

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

<b>Road No./County:</b>	SR 159 / Vigo County
<b>Designation Number(s):</b>	2002197
<b>Project Description/Termini:</b>	SR 159 Small Structure Replacement at UNT to Splunge Creek Located 4.15 Miles North of SR 246 (RP 23+38) Work begins 200 feet south of the structure center and ends 200 feet north of the structure center, for a length of 400 feet (0.076 mile)

<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**

	<i>rje</i> January 4, 2024	
	INDOT DE Initials and Date	INDOT ESD Initials and Date

**Certification of Public Involvement**

\_\_\_\_\_

INDOT Consultant Services Signature and Date

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

*Randy Zane Kurtz* January 2, 2024

**Name and Organization of CE/EA Preparer:** \_\_\_\_\_

Brock Ervin, INDOT, Crawfordsville District Environmental

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

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

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

Notice of Entry letters were mailed to potentially affected property owners near the project area on July 12, 2022, and February 13, 2023, notifying them about the project and that individuals responsible for land surveying and field activities may be seen in the area. Sample copies of the Notice of Entry letters are included in Appendix G.

This project requires more than 0.5 acre of new permanent right-of-way. Therefore, the project meets the minimum requirements described in the current Indiana Department of Transportation (INDOT) Public Involvement Manual, which requires the project sponsor to offer the public an opportunity to submit comments and/or request a public hearing. Therefore, a legal notice will appear in a local publication contingent upon the release of this document for public involvement. This document will be revised after the public involvement requirements are fulfilled.

## Public Controversy on Environmental Grounds

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

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

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

Sponsor of the Project: INDOT INDOT District: Crawfordsville

Local Name of the Facility: SR 159

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

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

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**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:**

This project will address a small structure on SR 159 at unnamed tributary (UNT) to Splunge Creek in Vigo County. The culvert is identified as CV 159-084-23.30 and consists of a set of twin corrugated metal pipe arches. The project is needed due to the poor condition of the small structure. An 8-foot-long segment of the culvert floor has rusted out along the west end of the south pipe, and rust holes are scattered throughout the bottoms of both pipes. The most recent culvert inspection report of October 6, 2022, rated the culvert condition as 4 out of 9 (poor condition, Appendices I-20 to I-28).

**Purpose:**

The purpose of this project is to maintain a structurally sound crossing of SR 159 over UNT to Splunge Creek and increase the condition rating to at least 7 (good condition).

**PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):**

County:           Vigo                                Municipality:           N/A          

Limits of Proposed Work:           200 feet south of structure center to 200 feet north of structure center (based on incidental limits)          

Total Work Length:           400 feet / 0.076 miles\*            
\*Based on Incidental Limits

Total Work Area:           0.70 acres\*\*            
\*\*Based on Construction Limits

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.*

**Location:**

This project is located at a small structure on SR 159 in Vigo County, 4.15 miles north of SR 246 (RP 23+38), approximately 0.60 mile north of French Drive (Appendix A-1). The small structure, CV 159-084-23.30, carries SR 159 over a UNT to Splunge Creek. The crossing is located in the southeast corner of Vigo County in Pierson Civil Township, approximately 13 miles southeast of Terre Haute and 6.7 miles northeast of Farmersburg, which is the nearest incorporated area. It is also located in the USGS 7.5-Minute Lewis Quadrangle, and per the Public Land Survey System, it is in Sections 23 and 24 of Township 10 North, Range 8 West (Appendix F-7).

**Existing Conditions:**

The project is situated in a rural area where land use is primarily for agriculture row crops and scattered residential properties. The culvert is located along the headwater segment of UNT to Splunge Creek, which has a stream width of 14 feet and is surrounded by a wooded riparian corridor. The UNT outfalls into Splunge Creek approximately three miles downstream of the project area, where it almost immediately outfalls into Eel River.

This segment of SR 159 is a two-lane road with 11-foot lanes, no paved shoulder, and narrow gravel shoulders. The roadway is straight and mostly flat, and no guardrail is present within the project area. V-shaped vegetated roadside ditches are present to the south of the structure, but north of the structure, ditches are inconsistent, poorly defined, and vegetated. Overhead utilities are located in the northeast and southwest quadrants, crossing SR 159 at the location of the structure. Three field entrances are located in three of the quadrants near the culvert. Land within 30 feet of the roadway centerline is considered to be in a transportation use due to the roadside ditches, culverts, and utilities; however, land records consider the right-of-way to be at the edge of pavement on

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both sides of the road.

The existing structure, CV 159-084-23.30, consists of twin corrugated metal pipe arches (CMPAs), each measuring approximately 8.5 feet (103 inches) wide, 6 feet (71 inches) tall, and 47 feet long. The culvert is at a 0° skew to the road and sits under approximately three feet of fill. In addition to corrosion along the bottoms of the pipes, the east anchor headwall has deteriorated and become detached. The channel is rated in fair condition (5) due to erosion on the east bank on both sides of the culvert. Log debris has also built up on the upstream side to the west, restricting flow and increasing erosion at the inlet. While scattered pieces of riprap are present near the inlet and outlet of the culvert, it is mostly washed away or covered in sediment. The channel is scoured at both ends of the culvert. Existing right-of-way is the edge of pavement, though land in transportation use extends beyond it in the form of roadside ditches, culvert structures, and overhead utilities.

### Preferred Alternative:

The preferred alternative to address the deteriorated culvert is to replace it with a new culvert. The proposed plans will replace it with a 54-foot long, precast, reinforced concrete, four-sided box culvert with a 16-foot span and a 6-foot rise. The culvert will be installed at a 0° skew and will be sumped into the channel one foot, creating a vertical opening of five feet. The culvert will be constructed with 12 to 15-foot wingwalls in all four quadrants. Approximately 0.04 acre of riprap will be installed at the inlet and outlet, extending out between the wingwalls approximately 22 to 25 feet. The areas behind the wingwalls will be backfilled, and the ditches will be realigned around them.

The culvert will be replaced via an open road cut. Afterwards, 200 feet of roadway above the culvert (100 feet north and 100 feet south of the culvert) will be reconstructed to full depth. The remaining roadway approaches out to 200 feet on either side of the culvert will be milled 2 inches and resurfaced to tie into the new pavement. Two-foot gravel shoulder will be reconstructed, and road embankments and ditches will be regraded. The project has a total length of 400 feet. See project plans, Appendices B-9 to B-19.

To complete the project, the acquisition of approximately 0.90 acre of right-of-way is required, based on the existing right-of-way limits at the edge of pavement. Proposed right-of-way extends 200 feet from both sides of the culvert north and south along SR 159 and 60 feet east and west from the roadway centerline. The total proposed right-of-way footprint is 400 feet along the roadway and 120 feet wide. The construction limits cover an area of approximately 0.70 acre, and approximately 0.55 acre of ground disturbance is anticipated beyond the creek.

A road closure is planned during construction. Traffic will be maintained by a detour along SR 246, US 150, SR 641, and SR 46 (Appendix B-12). Compared to the segment of SR 159 bypassed, the detour will require an additional driving distance of approximately 9.5 miles. Construction is expected to last three to four months, starting in the spring of 2025 (with tree clearing to be conducted the previous winter).

Approximately 116 linear feet of permanent impacts to UNT to Splunge Creek are expected. One palustrine emergent wetland is located in the poorly formed roadside ditch in the northeast quadrant and partly within the project limits. Approximately 0.013 acre of wetland impacts are expected. Approximately 0.36 acre of tree clearing is expected, which includes clearing for utility relocations beyond the construction limits.

### Logical Termini/Independent Utility:

The project has logical termini because they are restricted to only what is necessary to complete the work in accordance with the project's purpose and need and to accommodate other environmental considerations. The project has independent utility because it is a single and complete project that is not interdependent on any other projects. The project is a reasonable expenditure, regardless of any other current or planned transportation improvements.

### OTHER ALTERNATIVES CONSIDERED:

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

Due to the low condition rating of the culvert, no other "build" alternatives were considered to address the purpose and need other than to replace the structure.

### No-Build/Do-Nothing Alternative:

The no-build alternative would not do anything to address the deteriorating culvert. This alternative was dismissed because it would not satisfy the purpose and need of the project.

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

- It would not correct existing capacity deficiencies;
- It would not correct existing safety hazards;
- It would not correct the existing roadway geometric deficiencies;
- It would not correct existing deteriorated conditions and maintenance problems; or
- It would result in serious impacts to the motoring public and general welfare of the economy.
- Other (Describe):

X

**ROADWAY CHARACTER:**

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

Name of Roadway SR 159  
 Functional Classification: Rural Major Collector  
 Current ADT: 725 VPD (2025) Design Year ADT: 725 VPD (2045)  
 Design Hour Volume (DHV): 71 Truck Percentage (%) 23.94  
 Designed Speed (mph): 55 Legal Speed (mph): 55

	Existing	Proposed
Number of Lanes:	2	2
Type of Lanes:	Through Lanes	Through Lanes
Pavement Width:	11 ft.	11 ft.
Shoulder Width:	2 ft.	2 ft.
Median Width:	0 ft.	0 ft.
Sidewalk Width:	0 ft.	0 ft.

Setting:  Urban  Suburban  Rural  
 Topography:  Level  Rolling  Hilly

**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 159-084-23.30 Sufficiency Rating: 4 (Poor), INDOT 10/06/2022 Insp. Rep  
 (Rating, Source of Information)

	Existing	Proposed
Bridge/Structure Type:	Twin Corrugated Metal Pipe Arches	Precast, Reinforced Concrete, Four-Sided Box Culvert
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:	47 ft.	54 ft.
Shoulder Width:	2 ft.	2 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.*

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The existing structure, CV 159-084-23.30, consists of twin CMPAs, each measuring approximately 8.5 feet (103 inches) wide, 6 feet (71 inches) tall, and 47 feet long. The culvert is at a 0° skew to the road and sits under approximately three feet of fill. In addition to corrosion along the bottoms of the pipes, the east anchor headwall has deteriorated and become detached. The replacement structure is a 54-foot long, precast, reinforced concrete, four-sided box culvert with a 16-foot span and a 6-foot rise. The culvert will be installed at a 0° skew and will be sumped into the channel one foot, creating a vertical opening of five feet. The culvert will be constructed with 12 to 15-foot wingwalls in all four quadrants. Three small pipes, each with a maximum diameter of 12 inches, are present at field entrances in three of the quadrants near the creek crossing. These will also be replaced during construction.

**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 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.*

A road closure is planned during construction. Traffic will be maintained by a detour along SR 246, US 150, SR 641, and SR 46 (Appendix B-12). Compared to the segment of SR 159 bypassed, the detour will require an additional driving distance of approximately 9.5 miles. Construction is expected to last three to four months, starting in the spring of 2025 (with tree clearing to be conducted the previous winter).

The project may pose a temporary inconvenience to traveling motorists, including school buses and emergency services; however, no significant delays are anticipated, and all inconveniences will cease upon project completion. It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction that will block or limit access.

**ESTIMATED PROJECT COST AND SCHEDULE:**

Engineering: \$ 100,000 (2024) Right-of-Way: \$ 50,000 (2024) Construction: \$ 700,000 (2024/2025)

Anticipated Start Date of Construction: Winter 2024/Spring 2025

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**RIGHT OF WAY:**

Land Use Impacts	Amount (acres)	
	Permanent	Temporary
Residential	0.09	
Commercial		
Agricultural	0.14	
Forest	0.67	
Wetlands		
TOTAL	0.90	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.*

Based on legal property descriptions, existing right-of-way is the edge of pavement, though land in transportation use extends beyond it, primarily in the form of roadside ditches, culvert structures, and overhead utilities. Approximately 0.90 acre of right-of-way is required, based on the existing right-of-way limits at the edge of pavement. Proposed right-of-way extends 200 feet north and south along SR 159 from the center of the culvert, and 60 feet east and west from the roadway centerline. One parcel in the southeast quadrant of the project area appears to have been a rural residence with outbuildings at some point, but no buildings remain. According to a review of past aeriels, the house was razed sometime before 2016. The other three parcels are primarily used for agriculture, but the areas being acquired are mostly wooded. Approximately 0.14 acre of proposed right-of-way in the northwest quadrant is currently being farmed. The rest of the right-of-way is woods, stream, and maintained, grassy roadside and ditch.

### 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 materials for this project were emailed to recipients on October 3, 2023 (Appendix C-1), unless otherwise indicated below. Additional reviews of agency websites were conducted to determine any additional coordination needs, as indicated.

Agency	Date Sent	Date of Response	Appendix and Comments
Federal Highway Administration (FHWA), Indiana Division	10/3/2023	No Response	
US Army Corps of Engineers (USACE), Louisville Office, Indianapolis Regulatory Field Office	10/3/2023	No Response	
National Park Service, Midwest Regional Office	10/3/2023	No Response	
US Dept. of Housing and Urban Development, Chicago Regional Office	10/3/2023	No Response	
Indiana Department of Natural Resources (IDNR), Division of Fish and Wildlife (DFW)	10/3/2023	11/2/2023	<i>See Appendices C-4 to C-6:</i>
National Resources Conservation Service (NRCS), Indiana State Office	10/3/2023	10/16/2023	<i>See Appendices C-7 to C-8:</i> The project will cause a conversion of prime farmland, resulting in an impact rating score of 149. The completed form was submitted 11/3/2023.

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Indiana Department of Environmental Management (IDEM), Wetlands and Stormwater Programs	10/3/2023	No Response	
Terre Haute Area Metropolitan Planning Organization (THAMPO)	10/3/2023	No Response	
Vigo County Commissioners	10/3/2023	No Response	
Vigo County Council	10/3/2023	No Response	
Vigo County Highway Department	10/3/2023	No Response	
Vigo County Surveyor's Office	10/3/2023	No Response	
Vigo County Soil & Water District	10/3/2023	No Response	
Vigo County Area Planning Department (Floodplain Administrator)	10/3/2023	No Response	
Vigo County ADA Coordinator	11/11/2023	12/4/2023	See Appendix C-40
US Fish and Wildlife Service (USFWS) (IPaC Online Coordination)	10/2/2023 11/17/2023 (Online Submission)	11/17/2023 (Automated Response)	See Appendices C-12 to C-39: IPaC was resubmitted to increase tree clearing requirements due to utility relocations. The automated IPaC response generated a finding of "Not Likely to Adversely Affect" (NLAA) the Indiana and northern long-eared bats. No other federally protected species were identified.
Indiana Geological & Water Survey (IGWS) (Online Submission Form)	10/2/2023 (Online Submission)	10/2/2023 (Automated Response)	See Appendices C-9 to C-10: Forwarded automated response to designer on 10/2/2023.
IDEM, Groundwater Division (Online Database Review for WHPA & SWA)	10/3/2023 (Online Review)	N/A	The project is not located in a WHPA or SWA.
IDNR, Division of Water (Online Database Review for Water Wells)	10/2/2023 (Online Review)	N/A	No water wells are in or near the project area.

Additional information regarding responses to early coordination are provided in the appropriate resource-specific sections below. 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
<b>X</b>	<b>X</b>		

Total stream(s) in project area:           176           Linear feet      Total impacted stream(s):           128           Linear feet

Stream Name	Classification Per 7.5' Topographic Map	Total Size in Project Area (linear feet)	Permanent Impacts (linear feet)	Temporary Impacts (linear feet)	Comments (i.e. location, flow direction, likely Water of the US, appendix reference)
UNT to Splunge Creek	Intermittent Blue Line (Cowardin Classification R4SB5C)	176	116	12	Appendix F-15. UNT to Splunge Creek is a likely WOUS conveyed by the subject culvert, CV 159-084-23.30, with an OHWM of 14 ft. wide and 30 in. deep. It generally flows southwest to northeast through the project area.



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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 Red Flag Investigation (RFI) Report approved July 25, 2023 (Appendix E), there are two waterways identified by GIS (four waterway segments) that may be potentially jurisdictional within the 0.5-mile search radius. Mapping identifies both streams as unnamed tributaries to Splunge Creek, one of which traverses the project area.

Neither Splunge Creek nor any of its tributaries are listed on the National Wild and Scenic Rivers list or the Nationwide Rivers Inventory, nor are they given any other designations on the Indiana Natural Resources Commission's Outstanding Rivers List (Bulletin #4, <https://www.in.gov/nrc/nonrule-policy-documents-npd/>). Per the list of designated salmonid waters of Indiana provided by 327 IAC 2-1.5-5 and the IDNR DFW 2019-2024 Indiana Inland Trout Strategic Plan, no salmonid streams will be impacted by this project. While Vigo County regulates certain drainage features, neither Splunge Creek nor its tributaries are listed as regulated drains, per the Vigo County Regulated Legal Drain website (<https://www.vigocounty.in.gov/department/division.php?structureid=103>).

A field investigation for surface water features was conducted on August 25, 2022, by INDOT Crawfordsville DE, and a Waters of the US (WOUS) Report was prepared (Appendix F). The report was approved by the INDOT Ecology and Waterway Permitting Office (EWPO) on September 7, 2023. One likely jurisdictional stream, UNT to Splunge Creek, was identified within the project limits (Appendix F-15).

### **UNT to Splunge Creek (116 linear feet of permanent impacts):**

UNT to Splunge Creek is an intermittent blue-line stream per the USGS 7.5' Lewis Quadrangle Topographic Map. It passes beneath SR 159 approximately 0.60 mile north of French Drive via the twin culvert structure, CV 159-084-23.30, which is the subject of this project. The UNT generally flows from southwest to northeast through the project area and outfalls into Splunge Creek three miles to the east of the project, where it almost immediately outfalls into Eel River. Approximately 176 linear feet of UNT to Splunge Creek were within the area investigated for the WOUS Report, which identified an ordinary high-water mark (OHWM) measuring 14 feet wide and 30 inches deep. UNT to Splunge Creek was considered to be an average quality stream, and per the Cowardin classification system, it is classified as an intermittent, seasonally-flooded, riverine stream with a mud substrate (R4SB5C). Per USGS StreamStats, it has an upstream drainage area from the project location of 0.372 square mile. Due to its connectivity to Eel River, a navigable water of the US, UNT to Splunge Creek is likely a water of the US.

The existing twin pipes along this stream will be replaced by a 54-foot long, 16-foot wide, six-foot deep (sumped one foot) four-sided concrete culvert, with riprap and wingwalls at both ends. Approximately 143 linear feet of UNT to Splunge Creek are within the proposed right-of-way limits, of which 116 will be permanently impacted by construction of the new culvert and riprap. Approximately 12 linear feet of temporary impacts are expected for dewatering and other incidental work. In addition to work below the OHWM, approximately 80 linear feet of UNT to Splunge Creek will be impacted by tree clearing, which will cause an adverse effect to water quality due to loss of shade.

Due to impacts to wetlands and streams, USACE Section 404 and IDEM Section 401 permits will be required. The project is expected to qualify for the Nationwide Permit (NWP) Program, and no stream or wetland mitigation is anticipated. No coordination responses from USACE or IDEM were received. USACE makes all final determinations regarding jurisdiction.

IDNR DFW responded to early coordination on November 2, 2023 (Appendix C-4), providing numerous recommendations regarding stream impacts, aquatic organisms, and wildlife crossings. IDNR recommended that a mitigation plan be developed for any unavoidable habitat impacts. They recommended that culverts consisting of multiple boxes or pipes be avoided, using a structure that has a minimum span of 1.2 times the OHWM width, sumping the structure by 20%, and ensuring that the water velocity through the structure approximates that of the rest of the stream. They recommended upgrading wildlife passage through the structure and above the OHWM using natural substrates or compact aggregate. They provided additional standard recommendations, such as avoiding work in the stream during the fish spawning season (April 1 through June 30), incorporating native vegetation for streambank stabilization and erosion control, and limiting riprap to between the toe of the stream embankment up to the OHWM. See the IDNR DFW early coordination response letter for additional recommendations.

No other early coordination responses were received regarding stream impacts. All applicable recommendations are included in the Environmental Commitments section of this CE document. All waters of the US shall be identified on the plans. Waters of the US that are not permitted to be impacted and/or beyond the construction limits shall be marked "Do Not Disturb".

The RFI Report identified UNT to Splunge Creek as an IDEM listed 303(d) impaired stream due to the presence of *E. coli* (Appendix E-8). Workers who are working in or near water with *E. coli* should take care to wear appropriate PPE, observe proper hygiene procedures such as regular hand washing, and limit personal exposure.

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Open Water Feature(s)	<u>Presence</u>	<u>Impacts</u>	
		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 to avoid, minimize, and mitigate if impacts will occur.*

Based on topographic mapping (Appendix B-2) and the RFI Report (Appendix E-8) approved July 25, 2023, there are no open-water features within the 0.5-mile search radius. A field investigation for surface water features was conducted on August 25, 2022. A WOUS Report (Appendix F) was prepared by INDOT Crawfordsville DE, which was approved by INDOT EWPO on September 7, 2023. No ponds or lakes were identified within the area of investigation. USACE makes all final determinations regarding jurisdiction.

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

Total wetland area:           0.0753           Acre(s)      Total wetland area impacted:           0.013           Acre(s)

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

Wetland No.	Classification	Total Size (Acres)	Impacted Area (Acres)	Comments (i.e. location, likely Water of the US, appendix reference)
Wetland A	Palustrine Emergent (PEM1B)	0.0753	0.013	Appendix F-15. Wetland A is located along the poorly defined roadside ditch (RSD-3) in the northeast quadrant of the project area. Impacts are necessary, but most of Wetland A is beyond the construction and right-of-way limits and will not be impacted.

<u>Wetlands (Mark all that apply)</u>	<u>Documentation</u>	<u>ESD Approval Dates</u>
Wetland Determination	<input checked="" type="checkbox"/>	September 7, 2023
Wetland Delineation	<input checked="" type="checkbox"/>	September 7, 2023
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;	<input type="checkbox"/>
Substantially increased project costs;	<input type="checkbox"/>
Unique engineering, traffic, maintenance, or safety problems;	<input checked="" type="checkbox"/>
Substantial adverse social, economic, or environmental impacts, or	<input type="checkbox"/>
The project not meeting the identified needs.	<input checked="" type="checkbox"/>

*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 RFI Report approved July 25, 2023 (Appendix E-8), there are three wetland polygons within the 0.5-mile search radius, one of which is in the project area, which represents the channel of UNT to Splunge Creek (Appendix F-11). No non-riverine wetland

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polygons were identified in the project area. A field investigation for surface water features was conducted on August 25, 2022, by INDOT DE. A Waters of the US (WOUS) Report (Appendix F) was prepared, which was approved by the INDOT Ecology and Waterway Permitting Office (EWPO) on September 7, 2023. One likely jurisdictional wetland was identified in the area of investigation, and wetland impacts are anticipated (Appendices F-15 and B-13).

**Wetland A (0.013 acre of permanent impacts):**

Wetland A is a palustrine emergent wetland (PEM1B) located along and somewhat beyond the poorly defined roadside ditch, RSD-3, in the northeast quadrant of the project area. It is located approximately 90 feet from the UNT to Splunge Creek at its closest point (Appendix F-15). The dominant species within Wetland A was barnyard grass (*Echinochloa crus-galli*, FACW), with all other identified species having indicator statuses of FACW or OBL. Wetland A was delineated to be 0.0753 acre. As the roadside ditch provides hydrologic connectivity between Wetland A and UNT to Splunge Creek, a likely water of the US, Wetland A is also likely a water of the US.

Impacts to Wetland A are required to regrade the ditch and promote flow away from the reconstructed approach road and toward the stream. Due to this work, it is currently estimated that 0.013 acre of Wetland A will be permanently impacted, and no temporary impacts are expected.

Due to impacts to wetlands and streams, USACE Section 404 and IDEM Section 401 permits will be required. The project is expected to qualify for the Nationwide Permit (NWP) Program, and no stream or wetland mitigation is anticipated. No coordination responses from USACE or IDEM were received. USACE makes all final determinations regarding jurisdiction.

No other early coordination responses were received regarding wetland impacts. 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"/>	<input checked="" type="checkbox"/> <b>Yes</b>	<input type="checkbox"/> <b>NO</b>
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Total terrestrial habitat in project area:           0.62           Acre(s)                      Total tree clearing:           0.36           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 of aerial imagery (Appendix B-3) and a site visit on August 25, 2022, by INDOT DE, terrestrial habitat was identified and will be impacted. Terrestrial habitat in and adjacent to the project area consists of the forested riparian corridor along UNT to Splunge Creek, grasslands along the roadside ditches, a residential lawn, and an agricultural field. Overhead utilities are located within the project limits, and utility relocations are anticipated, placing them along the east edge of the proposed right-of-way.

Based on the construction limits, excluding UNT to Splunge Creek and the roadway, the project requires approximately 0.46 acre of disturbance of terrestrial habitat. Approximately 0.20 acre of tree clearing is anticipated within the construction limits, and an additional 0.16 acre is expected for utility relocations along the east side of SR 159, for a total of 0.36 acre of anticipated tree clearing.

IDNR DFW responded to early coordination on November 2, 2023 (Appendix C-4), providing comments regarding terrestrial habitat. IDNR provided recommendations to minimize impacts to habitat, including the incorporation of a wildlife passage, avoiding removal of trees suitable for bat use between April 1st and September 30th, using materials that limit the accidental entrapment of small animals, standard recommendations for controlling erosion and sediment movement, and revegetation of disturbed areas with native plant species. IDNR also stated that impacts to non-wetland forest of less than one acre and more than 0.10 acre in a rural or urban area should be mitigated at a minimum 1:1 ratio, based on the area of impact. See their early coordination response letter for additional recommendations.

No other early coordination responses were received regarding terrestrial habitat impacts. All applicable recommendations are included in the Environmental Commitments section of this CE document.

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**Protected Species**

**Federally Listed Bats**

	Yes	No
Information for Planning and Consultation (IPaC) determination key completed	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Section 7 informal consultation completed (IPaC cannot be completed)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Section 7 formal consultation Biological Assessment (BA) required	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Determination Received for Listed Bats from USFWS: NE  NLAA  LAA

**Other Species not included in IPaC**

	Yes	No
Additional federal species found in project area (based on IPaC species list)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
State species (not bird) found in project area (based upon consultation with IDNR)	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Migratory Birds**

	Yes	No
Known usage or presence of birds (i.e. nests)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
State bird species based upon coordination with IDNR	<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 the RFI report (Appendix E) approved July 25, 2023, the IDNR Vigo County Endangered, Threatened, and Rare (ETR) Species List was checked, which indicated that no known protected species are present within the 0.5-mile radius. According to the IDNR DFW early coordination response letter dated June 22, 2023 (Appendix C-4), the Natural Heritage Program's Database was checked, and no protected plant or animal species were identified.

INDOT DE conducted a review of documented sightings of bat species within 0.5-mile of the project area using the USFWS database on October 2, 2023 (Appendix C-11). None were identified. An inspection to detect the presence of bats using the structure was conducted on August 25, 2022 (Appendix I-2), and a follow-up inspection was conducted on January 3, 2024 (Appendix I-29), and no bats or signs of bats using the structure were observed. The project requires approximately 0.36 acre of tree clearing, all of which is within 100 feet of the roadway edge of pavement.

Project information was originally submitted through the USFWS's Information for Planning and Consultation (IPaC) portal on October 2, 2023, and an official species list was generated (Appendices C-12 to C-24). The project is within range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally endangered northern long-eared bat (NLEB, *Myotis septentrionalis*).

The project qualifies for the Range-wide Programmatic Informal Consultation for the Indiana bat and NLEB, dated May 2016 (revised February 2018), between FHWA, Federal Railroad Administration (FRA), Federal Transit Administration (FTA), and USFWS. An effect determination key was originally completed on October 2, 2023, but was updated on November 17, 2023, to increase the amount of proposed tree clearing. Based on the responses provided on the key, IPaC generated a Not Likely to Adversely Affect (NLAA) finding for the Indiana bat and NLEB (Appendices C-25 to C-39), which was submitted for USFWS review. No response was received within the 14-day review period; therefore, it was concluded that USFWS concurs with the finding. IPaC generated six avoidance and minimization measures (AMMs): General AMM 1, Lighting AMM 1, and Tree AMMs 1 through 4, which includes limiting tree removal and trimming activities to the time of year when bats are not likely to be present (October 1 through March 31). These AMMs are included as firm commitments in the Environmental Commitments section of this document.

The USFWS official species list also identified four other species as potentially occurring in the project area (Appendix C-18). The project is in the range of the monarch butterfly (*Danaus plexippus*), which is a candidate species, but it is not considered a protected species. The project is in the range of the tricolored bat (*Perimyotis subflavus*) and the salamander mussel (*Simpsonias ambigua*), which are proposed endangered species. This project will not jeopardize the continued existence of the tricolored bat or the salamander mussel. No protected critical habitat has been proposed for the tricolored bat; therefore, no further action is required. USFWS has proposed eight segments of Indiana streams as containing critical habitat for the salamander mussel per the Federal Register, Vol. 88, No. 161. The project area and the downstream reach from the project area have been reviewed for segments of stream designated as proposed critical habitat for the salamander mussel, and none are present within at least two stream miles. Therefore, this project will not have a negative impact on proposed critical habitat for the salamander mussel, and no further action is required. The project is in the range of a "non-essential experimental population" of the whooping crane (*Grus americana*), but this population is not covered by protections provided for the natural endangered population of whooping crane. Therefore, no further

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coordination is required for these species.

Bird habitat is present in and near the project area, but no evidence of birds using or nesting on or in the twin pipe structures was observed.

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

**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
<b>X</b>	
	<b>X</b>
	<b>X</b>

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, the project is located inside the designated karst region of Indiana as outlined in INDOT's July 15, 2021, Protection of Karst Features During Project Development and Construction guidance document. According to the topographic map of the project area (Appendix B-2) and the RFI Report (Appendix E-8), there are no karst features identified within or adjacent to the project area, and none were observed during the field investigation on August 25, 2022. The RFI Report identified three surface mine polygons within the 0.5-mile radius, the closest of which is 0.25 mile east of the project (Appendix B-9). Aerial imagery shows surface mining in this area occurred between 2004 and 2006, with the area being remediated and reclaimed in 2007. Due to surface mining, this area has a karst-like appearance on aerial imagery, but it is not related to karst features.

In the automated early coordination response dated October 2, 2023, the Indiana Geological and Water Survey (IGWS) did not indicate that karst features exist in the project area (Appendix C-9). IGWS noted that the project area had moderate liquefaction potential, a high potential for bedrock resources, and active or abandoned surface coal mines. No impacts to mineral resources are anticipated, because the project involves the reconstruction of an existing facility at its current location, and no extraction sites are located in or near the project area. The response from IGWS was communicated to the designer on October 2, 2023.

### SECTION C – OTHER RESOURCES

	<u>Presence</u>	<u>Impacts</u>	
		Yes	No
<b>Drinking Water Resources</b>			
Wellhead Protection Area(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Source Water Protection Area(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Well(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Urbanized Area Boundary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public Water System(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is the project located in the St. Joseph Sole Source Aquifer (SSA):		<b>Yes</b>	<b>No</b>
If Yes, is the FHWA/EPA SSA MOU Applicable?		<input type="checkbox"/>	<b>X</b>
If Yes, is a Groundwater Assessment Required?		<input type="checkbox"/>	<input type="checkbox"/>

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*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.*

**Sole Source Aquifer**

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

**Wellhead Protection and Source Water Areas**

The Indiana Department of Environmental Management’s Wellhead Proximity Determinator website (<https://www.in.gov/idem/cleanwater/information-about/groundwater-monitoring-and-source-water-protection/wellhead-protection-program/source-water-proximity-determination-tool/>) was accessed on October 2, 2023, by INDOT DE. The project is not located within a wellhead protection area (WHPA) or a source water area (SWA). No impacts are expected.

**Water Wells**

The IDNR Water Well Record Database website (<https://www.in.gov/dnr/water/3595.htm>) was accessed on October 2, 2023, by INDOT DE. No water wells are mapped in or near the project area, and none were observed during the field investigation on August 25, 2022. The nearest well is mapped approximately 400 feet north of the project limits. No impacts are expected.

**Public Water System**

Based on a desktop review of the IDNR Water Well Record Database, aerial imagery, and a field investigation on August 25, 2022, by INDOT DE, no public water systems or significant withdraw wells were identified, and 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**

**Impacts**

Yes	No

If applicable, indicate the Floodplain Level?

Level 1     Level 2     Level 3     Level 4     Level 5

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

The IDNR Indiana Floodway Information Portal website was accessed on July 11, 2023, by INDOT DE, and an IDNR Floodplain Analysis and Regulatory Assessment (FARA) was generated for this project (Appendix F-14). This project is not located in an IDNR-delineated floodway. The USGS StreamStats online application determined that UNT to Splunge Creek has an upstream drainage area of 0.37 square mile from the project location (Appendix F-13), which is below the 1 square mile threshold for IDNR floodway jurisdiction. Therefore, it does not fall within the guidelines for the implementation of 23 CFR 650, 23 CFR 771, and 44 CFR. No impacts are expected.

IDNR DFW responded to early coordination on November 2, 2023, stating that formal approval by IDNR Division of Water is not required for this project (Appendix C-4). Early coordination materials were sent to the floodplain coordinator in the Vigo County Area Planning Department. No response was received.

**Farmland**

- Agricultural Lands
- Prime Farmland (per NRCS)

**Presence**

**Impacts**

Yes	No
X	
X	

Total Points (from Section VII of CPA-106/AD-1006\*)              149          

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

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

Based on a review of aerial imagery and a site visit on August 25, 2022, by INDOT DE, land used for agricultural row crops was identified near the project area. Based on a desktop review of the National Resources Conservation Service (NRCS) Web Soil Survey website (<https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>), prime farmland that meets the definition of farmland under the Farmland Protection Policy Act (FPPA) is present within the project area. All land within the project area was identified as prime farmland. While 0.90 acre of land will be acquired, approximately 0.35 acre is considered to be in a transportation use. Therefore, 0.55 acre of prime farmland will be transitioned to a transportation use.

An early coordination letter was sent to the Natural Resources Conservation Service (NRCS) and a Farmland Conversion Impact Rating Form AD-1006 was completed for the project (Appendix C-8). NRCS responded on October 16, 2023, stating that the project will cause a conversion of prime farmland (Appendix C-7). Based on the finalized AD-1006 Form, which was resubmitted to NRCS on November 3, 2023, the project will convert 0.55 acre of prime or unique farmland to a transportation use, and the analysis resulted in a score of 149 out of a maximum 260. NRCS's threshold score for significant impacts to farmland that results in the consideration of other alternatives is 160. Since this project score is less than the threshold, no significant loss of prime, unique, statewide, or locally important farmland will result from this project. No alternatives other than those previously discussed in this document will be investigated without reevaluating impacts to prime farmland.

### SECTION D – CULTURAL RESOURCES

<b>Minor Projects PA</b>	<b>Category(ies) and Type(s)</b> <input type="text" value="Categories A-4, A-9, B-9"/>	<b>INDOT Approval Date(s)</b> <input type="text" value="October 6, 2023"/>	<b>N/A</b> <input type="text"/>
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**Full 106 Effect Finding**  
 No Historic Properties Affected       No Adverse Effect       Adverse Effect

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

<b>Documentation Prepared</b> (mark all that apply)		<b>ESD Approval Date(s)</b>	<b>SHPO Approval Date(s)</b>
APE, Eligibility and Effect Determination	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>
800.11 Documentation	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>
Historic Properties Report or Short Report	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>
Archaeological Records Check and Assessment	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>
Archaeological Phase Ia Survey Report	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>
Archaeological Phase Ic Survey Report	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>
Other:	<input type="text"/>	<input type="text"/>	<input type="text"/>

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

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

A preliminary review of the IDNR Division of Historic Preservation and Archaeology (DHPA) Indiana Historic Buildings, Bridges, and Cemeteries (IHBBC) Map was conducted on November 20, 2022 (<https://www.in.gov/dnr/historic-preservation/help-for-owners/national-and-state-registers/shaard-database/>). Mapping identified one historic county road bridge rated as contributing within 0.5 mile of the project. The bridge is 0.5 mile east of the project and will not be impacted.

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On October 6, 2023, the INDOT Cultural Resources Office (CRO) determined that this project falls within the guidelines of Category B, Type 9, under the Minor Projects Programmatic Agreements (MPPA, Appendix D). The project satisfies the archaeological requirements under Condition A(ii) for work in undisturbed soils, where an archaeological investigation, reviewed by INDOT CRO, determines that no National Register-listed or potentially eligible archaeological resources are present within the project area. An INDOT CRO archaeologist performed a Phase Ia field reconnaissance survey, and an Indiana Archaeological Short Report was prepared on October 6, 2023. No archaeological sites were documented as a result of the survey. The project satisfies the above-ground requirements of the MPPA under Conditions B(ii)(a) and B(ii)(b)(1). Condition B(ii)(a) is for projects where work will not occur adjacent to or within a National Register-listed or eligible resource or district. Condition B(ii)(b)(1) is for culvert projects where the culvert does not exhibit wood, stone, or brick structures or parts therein. The project also satisfies the conditions for Category A-4 and A-9. Category A-4 includes road work in previously disturbed soils where sidewalk and curbs will not be impacted. Category A-9 includes installation or repair of erosion control measures in previously disturbed soils.

No further consultation is required. This completes the Section 106 process and the responsibilities of the FHWA under National Historic Preservation Act of 1966, as amended, have been fulfilled.

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

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

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

Section 4(f) of the US 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 and waterfowl refuges, and NRHP listed or eligible historic properties regardless of ownership. Lands subject to this law are referred to as Section 4(f) resources.

Based on the RFI Report (Appendix E), a desktop review of GIS and aerial resources, and the review for historical resources, there is one potential Section 4(f) resource located within 0.5 mile of the project location. This a potentially historic bridge located 0.5 mile east of the project, and it will not be impacted. There are no Section 4(f) resources within or adjacent to the project area; therefore, no use is expected.



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**Section 6(f) Involvement**

**Presence**

**Use**

**Section 6(f) Property**

Yes

No




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

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

A review of Section 6(f) properties listed on the INDOT Environmental Services Division (ESD) website were reviewed (Appendix I-1). A total of 11 LWCF funded projects involving seven different properties were identified in Vigo County. None of these properties are located in or near the project area; therefore, there will be no impacts to Section 6(f) properties.

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

Location in STIP: By Incorporation from the TIP

Name of MPO (if applicable): Terra Haute Area Metropolitan Planning Organization (THAMPO)

Location in TIP (if applicable): Amendment 1, Page 9

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.*

**STIP/TIP**  
 This project is included in the Fiscal Year (FY) 2024-2028 Terra Haute Area Metropolitan Planning Organization (THAMPO) Transportation Improvement Plan (TIP, Appendix H-5 to H-7) and the Statewide Transportation Improvement Program (STIP) by reference (Appendices H-1).

**Attainment Status**  
 This project is located in Vigo County, which is currently a maintenance area for 8-hour ozone according to the Environmental Planning Agency's Green Book website (<https://www.epa.gov/green-book>). This project has been identified as being exempt from air quality analysis in accordance with 40 CFR Part 93.126 and this project is not a project of air quality concern (40 CFR Part 93.123). Therefore, the project will have no significant impact on air quality.

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**MSAT Level 1a Analysis**

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

**SECTION G - NOISE**

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

**Regional, Community & Neighborhood Factors**

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

Yes	No
<b>X</b>	
	<b>X</b>
	<b>X</b>
	<b>X</b>
<b>X</b>	
<b>X</b>	

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

The project will replace an existing culvert on its existing alignment; therefore, the project is unlikely to impact plans for development in the area, nor will it impact community cohesion. The project will require approximately 0.90 acre of permanent right-of-way acquisition, which will have an insignificant impact on county tax revenue. Approximately 0.35 acre of the right-of-way acquisition is generally in a transportation use, based on existing ditch lines, culverts, and utility poles. Therefore, approximately 0.55 acre will be converted from its current land use, most of which is undeveloped riparian forest. Approximately 0.14 acre of land is currently being farmed for row crops; this is not expected to cause a substantial impact to farm or tax revenues.

An online review for fairs and festivals in Vigo County identified two recurring events, both of which are in Terre Haute: the Banks of the Wabash Festival in late May/early June and Old Fashion Days in late September. Terre Haute is approximately 15 miles to the northwest. While the project requires a detour, regional commuters are likely to be using US 150 from the south or SR 46 from the east. In addition to the official detour, numerous alternative routes are available to commuters. Therefore, the project is expected to have an insignificant impact on community events in the region.

This project involves improvements to SR 159, which is owned and operated by INDOT. INDOT has an approved Americans with Disabilities Act (ADA) transition plan, most recently updated in June 2021. This project is in compliance with INDOT's transition plan. The Vigo County ADA Coordinator was contacted on November 11, 2023, and they replied on December 4, 2023 stating that they have an approved transition plan. This project is in a rural area and located more than two miles from the nearest communities, which are small unincorporated towns. No sidewalks are present in or near the project area. Therefore, this project will have no involvement with facilities regulated under the Americans with Disabilities Act.

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### 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 the RFI Report (Appendix E-7), there is one cemetery located within the 0.5-mile radius of the project area, but no other public facilities (health, educational, emergency response, airport, pedestrian, bicycle, religious or other facilities) were identified. Review of aerial photography at the location of the mapped cemetery shows farmland and riparian forest, and it provides no visual indication that a cemetery is present. Therefore, it is assumed that the cemetery is not a commercial or publicly available location.

Based on the approved RFI Report, the project is not within 20,000 feet (3.8 miles) of a public airport, and the designer confirmed that structures and equipment will not exceed 200 feet in elevation. Therefore, no permits or additional coordination are required for impacts to aviation airspace.

Overhead utilities are located in the northwest and southeast quadrants of the project area, crossing over SR 159 above the culvert. Relocation of these utilities is anticipated and is expected to occur within the proposed right-of-way limits. Impacts caused by utility relocations are reflected by the analysis of impacts described in this document. All permits required for utility relocations are the responsibility of the utility provider.

Early coordination letters were sent to Vigo County officials and government departments, including the Commissioners, County Council, Highway Department, Surveyor's Office, Soil and Water Conservation District, and Area Planning Department, as well as THAMPO. No responses were received.

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?

Does the project require an EJ analysis?

If YES, then:

Are any EJ populations located within the project area?

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

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

*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 6640.23A, FHWA and the project sponsor, as a recipient of funding from FHWA, are responsible to ensure that their programs, policies, and activities do not have a disproportionately high and adverse effect on minority or low-income populations. Per the current INDOT Categorical Exclusion Manual, an Environmental Justice (EJ) analysis is required for any project that has two or more relocations or requires 0.5 acre or more of additional permanent right-of-way. This project will not require any relocations. Based on the existing right-of-way limits at the edge of pavement, the preferred alternative requires approximately 0.90 acre of permanent right-of-way acquisition to complete the project. 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 Vigo County. The community that overlaps the project area is called the affected community (AC). In this project, the AC is Pierson Civil Township, which is the smallest geographic area containing the project for which the necessary census data was available.

An AC contains a population of concern for EJ if the minority or low-income population of the AC is more than 50% of the total or if the low-income or minority population is at least 125% of the COC's respective population. Data from Census.gov was obtained by INDOT's Crawfordsville District and was used to identify the minority and low-income populations within the AC and COC, which were obtained on October 3, 2023 (Appendices I-9 to I-15). The pertinent Census data and calculations for EJ analysis are summarized below in Tables 1 and 2. See the attachments for the Census.gov data sheets.

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<b>Table 1: Minority Population and EJ Analysis</b>		
	COC Vigo County, Indiana	AC Pierson Civil Township, Vigo County, Indiana
Total Population for Whom Minority Status was Determined	106,523	1,575
Total Minority Population	16,175	67
Percent Minority	15.18%	4.25%
125% of COC Threshold (25% over COC Percent Minority)	18.98%	
Is the AC Percent Minority Greater than 125% of COC?		<b>No</b>
Is the AC Percent Minority Greater than 50% of COC?		<b>No</b>
Is there a Minority Population of EJ Concern?		<b>No</b>

The AC, Pierson Civil Township, has a percent minority population of 4.25%, which is below the 50% threshold, and it is below the 125% threshold of 18.98% established by the COC, Vigo County. Therefore, the affected community does not contain a minority population of EJ concern.

<b>Table 2: Low-Income Population and EJ Analysis</b>		
	COC Vigo County, Indiana	AC Pierson Civil Township, Vigo County, Indiana
Total Population for Whom Poverty Status was Determined	98,399	1,548
Total Population Below Poverty Level	19,494	469
Percent Low-Income	19.81%	30.30%
125% of COC Threshold (25% over COC Percent Low-Income)	24.76%	
Is the AC Percent Low-Income Greater than 125% of COC?		<b>Yes</b>
Is the AC Percent Low-Income Greater than 50%?		<b>No</b>
Is there a Low-Income Population of EJ Concern?		<b>Yes</b>

The AC, Pierson Civil Township, has a percent low-income population of 30.30%, which is below the 50% threshold, but it is above the 125% threshold of 24.76% established by the COC, Vigo County. Therefore, the affected community contains a low-income population of EJ concern.

The proposed project is expected to require approximately 0.90 acre of permanent right-of-way acquisition. The project is situated in a rural area where land use primarily consists of riparian woodlands, agricultural fields, and scattered residential properties. While recorded deeds identify the existing right-of-way limits at the roadway edge of pavement, approximately 0.35 acre of the proposed right-of-way consists of roadside ditches, roadway drainage structures, and overhead utilities, which indicate an existing transportation use.

The project will impact four property owners and it is in a rural area of southeast Vigo County. None of the land parcels currently contain housing or other extant buildings. One parcel in the southeast quadrant of the project area appears to have been a residence at some point, but according to a review of past aeriels, the house was razed sometime before 2016. The other three parcels are primarily used for agriculture, but the areas being acquired are mostly wooded. Approximately 0.14 acre of proposed right-of-way in the northwest quadrant is currently being farmed. The rest of the right-of-way is woods, stream, and maintained lawn. Field entrances are located within the project limits and will be perpetuated and improved by the project.

A road closure is planned during construction, and the official detour will use SR 246, US 150, SR 641, and SR 46. Compared to the segment of SR 159 bypassed, the detour will require an additional driving distance of approximately 10 miles. Construction is expected to last three to four months. Unofficial local detours will likely mitigate some of the impacts of the of the official detour on the low-income EJ population. Using Daugherty Street (94<sup>th</sup> Street) and French Drive (gravel roads) as an unofficial local detour will add no length to the total distance traveled. Using SR 246 and All Street as an unofficial local detour (paved roads) will have a shorter driving distance than the bypassed segment of SR 159.

Impacts to EJ populations are expected to be minor. Except for the area being farmed and the residential lawn, a majority of the proposed right-of-way is either in transportation use or consists of unimproved woodlands. A small percent of each affected parcel

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will be impacted, and the project will not impede or encumber the remaining parcels for their current land use. The project will have a negligible impact on agricultural incomes, and it will not have any direct impact on residential dwellings or other buildings. The impacts caused by the detour are expected to be minor and will be temporary. This project is needed to provide continued use of SR 159 on its current alignment for local and regional users, including the affected community. Therefore, the project is not expected to have a disproportionately high and adverse impact on the low-income or minority populations of EJ concern.

This EJ analysis was submitted to INDOT ESD, Environmental Policy Office for review, and they concurred with its findings on December 19, 2023 (Appendix I-16).

**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**

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

Documentation

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

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

Date RFI concurrence by INDOT SAM (if applicable):     July 25, 2023    

*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.*

An RFI Report was prepared by INDOT DE based on a review of GIS and available public records. INDOT SAM concurred with the analysis on July 25, 2023 (Appendix E). 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 (Appendix E-9). Further investigation for hazardous material concerns or regulated substances is not required at this time.

## Part IV – Permits and Commitments

**PERMITS CHECKLIST**

**Permits** (mark all that apply)

Likely Required

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

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

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

- Nationwide Permit (NWP)

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**Permits** (mark all that apply)

**Likely Required**

Regional General Permit (RGP)	<input type="checkbox"/>
Individual Permit (IP)	<input type="checkbox"/>
Isolated Wetlands	<input type="checkbox"/>
Construction Stormwater General Permit (CSGP)	<input type="checkbox"/>
Other	<input type="checkbox"/>
<b>IN Department of Natural Resources</b>	
Construction in a Floodway	<input type="checkbox"/>
Navigable Waterway Permit	<input type="checkbox"/>
Other	<input type="checkbox"/>
<b>Mitigation Required</b>	
<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."

The project will have permanent and/or temporary impacts to UNT to Splunge Creek and one wetland, both of which are likely waters of the US regulated under Sections 404 and 401 of the Clean Water Act. Therefore, permits from USACE and IDEM are anticipated. As permanent impacts to the stream are below the 300-foot and 0.1-acre thresholds, the project is anticipated to qualify for the NWP Program, and no stream mitigation is anticipated.

Based on the upstream drainage area for UNT to Splunge Creek of 0.37 square mile and the IDNR response letter from November 2, 2023 (Appendix C-4), an IDNR CIF permit is not required.

Within construction limits, approximately 0.55 acre of ground disturbance is anticipated, including approximately 0.09 acre along the roadway for full depth pavement replacement. Therefore, an IDEM CSGP is not anticipated. Utility providers are responsible for acquiring any necessary permits for utility relocations beyond INDOT's construction limits.

While Vigo County regulates certain drainage features, neither Splunge Creek nor its tributaries are listed as regulated drains, per the Vigo County Regulated Legal Drain website (<https://www.vigocounty.in.gov/departments/division.php?structureid=103>). Early coordination materials were sent to the Vigo County Surveyor's office on October 3, 2023; no response was received.

## 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 DE will be contacted immediately. (INDOT DE)
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 DE)
3. All Waters of the US shall be identified on the plans. Waters of the US that are not permitted to be impacted and/or beyond the construction limits shall be marked "Do Not Disturb". (INDOT DE)
4. IDEM identifies UNT to Splunge Creek as a 303(d) listed impaired stream due to the presence of *E. coli*. Workers who are working in or near water with *E. coli* should take care to wear appropriate PPE, observe proper hygiene procedures such as regular hand washing, and limit personal exposure. (INDOT SAM)
5. A USFWS Bridge/Structure Assessment shall take place no earlier than two (2) years prior to the start of construction. If construction will begin after January 3, 2026, an inspection of the structure by a qualified individual must be performed. Inspection of the structure should check for presence of bats/bat indicators. The results of the inspection must indicate no signs of bats. If signs of bats are documented during this inspection, the INDOT District Environmental Manager must be contacted immediately. (INDOT DE)
6. General AMM 1: Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs. (USFWS, IPaC)
7. Lighting AMM 1: Direct temporary lighting away from suitable habitat during the active season. (USFWS, IPaC)

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8. Tree Removal AMM 1: Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal. (USFWS, IPaC)
9. Tree Removal AMM 2: 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 of documented roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed. (USFWS, IPaC and IDNR DFW)
10. Tree Removal AMM 3: Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits). (USFWS, IPaC)
11. Tree Removal AMM 4: Do not remove documented Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 miles of roosts, or documented foraging habitat any time of year. (USFWS, IPaC)

**For Consideration:**

1. Do not work in the waterway from April 1 through June 30 without the prior written approval of the Division of Fish and Wildlife. (IDNR DFW)
2. Do not excavate in the low flow area except for the placement of piers, foundations, and riprap, or removal of the old structure. (IDNR DFW)
3. Stream crossings need to consider the ability of fish and wildlife to pass through the structure. Crossings must not create conditions that are less favorable for passage through the area compared to pre-disturbance conditions. To ensure fish passage is not obstructed, material should not be placed on the streambed above the existing flowline. (IDNR DFW)
4. The replacement crossing structure, and any bank stabilization under or around the structure, must not create conditions that are less favorable for wildlife passage when compared to existing conditions. Upgrading wildlife passage for replacement/rehabilitated structures is recommended whenever possible to improve wildlife/vehicle safety. Bank lines must be maintained or restored within structures to allow for wildlife passage above the OHWM. All wildlife passage designs must include a smooth level pathway a minimum of 1-3 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. (IDNR DFW)
5. Combining vegetation with any of the following bank stabilization methods is recommended to 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. (IDNR DFW)
6. If box and pipe culverts are used, the culvert bottoms should be sumped a minimum of 6" (or 20% of the culvert height or diameter, whichever is greater up to a maximum of 2') below the stream bed elevation. Sumping is not required for bridges or three-sided culverts. 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). (IDNR DFW)
7. Any riprap placed at the culvert's outlet/inlet needs to be installed at grade (or countersunk then backfilled with native material). The slope of the riprap should match the stream's gradient. Riprap needs to be mixed with smaller stone and fines to match the existing stream substrate particle distribution and provide impermeability of the riprap apron/substrate so the flow doesn't percolate through the voids below the riprap apron's surface. (IDNR DFW)
8. Riprap or other hard bank stabilization materials should be used only at the toe of the side slopes 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. (IDNR DFW)
9. Impacts to non-wetland forest under one (1) acre but at least 0.10 acre in a rural or urban area should be mitigated at a minimum 1:1 ratio based on area of impact. If floodway impacts to forested wetland and non-wetland habitat areas combine to be 0.10 acres or more, mitigation should be done and coordinated with the biologist, as needed. (IDNR DFW)
10. Do not construct any temporary runarounds, access bridges, causeways, cofferdams, diversions, or pumparounds. (IDNR DFW)
11. 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)
12. Do not deposit or allow construction/demolition materials or debris to fall or otherwise enter the waterway. Any incidental fallen material or debris in the waterway must be removed within 24 hours using best management practices, particularly lifting material out of the waterway and not dragging it across the streambed whenever possible. (IDNR DFW)

APPENDICES

Appendix A: CE Level Thresholds Chart

Appendix B: Graphics

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Indiana State Aerial Imagery ..... B-3
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Appendix C: Early Coordination

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Appendix E: Red Flag Investigation Report

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## **Appendix A: CE Level Thresholds Chart**

## 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>					
<ul style="list-style-type: none"> <li>• District Env. (DE)</li> <li>• Env. Serv. Div. (ESD)</li> <li>• FHWA</li> </ul>	Concurrence by DE or ESD	DE or ESD	DE or ESD	DE and/or ESD	DE and/or ESD; and FHWA

<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

Project Location Map .....	B-1
USGS 1:24k Topographic Map .....	B-2
Indiana State Aerial Imagery .....	B-3
Ground Level Photography .....	B-4 – B-8
Photo Orientation Map .....	B-4
Photography .....	B-5 – B-8
Design Plans .....	B-9 – B-19

Des. No. 2002197












SR 159 at UNT to Splunge Creek

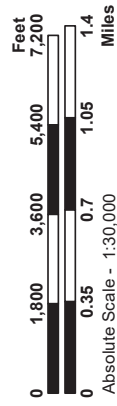
Small Structure Replacement

4.15 Miles North of SR 246 (RP 23.38)

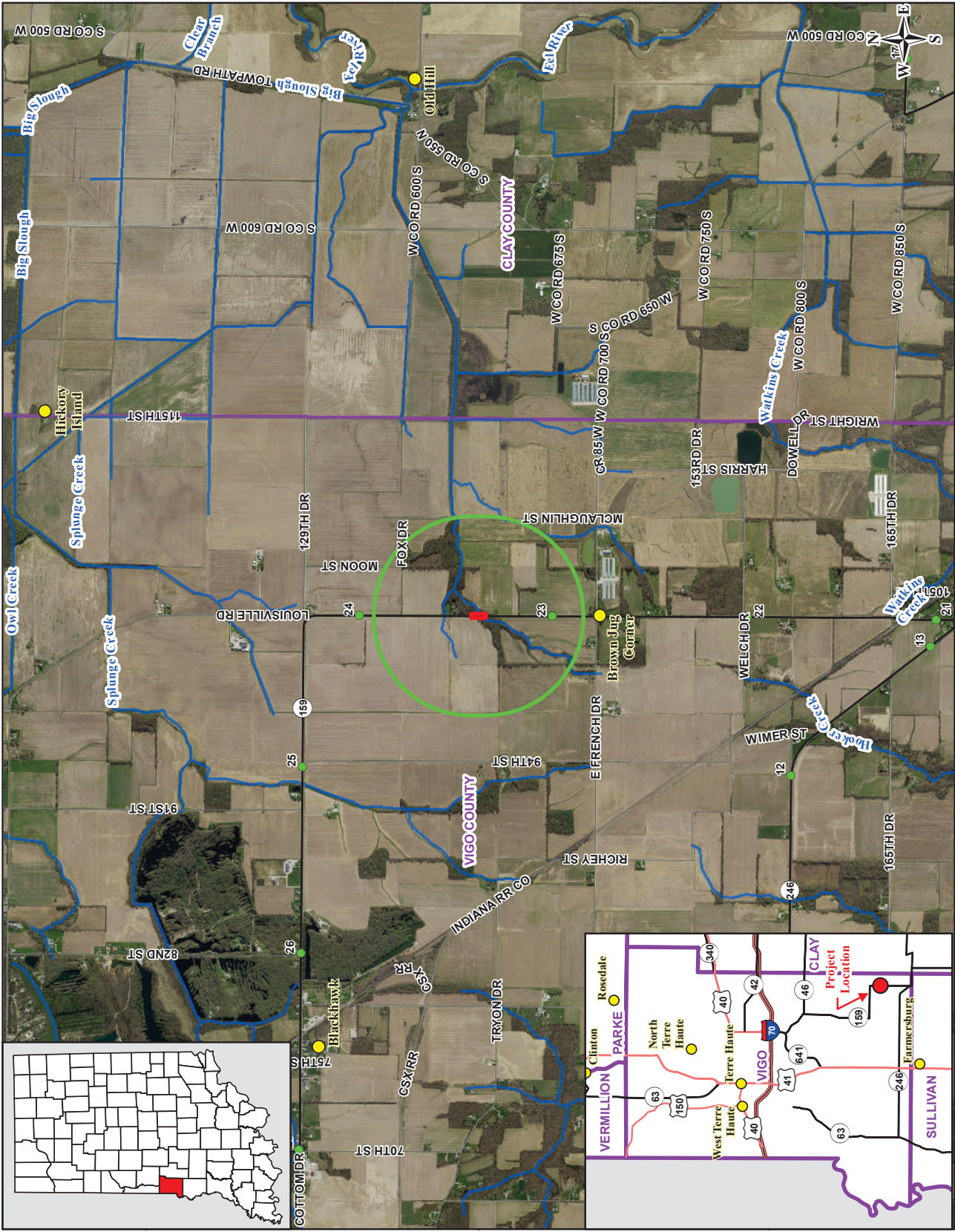
Vigo County

**Project Location Map**

-  Project Location
-  Half-Mile Radius
-  Cities and Towns
-  Road Reference Posts (RPs)
-  County Line
-  Rivers and Streams
-  State Highways
-  US Highways
-  Interstates
-  Toll Roads
-  Local Roads



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



Des. No. 2002197






SR 159 at UNT to Splunge Creek

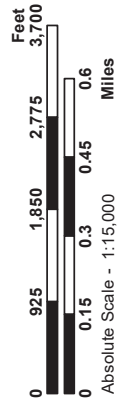
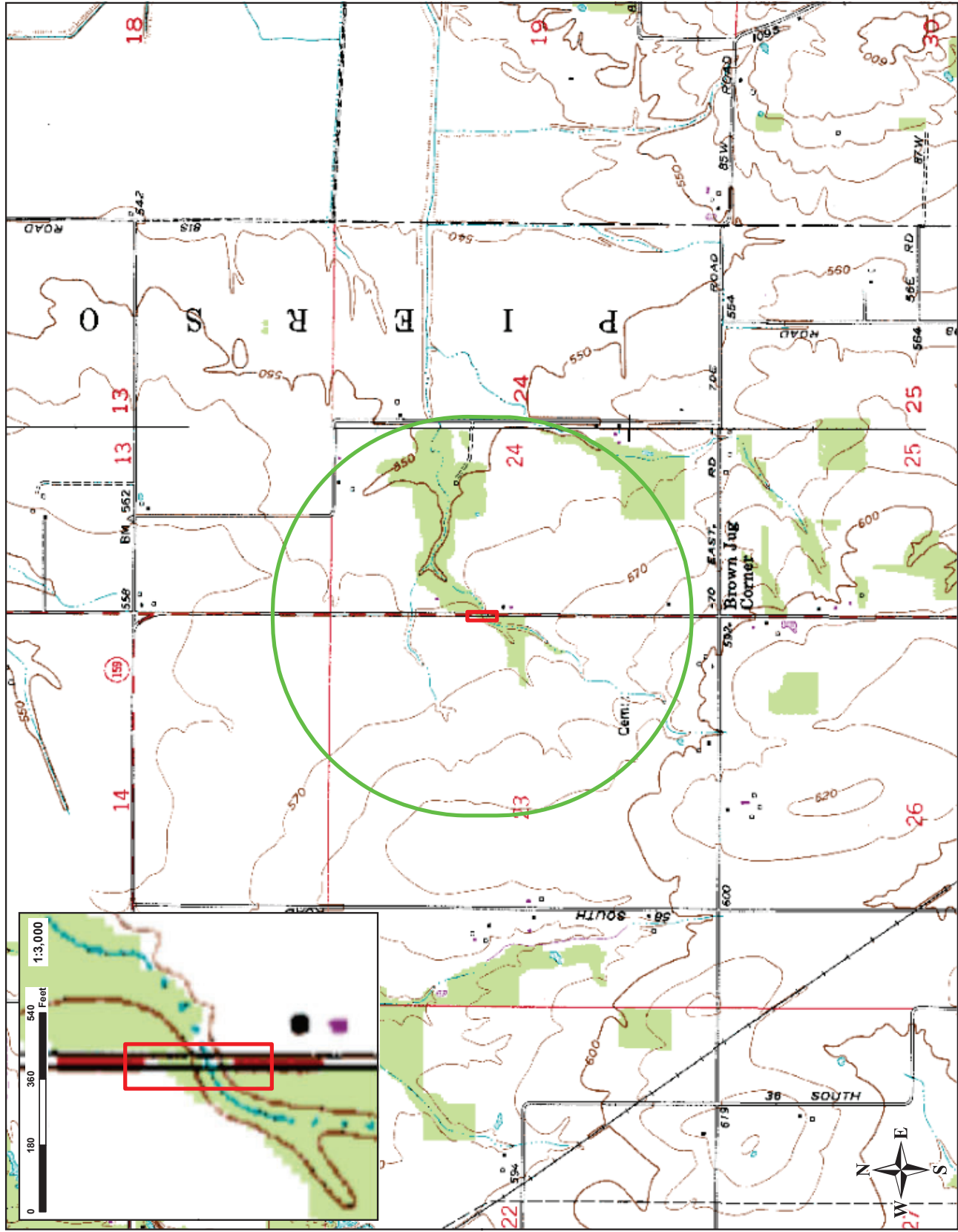
Small Structure Project

4.15 Miles North of SR 246 (RP 23+38)

Vigo County

### USGS 1:24k Topographic Map







-  Project Location
-  Half-Mile Radius
-  USGS 7.5' Quadrangle
-  PLSS Section, Township, & Range
-  Civil Township

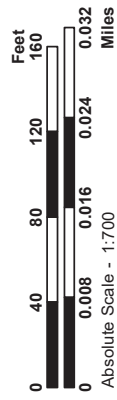


Sources:  
Non Orthophotography Data -  
Obtained from the State of Indiana  
Geographical Information Office Library  
Orthophotography - Obtained from Indiana  
Map Framework Data ([www.indianamap.org](http://www.indianamap.org))  
Map Projection: UTM Zone 16 N  
Map Datum: NAD83

**Des. No. 2002197**  
**SR 159 at UNT to Splunge Creek**  
 Small Structure Project  
 4.15 Miles North of SR 246 (RP 23+38)  
 Vigo County

**Indiana State Aerial Imagery**

-  Area of Investigation
-  State Highways
-  US Highways
-  Interstates
-  Toll Roads
-  Local Roads







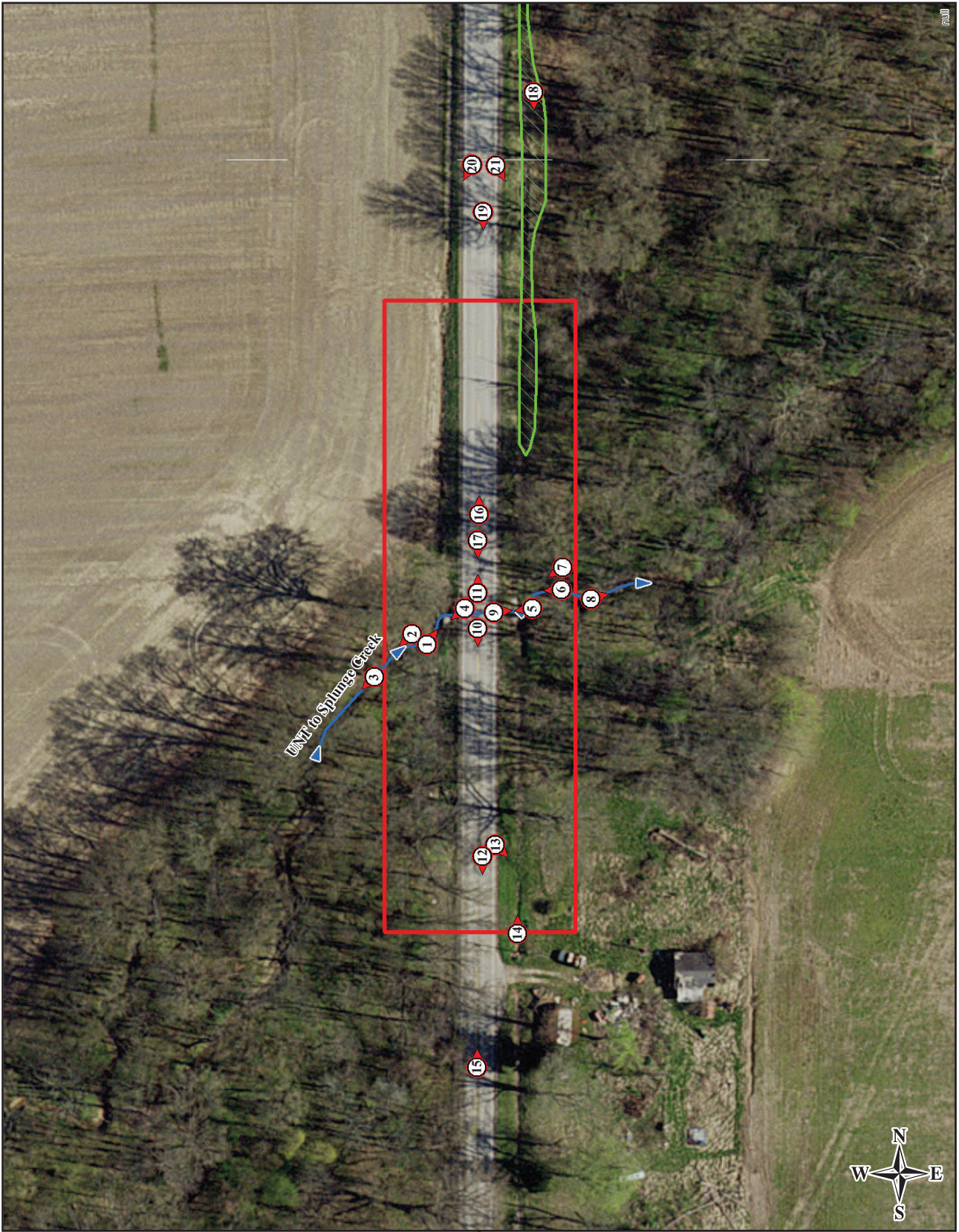
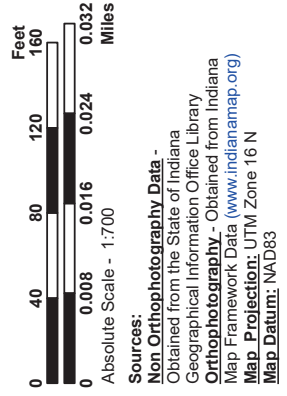
**Sources:**  
**Non Orthophotography Data** -  
 Obtained from the State of Indiana  
 Geographical Information Office Library  
**Orthophotography** - Obtained from Indiana  
 Map Framework Data ([www.indianamap.org](http://www.indianamap.org))  
**Map Projection:** UTM Zone 16 N  
**Map Datum:** NAD83



**Des. No. 2002197**  
**SR 159 at UNT to Splunge Creek**  
 Small Structure Project  
 4.15 Miles North of SR 246 (RP 23+38)  
 Vigo County

**Photo Orientation Map**

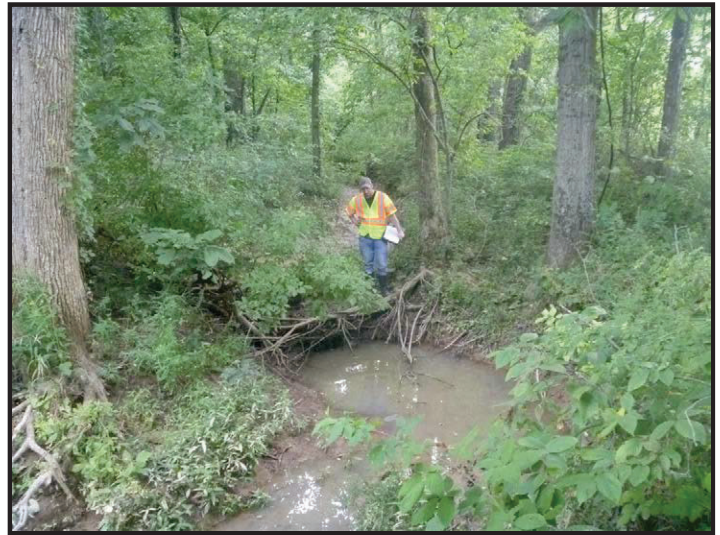
-  Area of Investigation
-  Photo Orientation Arrow
-  Likely Jurisdictional Streams
-  Wetlands







**Photo 1 – Inlet at SR 159 over UNT to Splunge Creek:** Facing northeast toward inlet of SR 159 small structure, Str. No. CV 159-084-23.30, a set of twin elliptical 47-foot-long steel pipes, each 8.5 feet wide and 6 feet high.



**Photo 2 – UNT to Splunge Creek, Upstream from SR 159t:** Facing upstream to the southwest along UNT to Splunge Creek.



**Photo 3 – UNT to Splunge Creek, Upstream from SR 159:** Facing upstream to the southwest along UNT to Splunge Creek, upstream of the inlet. The OHWM in this area measured 14 ft. wide by 30 in. deep.



**Photo 4 – SR 159 Crossing of UNT to Splunge Creek:** Facing upstream to the southwest along UNT to Splunge Creek from the top of the SR 159 small structure.



**Photo 5 – Outlet at SR 159 over UNT to Splunge Creek:** Facing upstream to the west toward the outlet of Str. No. CV 159-084-23.30, from east of SR 159.



**Photo 6 – UNT to Splunge Creek, Downstream from SR 159:** Facing upstream to the west along UNT to Splunge Creek. The creek was ten feet wide in this area.



**Photo 7 – UNT to Splunge Creek, Downstream from SR 159:** Facing upstream to the southwest along UNT to Splunge Creek toward the structure outlet, from the north bank of the creek.



**Photo 8 – UNT to Splunge Creek, Downstream from SR 159:** Facing downstream to the east along UNT to Splunge Creek from downstream of the outlet.



**Photo 9 – SR 159 Crossing of UNT to Splunge Creek:** Facing downstream to the east along UNT to Splunge Creek from the top of the SR 159 small structure. The left pipe flows freely, but the right pipe outfalls into a scour hole.



**Photo 10 – SR 159 Crossing of UNT to Splunge Creek:** Facing south along SR 159 from the top of the small structure at Splunge Creek. Topography is flat and land use is forested, and rural residential.



**Photo 11 – SR 159 Crossing of UNT to Splunge Creek:** Facing north along SR 159 from the top of the small structure at Splunge Creek. Topography is flat and land use is forested, agricultural, and rural residential.



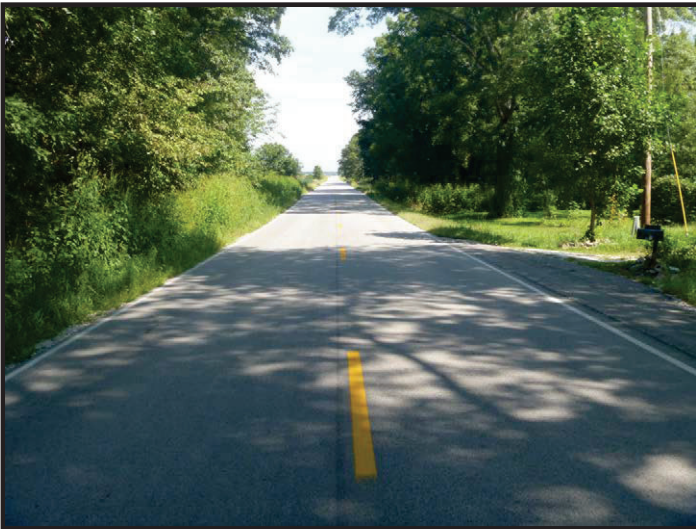
**Photo 12 – SR 159 Project Area, South of Culvert:** Facing south along SR 159 toward the southern limits of the project area.



**Photo 13 – Southeast Quadrant:** Facing southeast toward the northern part of the residential lawn along the east side of SR 159. Buildings have been razed.



**Photo 14 – Southeast Quadrant:** Facing downgrade to the north along roadside ditch from near the southern terminus.



**Photo 15 – SR 159 Project Setting, South of Culvert:** Facing north toward the project area from south of the southern project terminus.



**Photo 16 – SR 159 Project Setting, North of Culvert:** Facing north toward the northern limits of the project.



**Photo 17 – SR 159 Project Setting, North of Culvert:** Facing south toward the culvert and UNT to Splunge Creek.



**Photo 18 – Wetland:** Facing south along the wetland located in the northeast roadside ditch from north of the project area.



**Photo 19 – SR 159 Project Setting, North of Culvert:** Facing south toward the project area from beyond its northern limits.



**Photo 20 – SR 159 Project Setting, North of Culvert:** Facing southwest toward the project area from beyond its northern limits.



**Photo 21 – SR 159 Project Setting, North of Culvert:** Facing southeast toward the project area from beyond its northern limits and toward the wetland in the northeast roadside ditch.

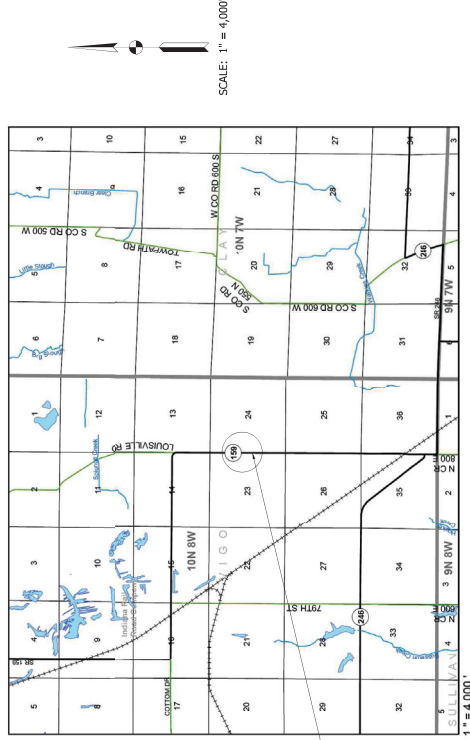
# INDIANA DEPARTMENT OF TRANSPORTATION



## ROAD PLANS

ROUTE: SR 159 FROM: RP 23+38 TO: RP 23+38  
 PROJECT NO. 200219700ST1P.E.  
 200219700ST1R/W  
 200219700ST1CONST.

Small Structure Replacement on SR 159  
 Located 4.15 mi N of SR 246  
 Section 23,24, T-10-N, R-8-W, Pleierson Township, Vigo County, Indiana

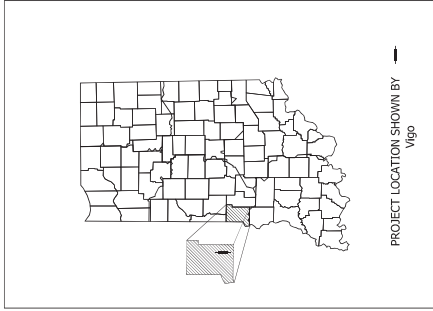


PROJECT NO.	2002197
CONTRACT NO.	19-448
DESIGNATION	2002197

CULVERT ASSETS	
DES. NO.	WORK TYPE
CV 19-448+23.30	Small Structure Replacement

TRAFFIC DATA	
AD.A.A.	75 U.P.S.
AD.A.A.	75 M.P.S.
AD.A.A.	75 M.P.H.
AD.A.A.	71 U.P.S.
AD.A.A.	71 M.P.S.
AD.A.A.	71 M.P.H.
AD.A.A.	60 U.P.S.
AD.A.A.	60 M.P.S.
AD.A.A.	60 M.P.H.

DESIGN DATA	
DESIGN SPEED	35 M.P.H.
DESIGN CRITERIA	3R (UNIMPAVED)
FUNCTIONAL CLASSIFICATION	STATE COLLECTOR
RURAL/URBAN	RURAL
ACCESS CONTROL	U.S.A.



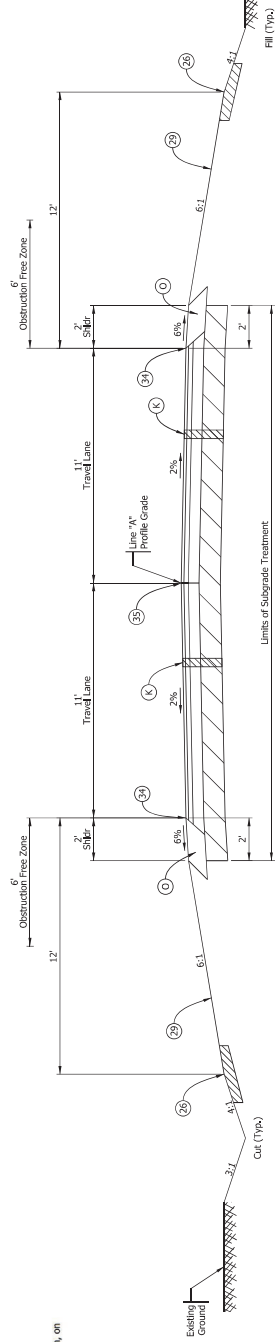
LATITUDE: N 39°17'49"	LONGITUDE: W 87°15'32"
GROSS LENGTH: 0.075 MI.	
NET LENGTH: 0.075 MI.	
MAX. GRADE: 0.91 %	

INDIANA DEPARTMENT OF TRANSPORTATION  
 STANDARD SPECIFICATIONS DATED 2024  
 TO BE USED WITH THESE PLANS

DESIGNATION	2002197
SHEETS	1 of 14
PROJECT	200219700ST1
CONTRACT	19-448

PLANS PREPARED BY:	PHONE NUMBER
CERTIFIED BY:	DATE
RECOMMENDED FOR LETTING:	DATE
INDIANA DEPARTMENT OF TRANSPORTATION	

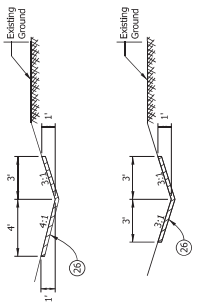
- ① 165 lbs/yd QC/QA-HMA 3, 64, Surface, 9.5mm, on 275 lbs/yd QC/QA-HMA 3, 64, Intermediate, 19.0mm, on 165 lbs/yd QC/QA-HMA 3, 64, Base, 20.0mm, on Subgrade Treatment Type 1c, on Geotextile for Pavement Type 2B
- ② Milling, Asphalt, 1.5 in, then Overlay with 165 lbs/yd QC/QA-HMA 3, 64, Surface, 9.5mm
- ③ Compacted Aggregate No. 53
- ④ Sodding
- ⑤ Mulched Seeding R
- ⑥ Line, Paint, Solid, White, 6 in.
- ⑦ Line, Paint, Broken, Yellow, 6 in.



**FULL DEPTH SECTION**  
Scale: 3/8"=1'-0"  
Sta. 9+00 to Sta. 11+00 "A"

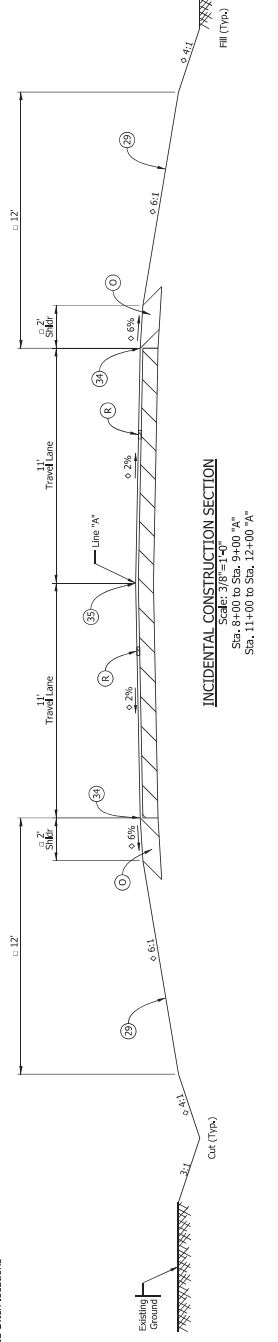
Start Sta.	End Sta.	Lt. (ft.)	Rt. (ft.)	Shoulder Slope	Embankment Slope	Remarks
8+00.00	8+50.00	Lt.	Rt.	4:1	6:1	Slope
8+00.00	8+50.00	Lt.	Rt.	4:1	4:1	Ditch Fore Slope
8+00.00	8+50.00	Lt.	Rt.	4:1	3:1	Ditch Back Slope
11+50.00	12+00.00	Rt.	Lt.	6:1	4:1	Ditch Fore Slope
11+50.00	12+00.00	Rt.	Lt.	6:1	4:5.1	Ditch Back Slope
11+50.00	12+00.00	Rt.	Lt.	3:1	4:5.1	Ditch Fore Slope
8+00.00	8+50.00	Rt.	Lt.	2.25%	2.0%	Travel Lane Slope
8+00.00	8+50.00	Lt.	Rt.	2.45%	2.0%	Travel Lane Slope
8+00.00	8+50.00	Rt.	Lt.	6.0%	6.0%	Agg. Shoulder Slope
8+00.00	8+50.00	Lt.	Rt.	12.0%	12.0%	Agg. Shoulder Slope
11+50.00	12+00.00	Rt.	Lt.	2.0%	2.40%	Travel Lane Slope
11+50.00	12+00.00	Lt.	Rt.	2.0%	1.40%	Travel Lane Slope
11+50.00	12+00.00	Rt.	Lt.	6.0%	6.0%	Agg. Shoulder Slope
11+50.00	12+00.00	Lt.	Rt.	6.0%	7.40%	Agg. Shoulder Slope

These are approximate values, match back to the existing in incident.

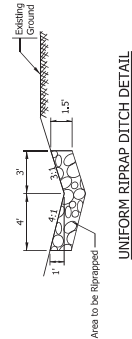


**SODDED DITCH DETAIL**  
No Scale

See Plan and Profile Sheets for Sodded Ditch Locations



**INCIDENTAL CONSTRUCTION SECTION**  
Scale: 3/8"=1'-0"  
Sta. 8+00 to Sta. 9+00 "A"  
Sta. 11+00 to Sta. 12+00 "A"



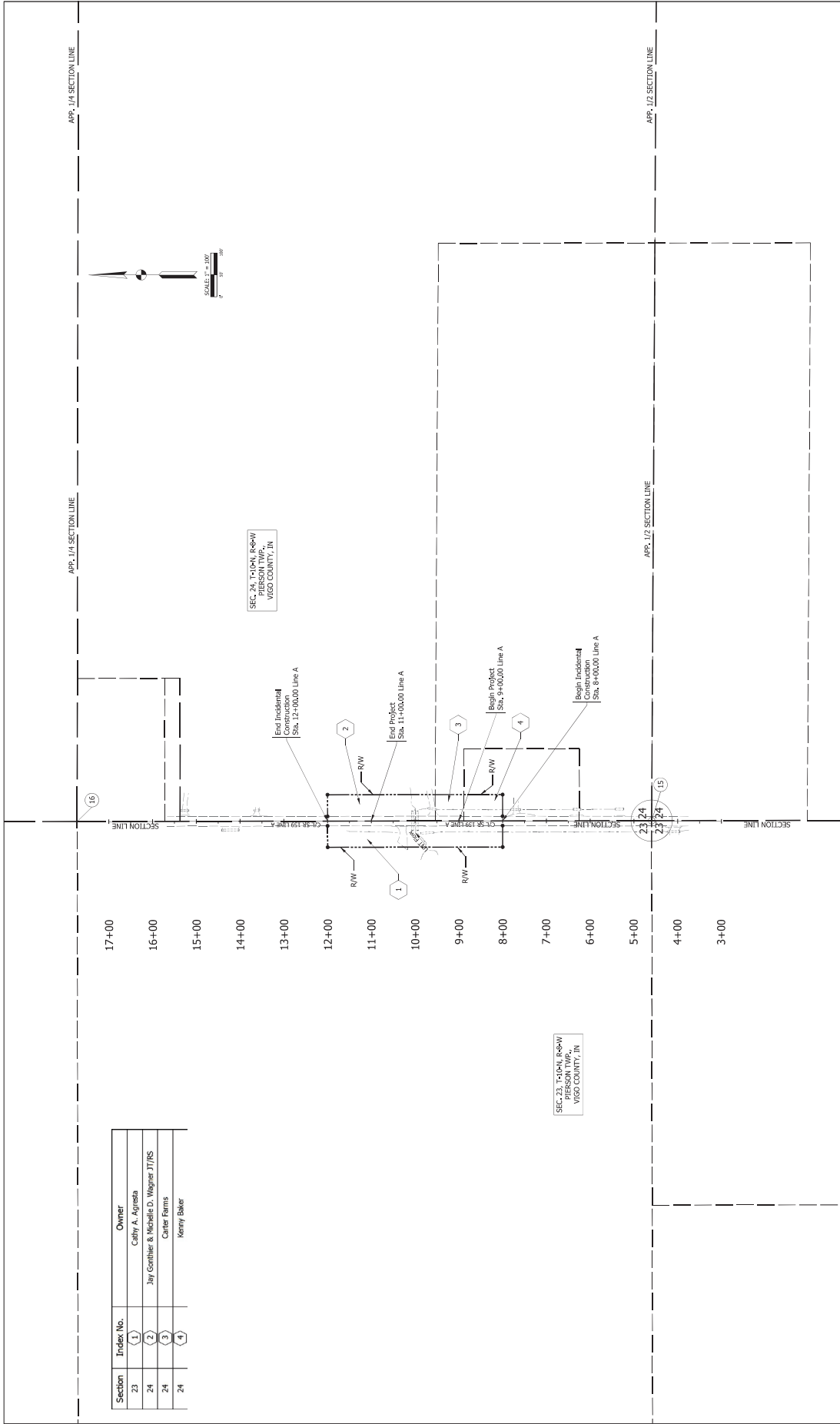
**UNIFORM RIPRAP DITCH DETAIL**  
No Scale

See Plan and Profile Sheets for Riprap Ditch Locations

Start Sta.	End Sta.	Lt. (ft.)	Rt. (ft.)	Shoulder Width	Embankment Width	Remarks
8+00.00	8+50.00	Lt.	Rt.	2.0 ft.	2.0 ft.	Agg. Shoulder Width
8+00.00	8+50.00	Lt.	Rt.	1.9 ft.	1.9 ft.	Agg. Shoulder Width
8+00.00	8+50.00	Rt.	Lt.	6.0 ft.	12.0 ft.	Slope Width
8+00.00	8+50.00	Lt.	Rt.	2.0 ft.	1.4 ft.	Agg. Shoulder Width
11+50.00	12+00.00	Rt.	Lt.	2.0 ft.	1.4 ft.	Agg. Shoulder Width
11+50.00	12+00.00	Lt.	Rt.	2.0 ft.	1.6 ft.	Agg. Shoulder Width
11+50.00	12+00.00	Rt.	Lt.	12.0 ft.	6.0 ft.	Slope Width
11+50.00	12+00.00	Lt.	Rt.	12.0 ft.	6.6 ft.	Slope Width

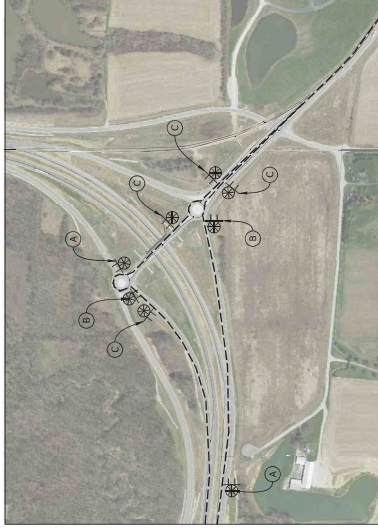
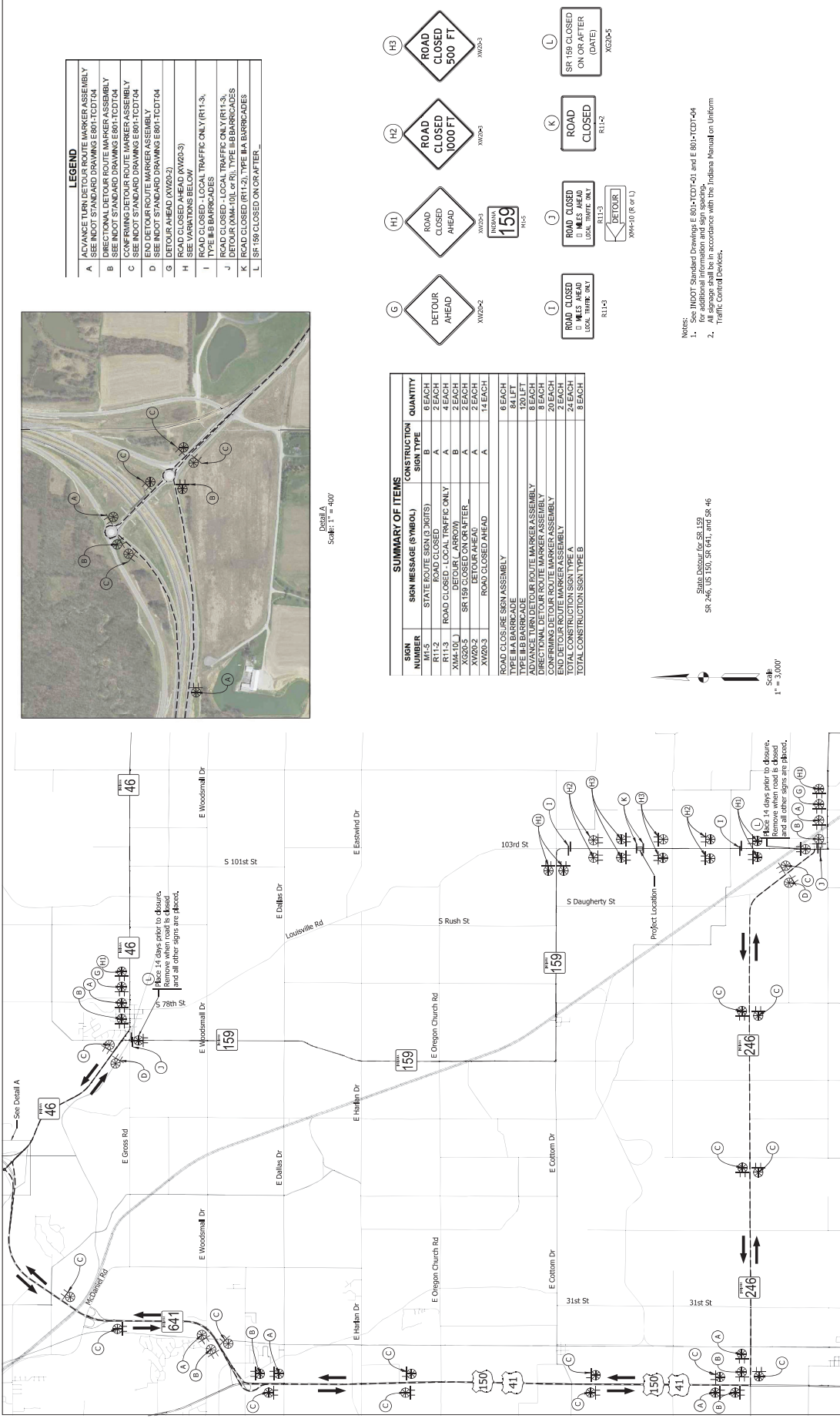
These are approximate values, match back to the existing.

RECOMMENDED FOR APPROVAL	DESIGNER/ENGINEER	DATE	SCALE	BRIDGE FILE
	DAWN EDA	May 2022	AS SHOWN	2002197
DESIGNED: EDA	DESIGNED: EDA	May 2022	INDIANA DEPARTMENT OF TRANSPORTATION	
CHECKED: ASB	CHECKED: ASB	May 2022		
CHECKED: ASB	CHECKED: ASB	May 2022		
TYPICAL CROSS SECTIONS			SHEETS	
			3	of 14
			CONTRACT	PROJECT
			IN-2430	2002197(2)1



Section	Index No.	Owner
23	1	Cathy A. Agrusa
24	2	Jay Gonthier & Michelle D. Wagner JT/RS
24	3	Carter Farms
24	4	Kenny Baker

RECOMMENDED FOR APPROVAL DESIGNER: EDA CHECKED: ASB		DESIGNER: EDA CHECKED: ASB		DATE: May 2022 DATE: May 2022		INDIANA DEPARTMENT OF TRANSPORTATION PLAT NO. 1		SCALE: 1" = 100' BRIDGE FILE DISPOSITION 2002197	
SEC. 23, TOWNSHIP PEIRSON TWP., VIGO COUNTY, IN		SEC. 24, TOWNSHIP PEIRSON TWP., VIGO COUNTY, IN		SHEETS 5 of 14		PROJECT I-75/50		PROJECT 2002197/01	



Detail A  
Scale: 1" = 400'

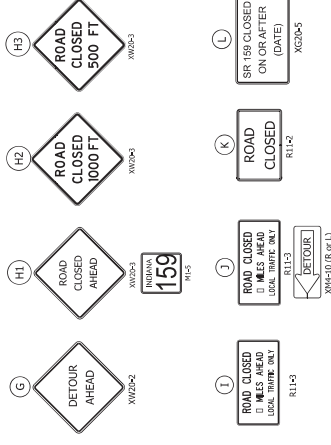
SIGN NUMBER	SIGN MESSAGE (SYMBOL)	CONSTRUCTION SIGN TYPE	QUANTITY
R11-2	STATE ROUTE SHIELD (SR 46)	A	8 EACH
R11-2	ROAD CLOSED	A	2 EACH
R11-3	ROAD CLOSED - LOCAL TRAFFIC ONLY	A	4 EACH
XM4-10L	DETOUR (ARROW)	B	2 EACH
X19A-5	SR 159 CLOSED ON RAMP	A	2 EACH
X19B-5	SR 159 CLOSED ON RAMP	A	2 EACH
XW20-3	ROAD CLOSED AHEAD	A	14 EACH
<b>ROAD CLOSURE SIGN ASSEMBLY</b>			
ROAD CLOSED		B	6 EACH
SR 159 CLOSED ON RAMP		B	6 EACH
TYPE III BARRICADE		C	120 LEFT
ADVANCE TURN DETOUR ROUTE MARKER ASSEMBLY		D	8 EACH
DIRECTIONAL DETOUR ROUTE MARKER ASSEMBLY		E	8 EACH
CONFINING DETOUR ROUTE MARKER ASSEMBLY		F	20 EACH
CONFINING DETOUR ROUTE MARKER ASSEMBLY		G	20 EACH
TOTAL CONSTRUCTION SIGN TYPE A			24 EACH
TOTAL CONSTRUCTION SIGN TYPE B			8 EACH

SR 46, SR 159, SR 471, and SR 46  
 SR 46, SR 159, SR 471, and SR 46

Scale  
1" = 3,000'

**LEGEND**

A	ADVANCE TURN DETOUR ROUTE MARKER ASSEMBLY
B	SEE INDOT STANDARD DRAWING E 801-TCDT-01
C	SEE INDOT STANDARD DRAWING E 801-TCDT-01
D	SEE INDOT STANDARD DRAWING E 801-TCDT-01
E	SEE INDOT STANDARD DRAWING E 801-TCDT-01
F	SEE INDOT STANDARD DRAWING E 801-TCDT-01
G	SEE INDOT STANDARD DRAWING E 801-TCDT-01
H	SEE INDOT STANDARD DRAWING E 801-TCDT-01
I	SEE INDOT STANDARD DRAWING E 801-TCDT-01
J	SEE INDOT STANDARD DRAWING E 801-TCDT-01
K	SEE INDOT STANDARD DRAWING E 801-TCDT-01
L	SEE INDOT STANDARD DRAWING E 801-TCDT-01



Notes:  
 1. See INDOT Standard Drawings E 801-TCDT-01 and E 801-TCDT-04 for additional information and sign spacing.  
 2. Signs shall be placed in accordance with the Indiana Manual on Uniform Traffic Control Devices.

RECOMMENDED FOR APPROVAL		DESIGNER/ENGINEER	DATE
		DAWNA EDA	May 2022
		DAWNA EDA	May 2022
		CHECKED: ASB	May 2022

SCALE	AS NOTED	DISCUSSION	DATE
			2022/12/27

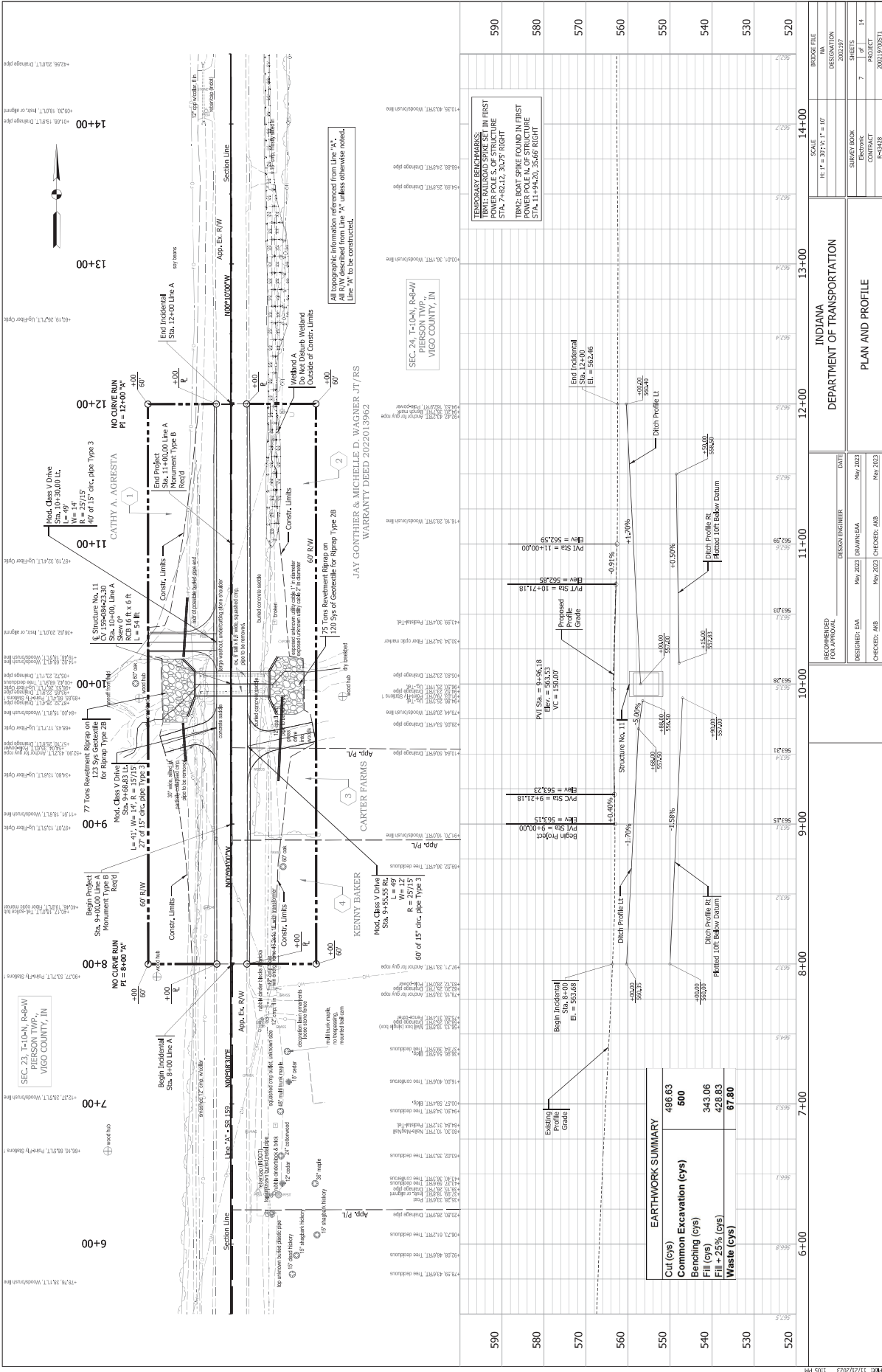
  

BRIDGE FILE	SHEETS
	6 of 14

PROJECT	CONTACT
INDIANA DEPARTMENT OF TRANSPORTATION MAINTENANCE OF TRAFFIC DETOUR	INDOT KCPASO





Cut (cys)	486.83
Common Excavation (cys)	500
Benching (cys)	343.06
Fill (cys)	428.83
Fill + 25% (cys)	67.80
Waste (cys)	

SEC. 23, T-10-N, R-6-W  
 PIERSON TWP.,  
 VIGO COUNTY, IN

SEC. 24, T-10-N, R-6-W  
 PIERSON TWP.,  
 VIGO COUNTY, IN

JAY GONTHER & MICHELLE D. WAGNER JT/RS  
 WARRANTY DEED 2022013962

SEC. 23, T-10-N, R-6-W  
 PIERSON TWP.,  
 VIGO COUNTY, IN

SEC. 24, T-10-N, R-6-W  
 PIERSON TWP.,  
 VIGO COUNTY, IN

All topographic information referenced from Line "A".  
 All R/W described from Line "A", unless otherwise noted.  
 Line "A" to be constructed.

TEMPORARY BENCHMARKS:  
 BM1: RAILROAD SPIKE IN FIRST  
 POWER POLE S. OF STRUCTURE  
 STA. 7+62.47, 34P5 RIGHT  
 BM2: BOAT SPIKE FOUND IN FIRST  
 POWER POLE S. OF STRUCTURE  
 STA. 11+94.20, 35A65 RIGHT

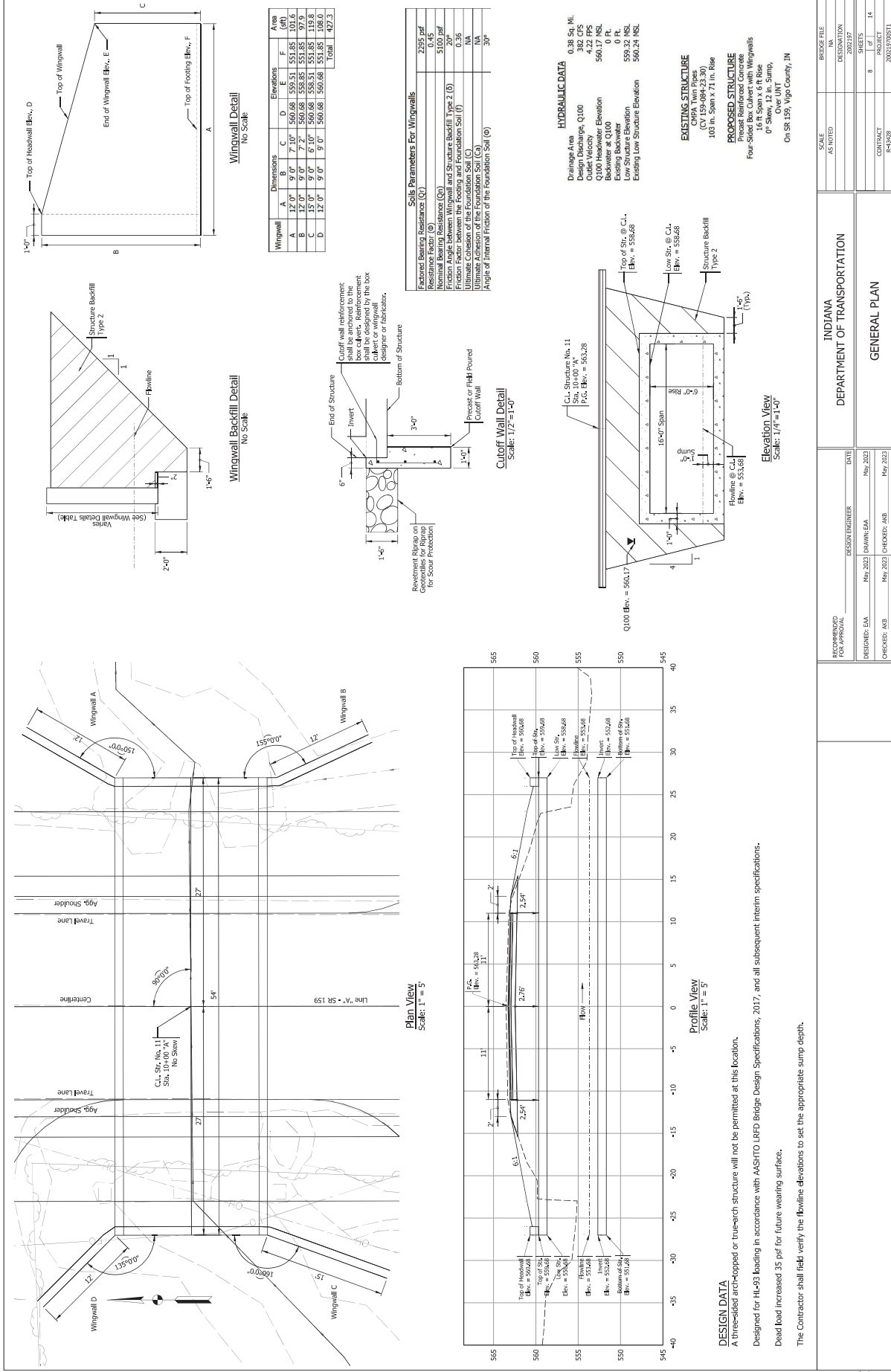
RECOMMENDED FOR APPROVAL  
 DESIGNER: EDA  
 DESIGNED: EDA  
 CHECKED: ASB  
 DATE: May 2023  
 DATE: May 2023  
 CHECKED: ASB

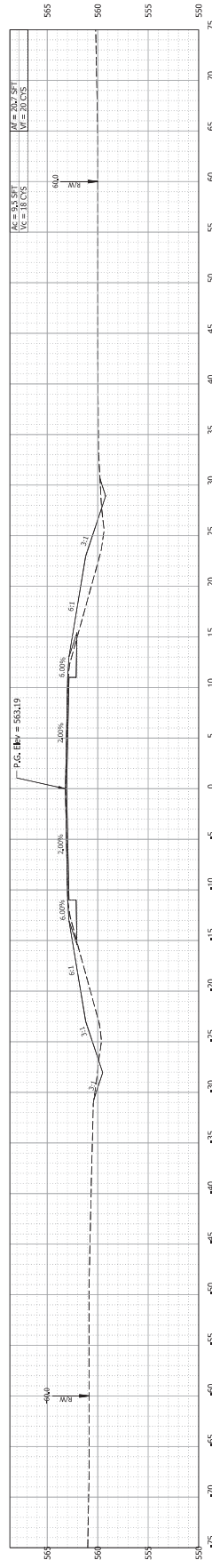
INDIANA  
 DEPARTMENT OF TRANSPORTATION  
 PLAN AND PROFILE

SCALE  
 H: 1" = 30' V: 1" = 10'

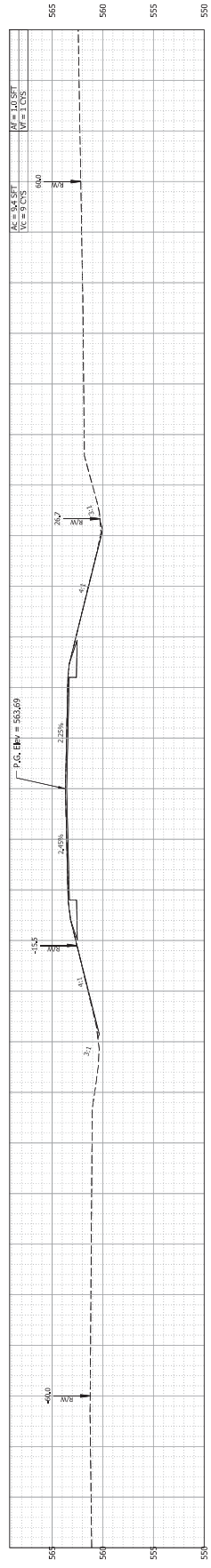
PROJECT  
 SHEETS  
 SHEETS  
 PROJECT  
 SHEETS  
 SHEETS

2023/05/21

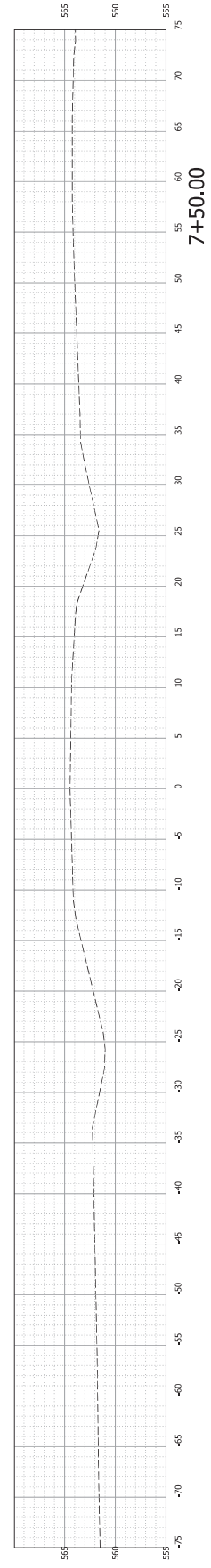




8+50.00

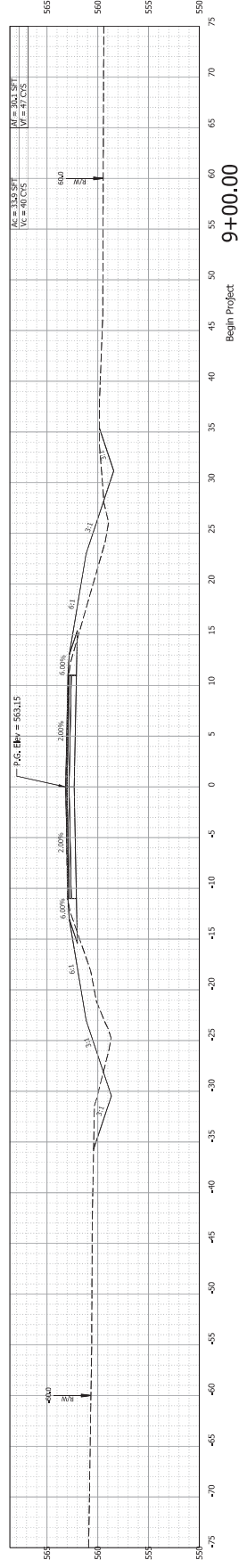
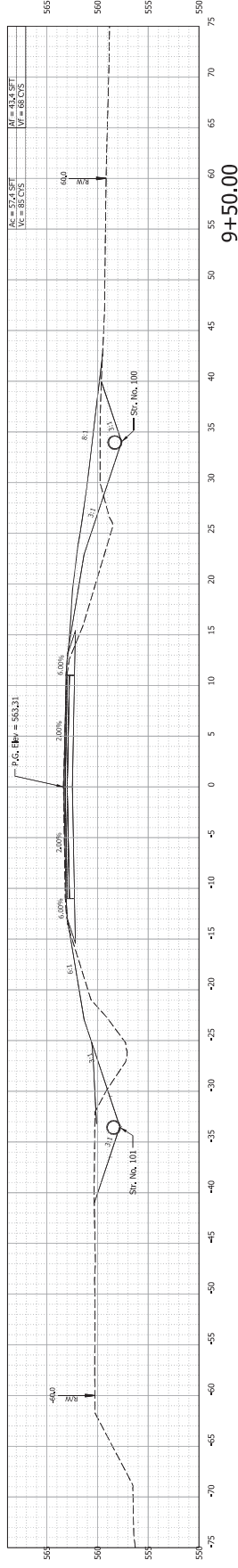
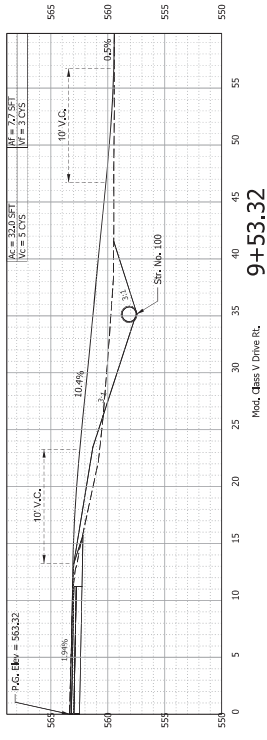


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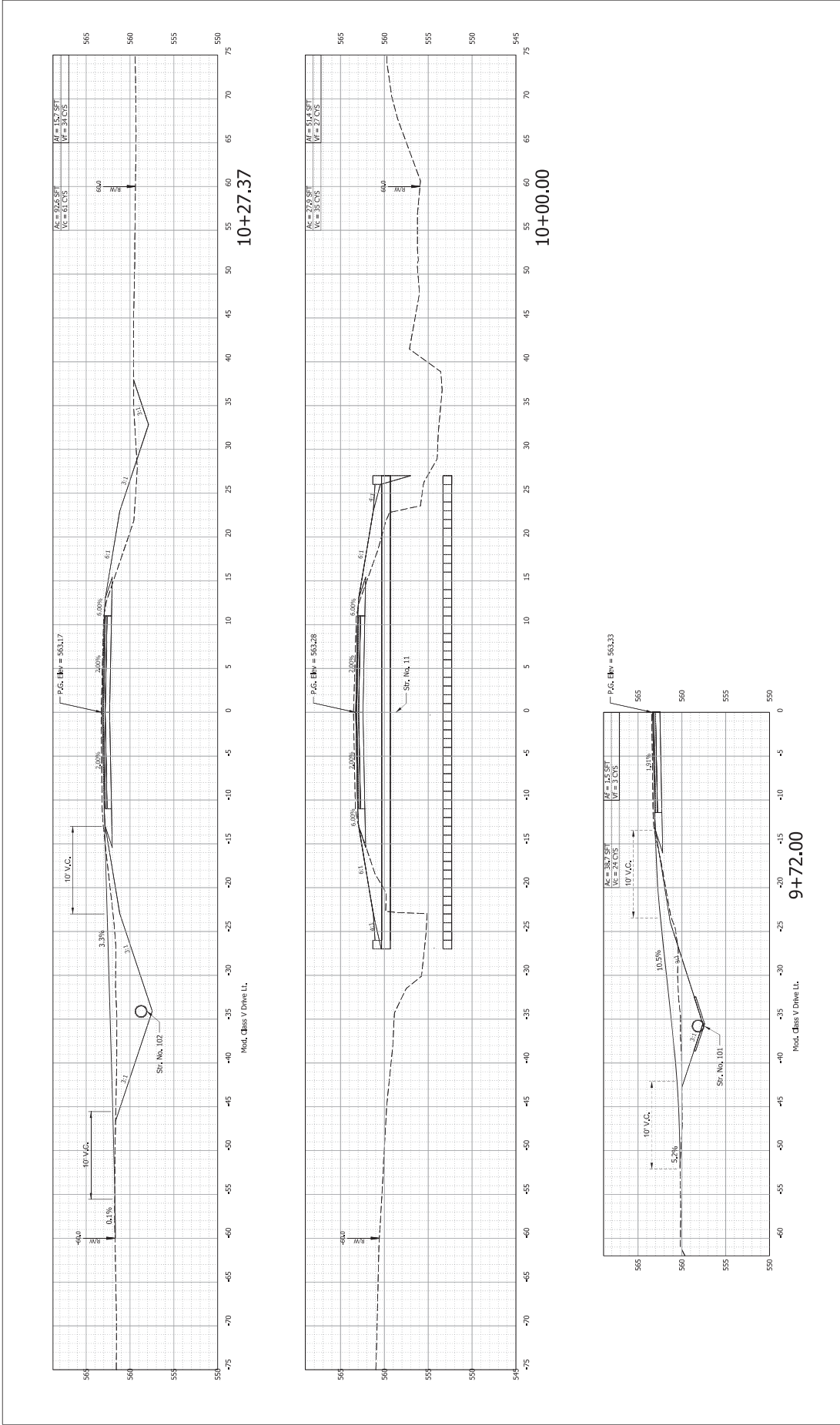


7+50.00

RECOMMENDED FOR APPROVAL DESIGNED: EBA CHECKED: ASB DATE: May 2022 DATE: May 2022	DESIGN ENGINEER INDIANA EBA CHECKED: ASB DATE: May 2022	INDIANA DEPARTMENT OF TRANSPORTATION		BRIDGE FILE SCALE DESIGNATION 2002197
		CROSS SECTIONS SR 159 - LINE 'A'		SURVEY BOOK CONTRACT SHEETS 10 of 14 PROJECT 20021970211

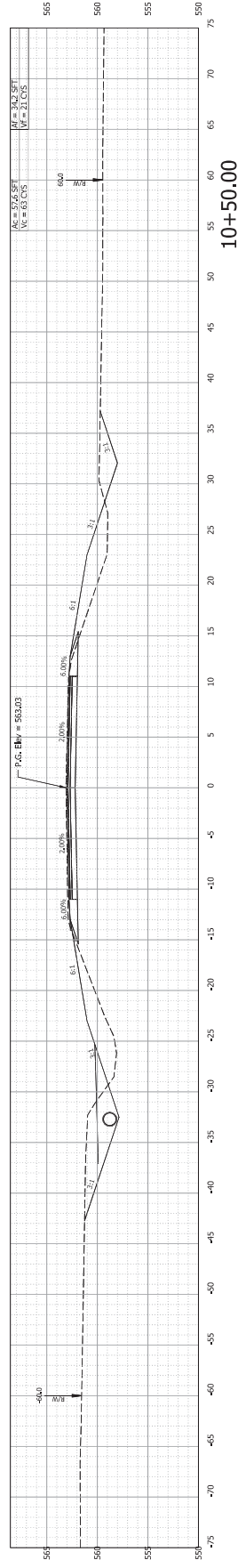
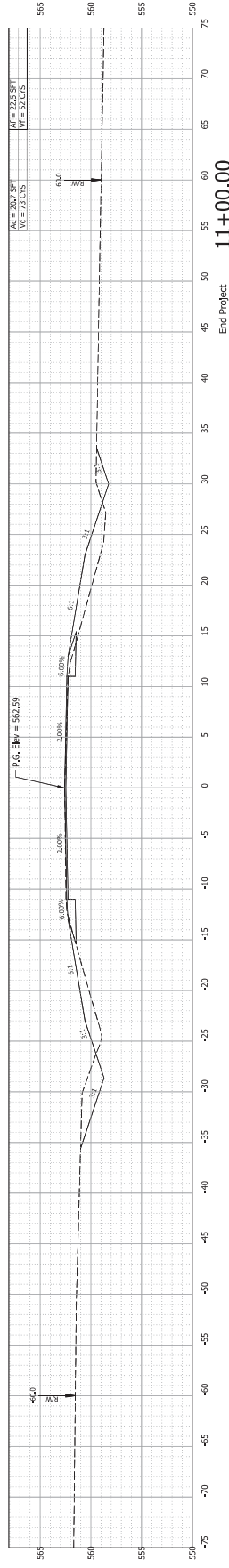
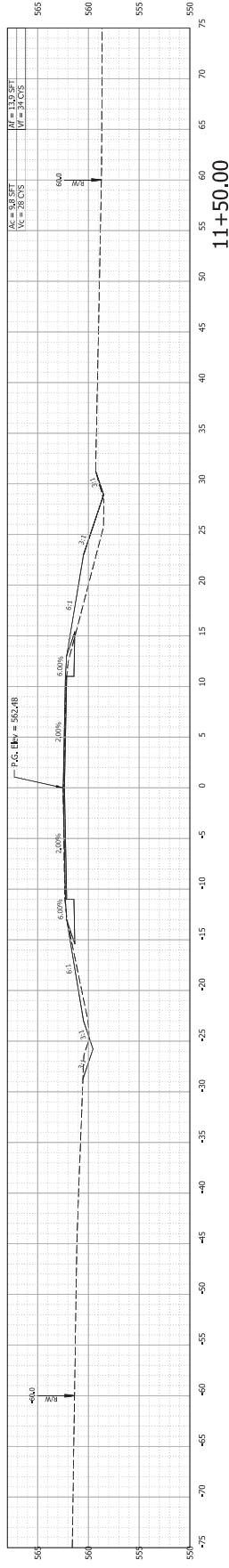


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CHECKED: ASB		May 2023	ASB
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CROSS SECTIONS SR 159 - LINE 'A'			
SCALE	BRIDGE FILE	DESIGNATION	PROJECT
1" = 5'		2023197	SR 159
SURVEY BOOK	CONTRACT	SHEETS	PROJECT
	PC-243	11 of 14	2023197S1



RECOMMENDED FOR APPROVAL	DESIGNER/ENGINEER	DATE	INDIANA DEPARTMENT OF TRANSPORTATION	SCALE 1" = 5'	BRIDGE FILE
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					SHEETS 12 of 14

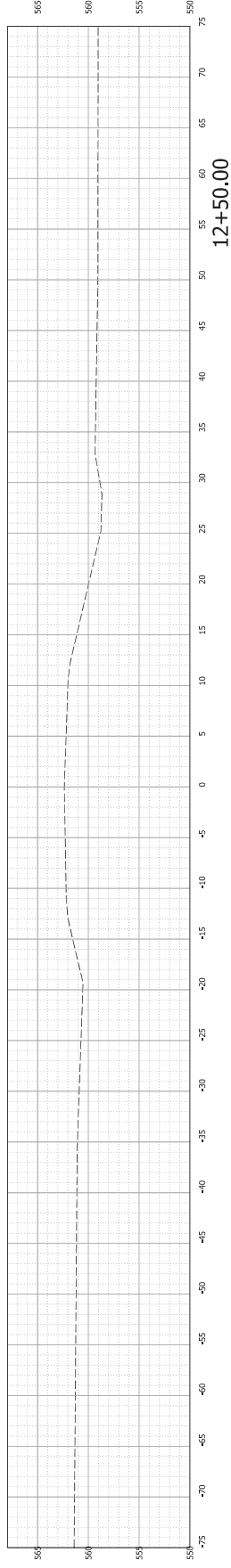
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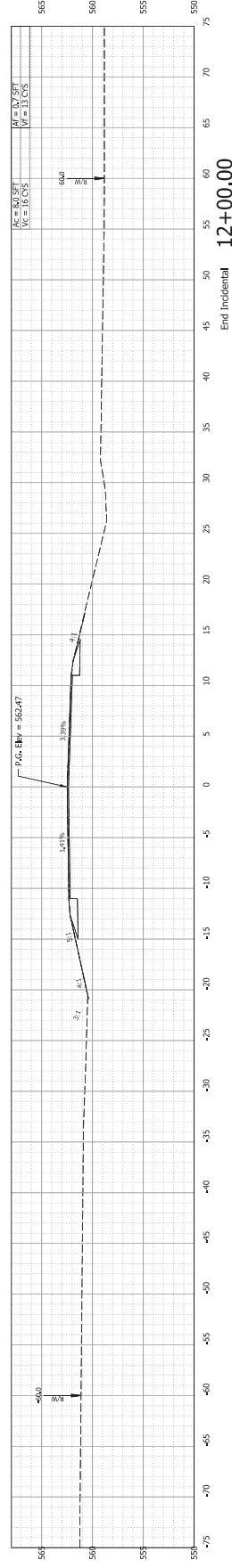
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CHECKED: ASB	May 2022	CHECKED: ASB	May 2022

INDIANA DEPARTMENT OF TRANSPORTATION	
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SCALE: 1" = 5'	BRIDGE FILE: 2002197
SURVEY BOOK: K-12-43	DESIGNATION: 2002197
CONTRACT: K-12-43	
SHEETS: 13 of 14	
PROJECT: K-12-43	
PROJECT: 2002197	



12+50.00



12+00.00

RECOMMENDED FOR APPROVAL		DESIGN ENGINEER	DATE
DESIGNED: EBA	May 2023	JMANN, EBA	May 2023
CHECKED: ASB	May 2023	CHECKED: ASB	May 2023
INDIANA DEPARTMENT OF TRANSPORTATION			
CROSS SECTIONS SR 159 - LINE 'A'			
SCALE	1" = 5'	SURVEY BOOK	14
BRIDGE FILE	2002197	CONTRACT	PC-243
DESIGNATION	2002197	PROJECT	20021970211
SHEETS		14	

**Appendix C: Early Coordination**

Sample INDOT Early Coordination Letter (10/3/2023)..... C-1 – C-3  
IDNR DFW Response (11/2/2023) ..... C-4 – C-6  
NRCS Response (10/16/2023)..... C-7 – C-8  
IGWS Automated Response (10/2/2023) ..... C-9 – C-10  
INDOT 0.5-Mile Bat Review Response (10/2/2023) ..... C-11  
USFWS IPaC List of Threatened and Endangered Species (10/2/2023)..... C-12 – C-24  
USFWS IPaC NLAA Concurrence Verification Letter (11/17/2023)..... C-25 – C-39  
Vigo County ADA Coordinator Response (12/4/2023) ..... C-40





# INDIANA DEPARTMENT OF TRANSPORTATION

Crawfordsville District  
41 W 300 N  
Crawfordsville, IN 47933

PHONE: (765) 361-5200

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

October 3, 2023

«Prefix» «Contact\_First» «Contact\_Last\_or\_office»  
«Title\_or\_Office»  
«Agency»  
«Address\_1»  
«Address\_2»  
«City», «State» «Zip»

**Re: Des. No.: 2002197 Early Coordination**  
**SR 159 Small Structure Project at UNT to Splunge Creek, 4.15 Miles North of SR 246**  
**Vigo County**

Dear «Prefix» «Contact\_Last\_or\_office»,

The Indiana Department of Transportation (INDOT) intends to proceed with a highway project, which is funded in part by the Federal Highway Administration (FHWA). This letter is part of the early coordination phase of the environmental review process. We are requesting comments from your area of expertise regarding any possible environmental effects associated with this project. Please use the above designation number and description in your reply. We will incorporate your comments into a study of the project's environmental impacts.

The Indiana Department of Transportation (INDOT) has programmed a federally funded project, Des. No. 2002197, in order to address the deteriorated condition of a small structure located on SR 159 in Vigo County, 4.15 miles north of SR 246 (RP 23+38). The small structure, CV 159-084-23.30, carries SR 159 over an unnamed tributary (UNT) to Splunge Creek. SR 159 over UNT to Splunge Creek is located in the southeast corner of Vigo County in Pierson Civil Township, approximately 13 miles southeast of Terre Haute and 6.7 miles northeast of Farmersburg, the nearest incorporated area. It is also located and in the USGS 7.5-Minute Lewis Quadrangle, and per the Public Land Survey System, it is in Sections 23 and 24 of Township 10 North, Range 8 West.

*Draft Purpose and Need:*

The project is needed due to the poor condition of the culvert, which is a set of twin corrugated metal pipes. An 8-foot-long segment of the culvert floor has rusted out along the west end of the south pipe, and rust holes are scattered throughout the bottoms of both pipes. The most recent culvert inspection report of October 6, 2022, issued a culvert rating of 4 out of 9 (poor condition). The purpose of this project is to maintain a structurally sound crossing of SR 159 over UNT to Splunge Creek and increase the condition rating to at least 7 (good condition).

*Existing Conditions:*

The project is situated in a rural area where land use is primarily for agriculture and scattered residential properties. The culvert is located along the headwater segment of UNT to Splunge Creek, which is surrounded by a wooded riparian corridor where the stream is approximately 14 feet wide. The tributary outfalls into Splunge Creek approximately three miles downstream of the project area, where it almost immediately outfalls into Eel River.

This segment of SR 159 is a two-lane road with 11-foot lanes, no paved shoulder, and narrow gravel shoulders. The roadway is straight and mostly flat, and no guardrail is present within the project area. V-shaped vegetated roadside ditches are present to the south of the structure, but north of the structure, ditches are inconsistent, poorly defined, and vegetated. Overhead utilities are located in the northeast and southwest quadrants, crossing SR 159 at the location of the structure. Three off-road access areas are located in three of the quadrants near the culvert. Land within 30 feet of the

roadway centerline is considered to be in a transportation use due to the roadside ditches, culverts, and utilities; however, land records consider the right-of-way to be at the edge of pavement on both sides of the road.

The existing structure, CV 159-084-23.30, consists of twin corrugated metal pipe arches (CMPAs), each measuring approximately 8.5 feet (103 inches) wide, 6 feet (71 inches) tall, and 47 feet long. The culvert is at a 0° skew to the road and sits under approximately three feet of fill. In addition to corrosion along the bottoms of the pipes, the east anchor headwall has deteriorated and become detached. The channel is rated in fair condition (5) due to erosion on the east bank on both sides of the culvert. Log debris has also built up on the upstream side to the west, restricting flow and increasing erosion at the inlet. While scattered pieces of riprap are present near the inlet and outlet of the culvert, it is mostly washed away or covered in sediment. The channel is scoured at both ends of the culvert.

Preferred Alternative:

The preferred alternative to address the deteriorated culvert is to replace it with a new culvert. The proposed plans will replace it with a 54-foot long, precast, reinforced concrete, four-sided box culvert with a 16-foot span and a 6-foot rise. The culvert will be installed at a 0° skew and will be sumped into the channel one foot, creating a vertical opening of five feet. The culvert will be constructed with 12 to 15-foot wingwalls in all four quadrants. Approximately 0.04 acre of riprap will be installed at the inlet and outlet, extending out between the wingwalls approximately 22 to 25 feet. The areas behind the wingwalls will be backfilled, and the ditches will be realigned around them.

The culvert will be replaced via an open road cut. Afterwards, 200 feet of roadway above the culvert (100 feet north and 100 feet south of the culvert) will be reconstructed to full depth. The remaining roadway approaches out to 200 feet on either side of the culvert will be milled 2 inches and resurfaced to tie into the new pavement. Two-foot gravel shoulder will be reconstructed, and road embankments and ditches will be regraded. The project has a total length of 400 feet.

To complete the project, the acquisition of approximately 0.90 acre of right-of-way is required, based on the existing right-of-way limits at the edge of pavement. Proposed right-of-way extends 200 feet from both sides of the culvert north and south along SR 159 and 60 feet east and west from the roadway centerline. The total proposed right-of-way footprint is 400 feet along the roadway and 120 feet wide. Approximately 0.47 acre of ground disturbance will occur within the construction limits. From the roadway centerline, maximum construction limits near the culvert extend out approximately 50 feet on each side of the road and then taper down to approximately 25 to 30 feet at the termini of the project limits.

A road closure is planned during construction. Traffic will be maintained by a detour along SR 246, US 150, SR 641, and SR 46. The total detour length adds approximately 21.0 miles to the distance travelled compared to driving this segment of SR 159. Construction is expected to start in the fall of 2024 and last approximately three to four months.

Approximately 110 feet of UNT to Splunge Creek will be impacted by the culvert replacement and installation of riprap. Additional impacts may be required if dewatering equipment is needed, such as cofferdams or pump-arounds. One palustrine emergent wetland is located partly within the project limits, which is contained in the poorly formed roadside ditch in the northeast quadrant. It measured 0.0753 acre and is approximately 80 feet from the culvert at its nearest point. Wetland impacts incurred by the project have not yet been determined but are expected to be less than 0.01 acre. Approximately 0.15 to 0.2 acre of tree clearing, based on canopy, is expected.

The INDOT Crawfordsville District Environmental Section will perform an investigation for surface water resources and a biological assessment to identify any ecological resources that may be present. The project is anticipated to qualify for the Range-wide Programmatic Agreement for the Indiana bat and northern long-eared bat by completing the Information for Planning and Consultation (IPaC) process, and no other federally listed endangered or threatened species were identified in or near the project area. This project will be assessed for applicability of the Minor Projects Programmatic Agreement, pending review by the INDOT Cultural Resources Office.

Please provide your response within thirty (30) calendar days from the date of this letter. 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 Brock Ervin, INDOT Environmental Manager, by the means listed below, or Jessica Conkright, INDOT Project Manager, [jconkright@indot.in.gov](mailto:jconkright@indot.in.gov), 765-361-5243. Thank you in advance for your input.