within the 0.5 mile search radius. Specifically, Coal Creek originates east of the study area and flows west under US 41 (Appendix B, page B-4 to B-5).

A Waters of the US (WOTUS) Report was prepared by Parsons and approved by the INDOT Ecology and Waterway Permitting Office on December 5, 2019. Please refer to Appendix F for the WOTUS Report. It was determined that there is one jurisdictional stream, Coal Creek, within the project area. Coal Creek is a perennial stream of average quality. It

exhibited an 87-foot wide and 30-inch deep ordinary high watermark (OHWM) during the field visit. Coal Creek drains 62.49 square miles and is likely a Water of the US. Coal Creek is not classified as a Federal *Wild and Scenic River or a State Natural, Scenic and Recreational River*. It is not listed in the *Nationwide Rivers Inventory* or on the Indiana Register's listing of *Outstanding Rivers and Streams*. Coal Creek is not classified as a navigable waterway. The US Army Corps of Engineers (USACE) makes all final determinations regarding jurisdiction.

Approximately 57 linear feet of stream impacts are expected. Impacting Coal Creek can not be avoided because the existing bridge has a pier within the stream channel. The existing piers will be removed to approximately 2-feet below grade. New foundations will be installed, and riprap scour protection will be added to protect the new structure.

The project will require a USACE 404 permit and an Indiana Department of Environmental (IDEM) Section 401 Water Quality Certification. Mitigation will be required as part of this project. The need for stream and wetland mitigation is not anticipated.

Early coordination letters were sent to USACE, the IDNR Division of Fish and Wildlife (DFW), and the United States Fish and Wildlife Service (USFWS) on December 3, 2019 (Appendix C, pages C-1 to C-3). Concurrently, electronic coordination occurred with IDEM (Appendix C, pages C-10 to C-16). USACE did not respond to the early coordination letter. IDNR-DFW responded on January 7, 2020 with standard recommendations for stream crossings, such as wildlife considerations, bank stabilization methods, and minimizing impacts to riparian habitat (Appendix C, pages C-4 to C-6). USFWS responded on December 4, 2019, and standard recommendations were provided (Appendix C, pages C-19 to C-20). All applicable IDNR-DFW and USFWS recommendations are included in the Environmental Commitments section of this CE document.

Other Surface Waters	**Presence**	**Impacts**	
		Yes	**No**
Reservoirs			
Lakes			
Farm Ponds			
Detention Basins			
Storm Water Management Facilities			
Other:			

Remarks:

Based on a desktop review, a site visit on October 8, 2019 by Parsons, the aerial map of the project area (Appendix B, pages B-4 to B-5), and the water resources map in the RFI report (Appendix E, page E-7), there are no other surface waters within the 0.5 mile search radius. No other surface waters are present within the project area; therefore, no impacts are expected.

A Waters of the US (WOTUS) Report was prepared by Parsons and approved by the INDOT Ecology and Waterway Permitting Office on December 5, 2019. Please refer to Appendix F for the WOTUS Report. It was determined that there are no other surface waters within the project area. The USACE makes all final determinations regarding jurisdiction.

Responses to early coordination did not include applicable comments regarding other surface waters.

Wetlands	**Presence**	**Impacts**	
		Yes	**No**
	X	X	

Total wetland area: 0.239 acre(s) Total wetland area impacted: 0.031 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
Wetland 1	Palustrine Emergent	0.004	N/A	Poor Quality / Water of the US / Southwest of bridge

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Wetland No.	Classification	Total Size (Acres)	Impacted Acres	Comments
Wetland 2	Palustrine Emergent	0.008	0.004	Poor Quality / Water of the US / Southeast of bridge
Wetland 3	Palustrine Emergent	0.007	0.003	Poor Quality / Water of the US / Northwest of bridge
Wetland 4	Palustrine Forested	0.220	0.024	Average Quality / Water of the US / Northeast of bridge

Wetlands (*Mark all that apply*)	**Documentation**	**ES Approval Dates**
Wetland Determination	X	**December 5, 2019**
Wetland Delineation	X	**December 5, 2019**
USACE Isolated Waters Determination		
Mitigation Plan		

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;	X
Substantial adverse social, economic, or environmental impacts, or	
The project not meeting the identified needs.	X

Measures to avoid, minimize, and mitigate wetland impacts need to be discussed in the remarks box.

Remarks:

Based on a review of the National Wetlands Inventory (NWI) online mapper (https://www.fws.gov/wetlands/data/Mapper.html), a site visit on October 8, 2019 by Parsons, the USGS topographic map (Appendix B, page B-2), and the RFI report (Appendix E, page E-7), there are 13 wetlands located within the 0.5 mile search radius. There are four wetlands present within the project area.

A WOTUS Report was prepared by Parsons and approved by the INDOT Ecology and Waterway Permitting Office on December 5, 2019. Please refer to Appendix F for the WOTUS Report (graphics are provided in Appendix B-1 to B-9). It was determined that there are four wetlands within the project area. Of these, three wetlands will be impacted by the proposed project for a total impact of 0.031 acre. These resources are poor quality palustrine emergent and average quality palustrine forested wetlands that occur primarily within roadside ditches. USACE makes all final determinations regarding jurisdictions.

Each wetlands' type, size, quality, and the area of proposed impacts are listed in the above table. These resources are mapped in Appendix B, pages B-4 to B-7, and shown on the project plans in Appendix B, page B-16. Impacts to wetlands could not be avoided because they are located adjacent to the existing bridge, and the profile needs to be raised in order to achieve adequate freeboard clearance above the floodway. Impacts will be further minimized through the permitting process. There is no practicable alternative to the proposed new construction in wetlands, and the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use. Approval of this document will constitute approval of the adverse impacts to wetlands.

Early coordination letters were sent to USACE and IDNR-DFW on December 3, 2019 (Appendix C, pages C-1 to C-3). Concurrently, electronic coordination occurred with IDEM (Appendix C, pages C-10 to C-16). USACE did not respond to the early coordination letter. IDNR-DFW's January 7, 2020 response provided recommendations on bank stabilization and development of a mitigation plan (Appendix C, pages C-4 to C-6). All applicable IDEM and IDNR-DFW recommendations are included in the Environmental Commitments section of this CE document.

	Presence	Impacts Yes	Impacts No
Terrestrial Habitat	X	X	
Unique or High Quality Habitat			

Use the remarks box to identify each type of habitat and the acres impacted (i.e. forested, grassland, farmland, lawn, etc).

Remarks:

Based on a desktop review, a site visit on October 8, 2019 by Parsons, and the 2018 aerial map of the project area (Appendix B, pages B-4 to B-5), terrestrial habitat within the project area consists of maintained grassy roadsides, agricultural land, and trees. All work will occur within proposed ROW and within 100 feet from an existing roadway. A total of approximately 0.76 acre of terrestrial habitat will be impacted by this project.

This roadside terrestrial habitat is considered to be low quality, except the northeast quadrant, which contains a forested wetland. Dominant species include common varietals of clover, bluegrass, foxtails, fescue, and crown vetch. The primary tree species observed within the project area were red mulberry (*Morus rubra*), ash-leaf maple (*Acer negundo*), common hackberry (*Celtis occidentalis*), Osage-orange (*Maclura pomifera*), honey locust (*Gleditsia triacanthos*), American elm (*Ulmus americana*), American sycamore (*Platanus occidentalis*), and green ash (*Fraxinus pennsylvanica*).

The October 29, 2018 *Bridge Inspection Report* (Appendix C, pages C-42 to C-44) reported the presence of bird nests on the structure, which appear similar to American cliff swallow (*Petrochelidon pyrrhonota)* nests. Therefore, the conditions of the Migratory Bird Treaty Act (MBTA) will be applied to this project. Refer to the Threatened and Endangered Species section for further discussion. Additionally, it is likely other common species of insects, birds, amphibians, and mammals inhabit the project area. The proposed 3-span bridge with its raised profile will provide more open area beneath the bridge compared to the existing concrete-arch structure. Therefore, this project will likely improve conditions for wildlife crossings.

Approximately 0.2 acre of tree clearing/trimming is anticipated. Impacting terrestrial habitat, including trees, could not be avoided due to their presence near the structure and roadway. These trees are considered "suitable summer habitat" for the Indiana bat and the northern long-eared bat (NLEB). Refer to the Threatened and Endangered Species section for further discussion. Tree trimming/clearing will be limited to the bats' inactive season.

Early coordination was sent to IDNR-DFW and USFWS on December 3, 2019 (Appendix C, pages C-1 to C-3). USFWS responded to early coordination on December 4, 2019 stating they have no objections to the project (Appendix C, pages C-19 to C-20). Standard recommendations were provided such as do not clear trees or understory vegetation outside construction zone boundaries, implementing proper erosion and sediment control measures, and evaluating wildlife crossings under bridge/culverts. IDNR-DFW's January 7, 2020 response recommended a mitigation plan for any unavoidable habitat impacts that will occur, revegetating all disturbed areas, and implementing proper erosion control measures (Appendix C, pages C-4 to C-6). All applicable USFWS and IDNR-DFW recommendations are included in the Environmental Commitments section of this CE document.

If there are high incidences of animal movements observed in the project area, or if bridges and other areas appear to be the sole corridor for animal movement, consideration of utilizing wildlife crossings should be taken.

Karst	Yes	No
Is the proposed project located within or adjacent to the potential Karst Area of Indiana?		X
Are karst features located within or adjacent to the footprint of the proposed project?		X
If yes, will the project impact any of these karst features?		

Use the remarks box to identify any karst features within the project area. (Karst investigation must comply with the Karst MOU, dated October 13, 1993)

Remarks: Based on a desktop review, the project is located outside the designated karst region of Indiana as outlined in the October 13, 1993 Memorandum of Understanding (MOU). According to the topographic map of the project area (Appendix B, page B-2) and the RFI report (Appendix E, page E-7), there are no karst features identified within or adjacent to the project area.

In the December 4, 2019 early coordination response, the Indiana Geological Survey (IGS) did not indicate that karst features exist in the project area (Appendix C, pages C-7 to C-9). Response from IGS has been communicated with the designer on December 4, 2019. No impacts are expected.

Threatened or Endangered Species	**Presence**	**Impacts**	
		Yes	**No**
Within the known range of any federal species	X	X	
Any critical habitat identified within project area			
Federal species found in project area (based upon informal consultation)			
State species found in project area (based upon consultation with IDNR)			

	Yes	**No**
Is Section 7 formal consultation required for this action?		X

Remarks: Based on a desktop review and the RFI report (Appendix E), completed by Parsons on October 16, 2018, the IDNR Fountain County Endangered, Threatened and Rare (ETR) Species List has been checked and is included in (Appendix E, page E-8 to E-10). The highlighted species on the list reflect the federal and state identified ETR species located within the county. According to the IDNR-DFW early coordination response letter dated January 7, 2020 (Appendix C, pages C-4 to C-6), the Natural Heritage Program's Database has been checked, and no plant or animal species listed as state or federally threatened, endangered, or rare have been reported to occur in the project vicinity.

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 C-21 to C-26). The project is within range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened NLEB (*Myotis septentrionalis*). No additional species were found within or adjacent to the project area other than the Indiana bat and the northern long-eared bat. This project is located outside a High Potential Zone for the Rusty Patched Bumble Bee. Therefore, no impacts 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 the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), Federal Transit Administration (FTA), and USFWS. An effect determination key was completed on December 5, 2019, and based on the responses provided, the project was found to "Not Likely To Adversely Affect" the Indiana bat and/or the NLEB. INDOT reviewed and verified the effect finding on December 5, 2019 and requested USFWS's review of the finding (Appendix C, pages C-27 to C-41). No response was received from USFWS within the 14-day review period; therefore, it was concluded they concur with the finding. Avoidance and Mitigation Measures (AMMs) are included as firm commitments in the Environmental Commitments section of this document.

The US 41 bridge over Coal Creek, INDOT Structure 041-23-03885 A, has shown evidence of use (i.e. nests) by a bird species protected under the MBTA during the October 29, 2018 inspection (Appendix C, pages C-42 and C-44). Avoidance and minimization measures must be implemented prior to the start of and during the nesting season. Nests without eggs or young should be removed prior to construction during the non-nesting season (September 8 – April 30) and during the nesting season if no eggs or young are present. Nests with eggs or young cannot be removed or disturbed during the nesting season (May 1 – September 7). Nests with eggs or young should be screened or buffered from active construction. Details of the required procedures are outlined in the "Potential Migratory Bird on Structure Unique Special Provision". This firm commitment is included in the Environmental Commitments of this document.

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.

SECTION B – OTHER RESOURCES

Drinking Water Resources	**Presence**	**Impacts**	
		Yes	**No**
Wellhead Protection Area			
Public Water System(s)			
Residential Well(s)			
Source Water Protection Area(s)			
Sole Source Aquifer (SSA)			

If a SSA is present, answer the following:

	Yes	**No**
Is the Project in the St. Joseph Aquifer System?		
Is the FHWA/EPA SSA MOU Applicable?		
Initial Groundwater Assessment Required?		
Detailed Groundwater Assessment Required?		

Remarks:

The project is located in Fountain 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/Environmental Protection Agency (EPA) Sole Source Aquifer Memorandum of Understanding (MOU) is not applicable to this project. Therefore, a detailed groundwater assessment is not needed, and no impacts are expected.

The IDEM Wellhead Proximity Determinator website was accessed on January 13, 2020 by Parsons (https://www.in.gov/idem/cleanwater/pages/wellhead/). This project is not located within a Wellhead Protection Area or Source Water Area. Therefore, no impacts are expected.

The IDNR Water Well Record Database website (https://www.in.gov/ dnr/water/3595.htm) was accessed on January 13, 2020 by Parsons. No wells are located near this project. Therefore, no impacts are expected.

Based on a desktop review of the INDOT Municipal Separated Storm Sewer System (MS4) website (Appendix I, page I-3) (https://entapps.indot.in.gov/MS4/) by Parsons on January 13, 2019 and the RFI report (Appendix E), this project is not located in an Urban Area Boundary location. No impacts are expected.

Based on a desktop review, a site visit on October 8, 2019 by Parsons, utility coordination (Appendix B, page B-11), and the 2018 aerial map of the project area (Appendix B, pages B-4 to B-5), no public water systems were identified. Therefore, no impacts are expected.

Flood Plains	**Presence**	**Impacts**	
		Yes	**No**
Longitudinal Encroachment			
Transverse Encroachment	X	X	
Project located within a regulated floodplain	X	X	
Homes located in floodplain within 1000' up/downstream from project			

Discuss impacts according to classification system described in the "Procedural Manual for Preparing Environmental Studies".

Remarks:

The IDNR Indiana Floodway Information Portal (http://dnrmaps.dnr.in.gov/ appsphp/fdms/) was accessed by Parsons on January 13, 2020 (Appendix F, page F-13). Additionally, Parsons reviewed the Federal Emergency Management

Agency's (FEMA) Floodway Insurance Rate Map (FIRM) (Appendix F, page F-12), the RFI report (Appendix E, page E-7), and the GIS-Based Water Resources maps in the WOTUS report (Appendix B, page B-4 and B-5), and there is no mapped floodway within the project area. An early coordination letter was sent on December 3, 2019 to the local Floodplain Administrator (Appendix C, pages C-1 to C-3). IDNR-DFW responded that this project is located within a regulated floodway (Appendix C, page C-4). Further coordination with IDNR-DFW will occur during the permitting processes. Per the *INDOT Categorical Exclusion Manual*, this project will have Category 4 Impacts, projects involving replacement of existing drainage structures on essentially the same alignment.

No homes are located within the base floodplain within 1,000 feet upstream, and no homes are located within the base floodplain within 1,000 feet downstream. The proposed structure will have an effective capacity such that backwater surface elevations are not expected to substantially increase. As a result, there will be no substantial adverse impacts on natural and beneficial floodplain values; there will be no substantial change in flood risks; and there will be no substantial increase in potential for interruption or termination of emergency service or emergency evacuation routes; therefore, it has been determined that this encroachment is not substantial. A hydraulic design study that addresses various structure size alternatives was completed and approved on January 29, 2019. A summary of this study was included with the Field Check Plans (Appendix B, page B-16).

	Presence	Impacts	
Farmland		Yes	No
Agricultural Lands	X	X	
Prime Farmland (per NRCS)			

Total Points (from Section VII of CPA-106/AD-1006* **156**

**If 160 or greater, see CE Manual for guidance.*

See CE Manual for guidance to determine which NRCS form is appropriate for your project.

Remarks: Based on a desktop review, a site visit on October 8, 2019 by Parsons, and the aerial map of the project area (Appendix B, page B-4 to B-5) the project will convert 0.93 acre of farmland as defined by the Farmland Protection Policy Act. An early coordination letter was sent on December 3, 2019 to the Natural Resources Conservation Services (NRCS). Coordination with NRCS resulted in a score of 156 on the AD 1006 Form (Appendix C, page C-18). NRCS's threshold score for significant impacts to farmland that result in the consideration of alternatives is 160. Since this project score is less than the threshold, no significant loss of prime, unique, statewide, or local important farmland will result from this project. No alternatives other than those previously discussed in this document will be investigated without reevaluating impacts to prime farmland.

SECTION C – CULTURAL RESOURCES

	Category	Type	INDOT Approval Dates	N/A
Minor Projects PA Clearance	B	4, 10, 12	February 13, 2020	

	Eligible and/or Listed Resource Present
Results of Research	
Archaeology	
NRHP Buildings/Site(s)	
NRHP District(s)	
NRHP Bridge(s)	

Project Effect

No Historic Properties Affected ☐ No Adverse Effect ☐ Adverse Effect ☐

Documentation (mark all that apply)	**Documentation Prepared**	**ES/FHWA Approval Date(s)**	**SHPO Approval Date(s)**
Historic Properties Short Report			
Historic Property Report			
Archaeological Records Check/ Review			
Archaeological Phase Ia Survey Report	X		
Archaeological Phase Ic Survey Report			
Archaeological Phase II Investigation Report			
Archaeological Phase III Data Recovery			
APE, Eligibility and Effect Determination			
800.11 Documentation			

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

Describe all efforts to document cultural resources, including a detailed summary of the Section 106 process, using the categories outlined in the remarks box. The completion of the Section 106 process requires that a Legal Notice be published in local newspapers. Please indicate the publication date, name of paper(s) and the comment period deadline. Likewise include any further Section 106 work which must be completed at a later date, such as mitigation or deep trenching.

Remarks:

On February 13, 2020 the INDOT Cultural Resources Office (CRO) determined that this project falls within the guidelines of Category B, Type 4, 10, and 12 under the Minor Projects Programmatic Agreement (MPPA) (Appendix D, pages D-1 to D-5). The applicable MPPA work descriptions are listed below.

- Instillation of new safety appurtenances, including but not limited to, guardrails, barriers, glare screens, and crash attenuators
- Slide corrections, slope repairs, and other erosion control measures, in undisturbed soils
- Replacement, widening, or raising the elevation of the superstructure on existing bridges, and bride replacement projects (when both the superstructure and substructure are removed)

An archaeological investigation approved by INDOT CRO determined that no National Register-listed or potentially National Register-eligible archaeological resources are present 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 D – SECTION 4(f) RESOURCES/ SECTION 6(f) RESOURCES

Section 4(f) Involvement (mark all that apply)

	Presence	**Use**	
		Yes	**No**
Parks & Other Recreational Land			
Publicly owned park			
Publicly owned recreation area			
Other (school, state/national forest, bikeway, etc.)			

Indiana Department of Transportation

County Fountain Route US 41 Des. No. 1601078

	Evaluations Prepared	FHWA Approval date
Programmatic Section 4(f)*		
"De minimis" Impact*		
Individual Section 4(f)		

	Presence	Use	
Wildlife & Waterfowl Refuges		Yes	No
National Wildlife Refuge			
National Natural Landmark			
State Wildlife Area			
State Nature Preserve			

	Evaluations Prepared	FHWA Approval date
Programmatic Section 4(f)*		
"De minimis" Impact*		
Individual Section 4(f)		

	Presence	Use	
Historic Properties		Yes	No
Sites eligible and/or listed on the NRHP			

	Evaluations Prepared	FHWA Approval date
Programmatic Section 4(f)*		
"De minimis" Impact*		
Individual Section 4(f)		

**FHWA approval of the environmental document also serves as approval of any Section 4f Programmatic and/or De minimis evaluation(s) discussed below.*

Discuss Programmatic Section 4(f) and "de minimis" Section 4(f) impacts in the remarks box below. Individual Section 4(f) documentation must be separate Draft and Final documents. For further discussions on Programmatic, "de minimis" and Individual Section 4(f) evaluations please refer to the "Procedural Manual for the Preparation of Environmental Studies". Discuss proposed alternatives that satisfy the requirements of Section 4(f).

Remarks:

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 parks, recreation areas, wildlife/waterfowl refuges, and National Register of Historic Places (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, a site visit on October 8, 2019 by Parsons, the 2018 aerial map of the project area (Appendix B, pages B-4 to B-5), and the RFI report (Appendix E), there are no potential Section 4(f) resources located within the 0.5 mile search radius. There are no Section 4(f) resources within or adjacent to the project area. Therefore, no use is expected.

	Presence	Use	
Section 6(f) Involvement		Yes	No
Section 6(f) Property			

Discuss proposed alternatives that satisfy the requirements of Section 6(f). Discuss any Section 6(f) involvement.

Remarks: 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 Section 6(f) properties on the LWCF website at https://www.lwcfcoalition.com/map-of-lwcf revealed a total of 4 properties in Fountain County (Appendix I, page I-5). None of these properties are located within or adjacent to the project area. Therefore, there will be no impacts to Section 6(f) resources as a result of this project.

SECTION E – Air Quality

Air Quality

Conformity Status of the Project	**Yes**	**No**
Is the project in an air quality non-attainment or maintenance area?		X
If YES, then:		
Is the project in the most current MPO TIP?		
Is the project exempt from conformity?		
If the project is NOT exempt from conformity, then:		
Is the project in the Transportation Plan (TP)?		
Is a hot spot analysis required (CO/PM)?		

Level of MSAT Analysis required?

Level 1a [X] Level 1b [ ] Level 2 [ ] Level 3 [ ] Level 4 [ ] Level 5 [ ]

Remarks: The 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 1701589 (Appendix H, page H-1). The FY 2018-2021 STIP includes DES number 1601078 by reference with the contract number B-40580 (Appendix B, page B-10).

This project is located in Fountain County, which is currently in attainment for all criteria pollutants according to IDEM's Current and Historic List of Nonattainment Areas by County. Therefore, the conformity procedures of 40 CFR Part 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 F - NOISE

Noise	**Yes**	**No**
Is a noise analysis required in accordance with FHWA regulations and INDOT's traffic noise policy?		X

	No	**Yes/ Date**
ES Review of Noise Analysis	**N/A**	

Remarks: 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 G – COMMUNITY IMPACTS

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

Remarks: The US 41 over Coal Creek bridge replacement project is consistent with local and regional land use and transportation plans. No significant economic or community impacts are expected to develop as a result of the project. This project is necessary to address the condition and hydraulic issues of the US 41 bridge over Coal Creek. Therefore, this project will positively impact motorists using this facility, and should have minimal impacts to community cohesion, the local tax base, or property values. Impacts from the MOT will be temporary, and a detour will be provided. Although the community has an approved transition plan, this project does not include any pedestrian facilities.

Indirect and Cumulative Impacts	**Yes**	**No**
Will the proposed action result in substantial indirect or cumulative impacts?		X

Remarks: Indirect impacts are effects which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate. Cumulative impacts affect the environment, which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such actions.

The project will not result in substantial indirect impacts because it involves the replacement of an existing structure with no changes to access within a rural area. As a result, there will be minimal opportunity for the project to induce development. Similarly, the project will not result in substantial cumulative impacts because it will not change capacity, so there will be minimal impacts associated with other past, present, and future actions.

Public Facilities & Services	**Yes**	**No**
Will the proposed action result in substantial impacts on health and educational facilities, public and private utilities, emergency services, religious institutions, airports, public transportation or pedestrian and bicycle facilities? *Discuss how the maintenance of traffic will affect public facilities and services.*		X

Remarks: Based on a desktop review, a site visit on October 8, 2019, the 2018 aerial map of the project area (Appendix B, page B-4 to B-5), and the RFI report (Appendix E), there are no public facilities within the 0.5 mile search radius. Access to all properties will be maintained during construction. Therefore, no impacts are expected.

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.

Environmental Justice (EJ) (Presidential EO 12898)	Yes	No
During the development of the project were EJ issues identified?		X
Does the project require an EJ analysis?	X	
If YES, then:		
Are any EJ populations located within the project area?		X
Will the project result in adversely high or disproportionate impacts to EJ populations?		X

Remarks:

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. The project will require 0.93 acre of ROW, but no relocations. 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 exist 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 Fountain County. The community that overlaps the project area is called the affected community (AC). In this project, the AC is Census Tract 9576. 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 2013-2017 American Community Survey 5-year Estimates was obtained from the US Census Bureau Website https://factfinder.census.gov/ on January 13, 2020 by Parsons. The data collected for minority and low-income populations within the AC are summarized in the below table.

Table: Minority and Low-Income Data 2013-2017 American Community Survey 5-Year Estimates

	COC – Fountain County	AC-1 – Census Tract 9576, Fountain County, Indiana
Percent Minority	2.39%	2.05%
125% of COC	2.99%	AC < 125% COC
EJ Population of Concern		No
Percent Low-Income	12.63%	13.10%
125% of COC	15.19%	AC < 125% COC
EJ Population of Concern		No

AC 1 – Census Tract 9576 has a percent minority of 2.05, 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 9576 has a percent low-income of 12.63, 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 and maps can be found in Appendix I, pages I-6 to I-9. No further environmental justice analysis is warranted.

Relocation of People, Businesses or Farms	Yes	No
Will the proposed action result in the relocation of people, businesses or farms?		X
Is a Business Information Survey (BIS) required?		X
Is a Conceptual Stage Relocation Study (CSRS) required?		X
Has utility relocation coordination been initiated for this project?	X	

Number of relocations: Residences: 0 Businesses: 0 Farms: 0 Other: 0

If a BIS or CSRS is required, discuss the results in the remarks box.

Remarks: No relocations of people, businesses, or farms will take place as a result of this project. Utility coordination is on-going.

SECTION H – HAZARDOUS MATERIALS & REGULATED SUBSTANCES

Hazardous Materials & Regulated Substances (Mark all that apply)	**Documentation**
Red Flag Investigation	X
Phase I Environmental Site Assessment (Phase I ESA)	
Phase II Environmental Site Assessment (Phase II ESA)	
Design/Specifications for Remediation required?	

	No	**Yes/ Date**
ES Review of Investigations		October 16, 2018

Include a summary of findings for each investigation.

Remarks: Based on a review of GIS and available public records, an RFI was completed on October 16, 2018 by Parsons (Appendix E). Since the RFI is more than one year old, the GIS maps were re-checked on February 10, 2020, and the results remain valid. No sites with hazardous material concerns (hazmat sites) or sites involved with regulated substances were identified in or within 0.5 mile of the project area. Further investigation for hazardous material concerns or regulated substances is not required at this time.

SECTION I – PERMITS CHECKLIST

Permits (mark all that apply)	**Likely Required**
Army Corps of Engineers (404/Section10 Permit)	
Individual Permit (IP)	
Nationwide Permit (NWP)	X
Regional General Permit (RGP)	
Pre-Construction Notification (PCN)	
Other	
Wetland Mitigation required	
Stream Mitigation required	
IDEM	
Section 401 WQC	X
Isolated Wetlands determination	
Rule 5	X
Other	
Wetland Mitigation required	
Stream Mitigation required	
IDNR	
Construction in a Floodway	X
Navigable Waterway Permit	
Lake Preservation Permit	
Other	
Mitigation Required	X
US Coast Guard Section 9 Bridge Permit	
Others (Please discuss in the remarks box below)	

Remarks:

A USACE Section 404 Nationwide Permit and an IDEM Section 401 Water Quality Certification will be required.

The work for this project will impact the floodplain of Coal Creek. Therefore, it will require an IDNR Construction in a Floodway (CIF) permit. IDNR-DFW's response to early coordination discussed this permit requirement. Tree clearing within the forested floodplain is anticipated; therefore, mitigation will likely be required.

More than one acre of land will be disturbed, therefore an IDEM Rule 5 Permit will be required.

Applicable recommendations provided by IDNR-DFW and USFWS 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.

SECTION J- ENVIRONMENTAL COMMITMENTS

The following information should be provided below: List all commitments, name of agency/organization requesting the commitment(s), and indicating which are firm and which are for further consideration. The commitments should be numbered.

Remarks:

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 Crawfordsville 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) Any work in a wetland area within right-of-way or in borrow/waste areas is prohibited unless specifically allowed in the U.S. Army Corps of Engineers permit. (INDOT ESD)

4) Structure No. 041-23-03885 A has shown evidence of use (i.e. nests) by a bird species protected under the Migratory Bird Treaty Act (MBTA) during the October 29, 2018 inspection. Avoidance and minimization measures must be implemented prior to the start of and during the nesting season. Nests without eggs or young should be removed prior to construction during the non-nesting season (September 8 – April 30) and during the nesting season if no eggs or young are present. Nests with eggs or young cannot be removed or disturbed during the nesting season (May 1 – September 7). Nests with eggs or young should be screened or buffered from active construction. Details of the required procedures are outlined in the "Potential Migratory Bird on Structure USP". (INDOT ESD)

5) 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. (USFWS)

6) Lighting AMM 1: Direct temporary lighting away from suitable habitat during the active season. (USFWS)

7) Tree Removal AMM 1: Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal. (USFWS)

8) Tree Removal AMM 2: Apply time of year restrictions for tree removal when bats are not likely to be present (i.e. no clearing April 1 to September 30), 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)

9) 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)

10) Tree Removal AMM 4: Do not remove documented Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 mile of roosts, or documented foraging habitat any time of year. (USFWS)

11) 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 29, 2020, 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 bird. The results of the inspection must indicate no signs of bats or birds. If signs of bats or birds are documented during this inspection, the INDOT District Environmental Manager must be contacted immediately. (USFWS)

12) The new, replacement, or rehabbed structure should not create conditions that are less favorable for wildlife passage under the structure compared to the current conditions. (IDNR-DFW)

13) Riprap or other hard bank stabilization materials should be used only at the toe of the sideslopes up to the OHWM with the exception of areas under bridges. The banks above the OHWM should be restored, stabilized, and revegetated using geotextiles and a mixture of grasses, sedges, wildflowers, shrubs, and tree species native to Central Indiana. For stream bed stabilization or scour protection, riprap or other materials should not be placed in the active stream channel above the existing streambed or flowline elevation. This is to prevent obstructions to the movement of aquatic organisms upstream and downstream. (IDNR-DFW)

14) 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 inches dbh or greater (5:1 mitigation based on the number of large trees). (IDNR-DFW)

15) Do not construct any temporary runarounds, access bridges, causeways, cofferdams, diversions, or pumparounds. (IDNR-DFW)

16) Do not cut any trees suitable for Indiana bat or northern long-eared bat roosting from April 1 through September 30. (IDNR-DFW)

17) Use minimum average 6-inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids. (IDNR-DFW)

For Further Consideration:

18) 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. (USFWS)

19) 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)

20) 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)

21) Avoid all work within the inundated part of the stream channel 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 the OHWM during this time unless the machinery is within the caissons or on the cofferdams. (USFWS)

SECTION K- EARLY COORDINATION

Please list the date coordination was sent and all 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. INDOT and FHWA are automatically considered early coordination participants and should only be listed if a response is received.

Remarks: Early coordination letters were sent on December 3, 2019, unless otherwise noted on Appendix C, page C-3. The list of agencies are summarized below.

Early Coordination

Agency	Response Received	Appendix C Page #'s
USFWS	December 4, 2019	C-19
US Department of Housing and Urban Development	None	N/A
USACE	None	N/A
National Park Service	None	N/A
NRCS	December 13, 2019	C-17
IDNR-DFW	January 7, 2020	C-4
IDEM	December 4, 2019	C-10
Attica Consolidated School Corporation	None	N/A
IGS	December 4, 2019	C-7
Fountain County Highway Department	None	N/A
Fountain County Commissioners	None	N/A

PARSONS

Table of Contents

PARSONS

Appendix H: Air Quality

Appendix I: Additional Studies

Appendix A

INDOT Supporting Documentation

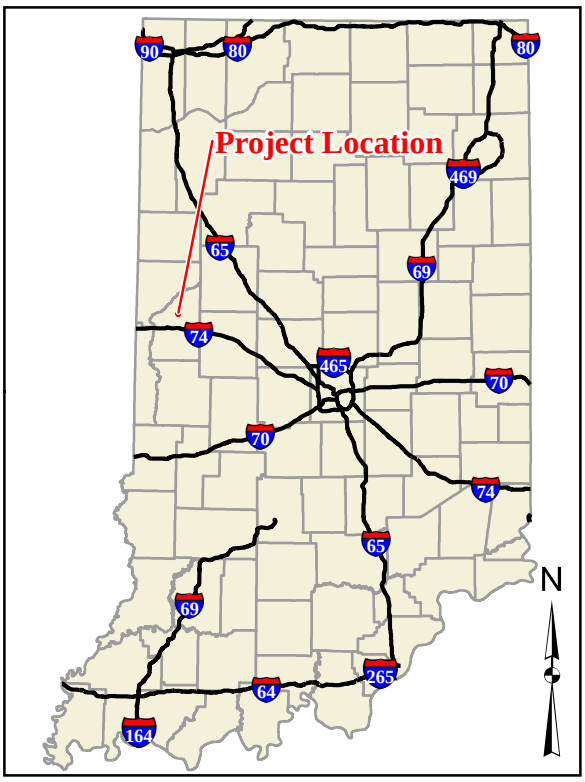
Categorical Exclusion Level Thresholds

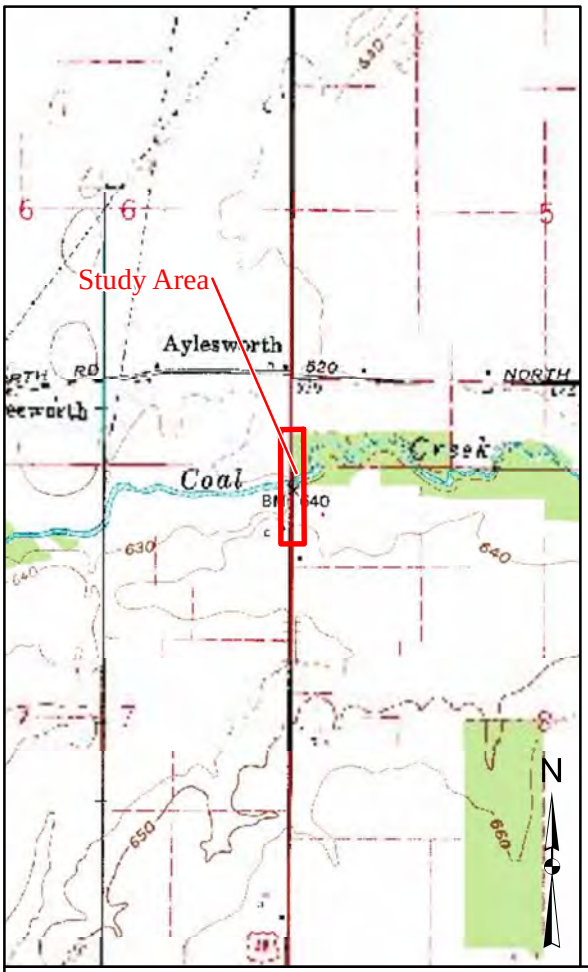
	PCE	Level 1	Level 2	Level 3	Level 4[1]
Section 106	Falls within guidelines of Minor Projects PA	"No Historic Properties Affected"	"No Adverse Effect"	-	"Adverse Effect" Or Historic Bridge involvement[2]
Stream Impacts	No construction in waterways or water bodies	< 300 linear feet of stream impacts	≥ 300 linear feet of stream impacts	-	Individual 404 Permit
Wetland Impacts	No adverse impacts to wetlands	< 0.1 acre	-	< 1 acre	≥ 1 acre
Right-of-way[3]	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" (Without AMMs[4] or with AMMs required for all projects[5])	"Not likely to Adversely Affect" (With any other AMMs)	-	"Likely to Adversely Affect"	Project does not fall under Species Specific Programmatic
Threatened/Endangered Species (Any other species)	Falls within guidelines of USFWS 2013 Interim Policy	"No Effect", ""Not likely to Adversely Affect"	-	-	"Likely to Adversely Affect"
Environmental Justice	No disproportionately high and adverse impacts	-	-	-	Potential[6]
Sole Source Aquifer	Detailed Assessment Not Required	-	-	-	Detailed Assessment
Floodplain	No Substantial Impacts	-	-	-	Substantial Impacts
Coastal Zone Consistency	Consistent	-	-	-	Not Consistent
National Wild and Scenic River	Not Present	-	-	-	Present
New Alignment	None	-	-	-	Any
Section 4(f) Impacts	None	-	-	-	Any
Section 6(f) Impacts	None	-	-	-	Any
Added Through Lane	None	-	-	-	Any
Permanent Traffic Alteration	None	-	-	-	Any
Coast Guard Permit	None	-	-	-	Any
Noise Analysis Required	No	-	-	-	Yes
Air Quality Analysis Required	No	-	-	-	Yes[7]
Approval Level • **District Env. Supervisor** • **Env. Services Division** • **FHWA**	Concurrence by INDOT District Environmental or Environmental Services	Yes	Yes		 Yes Yes Yes

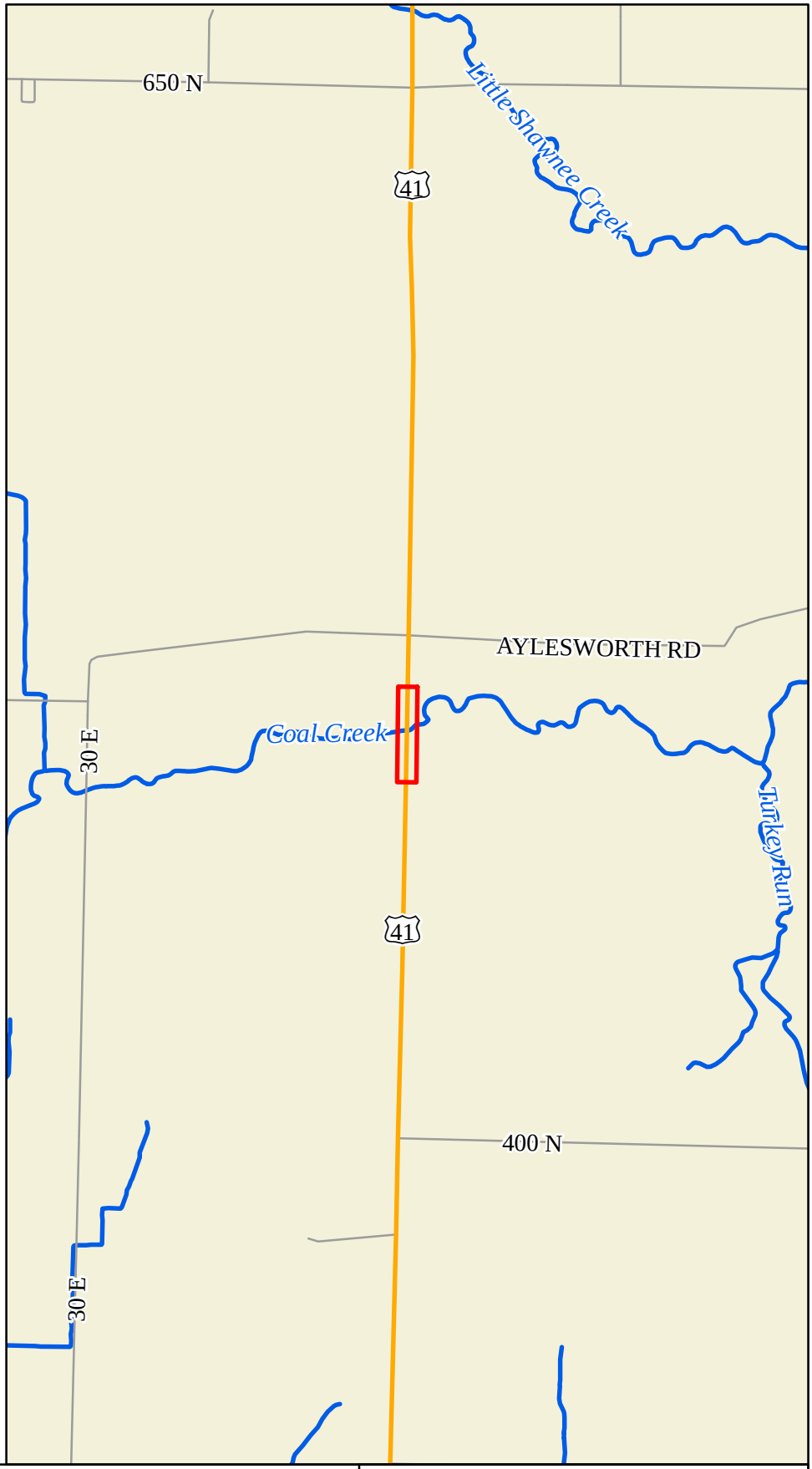
[1]Coordinate with INDOT Environmental Services. INDOT will then coordinate with the appropriate FHWA Environmental Specialist.
[2]Any involvement with a bridge processed under the Historic Bridge Programmatic Agreement.
[3]Permanent and/or temporary right-of-way.
[4]AMMs = Avoidance and Mitigation Measures.
[5]AMMs determined by the IPAC decision key to be needed that are listed in the USFWS *User's Guide for the Range-wide Programmatic Consultation for Indiana bat and Northern long-eared bat* as "required for all projects".
[6]Potential for causing a disproportionately high and adverse impact.
[7]Hot Spot Analysis and/or MSAT Quantitative Emission Analysis.
*Substantial public or agency controversy may require a higher-level NEPA document.

Appendix B

Graphics







Study Area
Streams and Rivers
Incorporated Areas

0 1,000 2,000
Feet

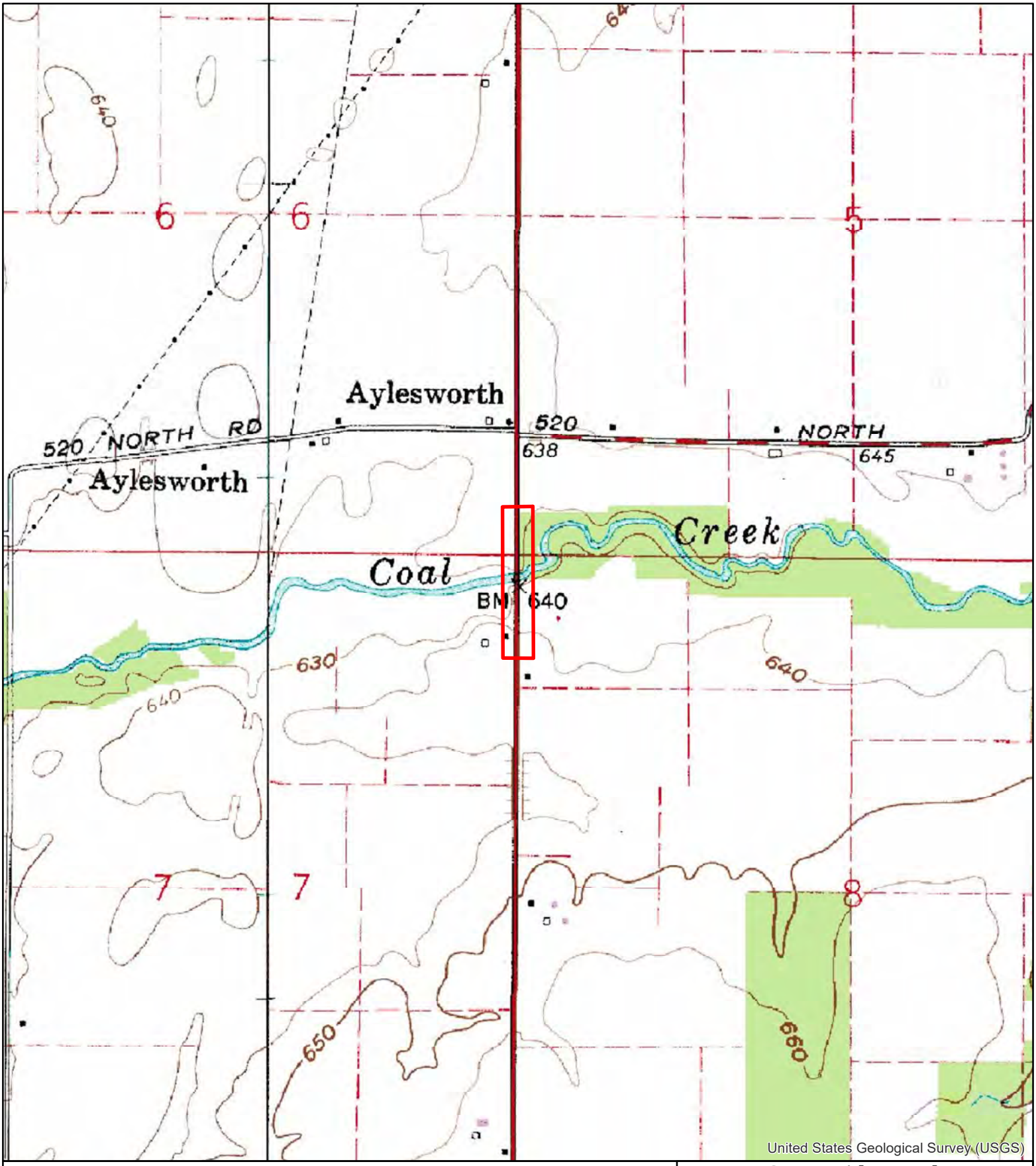
Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

U.S. 41 Bridge Replacement over Coal Creek Fountain County, Indiana Project Location

Des. 1601078

Date: 11/14/2019

PARSONS



Study Area

0 500 1,000
Feet

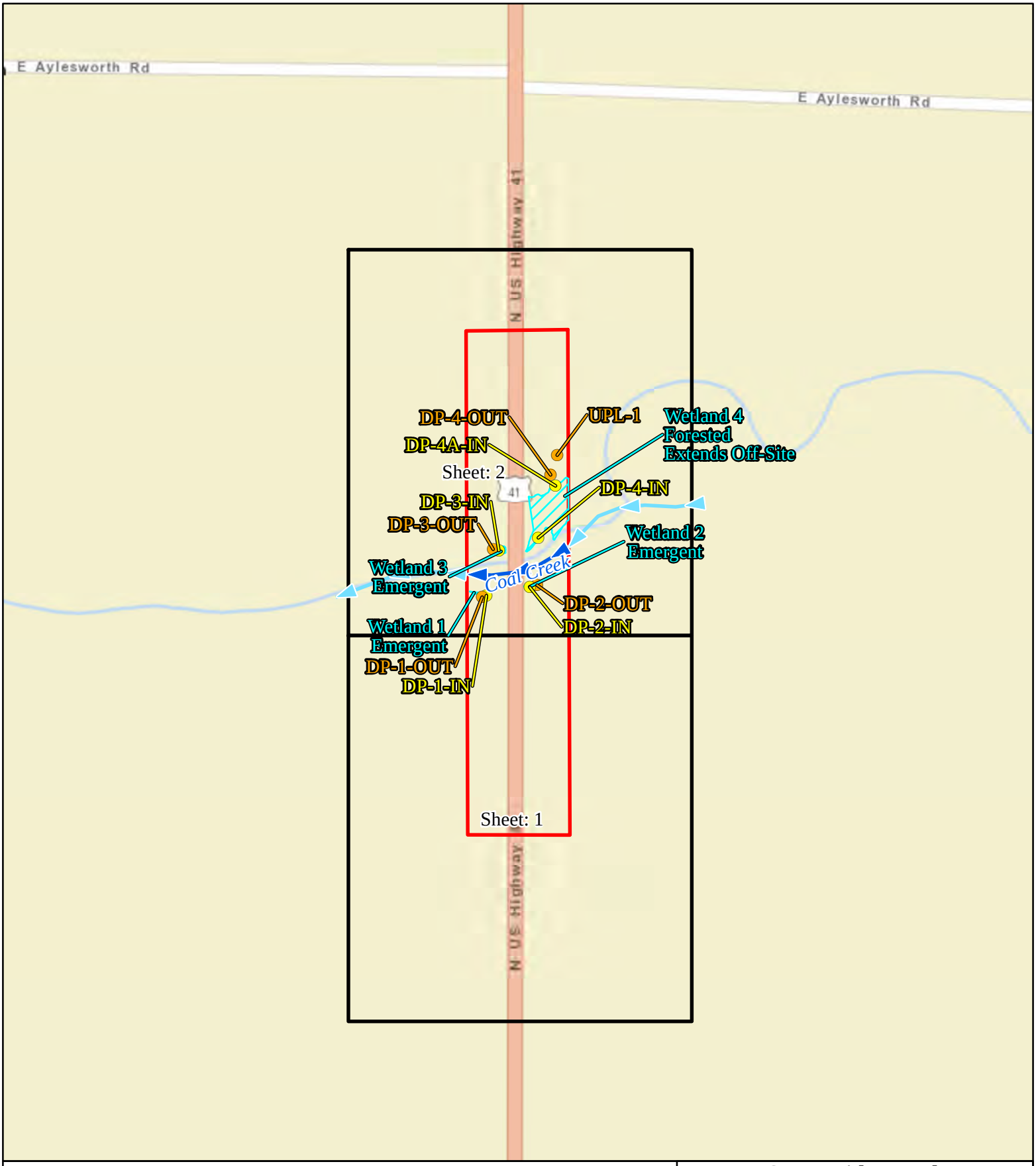
Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

U.S. 41 Bridge Replacement over Coal Creek
Fountain County, Indiana
USGS Topographic

Des. 1601078

Date: 11/14/2019

PARSONS



Study Area
Index
Waters of the U.S.
Data Point (IN)
Data Point (OUT)
Delineated Stream
Potential Stream

0 150 300
Feet

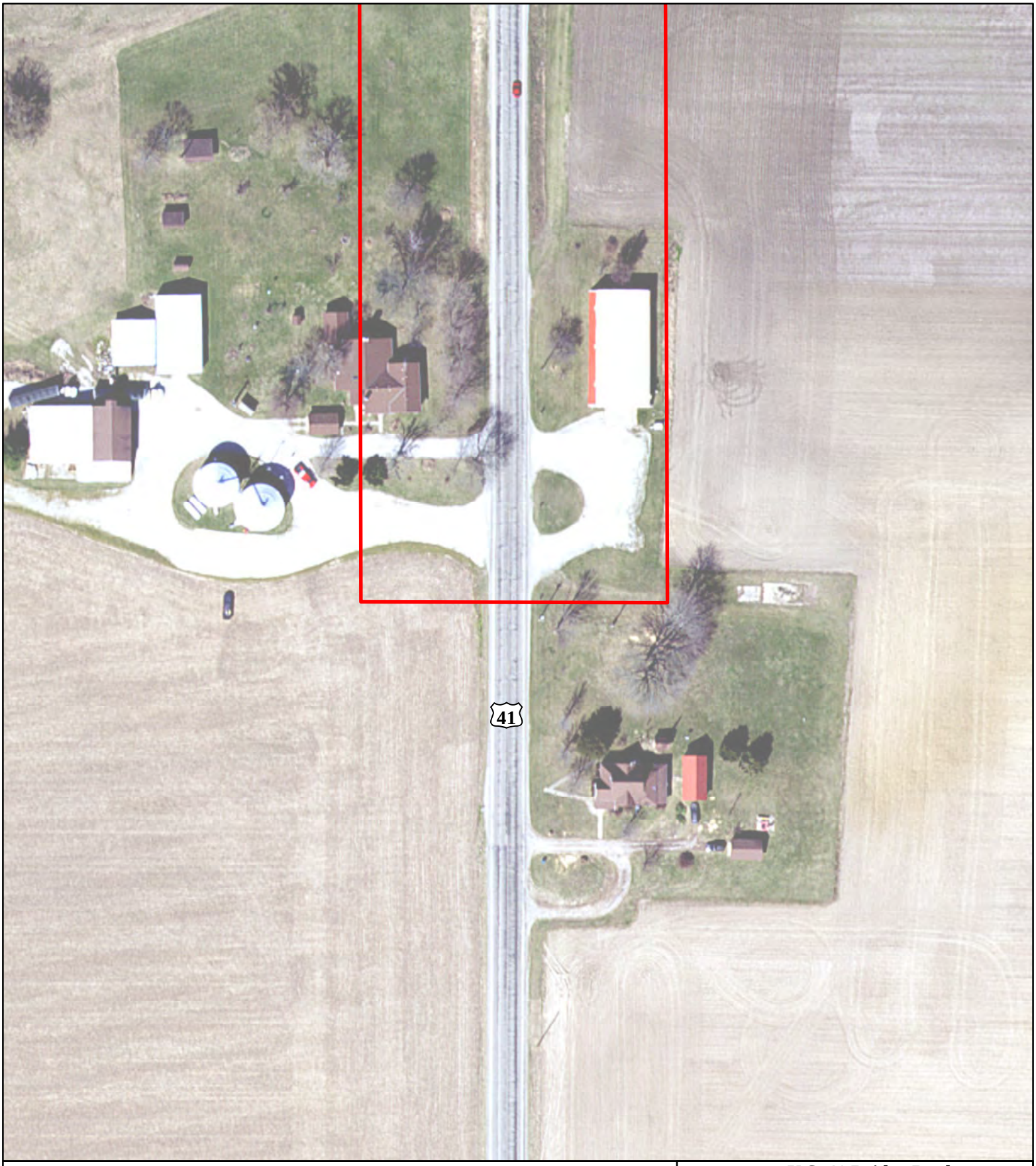
Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

U.S. 41 Bridge Replacement over Coal Creek Fountain County, Indiana Index

Des. 1601078

Date: 12/2/2019

PARSONS



Study Area
Waters of the U.S.
Delineated Stream
Potential Stream
River/Stream
Wetlands
Floodplain - DFIRM

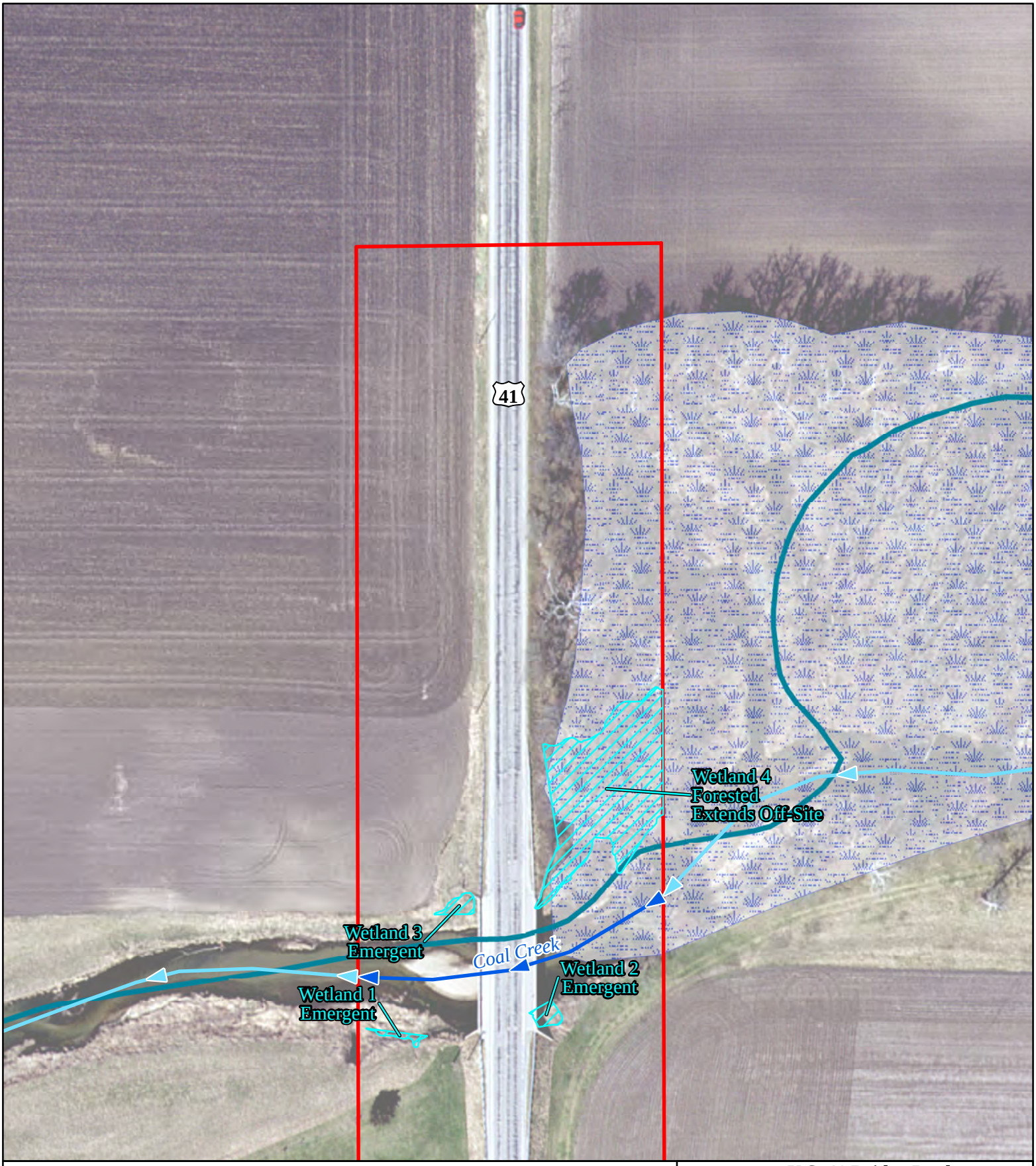
0 50 100
Feet

Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

U.S. 41 Bridge Replacement over Coal Creek
Fountain County, Indiana
GIS-Based Water Resources
Sheet: 1 of 2

Des. 1601078
Date: 12/2/2019

PARSONS



Study Area
Waters of the U.S.
Delineated Stream
Potential Stream
River/Stream
Wetlands
Floodplain - DFIRM

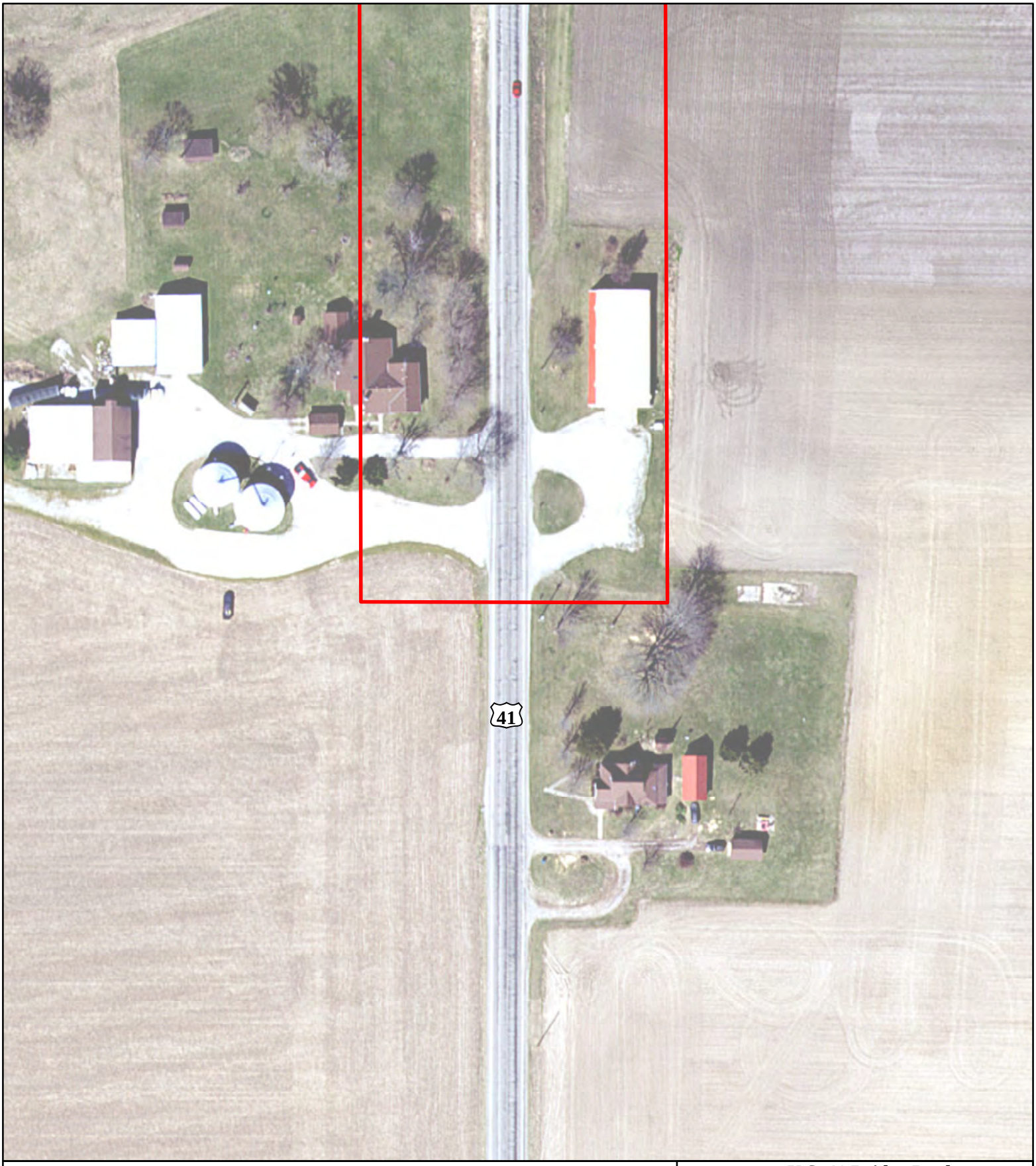
0 50 100
Feet

Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

U.S. 41 Bridge Replacement over Coal Creek
Fountain County, Indiana
GIS-Based Water Resources
Sheet: 2 of 2

Des. 1601078
Date: 12/2/2019

PARSONS



Study Area
Waters of the U.S.
Data Point (IN)
Data Point (OUT)
Delineated Stream
Potential Stream

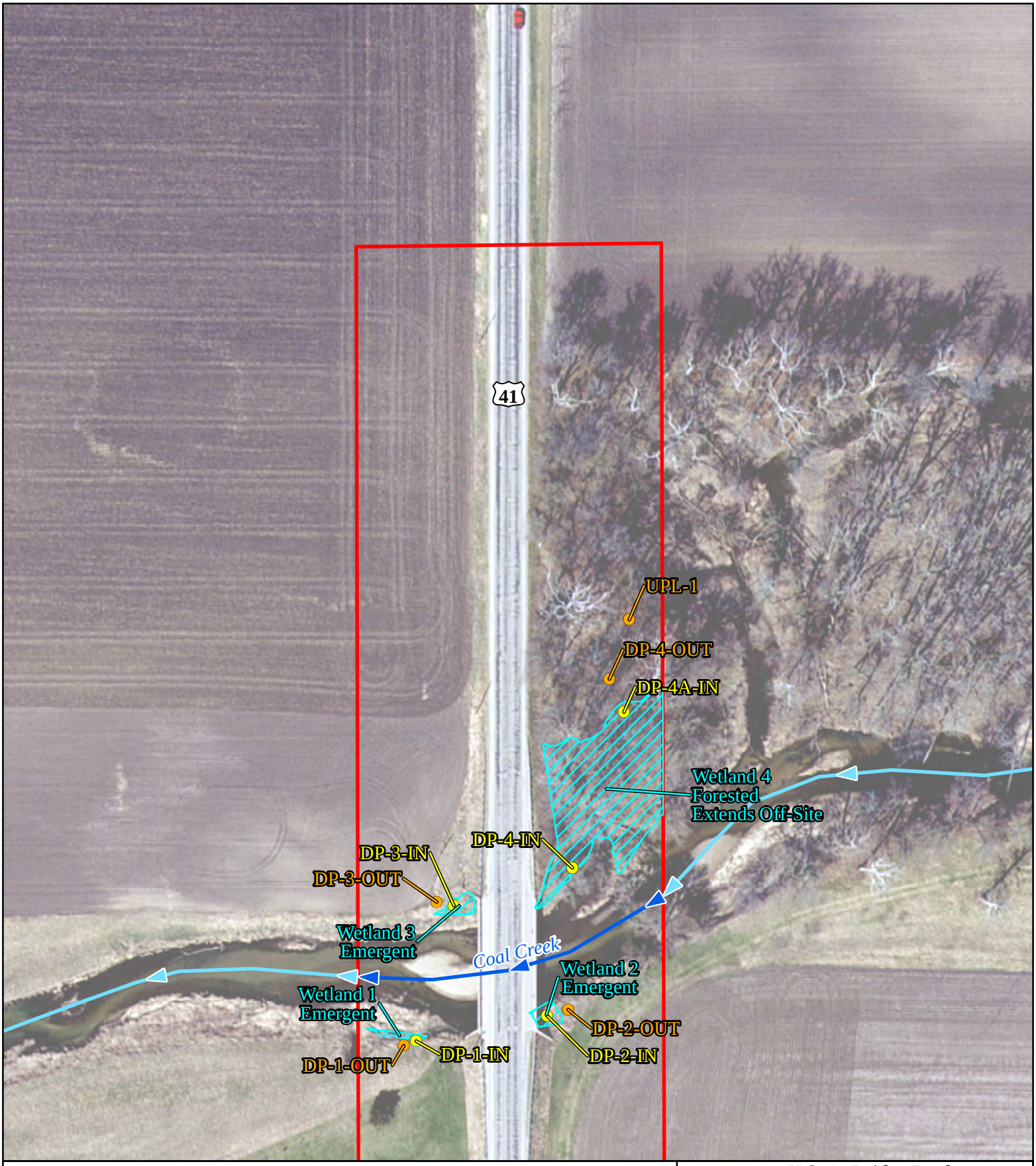
0 50 100
Feet

Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

U.S. 41 Bridge Replacement over Coal Creek
Fountain County, Indiana
Field Identified Resources
Sheet: 1 of 2

Des. 1601078
Date: 12/2/2019

PARSONS



Study Area
Waters of the U.S.
Data Point (IN)
Data Point (OUT)
Delineated Stream
Potential Stream

0 50 100
Feet

Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

U.S. 41 Bridge Replacement over Coal Creek
Fountain County, Indiana
Field Identified Resources
Sheet: 2 of 2

Des. 1601078
Date: 12/2/2019

PARSONS

Photo 1 – View of the US 41 bridge over Coal Creek facing east (10/8/2019).

Photo 2 – View of the US 41 bridge over Coal Creek facing north (10/8/2019).

Photo 3 – View of Coal Creek (upstream) facing northeast (10/8/2019).

Photo 4 – View of the US 41 bridge over Coal Creek facing west (10/8/2019).

Photo 5 – View of Coal Creek (upstream) facing northeast (10/8/2019).

Photo 6 – View of the US 41 bridge over Coal Creek facing southeast (10/8/2019).

Photo 7 – View of the west side of the US 41 bridge over Coal Creek facing south (10/8/2019).

Photo 8 – View of the east side of the US 41 bridge over Coal Creek facing south (10/8/2019).

PROJECT	DESIGNATION
1701589	1601078
CONTRACT	BRIDGE FILE
B-40580	041-23-10200

INDIANA DEPARTMENT OF TRANSPORTATION

BRIDGE PLANS

FOR SPANS OVER 20 FEET

ROUTE: US 41 AT: RP 168+22

PROJECT NO. 1701589 P.E.
1701589 R/W
1701589 CONST.

Excerpts

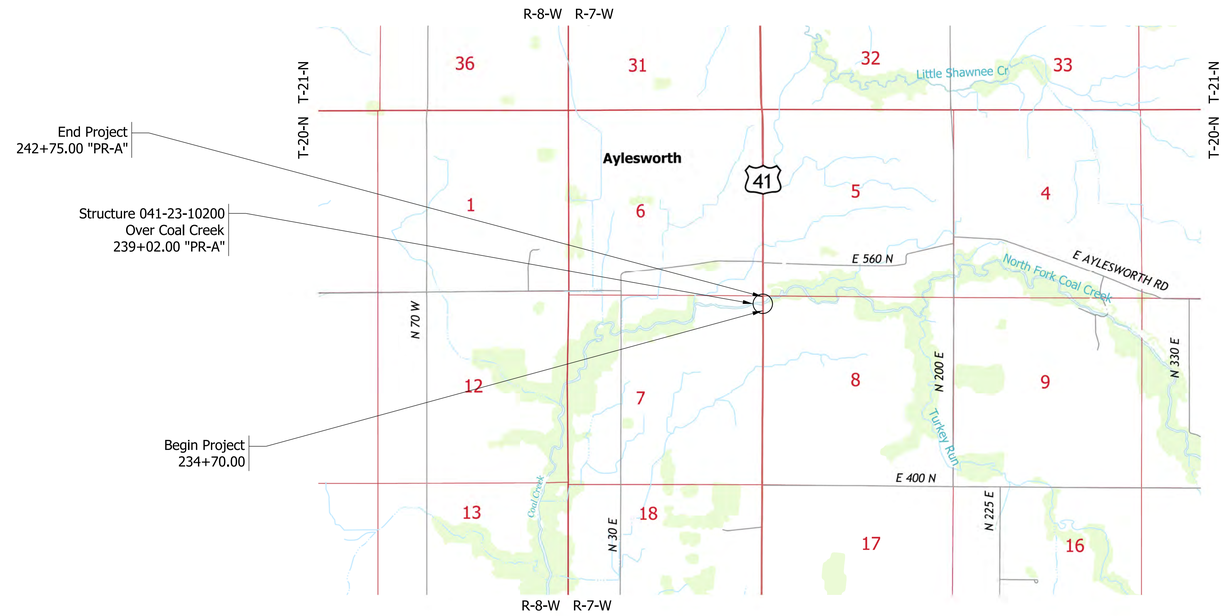
STRUCTURE INFORMATION				
STRUCTURE	TYPE	SPAN AND SKEW	OVER	STATION
041-23-10200	CONTINUOUS COMPOSITE PRESTRESSED CONCRETE BULB-TEE BEAM BRIDGE	3 Spans: 58'-0", 70'-0", 58'-0" Skew: 10° Lt.	Coal Creek	239+02.00 Line "PR-A"

Kin Project Information		
DES. NUMBER	DESCRIPTION	TYPE
1701589	SR 163 over Brouiletts Creek	Bridge

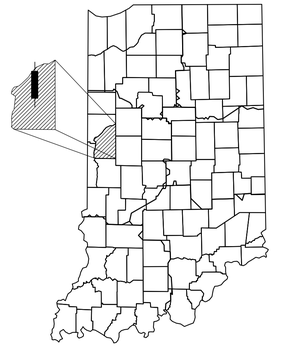
TRAFFIC DATA / US 41		
A.A.D.T.	(2021)	3,459 V.P.D.
A.A.D.T.	(2041)	3,529 V.P.D.
D.H.V	(2041)	376 V.P.H.
DIRECTIONAL DISTRIBUTION		50% N.B. 50% S.B.
TRUCKS		14.18% A.A.D.T.
		13.9% D.H.V.

DESIGN DATA / US 41	
DESIGN SPEED	55 M.P.H.
PROJECT DESIGN CRITERIA	NEW CONSTRUCTION (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION	MINOR ARTERIAL
RURAL/URBAN	RURAL
TERRAIN	LEVEL
ACCESS CONTROL	NONE

Bridge Replacement on US 41 over Coal Creek
Located Approximately 2.52 Miles South of SR 55
Between Sections 7 & 8, T-20-N, R-7-W, Shawnee Township, Fountain County, Indiana



SCALE: 1" = 2000'



PROJECT LOCATION SHOWN BY
FOUNTAIN COUNTY

LATITUDE: 40° 12' 00" N LONGITUDE: 87° 14' 35" W

BRIDGE LENGTH:	0.036	MI.
ROADWAY LENGTH:	0.008	MI.
TOTAL LENGTH:	0.044	MI.
MAX. GRADE:	-1.65	%

INDIANA DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS DATED 2020
TO BE USED WITH THESE PLANS.

PARSONS
101 W. Ohio St., Suite 2121
Indianapolis, IN 46204
Bus (317) 616-1000
Fax (317) 616-1033

IP_PWP:dms26358\US41_BR_Title Sheet.dgn
04-NOV-2019

PLANS PREPARED BY: PARSONS 317-616-1000 PHONE NUMBER

CERTIFIED BY: _____ DATE

APPROVED FOR LETTING: _____ INDIANA DEPARTMENT OF TRANSPORTATION DATE

BRIDGE FILE	
041-23-10200	
DESIGNATION	
1601078	
SURVEY BOOK	SHEETS
ELECTRONIC	1 of 15
CONTRACT	PROJECT
B-40580	1701589

UTILITIES

COMMUNICATIONS:

AT&T DISTRIBUTION
Matt Spindler
240 N. Meridian St.,
Room 1791
Indianapolis, IN 46204
(317) 265-3050

ELECTRIC:

DUKE ENERGY
Tim Umbaugh
390 N Main Street
Martinsville, IN 46151
(765) 349-4012

GENERAL NOTES

THE DESIGN CONSULTANT DOES NOT WARRANT THE ACCURACY OF THIS DATA AND ADVISES THE CONTRACTOR TO FIELD VERIFY ALL HORIZONTAL AND VERTICAL INFORMATION. WHERE PROPOSED WORK IS TO BE FITTED TO EXISTING WORK, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD, REPORT ANY ERRORS OR DISCREPANCIES TO THE ENGINEER, AND ASSUME RESPONSIBILITY FOR THE CORRECTNESS AND THE FIT OF THE PROPOSED TO THE EXISTING.

ALL UTILITIES ARE DEPICTED AS QUALITY LEVEL D UNLESS OTHERWISE NOTED.

INDEX

REVISIONS

SHEET NO.	DATE	REVISED

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: AGP DRAWN: EWM

CHECKED: MJK CHECKED: AAH

INDIANA
DEPARTMENT OF TRANSPORTATION

INDEX

HORIZONTAL SCALE	BRIDGE FILE
N/A	041-23-10200
VERTICAL SCALE	DESIGNATION
N/A	1601078
SURVEY BOOK	SHEETS
ELECTRONIC	2 of 15
CONTRACT	PROJECT
B-40580	1701589

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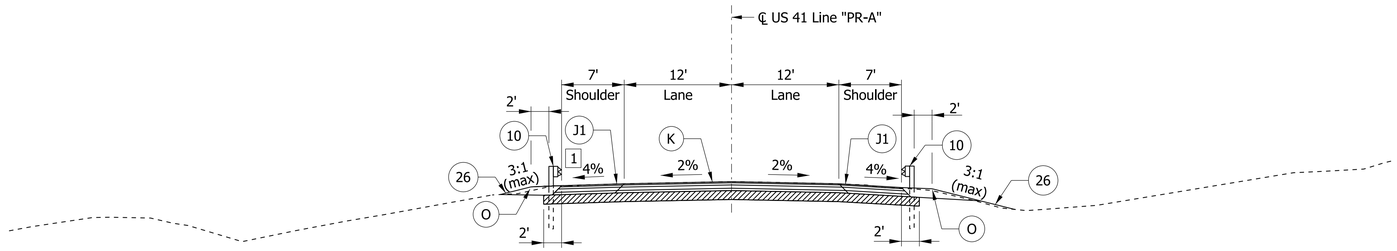
04-NOV-2019



TYPICAL SECTION

Sta. 236+75.00 to Sta. 237+84.19, Line "PR-A"
Sta. 240+19.81 to Sta. 241+30.00, Line "PR-A"

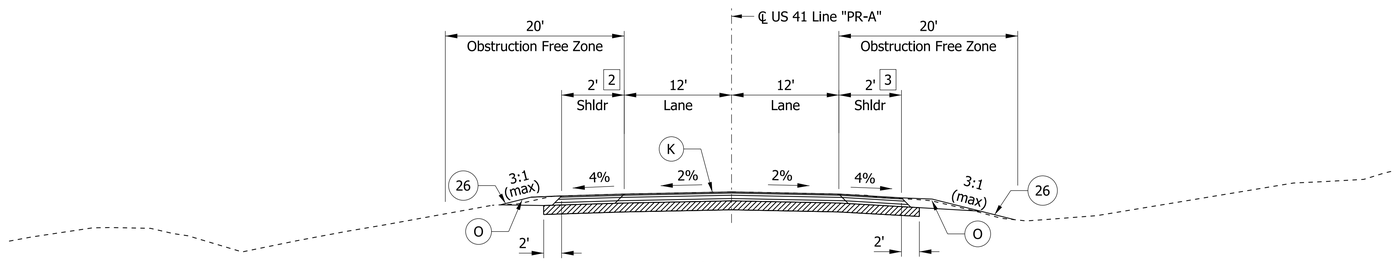
1 Begin Guardrail
Sta. 236+86.51 Lt.
Sta. 236+55.59 Rt.
End Guardrail
Sta. 241+48.41 Lt.
Sta. 241+17.49 Rt.

2 2'-0" to 7'-0"
Sta. 235+83.33 to Sta. 236+75.00
7'-0" to 2'-0"
Sta. 241+60.00 to Sta. 242+51.63

3 2'-0" to 7'-0"
Sta. 235+53.35 to Sta. 236+45.00
7'-0" to 2'-0"
Sta. 241+30.00 to Sta. 242+21.67

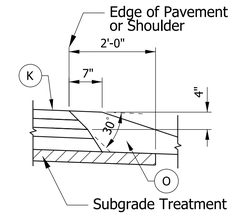
PAVING EXCEPTION

Sta. 237+84.19 to Sta. 240+19.81, Line "PR-A"



TYPICAL SECTION

Sta. 234+70.00 to Sta. 236+75.00, Line "PR-A"
Sta. 241+30.00 to Sta. 242+75.00, Line "PR-A"



SAFETY EDGE ON HMA PAVEMENT

NOTE TO REVIEWER:
PAVEMENT DESIGN HAS NOT BEEN COMPLETED AND WILL BE ADDED AT NEXT SUBMITTAL.

Notes:

1. Remove existing guardrail:
   Sta. 237+26.38 to Sta. 240+79.48 Lt.
   Sta. 237+38.81 to Sta. 240+83.54 Rt.

(K) - Full Depth HMA Pavement on Subgrade Treatment Type - TBD
(O) - Compacted Aggregate, No. 53
(10) - Guardrail, MGS W-Beam, 6'-3" Spacing
(26) - Mulched Seeding R
(J1) - Shoulder Rumble Strip
▨ - Subgrade Treatment, Type - TBD

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: WN DRAWN: SJC
CHECKED: KAP CHECKED: KAP

INDIANA
DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS

HORIZONTAL SCALE	BRIDGE FILE
1/8" = 1'	041-23-10200
VERTICAL SCALE	DESIGNATION
N/A	1601078
SURVEY BOOK	SHEETS
ELECTRONIC	3 of 15
CONTRACT	PROJECT
B-40580	1701589

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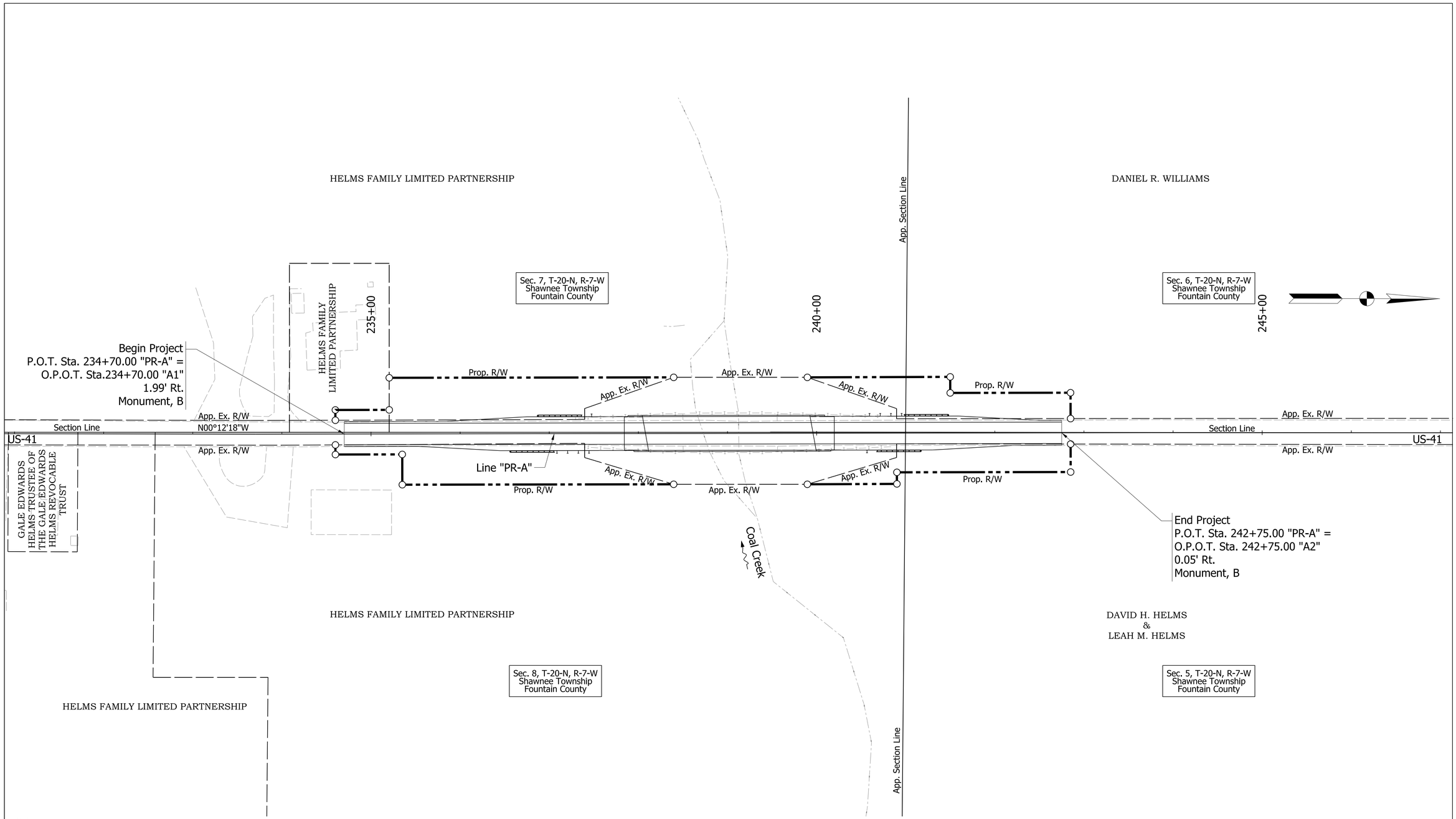
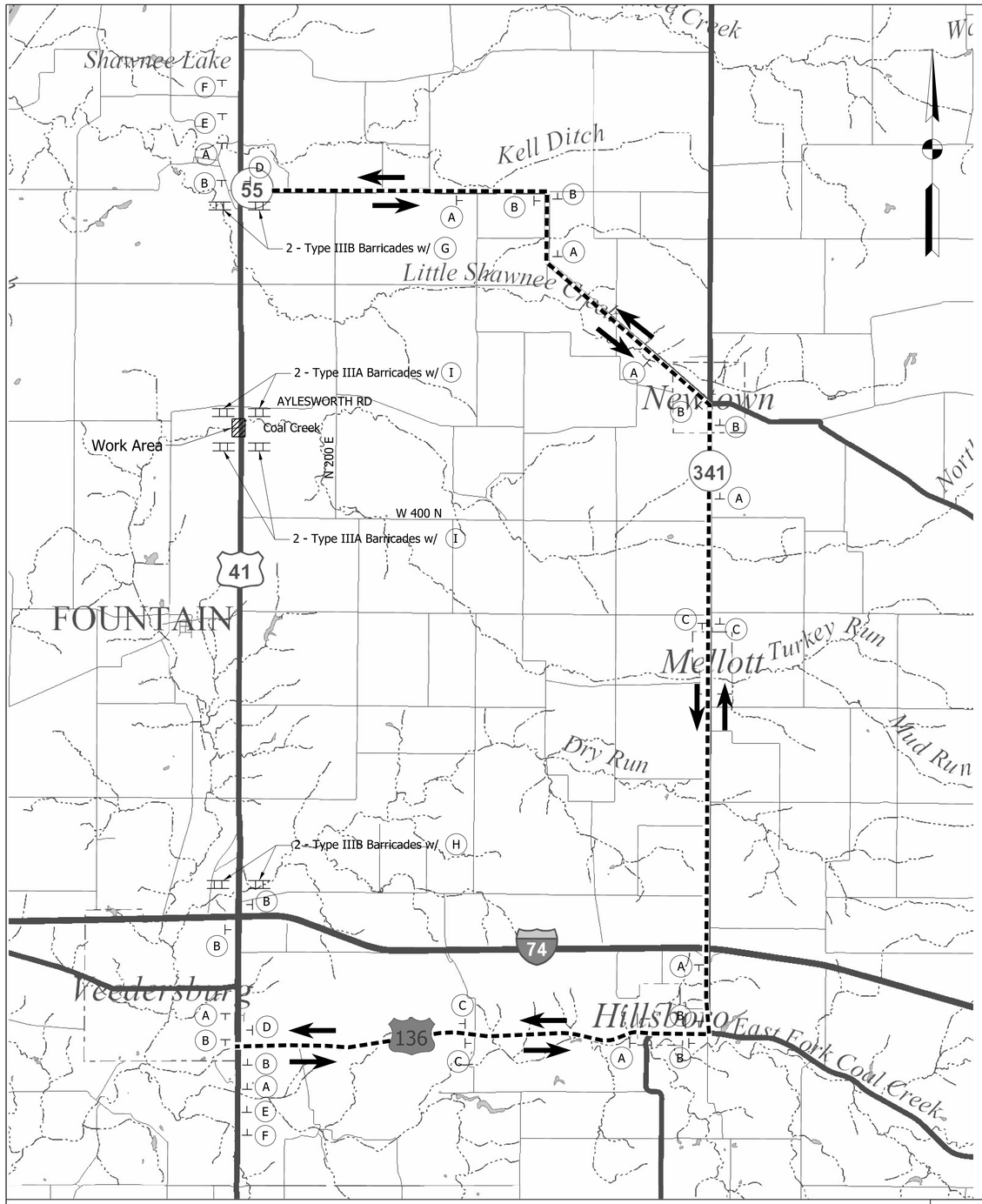
04-NOV-2019



Notes:
1. Line "PR-A" to be constructed.
2. All R/W described from Line "PR-A".

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE: 1" = 50'	BRIDGE FILE: 041-23-10200
		VERTICAL SCALE: N/A	DESIGNATION: 1601078
DESIGNED: WN DRAWN: SJC	PLAT NO. 1	SURVEY BOOK	SHEETS
CHECKED: KAP CHECKED: KAP		ELECTRONIC	4 of 15
		CONTRACT: B-40580	PROJECT: 1701589

IP_PWP:dms26366\US41_RD_Sht_Plat_01.dgn



M4-8 DETOUR
M3-1 or M3-3 SOUTH
M1-4 41
M5-1 (L) or M5-1 (R)
A

M4-8 DETOUR
M3-1 or M3-3 SOUTH
M1-4 41
M6-1 (L) or (R)
B

M4-8 DETOUR
M3-1 or M3-3 SOUTH
M1-4 41
M6-3
C

XM4-8a END DETOUR
M3-1 or M3-3 SOUTH
M1-4 41
D

DETOUR AHEAD
XW20-2 48"x48"
E

ROAD CLOSED AHEAD
XW20-3 48"x48"
F

R11-3 60"x30"
ROAD CLOSED 2.5 MILES AHEAD LOCAL TRAFFIC ONLY
XM4-10(R) or (L) 48"x18"
DETOUR
G

R11-3 60"x30"
ROAD CLOSED 5 MILES AHEAD LOCAL TRAFFIC ONLY
H

ROAD CLOSED
R11-2
I

LEGEND

- Detour Route
- Typical Sign Standard (Road Closure Sign Assembly)
- Barricade, Type III
- Detour Traffic

QUANTITY SUMMARY TABLE	
ITEM	QUANTITY
Construction Sign Type A	4 Each
Detour Route Marker Assembly	26 Each
Road Closure Sign Assembly	4 Each
Barricade Type IIIA	48 LFT
Barricade Type IIIB	48 LFT

Notes:

1. Confirming detour route marker assemblies (C) shall be placed every 3 miles along US 136 and HWY 341.
2. Detour signing to be in accordance with INDOT STD. DWG. E801-TCDT-01.

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: WN DRAWN: SJC

CHECKED: KAP CHECKED: KAP

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
DETOUR ROUTE

HORIZONTAL SCALE	BRIDGE FILE
N/A	041-23-10200
VERTICAL SCALE	DESIGNATION
N/A	1601078
SURVEY BOOK	SHEETS
ELECTRONIC	5 of 15
CONTRACT	PROJECT
B-40580	1701589

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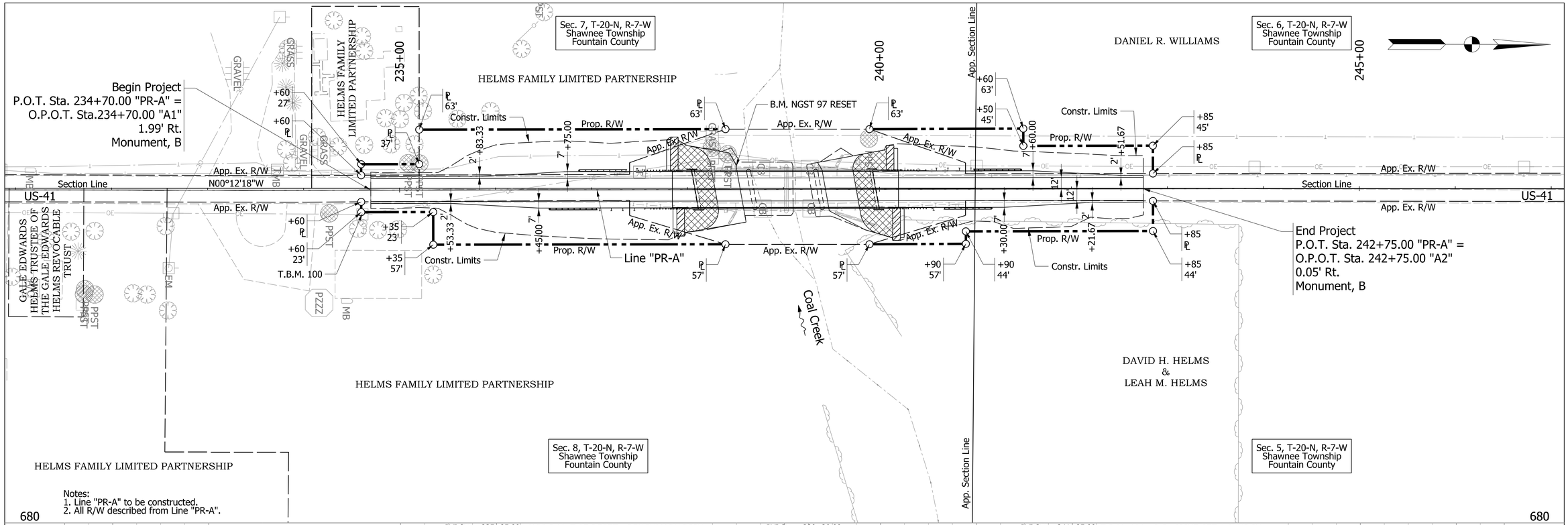

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION
DESIGNED: WN DRAWN: SJC	PLAN & PROFILE SHEET US-41 OVER COAL CREEK LINE "PR-A"
CHECKED: KAP CHECKED: KAP	

HORIZONTAL SCALE	BRIDGE FILE
1" = 50'	041-23-10200
VERTICAL SCALE	DESIGNATION
1" = 10'	1601078
SURVEY BOOK	SHEETS
ELECTRONIC	6 of 15
CONTRACT	PROJECT
B-40580	1701589

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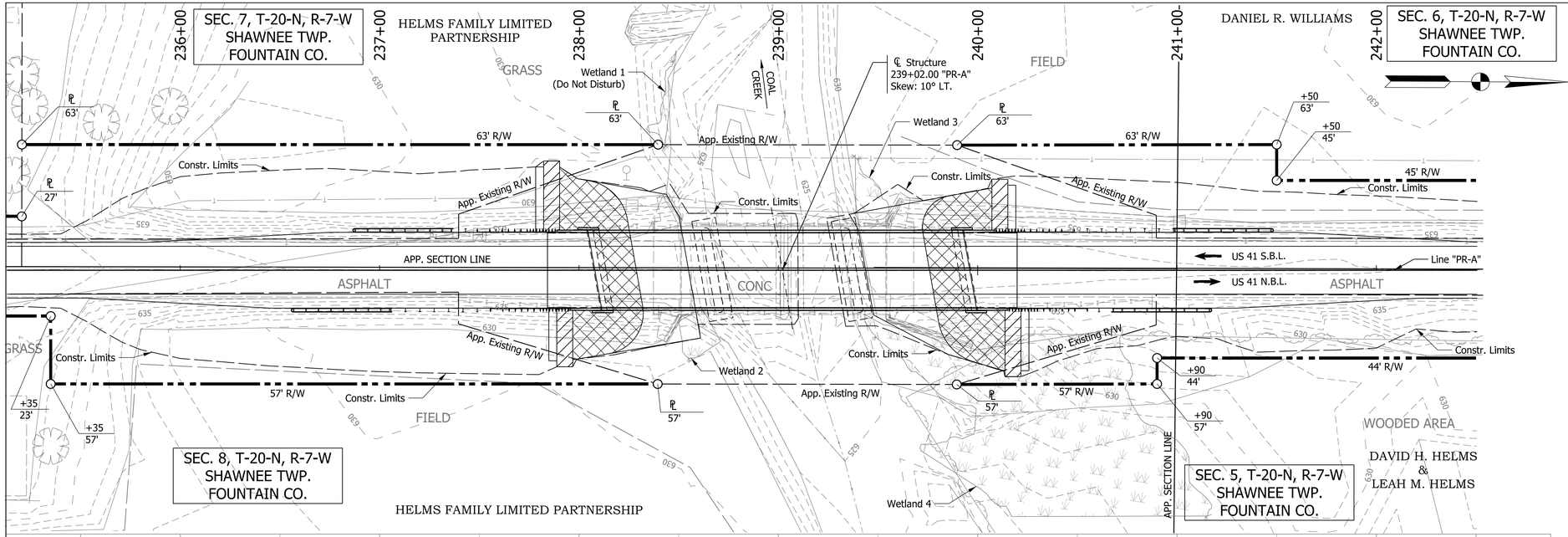


EXISTING STRUCTURE

The existing reinforced concrete arch bridge (41-0-3885A) was built in 1942 and widened in 1967, with 2 spans: 50'-0" with a 43'-0" min. clear roadway.
Existing structure to be removed.

HYDRAULIC DATA

Drainage Area	= 62.49 Sq. Mi.
Discharge (Q100)	= 6,960 Cfs.
Q100 Elev.	= 632.65 Ft. (NAVD 88)
Back Water @ Q100	= 0.88 Ft.
Velocity @ Q100	= 6.73 Ft./Sec.
Waterway Opening Required (Below Elev. 632.65)	= 1,062 Sft.
Waterway Opening Provided (Below Elev. 632.65)	= 1,126 Sft.
Min. Low Structure Elev.	= 635.58 Ft.
Q100 Scour Elevation	= 610.92 Ft.
Q500 Scour Elevation	= 607.25 Ft.

NOTES:

All Stations Described From Line "PR-A" Unless Noted Otherwise.

For Utility Contacts see Index Sheet No.2.

Cross-Hatched areas indicate limits of class I riprap Over Geotextiles. (Est. Riprap Qty. = TBD Tons) (Est. Geotextile Qty. = TBD Sys)

Hatched areas indicate limits of revetment riprap for riprap drainage turnouts. (Est. Riprap Qty. = TBD Tons) (Est. Geotextiles Qty. = TBD Sys.)

CONTINUOUS COMPOSITE
PRESTRESSED CONCRETE BULB-TEE BEAM BRIDGE
3 SPANS: 58'-0", 70'-0", 58'-0"
37'-4" CLEAR ROADWAY; SKEW: 10°00'00" LT
US 41 OVER COAL CREEK
FOUNTAIN COUNTY

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

DESIGNED: AGP DRAWN: EWM

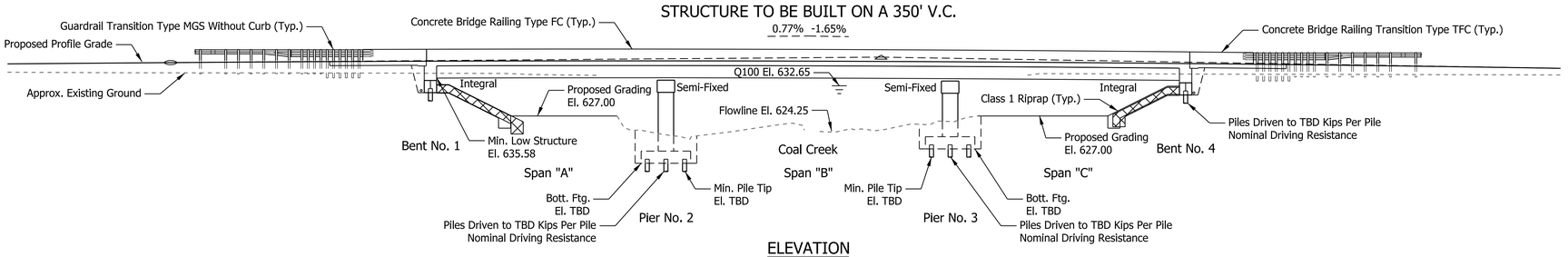
CHECKED: MJK CHECKED: AAH

INDIANA
DEPARTMENT OF TRANSPORTATION

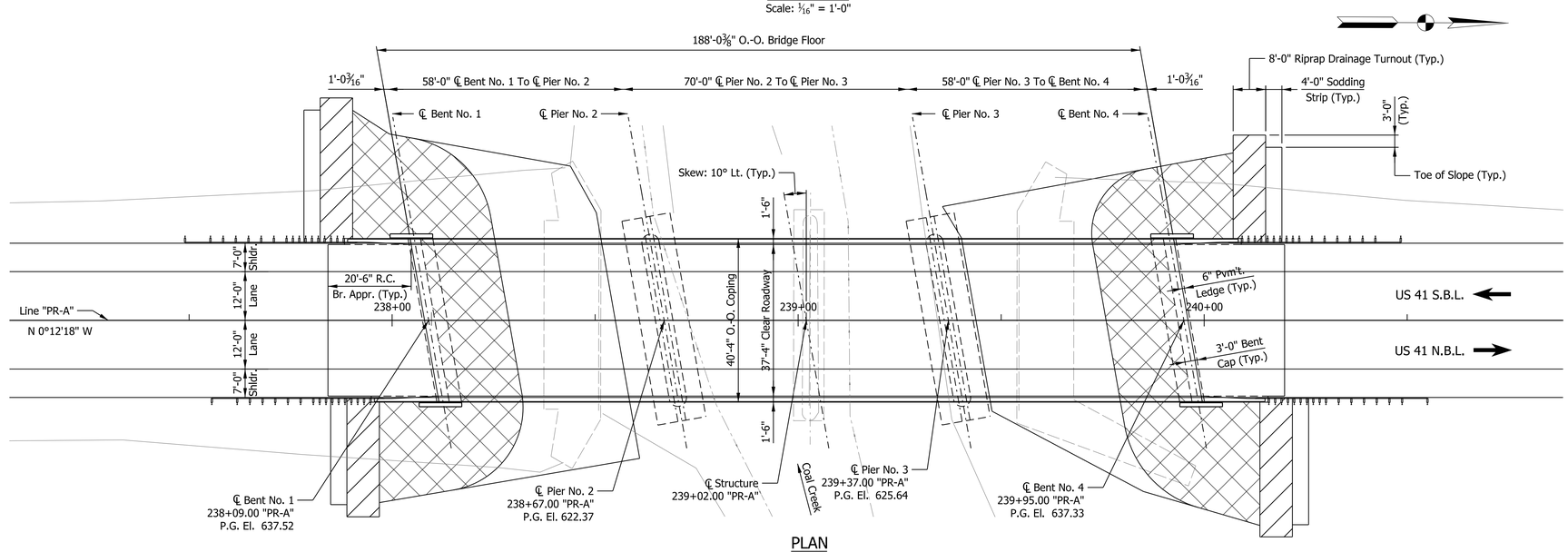
LAYOUT

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	041-23-10200
VERTICAL SCALE	DESIGNATION
1" = 10'	1601078
SURVEY BOOK	SHEETS
ELECTRONIC	7 of 15
CONTRACT	PROJECT
B-40580	1701589

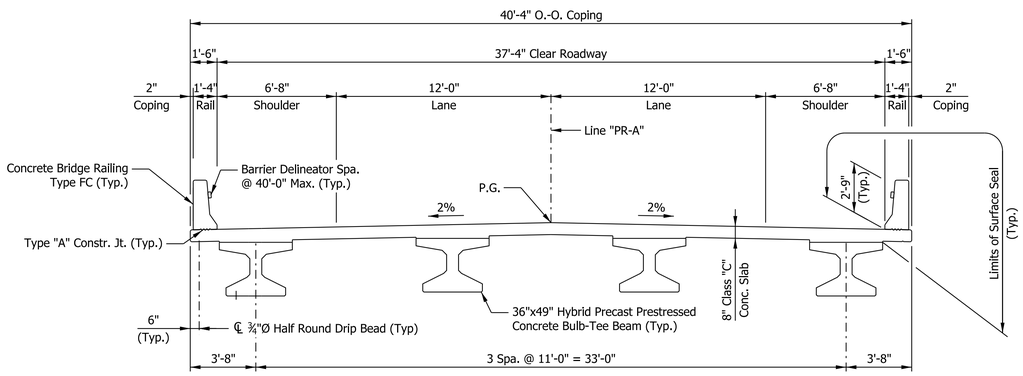
IP_PWP:dms26358\US41_BR_Layout.01.dgn
09-JAN-2020



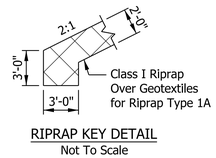
ELEVATION
Scale: 1/16" = 1'-0"



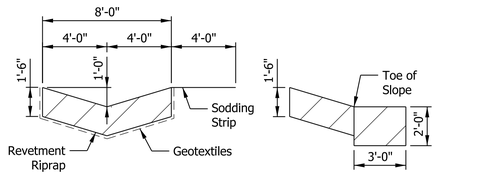
PLAN
Scale: 1/16" = 1'-0"



TYPICAL SECTION
Scale: 1/4" = 1'-0"



RIPRAP KEY DETAIL
Not To Scale



TYPICAL TANGENT SECTION
TYPICAL LONGITUDINAL SECTION

RIPRAP DRAINAGE TURNOUT DETAILS
Not To Scale

GENERAL NOTES

Reinforcing steel covering shall be 2½" in Top and 1" min.
In bottom of floor slabs, 3" in footing except bottom steel which shall be 4", and 2" in all other parts, unless noted.

DESIGN DATA

Superstructure & Substructure Designed for HL-93 Loading in accordance with AASHTO LRFD Bridge Design Specifications Eighth Edition, 2017. Designed for actual dead load plus 35 psf of future wearing surface and 15 psf for SIP Metal deck forms. Slab designed with a 7½" structural depth, and a ½" integral wearing surface.

DESIGN STRESSES

CONCRETE

Prestressed Concrete	f'c = 8,000 p.s.i.
Class "A" Concrete	f'c = 3,500 p.s.i.
Class "B" Concrete	f'c = 3,000 p.s.i.
Class "C" Concrete	f'c = 4,000 p.s.i.

REINFORCING STEEL

Grade 60 — fy = 60,000 p.s.i.

CONSTRUCTION LOADING

The exterior girder has been checked for strength, deflection, and overturning using the construction loads shown below. Cantilever overhang brackets were assumed for support of the deck overhang past the edge of the exterior girder. The finishing machine was assumed to be supported 6" outside the vertical coping form. The top overhang brackets were assumed to be located 6" past the edge of the vertical coping form. The bottom overhang brackets were assumed to be braced against the intersection of the girder bottom flange and web.

DECK FALSEWORK LOADS

Designed for 15 lb/Sft for permanent metal stay-in-place deck forms, removable deck forms, and 2-ft exterior walkway.

CONSTRUCTION LIVE LOAD

Designed for 20 lb/Sft extending 2-ft past the edge of coping and 75 lb/ft vertical force applied at a distance of 6 in. outside the face of coping over a 30-ft length of the deck centered with the finishing machine.

FINISHING MACHINE LOAD

4500 lb distributed over 10-ft along the coping.

WIND LOAD

Structure Designed for 70 mph horizontal wind loading in accordance with LRFD 3.8.1.

SEISMIC DESIGN DATA

Seismic Performance Zone	Zone TBD
Acceleration Coefficient (S_{D1})	TBD
Seismic Soil Profile Type	Site Class TBD

NOTES:

Hatching indicates limits of Revetment Riprap over Geotextiles

Cross-Hatching indicates limits of Class I Riprap.

CONTINUOUS COMPOSITE
PRESTRESSED CONCRETE BULB-TEE BEAM BRIDGE
3 SPANS: 58'-0", 70'-0", 58'-0"
37'-4" CLEAR ROADWAY; SKEW: 10°00'00" LT
US 41 OVER COAL CREEK
FOUNTAIN COUNTY

NOTE TO REVIEWER: Geotechnical Analysis has not yet been performed. Pile Types will be updated at the next submittal.

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: AGP DRAWN: EWM

CHECKED: MJK CHECKED: AAH

INDIANA
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	041-23-10200
VERTICAL SCALE	DESIGNATION
AS NOTED	1601078
SURVEY BOOK	SHEETS
ELECTRONIC	8 of 15
CONTRACT	PROJECT
B-40580	1701589

IP_PWP:dms26358\US41_BR_General Plan.01.dgn
04-NOV-2019

Appendix C

Early Coordination

PARSONS

101 West Ohio Street, Suite 2121 | Indianapolis, IN 46204
Direct: +1 317.616.1000 | **Fax:** +1 317.616.1033 | www.parsons.com

December 3, 2019

«First_Name» «Last_Name»
«Organization»
«Department»
«Street_Address»
«City_State_Zip»

Sample early coordination letter.

Re: Des. No.: 1601078
Description: US 41 over Coal Creek Bridge Replacement
2.52 miles south of SR 55
Fountain County, Indiana

Dear «Salutation» «Last_Name»,

The Indiana Department of Transportation (INDOT) proposes a bridge replacement project on US 41 over Coal Creek in Fountain County, Indiana. Specifically, this project is located in the Mellott Quadrangle, in Sections 5, 6, 7, and 8 of Township 20 North, Range 7 West (40.199725°, -87.242858°). Environmental analysis is being conducted for this project. The project is funded, in part, by the Federal Highway Administration (FHWA). This letter is part of the early coordination phase of the environmental review process. We are requesting comments from your area of expertise regarding any possible environmental effects associated with this project. Please use the above designation number and description in your reply. We will incorporate your comments into a study of the project's environmental impacts.

Purpose and Need: The need for this project is due to the deteriorating condition of the existing structure, INDOT Structure 041-23-10200. In the Abbreviated Engineering Assessment, dated June 21, 2019, numerous issues were noted, including wide transverse cracks throughout the wearing surface, substandard bridge railings, deep spalls, efflorescence, and exposed rebar on both bridge spans. Additionally, channel scour was observed on the east end of one of the piers. The purpose of this project is to provide a sufficient crossing of US 41 over Coal Creek.

Existing Conditions: The existing conditions include one 12-foot travel lane in either direction, with 7-foot shoulders. The existing structure is a two-span reinforced concrete arch bridge constructed in 1924 and reconstructed in 1967. The bridge is approximately 102 feet long and 43 feet wide. The project is located along a rural section of US 41. Land adjacent to the project area consists of maintained right-of-way, a farmstead, trees, and row crop fields. US 41 is oriented north-south and Coal Creek flows from east to west under the bridge.

Proposed Project: Work for this project would include replacing the existing structure with a three-span hybrid bulb-tee beam bridge measuring approximately 188 feet long and 40 feet wide. The profile grade would be raised less than 3 feet and riprap scour protection will be added. Guardrail will be upgraded and extended. Approximately 0.93 acre of permanent right-of-way will be acquired. The project limits extend approximately 300 feet north and south of the current structure. This section of US 41 over Coal Creek would be closed during construction and an official INDOT detour using US 136, SR 341, and SR 55 would be provided. Work for this project may occur year-round starting summer of 2021.

Environmental Concerns:
The USGS 7.5-minute quadrangle topographical map depicts Coal Creek as a perennial stream (solid blue line) (Attachments: Page 2). Parsons environmental staff conducted waters investigations to determine the presence of jurisdictional streams and wetlands. Parsons identified one likely jurisdictional stream and wetlands within

the study area, draft findings are depicted on the attached GIS-Based Water Resources map (Attachments: Page 3). A *Waters of the US* Report will be prepared. All applicable permits will be applied for and acquired before construction can begin. Parsons will continue to work in coordination with INDOT Ecology and Waterway Permitting Office (EWPO) to determine the presence and impacts to ecological resources.

This project is within the range of the federally endangered Indiana bat (*Myotis sodalis*) and federally threatened northern long-eared bat (*Myotis septentrionalis*). The Indiana Bat and Northern Long-eared Bat Range-Wide Programmatic Informal Consultation is anticipated to be applied to this project. Project information was uploaded to the USFWS's Information for Planning and Consultation (IPaC) website to identify if any species listed or proposed to be listed may be present in the area of the proposed action (Consultation Code: 03E12000-2019-SLI-0447). No species, other than bats, were listed. Less than 0.25 acre of tree trimming/clearing is anticipated.

Regarding Section 106 of the National Historic Preservation Act, the Minor Projects Programmatic Agreement (MPPA) Category B-12 is anticipated to apply to this project. Coordination with INDOT's Cultural Resources Office (CRO) will occur.

Please respond with your comments on any environmental impacts associated with this project**. Should we not receive your response within thirty (30) calendar days from the date of this letter, it will be assumed that your agency feels that there will be no adverse effects incurred as a result of the proposed project.** However, should you find that an extension to the response time is necessary, a reasonable amount may be granted upon request. The Project Manager, Melissa Patton, can be contacted at (765) 361-5697 or via email at mpatton@indot.in.gov. If you have any questions regarding this matter, please contact me at (317) 616-1021 or via e-mail at Keaton.Veldkamp@parsons.com. Thank you in advance for your input.

Sincerely,

Keaton Veldkamp
Associate Environmental Planner
Parsons

Attachments: Graphics

The following agencies received Early Coordination Letters:

Federal Highway Administration
Federal Office Building
575 N. Pennsylvania St., Room 254
Indianapolis, IN 46204

Manager, Public Hearings
Indiana Department of Transportation
100 N. Senate Avenue, Rm. 642
Indianapolis, IN 46204

INDOT Crawfordsville District
41 W. 300 N.
Crawfordsville, IN 47933

Field Supervisor
U.S. Fish and Wildlife Service
Bloomington Indiana Field Office
620 S. Walker St.
Bloomington, Indiana 47403-2121

Environmental Coordinator
Indiana Department of Natural Resources
Division of Fish and Wildlife
Room W264, IGC South
402 W. Washington St.
Indianapolis, IN 46204

State Conservationist
Natural Resources Conservation Service
6013 Lakeside Blvd.
Indianapolis, IN 46278

Regional Environmental Coordinator
Midwest Regional Office
National Park Service
601 Riverfront Dr.
Omaha, NE 68102

Indiana Geological and Water Survey
420 N. Walnut St.
Bloomington, IN 47404
(Electronic Coordination)

Indiana Department of Environmental Management
100 N. Senate Ave.
Indianapolis, IN 46204
(Electronic Coordination)

U.S. Army Corps of Engineers Louisville District
ATTN: CELRL-RDN
P.O. Box 59
Louisville, KY 40201

Field Environmental Officer
Chicago Regional Office
US Department of Housing & Urban Development
Metcalf Fed. Bldg., Room 2401
77 W. Jackson Blvd.
Chicago, IL 60604

Fountain County Highway Department
701 S. Mill St.
Veedersburg, IN 47987

Superintendent
Attica Consolidated School Corporation
205 E. Sycamore St.
Attica, IN 47918

Fountain County Commissioners
301 4th St.
Covington, IN 47932

THIS IS NOT A PERMIT

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

DNR #: ER-22046 **Request Received:** December 3, 2019

Requestor:
Parsons
Keaton Veldkamp
101 West Ohio Street, Suite 2121
Indianapolis, IN 46204

Project: US 41 bridge (#041-23-10200) replacement over Coal Creek, 2.52 miles south of SR 55; Des #1601078

County/Site info: Fountain

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: This proposal will require the formal approval for construction in a floodway under the Flood Control Act, IC 14-28-1. Please submit a copy of this letter with the permit application.

Natural Heritage Database: The Natural Heritage Program's data have been checked.
To date, no plant or animal species listed as state or federally threatened, endangered, or rare have been reported to occur in the project vicinity.

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) Stream Crossing Design:
For purposes of maintaining fish and wildlife passage through a crossing structure, the Environmental Unit recommends bridges rather than culverts and bottomless culverts rather than box or pipe culverts. Wide culverts are better than narrow culverts, and culverts with shorter through lengths are better than culverts with longer through lengths. If box or pipe culverts are used, the bottoms should be buried a minimum of 6" (or 20% of the culvert height/pipe diameter, whichever is greater up to a maximum of 2') below the stream bed elevation to allow a natural streambed to form within or under the crossing structure. Crossings should: span the entire channel width (a minimum of 1.2 times the OHWM width); maintain the natural stream substrate within the structure; have a minimum openness ratio (height x width / length) of 0.25; and have stream depth, channel width, and water velocities during low-flow conditions that are approximate to those in the natural stream channel. Banklines should be restored within box and pipe structures to allow for wildlife passage above the ordinary highwater mark.

The new, replacement, or rehabbed structure, and any bank stabilization under the structure, should not create conditions that are less favorable for wildlife passage under the structure compared to the current conditions. The Division of Fish and Wildlife would like to emphasize the importance of wildlife passage issues and transportation infrastructure projects. The following is a good place to start in terms of resources to consider in the design of stream crossing structures:
http://www.fs.fed.us/wildlifecrossings/library/.

The following are recommended resources for designing and constructing stream crossings for maintenance of instream habitat and aquatic organism passage: https://www.fs.fed.us/biology/nsaec/fishxing/aop_pdfs.html; https://www.fhwa.dot.gov/engineering/hydraulics/pubs/11008/hif11008.pdf.

2) Bank Stabilization:
Some form of bank and/or streambed stabilization is almost always needed with the construction, repair, replacement, or modification of a stream channel or crossing structure. For streambank stabilization and erosion control, regrading to a stable slope (2:1 or shallower) and establishing native vegetation along the banks are typically the most effective techniques. A variety of methods to accomplish this include: planting plugs, whips, container stock, seeding, and live stakes. In addition to vegetation establishment, some additional level of bioengineered bank stabilization may be needed under certain circumstances (inability to regrade to a stable slope, flow velocities that exceed the limits of vegetation alone, etc.). Combining vegetation with any of the following bank stabilization methods can provide additional bank protection while not compromising benefits to fish, wildlife, and botanical resources: geotextiles (erosion control blankets and/or turf reinforcement mats 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), vegetated geogrids or soil lifts, fiber rolls, glacial stone, or riprap. Information about bioengineering techniques can be found at http://www.in.gov/legislative/iac/20120404-IR-312120154NRA.xml.pdf. Additionally, the following is a link to a USDA/NRCS document that outlines many different bioengineering techniques for streambank stabilization: http://directives.sc.egov.usda.gov/17553.wba.

Riprap or other hard bank stabilization materials should be used only at the toe of the sideslopes up to the ordinary high water mark (OHWM) with the exception of areas directly under bridges for instance. The banks above the OHWM should be restored, stabilized, and revegetated using geotextiles and a mixture of grasses, sedges, wildflowers, shrubs, and trees native to Central Indiana and specifically for stream bank/floodway stabilization purposes as soon as possible upon completion. For streambed stabilization or scour protection, riprap or other stabilization materials should not be placed in the active stream channel above the existing streambed or flowline elevation. This is to prevent obstructions to the movement of aquatic organisms upstream and downstream.

3) Riparian Habitat:
We recommend a mitigation plan be developed (and submitted with the permit application) for any unavoidable habitat impacts that will occur. 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) or by using the 1:1 replacement ratio based on area depending on the type of habitat impacted (individual canopy tree removal in an urban streetscape or park-like environment versus removal of habitat supporting a tree canopy, woody understory, and herbaceous layer). Impacts under 0.10 acres may still involve the replacement of large diameter trees but typically do not require any additional mitigation or additional plantings beyond seeding and stabilizing disturbed areas. There are exceptions for high quality habitat sites however.

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 that are not currently mowed and maintained with a mixture of grasses, sedges, and wildflowers native to Central Indiana and specifically for stream bank/floodway stabilization purposes as soon as possible upon completion; turf-type grasses (including low-endophyte, friendly endophyte, and endophyte free tall fescue but excluding all other varieties of tall fescue) may be used in currently mowed areas only.
2. Minimize and contain within the project limits inchannel disturbance and the clearing of trees and brush.
3. Do not work in the waterway from April 1 through June 30 without the prior written approval of the Division of Fish and Wildlife.
4. 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.
5. Do not construct any temporary runarounds, access bridges, causeways, cofferdams, diversions, or pumparounds.
6. Use minimum average 6 inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids.
7. Do not use broken concrete as riprap.
8. Underlay the riprap with a bedding layer of well graded aggregate or a geotextile to prevent piping of soil underneath the riprap.
9. Minimize the movement of resuspended bottom sediment from the immediate project area.
10. Do not deposit or allow demolition/construction materials or debris to fall or otherwise enter the waterway.
11. 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.
12. 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: January 7, 2020

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

Organization and Project Information

Project ID:
Des. ID: 1601078
Project Title: US 41 over Coal Creek Bridge Replacement
Name of Organization: Parsons
Requested by: Eric Jagger

Environmental Assessment Report

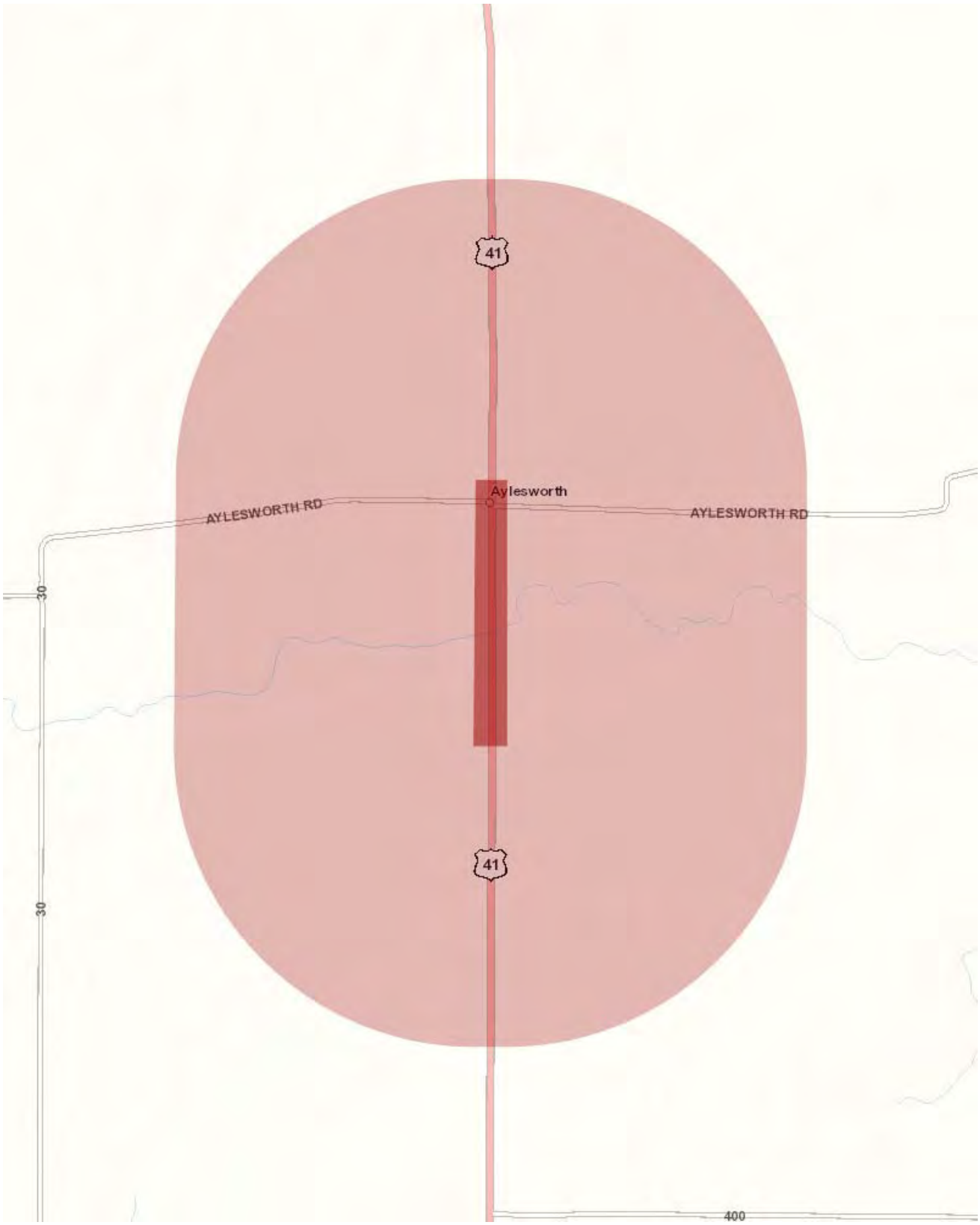
1. Geological Hazards:
    - High liquefaction potential
2. Mineral Resources:
    - Bedrock Resource: High Potential
    - Sand and Gravel Resource: High Potential
3. Active or abandoned mineral resources extraction sites:
    - None documented in the area

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

DISCLAIMER:

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: December 04, 2019



Metadata:

- https://maps.indiana.edu/metadata/Geology/Seismic_Earthquake_Liquefaction_Potential.html
- https://maps.indiana.edu/metadata/Geology/Industrial_Minerals_Sand_Gravel_Resources.html
- https://maps.indiana.edu/metadata/Geology/Bedrock_Geology.html

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

100 N Senate Avenue
Indianapolis , IN 46204

Parsons
Eric Jagger
101 W Ohio St
Suite 2121
Indianapolis , IN 46204

Date

To Engineers and Consultants Proposing Roadway Construction Projects:

RE: The Indiana Department of Transportation (INDOT) proposes a bridge replacement project on US 41 over Coal Creek in Fountain County, Indiana. Specifically, this project is located in the Mellott Quadrangle, in Sections 5, 6, 7, and 8 of Township 20 North, Range 7 West (40.199725°, - 87.242858°). The need for this project is due to the deteriorating condition of the existing structure, INDOT Structure 041-23-10200. In the Abbreviated Engineering Assessment, dated June 21, 2019, numerous issues were noted, including wide transverse cracks throughout the wearing surface, substandard bridge railings, deep spalls, efflorescence, and exposed rebar on both bridge spans. Additionally, channel scour was observed on the east end of one of the piers. The purpose of this project is to provide a sufficient crossing of US 41 over Coal Creek.

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 (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, Kosciosko, 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:
    - IC 14-26-2 Lakes Preservation Act 312 IAC 11
    - IC 14-26-5 Lowering of Ten Acre Lakes Act No related code
    - IC 14-28-1 Flood Control Act 310 IAC 6-1

- IC 14-29-1 Navigable Waterways Act 312 IAC 6
- IC 14-29-3 Sand and Gravel Permits Act 312 IAC 6
- 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
   - 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 is it 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 Indiana Department of Transportation (INDOT) proposes a bridge replacement project on US 41 over Coal Creek in Fountain County, Indiana. Specifically, this project is located in the Mellott Quadrangle, in Sections 5, 6, 7, and 8 of Township 20 North, Range 7 West (40.199725°, - 87.242858°). The need for this project is due to the deteriorating condition of the existing structure, INDOT Structure 041-23-10200. In the Abbreviated Engineering Assessment, dated June 21, 2019, numerous issues were noted, including wide transverse cracks throughout the wearing surface, substandard bridge railings, deep spalls, efflorescence, and exposed rebar on both bridge spans. Additionally, channel scour was observed on the east end of one of the piers. The purpose of this project is to provide a sufficient crossing of US 41 over Coal Creek.

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: 1/21/2020

Signature of the INDOT
Project Engineer or Other Responsible Agent Kenneth B. McMullen

Date: 1/21/2020

Signature of the
For Hire Consultant 

Eric Jagger

USDA
United States Department of Agriculture

Natural Resources Conservation Service
Indiana State Office
6013 Lakeside Boulevard
Indianapolis, IN 46278
317-290-3200

December 13, 2019

Keaton Veldkamp
Parsons
101 West Ohio Street, Suite 2121
Indianapolis, Indiana 46204

Dear Mr. Veldkamp:

The proposed project to replace the bridge that carries US 41 over Coal Creek in Fountain County, Indiana (Des. No 1601078), as referred to in your letter received December 3, 2019, will cause a conversion of prime farmland.

The attached packet of information is for your use competing Parts VI and VII of the AD-1006. After completion, the federal funding agency needs to forward one copy to NRCS for our records.

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

Sincerely,

JERRY RAYNOR
State Conservationist

Enclosures

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	Date Of Land Evaluation Request 12/3/2019
Name of Project US 41 over Coal Creek_DES1601078	Federal Agency Involved FHWA
Proposed Land Use Transportation	County and State Fountain Co, Indiana
PART II *(To be completed by NRCS)*	Date Request Received By NRCS 12/3/2019 / Person Completing Form: JRA

Does the site contain Prime, Unique, Statewide or Local Important Farmland? *(If no, the FPPA does not apply - do not complete additional parts of this form)*	YES ☑ NO ☐	Acres Irrigated	Average Farm Size: 427 ac
Major Crop(s): Corn	Farmable Land In Govt. Jurisdiction Acres: 238173% 93	Amount of Farmland As Defined in FPPA Acres: 21792[+]% 86	
Name of Land Evaluation System Used: LESA	Name of State or Local Site Assessment System	Date Land Evaluation Returned by NRCS: 12/13/2019	

PART III *(To be completed by Federal Agency)*	Alternative Site Rating: Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	0.93			
B. Total Acres To Be Converted Indirectly	0			
C. Total Acres In Site	0.93			
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	0.66			
B. Total Acres Statewide Important or Local Important Farmland	0.00			
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	<0.001			
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	69			
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)	77			

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)*	**Maximum Points**	Site A	Site B	Site C	Site D
1. Area In Non-urban Use	(15)	15			
2. Perimeter In Non-urban Use	(10)	10			
3. Percent Of Site Being Farmed	(20)	16			
4. Protection Provided By State and Local Government	(20)	0			
5. Distance From Urban Built-up Area	(15)	15			
6. Distance To Urban Support Services	(15)	0			
7. Size Of Present Farm Unit Compared To Average	(10)	6			
8. Creation Of Non-farmable Farmland	(10)	0			
9. Availability Of Farm Support Services	(5)	5			
10. On-Farm Investments	(20)	12			
11. Effects Of Conversion On Farm Support Services	(10)	0			
12. Compatibility With Existing Agricultural Use	(10)	0			
TOTAL SITE ASSESSMENT POINTS	160	79	0	0	0
PART VII ***(To be completed by Federal Agency)***					
Relative Value Of Farmland *(From Part V)*	100	77	0	0	0
Total Site Assessment *(From Part VI above or local site assessment)*	160	79	0	0	0
TOTAL POINTS ***(Total of above 2 lines)***	260	156	0	0	0

Site Selected:	Date Of Selection	Was A Local Site Assessment Used? YES ☐ NO ☐

Reason For Selection:

The preferred alternative meets the purpose and need of the proposed project.

Name of Federal agency representative completing this form:	Date:

(See Instructions on reverse side) **Form AD-1006 (03-02)**

Jagger, Eric

From: McWilliams, Robin <robin_mcwilliams@fws.gov>
Sent: Wednesday, December 4, 2019 5:13 PM
To: Jagger, Eric
Subject: Re: [EXTERNAL] US 41 over Coal Creek Bridge Replacement Des 1601078

Dear Mr. Jagger,

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 (l6 U.S.C. 661 et. seq.) and are consistent with the intent of the National Environmental Policy Act of l969, the Endangered Species Act of l973, 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 should follow the new Indiana bat/northern long-eared bat programmatic consultation process, if applicable (*i.e*. a federal transportation nexus is established). We will review that information once it is received.

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 recoordinate 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-bottomed 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 rip rap 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

On Tue, Dec 3, 2019 at 3:39 PM Jagger, Eric <Eric.Jagger@parsons.com> wrote:

US 41 over Coal Creek Bridge Replacement
Fountain County
Des. No. 1601078

The Early Coordination Letter attached is being sent to you on behalf of the Indiana Department of Transportation.

If you have any questions or concerns, please feel free to contact me.

Thank you,

Eric Jagger

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: November 11, 2019
Consultation Code: 03E12000-2019-SLI-0447
Event Code: 03E12000-2020-E-01027
Project Name: Des. No. 1601078 US 41 Bridge Replacement over Coal Creek

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/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: 03E12000-2019-SLI-0447

Event Code: 03E12000-2020-E-01027

Project Name: Des. No. 1601078 US 41 Bridge Replacement over Coal Creek

Project Type: BRIDGE CONSTRUCTION / MAINTENANCE

Project Description: The Indiana Department of Transportation (INDOT) proposes a bridge replacement project on US 41 over Coal Creek in Fountain County, Indiana. US 41 is oriented north-south with Coal Creek flowing east to west under the bridge. The need for this project is due to the deteriorating condition of the existing structure. In the Abbreviated Engineering Assessment, dated June 21, 2019, numerous widespread issues were noted, including wide transverse cracks throughout the wearing surface, substandard bridge railings, deep spalls, efflorescence, and exposed rebar on both bridge spans. Additionally, channel scour was observed on the east end of one of the piers. The purpose of this project is to maintain a safe crossing of US 41 over Coal Creek.

The existing conditions include one 12-foot travel lane in either direction, with 7-foot shoulders. The existing structure is a two-span reinforced concrete arch bridge constructed in 1924 and reconstructed in 1967. The bridge is approximately 102 feet long and 46 feet wide. The project is located along a rural section of US 41. Land adjacent to the project area consists of grassy right-of-way, a farmstead, trees, and row-crop fields.

Work for this project would include replacing the existing structure with a three-span hybrid bulb-tee beam bridge measuring approximately 188 feet long and 40.3 feet wide. The profile grade would be raised by less than 3 feet and riprap scour protection will be added. Guardrail will be upgraded and extended. Approximately 0.93 acre of permanent right-of-way will be acquired. The project limits extend approximately 300 feet north and south of the current structure. This section of US 41 over Coal Creek would be closed during construction and an official INDOT detour using US 136, SR 341, and SR 55 would be provided.

Work for this project may occur year-round starting summer of 2021. Suitable summer habitat exists within the project area northeast of the bridge along Coal Creek. Less than 0.25 acre of tree clearing/trimming is anticipated. All tree clearing/trimming will take place within 100 feet of paved surfaces. The primary tree species observed within the project area were red mulberry (Morus rubra), ash-leaf maple (Acer negundo),

common hackberry (Celtis occidentalis), Osage-orange (Maclura pomifera), honey locust (Gleditsia triacanthos), American elm (Ulmus americana), American sycamore (Platanus occidentalis), and green ash (Fraxinus pennsylvanica). Tree trimming/clearing will be limited to the inactive season. The contractor will likely use temporary lighting during construction. No permanent lighting exists within the project area.

A review of the USFWS GIS database for Indiana bat and northern long-eared bat roosting, hibernacula and capture sites was conducted for Des. 1601078 on May 16, 2018. There are no documented sites within a half mile of the project area. The US 41 bridge over Coal Creek was inspected for bats on October 29, 2018 and no evidence of bats was reported. Bird nests (swallows) are present; therefore, the conditions of the Migratory Bird Treaty Act (MBTA) will be applied to this project.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/40.19972375649491N87.2429640874221W

Counties: Fountain, IN

Endangered Species Act Species

There is a total of 2 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 Fisheries[1], 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.

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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
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/1/office/31440.pdf	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: ▪ 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 ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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: December 05, 2019
Consultation Code: 03E12000-2019-I-0447
Event Code: 03E12000-2020-E-01594
Project Name: Des. No. 1601078 US 41 Bridge Replacement over Coal Creek

Subject: Concurrence verification letter for the 'Des. No. 1601078 US 41 Bridge Replacement over Coal Creek' 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. No. 1601078 US 41 Bridge Replacement over Coal Creek** (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.

Project Description

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

Name

Des. No. 1601078 US 41 Bridge Replacement over Coal Creek

Description

The Indiana Department of Transportation (INDOT) proposes a bridge replacement project on US 41 over Coal Creek in Fountain County, Indiana. US 41 is oriented north-south with Coal Creek flowing east to west under the bridge. The need for this project is due to the deteriorating condition of the existing structure. In the Abbreviated Engineering Assessment, dated June 21, 2019, numerous widespread issues were noted, including wide transverse cracks throughout the wearing surface, substandard bridge railings, deep spalls, efflorescence, and exposed rebar on both bridge spans. Additionally, channel scour was observed on the east end of one of the piers. The purpose of this project is to maintain a safe crossing of US 41 over Coal Creek.

The existing conditions include one 12-foot travel lane in either direction, with 7-foot shoulders. The existing structure is a two-span reinforced concrete arch bridge constructed in 1924 and reconstructed in 1967. The bridge is approximately 102 feet long and 46 feet wide. The project is located along a rural section of US 41. Land adjacent to the project area consists of grassy right-of-way, a farmstead, trees, and row-crop fields.

Work for this project would include replacing the existing structure with a three-span hybrid bulb-tee beam bridge measuring approximately 188 feet long and 40.3 feet wide. The profile grade would be raised by less than 3 feet and riprap scour protection will be added. Guardrail will be upgraded and extended. Approximately 0.93 acre of permanent right-of-way will be acquired. The project limits extend approximately 300 feet north and south of the current structure. This section of US 41 over Coal Creek would be closed during construction and an official INDOT detour using US 136, SR 341, and SR 55 would be provided.

Work for this project may occur year-round starting summer of 2021. Suitable summer habitat exists within the project area northeast of the bridge along Coal Creek. Less than 0.25 acre of tree clearing/trimming is anticipated. All tree clearing/trimming will take place within 100 feet of paved surfaces. The primary tree species observed within the project area were red mulberry (Morus rubra), ash-leaf maple (Acer negundo), common hackberry (Celtis occidentalis), Osage-orange (Maclura pomifera), honey locust (Gleditsia triacanthos), American elm (Ulmus americana), American sycamore (Platanus occidentalis), and green ash (Fraxinus pennsylvanica). Tree trimming/clearing will be limited to the inactive season. The contractor will likely use temporary lighting during construction. No permanent lighting exists within the project area.

A review of the USFWS GIS database for Indiana bat and northern long-eared bat roosting, hibernacula and capture sites was conducted for Des. 1601078 on May 16, 2018. There are no documented sites within a half mile of the project area. The US 41 bridge over Coal Creek was inspected for bats on October 29, 2018 and no evidence of bats was reported. Bird nests (swallows) are present; therefore, the conditions of the Migratory Bird Treaty Act (MBTA) will be applied to this project.

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?

   No

8. 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

9. 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

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

    No

11. 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

12. 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

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

    Yes

14. 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

15. 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

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

    Yes

17. 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

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

    Yes

19. Will the tree removal alter *any* **documented** Indiana bat or NLEB roosts and/or alter any surrounding summer habitat **within** 0.25 mile of a documented roost?

    No

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)

    [1] See the Service's current summer survey guidance for our current definitions of suitable 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?

    [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

    - *InspectionReport2018.pdf https://ecos.fws.gov/ipac/project/PECWJ7I6CNFG5AHPXNLTWFSUGI/projectDocuments/15202527*

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?

    Yes

32. Is there *any* suitable habitat **within** 1,000 feet of the location(s) where **temporary** lighting will be used?

    Yes

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

    No

34. 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?

    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 are not associated with habitat removal, tree removal/ trimming, bridge and/or structure activities, temporary or permanent lighting, or use of percussives consistent with a No Effect determination in this key?

    Automatically answered
    Yes, other project activities are limited to actions that DO NOT cause any additional stressors to the bat species as described in the BA/BO

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. **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

43. **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

44. **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

45. **Lighting AMM 1**
    Will *all* **temporary** lighting be directed away from suitable habitat during the active season?

    Yes

Project Questionnaire

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

   N/A

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

   N/A

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.

   0.25

4. Please describe the proposed bridge work:

   Work for this project would include replacing the existing structure with a three-span hybrid bulb-tee beam bridge measuring approximately 188 feet long and 40.3 feet wide. The profile grade would be raised by less than 3 feet and riprap scour protection will be added. Guardrail will be upgraded and extended. Approximately 0.93 acre of permanent right-of-way will be acquired. The project limits extend approximately 300 feet north and south of the current structure. This section of US 41 over Coal Creek would be closed during construction and an official INDOT detour using US 136, SR 341, and SR 55 would be provided.

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

   Year-round 2021

6. Please enter the date of the bridge assessment:

   October 29, 2018 (will be a firm commitment to re-inspect within 2 years of construction).

Avoidance And Minimization Measures (AMMs)

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

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.

LIGHTING AMM 1

Direct temporary lighting away from suitable habitat during the active season.

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.

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 02, 2019. 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.

Excerpts

Bridge Inspection Report

041-23-03885 A
US 41
over
COAL CREEK

Inspection Date: 10/29/2018

Inspected By: Matthew Ference

Inspection Type(s): Routine

PHOTO 9

Description (10-29-2018) str# 041-23-03885 A, Arch underside in span B pic 5 looking southwest

PHOTO 10

Description (10-29-2018) str# 041-23-03885 A, Bird Nests

N - No Paint

Not Rated

Comments:

☐ Asset Type Has Changed

Scour POA?

Comment:

Pier 2 rests on 15 untreated timber piles that are 20' long driven to 25 tons of minimum bearing capacity (Matt Ference, 10-29-2018).

Pier 2 Top of Footing Elev. = 621.0'
Pier 2 Bottom of Footing Elev. = 618.0'

Endangered Species

Bats: seen or heard under structure? * N

Birds/swallows/nests seen? Empty nests present? * Y

** If yes, add one photo to the dropdown field*

BRIDGE Culvert Geometry

Barrel Length

Height

Width

Concrete Slopewall: N

Comments:

Terminal Joints: N

Comments:

PARSONS

Appendix D

Section 106 of the National Historic Preservation Act

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

Date: 02/13/2020

Project Designation Number: 1601078

Route Number: US 41

Project Description: Bridge Replacement Project, 2.52 miles south of SR 55

The Indiana Department of Transportation (INDOT) proposes a bridge replacement project on US 41 over Coal Creek, located 2.52 miles south of SR 55, in Fountain County, Indiana.

The need for this project is due to the deteriorating condition of the existing structure, INDOT Structure 041-23-03885A. In the Abbreviated Engineering Assessment for Des. No. 1601078, dated June 21, 2019, numerous widespread issues were noted, including wide transverse cracks throughout the wearing surface, substandard bridge railings, deep spalls, efflorescence, and exposed rebar on both bridge spans. Additionally, channel scour was observed on the east end of one of the piers. The purpose of this project is to provide a sufficient crossing of US 41 over Coal Creek.

The existing conditions include one (1) 12-foot travel lane in either direction, with seven (7)-foot shoulders. The existing structure is a two (2)-span reinforced concrete arch bridge constructed in 1924 and reconstructed in 1967. The bridge is approximately 102 feet long and 45.8 feet wide. The project is located along a rural section of US 41 and land use in the project area is primarily rural/agricultural.

Work for this project would include replacing the existing structure with a three (3)-span hybrid bulb-tee beam bridge measuring approximately 188 feet long and 40 feet wide. The profile grade would be raised less than three (3) feet and riprap scour protection will be added. Guardrail will be upgraded and extended. Approximately 0.93 acre of permanent right-of-way will be acquired. The project limits extend approximately 300 feet north and south of the current structure.

Feature crossed (if applicable): Coal Creek

Township: Shawnee Township

City/County: Fountain 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

Other (please specify): SHAARD GIS; SHAARD; online street-view imagery; Indiana Historic Building, Bridges, and Cemeteries Map (IHBBCM); Bridge Inspection Application System (BIAS); County GIS data (accessed via https://beacon.schneidercorp.com/); 2010 INDOT-sponsored *Historic*

Bridge Inventory (HBI); project information provided by ASC Group, Inc. dated 12/18/2019 and on file at INDOT-CRO;

Crider, Andrea
2020 Phase Ia Archaeological Records Check and Reconnaissance Survey for the Proposed US 41 over Coal Creek Bridge Replacement 2.52 Miles South of SR 55 (Des. No. 1601078) in Shawnee Township, Fountain County, Indiana. ASC Group, Indianapolis.

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 Fountain County. No listed resources are present within 0.25 mile of the project area, a distance that would serve as an adequate area of potential effects (APE) given the scope of the project and the surrounding terrain.

The *Fountain County Interim Report* (1988; Shawnee Township) of the Indiana Historic Sites and Structures Inventory (IHSSI) was also consulted. The National Register & IHSSI information is available in the Indiana State Historic Architectural and Archaeological Research Database (SHAARD) and the Indiana Historic Buildings, Bridges, and Cemeteries Map (IHBBCM). The SHAARD information was checked against the Interim Report hard copy maps. No IHSSI sites are recorded within 0.25 mile of the project.

The project area is in a rural setting with agricultural fields dominating the surrounding area though some scattered residential housing and agricultural-related outbuildings are present. Along the north side of the creek, east of the bridge, a small wooded area is present. The wooded area, consisting of mature and volunteer deciduous trees, completely blocks the viewshed of one (1) property northeast of the project area dating from the mid-to-late twentieth century. Two (2) other above-ground properties are within 0.25 mile of the project area; both are south of the project area. One (1) of the properties dates to the early-nineteenth century, according to county GIS records, and the other dates to the early-twentieth century. However, both properties have experienced the construction of multiple large additions and appear to have replacement windows and doors. The early nineteenth century house appears to have had a new brick-facing applied to the building since the brick from the additions and the original house all match, and the brick-facing lacks a header course. The early-twentieth century house has replacement siding as well. For the purposes of this determination, neither property appears to possess the necessary material integrity to be considered eligible to the National Register.

The subject bridge (#041-23-03885A; NBI #15280) is a two-span concrete arch bridge built in 1924 and reconstructed in 1967. The bridge length is 102 feet and the deck width, out-to-out, is 45.8 feet. The INDOT Historic Bridge Inventory determined that this bridge is not eligible for listing in the National Register (Volume 2, Section 2, page 448).

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:

Andrea Crider/January 27, 2020

Summary of Archaeology Investigation Results:

An archaeological records check and Phase Ia reconnaissance survey of the project area were conducted by ASC Group (Crider 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 1.4 acre survey area was examined through a combination of systematic shovel probing (n=16) in a residential lawn and a wooded area, pedestrian survey in agricultural fields, and visual inspection of disturbed areas. Augering within alluvial soils revealed no potential for intact buried archaeological sites. No archaeological sites were identified and no further work 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 ASC Group (February 13, 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):

B-4. Installation of new safety appurtenances, including but not limited to, guardrails, barriers, glare screens, and crash attenuators, under the following conditions ***[BOTH Condition A, which pertains to Archaeological Resources, and Condition B, which pertains to Above-Ground Resources, must be satisfied]***:

Condition A (Archaeological Resources)
One of the two conditions listed below must be met *(EITHER Condition i or Condition ii must be satisfied)*:

i. Work occurs in previously disturbed soils; *OR*
ii. Work occurs in undisturbed soils and 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 archaeological reports prepared for the project 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.

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.

B-12. Replacement, widening, or raising the elevation of the superstructure on existing bridges, and bridge replacement projects (when both the superstructure and substructure are removed), under the following conditions ***[BOTH Condition A, which pertains to Archaeological Resources, and Condition B, which pertains to Above-Ground Resources, must be satisfied]***:

Condition A (Archaeological Resources)
One of the two conditions listed below must be met *(EITHER Condition i or Condition ii must be satisfied)*:

i. Work occurs in previously disturbed soils; *OR*
ii. Work occurs in undisturbed soils and 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 archaeological reports prepared for the project 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)
The conditions listed below must be met ***(BOTH Condition i and Condition ii must be satisfied)***

i. Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource; *AND*
ii. With regard to the subject bridge, at least one of the conditions listed below is satisfied *(AT LEAST one of the conditions a, b or c, must be fulfilled)*:
    a. The latest Historic Bridge Inventory identified the bridge as non-historic (see https://www.in.gov/indot/2531.htm);
    b. The bridge was built after 1945, and is a common type as defined in Section V. of the *Program Comment Issued for Streamlining Section 106 Review for Actions Affecting Post-1945 Concrete and Steel Bridges* issued by the Advisory Council on Historic Preservation on November 2, 2012 for so long as that Program Comment remains in effect AND the considerations listed in Section IV of the Program Comment do not apply;
    c. The bridge is part of the Interstate system and was determined not eligible for the National Register under the Section 106 Exemption Regarding Effects to the Interstate Highway System adopted by the Advisory Council on Historic Preservation on March 10, 2005, for so long as that Exemption remains in effect.

If no, please explain:

Additional comments: If any archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, construction in the immediate area 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): Kelyn Alexander and Matt Coon

****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.*

PARSONS

Appendix E

Red Flag Investigation and 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: June 15, 2018

To: Site Assessment and Management
Environmental Services
Indiana Department of Transportation
100 North Senate Avenue, Room N642
Indianapolis, Indiana 46204

From: Hannah Marriott
Parsons
101 West Ohio Street, Suite 2121
Indianapolis, Indiana 46204
Hannah.Marriott@parsons.com

Re: RED FLAG INVESTIGATION
DES 1601078, State Project
Bridge Replacement
US 41 (041-23-03885 A)
Fountain County, Indiana

PROJECT DESCRIPTION

Brief Description of Project: The Indiana Department of Transportation (INDOT) proposes a bridge replacement project on US 41 over Coal Creek in Fountain County, Indiana. Specifically, the project is located in the Mellott Quadrangle, in Sections 5, 6, 7, and 8 in Township 20 North, Range 7 West. The project is located along a rural section of US 41. Land adjacent to the bridge consists of grassy right-of-way, woodlands, and row-crop fields. Work for this project includes a full bridge replacement.

Bridge and/or Culvert Project: Yes ☒ No ☐ Structure # 041-23-03885 A
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 Unknown at this time
Type of excavation: Unknown at this time
Maintenance of traffic: Unknown at this time
Work in waterway: Yes ☐ No ☐ Above ordinary high water mark: Yes ☐ No ☐ Potential
State Project: ☒ LPA: ☐
Any other factors influencing recommendations:

INFRASTRUCTURE TABLE AND SUMMARY

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

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

Explanation: No infrastructure resources were identified within the 0.5 mile search radius.

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	**1**	Canal Routes - Historic	**N/A**
Karst Springs	**N/A**	NWI - Wetlands	**6**
Canal Structures – Historic	**N/A**	Lakes	**N/A**
NPS NRI Listed	**N/A**	Floodplain - DFIRM	**N/A**
NWI-Lines	**4**	Cave Entrance Density	**N/A**
IDEM 303d Listed Streams and Lakes (Impaired)	**1**	Sinkhole Areas	**N/A**
Rivers and Streams	**1**	Sinking-Stream Basins	**N/A**

NWI – Lines: Four (4) NWI-lines are located within the 0.5 mile search radius. One (1) NWI-line is located within the project area. A Waters of the US Report will be prepared and coordination with INDOT Environmental Services (ES) Ecology and Waterway Permitting Office (EWPO) will occur.

IDEM 303d Listed Streams and Lakes: One (1) 303d listed stream segment is located within the 0.5 mile search radius. Coal Creek is located within the project area. Coal Creek is listed for *E. coli*. Workers who are working in or near the water with *E. coli* should take care to wear appropriate personal protective equipment (PPE), observe proper hygiene procedures, including regular hand washing, and limit exposure.

Rivers and Streams: One (1) stream segment is located within the 0.5 mile search radius. Coal Creek is located within the project area. A Waters of the US Report will be prepared and coordination with INDOT ES EWPO will occur.

NWI – Wetlands: Six wetlands are located within the 0.5 mile search radius. One wetland is located within the project area. A Waters of the US Report will be prepared and coordination with INDOT ES EWPO will occur.

URBANIZED AREA BOUNDARY SUMMARY

Explanation: The project area is not located in an Urbanized Area Boundary.

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

Explanation: No mining and mineral exploration resources were identified within the 0.5 mile search radius.

HAZARDOUS MATERIAL CONCERNS TABLE AND SUMMARY

Hazardous Material Concerns Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Superfund	**N/A**	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 concerns were identified within the 0.5 mile search radius.

ECOLOGICAL INFORMATION SUMMARY

The Fountain County 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 ES did not indicate the presence of endangered species. Coordination with the United States Fish and Wildlife Service (USFWS) and the Indiana Department of Natural Resources (IDNR) will occur.

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The October 18, 2017, inspection report for Bridge No. 041-23-03885A states that no evidence of bats was seen or heard under the bridge. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to "Using the USFWS's Information for Planning and Consultation (IPaC) System for Listed Bat Consultation for INDOT Projects".

An inquiry using the USFWS's IPaC website did not indicate the presence of the federally endangered species, Rusty Patched Bumble Bee, 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: N/A

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 EWPO:

- One NWI line is located within the project area.
- One 303d impaired stream, associated with Coal Creek, is located within the project area. Coal Creek is listed for E. coli. Workers who are working in or near the water with E. coli should take care to wear appropriate personal protective equipment (PPE), observe proper hygiene procedures, including regular hand washing, and limit exposure.
- One stream, associated with Coal Creek, is located within the project area.
- One wetland is located within the 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. The range-wide programmatic consultation for the Indiana Bat and Norther Long-eared Bat will be completed according to "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

October 16, 2018

INDOT Environmental Services concurrence: Nicole Fohey-Breting (Signature)

Prepared by:

Hannah Marriott
Associate Environmental Planner
Parsons

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: N/A

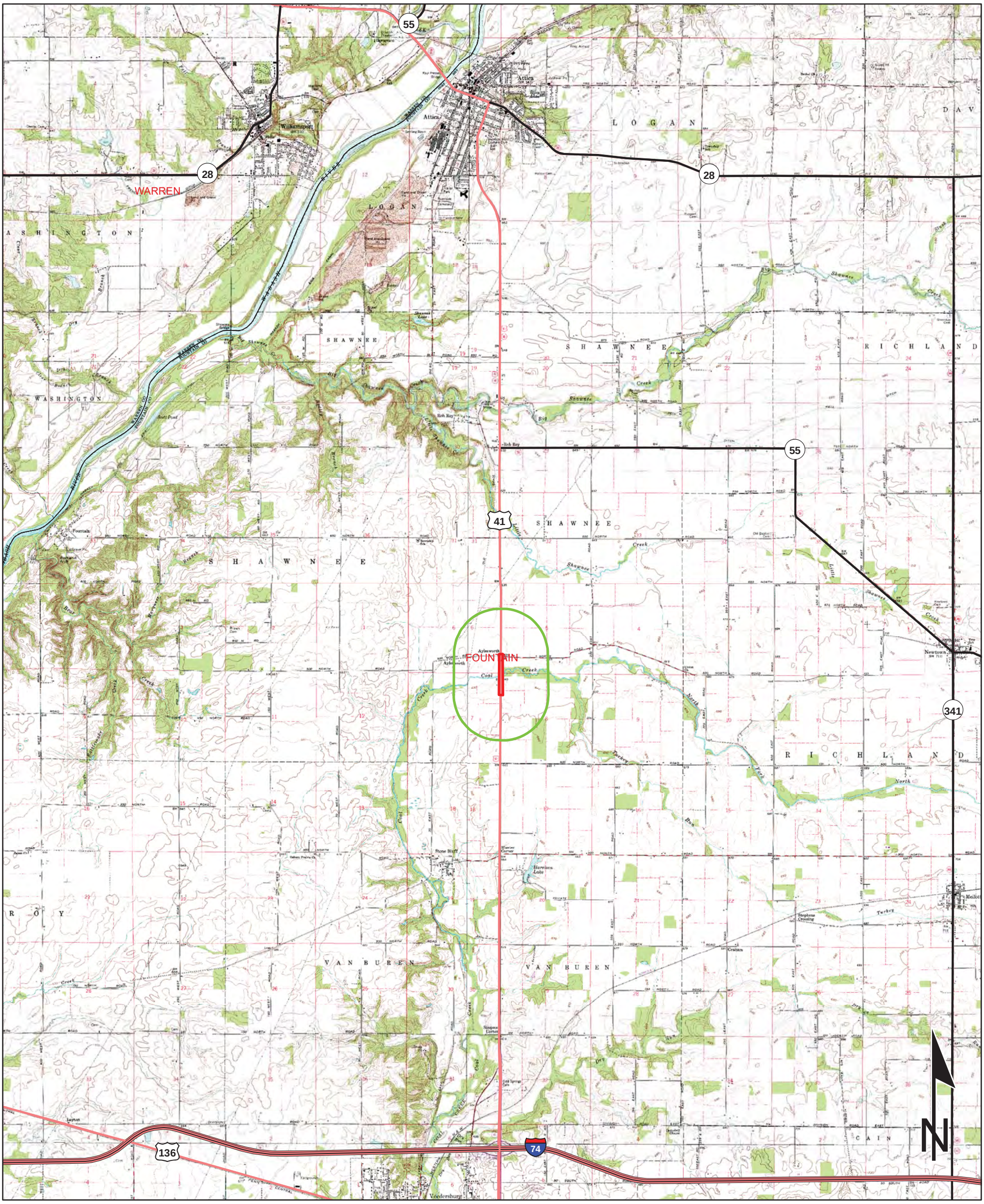
WATER RESOURCES: YES

URBANIZED AREA BOUNDARY: N/A

MINING/MINERAL EXPLORATION: N/A

HAZMAT CONCERNS: N/A

Red Flag Investigation - Topographic
US 41 over Coal Creek
Des. No. 1601078, Bridge Replacement
Fountain County, Indiana



1 0.5 0 1 Miles

Sources:

Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library

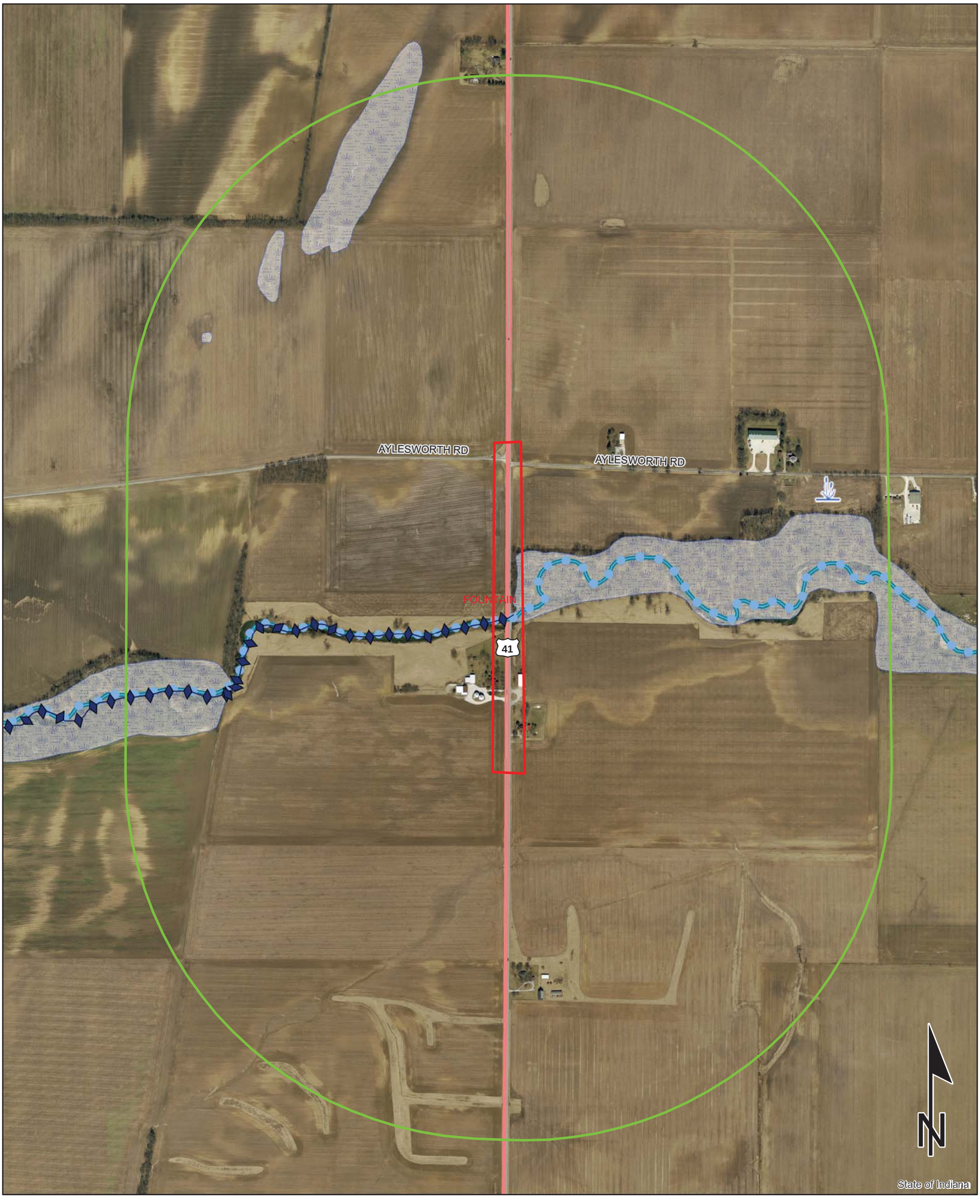
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

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.

MELLOTT QUADRANGLE
INDIANA
7.5 MINUTE SERIES
(TOPOGRAPHIC)

Red Flag Investigation - Water Resources
US 41 over Coal Creek
Des. No. 1601078, Bridge Replacement
Fountain County, Indiana



0.15 0.075 0 0.15 Miles

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.

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

Indiana County Endangered, Threatened and Rare Species List

County: Fountain

Species Name	Common Name	FED	STATE	GRANK	SRANK
Mollusk: Bivalvia (Mussels)					
Cyprogenia stegaria	Eastern Fanshell Pearlymussel	LE	SE	G1Q	S1
Epioblasma flexuosa	Leafshell		SX	GX	SX
Epioblasma obliquata perobliqua	White catspaw	LE	SE	G1T1	SX
Epioblasma sampsonii	Wabash Riffleshell		SX	GX	SX
Epioblasma torulosa torulosa	Tubercled Blossom	LE	SE	G2TX	SX
Epioblasma triquetra	Snuffbox	LE	SE	G3	S1
Fusconaia subrotunda	Longsolid	C	SE	G3	SX
Lampsilis fasciola	Wavyrayed Lampmussel		SSC	G5	S3
Ligumia recta	Black Sandshell			G4G5	S2
Obovaria retusa	Ring Pink	LE	SX	G1	SX
Obovaria subrotunda	Round Hickorynut	C	SE	G4	S1
Plethobasus cicatricosus	White Wartyback	LE	SE	G1	SX
Plethobasus cyphyus	Sheepnose	LE	SE	G3	S1
Pleurobema clava	Clubshell	LE	SE	G1G2	S1
Pleurobema cordatum	Ohio Pigtoe		SSC	G4	S2
Pleurobema plenum	Rough Pigtoe	LE	SE	G1	S1
Pleurobema pyramidatum	Pyramid Pigtoe		SE	G2G3	SX
Ptychobranchus fasciolaris	Kidneyshell		SSC	G4G5	S2
Quadrula cylindrica cylindrica	Rabbitsfoot	LT	SE	G3G4T3	S1
Simpsonaias ambigua	Salamander Mussel	C	SSC	G3	S2
Toxolasma lividus	Purple Lilliput	C	SSC	G3Q	S2
Villosa fabalis	Rayed Bean	LE	SE	G2	S1
Villosa lienosa	Little Spectaclecase		SSC	G5	S3
Insect: Odonata (Dragonflies & Damselflies)					
Tachopteryx thoreyi	Gray Petaltail		wl	G4	S3
Fish					
Percina copelandi	Channel Darter		SE	G4	S2
Percina evides	Gilt Darter		SE	G4	S1
Amphibian					
Acris blanchardi	Northern Cricket Frog		SSC	G5	S4
Hemidactylium scutatum	Four-toed Salamander		SSC	G5	S2
Lithobates areolatus circulosus	Northern Crawfish Frog		SE	G4T4	S2
Reptile					
Terrapene ornata ornata	Ornate Box Turtle		SE	G5T5	S1
Bird					
Bartramia longicauda	Upland Sandpiper		SE	G5	S3B
Cistothorus platensis	Sedge Wren		SE	G5	S3B
Haliaeetus leucocephalus	Bald Eagle		SSC	G5	S2
Helmitheros vermivorus	Worm-eating Warbler		SSC	G5	S3B

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

GRANK: Global Heritage Rank: G1 = critically imperiled globally; G2 = imperiled globally; G3 = rare or uncommon globally; G4 = widespread and abundant globally but with long term concerns; G5 = widespread and abundant globally; G? = unranked; GX = extinct; Q = uncertain rank; T = taxonomic subunit rank

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: Fountain

Species Name	Common Name	FED	STATE	GRANK	SRANK
Ixobrychus exilis	Least Bittern		SE	G5	S3B
Lophodytes cucullatus	Hooded Merganser			G5	S2S3B
Mniotilta varia	Black-and-white Warbler		SSC	G5	S1S2B
Setophaga cerulea	Cerulean Warbler		SE	G4	S3B
Mammal					
Myotis sodalis	Indiana Bat or Social Myotis	LE	SE	G2	S1
Taxidea taxus	American Badger		SSC	G5	S2
Vascular Plant					
Androsace occidentalis	Western Rockjasmine		ST	G5	S2
Camassia angusta	Wild Hyacinth		SE	G5?Q	S1
Carex pedunculata	Longstalk Sedge		SR	G5	S2
Circaea alpina	Small Enchanter's Nightshade		SX	G5	SX
Clematis pitcheri	Pitcher Leather-flower		SR	G4G5	S2
Diervilla lonicera	Northern Bush-honeysuckle		SR	G5	S2
Eriophorum angustifolium	Narrow-leaved Cotton-grass		SR	G5	S2
Erysimum capitatum	Prairie-rocket Wallflower		ST	G5	S2
Euphorbia obtusata	Bluntleaf Spurge		SE	G5	S1
Fragaria vesca var. americana	Woodland Strawberry		SE	G5T5	S1
Hypericum pyramidatum	Great St. John's-wort		ST	G4	S1
Juglans cinerea	Butternut		WL	G4	S3
Lemna minima	Least Duckweed		SE	GNR	S1
Napaea dioica	Glade Mallow		SR	G4	S2
Onosmodium hispidissimum	Shaggy False-gromwell		SE	G4G5T4	S1
Oryzopsis racemosa	Black-fruit Mountain-ricegrass		SR	G5	S2
Panax quinquefolius	American Ginseng		WL	G3G4	S3
Panicum rigidulum var. pubescens	Long-leaved Panic-grass		SX	G5T5?	SX
Pinus strobus	Eastern White Pine		SR	G5	S2
Saxifraga forbesii	Forbes Saxifrage		SE	G4Q	S1
Selaginella rupestris	Ledge Spike-moss		ST	G5	S2
Silene regia	Royal Catchfly		ST	G3	S2
Taxus canadensis	American Yew		SE	G5	S1
Tragia cordata	Heart-leaved Noseburn		WL	G4	S2
Vaccinium myrtilloides	Velvetleaf Blueberry		SE	G5	S1
High Quality Natural Community					
Forest - floodplain mesic	Mesic Floodplain Forest		SG	G3?	S1
Forest - floodplain wet	Wet Floodplain Forest		SG	G3?	S3
Forest - upland dry-mesic Central Till Plain	Central Till Plain Dry-mesic Upland Forest			GNR	S2
Forest - upland mesic Central Till Plain	Central Till Plain Mesic Upland Forest			GNR	S3

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Division of Nature Preserves
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Indiana County Endangered, Threatened and Rare Species List

County: Fountain

Species Name	Common Name	FED	STATE	GRANK	SRANK
Prairie - mesic	Mesic Prairie		SG	G2	S2
Primary - cliff sandstone	Sandstone Cliff		SG	GU	S3
Wetland - fen	Fen		SG	G3	S3
Wetland - marsh	Marsh		SG	GU	S4
Wetland - seep circumneutral	Circumneutral Seep		SG	GU	S1
Other Significant Feature					
Geomorphic - Nonglacial Erosional Feature - Water Fall and Cascade	Water Fall and Cascade			GNR	SNR

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

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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

GRANK: Global Heritage Rank: G1 = critically imperiled globally; G2 = imperiled globally; G3 = rare or uncommon globally; G4 = widespread and abundant globally but with long term concerns; G5 = widespread and abundant globally; G? = unranked; GX = extinct; Q = uncertain rank; T = taxonomic subunit rank

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

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Appendix F

Water Resources

Excerpts

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Waters of the U.S. Report

U.S. 41 Bridge Replacement over Coal Creek

Fountain County, Indiana
Designation Number 1601078

Prepared for the Indiana Department of Transportation

December 2, 2019

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Table of Contents

Waters of the U.S. Report

Narrative:

Tables:

Exhibits

Exhibits omitted. See Appendix B for graphics.

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WATERS OF THE U.S. REPORT
U.S. 41 Bridge Replacement over Coal Creek
Fountain County, Indiana
INDOT Designation (Des.) Number 1601078
Prepared By: Gregory R Moushon, Senior Environmental Planner
December 2, 2019

I: Project Information

Fieldwork Dates:
Fieldwork for this report was conducted on October 8, 2019.

Contributors:
Dan Miller, Environmental Services Manager
Eric Jagger, Associate Environmental Planner
Wade Kimmon, GIS Specialist

Project Location:
Mellott Quadrangle
Sections 5, 6, 7, and 8 of Township 20 North, Range 7 West
U.S. 41 Reference Post (RP) 168+22
Fountain County, Indiana
Latitude/Longitude: 40.19980 North 87.242968 West

Project Description:
The Indiana Department of Transportation (INDOT) proposes a bridge replacement project on U.S. 41 over Coal Creek, located 2.52 miles south of SR 55 in Fountain County, Indiana (Des. 1601078). The need for this project is due to the deteriorating condition of the existing structure, INDOT Structure 041-23-10200. In the Abbreviated Engineering Assessment dated June 21, 2019, numerous widespread issues were noted, including wide transverse cracks throughout the wearing surface, substandard bridge railings, deep spalls, efflorescence, and exposed rebar on both bridge spans. Additionally, channel scour was observed on the east end of one of the piers. The purpose of this project is to provide a safe and hydraulically sufficient crossing of U.S. 41 over Coal Creek.

The existing conditions include one 12-foot travel lane in either direction with 7-foot shoulders. The existing structure is a two-span reinforced concrete arch bridge constructed in 1924 and reconstructed in 1967. The bridge is approximately 102 feet long and 46 feet wide. The project is located along a rural section of U.S. 41. Land adjacent to the project area consists of maintained right-of-way, a farmstead, a forested tract, and row-crop fields. U.S. 41 is oriented north-south and Coal Creek flows from east to west under the bridge.

Work for this project would include replacing the existing structure with a three-span hybrid bulb-tee beam bridge measuring approximately 188 feet long and 40 feet wide. The profile grade would be raised less than 3 feet and riprap scour protection will be added. Guardrail will be upgraded and extended. Approximately 0.93 acre of permanent right-of-way will be acquired. The project limits extend approximately 300 feet north and south of the current structure. This section of U.S. 41 over Coal Creek would be closed during construction and an official INDOT detour will be provided.

II: Office Evaluation

Methodology:

The study area was based on the design alternatives evaluated for the National Environmental Policy Act (NEPA) document. The study area encompassed all project alternatives currently under evaluation. The final study area was approximately 6.3 acres in size.

A desktop review of the study area was conducted to identify potential waterways (streams, wetlands, ponds, etc.). This included a review of historic and recent aerial photography for any areas with a water signature or a sharp change in vegetation. Any such areas were flagged for follow-up field reconnaissance. United States Geological Survey (USGS) topographic mapping, National Wetlands Inventory (NWI) mapping, National Hydrography Dataset (NHD) mapping, floodplain mapping, mapped soil units, historic drainage mapping, and LiDAR mapping were also reviewed. Any noted items were flagged for follow-up field reconnaissance.

Aerial Photography:

During review of current and historical aerial photography, numerous areas were identified within the study area that displayed potential wetland signatures associated with water ponding, darkened soils, and/or shifts in vegetation. Coal Creek was noted crossing under U.S. 41 within the study area. These areas were investigated during the field reconnaissance.

USGS Mapping:

During review of USGS 7.5-minute series topographic mapping (page 10), one perennial (solid blue line) stream was noted within the study area. Coal Creek crosses under U.S. 41 within the study area boundary. No intermittent (dashed blue line) streams were noted within the study area.

NWI and Floodplain Mapping:

During review of NWI mapping (pages 12 to 13), no wetland lines were noted within the study area. One forested wetland (PFO1A) polygon was mapped within the northeast portion of the study area. This area was investigated during the field reconnaissance. No floodplains were mapped within the study area.

Mapped Soil Units:

The Natural Resources Conservation Service (NRCS) classifies soil types as follows: hydric (100%), predominantly hydric (66-99%), partially hydric (33-65%), predominantly non-hydric (1-32%), and not-hydric (0%). According to the Soil Survey Geographic (SSURGO) Database for Fountain County, Indiana, the study area is mostly comprised of predominantly non-hydric and not-hydric soil types (pages 14 to 15). Mapped soil units within the study area are summarized in Table 1 (below).

Table 1: Mapped Soil Units within the Study Area

Soil Unit	Abbreviation	Classification	Percent Within Study Area
Brouillett silt loam, 0 to 2 percent slopes, occasionally flooded, brief duration	BvlAK	Predominantly non-hydric (1-32%)	48.6%
Ockley silt loam, 0 to 2 percent slopes	ObxA	Not hydric (0%)	20.5%
Ockley silt loam, 6 to 12 percent slopes, eroded	ObxC2	Predominantly non-hydric (1-32%)	19.9%
Westland silty clay loam, 0 to 2 percent slopes	WqvA	Hydric (100%)	11.0%

Historic Drainage:

The Fountain County Soil Survey (USDA, 1966) was reviewed for historic drainage features within the study area. Two historic drainage features were noted within the study area (page 18). Coal Creek was noted flowing under U.S. 41 and

one additional drainage feature was noted within the southeast agricultural field and discharges into Coal Creek along the east study area boundary. These features were investigated during the field reconnaissance.

LiDAR and NHD Mapping:

A review of LiDAR mapping revealed roadside ditches along all both sides of U.S. 41 (pages 16 to 17). Three additional NHD streams were noted within the study area. Coal Creek was noted as flowing under U.S. 41 within the study area. One roadside ditch along the east side of U.S. 41 within the northeast quadrant is shown discharging into an oxbow of Coal Creek. An additional drainage feature was noted within the southeast agricultural field and discharges into Coal Creek along the east study area boundary. These features were investigated during the field reconnaissance. The northern boundary of Wetland 4 follows the topographic changes as shown on the LiDAR map.

Watershed:

This project is located within a single hydrologic unit code 12-digit (HUC 12) watershed: Harrison Lake-Coal Creek (051201080708).

III: Field Reconnaissance

Methodology:

Parsons conducted field investigations to determine the presence of waterways, including streams, wetlands, lakes, and ponds, within the study area. The entire study area was reviewed for resources via a walking survey. All areas flagged during desktop review were investigated and documented. Resource maps showing all identified features are attached for reference (pages 19 to 20).

The ordinary high-water mark (OHWM) of each stream was determined using a measuring tape. A hand-held GPS unit (Trimble Geo 7 Series) was used to collect the location of each identified stream. The upstream drainage area for each stream was calculated using StreamStats Version 4.3.0 (USGS, 2019), if available. Qualitative assessments of stream quality were also completed.

Vegetation, soil, and hydrology data were collected using the methods described in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)* (USACE, 2010). Wetland indicator statuses for plants were obtained from the National Wetland Plant List (Lichvar, 2016). Data forms for each wetland are included in this report for reference (pages 39 to 58). A hand-held GPS unit (Trimble Geo 7 Series) was used to collect the boundary of each identified wetland, as well as all data points. The area for each wetland and its length (measured along its centerline) are provided. A qualitative assessment of each wetland's quality was conducted, which included grading them (poor, average, or excellent) based on ecological function, size, species diversity, invasive species prevalence, and amount of disturbance.

Photographs were taken throughout the study area. This included photographs of each feature identified within the study area (pages 23 to 38). Photograph orientation maps are included for additional reference (pages 21 to 22).

Streams:

Field investigation resulted in the identification of one likely jurisdictional stream totaling approximately 255 linear feet within the study area. The feature is summarized in the Stream Summary Table (Table 2, page 4). No other features exhibiting an OHWM were observed within the study area.

Coal Creek

Coal Creek originates east of the study area and flows west under U.S. 41 (page 20). Coal Creek exhibited an 87-foot wide and 30-inch deep OHWM. Approximately 255 feet of this stream lies within the study area. According to USGS Streamstats, the upstream drainage area of Coal Creek is approximately 62.5 square miles.

Coal Creek has a forested riparian corridor along its northeast bank, pasture along its southwest bank, and row-crop fields along its northwest and southeast banks through the study area. Its substrate consists of gravel, sand, and silt. Gravel bars, pools, and riffles were observed. Due to the presence of a narrow riparian corridor within the study area, moderate in-stream cover, minimal bank erosion, and moderate sinuosity, this stream is classified as average quality.

Coal Creek is shown as a perennial stream (solid blue line) on USGS 7.5-minute series topographic mapping (page 10). It is a tributary to the Wabash River (a traditionally navigable waterway). Based on the field observations, the presence of an OHWM, and the connectivity to a navigable waterway, Coal Creek is likely a water of the U.S. Coal Creek is not classified as a Federal *Wild and Scenic River or* a *State Natural, Scenic and Recreational River*. It is not listed on the Indiana Register's listing of *Outstanding Rivers and Streams*.

Table 2: Stream Summary Table

Name	Photo #	Latitude/ Longitude	OHWM Width (ft)	OHWM Depth (in)	Length (ft) and acres (ac.)	USGS Blue-Line (Y/N)	Riffles/ Pools (Y/N)	Typical Substrate	Quality*	Likely Water of the US (Y/N)
Coal Creek	11-12, 14, 16-20, 22, 24, 27-28, 36-37	40.19980/ -87.242968	87	30	255 (0.509 ac.)	Y	Y/Y	Gravel, Silt, and Sand	Average	Y
TOTAL					**255 (0.509 ac.)**					

*Quality was based on qualitative observations within and immediately adjacent to the study area.

Wetlands:

Sampling locations were determined by the presence or absence of hydrophytic vegetation and hydrology indicators. Four wetlands were identified within the study area totaling 0.239 acre (267 linear feet). Three wetlands were emergent, and one was forested. All four wetlands are likely waters of the U.S. due to their likely connection to Coal Creek. A wetland summary table (Table 3, page 6) and data point summary table (Table 4, page 7) summarize the data collected on these features.

Wetland 1

The area associated with Data Point 1-IN (DP-1-IN) was evaluated because it exhibited hydrophytic vegetation. The herbaceous stratum was dominated by *Phalaris arundinacea* (reed canary grass, FACW, 98%). This point met the hydrophytic vegetation criterion because it passed the rapid test, dominance test, and prevalence index. The soil profile met the hydric soil criterion because it exhibited the Problematic Hydric Soils indicator. Alluvial deposits were observed at this depressional sample location adjacent to Coal Creek. Two secondary indicators (Geomorphic Position [D2] and FAC-Neutral Test [D5]) of hydrology were observed. Since all three wetland criteria were met at DP-1-IN, this area was identified as Wetland 1.

Data Point 1-OUT (DP-1-OUT) was taken upslope from 1-IN. The herbaceous stratum was dominated by *Poa pratensis* (Kentucky blue grass, FAC, 30%), *Schedonorus arundinaceus* (tall false rye grass, FACU, 20%), *Cirsium arvense* (Canadian thistle, FACU, 20%), and *Setaria viridis* (green bristle grass, UPL, 20%). This point did not meet the hydrophytic vegetation criterion. No hydric soil indicators were observed. No hydrology indicators were observed. Since none of the three wetland criteria were met at DP-1-OUT, this point was determined to be upland. This data point helped establish the boundary of Wetland 1, which was determined based on changes in vegetation and topography.

Wetland 1 is an emergent wetland that is approximately 0.004 acre (49 linear feet) in size. It is located along the west side of U.S. 41 and south of Coal Creek. The slightly elevated, non-hydrophytic vegetation dominated riparian corridor

borders Wetland 1 to its east and south. A depressional area associated with and below the OHWM of Coal Creek creates its western boundary. Wetland 1 is dominated by reed canary grass, an invasive species. Because of this, it was classified as a poor-quality wetland. Wetland 1 is adjacent to and likely hydrologically connected to Coal Creek, a likely water of the U.S. Based on this connectivity, Wetland 1 is likely a water of the U.S.

Wetland 2

The area associated with Data Point 2-IN (DP-2-IN) was evaluated because it exhibited hydrophytic vegetation. The herbaceous stratum was dominated by *Phalaris arundinacea* (reed canary grass, FACW, 96%). This point met the hydrophytic vegetation criterion because it passed the rapid test, dominance test, and prevalence index. The soil profile met the hydric soil criterion because it exhibited the Redox Dark Surface (F6) indicator. Two secondary indicators (Geomorphic Position [D2] and FAC-Neutral Test [D5]) of hydrology were observed. Since all three wetland criteria were met at DP-2-IN, this area was identified as Wetland 2.

Data Point 2-OUT (DP-2-OUT) was taken upslope from DP-2-IN. The herbaceous stratum was dominated by *Schedonorus arundinaceus* (tall false rye grass, FACU, 80%). This point did not meet the hydrophytic vegetation criterion. No hydric soil indicators were observed. No hydrology indicators were observed. Since none of the three wetland criteria were met at DP-2-OUT, this point was determined to be upland. This data point helped establish the boundary of Wetland 2, which was determined based on changes in vegetation and topography.

Wetland 2 is an emergent wetland that is approximately 0.008 acre (27 linear feet) in size. It is located along the east side of U.S. 41 and south of Coal Creek. The slightly elevated, non-hydrophytic vegetation dominated riparian corridor borders Wetland 2 to its south and east. The U.S. 41 bridge wingwall creates the western boundary for Wetland 2. Wetland 2 is dominated by reed canary grass, an invasive species. Because of this, it was classified as a poor-quality wetland. Wetland 2 is adjacent to and likely hydrologically connected to Coal Creek, a likely water of the U.S. Based on this connectivity, Wetland 2 is likely a water of the U.S.

Wetland 3

The area associated with Data Point 3-IN (DP-3-IN) was evaluated because it exhibited hydrophytic vegetation. The sapling/shrub stratum was present but not at sufficient coverage for any species to be considered dominant. The herbaceous stratum was dominated by *Poa pratensis* (Kentucky blue grass, FAC, 35%) and *Phalaris arundinacea* (reed canary grass, FACW, 20%). This point met the hydrophytic vegetation criterion because it passed the dominance test. The soil profile met the hydric soil criterion because it exhibited the Problematic Hydric Soils indicator. Alluvial deposits were observed at this depressional sample location adjacent to Coal Creek. Two secondary indicators (Geomorphic Position [D2] and FAC-Neutral Test [D5]) of hydrology were observed. Since all three wetland criteria were met at DP-3-IN, this area was identified as Wetland 3.

Data Point 3-OUT (DP-3-OUT) was taken upslope from 3-IN. The sapling/shrub stratum was present but not at sufficient coverage for any species to be considered dominant. The herbaceous stratum was dominated *Setaria viridis* (green bristle grass, UPL, 80%). This point did not meet the hydrophytic vegetation criterion. No hydric soil indicators were observed. No hydrology indicators were observed. Since none of the three wetland criteria were met at DP-3-OUT, this point was determined to be upland. This data point helped establish the boundary of Wetland 3, which was determined based on changes in vegetation and topography.

Wetland 3 is an emergent wetland that is approximately 0.007 acre (29 linear feet) in size. It is located along the west side of U.S. 41 and north of Coal Creek. The slightly elevated, non-hydrophytic vegetation dominated riparian corridor borders Wetland 3 to its north and west. The U.S. 41 bridge wingwall creates the eastern boundary for Wetland 3. Wetland 3 is dominated by reed canary grass, an invasive species. Because of this, it was classified as a poor-quality wetland. Wetland 3 is adjacent to and likely hydrologically connected to Coal Creek, a likely water of the U.S. Based on this connectivity, Wetland 3 is likely a water of the U.S.

Wetland 4

The area associated with Data Point 4-IN (DP-4-IN) was evaluated because it exhibited hydrophytic vegetation. The tree stratum was dominated by *Catalpa speciosa* (northern catalpa, FACU, 75%). The herbaceous stratum was dominated by *Elymus virginicus* (Virginia wild-rye, FACW, 84%). This point met the hydrophytic vegetation criterion because it passed the prevalence index. The soil profile met the hydric soil criterion because it exhibited the Problematic Hydric Soils indicator. Dark floodplain soils with redox features at depth were observed at this depressional sample location adjacent to Coal Creek. One primary indicator (Drift Deposits [B3]) and three secondary indicators (Surface Soil Cracks [B6], Drainage Patterns [B10], and Geomorphic Position [D2]) of hydrology were observed. Since all three wetland criteria were met at DP-4-IN, this area was identified as Wetland 4.

The area associated with Data Point 4A-IN (DP-4A-IN). The tree stratum was dominated by *Celtis occidentalis* (common hackberry, FAC, 60%) and *Maclura pomifera* (osage-orange, FACU, 20%). The sapling/shrub stratum was dominated by *Fraxinus pennsylvanica* (green ash, FACW, 3%) and *Rosa multiflora* (rambler's rose, FACU, 2%). The herbaceous stratum was dominated by *Elymus virginicus* (Virginia wild-rye, FACW, 65%) and *Symphyotrichum lateriflorum* (farewell-summer, FACW, 20%). This point met the hydrophytic vegetation criterion because it passed the dominance test and prevalence index. The soil profile met the hydric soil criterion because it exhibited the Redox Dark Surface (F6) indicator. Three secondary indicators (Surface Soil Cracks [B6], Geomorphic Position [D2], and FAC-Neutral Test [D5]) of hydrology were observed. Since all three wetland criteria were met at DP-4A-IN, this area was identified as Wetland 4.

Data Point 4-OUT (DP-4-OUT) was taken upslope from DP-4A-IN. The tree stratum was dominated by *Maclura pomifera* (osage-orange, FACU, 30%) and *Platanus occidentalis* (American sycamore, FACW, 20%). The sapling/shrub stratum was dominated by *Lonicera maackii* (Amur honeysuckle, UPL, 5%). The herbaceous stratum was dominated *Ageratina altissima* (white snakeroot, FACU, 40%), *Symphyotrichum lateriflorum* (farewell-summer, FACW, 10%), *Cyperus esculentus* (chufa, FACW, 10%), *Elymus virginicus* (Virginia wild rye, FACW, 10%), *and Leersia oryzoides* (rice cut grass, OBL, 10%). This point met the hydrophytic vegetation criterion because it passed the dominance test. No hydric soil indicators were observed. Only one indicator (FAC-Neutral Test [D5]) of hydrology was observed. Since two of the three wetland criteria were not met at DP-4-OUT, this point was determined to be upland. This data point helped establish the boundary of Wetland 4, which was determined based on changes in vegetation and topography.

Wetland 4 is a forested wetland that is approximately 0.220 acre (162 linear feet) in size within the study area. This wetland extends to the east outside of the study area. It is located along the east side of U.S. 41 and north of Coal Creek. Wetland 4 exhibited good species diversity with some invasive/non-native species. Because of this, it was classified as an average-quality wetland. Wetland 4 is adjacent to and likely hydrologically connected to Coal Creek, a likely water of the U.S. Based on this connectivity, Wetland 4 is likely a water of the U.S.

Table 3: Wetland Summary Table

Name	Photograph Number	Latitude/ Longitude	Wetland Type*	Area (acre)	Length (linear-feet)	Quality	Likely Water of the U.S. (Y/N)	Isolated (Y/N) and Class I, II or III	Likely Exempt Isolated Wetland (Y/N)
Wetland 1	10-14, 17, 36	40.199697, -87.243289	Palustrine Emergent	0.004	49	Poor	Y	N	N
Wetland 2	20-22, 24, 37	40.199743, -87.242879	Palustrine Emergent	0.008	27	Poor	Y	N	N
Wetland 3	16, 30-31, 33-34, 36	40.199979, -87.243125	Palustrine Emergent	0.007	29	Poor	Y	N	N
Wetland 4	39-45	40.200233, -87.242714	Palustrine Forested	0.220	162	Average	Y	N	N
Totals				**0.239**	**267**				

*Classification of Wetlands and Deepwater Habitats of the United States (*Cowardin et al. 1979*)

Non-Jurisdictional Features:

Additional Data Points

One additional data point was investigated within the study area where there was a distinct change in vegetation or topography.

Upland Data Point 1 (UPL-1) was evaluated because it exhibited hydrophytic vegetation. The tree stratum was dominated by *Gleditsia triacanthos* (honey locust, FACU, 30%) and *Ulmus americana* (American elm, FACW, 15%). The sapling/shrub stratum was dominated by *Celtis occidentalis* (common hackberry, FAC, 20%) and *Fraxinus pennsylvanica* (green ash, FACW, 10%). The herbaceous stratum was dominated by *Ageratina altissima* (white snakeroot, FACU, 25%) and *Lactuca biennis* (wild blue lettuce, FACU, 15%). This point met the hydrophytic vegetation criterion because it passed the dominance test. No hydric soil indicator was observed. No hydrology indicators were observed. Since two of the three wetland criteria were not met at UPL-1, this area was determined to be upland.

Table 4: Data Point Summary Table

Data Point Name	Hydrophytic Vegetation (Y/N)	Hydric Soils (Y/N)	Wetland Hydrology (Y/N)	Wetland (Y/N)
DP-1-IN	Y	Y	Y	Y
DP-1-OUT	N	N	N	N
DP-2-IN	Y	Y	Y	Y
DP-2-OUT	N	N	N	N
DP-3-IN	Y	Y	Y	Y
DP-3-OUT	N	N	N	N
DP-4-IN	Y	Y	Y	Y
DP-4A-IN	Y	Y	Y	Y
DP-4-OUT	Y	N	N	N
UPL-1	Y	N	N	N

IV: Conclusions

Based on field investigations, the study area has features that are likely waters of the U.S. One stream, Coal Creek, was documented within the study area totaling 255 linear feet (0.509 acre). Four wetlands were identified within the study area totaling 0.239 acre (267 linear feet).

All jurisdictional waters of the U.S. are under the regulatory authority of the USACE under Section 404 of the Clean Water Act. Every effort should be taken to avoid and minimize impacts to the resources outlined in this report. If impacts are necessary, then mitigation may be required. Impacts must be minimized before mitigation can be considered. The INDOT Environmental Services Division should be contacted immediately if impacts will occur. The final determination of jurisdictional waters is ultimately made by the USACE and IDEM. This report is our best judgement based on the guidelines set forth by the USACE.

A preliminary jurisdictional determination form is attached to the end of this report (pages 59 to 62).

V. References

Cowardin, L.M, V. Carter, F.C. Golet, and E.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States.* US Department of the Interior, Fish and Wildlife Service, Washington DC.

Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. *The National Wetland Plant List: 2016 Wetland Ratings*. Phytoneuron 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X

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VI. Acknowledgements

This report 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.

Gregory R. Moushon
Senior Environmental Planner
Parsons

NOTES TO USERS

is for use in administering the National Flood Insurance Program. It does
darly identify all areas subject to flooding, particularly from local drainage
f small size. The **community map repository** should be consulted for
pdated or additional flood hazard information.

lood Hazard Areas were determined by **approximate study methods**.
, no Flood Insurance Study Report was developed.

ction used in the preparation of this map was Indiana State Plane
e (FIPS zone 1302). The **horizontal datum** was NAD 83, GRS 1980
Differences in datum, spheroid, projection or UTM zones used in the
n of FIRMs for adjacent jurisdictions may result in slight positional
s in map features across jurisdiction boundaries. These differences do not
ccuracy of this FIRM.

ations on this map are referenced to the North American Vertical Datum of
ese flood elevations must be converted to structure and ground elevations
d to the same **vertical datum**. For information regarding conversion
the National Geodetic Vertical Datum of 1929 and the North American
Datum of 1988, visit the National Geodetic Survey website at
.ngs.noaa.gov or contact the National Geodetic Survey at the following

rmation Services
NGS12
Geodetic Survey
#9202
l-West Highway
ing, Maryland 20910-3282
-3242

current elevation, description, and/or location information for **bench marks**
this map, please contact the Information Services Branch of the National
Survey at **(301) 713- 3242**, or visit its website at http://www.ngs.noaa.gov.

e information shown on this FIRM was derived from the 2005
rthophotography (IndianaMap Framework Data www.indianamap.org). This
n was photogrammetrically compiled at a scale of 1:2400 from aerial
hy dated spring 2005.

e limits shown on this map are based on the best data available at the time
tion. Because changes due to annexations or de-annexations may have
after this map was published, map users should contact appropriate
y officials to verify current corporate limit locations.

fer to the separately printed **Map Index** for an overview map of the
lowing the layout of map panels; community map repository addresses;
ting of Communities table containing National Flood Insurance Program
each community as well as a listing of the panels on which each community

rmation on available products associated with this FIRM visit the **Map
Center (MSC)** website at http://msc.fema.gov. Available products may
eviously issued Letters of Map Change, a Flood Insurance Study Report,
gital versions of this map. Many of these products can be ordered or
directly from the MSC website.

ve **questions about this map,** how to order products, or the National
surance Program in general, please call the **FEMA Map Information
e (FMIX)** at **1-877-FEMA-MAP** (1-877-336-2627) or visit the FEMA
t http://www.fema.gov/business/nfip.

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the "base flood," is the flood
a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard
the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Haza
include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water
elevation of the 1% annual chance flood.

ZONE A — No Base Flood Elevations determined.

ZONE AE — Base Flood Elevations determined.

ZONE AH — Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood El
determined.

ZONE AO — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); av
depths determined. For areas of alluvial fan flooding, velocities also d

ZONE AR — Special Flood Hazard Areas formerly protected from the 1% annual ch
flood by a flood control system that was subsequently decertified. Zo
AR indicates that the former flood control system is being restored to
protection from the 1% annual chance or greater flood.

ZONE A99 — Area to be protected from 1% annual chance flood by a Federal Flood
protection system under construction; no Base Flood Elevations deter

ZONE V — Coastal flood zone with velocity hazard (wave action); no Base Flood
determined.

ZONE VE — Coastal flood zone with velocity hazard (wave action); Base Flood El
determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be k
encroachment so that the 1% annual chance flood can be carried without substantial incr
flood heights.

OTHER FLOOD AREAS

ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood wi
average depths of less than 1 foot or with drainage areas less than 1 squ
mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Are

1% Annual Chance Floodplain Boundary

0.2% Annual Chance Floodplain Boundary

Floodway boundary

Zone D boundary

CBRS and OPA boundary

Boundary dividing Special Flood Hazard Area Zones and bo
existing Special Flood Hazard Areas of different Base Flood
flood depths, or flood velocities

513 — Base Flood Elevation line and value; elevation in feet*

(EL 987) — Base Flood Elevation value where uniform within zone; ele
feet*

*Referenced to the North American Vertical Datum of 1988

A — A — Cross section line

23 — 23 — Transect line

45° 02' 08", 93° 02' 12" — Geographic coordinates referenced to the North American
1983 (NAD 83) Western Hemisphere

3100000 FT — 5000-foot ticks: Indiana State Plane West Zone
(FIPS Zone 1302), Transverse Mercator projection

4480000 N — 1000-meter Universal Transverse Mercator grid values, zon

DX5510 — Bench mark (see explanation in Notes to Users section of t
panel)

M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
February 6, 2013

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Commun
Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance a
or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'

500 0 1000 2000 FEET

300 0 300 600 METERS

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0130C

FIRM

FLOOD INSURANCE RATE M

FOUNTAIN COUNTY, INDIANA AND INCORPORATED ARE

PANEL 130 OF 375

(SEE MAP INDEX FOR FIRM PANEL LA

CONTAINS:

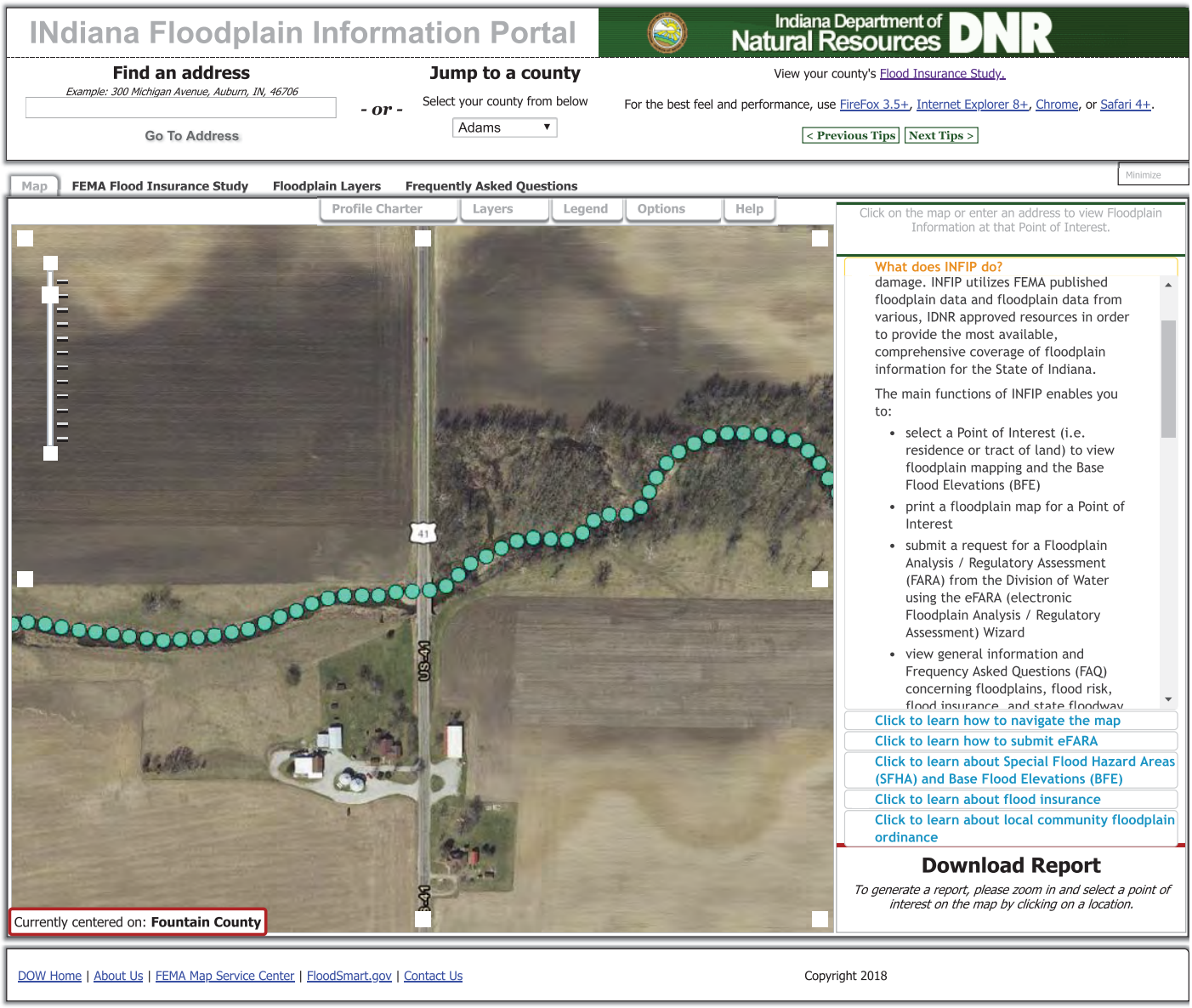
COMMUNITY	NUMBER	PANEL
FOUNTAIN COUNTY	180064	0130

Notice to User: The **Map Number** sho
should be used when placing map or
Community Number shown above s
used on insurance applications for th
community.

MAP NU
18045C

EFFECTIVE
FEBRUARY 6

Federal Emergency Management


INdiana Floodplain Information Portal
Indiana Department of Natural Resources DNR
Find an address
Example: 300 Michigan Avenue, Auburn, IN, 46706
Go To Address
- or -
Jump to a county
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
Profile Charter
Layers
Legend
Options
Help
Click on the map or enter an address to view Floodplain Information at that Point of Interest.
What does INFIP do?
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 Floodplain Analysis / Regulatory Assessment) Wizard
view general information and Frequency Asked Questions (FAQ) concerning floodplains, flood risk, flood insurance, and state floodway
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.
41
US-41
Currently centered on: Fountain County
DOW Home | About Us | FEMA Map Service Center | FloodSmart.gov | Contact Us
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Appendix G

Public Involvement

PARSONS

101 West Ohio Street, Suite 2121 | Indianapolis, IN 46204
Direct: +1 317.616.1000 | **Fax:** +1 317.616.1033 | www.parsons.com

«AddressBlock»

RE: Des. No. 1601078
US 41 Bridge Replacement over Coal Creek
Fountain County, Indiana

Notice of Entry for Survey or Investigations

January 15, 2020

Dear Property Owner,

Our information indicates that you own property near the above proposed transportation project. Representatives of the Indiana Department of Transportation will be conducting engineering and/or environmental surveys of the project area in the near future. It may be necessary for the INDOT Representatives to enter onto your property to complete this work. This is permitted by Indiana Code § 8-23-7-26. Anyone performing this type of work has been instructed to identify him or herself to you, if you are available, before they enter your property. If you no longer own this property or it is currently occupied by someone else (i.e. rental, sharecrop), please let us know the name of the new owner or occupant so that we can contact them about the survey.

Please read the attached notice to inform you of what the "Notice of Entry for Survey or Investigation" means. The design and environmental surveys are needed for the proper planning and design of this highway project. Engineering survey work would include mapping the location of features such as trees, buildings, fences, drives, ground elevations, etc. Environmental survey work may include the identification and mapping of wetlands, architectural surveys, archaeological investigations (which may involve the survey, testing, or excavation of identified archaeological sites), and various other environmental studies. It is our sincere desire to cause you as little inconvenience as possible during this survey.

At this stage we generally 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.

If any problems occur, please contact the field crew or one of the following:

Matt Kohut, PE
Bridge Project Manager
101 West Ohio Street, Suite 2121
Indianapolis, IN 46204
(317) 616-1003
matthew.kohut@parsons.com

Daniel J. Miller
Principal Environmental Planner
101 West Ohio Street, Suite 2121
Indianapolis, IN 46204
(317) 616-4663
daniel.j.miller@parsons.com

Harry S. Nikides
ASC Group, Inc.
9376 Castlegate Drive
Indianapolis, IN 46256
(317) 915-9300 x100

Please be aware that IC 8-23-7-27 and 28 provides that you may seek compensation from INDOT for damages occurring to your property (land or water) that result from INDOT's entry for the purposes mentioned above in IC 8-23-7-26. In this case, a basic procedure that may be followed is for you and/or an INDOT employee or representative to present an account of the damages to one of the above named INDOT staff. They will check the information and forward it to the appropriate person at INDOT who will contact you to discuss the situation and compensation.
In the event that property damage occurs as a result of work performed during survey, the Crawfordsville District Right of Way Manager can provide you with a form to request compensation for damages. You may contact:

Bert Herron
Crawfordsville District Right of Way Manager
41 W 300 N
Crawfordsville, IN 47933
756-361-5243
bherron@indot.in.gov

After filling out the form, you can return it to the District Right of Way Manager for consideration. Please contact the District Right of Way Manager if you have questions regarding the matter, rights, and procedures.

If you are not satisfied with the compensation that INDOT determines is owed to you, Indiana Code 8-23-7-8 provides the following:

> The amount of damages shall be assessed by the county agricultural extension educator of the county in which the land or water is located and two (2) disinterested residents of the county, one (1) appointed by the aggrieved party and one (1) appointed by the department. A written report of the assessment of damages shall be mailed to the aggrieved party and the department by first class United States mail. If either the department or the aggrieved party is not satisfied with the assessment of damages, either or both may file a petition, not later than fifteen (15) days after receiving the report, in the circuit or superior court of the county in which the land or water is located.

Thank you in advance for your cooperation in this matter.

Sincerely,

Daniel J. Miller
Parsons, Principal Environmental Planner
101 W. Ohio St., Suite 2121
Indianapolis, IN 46204
daniel.j.miller@parsons.com

Attachment

Recipients:

Name	Address	City,State, zip
Daniel R Williams	4653 Wabash Ave	Terre Haute, IN 47803-1441
David H & Leah M Helms	1914 E Aylesworth Rd	Veedersburg, IN 47987
Helms Family Limited Partnership	1944 N US HWY 41	Veedersburg, IN 47987

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Appendix H

Air Quality

Indiana Department of Transportation (INDOT)

State Preservation and Local Initiated Projects FY 2020 - 2024

SPONSOR	CONTRACT # / LEAD DES	STIP NAME	ROUTE	WORK TYPE	LOCATION	DISTRICT	MILES	FEDERAL CATEGORY	Estimated Cost left to Complete Project*	PROGRAM	PHASE	FEDERAL	MATCH	2020	2021	2022	2023	2024
Vermillion County																		
Vermillion County	38269 / 1500253	Init.	VA VARI	Bridge Inspections	Countywide Bridge Inspection and Inventory Program for Cycle Years 2019-2022	Crawfordsville	0	Multiple		Local Bridge Program	PE	$258,849.38	$0.00	$97,191.20	$4,935.20	$150,422.33	$6,300.65	
										Local Funds	PE	$0.00	$64,712.34	$24,297.80	$1,233.80	$37,605.58	$1,575.16	
Indiana Department of Transportation	38771 / 1500138	Init.	SR 71	Small Structure Replacement	0.20 mi N of SR 163	Crawfordsville	0	STPBG		Bridge Construction	CN	$431,142.40	$107,785.60	$538,928.00				
Indiana Department of Transportation	38771 / 1500138	A 01	SR 71	Small Structure Replacement	0.20 mi N of SR 163	Crawfordsville	0	STPBG	$694,138.00	Bridge ROW	RW	$16,880.00	$4,220.00	$21,100.00				
Comments:RW Phase for $21,100 FY20, No MPO																		
Indiana Department of Transportation	39962 / 1600981	Init.	SR 63	Small Structure Replacement	1.34 mi N of SR 32	Crawfordsville	0	NHPP		Bridge ROW	RW	$32,000.00	$8,000.00	$40,000.00				
										Bridge Construction	CN	$924,648.80	$231,162.20		$1,155,811.00			
Indiana Department of Transportation	40104 / 1602082	Init.	SR 63	Bridge Deck Overlay	NB Bridge over Jordan Branch, 1.53 mi of SR 32	Crawfordsville	0	NHPP		Bridge Construction	CN	$1,646,553.60	$411,638.40	$2,058,192.00				
Indiana Department of Transportation	40104 / 1602082	A 11	SR 63	Bridge Deck Overlay	NB Bridge over Jordan Branch, 1.53 mi of SR 32	Crawfordsville	0	STBG	$1,958,165.00	Bridge Consulting	PE	$92,000.00	$23,000.00	$115,000.00				
Comments:PE phase for $115,000 FY20, No MPO																		
Indiana Department of Transportation	40109 / 1592952	Init.	SR 63	HMA Overlay, Preventive Maintenance	From 0.62 mi N of SR 234 (N. Br. Approach) to 0.23 mi S of SR 32	Crawfordsville	6.036	NHPP		Road Construction	CN	$4,897,692.00	$1,224,423.00	$6,122,115.00				
Indiana Department of Transportation	40162 / 1298389	Init.	SR 63	Bridge Deck Replacement	Bridge over Vermillion River 0.6 2 miles N of SR 234	Crawfordsville	0	NHPP		Bridge Construction	CN	$4,081,867.20	$1,020,466.80			$5,102,334.00		
Indiana Department of Transportation	40580 / 1701589	Init.	SR 163	Bridge Replacement, Other Construction	Over Brouiletts Creek	Crawfordsville	0	STPBG		Bridge Construction	CN	$4,635,746.40	$1,158,936.60			$5,794,683.00		
Indiana Department of Transportation	40580 / 1701589	A 01	SR 163	Bridge Replacement, Other Construction	Over Brouiletts Creek	Crawfordsville	0	STPBG	$5,844,683.00	Bridge ROW	RW	$20,000.00	$5,000.00	$25,000.00				
Comments:ROW phase for $25,000 FY20, No MPO																		
Indiana Department of Transportation	40772 / 1700098	Init.	SR 63	Auxiliary Lanes, Accel & Decel or Turn Lanes	From 1400 ft S of EB I-74 ramp to 1650 ft N of WB I-74 ramp	Crawfordsville	.728	NHPP		Safety Construction	CN	$448,286.40	$112,071.60			$560,358.00		
Clinton	40872 / 1800239	Init.	ST 1019	Road Rehabilitation (3 R/4R Standards)	9th Street from Vine Street to Knowles Street	Crawfordsville	.4	STPBG		Local Funds	CN	$0.00	$511,590.00				$511,590.00	
										Group IV Program	CN	$2,046,360.00	$0.00				$2,046,360.00	
Indiana Department of Transportation	40942 / 1800417	Init.	US 36	Bridge Painting	@ Wabash River; 01.79 mi E of SR 63	Crawfordsville	0	STPBG		Bridge Construction	CN	$2,252,944.00	$563,236.00		$2,816,180.00			
Indiana Department of Transportation	40956 / 1800461	Init.	SR 32	Bridge Thin Deck Overlay	@ Jordans Branch; 0.90 mi W of SR 63	Crawfordsville	0	STPBG		Bridge Construction	CN	$484,523.20	$121,130.80		$605,654.00			

Report Created:12/17/2019 11:18:02AM

*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.

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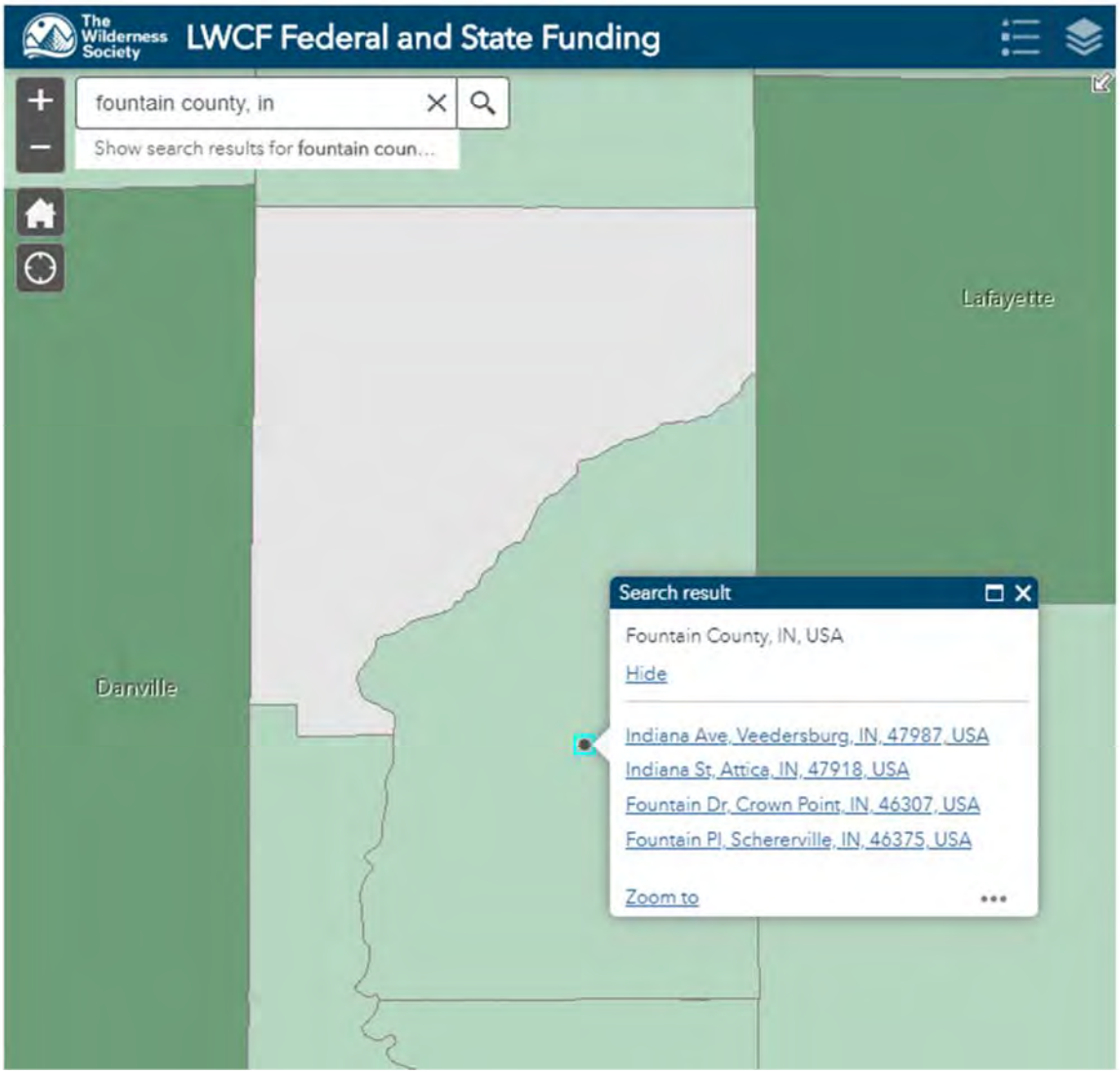
Appendix I

Additional Studies

https://www.lwcfcoalition.com/map-of-lwcf

MAP OF LWCF FUNDING THROUGH FEDERAL LAND MANAGEMENT AGENCIES AND STATE & LOCAL ASSISTANCE PROGRAM.



Legend:

Your Selections

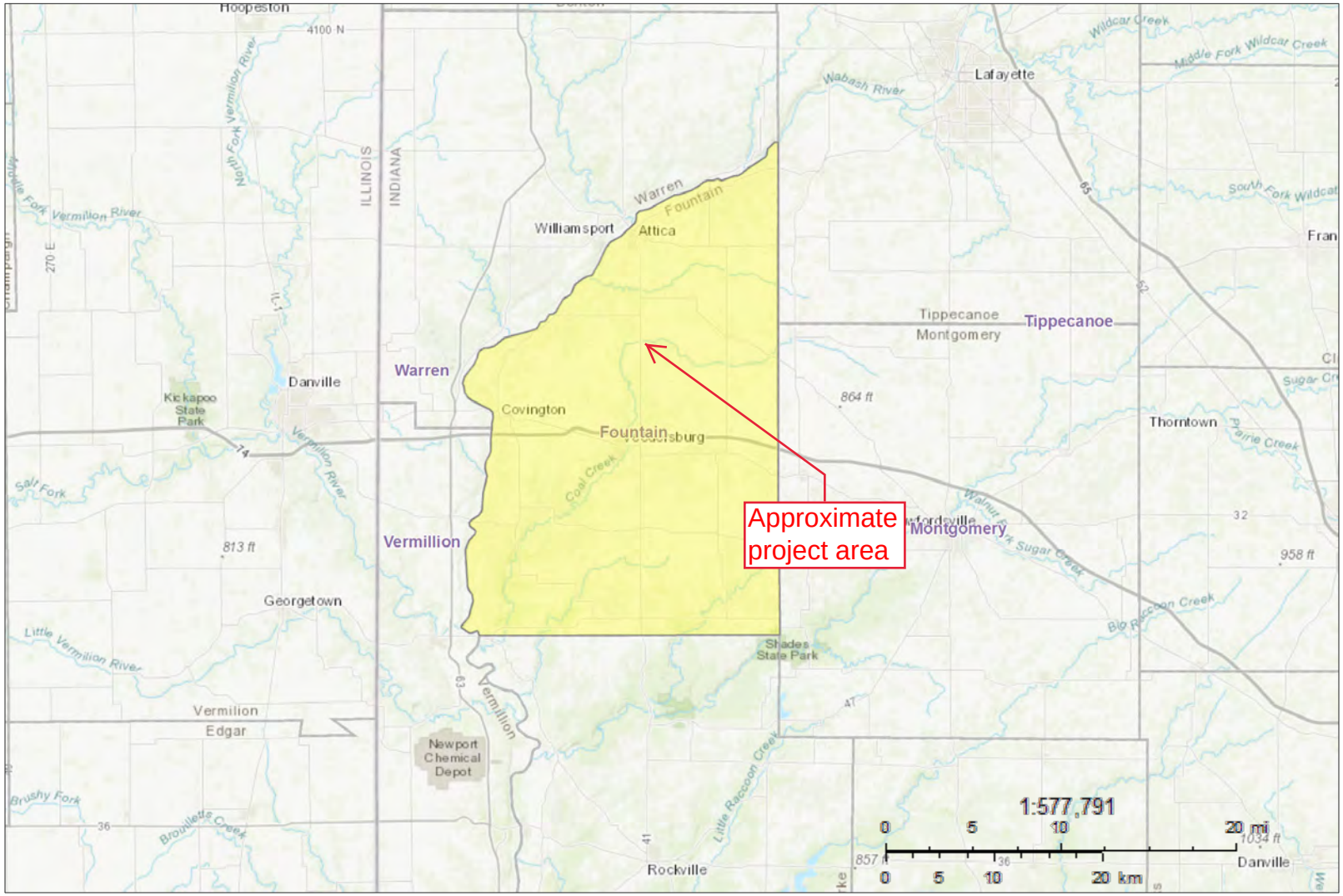
- ☐ 2018 boundaries were used to map 'Your Selections'

Selection Results

No Legend

2018 Boundaries

- ☐ County



Legend:

Your Selections

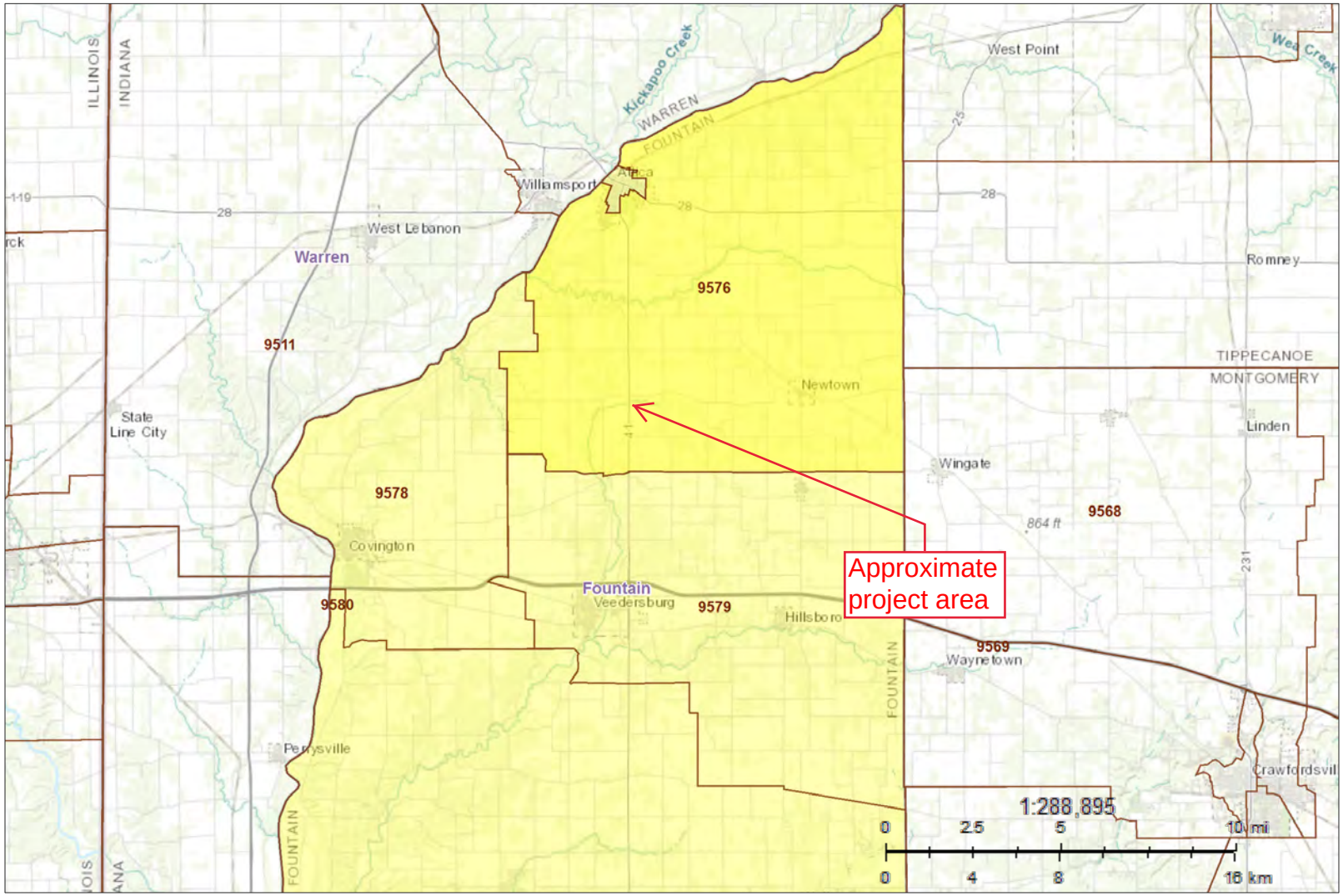
- 2017 boundaries were used to map 'Your Selections'

Selection Results

No Legend

2018 Boundaries

- County
- Census Tract



B02001

RACE

Universe: Total population

2013-2017 American Community Survey 5-Year Estimates

Note: This is a modified view of the original table.

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.

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.

	Fountain County, Indiana	Census Tract 9576, Fountain County, Indiana
	Estimate	Estimate
Total:	16,620	2,922
White alone	16,223	2,862
Black or African American alone	60	0
American Indian and Alaska Native alone	43	21
Asian alone	17	0
Native Hawaiian and Other Pacific Islander alone	0	0
Some other race alone	47	18
Two or more races:	230	21

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 Accuracy of the Data). The effect of nonsampling error is not represented in these tables.

While the 2013-2017 American Community Survey (ACS) data generally reflect the February 2013 Office of Management and Budget (OMB) definitions 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 definitions due to differences in the effective dates of the geographic entities.

B17001

POVERTY STATUS IN THE PAST 12 MONTHS BY SEX BY AGE

Universe: Population for whom poverty status is determined
2013-2017 American Community Survey 5-Year Estimates

Note: This is a modified view of the original table.

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.

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.

	Fountain County, Indiana	Census Tract 9576, Fountain County, Indiana
	Estimate	Estimate
Total:	16,208	2,755
Income in the past 12 months below poverty level:	2,047	361
Income in the past 12 months at or above poverty level:	14,161	2,394

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 Accuracy of the Data). The effect of nonsampling error is not represented in these tables.

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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.