

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

Road No./County:	State Road (SR) 225 / Tippecanoe County
Designation Number(s):	2002077
Project Description/Termini:	Bridge Rehabilitation on SR 225 over Wabash River, 0.60 mile north of Old SR 25. The project area extends from approximately 700.0 feet to the south and 650.0 feet north of the centerline of the proposed structure

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

Approval

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

FHWA Signature and Date	

Release for Public Involvement

N/A	ADWP	February 2, 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: _____

Name and Organization of CE/EA Preparer: _____

Raquel Walker – Beam, Longest and Neff (BLN)

Indiana Department of Transportation

County Tippecanoe Route SR 225 Des. No. 2002077

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.**

	Yes	No
Does the project have a historic bridge processed under the Historic Bridges PA*?	<input checked="" type="checkbox"/>	<input 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 August 20, 2021, notifying them about the project and that individuals responsible for land surveying and field activities may be seen in the area. A sample copy of the Notice of Entry letter is included in Appendix G, Page 1.

Section 106

To meet the public involvement requirements of Section 106, a legal notice of the Federal Highway Administration's (FHWA) finding of "No Historic Properties Affected" was published in the *Journal and Courier* on April 21, 2023, offering the public an opportunity to submit comments pursuant to 36 CFR 800.2(d), 800.3(e), and 800.6(a)(4), and the public comment period closed 30 days later, on May 21, 2023. The public notice's text and the publication affidavit appear in Appendix D, Pages 64-65. No comments were received in response to the public notice.

Historic Bridge

Pursuant to the Historic Bridge Programmatic Agreement (PA), a public hearing is required. 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 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 225

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

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

This is page 2 of 26 Project name: SR 225 over Wabash River, Bridge No.225-79-04016 G Date: January 29, 2024

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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: The project need is evidenced by the deteriorated condition of the existing bridge (225-79-04016 G /National Bridge Inventory [NBI]: 029150) conveying SR 225 over Wabash River. The most recent bridge inspection report dated May 23, 2022, indicates there are structural deficiencies that need to be addressed including cracking, leaching, and spalling with up to 17% delamination per span are exhibited on the existing bridge. There is widespread deterioration of truss members and gusset plates due to existing curbs not being able to protect the truss members from roadway drainage runoff. In addition, many truss and superstructure members do not have a load capacity meeting the Indiana Design Manual (IDM) requirements (<HS-15). Based on the amount of traffic over the bridge and the functional classification of the roadway (rural collector), the required live load capacity is an HS-15 loading. "HS" indicates multiple loaded axle vehicles, such as semi-trailer trucks, and the "15" is the gross weight in tons of the vehicle. Furthermore, Abutments No. 1 and No. 5 have cracking and weathering, which, if it continues, could jeopardize their structural integrity (Appendix I, Page 33). The bridge was closed in May 2022 due to cracks in two vertical truss members and will remain closed until the deterioration is addressed. Since the bridge had to be closed, the current load capacity is 0.

Purpose: The purpose of this project is to improve portions of the bridge as required to increase the load capacity of the bridge to meet an HS-15 loading and to protect the members that are at risk of future deterioration. The goals of the project will be met by addressing the bridge deck cracking, leaching and spalling, protecting the truss elements from roadway runoff and other environmental elements, improving superstructure members to provide and HS-15 load capacity for the bridge, and addressing the abutment deterioration from worsening which could compromise the structural integrity of the bridge. Improvements would allow the bridge to re-open.

PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Tippecanoe

Municipality: West Lafayette

Limits of Proposed Work: 700.0 feet to the south and 650.0 feet to the north of the centerline of the bridge

Total Work Length: 0.256 Mile(s)

Total Work Area: 0.76 Acre(s)

Is an Interstate Access Document (IAD)¹ required?

If yes, when did the FHWA provide a Determination of Engineering and Operational Acceptability?

Yes ¹	No
<input type="checkbox"/>	<input type="checkbox"/>
Date: <input type="text"/>	

¹ 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.

The Indiana Department of Transportation (INDOT) and the FHWA intend to proceed with a bridge rehabilitation on SR 225 over Wabash River.

Location:

The project is on SR 225, approximately 0.60 mile north of Old SR 25, over Wabash River in West Lafayette, Tippecanoe and Washington Townships, Tippecanoe County, Indiana. Specifically, the project is in Section 25 and Brummett's Reserve Section 6, Township 24 North, Range 4 West, as shown on the Lafayette East 7.5 Minute U.S. Geological Survey Topographic Map (Appendix B, Page 2).

Existing Conditions:

Bridge No. 225-79-04016 G (NBI: 029150), also known as the Jewettsport Ford Bridge and State Highway Bridge No. 4016, is a four-span, steel, Pratt truss conveying SR 225 over the Wabash River. This bridge, constructed in 1912, underwent multiple repairs between 1954 and 2014. The existing bridge is approximately 646 feet long, with a clear roadway width of approximately 14.4 feet (single-lane) and an out-to-out deck width of approximately 15.9 feet (Appendix I, Pages 27-28). This structure has been identified as a "Select" bridge eligible for inclusion in the National Register of Historic Places (NRHP) under Criterion C for its engineering

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significance in the *Indiana Historic Bridge Inventory Volume 2: Listing of Historic and Non-Historic Bridges* (2009). The existing bridge railing was installed in 1988 and has no historical significance. The bridge is experiencing cracking, leaching, and spalling with up to 17% delamination per span. There is also widespread deterioration of truss members and gusset plates due to existing curbs not able to protect the truss members from roadway drainage runoff. In addition, a substantial number of the truss and superstructure members do not have a load capacity meeting the IDM requirements (Appendix I, Pages 27-28). Traffic signals are at each end of the bridge to regulate traffic and will remain in place. Due to structural damage, the bridge has been closed to through traffic since May 2022. The existing detour utilizes Old SR 25, I-65, and North River Road/SR 43.

SR 225 is a two-way, north-south roadway, classified as a Rural Major Collector, and is not listed on the National Truck Network. The roadway consists of two 10-foot-wide travel lanes, one in each direction, with two-foot-wide aggregate shoulders that taper into a single 14.4-foot-wide lane on the bridge. The posted speed limit is 10 miles per hour (mph) for the bridge and 50 mph for the road. The existing roadway alignment will be matched as closely as possible.

Surrounding land use is primarily wooded and agricultural in a rural setting. There is a residential grouping and driveway in the northwest corner of the project area. Prophetstown State Park, a Land and Water Conservation Fund (LWCF) property, is adjacent to the northwest portion of the project area. In addition, the bridge crosses over a privately owned island in the Wabash River.

Preferred Alternative:

INDOT, with partial funding from FHWA, intends to proceed with a bridge rehabilitation project on SR 225 over Wabash River. The Alternative Analysis for this project evaluated two alternatives, Alternatives A (No-Build) and Alternative B.1 (Rehabilitation for Continued Vehicular Use), before finding a feasible and prudent alternative that meets the project's purpose and need. A description of the preferred alternative, as noted in the Alternative Analysis report (Appendix D, Pages 58-60), can be found below.

Alternative B.1 Rehabilitation of the Existing Bridge for Continued Vehicular Use

The preferred alternative consists of rehabilitating the existing Select bridge for continued vehicular use, meeting the Secretary of the Interior's Standards for Rehabilitation. This alternative includes rehabilitating the existing bridge to current INDOT and FHWA criteria for structural capacity and safety features. Although the existing bridge is one-lane, which is considered sub-standard, it is acceptable to allow it to remain a one-lane bridge since SR 225 experiences low-to-moderate traffic volumes. The existing traffic signals will remain in place to control traffic. In addition, it is not feasible to widen the existing historic bridge, and it has acceptable performance in its current configuration. The scope of work for the rehabilitation will include:

- Remove the existing concrete deck, curbs, approach slabs, railing, and portions of mudwalls
- Replace or repair truss gusset plates, bearings, verticals, diagonals, low chords, low chord splices, bottom lateral connections and bracing, stringers, and floor beams
- Reset truss bearings
- Clean and paint truss, floor beams, and stringers
- Replace or patch portions of abutments and wings
- Construct deck, rails, portions of mudwalls, joints, portions of bridge seats, and approach slabs
- Transition milling to tie into the bridge at each end and surface sealing the approach roadways
- Place revetment riprap on geotextiles around the wingwalls
- Color-match the new structural steel to the existing floor system and truss
- Place Class 1 Riprap around Piers 2 and 4
- Construct riprap drainage turnouts at all four corners of the bridge
- Construct wildlife crossings composed of compacted No. 53 stone against both abutments
- Replace the existing railing with PF-1 railing, resulting in a reduction of the shoulders from 1.71 feet to 1.5 feet and the clear roadway width from 14.4 feet to 14 feet

Please refer to Appendix B, Pages 20-25, for plan sheets illustrating the above scope of work.

This alternative will meet the project's purpose and need by correcting the deteriorated portions of the bridge and providing the improvements necessary to increase the load capacity to an HS-15 or greater to meet IDM standards. The rehabilitation activities will improve the overall condition rating to a seven (good) or better and preserve the existing structure's historical integrity. The estimated cost of the rehabilitation included in the Alternatives Analysis is \$4,570,000 (Appendix D, Page 60), and the estimated cost of construction in the Indiana State Transportation Improvement Program (STIP) is \$4,993,815 (Appendix H, Page 1). The cost difference between the Alternatives Analysis and the STIP is due to fluctuating construction costs, materials, and labor.

The proposed maintenance of traffic (MOT) plan for the project will utilize the existing road closure but include additional detour signage. Please refer to this document's *Maintenance of Traffic* section for additional details.

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Logical Termini/Independent Utility:

The project area extends approximately 700.0 feet south and 650.0 feet north of the centerline of the bridge for a total work length of approximately 1,350 feet. The logical termini were developed to minimize impacts on the surrounding environment while including limits necessary to address the project need. Impacts have been minimized to the greatest extent practicable in order to complete the purpose and need of the project. The project has independent utility as the completion will not dictate the outcome of any other projects in the surrounding area and is not dependent on any other planned projects.

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.

Alternative A: No-Build

The No-Build/Do-Nothing alternative was considered for the project. This alternative means no federal funds would be expended, and no action would occur. The No-Build/Do-Nothing alternative would not address the purpose of the project, which is to correct the deteriorated portions of the bridge and provide improvements necessary to re-open the bridge and increase the load capacity to meet IDM standards and prolong the life of the bridge while preserving its historical aspects. If the No-Build/Do-Nothing alternative is selected, the existing bridge would remain closed and unusable for motorists. This alternative does not meet the project's purpose and need; therefore, it is not feasible or prudent.

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):

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

ROADWAY CHARACTER:

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

Name of Roadway	<u>SR 225</u>			
Functional Classification:	<u>Rural Major Collector</u>			
Current ADT:	<u>0</u>	VPD (2022)	Design Year ADT:	<u>1,206</u>
				VPD (2042)
Design Hour Volume (DHV):	<u>132</u>	Truck Percentage (%)	<u>19%</u>	
Designed Speed (mph):	<u>50</u>	Legal Speed (mph):	<u>50</u>	

	Existing		Proposed	
Number of Lanes:	2		2	
Type of Lanes:	10-foot travel		10-foot travel	
Pavement Width:	24	ft.	24	ft.
Shoulder Width:	2	ft.	2	ft.
Median Width:	n/a	ft.	n/a	ft.
Sidewalk Width:	n/a	ft.	n/a	ft.

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

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BRIDGES AND/OR SMALL STRUCTURE(S):

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

Structure/NBI Number(s): Bridge No. 225-79-04016 G /NBI:029150 Sufficiency Rating: 5.5, Bridge Inspection Report (Appendix I, Page 8).
(Rating, Source of Information)

	Existing		Proposed	
Bridge/Structure Type:	Steel Pratt Thru Truss		Steel Pratt Thru Truss	
Number of Spans:	4		4	
Weight Restrictions:	12	ton	15	ton
Height Restrictions:	15.92	ft.	15.92	ft.
Curb to Curb Width:	14.4	ft.	14	ft.
Outside to Outside Width:	15.9	ft.	15.9	ft.
Shoulder Width:	1.71	ft.	1.5	ft.

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

The project involves the rehabilitation of Bridge No. 225-79-04016 G (NBI: 029150), a four-span, steel, Pratt truss bridge constructed in 1912 that has undergone multiple repairs between 1954 and 2014. The existing bridge is approximately 626 feet long, with a clear roadway width of approximately 14.4 feet (single-lane) and an out-to-out deck width of approximately 15.9 feet. This structure has been identified as a "Select" bridge eligible for inclusion in the NRHP under Criterion C for its engineering significance. The scope of work for the rehabilitation will include removing and repairing the bottom lateral connections and bracing where feasible, removing the existing concrete deck, curbs, approach slabs, and portions of mudwalls, replacing or repairing the truss gusset plates, bearings, verticals, diagonals, low chords, low chord splices, stringers, and floor beams, and resetting the truss bearings. The new structural steel will be color-matched to the existing floor system and truss. No other bridges, small structures, or pipes are present within the project area.

MAINTENANCE OF TRAFFIC (MOT) DURING CONSTRUCTION:

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

The MOT for the project requires a full road closure with a detour utilizing Old SR 25, I-65, and North River Road/SR 43. This detour adds four miles for motorists and is already in place since the May 2022 bridge closure to thru traffic due to structural damage (Appendix B, Page 13). The project is anticipated to be completed in Fall 2026.

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

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ESTIMATED PROJECT COST AND SCHEDULE:

Engineering: \$ 500,000 (2022*) Right-of-Way: \$ 40,000 (2024) Construction: \$ 4,994,000 (2025)
 *Engineering costs were included in the previous STIP under the year 2022.

Anticipated Start Date of Construction: Summer 2024

*If necessary, the INDOT Project Manager will ensure an administrative modification to the STIP will occur prior to the Ready-for-Contract (RFC) date.

RIGHT OF WAY:

Land Use Impacts	Amount (acres)	
	Permanent	Temporary
Residential	N/A	0.11
Commercial	N/A	N/A
Agricultural	N/A	N/A
Forest	N/A	0.12
Wetlands	N/A	N/A
Other:	N/A	N/A
Other:	N/A	N/A
TOTAL	0.0	0.23

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

The existing right-of-way (ROW) width varies from approximately 45.0 feet to 75.0 feet from the centerline of the roadway. The current land use of the existing ROW is wooded, agricultural, and residential.

This project will not need permanent ROW but will require approximately 0.23 acre of temporary ROW for construction access to the sides of the bridge. Approximately 0.11 acre will be needed from a residential parcel in the northeast and 0.03 acre from a wooded parcel southwest of the bridge. In addition, approximately 0.09 acre of temporary ROW will be obtained from a wooded parcel in the northwest that is publicly owned by the Indiana Department of Natural Resources (IDNR), Division of State Parks. This parcel is not used for public recreation.

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

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

SECTION A - EARLY COORDINATION:

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

Early Coordination Letters were sent on July 11, 2022, and May 30, 2023 (Appendix C, Pages 1-3).

Agency	Date Sent	Response Received	Appendix
FHWA	July 11, 2022	No Response	-
INDOT, Crawfordsville District	July 11, 2022	No Response	-
Natural Resources Conservation Service (NRCS)	July 11, 2022	July 12, 2022	C4 - C5
Indiana Geological and Water Survey (IGWS) - Electronic	July 11, 2022	July 14, 2022	C6 - C8

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Indiana Department of Natural Resources, Division of Fish and Wildlife (IDNR, DFW)	July 11, 2022	August 10, 2022 & June 23, 2023	C14 - C17 & C60 - C61
U.S. Coast Guard, Eighth District	July 11, 2022	No Response	-
U.S. Army Corps of Engineers (USACE)	July 11, 2022	No Response	-
National Park Service	July 11, 2022	No Response	-
U.S. Department of Housing and Urban Development	July 11, 2022	August 16, 2022	-
Tippecanoe County Emergency Management	July 11, 2022	No Response	-
Tippecanoe County Surveyor	July 11, 2022	No Response	-
Tippecanoe County Commissioners	July 11, 2022	No Response	-
Tippecanoe County Highway Department	July 11, 2022	No Response	-
Area Plan Commission of Tippecanoe County (APC)	July 11, 2022	July 28, 2022	C12 - C13
Indiana Gas Company Inc.	July 11, 2022	No Response	-
Prophetstown State Park	July 11, 2022	No Response	-
CenterPoint Energy	July 14, 2022	July 26, 2022	C9 - C11
IDNR- Division of State Parks	May 30, 2023	May 30, 2023	C18 - C19
U.S. Fish & Wildlife Service (USFWS)	June 12, 2023	June 16, 2023	C20 - C25

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

X
X
X

Impacts

Yes	No
X	
X	
X	

Total stream(s) in project area: 130 Linear feet Total impacted stream(s): 65.5 Linear feet

Stream Name	Classification	Total Size in Project Area (linear feet)	Impacted linear feet	Comments (i.e., location, flow direction, likely Water of the US, appendix reference)
Wabash River	Perennial	130	62	Wabash River flows northeast to southwest through the project area under SR 225. The Wabash River is likely considered a jurisdictional Waters of the U.S. (Appendix F, Pages 2-3).

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

Based on the desktop review, the aerial map of the project area (Appendix B, Page 3), and the Red Flag Investigation (RFI) report (Appendix E, Pages 1-9), there are 14 streams, rivers, watercourse, or other jurisdictional features within the 0.5-mile search radius. There are three streams, rivers, watercourses, or other jurisdictional features within or adjacent to the project area. That number was reduced to one during the site visit on August 17, 2022, by BLN.

A *Waters of the U.S. Determination/Wetland Delineation Report* was approved by the INDOT Ecology and Waterway Permitting Office on February 10, 2023. Please refer to Appendix F, Pages 1-18 for the *Waters of the U.S. Determination/Wetland Delineation*

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Report. It was determined that one likely jurisdictional waterway, Wabash River, is within the project area. USACE makes all final determinations regarding jurisdiction.

Wabash River

Wabash River flows northeast to southwest through the project area under SR 225 and is classified as a solid (perennial) blue-line stream. The ordinary high-water mark (OHWM) was obtained using GIS due to the large width of the stream. Wabash River exhibits an upstream OHWM of 580 feet wide and 14.32 feet deep. The river is rated as average quality based on its ability to support aquatic life, having a wide riparian buffer, the presence of riffles, and overhead cover along the banks of the river. The main substrate present in the stream is cobble and silt. Wabash River is a traditionally navigable waterway (TNW); therefore, it is considered a Waters of the U.S.

Approximately 62 linear feet and 0.097 acre of permanent impacts to Wabash River will be necessary to place Class 1 riprap for scour protection around Abutment 1, and Piers 2 and 4. No temporary impacts will occur as the riprap will be placed via barge. Since impacts to Wabash River are not anticipated to exceed 300 linear feet, the mitigation threshold for stream impacts, mitigation will likely not be required but will be determined during permitting. Waterway permits will be needed due to stream impacts. Refer to the *Permits* section of this CE document for more details.

Wabash River is a navigable waterway listed on the Indiana Department of Natural Resources (IDNR) Listing of Outstanding Rivers and Streams. Wabash River is not listed as a Federal, Wild, and Scenic River; State Natural, Scenic, and Recreational River; or on the National Rivers Inventory, nor are there any present in or adjacent to the project area.

Wabash River is listed for Impaired Biotic Communities (IBC), nutrient impairment, and E. coli. Concerning IBC and nutrient impairment, Best Management Practices (BMPs) will be used to avoid further degradation to the stream. Regarding E. coli, workers who are working in or near water with E. coli should take care to wear appropriate Personal Protective Equipment (PPE), observe proper hygiene procedures, including regular hand washing, and limit personal exposure. Exposure to Polychlorinated Biphenyls (PCBs) in fish tissue is considered low, assuming workers are not eating biota surrounding or associated with the water body. This is included as a firm commitment in the *Environmental Commitments* section of this CE document.

The IDNR, DFW responded on August 10, 2022, with several recommendations to avoid or minimize impacts to fish, wildlife, and botanical resources. Their response indicated there are mussel species known within the segment of the Wabash River where the project is occurring and recommended additional coordination with their agency if any work in the stream channel is proposed, especially within causeways. No causeways will be placed within the stream channel (Appendix C, Pages 14-17). Since riprap will be placed around the piers, additional coordination occurred with the IDNR-DFW on June 23, 2023. They stated as long as riprap is placed by barge immediately adjacent to the piers, and the barge is able to access the work areas without dragging on or otherwise scouring the streambed, impacts to mussels should be minimal. They added the use of a barge is a good alternative to building a causeway or using cofferdams (Appendix C, Pages 60-61). This has been added as a firm commitment in the *Environmental Commitments* section of this CE document.

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

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

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

Based on the desktop review, the aerial map of the project area (Appendix B, Page 3), and the RFI report (Appendix E, Pages 1-9), there is one open water feature within the 0.5-mile search radius. There are no open water features within or adjacent to the project area, which was confirmed during the site visit on August 17, 2022, by BLN. Therefore, no impacts are expected.

A *Waters of the U.S. Determination/Wetland Delineation Report* was approved by the INDOT Ecology and Waterway Permitting Office on February 10, 2023. Please refer to Appendix F, Pages 1-18 for the *Waters of the U.S. Determination/Wetland Delineation*

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Report. It was determined that no open water features are present within or adjacent to the project area. The USACE makes all final determinations regarding jurisdiction.

	<u>Presence</u>	<u>Impacts</u>				
	<input type="checkbox"/>	<table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center; padding: 0 10px;">Yes</td> <td style="text-align: center;">No</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table>	Yes	No	<input type="checkbox"/>	<input type="checkbox"/>
Yes	No					
<input type="checkbox"/>	<input type="checkbox"/>					
Wetlands						
Total wetland area: <u> n/a </u> Acre(s)	Total wetland area impacted: <u> n/a </u> Acre(s)					

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

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

	<u>Documentation</u>	<u>ESD Approval Dates</u>
Wetlands (Mark all that apply)		
Wetland Determination	<input checked="" type="checkbox"/>	<input type="text" value="February 10, 2023"/>
Wetland Delineation	<input type="checkbox"/>	<input type="text"/>
USACE Isolated Waters Determination	<input type="checkbox"/>	<input type="text"/>

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

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

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

Based on the desktop review, the aerial map of the project area (Appendix B, Page 3), and the RFI report (Appendix E, Pages 1-9), there are 10 wetlands within the 0.5-mile search radius. There are two wetlands within or adjacent to the project area. That number was updated to zero during the site visit on August 17, 2022, by BLN. Therefore, no impacts are expected.

A *Waters of the U.S. Determination/Wetland Delineation Report* was approved by the INDOT Ecology and Waterway Permitting Office on February 10, 2023. Please refer to Appendix F, Pages 1-18 for the *Waters of the U.S. Determination/Wetland Delineation Report*. It was determined that no wetlands are present within or adjacent to the project area. The USACE makes all final determinations regarding jurisdiction.

	<u>Presence</u>	<u>Impacts</u>				
	<input checked="" type="checkbox"/>	<table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center; padding: 0 10px;">Yes</td> <td style="text-align: center;">No</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table>	Yes	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Yes	No					
<input checked="" type="checkbox"/>	<input type="checkbox"/>					
Terrestrial Habitat						
Total terrestrial habitat in project area: <u> 0.55 </u> Acre(s)	Total tree clearing: <u> 0.18 </u> Acre(s)					

Describe types of terrestrial habitat (i.e., forested, grassland, farmland, lawn, etc) adjacent to 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 measures to avoid, minimize, and mitigate if impacts will occur.

Based on a desktop review, a site visit on August 17, 2022, by BLN, and the aerial map of the project area (Appendix B, Page 3), there is wooded riparian habitat and maintained roadside grasses present within the project area. Vegetation within the project area includes evening primrose (*Oenothera biennis*), reed canary grass (*Phalaris arundinacea*), rice cutgrass (*Leersia oryzoides*),

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common thistle (*Cirsium vulgare*), Virginia creeper (*Parthenocissus quinquefolia*), amur honeysuckle (*Lonicera maackii*), poison hemlock (*Conium maculatum*), common chicory (*Cichorium intybus*), and nodding bristle-grass (*Setaria faberi*). Tree species include hackberry (*Celtis occidentalis*), eastern white pine (*Pinus strobus*), black walnut (*Juglans nigra*), silver maple (*Acer saccharinum*), and American basswood (*Tilia americana*). Suitable summer habitat exists within the project area, and approximately 0.55 acre of terrestrial disturbance, including 0.18 acre of tree clearing, will occur to facilitate the proposed bridge project and road improvements. Mitigation is anticipated since the tree clearing exceeds 0.10 acre, the mitigation threshold. Any disturbed areas will be restored following the completion of construction activities. In addition, approval from Tippecanoe County for clear-cutting trees within a floodway will need to be obtained. This is included as a firm commitment in the *Environmental Commitments* section of this CE document.

The IDNR-DFW responded on August 10, 2022, with several recommendations to avoid or minimize impacts to terrestrial habitat. These recommendations included developing a mitigation plan for any unavoidable habitat impacts as well as recommendations for installing bank stabilization measures, revegetating all bare and disturbed areas, and installing appropriate erosion and sediment control measures. In their response letter, the IDNR-DFW also indicated that if impacts to non-wetland riparian forest are less than one acre, the non-wetland forest removed in a rural setting should be replaced at a 1:1 ratio based on area (Appendix C, Pages 14-17). Any disturbed areas will be restored following the completion of construction activities.

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

Protected Species

Federally Listed Bats

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

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

Determination Received for Listed Bats from USFWS: NE NLAA LAA

Other Species not included in IPaC

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

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

Migratory Birds

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

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

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

Based on a desktop review and the RFI report (Appendix E, Pages 1-9) completed by BLN on August 29, 2022, the IDNR Tippecanoe County Endangered, Threatened and Rare (ETR) Species List has been checked. According to the IDNR, DFW early coordination response letter dated August 10, 2022 (Appendix C, Pages 14-17), the Natural Heritage Program's Database has been checked. The DNR's Prophetstown State Park, an LWCF property, is located within a half mile of the project area, and the following species have been documented within 0.5-mile:

- A) Plant: tall bur-head (*Echinodorus berteroi*), state endangered
- B) Bird: sedge wren (*Cistothorus stellaris*), state endangered
- C) Mussels:
 1. Snuffbox (*Epioblasma triquetra*), federal & state endangered
 2. Rayed Bean (*Villosa fabalis*), federal & state endangered
 3. Fanshell (*Cyprogenia stegaria*), federal & state endangered
 4. Clubshell (*Pleurobema clava*), federal & state endangered
 5. Northern riffleshell (*Epioblasma rangiana*), federal & state endangered
 6. Rough Pigtoe (*Pleurobema plenum*), federal & state endangered
 7. Round hickorynut (*Obovaria subrotunda*) state endangered
 8. Ohio Pigtoe (*Pleurobema cordatum*), state special concern

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9. Wavyrayed lampmussel (*Lampsilis fasciola*), state special concern
10. Black sandshell (*Ligumia recta*), state special concern
11. Pyramid Pigtoe (*Pleurobema rubrum*), state extirpated
12. Tubercled Blossom (*Epioblasma torulosa*), state extirpated
13. Longsolid (*Fusconaia subrotunda*), state extirpated
14. White Wartyback (*Plethobasus cicatricosus*), state extirpated
15. Ring Pink (*Obovaria retusa*), state extirpated

The IDNR-DFW stated “There are mussels throughout this stretch of the Wabash River (20+ species). Most are common species, but a few are more rare species. It is unclear in the information provided what kind of in-stream disturbance might take place or if any causeway(s) will be used. If there will be no in-stream disturbance, then impacts to mussel species should be minimal as long as standard erosion control measures are implemented. However, if there is any work in the stream proposed, and especially any causeways, we recommend further coordination with us regarding potential mussel species impacts.” They also stated, “suitable habitat for the sedge wren (*Cistothorus stellaris*) no longer exists in the project area. Therefore, we do not foresee any impacts to this species as a result of this project.” Additional coordination occurred with IDNR due to riprap installation around Piers 2 and 4 via barge. IDNR-DFW responded on June 23, 2023, stating as long as riprap is placed by barge, the riprap is placed immediately adjacent to the piers, and the barge is able to access the work areas without dragging on or otherwise scouring the streambed, impacts to mussels should be minimal. They added that the use of a barge is a good alternative to building a causeway or using cofferdams (Appendix C, Pages 60-61). This is included as a firm commitment in the *Environmental Commitments* section of this CE document. A review of the USFWS database was completed by INDOT, Crawfordsville District, on February 8, 2022, who indicated there was no presence of bats in or within 0.5 mile of the project area. In addition, there is no critical habit within the project area.

Project information was submitted through the USFWS’s Information for Planning and Consultation (IPaC) portal, and an official species list was generated on June 19, 2023 (Appendix C, Pages 26-42). The project is within range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally endangered Northern Long-eared bat (NLEB) (*Myotis septentrionalis*). Other species were generated on the IPaC species list along with the Indiana bat and NLEB.

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 completed on June 19, 2023, by BLN, and based on the responses provided, the project was found to “May Affect- Not Likely to Adversely Affect” the Indiana bat and/or the NLEB (Appendix C, Pages 43-58). INDOT Crawfordsville District reviewed and verified the effect finding on June 21, 2023, and requested USFWS’s review of the finding. No response was received from USFWS within the 14-day review period; therefore, it was concluded they concur with the finding. The USFWS recommends general, lighting, and tree Avoidance and Minimization Measures (AMMs). AMMs and/or commitments are included as firm commitments in the *Environmental Commitments* section of this document.

A bridge inspection occurred on August 17, 2022, by BLN, and the results indicated no signs of bats were present (Appendix C, Page 59). Bridge/Structure Assessments are only valid for two years. If construction will begin after August 17, 2024, an inspection of the structure by a qualified individual must be performed. Inspection of the structure should check for presence of bats/bat indicators and/or presence of birds. The results of the inspection must indicate no signs of bats or birds. If signs of bats or birds are documented during this inspection, the INDOT District Environmental Manager must be contacted immediately.

The official species list generated from IPaC indicated five other species present within the project area. The experimental population, non-essential Whooping Crane (*Grus americana*), the candidate Monarch Butterfly (*Danaus plexippus*), the proposed endangered Tricolored Bat (*Perimyotis subflavus*), the endangered Fanshell (*Cyprogenia stegaria*), and threatened Rabbitsfoot (*Quadrula cylindrica cylindrica*) mussel species are all listed as potentially within the project area. No further coordination was required for the Whooping Crane and Monarch Butterfly as experimental and candidate species, as opposed to threatened or endangered. The IPaC determination does not cover the Tricolored Bat as a “proposed” species and is not yet afforded protection under Section 7. Since work will occur in the stream channel to place riprap around the piers, additional coordination occurred with the IDNR and USFWS regarding the mussel species.

On June 12, 2023, BLN provided a “May Affect – Not Likely to Adversely Affect” determination for the endangered Fanshell (*Cyprogenia stegaria*) and threatened Rabbitsfoot (*Quadrula cylindrica cylindrica*) mussel species and provided AMMs to reduce potential impacts (Appendix C, Pages 22-25). The USFWS responded on June 16, 2023, stating they believe the proposed AMMs adequately protect Fanshell and Rabbitsfoot mussels, as well as the numerous Wabash River mussel species listed by IDNR, and they concur with the determination that the proposed project is not likely to adversely affect these endangered and threatened mussel species with the AMMs in place (Appendix C, Pages 20-21).

IDNR-DFW responded on June 23, 2023, stating as long as riprap is placed by barge, the riprap is placed immediately adjacent to

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the piers, and the barge is able to access the work areas without dragging on or otherwise scouring the streambed, impacts to mussels should be minimal. They added that the use of a barge is a good alternative to building a causeway or using cofferdams (Appendix C, Pages 60-61). This is included as a firm commitment in the *Environmental Commitments* section of this CE document.

Bridge No. 225-79-04016 G (NBI: 029150) has shown evidence of use (i.e., nests) by a bird species protected under the Migratory Bird Treaty Act (MBTA) during the May 23, 2022, inspection. AMMs must be implemented prior to the start of and during the nesting season. Nests without eggs or young should be removed prior to construction during the non-nesting season (September 8 – April 30) and during the nesting season if no eggs or young are present. Nests with eggs or young cannot be removed or disturbed during the nesting season (May 1 – September 7). Nests with eggs or young should be screened or buffered from active construction. Details of the required procedures are outlined in the “Potential Migratory Bird on Structure” Unique Special Provision (USP). This firm commitment is included in the *Environmental Commitments* section of this CE document.

This precludes the need for further consultation on the project under Section 7 of the Endangered Species Act of 1973, as amended. If new information on endangered species at the site becomes available, or if project plans are changed, the 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
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

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

Based on a desktop review and the Indiana Karst Region map, the project is located outside the designated Indiana Karst Region as outlined in the July 15, 2021, *Protection of Karst Features during Project Development and Construction*. According to the topographic map of the project area (Appendix B, Page 2) and the RFI report (Appendix E, Pages 1-9), there are no karst features identified within or adjacent to the project area. In the early coordination response dated July 14, 2022, the IGWS did not indicate that karst features exist in the project area (Appendix C, Pages 6-8). Their response stated the project is within an area of high liquefaction potential, is in a floodway, has high potential for bedrock resources, and high potential for sand and gravel resources. Their response also indicated that no active and/or abandoned mineral resource extraction sites (i.e., petroleum exploration wells, underground coal mines, and surface coal mines) have been documented in the area. The response from IGWS was communicated to the designer on July 14, 2022. No impacts are expected.

In their early coordination response dated July 28, 2022, APC stated there are no oil and gas wells, Northern Indiana Citizens Helping Ecosystems Survive (NICHES) Land Trust Areas, round barns, or underground storage tanks within a half mile of the project area. They did state that there is US Aggregates (mining) west of the project area and home and park wells within a half mile of the project area (Appendix C, Pages 12-13). No impacts to these resources are expected.

SECTION C – OTHER RESOURCES

Drinking Water Resources

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

	Presence	Impacts	
		Yes	No
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Public Water System(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

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

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

Wellhead Protection Area and Source Water Area

The Indiana Department of Environmental Management (IDEM) 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 July 14, 2022, by BLN. This project is not located within a Wellhead Protection Area or Source Water Area. No impacts are expected.

Water Wells

The IDNR's Water Well Record Database website (<https://www.in.gov/dnr/water/ground-water-wells/water-well-record-database/>) was accessed on July 14, 2022, by BLN. Wells are present northwest of the project area; however, they are outside of the project area and construction boundaries. Therefore, no impacts are expected. Should it be determined during the right-of-way phase that these wells will be affected, a cost to cure will likely be included in the appraisal to restore the wells.

Urban Area Boundary

Based on a desktop review of IDEM's MS4 Boundaries Map for Indiana website (by BLN on August 29, 2022, this project is located in an Urban Area Boundary. An early coordination letter was sent on August 11, 2022, to the MS4 coordinator (the Tippecanoe County Surveyor). The MS4 coordinator did not respond within the 30-day time frame. The Tippecanoe County Drainage Board requires a Stormwater Pollution Prevention Plan (SWPPP), which includes erosion and sediment control measures and materials handling procedures, to be submitted as part of the construction plans and specifications for any project located within Tippecanoe County that includes clearing, grading, excavation, and other land-disturbing activities that result in the disturbance of 0.5 acre or more of total land area (<https://www.tippecanoe.in.gov/DocumentCenter/View/25262/Tippecanoe-County-Stormwater-Ordinance-PDF>). Avoidance alternatives are not practical as impacts are necessary to meet the purpose and need of the project; however, impacts will be reduced to the greatest extent practicable to complete the project, and approval from the Tippecanoe County Drainage Board will be obtained prior to construction. This is included as a firm commitment in the *Environmental Commitments* section of this CE document. This project will comply with the stormwater quality management plan by implementing and adhering to BMPs.

Public Water System

Based on a desktop review, a site visit on August 17, 2022, by BLN, the aerial map of the project area (Appendix B, Page 3), and coordination with local utilities, no public water systems were identified. Therefore, no impacts are expected.

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

If applicable, indicate the Floodplain Level?

Level 1 Level 2 Level 3 Level 4 Level 5

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

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Based on a desktop review of the IDNR Indiana Floodway Information Portal website (<https://www.in.gov/dnr/water/surface-water/indiana-floodplain-mapping/indiana-floodplain-information-portal/>) by BLN on August 31, 2022, and the RFI report (Appendix E, Pages 1-9), this project is in a regulatory floodplain as determined from approved IDNR floodplain maps (Appendix F, Page 7). An early coordination letter was sent to the local Floodplain Administrator (the APC) on July 11, 2022. The floodplain administrator responded on July 28, 2022, with no specific recommendations regarding the floodplain (Appendix C, Pages 12-13). In addition, approval from Tippecanoe County for clear-cutting trees within a floodway will need to be obtained to ensure compliance with the local floodplain ordinance. Tree clearing mitigation will be handled through the IDNR In-lieu Fee Program.

This project qualifies as a Category 3 per the current INDOT CE Manual, which states the modifications to drainage structures included in this project will result in an insubstantial change in their capacity to carry flood water. This change could cause a minimal increase in flood heights and flood limits. These minimal increases will not result in any substantial adverse impacts on the natural and beneficial floodplain values; they will not result in a substantial change in flood risks or damage; and they do not have substantial potential for interruption or termination of emergency service or emergency routes; therefore, it has been determined that this encroachment is not substantial.

Farmland	<u>Presence</u>	<u>Impacts</u>	
		Yes	No
Agricultural Lands	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Prime Farmland (per NRCS)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Total Points (from Section VII of CPA-106/AD-1006*)		<u>105</u>	
<i>*If 160 or greater, see CE Manual for guidance.</i>			

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

Based on a desktop review, a site visit on August 17, 2022, by BLN, and the aerial map of the project area (Appendix B, Page 3), there is farmland as defined by the Farmland Protection Policy Act (FPPA) within or adjacent to the project area. An early coordination letter was sent to the NRCS on July 11, 2022. Coordination with NRCS resulted in a score of 105 on the NRCS Farmland Conversion Impact Rating Form (Appendix C, Pages 4-5). NRCS's threshold score for significant impacts to farmland that result in the consideration of alternatives is 160. Since this project score is less than the threshold, no significant loss of prime, unique, statewide, or 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

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

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Documentation Prepared (mark all that apply)

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

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

ESD Approval Date(s)

December 22, 2022
March 24, 2023
December 22, 2022
December 27, 2022

SHPO Approval Date(s)

January 27, 2023
April 26, 2023
January 27, 2023
January 27, 2023

MOA Signature Dates (List all signatories)

Memorandum of Agreement (MOA)

--

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

INDOT, acting on behalf of the FHWA, is required to comply with Section 106 of the National Historic Preservation Act of 1966 as amended (Section 106) and its implementing federal regulation, 36 CFR 800. Section 106 and 36 CFR 800 outline a process that requires INDOT to evaluate the effects of its undertakings on properties that are listed on or eligible for listing on the NRHP. The following information summarizes the steps INDOT took to identify the cultural resources listed on or eligible for listing on the NRHP and the expected impacts the proposed project would have on those resources.

Per the terms of the "Programmatic Agreement Regarding Management and Preservation of Indiana's Historic Bridges" (Historic Bridges PA), the Federal Highway Administration-Indiana Division (FHWA) will satisfy its Section 106 responsibilities involving "Select" and "Non-Select" bridges through the Project Development Process (PDP) of the Historic Bridges PA (Stipulation III). Bridge No. 225-79-04016 G (NBI: 029150) has been classified as a "Select" bridge by the INDOT Historic Bridge Inventory. Thus, the procedures outlined in Stipulation III.A. of the Historic Bridges PA will be followed to fulfill FHWA's Section 106 responsibilities for the bridge. Additionally, because the rehabilitation of the bridge is the preferred alternative, the standard treatment approach described in Attachment B of the Historic Bridges PA (Standard Treatment Approach for Historic Bridges) will be followed.

Area of Potential Effect (APE):

Per 36 CFR 800.9(a), the Area of Potential Effect (APE) is defined as the "geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties if any such properties exist." The project APE includes all properties adjacent to the project and those with a proximate viewshed of the project. The APE for this project was created to take into account construction staging and traffic, properties within the sightline of the project, and properties that may be impacted due to construction traffic and noise. A map illustrating the APE limits as described is provided in Appendix D, Page 10.

Coordination with Consulting Parties:

Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, requires Federal Agencies, or their representatives, to take into account the effects of their undertakings on historic properties. In accordance with 36 CFR 800.2(c) and the INDOT Cultural Resources Manual, consulting parties were invited to participate in efforts to identify historic properties potentially affected by this undertaking, assess its effects, and seek ways to avoid, minimize, or mitigate any adverse effects on historic properties. On April 5, 2022, the following consulting parties were sent project information and invited to participate in the Section 106 evaluation process (Appendix D, Pages 14-21). The State Historic Preservation Officer (SHPO) is an automatic consulting party due to their mandatory or designated roles as specified in 36 C.F.R. § 800.2. Other parties that accepted consulting party status are shown in boldface type below.

Consulting Party	Response
Indiana SHPO	April 14, 2022
Indiana Landmarks, Western Regional Office	No Response
Lafayette Historic Preservation Commission	No Response
Wabash Valley Trust for Historic Preservation	No Response
Historic SPANs Task Force	April 5, 2022
Historic Hoosier Bridges	April 5, 2022
Historicbridges.org	April 5, 2022
Historic Bridge Foundation	No Response
Tippecanoe County Historian	No Response
Tippecanoe County Area Genealogical Society	No Response

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Tippecanoe County Historical Association	No Response
Tippecanoe County Commissioners	No Response
Tippecanoe County Highway Supervisor	No Response
Tippecanoe County Surveyor	No Response
Miami Tribe of Oklahoma	April 6, 2022
Peoria Tribe of Indians of Oklahoma	April 6, 2022
Eastern Shawnee Tribe of Oklahoma	April 26, 2022
Pokagon Band of Potawatomi Indians	May 5, 2022
Shawnee Tribe	No Response
Forest County Potawatomi Community	No Response

In response to receipt of the early coordination invitation letter on April 5, 2022, the Historic SPANs Task Force, Historic Hoosier Bridges, and <https://historicbridges.org/index.php> responded requesting to be included as a consulting party on the project (Appendix D, Pages 22-24).

The Miami Tribe of Oklahoma responded on April 6, 2022, stating that they have no objections to the project at this time as they are not aware of any existing documentation linking a specific Miami cultural or historical site to this project site and accepted the invitation to be a consulting party (Appendix D, Page 25).

The Peoria Tribe of Indians of Oklahoma responded on April 6, 2022, stating they are unaware of items covered under the Native American Graves Protection and Repatriation Act (NAGPRA) to be associated with the proposed project site, including funerary or sacred objects, objects of cultural patrimony, or ancestral human remains. They went on to state they have no objection at this time to the proposed project (Appendix D, Page 26).

The SHPO responded on April 14, 2022, requesting that a list of consulting parties that have agreed to participate in the consultation of this dual review project be included with the next submission. They also stated that once the information regarding above-ground historic and archaeological resources is received, they will resume identification and evaluation procedures for the project (Appendix D, Pages 28).

The Eastern Shawnee Tribe of Oklahoma responded on April 26, 2022, stating they had found their people occupied these areas historically and/or prehistorically. However, the project proposes no adverse effect or endangerment to known sites of interest to the Eastern Shawnee Tribe (Appendix D, Page 29).

The Pokagon Band of Potawatomi Indians responded on May 5, 2022, stating the proposed work is occurring within a mile of known archaeological sites, historic sites, or features that are considered sensitive or recorded in the Pokagon Band Historic Inventory Database. However, they determined that the project would have no adverse effect or endangerment to known sites of interest to the Pokagon Band of Potawatomi Indians (Appendix D, Page 30).

On June 27, 2022, Clark Dietz distributed the Alternatives Analysis via email and the INDOT Section 106 Consultation and Outreach Portal Enterprise (IN SCOPE) to consulting parties for a 30-day review and comment period. The Alternative Analysis recommended the preferred alternative is to rehabilitate the existing bridge for continued vehicular use that meets the Secretary of the Interior's Standards for Rehabilitation. The rehabilitation efforts would include addressing the bridge deck cracking, leaching, and spalling, protecting the truss elements from roadway runoff and other environmental elements, improving the superstructure members to provide at least an HS-15 load capacity, and addressing the abutment deterioration to prevent further deterioration (Appendix D, Pages 58-60 and Appendix I, Pages 34-37).

In communication with INDOT Cultural Resources Office (CRO) on July 13, 2022, the Area Plan Commission of Tippecanoe County asked to be added as a consulting party.

Historic Hoosier Bridges responded on July 18, 2022, expressing they applaud the decision to rehabilitate and maintain the existing structure for continued use on this lower-volume state road and stated it will continue to be a historic attribute that fits in well with the Prophetstown area. They expressed that their only concerns would be regarding the materials and methods used in the rehabilitation process and that they expect it to be done in an in-kind manner to maintain the highest historic integrity possible (Appendix D, Page 38).

The Historic SPANs Task Force responded on July 20, 2022, stating, "Upon review of the Historic Bridge Alternative Analysis report, the preliminary preferred alternative of Rehabilitation for Continued Vehicular Use is supported as described for this outstanding historic structure" (Appendix D, Page 39).

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In a letter dated July 25, 2022, SHPO acknowledged receipt of the Alternatives Analysis and stated they agreed with the recommendation for rehabilitation of the existing bridge for continued vehicular use (Alternative B.1) as the preferred alternative compared to the No Build. In addition, SHPO requested the bridge be photographically documented, including color digital images providing overviews of the resource, along with detailed shots of the character-defining features. In addition, they would like a photo log corresponding to the photographs, a photo key, and an overview thumbnail sheet. They requested a draft copy of this documentation be submitted on a CD, flash drive, or any other previously approved storage device for their review and approval. Upon approval, the documentation should be provided to a public or not-for-profit organization willing to accept the documentation to be made available to the public (Appendix D, Pages 40-41). This has been added as a firm commitment in the *Environmental Commitments* section of this CE document.

The Eastern Shawnee Tribe of Oklahoma responded to the receipt of the HBAA on August 31, 2022, stating they have found their people occupied these areas historically and/or prehistorically. However, the project proposes no adverse effect or endangerment to known sites of interest to the Eastern Shawnee Tribe (Appendix D, Page 42).

Archaeology:

Clark Dietz prepared an Archaeological Short Report on December 28, 2022. The Phase Ia archaeological reconnaissance located no archaeological sites within the project area, and it was recommended that the project be allowed to proceed as planned (Appendix D, Pages 61-62). INDOT CRO approved the report on December 27, 2022. It was then submitted to SHPO and the tribes on December 28, 2022. In a letter dated January 27, 2023, SHPO concurred with the recommendation of the archaeological report (Appendix D, Pages 52-53).

Historic Properties:

To further assist FHWA in carrying out its responsibilities pursuant to 36 C.F.R. § 800.4(b), Qualified Professionals employed by Clark Dietz completed the Historic Properties Report (HPR) (Shaw/Hutzell, 12/28/2022). As a result of the historic property identification and evaluation efforts, no above-ground resources other than INDOT Bridge No. 225-79-04016 G (NBI: 029150) are recommended eligible for listing in the NRHP. The HPR was submitted to the INDOT-CRO for review, and on December 28, 2022, INDOT-CRO released the report, and Clark Dietz provided it to the consulting parties for a 30-day review and comment period (Appendix D, Pages 43-48. Excerpts from the HPR are provided in Appendix D, Pages 55-57).

The Historic SPANs Task Force responded on December 29, 2022, stating they had reviewed the Historic Property Report and Archaeology Report and had no additional comments (Appendix D, Page 49).

The Forest County Potawatomi Tribal Historic Preservation Officer (THPO) responded on December 29, 2022, stating they reviewed the information provided and offered a finding of No Historic Properties Affected of significance to the Forest County Potawatomi Community. However, they requested to remain as a consulting party for the project (Appendix D, Page 50).

The Eastern Shawnee Tribe of Oklahoma responded on January 23, 2023, stating they had found their people occupied these areas historically and/or prehistorically. However, the project proposes no adverse effect or endangerment to known sites of interest to the Eastern Shawnee Tribe (Appendix D, Page 51).

In a letter dated January 27, 2023, SHPO concurred with the conclusion of the HPR and stated that as a result of the historic property identification and evaluation efforts, no above-ground resources other than INDOT Bridge No. 225-79-04016 G are recommended as eligible for listing in the NRHP. SHPO also agreed with the archaeologist that no further archaeological investigations appear to be necessary. However, SHPO stipulated that state law IC 14-21-1-27 and -29 requires that if any prehistoric or historical archaeological artifacts or human remains are discovered during construction, demolition, or earth-moving activities, the discovery must be reported to the Department of Natural Resources within two business days (Appendix D, Pages 52-53).

Documentation and Findings:

On March 24, 2023, INDOT, on behalf of FHWA, signed the 800.11(e) finding of "No Historic Properties Affected," and it was distributed to consulting parties along with the 30% plans (Appendix D, Pages 1-8). In a letter dated April 26, 2023, SHPO concurred with the "No Historic Properties Affected" determination. They also stated they appreciated the 30% plans that were provided and had no comment on this set of plans but look forward to receiving the 60% and 90% plans, after which they will decide whether it is appropriate to issue a Director's Letter of Clearance for this project, indicating compliance with Indiana Code 14-21-1-18 (Appendix D, Pages 66-68).

Per the Historic Bridge PA, the 30%, 60%, and 90% plan sets are required to be submitted to SHPO for review. The 30% Plans were distributed with the 800.11(e) on March 24, 2023. The 60% Plans were submitted to SHPO for review on September 28, 2023 (Appendix D, Pages 71-75). The 90% plan set will be submitted to SHPO prior to Ready-for Contracts (RFC). This has been added

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as a firm commitment in the *Environmental Commitments* section of this CE document.

On September 28, 2023, the 60% Plans were distributed to SHPO and consulting parties (Appendix D, Pages 71-75). In a letter dated October 30, 2023, SHPO stated "We appreciate the 60% plans provided. At this time, we have no comment on this set of plans" (Appendix D, Pages 76-77).

With regard to state law, pursuant to Section 11.5(f) of the rule governing dual review, at the conclusion of the SHPO's review of the final plans, it is anticipated that the Division of Historic Preservation and Archaeology's (DHPA) Division Director would issue a letter of clearance exempting this project from obtaining a Certificate of Approval (COA) from the Indiana Historic Preservation Review Board (Review Board) under IC 14-21-1-18. Obtaining a letter of clearance before environmental consultation form (ECF) approval is added as a firm commitment in the *Environmental Commitments* section of this CE document.

Public Involvement:

In accordance with 36 CFR 800.2(d), 800.3(e), and 800.6(a)(4), the views of the public were sought regarding the effect of the proposed project. An advertisement was placed in the Tippecanoe County, Indiana *Journal and Courier* newspaper on April 21, 2023, offering the public an opportunity to submit comments pursuant to 36 CFR 800.2(d), 800.3(e), and 800.6(a)(4). The public comment period closed 30 days later, on May 21, 2023. The text of the public notice and the affidavit of publication appear in Appendix D, Pages 64-65. No comments were received in response to the public notice.

Per Stipulation III of the Historic Bridges PA, INDOT will hold a public hearing for the project prior to completion of NEPA studies. All consulting parties will be notified of the public hearing. 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. FHWA's final approval of the environmental document will affirm that all Historic Bridges PA requirements have been fully addressed and will serve to confirm that FHWA has concluded its responsibilities under Section 106.

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

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

Evaluations
Prepared

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

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

Section 4(f) of the U.S. Department of Transportation Act of 1966 prohibits the use of certain public and historic lands for federally funded transportation facilities unless there is no feasible and prudent alternative. The law applies to significant publicly owned parks, recreation areas, wildlife/waterfowl refuges, and NRHP-eligible or listed historic properties regardless of ownership. Lands subject to this law are considered Section 4(f) resources.

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Based on a desktop review, the aerial map of the project area (Appendix B, Page 3), and the RFI report (Appendix E, Pages 1-9), there is one recreational facility, two trails, and one managed land located within the 0.5-mile search radius. According to additional research and the site visit on August 17, 2022, by BLN, there are two (2) 4(f) resources within or adjacent to the project area. Bridge No. 225-79-04016 G is within the project area and spans the Wabash River and Prophetstown State Park is adjacent to the northeast quadrant of the project area. A detailed discussion of these resources is provided below.

Prophetstown State Park

Prophetstown State Park, established in 2004, is adjacent to the project area on the west side of Bridge No. 225-79-04016 G and is owned and operated by the IDNR Division of State Parks. Based on its public ownership and status as a park, Prophetstown State Park is considered a Section 4(f) resource. Through the ROW process, it has been determined that the parcel owned by the IDNR within the project area is not readily accessible to the general public. According to the IDNR, it is behind the guardrail within the grade up to the bridge (Appendix I, Pages 39-40). When the IDNR transferred land to the Recreational Development Commission Prophetstown State Park in 2002, a 2.86 acre parcel of land along SR 225 northwest of the bridge was not included in the transfer; this is the portion of land within the project area. This parcel is primarily wooded. The FHWA Environmental Protection Agency (EPA) Toolkit (<https://www.environment.fhwa.dot.gov/legislation/section4f/4fpolicy.aspx#hbho>) states "Publicly owned land is considered to be a park, recreation area or wildlife and waterfowl refuge when the land has been officially designated as such by a Federal, State or local agency, and the officials with jurisdiction over the land determine that its primary purpose is as a park, recreation area, or refuge. Primary purpose is related to a property's primary function and how it is intended to be managed". Given the parcel within the project area is not readily accessible to the public and its primary purpose is not for public or recreational use, this parcel would not be subject to Section 4(f) protection.

Bridge No. 225-79-04016 G

Bridge No. 225-79-04016 G (NBI: 029150) is identified as a "Select" Bridge according to the Indiana Historic Bridge Inventory (December 2010) and is eligible for inclusion in the NRHP under Criterion C due to its engineering significance. "Select" bridges are structures most suitable for preservation and are excellent examples of a given type of historic bridge. Per FHWA's Section 4(f) guidance, a proposed action will "use" a bridge that is on or eligible for inclusion on the NRHP when the action will impair the historic integrity of the bridge either by rehabilitation or demolition. Rehabilitation that does not impair the historic integrity of the bridge as determined by procedures implementing the Nation Historic Preservation Act of 1966, as amended, is not subject to Section 4(f).

Because the preferred alternative is to rehabilitate the existing bridge for continued vehicular use that meets the Secretary of the Interior's Standards for Rehabilitation (Appendix D, Page 59), the project will not impair the historical integrity of the bridge. As a result, the rehabilitation of the bridge is not considered a "use" and is not subject to Section 4(f). On June 27, 2022, Clark Dietz distributed the Alternatives Analysis via email and the INDOT Section 106 Consultation and Outreach Portal Enterprise (IN SCOPE) to consulting parties for a 30-day review and comment period. In a letter dated July 25, 2022, SHPO acknowledged receipt of the Alternatives Analysis and stated they agreed with the conclusions of the Alternatives Analysis that Alternative B.1: Rehabilitation for Continued Vehicular Use, meeting the Secretary of the Interior's Standards for Rehabilitation is the preferred alternative for this project compared to the No Build Alternative (Appendix D, Pages 40-41).

The historical integrity of the bridge will be maintained through coordination and consultation with the SHPO during the design phase of the project with the required plan submittals (30 pursuant to the Historic Bridge PA. Therefore, no Section 4(f) use of the bridge will occur. FHWA approval of this CE document confirmed that there is no Section 4(f) use of the bridge.

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 the conversion of lands purchased with LWCF monies to a non-recreation use.

A review of 6(f) properties on the INDOT ESD website revealed a total of 18 properties in Tippecanoe County (Appendix I, Page 1). One of these properties, Prophetstown State Park, is adjacent to the project area. IDNR- Division of State Parks responded on May 30, 2023, stating "The project as submitted will not impact an LWCF site. Should the scope or location of the project change as to take land from or negatively impact outdoor recreation at the nearby LWCF site, Prophetstown State Park, the DNR Division of State Parks must be contacted" (Appendix C, Pages 18-19). Therefore, there will be no impact to 6(f) resources as a result of this project.

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SECTION F – Air Quality

STIP/TIP and Conformity Status of the Project

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

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

Location in STIP: Fiscal Year (FY) Statewide Transportation Improvement Program (STIP) 2024-2028 Page 224

Name of MPO (if applicable): Area Plan Commission of Tippecanoe County (APCTC)

Location in TIP (if applicable): APCTC Transportation Improvement Plan (TIP) FY 2024-2028, Page 36 of 182

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 FY 2024-2028 APCTC Metropolitan Planning Organization (MPO) TIP and FY 2024-2028 STIP (Appendix H, Pages 1-2).

Attainment Status

This project is located in Tippecanoe County, which is currently in attainment for all criteria pollutants according to the Environmental Protection Agency (EPA) Green Book website ([Nonattainment Areas for Criteria Pollutants \(Green Book\) | US EPA](#)). Therefore, the conformity procedures of 40 Code of Federal Regulations (CFR) Part 93 do not apply.

MSAT

This project qualifies as a categorical exclusion (Group 1) under 23 CFR 771.1171 or exempt under the Clean Air Act conformity rule under 40 CFR 93.126. 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? Yes No

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

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.

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SECTION H – COMMUNITY IMPACTS

Regional, Community & Neighborhood Factors

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

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

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

The proposed project will benefit the community by rehabilitating the deteriorating bridge on SR 225 over Wabash River. The project is not anticipated to impact the tax base for the area or result in a division of the community. While there may be temporary inconveniences associated with construction, such as possible construction noise and fugitive dust, there are no long-term, foreseeable economic impacts from the project. According to a review of the website Find Art Shows, Craft Shows, and Festivals Near You (<https://www.fairsandfestivals.net/>), an online resource for local fairs and festivals, there are no scheduled festivals or other public events that will be impacted as a result of the project.

As required by the Americans with Disabilities Act (ADA), Tippecanoe County has developed an ADA Transition Plan, originally dated November 30, 2012, and amended in December 2013 and January 2015 (Tippecanoe County, Indiana Transition Plan). The project will be designed in accordance with this plan and all applicable ADA requirements.

Indirect impacts are effects caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate. Cumulative impacts affect the environment, which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such actions. This project will not contribute to or stimulate an increase in commercial or residential development in the project area. No other indirect or cumulative impacts are expected as a result of the project.

Public Facilities and Services

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

Based on a desktop review, the aerial map of the project area (Appendix B, Page 3), and the RFI report (Appendix E, Pages 1-9), there is one recreational facility, two trails, and one managed land located within the 0.5-mile search radius. The Prophetstown State Park is adjacent to the project area. This was confirmed by the site visit on August 17, 2022, by BLN.

IDNR-Division of State Parks responded on May 30, 2023, stating, "the project as submitted will not impact a LWCF site. Should the scope or location of the project change as to take land from or negatively impact outdoor recreation at the nearby LWCF site, Prophetstown State Park, the DNR Division of State Parks must be contacted" (Appendix C, Pages 18-19).

Overhead fiber and electric lines span the north side of the bridge, two fiber lines are underbuilt on the bridge, and one 6-inch steel distribution main is on the south side of the bridge. No relocations or disruptions to the services these facilities carry are anticipated. Coordination with the applicable utility providers will be ongoing.

CenterPoint Energy responded on July 26, 2022, stating they have easements for their facilities in the area; however, they do not anticipate any environmental impacts with regards to their facilities due to this project (Appendix C, Pages 9-11)

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.

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Environmental Justice (EJ) (Presidential EO 12898)

During the development of the project were EJ issues identified?

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

Does the project require an EJ analysis?

If YES, then:

Are any EJ populations located within the project area?

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

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

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

Under FHWA Order 6640.23A, FHWA and the project sponsor, as a recipient of funding from FHWA, are responsible for ensuring that their programs, policies, and activities do not have a disproportionately high and adverse effect on minority or low-income populations. This project will have no relocations and will require less than 0.5 acre of additional permanent ROW; therefore, an EJ analysis is not required per the current INDOT Categorical Exclusion Manual.

Relocation of People, Businesses or Farms

Will the proposed action result in the relocation of people, businesses or farms?

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

Is a BIS or CSRS required?

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)

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

Phase I Environmental Site Assessment (Phase I ESA)

Phase II Environmental Site Assessment (Phase II ESA)

Design/Specifications for Remediation required?

Date RFI concurrence by INDOT SAM (if applicable): August 29, 2022

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

Based on a review of Geographic Information Systems (GIS) and available public records, the RFI was completed on August 29, 2022, by BLN, and INDOT Site Assessment and Management (SAM) provided their concurrence on August 29, 2022 (Appendix E, Pages 1-9). No sites with hazardous material concerns (hazmat sites) or sites involved with regulated substances were identified in or within 0.5-mile of the project area. Further investigation for hazardous material concerns or regulated substances is not required.

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Part IV – Permits and Commitments

PERMITS CHECKLIST

Permits (mark all that apply)

Likely Required

Army Corps of Engineers (404/Section10 Permit)

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

IN Department of Environmental Management (401/Rule 5)

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

IN Department of Natural Resources

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

Mitigation Required

US Coast Guard Section 9 Bridge Permit

Others (Please discuss in the discussion below)

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

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

A USACE Section 404 Nationwide Permit and IDEM Section 401 Water Quality Certification (WQC) will likely be required due to permanent stream impacts below the OHWM of Wabash River. In addition, an IDNR Construction in a Floodway (CIF) permit for construction within an IDNR-mapped floodway will likely be required. Mitigation will be necessary due to tree clearing being greater than 0.10 acre, the mitigation threshold. Tree clearing mitigation will be addressed through the IDNR In-lieu Fee Program. In addition, a USACE Section 10 permit may be required for impacts to navigable waters of the U.S., and approval from Tippecanoe County for clear-cutting trees within a floodway will need to be obtained. In addition, a SWPPP is required through the Tippecanoe County Drainage Board due to land-disturbing activities of more than 0.5 acre or more of total land area.

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

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

ENVIRONMENTAL COMMITMENTS

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

Firm:

1. If the scope of work or permanent or temporary ROW amounts change, the INDOT Environmental Services Division (ESD) and the INDOT District Environmental Section will be contacted immediately (INDOT ESD and INDOT Crawfordsville District).
2. It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction that would block or limit access (INDOT ESD).
3. A USFWS Bridge/Structure Assessment shall take place no earlier than two (2) years prior to the start of construction. If

Indiana Department of Transportation

County TippecanoeRoute SR 225Des. No. 2002077

- construction will begin after August 17, 2024, an inspection of the structure by a qualified individual must be performed. Inspection of the structure should check for presence of bats/bat indicators and/or presence of birds. The results of the inspection must indicate no signs of bats or birds. If signs of bats or birds are documented during this inspection, the INDOT Crawfordsville District Environmental Manager must be contacted immediately (INDOT ESD).
4. If necessary, the INDOT Project Manager will ensure an administrative modification to the STIP will occur prior to the Ready-for-Contract (RFC) date (INDOT ESD).
 5. Bridge No. 225-79-04016 G has shown evidence of use (i.e., nests) by a bird species protected under the MBTA during the December 8, 2020, inspection. AMMs must be implemented prior to the start of and during the nesting season. Nests without eggs or young should be removed prior to construction during the non-nesting season (September 8 – April 30) and during the nesting season if no eggs or young are present. Nests with eggs or young cannot be removed or disturbed during the nesting season (May 1 – September 7). Nests with eggs or young should be screened or buffered from active construction. Details of the required procedures are outlined in the "Potential Migratory Bird on Structure" RSP (INDOT EWPO).
 6. Wabash River is listed for IBCs, nutrient impairment, and *E. coli*. Concerning IBC and nutrient impairment, BMPs will be used to avoid further degradation to the stream. Regarding *E. coli*, workers who are working in or near water with *E. coli* should take care to wear appropriate PPE, observe proper hygiene procedures, including regular hand washing, and limit personal exposure. Exposure to PCBs in fish tissue is considered low, assuming workers are not eating biota surrounding or associated with the water body (INDOT SAM).
 7. SHPO has requested that the bridge be photographically documented, including color digital images that provide overviews of the resource, along with detailed shots of the character-defining features. In addition, they would like a photo log that corresponds to the photographs, a photo key, and an overview thumbnail sheet. A draft copy of this documentation should be submitted on a CD, flash drive, or any other previously approved storage device for their review and approval. Upon approval, the documentation should be provided to a public or not-for-profit organization willing to accept the documentation, to be made available to the public. SHPO should be informed of which not-for-profit accepts the documentation. This should be completed prior to ECF approval (SHPO).
 8. The 90% plan set need to be approved by SHPO prior to ECF approval (SHPO).
 9. In order to comply with IC 14-21-1-18, a COA must be obtained from the Review Board or a director's letter of clearance must be obtained from the Indiana DHPA exempting the project from obtaining a COA. This must be completed before ECF approval. (SHPO).
 10. The historical marker (157-332-05031) identified in the northwest corner of project area should not be disturbed, and Will be marked on the plans as "Do Not Disturb". Should it be necessary to move the marker, it needs to be reset as appropriate (Area Plan Commission of Tippecanoe County, Indiana).
 11. Strict erosion control measures will be needed at the site during construction (USFWS).
 12. Approval from the Tippecanoe County Drainage Board will need to be obtained prior to construction (INDOT EWPO).
 13. No pollutants of any kind can enter the waterway due to this project. This includes spilling of petroleum products or other chemicals from the machinery/equipment being used, as well as any chemical-based material associated with demolition and construction (USFWS).
 14. Emergency response equipment and spill containment materials must be maintained at the project site, and a contained fueling and fuel storage area needs to be designated at least 150 feet away from the Wabash River (USFWS).
 15. 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).
 16. Lighting AMM 1: Direct temporary lighting away from suitable habitat during the active season (USFWS).
 17. Tree Removal AMM 1: Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal (USFWS).
 18. Tree Removal AMM 2: Apply time of year restrictions for tree removal when bats are not likely to be present (April 1 to September 30), or limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/rail surface and outside of documented roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed. Do not cut any trees suitable for Indiana bat or Northern Long-eared bat roosting (greater than 5 inches dbh, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) (USFWS and IDNR-DFW).
 19. Tree Removal AMM 3: Ensure tree removal is limited to the 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).
 20. 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).
 21. The riprap will be placed by barge and immediately adjacent to the piers. The barge should be able to access the work areas without dragging on the streambed or otherwise scouring the streambed. This will be incorporated into the Contract Documents (IDNR-DFW).

For Further Consideration

22. The rehabilitated crossing structure, and any bank stabilization under or around the structure, must not create conditions that

Indiana Department of Transportation

County Tippecanoe

Route SR 225

Des. No. 2002077

- are less favorable for wildlife passage when compared to existing conditions (IDNR-DFW).
23. All wildlife passage designs must include a smooth level pathway a minimum of 1-3 feet in width composed of a 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).
 24. Riprap or other hard bank stabilization materials should be used only at the toe of the sideslopes up to the ordinary high water mark (OHWM), with the exception of areas directly under bridges, for instance. The banks above the OHWM should be restored, stabilized, and revegetated using geotextiles and a mixture of grasses, sedges, wildflowers, shrubs, and trees native to Central Indiana and specifically for stream bank/floodway stabilization purposes as soon as possible upon project completion (IDNR-DFW).
 25. For streambed stabilization or scour protection, riprap or other stabilization materials should not be placed in the active stream channel above the existing streambed or flowline elevation unless specifically designed and installed for grade control and aquatic organism passage (IDNR-DFW).
 26. Impacts to non-wetland forest of one (1) acre or more should be mitigated at a minimum 2:1 ratio. If less than one acre of non-wetland forest is removed in a rural setting, replacement should be at a 1:1 ratio based on area. Impacts to non-wetland forest under one (1) acre in an urban setting should be mitigated by planting five trees, 1 inch to 2 inches in diameter-at-breast height (dbh), for each tree which is removed that is 10" dbh or greater (5:1 mitigation based on the number of large trees) or by using the 1:1 replacement ratio based on area depending on the type of habitat impacted (individual canopy tree removal in an urban streetscape or park-like environment versus removal of habitat supporting a tree canopy, woody understory, and herbaceous layer). Impacts under 0.10 acre in an urban area may still involve the replacement of large diameter trees but typically do not require any additional mitigation or additional plantings beyond seeding and stabilizing disturbed areas (IDNR-DFW).
 27. Do not construct any temporary runarounds, access bridges, causeways, cofferdams, diversions, or pumparounds (IDNR-DFW).
 28. Use a minimum average 6-inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids (IDNR-DFW).

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Appendix A:

**INDOT Supporting
Documentation**

Categorical Exclusion Level Thresholds

	PCE	Level 1	Level 2	Level 3	Level 4 ¹
Section 106	Falls within guidelines of Minor Projects PA	“No Historic Properties Affected”	“No Adverse Effect”	-	“Adverse Effect” Or Historic Bridge involvement ²
Stream Impacts³	No construction in waterways or water bodies	< 300 linear feet of stream impacts	≥ 300 linear feet of stream impacts	-	USACE Individual 404 Permit ⁴
Wetland Impacts³	No adverse impacts to wetlands	< 0.1 acre	-	< 1.0 acre	≥ 1.0 acre
Right-of-way⁵	Property acquisition for preservation only or none	< 0.5 acre	≥ 0.5 acre	-	-
Relocations⁶	None	-	-	< 5	≥ 5
Threatened/Endangered Species (Species Specific Programmatic for Indiana bat & northern long eared bat)*	“No Effect”, “Not likely to Adversely Affect” (With select AMMs ⁷)	“Not likely to Adversely Affect” (With any AMMs or commitments)	-	“Likely to Adversely Affect”	Project does not fall under Species Specific Programmatic ⁸
Threatened/Endangered Species (Any other species)*	Falls within guidelines of USFWS 2013 Interim Policy or “No Effect”	“Not likely to Adversely Affect”	-	-	“Likely to Adversely Affect”
Environmental Justice	No disproportionately high and adverse impacts	-	-	-	Potential ⁹
Sole Source Aquifer	No Detailed Groundwater Assessment	-	-	-	Detailed Groundwater Assessment
Floodplain	No Substantial Impacts	-	-	-	Substantial Impacts
Section 4(f) Impacts	None	-	-	-	Any ¹⁰
Section 6(f) Impacts	None	-	-	-	Any
Permanent Traffic Alteration	None	-	-	-	Any
Noise Analysis Required	No	-	-	-	Yes
Air Quality Analysis Required	No	-	-	-	Yes ¹¹
Approval Level <ul style="list-style-type: none"> • District Env. (DE) • Env. Serv. Div. (ESD) • FHWA 	Concurrence by DE or ESD	DE or ESD	DE or ESD	DE and/or ESD	DE and/or ESD; and FHWA

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

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

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

⁴ US Army Corps of Engineers Individual 404 Permit

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

⁶ 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.

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

⁸ 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.

⁹ Potential for causing a disproportionately high and adverse impact.

¹⁰ 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.

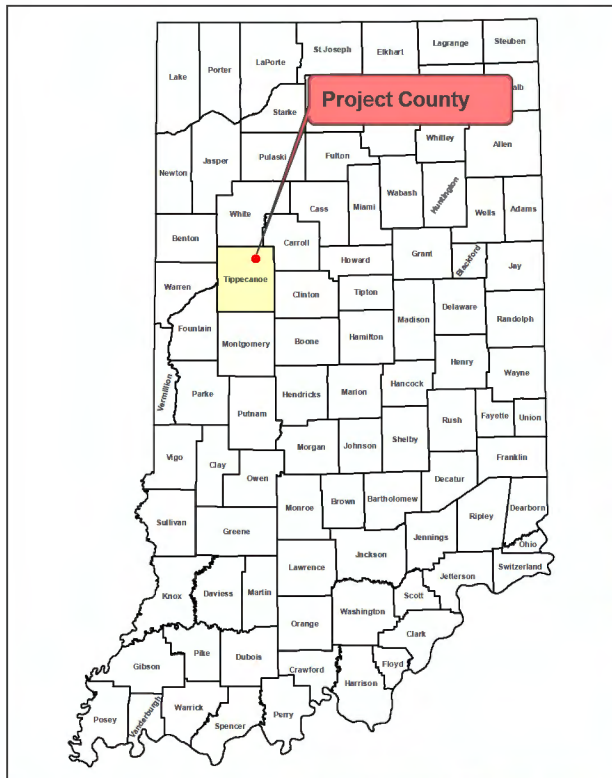
¹¹ Hot Spot Analysis and/or MSAT Quantitative Emission Analysis.

* Includes the threatened/endangered species critical habitat

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

Appendix B:

Graphics



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

Source: Indiana MAP
 1:6,000
 1 inch = 500 feet

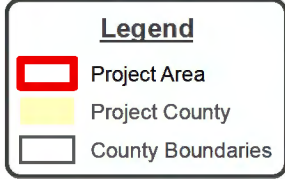
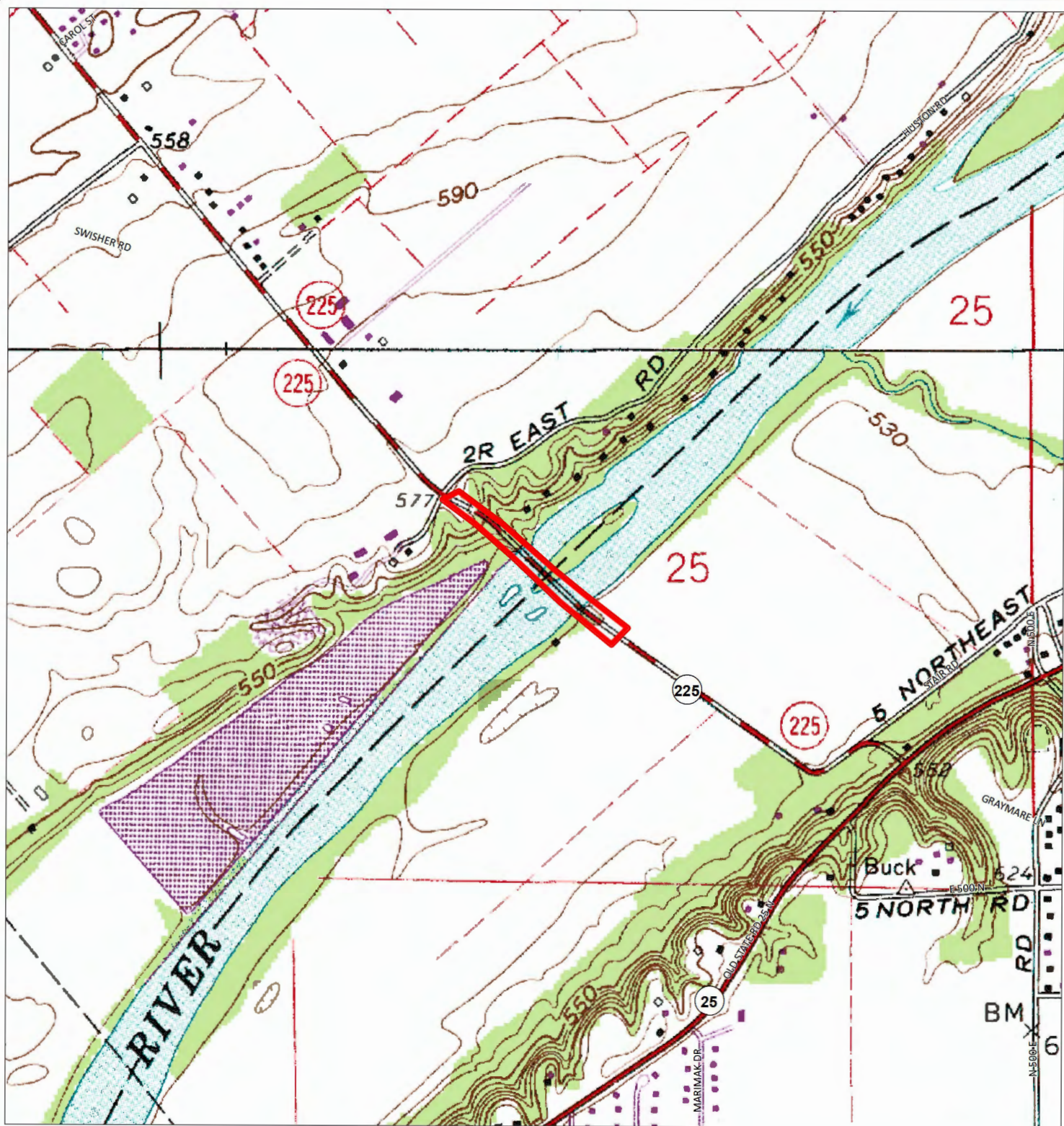


Figure 1: Project Location Map
 SR 225 over Wabash River
 0.60 Mile North of SR 25
 Tippecanoe County, Indiana Des.
 No. 2002077



Source: U.S. Geological Survey

1:12,000

1 in = 1,000 ft

BLN
BEAM-LONGEST-NEFF

Legend

Project Area

Figure 2: USGS Topographic Map
SR 225 over Wabash River
0.60 Mile North of SR 25
Tippecanoe County, Indiana
Des. No. 2002077

August 25, 2022



Service Layer Credits:
Source: Esri, Maxar,
Earthstar Geographics,
and the GIS User



Source: Indiana MAP
1:2,400
1 in = 200 ft



Legend


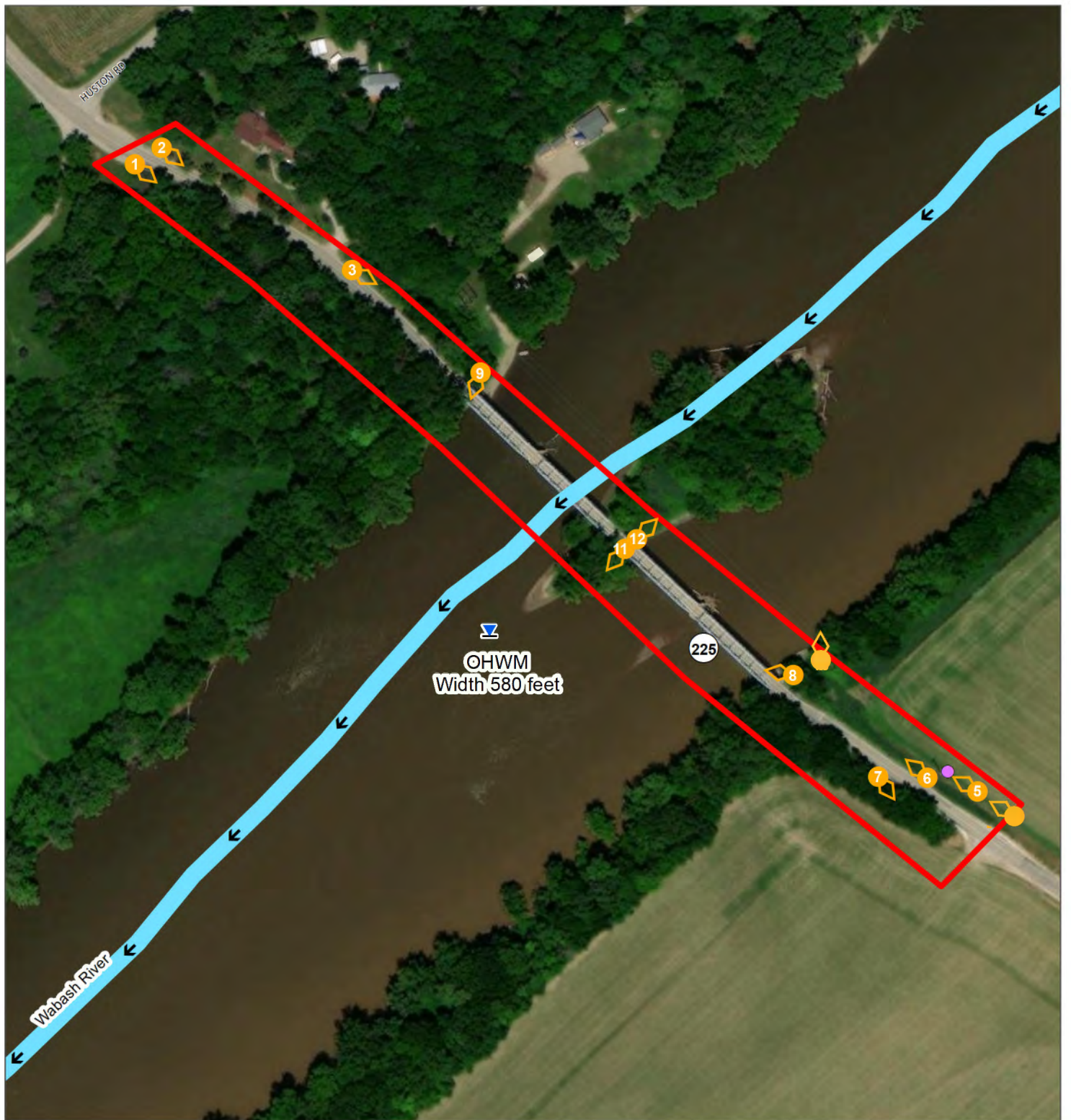
 Project Area

Figure 3: Aerial Map
SR 225 over Wabash River
0.60 Mile North of SR 25
Tippecanoe County, Indiana
Des. No. 2002077

August 25, 2022



Source: BLN Field Investigation

2,400

1 in = 200 ft



Legend			
	Project Area		Photo Point
	Wabash River		Soil Data Point
	Ordinary High-Water Mark		

Figure 4: Photo Location and Orientation Map

SR 225 over Wabash River

0.60 Mile North of SR 25

Tippecanoe County, Indiana

Des. No. 2002077

February 06, 2023



Photo 1: Looking at the right-of-way (ROW) facing southeast at the project area from the northwestern project terminus.



Photo 2: Looking southeast at the ROW facing the project area from the northwest project terminus.



Photo 3: Looking southeast at the structure from the northwestern side of SR 225.



Photo 4: Looking northwest at the structure from the southeastern side of SR 225.



Photo 5: Sample point (SP1) taken in the northeast quadrant.



Photo 6: Looking northwest from the sample point in the northeast quadrant.



Photo 7: Looking east facing the terminus of the project area from the southwestern side of SR 225.



Photo 8: Looking west at the structure from the eastern quadrant.



Photo 9: Looking southeast at the structure from the northwest quadrant.



Photo 10: Looking northeast (upstream) from the northeastern quadrant.



Photo 11: Looking southwest (downstream) from the top of the structure.

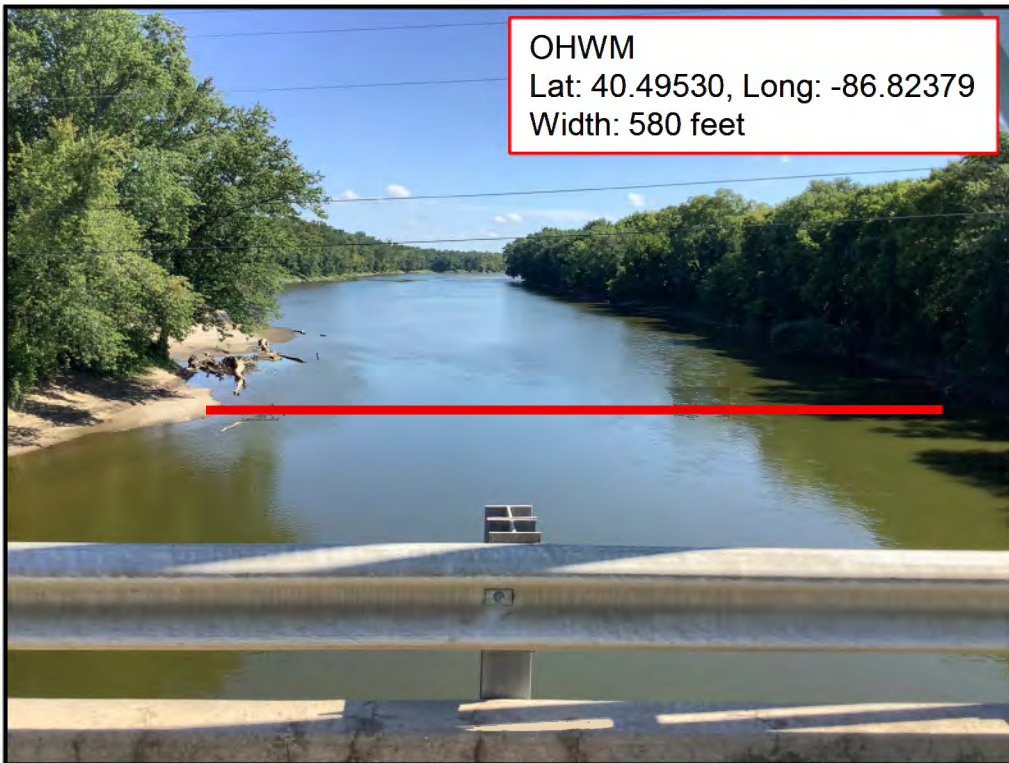


Photo 12: Looking northeast (upstream) from the top of the structure. The OHWM was measured using GIS, and no depth was taken.

PROJECT	DESIGNATION
2002077	2002077
CONTRACT	BRIDGE FILE
B-43431	225-79-04016H

STRUCTURE INFORMATION				
STRUCTURE	TYPE	SPAN AND SKEW	OVER	STATION
225-79-04016H	STEEL THROUGH TRUSS BRIDGE	4 SPANS: 158'-0" SKEW: 0°	WABASH RIVER	© STRUCTURE 46+72.78 "X"

INDIANA DEPARTMENT OF TRANSPORTATION

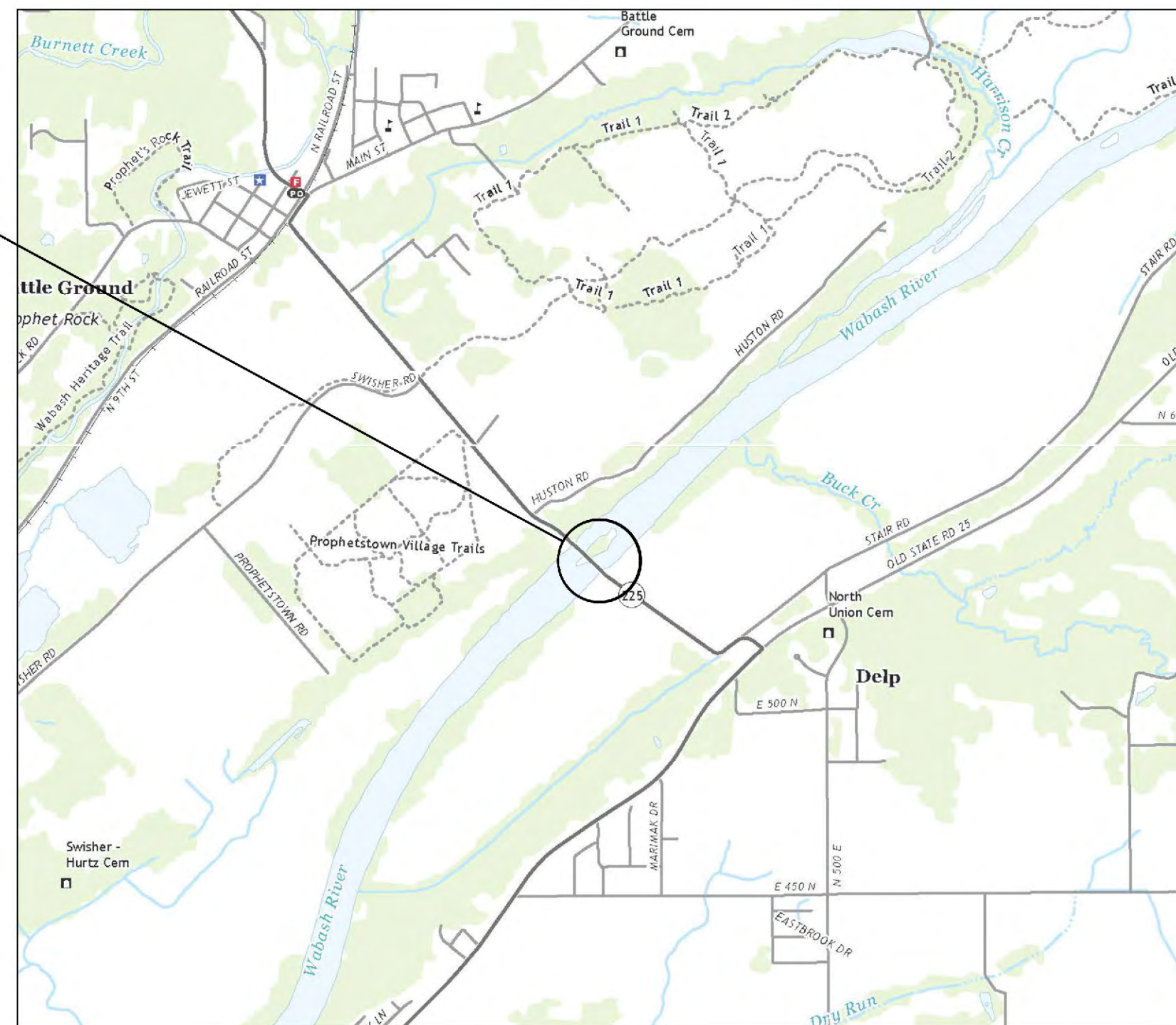


BRIDGE PLANS

FOR SPANS OVER 20 FEET
ROUTE: SR 225 AT: RP 0+59

PROJECT NO. 2002077 P.E.
2002077 R/W
2002077 CONST.

Bridge Rehabilitation on SR 225
Located 0.60 Miles North of Old SR 25 in
Section 25, T-24-N, R-4-W, & Brummetts Reserve, Section 6, T-24-N, R-4-W
Tippecanoe Township, Tippecanoe County, Indiana

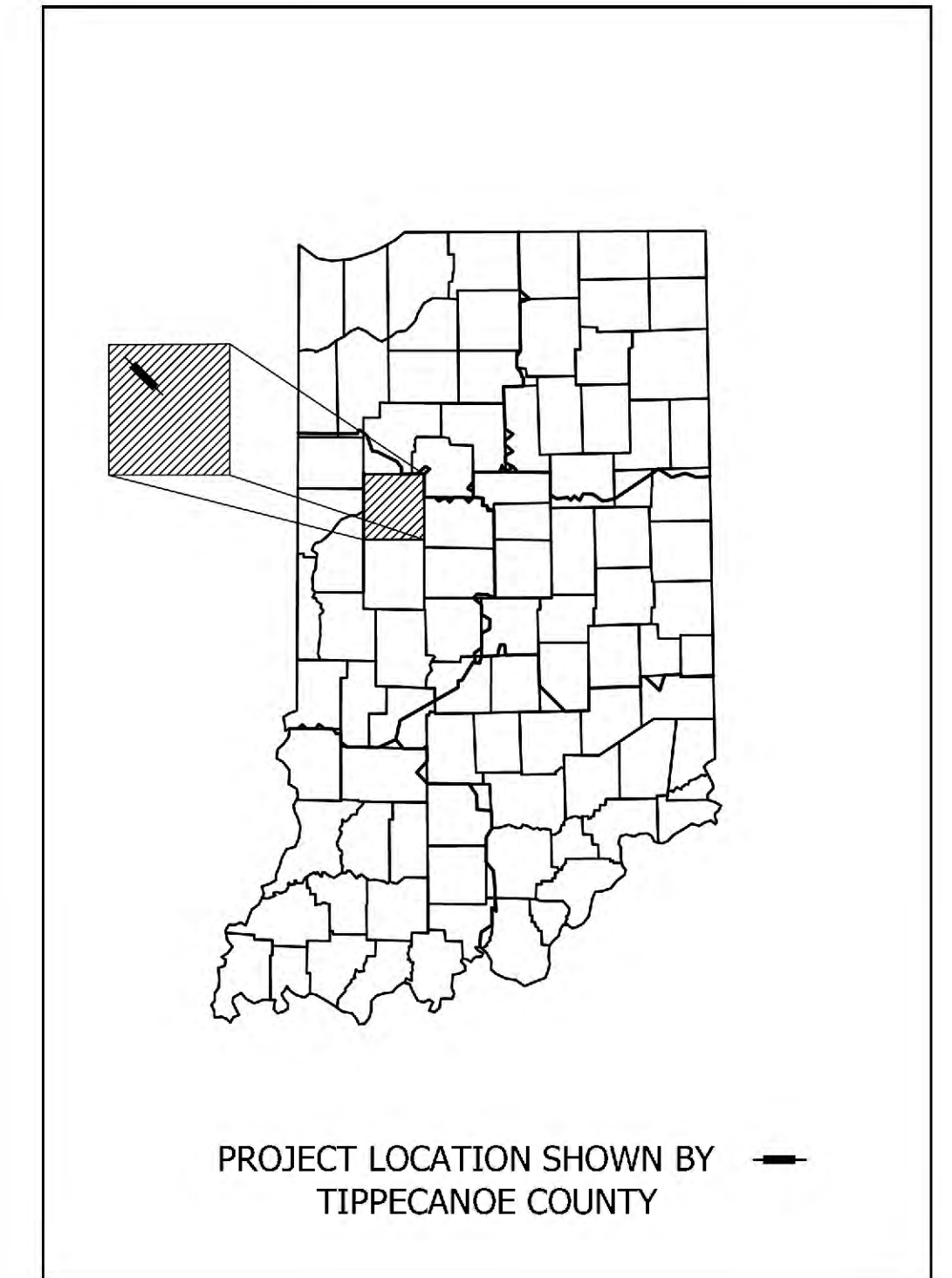


PROJECT LOCATION
Begin Project-Sta.43+05.00 "X"
End Project-Sta.50+16.28 "X"

LOCATION MAP
SCALE: 1:24000

TRAFFIC DATA		
A.A.D.T.	(2024)	1,190 V.P.D.
A.A.D.T.	(2044)	1,206 V.P.D.
D.H.V	(2044)	132 V.P.H.
DIRECTIONAL DISTRIBUTION		46.45 %
TRUCKS		19.09 % A.A.D.T. 10.85 % D.H.V.

DESIGN DATA	
DESIGN SPEED	30 M.P.H.
PROJECT DESIGN CRITERIA	3R (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION	RURAL COLLECTOR
RURAL/URBAN	RURAL
TERRAIN	LEVEL
ACCESS CONTROL	NONE



LATITUDE: 40°29'44.07" N LONGITUDE: 86°49'23.97" W

BRIDGE LENGTH:	0.122	MI.
ROADWAY LENGTH:	0.013	MI.
TOTAL LENGTH:	0.135	MI.
MAX. GRADE:	1.80	%

HUC 12: 051201050603
HUC 14: 05120105070030

PLANS PREPARED BY: **BLN** BEAM·LONGEST·NEFF

8320 CRAIG STREET | INDIANAPOLIS, IN 46250
317.849.5832 | F: 317.841.4280 | WWW.B-L-N.COM

NOT FOR CONSTRUCTION

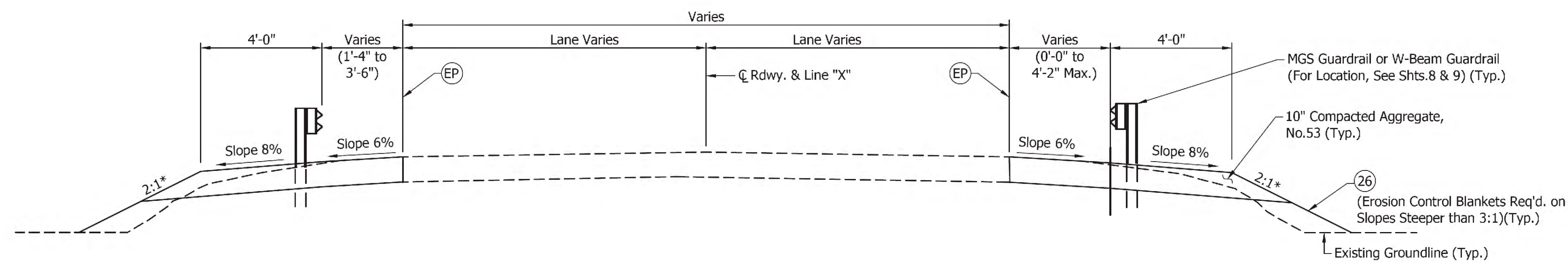
PLANS PREPARED BY:	BEAM, LONGEST & NEFF, LLC	(317)849-5832 PHONE NUMBER
CERTIFIED BY:	_____	DATE
APPROVED FOR LETTING:	_____	DATE
INDIANA DEPARTMENT OF TRANSPORTATION		

INDIANA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS DATED 2022 TO BE USED WITH THESE PLANS.	
BRIDGE FILE	225-79-04016H
DESIGNATION	2002077
DRAWING NO.	SHEETS
1	of 47
CONTRACT	PROJECT
B-43431	2002077

LEGEND

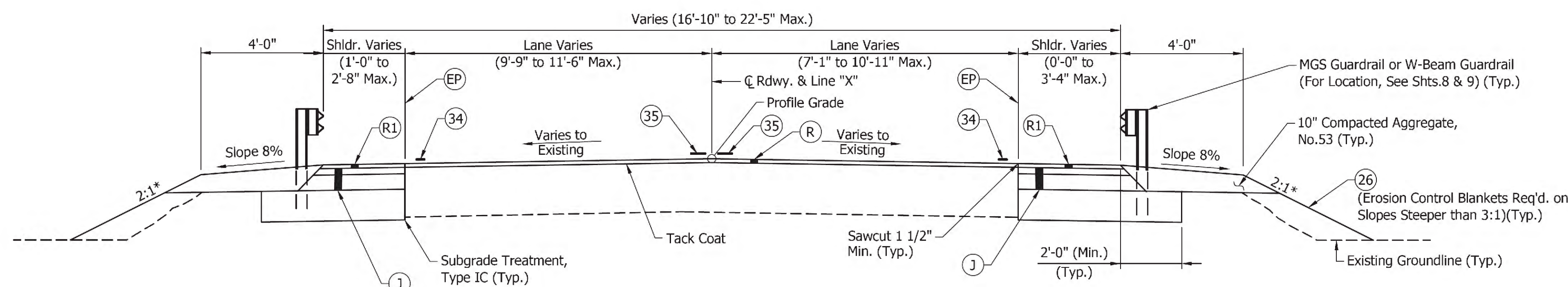
- Ⓜ Mulched Seeding, R:
Apply to Areas above El. 555.20
Seed Mixture Floodplain:
Apply to Areas below El. 555.20
- Ⓝ Line, Paint, Solid, White, 6 in.
- Ⓞ Line, Paint, Solid, Yellow, 6 in.
- Ⓟ Widening with HMA, Type B
(275 lb/syd, HMA Intermediate, Type B on
660 lb/syd, HMA Base, Type B
(Tack Coat between HMA Layers)
- Ⓠ 165 lb/syd, QC/QA-HMA, 3, 64, Surface, 9.5 mm on
275 lb/syd, QC/QA-HMA, 3, 64, Intermediate, 19.0 mm or
660 lb/syd, QC/QA-HMA, 3, 64, Base, 25.0 mm
(Tack Coat between HMA Layers)
- Ⓡ 165 lb/syd, QC/QA-HMA, 3, 64, Surface, 9.5 mm on
Transition Milling, 1.5 in.
After Milling, seal visible cracks 0.25 in. wide or wider, be
applying tack coat, with PG 64-22 only. No Emulsion shall
used. The sealed cracks shall not be overbonded.
- Ⓡ1 165 lb/syd, QC/QA-HMA, 3, 64, Surface, 9.5 mm on
Widening with HMA, Type B
- Ⓢ Existing Edge of Pavement

* See Cross-Sections for Slope



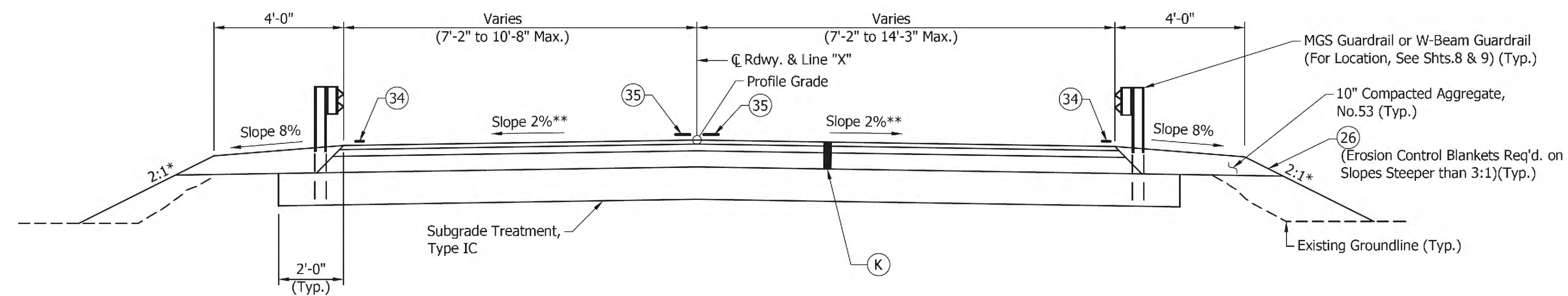
TYPICAL SECTION THROUGH SHOULDER REPLACEMENT

STA.40+00.00 "X" to STA.42+05.00 "X"
STA.51+00.00 "X" to STA.53+15.00 "X"
Scale: 3/8" = 1'-0"



TYPICAL SECTION THROUGH RESURFACE

STA.42+05.00 "X" to STA.43+05.00 "X"
Scale: 3/8" = 1'-0"



TYPICAL SECTION THROUGH FULL DEPTH PAVEMENT

STA.43+05.00 "X" to STA.43+29.28 "X"
STA.50+16.28 "X" to STA.51+00.00 "X"
Scale: 3/8" = 1'-0"

** Varies from 2% to Existing from Sta. 50+16.28 "X" to Sta. 51+00.00 "X"

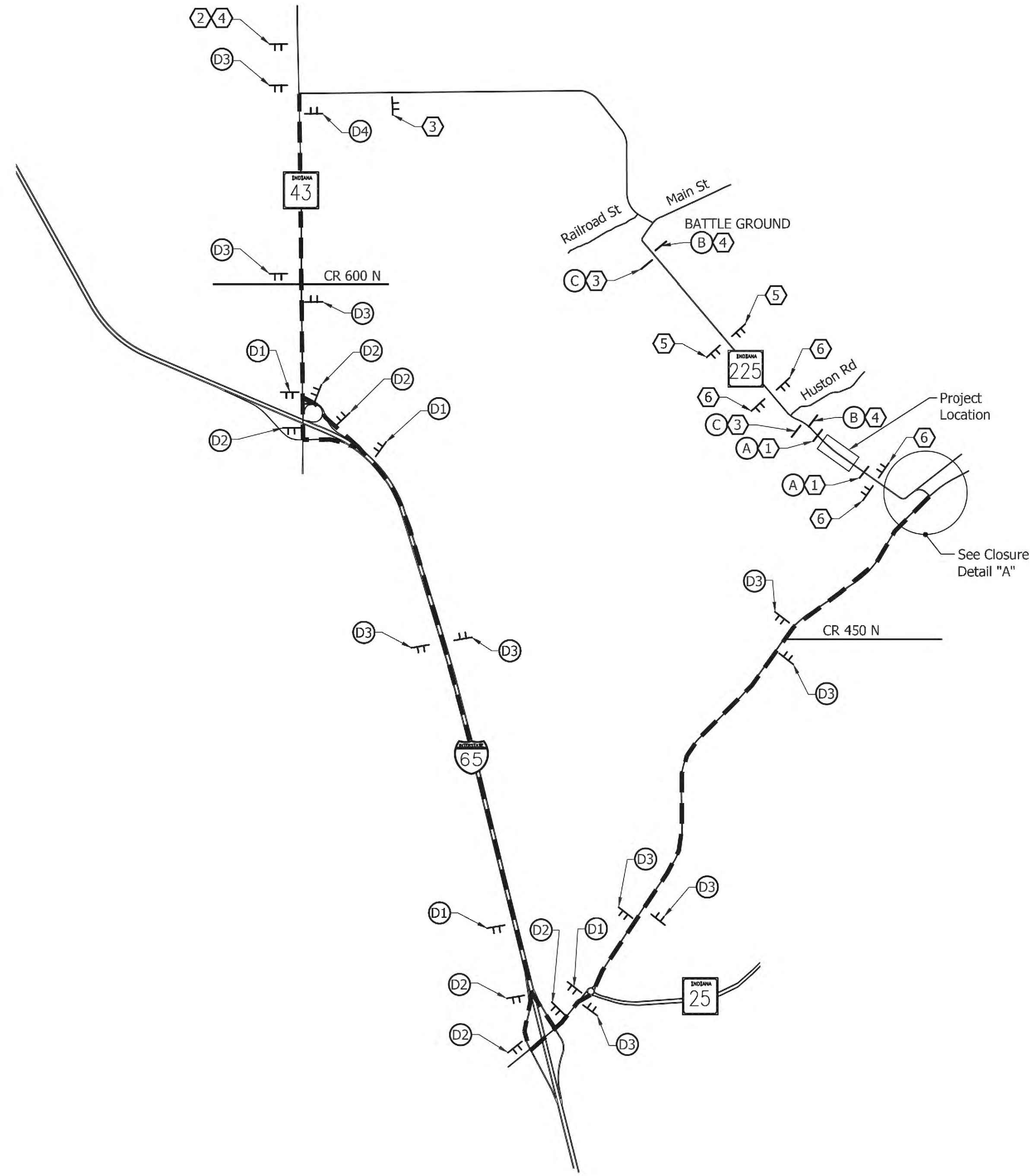
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RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: ISW _____	DRAWN: MEN _____	
CHECKED: LLS _____	CHECKED: ISW _____	

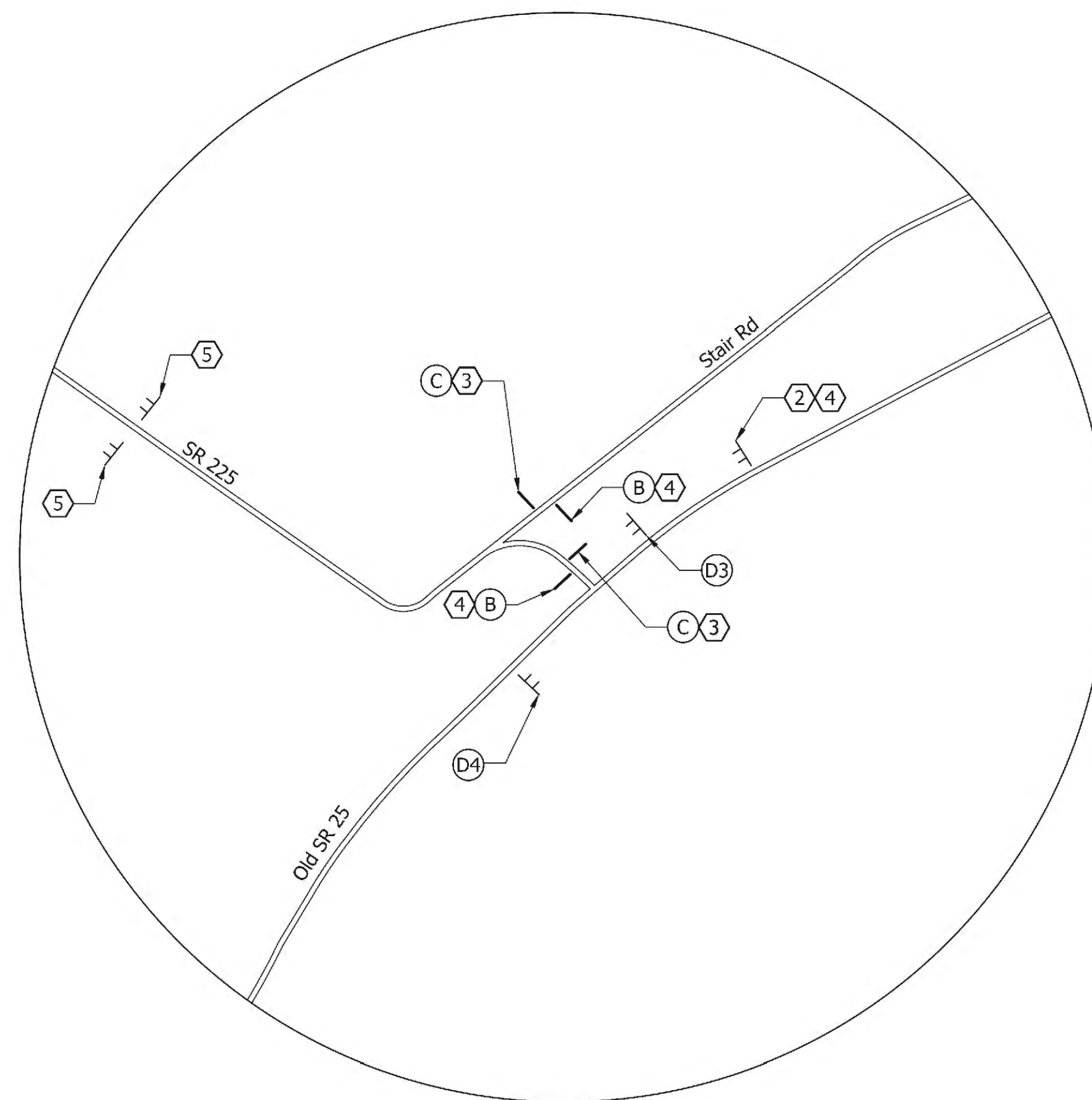
INDIANA
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

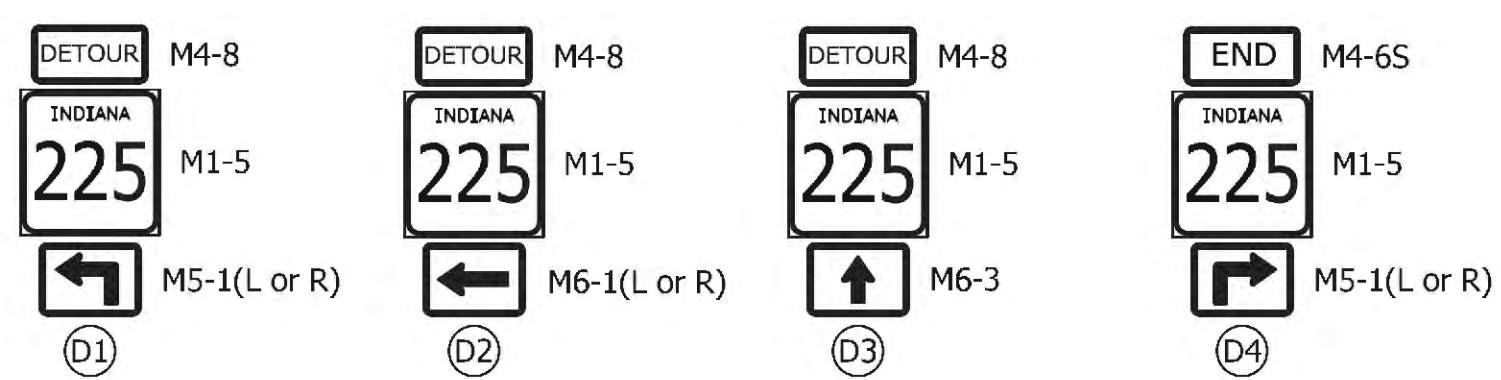
HORIZONTAL SCALE 3/8" = 1'-0"	BRIDGE FILE 225-79-04016H
VERTICAL SCALE 3/8" = 1'-0"	DESIGNATION 2002077
DRAWING NO.	SHEETS
	3 of 47
CONTRACT B-43431	PROJECT 2002077



DETOUR ROUTE MAP
No Scale



CLOSURE DETAIL "A"
No Scale



DETOUR ROUTE MARKER ASSEMBLIES
No Scale

- LEGEND**
- (A) Barricade Type III-A & Road Closure Sign Assembly
 - (B) Barricade Type III-B
 - (C) Barricade Type III-B & Road Closure Sign Assembly
 - (D) Detour Route Marker Assembly
 1. Advance Turn
 2. Directional
 3. Confirming
 4. End

LL Construction Sign and Support

CONSTRUCTION SIGNS TYPE "A"

- (1) R11-2 Road Closed
- (2) XW20-2 Detour Ahead
- (3) R11-4 Road Closed to Thru Traffic
- (4) XG20-5 SR 225 Closed on or After xx/xx/xxxx
- (5) XW20-3 Road Closed Ahead
- (6) XW20-3 Road Closed 500 Feet

NOTES:
All signs, lights and barricades shall be in accordance with current INDOT Standards and the Manual on Uniform Traffic Control Devices.

All XG20-5 shall be installed a minimum of 14 days prior to closing road.

MAINTENANCE OF TRAFFIC QUANTITIES

ITEM	QUANTITY
Barricade Type III-A	XX Lft.
Barricade Type III-B	XX Lft.
Road Closure Sign Assembly	XX Ea.
Construction Signs Type "A"	XX Ea.
Detour Route Marker Assembly	XX Ea.

NOTE TO REVIEWER:

Quantities to be completed at Stage 3.

NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____

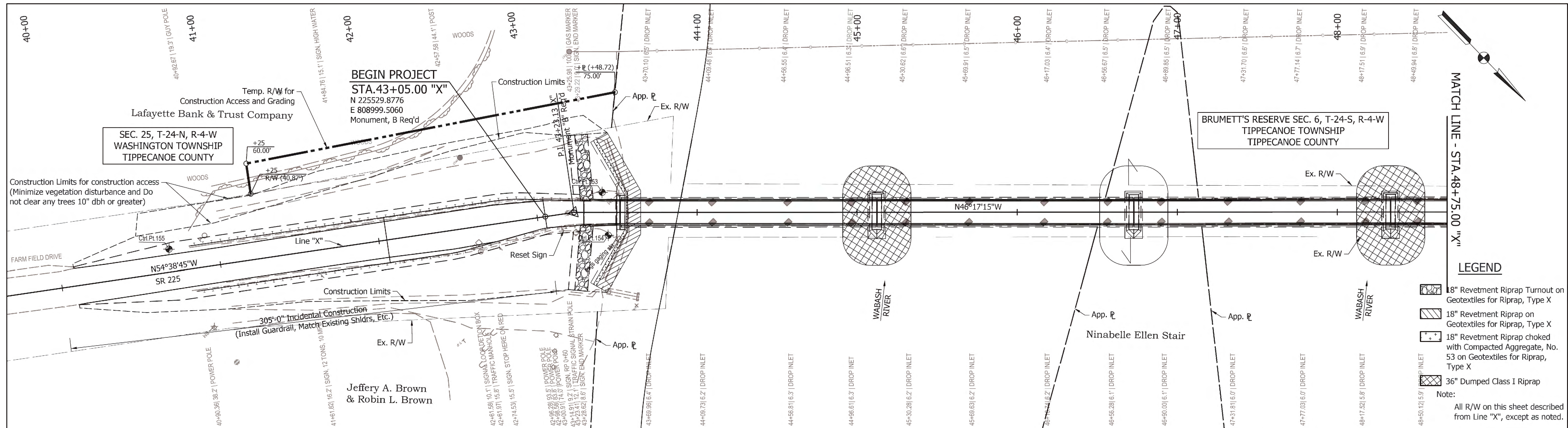
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CHECKED: LLS CHECKED: TSW

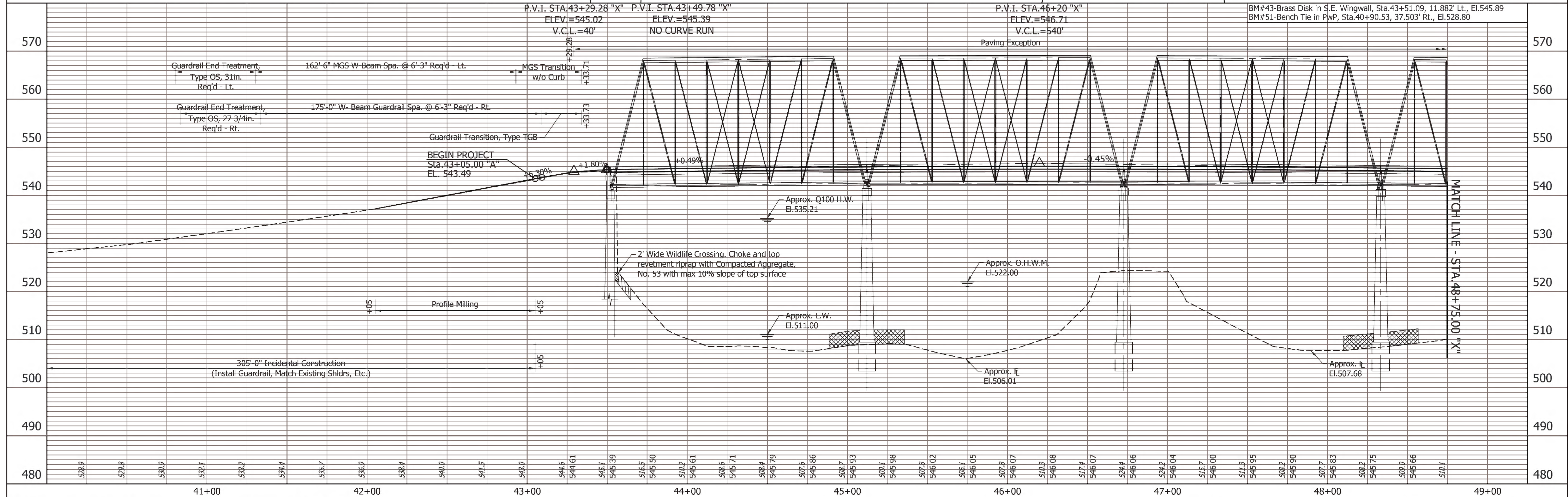
INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC

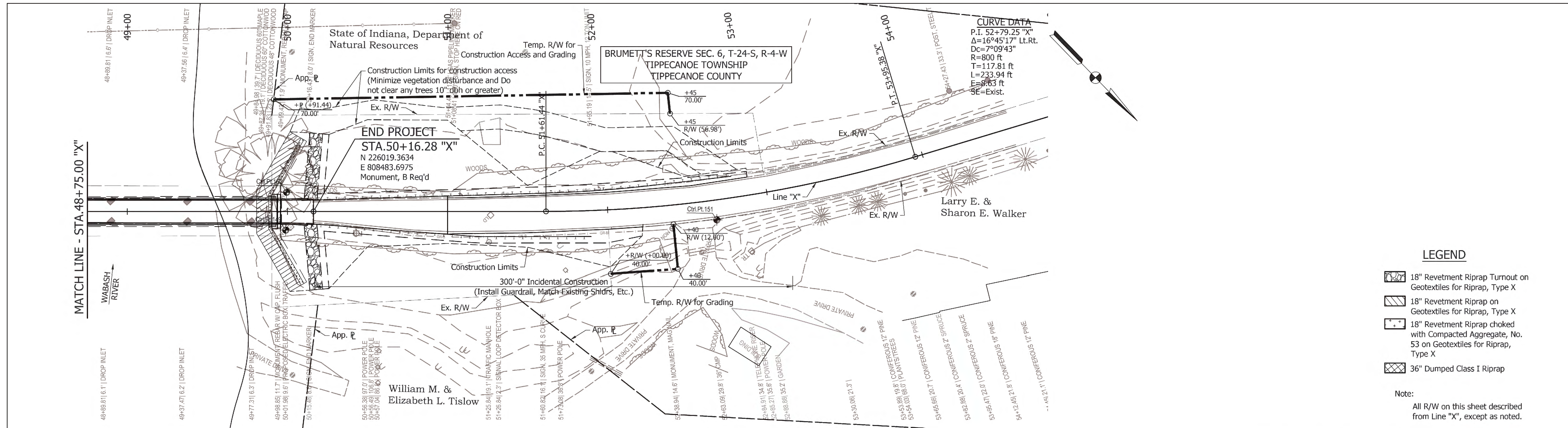
HORIZONTAL SCALE	BRIDGE FILE
N/A	225-79-04016H
VERTICAL SCALE	DESIGNATION
N/A	2002077
DRAWING NO.	SHEETS
	5 of 47
CONTRACT	PROJECT
B-43431	2002077



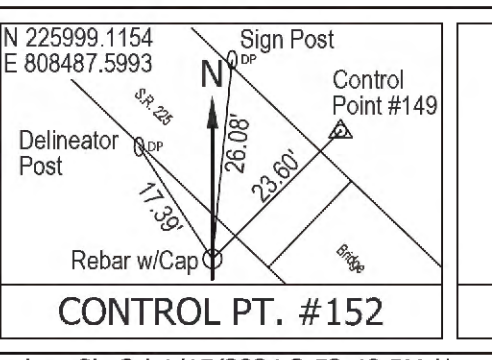
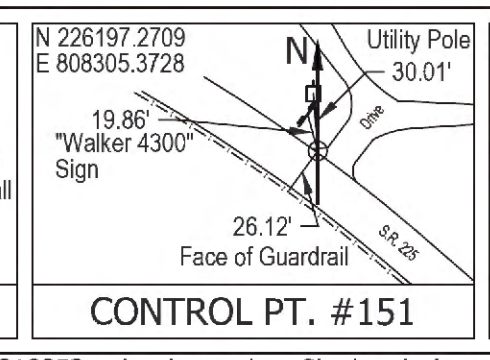
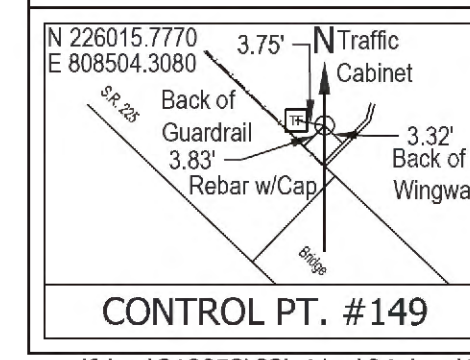
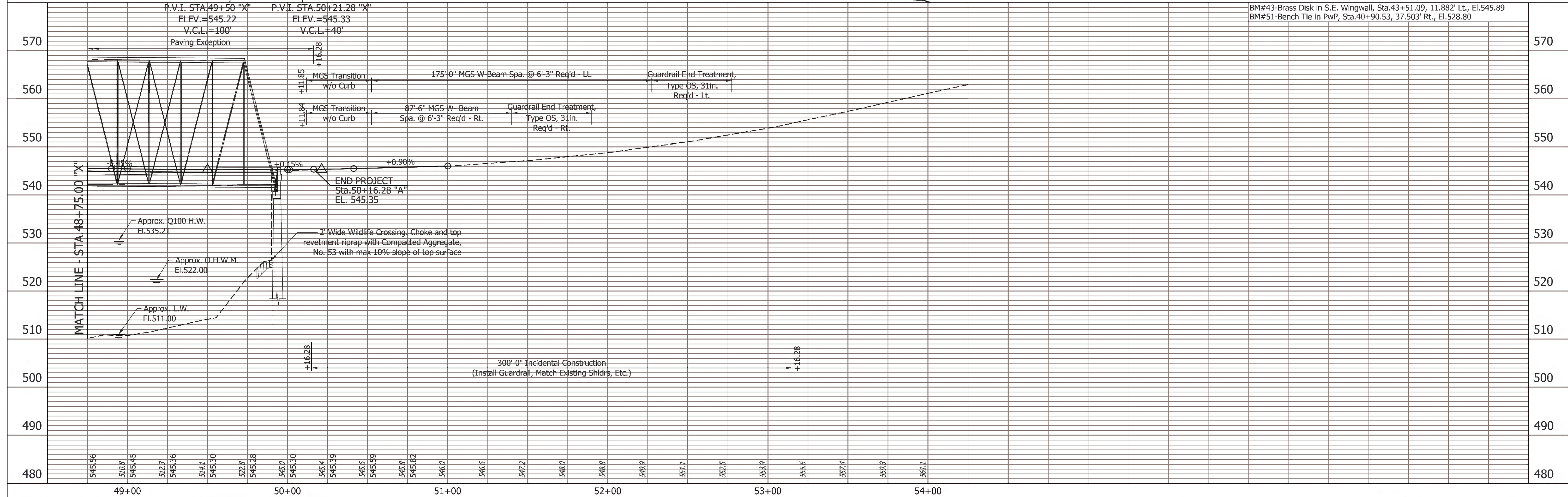
- LEGEND**
- 18" Revetment Riprap Turnout on Geotextiles for Riprap, Type X
 - 18" Revetment Riprap on Geotextiles for Riprap, Type X
 - 18" Revetment Riprap choked with Compacted Aggregate, No. 53 on Geotextiles for Riprap, Type X
 - 36" Dumped Class I Riprap
- Note:
All R/W on this sheet described from Line "X", except as noted.



<p>Control Point #153 N 225543.4629 E 808963.3839</p> <p>Control Point #154 N 225563.4864 E 808979.1646</p> <p>Control Point #155 N 225382.0308 E 809183.3761</p>	<p>INDIANA DEPARTMENT OF TRANSPORTATION</p> <p>DESIGNED: TSW DRAWN: MEN CHECKED: LLS</p> <p>RECOMMENDED FOR APPROVAL DESIGN ENGINEER DATE</p> <p>CHECKED: LLS CHECKED: TSW</p>	<p>HORIZONTAL SCALE 1" = 30'</p> <p>VERTICAL SCALE 1" = 10'</p> <p>DRAWING NO. SHEETS</p> <p>CONTRACT PROJECT</p>
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- LEGEND**
- 18" Revetment Riprap Turnout on Geotextiles for Riprap, Type X
 - 18" Revetment Riprap on Geotextiles for Riprap, Type X
 - 18" Revetment Riprap choked with Compacted Aggregate, No. 53 on Geotextiles for Riprap, Type X
 - 36" Dumped Class I Riprap
- Note:
All R/W on this sheet described from Line "X", except as noted.



N 226015.7770 E 808504.3080	N 226197.2709 E 808305.3728	N 225999.1154 E 808487.5993
3.75'	19.86'	26.00'
Traffic Cabinet	Walker 4300 Sign	Sign Post
3.32' Back of Wingwall	3.83' Back of Guardrail	Control Point #149
30.01'	26.12' Face of Guardrail	17.39'
3.32'	3.83'	26.00'
3.32'	3.83'	26.00'

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: ISW	DRAWN: MEN	
CHECKED: LLS	CHECKED: ISW	

**INDIANA
DEPARTMENT OF TRANSPORTATION**

**PLAN AND PROFILE
LINE "X"**

HORIZONTAL SCALE 1"=30'	BRIDGE FILE 225-79-04016H
VERTICAL SCALE 1"=10'	DESIGNATION 2002077
DRAWING NO.	SHEETS
	7 of 48
CONTRACT B-43431	PROJECT 2002077

40+00

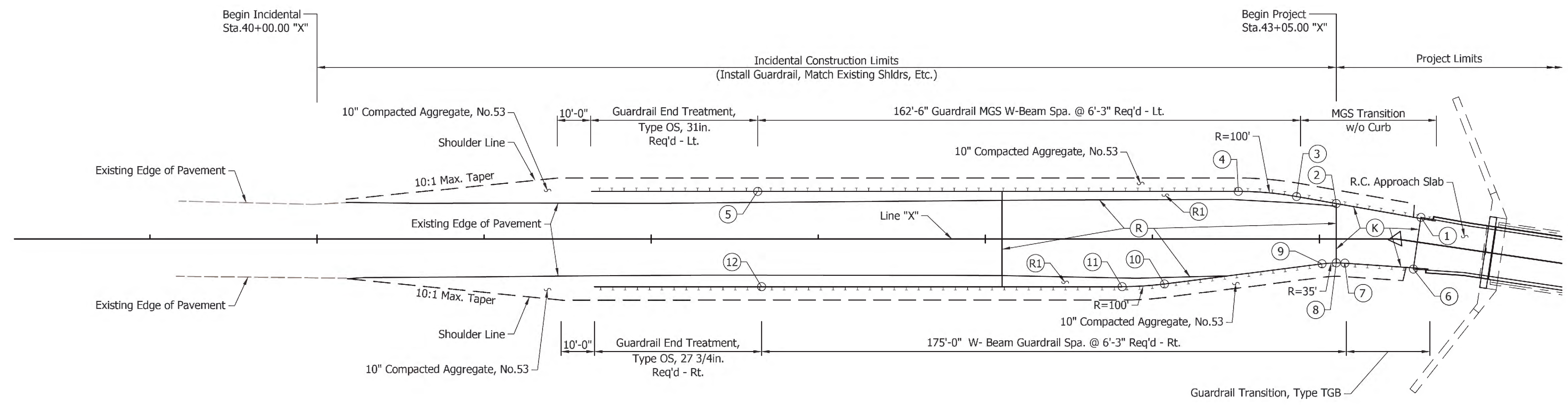
41+00

42+00

43+00

LEGEND

- (J) Widening with HMA, Type B
(275 lb/syd, HMA Intermediate, Type B on
660 lb/syd, HMA Base, Type B
(Tack Coat between HMA Layers)
- (K) 165 lb/syd, QC/QA-HMA, 3, 64, Surface, 9.5 mm on
275 lb/syd, QC/QA-HMA, 3, 64, Intermediate, 19.0 mm on
660 lb/syd, QC/QA-HMA, 3, 64, Base, 25.0 mm
(Tack Coat between HMA Layers)
- (R) 165 lb/syd, QC/QA-HMA, 3, 64, Surface, 9.5 mm on
Transition Milling, 1.5 in.
After Milling, seal visible cracks 0.25 in. wide or wider, before
applying tack coat, with PG 64-22 only. No Emulsion shall be
used. The sealed cracks shall not be overbonded.
- (R1) 165 lb/syd, QC/QA-HMA, 3, 64, Surface, 9.5 mm on
Widening with HMA, Type B



Station	Offset
①	43+29.28 "X" 7.11' Lt.
②	43+05.00 "X" 10.62' Lt.
③	42+94.35 "X" 12.50' Lt.
④	42+75.69 "X" 14.25' Lt.
⑤	40+82.23 "X" 14.25' Lt.
⑥	43+29.28 "X" 7.83' Rt.
⑦	43+07.58 "X" 7.23' Rt.
⑧	43+05.00 "X" 7.14' Rt.
⑨	43+00.73 "X" 7.42' Rt.
⑩	42+53.58 "X" 13.45' Rt.
⑪	42+40.91 "X" 14.25' Rt.
⑫	40+83.01 "X" 14.25' Rt.

SHOULDER AND GUARDRAIL DETAILS
(REQ'D @ BEGINNING OF PROJECT)
Scale: 1" = 20'

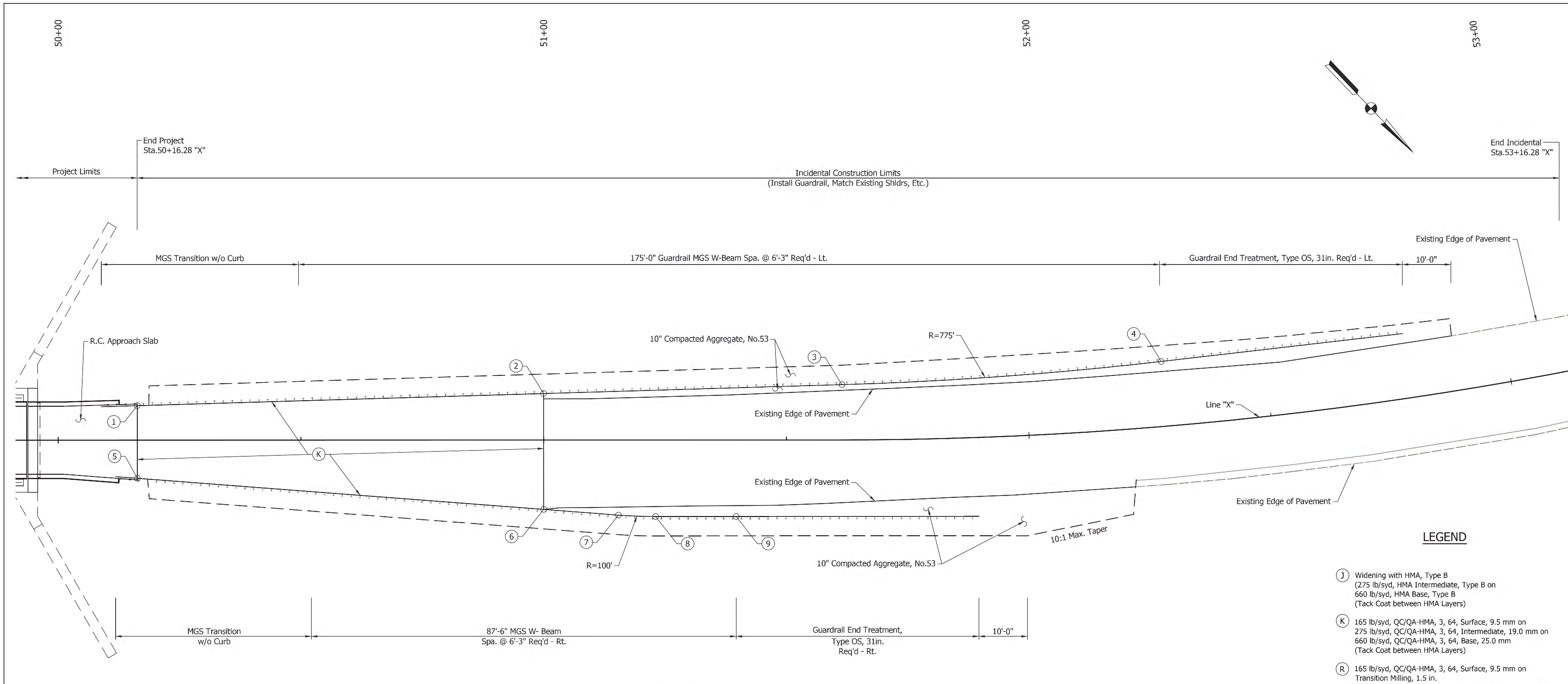
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: TSW _____	DRAWN: MEN _____	
CHECKED: LLS _____	CHECKED: TSW _____	

INDIANA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION LAYOUT DETAILS

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	225-79-04016H
VERTICAL SCALE	DESIGNATION
1"=20'	2002077
DRAWING NO.	SHEETS
	8 of 47
CONTRACT	PROJECT
B-43431	2002077



SHOULDER AND GUARDRAIL DETAILS
(REQ'D @ END OF PROJECT)
Scale: 1" = 10'

LEGEND

- (J) Widening with HMA, Type B
(275 lb/syd, HMA Intermediate, Type B on 660 lb/syd, HMA Base, Type B (Tack Coat between HMA Layers)
- (K) 165 lb/syd, QC/QA-HMA, 3, 64, Surface, 9.5 mm on 275 lb/syd, QC/QA-HMA, 3, 64, Intermediate, 19.0 mm on 660 lb/syd, QC/QA-HMA, 3, 64, Base, 25.0 mm (Tack Coat between HMA Layers)
- (R) 165 lb/syd, QC/QA-HMA, 3, 64, Surface, 9.5 mm on Transition Milling, 1.5 in.
After Milling, seal visible cracks 0.25 in. wide or wider, before applying tack coat, with PG 64-22 only. No Emulsion shall be used. The sealed cracks shall not be overbonded.
- (R1) 165 lb/syd, QC/QA-HMA, 3, 64, Surface, 9.5 mm on Widening with HMA, Type B

Station	Offset
①	50+16.28 "X" 7.11' Lt.
②	51+00.00 "X" 9.58' Lt.
③	51+61.44 "X" 11.38' Lt.
④	52+28.42 "X" 13.37' Lt.
⑤	50+16.28 "X" 7.83' Rt.
⑥	51+00.00 "X" 14.27' Rt.
⑦	51+15.38 "X" 15.46' Rt.
⑧	51+23.05 "X" 15.75' Rt.
⑨	51+39.65 "X" 15.75' Rt.

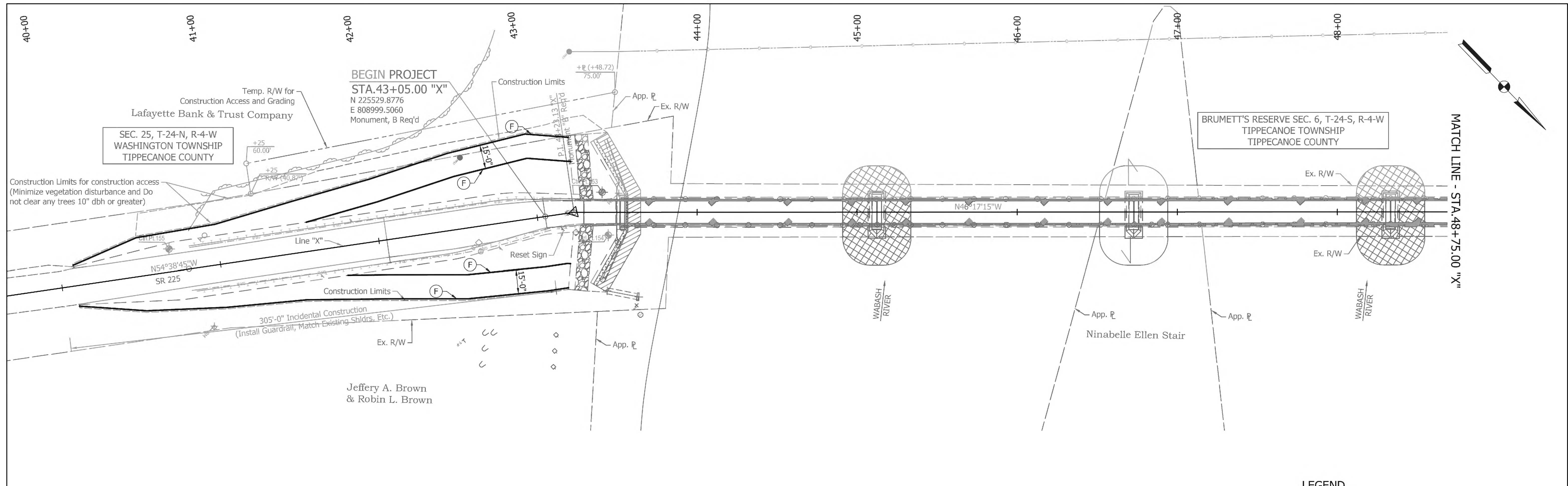
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: TSW _____	DRAWN: MEN _____	
CHECKED: LLS _____	CHECKED: TSW _____	

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION LAYOUT DETAILS

HORIZONTAL SCALE 1"=10'	BRIDGE FILE 225-79-04016H
VERTICAL SCALE 1"=10'	DESIGNATION 2002077
DRAWING NO.	SHEETS
	9 of 47
CONTRACT B-43431	PROJECT 2002077

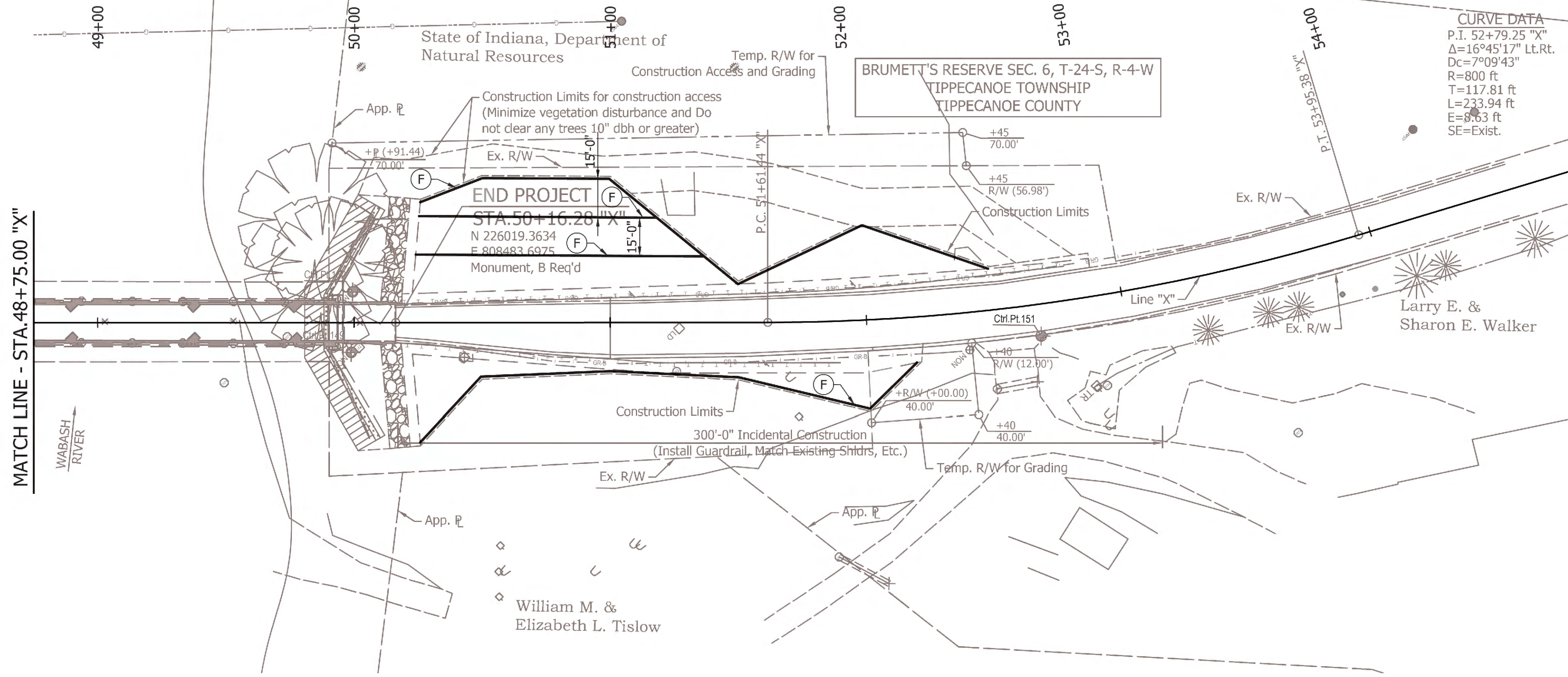


MATCH LINE - STA. 48+75.00 "X"

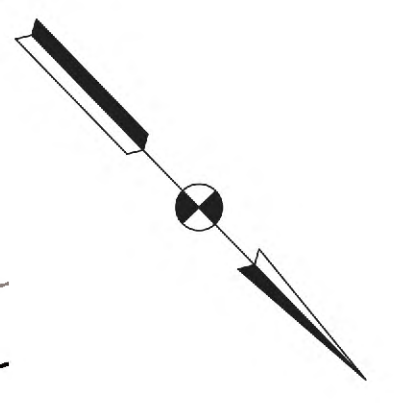
LEGEND

(F) Filter Sock

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____	INDIANA DEPARTMENT OF TRANSPORTATION EROSION CONTROL PLAN LINE "X"		HORIZONTAL SCALE	BRIDGE FILE
			1"=30'	225-79-04016H
			VERTICAL SCALE	DESIGNATION
			1"=10'	2002077
DESIGNED: TSW	DRAWN: NW	DRAWING NO.	SHEETS	
CHECKED: LLS	CHECKED: TSW	10	of	48
		CONTRACT	PROJECT	
		B-43431	2002077	



CURVE DATA
 P.I. 52+79.25 "X"
 $\Delta = 16^\circ 45' 17''$ Lt.Rt.
 $Dc = 7^\circ 09' 43''$
 $R = 800$ ft
 $T = 117.81$ ft
 $L = 233.94$ ft
 $E = 6.63$ ft
 SE=Exist.



LEGEND
 (F) Filter Sock

MATCH LINE - STA. 48+75.00 "X"

WABASH RIVER

State of Indiana, Department of Natural Resources

BRUMET'S RESERVE SEC. 6, T-24-S, R-4-W
 TIPPECANOE TOWNSHIP
 TIPPECANOE COUNTY

Larry E. & Sharon E. Walker

William M. & Elizabeth L. Tislow

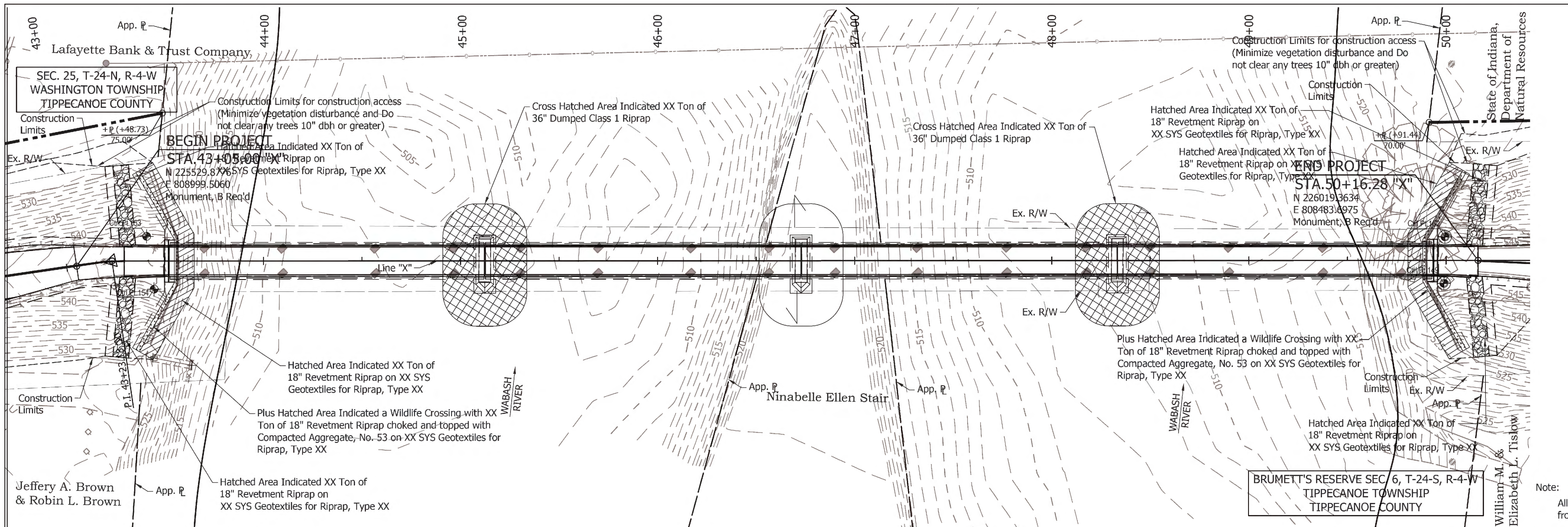
END PROJECT
 STA. 50+16.28
 N 226019.3634
 E 808483.6975
 Monument, B Req'd

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: TSW	DRAWN: NW	
CHECKED: LLS	CHECKED: TSW	

INDIANA
 DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN
 LINE "X"

HORIZONTAL SCALE	BRIDGE FILE
1"=30'	225-79-04016H
VERTICAL SCALE	DESIGNATION
1"=10'	2002077
DRAWING NO.	SHEETS
	11 of 48
CONTRACT	PROJECT
B-43431	2002077



EXISTING STRUCTURE
Existing Structure is a 4 Span Steel Through Bridge (4@ 158'-0") with a 14'-5" Clear Roadway. (To Be Rehabilitated)

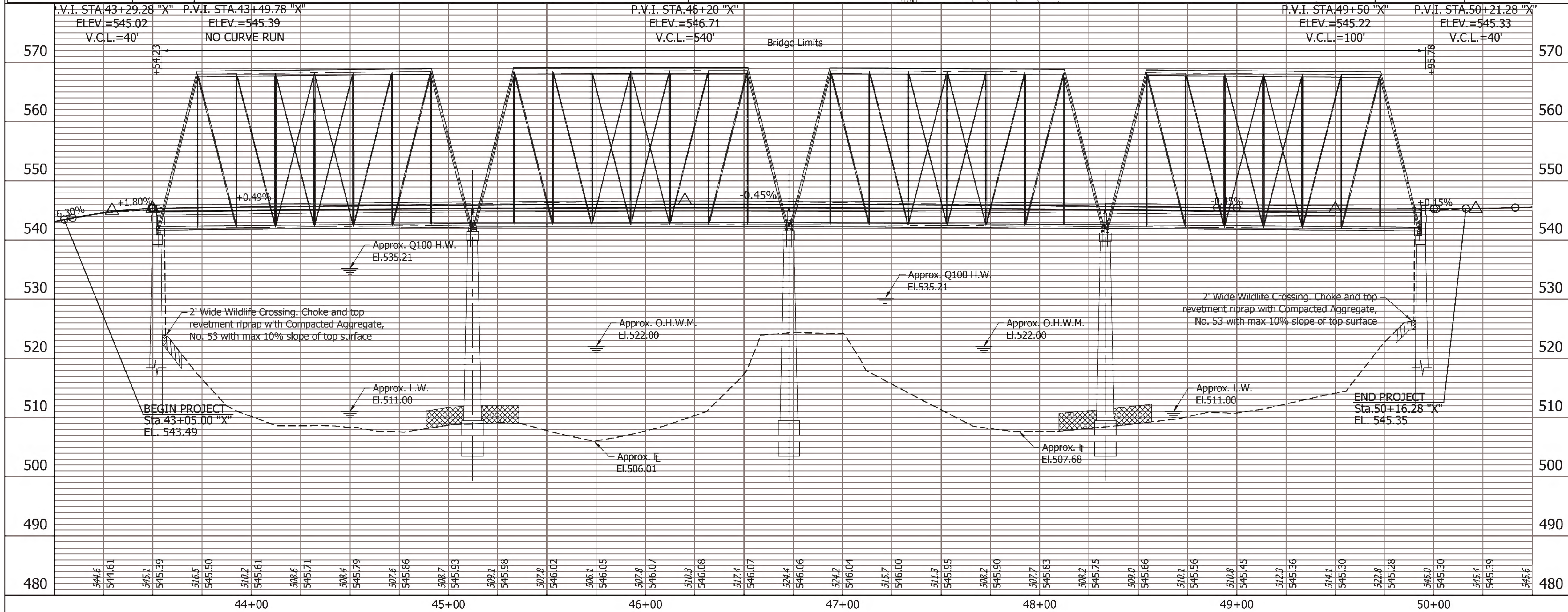
EARTHWORK SUMMARY

Common Excavation	xxx Cys
Usable Common Excavation (xx%)	xxx Cys
Fill + 20%	xxx Cys
Waterway Excavation	xx Cys
Usable Waterway Excavation (50%)	xx Cys
Borrow/Waste	xx Cys

The estimated quantities for Benching are xxx Cys for Cut and xxx Cys for Fill and are not included in the Earthwork Summary.

HYDRAULIC DATA

Drainage Area	4400 Sq Mi
Design Discharge, Q100	79,000 cfs
High Water Elevation, Q100	El.536.25
Existing Bridge Skew	0°
Flowline Elevation	El.506.01
Contraction Scour, Q100	5.52 ft
Pier Scour, Q100	11.62 ft
Total Scour, Q100	17.14 ft
Low Scour Elevation, Q100	El.488.87
Max. Velocity, Q100	5.13 ft/sec
Avg. Velocity, Q100	4.48 ft/sec



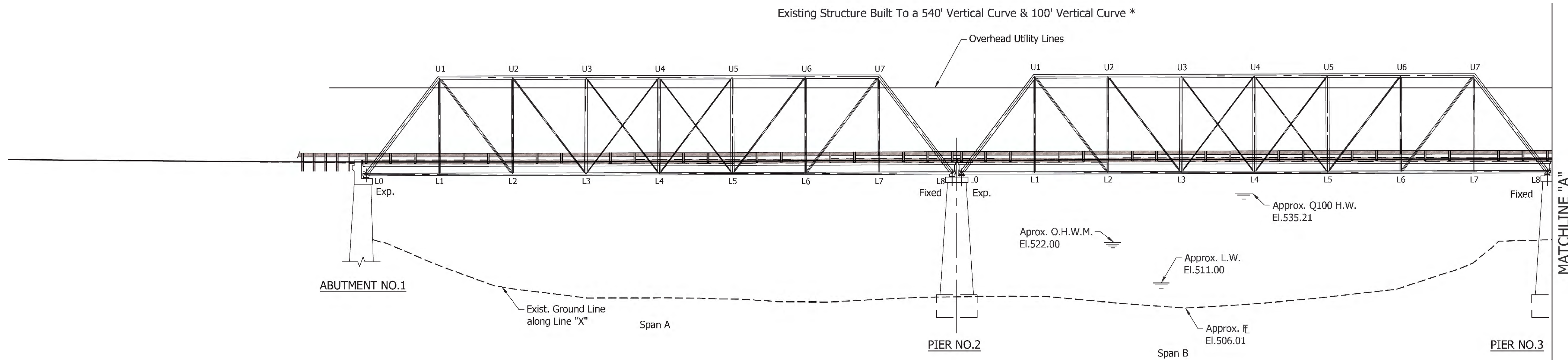
LEGEND

- 18" Revetment Riprap Turnout on Geotextiles for Riprap, Type X
- 18" Revetment Riprap on Geotextiles for Riprap, Type X
- 18" Revetment Riprap choked with Compacted Aggregate, No. 53 on Geotextiles for Riprap, Type X
- 36" Dumped Class 1 Riprap

STEEL THROUGH TRUSS BRIDGE
4 SPANS @ 158'-0"
14'-0" CLEAR ROADWAY SKEW: 0°
SR 225 OVER WABASH RIVER
TIPPECANOE COUNTY

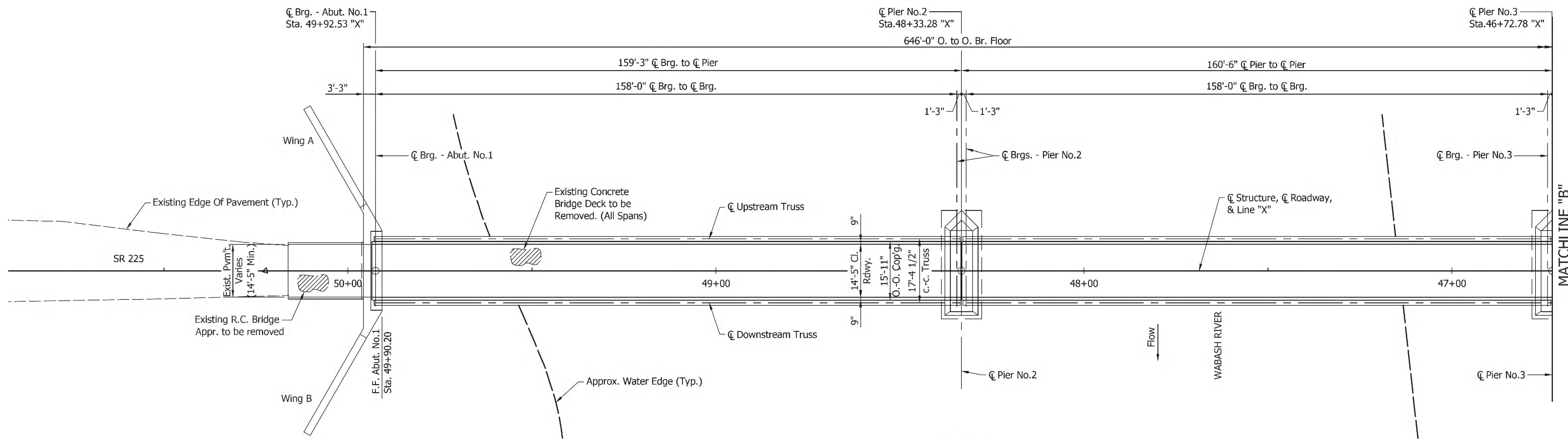
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE	BRIDGE FILE
DESIGNED: TSW	DRAWN: MEN			1"=30'	225-79-04016H
CHECKED: LLS	CHECKED: TSW		LAYOUT LINE "X"	VERTICAL SCALE	DESIGNATION
				1"=10'	2002077
			DRAWING NO. S1 of S15	SHEETS	
				12	of 48
			CONTRACT	PROJECT	
			B-43431	2002077	

Existing Structure Built To a 540' Vertical Curve & 100' Vertical Curve *



* There is no record of the existing vertical curve. The grade is based on fitting vertical curve to the surveyed top of floor beams throughout the bridge.

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



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

Notes:
For General Notes, Design Data, Construction Procedure and Typical section, see Dwg.56.
Hatched areas indicates areas to be removed.
General Plan and Structure Details shown in reverse stationing order to be consistent with original plans and subsequent rehabilitations and repairs.

STEEL THROUGH TRUSS BRIDGE
4 SPANS @ 158'-0"
14'-5" CLEAR ROADWAY SKEW: 0°
SR 225 OVER WABASH RIVER
TIPPECANOE COUNTY

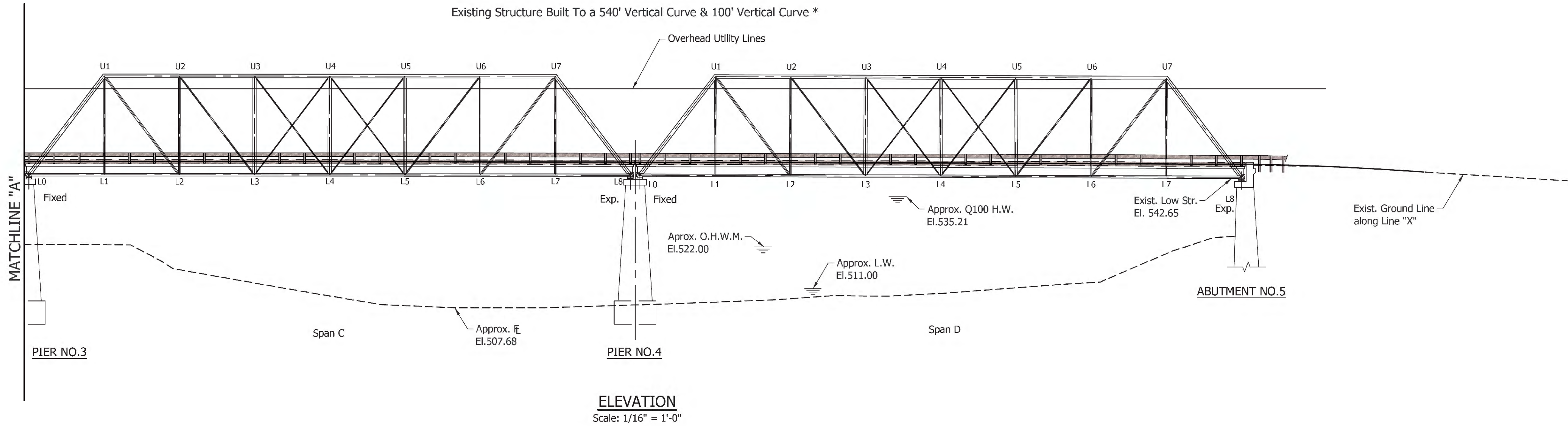
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: TSW	DRAWN: JF	
CHECKED: LLS	CHECKED: TSW	

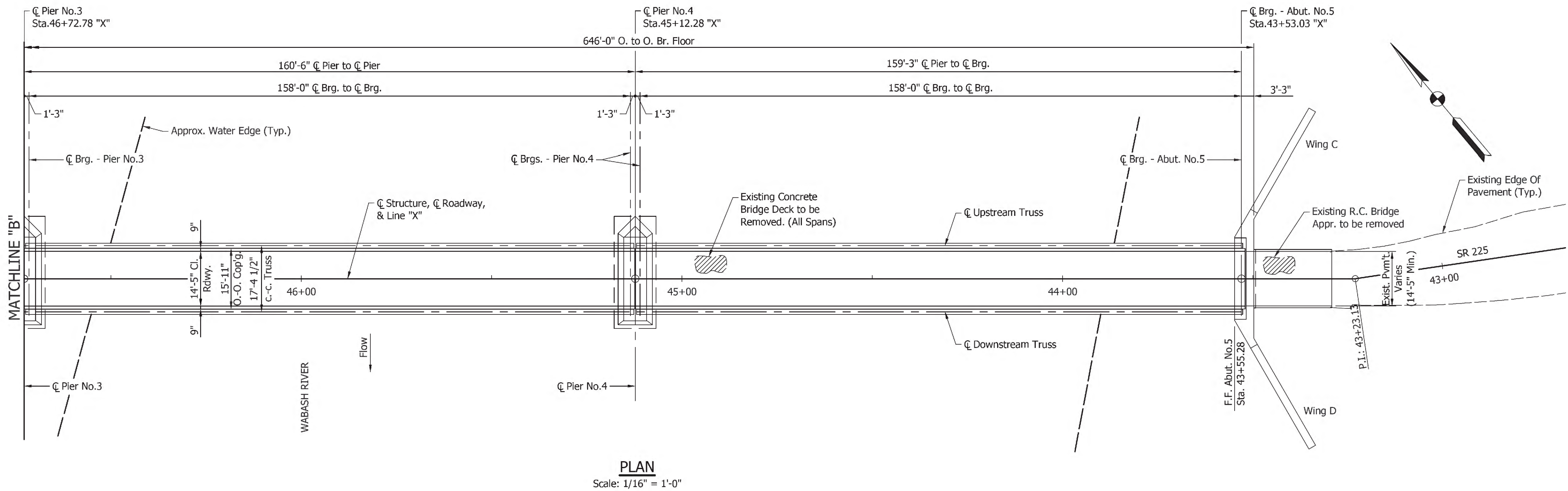
INDIANA
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
EXISTING

HORIZONTAL SCALE	BRIDGE FILE
1/16" = 1'-0"	225-79-04016H
VERTICAL SCALE	DESIGNATION
1/16" = 1'-0"	2002077
DRAWING NO.	SHEETS
S2 of S14	14 of 47
CONTRACT	PROJECT
B-43431	2002077



* There is no record of the existing vertical curve. The grade is based on fitting vertical curve to the surveyed top of floor beams throughout the bridge.



Notes:
For General Notes, Design Data, Construction Procedure and Typical section, see Dwg.S6. Hatched areas indicates areas to be removed. General Plan and Structure Details shown in reverse stationing order to be consistent with original plans and subsequent rehabilitations and repairs.

STEEL THROUGH TRUSS BRIDGE
4 SPANS @ 158'-0"
14'-5" CLEAR ROADWAY SKEW: 0°
SR 225 OVER WABASH RIVER
TIPPECANOE COUNTY

NOT FOR CONSTRUCTION

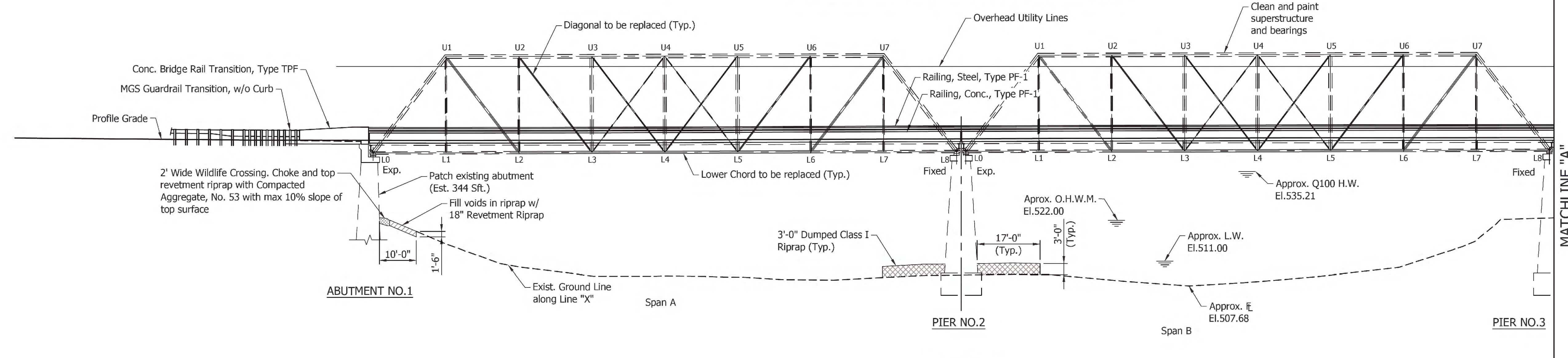
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: TSW	DRAWN: JF	
CHECKED: LLS	CHECKED: TSW	

INDIANA
DEPARTMENT OF TRANSPORTATION

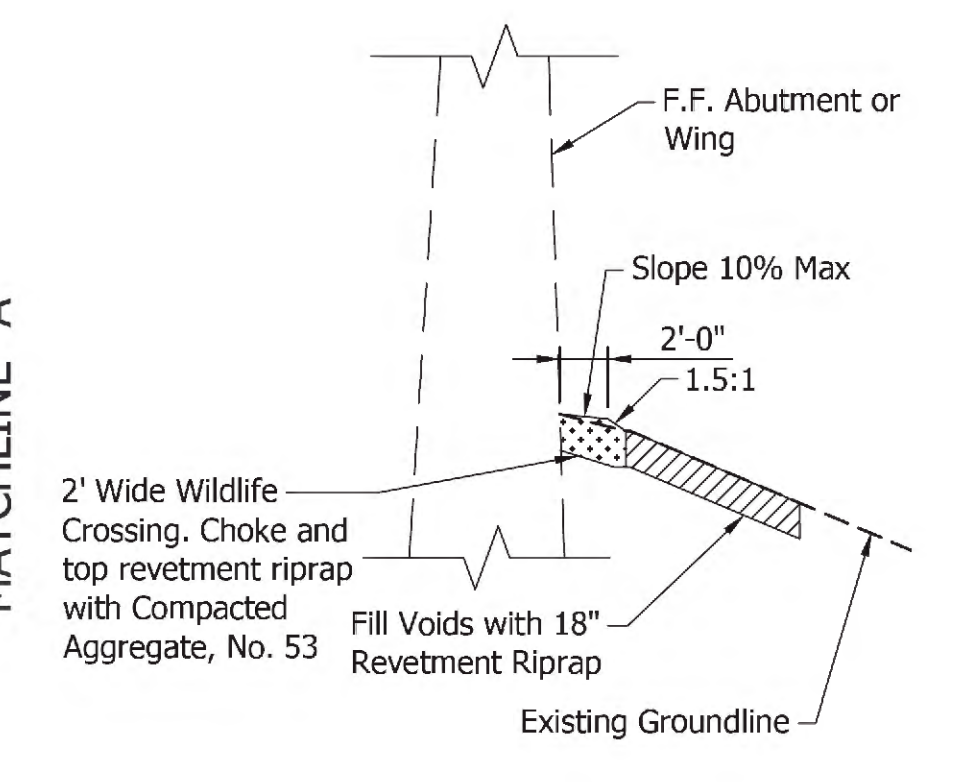
GENERAL PLAN
EXISTING

HORIZONTAL SCALE	BRIDGE FILE
1/16" = 1'-0"	225-79-04016H
VERTICAL SCALE	DESIGNATION
1/16" = 1'-0"	2002077
DRAWING NO.	SHEETS
S3 of S14	15 of 47
CONTRACT	PROJECT
B-43431	2002077

Existing Structure Built To a 540' Vertical Curve & 100' Vertical Curve *



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

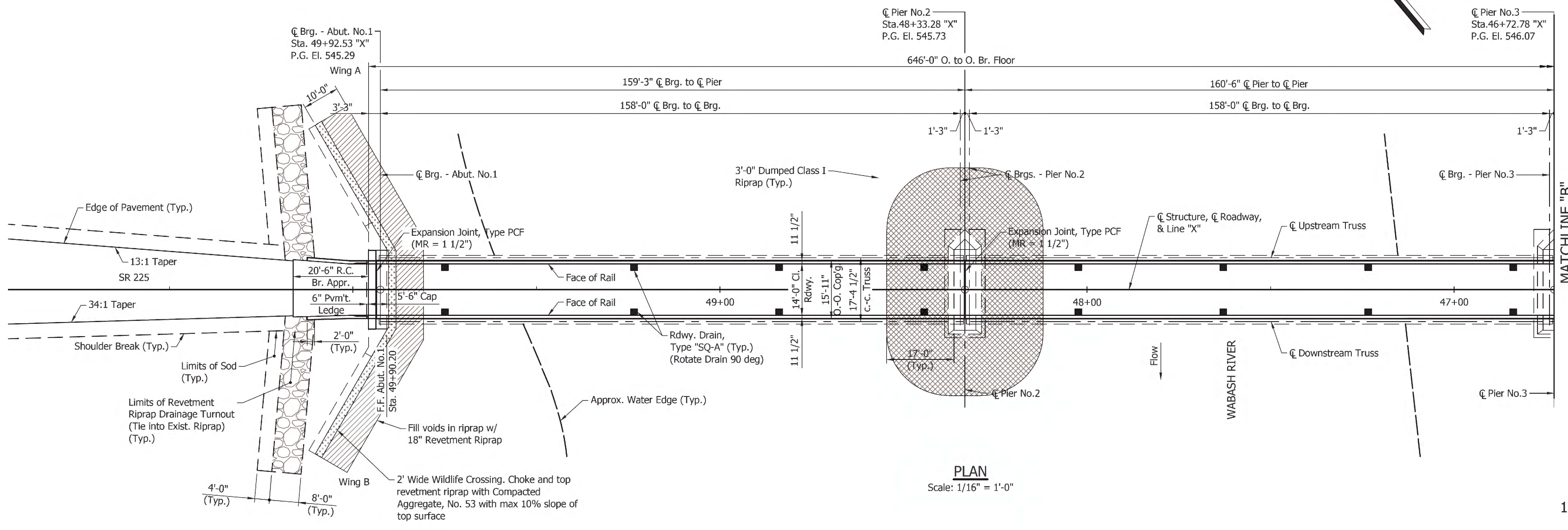


WILDLIFE CROSSING
Scale: 1/8" = 1'-0"

DECK DRAIN LOCATIONS

NORTH & SOUTH CURB LINES	
43+62.91 "X"	
44+61.41 "X"	
45+43.16 "X"	
46+22.16 "X"	
46+41.91 "X"	
46+83.91 "X"	
47+23.41 "X"	
47+62.91 "X"	
48+02.41 "X"	
48+44.41 "X"	
48+83.91 "X"	
49+23.41 "X"	
49+75 "X"	

Notes:
For General Notes, Design Data, Construction Procedure and Typical section, see Dwg.S6.
For additional details of member replacement and repairs, see Dwg.S8 thru S11.
General Plan and Structure Details shown in reverse stationing order to be consistent with original plans and subsequent rehabilitations and repairs.



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

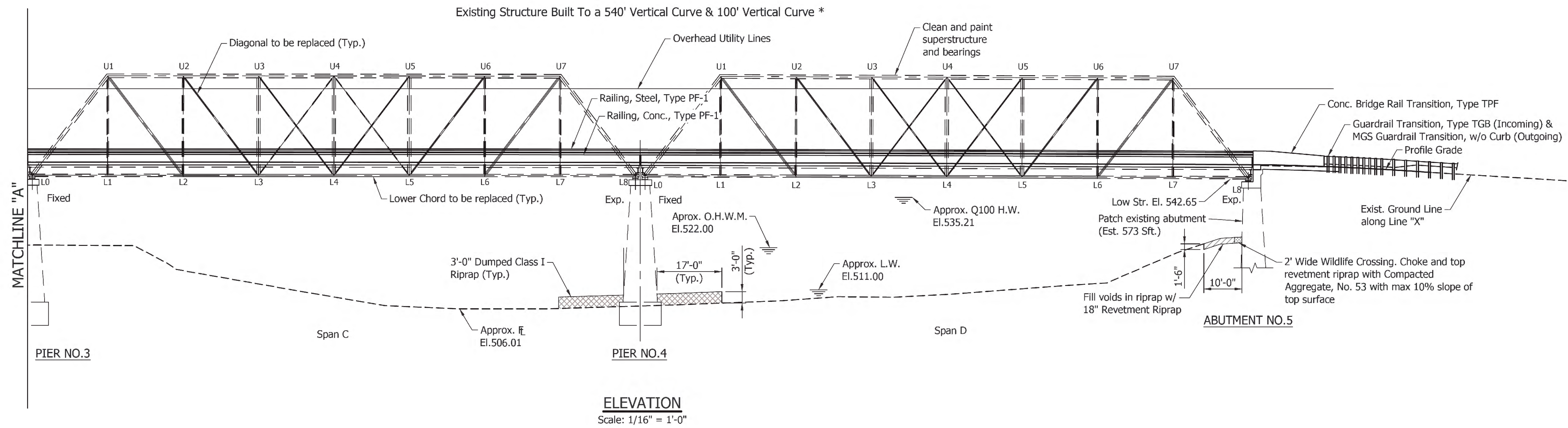
STEEL THROUGH TRUSS BRIDGE
4 SPANS @ 158'-0"
14'-0" CLEAR ROADWAY SKEW: 0°
SR 225 OVER WABASH RIVER
TIPPECANOE COUNTY

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: TSW	DRAWN: JF	
CHECKED: LLS	CHECKED: TSW	

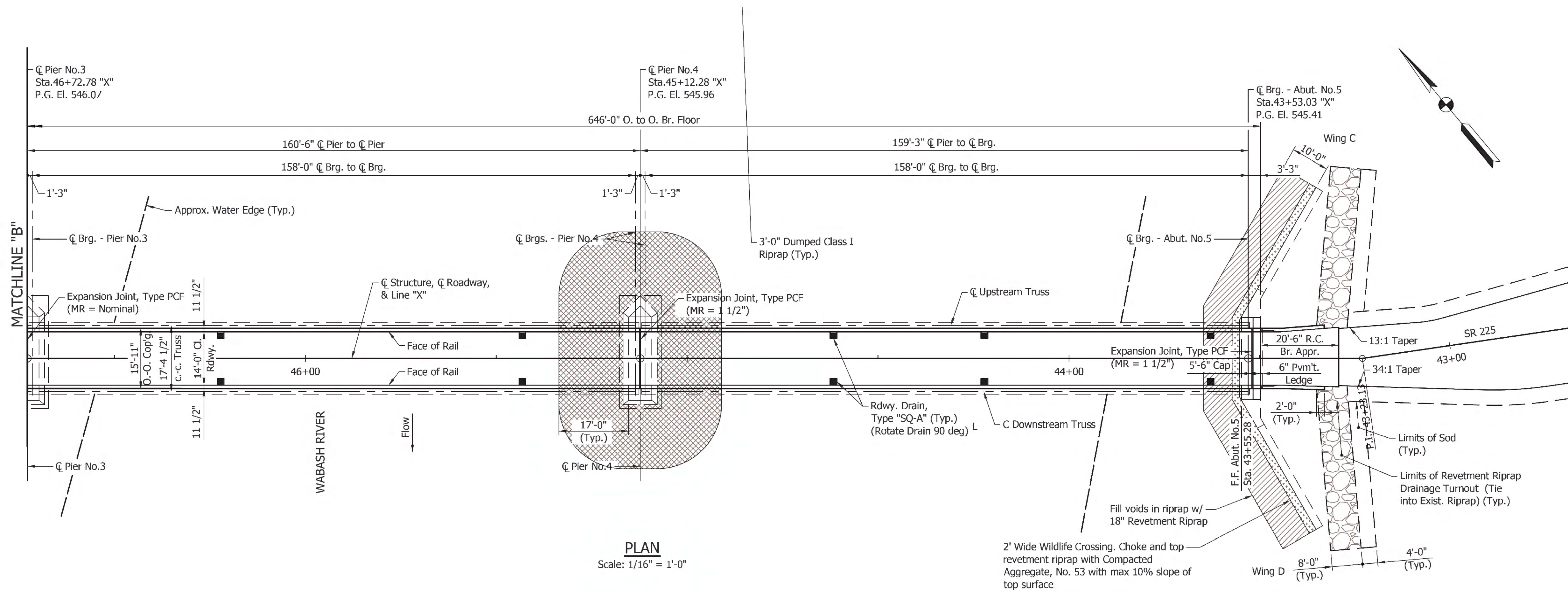
INDIANA
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
PROPOSED

HORIZONTAL SCALE 1/16" = 1'-0"	BRIDGE FILE 225-79-04016H
VERTICAL SCALE 1/16" = 1'-0"	DESIGNATION 2002077
DRAWING NO. S4 of S15	SHEETS 15 of 48
CONTRACT B-43431	PROJECT 2002077



* There is no record of the existing vertical curve. The grade is based on fitting vertical curve to the surveyed top of floor beams throughout the bridge.



DECK DRAIN LOCATIONS

NORTH & SOUTH CURB LINES	
43+62.91 "X"	
44+61.41 "X"	
45+43.16 "X"	
46+22.16 "X"	
46+41.91 "X"	
46+83.91 "X"	
47+23.41 "X"	
47+62.91 "X"	
48+02.41 "X"	
48+44.41 "X"	
48+83.91 "X"	
49+23.41 "X"	
49+75 "X"	

Note:
For General Notes, Design Data, Construction Procedure and Typical section, see Dwg.S6.
For additional details of member replacement and repairs, see Dwg.S8 thru S11.
General Plan and Structure Details shown in reverse stationing order to be consistent with original plans and subsequent rehabilitations and repairs.

STEEL THROUGH TRUSS BRIDGE
4 SPANS @ 158'-0"
14'-0" CLEAR ROADWAY SKEW: 0°
SR 225 OVER WABASH RIVER
TIPPECANOE COUNTY

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: TSW	DRAWN: JF	
CHECKED: LLS	CHECKED: TSW	

INDIANA DEPARTMENT OF TRANSPORTATION

GENERAL PLAN PROPOSED

HORIZONTAL SCALE	BRIDGE FILE
1/16" = 1'-0"	225-79-04016H
VERTICAL SCALE	DESIGNATION
1/16" = 1'-0"	2002077
DRAWING NO.	SHEETS
SS of S15	16 of 48
CONTRACT	PROJECT
B-43431	2002077

GENERAL NOTES

Reinforcing Steel covering shall be 1 1/2" in the top and 1" minimum in the bottom of the floor slab, and 2" in all other parts, unless noted.

Reinforcing Steel in bridge slab, railing and abutments shall be epoxy coated.

Portions of the present structure shall be Removed.

Missing or deteriorated bolts and rivets shall be replaced as directed by the Engineer.

All bolts and rivets that are Removed or open holes shall be replaced or filled with A325 round headed bolts of the applicable size. At no time shall standard bolts be utilized without the written consent of the Engineer.

The Contractor shall be responsible for and provide adequate Jacking, Shoring, and temporary support prior to all structural repairs. The Contractor shall submit to the Project Engineer/Supervisor (PE/S), 14 days prior to indicated work, a plan detailing their proposed method for jacking, shoring, and temporary support of the existing structure during the construction of truss members. Each drawing must include Contract Number, Contractor Name, and shall be designed and sealed by a Professional Engineer Licensed in the State of Indiana. See Special Provisions for additional details.

The bridge seats, railing and concrete railing transitions to be sealed in accordance with 702.21. (Estimated Quantity = xxx Sft.)

Where new work is to be fitted to the old work, the Contractor shall check and verify all dimensions, elevations, and conditions in the field and report any errors or discrepancies to the Engineer and assume responsibility for their correctness and the fit of the new construction to the existing structure.

Do not paint top of top Flange of Stringers

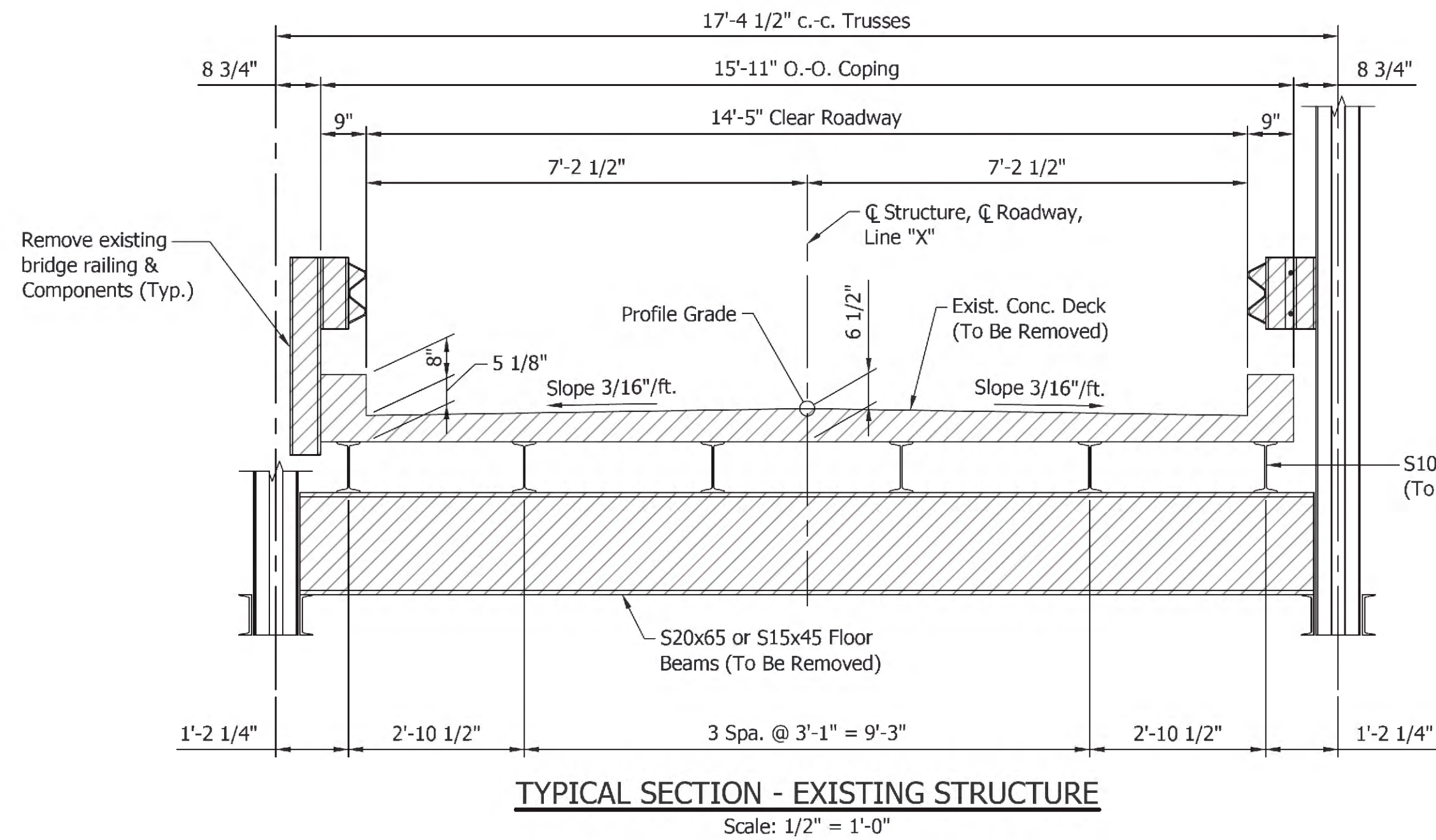
Plans for existing structure are on file in the Research and Documents Section at the Indiana Department of Transportation, as Bridge File No.225-79-04016 and are available upon request.

The bridge was last painted in 2002, but the tops of the stringer flanges were last painted in 1988. It should be assumed lead paint is present on the top of the top flange

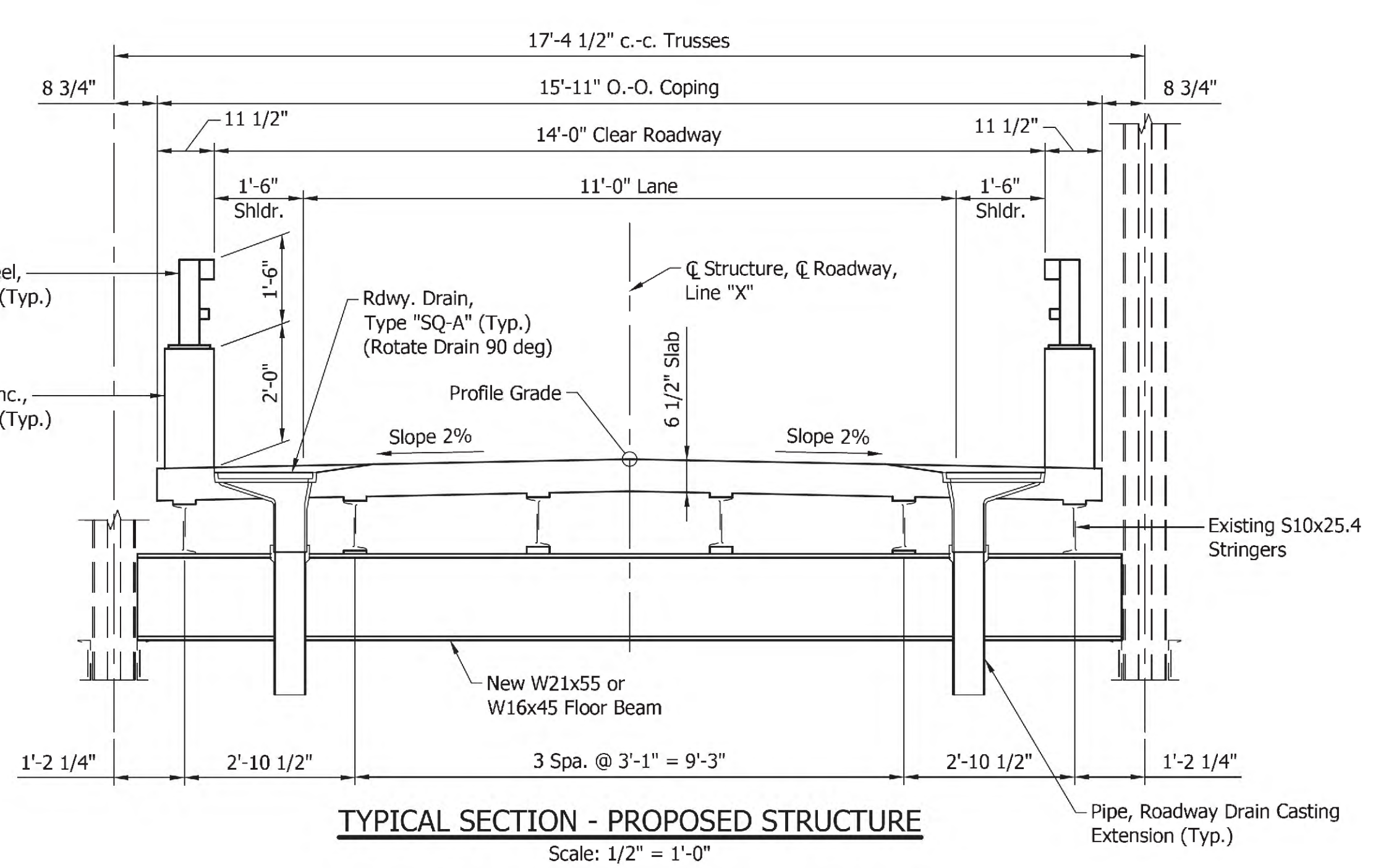
Concrete in bridge slab and railing to be Class "C-LW".

Concrete in substructure to be Class "A".

Paint Color shall match Federal Standards 595 Color No.15450 Light Blue.



TYPICAL SECTION - EXISTING STRUCTURE
Scale: 1/2" = 1'-0"



TYPICAL SECTION - PROPOSED STRUCTURE
Scale: 1/2" = 1'-0"

CONSTRUCTION PROCEDURE

1. Remove and repair bottom lateral connections and bracing where feasible as shown on detail plans.
2. Remove existing concrete deck, curbs, approach slabs and portions of mudwalls.
3. Replace or repair truss gusset plates, bearings, verticals, diagonals, low chords, low chord splices, bottom lateral connections and bracing, stringers, and floor beams.
4. Reset Truss Bearings.
5. Clean and paint truss, floor beams, and stringers.
6. Replace or patch portions of abutments and wings.
7. Construct deck, rails, portions of mudwalls, joints, portions of bridge seats, and approach slabs.
8. Complete all other work as shown in the detail plans.

The sequence of the above notes does not necessarily indicate sequence of construction operations.

Structure to be closed to traffic during all phases of work. See Maintenance of Traffic Details.

DESIGN DATA

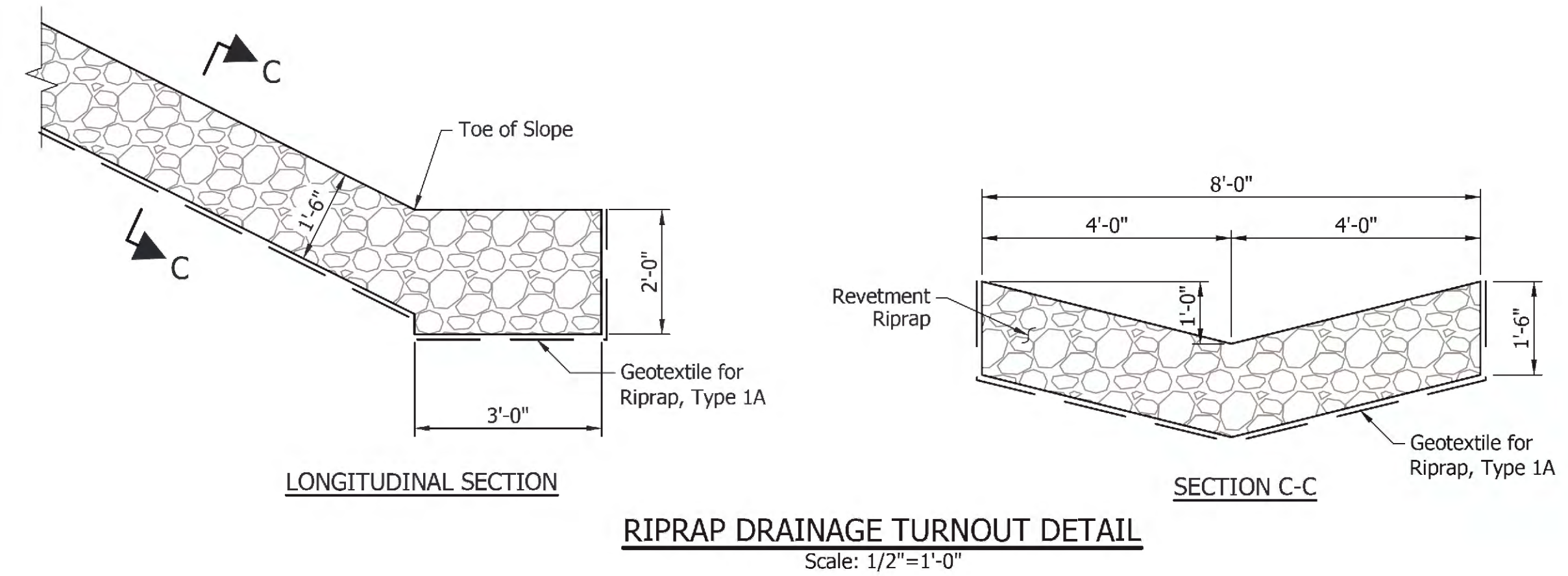
LIVE LOAD
Deck designed for HL-93 in accordance with the AASHTO LRFD Bridge Design Specifications, 9th Ed.
Floor beams designed for HS15-44 loading with impact and distribution of loads in accordance with 2002 AASHTO Standard Specifications.
Stringers and truss checked for HS15-44 loading with impact and distribution of loads in accordance with 2002 AASHTO Standard Specifications.

DEAD LOAD
Actual weight plus 18.75 psf (composite) for future wearing surface. Permanent deck forms will not be permitted.

FLOOR SLAB
Slab designed for HL-93 loading with a 1/2" sacrificial wearing surface.

DESIGN STRENGTHS
To be in accordance with the Ninth Edition AASHTO LRFD Bridge Design Specifications.
CONCRETE:
Class "C-LW": f'c=4,000 psi (unit weight = 125 pcf)
Class "A": f'c=3,500 psi
REINFORCING STEEL:
Grade 60: fy=60,000 psi
STRUCTURAL STEEL:
ASTM A709 Grade 50: fy=50,000 psi

SEISMIC DATA
AASHTO Guide Design Specifications for LRFD Seismic Bridge Design
Seismic Zone Category XX
S1 = XX
Site Class XX
Fv = XX



RIPRAP DRAINAGE TURNOUT DETAIL
Scale: 1/2"=1'-0"

Notes:
Hatched area indicates portions to be removed.
For Existing Elevation and Plan, see Dwgs.S3 & S4.
For Proposed Elevation and Plan, see Dwgs.S4 & S5.

NOT FOR CONSTRUCTION

STEEL THROUGH TRUSS BRIDGE
4 SPANS @ 158'-0"
14'-0" CLEAR ROADWAY SKEW: 0°
SR 225 OVER WABASH RIVER
TIPPECANOE COUNTY

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____	INDIANA DEPARTMENT OF TRANSPORTATION		HORIZONTAL SCALE	BRIDGE FILE
			AS NOTED	225-79-04016H
DESIGNED: TSW DRAWN: JF	GENERAL PLAN TYPICAL SECTIONS		VERTICAL SCALE	DESIGNATION
			AS NOTED	2002077
CHECKED: LLS CHECKED: TSW			DRAWING NO.	SHEETS
			S6 of S14	18 of 47
			CONTRACT	PROJECT
			B-43431	2002077

Appendix C:

Early Coordination



INDIANA DEPARTMENT OF TRANSPORTATION

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

PHONE: (317) 233-6795

Eric Holcomb, Governor
Michael Smith, Commissioner

July 11, 2022

Sample Early Coordination Letter

Early Coordination Agency

Re: Early Coordination Letter, Des. No. 2002077, Bridge Project on State Road (SR) 225, 0.60 Mile North of Old SR 25 in Tippecanoe County, Indiana.

Dear Early Coordination Agency:

The Indiana Department of Transportation (INDOT) with funding from the Federal Highway Administration (FHWA) is developing plans for the aforementioned project. In accordance with the National Environmental Policy Act (NEPA), its implementing regulations 40 CFR Part 1500-1508, and guidance from the Council on Environmental Quality (CEQ), this letter is being sent to you as part of the early coordination phase of the environmental review process, in which we are requesting comments from your area of expertise regarding any possible environmental effects associated with the 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.

INDOT has identified the need to address deficiencies of a bridge on State Road (SR) 225 over Wabash River, 0.60 mile north of SR 25. The project is in Section 25 of Township 24 north and Range 4 west as shown on the US Geological Survey 7.5' Lafayette East, Indiana Topographic Quadrangle.

The existing structure (#225-79-04016-F: NBI # 029150) is a four-span, steel, Pratt truss bridge that is approximately 646 feet long and approximately 15 feet, 11 inches wide. According to the INDOT Bridge Inspection Report, the original construction date is 1912, and it was rehabilitated in 1954, 1977, 1988, 1993, 1995, 1997, 2002, 2003, and 2014. This bridge is listed as a select bridge on the Indiana Historic Bridge Inventory. The bridge was inspected by INDOT on October 13, 2021, and was found to have cracking, leaching, and spalling with up to 17% delamination per span. There is also widespread deterioration of truss members and gusset plates due to existing curbs not being able to protect the truss members from roadway runoff. In addition, 161 of the truss and superstructure members do not have a load capacity meeting the Indiana Design Manual (IDM) requirement. The deck, wearing surface, superstructure and substructure have a poor condition rating (4 out of 9). The purpose of the proposed project is to improve portions of the bridge as required to increase the load capacity to meet an HS-15 loading and to protect members at risk of future deterioration.

Per the terms of the "Programmatic Agreement Regarding Management and Preservation of Indiana's Historic Bridges" (Historic Bridge PA), the Federal Highway Administration-Indiana Division (FHWA) will satisfy its Section 106 responsibilities involving "Select" and "Non-Select" bridges through the Project Development Process (PDP) of the Historic Bridges PA (Stipulation III).

The Historic Bridge PA Development Process and Section 4(f) of the Department of Transportation Act of 1966 require the development of a Section 4(f) Alternatives Analysis in an effort to minimize harm and reduce impacts to historic structures. Per the guidelines of the Historic Bridges Programmatic Agreement, the applicable alternatives will be evaluated to determine the most prudent and feasible option to meet the desired transportation need. The project will follow the Secretary of the Interior's (SOI) Standards for rehabilitation to retain the historical integrity and significance under Section 106 of the National Historic Preservation Act of 1966, as amended. The

preliminary preferred alternative would include the rehabilitation of the existing bridge to current INDOT and FHWA criteria for structural capacity and safety features. The existing bridge is one-lane, which is considered sub-standard according to IDM 412-2B; however, the bridge's clear roadway width would not be improved with this alternative, and it is acceptable to allow the bridge to remain as a one lane bridge.

It is anticipated that the entire floor system would be replaced, as well as truss member replacement/repairs. The deck would also be replaced, as well as the non-historic-age railing with a new railing which would be constructed. The current railing was installed in 1988 and has no historical significance. Patching of the substructure units would also be included to repair damaged portions of the piers and abutments while protecting them from future deterioration.

It is anticipated that 0.5 acre of temporary right-of-way (ROW) will be required as well as 0.02 acre of permanent ROW. The project will not add permanent lighting to the area; however, temporary lighting maybe used during construction. Maintenance of Traffic (MOT) will require full closure with a detour utilizing Interstate (I) 65. The MOT will be implemented per the Indiana Design Manual guidelines.

Land use in the vicinity is primarily forested. No listed areas or nature preserves exist in the project area and the project is not located within the potential karst feature area of the state. Beam, Longest and Neff (BLN) will perform waters and wetlands determinations to identify water resources that may be present. The Waters of the US Report will be reviewed by the INDOT Ecology and Waterway Permitting Office.

The project is anticipated to qualify for the Rangewide Programmatic Agreement for the Indiana bat and northern long-eared bat by completing the Information for Planning and Consultation (IPaC). BLN will have Qualified Professionals (QPs) investigate the project area for archaeological and historic resources for compliance with Section 106 of the National Historic Preservation Act (NHPA). The results will be coordinated with the INDOT Cultural Resources Office (CRO) to evaluate the project area for archaeological and historic resources and for Section 106 compliance. The results of this investigation will be forwarded to the State Historic Preservation Officer (SHPO) for review and concurrence as appropriate.

Please respond with your comments on any environmental impacts associated with this project. **If we do not receive a response within thirty (30) calendar days, it will be assumed that your agency feels there will be no adverse effects incurred as a result of the proposed project.** Should you find that an extension to the response time is necessary; a reasonable amount will be granted upon request. If you have any questions, or if we can be of any further assistance, please contact either Arshad Ahmed, INDOT Project Manager at ArAhmed@indot.in.gov or telephone 765-361-5258 or Preeti Samra at psamra@b-l-n.com or telephone 317-849-5832. Thank you in advance for your input.

Sincerely,



Preeti Samra
Environmental Analyst
Beam, Longest, and Neff

Attachments:

Mailing List

~~Maps (Location, Topographic, Aerial, NWI, Floodplain and Karst)~~

~~Ground-Level Photographs~~

Sample Early Coordination Letter

EARLY COORDINATION MAILING LIST

<p>Federal Highway Administration Federal Office Building, Room 254 575 North Pennsylvania Street Indianapolis, IN 46204 Electronic Coordination – k.carmanygeorge@dot.gov</p>	<p>Zane Kurtz Environmental Section Manager, Crawfordsville District Indiana Department of Transportation Electronic Coordination – RKurtz@indot.in.gov</p>
<p>Indiana Geological and Water Survey 611 North Walnut Grove Bloomington, IN 47405 Electronic Coordination https://igws.indiana.edu/eAssessment/</p>	<p>Field Supervisor U.S. Fish and Wildlife Service Bloomington, Indiana Field Office 620 South Walker Street Bloomington, IN 47403 Electronic Coordination – robin_mcwilliams@fws.gov</p>
<p>Environmental Coordinator Indiana Department of Natural Resources Division of Fish and Wildlife 402 West Washington Street, Room W273 Indianapolis, IN 46204 Electronic Coordination – environmentalreview@dnr.in.gov</p>	<p>State Conservationist Natural Resources Conservation Service 6013 Lakeside Blvd. Indianapolis, IN 46278 Electronic Coordination – rick.neilson@in.usda.gov</p>
<p>Regional Environmental Coordinator Midwest Regional Office National Park Service 601 Riverfront Drive Omaha, NE 68102 Electronic Coordination – mwro_compliance@nps.gov</p>	<p>Tippecanoe County Highway Department 20 N 3rd Street, 1st Floor Lafayette, IN 47901 Electronic Coordination – highway@tippecanoe.in.gov</p>
<p>Field Environmental Officer, Chicago Regional Officer U.S. Department of Housing and Urban Development Metcalf Federal Building 77 W. Jackson Blvd, Room 2401 Chicago, IL 60604 Electronic Coordination – erik.r.sandsted@hud.gov</p>	<p>Ms. Deborah Snyder U.S. Army Corps of Engineers Louisville District, Indianapolis Regulatory Office Indianapolis, IN 46216 Electronic Coordination – regulatoryapplicationsLRL@usace.army.mil</p>
<p>William “Smokey” Anderson Tippecanoe County Emergency Management Director 629 N 6th Street, Suite J Lafayette, IN 47901 Electronic Coordination - wwanderson@tippecanoe.in.gov</p>	<p>Tippecanoe County Commissioners 20 N 3rd Street, 1st Floor Lafayette, IN 47901 Electronic Coordination – commissioners@tippecanoe.in.gov</p>
<p>Area Plan Commission David Hittle- Executive Director 20 N 3rd Street Lafayette, IN 47901 Electronic Coordination- apc@tippecanoe.in.gov</p>	<p>Arshad Ahmed, PMP Project Manager, Crawfordsville District Indiana Department of Transportation 41 West 300 North Crawfordsville, IN 47933 Electronic Coordination: ArAhmed@indot.in.gov</p>
<p>Zach Beasley Tippecanoe County Surveyor 20 N 3rd Street Lafayette, IN 47901 Electronic Coordination – surveyor@tippecanoe.in.gov</p>	<p>Prophetstown State Park IDNR, Division of State Parks and Reservoirs 4112 E. State Road 225 West Lafayette, IN 47906 Electronic Coordination – jplanck@dnr.IN.gov</p>
<p>Indiana Gas Company, Inc. (Vectren North) 211 NW Riverside Dr Evansville, IN 47708 Electronic Coordination – www.grants@oed.in.gov</p>	<p>Commander, Eighth Coast Guard District Attn: Bridge Branch 1222 Spruce Street, Rm 2.102D St Louis, MO 63103-2832 Electronic Coordination - eric.washburn@uscg.mil</p>
<p>U.S. Fish and Wildlife Service (USFWS) USFWS Information for Planning and Consultation (IPaC) Electronic Coordination - https://ipac.ecosphere.fws.gov/</p>	

July 12, 2022

Preeti Samra
Beam, Longest and Neff, L.L.C.
8320 Craig Street
Indianapolis, Indiana 46250
bearl@b-l-n.com

Dear Mr. Samra:

The proposed Bridge Project in Tippecanoe County, Indiana (Des. No. 2002077), as referred to in your letter received July 11, 2022, will cause a conversion of prime farmland.

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

If you need additional information, please contact John Allen at 317-295-5859 or john.allen@usda.gov.

Sincerely,

JOHN ALLEN Digitally signed by JOHN ALLEN
Date: 2022.07.12 14:35:22 -04'00'

JOHN ALLEN
State Soil Scientist

Enclosures

FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)		Date Of Land Evaluation Request 7/12/22			
Name of Project DES2002077 Bridge Proj SR225		Federal Agency Involved FHWA			
Proposed Land Use		County and State Tippecanoe County, Indiana			
PART II (To be completed by NRCS)		Date Request Received By NRCS 7/11/22		Person Completing Form: JRA	
Does the site contain Prime, Unique, Statewide or Local Important Farmland? <i>(If no, the FPPA does not apply - do not complete additional parts of this form)</i>		YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		Acres Irrigated	
				Average Farm Size 321 ac	
Major Crop(s) Corn		Farmable Land In Govt. Jurisdiction Acres: 290266 % 90		Amount of Farmland As Defined in FPPA Acres: 26177 % 81	
Name of Land Evaluation System Used LESA		Name of State or Local Site Assessment System		Date Land Evaluation Returned by NRCS 7/12/22	
PART III (To be completed by Federal Agency)		Alternative Site Rating			
		Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly		0			
B. Total Acres To Be Converted Indirectly		0			
C. Total Acres In Site		0.02			
PART IV (To be completed by NRCS) Land Evaluation Information					
A. Total Acres Prime And Unique Farmland		0.02			
B. Total Acres Statewide Important or Local Important Farmland		0.00			
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted		<0.001			
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value		83			
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)		70			
PART VI (To be completed by Federal Agency) Site Assessment Criteria <i>(Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)</i>		Maximum Points	Site A	Site B	Site C
1. Area In Non-urban Use		(15)	15		
2. Perimeter In Non-urban Use		(10)	10		
3. Percent Of Site Being Farmed		(20)	5		
4. Protection Provided By State and Local Government		(20)	0		
5. Distance From Urban Built-up Area		(15)	5		
6. Distance To Urban Support Services		(15)	0		
7. Size Of Present Farm Unit Compared To Average		(10)	0		
8. Creation Of Non-farmable Farmland		(10)	0		
9. Availability Of Farm Support Services		(5)	0		
10. On-Farm Investments		(20)	0		
11. Effects Of Conversion On Farm Support Services		(10)	0		
12. Compatibility With Existing Agricultural Use		(10)	0		
TOTAL SITE ASSESSMENT POINTS		160	35	0	0
PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)		100	70	0	0
Total Site Assessment (From Part VI above or local site assessment)		160	35	0	0
TOTAL POINTS (Total of above 2 lines)		260	105	0	0
Site Selected: A		Date Of Selection n/a		Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	
Reason For Selection: Existing site location.					
Name of Federal agency representative completing this form: Raquel Walker					Date: 5/23/2023

(See Instructions on reverse side)

Organization and Project Information

Project ID:
Des. ID: 2002077
Project Title: Bridge Project on SR 225, 0.60 Mile North of Old SR 25 in Tippecanoe County
Name of Organization: Beam, Longest and Neff
Requested by: Preeti Samra

Environmental Assessment Report

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

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

DISCLAIMER:

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

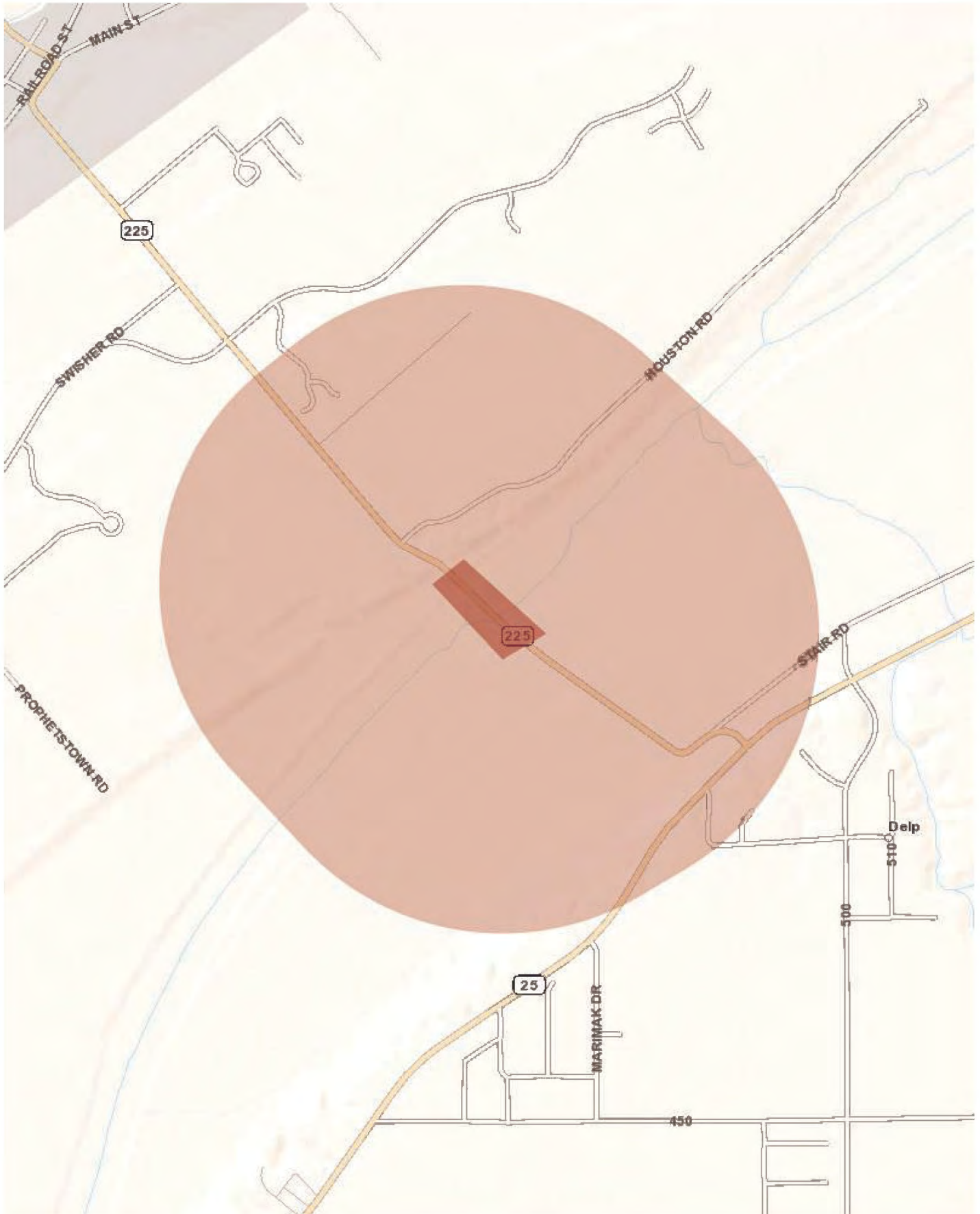
This information was furnished by Indiana Geological Survey

Address: 1001 E. 10th St., Bloomington, IN 47405

Email: IGSEnvir@indiana.edu

Phone: 812 855-7428

Date: July 14, 2022



Metadata:

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

Raquel Walker

From: Neal, Steven <Steven.Neal@centerpointenergy.com>
Sent: Tuesday, July 26, 2022 11:23 AM
To: Preeti Samra
Subject: RE: [External Email] Des. No. 2002077, Bridge Project on SR 225, Tippecanoe County-Early Coordination Letter
Attachments: RE: [External Email] Initial Notice, Des 2002077, SR 225 over the Wabash River,

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Good Morning,

I was asked to respond to your email as I was originally assigned to review the initial notice that was sent to us in August of last year (see attached). That email contains a facility map attached as well. We also have easements for our facilities in the area.

We do not anticipate any environmental impacts with regards to our facilities due to this project.

Please feel free to contact me if you need any further information. I would happy help out.

Thanks you,



Steven Neal
Gas Engineering
765.449.5673 w. | 765.637.8295 c.
CenterPointEnergy.com



From: Preeti Samra <psamra@b-l-n.com>
Sent: Thursday, July 14, 2022 9:34 AM
To: Myers, Dana <Dana.Myers@centerpointenergy.com>
Cc: Noland Jr, Jerry L <jerry.noland@centerpointenergy.com>
Subject: [External Email] Des. No. 2002077, Bridge Project on SR 225, Tippecanoe County-Early Coordination Letter

Some people who received this message don't often get email from psamra@b-l-n.com. [Learn why this is important](#)

EXTERNAL EMAIL

CAUTION: This message originated from outside CenterPoint Energy. Do not click on links, open attachments, or enter data unless you recognize the sender, were expecting the content and know it to be safe.

Good afternoon,

Attached is the Early Coordination Letter for a bridge project on SR 225, 0.60 mile north of Old SR 25 in Tippecanoe County, Indiana (Des 2002077). Please respond with your comments on any environmental impacts associated with this project. **If we do not receive a response within thirty (30) calendar days, it will be assumed that your agency feels there will be no adverse effects incurred as a result of the proposed project.** Should you find that an extension to the response time is necessary; a reasonable amount will be granted upon request.

Thank you in advance!

PREETI SAMRA

Environmental Analyst

o: 317.849.5832

c: 317.946.9709

B-L-N.com

BEAM, LONGEST and NEFF









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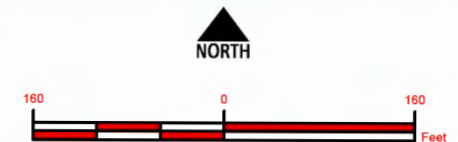
***** This email is from an external sender outside of the CenterPoint Energy network. Be cautious about clicking links or opening attachments from unknown sources. *****



Source: Esri, Maxar, GeoEye, Earthstar



-  PIPELINE LOW PRESSURE
-  PIPELINE MEDIUM PRESSURE
-  PIPELINE HIGH PRESSURE
-  PIPELINE TRANSMISSION
-  PIPELINE RETIRED
-  PIPELINE CASING
-  STATION
-  OTHER GAS FACILITY



PROJECT NAME: _____

INDOT Des.No.2002077

CREATED BY: Jon Eastham

ISSUE DATE: 8/24/2021

SHEET # 1 OF 1

REQUESTED BY: Denise Moe

DISCLAIMER

Vectren provides this map for reference only. Call 811 before excavating. DO NOT RELY on this map for any use including legal, engineering, survey, or financial/cost estimating. Always contact Vectren 800-227-1376 prior to performing work on or around Vectren facilities.

Area Plan Commission of Tippecanoe County, Indiana

July 28, 2022
Ref. No. 2022-179

Arshad Ahmed, Senior Project Manager
INDOT Crawfordsville District Office
41 W 300N
Crawfordsville, IN 47933

Dear Mr. Ahmed:

Thank you for including the Area Plan Commission as part of the early coordination phase of the SR 225 bridge project, des # 2002077. We have reviewed the project information and offer the following comments.

Historic Structures: In reviewing the Indiana State Historical Architectural and Archaeological Research database, the most obvious historic structure is the bridge itself, which has an Outstanding Rating. The Survey Number is 157-332-05031. Furthermore, on SR 225 at the northwest corner of the project area is a historical marker and the SHARRD number is 157-332-05031. Outside of a ½ mile radius of the bridge, there is the Wabash and Earie Canal (Notable Rating, 157-332-00014), the North Union Cemetery (Contributing Rating, CR-79-123), as well as a Historic District and numerous sites with the Town of Battle Ground.

The last historical site that needs to be researched is the location of Prophetstown. While we do not know its exact location, it could be within a ½ mile radius of the project site. We recommend a consultation with the State's Historic Preservation Officer to determine its impact.

The island where the bridge is located is called Goose and Heron Island, which is a wildlife preserve.

As for parks and recreation, Prophetstown State Park is within a ½ mile radius of the bridge. Other significant sites in the area include the following: The Farms at Prophetstown, Wah-ba-shik-a Nature Center, and the Tippecanoe Battlefield. The Battlefield is a National Historic Landmark.

Within a ½ mile radius of the bridge, we located five home water wells and one well for the State Park.

There are no oil and gas wells, NICHES Land Trust Areas, round barns, or underground storage tanks within a ½ mile radius of the bridge. There is US Aggregates (mining), and it is located just west of the project area.

The closest cemeteries (other than the previously mentioned North Union Cemetery) are the Battle Field Memorial, Harrisonville and the Battle Ground Cemetery. The closet schools are

the Battle Ground Intermediate School and the Battle Ground Elementary School. Both are located within the Town of Battle Ground. Likewise, the closet church is the Battle Ground United Methodist Church. There are no libraries within the Town of Battle Ground.

Please call or email if you have any questions.

Sincerely,

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

David Hittle
Executive Director

cc: Preeti Samra, Environmental Analyst

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

DNR #: ER-24854

Request Received: July 11, 2022

Requestor: Beam, Longest and Neff, LLC
Preeti Samra
8320 Craig Street
Indianapolis, IN 46250

Project: SR 225 bridge (#225-79-04016-F: NBI # 029150) rehabilitation over Wabash River, 0.60 mile north of Old SR 25; Des #2002077

County/Site info: Tippecanoe

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

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

Regulatory Assessment: This proposal will require the formal approval of our agency for construction in a floodway, pursuant to the Flood Control Act (IC 14-28-1), unless it qualifies under the INDOT and IDNR Memorandum of Understanding for Maintenance Activity Exemption, dated March 1997. Please include a copy of this letter with the permit application, if required.

Natural Heritage Database: The Natural Heritage Program's data have been checked. DNR's Prophetstown State Park, a LWCF property, is located within 1/2 mile of the project area. The species below have also been documented within 1/2 mile of the project area. The Division of Nature Preserves does not anticipate any impacts to the plant species as a result of this project.

- A) PLANT: tall bur-head, *Echinodorus berteroi*, state endangered
- B) BIRD: sedge wren (*Cistothorus stellaris*), state endangered
- C) MUSSELS:
 - 1. Snuffbox (*Epioblasma triquetra*), federal & state endangered
 - 2. Rayed Bean (*Villosa fabalis*), federal & state endangered
 - 3. Fanshell (*Cyprogenia stegaria*), federal & state endangered
 - 4. Clubshell (*Pleurobema clava*), federal & state endangered
 - 5. Northern riffleshell (*Epioblasma rangiana*), federal & state endangered
 - 6. Rough Pigtoe (*Pleurobema plenum*), federal & state endangered
 - 7. Round hickorynut (*Obovaria subrotunda*) state endangered
 - 8. Ohio Pigtoe (*Pleurobema cordatum*), state special concern
 - 9. Wavyrayed lampmussel (*Lampsilis fasciola*), state special concern
 - 10. Black sandshell (*Ligumia recta*), state special concern
 - 11. Pyramid Pigtoe (*Pleurobema rubrum*), state extirpated
 - 12. Tubercled Blossom (*Epioblasma torulosa*), state extirpated
 - 13. Longsolid (*Fusconaia subrotunda*), state extirpated
 - 14. White Wartyback (*Plethobasus cicatricosus*), state extirpated
 - 15. Ring Pink (*Obovaria retusa*), state extirpated

Fish & Wildlife Comments: Suitable habitat for the Sedge Wren no longer exists in the project area. Therefore, we do not foresee any impacts to this species as a result of this project.

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

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

1) Mussels:

There are mussels throughout this stretch of the Wabash River (20+ species). Most are common species, but a few are more rare species. It is unclear in the information provided what kind of in-stream disturbance might take place or if any causeway(s) will be used. If there will be no in-stream disturbance, then impacts to mussel species should be minimal as long as standard erosion control measures are implemented.

However, if there is any work in the stream proposed, and especially any causeways, we recommend further coordination with us regarding potential mussel species impacts.

2) Stream Crossing Repairs:

The rehabilitated 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 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 ordinary high water mark. 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. The location of the wildlife pathway is dependent on the wildlife species using the area.

There are a number of techniques and materials for incorporating wildlife passage into the design of a crossing structure repair if maintaining or restoring bank lines is not an option. Coordination with the Regional Environmental Biologist to address wildlife passage issues before submitting a permit application, if required, is encouraged to avoid delays in the permitting process. The following links are good resources to consider in the design of stream crossing structures to maintain fish and wildlife passage: <http://www.fs.fed.us/wildlifecrossings/library/>, https://www.fhwa.dot.gov/clas/ctip/wildlife_crossing_structures/, https://www.fs.fed.us/biology/nsaec/fishxing/aop_pdfs.html, <https://www.fhwa.dot.gov/engineering/hydraulics/pubs/11008/hif11008.pdf>.

3) Bank Stabilization:

Some form of bank and/or streambed stabilization is almost always needed with the construction, repair, replacement, or modification of a stream channel or crossing structure. For streambank stabilization and erosion control, regrading to a stable slope (2:1 or shallower) and establishing native vegetation along the banks are typically the most effective techniques. A variety of methods to accomplish this include: planting plugs, whips, container stock, seeding, and live stakes. In addition to vegetation establishment, some additional level of bioengineered bank stabilization may be needed under certain circumstances (inability to regrade to a stable slope, flow velocities that exceed the limits of vegetation alone, etc.). Combining vegetation with any of the following bank stabilization methods can provide additional bank protection while not compromising benefits to fish, wildlife, and botanical resources: geotextiles (erosion control blankets and/or turf reinforcement mats that are heavy-duty, biodegradable, and net free or that use loose-woven / Leno-woven netting to minimize the entrapment and snaring of small-bodied wildlife such as snakes and turtles), vegetated geogrids or soil lifts, fiber rolls, glacial stone, or riprap. Information about bioengineering techniques can be found at the following link to a USDA/NRCS document that outlines many different bioengineering techniques for streambank stabilization: <http://directives.sc.egov.usda.gov/17553.wba>.

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

4) Riparian Habitat:

We recommend a mitigation plan be developed (and submitted with the permit application, if required) for any unavoidable habitat impacts that will occur. The DNR's Habitat Mitigation Guidelines (and plant lists) can be found online at: <http://iac.iga.in.gov/iac/20200527-IR-312200284NRA.xml.pdf>.

Impacts to non-wetland forest of one (1) acre or more should be mitigated at a minimum 2:1 ratio. If less than one acre of non-wetland forest is removed in a rural setting, replacement should be at a 1:1 ratio based on area. Impacts to non-wetland forest under one (1) acre in an urban setting should be mitigated by planting five trees, 1 inch to 2 inches in diameter-at-breast height (dbh), for each tree which is removed that is 10" dbh or greater (5:1 mitigation based on the number of large trees) or by using the 1:1 replacement ratio based on area depending on the type of habitat impacted (individual canopy tree removal in an urban streetscape or park-like environment versus removal of habitat supporting a tree canopy, woody understory, and herbaceous layer). Impacts under 0.10 acre in an urban area may still involve the replacement of large diameter trees but typically do not require any additional mitigation or additional plantings beyond seeding and stabilizing disturbed areas. There are exceptions for high quality habitat sites however.

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

1. Revegetate all bare and disturbed areas that are not currently mowed and maintained with a mixture of grasses, sedges, and wildflowers native to Central Indiana and specifically for stream bank/floodway stabilization purposes as soon as possible upon completion; turf-type grasses (including low-endophyte, friendly endophyte, and endophyte free tall fescue but excluding all other varieties of tall fescue) may be used in currently mowed areas only. A native herbaceous seed mixture must include at least 5 species of grasses and sedges and 5 species of wildflowers.
2. Minimize and contain within the project limits inchannel disturbance and the clearing of trees and brush.
3. Do not work in the waterway from April 1 through June 30 without the prior written approval of the Division of Fish and Wildlife.
4. Do not cut any trees suitable for Indiana bat or Northern Long-eared bat roosting (greater than 5 inches dbh, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30.
5. Do not construct any temporary runarounds, access bridges, causeways, cofferdams, diversions, or pumparounds.
6. Use minimum average 6 inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids.
7. Do not use broken concrete as riprap.
8. Underlay the riprap with a bedding layer of well graded aggregate or a geotextile to prevent piping of soil underneath the riprap.

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9. Minimize the movement of resuspended bottom sediment from the immediate project area.

10. 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.

11. Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the waterbody or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.

12. Seed and protect all disturbed streambanks and slopes not protected by other methods that are 3:1 or steeper with erosion control blankets that are heavy-duty, biodegradable, and net free or that use loose-woven / Leno-woven netting to minimize the entrapment and snaring of small-bodied wildlife such as snakes and turtles (follow manufacturer's recommendations for selection and installation); seed and apply mulch on all other disturbed areas.

Contact Staff:

Christie L. Stanifer, Environ. Coordinator, Fish & Wildlife

Our agency appreciates this opportunity to be of service. Please contact the above staff member at (317) 232-4080 if we can be of further assistance.

Christie L. Stanifer

Date: August 10, 2022

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

Raquel Walker

From: Hurst, Allen A <AHurst@dnr.IN.gov>
Sent: Tuesday, May 30, 2023 4:29 PM
To: Raquel Walker
Cc: Brian Shaw; Simmons, Nathaniel R
Subject: RE: Early Coordination Letter - Des 2002077 - SR 225 over the Wabash River

Follow Up Flag: Follow up
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Des No: 2002077

Description: SR 225 over the Wabash River

Hi Raquel,

I searched through our LWCF review files and found nothing relating to this project. Thank you for sending it my way! As for the review-

The project as submitted will not impact a LWCF site. Should the scope or location of the project change as to take land from, or negatively impact outdoor recreation at the nearby LWCF site, Prophetstown State Park, the DNR Division of State Parks must be contacted at nsimmons@dnr.in.gov.

Allen Hurst

Trails Coordinator
Indiana Department of Natural Resources
Division of State Parks
317-232-4070
ahurst@dnr.in.gov
www.dnr.IN.gov

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

From: Raquel Walker <rwalker@b-l-n.com>
Sent: Tuesday, May 30, 2023 10:04 AM
To: Hurst, Allen A <AHurst@dnr.IN.gov>
Cc: Brian Shaw <bshaw@b-l-n.com>
Subject: Early Coordination Letter - Des 2002077 - SR 225 over the Wabash River

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Hi Allen,

We are working on the SR 225 over the Wabash River project in Tippecanoe County, Indiana. Early Coordination letters for the project were submitted back in July 2022. We weren't sure if the environmental analyst at the time, who is no longer with BLN, included you as part of the distribution. We did not see a response from the IDNR Division of Outdoor