

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

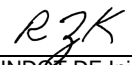
<b>Road No./County:</b>	SR 26, Tippecanoe County
<b>Designation Number(s):</b>	1900333
<b>Project Description/Termini:</b>	Small Structure Replacement with Bridge, SR 26, 4.98 miles west of US 52/231 over Goose Creek in Tippecanoe County. The project extends 825 feet west and 200 feet east of the structure center, from station 230+75.00 to station 241+00.00.

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

**Approval**

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

**Release for Public Involvement**

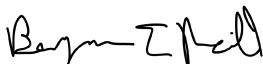
 _____ INDOT DE Initials and Date	January 3, 2023 _____ INDOT ESD Initials and Date
----------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------

**Certification of Public Involvement**

\_\_\_\_\_

INDOT Consultant Services Signature and Date

**INDOT DE/ESD Reviewer Signature and Date:**

 _____	January 3, 2023
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**Name and Organization of CE/EA Preparer:**

\_\_\_\_\_

Rachel Pluckebaum and Kirk Roth, Corradino, LLC

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County Tippecanoe County

Route SR 26

Des. No. 1900333

Note: Refer to the most current INDOT CE Manual, guidance language, and other ESD resources for further guidance regarding any section of this form.

## Part I – Public Involvement

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

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

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

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

Notice of Entry letters were mailed to potentially affected property owners near the project area on July 8, 2020 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-2 to G-3.

### Project Does Meet

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

## **Public Controversy on Environmental Grounds**

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

### No Controversy

At this time, there is not substantial public controversy concerning impacts to the community or to natural resources.

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

Sponsor of the Project: Indiana Department of Transportation (INDOT) INDOT District: Crawfordsville

Local Name of the Facility: SR 26

Funding Source (mark all that apply): Federal  State  Local  Other\*

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

### **PURPOSE AND NEED:**

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

#### Need

The need for this project is due to the condition of the existing concrete precast structure (CV 026-079-28.10) and the limited access at the inlet side of the structure. The north ends of both boxes have the last segment disconnected. There is bank erosion and channel scour at both ends of the structure. There is drift build up on a steel H-piling debris wall at the north end of the structure. The existing tall fill slopes make access to clear debris difficult. The structural evaluation rating from the culvert inspection report is a 4

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(poor condition) on a scale from 0 (failed condition) to 9 (excellent condition). See the culvert inspection report dated May 13, 2021, for more details (Appendix I-4 to I-18).

Purpose

The purpose of this project is to provide a structure with a condition rating of good or better (7 or above) and to improve access for maintenance and inspection at the culvert's inlet.

**PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):**

County: Tippecanoe Municipality: N/A

Limits of Proposed Work: 825 feet to the west and 200 feet to the east of the centerline of the structure

Total Work Length: 0.18 Mile(s) Total Work Area: 6.5 Acre(s)

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

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

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

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

INDOT and the Federal Highway Administration (FHWA) intend to proceed with the small structure project.

Location

The structure is on SR 26, 4.98 miles west of US 52/231. The project is in Shelby Township, Tippecanoe County, Indiana, in Section 7 and 18, Township 23 North, Range 5 West (Appendix B-4).

Existing Conditions

The existing structure is comprised of twin concrete culverts each with a 7-foot span, a 7-foot rise and a 296-foot length. Structural deficiencies include bank erosion and channel scour at both ends of the structure. There is drift build up at the north end by the trees. The north end of the culvert has H-piles placed vertically through the channel to stop the debris from clogging the entrance into the culverts and the north ends of both boxes have the last segment disconnected. As documented in the *Waters of the U.S. Determination Report*, Goose Creek flows south through the structure (Appendix F-13). The surrounding land use is rural with woods surrounding the project area. The existing SR 26 pavement section within the project area consists of one eastbound 12-foot travel lane and one westbound 12-foot travel lane with 8-foot paved shoulders. This section of SR 26 is a *Principal Arterial*.

Preferred Alternative

The preferred alternative is to remove and replace the twin reinforced concrete box structures with a 291-foot long, 22-foot span, 11-foot rise precast concrete 3-sided bridge (Appendix B-7 to B-21). This alternative would involve completely removing and replacing the existing twin box culverts. The steel H-piling debris wall at the inlet will be cut 3 feet below the existing grade. A paved 16-foot width access road will be constructed down the existing fill slopes to provide future access for maintenance and inspection of the replacement structure. The 890-foot in length access road will include a truck turnaround and goes from SR 26 to the northwest quadrant of the structure. Goose Creek will be realigned to flow through the structure and debris in the channel will be removed. Scour protection (Class 2 riprap on geotextiles) will be placed at the inlet, outlet, and throughout the structure. Additionally, riprap will be placed along the sideslopes as a slope stabilization measure. Temporary dewatering measures will involve the installation of a cofferdam at the inlet and outlet of the existing structures for a pumparound and construction site dewatering. A cofferdam and pumparounds will also be installed at three adjacent tributaries (Appendix B-16).

This project will require 0.63 acre of permanent right-of-way (ROW). Construction limits have been reduced to only the extent necessary to meet the project's purpose and need. Impact to trees and Goose Creek have been reduced to the extent practicable. See Appendix B-7 to B-21 for the design plans. The existing roadway will be replaced in kind, and the project will not change the vertical or horizontal alignment of SR 26. An overhead electric line along the south side of SR 26 will be temporarily relocated during





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### BRIDGES AND/OR SMALL STRUCTURE(S):

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

Structure/NBI Number(s): CV 026-079-28.10 Sufficiency Rating: Condition Rating 4 (poor), INDOT Culvert Inspection Report, May 13, 2021 (Appendix I-4 to I-18)  
(Rating, Source of Information)

	Existing		Proposed	
Bridge/Structure Type:	Twin Reinforced Concrete Box		Precast Concrete 3-Sided Bridge	
Number of Spans:	2		1	
Weight Restrictions:	N/A	ton	N/A	ton
Height Restrictions:	N/A	ft.	N/A	ft.
Curb to Curb Width:	N/A	ft.	N/A	ft.
Outside to Outside Width:	296	ft.	291	ft.
Shoulder Width:	10	ft.	10	ft.

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

The existing structure (CV 026-079-28.10) is comprised of two reinforced concrete box structures with a 7-foot span, a 7-foot rise, and a 296-foot length. The project will include removing and replacing the structures. The existing structures will be replaced with a 291-foot long, 22-foot span, 11-foot rise precast concrete 3-sided bridge. Scour protection (class 2 riprap on geotextiles) will be placed at the inlet, outlet, and throughout of the structure. Goose Creek will be realigned to flow through the structure and debris in the channel will be removed. Temporary dewatering measures will involve the installation of a cofferdam at the inlet and outlet of the existing structure for a pumparound and construction site dewatering.

The latest Historic Bridge Inventory (<http://www.in.gov/indot/2531.htm>) did not identify any historic structures at or near the project area. No additional structures are located within the project area.

### MAINTENANCE OF TRAFFIC (MOT) DURING CONSTRUCTION:

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

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

The MOT for this project will include a road closure during construction. SR 26 will be closed at the project area during construction and traffic will be detoured via SR 55, SR 352, US 52, and US 231. The detour is 24.5 miles in length (Appendix B-12 to B-14).

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

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### ESTIMATED PROJECT COST AND SCHEDULE:

Engineering: \$ 480,000 (2020) Right-of-Way: \$ 100,000 (2022) Construction: \$ 4,223,368 (2024)

Anticipated Start Date of Construction: Spring 2024

### RIGHT OF WAY:

Land Use Impacts	Amount (acres)	
	Permanent	Temporary
Residential	0.00	0.00
Commercial	0.00	0.00
Agricultural	0.00	0.00
Woodland	0.63	0.00
Wetlands	0.00	0.00
Other:	N/A	N/A
Other:	N/A	N/A
TOTAL	0.63	0.00

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

The existing ROW along the approaches to the structure is approximately 200 feet to the north and 200 feet to the south of the centerline of SR 26 (Appendix B-17).

The project requires approximately 0.63 acre of permanent ROW located in the north quadrant of the project area, which is wooded. There are woodlands adjacent to the existing travel way. The proposed ROW width will be approximately 290 feet north of the centerline on SR 26, 200 feet west and 65 feet east of the structure center. During Section 106 coordination, it was believed there would be 0.80 acre of permanent ROW, but ROW impact has been reduced since that time. No temporary ROW will be required for this project. The additional ROW is required to place scour protection measures and to construct the proposed access road at the structure's inlet.

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

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

### SECTION A - EARLY COORDINATION:

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

Early coordination letters were sent on December 22, 2021, unless stated otherwise below (Appendix C-2 to C-4).

Agency	Date Sent	Date Response Received	Appendix
USFWS Information for Planning and Consultation (IPaC) Portal	3/10/2022	3/10/2022	C-16 to C-28
Federal Highway Administration (FHWA)	12/22/2021	N/A	N/A
National Resource Conservation Service (NRCS)	8/31/2022	9/2/2022	C-10
Indiana Geological and Water Society (IGWS)	12/22/2021	12/22/2021	C-11 to C-13
Indiana Department of Natural Resources – Division of Fish and Wildlife (IDNR-DFW)	12/22/2021	1/21/2022	C-5 to C-8
U.S. Department of Housing and Urban Development (HUD)	12/22/2021	N/A	N/A

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National Park Service (NPS)	12/22/2021	N/A	N/A
U.S. Army Corps of Engineers (USACE)	12/22/2021	N/A	N/A
INDOT-Environmental Policy Manager	12/22/2021	N/A	N/A
INDOT-Crawfordsville District	12/22/2021	N/A	N/A
Tippecanoe County Surveyor	12/22/2021	N/A	N/A
Tippecanoe County Executive Director	12/22/2021	N/A	N/A
Tippecanoe County Soil & Water Conservation	12/22/2021	N/A	N/A
Area Plan Commission of Tippecanoe County (APCTC)	12/22/2021	1/12/2022	C-14 to C-15
INDOT Bat and Heritage Database Check	5/26/2021	5/27/2021	C-9

All applicable recommendations are included in the Environmental Commitments section of this CE document.

## SECTION B – ECOLOGICAL RESOURCES:

### Streams, Rivers, Watercourses & Other Jurisdictional Features

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

**Presence**


**Impacts**

Yes	No

Total stream(s) in project area: 1688 Linear feet      Total impacted stream(s): 1056 Linear feet

Stream Name	Classification	Total Size in Project Area (linear feet)	Impacted linear feet	Comments (i.e. location, flow direction, likely Water of the US, appendix reference)
Goose Creek	Perennial	701	506	Project structure, flowing south, likely Water of the U.S., Appendix F-5
UNT1 to Goose Creek	Intermittent	265	250	50 feet north of the project structure, flowing west, likely Water of the U.S. Appendix F-5 to F-6
UNT2 to Goose Creek	Ephemeral	349	85	150 feet north of the project structure, flowing east, likely Water of the U.S. Appendix F-6
UNT3 to Goose Creek	Ephemeral	373	215	60 feet south of the project structure, flowing east, likely Waters of the U.S. Appendix F-7

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

Based on the desktop review, the aerial map of the project area, and the RFI report (Appendix E-3) there are fourteen streams, rivers, watercourses or other jurisdictional features within the 0.5-mile search radius. There are four streams, rivers, watercourse or other jurisdictional features within or adjacent to the project area. That number was confirmed by the site visits on September 1 and September 14, 2021 and September 14, 2022 by Corradino, LLC.

A *Waters of the U.S. Determination Report* was completed for the project on September 20, 2022. Please refer to Appendix F for the *Waters of the U.S. Report*. It was determined that four streams within the project area are apparent Waters of the U.S. traceable to the navigable Wabash River (Appendix F-5 to F-7). Impacts to Goose Creek, UNT1 to Goose Creek, UNT2 to Goose Creek, and UNT3 to Goose Creek include scour protection (revetment riprap on geotextiles) will be placed at the inlet and outlet of the structure. Temporary dewatering measures will involve the installation of a cofferdam at the inlet and outlet of the pipes for a pumparound and construction site dewatering (Appendix B-16 and B-17). The USACE makes all final determinations regarding jurisdiction.

Goose Creek is a perennial creek that flows south through the project culvert and has an ordinary high water mark (OHWM) of approximately 16.0 feet in width and 0.25 foot in depth. The upstream drainage area is 6.037 square miles at the project location (Appendix F-5). Up to 416 linear feet of permanent and 90 linear feet of temporary impacts to Goose Creek are anticipated. Goose Creek will be realigned to flow through the structure and debris in the channel will be removed. Goose Creek is a mapped U.S.

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Geological Survey (USGS) blue line perennial stream.

UNT1 to Goose Creek is an intermittent channel that flows west into Goose Creek approximately 50 feet north of the project structure and has an OHWM of approximately 2.0 feet wide and 0.25 feet deep. The upstream drainage area is included within the 6.037 square miles drainage basin of Goose Creek (Appendix F-5). Up to 225 linear feet of permanent and 25 linear feet of temporary impacts to UNT1 to Goose Creek are anticipated. UNT1 to Goose Creek is a mapped USGS blue line intermittent stream.

Impacts to UNT1 to Goose Creek include scour protection (revetment riprap on geotextiles) will be placed at the inlet and outlet of the structure. Temporary dewatering measures will involve the installation of a cofferdam at the inlet and outlet of the pipes for a pumparound and construction site dewatering (Appendix B-16 and B-17).

UNT2 to Goose Creek is an ephemeral creek that flows east into Goose Creek approximately 150 feet north of the project structure and has an OHWM of approximately 9.0 feet in width and 0.75 foot in depth. The upstream drainage area is included within the 6.037 square miles drainage basin of Goose Creek (Appendix F-6). Up to 25 linear feet of permanent and 60 linear feet of temporary impacts to UNT2 to Goose Creek are anticipated. UNT2 to Goose Creek is not a mapped USGS blue line stream but is recorded as a stream/river in the USGS National Hydrogeography Dataset.

Impacts to UNT2 to Goose Creek include scour protection (revetment riprap on geotextiles) will be placed at the inlet and outlet of the structure. Temporary dewatering measures will involve the installation of a cofferdam at the inlet and outlet of the pipes for a pumparound and construction site dewatering (Appendix B-16 and B-17).

UNT3 to Goose Creek is an ephemeral creek that flows east into Goose Creek approximately 60 feet south of the project structure and has an OHWM of approximately 2.0 feet in width and 0.25 foot in depth. The upstream drainage area is included within the 6.037 square miles drainage basin of Goose Creek (Appendix F-7). Up to 160 linear feet of permanent and 55 linear feet of temporary impacts to UNT3 to Goose Creek are anticipated. UNT3 to Goose Creek is not a mapped USGS blue line stream but is recorded as a canal/ditch in the USGS National Hydrogeography Dataset.

Impacts to UNT3 to Goose Creek include scour protection (revetment riprap on geotextiles) will be placed at the inlet and outlet of the structure. Temporary dewatering measures will involve the installation of a cofferdam at the inlet and outlet of the pipes for a pumparound and construction site dewatering (Appendix B-16 and B-17).

There are no Federal, Wild and Scenic Rivers, State Natural, Scenic and Recreational Rivers, Outstanding Rivers for Indiana, navigable waterways or National Rivers Inventory waterways present within or adjacent to the project area. Therefore, no impacts to these resources are expected. No mitigation is expected. Impacts to jurisdictional waterways has been reduced through project design to the extent practicable while still meeting the project purpose and need. A Section 404 Permit from USACE and a Section 401 Water Quality Certification from IDEM will be required for impacts to jurisdictional streams.

IDNR-DFW responded on January 21, 2022 (Appendix C-5 to C-8) with recommendations to avoid and minimize impacts to fish, wildlife, and botanical resources to the greatest extent possible, and compensate for impacts. The recommendations include: that a structure that allows natural substrate to form; bank stabilization measures; minimization of channel disturbance due to tree and brush removal; minimum of 6 inch riprap grade for aquatic organism habitat; sediment control at streams; do not construct any temporary runarounds, access bridges, causeways, cofferdams, diversions, or pumparounds; and avoidance of all work within the inundated part of the stream channel during the fish spawning season (April 1 through June 30).

All applicable recommendations are included in the Environmental Commitments section of this CE document.

Open Water Feature(s)	Presence	Impacts	
		Yes	No
Reservoirs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lakes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Farm Ponds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Retention/Detention Basin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Storm Water Management Facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

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*to avoid, minimize, and mitigate if impacts will occur.*

Based on the desktop review, the aerial map of the project area, and the RFI report (Appendix E-3 to E-4) there is one open water feature within the 0.5-mile search radius. The site visits on September 1 and September 14, 2021 and September 14, 2022 confirmed that no open water features are present within or adjacent to the project area.

IDNR-DFW responded on January 21, 2022 (Appendix C-5 to C-8) and did not include recommendations for open water features. All applicable recommendations are included in the Environmental Commitments section of this CE document.

	<u>Presence</u>	<u>Impacts</u>	
<b>Wetlands</b>	<input type="checkbox"/>	Yes	No
Total wetland area: <u>N/A</u> Acre(s)	Total wetland area impacted:	<u>N/A</u>	<u>N/A</u> Acre(s)

	<u>Documentation</u>	<u>ESD Approval Dates</u>
<b>Wetlands</b> (Mark all that apply)		
Wetland Determination	<input checked="" type="checkbox"/>	September 20, 2020
Wetland Delineation	<input type="checkbox"/>	
USACE Isolated Waters Determination	<input type="checkbox"/>	

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

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

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

Based on the desktop review, the aerial map of the project area, and the RFI report (Appendix E-3) there are two wetlands within the 0.5-mile search radius. There are no wetlands within or adjacent to the project area, which was confirmed by the site visit on September 1 and September 14, 2021 and September 14, 2022 by Corradino, LLC and a wetland delineation data point by Corradino, LLC on September 14, 2022 (Appendix F-8 and F-38 to F-39). Therefore, no impacts are expected.

IDNR-DFW responded on January 21, 2022 (Appendix C-5 to C-8) and did not include recommendations for wetlands. All applicable recommendations are included in the Environmental Commitments section of this CE document.

	<u>Presence</u>	<u>Impacts</u>	
<b>Terrestrial Habitat</b>	<input checked="" type="checkbox"/>	Yes	NO
Total terrestrial habitat in project area: <u>6.5</u> Acre(s)	Total tree clearing:	<u>5.4</u>	<u>5.4</u> Acre(s)

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

Based on a desktop review, site visits on September 1 and September 14, 2021 by Corradino, LLC, the aerial map of the project area (Appendix B-3), there are woodlands within the project area. Dominant species in the creekside area primarily include sugar maple (*Acer saccharum*), common hackberry (*Celtis occidentalis*), eastern black walnut (*Juglans nigra*), black locust (*Robinia pseudoacacia*), eastern redbud (*Cercis canadensis*), Amur honeysuckle (*Lonicera maackii*), Canada goldenrod (*Solidago canadensis*), rough horsetail (*Equisetum hyemale*), and other species. Dominant species in the sparsely wooded hillslope area

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include eastern redcedar (*Juniperus virginiana*), black locust (*Robinia pseudoacacia*), Amur honeysuckle (*Lonicera maackii*), Canada goldenrod (*Solidago canadensis*) and tall fescue (*Schedonorus arundinaceus*). Approximately 5.4 acre of impacts, including tree clearing, are expected to this habitat. Disturbance to wooded areas have been reduced to the extent practicable and mitigation is anticipated. There is also 1.1 acre of grassy roadside habitat within the project area. Dominant species include tall fescue (*Schedonorus arundinaceus*), white clover (*Trifolium repens*), and common dandelion (*Taraxacum officinale*). Land use is the surrounding area is rural. The project will disturb approximately 6.5 acre of soil and 5.4 acre tree removal is required at the inlet and outlet of the project structure and along the fill slopes, access road, and truck turnaround.

IDNR-DFW responded on January 21, 2022 with recommendations regarding wildlife passage, minimization of tree clearing, mitigation for non-wetland forest, revegetation with native species, and erosion control (Appendix C-5 to C-8). All applicable recommendations are included in the Environmental Commitments section of this CE document.

**Protected Species**

**Federally Listed Bats**

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

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

Determination Received for Listed Bats from USFWS: NE  NLAA  LAA

**Other Species not included in IPaC**

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

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

**Migratory Birds**

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

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

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

Based on a desktop review and the RFI report (Appendix E-4), completed by Corradino, LLC on March 18, 2022, the IDNR Tippecanoe County Endangered, Threatened and Rare (ETR) Species List has been checked. According to the IDNR-DFW early coordination response letter dated January 21, 2022 (Appendix C-5 to C-8), the Natural Heritage Program's Database has been checked and no presence of ETR species are within the 0.5-mile search radius. An INDOT 0.5-mile bat review occurred on May 27, 2021. There are no documented sites within 0.5-mile of the project area (Appendix C-9).

Project information was submitted through the USFWS's Information for Planning and Consultation (IPaC) portal, and an official species list was generated on November 2, 2022 (Appendix C-30 to C-45). The project is within range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (NLEB) (*Myotis septentrionalis*). The official species list generated from IPaC also indicated one other species present within the project area, the candidate species monarch butterfly (*Danaus plexippus*). Because the monarch butterfly does not have endangered or threatened status, it is not federally protected under the Endangered Species Act.

The project qualifies for the Range-wide Programmatic Informal Consultation for the Indiana bat and northern long-eared bat (NLEB), dated May 2016 (revised February 2018), between FHWA, Federal Railroad Administration (FRA), Federal Transit Administration (FTA), and USFWS. INDOT conducted a culvert inspection on May 13, 2021 and Corradino, LLC conducted a bat inspection on September 1, 2021. Neither inspection identified signs of bats/birds using the structure (Appendix I-8; I-3). An effect determination key was completed on March 10, 2022, and based on the responses provided, it was found that the project "may affect- not likely to adversely affect" the Indiana bat and/or the NLEB (Appendix C-16 to C-29). INDOT reviewed and verified the effect find on March 10, 2022 and requested USFWS's review of the finding. No response was received from USFWS within the 14-day review period; therefore, it was concluded they concur with the finding. Avoidance and Minimization Measures (AMMs) include the following:

- General AMM1 – Ensure all 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 AMM1 – Direct temporary lighting away from suitable habitat during the active season, from April 1 to September

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- Tree Removal AMM1 – Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal.
- Tree Removal AMM2 – Apply time of year restrictions for tree removal when bats are not likely to be present (October 1 through March 31), 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 documented roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed.
- Tree Removal AMM3 – 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 (eg., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits).
- Tree Removal AMM4 – Do not remove documented Indiana bat or NELB roosts that are still suitable for roosting, or trees within 0.25 miles of roosts, or documented foraging habitat any time of year.

AMMs are included as firm commitments in the Environmental Commitments section of this document.

The existing structure (CV 026-079-28.10) and the project's surrounding habitat is conducive for use (i.e. nests) by a bird species protected under the Migratory Bird Treaty Act (MBTA). Prior to the start of nesting season (May 1) the structure must be inspected for birds or signs of birds. If birds or signs of birds are found during the 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/RSP.

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, USFWES will be contacted for consultation.

**Geological and Mineral Resources**

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

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

Date Karst Evaluation reviewed by INDOT EWPO (if applicable): \_\_\_\_\_

*Discuss if project is located in the Indiana Karst Region and if any karst features have been identified in the project area (from RFI). Discuss response received from IGWS coordination. Discuss if any mines, oil/gas, or exploration/abandoned wells were identified and if impacts will occur. Include discussion of karst study/report was completed and results. (Karst investigation must comply with the current Protection of Karst Features during Planning and Construction guidance and coordinated and reviewed by INDOT EWPO)*

Based on a desktop review and the Indiana Karst Region map, the project is located outside the designated Indiana Karst Region as outlined in the most current *Protection of Karst Features during Project Development and Construction*. According to the topographic map of the project area (Appendix B-4), the RFI report (Appendix E-3) there are no karst features identified within or adjacent to the project area. In the early coordination response December 22, 2021, the Indiana Geological and Water Survey (IGWS) did not indicate that karst features exist in the project area (Appendix C-11 to C-13). IGWS identified the project area as having moderate liquefaction potential and 1% annual change of a flood hazard. There is moderate potential for bedrock resources and low potential for sand and gravel resources. There are abandoned industrial minerals and sand gravel pits nearby. Response from IGWS has been communicated to the designer on July 7, 2022. No impact is expected.

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**SECTION C – OTHER RESOURCES**

**Drinking Water Resources**

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

Presence

X

Impacts

Yes	No
	X

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

Yes	No
	X

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

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

The Indiana Department of Environmental Management's Wellhead Proximity Determinator website (<http://www.in.gov/idem/cleanwater/pages/wellhead/>) was accessed June 2, 2022, by Corradino, LLC. This project is not located in a Source Water Area but is within a Wellhead Protection Area. Early coordination letters were sent to the APCTC, Tippecanoe County Soil and Water Conservation District, and Tippecanoe County Surveyor on December 22, 2021. The APCTC responded on January 12, 2022 that one significant water withdraw is located near SR 26 and CR 600W (Appendix C-14 to C-15). The Soil and Water Conservation District and County Surveyor provided no response. The feature will not be affected because the groundwater withdrawal location is outside the project and within a different watershed, and because the project will utilize standard INDOT specifications which prevent groundwater contamination. Therefore, no impacts are expected.

The Indiana Department of Natural Resources Water Well Record Database website (<https://www.in.gov/dnr/water/3595.htm>) was accessed on July 7, 2022, by Corradino, LLC. No wells are located near this project. Therefore, no impacts are expected.

Based on a desktop review, site visits on September 1 and 14, 2021 and September 14, 2022 by Corradino, LLC, the aerial map of the project area (Appendix B-3), no public water systems were identified. Therefore, no impacts are expected.

**Floodplains**

- Project located within a regulated floodplain
- Longitudinal encroachment
- Transverse encroachment
- Homes located in floodplain within 1000' up/downstream from project

Presence

X
X

Impacts

Yes	No
X	
X	

If applicable, indicate the Floodplain Level?

Level 1     Level 2     Level 3     Level 4     Level 5

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

Based on a desktop review of The Indiana Department of Natural Resources Indiana Floodway Information Portal website ([Indiana Floodplain Information Portal 2.0 \(arcgis.com\)](http://www.in.gov/dnr/floodway/)) by Corradino, LLC on September 6, 2022, and the RFI report, this project is located in



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a regulatory floodplain as determined from approved IDNR floodplain maps (Appendix F-16). An early coordination letter was sent on December 22, 2021, to the Tippecanoe County Surveyor and to the Tippecanoe County Soil and Water Conservation District. These floodplain administrators did not respond within the 30 day time frame. This project qualifies as a Category 4 per the current INDOT CE Manual, which states:

No homes are located within the base floodplain within 1,000 feet upstream and 2 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.

<b>Farmland</b>	<b><u>Presence</u></b>	<b><u>Impacts</u></b>	
		<b>Yes</b>	<b>No</b>
Agricultural Lands	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prime Farmland (per NRCS)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Points (from Section VII of CPA-106/AD-1006*)	<u>N/A</u>		
<i>*If 160 or greater, see CE Manual for guidance.</i>			

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

Based on a desktop review, a site visit on September 1 and 14, 2021 and September 14, 2022 by Corradino, LLC, the aerial map of the project area (Appendix B-3), there is no land that meets the definition of farmland under the Farmland Protection Policy Act (FPPA). The requirements of the FPPA do not apply to this project; therefore, no impacts are expected. An early coordination letter was sent on August 31, 2022, to the NRCS. The NRCS replied on September 2, 2022 that the project would not cause a conversion of prime farmland (Appendix C-10). No alternatives other than those previously discussed in this document will be investigated without reevaluating impacts to prime farmland.

### SECTION D – CULTURAL RESOURCES

	<b>Category(ies) and Type(s)</b>	<b>INDOT Approval Date(s)</b>	<b>N/A</b>
<b>Minor Projects PA</b>	B-6	August 23, 2022	
<b>Full 106 Effect Finding</b>	No Historic Properties Affected <input type="checkbox"/>	No Adverse Effect <input type="checkbox"/>	Adverse Effect <input type="checkbox"/>
<b>Eligible and/or Listed Resources Present</b>	NRHP Building/Site/District(s) <input type="checkbox"/>	Archaeology <input type="checkbox"/>	NRHP Bridge(s) <input type="checkbox"/>

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**Documentation Prepared** (mark all that apply)

- APE, Eligibility and Effect Determination 800.11 Documentation
- Historic Properties Report or Short Report
- Archaeological Records Check and Assessment
- Archaeological Phase Ia Survey Report
- Archaeological Phase Ic Survey Report
- Other:

**ESD Approval Date(s)**

8/23/22
8/03/22

**SHPO Approval Date(s)**

9/23/22
9/23/22

**MOA Signature Dates** (List all signatories)

Memorandum of Agreement (MOA)

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

On August 23, 2022, the INDOT Cultural Resources Office (CRO) determined that this project falls within the guidelines of Category B, Type 6 under the Minor Projects Programmatic Agreement (Appendix D-2 to D-6). The project falls under Category B-6 which covers minor actions deemed appropriate for coverage under the MPPA, by consultation and mutual agreement between INDOT, FHWA, and the SHPO. Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resources. INDOT CRO review determined that no above-ground concerns exist (Appendix D-5). The project takes place in undisturbed soils. An Archaeological Records Check and Phase 1a reconnaissance survey were conducted by Metric, LLC (Appendix D-6). A 10.6-acre survey was examined, and no evidence of archaeological deposits was identified. INDOT-CRO concurred with the Metric, LLC evaluation and concluded that there are no archaeological concerns within the project scope. No further consultation is required. This completes the Section 106 process and the responsible of the FHWA under Section 106 have been fulfilled.

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

	<u>Presence</u>	<u>Use</u>	
		Yes	No
<b>Parks and Other Recreational Land</b>			
Publicly owned park	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Publicly owned recreation area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (school, state/national forest, bikeway, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Wildlife and Waterfowl Refuges</b>			
National Wildlife Refuge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
National Natural Landmark	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State Wildlife Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State Nature Preserve	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Historic Properties</b>			
Site eligible and/or listed on the NRHP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b><u>Evaluations Prepared</u></b>			
Programmatic Section 4(f)	<input type="checkbox"/>		
"De minimis" Impact	<input type="checkbox"/>		
Individual Section 4(f)	<input type="checkbox"/>		
Any exception included in 23 CFR 774.13	<input type="checkbox"/>		

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

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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 NRHP eligible or listed historic properties regardless of ownership. Lands subject to this law are considered Section 4(f) resources.

Based on a desktop review, the aerial map of the project area (Appendix B-3), and the RFI report (Appendix E-3), there are no potential 4(f) resources located within the 0.5-mile search radius. According to additional research, and by the site visits on September 1 and 14, 2021 and September 14, 2022 by Corradino, LLC, there are no 4(f) resources within or adjacent to the project area. Therefore, no use is expected.

**Section 6(f) Involvement**

**Presence**

**Use**

Yes

No

**Section 6(f) Property**




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

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

A review of 6(f) properties on the INDOT ESD website revealed a total of eighteen properties in Tippecanoe County (Appendix I-2). None of these properties are located within or adjacent to the project area. Therefore, there will be no impacts to 6(f) resources.

**SECTION F – Air Quality**

**STIP/TIP and Conformity Status of the Project**

- Is the project in the most current STIP/TIP?
- Is the project located in an MPO Area?
- Is the project in an air quality non-attainment or maintenance area?
- If Yes, then:
  - Is the project in the most current MPO TIP?
  - Is the project exempt from conformity?
- If No, then:
  - Is the project in the Transportation Plan (TP)?
  - Is a hot spot analysis required (CO/PM)?

Yes	No
X	
X	
	X

Location in STIP: 2022-2026 STIP

Name of MPO (if applicable): \_\_\_\_\_

Location in TIP (if applicable): \_\_\_\_\_

Level of MSAT Analysis required?

Level 1a  Level 1b  Level 2  Level 3  Level 4  Level 5

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

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The project is part of the APCTC TIP which has been directly incorporated into the Fiscal Year (FY) 2022-2026 Statewide Transportation Improvement Program (STIP) (Appendix H-6).

This project is located in Tippecanoe County which is currently in attainment for all criteria pollutants according to IDEM Air Quality Data (<https://www.in.gov/idem/airmonitoring/air-quality-data/>). 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 G - NOISE

<b>Noise</b>	<b>Yes</b>	<b>No</b>
Is a noise analysis required in accordance with FHWA regulations and INDOT's traffic noise policy?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Date Noise Analysis was approved/technically sufficient by INDOT ESD: _____		

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

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

## SECTION H – COMMUNITY IMPACTS

<b>Regional, Community &amp; Neighborhood Factors</b>	<b>Yes</b>	<b>No</b>
Will the proposed action comply with the local/regional development patterns for the area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Will the proposed action result in substantial impacts to community cohesion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will the proposed action result in substantial impacts to local tax base or property values?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will construction activities impact community events (festivals, fairs, etc.)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the community have an approved transition plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If No, are steps being made to advance the community's transition plan?	<input type="checkbox"/>	<input type="checkbox"/>
Does the project comply with the transition plan? (explain in the discussion below)	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

The MOT for this project will include a road closure during construction. SR 26 will be closed at the project area during construction and traffic will be detoured via SR 55, SR 352, US 52/US 231. The road closure will pose a temporary inconvenience to traveling motorists (including school buses and emergency services); however, no significant delays are anticipated, and all inconveniences and delays will cease upon project completion. Construction is expected to begin in Spring 2024 and last the entire construction season.

The proposed action is not expected to conflict with development patterns or have substantial impacts to property values. The project is not expected to affect American Disabilities Act (ADA) facilities in any way.

### Public Facilities and Services

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

Based on a desktop review, the aerial map of the project area (Appendix B-3), and the RFI report (Appendix E-3) there are 2 public

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facilities (cemeteries) within the 0.5-mile search radius, and no public airports are located within 3.8 miles (20,000 feet) of the project area. There are no public facilities within or adjacent to the project area, which was confirmed by the site visits on September 1 and 14, 2021 and September 14, 2022 by Corradino, LLC. Therefore, no impacts are expected. Access to all properties will be maintained during construction.

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)

During the development of the project were EJ issues identified?

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

Does the project require an EJ analysis?

If YES, then:

Are any EJ populations located within the project area?

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

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

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

Under FHWA Order 66.40.23A, 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 right-of-way. The project will require 0.63 acre of ROW. Therefore, an EJ Analysis is required.

Potential EJ impacts are detected by locating minority and low-income populations relative to a reference population to determine if populations of EJ concern 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 Tippecanoe County, Indiana. The community that overlaps the project area is called the affected community (AC). In this project, the AC is comprised of Census Tract 102.1 which encompasses the proposed ROW acquisition, and Census Tract 106 which includes an area of the project not subject to ROW acquisition. 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 2018 and 2019 U.S. Census American Community Survey was obtained from <https://data.census.gov/cedsci> on July 27, 2022 by Corradino, LLC. The data collected for minority and low-income populations within the COC and AC are summarized in the below table.

The AC Census Tract 102.1 has a percent minority of 4.59% which is below 50% and is below the 125% COC threshold. The AC Census Tract 106 has a percent minority of 10.10% which is below 50% and is below the 125% COC threshold. Therefore, AC Census Tracts 102.1 and 106 do not contain a minority population of EJ concern.

The AC Census Tract 102.1 has a percent low-income of 7.37% which is below 50% and is below the 125% COC threshold. The AC Census Tract 106 has a percent low-income of 6.09% which is below 50% and is below the 125% COC threshold. Therefore, AC Census Tracts 102.1 and 106 do not contain a low-income population of EJ concern.

	COC – Tippecanoe County, Indiana	AC – Census Tract 102.1	AC – Census Tract 106
Percent Minority	23.62%	4.59%	10.10%
125% of COC	29.52%	AC < 125% COC	AC < 125% COC
EJ Population of Concern		No	No
Percent Low-Income	18.72%	7.37%	6.09%
125% of COC	23.40%	AC < 125% COC	AC < 125% COC
EJ Population of Concern		No	No

**Conclusion**

The census data sheets, map, and calculations can be found in Appendix I-19 to I-24. This project does not contain a minority population or low-income population of EJ. Therefore, this project is not expected to not have a disproportionately high and adverse effect on minority or low-income populations. No further EJ analysis is warranted.

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**Relocation of People, Businesses or Farms**

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

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

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

*Discuss any relocations that will occur due to the project. If a BIS or CSRS is required, discuss the results in the discussion below.*

No relocations of people, businesses, or farms will take place as a result of this project.

**SECTION I – HAZARDOUS MATERIALS & REGULATED SUBSTANCES**

Documentation

**Hazardous Materials & Regulated Substances** (Mark all that apply)

Red Flag Investigation (RFI)	<input checked="" type="checkbox"/>
Phase I Environmental Site Assessment (Phase I ESA)	<input type="checkbox"/>
Phase II Environmental Site Assessment (Phase II ESA)	<input type="checkbox"/>
Design/Specifications for Remediation required?	<input type="checkbox"/>

Date RFI concurrence by INDOT SAM (if applicable): March 18, 2022

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

Based on a review of GIS and available public records, the RFI was completed on March 18, 2022 by Corradino, LLC and INDOT SAM provided their concurrence on March 18, 2022 (Appendix E-5). 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.

## Part IV – Permits and Commitments

**PERMITS CHECKLIST**

**Permits** (mark all that apply)

Likely Required

**Army Corps of Engineers (404/Section10 Permit)**

Nationwide Permit (NWP)	<input type="checkbox"/>
Regional General Permit (RGP)	<input checked="" type="checkbox"/>
Individual Permit (IP)	<input type="checkbox"/>
Other	<input type="checkbox"/>

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

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

**IN Department of Natural Resources**

This is page 18 of 21 Project name: SR 26 Small Structure Project Date: December 13, 2022

# Indiana Department of Transportation

County Tippecanoe County

Route SR 26

Des. No. 1900333

**Permits** (mark all that apply)

**Likely Required**

Construction in a Floodway	<input checked="" type="checkbox"/>
Navigable Waterway Permit	<input type="checkbox"/>
Other	<input type="checkbox"/>
<b>Mitigation Required</b>	<input checked="" type="checkbox"/>
<b>US Coast Guard Section 9 Bridge Permit</b>	<input type="checkbox"/>
<b>Others (Please discuss in the discussion below)</b>	<input type="checkbox"/>

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

Goose Creek, UNT1 to Goose Creek, UNT2 to Goose Creek, and UNT3 to Goose Creek were identified as jurisdictional waterways in the *Waters of the U.S. Determination Report*. A Section 404 Permit from USACE and a Section 401 Water Quality Certification from IDEM will be required for approximately 1056 linear feet of stream impact (826 linear feet permanent and 230 linear feet temporary).

Total disturbed area of soil will be 6.5 acres, which is above the 1.0 acre threshold for an IDEM Construction Stormwater General Permit (GSGP), formerly Rule 5 Storm Water Runoff Permit.

The upstream drainage area of Goose Creek is 6.037 square miles, and the project does not meet the rural bridge exemption; therefore, an IDNR Construction in a Floodway Permit will be required.

No public airports are within 3.8 miles of the project area and an Indiana Tall Structure Permit is not required.

Applicable recommendations provided by resource agencies are included in the *Environmental Commitments* section of this document. If permits are found to be necessary, the conditions of the permit will be requirements of the project and will supersede these recommendations.

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

## ENVIRONMENTAL COMMITMENTS

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

**Firm:**

1. If the scope of work or permanent or temporary right-of-way amounts change, INDOT Environmental Services Division (ESD) and the Crawfordsville District Design/Environmental Manager 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 activity that would block or limit access. (INDOT ESD)
3. USFWS Bridge/Structure Assessment shall take place no earlier than two (2) years prior to the start of construction. If construction will begin after May 13, 2023, an inspection of the structure by a qualified individual, must be performed. Inspection of the structure should check for presence of bats/bat indicators and/or presence of birds. 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. (INDOT ESD)
4. The existing structure (CV 026-079-28.10) and the project's surrounding habitat is conducive for use (i.e. nests) by a bird species protected under the Migratory Bird Treaty Act (MBTA). Prior to the start of nesting season (May 1) the structure must be inspected for birds or signs of birds. If birds or signs of birds are found during the 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/RSP. (INDOT ESD)
5. General AMM1 – Ensure all 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 AMM1 – Direct temporary lighting away from suitable habitat during the active season, April 1 through September 30.

## Indiana Department of Transportation

County Tippecanoe County

Route SR 26

Des. No. 1900333

(USFWS)

7. Tree AMM1 - Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to the extent practicable to avoid tree removal in excess of what is required to implement the project safely. (USFWS)

8. Tree Removal AMM2 - Apply time of year restrictions when bats are not likely to be present (October 1 to March 31) for tree removal 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, IDNR-DFW)

9. Tree Removal AMM3 - 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 AMM4 - Do not remove documented Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 miles of roosts, or documented foraging habitat any time of year. (USFWS)

**For Further Consideration:**

11. If box or pipe culverts are used, the bottoms should be buried to 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 bankfull width); maintain the natural stream substrate within the structure; have a minimum openness ratio (height width/length) of 0.25; and have stream depth and water velocities during low-flow conditions that are approximate to those in the natural stream channel. 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)

12. 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 unless specifically designed and installed for grade control and aquatic organism passage. This is to prevent obstructions to the movement of aquatic organisms upstream and downstream. (IDNR-DFW)

13. 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)

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

15. Impacts to non-wetland of one (1) acre or more should be mitigated at a minimum 2:1 ratio. (IDNR-DFW)



**Indiana Department of Transportation**

County Tippecanoe County

Route SR 26

Des. No. 1900333

**Table of Contents for Appendix Items**

- Appendix A: INDOT Supporting Documentation
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- Appendix B: Graphics
  - Project Location Map ..... (B-2)
  - Aerial Map..... (B-3)
  - USGS Topographic Map ..... (B-4)
  - Waterways and Photo Key Map..... (B-5)
  - Photo Log ..... (B-6)
  - Plans..... (B-7 to B-21)
- Appendix C: Early Coordination
  - Example early coordination letter ..... (C-2 to C-4)
  - Early coordination responses..... (C-5 to C-45)
    - IDNR-DFW ..... (C-5 to C-8)
    - Bat and Heritage Database Check.....(C-9)
    - NRCS..... (C-10)
    - IGWS..... (C-11 to C-13)
    - Area Plan Commission of Tippecanoe County ..... (C-14 to C-15)
    - USFWS Concurrence Verification Letter ..... (C-16 to C-29)
    - USFWS Species List ..... (C-30 to C-45)
- Appendix D: Section 106 of the NHPA
  - Minor Projects PA Project Assessment.....(D-2 to D-6)
- Appendix E: Red Flag and Hazardous Materials
  - Red Flag Investigation.....(E-2 to E-9)
- Appendix F: Water Resources
  - Waters Report.....(F-2 to F-9)
  - Supporting Maps..... (F-10 to F-20)
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  - Wetland Determination Data Form ..... (F-38 to F-39)
  - Preliminary Jurisdictional Determination Form ..... (F-40 to F-43)
- Appendix G: Public Involvement
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  - STIP page with project listed.....(H-2 to H-6)
- Appendix I: Additional Studies
  - Section 6(f) List..... (I-2)
  - Bridge/Structure Assessment Form ..... (I-3)
  - Culvert Inspection Report .....(I-4 to I-18)
  - Environmental Justice Memorandum..... (I-19 to I-24)

# Appendix A

INDOT Supporting Documentation

Des. No. 1900333

## Categorical Exclusion Level Thresholds

	PCE	Level 1	Level 2	Level 3	Level 4 <sup>1</sup>
<b>Section 106</b>	Falls within guidelines of Minor Projects PA	“No Historic Properties Affected”	“No Adverse Effect”	-	“Adverse Effect” Or Historic Bridge involvement <sup>2</sup>
<b>Stream Impacts<sup>3</sup></b>	No construction in waterways or water bodies	< 300 linear feet of stream impacts	≥ 300 linear feet of stream impacts	-	USACE Individual 404 Permit <sup>4</sup>
<b>Wetland Impacts<sup>3</sup></b>	No adverse impacts to wetlands	< 0.1 acre	-	< 1.0 acre	≥ 1.0 acre
<b>Right-of-way<sup>5</sup></b>	Property acquisition for preservation only or none	< 0.5 acre	≥ 0.5 acre	-	-
<b>Relocations<sup>6</sup></b>	None	-	-	< 5	≥ 5
<b>Threatened/Endangered Species (Species Specific Programmatic for Indiana bat &amp; northern long eared bat)*</b>	“No Effect”, “Not likely to Adversely Affect” (With select AMMs <sup>7</sup> )	“Not likely to Adversely Affect” (With any AMMs or commitments)	-	“Likely to Adversely Affect”	Project does not fall under Species Specific Programmatic <sup>8</sup>
<b>Threatened/Endangered Species (Any other species)*</b>	Falls within guidelines of USFWS 2013 Interim Policy or “No Effect”	“Not likely to Adversely Affect”	-	-	“Likely to Adversely Affect”
<b>Environmental Justice</b>	No disproportionately high and adverse impacts	-	-	-	Potential <sup>9</sup>
<b>Sole Source Aquifer</b>	No Detailed Groundwater Assessment	-	-	-	Detailed Groundwater Assessment
<b>Floodplain</b>	No Substantial Impacts	-	-	-	Substantial Impacts
<b>Section 4(f) Impacts</b>	None	-	-	-	Any <sup>10</sup>
<b>Section 6(f) Impacts</b>	None	-	-	-	Any
<b>Permanent Traffic Alteration</b>	None	-	-	-	Any
<b>Noise Analysis Required</b>	No	-	-	-	Yes
<b>Air Quality Analysis Required</b>	No	-	-	-	Yes <sup>11</sup>
<b>Approval Level</b>	Concurrence by DE or ESD	DE or ESD	DE or ESD	DE and/or ESD	DE and/or ESD; and FHWA
<ul style="list-style-type: none"> <li>• District Env. (DE)</li> <li>• Env. Serv. Div. (ESD)</li> <li>• FHWA</li> </ul>					

<sup>1</sup> Coordinate with INDOT Environmental Services Division. INDOT will then coordinate with the appropriate FHWA Environmental Specialist.

<sup>2</sup> Any involvement with a bridge processed under the Historic Bridge Programmatic Agreement.

<sup>3</sup> Total permanent impacts to streams (linear feet) and wetlands (acres).

<sup>4</sup> US Army Corps of Engineers Individual 404 Permit

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

<sup>6</sup> If any relocations are within an area with a known or suspected Environmental Justice (EJ) or disadvantaged population, or has greater than 5 relocations, a conversation with FHWA, through INDOT ESD, is needed to confirm NEPA classification and outreach plan for the project.

<sup>7</sup> Avoidance and Mitigation Measures (AMMs) determined by the IPAC determination key to be required that are not tree AMMs, bridge AMMs, or structure AMMs.

<sup>8</sup> Projects that do not fall under a Species Specific Programmatic and results in a “Likely to Adversely Affect”. Other findings can be processed as a lower-level CE.

<sup>9</sup> Potential for causing a disproportionately high and adverse impact.

<sup>10</sup> Section 4(f) use resulting in an Individual, Programmatic, or *de minimis* evaluation. The only exception is a *de minimis* evaluation for historic properties (Effective January 2, 2020). If a historic property *de minimis* and no other use, mark the *None* column.

<sup>11</sup> Hot Spot Analysis and/or MSAT Quantitative Emission Analysis.

\* Includes the threatened/endangered species critical habitat

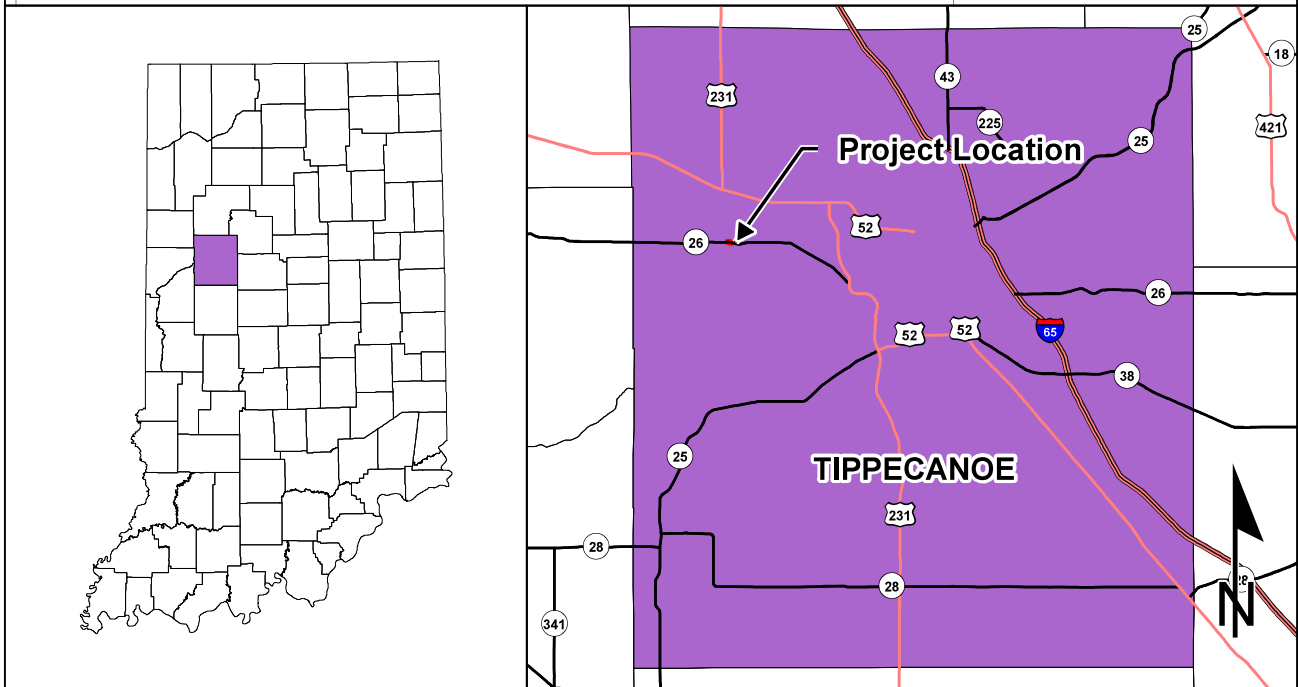
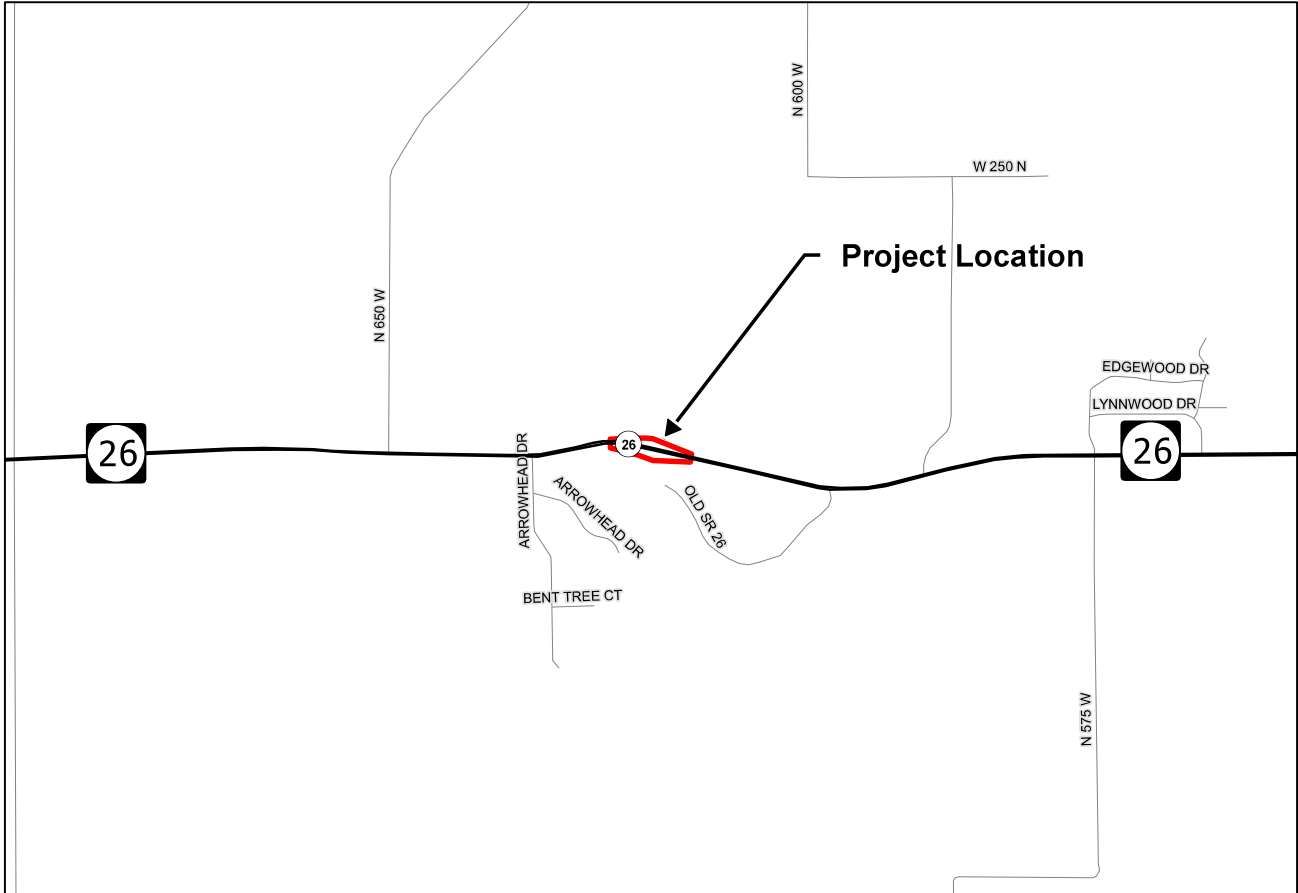
Note: Substantial public or agency controversy may require a higher-level NEPA document.

# Appendix B

Graphics

Des. No. 1900333

**Project Location Map**  
**SR 26, 4.98 Miles West of US 52/231**  
**Des. No. 1900333, Small Structure Replacement**  
**Tippecanoe County, Indiana**



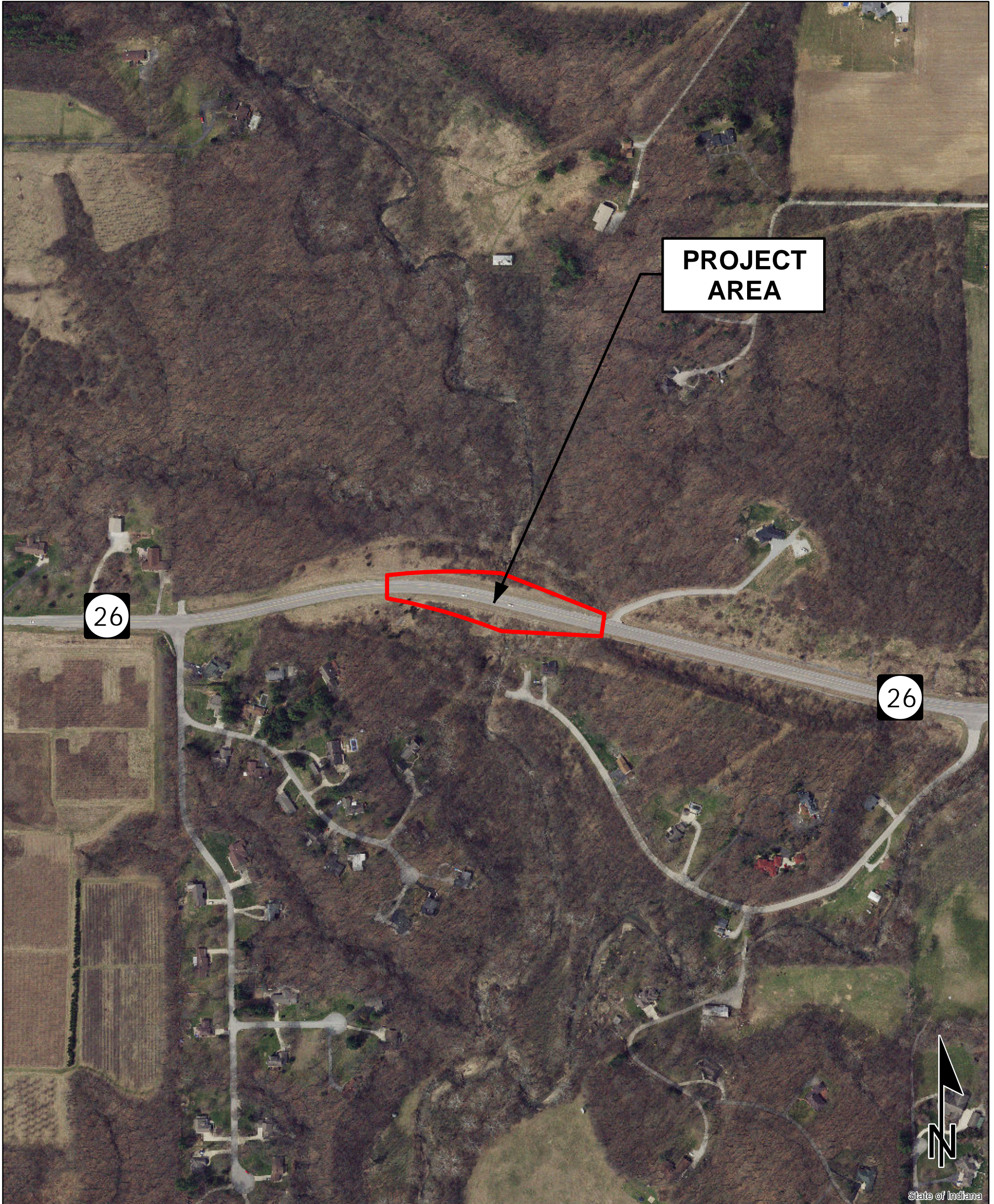
Sources: 0.25 0.125 0 0.25 Miles  
**Non Orthophotography**  
**Data** - Obtained from the State of Indiana Geographical Information Office Library  
**Orthophotography** - Obtained from Indiana Map Framework Data ([www.indianamap.org](http://www.indianamap.org))  
**Map Projection:** UTM Zone 16 N **Map 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.

**INDIANA STATEWIDE GIS DATA**

Appendix B-2



Red Flag Investigation - Aerial  
SR 26, 4.98 Miles West of US 52/231  
Des. No. 1900333, Small Structure Replacement  
Tippecanoe County, Indiana



Sources:  
**Non Orthophotography**  
**Data** - Obtained from the State of Indiana Geographical Information Office Library  
**Orthophotography** - Obtained from Indiana Map Framework Data ([www.indianamap.org](http://www.indianamap.org))  
**Map Projection:** UTM Zone 16 N **Map Datum:** NAD83

500 250 0 500 Feet

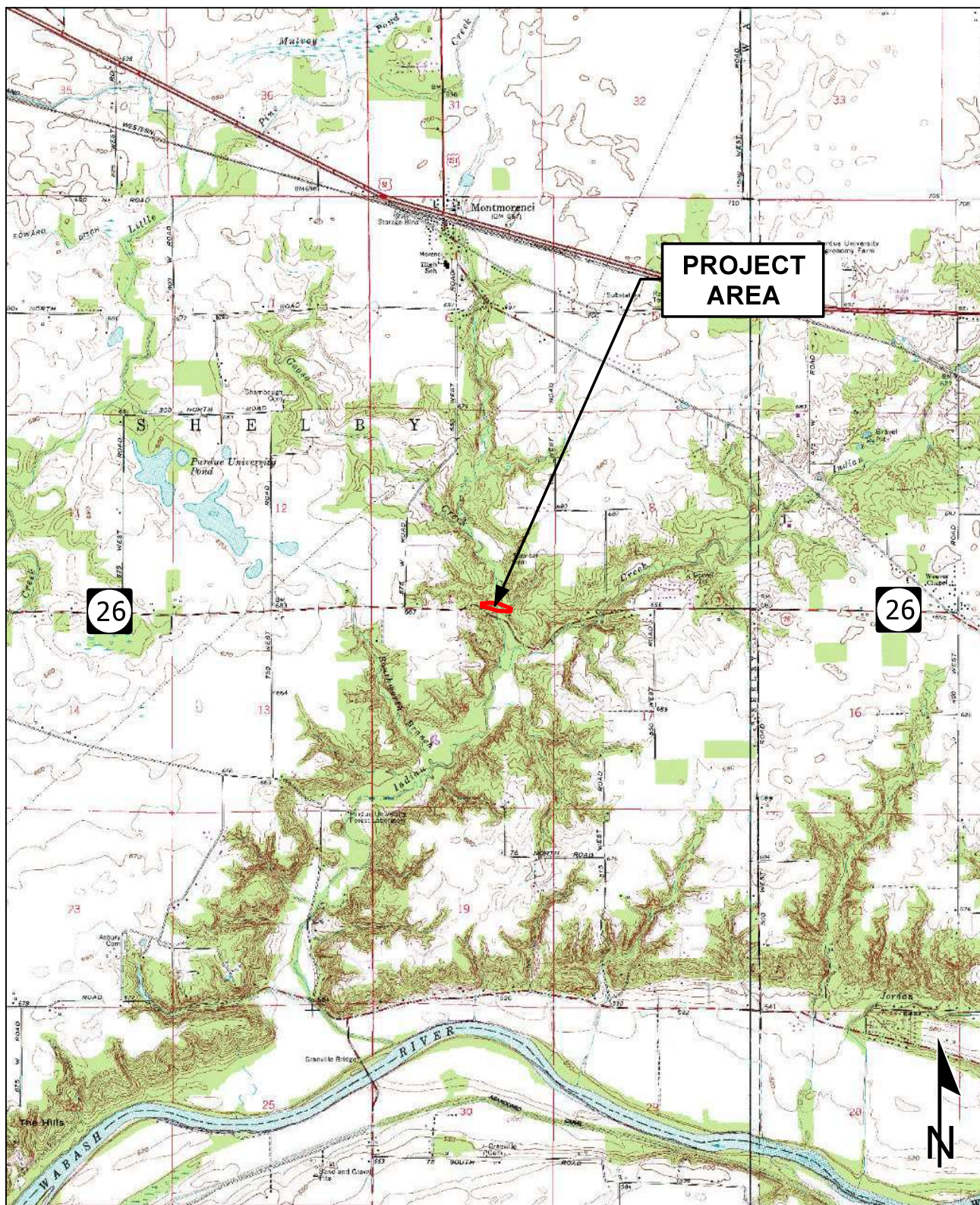
This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

INDIANA STATEWIDE  
AERIAL IMAGERY  
FLOWN 2016

Appendix B-3



USGS Topographic Map  
SR 26, 4.98 Miles West of US 52/231  
Des. No. 1900333, Small Structure Replacement  
Tippecanoe County, Indiana

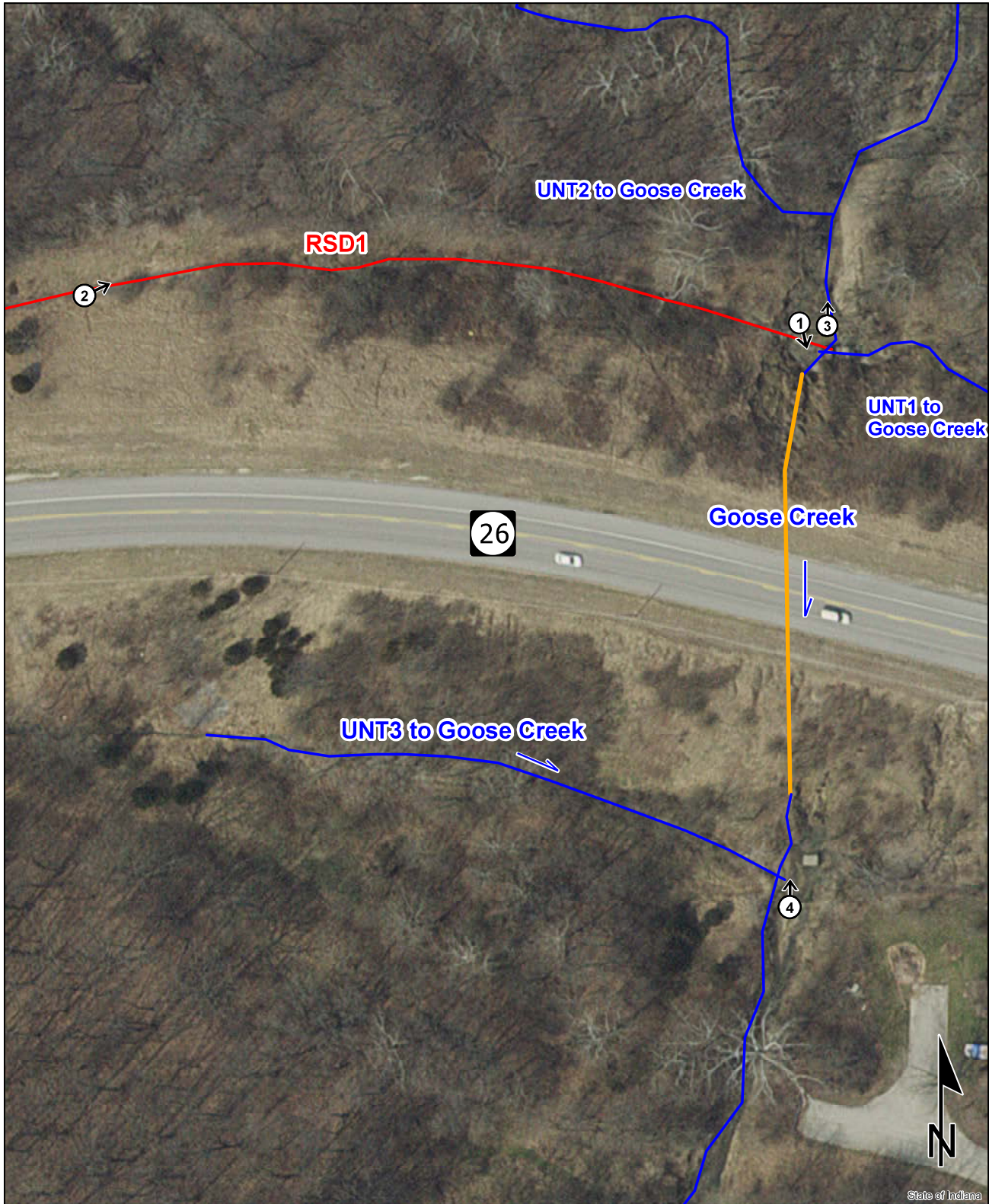


Sources: 0.75 0.375 0 0.75 Miles  
Non Orthophotography  
Data - Obtained from the State of Indiana Geographical Information Office Library  
Orthophotography - Obtained from Indiana Map Framework Data ([www.indianamap.org](http://www.indianamap.org))  
Map Projection: UTM Zone 16 N Map Datum: NAD83  
This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

OTTERBEIN  
QUADRANGLE INDIANA  
7.5 MINUTE SERIES  
(TOPOGRAPHIC)  
Appendix B-4



Waterways and Photo Key Map  
 SR 26, 4.98 Miles West of US 52/231  
 Des. No. 1900333, Small Structure Replacement  
 Tippecanoe County, Indiana



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

**INDIANA STATEWIDE  
 AERIAL IMAGERY  
 FLOWN 2016**

**Legend**

- Project Structure (CV 026-079-28.10)
- Flow Direction
- Tributary
- Roadside Ditch

Appendix B-5



DES 1900333—Photo Log



Picture 1—DES 1900333 structure inlet; southeast view; 04 APR 2022.



Picture 2—Riprap-lined roadside ditch; northeast view; 04 APR 2022.



Picture 3—Goose Creek upstream; north view; 04 APR 2022.



Picture 4—DES 1900333 structure outlet and Goose Creek; north view; 04 APR 2022.

PROJECT	DESIGNATION
1900333	1900333
CONTRACT	BRIDGE FILE
R-42243	T.B.D.

# INDIANA DEPARTMENT OF TRANSPORTATION



STRUCTURE INFORMATION				
STRUCTURE	TYPE	SPAN AND SKEW	OVER	STATION
T.B.D.	PRECAST REINFORCED CONCRETE THREE-SIDED STRUCTURE	1 SPAN @ 22'-0" SKEW: 11°00'00"	GOOSE CREEK	☉ STRUCTURE 239+00.00 "PR-B"

CULVERT ASSETS	
DES. NO.	CULVERT ASSET ID
1900333	CV 026-079-28.10

KIN PROJECT INFORMATION	
DESIGNATION	PROJECT DESCRIPTION
1900301	SMALL STRUCTURE PIPE LINING ON U.S. 41 OVER UNT TO MUD CREEK, 1.62 MILES SOUTH OF S.R. 18.
1900322	SMALL STRUCTURE REPLACEMENT ON S.R. 18 OVER UNT TO GREENWOOD DITCH, 6.08 MILES EAST OF U.S. 52.
1900333 (LEAD)	SMALL STRUCTURE REPLACEMENT WITH BRIDGE ON S.R. 26 OVER GOOSE CREEK, 4.98 MILES WEST OF U.S. 52/U.S. 231.

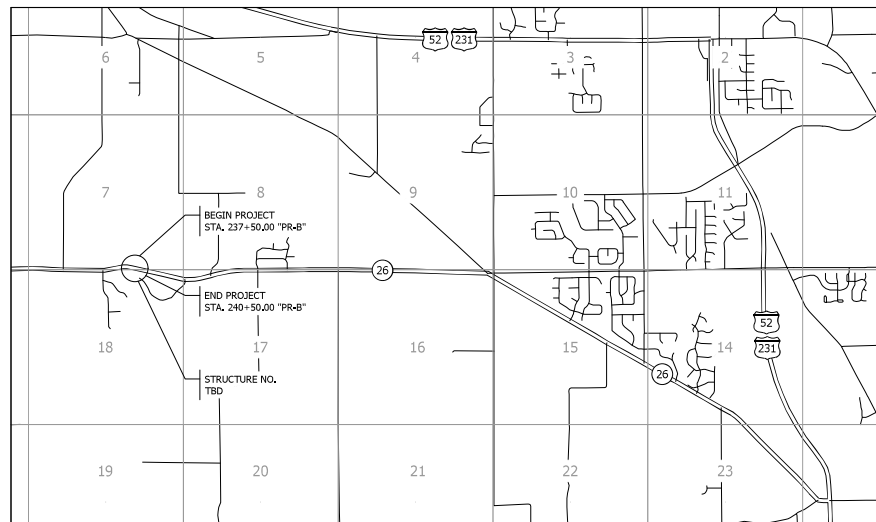
## BRIDGE PLANS

FOR SPANS OVER 20 FEET

ROUTE: S.R. 26 AT: RP 28+10

PROJECT NO. 1900333 P.E.  
1900333 R/W  
1900333 CONST.

SMALL STRUCTURE REPLACEMENT WITH BRIDGE ON S.R. 26 OVER GOOSE CREEK, APPROXIMATELY 4.98 MILES WEST OF U.S. 52/U.S. 231, LOCATED IN SECTIONS 7 AND 18, T-23-N, R-5-W, SHELBY TOWNSHIP, TIPPECANOE COUNTY, INDIANA.



STAGE 2 PLANS  
JULY 2022

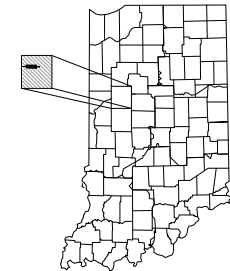


SCALE:  
1" = 2000'

TRAFFIC DATA	S.R. 26
A.A.D.T. (2024)	2,290 V.P.D.
A.A.D.T. (2044)	2,640 V.P.D.
D.H.V. (2044)	264 V.P.H.
DIRECTIONAL DISTRIBUTION	50%
TRUCKS	13.8% D.H.V. 16.6% A.A.D.T.

DESIGN DATA	
DESIGN SPEED	60 M.P.H.
PROJECT DESIGN CRITERIA	3R (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION	PRINCIPAL ARTERIAL
RURAL/URBAN	RURAL
TERRAIN	ROLLING
ACCESS CONTROL	NONE



PROJECT LOCATION SHOWN BY  
TIPPECANOE COUNTY

LATITUDE: 40°26'46" N LONGITUDE: 87°01'27" W

BRIDGE LENGTH: 0.004 MI.  
ROADWAY LENGTH: 0.053 MI.  
TOTAL LENGTH: 0.057 MI.  
MAX. GRADE: 4.09 %

H.U.C. 051201080501



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


PRELIMINARY

PLANS PREPARED BY: CORRADINO, LLC 317-488-2363  
PHONE NUMBER  
CERTIFIED BY: \_\_\_\_\_ DATE \_\_\_\_\_  
APPROVED FOR LETTING: \_\_\_\_\_ DATE \_\_\_\_\_  
INDIANA DEPARTMENT OF TRANSPORTATION


BRIDGE FILE	
T.B.D.	
DESIGNATION	
1900333	
SHEET	
1	of 23
CONTRACT	PROJECT
R-42243	1900333

F:\430 - INDOT Cawoods\1114-100333\_BRO2650\Plan\32 Sheet Drawings\10 Design Sheets\INDEX.dwg - Layout1  
 Plot Date: 07/21/2022 8:11:19 AM / 2x4145

UTILITIES	
ELECTRIC:	TIPMONT R.E.M.C. JOSH GERMOND P.O. BOX 20 LINDEN, INDIANA 47955 765-426-6170
COMMUNICATIONS:	TIPMONT R.E.M.C., FIBER JOSH GERMOND P.O. BOX 20 LINDEN, INDIANA 47955 765-426-6170



**811**  
Know what's below.  
Call before you dig.



DON'T DIG BIRD  
 1-800-363-5544  
 1-800-426-6170  
 FOR A LIST OF LOCAL 811 CENTERS

**GENERAL NOTES**

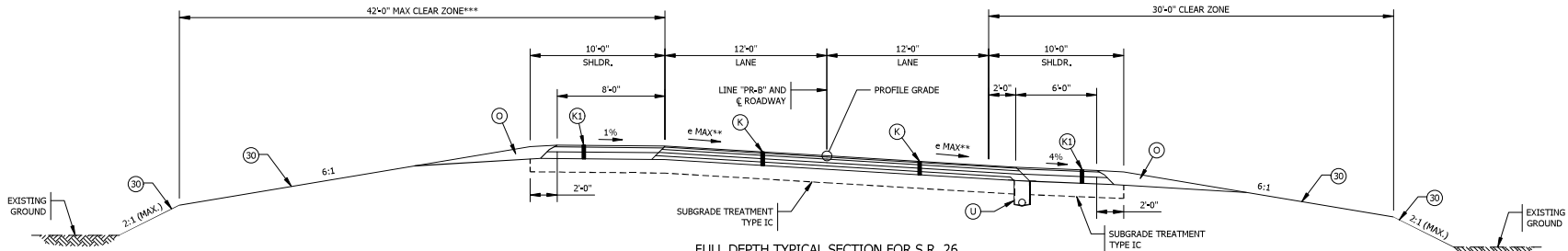
1. ALL EARTHEN SHOULDERS, MEDIAN AREAS, AND CUT AND FILL SLOPES SHALL BE PLAIN OR MULCH SEEDED EXCEPT WHERE SODDING IS SPECIFIED.

INDEX	
SHEET NO.	DESIGNATION
1	TITLE
2	INDEX AND GENERAL NOTES
3 - 4	TYPICAL SECTIONS
5	PLAT NO. 1
6 - 8	MAINTENANCE OF TRAFFIC
9	PLAN AND PROFILE - LINE "PR-B"
10	PLAN AND PROFILE - LINE "ACCESS ROAD"
11	SUPERELEVATION DIAGRAM
12	GENERAL PLAN
13	SUMMARY TABLES
14 - 23	CROSS SECTIONS

REVISIONS		
SHEET NO.	DATE	REVISED

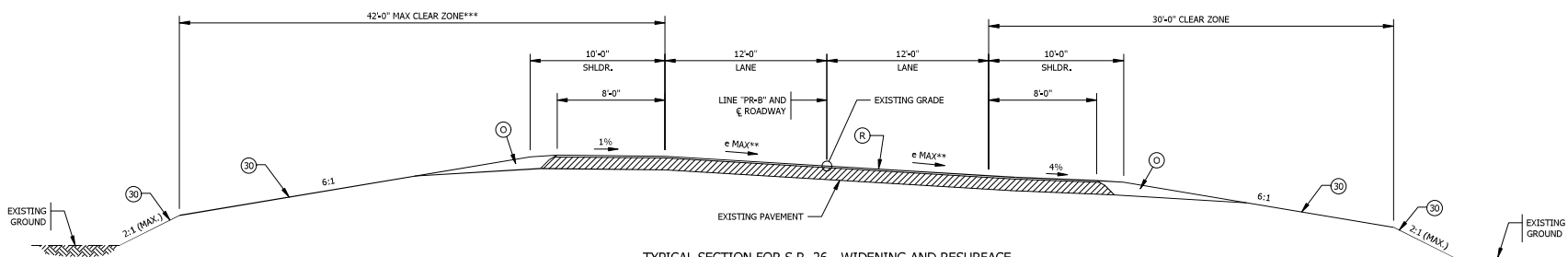
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	DESIGNED: BJM _____	DRAWN: SEJ _____		<b>INDIANA DEPARTMENT OF TRANSPORTATION</b>	VERTICAL SCALE	DESIGNATION 1900333
	CHECKED: ZZH _____	CHECKED: BJM _____		<b>INDEX AND GENERAL NOTES</b>		SHEET 2 OF 23
					CONTRACT R-42243	PROJECT 1900333





**FULL DEPTH TYPICAL SECTION FOR S.R. 26**  
 STA. 237+50.00 "PR-B" TO STA. 240+50.00 "PR-B"

\*\* SEE SUPERELEVATION DIAGRAM FOR SUPERELEVATION TRANSITION STATION RANGES  
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 SCALE: 1/4" = 1'-0"

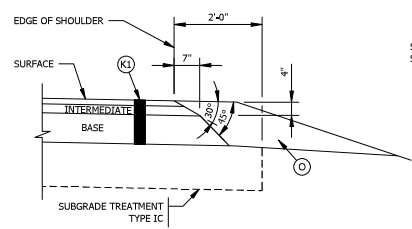


**TYPICAL SECTION FOR S.R. 26 - WIDENING AND RESURFACE**  
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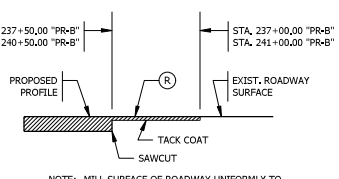
\*\* SEE SUPERELEVATION DIAGRAM FOR SUPERELEVATION TRANSITION STATION RANGES  
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**LEGEND**

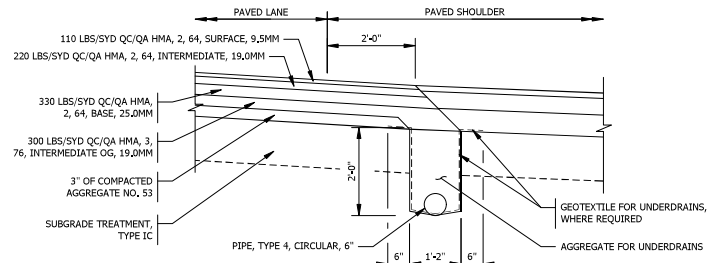
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 220 LBS/SYD QC/QA HMA, 2, 64, INTERMEDIATE, 19.0MM ON  
 330 LBS/SYD QC/QA HMA, 2, 64, BASE, 25.0MM ON  
 300 LBS/SYD QC/QA HMA, 3, 76, INTERMEDIATE OG, 19.0MM ON  
 3" COMPACTED AGGREGATE, NO. 53
- (K1) 165 LBS/SYD QC/QA HMA, 2, 64, SURFACE, 9.5MM ON  
 495 LBS/SYD QC/QA HMA, 2, 64, BASE, 25.0MM ON  
 6" COMPACTED AGGREGATE, NO. 53
- TACK COAT TO BE PLACED BETWEEN HMA LAYERS. JOINT ADHESIVE TO BE INSTALLED AT ALL LONGITUDINAL JOINTS IN THE SURFACE AND INTERMEDIATE LAYER. LIQUID ASPHALT SEALANT TO BE PLACED CENTERED ON THE LONGITUDINAL JOINTS THAT HAVE JOINT ADHESIVE INSTALLED.
- (O) 12" COMPACTED AGGREGATE, NO. 53
- (SD) SEED MIX R WITH EROSION CONTROL BLANKET
- (R) 165 LBS/SYD QC/QA HMA, 2, 64, SURFACE, 9.5MM ON MILLING, ASPHALT, 1.5"
- (N) 8" COMPACTED AGGREGATE, NO. 53
- (U) 6" UNDERDRAIN



**SAFETY EDGE ON HMA PAVEMENT**  
 SCALE: 3/4" = 1'-0"



**ASPHALT WEDGE DETAIL**  
 NOT TO SCALE



**UNDERDRAIN DETAIL**  
 SCALE: 3/4" = 1'-0"

\*\*\* CLEAR ZONE VARIES: 42'-0" AT STA. 236+46.00 "PR-B" TO 30'-0" STA. 238+28.00 "PR-B"

**PRELIMINARY**

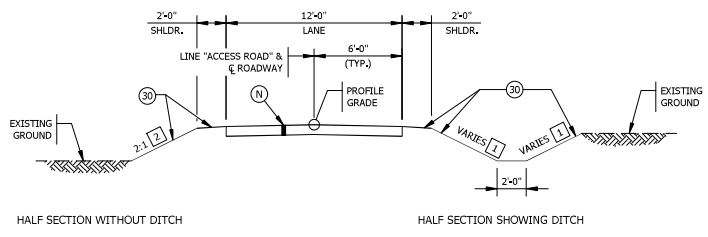
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DESIGNED: BJM	DRAWN: SEJ	
CHECKED: ZZH	CHECKED: BJM	

**INDIANA DEPARTMENT OF TRANSPORTATION**  
**TYPICAL SECTIONS**

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	T.S.D.
VERTICAL SCALE	DESIGNATION
	1900333
	SHEET
	3 OF 23
CONTRACT	PROJECT
R-42243	1900333

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 Plot By:

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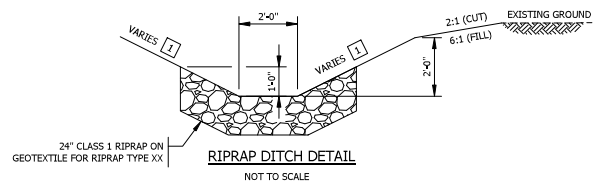


**TYPICAL SECTION FOR ACCESS ROAD**  
 STA. 0+00.00 "ACCESS ROAD" TO STA. 8+90.00 "ACCESS ROAD"  
 SCALE: 1/4" = 1'-0"

- 1** SIDESLOPES VARY AS SHOWN BELOW:  
 RIGHT:  
 3:1 STA. 0+00.00 "ACCESS ROAD" TO STA. 5+00.00 "ACCESS ROAD"  
 VARIES FROM 3:1 TO 2:1 STA. 5+00.00 "ACCESS ROAD" TO 5+25.00 "ACCESS ROAD"  
 2:1 FROM 05+25.00 "ACCESS ROAD" TO 8+90.00 "ACCESS ROAD"  
 LEFT:  
 2:1 STA. 0+00.00 "ACCESS ROAD" TO STA. 8+90.00 "ACCESS ROAD"
- 2** FILL SLOPE SHOWN,  
 CUT SLOPE SIMILAR.

**LEGEND**

- (K) 110 LBS/SYD QC/QA HMA, 2, 64, SURFACE, 9.5MM ON  
 220 LBS/SYD QC/QA HMA, 2, 64, INTERMEDIATE, 19.0MM ON  
 330 LBS/SYD QC/QA HMA, 2, 64, BASE, 25.0MM ON  
 300 LBS/SYD QC/QA HMA, 3, 76, INTERMEDIATE OG, 19.0MM ON  
 3" COMPACTED AGGREGATE, NO. 53
  - (KL) 165 LBS/SYD QC/QA HMA, 2, 64, SURFACE, 9.5MM ON  
 495 LBS/SYD QC/QA HMA, 2, 64, BASE, 25.0MM ON  
 6" COMPACTED AGGREGATE, NO. 53
  - (O) 12" COMPACTED AGGREGATE, NO. 53
  - (30) SEED MIX R WITH EROSION CONTROL BLANKET
  - (R) 165 LBS/SYD QC/QA HMA, 2, 64, SURFACE, 9.5MM ON  
 MILLING, ASPHALT, 1.5"
  - (N) 8" COMPACTED AGGREGATE, NO. 53
  - (U) 6" UNDERDRAIN
- TACK COAT TO BE PLACED BETWEEN HMA LAYERS. JOINT  
 ADHESIVE TO BE INSTALLED AT ALL LONGITUDINAL JOINTS IN  
 THE SURFACE AND INTERMEDIATE LAYER. LIQUID ASPHALT  
 SEALANT TO BE PLACED CENTERED ON THE LONGITUDINAL  
 JOINTS THAT HAVE JOINT ADHESIVE INSTALLED.



**RIPRAP DITCH DETAIL**  
 NOT TO SCALE

**PRELIMINARY**

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: BJM	DRAWN: SEJ	
CHECKED: ZZH	CHECKED: BJM	

**INDIANA**  
**DEPARTMENT OF TRANSPORTATION**  
  
**TYPICAL SECTIONS**

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	T.S.D.
VERTICAL SCALE	DESIGNATION
	1900333
	SHEET
	4 OF 23
CONTRACT	PROJECT
R-4243	1900333

223+00  
224+00  
225+00  
226+00  
227+00  
228+00  
229+00  
230+00  
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238+00  
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243+00  
244+00  
245+00  
246+00

**CURVE DATA**

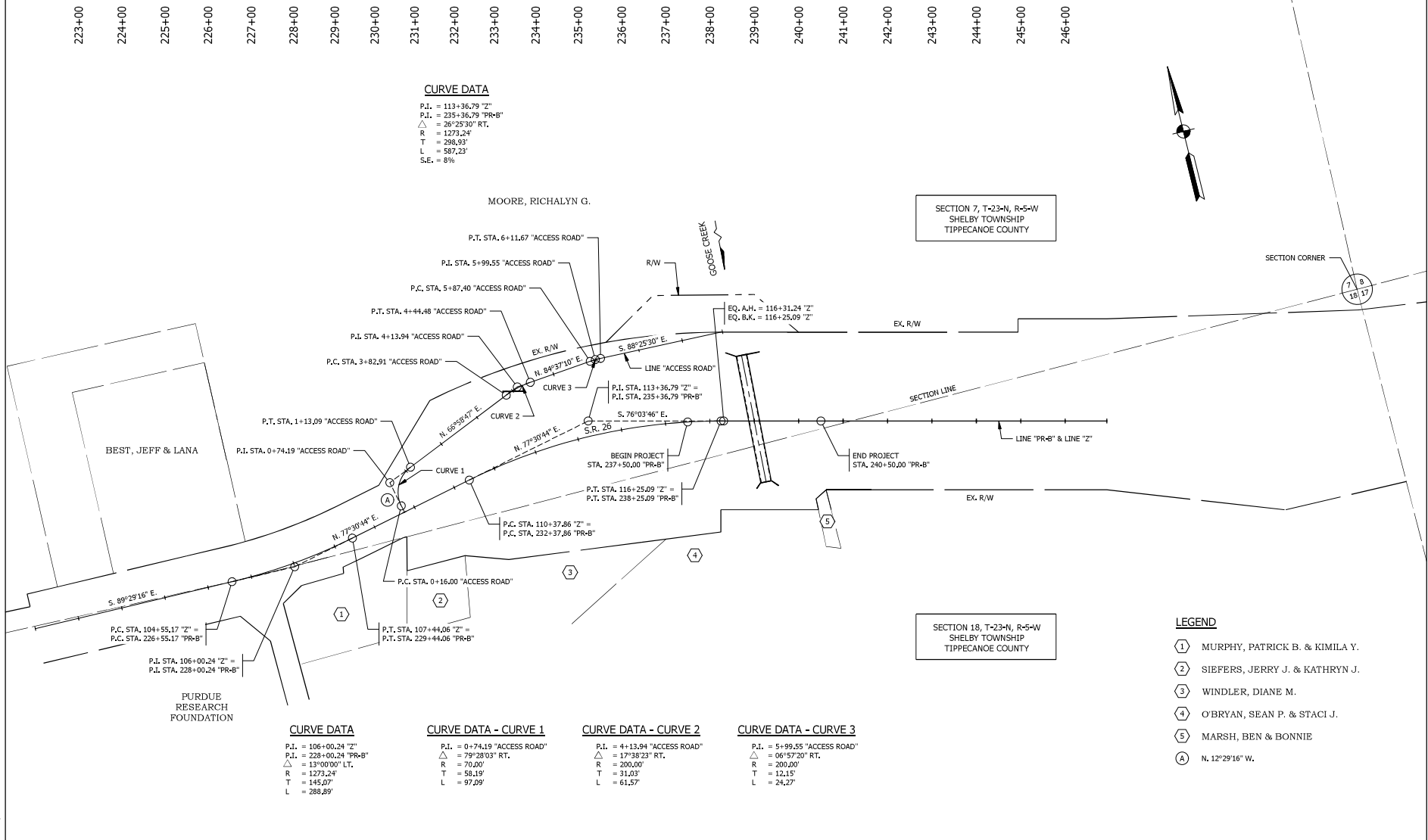
P.I. = 113+36.79 "Z"  
P.I. = 235+36.79 "PR-B"  
 $\Delta$  = 26°25'30" RT.  
R = 1273.24'  
T = 298.93'  
L = 587.23'  
S.E. = 8%

MOORE, RICHALYN G.

SECTION 7, T-23-N, R-5-W  
SHELBY TOWNSHIP  
TIPPECANOE COUNTY



SECTION CORNER  
7 8  
18 17



**CURVE DATA**

P.I. = 106+00.24 "Z"  
P.I. = 228+00.24 "PR-B"  
 $\Delta$  = 15°00'00" LT.  
R = 1273.24'  
T = 145.07'  
L = 288.89'

**CURVE DATA - CURVE 1**

P.I. = 0+74.19 "ACCESS ROAD"  
 $\Delta$  = 79°28'03" RT.  
R = 70.00'  
T = 58.19'  
L = 97.09'

**CURVE DATA - CURVE 2**

P.I. = 4+13.94 "ACCESS ROAD"  
 $\Delta$  = 17°38'23" RT.  
R = 200.00'  
T = 31.03'  
L = 61.57'

**CURVE DATA - CURVE 3**

P.I. = 5+99.55 "ACCESS ROAD"  
 $\Delta$  = 06°57'20" RT.  
R = 200.00'  
T = 12.15'  
L = 24.27'

SECTION 18, T-23-N, R-5-W  
SHELBY TOWNSHIP  
TIPPECANOE COUNTY

**LEGEND**

- ① MURPHY, PATRICK B. & KIMILYA.
- ② SIEPERS, JERRY J. & KATHRYN J.
- ③ WINDLER, DIANE M.
- ④ O'BRYAN, SEAN P. & STACI J.
- ⑤ MARSH, BEN & BONNIE
- Ⓐ N. 12°29'16" W.

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**PRELIMINARY**

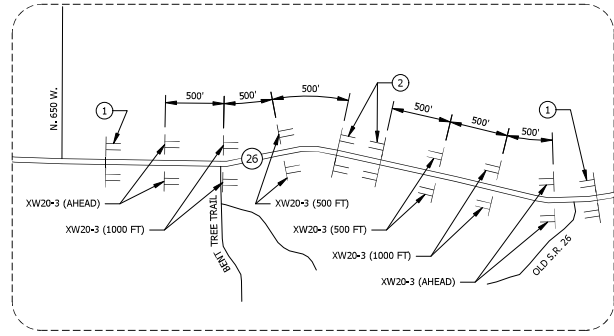
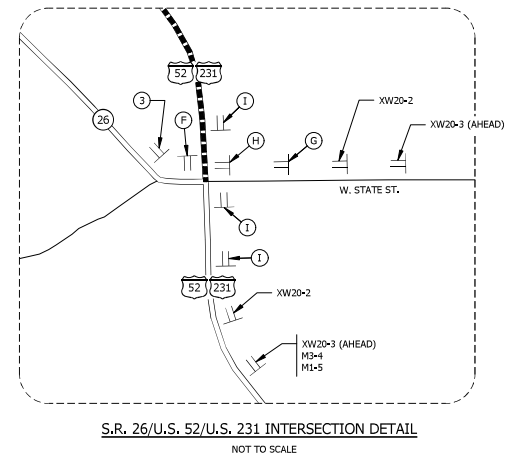
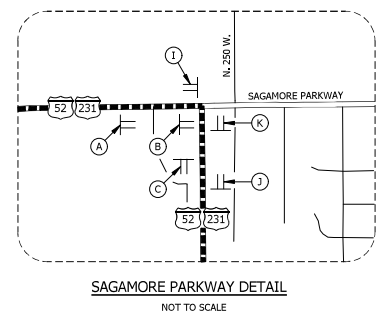
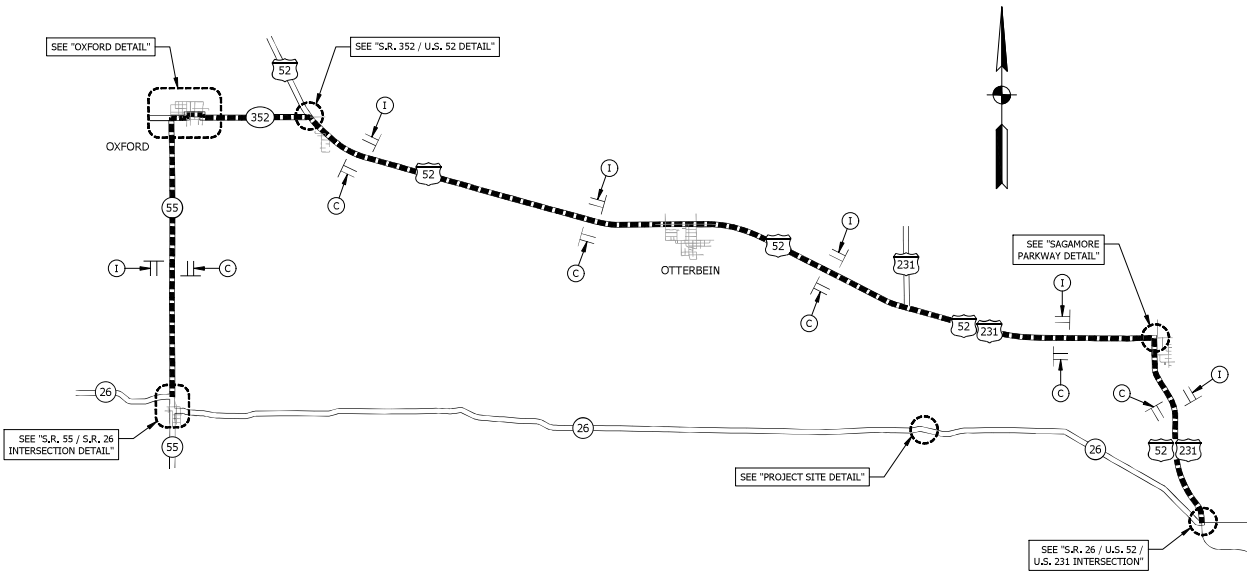
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: BJM	DRAWN: SEJ	
CHECKED: ZZH	CHECKED: BJM	

**INDIANA  
DEPARTMENT OF TRANSPORTATION**

PLAT NO. 1

HORIZONTAL SCALE	BRIDGE FILE
1" = 100'	T.S.D.
VERTICAL SCALE	DESIGNATION
	1900333
	SHEET
	5   21   23
CONTRACT	PROJECT
R-4243	1900333

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 Project By: JIM 21, 2022 8:41:38 AM / 261101



- LEGEND**
- ① 48 LFT. OF TYPE III-B BARRICADES, STAGGERED WITH ROAD CLOSURE SIGN ASSEMBLY R11-4
  - ② 48 LFT. OF TYPE III-A BARRICADES WITH ROAD CLOSURE SIGN ASSEMBLY R11-2
  - ③ 24 LFT. OF TYPE III-B BARRICADES WITH ROAD CLOSURE SIGN ASSEMBLY R11-3A AND XM4-10 SIGN.
  - DETOUR ROUTE
  - TT SIGN ASSEMBLY
  - ⊕ TYPE B CONSTRUCTION WARNING LIGHT
  - ⊙ TYPE A CONSTRUCTION WARNING LIGHT

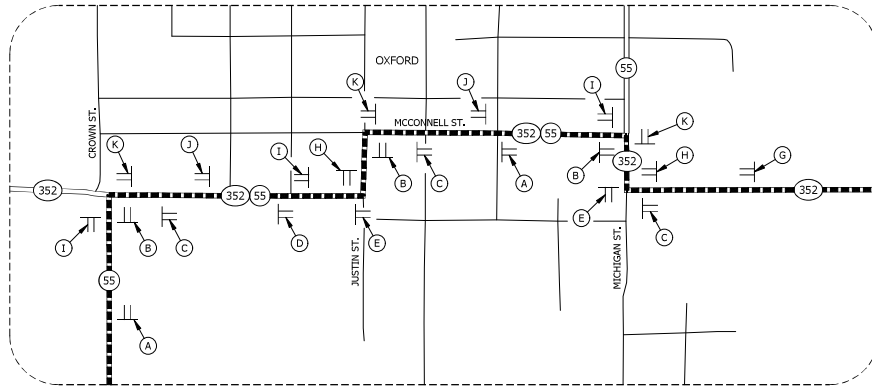
**PRELIMINARY**

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: BJM	DRAWN: SEJ	
CHECKED: ZZH	CHECKED: BJM	

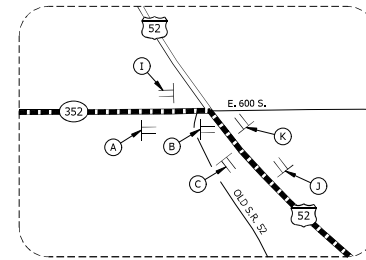
**INDIANA DEPARTMENT OF TRANSPORTATION**

**MAINTENANCE OF TRAFFIC**

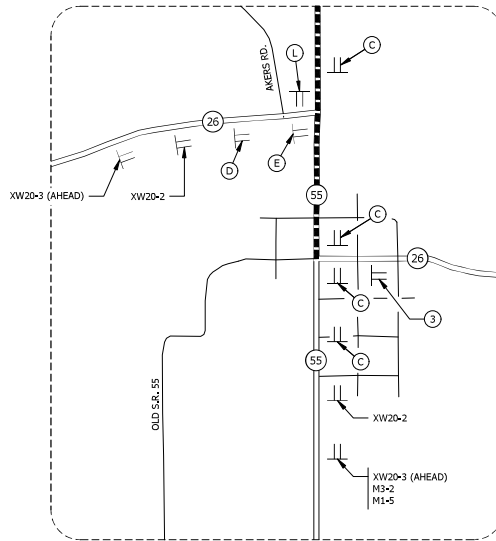
HORIZONTAL SCALE	BRIDGE FILE
1" = 500' UNLESS NOTED	T.S.D.
VERTICAL SCALE	DESIGNATION
	1900333
	SHEET
	6 OF 23
CONTRACT	PROJECT
R-4243	1900333



**OXFORD DETAIL**  
NOT TO SCALE



**S.R. 352/U.S. 52 DETAIL**  
NOT TO SCALE



**S.R. 55/S.R. 26 INTERSECTION DETAIL**  
NOT TO SCALE

**LEGEND**

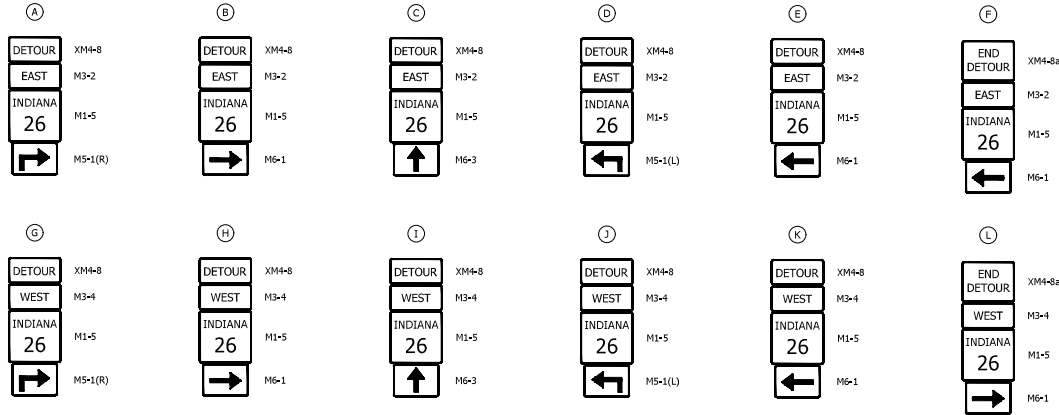
- ① 48 LFT. OF TYPE III-B BARRICADES, STAGGERED WITH ROAD CLOSURE SIGN ASSEMBLY R11-4
- ② 48 LFT. OF TYPE III-A BARRICADES WITH ROAD CLOSURE SIGN ASSEMBLY R11-2
- ③ 24 LFT. OF TYPE III-B BARRICADES WITH ROAD CLOSURE SIGN ASSEMBLY R11-3A AND XM4-10 SIGN.
- DETOUR ROUTE
- TT SIGN ASSEMBLY
- TYPE B CONSTRUCTION WARNING LIGHT
- ⊗ TYPE A CONSTRUCTION WARNING LIGHT

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 Plotted By: \_\_\_\_\_

<b>PRELIMINARY</b>	RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE _____	<b>INDIANA DEPARTMENT OF TRANSPORTATION</b>	HORIZONTAL SCALE AS NOTED	BRIDGE FILE
	DESIGNED: BJM DRAWN: SEJ		VERTICAL SCALE	DESIGNATION 1900333
	CHECKED: ZZH CHECKED: BJM		<b>MAINTENANCE OF TRAFFIC</b>	
			CONTRACT R-42243	PROJECT 1900333



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 Plotted By:



XW20-2



XW20-3



XG20-5



R11-2



R11-3A



R11-4



XM4-10

CONSTRUCTION SIGN SCHEDULE				
SIGN NO.	DESCRIPTION	SIZE (FT.)	TYPE	EST. QTY.
XG20-5	S.R. 26 CLOSED ON OR AFTER XX	5 X 3	A	2
XW20-2	DETOUR AHEAD	4 X 4	A	4
XW20-3	ROAD CLOSED XXXX	4 X 4	A	16
M1-5	STATE ROUTE SIGN	2.5 X 2	B	2
M3-2	CARDINAL DIRECTION (EAST)	2 X 1	B	1
M3-4	CARDINAL DIRECTION (WEST)	2 X 1	B	1
XM4-10	DETOUR (INSIDE ORANGE ARROW)	4 X 1.5	B	2
R11-2	ROAD CLOSED	4 X 2.5	-	2
R11-3A	ROAD CLOSED XX MILES	5 X 2.5	-	2
R11-4	ROAD CLOSED TO THRU TRAFFIC	5 X 2.5	-	2

DETOUR ROUTE MARKER ASSEMBLIES: 59 REQ'D  
 TYPE III-A BARRICADES: 96 LFT.  
 TYPE III-B BARRICADES: 144 LFT.  
 \* DETOUR ROUTE MARKER ASSEMBLIES SHALL BE IN ACCORDANCE WITH STD. DWG. 801-TCDD-04.  
 \* TYPE B CONSTRUCTION WARNING LIGHTS SHALL BE USED WITH ALL SIGNS LOCATED ON BARRICADES AND AS SHOWN. TYPE A CONSTRUCTION WARNING LIGHTS SHALL BE USED ON ALL OTHER CONSTRUCTION SIGNS. (NOT PAY ITEMS.)  
 \* TWO XG20-5 SIGNS TO BE PLACED AS DIRECTED BY THE ENGINEER.

TOTAL TYPE "A" SIGNS	22
TOTAL TYPE "B" SIGNS	6
ROAD CLOSURE SIGN ASSEMBLIES	6

**LEGEND**

- ① 48 LFT. OF TYPE III-B BARRICADES, STAGGERED WITH ROAD CLOSURE SIGN ASSEMBLY R11-4
- ② 48 LFT. OF TYPE III-A BARRICADES WITH ROAD CLOSURE SIGN ASSEMBLY R11-2
- ③ 24 LFT. OF TYPE III-B BARRICADES WITH ROAD CLOSURE SIGN ASSEMBLY R11-3A AND XM4-10 SIGN.
- DETOUR ROUTE
- TT SIGN ASSEMBLY
- ☉ TYPE B CONSTRUCTION WARNING LIGHT
- ⊙ TYPE A CONSTRUCTION WARNING LIGHT

PRELIMINARY	RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____	<b>INDIANA</b> <b>DEPARTMENT OF TRANSPORTATION</b>  <b>MAINTENANCE OF TRAFFIC</b>	HORIZONTAL SCALE NONE	BRIDGE FILE	
	DESIGNED: BJM DRAWN: SEJ		VERTICAL SCALE	DESIGNATION 1900333	
	CHECKED: ZZH		CHECKED: BJM		SHEET 8 OF 23
				CONTRACT R-42243	PROJECT 1900333

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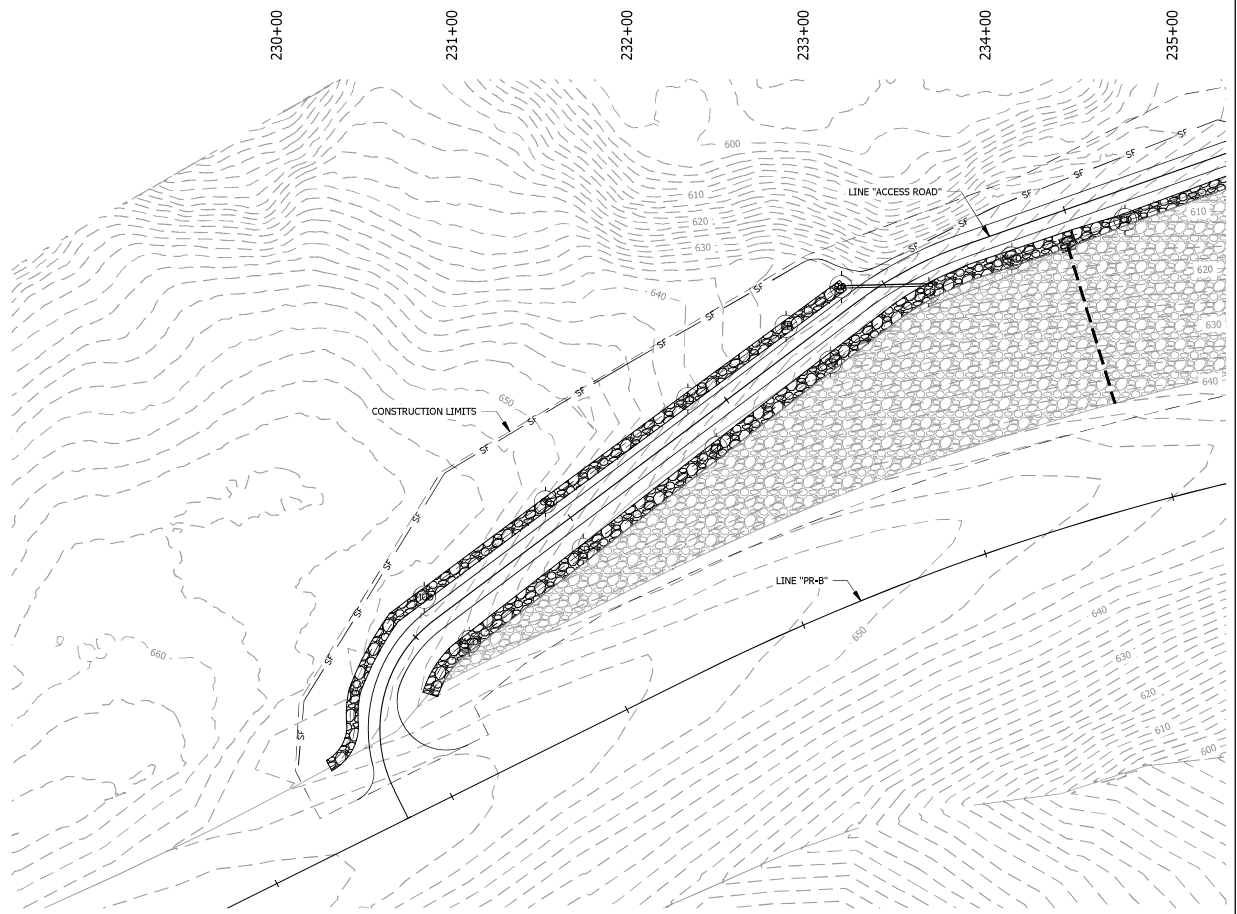


**EROSION CONTROL LEGEND**

- SILT FENCE
- TEMPORARY SLOPE DRAIN (SEE INDOT STANDARD DRAWING E 205-TECS-01 THROUGH -04)
- TEMPORARY CHECK DAM
- TEMPORARY CHECK DAM, MODIFIED
- TEMPORARY INLET PROTECTION
- RIPRAP SPLASHPAD
- DISCHARGE WATER MUST FILTER THROUGH A SEDIMENT TRAP OR OTHER SEDIMENT CONTROL MEASURES PRIOR TO REACHING WATERWAY

**NOTES:**

1. ALL SUMP HOLES SHALL BE REFILLED AFTER CONSTRUCTION (APPROX. 0.50 CYS PER SUMP HOLE)
2. ALL DISTURBANCES FROM CONSTRUCTION OPERATIONS ABOVE THE GRNWM SHALL BE REFILLED AND RESEEDED WITH INDOT SEED MIX, TYPE R.
3. TEMPORARY DEWATERING MEASURES ARE EXPECTED TO BE IN PLACE FOR 36 WEEKS.
4. SILT FENCE SHALL NOT CROSS STREAM.



**PRELIMINARY**

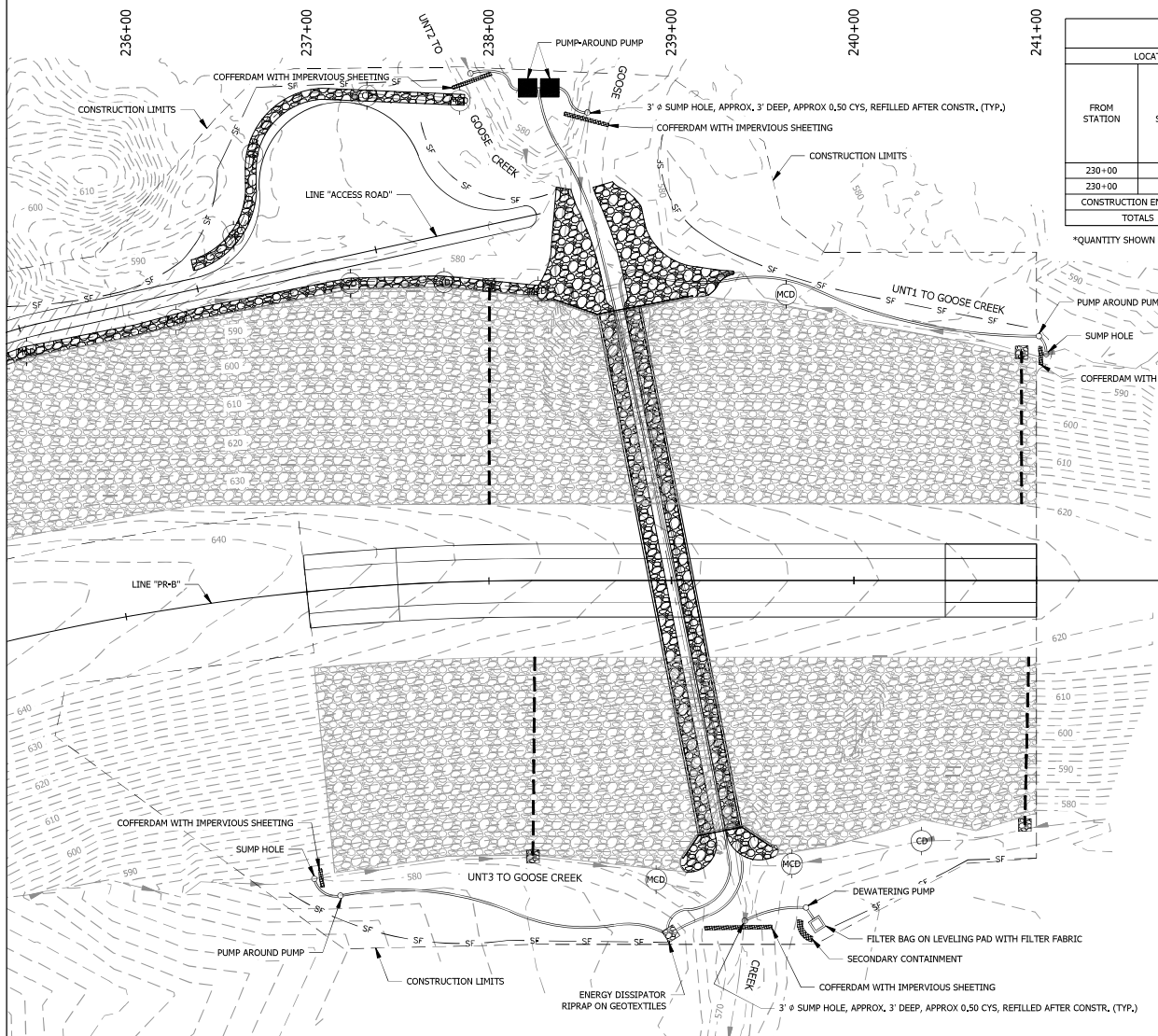
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DESIGNED: ZZH	DRAWN: ZZH		
CHECKED: BIM	CHECKED: BIM		

**INDIANA  
DEPARTMENT OF TRANSPORTATION**

**EROSION CONTROL DETAILS**

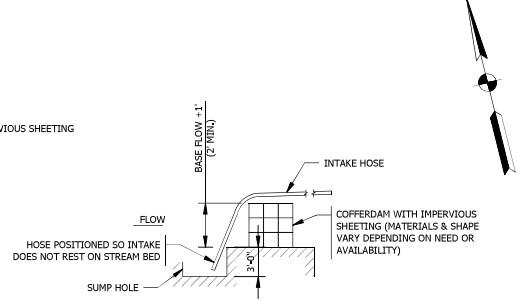
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VERTICAL SCALE	DESIGNATION 1900333
	SHEET 7 OF 23
CONTRACT R-42243	PROJECT 1900333

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 File Name: Plan32.dwg  
 Plotted By:



TEMPORARY EROSION CONTROL														
LOCATION		LEFT	RIGHT	* SILT FENCE	* TEMPORARY CHECK DAM	* TEMPORARY FILTER STONE	* TEMPORARY GEOTEXTILES	* TEMPORARY SEEDING	* TEMPORARY MULCH	* TEMPORARY REPAIR	* TEMPORARY SLOPE DRAIN			
FROM STATION	TO STATION			FT	TON	TON	SYS	LBS	TON	TON	LFT	EACH		
230+00	241+00	X		1350	100	5	400	400	7.5	5	350	1	1	
230+00	241+00	X		350	15	2	60	400	7.5	5	250		1	
	CONSTRUCTION ENTRANCE	X	X				200							200
TOTALS				1700	115	7	660	800	15	10	600	1	2	200

\*QUANTITY SHOWN FOR INFORMATION ONLY. COST INCLUDED IN "STORM WATER MANAGEMENT BUDGET".



COFFERDAM/SUMP HOLE WORK AREA  
NOT TO SCALE

**EROSION CONTROL LEGEND**

- SF - SILT FENCE
- - - - TEMPORARY SLOPE DRAIN (SEE INDOT STANDARD DRAWING E 205-TECS-01 THROUGH -04)
- CD - TEMPORARY CHECK DAM
- MCD - TEMPORARY CHECK DAM, MODIFIED
- IP - TEMPORARY INLET PROTECTION
- ▨ - RIPRAP SPLASHPAD
- ▨ - DISCHARGE WATER MUST FILTER THROUGH A SEDIMENT TRAP OR OTHER SEDIMENT CONTROL MEASURES PRIOR TO REACHING WATERWAY

**NOTES:**

1. ALL SUMP HOLES SHALL BE REFILLED AFTER CONSTRUCTION (APPROX. 0.50 CYS PER SUMP HOLE)
2. ALL DISTURBANCES FROM CONSTRUCTION OPERATIONS ABOVE THE OHWM SHALL BE REFILLED AND RESEEDED WITH INDOT SEED MIX, TYPE R.
3. TEMPORARY DEWATERING MEASURES ARE EXPECTED TO BE IN PLACE FOR 36 WEEKS.
4. SILT FENCE SHALL NOT CROSS STREAM.

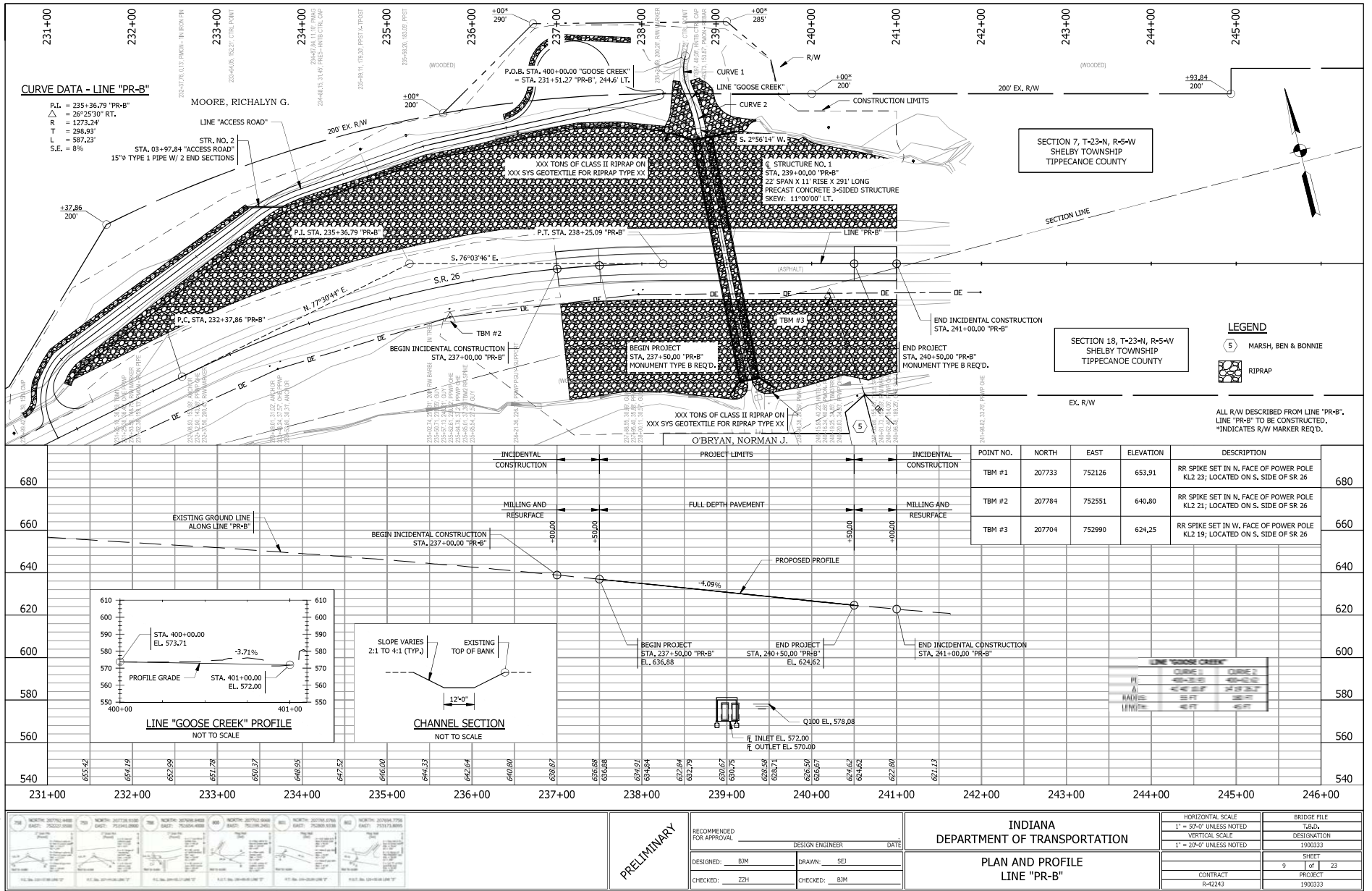
**PRELIMINARY**

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: ZZH	DRAWN: ZZH	
CHECKED: BIM	CHECKED: BIM	

**INDIANA DEPARTMENT OF TRANSPORTATION**  
**EROSION CONTROL DETAILS**

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'-0" UNLESS NOTED	T.B.D.
VERTICAL SCALE	DESIGNATION
	1900333
	SHEET
	7 OF 23
CONTRACT	PROJECT
R-4243	1900333

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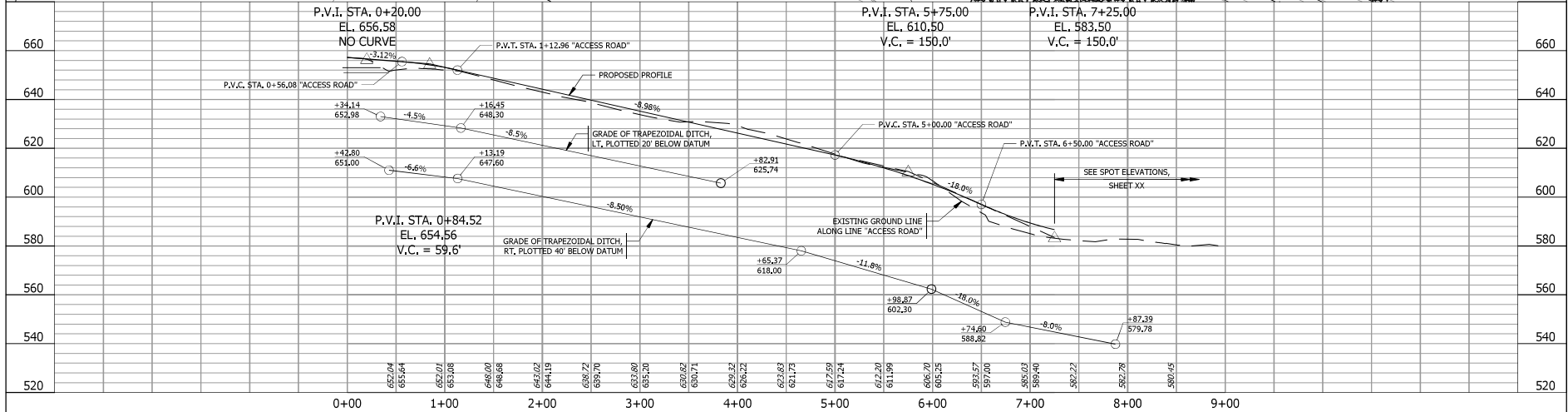
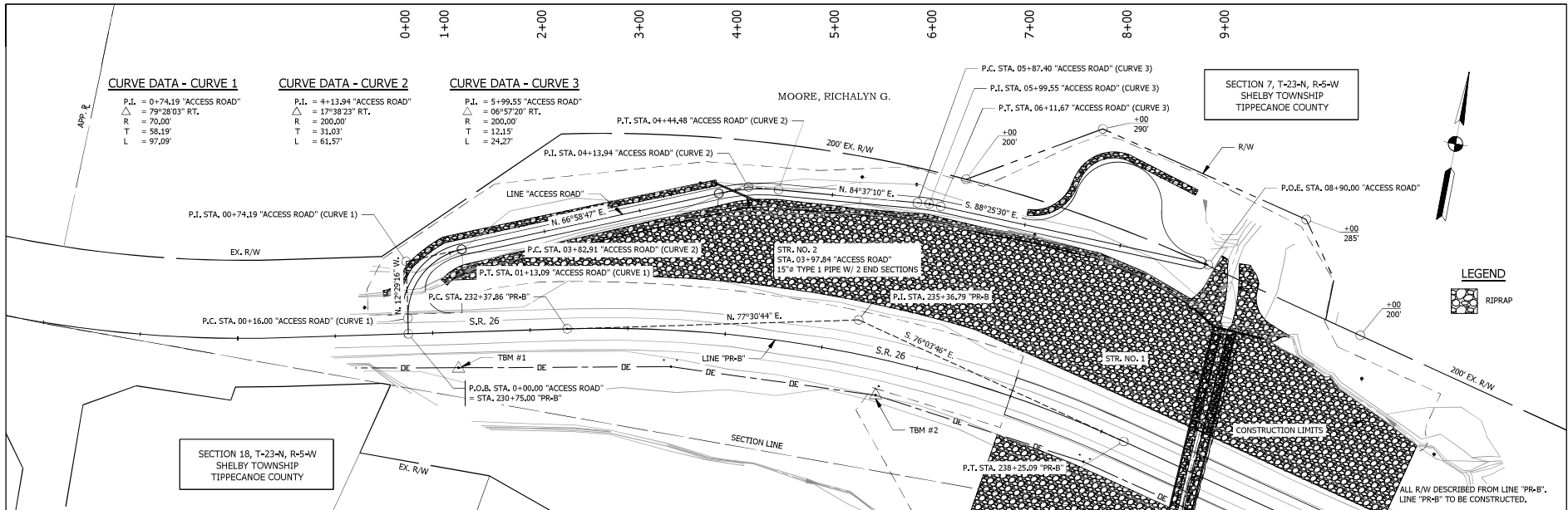


**PRELIMINARY**

RECOMMENDED FOR APPROVAL \_\_\_\_\_ DATE \_\_\_\_\_  
 DESIGN ENGINEER \_\_\_\_\_  
 DESIGNED: BJM DRAWN: SEJ  
 CHECKED: ZZH CHECKED: BJM

**INDIANA DEPARTMENT OF TRANSPORTATION**  
**PLAN AND PROFILE LINE "PR-B"**

HORIZONTAL SCALE 1" = 50'-0" UNLESS NOTED	BRIDGE FILE T.B.D.
VERTICAL SCALE 1" = 20'-0" UNLESS NOTED	DESIGNATION 1900333
	SHEET 9 OF 23
	PROJECT R-42243
	1900333



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**PRELIMINARY**

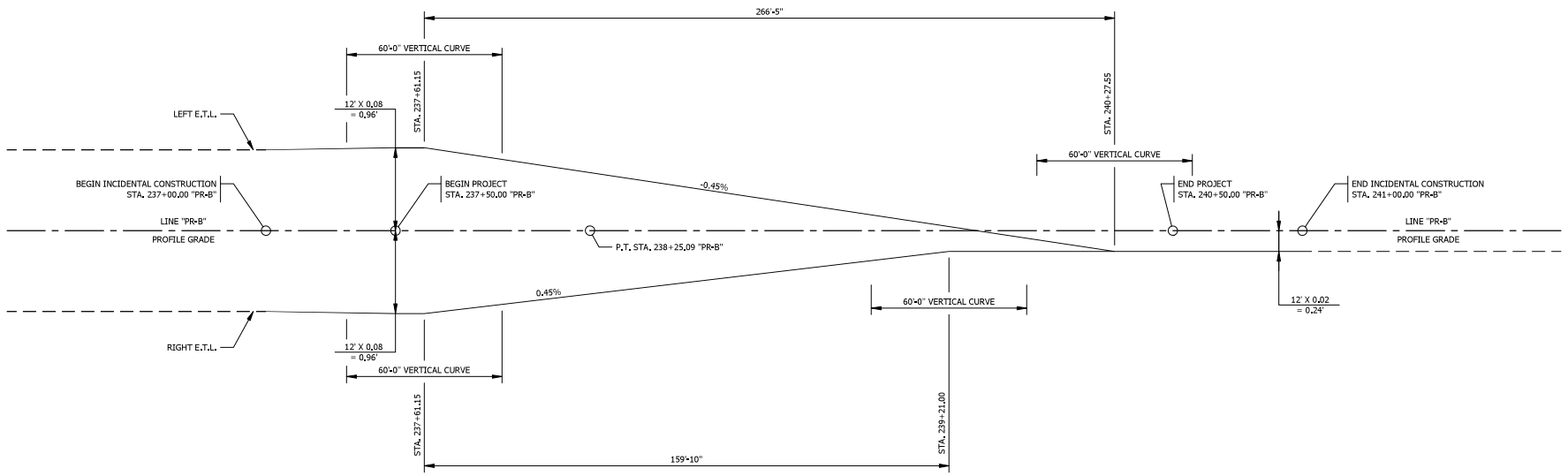
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DESIGNED: BJM	DRAWN: SEJ	
CHECKED: ZZH	CHECKED: BJM	

**INDIANA DEPARTMENT OF TRANSPORTATION**

**PLAN AND PROFILE LINE "ACCESS ROAD"**

HORIZONTAL SCALE 1" = 50'-0" UNLESS NOTED	BRIDGE FILE T.B.D.
VERTICAL SCALE 1" = 20'-0" UNLESS NOTED	DESIGNATION 1900333
	SHEET 10 OF 23
	PROJECT R-42243
	1900333

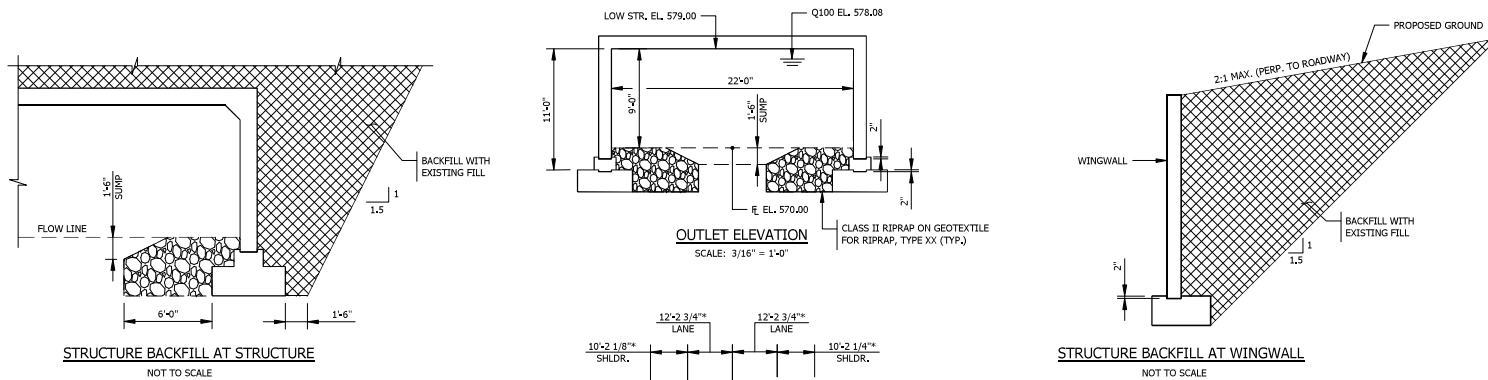
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 Date: JUN 21, 2022 8:44:10 AM / 2x41 hdt



**SUPERELEVATION DIAGRAM**

<b>PRELIMINARY</b>	RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____	HORIZONTAL SCALE NONE	BRIDGE FILE T.S.D.
	DESIGNED: BJM	DRAWN: SEJ		VERTICAL SCALE	DESIGNATION 1900333
	CHECKED: ZZH	CHECKED: BJM			SHEET 11 OF 23
					CONTRACT R-42243
<b>INDIANA DEPARTMENT OF TRANSPORTATION</b>					
<b>SUPERELEVATION DIAGRAM</b>					

P:\450 - INDOT Drawings\1114-100333\_BRW0501\Plan05 Sheet Drawings\10 Design Sheets\CSE\PLAN01.dwg - Layout  
 JUN 21, 2022 8:44:04 AM / 241 hst  
 File Name: P:\450 - INDOT Drawings\1114-100333\_BRW0501\Plan05 Sheet Drawings\10 Design Sheets\CSE\PLAN01.dwg - Layout  
 Project By:



**EXISTING STRUCTURE**

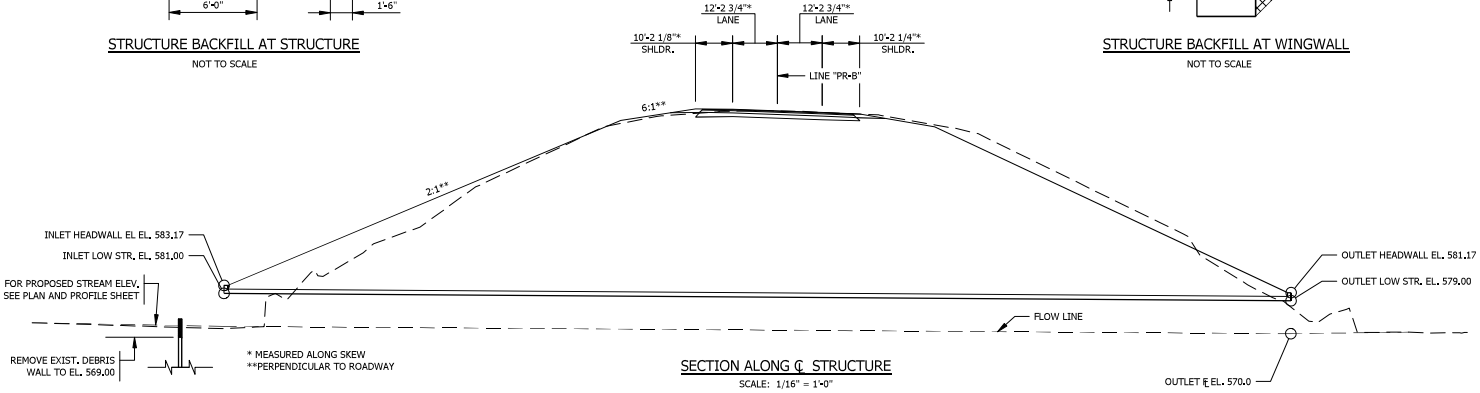
THE EXISTING STRUCTURE IS A TWIN 84" X 84" CONCRETE BOX, WITH AN OUT TO OUT LENGTH OF 296'-4". THE EXISTING STRUCTURE SHALL BE REMOVED. ESTIMATED QTY. OF EXCAVATION TO REMOVE EXISTING STRUCTURE = 52,000 CYS.

**DESIGN DATA**

STRUCTURE DESIGNED FOR HL-93 LOADING, IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, EIGHTH EDITION, 2017, AND SUBSEQUENT INTERIM.

**HYDRAULIC DATA**

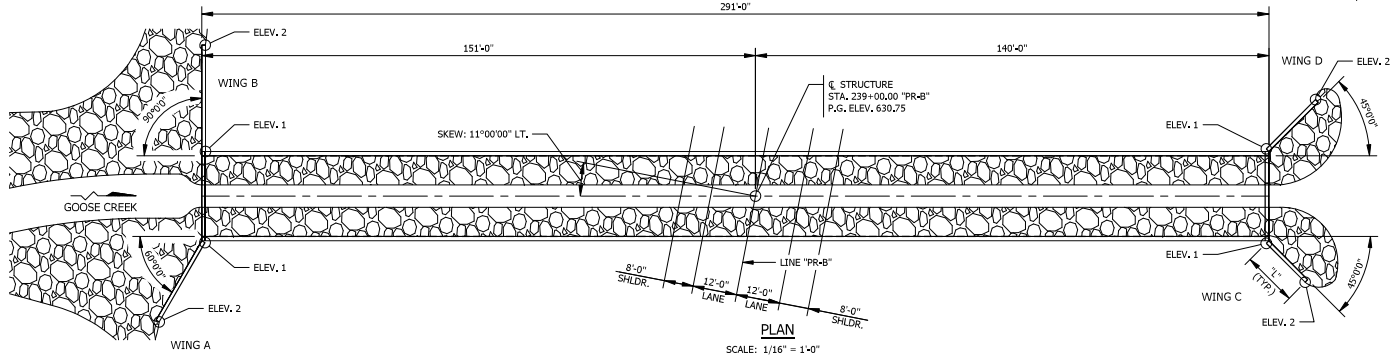
DRAINAGE AREA:	5.21 SQ. MI.
Q100 DISCHARGE:	1,680 CFS
Q100 ELEVATION:	578.08 FT.
APPROXIMATE SKEW:	11° 0' 0"
PROPOSED VELOCITY	10.37 FT./SEC.
PROPOSED BACKWATER	2.16 FT.
MINIMAL LOW STRUCTURE ELEVATION	579.00 FT.
EXISTING VELOCITY	17.15 FT./SEC.
EXISTING BACKWATER	9.25 FT.
EXISTING LOW STRUCTURE	577.00 FT.



**WINGWALL TABLE**

WING	"L"	ELEV. 1	ELEV. 2	AREA (SFT)
"A"	25'	583.17	579.00	281.3
"B"	29'	583.17	577.00	297.3
"C"	15'	581.17	576.00	161.3
"D"	19'	581.17	576.00	204.3

ESTIMATED QUANTITY OF HEADWALLS: 48.6 SFT.



**SOIL PARAMETERS FOR WINGWALL DESIGN**

SOIL PARAMETERS FOR WINGWALL DESIGN	VALUE
FACTORED BEARING RESISTANCE	---
NOMINAL BEARING CAPACITY	---
RESISTANCE FACTOR	---
FRICTION ANGLE OF THE BACKFILL	---
FRICTION FACTOR OF THE FOUNDATION SOIL	---
ANGLE OF INTERNAL FRICTION OF THE FOUNDATION SOIL	---
ULTIMATE ADHESION BETWEEN FOUNDATION SOIL AND THE POURED CONCRETE FOOTING	---
SOIL COHESION	---

**PRECAST CONCRETE 3-SIDED STRUCTURE**  
 SPAN: 22'-0"  
 RISE: 11'-0"  
 SKEW: 11°00'00" LT.  
 S,R, 26 OVER GOOSE CREEK  
 TIPPECANOE COUNTY

PRELIMINARY	RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____	<b>INDIANA DEPARTMENT OF TRANSPORTATION</b>  <b>GENERAL PLAN</b>	HORIZONTAL SCALE	BRIDGE FILE
	DESIGNED: BJM	DRAWN: SEJ			AS NOTED	T.S.D.
	CHECKED: ZZH	CHECKED: BJM			VERTICAL SCALE	DESIGNATION
						1900333
					SHEET	
					12	23
					CONTRACT	PROJECT
					R-42243	1900333

P:\450 - HDOOT Cawoodville (11M-100033)\_BR0501 Plans\05 Sheet Drawings\10 Design Sheets\SUMMARY\01.dwg - Layout  
 File Name: By: P:\05\B1  
 Date: 21-Jul-2022 8:42:21 AM / 2:01:50

PAVEMENT QUANTITIES AND APPROACH TABLE																															
LOCATION	DESCRIPTION (APPROACH TYPE OR CLASS)	WIDTH	LENGTH	RADI IN/OUT	DISTANCE BEYOND RW LINE	SURFACE BEYOND RW LINE			GRADE (LESS THEN 10% NOT SHOWN)		EXCAVATION		SUBGRADE IMPROVEMENT					JOINT ADHESIVE			REMARKS										
						COMPACTED AGGREGATE	HMA	CONCRETE	1	3	CYB	SURF.	INTER.	INTER.	BASE	WIDENING WITH HMA, TYPE B	ASPHALT FOR BLACK COAT	COMPACTED AGGREGATE NO. 53	COMPACTED AGGREGATE NO. 53	COMPACTED AGGREGATE NO. 53		COMPACTED AGGREGATE NO. 53	SUBGRADE TREATMENT, TYPE IC	GEOTEXTILE FOR PAVEMENT, TYPE 5B	MILLING, ASPHALT, 1.5"	SURF. LFT	INTER. LFT	LIQUID ASPHALT SEALANT LFT			
																													FT	FT	FT
SR 26 LINE "PR-B"	CLASS V	44	300						18.0		317	42	124	96	142	259			1			172	300		1428		445	1200	900	1200	
LINE "ACCESS ROAD"		12	800	25/25																											
TOTALS											2154	1505	124	96	142	259			1			172	1158		1428	0	445	1200	900	1200	

STRUCTURE DATA																																				
STRUCTURE NUMBER	LOCATION				DESCRIPTION	COVER			FLOW LINE		LENGTH	VIDEO INSPECTION LENGTH	SKEW	MAX	MIN	UP STREAM	DOWN STREAM	SERVICE LIFE	SAFE DIMENSIONAL	PH	BACKFILL METHOD	STRUCTURE BACKFILL TYPE 1	STRUCTURE BACKFILL TYPE 2	STRUCTURE BACKFILL TYPE 3	SCOUR PROTECTION		RYR TON IMPROVEMENT		SAFETY METAL END SECTION	CONNECT TO STR.	GULVERT ASSET ID	REMARKS				
	STATION	LEFT	RIGHT	CROSS		OFFSET	SIZE	PIPE TYPE	MANHOLE, INLET, CATCH BASIN OR SPECIALTY STRUCTURE	LEFT															RIGHT	FEET	PERCENT	PERCENT					ELEV.	ELEV.	YRS	TONS
1	237+00.00 "PR-B"		X		22 X 11		REINFORCED CONCRETE 3-SIDED STRUCTURE	43			201		11	48.82	48.12	875.00	870.00	75																		
2	241+97.84 "ACCESS ROAD"		X		12 X 8			43			43			0.40	0.34	625.70	621.30																			

UNDERDRAIN TABLE																																					
UNDERDRAIN PIPE LIMITS	TYPE 4 PIPE		UNDERDRAIN PIPE				OUTLET PIPE				OUTLET PROTECTORS				REMARKS																						
	4 in	6 in	GEOTEXTILES FOR UNDERDRAIN PIPE, TYPE 2B	AGGREGATE FOR UNDERDRAINS	HMA FOR UNDERDRAINS	SPECIAL GRADE	FLOW LINE ELEVATION @ UNDERDRAIN PIPE LIMITS	OUTLET PIPE REQUIRED	CONNECT UNDERDRAIN PIPE TO STRUCTURE NO. _____	STRUCTURE INVERT ELEVATION	45 DEGREE ELBOWS REQUIRED (1 OR 2)	6 in OUTLET PIPE	OUTLET ELEVATION	OUTLET AS OUTLET PROTECTOR NO. _____		DITCH FLOW LINE ELEVATION @ PROTECTOR	CONNECT OUTLET PIPE TO STRUCTURE NO. _____	STRUCTURE INVERT ELEVATION	IS BACKFILL FOR STRUCTURAL BACKFILL	HMA FOR UNDERDRAINS	OUTLET PROTECTOR NO. _____	OUTLET PROTECTOR TYPE	OUTSIDE LEFT	MEDIAN LEFT	MEDIAN RIGHT	OUTSIDE RIGHT											
237+50.00 "PR-B", RT	300.0	252.0	27.0					N																													CONTINUE EXISTING UNDERDRAIN
TOTALS	300.0	252.0	27.0																																		

EARTHWORK		
ITEM	QUANTITY	LIMIT
FILL + 25%	1652	CYS
COMMON EXCAVATION	2154	CYS
WATERWAY EXCAVATION	118	CYS
SURPLUS EXCAVATION (NO DIRECT PAYMENT)	0	CYS
WASTE = COMMON EX + WATERWAY EX + SURPLUS EXC. (FILL + 25%)	390	CYS
BENCHING (NO DIRECT PAYMENT)	0	CYS

PAVEMENT MARKINGS TABLE										
LOCATION	FROM STATION	TO STATION		LEFT	CENTER	RIGHT	LINE			SNOWPLOWABLE RAISED PAVIMENT MARKER
		LEFT	RIGHT				THERMOPLASTIC, SOLID, YELLOW, 6 IN.	THERMOPLASTIC, SOLID, WHITE, 6 IN.	THERMOPLASTIC, BROKEN, YELLOW, 6 IN.	
	237+00.00 "PR-B"	241+00.00 "PR-B"		X			400		400	
	237+00.00 "PR-B"	241+00.00 "PR-B"			X		400		400	10
	237+00.00 "PR-B"	241+00.00 "PR-B"		X			400		400	10
TOTALS							400		400	10

PIPE MATERIAL TABLE	
ITEM	QUANTITY
STRUKTURE NUMBER	2
PIPE TYPE/SHAPE	1/CLR
MAXIMUM PIPE SIZE	35"
CONCRETE PIPE SIZE	
CLASS	II
REINFORCING RATING	1000
MINIMUM DRAINAGE CONCRETE PIPE, CLASS 3 (S)	OK
CONCRETE PIPE, TYPE 5 (S)	OK
BRICK OR PIPE	
MANHOLE WALL PIPE (S) / MAXIMUM DR	OK/26
PROFILE WALL PIPE (S)	OK
MANHOLE WALL PIPE (S)	OK
PIPE (S) EXTRA STRENGTH (S)	OK

RIPRAP AND SEEDING SUMMARY TABLE											
LOCATION		LOCATION									
FROM STATION	TO STATION	LEFT	MEDIAN	RIGHT	LENGTH		FERTILIZER	SEED MIXTURE, R	EROSION CONTROL MAT, BLANKET	RIPRAP, CLASS 1	GEOTEXTILE FOR RIPRAP, TYPE 1B
					LFT	TON					
237+00.00 "PR-B"	241+00.00 "PR-B"	X	X	X	400	1.0	513	12090			
240+00.00 "ACCESS ROAD"	241+00.00 "ACCESS ROAD"	X	X	X	800				1012	1422	
TOTALS						1.0	513	12090	1012	1422	

MONUMENT SUMMARY TABLE							
LOCATION							
STATION	OFFSET	LEFT		RIGHT		MONUMENT TYPE B	RIGHT-OF-WAY MARKER
		FT	TYPE	FT	TYPE		
237+50.00 "PR-B", BEGIN PROJECT							X
240+50.00 "PR-B", END PROJECT							X
236+00.00 "PR-B"	300	X					X
237+00.00 "PR-B"	200	X					X
239+00.00 "PR-B"	295	X					X
240+00.00 "PR-B"	200	X					X
TOTALS			2				4

PRELIMINARY

RECOMMENDED FOR APPROVAL: _____	DESIGN ENGINEER	DATE: _____
DESIGNED: ZZH	DRAWN: SEJ	
CHECKED: BIM	CHECKED: ZZH	

INDIANA  
 DEPARTMENT OF TRANSPORTATION  
  
 ROAD SUMMARY

HORIZONTAL SCALE	BRIDGE FILE
NONE	T-50.
VERTICAL SCALE	DESIGNATION
	1900333
	SHEET
	13 OF 23
CONTRACT	PROJECT
R-4243	1900333



# Appendix C

Early Coordination

Des. No. 1900333

December 22, 2021

Indiana Department of Transportation  
Crawfordsville District  
41 West 300 North  
Crawfordsville, IN 47901

Re: Designation Number.: 1900333, SR 26 Small Structure Project Over Goose Creek,  
Tippecanoe County, Indiana  
**Environmental Early Coordination**

Dear Environmental Coordinator:

The Indiana Department of Transportation, with federal funding, intends to proceed with a project involving the small structure in Tippecanoe County. 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 numbers and description in your reply.** We will incorporate your comments into a study of the project's environmental impacts.

This project is located on SR 26, 4.98 miles west of US 52/US 231, in Tippecanoe County, Indiana. This section of SR 52 is a *Principal Arterial*. The existing SR 26 consists of one 12 foot lane in each direction with 10 foot wide shoulders on each side of the roadway. The existing small structure is a pair of 7 foot by 7 foot reinforced concrete box structures. The draft need is due to the deterioration of the structure rating 4 (poor condition) out of 9 (excellent condition). The draft purpose is to have a structure with a condition rating of at least 7 (good condition) out of 9. The approximate existing right-of-way is 200 feet on each side of the centerline throughout the project.

The proposed project is anticipated to replace the small structure over a tributary to Goose Creek. The replacement structure is anticipated to be a small structure replacement with a precast concrete three-sided bridge length culvert with a 22 foot span and a 9 foot vertical opening. Riprap will be placed through the structure, at the inlet, and outlet in accordance with INDOT standard drawings. The project requires 0.8 acre of permanent right-of-way and up to 0.1 acre of temporary right-of-way. Proposed right-of-way widths along SR 26 are approximately 290 feet from the centerline. The project will be approximately 300 in length. The proposed method of traffic maintenance is anticipated to require an official state detour. Up to 5.0 acres of trees are anticipated to be cleared as part of the project. The project is anticipated to begin construction in 2024.

Land use in the vicinity of the project area is primarily in a wooded area. Corradino will perform waters and wetlands determinations to identify water resources that may be present. The project is anticipated

to qualify for the Rangewide Programmatic Agreement for the Indiana bat and Northern Long-eared bat by completing the Information for Planning and Consultation (IPaC). Coordination will occur with INDOT Cultural Resources Office (CRO) to evaluate the project area for archaeological and historic resources and for Section 106 compliance. The results of this will be forwarded to the State Historic Preservation Office (SHPO) for review and concurrence as appropriate.

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. If you have any questions regarding this matter, please feel free to contact Zed Hott of Corradino LLC, at 317-488-2363 or [zhott@corradino.com](mailto:zhott@corradino.com) and or the Project Manager, Sara Heck, of INDOT at [sheck@indot.in.gov](mailto:sheck@indot.in.gov). Thank you in advance for your input.

Sincerely,



Zed Hott  
Corradino LLC  
200 South Meridian Street, Suite 330  
Indianapolis, IN 46225

Attachments:

- A. Project Location Maps
- B. Site Photos

**The following agencies received Early Coordination Letters:**

Federal Highway Administration  
Federal Office Building, Room 254  
575 North Pennsylvania Street  
Indianapolis, Indiana 46204

State Conservationist  
Natural Resource Conservation Service  
6013 Lakeside Boulevard  
Indianapolis, IN 46278

Environmental Coordinator  
Indiana Department of Natural Resources  
Division of Fish and Wildlife  
402 West Washington Street, Rm. W273  
Indianapolis, IN 46204

IDEM  
Automatic coordination website

IDEM – Groundwater Section  
Electronic Submittal

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

Regional Environmental Coordinator  
Midwest Regional Office  
National Park Service  
601 Riverfront Drive  
Omaha, Nebraska 68102

U.S. Army Corps of Engineers  
Louisville District  
ATTN: CELRL-RDN  
P.O. Box 59  
Louisville, KY 40201-0059

Indiana Department of Transportation  
Crawfordsville District  
41 West 300 North  
Crawfordsville, IN 47933

Tippecanoe County Surveyor  
20 N 3<sup>rd</sup> Street  
Lafayette, IN 47901

Tippecanoe County Executive Director  
20 N 3<sup>rd</sup> Street  
Lafayette, IN 47901

Tippecanoe County Soil & Water Conservation  
1812 Troxel Drive Suite 3  
Lafayette, IN 47901

Indiana Geological and Water Survey  
611 North Walnut Grove  
Bloomington, IN 47405

US Fish and Wildlife Service  
Northern Indiana Suboffice  
P.O. Box 2616  
Chesterton, IN 46304  
[Elizabeth\\_mccloskey@fws.gov](mailto:Elizabeth_mccloskey@fws.gov)

Area Plan Commission of Tippecanoe County  
20 N. Third Street  
Lafayette, IN 47901  
tstroshtine@tippecanoe.in.gov

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

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**DNR #:** ER-24365

**Request Received:** December 22, 2021

**Requestor:** The Corradino Group, Inc.  
Zed Z Hott  
200 South Meridian Street, Suite 330  
Indianapolis, IN 46225

**Project:** SR 26 small structure replacement over Goose Creek, about 4.98 miles west of US 52/US 231; Des #1900333

**County/Site info:** Tippecanoe

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 of our agency for construction in a floodway pursuant to the Flood Control Act (IC 14-28-1), unless it qualifies for a bridge exemption (see enclosure). Please include a copy of this letter with the permit application if the project does not meet the bridge exemption criteria.

**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 must span the entire channel width (a minimum of 1.2 times the ordinary high water mark width). Crossings must maintain the natural stream substrate within the structure (natural stream substrate must be replaced in sumped box and pipe culverts up to the existing flowline). Scour protection at the inlet and outlet must not extend above the existing flowline elevation. Stream depth, channel width and water velocities in the crossing structure during low-flow conditions must approximate those in the natural stream channel.

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. Upgrading wildlife passage for replacement/rehabilitated structures is recommended whenever possible to improve wildlife/vehicle safety. White-tailed deer passage must be incorporated into all new structures where no structure previously existed. Minimum structure dimensions for

**Attachments:** A - Bridge Exemption Criteria

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

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white-tailed deer passage are 20 feet of width clearance (overall span of the structure) and 8 feet of height clearance measured from the OHWM. Bank lines must be restored within structures to allow for wildlife passage above the ordinary high water mark. All wildlife passage designs must include a smooth level pathway a minimum of 1-2 feet in width composed of natural substrate (soil, sand, gravel, etc.) or compacted aggregate fill over riprap (#2, #53, #73, etc.) tied into existing elevations both upstream and downstream.

There are a number of techniques and materials for incorporating wildlife passage into the design of a crossing structure if restoring bank lines is not an option. Coordination with the Regional Environmental Biologist to address wildlife passage issues before submitting a permit application, if required, is encouraged to avoid delays in the permitting process. The following links are good resources to consider in the design of stream crossing structures to maintain fish and wildlife passage:

<http://www.fs.fed.us/wildlifecrossings/library/>,  
[https://roadeology.ucdavis.edu/files/content/projects/DOT-FHWA\\_Wildlife\\_Crossing\\_Structures\\_Handbook.pdf](https://roadeology.ucdavis.edu/files/content/projects/DOT-FHWA_Wildlife_Crossing_Structures_Handbook.pdf), [https://www.fs.fed.us/biology/nsaec/fishxing/aop\\_pdfs.html](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 the following 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 unless specifically designed and installed for grade control and aquatic organism passage. 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, if required) for any unavoidable habitat impacts that will occur. The DNR's Habitat Mitigation Guidelines (and plant lists) can be found online at:  
<http://iac.iga.in.gov/iac/20200527-IR-312200284NRA.xml.pdf>.

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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, 1 inch to 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 acre in an urban area 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.

It should be noted that impacts to non-wetland wooded habitat in excess of 5 acres could be subject to an increased mitigation ratio. Coordination with the Regional Environmental Biologist to address habitat impacts and mitigation before submitting a permit application, if required, is encouraged to avoid delays in the permitting process.

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. A native herbaceous seed mixture must include at least 5 species of grasses and sedges and 5 species of wildflowers.
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

**THIS IS NOT A PERMIT**

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

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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.

*Christie L. Stanifer*

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**Date:** January 21, 2022

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



**From:** [Laymon, Makinna](#)  
**To:** [Rachel Pluckebaum](#)  
**Cc:** [Khan, Asfahan](#); [Kurtz, Randy](#)  
**Subject:** FW: Des. No. 1900333 - Bat and Heritage Database Check  
**Date:** Thursday, May 27, 2021 9:57:22 AM  
**Attachments:** [image001.png](#)  
[image002.png](#)  
[image005.png](#)  
[image006.png](#)  
[image007.png](#)  
[image008.png](#)  
[image009.png](#)  
[image010.png](#)  
[image011.png](#)  
[image003.png](#)  
[image012.png](#)  
[03 - Project Location Map.pdf](#)  
[03 - Project Location Map.mxd](#)  
[01 - USGS Topo Map \(Zoom In\).pdf](#)  
[01 - USGS Topo Map \(Zoom In\).mxd](#)

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Good morning,

A review of the USFWS GIS database for Indiana bat and Northern long-eared bat roosting, hibernacula and capture sites was conducted for Des No. 1900333 on 5/27/2021. There are no documented sites within a half mile the project area. The USFWS Information for Planning and Conservation (IPaC) website must be consulted and a new project created to obtain an official species list and complete the questionnaire for the project to determine the applicability of the programmatic consultation. If needed, the IPaC generated documents must be forwarded to the USFWS for verification.

Thank you,

**Makinna Laymon**

*Environmental Manager 2, Capital Program Management Division*

41 West 300 North  
Crawfordsville, IN 47933

**Phone:** (765) 361-5621

**Email:** [MLaymon2@indot.in.gov](mailto:MLaymon2@indot.in.gov)



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**From:** Kurtz, Randy <RKurtz@indot.IN.gov>  
**Sent:** Wednesday, May 26, 2021 12:21 PM  
**To:** Laymon, Makinna <MLaymon2@indot.IN.gov>  
**Subject:** FW: Des. No. 1900333 - Bat and Heritage Database Check

Good afternoon

See below.. Let me know when you start the bat check so you can walk me through it with you.

Thanks

**Randy "Zane" Kurtz**

*Environmental Section Manager  
Capital Program Management Division*

41 West 300 North

September 2, 2022

Zed Hott  
Corradino, LLC  
200 South Meridian Street, Suite 330  
Indianapolis, Indiana 46225  
[zhott@carradino.com](mailto:zhott@carradino.com)

Dear Mr. Hott:

The proposed small structure project in Tippecanoe County, Indiana (Des. No. 1900333), as referred to in your letter received August 31, 2022, will not cause a conversion of prime farmland.

If you need additional information, please contact John Allen at 317-295-5859 or [john.allen@usda.gov](mailto:john.allen@usda.gov)

Sincerely,

**JOHN ALLEN** Digitally signed by JOHN ALLEN  
Date: 2022.09.02 09:22:44 -04'00'

JOHN ALLEN  
State Soil Scientist



## Organization and Project Information

**Project ID:** SR 26 Small Structure Project over Goose Creek  
**Des. ID:** SR 26 over Goose Creek, Tippecanoe County, IN  
**Project Title:** Des. No. 1900333 SR 26 over Goose Creek, Tippecanoe County, IN  
**Name of Organization:** Corradino, LLC  
**Requested by:** Rachel Pluckebaum

## Environmental Assessment Report

### 1. Geological Hazards:

- Moderate liquefaction potential
- 1% Annual Chance Flood Hazard

### 2. Mineral Resources:

- Bedrock Resource: Moderate Potential
- Sand and Gravel Resource: Low Potential

### 3. Active or abandoned mineral resources extraction sites:

- Abandoned Industrial Minerals Sand Gravel Pits

\*All map layers from Indiana Map ([maps.indiana.edu](http://maps.indiana.edu))

## DISCLAIMER:

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

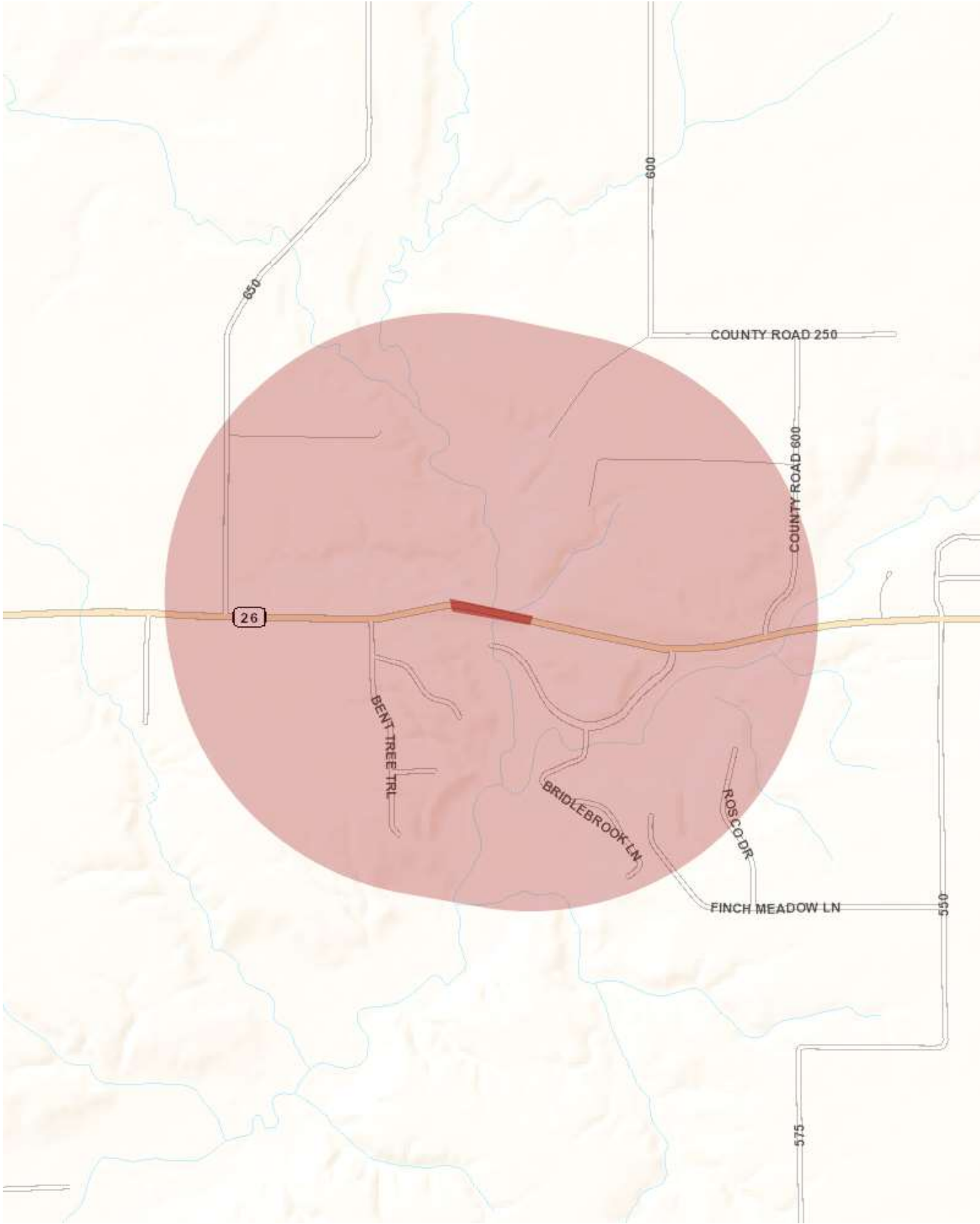
This information was furnished by Indiana Geological Survey

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

Email: [IGSEnvir@indiana.edu](mailto:IGSEnvir@indiana.edu)

Phone: 812 855-7428

Date: December 22, 2021



## Metadata:

- [https://maps.indiana.edu/metadata/Geology/Industrial\\_Minerals\\_Sand\\_Gravel\\_Pits\\_Abandoned.html](https://maps.indiana.edu/metadata/Geology/Industrial_Minerals_Sand_Gravel_Pits_Abandoned.html)
- [https://maps.indiana.edu/metadata/Geology/Seismic\\_Earthquake\\_Liquefaction\\_Potential.html](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/Industrial_Minerals_Sand_Gravel_Resources.html)
- [https://maps.indiana.edu/metadata/Hydrology/Floodplains\\_FIRM.html](https://maps.indiana.edu/metadata/Hydrology/Floodplains_FIRM.html)
- [https://maps.indiana.edu/metadata/Geology/Bedrock\\_Geology.html](https://maps.indiana.edu/metadata/Geology/Bedrock_Geology.html)

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Area Plan Commission of Tippecanoe County, Indiana

January 12, 2022  
Ref. No. 2022-006

Zed Hott  
Corradino LLC  
200 South Meridian Street, Suite 330  
Indianapolis, IN 46225

Dear Mr. Hott:

Thank you for including the Area Plan Commission as part of the environmental early coordination for the SR 26 small structure project over Goose Creek, des #1900333. We have reviewed the project information and offer the following comments.

**Historic Structures:** After reviewing the Indiana State Historical Architectural and Archaeological Research database, we have identified one site within a ½ miles radius of the project. The site is the Spencer Cemetery, and the survey number is 0157-487-20020. The site is rated as “Contributing.” It is located at the section/township/range of 7 (SE) 23-5. According to our information, it is an acre in size, and located in the woods behind and south of a house. There are around 35-50 grave sites, with many children buried there. Graves range in date from 1883-1888.

It should be noted that the Arrowhead subdivision, located on the south side of SR 26 is within a ½ mile radius. It is a subdivision with homes that were constructed in the 1960’s.

There are no churches, libraries, schools or parks within a ½ mile radius of the project. There are three properties of interest located close to the project but outside of the ½ mile radius and they are:

- a) Frank and Asa Beineke Memorial Forrest (NICHES), on CR 725W,
- b) Purdue Wildlife Area, 8000 SR 26,  
(<https://ag.purdue.edu/fnr/Pages/propwildlifearea.aspx>), and
- c) Martell Forest, on CR 100N (<https://ag.purdue.edu/fnr/Pages/propmartell.aspx>)

We also looked at DNRs and IDEMs GIS information and found no active oil and gas wells, no trails, no active mining, no hazardous material, no historic round and polygonal barns, and no underground storage tanks within a ½ mile radius of the project location. There was one significant water withdraw reported, and the registration number is 00455. It is located at SR 26 and CR 600W. There is one closed well just outside of the ½ mile radius and its permit number 23743. It is located on CR 600W just south of the CR 250N bend.

There are wetlands and floodplains within a ½ mile radius, and they are related to Goose and Indian Creeks.

We also have in our office copies of the draft location-design study report as well as the environmental study for the initial project, RS-4879. If you would like a copy of them, please let us know.

Please call or email if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Hittle", with a horizontal line extending to the right from the end of the name.

David Hittle  
Executive Director

cc: Sara Heck, INDOT Project Manager



## United States Department of the Interior



### FISH AND WILDLIFE SERVICE

Indiana Ecological Services Field Office

620 South Walker Street

Bloomington, IN 47403-2121

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

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

In Reply Refer To:

March 10, 2022

Project code: 2022-0017452

Project Name: Des. No. 1900333, SR 26, 4.98 Miles West of US 52/231

Subject: Concurrence verification letter for the 'Des. No. 1900333, SR 26, 4.98 Miles West of US 52/231' 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 dated March 10, 2022 to verify that the **Des. No. 1900333, SR 26, 4.98 Miles West of US 52/231** (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*). Consultation with the 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.

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

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

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

- Monarch Butterfly *Danaus plexippus* Candidate

## Project Description

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

### **Name**

Des. No. 1900333, SR 26, 4.98 Miles West of US 52/231

### **Description**

The project is located on SR 26 4.98 miles west of US 52/231 in Tippecanoe County, Indiana. 5 acres of trees will be cleared for this project. Dominant tree species include Eastern Sycamore (*Platanus occidentalis*), Black Walnut (*Juglans nigra*), Sugar Maple (*Acer saccharum*), Eastern Redbud (*Cercis canadensis*), American Basswood (*Tilia americana*), Flowering Dogwood (*Cornus florida*), and Eastern Redcedar (*Juniperus virginiana*). There is suitable summer habitat within the project area. The expected construction date for this project is Spring 2024 and last the entire construction season. A review of the USFWS GIS database for Indiana bat and Northern Long-eared bat roosting was conducted on May 27, 2021 by Crawfordsville District and states that no documented sites were found within 0.5 mile of the project area. No federally endangered species are within the 0.5 mile radius of the project. No bats were seen in the most recent Bridge Inspection Report, dated May 13, 2021. No permanent lighting will be installed and it is unknown whether temporary lighting will be needed, thus temporary lighting will be assumed.

The existing twin reinforced concrete boxes have an overall rating of 4 (poor condition) out of 9 (excellent condition). There is substantial debris build up at the inlet and scour has caused the end sections of the box to complete detach from the rest of the structure. Due to the severity of the deterioration of the existing structures, the proposed scope for this project is a small structure replacement with a bridge. The structure is under approximately 50 feet of fill and significant excavation (up to 70 feet deep) of the existing wooded sideslopes will be necessary to remove and replace the existing structures. To allow for future access to the inlet of the structure for inspection and debris removal, an access road will also be constructed as part of this project along the north side of SR 26.

## 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<sup>[1]</sup>?

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

**Automatically answered**

Yes

2. Is the project within the range of the Northern long-eared bat<sup>[1]</sup>?

[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<sup>[1]</sup> 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<sup>[1]</sup>?

[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<sup>[1]</sup>?

[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<sup>[1]</sup> summer habitat for Indiana Bat or NLEB **within** the project action area<sup>[2]</sup>? (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<sup>[1]</sup> 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<sup>[1][2]</sup> been conducted<sup>[3][4]</sup> **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**<sup>[1][2]</sup>?

[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<sup>[1]</sup>?

[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**<sup>[1][2]</sup>?

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

*No*

20. Are *all* trees that are being removed clearly demarcated?  
Yes
21. Will the removal of habitat or the removal/trimming of trees include installing new or replacing existing **permanent** lighting?  
No
22. Does the project include wetland or stream protection activities associated with compensatory wetland mitigation?  
No
23. Does the project include slash pile burning?  
No
24. Does the project include *any* bridge removal, replacement, and/or maintenance activities (e.g., any bridge repair, retrofit, maintenance, and/or rehabilitation work)?  
Yes
25. Is there *any* suitable habitat<sup>[1]</sup> 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

26. Has a bridge assessment<sup>[1]</sup> been conducted **within** the last 24 months<sup>[2]</sup> 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**

- CV 026\_079\_28.10 Culvert Replacement Insp\_Rpt-2021-05-13.pdf <https://ipac.ecosphere.fws.gov/project/CN5PBNX5VNH7ZJTDUTY6E6FLDQ/projectDocuments/106692750>

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

[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

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

No

29. 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

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

Yes

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

Yes

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

No

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

No

34. 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

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

No

36. 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*

37. 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.*

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 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.*

39. 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*

40. **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*



41. **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<sup>[1]</sup> 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

42. **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

43. **Tree Removal AMM 4**

Can the project avoid cutting down/removal of *all* (1) **documented**<sup>[1]</sup> Indiana bat or NLEB roosts<sup>[2]</sup> (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

44. **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?

Yes

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

No

3. How many acres<sup>[1]</sup> 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.

0.45

4. Please describe the proposed bridge work:

*The existing twin reinforced concrete boxes have an overall rating of 4 (poor condition) out of 9 (excellent condition). There is substantial debris build up at the inlet and scour has caused the end sections of the box to completely detach from the rest of the structure. Due to the severity of the deterioration of the existing structures, the proposed scope for this project is a small structure replacement with a bridge. The structure is under approximately 50 feet of fill and significant excavation (up to 70 feet deep) of the existing wooded sideslopes will be necessary to remove and replace the existing structures. To allow for future access to the inlet of the structure for inspection and debris removal, an access road will also be constructed as part of this project along the north side of SR 26.*

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

*Spring 2024*

6. Please enter the date of the bridge assessment:

*May 13, 2021*

## Avoidance And Minimization Measures (AMMs)

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

### TREE REMOVAL AMM 3

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

### TREE REMOVAL AMM 4

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

### GENERAL AMM 1

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

### TREE REMOVAL AMM 1

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

### LIGHTING AMM 1

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

**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.

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

This key was last updated in IPaC on February 24, 2022. 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.

## **IPaC User Contact Information**

Agency: Indiana Department of Transportation  
Name: Benjamin Neild  
Address: 41 W. 300 N.  
City: Crawfordsville  
State: IN  
Zip: 47933  
Email: bneild@indot.in.gov  
Phone: 7653615259



## 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

In Reply Refer To:

November 02, 2022

Project Code: 2022-0017452

Project Name: Des. No. 1900333, SR 26, 4.98 Miles West of US 52/231

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

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

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.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

**Migratory Birds:** In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of

Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. **Please include the Consultation Code 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
- Migratory Birds
- Wetlands

## 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

**Project Code:** 2022-0017452  
**Project Name:** Des. No. 1900333, SR 26, 4.98 Miles West of US 52/231  
**Project Type:** Bridge - Maintenance  
**Project Description:** The project is located on SR 26 4.98 miles west of US 52/231 in Tippecanoe County, Indiana. 5 acres of trees will be cleared for this project. Dominant tree species include Eastern Sycamore (*Platanus occidentalis*), Black Walnut (*Juglans nigra*), Sugar Maple (*Acer saccharum*), Eastern Redbud (*Cercis canadensis*), American Basswood (*Tilia americana*), Flowering Dogwood (*Cornus florida*), and Eastern Redcedar (*Juniperus virginiana*). There is suitable summer habitat within the project area. The expected construction date for this project is Spring 2024 and last the entire construction season. A review of the USFWS GIS database for Indiana bat and Northern Long-eared bat roosting was conducted on May 27, 2021 by Crawfordsville District and states that no documented sites were found within 0.5 mile of the project area. No federally endangered species are within the 0.5 mile radius of the project. No bats were seen in the most recent Bridge Inspection Report, dated May 13, 2021. No permanent lighting will be installed and it is unknown whether temporary lighting will be needed, thus temporary lighting will be assumed.

The existing twin reinforced concrete boxes have an overall rating of 4 (poor condition) out of 9 (excellent condition). There is substantial debris build up at the inlet and scour has caused the end sections of the box to complete detach from the rest of the structure. Due to the severity of the deterioration of the existing structures, the proposed scope for this project is a small structure replacement with a bridge. The structure is under approximately 50 feet of fill and significant excavation (up to 70 feet deep) of the existing wooded sideslopes will be necessary to remove and replace the existing structures. To allow for future access to the inlet of the structure for inspection and debris removal, an access road will also be constructed as part of this project along the north side of SR 26.

**Project Location:**

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@40.44603465,-87.02399110416003,14z>



Counties: Tippecanoe County, Indiana

## Endangered Species Act Species

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

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

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, 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 <i>Myotis sodalis</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/5949">https://ecos.fws.gov/ecp/species/5949</a>	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> <li>▪ 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 <a href="http://www.fws.gov/midwest/endangered/mammals/nleb/index.html">www.fws.gov/midwest/endangered/mammals/nleb/index.html</a></li> </ul> Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>	Threatened

### Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate

### Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.



## Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

- 
1. The [Migratory Birds Treaty Act](#) of 1918.
  2. The [Bald and Golden Eagle Protection Act](#) of 1940.
  3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

**The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern \(BCC\) list](#) or warrant special attention in your project location.** To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Oct 15 to Aug 31
Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9399">https://ecos.fws.gov/ecp/species/9399</a>	Breeds May 15 to Oct 10

NAME	BREEDING SEASON
<b>Bobolink <i>Dolichonyx oryzivorus</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31
<b>Cerulean Warbler <i>Dendroica cerulea</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/2974">https://ecos.fws.gov/ecp/species/2974</a>	Breeds Apr 21 to Jul 20
<b>Chimney Swift <i>Chaetura pelagica</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
<b>Eastern Whip-poor-will <i>Antrostomus vociferus</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 20
<b>Golden Eagle <i>Aquila chrysaetos</i></b> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. <a href="https://ecos.fws.gov/ecp/species/1680">https://ecos.fws.gov/ecp/species/1680</a>	Breeds elsewhere
<b>Henslow's Sparrow <i>Ammodramus henslowii</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/3941">https://ecos.fws.gov/ecp/species/3941</a>	Breeds May 1 to Aug 31
<b>Kentucky Warbler <i>Oporornis formosus</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 20
<b>Lesser Yellowlegs <i>Tringa flavipes</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9679">https://ecos.fws.gov/ecp/species/9679</a>	Breeds elsewhere
<b>Prothonotary Warbler <i>Protonotaria citrea</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 1 to Jul 31
<b>Red-headed Woodpecker <i>Melanerpes erythrocephalus</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
<b>Rusty Blackbird <i>Euphagus carolinus</i></b> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere

NAME	BREEDING SEASON
Upland Sandpiper <i>Bartramia longicauda</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/9294">https://ecos.fws.gov/ecp/species/9294</a>	Breeds May 1 to Aug 31
Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

## Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

### Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

### Survey Effort (|)

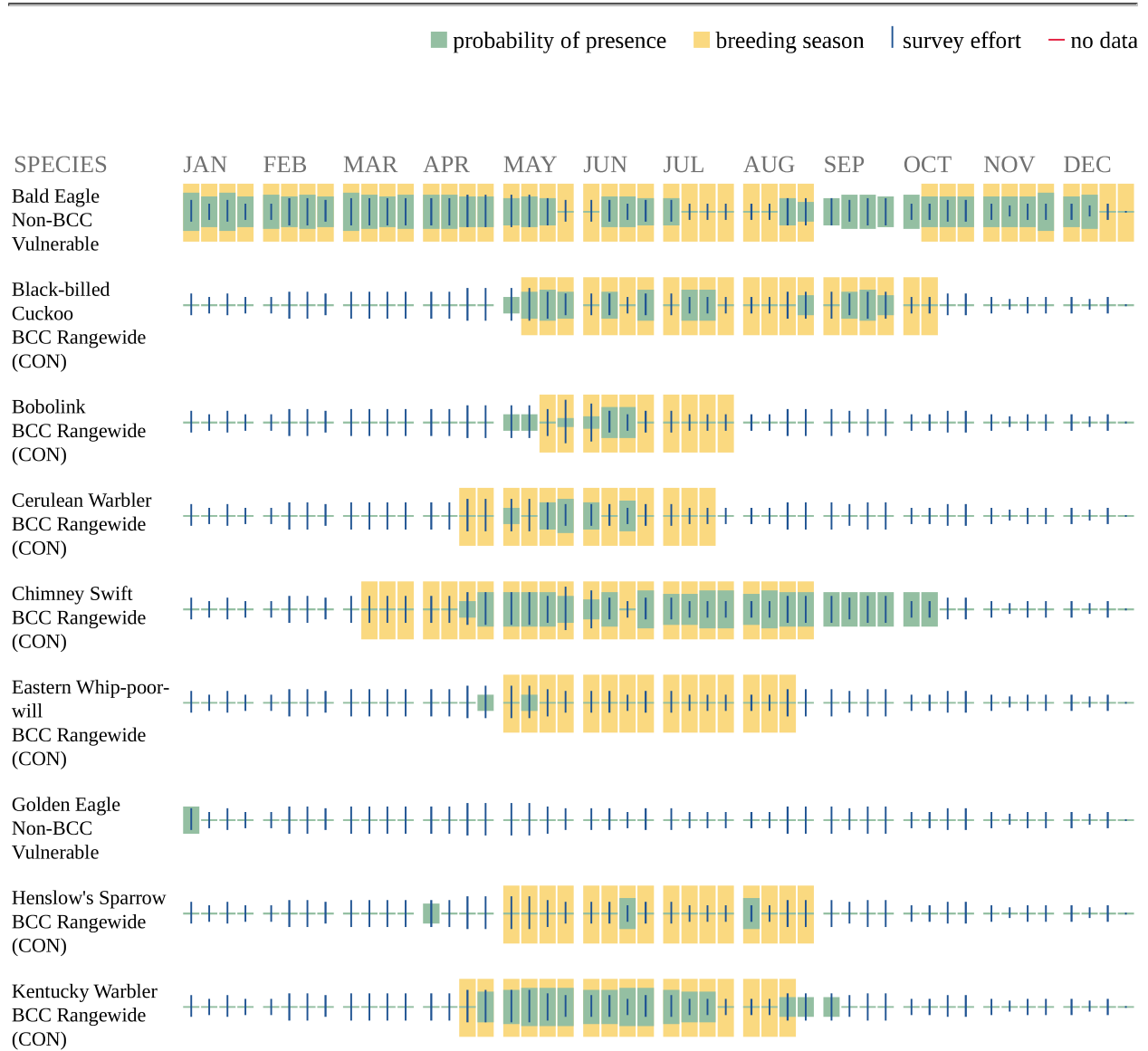
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

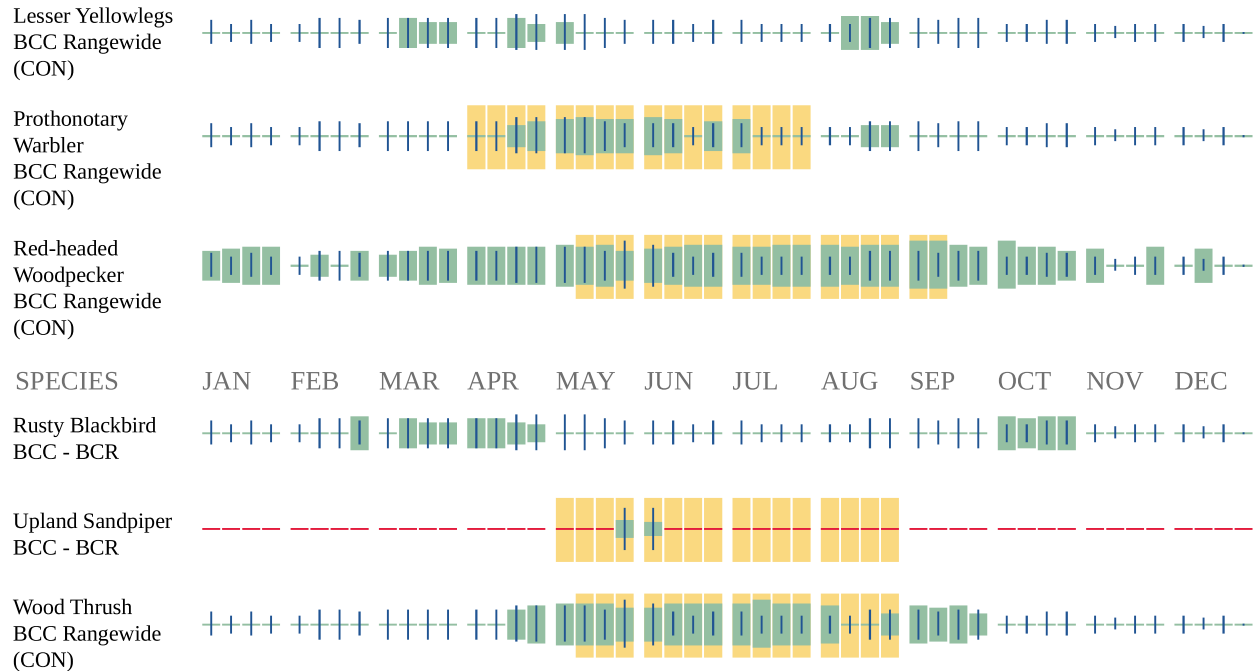
### No Data (-)

A week is marked as having no data if there were no survey events for that week.

### Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

## Migratory Birds FAQ

**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

**What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?**

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

### **What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

### **How do I know if a bird is breeding, wintering or migrating in my area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

### **What are the levels of concern for migratory birds?**

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).



Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

### **Details about birds that are potentially affected by offshore projects**

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

### **What if I have eagles on my list?**

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

### **Proper Interpretation and Use of Your Migratory Bird Report**

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

## Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

RIVERINE

- [Riverine](#)

## **IPaC User Contact Information**

Agency: Corradino LLC  
Name: Rachel Pluckebaum  
Address: 200 South Meridian Street Suite 330  
City: Indianapolis  
State: IN  
Zip: 46225  
Email: rpluckebaum@corradino.com  
Phone: 3174882363

## **Lead Agency Contact Information**

Lead Agency: Indiana Department of Transportation

# Appendix D

Section 106 of the NHPA

Des. No. 1900333

## Minor Projects PA Project Submittal and Assessment Form

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### SECTION 1

*Submittal of this form is only required for projects where Category B applies. Projects qualifying under Category A do not require submittal of this form. SECTION 2 (for Conditions of Category B.1 for curb/sidewalk) or SECTION 3 (for Conditions of Category B.9 for drainage structures) may be required as determined by INDOT-Cultural Resources Office (INDOT-CRO) review. INDOT-CRO will notify applicant if the Minor Projects PA does not apply.*

#### **Part 1: Project Information-Completed by Applicant (Consultant/PM/Project Sponsor/INDOT District Staff)\***

*\*A qualified professional historian (QP) is not required to complete Part I INDOT-Cultural Resources Office (INDOT-CRO) staff will be responsible for completion of Part II.*

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**Original Submission Date:** July 6, 2022

**Amended Submission Date\*:**

*\*Consult with INDOT-CRO to determine whether an amendment is required. For revisions/updates to original form, please detail in applicable sections below. Please use red font to distinguish the revisions/updates.*

**Submitted By (Provide Name and Firm/Organization):**

Candy Hudziak  
Metric Environmental, LLC

**Project Designation Number:** 1900333

**Route Number:** State Road (SR) 26

**Feature crossed (if applicable):** Goose Creek

**City/Township:** Shelby Township

**County:** Tippecanoe County

**Project Description:**

The project is located approximately five miles west of United States 52/231 (US 52/231) on State Road (SR) 26 where it crosses Goose Creek in Shelby Township, Tippecanoe County, Indiana. The project involves the replacement of small structure No. CV 026-079-28.10 carrying Goose Creek beneath SR 26, to be replaced with a three-sided, single-span concrete structure. The project scope also includes resurfacing and widening of SR 26, construction of a twelve-foot-wide access road with shoulders, and installation of riprap and erosion control materials. The anticipated total project length is 0.057 mile.

The existing structures (No. CV 026-079-28.10) are two precast concrete-box culverts that were built in 1993. Most recently, the roadway within the project limits was milled to two inches and resurfaced in 2016. The existing cross section of SR 26 consists of one 12-foot-wide lane in each direction with 10-foot-wide shoulders on each side of the roadway.

The easternmost structure has experienced a loss of two box sections from the existing structure. The failed sections lie downstream nearly 20 feet and are embedded into the stream bed. There are no apparent issues present with the westernmost structure at the time of this report. Erosion of the roadway embankment is also present. At the north end, the end box sections have settled nearly 2 feet. Erosion of the roadway embankment is also present.

The downstream ends of the existing structures are being undermined by scour and have broken away from the main portion of the structure. The upstream end of the structure catches a significant amount of debris. Due to the structure being underneath approximately 60 feet of roadway fill, steep side slopes and poor access, it is difficult for the Crawfordsville District to maintain the structure and clear the built-up debris at the upstream end. Sections of the structure at the upstream end have also broken away from the main part of the structure.

## Minor Projects PA Project Submittal and Assessment Form

The existing banks on the north and south side of SR 26 have developed gullies and rills resulting in the loss of embankment material. Significant loss of embankment can be seen around the ends of the inlet of the structures which may be largely due to stream action and granular fill.

INDOT Office of Hydraulics performed a hydraulic analysis of this location and found the existing structure to be hydraulically inadequate. Backwater of the existing condition is 9.25-feet, and the existing outlet velocity is 17.15-feet per second.

The purpose of this project is to address the structural deficiencies/segment separation of the existing box culverts, address the erosion/scour of the channel and embankments upstream and downstream. Additionally, the purpose of the project is to reduce the tendency of debris to collect upstream and downstream and to reduce the existing backwater to less than 3-feet to reduce upstream flooding and comply with INDOT's current hydraulic requirements. An access road will be constructed for ease of maintenance due to the steep decline to reach the two culverts.

Discussion with the Crawfordsville District was undertaken regarding the maintenance of traffic for this project. The shortest official detour route is approximately 45 miles in length. The route uses SR 26, SR 55, SR 352, US 52, and US 231 as these are the nearest state or federal route available in the area. A map of the proposed detour route is provided in Figure 3. Coordination with Tippecanoe County will be required for the local detour, however, the local detour is likely to be CR 750W, to CR 725 W to Baseline Road to CR 500W. The local detour is approximately 6.5 miles in length.

Proposed anticipated right-of-way includes 0.1 acre of temporary and 0.8 acre of permanent.

**If the project includes any curb, curb ramp, or sidewalk work, please specify the location(s) of such work:**

**For bridge or small structure projects, please list feature crossed, structure number, NBI number, and structure type:**

The structures (CV 026-079-28.10) are precast concrete box culverts below SR 26 conveying Goose Creek

**For bridge projects, is the bridge included in INDOT's Historic Bridge Inventory (<https://www.in.gov/indot/2531.htm>)?**

Yes       No

**If yes, did the inventory determine the bridge eligible for or listed in the National Register of Historic Places? Please provide page # of entry in Historic Bridge Inventory.**

Yes       No

**Inventory Page #** \_\_\_\_\_

**Will there be right-of-way acquisition as part of this project?**

Yes       No

**If yes was checked above, please check all that apply:**

Permanent       Temporary       Reacquisition

**If applicable, identify right-of-way acquisition locations in text below and in attached mapping. Please specify how much (both temporary and permanent) and indicate what activities are included in the proposed right-of-way:**

0.1 acre of temporary and 0.8 acre of permanent

## Minor Projects PA Project Submittal and Assessment Form

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Is there any potential for additional temporary right-of-way to be needed later for purposes such as access, staging, etc.?

Yes  No

### Archaeology (check one):

- All proposed activities are presumed to occur in previously disturbed soils\***  
*\*INDOT-CRO will notify you if project area includes undisturbed soils and requires an archaeological reconnaissance.*
- Project takes place in undisturbed soils and the archaeology report is included in submission or will be forthcoming\***  
*\* If an archaeology report is required, the Minor Projects PA Form will not be finalized until the report is reviewed and approved by INDOT-CRO. For INDOT-sponsored projects, INDOT-CRO may be able to complete the archaeological investigation. If you would like to request that INDOT-CRO complete an archaeological investigation, please contact the INDOT-CRO archaeology team lead. See CRM Pt. 1 Ch. 3 for current contact information.*

**Please specify all applicable categories and condition(s) (highlight applicable conditions in yellow)\*:**

*\*Include full category text, including any conditions. INDOT-CRO will finalize categories upon their review.*

**B-6:** Other minor actions if deemed appropriate for coverage under this MPPA, by consultation and mutual agreement between INDOT, FHWA, and the SHPO. The Tribes shall be provided information on all projects proposed to be cleared under this category for review prior to an agreement being signed between the agencies.

Check  if **SECTION 2: Minor Projects PA Category B-1, Condition B-ii Submission is included**

Check  if **SECTION 3: Minor Projects PA Category B-9, Condition B-i-c-2 or B-ii-b-3 Submission is included**

### Part II: Completed by INDOT-CRO

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*Amendments will be shown in red font.*

### Information reviewed (please check all that apply):

General project location map  USGS map  Aerial photograph  Soil survey data

General project area photos  Archaeology Reports  Historic Property Reports

Indiana Historic Buildings, Bridges, and Cemeteries Map/Interim Report

Bridge inspection information/BIAS  Historic Bridge Inventory Database

SHAARD  SHAARD GIS  Streetview Imagery  County GIS Data/Property Cards

### Other (please specify):

Cochran, Donald R.  
1988 Archaeological Field Reconnaissance, Replacement of Portions of SR 26, Tippecanoe County, Indiana. Archaeological report (AR-79-00155) prepared for the Indiana Department of Highways by Archaeological Resources Management Service, Ball State University, Muncie, IN.

Version Date April 2022



## Minor Projects PA Project Submittal and Assessment Form

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Are there any commitments associated with this project? If yes, please explain and include in the Additional Comments Section below.      yes                       no

Does the project result in a de minimis impact to a Section 4(f) protected historic resource? If yes, please explain in the Additional Comments Section below.      yes                       no

### Additional Comments:

#### Above-ground Resources

An INDOT Cultural Resources Office (CRO) historian, who met the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61, 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 Tippecanoe County. No listed resources are located immediately adjacent to the project area, a distance that serves as an adequate potential area of effects given the setting and scope of work.

The Indiana Historic Sites and Structures Inventory (IHSSI) and National Register information for Tippecanoe County are available in the Indiana State Historic Architectural and Archaeological Research Database (SHAARD) and the Indiana Historic Buildings, Bridges, and Cemeteries Map (IHBBCM). The *Tippecanoe County Interim Report* (1990; Shelby Township) of the IHSSI was also consulted. All sites were reviewed through the IHBBCM, which contains the most recently updated SHAARD information. No IHSSI documented resources are located immediately adjacent to the project area a.

According to the IHSSI rating system, generally properties rated "contributing" do not possess the level of historical or architectural significance necessary to be considered individually National Register-eligible, although they would contribute to a historic district. If they retain material integrity, properties rated "notable" might possess the necessary level of significance after further research. Properties rated "outstanding" usually possess the necessary level of significance to be considered National Register eligible if they retain material integrity.

The INDOT CRO historian reviewed structures adjacent to the project area utilizing online aerial, street-view photography, and the Tippecanoe County GIS website. The project area is located in a rural, wooded setting with agricultural fields nearby. The adjacent building stock is primarily mid-twentieth to early twenty-first century residential buildings. None of the structures appear to possess the historic significance or material integrity required to be considered NRHP-eligible. Both sides of the project area are bordered by thickets of trees and vegetation. The new access road will be screened by the trees and vegetation adding another layer of protection from any potential impacts.

The most recent inspection report (J. Gould; 5/10/2022) from the Bridge Inspection Application System (BIAS) was referenced to review the culvert. The subject structure (CV 026-079-28.10) carries SR 26 over Goose Creek and consists of twin four-sided concrete box culverts that are each approximately 35 feet long and 7 feet wide. Both structures were constructed in 1993. The project proposes to replace the structure with a 291-foot single span three-sided concrete box culvert with a twenty-foot span. Examination of online street view photography and BIAS images show the subject structure does not exhibit non-modern wood, stone, or brick structures or parts therein. In addition, the structure lacks a context that would suggest that it might have engineering or historical significance.

**Based on the available information, as summarized above, no above-ground concerns exist.**

#### Archaeological Resources

An INDOT-CRO archaeologist who meets the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61, reviewed the archaeology report submitted by Metric Environmental, LLC on behalf of Corradino, LLC on July 11, 2022.

## Minor Projects PA Project Submittal and Assessment Form

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An archaeological records check and Phase 1a reconnaissance survey were conducted by Metric LLC (Snell 2022). The records check found that the east side of the project had been previously surveyed by Cochran in 1988 for archaeological resources (Cochran 1988). A total of 10 archaeological sites were recorded, one of which was located within the current project area (12T745). Due to the age of the survey and because it did not comply with current DHPA standards, the previous survey area was resurveyed by Snell. A 10.6-acre survey was examined through the excavation of 28 shovel probes, and a visual inspection of disturbed areas and/or those locations with a slope of greater than 20%. No new evidence of archaeological deposits was identified by the field reconnaissance, nor was site 12T745 relocated, which is believed to be destroyed by the relocation of SR 26. It is our opinion that the report is acceptable, and we concur with the evaluation and recommendations made by Metric Environmental, LLC (Snell 2022). Therefore, there are no archaeological concerns as long as the scope of the project does not change.

**Accidental Discovery:** If any archaeological artifacts or human remains are uncovered during construction, demolition, or earth moving activities, construction within 100 feet of the discovery will be stopped, and INDOT-CRO and the Division of Natural Resources-Division of Historic Preservation and Archaeology (DNR-DHPA) will be notified immediately.

**INDOT-CRO staff reviewer(s):** John Baeten and Clint Kelly

INDOT Approval Date: 8/3/2022

Amendment Approval Date (if applicable):

*\*\*\*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.*

**Signatures for concurrence that the project falls under B-6 of the Minor Projects PA:**

**SHPO:**

<u>Chad W. Slider</u> Printed Name	 Signature	<u>09/23/22</u> Date
---------------------------------------	---------------------------------------------------------------------------------------------------	-------------------------

**FHWA:**

<u>Karstin Carmany-George</u> Printed Name	<u>KARSTIN MARIE CARMANY- GEORGE</u> Signature	 Digitally signed by KARSTIN MARIE CARMANY-GEORGE Date: 2022.09.27 13:06:04 -04'00' <u>9/27/22</u> Date
-----------------------------------------------	-----------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

**INDOT:**

<u>Matthew S. Coon</u> Printed Name	 Signature	<u>8/23/2022</u> Date
----------------------------------------	---------------------------------------------------------------------------------------------------	--------------------------

*\*\*\*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.*

## Minor Projects PA Project Submittal and Assessment Form

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Please attach the following to this form:

- **General Location Map.** This map should allow the INDOT-CRO reviewer to quickly locate the project.
- **Aerial photography map(s) of project area.** This map must include project limits. It may also include SHAARD data, but SHAARD data is not required.
- **If bridge or small structure project, please attach photographs of bridge or small structure.** Photographs can be found in inspection reports located in INDOT's Bridge Inspection Application System (BIAS), as well as other project documents, such as engineering assessments or mini-scopes.

**Map depicting potential temporary and/or permanent right-of-way acquisitions. In the email submission to INDOT-CRO, please also include:**

- **A GIS polygon shapefile or KMZ file of the project area** (shapefiles are preferred). Shapefiles should use "NAD\_1983\_UTM" projected coordinate system. In addition, these files should contain the following *text* attribute field: DES\_NO. The project designation number should be entered in this field.
- **If the project takes place in undisturbed soils, attach the results of the archaeological investigation, if completed.** *Note: The MPPA Submission Form may be submitted before the archaeology report. INDOT-CRO staff will process the above-ground portion of the form in advance of the archaeological portion of the form. However, a completed determination form will not be returned to the applicant until after the archaeology report has been reviewed and approved by INDOT-CRO.*

# Appendix E

Red Flag and Hazardous Materials

Des. No. 1900333



# INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue  
Room N758-ES  
Indianapolis, Indiana 46204

PHONE: (855) 463-6848  
(855) INDOT4U

**Eric Holcomb, Governor**  
**Michael Smith,**  
**Commissioner**

Date: March 18, 2022

To: Site Assessment & Management (SAM)  
Environmental Policy Office - Environmental Services Division (ESD)  
Indiana Department of Transportation (INDOT)  
100 N Senate Avenue, Room N758-ES  
Indianapolis, IN 46204

From: Rachel Pluckebaum  
Corradino, LLC  
200 S. Meridian St. Suite 330  
Indianapolis, IN 46225  
rpluckebaum@corradino.com

Re: RED FLAG INVESTIGATION  
DES #1900333, State Project  
Small Structure Replacement  
SR 26, 4.98 Miles West of US 52/231  
Tippecanoe County, Indiana

## PROJECT DESCRIPTION

Brief Description of Project: The project is located on SR 26, 4.98 miles west of US 52/231 over Goose Creek in Tippecanoe County, Indiana. The existing concrete precast structure has an overall rating of 4 (poor condition) out of 9 (excellent condition). The north ends of both boxes have the last segment disconnected. There is a considerable amount of bank erosion and channel scour at both ends of the structure. There is severe drift build up at the north end by the trees. The north end of the culvert has H-piles placed vertically through the channel to stop the debris from clogging the entrance into the culvert boxes. Due to the severity of the deterioration of the concrete precast structure, the proposed scope of this project is a small structure replacement with a bridge.

Bridge and/or Culvert Project: Yes  No  Structure # CV 026-079-28.10

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 0.1 Permanent  # Acres 0.8, Not Applicable

Type and proposed depth of excavation: Excavation will be approximately 7 feet deep and will be required to remove and replace the existing culvert. Excavation beyond the existing toe of slope will be at approximately 3 feet deep and will be required to construct a new maintenance road. Excavation will be at approximately 3 feet deep within the limits of the stream and will take place to construct riprap on geotextiles for new scour protection.

Maintenance of traffic: SR 26 will be closed during construction. Traffic will be maintained with a signed detour. Work

in waterway: Yes  No  Below ordinary high water mark: Yes  No

State Project:  LPA:

Any other factors influencing recommendations: N/A

## INFRASTRUCTURE TABLE AND SUMMARY

<b>Infrastructure</b>			
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 <sup>1</sup>	N/A	Pipelines	N/A
Cemeteries	2	Railroads	N/A
Hospitals	N/A	Trails	N/A
Schools	N/A	Managed Lands	N/A

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

Explanation:

**Cemeteries:** Two (2) cemeteries are located within the 0.5 mile search radius. Spencer Cemetery is located 0.26 mile north of the project area. No impact is expected.

## WATER RESOURCES TABLE AND SUMMARY

<b>Water Resources</b>			
Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
NWI - Points	N/A	Canal Routes - Historic	N/A
Karst Springs	N/A	NWI - Wetlands	2
Canal Structures – Historic	N/A	Lakes	1
NPS NRI Listed	N/A	Floodplain - DFIRM	1
NWI-Lines	2	Cave Entrance Density	N/A
IDEM 303d Listed Streams and Lakes (Impaired)	N/A	Sinkhole Areas	N/A
Rivers and Streams	14	Sinking-Stream Basins	N/A

Explanation:

**NWI – Lines:** Two (2) NWI – Lines are located within the 0.5 mile search radius. The nearest NWI – Line is 0.23 mile south of the project area. No impact is expected.

**Rivers and Streams:** Fourteen (14) river/stream segments are located within the 0.5 mile search radius. The nearest river/stream segment, Goose Creek, is within the project area. A Waters of the US Report will be prepared and coordination with INDOT ESD Ecology and Waterway Permitting will occur.

**NWI – Wetlands:** Two (2) NWI – Wetlands are located within the 0.5 mile search radius. The nearest NWI – Wetland is located 0.02 mile north of the project area. No impact is expected.

**Lakes:** One (1) lake is located within the 0.5 mile search radius. The lake is located 0.06 mile north of the project area. No impact is expected.

**Floodplain – DFIRM:** One (1) floodplain polygon is located within the 0.5 mile search radius. The project is located within a floodplain polygon. Coordination with INDOT ESD Ecology and Waterway Permitting will occur.

**MINING AND MINERAL EXPLORATION TABLE AND SUMMARY**

<b>Mining/Mineral Exploration</b>			
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**

<b>Hazardous Material Concerns</b>			
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

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

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

**ECOLOGICAL INFORMATION SUMMARY**

The Tippecanoe 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 ESD did not indicate the presence of ETR species within the 0.5 mile search radius.

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The project area is located in a rural area surrounded by woods. The May 13, 2021, inspection report for culvert CV 026-079-28.10 states that no evidence of bats was seen or heard in the culvert. The range-wide programmatic



consultation for the Indiana bat and Northern Long-eared Bat will be completed according to the most recent “Using the USFWS’s IPaC System for Listed Bat Consultation for INDOT Projects”.

**RECOMMENDATIONS SECTION**

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

INFRASTRUCTURE: N/A

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

- Goose Creek is located within the project area
- The project is in a floodplain polygon (Coordination Only)

MINING/MINERAL EXPLORATION: N/A

HAZARDOUS MATERIAL CONCERNS: N/A

ECOLOGICAL INFORMATION: Coordination with USFWS and IDNR will occur. The range-wide programmatic consultation for the Indiana bat and Northern Long-eared bat will be completed according to the most recent “Using the USFWS’s IPaC System for Listed Bat Consultation for INDOT Projects”.

**Nicole Fohey**  
**Breting**  
Digitally signed by Nicole  
Fohey-Breting  
Date: 2022.03.18 15:44:13  
-04'00'

INDOT ESD concurrence: \_\_\_\_\_ (Signature)

Prepared by:  
Rachel Pluckebaum  
Environmental Specialist  
Corradino, LLC

**Graphics:**

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

SITE LOCATION: YES

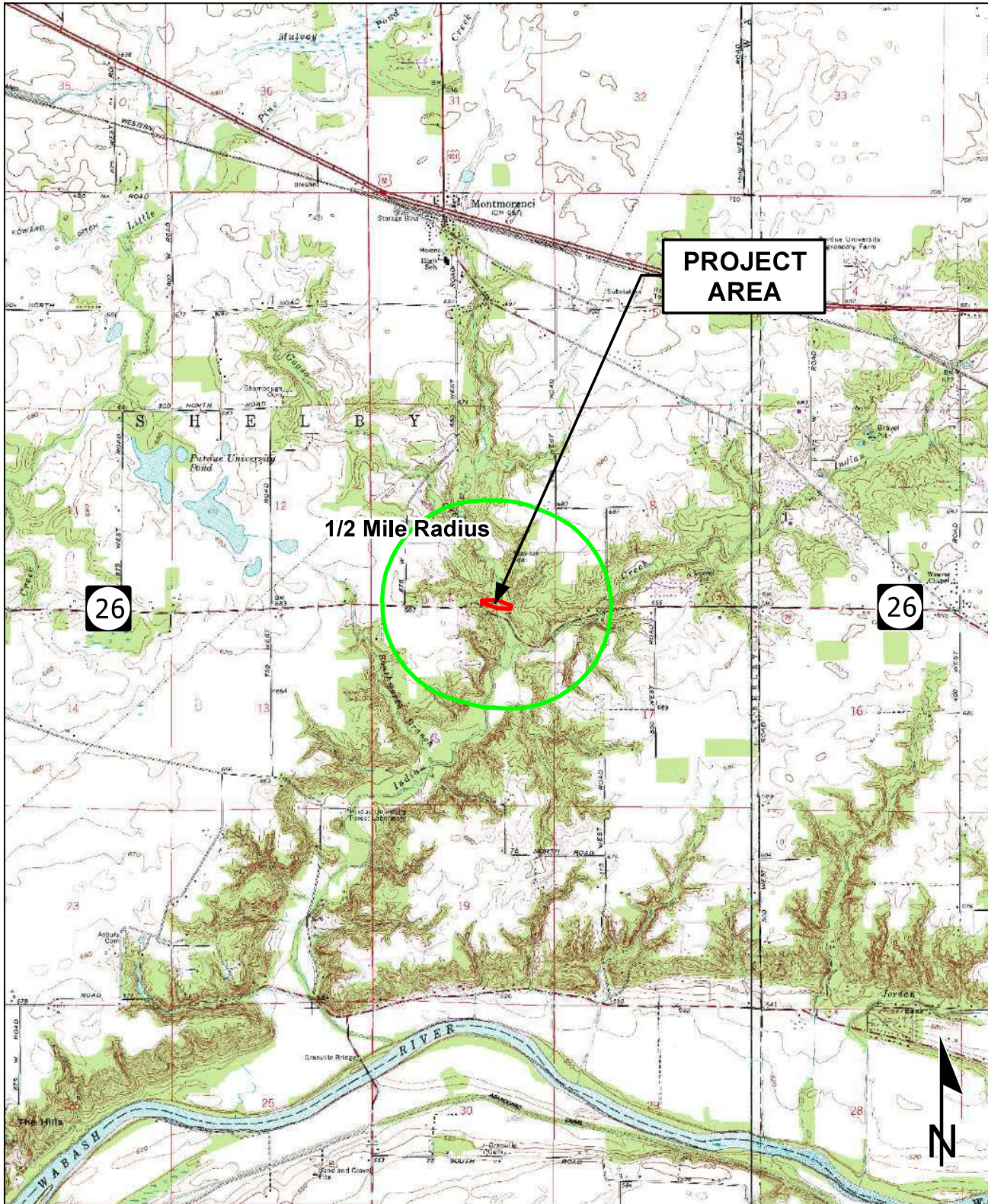
INFRASTRUCTURE: YES

WATER RESOURCES: YES

MINING/MINERAL EXPLORATION: N/A

HAZARDOUS MATERIAL CONCERNS: N/A

Red Flag Investigation - Site Location  
 SR 26, 4.98 Miles West of US 52/231  
 Des. No. 1900333, Small Structure Replacement  
 Tippecanoe County, Indiana

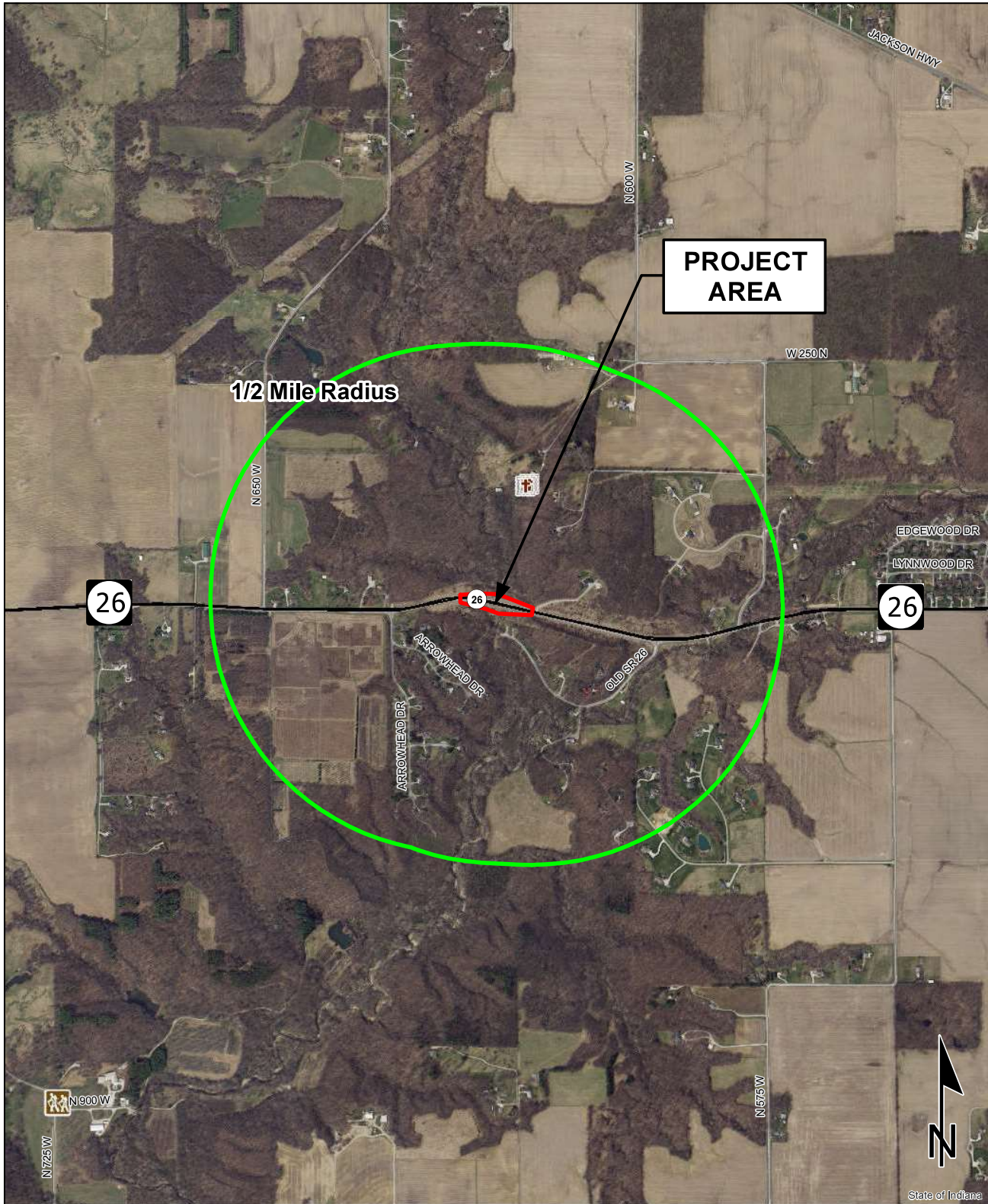


Sources: 0.75 0.375 0 0.75 Miles  
 Non Orthophotography  
 Data - Obtained from the State of Indiana Geographical Information Office Library  
 Orthophotography - Obtained from Indiana Map Framework Data ([www.indianamap.org](http://www.indianamap.org))  
 Map Projection: UTM Zone 16 N Map Datum: NAD83  
 This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

**OTTERBEIN  
 QUADRANGLE INDIANA  
 7.5 MINUTE SERIES  
 (TOPOGRAPHIC)**

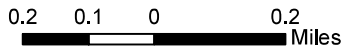


Red Flag Investigation - Infrastructure  
 SR 26, 4.98 Miles West of US 52/231  
 Des. No. 1900333, Small Structure Replacement  
 Tippecanoe County, Indiana



Sources: **Non Orthophotography**  
 Data - Obtained from the State of Indiana Geographical Information Office Library  
**Orthophotography** - Obtained from Indiana Map Framework Data ([www.indianamap.org](http://www.indianamap.org))  
 Map Projection: UTM Zone 16 N Map Datum: NAD83

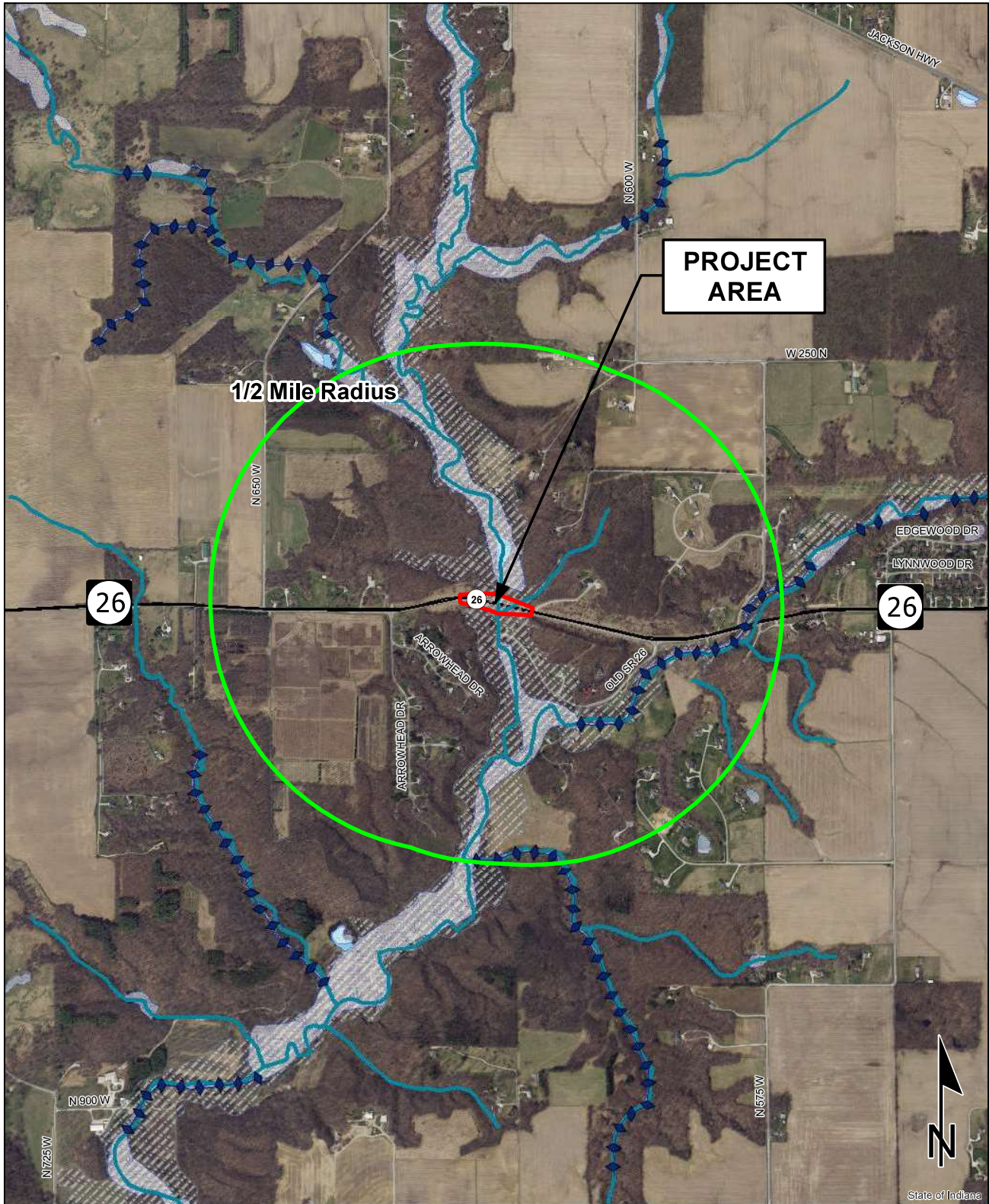
This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.



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

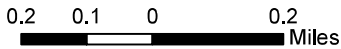


Red Flag Investigation - Water Resources  
 SR 26, 4.98 Miles West of US 52/231  
 Des. No. 1900333, Small Structure Replacement  
 Tippecanoe County, Indiana



**Sources:**  
**Non Orthophotography**  
**Data** - Obtained from the State of Indiana Geographical Information Office Library  
**Orthophotography** - Obtained from Indiana Map Framework Data ([www.indianamap.org](http://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	Wetlands	Project Area
Karst Spring	Lake	Half Mile Radius
NWI - Line	Floodplain - DFIRM	Toll
Impaired_Stream_Lake	Cave Entrance Density	Interstate
NPS NRI listed	Sinkhole Area	State Route
River	Sinking-Stream Basin	US Route
Canal Structure - Historic	County Boundary	Local Road
Canal Route - Historic		

Appendix E-9