Indiana Department of Transportation

County Knox Route SR 58 Des. No. 1700156 and 1700159

FHWA-Indiana Environmental Document

CATEGORICAL EXCLUSION / ENVIRONMENTAL ASSESSMENT FORM

GENERAL PROJECT INFORMATION

Road No./County:	SR 58, Knox County, Indiana
Designation Number:	1700156 and 1700159
Project Description/Termini:	The project involves replacing the bridges carrying SR 58 over Pollard Ditch (058-42-06072B), 1.74 miles west of SR 67, and the Unnamed Tributary (UNT) to Pollard Ditch (058-42-06073B), 1.65 miles west of SR 67. Additionally, the grade at and between bridges will be raised approximately four feet; several corrugated metal and plastic pipes near the bridges will be removed; five new drainage pipes will be installed; field entrances will be adjusted; and scour protection will be installed along various drainage features. The bridges are part of a bundled group under Contract B-40554, Lead DES 1700149.

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

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

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

Approval _____ _____ _____ _____
ESM Signature Date ES Signature Date

_____ _____
FHWA Signature Date

Release for Public Involvement

RF 9/10/2020
ESM Initials Date ES Initials Date

Certification of Public Involvement _____ _____
Office of Public Involvement Date

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

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

Name and Organization of CE/EA Preparer: Virginia Flynn, Kaskaskia Engineering Group, LLC

Part I - PUBLIC INVOLVEMENT

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

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

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

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

Remarks:

Notice of Entry letters were mailed to potentially affected property owners near the project area on January 7, 2019 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 C, pages 1 and 2.

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

Public Controversy on Environmental Grounds	Yes	No
Will the project involve substantial controversy concerning community and/or natural resource impacts?		X

Remarks:

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

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

Sponsor of the Project: Indiana Department of Transportation (INDOT) INDOT District: Vincennes
Local Name of the Facility: SR 58

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

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

PURPOSE AND NEED:

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

The need for this project is due to the deteriorating conditions of the bridges (058-42-06072B, National Bridge Inventory [NBI] 20820 and 058-42-06073B, NBI 20830), as documented in the INDOT Mini Scopes, dated December 21, 2016. According to the INDOT Bridge Inspection Report for 058-42-06072B, dated November 8, 2019, the existing single-span, adjacent prestressed concrete box beam bridge on vertical abutments is 49 feet in length, with a deck width of 30.5 feet. The wearing surface has moderate width longitudinal cracking. There are a few areas of delamination near the deck ends. The superstructure has fine longitudinal cracks of variable lengths with spot moisture stains emanating from over the abutments at some of the beam locations. A beam over the west abutment has a 15 foot longitudinal crack emanating from over the abutment cap. The concrete abutments each have typical vertical cracking with efflorescence near the bridge centerline. Efflorescence is also present at the construction joint between the widening caps and original abutments. The timber wingwalls have moderate to heavy deterioration where exposed. Timber planks acting as backwall under widening sections exhibit moderate deterioration.

According to the INDOT Bridge Inspection Report for 058-42-06073B, dated November 8, 2019, the existing single-span, adjacent prestressed concrete box beam bridge on vertical abutments is 48 feet in length, with a deck width of 30.5 feet. The deck surface exhibits a few full length moderate width longitudinal cracks in both lanes and some surface patching. The wearing surface has delamination, which appears to be more of a debonding between the deck and underlying PCBBs. The superstructure has fine width, typically short, longitudinal hairline cracking visible on some beams at the west end along with some spot light moisture stains. Dark moisture staining is visible along joint between two beams at the west end and some local light efflorescence is visible along joints between two beams at the east end near the midspan. The substructure has moderate width cracking and light to moderate scaling on the original construction abutment faces, which is more pronounced at the west abutment. Timber mudwall planks and steel shell piles within widened areas exhibit minor decay and splitting and light surface rust. The southwest wingwall timber piles and planks exhibit heavier deterioration, but roadway embankment is not experiencing any significant slump.

Additionally, the existing bridges and road are entirely inundated during flood events, posing a travel hazard for the public.

The purpose of the bridge replacement projects is to maintain the crossing at SR 58 over Pollard Ditch and UNT to Pollard Ditch before it becomes unserviceable or a concern to the traveling public. The crossings are located over Pollard Ditch, 1.74 miles west of SR 67 and over UNT to Pollard Ditch, 1.65 miles west of SR 67.

PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Knox Municipality: N/A

Limits of Proposed Work: The project limits on SR 58 begin at approximately 1.85 miles west of SR 67 and ends at 1.57 miles west of SR 67, for a total length of 1,468 feet. The bridge over Pollard Ditch is located 1.74 miles west of SR 67, and the bridge over UNT to Pollard Ditch is located 1.65 miles west of SR 67.

Total Work Length: 0.278 Mile(s) Total Work Area: 6.63 Acre(s)

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

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

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

The Federal Highway Administration (FHWA) and INDOT, Vincennes District propose to proceed with bridge replacement projects involving SR 58, 1.65 and 1.74 mile west of SR 67 in Knox County, Indiana (Appendix B, page 1). The project length is approximately 0.278 mile. The project is located in Section 13, Township 5 North, Range 8 West, in Vigo Township, Knox County, Indiana.

SR 58 is classified as a *Rural Major Collector*. The posted speed limit is 55 mph. The existing roadway consists of two 10-foot lanes bordered by 1 foot usable shoulders. The existing bridges are single span adjacent prestressed concrete box beam bridges on vertical abutments (Appendix B, pages 2 to 13). Both bridges are approximately 49 feet in length, with an out-to-out width of 30.5 feet. Land use around the project area is agricultural fields. As discussed in the Purpose and Need, several areas of both bridges are deteriorating and are in need of repair to maintain the safety of the crossings and hydraulic function of the bridges. Additionally, the existing bridges and road are entirely inundated during flood events.

The preferred alternative is to replace both existing structures. Both bridges (over Pollard Ditch and UNT to Pollard Ditch) would be replaced with single-span precast prestressed concrete bulb-tee beam bridges with spill through abutments supported on piles. Proposed Bridge over Pollard Ditch (058-42-10340) has a deck width of 33 feet and a span length of 67 feet. Proposed Bridge over UNT to Pollard Ditch (058-42-10341) has a deck width of 33 feet and a span length of 62 feet. Additionally, new approach slabs and guardrails will be constructed. Existing pipes in all four quadrants of the Pollard Ditch bridge will be removed. Existing pipes in the southeast quadrant and north of the UNT to Pollard Ditch bridge will be removed, with a new drainage structure installed north of bridge in a different location. Riprap will be placed at all abutment spill slopes as scour protection. The proposed grade at and between the bridges will be raised approximately four feet to ensure beams are not under water during flood events. The southwest, northwest, and northeast field drives for Pollard Ditch and southwest, northwest and southeast field drives for UNT to Pollard Ditch will be relocated to accommodate placement of guardrail. Four new drainage pipes will be installed under the field drives. Due to the increase of the profile grade on SR 58, UNT to Pollard Ditch will need to be relocated further from the roadway in order to not adversely impact the stream channel. Impacts to streams, if required, will be mitigated through the purchasing of mitigation credits from Indiana Department of Natural Resources (DNR's) In-Lieu Fee (ILF) program, Indiana Stream and Wetland Mitigation Program (IN SWMP). Temporary and permanent right-of-way (ROW) will be required. Every effort to avoid minimize, and/or mitigate project impacts will be made. The proposed maintenance of traffic (MOT) is full closure of SR 58 with an official state detour. Refer to the MOT section in this document. Preliminary project plans are included in Appendix B (pages 14 to 30).

Replacing the bridges will address all the existing deficiencies, therefore maintaining the crossings, thus meeting the purpose and need. Additionally, it allows the proposed grade to be raised to ensure the proposed bridge beams are not under water during flood events. Currently, the existing bridge and road flood entirely, and raising the proposed grade of the roadway and bridges at or above the Base Flood Elevation will ensure safe travel.

The project limits on SR 58 begin at approximately 1.85 miles west of SR 67 and ends at 1.57 miles west of SR 67, for a total length of 1,468 feet. The project demonstrates independent utility because it will improve the function of the structures as an independent project and does not depend on any other planned projects.

OTHER ALTERNATIVES CONSIDERED:

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

Rehabilitation
Rehabilitating the existing structures would address the deteriorating conditions of the current structures and extend the life of the bridges, meeting the purpose and need. However, this alternative is not cost-effective as the structures are beyond the point of rehabilitation. Therefore, this alternative is not recommended.

No Build
The no-build alternative proposed continued use of the bridges in the current condition. The no build does not address the deteriorating conditions of the bridges, therefore, eventually the bridges will become unsafe for travel and removed from service. This alternative does not meet the purpose and need. Therefore, this alternative is not recommended.

The Do Nothing Alternative is not feasible, prudent or practicable because (*Mark all that apply*):

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

ROADWAY CHARACTER:

Functional Classification: Rural Major Collector
Current ADT: 545 VPD (2022) Design Year ADT: 560 VPD (2042)
Design Hour Volume (DHV): 54 Truck Percentage (%) 15.39
Designed Speed (mph): 55 Legal Speed (mph): 55

	Existing		Proposed	
Number of Lanes:	2 (EB & WB)		2 (EB & WB)	
Type of Lanes:	10' through travel lanes		11' through travel lanes	
Pavement Width:	20	ft.	30.67	ft.
Outside Shoulder Width:	1.0	ft.	4.3	ft.
Median Width:	N/A	ft.	N/A	ft.
Sidewalk Width:	N/A	ft.	N/A	ft.

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

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

DESIGN CRITERIA FOR BRIDGES:

Structure/NBI Number(s): Existing: 058-42-06072B, NBI: 20820
New: 058-42-10340

Sufficiency Rating: 86.8 (INDOT Bridge Inspection Report, November 8, 2019)

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(Rating, Source of Information)

	Existing		Proposed	
Bridge Type:	Prestressed concrete box beam bridge on vertical abutments		Prestressed Concrete Bulb-Tee Beam	
Number of Spans:	1		1	
Weight Restrictions:	N/A	ton	N/A	ton
Height Restrictions:	N/A	ft.	N/A	ft.
Curb to Curb Width:	28.5	ft.	30	ft.
Outside to Outside Width:	30.5	ft.	33	ft.
Shoulder Width:	4.25	ft.	4	ft.
Length of Channel Work:			120	ft.

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

Remarks: Bridge over Pollard Ditch (058-42-06072B), located 1.74 miles west of SR 67, on SR 58. The existing bridge is a single-span, prestressed concrete box beam bridge on vertical abutments. The bridge is approximately 49 feet in length, with an out-to-out width of 30.5 feet. Additionally, on all corners of the bridge are 18-inch corrugated metal pipe culverts that convey the roadside drainage into Pollard Ditch.

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

Structure/NBI Number(s): Existing: 058-42-06073B, NBI: 20830
New: 058-42-10341

Sufficiency Rating: 88.3 (INDOT Bridge Inspection Report, November 8, 2019)

(Rating, Source of Information)

	Existing		Proposed	
Bridge Type:	Prestressed concrete box beam bridge on vertical abutments		Prestressed Concrete Bulb-Tee Beam	
Number of Spans:	1		1	
Weight Restrictions:	N/A	ton	N/A	ton
Height Restrictions:	N/A	ft.	N/A	ft.
Curb to Curb Width:	28.5	ft.	30	ft.
Outside to Outside Width:	30.5	ft.	33	ft.
Shoulder Width:	4.25	ft.	4	ft.
Length of Channel Work:			506	ft.

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

Remarks: Bridge over Unnamed Tributary (UNT) to Pollard Ditch (058-42-06073B), located 1.65 miles west of SR 67, on SR 58. The existing bridge is a single-span, prestressed concrete box beam bridge on vertical abutments. The bridge is approximately 48 feet in length, with an out-to-out width of 30.5 feet. Additionally, there is an 18-inch corrugated metal pipe culvert in the southeast corner and a 24-inch corrugated plastic pipe culvert to the north that conveys the nearby ditch drainage into UNT to Pollard Ditch.

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

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

MAINTENANCE OF TRAFFIC (MOT) DURING CONSTRUCTION:

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

Remarks:

The proposed MOT for the project will require a full closure of SR 58 with an official state detour route consisting of SR 67 and SR 159 (Appendix B, page 29 and 30), for a total length of approximately 14.5 miles. The official state detour route will take approximately 17 minutes.

The closure will pose a temporary inconvenience to traveling motorists (including school buses and emergency services); however, no significant delays are anticipated and all inconveniences will cease upon project completion. Delays would occur during construction, but cease with project completion. No permanent impacts are expected. No substantial controversy is expected.

ESTIMATED PROJECT COST AND SCHEDULE:

Engineering: $ N/A Right-of-Way: $ 158,000 Construction: $ 5,097,233

Anticipated Start Date of Construction: Spring 2022

Date project incorporated into STIP July 2, 2019 (2020-2024 STIP) Under Lead Des. No. 1700149

Is the project in an MPO Area?	Yes	No
		X

If yes,

Name of MPO

Location of Project in TIP

Date of incorporation by reference into the STIP

RIGHT OF WAY:

Land Use Impacts	Amount (acres) Permanent	Temporary
Residential	0	0
Commercial	0	0
Agricultural	2.44	0.02
Forest	0	0
Wetlands	0	0
Other: Early Successional roadside vegetation	3.57	0.20
Other: Streams	0.39	0.01
TOTAL	6.4	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 or reacquisition, either known or suspected, and there impacts on the environmental analysis should be discussed.

Remarks:

INDOT has no right-of-way (ROW) outside the edge of pavement. Any work outside the edge of the traveled way would necessitate acquiring new ROW.

The project requires approximately 6.4 acres of permanent new ROW. The permanent ROW to be acquired consists of agricultural land, early successional vegetation, and waterways. The permanent ROW will extend 85 feet south of the SR 58 centerline, totaling 2.97 acre, and a maximum of 115 feet north of the SR 58 centerline, totaling 3.43 acre. The project also requires approximately 0.23 acre of temporary new ROW. The temporary ROW to be acquired consists of early successional vegetation, agricultural land, and waterways. It will extend 130 feet north of the SR 58 centerline and 95 feet south of the SR 58 centerline.

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

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

SECTION A – ECOLOGICAL RESOURCES

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

Remarks:

Based on a desktop review, a site visit on October 5, 2018 and June 3, 2020 by HNTB, the aerial map of the project area (Appendix B, page 1) and the water resources map in the Red Flag Investigation (RFI) report (Appendix E, page 7), there are eight rivers and streams located within the 0.5 mile search radius. There are four river and stream segments located within or adjacent to the project area. A Waters of the U.S. Determination/Wetland Delineation Report was approved by the INDOT Ecology and Waterway Permitting

Office on April 3, 2019. An addendum was drafted due additional ROW acreage requirements due to stream relocation and approach work, and was approved by the INDOT Ecology and Waterway Permitting Office on August 7, 2020. Please refer to Appendix F for the Waters of the U.S. Determination/Wetland Delineation Report and Addendum. It was determined that three likely jurisdictional streams were located within the project area. The U.S. Army Corps of Engineers (USACE) makes all final determinations regarding jurisdiction.

Pollard Ditch is a perennial stream. Pollard Ditch flows into a tributary of White River approximately 3.35 miles southeast of the project area. A defined ordinary high water mark (OHWM) was observed at approximately 11.25 feet wide and 25.2 inches deep. The ditch has an upstream drainage of 17.72 square miles. Impacts to this ditch are discussed below.

UNT to Pollard Ditch is an intermittent stream. UNT to Pollard Ditch flows into Pollard Ditch approximately 518 feet south of the project area. A defined OHWM was observed at approximately 7.1 feet wide and 25.2 inches deep. Impacts to this UNT are discussed below.

UNT 1 to Pollard Ditch is an intermittent stream. UNT 1 to Pollard Ditch flows east into Pollard Ditch approximately 150 north of the project area. A defined OHWM was observed at approximately 3 feet wide and 2 inches deep. There will be no impacts to UNT 1 to Pollard Ditch.

Impacts are expected to Waters of the U.S. streams due to construction of the structures and installation of scour protection. There will be an estimated 120 LFT (0.033 acre) of permanent stream impacts to Pollard Ditch and 506 LFT (0.082 acre) of permanent impacts to UNT to Pollard Ditch from replacement of the bridges, relocation of UNT to Pollard Ditch, and installation of riprap for scour protection. There will be an estimated 170 LFT (0.044 acre) of temporary stream impacts to Pollard Ditch and 580 LFT (0.094 acre) of temporary impacts to UNT to Pollard Ditch from construction of sandbag cofferdams and temporary pump around of the streams. An Indiana Department of Environmental Management (IDEM) 401 / USACE 404 Permit will be required for impacts to the streams. Impacts to streams, if required, will be mitigated through the purchasing of mitigation credits from Indiana Department of Natural Resources (DNR's) In-Lieu Fee (ILF) program, Indiana Stream and Wetland Mitigation Program (IN SWMP).

An early coordination letter was sent to IDNR, Division of Fish and Wildlife (DFW) on March 19, 2020. In an April 17, 2020 early coordination response, the IDNR-DFW provided a list of recommendations for consideration to minimize impacts to fish, wildlife, and botanical resources to the greatest extent possible and compensate for the impacts (Appendix C, pages 11 to 13). The recommendations can be found in the commitments section of this document.

The bridges cross a regulated drain, Pollard Ditch, and one of its laterals, according to an early coordination response letter on March 24, 2020 from the Knox County Surveyor (Appendix C, page 24). The structure modifications must be approved by Knox County Surveyor before work can commence. This information was sent to the designer on April 13, 2020.

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

Remarks:

Based on a desktop review, a site visit on October 5, 2018 and June 3, 2020 by HNTB, the aerial map of the project area (Appendix B, page 1), and the water resources map in the RFI report (Appendix E, page 7), there is one lake located within the 0.5 mile search radius. There are no other surface waters present within or adjacent to the project area. 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 April 3, 2019. An addendum was approved by the INDOT Ecology and Waterway Permitting Office on August 7, 2020. Please refer to Appendix F for the Waters of the U.S. Determination/Wetland Delineation Report and Addendum. It was determined that no open waters were located within the investigated area. The USACE makes all final determinations regarding jurisdiction. Therefore, no impacts are expected.

An early coordination letter was sent to IDNR-DFW on March 19, 2020. In an April 17, 2020 early coordination response, the IDNR-DFW provided a list of recommendations for consideration to minimize impacts to fish, wildlife, and botanical resources to the greatest extent possible and compensate for the impacts (Appendix C, pages 11 to 13). The recommendations can be found in the commitments section of this document.

	Presence	Impacts Yes	Impacts No
Wetlands			

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

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

Wetland No.	Classification	Total Size (Acres)	Impacted Acres	Comments

Wetlands (*Mark all that apply*)	Documentation	ES Approval Dates
Wetland Determination	X	April 3, 2019 and August 7, 2020
Wetland Delineation		
USACE Isolated Waters Determination		
Mitigation Plan		

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

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

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

Remarks:

Based on a review of the National Wetlands Inventory (NWI) (https://www.fws.gov/wetlands/data/Mapper.html) online mapper, a site visit on October 5, 2018 and June 3, 2020 by HNTB, the USGS topographic map (Appendix B, page 1) and the RFI report (Appendix E, page 1) there are six wetlands located within the 0.5 mile search radius. There are no wetlands present within or adjacent to the project area.

A Waters of the U.S. Determination/Wetland Delineation Report was approved by the INDOT Ecology and Waterway Permitting Office on April 3, 2019. An addendum was approved by the INDOT Ecology and Waterway Permitting Office on August 7, 2020. Please refer to Appendix F, page 1 for the Waters of the U.S. Determination/Wetland Delineation Report and Addendum. It was determined that no wetlands were located within the investigated area. The USACE makes all final determinations regarding jurisdiction. Therefore, no

impacts are expected.

An early coordination letter was sent to IDNR-DFW on March 19, 2020. In an April 17, 2020 early coordination response, the IDNR-DFW provided a list of recommendations for consideration to minimize impacts to fish, wildlife, and botanical resources to the greatest extent possible and compensate for the impacts (Appendix C, pages 11 to 13). The recommendations can be found in the commitments section of this document.

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

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

Remarks:

Based on a desktop review, a site reconnaissance conducted on October 5, 2018 and June 3, 2020 by HNTB, and the aerial map of the project area (Appendix B, page 1), habitat within and adjacent to the project limits consists of mostly agricultural row crops with scrub/shrub with a few trees along the banks of Pollard Ditch and UNT to Pollard Ditch. Dominant vegetation along the banks of Pollard Ditch included reed canary grass (*Phalaris arundinacea*), silver maple (*Acer saccharinum*), honey locust (*Gleditsia triacanthos*), and white mulberry (*Morus alba*). Dominant vegetation along the banks of UNT to Pollard Ditch included reed canary grass, clearweed (*Pilea pumila*), common ragweed (*Ambrosia artemsiifolia*), and white mulberry. The project area is considered flat. It is estimated two trees will be removed with the construction of the new structures.

There will be impacts to habitat due to 3.7 acre of early successional vegetation removal during installation of the structures and reconstruction of the roadway. Dominant vegetation includes white mulberry (*Morus alba,* FAC), as well as invasive honeysuckle (*Lonicera maackii,* UPL), and reed canarygrass (*Phalaris arundinacea,* FACW). Since the area within the project limits has been disturbed with past transportation uses and agriculture, the potential for the area to be of high quality habitat is minimal. Rehabilitation of disturbed areas shall be accomplished under the directive of the current INDOT Standard Specifications. Erosion and sediment control measure will be implemented as required for this project.

An early coordination letter was sent to IDNR-DFW and the U.S. Fish and Wildlife Service (USFWS) on March 19, 2020. The USFWS did not respond. The IDNR-DFW's early coordination response provided a list of recommendations for consideration to minimize impacts to terrestrial habitat and other natural resources (Appendix C, pages 11 to 13). Applicable recommendations are included in the commitments section of this document.

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

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

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

Remarks:

Based on a desktop review, the project is located outside of the designated karst region of Indiana as outlined in the October 13, 1993 Memorandum of Understanding (MOU). According to the topo map of the project area (Appendix B, page 1), and the RFI report (Appendix E, page 1), there are no karst features identified

within or adjacent to the project area. In the early coordination response, the Indiana Geological Survey (IGS) did not indicate that karst features exist within the project area (Appendix C, pages 8 to 10). IGS also indicated potential mine subsidence, high liquefaction potential, and active or abandoned mineral resource extraction sites. Response from IGS has been communicated with the designer on April 20, 2020. No impacts area expected.

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

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

Remarks:

Based on a desktop review and the RFI report (Appendix E*,* page 1), completed by Kaskaskia Engineering Group (KEG) on April 24, 2020*,* the IDNR Knox County Endangered, Threatened and Rare (ETR) Species List has been checked and is included in Appendix E*,* pages 10 to 12. The highlighted species on the list reflect the federal and state identified ETR species located within the county. According to the IDNR-DFW early coordination response letter dated April 17, 2020 (Appendix C*,* pages 11 to 13), the Natural Heritage Program's Database has been checked. The federal and state endangered Indiana Bat (*Myotis sodalis*) has been documented within 0.5 mile of the project area*.* Firm commitments from IDNR-DFW regarding the Indiana Bat are included in the *Environmental Commitments* section of this document.

Project information was submitted through the USFWS's Information for Planning and Consultation (IPaC) portal, and an official species list was generated (Appendix *C,* pages 25 to 30). The project is within range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (NLEB) (*Myotis septentrionalis*). No additional species were found within or adjacent to the project area other than the Indiana bat and northern long-eared bat.

The project qualifies for the *Range-wide Programmatic Informal Consultation for the Indiana bat and northern long-eared bat (NLEB)*, dated May 2016 (revised February 2018), between FHWA, Federal Railroad Administration (FRA), Federal Transit Administration (FTA), and USFWS. An effect determination key was completed on July 21, 2020, and based on the responses provided, the project was found to *Not Likely to Adversely Affect (NLAA)* the Indiana bat and/or the NLEB. INDOT reviewed and verified the effect finding on July 22, 2020 and requested USFWS's review of the finding (Appendix *C,* pages 32 to 46). No response was received from USFWS within the 14-day review period; therefore, it was concluded they concur with the finding. Avoidance and Mitigation Measures (AMMs) are included as firm commitments in the *Environmental Commitments* section of this document.

The bridges have not shown evidence of use (i.e. nests) by a bird species protected under the Migratory Bird Treaty Act (MBTA) during the June 3, 2020 inspection. All applicable recommendations are included in the Environmental Commitments section of this CE document.

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

SECTION B – OTHER RESOURCES

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

If a SSA is present, answer the following:

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

Remarks:

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

The IDEM's Wellhead Proximity Determinator website (http://www.in.gov/idem/cleanwater/pages/wellhead) was accessed on March 13, 2020 by KEG. This project is not located within a Wellhead Protection Area or Source Water Area. In an early coordination response letter dated March 24, 2020, IDEM stated the project is not located within a wellhead area (Appendix C, page 22). No impacts are expected.

The IDNR's Water Well Record Database website (https://www.in.gov/dnr/water/3595.htm) was accessed on March 16, 2020 by KEG. There is a well located adjacent to the project site on the north side of the roadway. Engineering survey data from HNTB did not show any wells present within or adjacent to the project area. Therefore, no impacts are expected. Should it be determined during the ROW phase that wells are affected, a cost to cure will likely be included in the appraisal to restore the wells.

Based on a desktop review of the INDOT MS4 website (https://entapps.indot.in.gov/MS4/) by KEG on March 16, 2020, and the RFI report; this project is not located in an Urban Area Boundary location. No impacts are expected.

Based on a desktop review, a site visit on June 3, 2020 by HNTB, the aerial map of the project area (Appendix B, page 1), no public water systems were identified. Therefore, no impacts are expected.

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

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

Remarks:

Based on a desktop review of the IDNR Indiana Floodway Information Portal website (http://dnrmaps.dnr.in.gov/appsphp/fdms/) by KEG on March 16, 2020, and the RFI report; this project is located in a regulatory floodplain as determined from approved IDNR floodplain maps (Appendix F, pages 10 and 33). An early coordination letter was sent on March 19, 2020 to the local Floodplain Administrator. The

floodplain administrator did not respond within the 30-day time frame. This project qualifies as a Category 4 per the current INDOT CE Manual, which includes projects involving replacement of existing drainage structures on essentially the same alignment. No homes are located within the base floodplain within 1,000 feet upstream and no homes are located within the base floodplain within 1,000 feet downstream. The proposed structure will have an effective capacity such that backwater surface elevations are not expected to substantially increase. As a result, there will be no substantial adverse impacts on natural and beneficial floodplain values; there will be no substantial change in flood risks; and there will be no substantial increase in potential for interruption or termination of emergency service or emergency evacuation routes; therefore, it has been determined that this encroachment is not substantial. A hydraulic design study that addresses various structure size alternates will be completed during the preliminary design phase. A summary of this study will be included with the Field Check Plans.

In an early coordination response from IDNR-DFW on April 17, 2020, they state this project will require formal approval of their agency pursuant to the Flood Control Act, IC 14-28-1, for construction in a floodway, unless it qualifies for a bridge exemption (Appendix C, pages 11 to 14). Due to the relocation of UNT to Pollard Ditch, the project does not qualify for a bridge exemption. Therefore, an IDNR Construction in a Floodway permit will be required.

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

Total Points (from Section VII of CPA-106/AD-1006* 152
**If 160 or greater, see CE Manual for guidance.*

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

Remarks:

Based on a desktop review, a site visit on June 3, 2020 by HNTB, and the aerial map of the project area (Appendix B, page 1), the project will convert 3.9 acres of farmland as defined by the Farmland Protection Policy Act. An early coordination letter was sent on March 19, 2020 to Natural Resources Conservation Service (NRCS). Coordination with NRCS result in a score of 152 on the AD 1006 Form (Appendix C, page 7). NRCS's threshold score for significant impacts to farmland that result in the consideration of alternatives is 160. Since this project score is less than the threshold, no significant loss of prime, unique, statewide, or local important farmland will result from this project. No alternatives other than those previously discussed in this document will be investigated without reevaluating impacts to prime farmland.

SECTION C – CULTURAL RESOURCES

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

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

County Knox Route SR 58 Des. No. 1700156 and 1700159

Project Effect

No Historic Properties Affected [X] No Adverse Effect [ ] Adverse Effect [ ]

Documentation (mark all that apply)	**Documentation Prepared**	**ES/FHWA Approval Date(s)**	**SHPO Approval Date(s)**
Historic Properties Short Report			
Historic Property Report			
Archaeological Records Check/ Review			
Archaeological Phase Ia Survey Report	X	June 18, 2020	June 18, 2020
Archaeological Phase Ic Survey Report			
Archaeological Phase II Investigation Report			
Archaeological Phase III Data Recovery			
APE, Eligibility and Effect Determination			
800.11 Documentation			

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

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

Remarks:

On July 13, 2020 the INDOT Cultural Resource Office (CRO) determined that this project falls within the guidelines of Category B, Type 12 under the Minor Projects Programmatic Agreement (Appendix D, pages 1 to 4). Category B, Type 12 covers work involving the replacement, widening, or raising the elevation of the superstructure on existing bridges, and bridge replacement projects (when both the superstructure and substructure are removed). A Phase Ia archaeological reconnaissance and report was completed on June 17, 2020. Two sites were identified but neither is eligible for listing on the National Register of Historic Places (NRHP). There were no above-ground concerns. No further consultation is required. This completes the Section 106 process and the responsibilities of the FHWA under Section 106 have been fulfilled.

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

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

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

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

Individual Section 4(f)		

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

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

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

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

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

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

Remarks:

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

Based on a desktop review, a site visit on June 3, 2020 by HNTB, the aerial map of the project area (Appendix B, page 1) and the RFI report (Appendix E, page 1) there are no 4(f) resources located within the 0.5 mile search radius. There are no Section 4(f) resources within or adjacent to the project area. Therefore, no use is expected.

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

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

Remarks:

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

A review of 6(f) properties on the Land and Water Conservation Fund (LWCF) County Property List revealed a total of 4 properties in Knox County (Appendix H, page 1). None of these properties are located within or adjacent to the project area. Therefore, there will be no impacts to 6(f) resources as a result of this project.

SECTION E – Air Quality

Air Quality

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

Level of MSAT Analysis required?

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

Remarks:

The FY 2020-2024 STIP is listed based on the lead DES number in contract B-40554. The lead DES number for this contract is Des. No. 1700149. The FY 2020-2024 STIP includes DES number 1700156 and 1700159 by reference with the contract number B-40554 (Appendix G, page 1).

This project is located in Knox County, which is currently in attainment for all criteria pollutants according to IDEM. Therefore, the conformity procedures of 40 CFR Part 93 do not apply.

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

SECTION F - NOISE

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

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

Remarks: This project is a Type III project. In accordance with 23 CFR 772 and the INDOT Traffic Noise Policy, this action will not require a formal noise analysis.

SECTION G – COMMUNITY IMPACTS

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

Remarks:

The project area is located outside of any city limits. The community of Westphalia, Indiana is located approximately 1.4 miles east. The project is located within the Knox County limits, which does not have an approved transition plan.

The project is anticipated to result in positive effects to the county and the surrounding area due to improved safety by constructing new bridges, redirecting stream flow to eliminate the potential for over-topping of SR 58 during high water events, and improving the drainage infrastructure at this location.

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

Remarks:

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

Minor, short-term indirect impacts are anticipated as a result of this project during the construction of the two new bridges. The official state detour route will increase travel time during the construction phase of the project; traffic flow and travel times will return to normal upon completion of the bridge replacements. . There will be possible short-term indirect impacts, but no cumulative impacts as result of this project.

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

Remarks:

Based on a desktop review, a site visit on June 3, 2020 by HNTB, the aerial map of the project area (Appendix B, page 1) and the RFI report (Appendix E, page 1) there are no public facilities within the 0.5 mile search radius. There are no public facilities within or adjacent to the project area. Access to all properties will be maintained during construction.

Since the project shall require a full road closure and traffic will be detoured 14.5 miles, the project will cause a direct impact to public facilities and services, especially between the communities of Westphalia and Widner. Delays shall occur during construction, but will cease with project completion. Temporary community and economic impacts will occur due to increased travel time and expense; however, no long-term negative impacts to the community or its economy are expected.

It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction that would block or limit access.

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

Remarks:

Under FHWA Order 6640.23A, FHWA and the project sponsor, as a recipient of funding from FHWA, are responsible to ensure that their programs, policies, and activities do not have a disproportionately high and adverse effect on minority or low-income populations. Per the current INDOT Categorical Exclusion Manual, an Environmental Justice (EJ) Analysis is required for any project that has two or more relocations or 0.5 acre of additional permanent right-of-way. The project will require 6.4 acres of additional permanent right-of-way. Therefore, an EJ Analysis is required.

Potential EJ impacts are detected by locating minority and low-income populations relative to a reference population to determine if populations of EJ concern exists and whether there could be disproportionately high and adverse impacts to them. The reference population may be a county, city or town and is called the community of comparison (COC). In this project, the COC is Knox County, Indiana. The community that overlaps the project area is called the affected community (AC). In this project, the AC is Census Tract 9551. An AC has a population of concern for EJ if the population is more than 50% minority or low-income or if the low-income or minority population is 125% of the COC. Data from the U.S. Census Bureau, 2014-2018 American Community Survey 5-Year Estimates was obtained from the US Census Bureau Website https://data.census.gov/cedsci/ on August 12, 2020 by KEG. The data collected for minority and low-income populations within the AC are summarized in the below table.

Table 1: Minority and Low-Income Data (ACS 5-Year Estimates, 2014-2018)

	COC – (Knox County)	AC-1 – (Census Tract 9551, Knox County, Indiana)
Percent Minority	7.2	1.4
125% of COC	9.0	AC < 125% COC
EJ Population of Concern		No
Percent Low-Income	17.2	6.8
125% of COC	21.5	AC < 125% COC
EJ Population of Concern		No
B17001:Poverty Status in the Past 12 Months by Sex by Age B03002: Hispanic or Latino Origin By Race		

AC-1, Census Tract 9551 has a percent minority of 1.4 which is below 50% and is below the 125% COC threshold. Therefore, the AC does not contain minority populations of EJ concern.

AC-1, Census Tract 9551 has a percent low-income of 6.8 which is below 50% and is below the 125% COC

threshold. Therefore, the AC does not contain low-income populations of EJ concern.

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

Relocation of People, Businesses or Farms

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

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

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

Remarks:

No relocations of people, businesses, or farms will take place as a result of this project. Utility coordination is being conducted by a consultant, HNTB.

SECTION H – HAZARDOUS MATERIALS & REGULATED SUBSTANCES

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

	No	Yes/ Date
ES Review of Investigations		X / April 24, 2020

Include a summary of findings for each investigation.

Remarks:

Based on a review of GIS and available public records, a RFI was approved on April 24, 2020 by the INDOT Site Assessment and Management section (Appendix E, page 1). No sites with hazardous material concerns (hazmat sites) or sites involved with regulated substances were identified in or within 0.5 mile of the project area. Further investigation for hazardous material concerns or regulated substances is not required at this time.

SECTION I – PERMITS CHECKLIST

Permits (mark all that apply)	**Likely Required**
Army Corps of Engineers (404/Section10 Permit)	
Individual Permit (IP)	
Nationwide Permit (NWP)	
Regional General Permit (RGP)	X
Pre-Construction Notification (PCN)	
Other	
Wetland Mitigation required	
Stream Mitigation required	

IDEM	
Section 401 WQC	X
Isolated Wetlands determination	
Rule 5	X
Other	
Wetland Mitigation required	
Stream Mitigation required	X
IDNR	
Construction in a Floodway	X
Navigable Waterway Permit	
Lake Preservation Permit	
Other	
Mitigation Required	
US Coast Guard Section 9 Bridge Permit	
Others (Please discuss in the remarks box below)	

Remarks:

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

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

SECTION J- ENVIRONMENTAL COMMITMENTS

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

Remarks:

Firm:

1. If the scope of work or permanent or temporary right-of-way amounts change, INDOT ESD and the INDOT District Environmental Section will be contacted immediately (INDOT ESD and INDOT District).
2. It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction activity that would block or limit access. (INDOT ESD)
3. USFWS Bridge/Structure Assessment shall take place no earlier than two (2) years prior to the start of construction. If construction will begin after June 3, 2022, an inspection of the structures by a qualified individual, must be performed. Inspections of the structures should check for the presence of bats/bat indicators and/or presence of birds. The results of the inspection must indicate no signs of bats or birds. If signs of bats or birds are documented during this inspection, the INDOT District Environmental Manager must be contacted immediately. (INDOT ESD and INDOT District)
4. Structures 058-42-06072B and 058-42-06073B, located on SR 58, 1.65 and 1.74 miles west of SR 67, have shown no evidence of use (for example, nests) by a bird species protected under the Migratory Bird Treaty Act (MBTA) during previous inspections. However, the structures are located over or near water which is preferred habitat for migratory birds. Avoidance and minimization measures must be implemented prior to the start of and during the nesting season. Nests without eggs or young should be removed prior to construction during the non-nesting season (September 8 – April 30) and during the nesting season if no eggs or young are present. Nests with eggs or young cannot be removed or disturbed during the nesting season (May 1 – September 7). Nests with eggs or young should be screened or buffered from active construction. Details of the required procedures are outlined in the "Potential Migratory Bird on Structure Unique Special Provision". (INDOT EWPO)
5. To minimize the impacts to the Indiana bat (and northern long-eared bat, which may also be present), do not cut any trees suitable for roosting (greater than 5 inches dbh, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30. (IDNR-DFW)
6. General AMM 1: Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental

commitments, including all applicable AMMs (USFWS).

7. Tree Removal AMM 1: Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal (USFWS).
8. Tree Removal AMM 2: Apply time of year restrictions for tree removal when bats are not likely to be present, or limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/ rail surface and outside of documented roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed (USFWS).
9. Tree Removal AMM 3: Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits) (USFWS).
10. Tree Removal AMM 4: Do not remove documented Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 miles of roosts, or documented foraging habitat any time of year (USFWS).
11. Both existing structures cross the regulated drain, Pollard Ditch, and one of its laterals. In accordance with the IC 36-9-27-71(f and g), the proposed structure modifications must be approved by the Knox County Surveyor before the work can take place. (Knox County Surveyor)

For Further Consideration:

1. For purposes of maintaining fish passage through a crossing structure, the Environmental Unit recommends bridges rather than culverts and bottomless culverts rather than box or pipe culverts. Wide culverts are better than narrow culverts, and culverts with shorter through lengths are better than culverts with long through lengths. If box or pipe culverts are used, the bottoms should be buried a minimum of six inches (or 20 percent of the culvert height/pipe diameter, whichever is greater up to a maximum of two feet) below the stream bed elevation to allow a natural streambed to form within or under the crossing structure. Crossings should: span the entire channel width (a minimum of 1.2 times the OHWM width); maintain the natural stream substrate within the structure; have a minimum openness ratio (height x width / length) of 0.25 and have stream depth, channel width, and water velocities during low-flow conditions that are approximate to those in the natural stream channel. (IDNR-DFW)
2. The new, replacement, or rehabbed structure, and any bank stabilization under the structure, should not create conditions that are less favorable for wildlife passage under the structure compared to current conditions. The pictures submitted show that there is no significant or consistent riprap layer that would currently impair wildlife passage under the bridges. Any new riprap or additional riprap would likely create a wildlife passage obstruction. This impact can be avoided while still providing scour protection. A level area of natural ground under the structure is ideal for wildlife passage. If channel clearing will result in a flat bench area above the normal water level under the structure, this area should allow wildlife passage and should remain free of riprap and other similar materials that can impair wildlife passage. (IDNR-DFW)
3. Minimize the use of riprap and use alternative erosion protection materials whenever possible. Riprap must not be placed in the active thalweg channel or placed in the streambed in a manner that precludes fish or aquatic organism passage (riprap must not be placed above the existing streambed elevation). Where riprap must be used, IDNR-DFW recommend placing only enough riprap to provide stream bank toe protection, such as from the toe of the bank up to the OHWM. 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 the area and specifically for stream bank/floodway stabilization purposes as soon possible upon completion. (IDNR-DFW)
4. While hard armoring alone (e.g. riprap or glacial stone) may be needed in certain instances, soft armoring and bioengineering techniques should be considered first. In many instances, one or more methods are necessary to increase the likelihood of vegetation establishment. Combining vegetation with most bank stabilization methods can provide additional bank protection and help reduce impacts upon fish and wildlife. If hard armoring is needed, wildlife passage can be facilitated by using a smooth-surfaced armoring material instead of riprap, such as articulated concrete block mats, fabric-formed concrete mats or other similar smooth-surfaced material. (IDNR-DFW)
5. Do not excavate in the low flow area except for the placement of piers, foundations, and riprap, or removal of the old structure. (IDNR-DFW)
6. Use minimum average 6 inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids. (IDNR-DFW)

SECTION K- EARLY COORDINATION

Please list the date coordination was sent and all agencies that were contacted as a part of the development of this Environmental Study. Also, include the date of their response or indicate that no response was received. INDOT and FHWA are automatically considered early coordination participants and should only be listed if a response is received.

Remarks:

All letters sent on 3/19/2020.

Agency	Response Date
U.S. Fish and Wildlife Service	No Response
Natural Resources Conservation Service	4/8/2020
Indiana Geological Survey	3/19/2020
Indiana Department of Natural Resources, Division of Fish and Wildlife	4/17/2020
Indiana Department of Environmental Management	Signed 3/23/2020
Indiana Department of Environmental Management, Wellhead Proximity	3/24/2020
Indiana Department of Transportation, Vincennes Environmental Manager Supervisor	3/19/2020
U.S. Army Corps of Engineers	No Response
U.S. Department of Housing and Urban Development	No Response
Indiana Department of Transportation, Public Hearings	No Response
National Park Service	No Response
Knox County Commissioners	No Response
Knox County Surveyor	3/24/2020
Knox County Highway Department	No Response
Floodplain Administrator	No Response

APPENDICES

Title **Page**

APPENDIX A

INDOT Supporting Documentation

Categorical Exclusion Level Thresholds

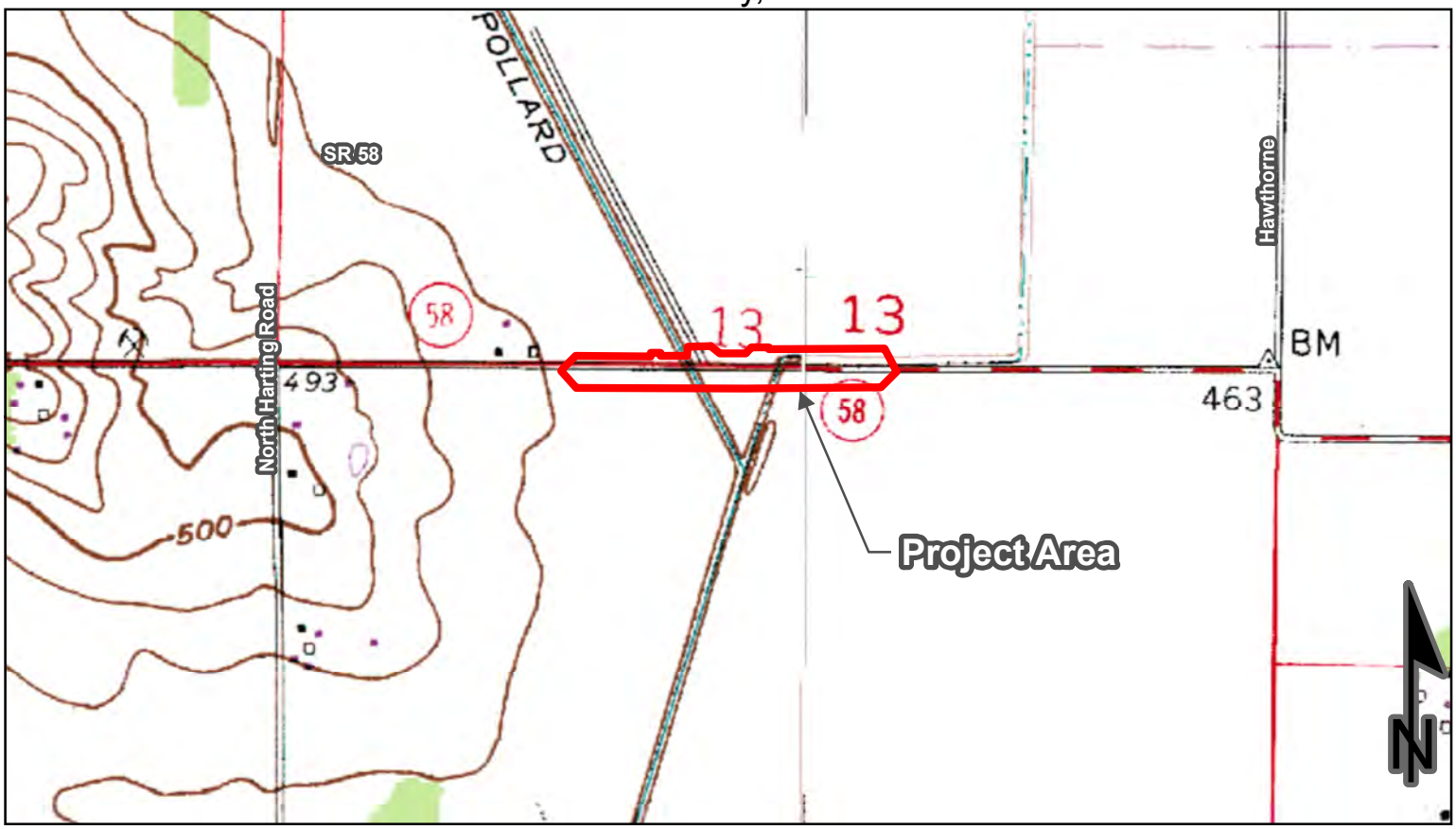
	PCE	Level 1	Level 2	Level 3	Level 4[1]
Section 106	Falls within guidelines of Minor Projects PA	"No Historic Properties Affected"	"No Adverse Effect"	-	"Adverse Effect" Or Historic Bridge involvement[2]
Stream Impacts	No construction in waterways or water bodies	< 300 linear feet of stream impacts	≥ 300 linear feet of stream impacts	-	Individual 404 Permit
Wetland Impacts	No adverse impacts to wetlands	< 0.1 acre	-	< 1 acre	≥ 1 acre
Right-of-way[3]	Property acquisition for preservation only or none	< 0.5 acre	≥ 0.5 acre	-	-
Relocations	None	-	-	< 5	≥ 5
Threatened/Endangered Species (Species Specific Programmatic for Indiana bat & northern long eared bat)	"No Effect", "Not likely to Adversely Affect" (Without AMMs[4] or with AMMs required for all projects[5])	"Not likely to Adversely Affect" (With any other AMMs)	-	"Likely to Adversely Affect"	Project does not fall under Species Specific Programmatic
Threatened/Endangered Species (Any other species)	Falls within guidelines of USFWS 2013 Interim Policy	"No Effect", ""Not likely to Adversely Affect"	-	-	"Likely to Adversely Affect"
Environmental Justice	No disproportionately high and adverse impacts	-	-	-	Potential[6]
Sole Source Aquifer	Detailed Assessment Not Required	-	-	-	Detailed Assessment
Floodplain	No Substantial Impacts	-	-	-	Substantial Impacts
Coastal Zone Consistency	Consistent	-	-	-	Not Consistent
National Wild and Scenic River	Not Present	-	-	-	Present
New Alignment	None	-	-	-	Any
Section 4(f) Impacts	None	-	-	-	Any
Section 6(f) Impacts	None	-	-	-	Any
Added Through Lane	None	-	-	-	Any
Permanent Traffic Alteration	None	-	-	-	Any
Coast Guard Permit	None	-	-	-	Any
Noise Analysis Required	No	-	-	-	Yes
Air Quality Analysis Required	No	-	-	-	Yes[7]
Approval Level • **District Env. Supervisor** • **Env. Services Division** • **FHWA**	Concurrence by INDOT District Environmental or Environmental Services	Yes	Yes	Yes Yes	Yes Yes Yes

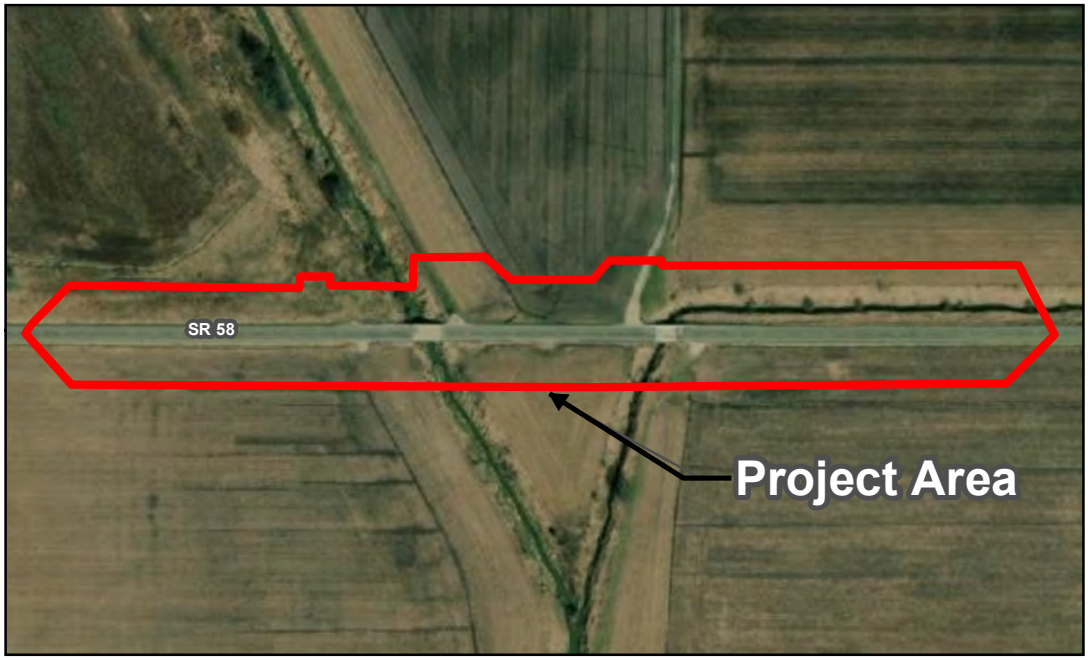
[1]Coordinate with INDOT Environmental Services. INDOT will then coordinate with the appropriate FHWA Environmental Specialist.
[2]Any involvement with a bridge processed under the Historic Bridge Programmatic Agreement.
[3]Permanent and/or temporary right-of-way.
[4]AMMs = Avoidance and Mitigation Measures.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

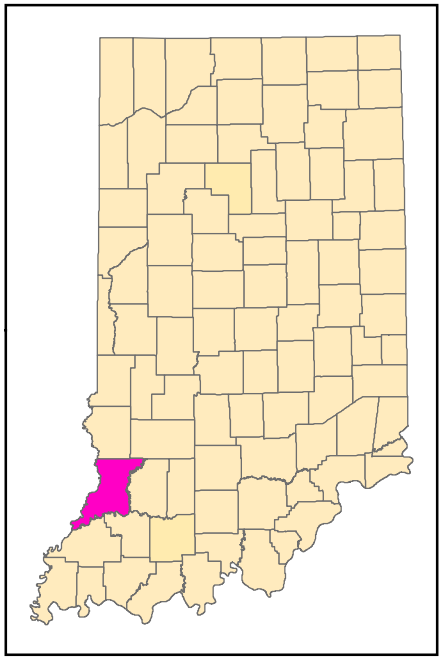
APPENDIX B

Graphics

General Site Map
SR 58, 1.65 to 1.74 miles west of SR 67
Des. Nos. 170156 and 1700159, Bridge Replacements
Knox County, Indiana







0.15 0.075 0 0.15 Miles

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

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

BICKNELL AND PLAINVILLE QUADRANGLES
INDIANA
7.5 MINUTE SERIES
(TOPOGRAPHIC)

1. Facing southeast beneath bridge over Pollard Ditch

2. Facing southeast beneath bridge over Pollard Ditch

3. Facing northwest towards Pollard Ditch

4. Facing west towards northwest on bank of Pollard Ditch

Photos taken 10/5/2018

5. Facing northwest towards stream bank and vegetation on bank of Pollard Ditch

6. Facing northwest under bridge over Pollard Ditch

Photos taken 10/5/2018

7. Facing northwest towards bridge over Pollard ditch

8. Facing southeast away from Pollard Ditch beneath bridge

9. Facing towards bridge over Pollard Ditch from downstream

10. Facing southeast away towards Pollard Ditch downstream from bridge

Photos taken 10/5/2018

11. Facing north towards fork in Pollard Ditch downstream from bridges

12. Facing northeast towards UNT to Pollard Ditch

Photos taken 10/5/2018

13. Looking west from bridge over UNT to Pollard Ditch

14. Facing southwest towards UNT to Pollard Ditch above bridge

15. Facing northeast towards UNT to Pollard Ditch from bridge

16. Facing west towards UNT to Pollard Ditch

Photos taken 10/5/2018

17. Facing east towards UNT to Pollard Ditch upstream from bridge

18. Facing west towards UNT to Pollard Ditch upstream from bridge

Photos taken 10/5/2018

19. Facing southwest towards bridge over UNT to Pollard Ditch east

20. Facing southwest under bridge over UNT to Pollard Ditch east

21. Facing northeast towards bridge over UNT to Pollard Ditch downstream

22. Facing east towards SR 58 from bridge

Photos taken 10/5/2018

23. Facing west towards SR 58 and drive culvert

24. Facing east towards SR 58 and bridge structure

LA CODE: 7066

PROJECT	DESIGNATION
1700156 & 1700159	1700156 & 1700159
CONTRACT	BRIDGE FILE
B-40554	058-42-10340 & 058-42-10341

STRUCTURE INFORMATION

STRUCTURE	TYPE	SPAN AND SKEW	OVER	STATION
058-42-10340	PRESTRESSED CONCRETE 36X49 BULB-TEE BEAM	1 SPAN: 67'-0" SKEW: 25°00'00"	POLLARD DITCH	55+41.00 LINE "A"
058-42-10341	PRESTRESSED CONCRETE 36X49 BULB-TEE BEAM	1 SPAN: 62'-0" SKEW: NONE	UNT POLLARD DITCH	59+55.38 LINE "A"

KIN PROJECT INFORMATION		
DESIGNATION	PROJECT DESCRIPTION	
1700156	SR 58 OVER POLLARD DITCH	LEAD DES
1700159	SR 58 OVER UNT TO POLLARD DITCH	

INDIANA DEPARTMENT OF TRANSPORTATION

INDIANA DEPARTMENT OF TRANSPORTATION INDOT

RIGHT-OF-WAY PLANS

FOR SPANS OVER 20 FEET

ROUTE: SR 58 AT: RP 27+13 & 27+22

PROJECT NO. 1700156 & 1700159 (R/W)

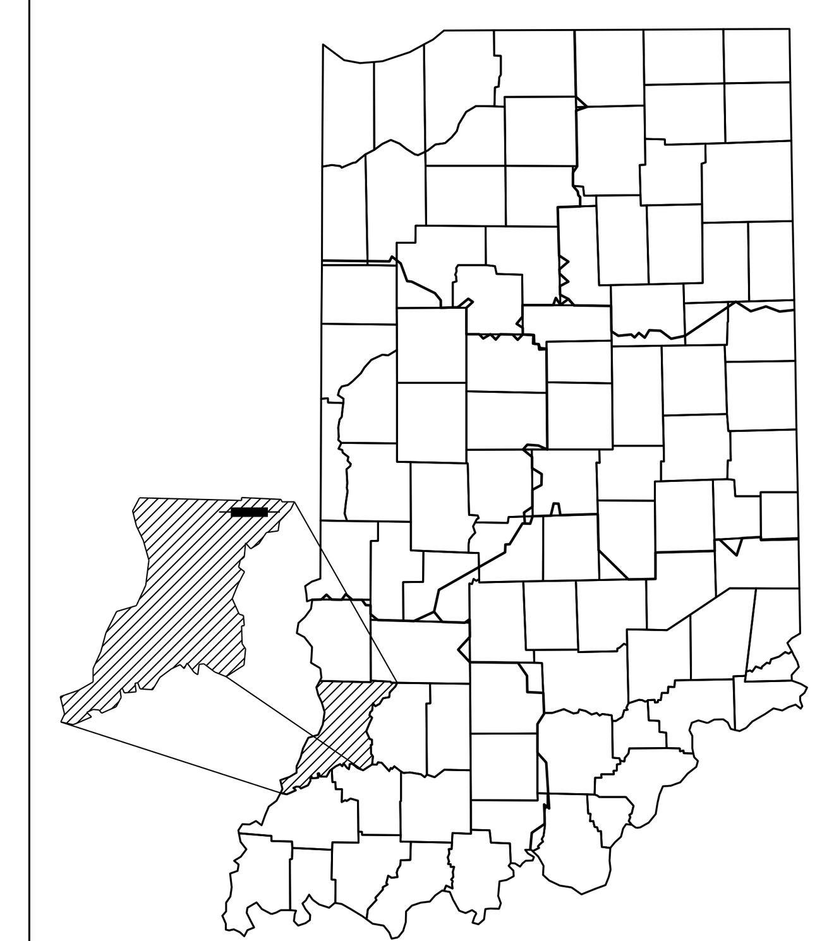
BRIDGE REPLACEMENT ON SR 58 OVER POLLARD DITCH, LOCATED APPROXIMATELY 1.74 MILES WEST OF SR 67, IN SECTION 13, T-5-N, R-8-W, VIGO TOWNSHIP, KNOX COUNTY, INDIANA, AND BRIDGE REPLACEMENT ON SR 58 OVER UNT POLLARD DITCH, LOCATED APPROXIMATELY 1.65 MILES WEST OF SR 67, IN SECTION 13, T-5-N, R-8-W, VIGO TOWNSHIP, KNOX COUNTY, INDIANA.

TRAFFIC DATA

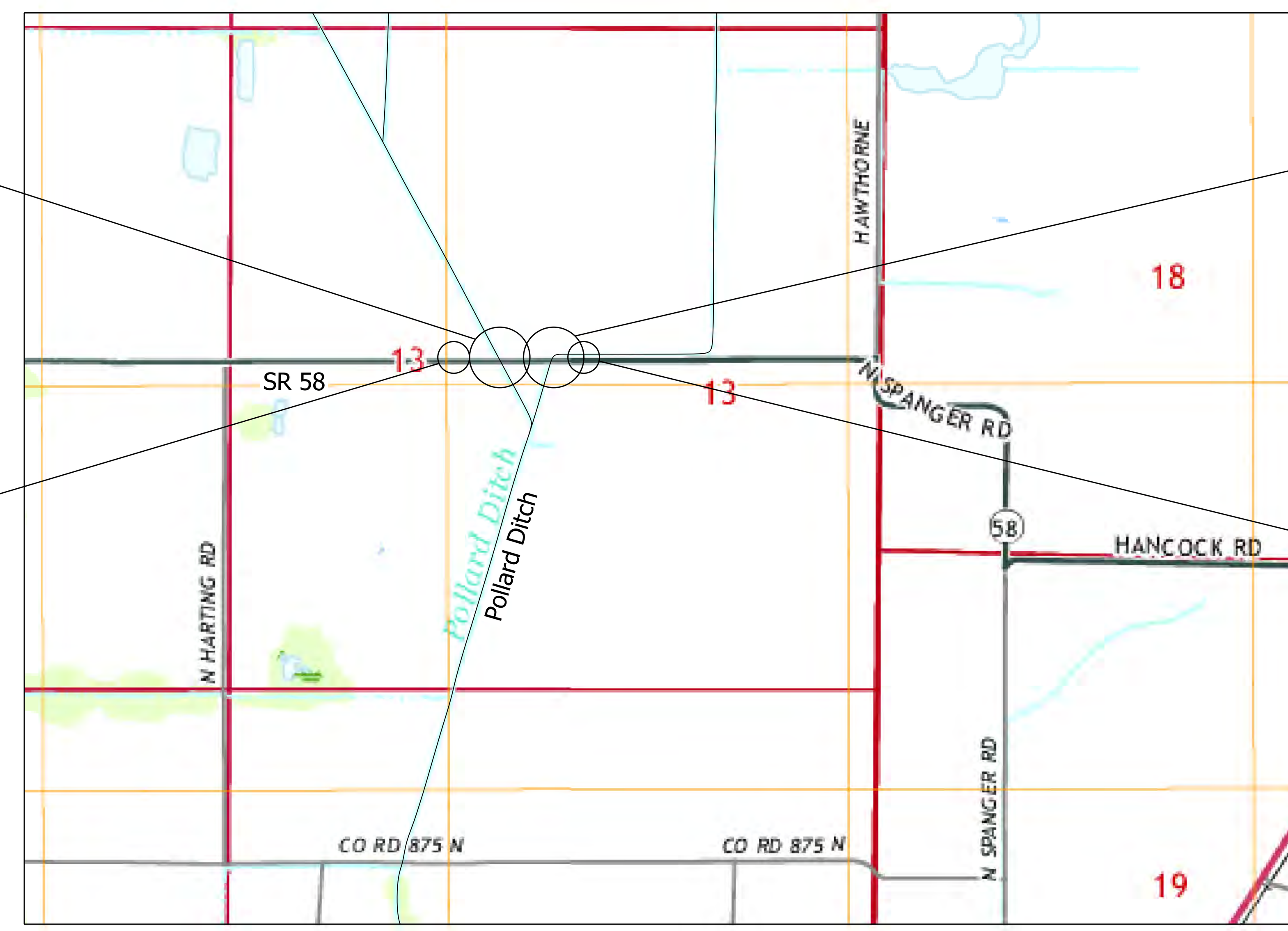
A.A.D.T.	(2022)	545	V.P.D.
A.A.D.T.	(2042)	560	V.P.D.
D.H.V.	(2042)	54	V.P.H.
DIRECTIONAL DISTRIBUTION		50.28	%
TRUCKS		10.72	% A.A.D.T.
		15.39	% D.H.V.

DESIGN DATA

DESIGN SPEED	55	MPH
PROJECT DESIGN CRITERIA	3R (NON-FREEWAY)	
FUNCTIONAL CLASSIFICATION	MAJOR COLLECTOR	
RURAL/URBAN	RURAL	
TERRAIN	LEVEL	
ACCESS CONTROL	NONE	



PROJECT LOCATION SHOWN BY —
KNOX COUNTY



1" = 1000'

LOCATION MAP
(KNOX COUNTY)

LATITUDE: 38° 52' 02" N LONGITUDE: 87° 15' 08" W

BRIDGE LENGTH:	0.013 & 0.012	MI.
ROADWAY LENGTH:	0.254	MI.
TOTAL LENGTH:	0.278	MI.
MAX. GRADE:	1.82	%

HYDROLOGIC UNIT CODE: 051202020801

PRELIMINARY R/W PLANS
AUGUST 05, 2020

NOTE: PROJECT LIMITS ENCOMPASS BOTH DES 1700156 AND DES 1700159

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

HNTB
HNTB Indiana, Inc.
The HNTB Companies
Infrastructure Solutions
111 Monument Circle
Suite 1200
Indianapolis, IN 46204

DRAFT
NOT FOR CONSTRUCTION

APPROVED: ______ OFFICE OF REAL ESTATE DIRECTOR ______ DATE

RECOMMENDED FOR APPROVAL: ______ ACQUISITION TEAM LEADER ______ DATE

	BRIDGE FILE		
	058-42-10340 & 058-42-10341		
	DESIGNATION		
	1700156 & 1700159		
SURVEY BOOK	SHEETS		
ELECTRONIC	1	of	15
CONTRACT	PROJECT		
B-40554	1700156 & 1700159		

LA CODE: 7066

UTILITIES

COMMUNICATIONS

AT&T - DISTRIBUTION
240 N. MERIDIAN ST, ROOM 1791
INDIANAPOLIS, IN 46204
MATT SPINDLER
(317) 265-3050

TDS TELECOM (SANDBORN)
16924 WEST VICTOR ROAD
NEW BERLIN, WI 53151
(262) 754-3063
MATT SCHULTE
MATT.SCHULTE@TDSTELECOM.COM

TELEPHONE

FRONTIER
8001 WEST JEFFERSON BLVD.
FORT WAYNE, IN 46804
(260) 461-3324
JOE SARLL
UTILITYCORDREQ@FTR.COM

GAS AND ELECTRIC

ATLAS ENERGY INDIANA, LLC
32 SOUTH COURT STREET, SUITE F
SULLIVAN, IN 47882
(812) 268-4900
WARREN HANKS
WHANKS@ATLASENERGY.COM

WIN ENERGY R.E.M.C.
3981 S. US HWY 41
VINCENNES, IN 47591
(812) 882-5140
GREGORY WOLVEN
GAWPE@WINENERGYREMC.COM

PIPELINE

COUNTRYMARK REFINING AND
LOGISTICS, LLC
1200 REFINERY ROAD
MT. VERNON, IN 47620
(812) 838-8160
TONY FERHENBACHER
TONY.FERHENBACHER@COUNTRYMARK.COM

WATER

KNOX COUNTY WATER, INC.
654 N. ANSON RD.
VINCENNES, IN 47591
(812) 726-5330
RICHARD MCNEW
COUNTYWATER@KNOXCOUNTY.IN.GOV

Indiana 811®

INDEX

REVISIONS

SHEET NO.	DATE	REVISED

DRAFT
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER		DATE
DESIGNED: CDC	DRAWN: CDC		
CHECKED: MRS	CHECKED: MRS		

INDIANA
DEPARTMENT OF TRANSPORTATION

R/W INDEX

HORIZONTAL SCALE	BRIDGE FILE
N/A	058-42-10340 & 058-42-10341
VERTICAL SCALE	DESIGNATION
N/A	1700156 & 1700159
SURVEY BOOK	SHEETS
ELECTRONIC	2 of 15
CONTRACT	PROJECT
B-40554	1700156 & 1700159

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2019R00715
2019R00715
LISA CLARK-BENOCK
KNOX COUNTY RECORDER
VINCENNES, IN
RECORDED ON
02/26/2019 10:45:07AM
REC FEE:25.00
PAGES: 1

LA CODE: 7066

Surveyor's Report

In accordance with Title 865, Article 1, Chapter 12 of the Indiana Administrative Code ("Rule 12"), the following observations and opinions are submitted regarding the various uncertainties in the locations of the lines and corners established this survey as a result of uncertainties in reference monumentation and inconsistencies in lines of occupation.

Location of Survey

This project is located on SR 58 over Pollard Ditch, located 1.7 miles west of SR 67 in Knox County, Indiana in Section 13, Township 5 North, Range 8 West.

Purpose of Survey

The purpose of this survey is to collect data for the design of two bridge replacement projects and to provide a basis for describing any right-of-way needed for the project. It is not a property retracement survey and any apparent property lines and/or corners shown are based only on physical evidence as collected during the field survey.

General

- All monument reference ties are shown on the Location Control Route Survey Plat (herein referred to as LCRS)
- All measurements are in US Survey feet unless otherwise noted. All distances shown on this LCRS represent ground measurements.
- Should additional USPLS corners be needed where none were found, they should be reestablished and tied to this survey.
- Field measurements for this survey were made in accordance with the specification outlined in Indiana Administrative Code 865 IAC-1-12-20 through 1-12-25. The decimal precision shown on this plat for the measurements and coordinates is for consistency in the mathematical calculations, and not to indicate the precision of the field work conducted for this survey.

Primary Control and Basis of Bearings

Unless noted otherwise, all bearings, distances, areas, and coordinates shown hereon are based upon the Indiana Geospatial Coordinate System's (InGCS) "Knox" zone per NAD 83 (2011) epoch 2010.00 and are reported in U.S. Survey Feet and decimal parts thereof. The "Knox" zone was developed to minimize the differences between ground measured horizontal distances and the corresponding grid coordinate (map) distances within the county bearing this zone's name.

InGCS "Knox" Zone Parameters
Geometric Datum: NAD 83(2011) epoch 2010.00
Projection Type: Transverse Mercator
Central meridian: 87°27'00" west longitude
Central Meridian scale factor: 1.000015
Latitude of Grid Origin: 38°24'00" north latitude
False Northing: 36,000.000m (118,110.00 U.S. Ft)
False Easting: 240,000.000m (787,400.00 U.S. Ft)

Alignment

No road plans were found, and only limited bridge plans were found for this project. INDOT's road log indicates this section of road was a county-maintained gravel roadway until 1935 when the State constructed a bituminous mixture on gravel. Line "A" this survey should be considered an original alignment.

Original Alignment Reference Monuments

500. Mag nail set at P.O.T. Station 50+00.00 Line "A".
501. Mag nail set at P.O.T. Station 57+50.00 Line "A".
502. Mag nail set at P.O.T. Station 65+00.00 Line "A".

Primary Control Points Set This Survey

100. A 5/8"rebar with cap was set in the grass on the north side of SR 58.
101. A 5/8"rebar with cap was set in the grass on the south side of SR 58.
102. A 5/8"rebar with cap was set in the grass on the north side of SR 58.

Corners of the PLSS

Section corners and certain quarter section corners were originally monumented by the Federal Government during the original subdivision of the State of Indiana. Corners shown on this survey were monumented for the Federal Government by setting wood posts at these corners in accordance with the Federal Government's Instructions. Without a continuous chain of record proving the perpetuation of the location of the wood posts, it is impossible to know or determine that the monuments found at these corners, this survey, are in these same location as the original wood posts. The remaining quarter section and quarter-quarter section corners were to be monumented by Local Surveyors (County Surveyors or Private Surveyors) after the initial Federal government survey. The monumentation of the locations of these corners were to be established in accordance with the Federal Government's Instructions for the subdivision of sections. There is not any direct evidence available indicating that the Instructions for the subdivision of sections were followed to determine the location of these corners. Therefore, monuments shown on this survey as marking corners set subsequent to the Federal Government Survey may not be in their "theoretical"location resulting from adherence to said Instructions.

Recovery of PLSS Corner Monuments

Item numbers refer to monument numbers shown on the LCRS.

600. A 5/8"Iron Pin was found per Knox County Surveyor reference tie and accepted as the Northeast Corner of Section 13, Township 5 North, Range 8 West.
601. A 5/8"Iron Pin with "Knox County Surveyor"cap was found per Knox County Surveyor reference tie and accepted as the East Quarter Corner of Section 13, Township 5 North, Range 8 West.
602. A 5/8"Iron Pin with "Knox County Surveyor"was found and accepted as the Southeast Corner of Section 13, Township 5 North, Range 8 West.
10184. The position of the West Quarter Corner of Section 13, Township 5 North, Range 8 West was established by using NAD 83 SPC coordinate values as shown on survey plat prepared for Triad Mining, Inc. by Douglas J. McDonald, LS, dated 11-24-2000 as Project No. 2000-63. The SPC coordinate values were converted to the "Knox" Zone of the InGCS.

100 NORTH: 288311.1426 EAST: 843684.2335
5/8" Rebar w/ "HNTB" cap (Set)
A = Mag nail in top center of 7th guard rail post, Dist. = 20.06', AZ = 129°
B = Mag nail in top center of 13th guard rail post, Dist. = 22.07', AZ = 268°
C = Mag nail in E.P., Dist. = 38.34', AZ = 197°
Not to scale
Primary Control

101 NORTH: 288267.2456 EAST: 844122.3072
5/8" Rebar w/ "HNTB" cap (Set)
A = Mag nail in top center of 8th guard rail post, Dist. = 4.18', AZ = 325°
B = S. flange of sign post "27×22", Dist. = 19.05', AZ = 85°
C = Mag nail in top center of 7th guard rail post, Dist. = 4.94', AZ = 46°
Not to scale
Primary Control

102 NORTH: 288304.7279 EAST: 844386.9033
5/8" Rebar w/ "HNTB" cap (Set)
A = NE. corner sign post "REFLECTOR", Dist. = 52.38', AZ = 266°
B = Mag nail in E.P., Dist. = 33.35', AZ = 158°
C = Mag nail in E.P., Dist. = 60.49', AZ = 279°
Not to scale
Primary Control

500 NORTH: 288283.1940 EAST: 843194.3880
Mag Nail (Set)
A = Mag nail in E.P., Dist. = 11.09', AZ = 329°
B = Mag nail in E.P., Dist. = 13.27', AZ = 47°
C = Mag nail in E.P., Dist. = 11.14', AZ = 178°
Not to scale
P.O.T. 50+00.00 LINE "A"

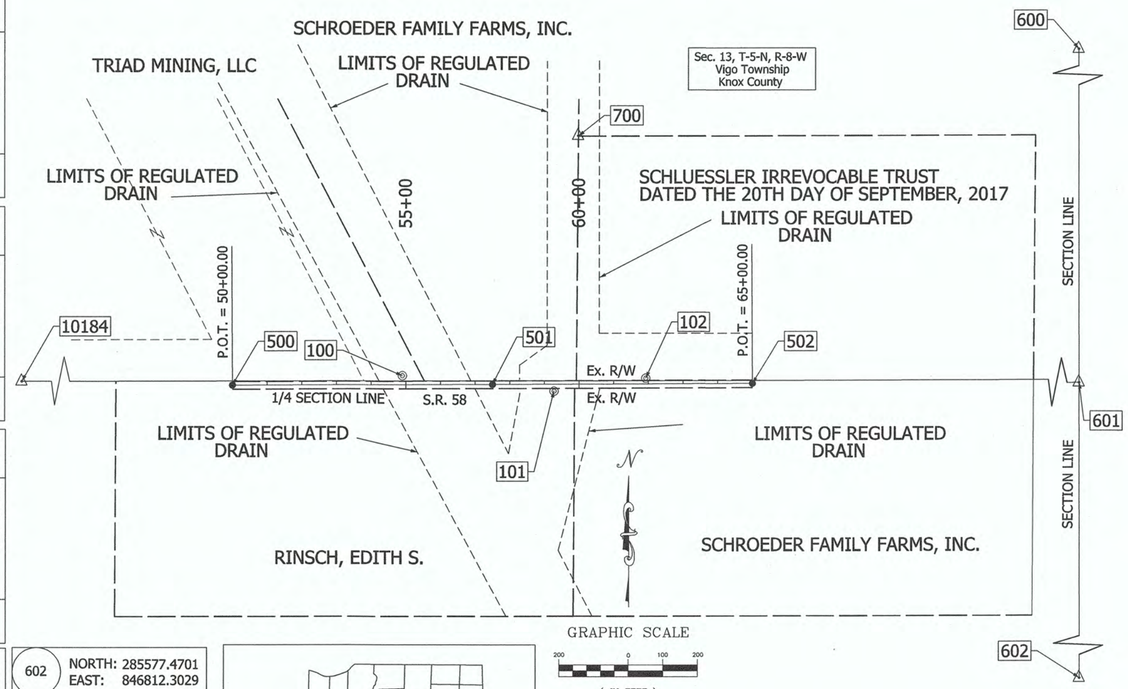
501 NORTH: 288286.2309 EAST: 843944.3818
Mag Nail (Set)
A = N. flange sign post "REFLECTOR", Dist. = 27.22', AZ = 238°
B = N. flange sign post "REFLECTOR", Dist. = 57.18', AZ = 103°
C = Mag nail in E.P., Dist. = 11.04', AZ = 358°
Not to scale
P.O.T. 57+50.00 LINE "A"

502 NORTH: 288289.2677 EAST: 844694.3757
Mag Nail (Set)
A = Mag nail in E.P., Dist. = 13.71', AZ = 39°
B = Mag nail in E.P., Dist. = 11.86', AZ = 331°
C = Mag nail in E.P., Dist. = 11.12', AZ = 180°
Not to scale
P.O.T. 65+00.00 LINE "A"

600 NORTH: 291024.3464 EAST: 846846.0348
5/8" Iron Pin (Found)
A = Mag nail 18" up in SW. face utility pole, Dist. = 114.06', AZ = 353°
B = Mag nail 24" up in E. face power pole, Dist. = 321.46', AZ = 182°
C = Mag nail 8" up in N. face wood fence post, Dist. = 21.66', AZ = 298°
Not to scale
Northeast Corner Sec. 13, T8N, R5W

601 NORTH: 288300.9700 EAST: 846829.2086
5/8" Iron Pin w/ Knox County Surveyor Cap (Found)
A = Mag nail 14" up in W. face utility pole, Dist. = 38.00', AZ = 338°
B = Mag nail 18" up in SE. face utility pole, Dist. = 45.45', AZ = 39°
C = NE. corner sign post "STOP", Dist. = 49.87', AZ = 191°
Not to scale
East Quarter Corner Sec. 13, T8N, R5W

602 NORTH: 285577.4701 EAST: 846812.3029
5/8" Iron Pin w/ Knox County Surveyor Cap (Found)
A = P.K. nail in N. face power pole, Dist. = 6.11', AZ = 262°
Not to scale
Southeast Corner Sec. 13, T8N, R5W



Plat Legend

- △ Found Section corner monument, as described on Plat
- • Mag Nail set, as described on Plat
- ◎ Set 5/8" Rebar with cap, as described on Plat
- ● Found Monument, as described on Plat

Surveyor's Report

Right of Way Note

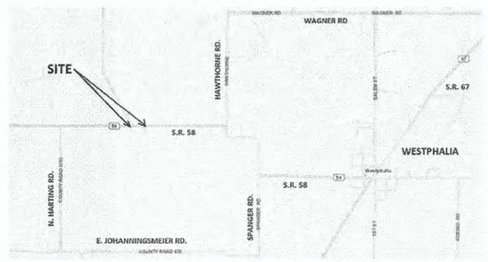
The existing right of way line, parcel ownership information shown on this plat are preliminary and subject to change based on verification/validation of title. This information is shown only to help orient the user of this plat as it relates to project centerlines and is not intended to establish existing right of way lines or ownership lines. The source used to plot existing right of way line and ownership lines shown on this plat is from last deed of record obtained from County Recorder's Office as well as other sources cited on this plat. The designer/consultant responsible for Right of Way Engineering will complete the final determination for this information.

Easement Note

Location of any easements are based on last deed of record available at the Recorder's Office. These deed records were found during initial research, and in no way represent all possible easements that could be recovered by a title search

Not to Scale

POINT #	DESCRIPTION	NORTHING (INGCS KNOX)	EASTING (INGCS KNOX)
100	5/8" Rebar W/Cap "HNTB" Set	288311.1426	843684.2335
101	5/8" Rebar W/Cap "HNTB" Set	288267.2456	844122.3072
102	5/8" Rebar W/Cap "HNTB" Set	288304.7279	844386.9033
500	Mag Nail Set	288283.1940	843194.3880
501	Mag Nail Set	288286.2309	843944.3818
502	Mag Nail Set	288289.2677	844694.3757
600	5/8 Iron Pin Found	291024.3464	846846.0348
601	5/8 Iron Pin W/Cap "KNOX COUNTY SURVEYOR" Found	288300.9700	846829.2086
602	5/8 Iron Pin W/Cap "KNOX COUNTY SURVEYOR" Found	285577.4701	846812.3029
700	1" Iron Pin Found	289001.6909	844191.9138



SURVEY STARTED		
1/23/2019		
SURVEY COMPLETED		
2/12/2019		
ROUTE PLAT SHEETS		
1	of	1

FIELD SURVEYOR STATEMENT

THIS SURVEY, TO THE BEST OF MY KNOWLEDGE AND BELIEF, IS EXCUTEDACCORDING TO THE PROVISIONS OF 865 I.A.C. 1-12-20 REGARDING ROUTESURVEYS, EXCEPT THAT ANY DATA SHOWN REGARDING THE LOCATION OR DESCRIPTION OF THE EXISTING PARCELS IS NOT PART OF THIS SURVEY.

KURT M. VONDERHEIDE REGISTERED No. LS20200082 STATE OF INDIANA LAND SURVEYOR

I AFFIRM, UNDER THE [PENALTIES FOR PERJURY, THAT I HAVE TAKEN REASONABLE CARE TO REDACT EACH SOCIAL SECURITY NUMBER IN THIS DOCUMENT, UNLESS REQUIRED BY LAW

PREPARED BY: Kurt M. Vonderheide 2/20/2019
REGISTERED LAND SURVEYOR, FIELD DATE

INDIANA
DEPARTMENT OF TRANSPORTATION

LOCATION CONTROL ROUTE SURVEY

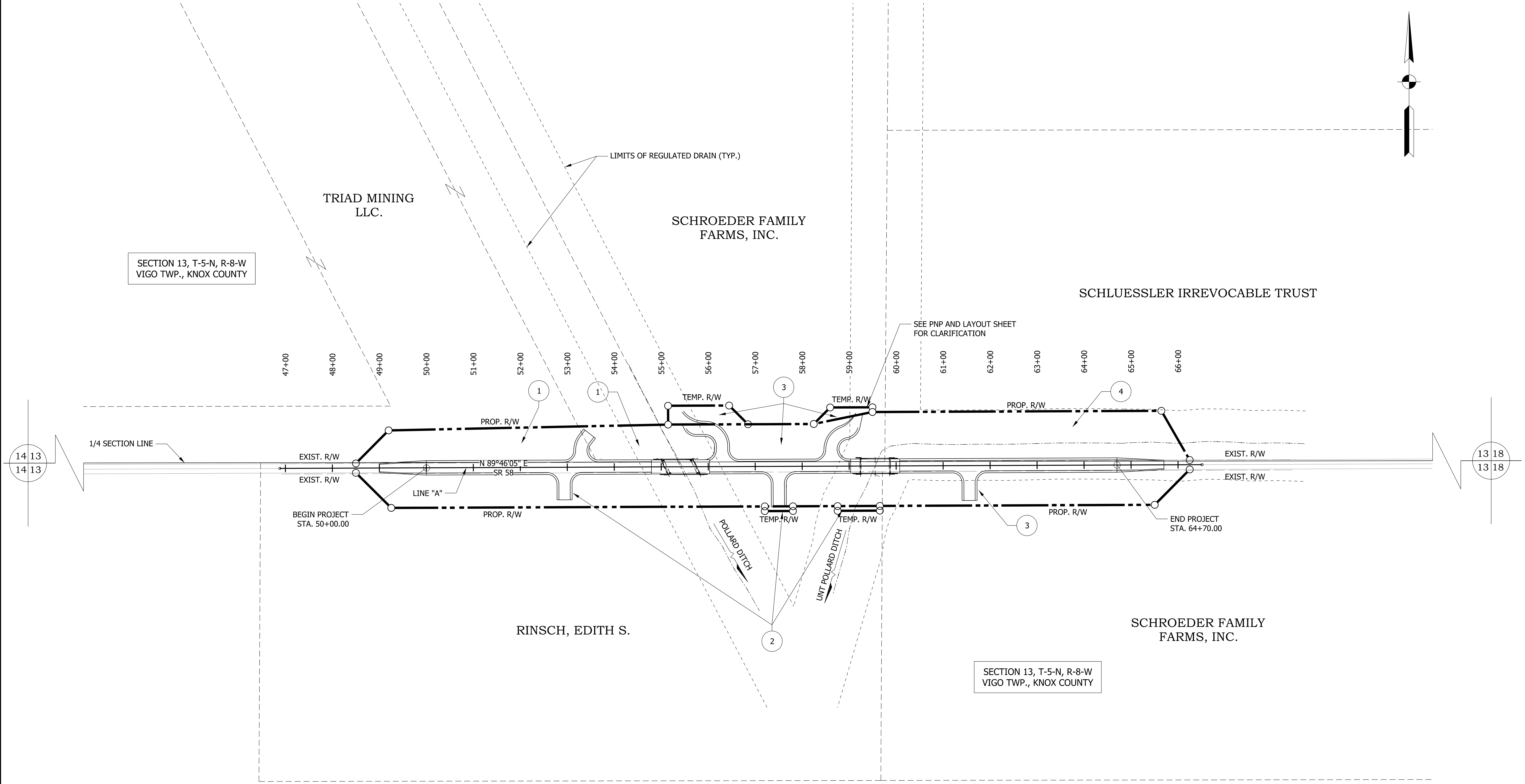
HORIZONTAL SCALE	BRIDGE FILE
1" = 200'	058-42-10340 & 058-42-10341
VERTICAL SCALE	DESIGNATION
N/A	1700156 & 1700159

SURVEY BOOK	SHEETS
ELECTRONIC	3 of 15
CONTRACT	PROJECT
B-40554	1700156 & 1700159

3 pcs
1 PDF

HNTB

LA CODE: 7066



DRAFT
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL		DESIGN ENGINEER	DATE
DESIGNED: CDC		DRAWN: CDC	
CHECKED: MRS		CHECKED: MRS	

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAT NO. 1

HORIZONTAL SCALE	BRIDGE FILE		
1" = 100'	058-42-10340 & 058-42-10341		
VERTICAL SCALE	DESIGNATION		
1" = 100'	1700156 & 1700159		
SURVEY BOOK	SHEETS		
ELECTRONIC	4	of	15
CONTRACT	PROJECT		
B-40554	1700156 & 1700159		

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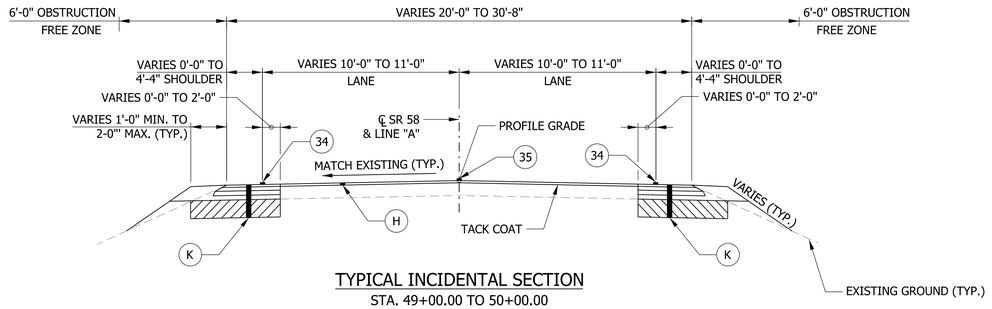
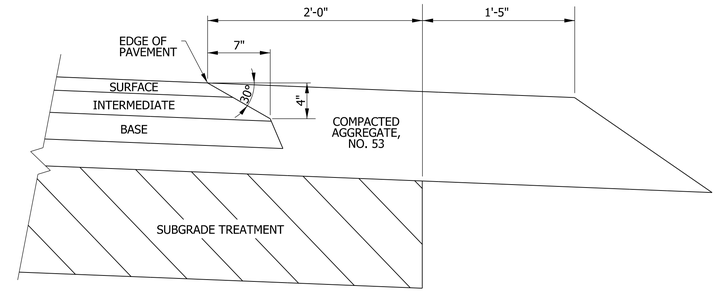
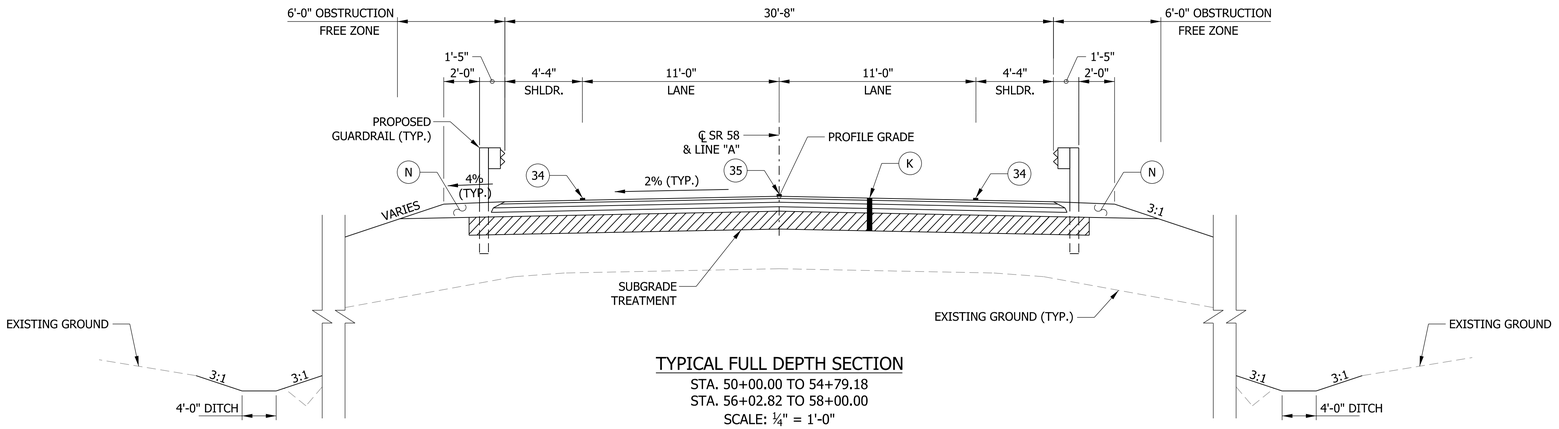
LA CODE: 7066



TYPICAL INCIDENTAL SECTION
STA. 49+00.00 TO 50+00.00
SCALE: ¼" = 1'-0"



TYPICAL SECTION WITHOUT GUARDRAIL AND SAFETY EDGE ON HMA PAVEMENT
1½" = 1'-0"



TYPICAL FULL DEPTH SECTION
STA. 50+00.00 TO 54+79.18
STA. 56+02.82 TO 58+00.00
SCALE: ¼" = 1'-0"

NOTE TO REVIEWER

PAVEMENT COMPOSITION TO BE REVISED UPON RECEIPT OF PAVEMENT DESIGN.

- (H) 165 LB/SYS QC/QA - HMA, 3, 64, SURFACE, 9.5 MM
- (K) 165 LB/SYS QC/QA - HMA, 3, 64, SURFACE 9.5 MM ON 275 LB/SYS QC/QA - HMA, 2, 64, INTERMEDIATE 19.0 MM ON 330 LB/SYS QC/QA - HMA, 2, 64, BASE 19.0 MM ON 3 INCHES OF COMPACTED AGGREGATE, NO. 53, BASE, ON SUBGRADE TREATMENT TYPE IC
- (N) COMPACTED AGGREGATE, NO. 53
- (34) LINE, PAINT, SOLID, WHITE 4 IN.
- (35) LINE, PAINT, BROKEN, YELLOW, 4 IN.

DRAFT
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: RRJ DRAWN: RRJ

CHECKED: MRS CHECKED: MRS

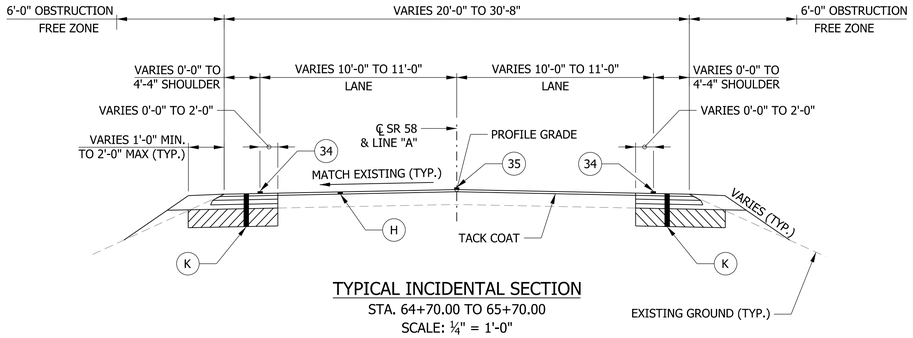
INDIANA
DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS
058-42-10340

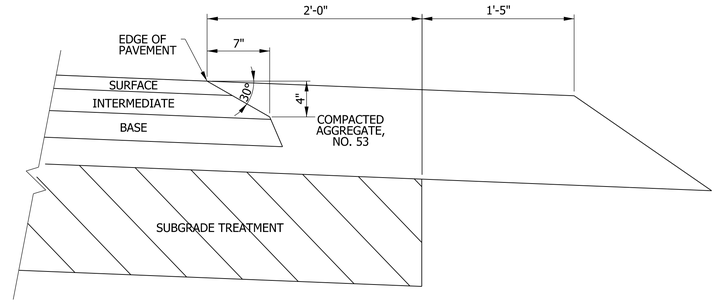
HORIZONTAL SCALE	BRIDGE FILE
AS SHOWN	058-42-10340 & 058-42-10341
VERTICAL SCALE	DESIGNATION
AS SHOWN	1700156 & 1700159

SURVEY BOOK	SHEETS
ELECTRONIC	5 of 15
CONTRACT	PROJECT
B-40554	1700156 & 1700159

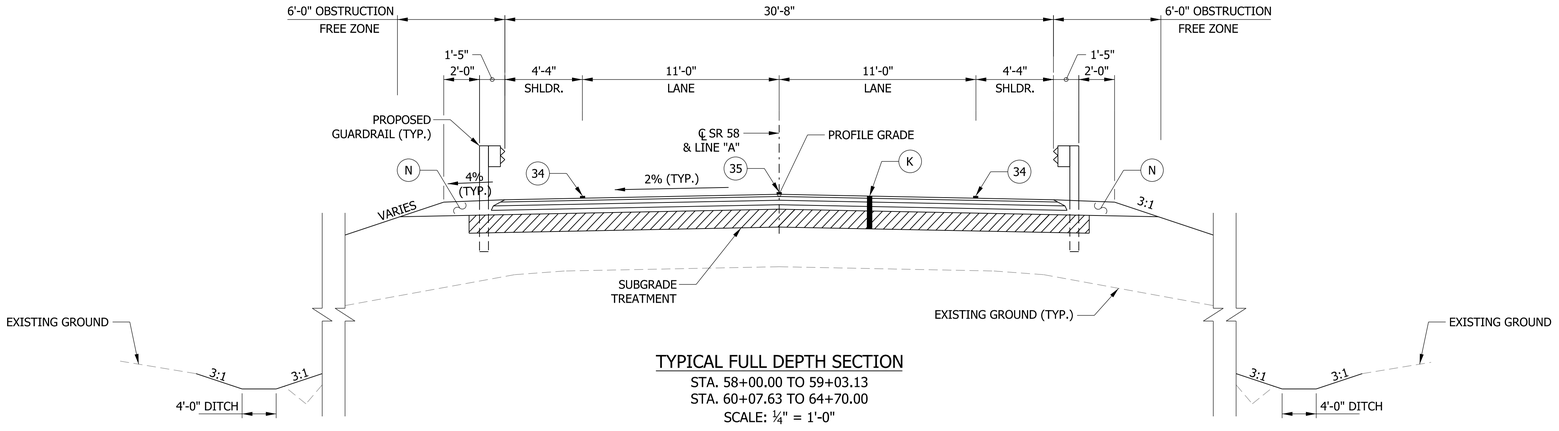
LA CODE: 7066



TYPICAL INCIDENTAL SECTION
STA. 64+70.00 TO 65+70.00
SCALE: ¼" = 1'-0"



TYPICAL SECTION WITHOUT GUARDRAIL AND SAFETY EDGE ON HMA PAVEMENT
1½" = 1'-0"



TYPICAL FULL DEPTH SECTION
STA. 58+00.00 TO 59+03.13
STA. 60+07.63 TO 64+70.00
SCALE: ¼" = 1'-0"

NOTE TO REVIEWER

PAVEMENT COMPOSITION TO BE REVISED UPON RECEIPT OF PAVEMENT DESIGN.

- (H) 165 LB/SYS QC/QA - HMA, 3, 64, SURFACE, 9.5 MM
- (K) 165 LB/SYS QC/QA - HMA, 3, 64, SURFACE 9.5 MM ON
  275 LB/SYS QC/QA - HMA, 2, 64, INTERMEDIATE 19.0 MM ON
  330 LB/SYS QC/QA - HMA, 2, 64, BASE 19.0 MM ON
  3 INCHES OF COMPACTED AGGREGATE, NO. 53, BASE, ON
  SUBGRADE TREATMENT TYPE IC
- (N) COMPACTED AGGREGATE, NO. 53
- (34) LINE, PAINT, SOLID, WHITE 4 IN.
- (35) LINE, PAINT, BROKEN, YELLOW, 4 IN.

DRAFT
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: RRJ DRAWN: RRJ

CHECKED: MRS CHECKED: MRS

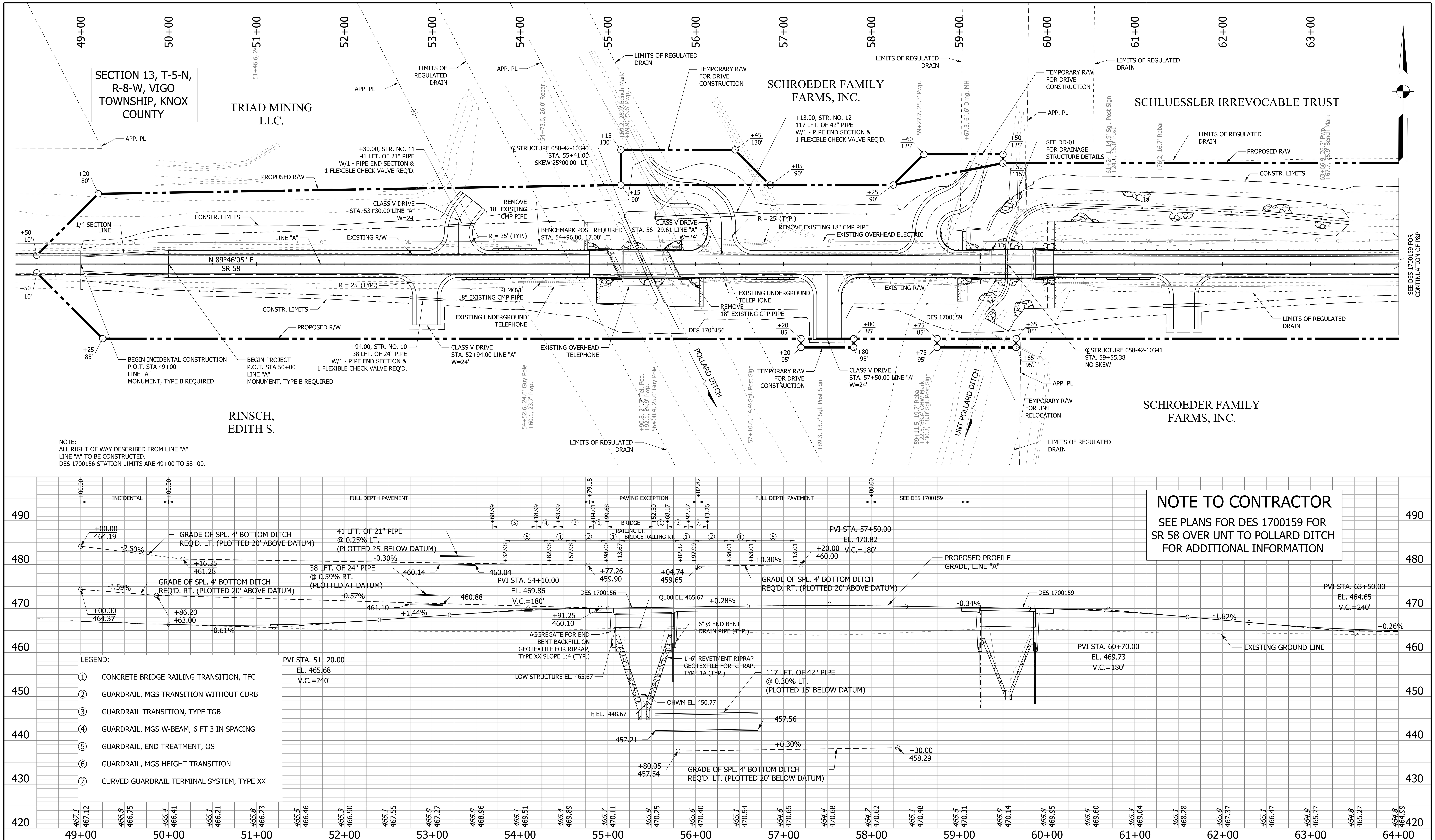
INDIANA
DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS
058-42-10341

HORIZONTAL SCALE	BRIDGE FILE
AS SHOWN	058-42-10340 & 058-42-10341
VERTICAL SCALE	DESIGNATION
AS SHOWN	1700156 & 1700159

SURVEY BOOK	SHEETS
ELECTRONIC	6 of 15
CONTRACT	PROJECT
B-40554	1700156 & 1700159

LA CODE: 7066


SECTION 13, T-5-N, R-8-W, VIGO TOWNSHIP, KNOX COUNTY
TRIAD MINING LLC.
SCHROEDER FAMILY FARMS, INC.
SCHLUESSLER IRREVOCABLE TRUST
RINSCH, EDITH S.
N 89°46'05" E
SR 58
LINE "A"
POLLARD DITCH
UNT POLLARD DITCH
+30.00, STR. NO. 11
41 LFT. OF 21" PIPE
W/1 - PIPE END SECTION &
1 FLEXIBLE CHECK VALVE REQ'D.
℄ STRUCTURE 058-42-10340
STA. 55+41.00
SKEW 25°00'00" LT.
+13.00, STR. NO. 12
117 LFT. OF 42" PIPE
W/1 - PIPE END SECTION &
1 FLEXIBLE CHECK VALVE REQ'D.
SEE DD-01
FOR DRAINAGE
STRUCTURE DETAILS
℄ STRUCTURE 058-42-10341
STA. 59+55.38
NO SKEW
BEGIN INCIDENTAL CONSTRUCTION
P.O.T. STA 49+00
LINE "A"
MONUMENT, TYPE B REQUIRED
BEGIN PROJECT
P.O.T. STA 50+00
LINE "A"
MONUMENT, TYPE B REQUIRED
+94.00, STR. NO. 10
38 LFT. OF 24" PIPE
W/1 - PIPE END SECTION &
1 FLEXIBLE CHECK VALVE REQ'D.
CLASS V DRIVE
STA. 52+94.00 LINE "A"
W=24'
CLASS V DRIVE
STA. 53+30.00 LINE "A"
W=24'
CLASS V DRIVE
STA. 56+29.61 LINE "A"
W=24'
CLASS V DRIVE
STA. 57+50.00 LINE "A"
W=24'
BENCHMARK POST REQUIRED
STA. 54+96.00, 17.00' LT.
REMOVE 18" EXISTING CMP PIPE
REMOVE EXISTING 18" CMP PIPE
EXISTING OVERHEAD ELECTRIC
EXISTING UNDERGROUND TELEPHONE
EXISTING OVERHEAD TELEPHONE
EXISTING R/W
PROPOSED R/W
CONSTR. LIMITS
LIMITS OF REGULATED DRAIN
TEMPORARY R/W FOR DRIVE CONSTRUCTION
TEMPORARY R/W FOR UNT RELOCATION
APP. PL
1/4 SECTION LINE
R = 25' (TYP.)
DES 1700156
DES 1700159
SEE DES 1700159 FOR CONTINUATION OF P&P
NOTE:
ALL RIGHT OF WAY DESCRIBED FROM LINE "A"
LINE "A" TO BE CONSTRUCTED.
DES 1700156 STATION LIMITS ARE 49+00 TO 58+00.
NOTE TO CONTRACTOR
SEE PLANS FOR DES 1700159 FOR
SR 58 OVER UNT TO POLLARD DITCH
FOR ADDITIONAL INFORMATION
PVI STA. 51+20.00
EL. 465.68
V.C.=240'
PVI STA. 54+10.00
EL. 469.86
V.C.=180'
PVI STA. 57+50.00
EL. 470.82
V.C.=180'
PVI STA. 60+70.00
EL. 469.73
V.C.=180'
PVI STA. 63+50.00
EL. 464.65
V.C.=240'
PROPOSED PROFILE GRADE, LINE "A"
EXISTING GROUND LINE
GRADE OF SPL. 4' BOTTOM DITCH REQ'D. LT. (PLOTTED 20' ABOVE DATUM)
GRADE OF SPL. 4' BOTTOM DITCH REQ'D. RT. (PLOTTED 20' ABOVE DATUM)
GRADE OF SPL. 4' BOTTOM DITCH REQ'D. LT. (PLOTTED 20' BELOW DATUM)
41 LFT. OF 21" PIPE @ 0.25% LT. (PLOTTED 25' BELOW DATUM)
38 LFT. OF 24" PIPE @ 0.59% RT. (PLOTTED AT DATUM)
117 LFT. OF 42" PIPE @ 0.30% LT. (PLOTTED 15' BELOW DATUM)
Q100 EL. 465.67
6" Ø END BENT DRAIN PIPE (TYP.)
AGGREGATE FOR END BENT BACKFILL ON GEOTEXTILE FOR RIPRAP, TYPE XX SLOPE 1:4 (TYP.)
1'-6" REVETMENT RIPRAP GEOTEXTILE FOR RIPRAP, TYPE 1A (TYP.)
LOW STRUCTURE EL. 465.67
OHWM EL. 450.77
℄ EL. 448.67
INCIDENTAL
FULL DEPTH PAVEMENT
PAVING EXCEPTION
SEE DES 1700159
BRIDGE RAILING LT.
BRIDGE RAILING RT.
LEGEND:
① CONCRETE BRIDGE RAILING TRANSITION, TFC
② GUARDRAIL, MGS TRANSITION WITHOUT CURB
③ GUARDRAIL TRANSITION, TYPE TGB
④ GUARDRAIL, MGS W-BEAM, 6 FT 3 IN SPACING
⑤ GUARDRAIL, END TREATMENT, OS
⑥ GUARDRAIL, MGS HEIGHT TRANSITION
⑦ CURVED GUARDRAIL TERMINAL SYSTEM, TYPE XX
49+00
50+00
51+00
52+00
53+00
54+00
55+00
56+00
57+00
58+00
59+00
60+00
61+00
62+00
63+00
64+00
490
480
470
460
450
440
430
420

NOTE TO REVIEWER

REFERENCE TIES AND BENCHMARKS WILL BE ADDED FOR FUTURE SUBMITTAL

DRAFT
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL		DESIGN ENGINEER	DATE
DESIGNED: EAH		DRAWN: EAH	
CHECKED: TMB		CHECKED: RRJ	

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
058-42-10340

HORIZONTAL SCALE	BRIDGE FILE
1" = 50'	058-42-10340 & 058-42-10341
VERTICAL SCALE	DESIGNATION
1" = 10'	1700156 & 1700159
SURVEY BOOK	SHEETS
ELECTRONIC	7 of 15
CONTRACT	PROJECT
B-40554	1700156 & 1700159

rrjacobs
8/12/2020 3:05:49 pm
model: Option b profile

LA CODE: 7066

TRIAD MINING LLC.

SECTION 13, T-5-N, R-8-W, VIGO TOWNSHIP, KNOX COUNTY

SCHROEDER FAMILY FARMS, INC.

SCHLUESSLER IRREVOCABLE TRUST

RINSCH, EDITH S.

SCHROEDER FAMILY FARMS, INC.

APP. PL

℄ STRUCTURE 058-42-10340
STA. 55+41.00
SKEW 25°00'00" LT.

℄ STRUCTURE 058-42-10341
STA. 59+55.38
NO SKEW

CLASS V DRIVE
STA. 58+62.45
W=24'

CLASS V DRIVE
STA. 61+56.00 LINE "A"
W=24'

TEMPORARY R/W FOR DRIVE CONSTRUCTION

TEMPORARY R/W FOR UNT RELOCATION

LIMITS OF REGULATED DRAIN

CONSTR. LIMITS

PROPOSED R/W

PROPOSED UNT DITCH RELOCATION

EXISTING OVERHEAD ELECTRIC

EXISTING OVERHEAD TELEPHONE

EXISTING UNDERGROUND TELEPHONE

EXISTING R/W

1/4 SECTION LINE

LINE "A"

N 89°46'05" E
SR 58

SEE DES 1700156 FOR CONTINUATION OF P&P

DES 1700156

DES 1700159

SEE DD-01 FOR DRAINAGE STRUCTURE DETAILS

REMOVE 24" EXISTING CPP PIPE

REMOVE 18" EXISTING CMP PIPE

BENCHMARK POST REQUIRED
STA. 59+18.00, 18.00 LT.

EXISTING 6" STEEL TILE (DO NOT DISTURB)

CONSTRUCTION LIMITS

POLLARD DITCH

UNT POLLARD DITCH

+56.00, STR. NO. 13
48 LFT. OF 36" PIPE
W/1 - PIPE END SECTION &
1 FLEXIBLE CHECK VALVE REQ'D.

END PROJECT
P.O.T. STA. 64+70
LINE "A"
MONUMENT, TYPE B REQUIRED

END INCIDENTAL CONSTRUCTION
P.O.T. STA. 65+70
LINE "A"
MONUMENT, TYPE B REQUIRED

NOTES:
ALL RIGHT OF WAY DESCRIBED FROM LINE "A"
LINE "A" TO BE CONSTRUCTED.
DES 1700159 STATION LIMITS ARE 58+00 TO 65+70.

SEE DES 1700156 | FULL DEPTH PAVEMENT | PAVING EXCEPTION | FULL DEPTH PAVEMENT | INCIDENTAL CONSTRUCTION

BRIDGE RAILING LT.

BRIDGE RAILING RT.

PVI STA. 51+20.00
EL. 465.68
V.C.=240'

PVI STA. 54+10.00
EL. 469.86
V.C.=180'

PVI STA. 57+50.00
EL. 470.82
V.C.=180'

PVI STA. 60+70.00
EL. 469.73
V.C.=180'

PVI STA. 63+50.00
EL. 464.65
V.C.=240'

+1.44%

+0.28%

-0.34%

-1.82%

0.26%

-0.30%

+0.30%

+1.34%

Q100 EL. 465.59

LOW STRUCTURE EL. 465.67

458.66

458.52

48 LFT. OF 36" PIPE
@ 0.29% RT.
(PLOTTED AT DATUM)

6" Ø END BENT DRAIN PIPE (TYP.)

AGGREGATE FOR END BENT BACKFILL ON GEOTEXTILE FOR RIPRAP, TYPE XX SLOPE 1:4 (TYP.)

EXISTING GROUND LINE

F EL. 451.13

OHWM EL. 453.23

+80.00
462.00

+01.96
461.63

+08.83
458.60

+80.77
460.00

+70.00
461.20

GRADE OF SPL. 4' BOTTOM DITCH REQ'D. RT. (PLOTTED 20' BELOW DATUM)

GRADE OF SPL. 4' BOTTOM DITCH REQ'D. RT. (PLOTTED 20' BELOW DATUM)

LEGEND:

① CONCRETE BRIDGE RAILING TRANSITION, TFC
② GUARDRAIL, MGS TRANSITION WITHOUT CURB
③ GUARDRAIL, MGS W-BEAM, 6 FT 3 IN SPACING
④ GUARDRAIL, END TREATMENT, OS
⑤ GUARDRAIL, MGS HEIGHT TRANSITION
⑥ CURVED GUARDRAIL TERMINAL SYSTEM, TYPE XX
⑦ GUARDRAIL, TRANSITION, TYPE TGB

NOTE TO CONTRACTOR

SEE PLANS FOR DES 1700156 FOR SR 58 OVER POLLARD DITCH FOR ADDITIONAL INFORMATION

NOTE TO REVIEWER

REFERENCE TIES AND BENCHMARKS WILL BE ADDED FOR FUTURE SUBMITTAL

DRAFT NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: EAH DRAWN: EAH

CHECKED: RRJ CHECKED: RRJ

INDIANA DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
058-42-10341

HORIZONTAL SCALE	BRIDGE FILE
1" = 50'	058-42-10340 & 058-42-10341
VERTICAL SCALE	DESIGNATION
1" = 10'	1700156 & 1700159
SURVEY BOOK	SHEETS
ELECTRONIC	8 of 15
CONTRACT	PROJECT
B-40554	1700156 & 1700159

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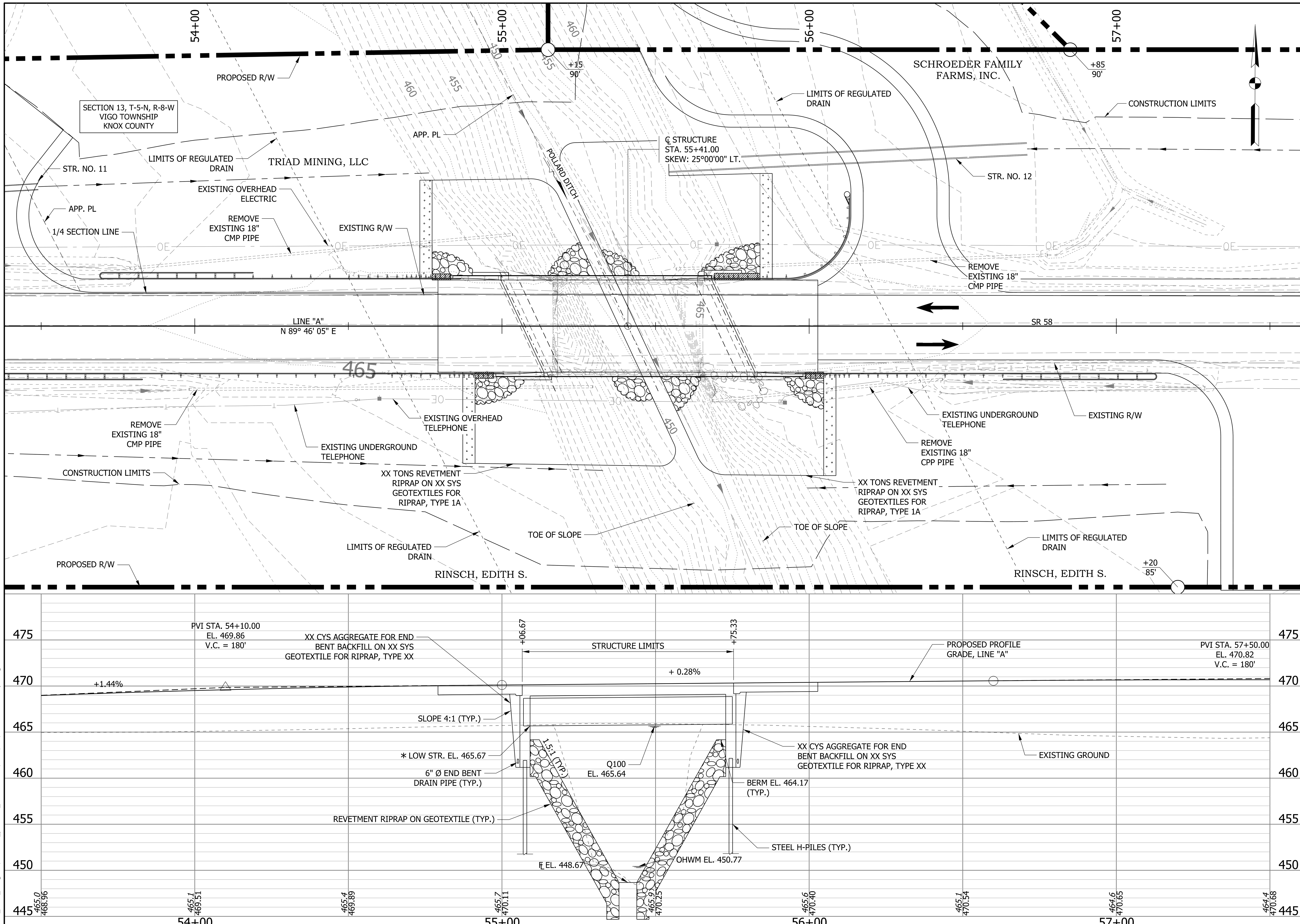

EXISTING STRUCTURE

THE EXISTING STRUCTURE WAS BUILT IN 1920 AS A STANDARD TRUSS BUILT ON CONCRETE ABUTMENTS. IN 1964 AND 1980 THE STRUCTURE WAS REHABILITATED. THE TRUSS WAS REMOVED, AND BOX BEAM SUPERSTRUCTURE INSTALLED. THE BRIDGE FLOOR LENGTH IS 49'-0" AND THE CLEAR ROADWAY WIDTH IS 28'-6". THE EXISTING STRUCTURE IS TO BE REMOVED AND REPLACED. EXISTING PLANS ARE ON FILE WITH THE INDIANA DEPARTMENT OF TRANSPORTATION AS FILE NO. 058-42-06072 B.

HYDRAULIC DATA

WATERWAY OPENING REQUIRED	504.74	SFT
WATERWAY OPENING PROVIDED	527.9	SFT
DRAINAGE AREA	15.99	SQ MI
DESIGN DISCHARGE, Q100	3,720	CFS
VELOCITY	0.89	FT/S
Q100 ELEV.	465.67	FT
Q500 ELEV.	466.36	FT
ESTIMATED SCOUR ELEV.	423.02	FT
BACKWATER AT Q100	0.03	FT
EXISTING WATERWAY OPENING (STRAIGHT)	439.91	SFT
EXISTING BACKWATER	0.03	FT
MIN. LOW STRUCTURE ELEV. REQ.	465.67	FT
EXISTING LOW STRUCTURE ELEV.	463.62	FT

HYDRAULIC SCOUR DATA

NOT OVERTOPPING Q500 FLOW DATA:

VELOCITY (MAX.)	5.97	FT/S
SCOUR DEPTH (CONTRACTION)	25.65	FT
SCOUR DEPTH (TOTAL)	25.65	FT
LOW SCOUR ELEV.	423.02	FT

EARTHWORK TABULATION

FILL + 25%	xxx	CYS
COMMON EXCAVATION	xxx	CYS
USABLE WATERWAY EXCAVATION (70%)	0	CYS
SURPLUS FOUNDATION EXCAVATION	0	CYS
WASTE	xxx	CYS
TOTAL WATERWAY EXCAVATION	0	CYS
EXCAVATION UNCLASSIFIED	0	CYS
Ø BENCHING (ESTIMATED)	0	CYS

Ø NO DIRECT PAYMENT FOR BENCHING. BENCHING WILL NOT BE PAID FOR AS COMMON EXCAVATION.

* LOW STRUCTURE ELEVATION IS AN ESTIMATE AND WILL BE REFINED DURING FINAL DESIGN.

SINGLE SPAN PRESTRESSED CONCRETE
BULB-TEE BEAM BRIDGE
1 SPAN: 67'-0"
SKEW: 25°00'00" LT
30'-0" CLEAR ROADWAY
SR 58 OVER POLLARD DITCH
KNOX COUNTY

NOTE TO REVIEWER

EARTHWORK TABULATION WILL BE UPDATED FOR FUTURE SUBMITTALS

DRAFT
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL ________ DESIGN ENGINEER ________ DATE

DESIGNED: CDC DRAWN: CDC
CHECKED: TMB CHECKED: RRJ

INDIANA
DEPARTMENT OF TRANSPORTATION

LAYOUT
058-42-10340

HORIZONTAL SCALE	BRIDGE FILE
1/16" = 1'-0"	058-42-10340 & 058-42-10341
VERTICAL SCALE	DESIGNATION
3/16" = 1'-0"	1700156 & 1700159
SURVEY BOOK	SHEETS
ELECTRONIC	9 of 15
CONTRACT	PROJECT
B-40554	1700156 & 1700159

lschmidt
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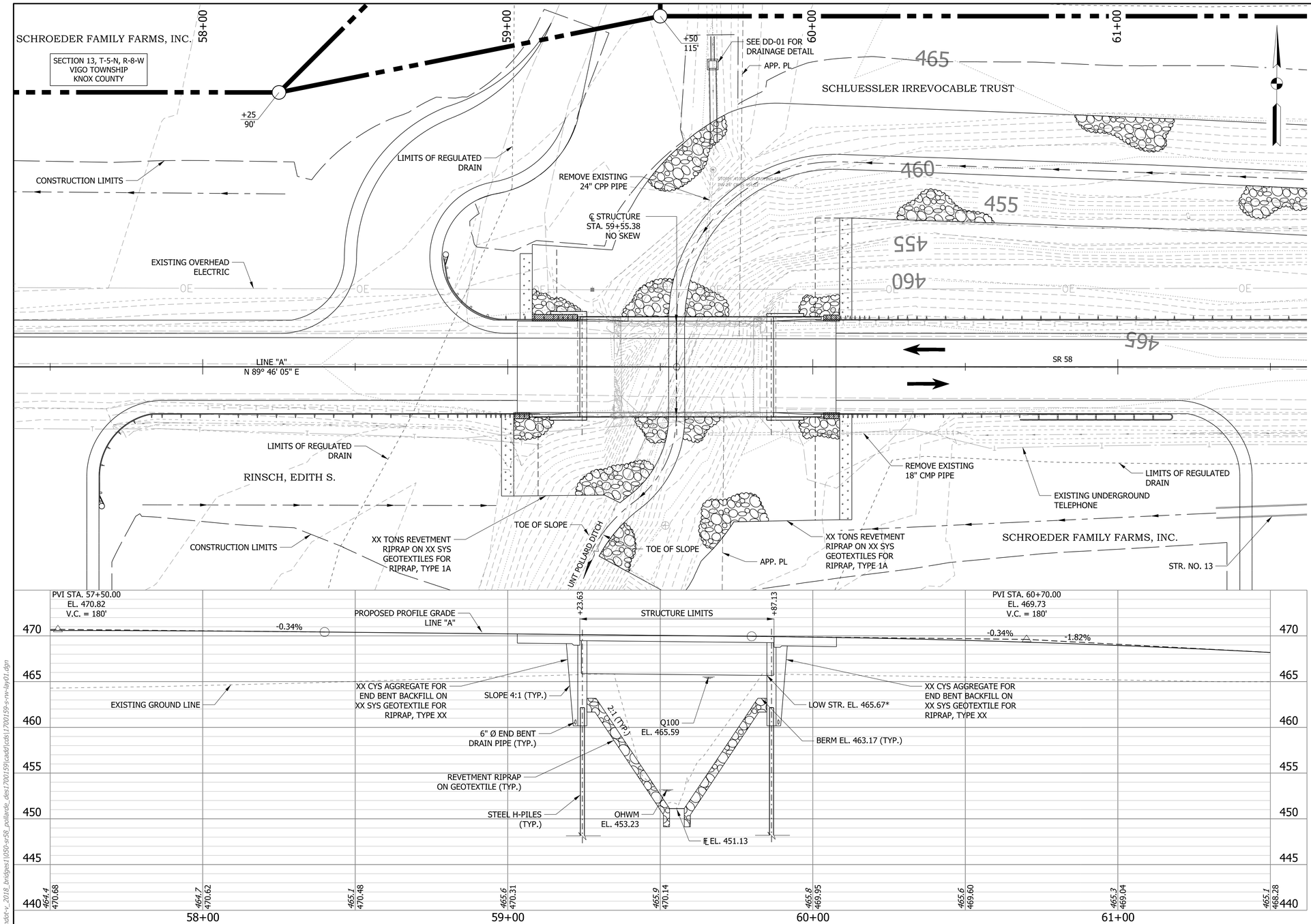


EXISTING STRUCTURE

THE EXISTING STRUCTURE WAS BUILT IN 1920 AS A STANDARD TRUSS BUILT ON CONCRETE ABUTMENTS. IN 1964 AND 1980 THE STRUCTURE WAS REHABILITATED. THE TRUSS WAS REMOVED, AND BOX BEAM SUPERSTRUCTURE INSTALLED. THE BRIDGE FLOOR LENGTH IS 49'-0" AND THE CLEAR ROADWAY WIDTH IS 28'-6". THE EXISTING STRUCTURE IS TO BE REMOVED AND REPLACED. EXISTING PLANS ARE ON FILE WITH THE INDIANA DEPARTMENT OF TRANSPORTATION AS FILE NO. 058-42-06073.

HYDRAULIC DATA

WATERWAY OPENING REQUIRED	358.44	SFT
WATERWAY OPENING PROVIDED	488.81	SFT
DRAINAGE AREA	1.73	SQ MI
DESIGN DISCHARGE, Q100	860	CFS
VELOCITY	0.20	FT/S
Q100 ELEV.	465.59	FT
Q500 ELEV.	466.30	FT
ESTIMATED SCOUR ELEV.	413.16	FT
BACKWATER AT Q100	0.00	FT
EXISTING WATERWAY OPENING	242.60	SFT
EXISTING BACKWATER	0.00	FT
MIN. LOW STRUCTURE ELEV. REQ.	465.67	FT
EXISTING LOW STRUCTURE ELEV.	463.69	FT

HYDRAULIC SCOUR DATA

NOT OVERTOPPING Q500 FLOW DATA:		
VELOCITY (MAX.)	2.39	FT/S
SCOUR DEPTH (CONTRACTION)	37.97	FT
SCOUR DEPTH (TOTAL)	37.97	FT
LOW SCOUR ELEV.	413.16	FT

EARTHWORK TABULATION

FILL + 25%	xxx	CYS
COMMON EXCAVATION	xxx	CYS
USABLE WATERWAY EXCAVATION (70%)	0	CYS
SURPLUS FOUNDATION EXCAVATION	0	CYS
WASTE	xxx	CYS
TOTAL WATERWAY EXCAVATION	0	CYS
EXCAVATION UNCLASSIFIED	0	CYS
Ø BENCHING (ESTIMATED)	0	CYS

Ø NO DIRECT PAYMENT FOR BENCHING. BENCHING WILL NOT BE PAID FOR AS COMMON EXCAVATION.

* LOW STRUCTURE ELEVATION IS AN ESTIMATE AND WILL BE REFINED DURING FINAL DESIGN.

SINGLE-SPAN PRESTRESSED
CONCRETE BULB-TEE BEAM
1 SPAN: 62'-0"
30'-0" CLEAR ROADWAY
SR 58 OVER UNT POLLARD DITCH
KNOX COUNTY

NOTE TO REVIEWER

EARTHWORK QUNATITIES WILL BE UPDATED FOR FUTURE SUBMITTALS

DRAFT
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: CDC DRAWN: CDC

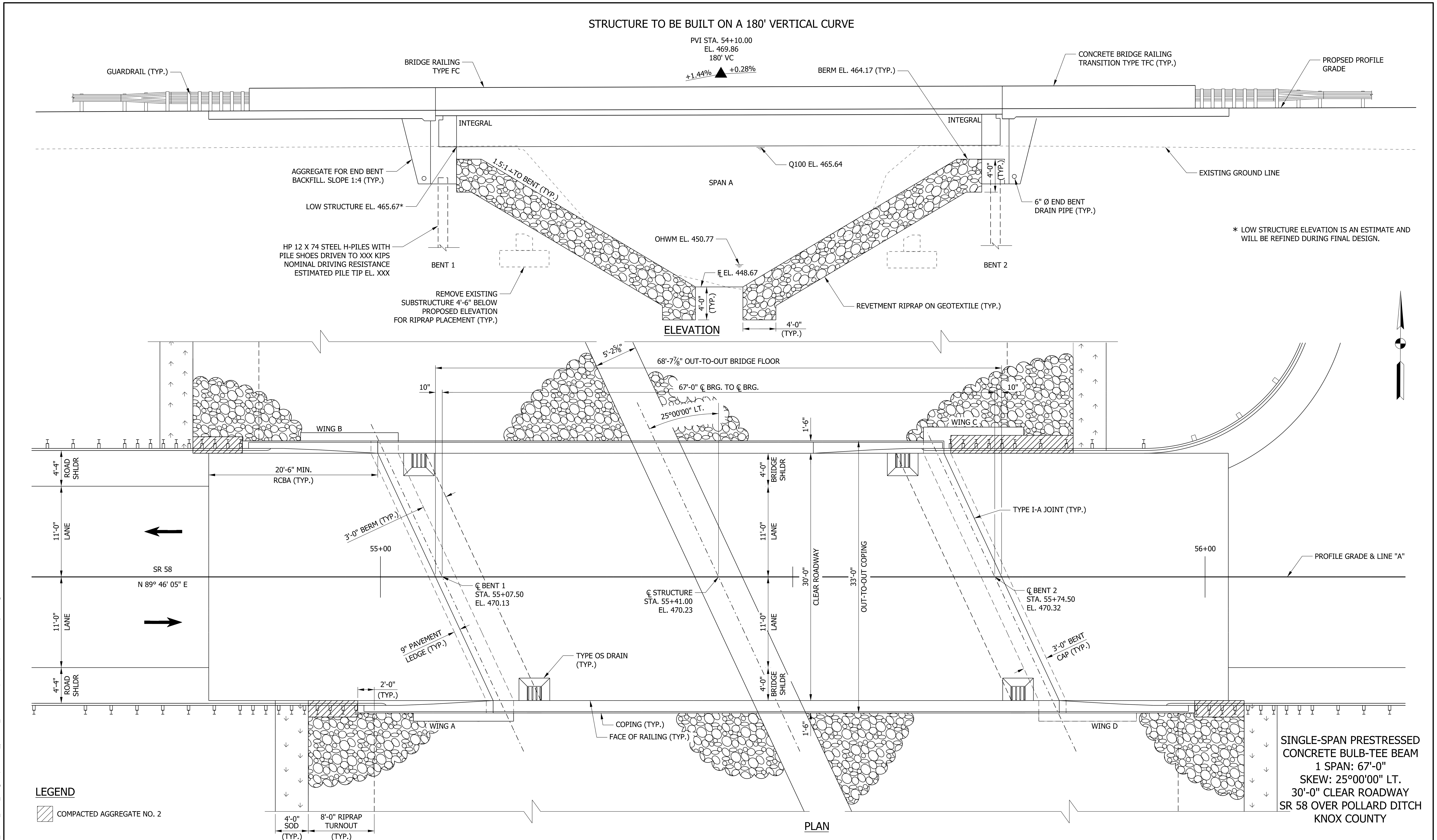
CHECKED: TMB CHECKED: RRJ

INDIANA
DEPARTMENT OF TRANSPORTATION

LAYOUT
058-42-10341

HORIZONTAL SCALE	BRIDGE FILE
1/16" = 1'-0"	058-42-10340 & 058-42-10341
VERTICAL SCALE	DESIGNATION
3/16" = 1'-0"	1700156 & 1700159
SURVEY BOOK	SHEETS
ELECTRONIC	10 of 15
CONTRACT	PROJECT
B-40554	1700156 & 1700159

LA CODE: 7066



SINGLE-SPAN PRESTRESSED CONCRETE BULB-TEE BEAM
1 SPAN: 67'-0"
SKEW: 25°00'00" LT.
30'-0" CLEAR ROADWAY
SR 58 OVER POLLARD DITCH
KNOX COUNTY

NOTE TO REVIEWER

PAVEMENT LEDGE HAS BEEN INCREASED TO 9" PER COORDINATION WITH THE INDOT STRUCTURES COMMITTEE

NOTE TO REVIEWER

PER COORDINATION WITH VINCENNES DISTRICT AND INDOT HYDRAULICS, EXISTING LOW STRUCTURE ELEVATION IS TO BE MAINTAINED

DRAFT
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER		DATE
DESIGNED: EAH		DRAWN: EAH	
CHECKED: TMB		CHECKED: RRJ	

INDIANA
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
058-42-10340

HORIZONTAL SCALE	BRIDGE FILE
3/16" = 1'-0"	058-42-10340 & 058-42-10341
VERTICAL SCALE	DESIGNATION
3/16" = 1'-0"	1700156 & 1700159
SURVEY BOOK	SHEETS
ELECTRONIC	11 of 15
CONTRACT	PROJECT
B-40554	1700156 & 1700159

ekahraman
8/3/2020 4:19:48 pm
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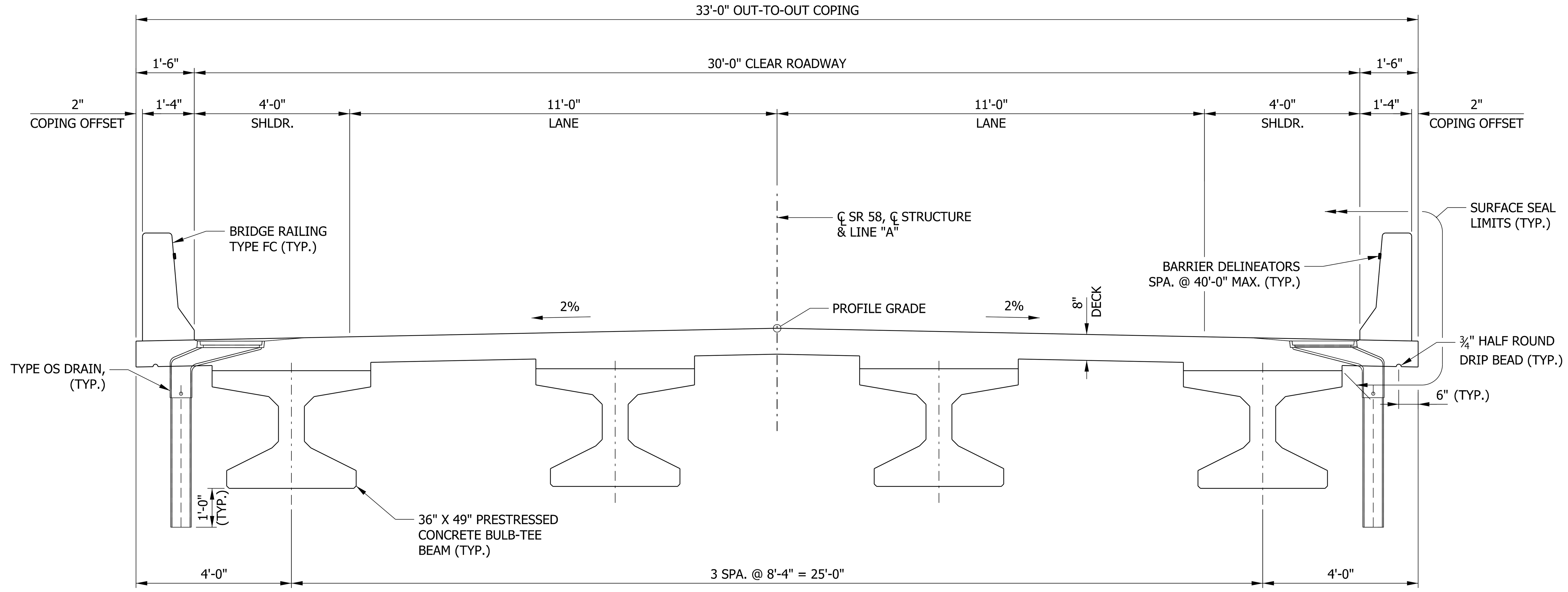
LA CODE: 7066



TYPICAL SECTION
(LOOKING AHEAD STATION)
SCALE: ½" = 1'-0"

GENERAL NOTES

REINFORCING BAR COVER SHALL BE 2½" MIN. IN TOP AND 1" MIN. IN BOTTOM OF FLOOR SLABS, AND 2" MIN. IN ALL OTHER PARTS, UNLESS NOTED.

ALL DIMENSIONS AND ELEVATIONS ARE IN FEET (FT) UNLESS OTHERWISE NOTED.

ALL CONCRETE IS TO BE CLASS "C". REINFORCING BARS IN DECK, BARRIERS, BARRIER TRANSITIONS, AND END BENTS SHALL BE EPOXY COATED.

ALL THE EXPOSED FACES OF THE END BENTS, BARRIERS, BARRIER TRANSITIONS, THE TOP OF DECK, THE FACE OF THE DECK COPING, THE REINFORCED CONCRETE BRIDGE APPROACH SLABS, AND THE UNDERSIDE OF THE DECK FROM COPING TO THE FACE OF THE EXTERIOR BEAM SHALL RECEIVE SURFACE SEAL. ALL SURFACE SEAL WILL BE PAID FOR AS LUMP SUM.

DESIGN DATA

LIVE LOAD
SUPERSTRUCTURE AND SUBSTRUCTURE DESIGNED FOR HL-93 LOADING IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION, 2017 AND ITS SUBSEQUENT INTERIMS.

DEAD LOAD
DESIGNED FOR ACTUAL DEAD LOAD PLUS 35 PSF OF FUTURE WEARING SURFACE AND 15 PSF FOR PERMANENT METAL DECK FORMS.

FLOOR SLAB
DESIGNED WITH A 7½" STRUCTURAL DEPTH PLUS ½" SACRIFICIAL WEARING SURFACE.

SEISMIC DESIGN DATA

SEISMIC PERFORMANCE ZONE = XX
ACCELERATION COEFFICIENT = XX
SEISMIC SOIL PROFILE TYPE = XX

DESIGN STRENGTHS

PRESTRESSED CONCRETE	f'c = 8,000 psi @ 28 DAYS
PRESTRESSED CONCRETE	f'c = 6,500 psi @ RELEASE
CLASS "C" CONCRETE	f'c = 4,000 psi
REINFORCING STEEL	f'c = 60,000 psi

CONSTRUCTION LOADING

THE EXTERIOR BEAM HAS BEEN CHECKED FOR STRENGTH, DEFLECTION, AND OVERTURNING USING THE CONSTRUCTION LOADS SHOWN BELOW. CANTILEVER OVERHANG BRACKETS WERE ASSUMED FOR SUPPORT OF THE DECK OVERHANG PAST THE EDGE OF THE EXTERIOR BEAM. THE FINISHING MACHINE WAS ASSUMED TO BE SUPPORTED 6 IN. OUTSIDE THE VERTICAL COPING FORM. THE TOP OVERHANG BRACKETS WERE ASSUMED TO BE LOCATED 6 IN. PAST THE EDGE OF THE VERTICAL COPING FORM. THE BOTTOM OVERHANG BRACKETS WERE ASSUMED TO BE BRACED AGAINST THE INTERSECTION OF THE GIRDER BOTTOM FLANGE AND WEB.

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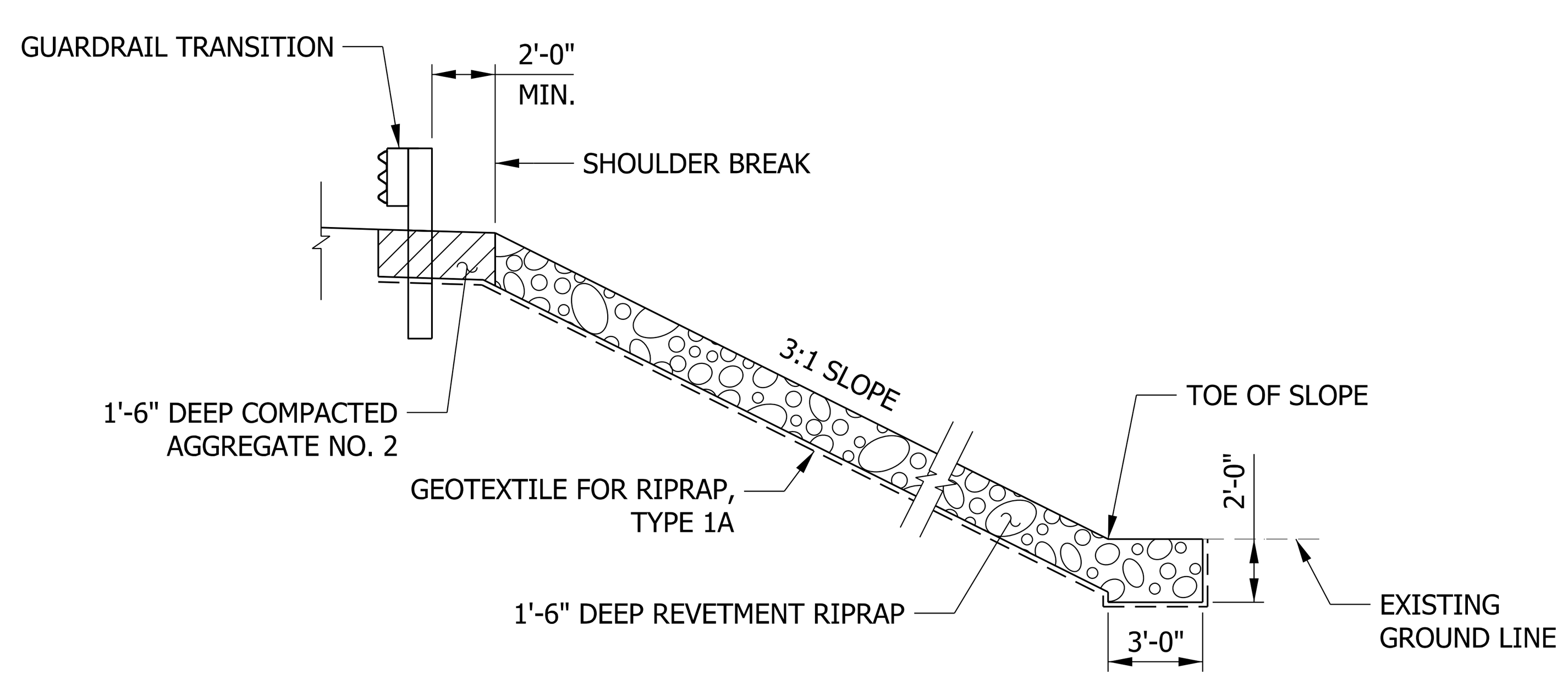
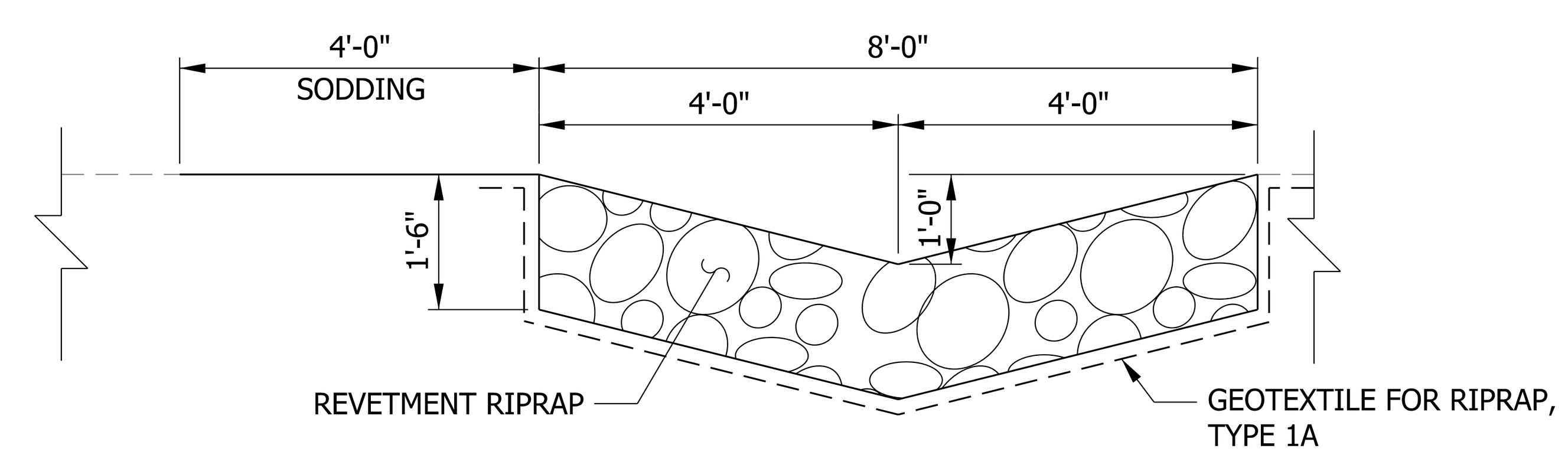
FINISHING-MACHINE LOAD
4500 LB DISTRIBUTED OVER 10 FT ALONG THE COPING.

WIND LOAD
STRUCTURE DESIGNED FOR 70 MPH HORIZONTAL WIND LOADING IN ACCORDANCE WITH AASHTO LRFD 3.8.1.



ELEVATION
SCALE: 3/16" = 1'-0"



TYPICAL SECTION
SCALE: ½" = 1'-0"

TURNOUT DETAILS

SINGLE-SPAN PRESTRESSED
CONCRETE BULB-TEE BEAM
1 SPAN: 67'-0"
SKEW: 25°00'00" LT.
30'-0" CLEAR ROADWAY
SR 58 OVER POLLARD DITCH
KNOX COUNTY

NOTE TO REVIEWER

SOIL INFORMATION AND SEISMIC DESIGN DATA WILL BE PROVIDED FOR THE FUTURE SUBMITTAL

DRAFT
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL ______ DESIGN ENGINEER ______ DATE

DESIGNED:	EAH	DRAWN:	EAH
CHECKED:	TMB	CHECKED:	RRJ

INDIANA
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
058-42-10340

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	058-42-10340 & 058-42-10341
VERTICAL SCALE	DESIGNATION
AS NOTED	1700156 & 1700159
SURVEY BOOK	SHEETS
ELECTRONIC	12 of 15
CONTRACT	PROJECT
B-40554	1700156 & 1700159

ekahraman
8/3/2020 4:19:48 pm
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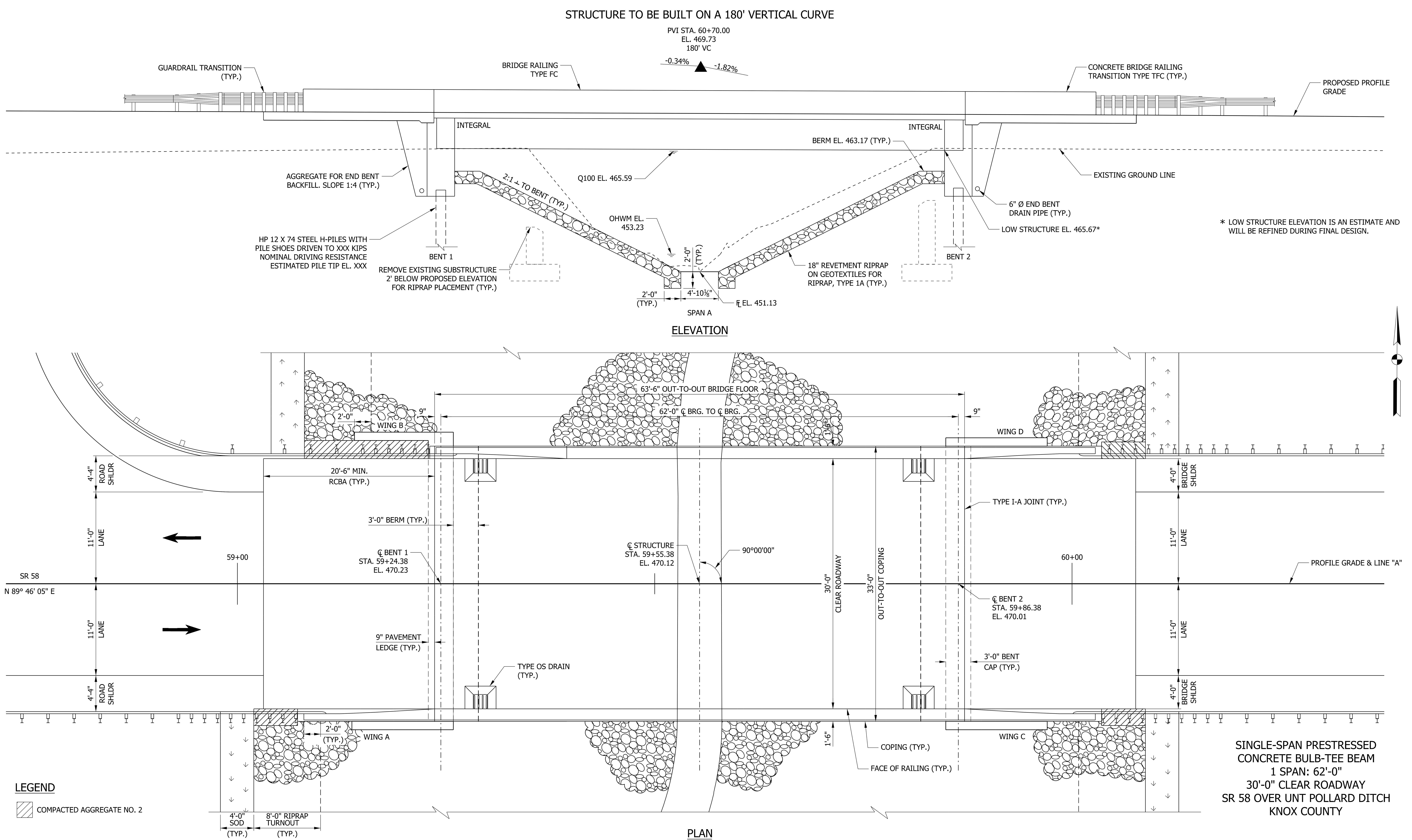
LA CODE: 7066



NOTE TO REVIEWER

PAVEMENT LEDGE HAS BEEN INCREASED TO 9" PER COORDINATION WITH THE INDOT STRUCTURES COMMITTEE

NOTE TO REVIEWER

PER COORDINATION WITH VINCENNES DISTRICT AND INDOT HYDRAULICS, EXISTING LOW STRUCTURE ELEVATION IS TO BE MAINTAINED

DRAFT
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL ______ DESIGN ENGINEER ______ DATE

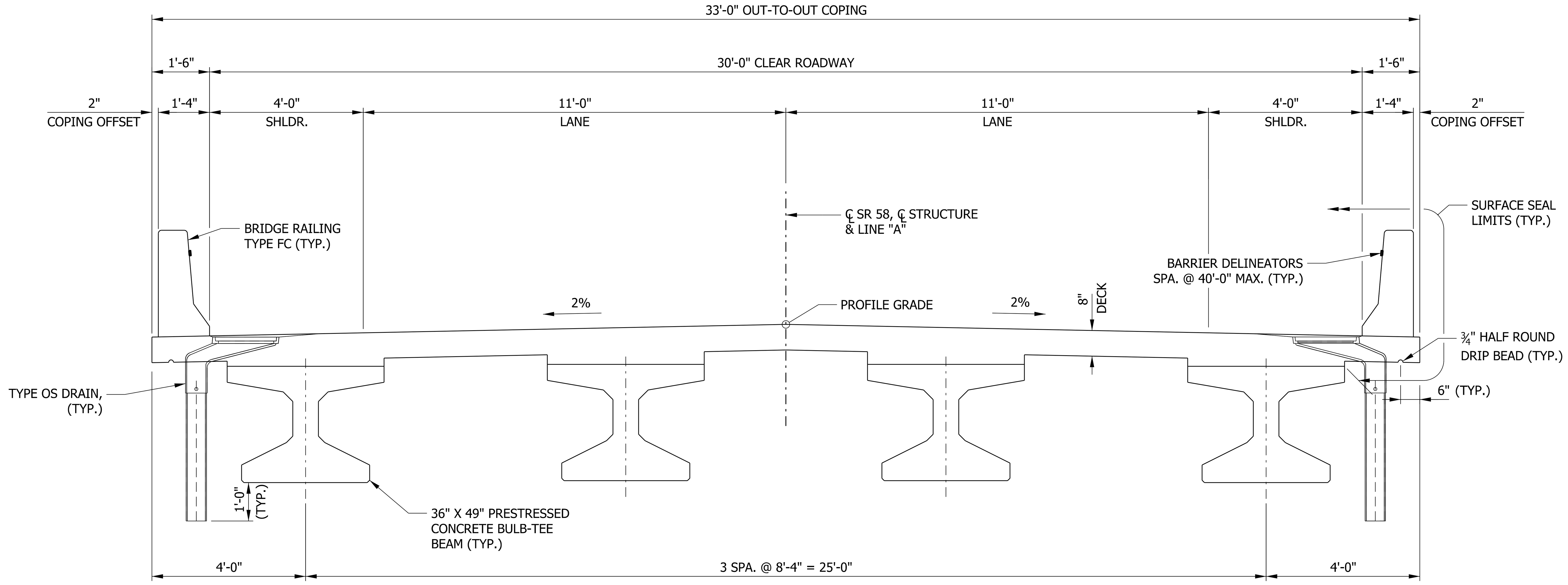
DESIGNED: RRJ | DRAWN: RRJ
CHECKED: MRS | CHECKED: MRS

INDIANA
DEPARTMENT OF TRANSPORTATION

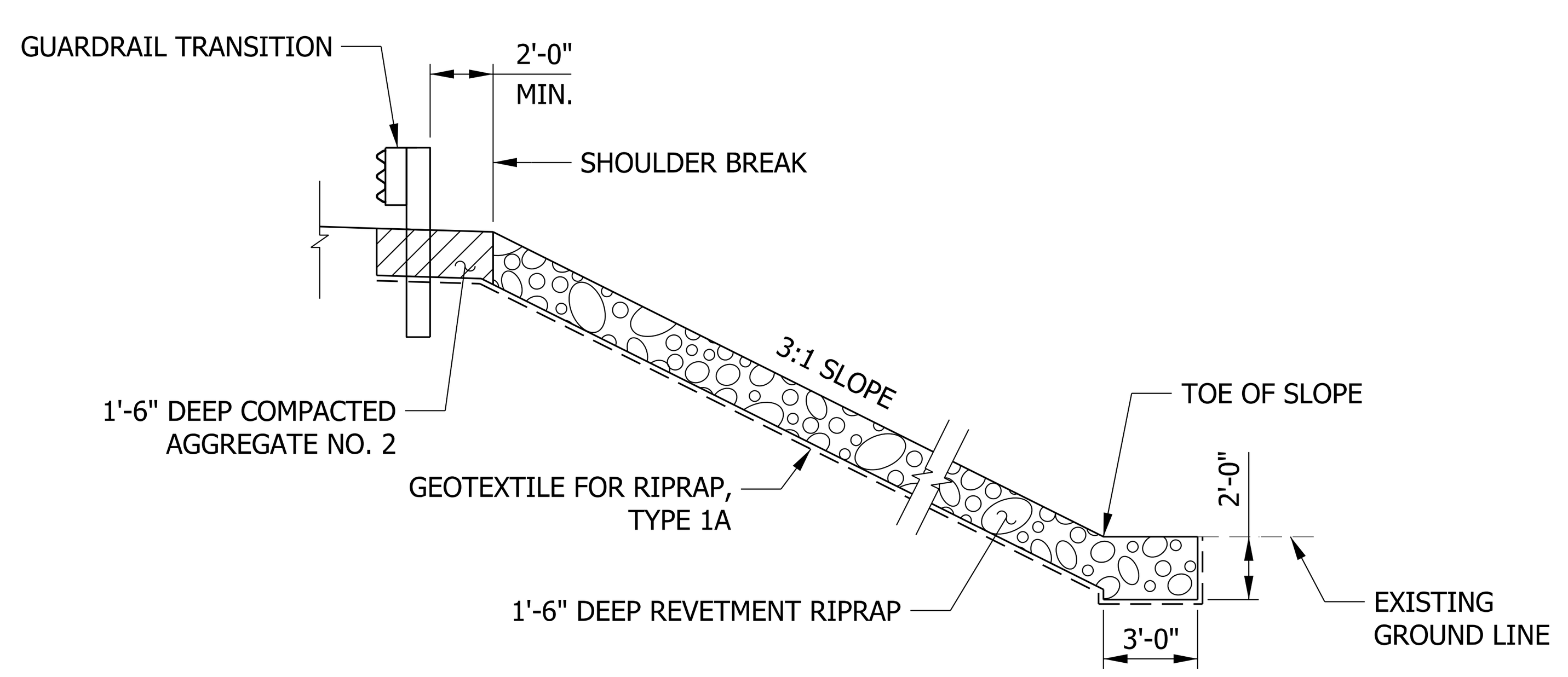
GENERAL PLAN
058-42-10341

HORIZONTAL SCALE	BRIDGE FILE
3/16" = 1'-0"	058-42-10340 & 058-42-10341
VERTICAL SCALE	DESIGNATION
3/16" = 1'-0"	1700156 & 1700159
SURVEY BOOK	SHEETS
ELECTRONIC	13 of 15
CONTRACT	PROJECT
B-40554	1700156 & 1700159

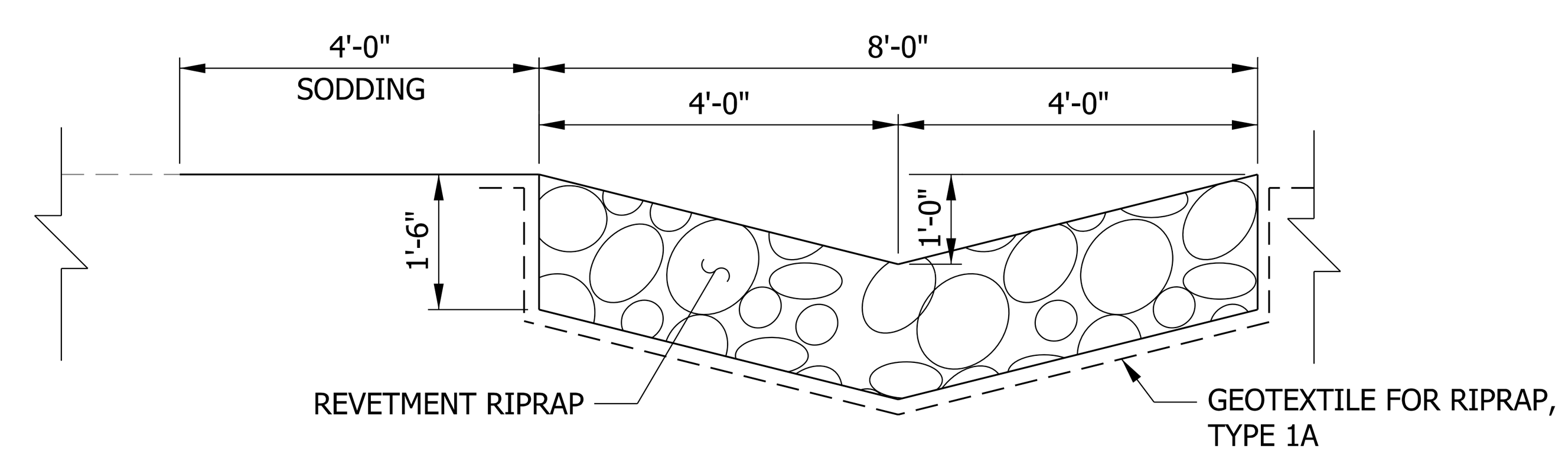
LA CODE: 7066



TYPICAL SECTION
(LOOKING AHEAD STATION)
SCALE: ½" = 1'-0"



ELEVATION
SCALE: 3/16" = 1'-0"



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SCALE: ½" = 1'-0"

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DESIGNED WITH A 7½" STRUCTURAL DEPTH PLUS ½" SACRIFICIAL WEARING SURFACE.

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SEISMIC PERFORMANCE ZONE = XX
ACCELERATION COEFFICIENT = XX
SEISMIC SOIL PROFILE TYPE = XX

DESIGN STRENGTHS

PRESTRESSED CONCRETE	f'c = 8,000 psi @ 28 DAYS
PRESTRESSED CONCRETE	f'c = 6,500 psi @ RELEASE
CLASS "C" CONCRETE	f'c = 4,000 psi
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SINGLE-SPAN PRESTRESSED
CONCRETE BULB-TEE BEAM
1 SPAN: 67'-0"
SKEW: 25°00'00" LT.
30'-0" CLEAR ROADWAY
SR 58 OVER POLLARD DITCH
KNOX COUNTY

NOTE TO REVIEWER

SOIL INFORMATION AND SEISMIC DESIGN DATA WILL BE PROVIDED FOR THE FUTURE SUBMITTAL

DRAFT
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL ______ DESIGN ENGINEER ______ DATE

DESIGNED: RRJ	DRAWN: RRJ
CHECKED: MRS	CHECKED: MRS

INDIANA
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
058-42-10341

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	058-42-10340 & 058-42-10341
VERTICAL SCALE	DESIGNATION
AS NOTED	1700156 & 1700159
SURVEY BOOK	SHEETS
ELECTRONIC	14 of 15
CONTRACT	PROJECT
B-40554	1700156 & 1700159

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LA CODE: 7066

PAVEMENT QUANTITIES AND APPROACH TABLE

LOCATION	DESCRIPTION (APPROACH TYPE OR CLASS)	WIDTH	LENGTH	RADII	DISTANCE BEYOND R/W LINE	SURFACE BEYOND R/W LINE: COMPACTED AGGREGATE BASE	SURFACE BEYOND R/W LINE: HMA	SURFACE BEYOND R/W LINE: CONCRETE	GRADE 1	GRADE 2	GRADE 3	GRADE 4	EXCAVATION CUT	EXCAVATION FILL	CLEAR ZONE AT DRIVE	HMA MATERIALS: 3, 64, SURFACE 9.5 mm (LBS. PER SYD. 165)	HMA MATERIALS: 2, 64, INTERMD. 19.0 mm (LBS. PER SYD. 275)	HMA MATERIALS: 2, 64, BASE 19.0 mm (LBS. PER SYD. 330)	HMA MATERIAL FOR: PRIME COAT	HMA MATERIAL FOR: TACK COAT	JOINT ADHESIVE, SURFACE	JOINT ADHESIVE, INTERMEDIATE	LIQUID ASPHALT SEALANT	SUBGRADE TREATMENT, TYPE IC	MILLING, ASPHALT, 1 1/2"	MILLED HMA CORREGATIONS, SINUSOIDAL	COMPACTED AGGREGATE, NO. 53	REMARKS
		FT	FT	FT	FT	SYS	SYS	SYS	%	%	%	%	CYS	CYS	FT	SYS	SYS	SYS	SYS	SYS	LFT	LFT	LFT	SYS	SYS	LFT	TONS	
STA. 49+00.00 TO 54+79.18 LINE "A"													XX	XX		1914	1692	1692		3607	779	679	779	1927	223	958	593	
STA. 56+02.82 TO 58+00.00 LINE "A"													XX	XX		672	672	672		1344	198	198	198	760	0	395	228	
STA. 58+00.00 TO 59+03.13 LINE "A"													XX	XX		352	352	352		703	103	103	103	397	0	206	119	
STA. 60+07.63 TO 65+70.00 LINE "A"													XX	XX		1857	1635	1635		3492	763	663	763	1863	223	925	574	
52+94.00 RT. LINE "A"	CLASS V DRIVE	24	58.25	25					-2	-13	-0.23				30													
53+30.00 LT. LINE "A"	CLASS V DRIVE	24	65.46	25					-2	-13	-10	4			30													
56+29.61 LT. LINE "A"	CLASS V DRIVE	24	157.48	25	29.0				-2	-3	0.4				30													
57+50.00 RT. LINE "A"	CLASS V DRIVE	24	75.00	25	1.1				-2	-13	-11	2.66			30													
58+62.45 LT. LINE "A"	CLASS V DRIVE	24	124.70	25	24.0				-2	-13	-0.49				30													
61+56.00 RT. LINE "A"	CLASS V DRIVE	24	63.12	25					-2	-13	-0.19				30													
TOTAL													XX	XX		4795	4351	4351		9146	1843	1643	1843	4947	446	2484	1514	

NOTE TO REVIEWER

ADDITIONAL SUMMARY TABLES WILL BE UPDATED IN FUTURE SUBMITTALS.

DRAFT
NOT FOR CONSTRUCTION

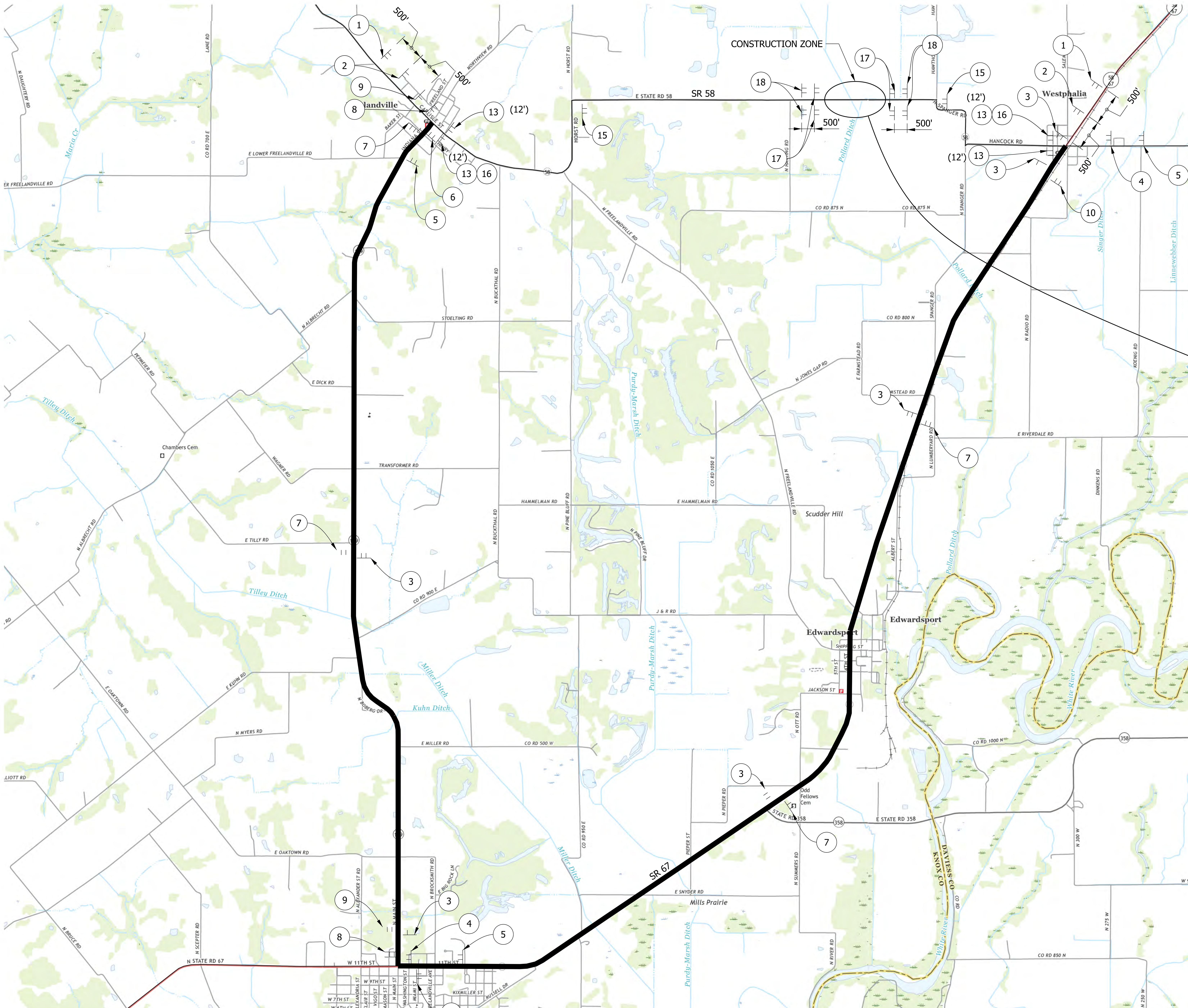
RECOMMENDED FOR APPROVAL ______ DESIGN ENGINEER DATE

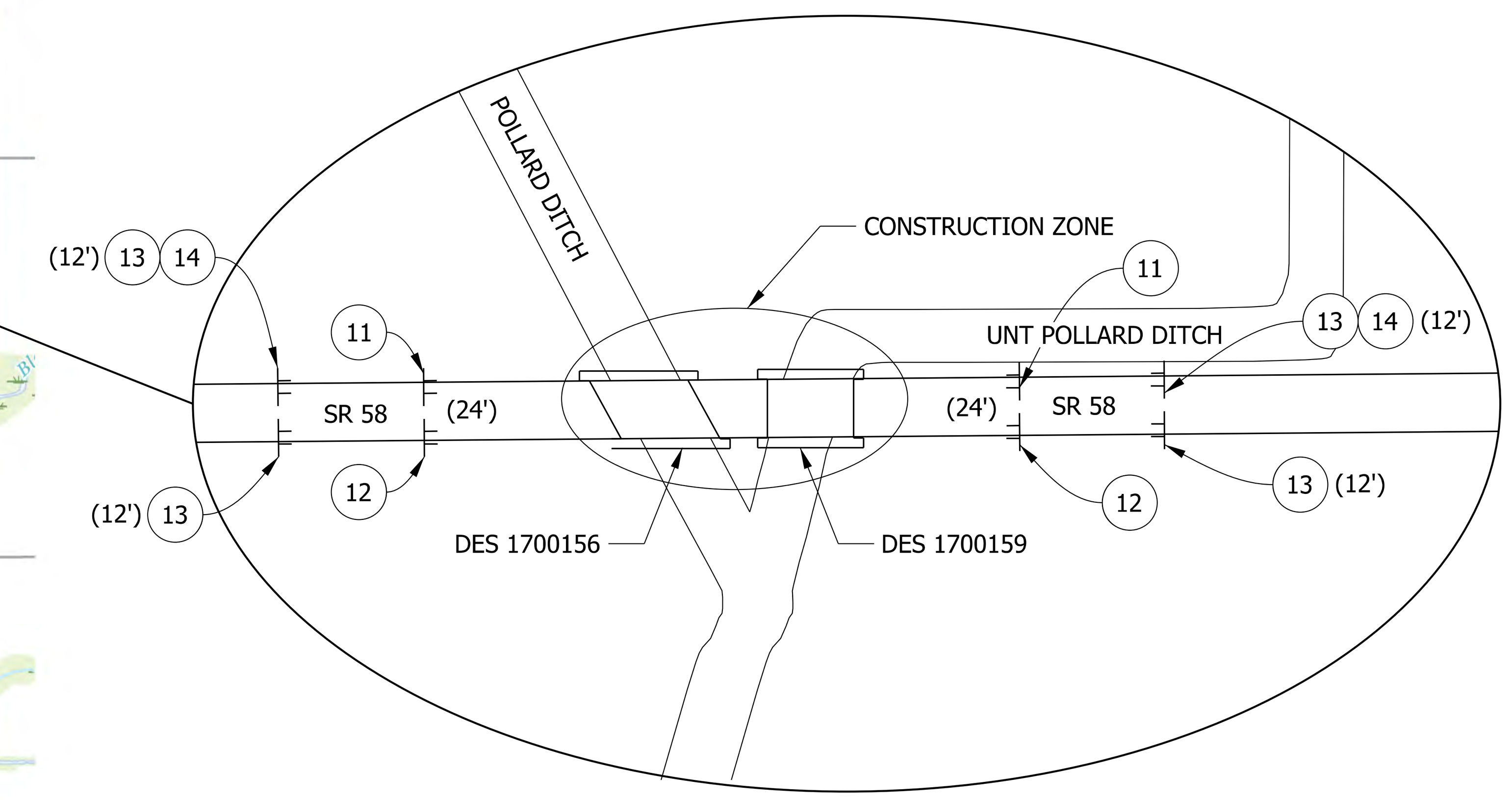
DESIGNED: CDC DRAWN: CDC
CHECKED: MRS CHECKED: MRS

INDIANA
DEPARTMENT OF TRANSPORTATION

SUMMARY TABLES

HORIZONTAL SCALE	BRIDGE FILE
N/A	058-42-10340 & 058-42-10341
VERTICAL SCALE	DESIGNATION
N/A	1700156 & 1700159
SURVEY BOOK	SHEETS
ELECTRONIC	15 of 15
CONTRACT	PROJECT
B-40554	1700156 & 1700159





CONSTRUCTION ZONE DETAIL

NOTES:

1. IN RURAL AREAS, SIGN (5) SHALL BE PLACED 500' PRIOR TO SIGN (4) OR (6) PER STANDARD DRAWING.
2. IN RURAL AREAS, SIGN (9) SHALL BE PLACED 500' PRIOR TO SIGN (8) OR (10) PER STANDARD DRAWING.
3. FOR ADDITIONAL INFORMATION ON DETOUR SIGN PLACEMENT, SEE STANDARD DRAWING E 801-TCDT-01 THRU E 801-TCDT-04.
4. FOR DETOUR ROUTE MARKER ASSEMBLIES AND SIGN DETAILS (1) THRU (15), SEE NEXT SHEET.
5. PUBLIC SCHOOLS, PUBLIC TRANSIT, EMERGENCY SERVICES, AND POSTAL SERVICES SHALL BE CONTACTED A MINIMUM OF 14 DAYS PRIOR TO BEGINNING CONSTRUCTION.
6. ACCESS TO ALL PRIVATE DRIVES SHALL BE MAINTAINED DURING CONSTRUCTION.

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7/29/2020 11:07:01 am
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DRAFT
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL		DESIGN ENGINEER	DATE
DESIGNED: JAM		DRAWN: JAM	
CHECKED: TMB		CHECKED: RRJ	

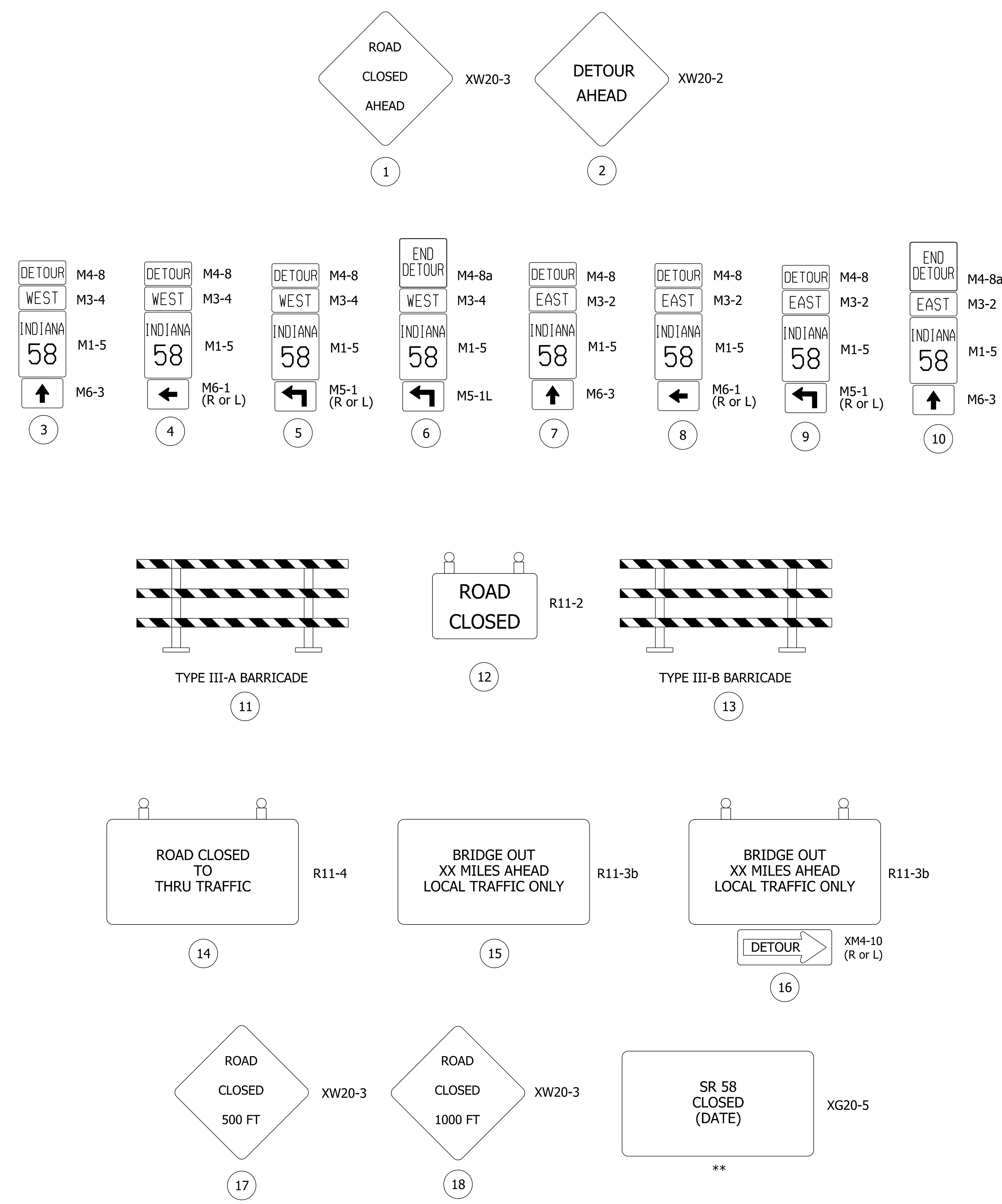
INDIANA DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC DETAILS

HORIZONTAL SCALE	BRIDGE FILE
1" = 2000'	058-42-10340
VERTICAL SCALE	DESIGNATION
1" = 2000'	1700156
SURVEY BOOK	SHEETS
ELECTRONIC	4 of 22
CONTRACT	PROJECT
B-40554	1700156

MOT SUMMARY			
	ITEM	UNITS	TOTALS
	DETOUR ROUTE MARKER ASSEMBLIES	EA	22
**	CONSTRUCTION SIGN, A	EA	18
	CONSTRUCTION SIGN, B	EA	2
	ROAD CLOSURE SIGN ASSEMBLY	EA	2
	BARRICADE, III-A	LF	48
	BARRICADE, III-B	LF	96

** INCLUDES 2 XG20-5 ROUTE CLOSURE NOTICE SIGNS TO BE FIELD LOCATED BY ENGINEER.



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DRAFT
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL ______ DESIGN ENGINEER ______ DATE

DESIGNED: RRJ
DRAWN: RRJ
CHECKED: MRS
CHECKED: MRS

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC DETAILS

HORIZONTAL SCALE	BRIDGE FILE
N/A	058-42-10340
VERTICAL SCALE	DESIGNATION
N/A	1700156
SURVEY BOOK	SHEETS
ELECTRONIC	5 of 22
CONTRACT	PROJECT
B-40554	1700156

APPENDIX C

Early Coordination

HNTB Corporation
The HNTB Companies
Infrastructure Solutions

111 Monument Circle
Suite 1200
Indianapolis, IN 46204

Telephone (317) 636-4682
Facsimile (317) 917-5211
www.hntb.com

January 7, 2019

Triad Mining LLC
3228 Summit Square Place, Suite 180
Lexington, KY 40509

Re: Knox County Tax Parcel – 42-03-13-200-006.000-025, 42-03-13-200-005.000-025

NOTICE OF SURVEY

Dear Property Owner:

HNTB, on behalf of The Indiana Department of Transportation (INDOT), will perform a survey for the design of the replacement of the 2 bridges on SR 58 over Pollard Ditch, Des No. 1700156 and 1700159, located approximately 1.7 miles west of SR 67 in Knox County, Indiana. A portion of this survey work may be performed on your property in order to provide design engineers information for project design. The survey work will include mapping the location of features such as trees, buildings, fences, drives, ground elevations, etc. The survey is needed for the proper planning and design of this highway project.

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

Indiana Code 8-23-7-26 allows HNTB, as the authorized employees of INDOT, *Right of Entry* to the project site (including private property) upon proper notification. A copy of a Notice of Survey discussion sheet, as found on INDOT's website (http://www.in.gov/indot/2888.htm), is attached to this letter. Pursuant to Indiana Code 8-23-7-27, this letter serves as written notification that we will be performing the above noted survey in the vicinity of your property on or after January 21, 2019.

HNTB employees will show you their identification, if you are available, before coming onto your property.

If you own but are not the tenant of this property (i.e. rental, sharecrop), please inform us so that we may also contact the actual tenant of the property prior to commencement of our work. If you have any questions or concerns regarding our proposed survey work or schedule, please contact the HNTB Project Manager. This contact information is as follows:

Angela Pearl, PE
111 Monument Circle, Suite 1200
Indianapolis, IN 46204
(317) 636-4682

Under Indiana Code 8-23-7-28, you have a right to compensation for any damage that occurs to your land or water as a result of the entry or work performed during the entry. To obtain such compensation, you should contact the Vincennes District Real Estate Manager; contact information is below. The District Real Estate Manager can provide you with a form to request compensation for damages. Once you fill out this form, you can return it to the District Real Estate Manager for consideration. If you are not satisfied with the compensation that INDOT determines is owed to you, Indiana Code 8-23-7-28 provides the following:

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

If you have questions regarding the rights and procedures outlined in this letter, please contact the Vincennes District Real Estate Manager. This contact information is as follows:

Jason Brown
3650 S. Hwy 41
Vincennes, IN 47591
(812) 895-7371

Thank you in advance for your cooperation in this matter.
Sincerely,
HNTB Corporation

Kurt M. Vonderheide

Kurt M. Vonderheide, PS
Survey Section Manager

Early Coordination List
SR 58, Bridge Replacements
Des. Nos. 1700156 and 1700159
Knox County, Indiana

The following lists the date coordination was sent and all agencies that were contacted as part of the development of this Environmental Study. Also included below is the date of their response, or an indication that no response was received.

Agency/Party	***Response Date(s)***
Federal and State Natural Resource/Regulatory Agencies – Sent 3/19/2020	
U.S. Fish and Wildlife Service	No Response
Natural Resources Conservation Service	4/8/2020
Indiana Geological Survey	3/19/2020
Federal Highway Administration	No Response
Indiana Department of Natural Resources, Division of Fish and Wildlife	4/17/2020
Indiana Department of Environmental Management	Signed 3/23/2020
Indiana Department of Environmental Management, Wellhead Proximity	3/24/2020
Indiana Department of Transportation, Vincennes Environmental Manager Supervisor	3/19/2020
U.S. Army Corps of Engineers	No Response
U.S. Department of Housing and Urban Development	No Response
Indiana Department of Transportation, Public Hearings	No Response
National Park Service	No Response
Local and County Agencies – Sent 3/19/2020	
Knox County Commissioners	No Response
Knox County Surveyor	3/24/2020
Knox County Highway Department	No Response
Floodplain Administrator	No Response

Following this list is an example of the Early Coordination Letter, as submitted, and the agency responses.

Kaskaskia
Engineering Group, LLC

323 Main Street
Suite E
Evansville, Indiana 47708
812.314.7041 *phone*

March 19, 2020

Sample Early Coordination Letter

Robin McWilliams, Field Supervisor
U.S. Fish and Wildlife Service
Bloomington Indiana Field Office
620 South Walker Street
Bloomington, Indiana 47403

Re: DES Nos: 1700156 and 1700159, Bridge Projects on SR 58, 1.65 and 1.74 miles west of SR 67, Knox County.
KEG No. 18-1036.03

Dear Ms. McWilliams:

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

This project is located on SR 58, 1.65 and 1.74 miles west of SR 67, just west of Westphalia, Indiana. This section of SR 58 is a two lane Rural Major Collector. The existing SR 58 approach cross section consists of two 10 foot lanes bordered by 1 foot usable shoulders. Roadside ditches exist along SR 58 in the vicinity of the structures.

The existing structure over Pollard Ditch (SN 058-42-06072B) is a single 45 foot clear span adjacent prestressed concrete box beam bridge on vertical abutments. The wearing surface has moderate width longitudinal cracking. There are a few areas of delamination near the deck ends. The superstructure has fine longitudinal cracks of variable lengths with spot moisture stains emanating from over abutments at some of the beam locations. A beam over the west abutment has a significantly wide, approximately 15 foot longitudinal crack emanating from over the abutment cap. The concrete abutments each have typical vertical crack with efflorescence near bridge centerline. Efflorescence is also present at the construction joint between widening caps and original abutments. The timber wingwalls have moderate to heavy deterioration where exposed and able to be inspected. Timber planks acting as backwall under widening sections exhibit moderate deterioration.

The existing structure over Unnamed Tributary (UNT) to Pollard Ditch (SN 058-42-06073B) is a single 45 foot clear span adjacent prestressed concrete box beam bridge on vertical abutments. The deck surface exhibits a few full length moderate width longitudinal cracks in both lanes and some surface patching. The wearing surface has delamination, which appears to be more of a debonding between the deck and underlying PCBBs. The superstructure has fine width, typically short longitudinal hairline cracking visible on some beams at the west end along with some spot light moisture stains. Dark moisture staining is visible along joint between two beams at the west end and some local light efflorescence visible along joints between two beams at the east end and near the midspan. The substructure has moderate width cracking and light to moderate scaling on the original construction

abutment faces, which is more pronounced at the west abutment. Timber mudwall planks and steel shell piles within widened areas exhibit minor decay and splitting and light surface rust. The southwest wingwall timber piles and planks exhibit heavier deterioration, but roadway embankment is not experiencing any significant slump.

There is no existing right-of-way (ROW) outside of the edge of pavement throughout the project area.

The current proposed project is to replace the existing bridges. Both bridges (over Pollard Ditch and UNT to Pollard Ditch) would be replaced with single-span precast prestressed concrete 36 by 49 bulb-tee beam bridges with spill through abutments supported on piles. Additionally, new approach slabs and guardrails will be constructed. Riprap will be placed at all abutment spill slopes as scour protection. The proposed grade at and between the bridges will be raised approximately four feet to ensure beams are not under water during flood events. A retaining wall is proposed along the northeast quadrant of the UNT to Pollard crossing. The southwest, northwest, and northeast field drives for Pollard Ditch and northwest and southeast field drives for UNT to Pollard Ditch will be relocated to accommodate placement of guardrail. The project would require the acquisition of 5 acres of permanent ROW and 0.5 acres of temporary ROW. The project limits would be approximately 0.28 mile in length. The method of traffic maintenance would be a full road closure with official state detour, utilizing SR 67 and SR 159. Construction is anticipated to begin in February 2022.

Land use in the vicinity of the project is predominantly agricultural fields. The INDOT Environmental Services Division (ESD) Ecology & Waterway Permitting Office (EWPO) will perform waters and wetlands determinations and a biological assessment to identify any ecological resources that may be present. This project qualifies for the application of the USFWS range-wide programmatic informal consultation for the Indiana bat and northern long-eared bat and project information will be submitted through USFWS's Information for Planning and Consultation (IPaC) separately. The INDOT Cultural Resources Office (CRO) will investigate the areas of additional right-of-way for archaeological and historic resources for Section 106 compliance. The results of this investigation will be forwarded to the State Historic Preservation Officer (SHPO) for review and concurrence.

Should we not receive your response within thirty (30) calendar days from the date of this letter, it will be assumed that your agency feels that there will be no adverse effects incurred as a result of the proposed project. However, should you find that an extension to the response time is necessary, a reasonable amount may be granted upon request. If you have any questions regarding this matter, please feel free to contact me, at 618-233-5877 or VFlynn@kaskaskiaeng.com, or Troy Arnold, INDOT Project Manager at 812-895-7348 x14669 or tarnold1@indot.in.gov. Thank you in advance for your input.

Sincerely,

Virginia Flynn

Virginia Flynn
Senior Environmental Scientist
Kaskaskia Engineering Group, LLC

Attachment -
- Early Coordination Letter Recipient List
- Maps (Location, Aerial, Topographic)
- Photo Log

cc: Angela Pearl, HNTB

USDA
United States Department of Agriculture

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

April 8, 2020

Virginia Flynn
Kaskaskia Engineering Group, LLC
323 Main Street, Suite E
Evansville, Indiana 47708

Dear Ms. Flynn:

The proposed project to address the deteriorating condition of the existing structures that carry State Road 58 over an unnamed tributary to Pollard Ditch in Knox County, Indiana (Des No. 1700156 and 1700159), as referred to in your letter received March 19, 2020, will cause a conversion of prime farmland.

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

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

Sincerely,

RICHARD NEILSON
Digitally signed by RICHARD NEILSON
Date: 2020.04.08 16:03:11 -04'00'

RICK NEILSON
State Soil Scientist

Enclosures

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	Date Of Land Evaluation Request	
Name of Project DES1700156 & DES1700159_SR58	Federal Agency Involved FHWA	
Proposed Land Use	County and State Knox County, Indiana	
PART II *(To be completed by NRCS)*	Date Request Received By NRCS 3/19/2020	Person Completing Form: JRA

Does the site contain Prime, Unique, Statewide or Local Important Farmland? *(If no, the FPPA does not apply - do not complete additional parts of this form)*	YES ☑	NO ☐	Acres Irrigated	Average Farm Size
				627 ac

Major Crop(s)	Farmable Land In Govt. Jurisdiction	Amount of Farmland As Defined in FPPA
Corn	Acres: 296184 % 88	Acres: 25820 % 77

Name of Land Evaluation System Used	Name of State or Local Site Assessment System	Date Land Evaluation Returned by NRCS
LESA		4/8/2020

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	0.16			
B. Total Acres To Be Converted Indirectly	3.74			
C. Total Acres In Site	5.0			
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	3.90			
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	14			
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)	89			

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)*	**Maximum Points**	Site A	Site B	Site C	Site D
1. Area In Non-urban Use	(15)	15			
2. Perimeter In Non-urban Use	(10)	10			
3. Percent Of Site Being Farmed	(20)	6			
4. Protection Provided By State and Local Government	(20)	0			
5. Distance From Urban Built-up Area	(15)	10			
6. Distance To Urban Support Services	(15)	10			
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)	2			
10. On-Farm Investments	(20)	10			
11. Effects Of Conversion On Farm Support Services	(10)	0			
12. Compatibility With Existing Agricultural Use	(10)	0			
TOTAL SITE ASSESSMENT POINTS	160	63	0	0	0
PART VII ***(To be completed by Federal Agency)***					
Relative Value Of Farmland *(From Part V)*	100	89	0	0	0
Total Site Assessment *(From Part VI above or local site assessment)*	160	63	0	0	0
TOTAL POINTS ***(Total of above 2 lines)***	260	152	0	0	0

Site Selected: A	Date Of Selection 4/15/20	Was A Local Site Assessment Used? YES ☐ NO ☑

Reason For Selection:

Will not create a substantial reduction in farmland or services.

Name of Federal agency representative completing this form: Virginia Flynn, Kaskaskia Engineering	Date: 4-15-20

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

Organization and Project Information

Project ID:	KEG 18-1036.03
Des. ID:	DES 1700156 and 1700159
Project Title:	Bridge Replacement Projects on SR 58, Knox County
Name of Organization:	Kaskaskia Engineering Group
Requested by:	Virginia Flynn

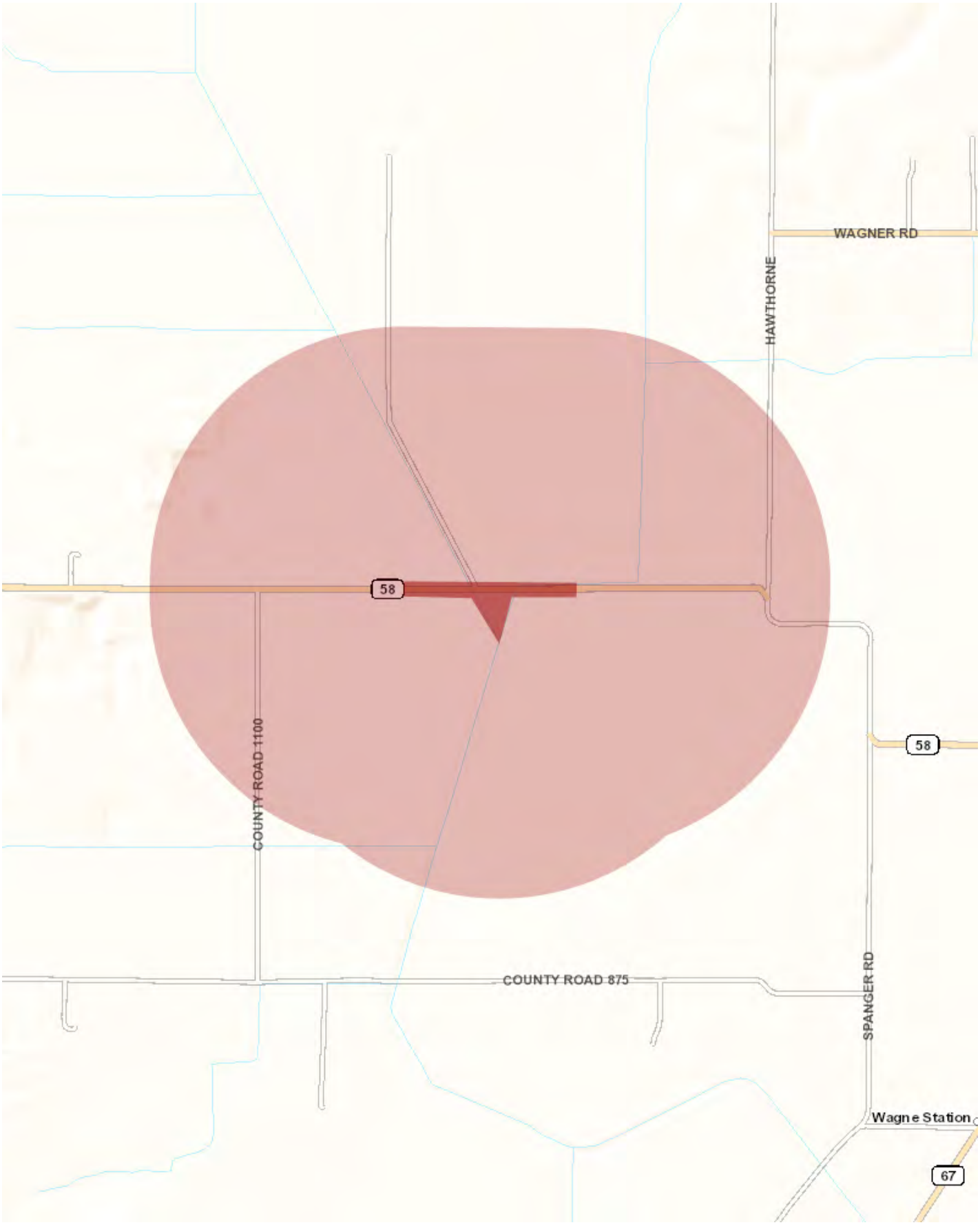
Environmental Assessment Report

1. Geological Hazards:
    - Potential Mine Subsidence (CMIS)
    - High liquefaction potential
2. Mineral Resources:
    - Bedrock Resource: High Potential
    - Sand and Gravel Resource: None documented in the area
3. Active or abandoned mineral resources extraction sites:
    - Petroleum Exploration Wells
    - Underground Coal Mines
    - Surface Coal Mines

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

This information was furnished by Indiana Geological Survey
Address: 420 N. Walnut St., Bloomington, IN 47404
Email: IGSEnvir@indiana.edu
Phone: 812 855-7428

Date: March 19, 2020



Metadata:

- https://maps.indiana.edu/metadata/Geology/Petroleum_Wells.html
- https://maps.indiana.edu/metadata/Geology/Coal_Mines_Entries.html
- https://maps.indiana.edu/metadata/Geology/Coal_Mines_Underground.html
- https://maps.indiana.edu/metadata/Geology/Coal_Mines_Surface.html
- https://maps.indiana.edu/metadata/Geology/Seismic_Earthquake_Liquefaction_Potential.html
- https://maps.indiana.edu/metadata/Geology/Bedrock_Geology.html

THIS IS NOT A PERMIT

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

DNR #: ER-22355 **Request Received:** March 19, 2020

Requestor: Kaskaskia Engineering Group, LLC
Virginia Flynn
323 Main Street, Suite E
Evansville, IN 47708

Project: SR 58 bridge replacements over UNT Pollard Ditch (SN 058-42-06073B) and Pollard Ditch (SN 058-42-06072B), west of Westphalia, 1.65 miles and 1.74 miles west of SR 67; Des #s 1700156 & 1700159, KEG #18-1036.03

County/Site info: Knox

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

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

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

Natural Heritage Database: The Natural Heritage Program's data have been checked.
The federal and state endangered Indiana Bat (Myotis sodalis) has been documented within 1/2 mile of the project area.

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

1) Indiana Bat:
To minimize impacts to the Indiana bat (and Northern Long-eared bat, which may also be present), do not cut any trees suitable for 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.

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

Attachments: A - Bridge Exemption Criteria

THIS IS NOT A PERMIT

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

3) Bank Stabilization & Wildlife Passage:
The new, replacement, or rehabbed structure, and any bank stabilization under the structure, should not create conditions that are less favorable for wildlife passage under the structure compared to current conditions. The pictures submitted show that there is no significant or consistent riprap layer that would currently impair wildlife passage under the bridges. Any new riprap or additional riprap would likely create a wildlife passage obstruction. This impact can be avoided while still providing scour protection. A level area of natural ground under the structure is ideal for wildlife passage. If channel clearing will result in a flat bench area above the normal water level under the structure, this area should allow wildlife passage and should remain free of riprap and other similar materials that can impair wildlife passage.

Minimize the use of riprap and use alternative erosion protection materials whenever possible. Riprap must not be placed in the active thalweg channel or placed in the streambed in a manner that precludes fish or aquatic organism passage (riprap must not be placed above the existing streambed elevation). Where riprap must be used, we recommend placing only enough riprap to provide stream bank toe protection, such as from the toe of the bank up to the ordinary high water mark (OHWM). 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 the area and specifically for stream bank/floodway stabilization purposes as soon as possible upon completion.

While hard armoring alone (e.g. riprap or glacial stone) may be needed in certain instances, soft armoring and bioengineering techniques should be considered first. In many instances, one or more methods are necessary to increase the likelihood of vegetation establishment. Combining vegetation with most bank stabilization methods can provide additional bank protection and help reduce impacts upon fish and wildlife. If hard armoring is needed, wildlife passage can be facilitated by using a smooth-surfaced armoring material instead of riprap, such as articulated concrete block mats, fabric-formed concrete mats, or other similar smooth-surfaced material.

Information about bioengineering techniques can be found at http://www.in.gov/legislative/iac/20120404-IR-312120154NRA.xml.pdf. Also, the following is a USDA/NRCS document that outlines many different bioengineering techniques for streambank stabilization: http://directives.sc.egov.usda.gov/17553.wba.

The additional measures listed below should be implemented to avoid, minimize, or compensate for impacts to fish, wildlife, and botanical resources:
1. Revegetate all bare and disturbed areas with a mixture of native grasses, sedges, wildflowers, and also native hardwood trees and shrubs if any woody plants are disturbed during construction as soon as possible upon completion. Do not use any varieties of Tall Fescue or other non-native plants, including prohibited invasive species (see 312 IAC 18-3-25).
2. Minimize and contain within the project limits 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 excavate in the low flow area except for the placement of piers, foundations, and riprap, or removal of the old structure.
5. Use minimum average 6 inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids.
6. Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the stream or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.

Attachments: A - Bridge Exemption Criteria

THIS IS NOT A PERMIT

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

7. 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:** April 17, 2020

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

Attachments: A - Bridge Exemption Criteria

The Flood Control Act (IC 14-28-1) contains a provision (Section 22), which exempts certain bridge projects from its permitting requirement. Specifically, the Act states:

A permit is not required for "a construction or reconstruction project on a state or county highway bridge in a rural area that crosses a stream having an upstream drainage area of not more than fifty (50) square miles…"

Therefore, in order for a bridge project to be exempt, it must:

- be a state or county highway department project;
- be a bridge;
- be located in a rural area; and
- cross a stream having an upstream drainage area of less than 50 square miles.

The initial criterion is very specific - the structure must be a state or county highway department project.

The second requirement mandates that the project be a bridge (for this provision, the Department of Natural Resources considers a culvert to be a bridge). Projects such as bank protection, spoil disposal, borrow pits, etc. are not automatically exempt. Anyone proposing to undertake a non-bridge related activity should consult with the Division of Water's Technical Services Section staff at 317-232-4160 (or toll free at 1-877-928-3755) regarding the applicability of the exemption prior to initiating work.

The third criterion states that the project must be located in a rural area. The phrase "rural area" is defined as an area:

- where the lowest floor elevation, including a basement, of any residential, commercial, or industrial building impacted by the project is at least 2 feet above the 100 year flood elevation with the project in place;
- located outside the corporate boundaries of a consolidated or an incorporated city or town; and
- located outside of the territorial authority for comprehensive planning (generally, a 2 mile planning buffer around a city or town).

The final criterion limits the exemption to a project crossing a stream having an upstream drainage area of less than 50 square miles. The drainage area includes all land area contributing to runoff above the project site and is determined from the United States Geological Survey 7½ minute series quadrangle maps. The Department of Natural Resources will determine the drainage area upon written request.

This exemption has been grossly misunderstood and liberally applied in the past. As a result, the Department of Natural Resources is taking a firm stance on future violations. If challenged, it will be the responsibility of the person claiming the exemption to prove to the Department that all 4 criteria have been satisfied. Failure to do so will result in the Department initiating litigation with the potential for the imposition of fines in amounts up to $10,000 per day.

Note: This exemption only applies to the Flood Control Act. If a bridge is to be constructed over a navigable waterway, or over or near a public freshwater lake, a permit will be required.

Indiana Department of Environmental Management

We Protect Hoosiers and Our Environment.

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

INDOT
Troy Arnold
3650 South US 41
Vincennes , IN 47591

Kaskaskia Engineering Group
Virginia Flynn
323 Main Street
Suite E
Evansville , IN 47708

Date

To Engineers and Consultants Proposing Roadway Construction Projects:

RE: This project is located on SR 58, 1.65 and 1.74 miles west of SR 67, just west of Westphalia, Indiana in Knox County. The current proposed project is to replace the existing bridges (SN 058-42-06072B and 058-42-06073B). Both bridges (over Pollard Ditch and UNT to Pollard Ditch) would be replaced with single-span precast prestressed concrete 36 by 49 bulb-tee beam bridges with spill through abutments supported on piles. Additionally, new approach slabs and guardrails will be constructed. Riprap will be placed at all abutment spill slopes as scour protection. The proposed grade at and between the bridges will be raised approximately four feet to ensure beams are not under water during flood events. A retaining wall is proposed along the northeast quadrant of the UNT to Pollard crossing. The southwest, northwest, and northeast field drives for Pollard Ditch and northwest and southeast field drives for UNT to Pollard Ditch will be relocated to accommodate placement of guardrail. The project would require the acquisition of 5 acres of permanent ROW and 0.5 acres of temporary ROW. The project limits would be approximately 0.28 mile in length. The method of traffic maintenance would be a full road closure with official state detour, utilizing SR 67 and SR 159. DES 1700156 and 1700159

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

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

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

WATER AND BIOTIC QUALITY

1. Section 404 of the Clean Water Act requires that you obtain a permit from the U.S. Army Corps of Engineers (USACE) before discharging dredged or fill materials into any wetlands or other waters, such as rivers, lakes, streams, and ditches. Other activities regulated include the relocation, channelization, widening, or other such alteration of a stream, and the mechanical clearing (use of heavy construction equipment) of wetlands. Thus, as a project owner or sponsor, it is your responsibility to ensure that no wetlands are disturbed without the proper permit. Although you may initially refer to the U.S. Fish and Wildlife Service National Wetland Inventory maps as a means of identifying potential areas of concern, please be mindful that those maps do not depict jurisdictional wetlands regulated by the USACE or the Department of Environmental Management. A valid jurisdictional wetlands determination can only be made by the USACE, using the 1987 Wetland Delineation Manual.

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

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

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

2. In the event a Section 404 wetlands permit is required from the USACE, you also must obtain a Section 401 Water Quality Certification from the IDEM Office of Water Quality Wetlands Program. To learn more about the Wetlands Program, visit: http://www.in.gov/idem/4384.htm (http://www.in.gov/idem/4384.htm).

3. If the USACE determines that a wetland or other water body is isolated and not subject to Clean Water Act regulation, it is still regulated by the state of Indiana . A State Isolated Wetland permit from IDEM's Office of Water Quality (OWQ) is required for any activity that results in the discharge of dredged or fill materials into isolated wetlands. To learn more about isolated wetlands, contact the OWQ Wetlands Program at 317-233-8488.

4. If your project will involve over a 0.5 acre of wetland impact, stream relocation, or other large-scale alterations to water bodies such as the creation of a dam or a water diversion, you should seek additional input from the OWQ Wetlands Program staff. Consult the Web at: http://www.in.gov/idem/4384.htm (http://www.in.gov/idem/4384.htm) for the appropriate staff contact to further discuss your project.

5. Work within the one-hundred year floodway of a given water body is regulated by the Department of Natural Resources, Division of Water. The Division issues permits for activities regulated under the follow statutes:
    - IC 14-26-2 Lakes Preservation Act 312 IAC 11
    - IC 14-26-5 Lowering of Ten Acre Lakes Act No related code
    - IC 14-28-1 Flood Control Act 310 IAC 6-1
    - IC 14-29-1 Navigable Waterways Act 312 IAC 6
    - IC 14-29-3 Sand and Gravel Permits Act 312 IAC 6
    - IC 14-29-4 Construction of Channels Act No related code

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

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

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

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

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

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

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

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

7. For projects involving impacts to fish and botanical resources, contact the Department of Natural Resources - Division of Fish and Wildlife (317/232-4080) for addition project input.

8. For projects involving water main construction, water main extensions, and new public water supplies, contact the Office of Water Quality - Drinking Water Branch (317-308-3299) regarding the need for permits.

9. For projects involving effluent discharges to waters of the State of Indiana , contact the Office of Water Quality - Permits Branch (317-233-0468) regarding the need for a National Pollutant Discharge Elimination System (NPDES) permit.

10. For projects involving the construction of wastewater facilities and sewer lines, contact the Office of Water Quality - Permits Branch (317-232-8675) regarding the need for permits.

AIR QUALITY

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

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

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

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

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

please contact the Acute Disease Control Division of the Indiana State Department of Health at (317) 233-7272.

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

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

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

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

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

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

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

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

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

4. With respect to lead-based paint removal: IDEM encourages all efforts to minimize human exposure to lead-based paint chips and dust. IDEM is particularly concerned that young children exposed to lead can suffer

from learning disabilities. Although lead-based paint abatement efforts are not mandatory, any abatement that is conducted within housing built before January 1, 1978 , or a child-occupied facility is required to comply with all lead-based paint work practice standards, licensing and notification requirements. For more information about lead-based paint removal visit: http://www.in.gov/isdh/19131.htm (http://www.in.gov/isdh/19131.htm).

5. Ensure that asphalt paving plants are permitted and operate properly. The use of cutback asphalt, or asphalt emulsion containing more than seven percent (7%) oil distillate, is prohibited during the months April through October. See 326 IAC 8-5-2 , Asphalt Paving Rule (http://www.ai.org/legislative/iac/T03260/A00080.PDF (http://www.ai.org/legislative/iac/T03260/A00080.PDF)).

6. If your project involves the construction of a new source of air emissions or the modification of an existing source of air emissions or air pollution control equipment, it will need to be reviewed by the IDEM Office of Air Quality (OAQ). A registration or permit may be required under 326 IAC 2 (View at: www.ai.org/legislative/iac/t03260/a00020.pdf (http://www.ai.org/legislative/iac/t03260/a00020.pdf).) New sources that use or emit hazardous air pollutants may be subject to Section 112 of the Clean Air Act and corresponding state air regulations governing hazardous air pollutants.

7. For more information on air permits visit: http://www.in.gov/idem/4223.htm (http://www.in.gov/idem/4223.htm), or to initiate the IDEM air permitting process, please contact the Office of Air Quality Permit Reviewer of the Day at (317) 233-0178 or OAMPROD atdem.state.in.us.

LAND QUALITY

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

1. If the site is found to contain any areas used to dispose of solid or hazardous waste, you need to contact the Office of Land Quality (OLQ)at 317-308-3103.

2. All solid wastes generated by the project, or removed from the project site, need to be taken to a properly permitted solid waste processing or disposal facility. For more information, visit http://www.in.gov/idem/4998.htm (http://www.in.gov/idem/4998.htm).

3. If any contaminated soils are discovered during this project, they may be subject to disposal as hazardous waste. Please contact the OLQ at 317-308-3103 to obtain information on proper disposal procedures.

4. If PCBs are found at this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding management of any PCB wastes from this site.

5. If there are any asbestos disposal issues related to this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding the management of asbestos wastes (Asbestos removal is addressed above, under Air Quality).

6. If the project involves the installation or removal of an underground storage tank, or involves contamination from an underground storage tank, you must contact the IDEM Underground Storage Tank program at 317/308-3039. See: http://www.in.gov/idem/4999.htm (http://www.in.gov/idem/4999.htm).

FINAL REMARKS

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

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

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

Signature(s) of the Applicant

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

Project Description

This project is located on SR 58, 1.65 and 1.74 miles west of SR 67, just west of Westphalia, Indiana in Knox County. The current proposed project is to replace the existing bridges (SN 058-42-06072B and 058-42-06073B). Both bridges (over Pollard Ditch and UNT to Pollard Ditch) would be replaced with single-span precast prestressed concrete 36 by 49 bulb-tee beam bridges with spill through abutments supported on piles. Additionally, new approach slabs and guardrails will be constructed. Riprap will be placed at all abutment spill slopes as scour protection. The proposed grade at and between the bridges will be raised approximately four feet to ensure beams are not under water during flood events. A retaining wall is proposed along the northeast quadrant of the UNT to Pollard crossing. The southwest, northwest, and northeast field drives for Pollard Ditch and northwest and southeast field drives for UNT to Pollard Ditch will be relocated to accommodate placement of guardrail. The project would require the acquisition of 5 acres of permanent ROW and 0.5 acres of temporary ROW. The project limits would be approximately 0.28 mile in length. The method of traffic maintenance would be a full road closure with official state detour, utilizing SR 67 and SR 159. DES 1700156 and 1700159

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

Date: 03/23/2020

Signature of the INDOT
Project Engineer or Other Responsible Agent Troy Arnold

Troy Arnold

Date: 3/23/2020

Signature of the
For Hire Consultant Virginia Flynn

Indiana Department of Environmental Management
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Eric J. Holcomb
Governor

Bruno Pigott
Commissioner

March 24, 2020

66-33
Kaskaskia Engineering Group
Attention: Virginia Flynn
323 Main Street, Suite E
Evansville, Indiana 47708

Dear Virginia Flynn,

RE: Wellhead Protection Area
Proximity Determination
Des No 1700156 and 1700159
SR 58 over Pollard Ditch and
UNT to Pollard Ditch
1.65 and 1.74 miles west of SR 67
Knox County, Indiana

Upon review of the above referenced project site, it has been determined that the proposed project area **is not located within** a Wellhead Protection Area. The information is accurate to the best of our knowledge; however, there are in some cases a few factors that could impact the accuracy of this determination. Some Wellhead Protection Area Delineations have not been submitted, and many have not been approved by this office. In these cases we use a 3,000 foot fixed radius buffer to make the proximity determination. To find the status of a Public Water Supply System's (PWSS's) Wellhead Protection Area Delineation please visit our tracking database at http://www.in.gov/idem/cleanwater/2456.htm and scroll to the bottom of the page.

Note: the Drinking Water Branch has a self service feature which allows one to determine wellhead proximity without submitting the application form. Use the following instructions:

1. Go to http://idemmaps.idem.in.gov/whpa2/
2. Use the search tool located in the upper left hand corner of the application to zoom to your site of interest by way of city, county, or address; or use the mouse to click on the site of interest displayed on the map.
3. Once the site of interest has been located and selected, use the print tool to create a .pdf of a wellhead protection area proximity determination response.

In the future please consider using this self service feature if it is suits your needs.

If you have any additional questions please feel free to contact me at the address above or at (317) 233-9158 and aturnbow@idem.in.gov.

Sincerely,

Alisha Turnbow

Alisha Turnbow,
Environmental Manager
Ground Water Section
Drinking Water Branch
Office of Water Quality

Krista N. Bollmann

From: Falls, Ryan G <RFalls@indot.IN.gov>
Sent: Thursday, March 19, 2020 11:56 AM
To: Krista N. Bollmann
Cc: Wright, Kristy; Ridgley, Brad
Subject: RE: SR 58, Bridge Projects, Knox County, IN (DES 1700156 and 1700159)-Vin Env Response

Krista Bollmann,

In the NEPA document, in the project description, mention the BIAS and NBI numbers of the new structures once. Throughout the document (including the project description as well) refer to the old BIAS/NBI number. This single mentioning is because the plans will likely show only the new BIAS/NBI.

Thank you for the opportunity to respond to early coordination.

Ryan Falls
Capital Program Management-Senior Environmental Manager Supervisor
Indiana Department of Transportation
3650 South US Highway 41
Vincennes, IN 47591
Office: 812-895-7326
Cell: 812-582-1387
Email: rfalls@indot.IN.gov

From: Krista N. Bollmann <KBollmann@kaskaskiaeng.com>
Sent: Thursday, March 19, 2020 12:11 PM
To: Falls, Ryan G <RFalls@indot.IN.gov>
Subject: SR 58, Bridge Projects, Knox County, IN (DES 1700156 and 1700159)

Mr. Falls,

Please find attached an early coordination letter and supporting exhibits for the above referenced project.

Thanks!

Kaskaskia Engineering Group, LLC
Krista Bollmann
Scientist II

Krista N. Bollmann

From: Richard A. Vermillion <raverm@sbcglobal.net>
Sent: Tuesday, March 24, 2020 11:09 AM
To: Krista N. Bollmann
Subject: RE: SR 58, Bridge Projects, Knox County, IN (DES 1700156 and 1700159)

Krista,

Both of the subject structures in your referenced project are crossing the regulated drain Pollard Ditch and one of its laterals. In accordance with IC 36-9-27-71(f & g) your proposed structure modifications must be approved by the Knox County Surveyor before the work can take place.

Once the proposed design is completed, please provide me with your submittal for review. The information must include structural details and hydraulic analysis for the existing structures as well as the designed proposed structures.

Please contact me if you need to discuss.

Richard A. Vermillion, PS

Knox County Surveyor
111 North Seventh Street, Suite 12
Courthouse, 4th Floor
Vincennes, Indiana 47591
(812) 885-2535
raverm@sbcglobal.net

From: Krista N. Bollmann <KBollmann@kaskaskiaeng.com>
Sent: Thursday, March 19, 2020 12:06 PM
To: raverm@sbcglobal.net
Subject: SR 58, Bridge Projects, Knox County, IN (DES 1700156 and 1700159)

Mr. Vermillion,

Please find attached an early coordination letter and supporting exhibits for the above referenced project.

Thanks!

Kaskaskia Engineering Group, LLC

Krista Bollmann
Scientist II
Certified: WBE/DBE/WOSB/EDWOSB
618.218.7637 cell | 618.233.5877 office
KBollmann@kaskaskiaeng.com

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Indiana Ecological Services Field Office
620 South Walker Street
Bloomington, IN 47403-2121
Phone: (812) 334-4261 Fax: (812) 334-4273
http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html

In Reply Refer To: July 16, 2020
Consultation Code: 03E12000-2020-SLI-2226
Event Code: 03E12000-2020-E-08831
Project Name: SR 58, Bridge Projects, Des. No. 1700156 and 1700159

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

To Whom It May Concern:

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

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

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

Please use the species list provided and visit the U.S. Fish and Wildlife Service's Region 3 Section 7 Technical Assistance website at - http://www.fws.gov/midwest/endangered/section7/s7process/index.html. This website contains step-by-step instructions which will help you

determine if your project will have an adverse effect on listed species and will help lead you through the Section 7 process.

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

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

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

Indiana Ecological Services Field Office
620 South Walker Street
Bloomington, IN 47403-2121
(812) 334-4261

Project Summary

Consultation Code: 03E12000-2020-SLI-2226

Event Code: 03E12000-2020-E-08831

Project Name: SR 58, Bridge Projects, Des. No. 1700156 and 1700159

Project Type: TRANSPORTATION

Project Description: This project is located on SR 58, 1.65 and 1.74 miles west of SR 67, in Knox County. The proposed project includes replacing two single span adjacent prestressed concrete box beam bridges on vertical abutments over Pollard Ditch (SN 058-42-06072B; NBI 20820) and Unnamed Tributary to Pollard Ditch (SN 058-42-06073B; NBI 20830). The current proposed project is to replace the existing bridges. Both bridges (over Pollard Ditch and UNT to Pollard Ditch) would be replaced with single-span precast prestressed concrete 36 by 49 bulb-tee beam bridges with spill through abutments supported on piles. Additionally, new approach slabs and guardrails will be constructed. Riprap will be placed at all abutment spill slopes as scour protection. The proposed grade at and between the bridges will be raised approximately four feet to ensure beams are not under water during flood events. The southwest, northwest, and northeast field drives for Pollard Ditch and Southwest, northwest and southeast field drives for UNT to Pollard Ditch will be relocated to accommodate placement of guardrail. Due to the increase of the profile grade on SR 58, UNT to Pollard Ditch will need to be relocated further from the roadway in order to not be encroached. The project would require the acquisition of approximately 6.5 acres of permanent ROW and approximately 0.5 acres of temporary ROW. The project would be approximately 0.35 mile in length. Installation of temporary or permanent lighting is not anticipated. There is suitable summer habitat within 1,000 feet of the project area. Two trees will be removed during the inactive season. Dominant tree species within and adjacent to the project area along Pollard Ditch include white mulberry (Morus alba), silver maple (Acer saccharinum), and honey locust (Gleditsia triacanthos). A June 3, 2020 inspection by HNTB did not indicate the presence of bats.

Land use in the vicinity of the project is mainly agricultural, with scattered rural residential structures. On March 4, 2020, INDOT Vincennes district environmental personnel stated, “A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area.” This was confirmed again by INDOT Vincennes district environmental personnel on June 25, 2020. However, in an early coordination response from IDNR-DFW, dated April

17, 2020, the INDR-DFW stated, “The Natural Heritage Program's data have been checked. The federal and state endangered Indiana Bat (Myotis sodalis) has been documented within 1/2 mile of the project area.” The USFWS database did have a GIS point for the Indiana Bat approximately 1.5 miles northwest of the project action area. Due to the scope of work and lack of suitable habitat in the project area, coordination with USFWS on this topic is not necessary.

Construction is anticipated to begin in February of 2022.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/38.86713118477863N87.25138480230957W

Counties: Knox, IN

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

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

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

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

Mammals

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/1/office/31440.pdf	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: ▪ Incidental take of the NLEB is not prohibited here. Federal agencies may consult using the 4(d) rule streamlined process. Transportation projects may consult using the programmatic process. See www.fws.gov/midwest/endangered/mammals/nleb/index.html Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

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

Bridge/Structure Bat Assessment Form

Date & Time of Assessment	DOT Project Number	Route/Facility Carried	County
June 3, 2020/11 am	Des. 1700156/1700159	SR 37	Knox
Federal Structure ID SN 058-42-06072B; NBI 020820 / SN 058-42-06073; NBI 020830	**Structure Coordinates** (latitude and longitude) 38° 52' 02" N and 87° 15' 08" W	**Structure Height** (approximate) 18 ft. and 15 ft.	**Structure Length** 67 ft. and 62 ft.

Structure Type (check one)

Bridge Construction Style

- ○ Cast-in-place
- ○ Flat Slab/Box
- ○ Truss (Side View)
- ◉ Parallel Box Beam
- ○ Pre-stressed Girder
- ○ Steel I-beam
- ○ Covered
- ○ Other:

Culvert Type

- ○ Box
- ○ Pipe/Round
- ○ Other:

Other Structure

- ○

Structure Material (check all that apply)

Deck Material	*Beam Material*	*End/Back Wall Material*
☐ Metal	☐ None	☐ Concrete
☒ Concrete	☒ Concrete	☒ Timber
☐ Timber	☐ Steel	☐ Stone/Masonry
☐ Open grid	☐ Timber	☐ Other:
☐ Other:	☐ Other:	

Creosote Evidence

- ○ Yes ○ No
- ◉ Unknown

Culvert Material

- ☐ Metal
- ☐ Concrete
- ☐ Plastic
- ☐ Stone/Masonry
- ☐ Other:

Notes:

Crossings Traversed (check all that apply)

☐ Bare ground	☐ Open vegetation
☐ Rip-rap	☐ Closed vegetation
☒ Flowing water	☐ Railroad
☐ Standing water	☐ Road/trail - Type:
☐ Seasonal water	☐ Other:

Surrounding Habitat (check all that apply)

☒ Agricultural	☐ Grassland
☐ Commercial	☐ Ranching
☐ Residential-urban	☒ Riparian/wetland
☐ Residential-rural	☐ Mixed use
☐ Woodland/forested	☐ Other:

Areas Assessed (check all that apply)

Check all areas that apply. If an area is not present in the structure, check the "not present" box.
Document all bat indicators observed during the assessment. Include the species present, if known, and provide photo documentation as indicated.

Area (check if assessed)	**Assessment Notes**	**Evidence of Bats** (include photos if present)
☒ All crevices and cracks: **Bridges/culverts:** rough surfaces or imperfections in concrete **Other structures:** soffits, rafters, attic areas	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ Concrete surfaces (open roosting on concrete)	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ Spaces between concrete end walls and the bridge deck	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ Crack between concrete railings on top of the bridge deck (Gap / Railing)	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ Vertical surfaces on concrete I-beams	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ Spaces between walls, ceiling joists	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ Weep holes, scupper drains, and inlets/pipes	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ All guiderails	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ All expansion joints	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species

Name: Kate Williams

Signature: *Kate Williams 7/16/2020*

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Indiana Ecological Services Field Office
620 South Walker Street
Bloomington, IN 47403-2121
Phone: (812) 334-4261 Fax: (812) 334-4273
http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html

In Reply Refer To: July 22, 2020
Consultation Code: 03E12000-2020-I-2226
Event Code: 03E12000-2020-E-08965
Project Name: SR 58, Bridge Projects, Des. No. 1700156 and 1700159

Subject: Concurrence verification letter for the 'SR 58, Bridge Projects, Des. No. 1700156 and 1700159' project under the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

To whom it may concern:

The U.S. Fish and Wildlife Service (Service) has received your request to verify that the **SR 58, Bridge Projects, Des. No. 1700156 and 1700159** (Proposed Action) may rely on the concurrence provided in the February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C 1531 *et seq.*).

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

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

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

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

Project Description

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

Name

SR 58, Bridge Projects, Des. No. 1700156 and 1700159

Description

This project is located on SR 58, 1.65 and 1.74 miles west of SR 67, in Knox County. The proposed project includes replacing two single span adjacent prestressed concrete box beam bridges on vertical abutments over Pollard Ditch (SN 058-42-06072B; NBI 020820; DES 1700156) and Unnamed Tributary to Pollard Ditch (SN 058-42-06073; NBI 020830; DES 1700159). The current proposed project is to replace the existing bridges. Both bridges (over Pollard Ditch and UNT to Pollard Ditch) would be replaced with single-span precast prestressed concrete 36 by 49 bulb-tee beam bridges with spill through abutments supported on piles. Additionally, new approach slabs and guardrails will be constructed. Riprap will be placed at all abutment spill slopes as scour protection. The proposed grade at and between the bridges will be raised approximately four feet to ensure beams are not under water during flood events. The southwest, northwest, and northeast field drives for Pollard Ditch and Southwest, northwest and southeast field drives for UNT to Pollard Ditch will be relocated to accommodate placement of guardrail. Due to the increase of the profile grade on SR 58, UNT to Pollard Ditch will need to be relocated further from the roadway in order to not be encroached. The project would require the acquisition of approximately 6.5 acres of permanent ROW and approximately 0.5 acres of temporary ROW. The project would be approximately 0.35 mile in length. Installation of temporary or permanent lighting is not anticipated. There is suitable summer habitat within 1,000 feet of the project area. Two trees will be removed during the inactive season. Dominant tree species within and adjacent to the project area along Pollard Ditch include white mulberry (Morus alba), silver maple (Acer saccharinum), and honey locust (Gleditsia triacanthos). A June 3, 2020 inspection by HNTB did not indicate the presence of bats.

Land use in the vicinity of the project is mainly agricultural, with scattered rural residential structures. On March 4, 2020, INDOT Vincennes district environmental personnel stated, “A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area.” This was confirmed again by INDOT Vincennes district environmental personnel on June 25, 2020. However, in an early coordination response from IDNR-DFW, dated April 17, 2020, the INDR-DFW stated, “The Natural Heritage Program's data have been checked. The federal and state endangered Indiana Bat (Myotis sodalis) has been documented within 1/2 mile of the project area.” The USFWS database did have a GIS point for the Indiana Bat approximately 1.5 miles northwest of the project action area. Due to the scope of work and minimal amount of suitable habitat in the project area, coordination with USFWS on this topic is not necessary.

Construction is anticipated to begin in February of 2022.

Determination Key Result

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

Qualification Interview

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

   [1] See Indiana bat species profile

   Automatically answered
   Yes

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

   [1] See Northern long-eared bat species profile

   Automatically answered
   Yes

3. Which Federal Agency is the lead for the action?
   A) Federal Highway Administration (FHWA)

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

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

   No

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

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

   No

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

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

   No

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

   No

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

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

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

   Yes

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

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

   Yes

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

    No

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

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

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

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

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

    No

12. Does the project include activities **within documented Indiana bat habitat**[1][2]?

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

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

    No

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

    Yes

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

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

    B) During the inactive season

15. Does the project include activities **within documented NLEB habitat**[1][2]?

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

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

    No

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

    Yes

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

    B) During the inactive season

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

    Yes

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

    No

20. Are *all* trees that are being removed clearly demarcated?

    Yes

21. Will the removal of habitat or the removal/trimming of trees include installing new or replacing existing **permanent** lighting?

    No

22. Does the project include wetland or stream protection activities associated with compensatory wetland mitigation?

    No

23. Does the project include slash pile burning?

    No

24. Does the project include *any* bridge removal, replacement, and/or maintenance activities (e.g., any bridge repair, retrofit, maintenance, and/or rehabilitation work)?

    Yes

25. Is there *any* suitable habitat[1] for Indiana bat or NLEB **within** 1,000 feet of the bridge? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

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

    Yes

26. Has a bridge assessment[1] been conducted **within** the last 24 months[2] to determine if the bridge is being used by bats?

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

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

    Yes

    SUBMITTED DOCUMENTS

    - *Bridge Culvert Bat Assessment Form April 2020 - fillable.pdf https://ecos.fws.gov/ipac/project/VMTIPIHLTBBVXA2KFFC2VKAA5Y/projectDocuments/22644465*

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

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

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

    No

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

    No

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

    No

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

    No

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

    No

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

    Yes

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

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

    Yes

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

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

    Yes

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

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

    Yes

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

    No

37. Are the project activities that use percussives (not including tree removal/trimming or bridge/structure work) consistent with a Not Likely to Adversely Affect determination in this key?

    Automatically answered
    Yes, because the activities are within 300 feet of the existing road/rail surface, greater than 0.5 miles from a hibernacula, and conducted during the active season within undocumented habitat.

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

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

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

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

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

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

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

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

42. **General AMM 1**
    Will the project ensure *all* operators, employees, and contractors working in areas of known or presumed bat habitat are aware of *all* FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable Avoidance and Minimization Measures?

    Yes

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

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

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

    Yes

44. **Tree Removal AMM 3**
    Can tree removal be limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits)?

    Yes

45. **Tree Removal AMM 4**
Can the project avoid cutting down/removal of *all* (1) **documented**[1] Indiana bat or NLEB roosts[2] (that are still suitable for roosting), (2) trees **within** 0.25 miles of roosts, and (3) documented foraging habitat any time of year?

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

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

Yes

Project Questionnaire

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

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

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

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

0.18

4. Please describe the proposed bridge work:
The current proposed project is to replace the existing bridges. Both bridges (over Pollard Ditch and UNT to Pollard Ditch) would be replaced with single-span precast prestressed concrete 36 by 49 bulb-tee beam bridges with spill through abutments supported on piles. Additionally, new approach slabs and guardrails will be constructed. Riprap will be placed at all abutment spill slopes as scour protection. The proposed grade at and between the bridges will be raised approximately four feet to ensure beams are not under water during flood events. The southwest, northwest, and northeast field drives for Pollard Ditch and Southwest, northwest and southeast field drives for UNT to Pollard Ditch will be relocated to accommodate placement of guardrail. Due to the increase of the profile grade on SR 58, UNT to Pollard Ditch will need to be relocated further from the roadway in order to not be encroached.

5. Please state the timing of all proposed bridge work:
   Bridge Work anticipated to begin in February of 2022.

6. Please enter the date of the bridge assessment:
   June 3, 2020

Avoidance And Minimization Measures (AMMs)

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

GENERAL AMM 1

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

TREE REMOVAL AMM 1

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

TREE REMOVAL AMM 2

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

TREE REMOVAL AMM 3

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

TREE REMOVAL AMM 4

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

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

This key was last updated in IPaC on December 02, 2019. Keys are subject to periodic revision.

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

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

APPENDIX D

Section 106 of the NHPA

Minor Projects PA Project Assessment Form

Date: 6/18/2020

Project Designation Number: 1700156 and 1700159

Route Number: State Road (SR) 58

Project Description: Bridge Replacement Projects over Pollard Ditch (1700156) and unnamed tributary to (UNT) Pollard Ditch, 1.65 and 1.74 miles west of SR 67

The project proposes to replace two (2) separate bridges, one over Pollard Ditch (Des. No. 1700156; 1.74 miles west of SR 67) and another over UNT to Pollard Ditch (Des. No. 1700159; 1.65 miles west of SR 67). Each bridge would be replaced with a single-span precast prestressed concrete 36 X 49 bulb-tee beam bridge with spill-through abutments supported on piles. New approach slabs and guardrails will be constructed. Riprap will be placed at all abutment spill slopes as scour protection. The proposed grade at and between the bridges will be raised approximately four (4) feet to ensure the proposed bridge beams are not under water during flood events, requiring 1,670 feet of roadway reconstruction to raise the grade and tie back to existing at the ends of the project limits. A retaining wall is proposed along the northeast quadrant of the UNT Pollard Ditch crossing to minimize impacts to the existing UNT. The southwest, northwest, and northeast field drives for Pollard Ditch and northwest and southeast field drives for UNT to Pollard Ditch will be relocated to accommodate placement of guardrail.

Feature crossed (if applicable): Pollard Ditch and UNT to Pollard Ditch

Township: Vigo Township

City/County: Knox County

Information reviewed (please check all that apply):

☑ General project location map ☑ USGS map ☑ Aerial photograph ☑ Interim Report

☐ Written description of project area ☐ General project area photos ☑ Soil survey data

☐ Previously completed historic property reports ☒ Previously completed archaeology reports

☑ Bridge Inspection Information

Other (please specify): SHAARD GIS; SHAARD; online street-view imagery; Indiana Historic Building, Bridges, and Cemeteries (IHBBC) map; County GIS data; Bridge Inspection Application System (BIAS); 2010 INDOT-sponsored *Historic Bridge Inventory* (HBI); project information provided by Kaskaskia Engineering Group, LLC, dated 3/20/2020 and on file with INDOT CRO.

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

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

B-12. Replacement, widening, or raising the elevation of the superstructure on existing bridges, and

bridge replacement projects (when both the superstructure and substructure are removed), under the following conditions ***[BOTH Condition A, which pertains to Archaeological Resources, and Condition B, which pertains to Above-Ground Resources, must be satisfied***

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

i. Work occurs in previously disturbed soils; OR

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

Condition B (Above-Ground Resources)
The conditions listed below must be met ***(BOTH Condition i and Condition ii must be satisfied):***

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

ii. With regard to the subject bridge, at least one of the conditions listed below is satisfied *(AT LEAST one of the conditions a, b or c, must be fulfilled)*:

a. The latest Historic Bridge Inventory identified the bridge as non-historic (see http://www.in.gov/indot/2531.htm);

b. The bridge was built after 1945, and is a common type as defined in Section V. of the *Program Comment Issued for Streamlining Section 106 Review for Actions Affecting Post- 1945 Concrete and Steel Bridges* issued by the Advisory Council on Historic Preservation on November 2, 2012 for so long as that *Program Comment* remains in effect AND the considerations listed in Section IV of the *Program Comment* do not apply;

c. The bridge is part of the Interstate system and was determined not eligible for the National Register under the Section 106 Exemption Regarding Effects to the Interstate Highway System adopted by the Advisory Council on Historic Preservation on March 10, 2005, for so long as that Exemption remains in effect.

If no, please explain:

Additional comments:

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

The *Knox County Interim Report* (1995; Vigo Township) of the Indiana Historic Sites and Structures Inventory (IHSSI) was also consulted. The National Register & IHSSI information is available in the Indiana State Historic Architectural and Archaeological Research Database (SHAARD) and the Indiana Historic Buildings, Bridges, and Cemeteries (IHBBC) map. The SHAARD information was checked against the Interim Report hard copy maps. The following surveyed Vigo Township resource was

recorded within 0.25 mile of the project: 1) 083-048-00036 (House; NA SR 58; first house west of Pollard Ditch, north side of SR 58). SHAARD records that this resource has been demolished. No other IHSSI sites were recorded within 0.25 mile of the project.

Land surrounding the project is rural consisting primarily of agricultural fields. No above-ground resources are located within 0.25 mile of the project location

The existing structure over Pollard Ditch/Des. No. 1700156 (#058-42-06072B; NBI #020820) is a prestressed concrete box-beam bridge built in 1920, reconstructed in 1964 and again 1980. The bridge was not included in the HBI due to its construction after 1965, which was the cutoff year for inclusion in the inventory. On November 2, 2012, the Advisory Council on Historic Preservation (ACHP) issued the *Program Comment for Streamlining Section 106 Review for Actions Affecting Post- 1945 Concrete and Steel Bridges* (*Program Comment*). The *Program Comment* relieves federal agencies from the Section 106 requirement to consider the effects of undertakings on most concrete and steel bridges built after 1945. On March 19, 2013, federal agencies were approved to use the *Program Comment* for Indiana projects.

The *Program Comment* applies for this bridge because it has not been previously listed in or determined eligible for listing in the National Register of Historic Places and it is not located in or adjacent to a historic district (Section IV.A of the *Program Comment*). As an example of a concrete box-beam bridge, this bridge is also not one of the types to which the *Program Comment* does not apply (arch bridges, truss bridges, bridges with movable spans, suspension bridges, cable-stayed bridges, or covered bridges [Section IV.B]). Additionally, this bridge has not been identified as having exceptional significance for association with a person or event, being a very early or particularly important example of its type in the state or the nation, having distinctive engineering or architectural features that depart from standard designs, or displaying other elements that were engineered to respond to a unique environmental context (Section IV.C). This bridge also has not been identified as having some exceptional quality. Because the above criteria from the *Program Comment* have been met, no individual consideration under Section 106 is required for Bridge #058-42-020820.

The existing structure over UNT to Pollard Ditch/Des. No. 1700159 (#058-42-060738; NBI #020830) is a prestressed concrete box-beam bridge built in 1920, reconstructed in 1964 and again 1980. The bridge was not included in the HBI due to its construction after 1965, which was the cutoff year for inclusion in the inventory. On November 2, 2012, the Advisory Council on Historic Preservation (ACHP) issued the *Program Comment for Streamlining Section 106 Review for Actions Affecting Post- 1945 Concrete and Steel Bridges* (*Program Comment*). The *Program Comment* relieves federal agencies from the Section 106 requirement to consider the effects of undertakings on most concrete and steel bridges built after 1945. On March 19, 2013, federal agencies were approved to use the *Program Comment* for Indiana projects.

The *Program Comment* applies for this bridge because it has not been previously listed in or determined eligible for listing in the National Register of Historic Places and it is not located in or adjacent to a historic district (Section IV.A of the *Program Comment*). As an example of a concrete box-beam bridge, this bridge is also not one of the types to which the *Program Comment* does not apply (arch bridges, truss bridges, bridges with movable spans, suspension bridges, cable-stayed bridges, or covered bridges [Section IV.B]). Additionally, this bridge has not been identified as having exceptional significance for association with a person or event, being a very early or particularly important example of its type in the state or the nation, having distinctive engineering or architectural features that depart from standard designs, or displaying other elements that were engineered to respond to a unique environmental context (Section IV.C). This bridge also has not been identified as having some exceptional quality. Because the above criteria from the *Program Comment* have been met, no individual consideration under Section 106 is required for Bridge #058-42-060738.

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

project scope does not change.

With regard to archaeological resources, an INDOT CRO archaeologist who meets the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61, completed a records check and Phase Ia archaeological reconnaissance. The records check found that nine archaeological investigations have been conducted and 29 archaeological sites recorded within 1.6 km (1 mile) of the project area. None of the sites or previous investigations were within or adjacent to the current project area.

Two prehistoric sites were located during this survey; 12-K-1668, consisting of a prehistoric isolate, and 12-K-1669, a lithic scatter that consisted of four artifacts. Both sites are insignificant with questionable integrity. The sites are ineligible to the state and national register and no further archaeological work is recommended.

If any archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, construction in the immediate area of the find will be stopped and the INDOT Cultural Resources Office and the Division of Historic Preservation and Archaeology will be notified immediately.

INDOT Cultural Resources staff reviewer(s): Susan Branigin and David Moffatt

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

From:	Moffatt, Charles D
To:	Matthew Stocker; Miller, Shaun (INDOT)
Cc:	Virginia Flynn; Richard Connolly
Subject:	RE: SR 58 Bridge Replacement Project, State Project, DES 1700156 and 1700159, MPPA
Date:	Tuesday, August 18, 2020 9:24:49 AM
Attachments:	image001.png image002.png image003.png image004.png

Matthew,
Thanks for notifying me of the change. Since my reconnaissance and report still covers the entire project area there is no need to revise the report or MPPA Determination form. As always, let me know if there are additional changes.

David

From: Matthew Stocker <mstocker@HNTB.com>
Sent: Monday, August 17, 2020 9:16 PM
To: Moffatt, Charles D <CMoffatt@indot.IN.gov>; Miller, Shaun (INDOT) <smiller@indot.IN.gov>
Cc: Virginia Flynn <VFlynn@kaskaskiaeng.com>; Richard Connolly <rconnolly@HNTB.com>
Subject: RE: SR 58 Bridge Replacement Project, State Project, DES 1700156 and 1700159, MPPA

David,

During Preliminary ROW review from INDOT, they requested a small change to the ROW in the Northwest Corner. This change reduces the need for the temporary ROW while still being within the original investigation limits. See attached shapefile with revised ROW limits.

Thanks,
Matt Stocker, PE
Project Engineer
Bridge Department
Tel (317) 917-5314

HNTB CORPORATION
111 Monument Circle Suite 1200, Indianapolis, IN 46204 | www.hntb.com

From: Moffatt, Charles D <CMoffatt@indot.IN.gov>
Sent: Monday, July 13, 2020 7:36 AM
To: Matthew Stocker <mstocker@HNTB.com>; Miller, Shaun (INDOT) <smiller@indot.IN.gov>
Cc: Virginia Flynn <VFlynn@kaskaskiaeng.com>; Richard Connolly <rconnolly@HNTB.com>

Subject: RE: SR 58 Bridge Replacement Project, State Project, DES 1700156 and 1700159, MPPA

Matthew,
Thank you for providing the information regarding the proposed expanded right-of-way. It is typical for our office to look at a slightly larger project area than given if possible and most of right-of-way as presented was covered in in my investigation.

The expanded right-of-way in the northeastern portion of the project area, north of the ditch, was not included in my original investigation area. However, this area is rather narrow, less the 15 m or 50 feet from the shoulder of the ditch to the northern boundary of the proposed right-of-way. Standard archaeological field methods used would have covered this area with no additional fieldwork and so no new fieldwork is required for this project. Please include a copy of this email with the project CE to show that this area was considered as part of the Section 106 undertaking.

David Moffatt
Archaeologist
Environmental Services
Cultural Resources Office
Indiana Department of Transportation
317-233-3703

From: Matthew Stocker <mstocker@HNTB.com>
Sent: Friday, July 10, 2020 2:52 PM
To: Moffatt, Charles D <CMoffatt@indot.IN.gov>; Miller, Shaun (INDOT) <smiller@indot.IN.gov>
Cc: Virginia Flynn <VFlynn@kaskaskiaeng.com>; Richard Connolly <rconnolly@HNTB.com>
Subject: RE: SR 58 Bridge Replacement Project, State Project, DES 1700156 and 1700159, MPPA

Thanks David,

Please see attached shapefile for our currently proposed ROW Limits. Please let me know if you have any questions or need anything else. If the ROW areas shift again, I will let you know.

Thanks,
Matt Stocker, PE
Project Engineer
Bridge Department
Tel (317) 917-5314

HNTB CORPORATION
111 Monument Circle Suite 1200, Indianapolis, IN 46204 | www.hntb.com

100+ YEARS OF INFRASTRUCTURE SOLUTIONS

From: Matthew Stocker
Sent: Friday, July 10, 2020 2:50 PM
To: 'Moffatt, Charles D' <CMoffatt@indot.IN.gov>; Miller, Shaun (INDOT) <smiller@indot.IN.gov>
Cc: Virginia Flynn <VFlynn@kaskaskiaeng.com>; Richard Connolly <rconnolly@HNTB.com>
Subject: RE: SR 58 Bridge Replacement Project, State Project, DES 1700156 and 1700159, MPPA

Thanks David,

Please see attached shapefile for our currently proposed ROW Limits. Please let me know if you have any questions or need anything else. If the ROW areas shift again, I will let you know.

Thanks,
Matt Stocker, PE
Project Engineer
Bridge Department
Tel (317) 917-5314

HNTB CORPORATION
111 Monument Circle Suite 1200, Indianapolis, IN 46204 | www.hntb.com

100+ YEARS OF INFRASTRUCTURE SOLUTIONS

From: Moffatt, Charles D <CMoffatt@indot.IN.gov>
Sent: Tuesday, July 7, 2020 3:17 PM
To: Matthew Stocker <mstocker@HNTB.com>; Miller, Shaun (INDOT) <smiller@indot.IN.gov>
Cc: Virginia Flynn <VFlynn@kaskaskiaeng.com>; Richard Connolly <rconnolly@HNTB.com>
Subject: RE: SR 58 Bridge Replacement Project, State Project, DES 1700156 and 1700159, MPPA

Matthew,
Please send me a file showing the new area or a more specific description of the area. I will most likely reply clearing the added right of way. It is OK if the description is not final, however please be aware that if the area shifts again it will be necessary to let us know so that we can evaluate the new area.

David

From: Matthew Stocker <mstocker@HNTB.com>
Sent: Tuesday, July 07, 2020 3:07 PM
To: Miller, Shaun (INDOT) <smiller@indot.IN.gov>; Moffatt, Charles D <CMoffatt@indot.IN.gov>
Cc: Virginia Flynn <VFlynn@kaskaskiaeng.com>; Richard Connolly <rconnolly@HNTB.com>
Subject: RE: SR 58 Bridge Replacement Project, State Project, DES 1700156 and 1700159, MPPA

Shaun,

INDOT requested a scope revision which will shift our ROW limits outside of the investigation area that was originally given to your team. Is there any buffer when it comes to needing to revisit a site? Our ROW is still being set, but it appears it may be at most 15' past the surveyed area.

Thanks,
Matt Stocker, PE
Project Engineer
Bridge Department
Tel (317) 917-5314

HNTB CORPORATION
111 Monument Circle Suite 1200, Indianapolis, IN 46204 | www.hntb.com

100+ YEARS OF INFRASTRUCTURE SOLUTIONS

From: Miller, Shaun (INDOT) <smiller@indot.IN.gov>
Sent: Monday, July 6, 2020 2:09 PM
To: Virginia Flynn <VFlynn@kaskaskiaeng.com>; Moffatt, Charles D <CMoffatt@indot.IN.gov>
Cc: Matthew Stocker <mstocker@HNTB.com>; Krista N. Bollmann <KBollmann@kaskaskiaeng.com>; Arnold, Troy <TArnold1@indot.IN.gov>; Falls, Ryan G <RFalls@indot.IN.gov>
Subject: RE: SR 58 Bridge Replacement Project, State Project, DES 1700156 and 1700159, MPPA

Virginia,

Please find attached, the final archeology report and completed MPPA B-12 determination form for inclusion in the CE. Dave sent the archaeology report to DHPA for their records on June 18 but neglected to inform you that it and the MPPA form were complete. I apologize for that oversight.

Dave-please close out Milestones entries, post report to INSCOPE, and send notification email to Tribes to wrap up this project.

APPENDIX E

Red Flag and Hazardous Materials

INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204

PHONE: (317) 232-5113
FAX: (317) 233-4929

Eric Holcomb, Governor
Joe McGuinness, Commissioner

Date: April 13, 2020

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

From: Virginia Flynn
Kaskaskia Engineering Group, LLC
323 Main Street, Suite E
Evansville, IN 47708
VFlynn@kaskaskiaeng.com

Re: RED FLAG INVESTIGATION
DES # 1700156 and 1700159, State Project
Bridge Replacements
SR 58, 1.65 and 1.74 Miles West of SR 67
Knox County, Indiana

PROJECT DESCRIPTION

Brief Description of Project: The proposed state projects are located on SR 58, 1.65 and 1.74 miles west of SR 67, in the Indiana Department of Transportation (INDOT) Vincennes District. The location is Knox County, Vigo Township, Bicknell and Plainville Quadrangles. The proposed work includes replacing two bridges, one over Pollard Ditch (SN 058-42-06072B; DES 1700156) and another over an Unnamed Tributary (UNT) to Pollard Ditch (SN 058-42-06073B; DES 1700159). The existing structures over Pollard Ditch and UNT to Pollard Ditch are single span adjacent prestressed concrete box beam bridges on vertical abutments. They will be replaced with a single-span precast prestressed concrete HN 36x49 bulb-tee beam bridges with spill through abutments supported on piles. Additionally, new approach slabs and guardrails will be constructed. Riprap will be placed at all abutment spills slopes as scour protection. The proposed grade at and between the bridges will be raised approximately 4 feet. A retaining wall is proposed along the northeast quadrant of the UNT to Pollard crossing to minimize the impacts to the existing UNT. The southwest, northwest, and northeast field drives for Pollard Ditch and northwest and southeast field drives for UNT to Pollard Ditch will be relocated to accommodate placement of guardrail.

Bridge and/or Culvert Project: Yes ☒ No ☐ Structure # 058-42-06072B and 058-42-06073B
If this is a bridge project, is the bridge Historical? Yes ☐ No ☒ , Select ☐ Non-Select ☐
(Note: If the project involves a historical bridge, please include the bridge information in the Recommendations Section of the report).
Proposed right of way: Temporary ☒ # Acres 0.5 Permanent ☒ # Acres 5.0 , Not Applicable ☐
Type of excavation: Removal of existing bridges, lengthening of bridge openings for proposed spill slopes and riprap, and roadside ditch construction to a depth of approximately 7 feet in depth max.
Maintenance of traffic: A full closure with official state detour.

Work in waterway: Yes ☒ No ☐ Below ordinary high water mark: Yes ☒ No ☐
State Project: ☒ LPA: ☐
Any other factors influencing recommendations: N/A.

INFRASTRUCTURE TABLE AND SUMMARY

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

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

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

WATER RESOURCES TABLE AND SUMMARY

Water Resources Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
NWI - Points	**N/A**	Canal Routes - Historic	**N/A**
Karst Springs	**N/A**	NWI - Wetlands	**6**
Canal Structures – Historic	**N/A**	Lakes	**1**
NPS NRI Listed	**N/A**	Floodplain - DFIRM	**N/A**
NWI-Lines	**5**	Cave Entrance Density	**N/A**
IDEM 303d Listed Streams and Lakes (Impaired)	**N/A**	Sinkhole Areas	**N/A**
Rivers and Streams	**8**	Sinking-Stream Basins	**N/A**

Explanation:
NWI-Lines – Five (5) NWI-Lines are located within the 0.5 mile search radius. Four (4) NWI-line segments, associated with Pollard Ditch and a UNT to Pollard Ditch, are located within the project area. A Waters of the US Report will be prepared and coordination with INDOT ES Ecology and Waterway Permitting will occur.

Rivers and Streams – Eight (8) river and stream segments are located within the 0.5 mile search radius. Four (4) river and stream segments, associated with Pollard Ditch and a UNT to Pollard Ditch, are located within the project area. A Waters of the US Report will be prepared and coordination with INDOT ES Ecology and Waterway Permitting will occur.

NWI-Wetlands – Six (6) wetlands are located within the 0.5 mile search radius. The nearest wetland is located 0.2 mile west of the project area. No impact is expected.

Lakes – One (1) lake is located within the 0.5 mile search radius. The lake is located approximately 0.2 mile west of the project area. No impact is expected.

URBANIZED AREA BOUNDARY SUMMARY

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

MINING AND MINERAL EXPLORATION TABLE AND SUMMARY

Mining/Mineral Exploration Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Petroleum Wells	**1**	Mineral Resources	**N/A**
Mines – Surface	**5**	Mines – Underground	**4**

Explanation:
Petroleum Wells: One (1) petroleum well is located within the 0.5 mile search radius. The well is located approximately 0.2 mile west of the project area. No impact is expected.

Mines-Surface: Five (5) surface mines are located within the 0.5 mile search radius. The nearest mine is adjacent to the project area. Coordination with IDNR Reclamation Division will occur.

Mines-Underground: Four (4) underground mines are located within the 0.5 mile search radius. The nearest mine is located 0.3 mile west of the project area. No impact is expected.

HAZARDOUS MATERIAL CONCERNS TABLE AND SUMMARY

Hazardous Material Concerns Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Superfund	**N/A**	Manufactured Gas Plant Sites	**N/A**
RCRA Generator/ TSD	**N/A**	Open Dump Waste Sites	**N/A**
RCRA Corrective Action Sites	**N/A**	Restricted Waste Sites	**N/A**
State Cleanup Sites	**N/A**	Waste Transfer Stations	**N/A**
Septage Waste Sites	**N/A**	Tire Waste Sites	**N/A**
Underground Storage Tank (UST) Sites	**N/A**	Confined Feeding Operations (CFO)	**N/A**
Voluntary Remediation Program	**N/A**	Brownfields	**N/A**
Construction Demolition Waste	**N/A**	Institutional Controls	**N/A**
Solid Waste Landfill	**N/A**	NPDES Facilities	**N/A**
Infectious/Medical Waste Sites	**N/A**	NPDES Pipe Locations	**1**
Leaking Underground Storage (LUST) Sites	**N/A**	Notice of Contamination Sites	**N/A**

Explanation:
NPDES Pipe Locations – One (1) NPDES pipe location is within the 0.5 mile search radius. The pipe location is approximately 0.4 mile southwest of the project area. No impact is expected.

ECOLOGICAL INFORMATION SUMMARY

The Knox County listing of the Indiana Natural Heritage Data Center information on endangered, threatened, or rare (ETR) species and high quality natural communities is attached with ETR species highlighted. A preliminary review of the

Indiana Natural Heritage Database by INDOT Environmental Services did indicate the presence of ETR species within the 0.5 mile search radius. Coordination with USFWS and IDNR will occur.

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The project area is located in a rural area surrounded by farm fields. The November 8, 2019 inspection report for Bridge #058-42-06072B states that no evidence of bats was seen or heard under the bridge. The November 8, 2019 inspection report for Bridge #058-42-06073B states that no evidence of bats was seen or heard under the bridge. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects."

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

RECOMMENDATIONS SECTION

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

INFRASTRUCTURE: N/A

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

- Four (4) NWI-line segments are located within the project area.
- Four (4) river and stream segments, associated with Pollard Ditch, are located within the project area.

URBANIZED AREA BOUNDARY: N/A

MINING/MINERAL EXPLORATION: One mine is adjacent to the project area. Coordination with IDNR Reclamation Division will occur.

HAZARDOUS MATERIAL CONCERNS: N/A

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

INDOT Environmental Services concurrence: Nicole Fohey-Breting Digitally signed by Nicole Fohey-Breting Date: 2020.04.24 13:59:50 -04'00' (Signature)

Prepared by:

Virginia Flynn

Virginia Flynn
Senior Environmental Scientist
Kaskaskia Engineering Group, LLC

Graphics:

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

SITE LOCATION: YES

INFRASTRUCTURE: N/A

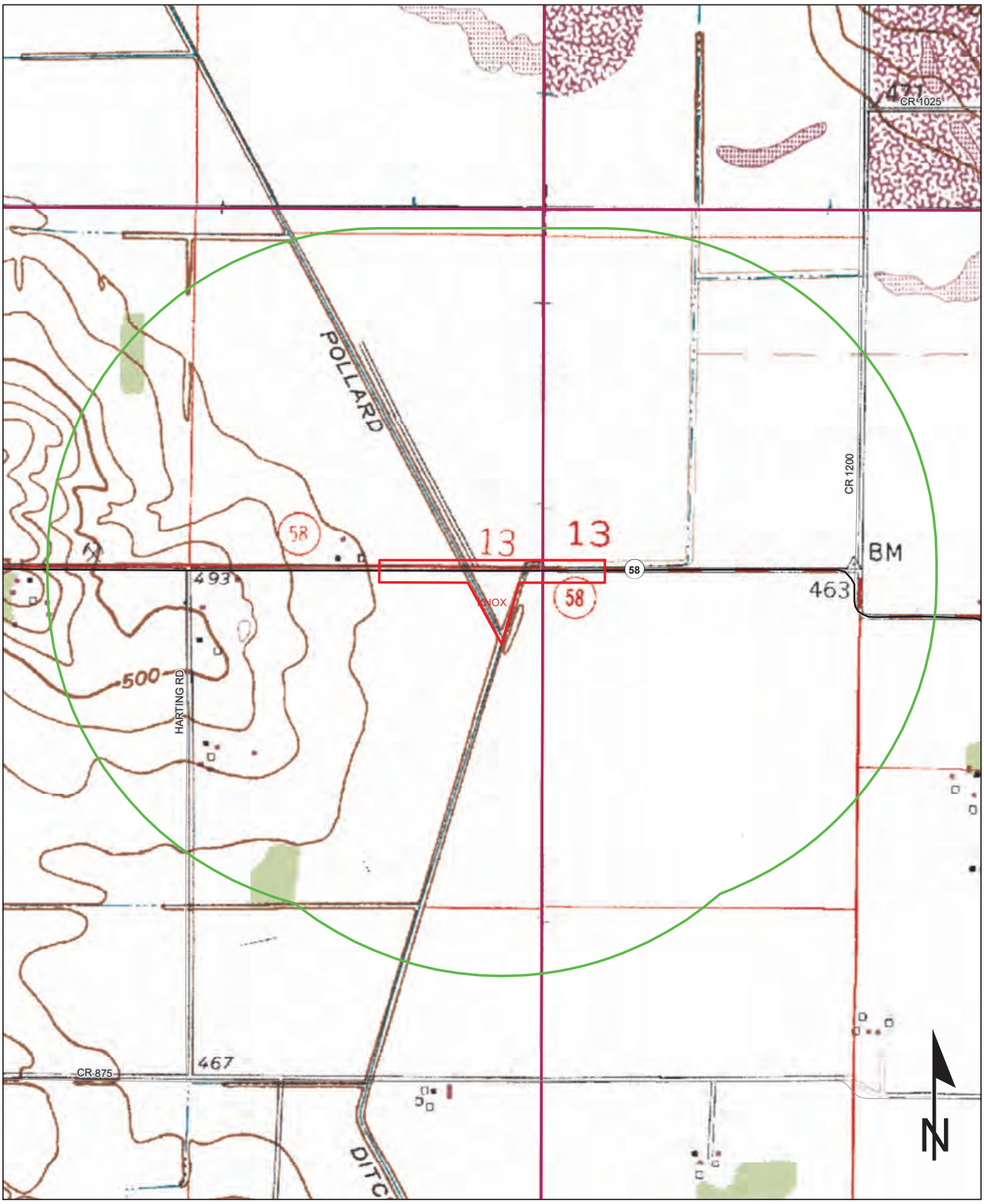
WATER RESOURCES: YES

URBANIZED AREA BOUNDARY: N/A

MINING/MINERAL EXPLORATION: YES

HAZARDOUS MATERIAL CONCERNS: YES

Red Flag Investigation - Site Location
SR 58, 1.65 to 1.74 Miles West of SR 67
Des. Nos. 1700156 and 1700159, Bridge Replacements
Knox County, Indiana



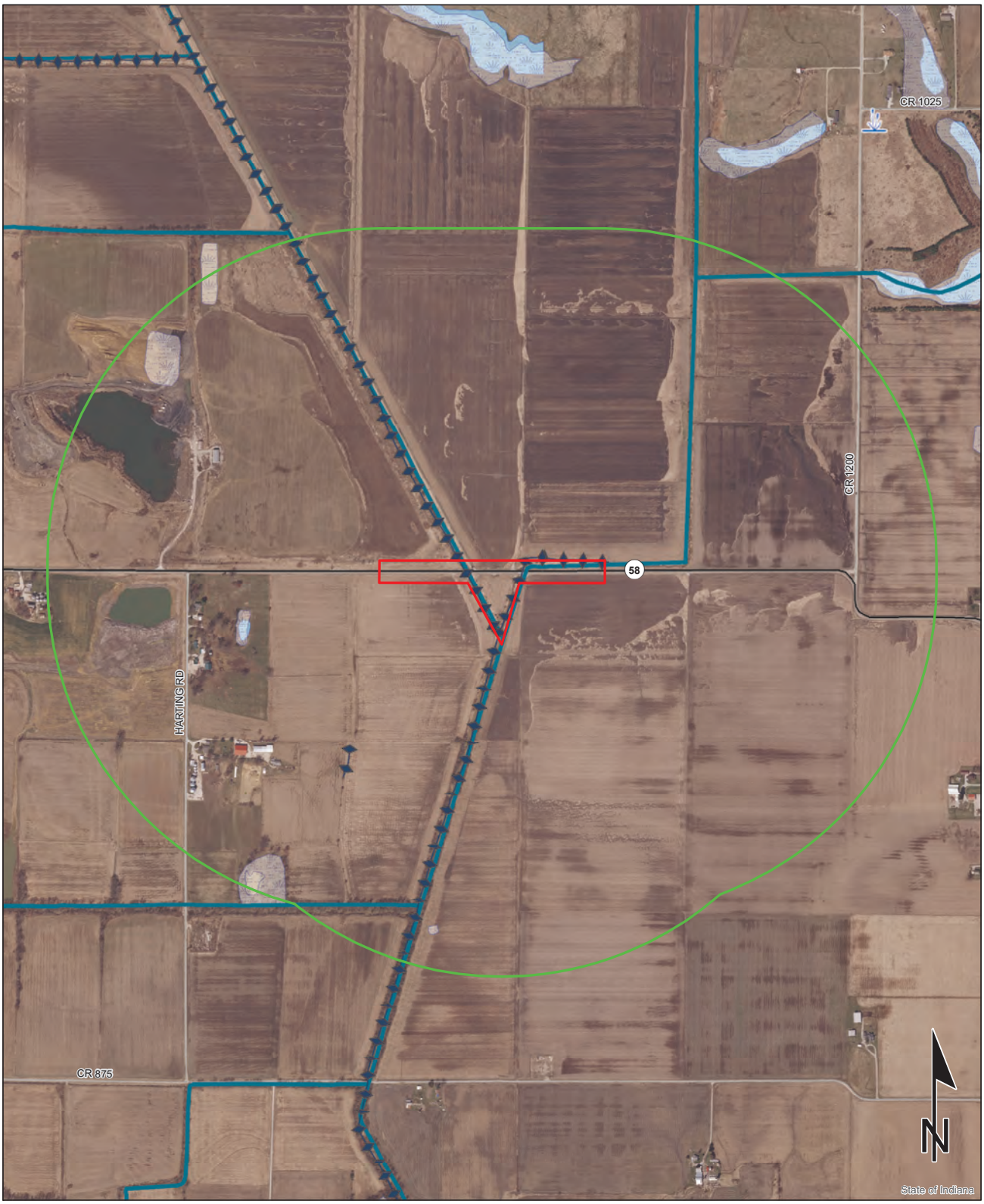
0.15 0.075 0 0.15 Miles

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

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

BICKNELL AND PLAINVILLE QUADRANGLES
INDIANA
7.5 MINUTE SERIES
(TOPOGRAPHIC)

Red Flag Investigation - Water Resources
SR 58, 1.65 to 1.74 Miles West of SR 67
Des. Nos. 1700156 and 1700159, Bridge Replacements
Knox County, Indiana



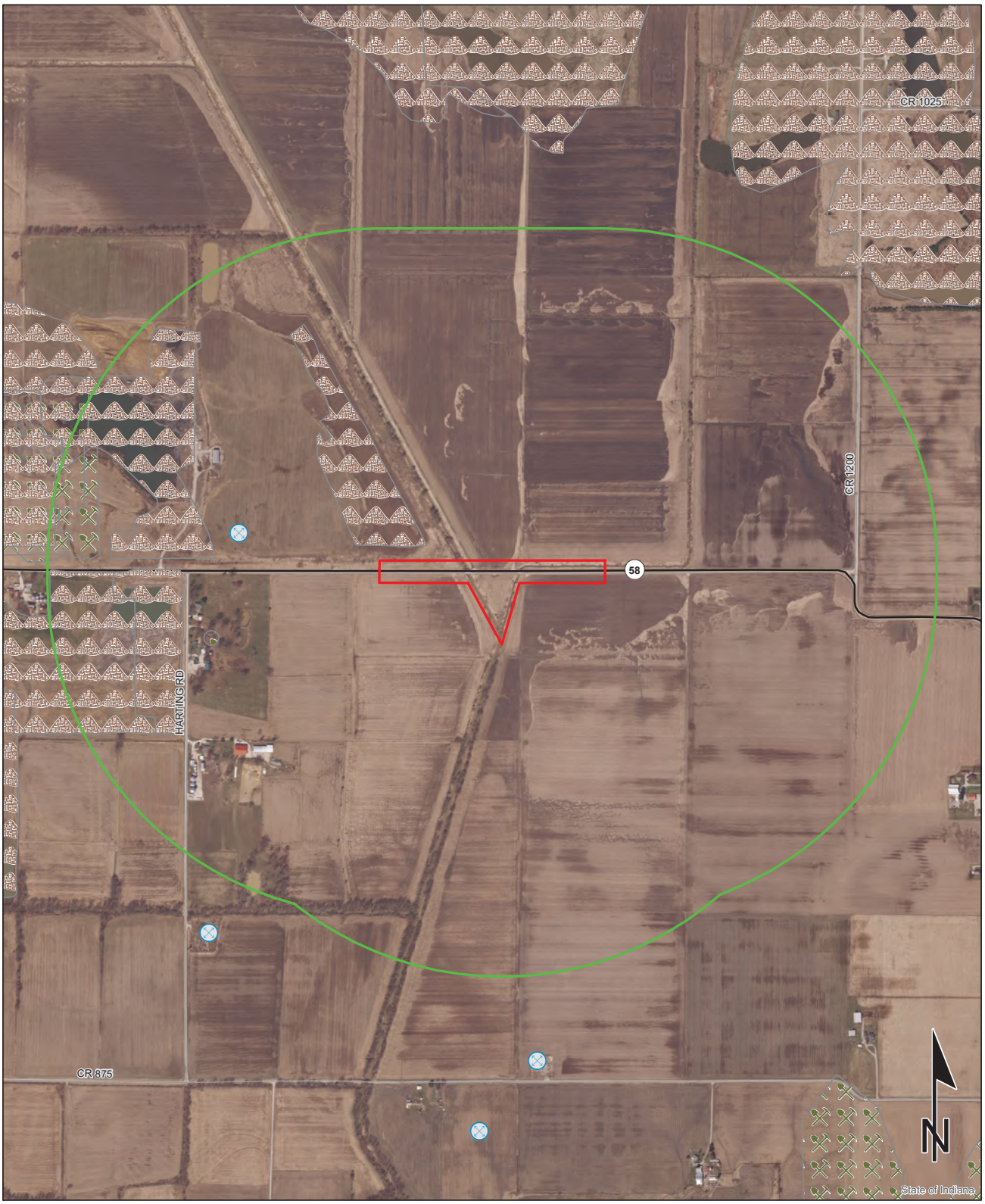
0.15 0.075 0 0.15 Miles

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

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

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

Red Flag Investigation - Mining/Mineral Exploration
SR 58, 1.65 to 1.74 Miles West of SR 67
Des. Nos. 1700156 and 1700159, Bridge Replacements
Knox County, Indiana



0.15 0.075 0 0.15 Miles

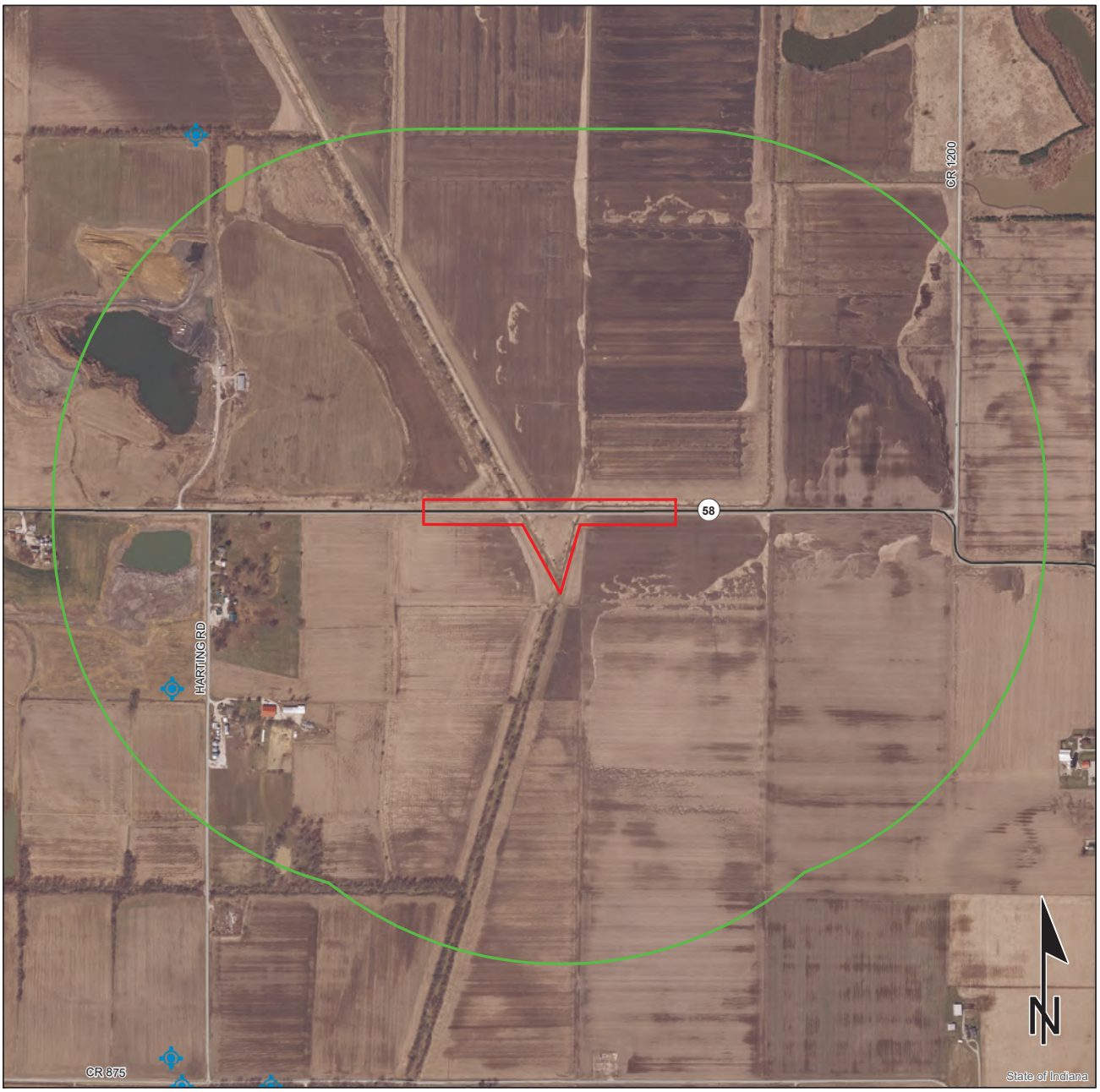
Sources:

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

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

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

Red Flag Investigation - Hazardous Material Concerns
SR 58, 1.65 to 1.74 Miles West of SR 67
Des. Nos. 1700156 and 1700159, Bridge Replacements
Knox County, Indiana



- Brownfield
- RCRA Corrective Action Sites
- Confined Feeding Operation
- Notice_Of_Contamination
- Construction/Demolition Site
- Infectious/Medical Waste Site
- Leaking Underground Storage Tank
- Manufactured Gas Plant
- NPDES Facilites
- NPDES Pipe Locations
- Open Dump Waste Site
- RCRA Generator/TSD
- Restricted Waste Site
- Septage Waste Site
- Solid Waste Landfill
- State Cleanup Site
- Superfund
- Tire Waste Site
- Underground Storage Tank
- Voluntary Remediation Program
- Waste Transfer Station
- Institutional Controls
- County Boundary
- Project Area
- Half Mile Radius
- Toll
- Interstate
- State Route
- US Route
- Local Road

0.15 0.075 0 0.15 Miles

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

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

Indiana County Endangered, Threatened and Rare Species List

County: Knox

Species Name	Common Name	FED	STATE	GRANK	SRANK
Mollusk: Bivalvia (Mussels)					
Arcidens confragosus	Rock Pocketbook			G4	S2
Cyprogenia stegaria	Eastern Fanshell Pearlymussel	LE	SE	G1Q	S1
Epioblasma flexuosa	Leafshell		SX	GX	SX
Epioblasma propinqua	Tennessee Riffleshell		SX	GX	SX
Epioblasma rangiana	Northern Riffleshell	LE	SE	G2	S1
Epioblasma torulosa	Tubercled Blossom	LE	SX	GX	SX
Epioblasma triquetra	Snuffbox	LE	SE	G3	S1
Fusconaia subrotunda	Longsolid	C	SX	G3	SX
Hemistena lata	Cracking Pearlymussel	LE	SX	G1	SX
Lampsilis abrupta	Pink Mucket	LE	SX	G2	SX
Lampsilis ovata	Pocketbook			G5	S2
Obovaria retusa	Ring Pink	LE	SX	G1	SX
Obovaria subrotunda	Round Hickorynut	C	SE	G4	S1
Plethobasus cicatricosus	White Wartyback	LE	SX	G1	SX
Plethobasus cyphyus	Sheepnose	LE	SE	G3	S1
Pleurobema clava	Clubshell	LE	SE	G1G2	S1
Pleurobema cordatum	Ohio Pigtoe		SSC	G4	S2
Pleurobema plenum	Rough Pigtoe	LE	SE	G1	S1
Pleurobema rubrum	Pyramid Pigtoe		SX	G2G3	SX
Potamilus capax	Fat Pocketbook	LE	SE	G2	S1
Ptychobranchus fasciolaris	Kidneyshell		SSC	G4G5	S2
Quadrula cylindrica cylindrica	Rabbitsfoot	LT	SE	G3G4T3	S1
Insect: Coleoptera (Beetles)					
Nicrophorus americanus	American Burying Beetle	LE	SX	G2G3	SX
Insect: Ephemeroptera (Mayflies)					
Homoeoneuria ammophila	Sand-loving Brush-legged Mayfly		ST	G4	S2
Pseudiron centralis	White Crabwalker Mayfly		SE	G5	S1
Siphloplecton interlineatum	Flapless Cleft-footed Minnow Mayfly		ST	G5	S2
Insect: Odonata (Dragonflies & Damselflies)					
Enallagma divagans	Turquoise Bluet		SR	G5	S3
Fish					
Ammocrypta clara	Western Sand Darter		SSC	G3	S2
Crystallaria asprella	Crystal Darter			G3	SX
Elassoma zonatum	Banded Pygmy Sunfish		SSC	G5	S1
Etheostoma squamiceps	Spottail Darter			G4G5	S2S3
Percina evides	Gilt Darter		SE	G4	S1
Percina uranidea	Stargazing Darter			G3	SX
Amphibian					

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

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State: SE = state endangered; ST = state threatened; SR = state rare; SSC = state species of special concern; SX = state extirpated; SG = state significant; WL = watch list

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

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

Indiana County Endangered, Threatened and Rare Species List

County: Knox

Species Name	Common Name	FED	STATE	GRANK	SRANK
Cryptobranchus alleganiensis alleganiensis	Eastern Hellbender	C	SE	G3G4T3T4	S1
Reptile					
Farancia abacura reinwardtii	Western Mud Snake		SSC	G5T5	SH
Kinosternon subrubrum subrubrum	Eastern Mud Turtle		SE	G5T5	S2
Macrochelys temminckii	Alligator Snapping Turtle	C	SE	G3G4	SH
Nerodia erythrogaster neglecta	Copperbelly Water Snake	PS:LT	SE	G5T3	S2
Opheodrys vernalis	Smooth Green Snake		SE	G5	S2
Pseudemys concinna concinna	Eastern River Cooter		SE	G5T5	S1
Bird					
Aimophila aestivalis	Bachman's Sparrow			G3	SXB
Asio flammeus	Short-eared Owl		SE	G5	S2
Haliaeetus leucocephalus	Bald Eagle		SSC	G5	S2
Lanius ludovicianus	Loggerhead Shrike		SE	G4	S3B
Tyto alba	Barn Owl		SE	G5	S2
Mammal					
Myotis lucifugus	Little Brown Bat	C	SE	G3	S2
Myotis septentrionalis	Northern Long Eared Bat	LT	SE	G1G2	S2S3
Myotis sodalis	Indiana Bat	LE	SE	G2	S1
Nycticeius humeralis	Evening Bat		SE	G5	S1
Perimyotis subflavus	Tricolored Bat		SE	G2G3	S2S3
Sylvilagus aquaticus	Swamp Rabbit		SE	G5	S1
Taxidea taxus	American Badger		SSC	G5	S2
Vascular Plant					
Androsace occidentalis	Western Rockjasmine		ST	G5	S2
Azolla caroliniana	Carolina Mosquito-fern		SR	G5	S3
Bacopa rotundifolia	Roundleaf Water-hyssop		ST	G5	S2
Callirhoe triangulata	Clustered Poppy-mallow		SE	G3	S1
Carex gigantea	Large Sedge		SE	G4	S1
Carex gravida	Heavy Sedge		SE	G5	S1
Carya pallida	Sand Hickory		SE	G5	S1
Catalpa speciosa	Northern Catalpa		SR	G4?	S3
Chelone obliqua var. speciosa	Rose Turtlehead		WL	G4T3	S3
Clematis pitcheri	Pitcher Leather-flower		SR	G4G5	S3
Cyperus pseudovegetus	Green Flatsedge		SR	G5	S2
Echinodorus cordifolius	Creeping Bur-head		SE	G5	S1
Gentiana puberulenta	Downy Gentian		SE	G4G5	S1
Gleditsia aquatica	Water-locust		SE	G5	S1
Heterotheca camporum var. camporum	Hairy Golden-aster		ST	G5TNR	S3
Hibiscus moscheutos ssp. lasiocarpos	Hairy-fruited Hibiscus		SE	G5T4	S1
Hypericum adpressum	Creeping St. John's-wort		SE	G3	S1

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Indiana County Endangered, Threatened and Rare Species List

County: Knox

Species Name	Common Name	FED	STATE	GRANK	SRANK
Iresine rhizomatosa	Eastern Bloodleaf		ST	G5	S3
Isoetes melanopoda	Blackfoot Quillwort		ST	G5	S2
Monarda bradburiana	Eastern Bee-balm		SE	G5	S1
Orobanche riparia	Bottomland Broomrape		SE	G4?	S1
Passiflora incarnata	Purple Passion-flower		WL	G5	S3
Penstemon tubaeflorus	Tube Penstemon		SE	G5	S1
Phacelia ranunculacea	Blue Scorpion-weed		SE	G4	S1
Plantago cordata	Heart-leaved Plantain		SE	G4	S1
Prenanthes aspera	Rough Rattlesnake-root		SR	G4?	S3
Psoralidium tenuiflorum	Few-flowered Scurf-pea		SX	G5	SX
Pteridium aquilinum var. pseudocaudatum	Bracken Fern		SX	G5T5	SX
Rorippa aquatica	Lake Cress		SE	G4?	S1
Rudbeckia fulgida var. fulgida	Orange Coneflower		WL	G5T4?	S3
Silene regia	Royal Catchfly		SE	G3	S1
Strophostyles leiosperma	Slick-seed Wild-bean		WL	G5	S3
Taxodium distichum var. distichum	Bald Cypress		ST	G5	S2
Trichostema dichotomum	Forked Bluecurl		WL	G5	S3
Vitis palmata	Catbird Grape		SR	G4	S3
High Quality Natural Community					
Barrens - sand	Sand Barrens		SG	G3	S2
Forest - floodplain wet-mesic	Wet-mesic Floodplain Forest		SG	G3?	S3
Forest - upland mesic Southwestern Lowlands	Southwestern Lowlands Mesic Upland Forest		SG	GNR	S1
Lake - pond	Pond		SG	GNR	SNR
Wetland - swamp forest	Forested Swamp		SG	G2?	S2
Other Significant Feature					
Geomorphic - Nonglacial Erosional Feature - Water Fall and Cascade	Water Fall and Cascade			GNR	SNR

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

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

APPENDIX F

Water Resources

From:	Sperry, Steve
To:	Kate Williams; Arnold, Troy
Cc:	Rehder, Crystal; Angela Pearl; Cooper, Nicholas
Subject:	APPROVED: WOTUS Report, SR 58 Bridge Replacements over Pollard D., 1.74 mile West SR-67, Knox Co, 1700156/59
Date:	Wednesday, April 3, 2019 3:40:17 PM
Attachments:	image001.png image002.png image003.png image004.png image005.png Permit Determination Questionnaire V 2_28_2019.docx WOTUS 1700156 SR57 Pollard Approved Final Rprt 4_3_2019.pdf

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Kate

Thank you for submitting the waters report for the above referenced project.

Troy

The approved report is attached and can also be found on ProjectWise through this link WOTUS 1700156 SR57 Pollard Approved Final Rprt 4_3_2019.pdf *It is the responsibility of the Project Manager to forward a copy of this report to the Project Designer.*

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

This email serves as notice that the Project Designer is to complete the standard Permit Determination Questionnaire (refer to attached) as soon as all required information is obtained. It will need to be submitted to NICK COOPER so that a permit determination can be made.

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

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

Thanks

Steve

Stephen C. Sperry
Ecology and Permits Coordinator
Division of Environmental Services
IGCN Room 642
100 N. Senate Ave.
Indianapolis, IN 46204
Office: (317) 232-5206
Email: ssperry@indot.in.gov

Photo Log Omitted.
See Appendix B.

Waters of the U.S. Report

SR 58 Bridge Replacement Project Type

Knox, County

Des. No.
1700156 (058-42-06072 B) &
1700159 (058-42-06073)

Prepared by:
HNTB
111 Monument Circle, Suite 1200
Indianapolis, IN, 46204
317.636.4682

April 3, 2019

1. PROJECT INFORMATION

Date(s) of Field Reconnaissance: 10/5/2018

Location

The project is located along SR 58 over Pollard Ditch and UNT to Pollard Ditch in Knox County, Indiana (Attachment A1).

- Section 13, Township 5N, Range 8W
- Bicknell and Plainville 1:24,000 scale Quadrangles
- Latitude/Longitude – 38.867101 N, -87.251346, NAD 1983-UTM, Zone 16N

Project Description

The Federal Highway Administration (FHWA) and Indiana Department of Transportation (INDOT), Vincennes District is planning to proceed with a bridge replacement project of two bridges at State Road (SR) 58 over Pollard Ditch and UNT to Pollard Ditch in Knox County, Indiana. The project will address poor existing structure conditions by replacing the bridge. It is anticipated that the bridges will be replaced with a single bridge.

2. DESKTOP RECONNAISSANCE

2.1 SOIL ASSOCIATIONS AND SERIES TYPES

According to the Soil Survey Geographic (SSURGO) Database for Johnson County, Indiana, the following mapped soils series are within the SR 58 Bridge Replacement project area (Attachments, pages A6-A10).

- **Kings silty clay (Kn):** very deep, very poorly drained soils formed in as much as 152 cm (60 inches) of silty clay in depressions on lake plains. Slope ranges from 0 to 1 percent. Kings silty clay is a hydric soil. This soil type has a hydric rating of 100%. They formed in clayey lacustrine deposits.

2.2 NATIONAL WETLANDS INVENTORY

Based on the U.S. Fish and Wildlife National Wetlands Inventory (NWI) data (www.fws.gov/wetlands/Data/State-Downloads.html) there is one wetland and two Riverine water bodies mapped within a half-mile of the project area (Attachments, page A5). The two riverine water bodies are the channels of Pollard Ditch and a UNT to Pollard Ditch.

- Pollard Ditch is mapped as riverine, lower perennial, unconsolidated bottom, permanently flooded, excavated (R2UBHx)
- UNT to Pollard Ditch is mapped as riverine, intermittent, streambed, seasonally flooded (R4SBC).
- One wetland within a half-mile is mapped as palustrine, unconsolidated bottom, intermittently exposed, dike/impounded (PUBGh).

2.3 HYDROLOGY

The project lies within the 12-digit Hydrologic Unit Code (HUC) representing Indian Creek-White River. The 12-digit HUC code is # 051202020801 (Attachment A11). According to the Indiana Floodplain Information Portal, the project lies within the regulatory floodway of Pollard Ditch with an approximate base flood elevation of 466.7 feet (NAVD88) (http://dnrmaps.dnr.in.gov/appsphp/fdms/) (Attachment A4).

3. FIELD RECONNAISSANCE

HNTB Indiana staff performed a field review on October 5, 2018. The purpose was to determine the presence of waters of the U.S. within the investigated area. HNTB Indiana staff collected data during the field review to appropriately characterize the investigated area and determine the presence or absence of jurisdictional waters. The field investigation area encompassed the area required for construction access and completion of the Bridge Replacement. HNTB staff photographed select features and areas of interest throughout the investigated area. A photo location map and selected photographs are included as attachments, pages A12-A24.

The investigated area was analyzed using the methods outlined in the Routine Determination, On-site Inspection Necessary procedure in the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual Midwest Region* (US Army corps of Engineers, 2010). Indicator status of plant species utilized the 2016 Midwest Region National Wetland Plant List (http://wetland-plants.usace.army.mil/nwpl_static/v33/home/home.html).

4. WATERS

The October 2018 field reconnaissance for the SR 58 Bridge Replacement Project revealed two streams (Pollard Ditch and UNT to Pollard Ditch) within the investigated area.

4.1 WETLANDS

No wetlands were observed during the October 2018 field investigation. Within the investigated area land use is limited to agricultural fields. North and south of SR 58, row-cropped agricultural lands are well-drained via extensive tile drain systems. The lack of topographic depressions and use of tile drains make the investigated area not conducive to ponding and the formation of wetlands.

4.2 STREAMS

Site investigations identified two likely jurisdictional streams, Pollard ditch and UNT to Pollard Ditch. A total of approximately 820 linear feet of stream length of Pollard Ditch and approximately 816 linear feet of stream length of UNT to Pollard Ditch is within the investigated area. The ordinary high-water mark (OHWM) measurements were obtained for the streams using tape measures.

POLLARD DITCH

Pollard ditch is a perennial stream feature that enters the investigated area from the northwest and flows southeast beneath SR 58. The stream is noted on the USGS 7.5 Minute Bicknell and Plainville Topographic Map as a perennial blue line stream (Attachments A2-A3). The stream appears to be an excavated channel that receives runoff from surrounding agricultural fields. The riparian corridor within the investigated area is dominated by agricultural fields. Instream cover throughout the investigated reach was limited to some pools (>70cm deep). Pollard Ditch is not a traditionally navigable waterway (TNW) within Indiana, however it is a tributary of the White River which is a navigable waterway within Knox County. The substrate was hardpan and silt. The banks of the channel near the bridge structure were dominated by reed canary grass (*Phalaris arundinacea*), silver maple (*Acer saccharinum*), honey locust (*Gleditsia triacanthos*), and white mulberry (*Morus alba*). The average OHWM of Pollard Ditch was 11.25 feet wide by 2.1 feet deep. According to the classification codes developed by Cowardin *et al*. (1979), this stream feature would be classified as a Riverine, lower perennial, unconsolidated bottom, permanently flooded, and excavated (R2UBHx). According to the USGS StreamStats website, (https://water.usgs.gov/osw/streamstats/indiana.html), Pollard Ditch drains approximately 17.72 square miles upstream of the investigated area (Attachment A11). Based on a qualitative assessment, this resource is of poor quality within this reach due to the lack of instream cover and poor development.

UNT TO POLLARD DITCH

UNT to Pollard ditch is an intermittent stream feature that enters the investigated area from the northeast and flows southwest underneath SR 58. The stream is noted on the USGS 7.5 Minute Bicknell and Plainville Topographic Map as an intermittent blue line (Attachments A2-A3). The stream appears to be an excavated channel that receives runoff from surrounding agricultural fields. Within the investigated area, banks of the UNT are steeply graded with minimal instream cover; instream cover was limited to aquatic macrophytes including pondweed (*Potamogeton* sp.). The riparian corridor within the investigated area is dominated by agricultural fields. UNT to Pollard Ditch is not a traditionally navigable waterway (TNW) within Indiana, however it is a tributary of Pollard Ditch, which is a tributary of White River, a navigable waterway within Knox County. The substrate was hardpan and silt. The banks of the channel were dominated by reed canary grass, clearweed (*Pilea pumila*), common ragweed (*Ambrosia artemsiifolia*), and white mulberry. The average OHWM of UNT to Pollard Ditch was 7.1 feet wide by 2.1 feet deep. According to the classification codes developed by Cowardin et al. (1979), this stream feature would be classified as a riverine, intermittent, streambed, seasonally flooded (R4SBC). Based on a qualitative assessment, this resource is of poor quality within this reach due to the intermittent regime, lack of instream cover and poor development.

TABLE 1: STREAM AND WATERWAY SUMMARY TABLE

Stream Name	Photo #	Lat/Long	OHWM	Quality	Substrate	USGS Blue Line	Riffles/Pools	Waters of U.S.
Pollard Ditch	1-11	38.867084 N, -87.252085 W	11.25 feet wide by 2.1 feet deep	Poor	Silt and hardpan	Yes	Yes	Yes
UNT to Pollard Ditch	11-12, 14-21	38.867084 N, -87.250638 W	7.1 feet wide by 2.1 feet deep	Poor	Silt and hardpan	Yes	Yes	Yes

4.3 Roadside Drainage Features

As illustrated in the ground level photographs included as Attachments pages A13-A24, no roadside ditches with ordinary high-water mark (OHWM) characteristics or hydrophytic vegetation indicating wetland conditions were observed within the survey area.

4.4 Open Waters

Site investigations did not identify open water features within the investigated area.

5. Conclusion

The October 2018 field review for the SR 58 Bridge Replacement Project identified two likely jurisdictional features within the investigated area. Pollard Ditch and UNT to Pollard Ditch are both Waters of the U.S. as they exhibit hydrological connectivity to White River, a TNW.

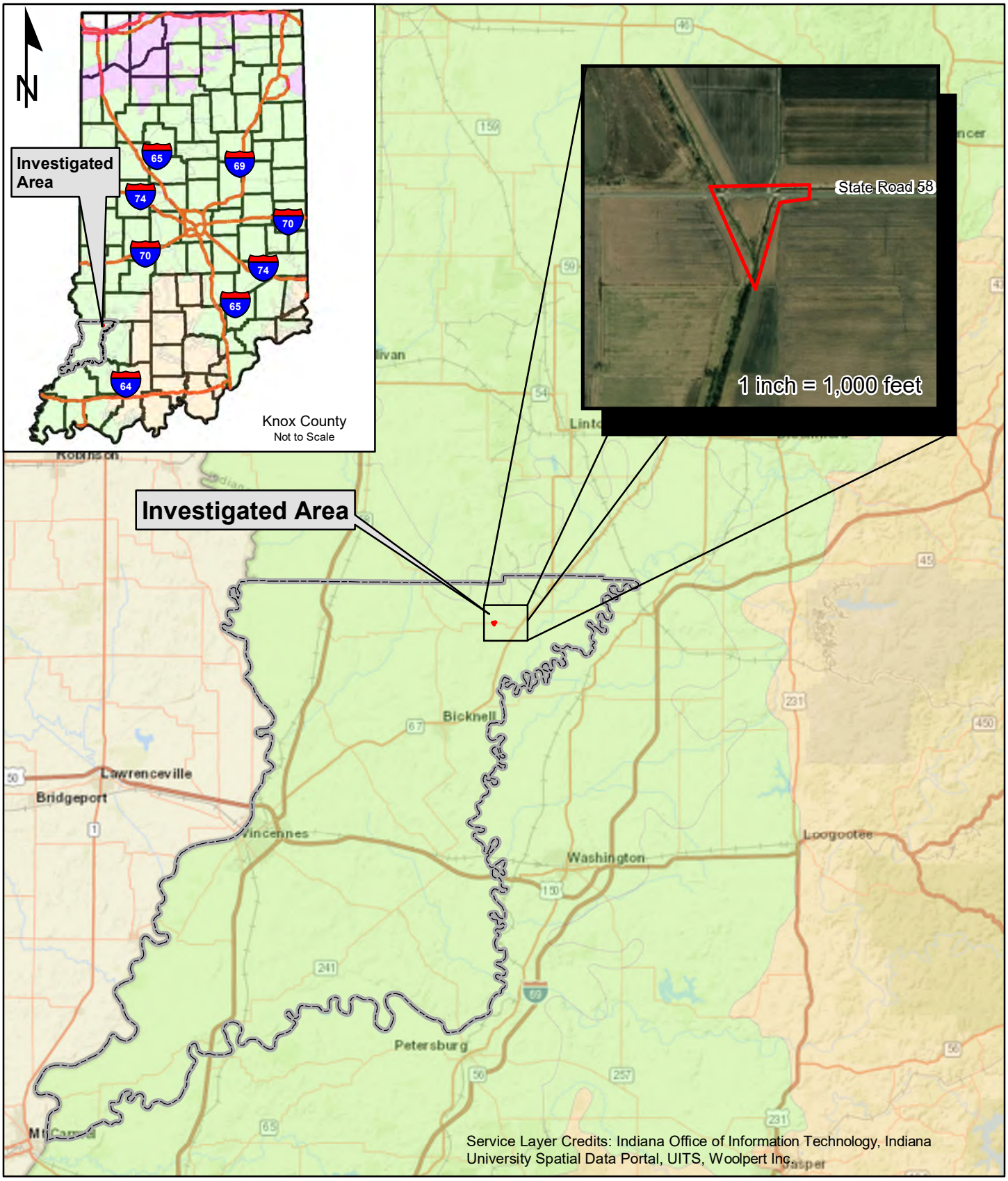
Every effort should be taken to avoid and minimize the impacts to the water resources listed above. Disturbance of a wetland or stream could result in a mitigation requirement to secure the required permits for the Bridge Replacement Project. If construction exceeds the limits of the survey review area illustrated in this document, further field investigation will be needed. This report is this office's best judgment of water resources that are likely to be under federal jurisdiction, based on the guidelines set forth by the U.S. Army Corps of Engineers (USACE). The final determination of jurisdictional waters is ultimately the responsibility of the USACE. The INDOT Office of Environmental Services should be contacted immediately if impacts occur.

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

Kathryn Lucier, Science Project Manager

Preparers:

HNTB Inc., Staff	Position	Contributing Effort
Kathryn Lucier	Science Project Manager	Project Management Field Data Collection
Caroline Tegeler	Scientist	Report Preparation



Investigated_Area
KNOX

NRCS Land Resource Regions
Northeast and Northcentral
Midwest
Eastern Mountains and Piedmont

0 4 8 Miles

Project Location Map

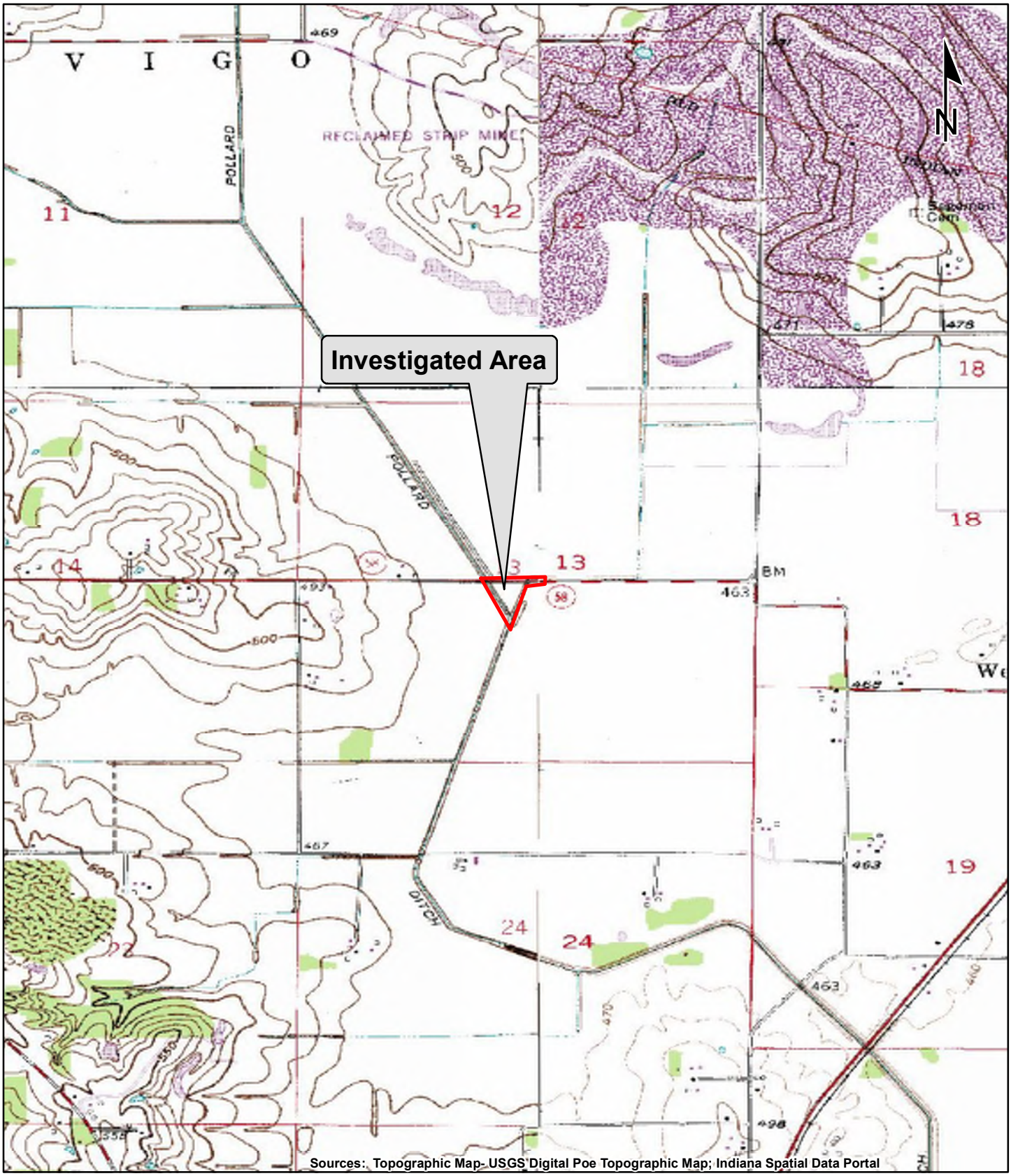
SR 58 over Pollard Ditch and UNT to Pollard Ditch
Bridge Replacement Project
Knox County, Indiana

Des. No. 1700156 &1700159

1 inch = 8 miles

HNTB

Graphics created by HNTB Corporation (2019)



Investigated_Area

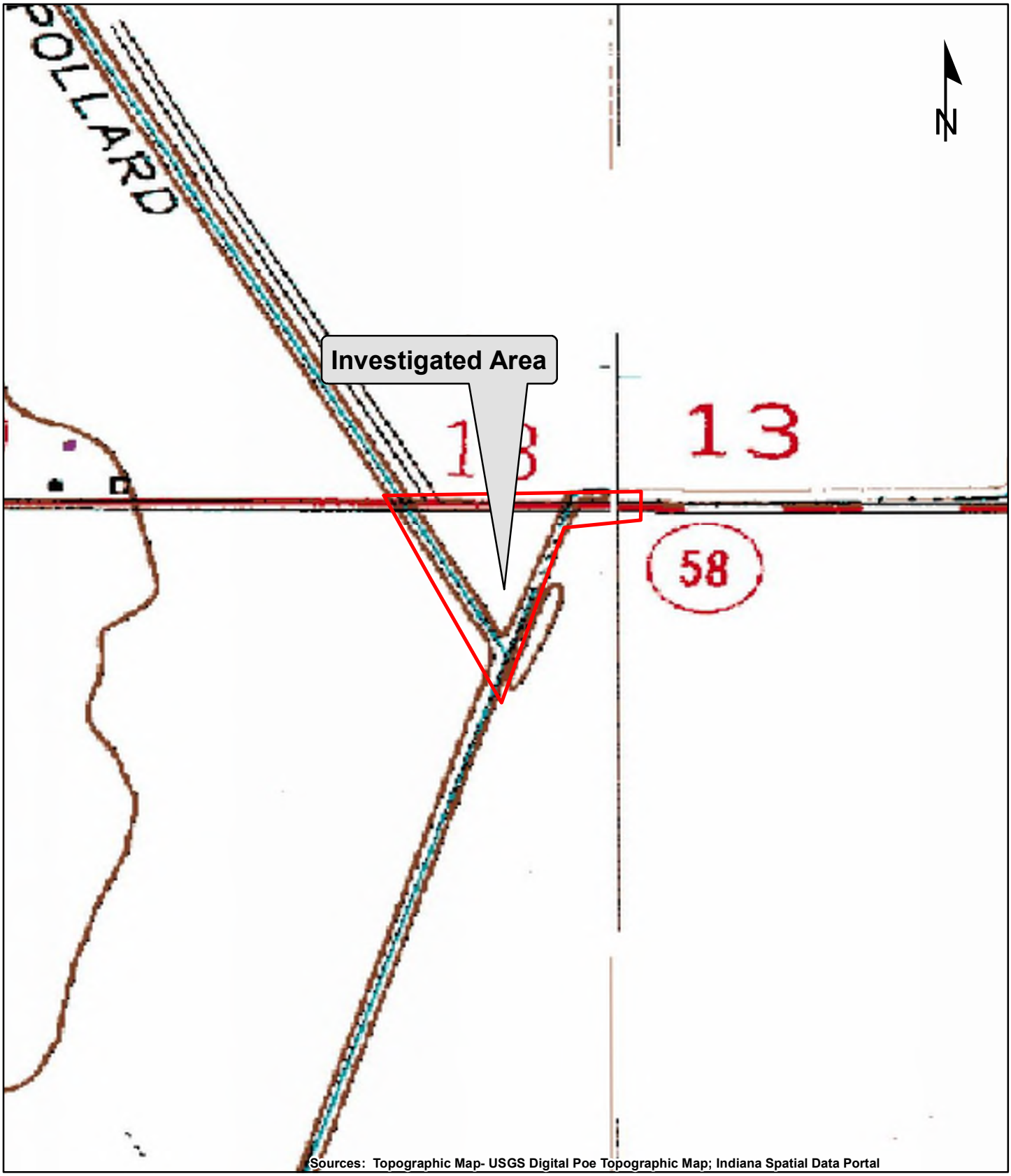
0 1,000 2,000 Feet

Bicknell and Plainville (1:24,000 scale)
SR 58 over Pollard Ditch and UNT to Pollard Ditch
Bridge Replacement Project
Knox County, Indiana

Des. No. 1700156 &1700159

1 inch = 2,000 feet

HNTB
Graphics created by HNTB Corporation (2019)



Legend

Investigated_Area

0 250 500 Feet

Bicknell and Plainville (1:6,000 scale)
SR 58 over Pollard Ditch and UNT to Pollard Ditch
Bridge Replacement Project
Knox County, Indiana

Des. No. 1700156 &1700159

1 inch = 500 feet

HNTB
Graphics created by HNTB Corporation (2019)

Streams

Investigated Area

Flood Zone AE

0 125 250 Feet

Water Resources Map
SR 58 over Pollard Ditch and UNT to Pollard Ditch
Bridge Replacement Project
Knox County, Indiana

Des. No. 1700156 &1700159

1 inch = 250 feet

HNTB
Graphics created by HNTB Corporation (2019)

U.S. Fish and Wildlife Service
National Wetlands Inventory

Des. No. 1700156 & 1700159

March 1, 2019

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Soil Map—Knox County, Indiana
(Investigated_Area)

Map Scale: 1:1,760 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 25 50 100 150

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Knox County, Indiana
Survey Area Data: Version 17, Sep 7, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 25, 2014—Mar 9, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Kn	Kings silty clay	5.6	100.0%
Totals for Area of Interest		**5.6**	**100.0%**

Hydric Rating by Map Unit

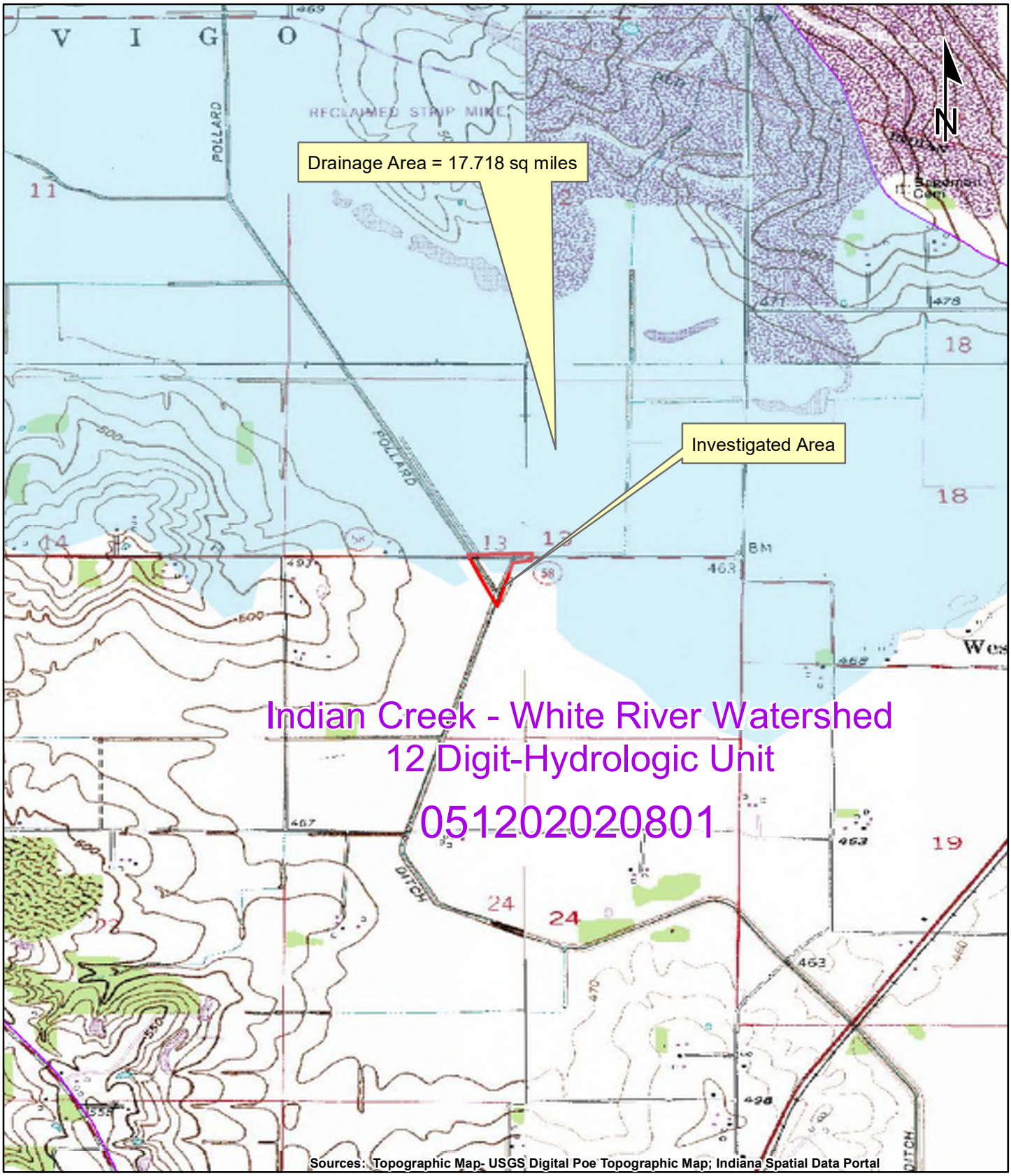
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Kn	Kings silty clay	100	5.6	100.0%
Totals for Area of Interest			**5.6**	**100.0%**

Report—Hydric Soil List - All Components

Hydric Soil List - All Components–IN083-Knox County, Indiana					
Map symbol and map unit name	**Component/Local Phase**	**Comp. pct.**	**Landform**	**Hydric status**	**Hydric criteria met (code)**
Kn: Kings silty clay	Kings	100	Depressions on lake plains	Yes	2

Data Source Information

Soil Survey Area: Knox County, Indiana
Survey Area Data: Version 17, Sep 7, 2018



Drainage Area
Investigated_Area
Watersheds HUC12 - 2009

0 1,000 2,000 Feet

Streamstats Map
SR 58 over Pollard Ditch and UNT to Pollard Ditch
Bridge Replacement Project
Knox County, Indiana

Des. No. 1700156 &1700159

1 inch = 2,000 feet

HNTB
Graphics created by HNTB Corporation (2019)

Photo Locations

Streams

Investigated Area

0 60 120 Feet

Photo Locations
SR 58 over Pollard Ditch and UNT to Pollard Ditch Bridge Replacement Project
Knox County, Indiana

Des. No. 1700156 & 1700159

1 inch = 133 feet

HNTB

Graphics created by HNTB Corporation (2019)

Appendix 2 - PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD: 4/3/2019

B. NAME AND ADDRESS OF PERSON REQUESTING PJD: K.Lucier, HNTB, 111 Monument Circle, Suite 1200, Indianapolis IN, 46204

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:

The Federal Highway Administration (FHWA) and Indiana Department of Transportation (INDOT), Vincennes District are planning to proceed with a bridge project involving two bridges over Pollard Ditch and UNT to Pollard Ditch along State Road (SR) 58 in Vigo Township, Indiana. Des. No. 1700156 and 1700159.

(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES)

State: IN County/parish/borough: Knox City: Edwardsport

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

Lat.: 38.867101 Long.: -87.251346

Universal Transverse Mercator: Easting 478.194.8 Northing 4302058.8

Name of nearest waterbody: Pollard Ditch, UNT to Pollard Ditch

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☐ Office (Desk) Determination. Date:

☐ Field Determination. Date(s):

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION.

Site number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resource (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
Pollard Ditch	38.867084	-87.252085	820 linear feet	non-wetland	Section 404
UNT to Pollard Ditch	38.867084	87.250638	816 linear feet	non-wetland	Section 404

1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.

2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there *"may be"* waters of the U.S. and/or that there *"may be"* navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for PJD (check all that apply)

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:

- [x] Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:
  Map: Aerial, USGS Topo, streamstats, Web of Soil, NWI.
- [ ] Data sheets prepared/submitted by or on behalf of the PJD requestor.
  - [ ] Office concurs with data sheets/delineation report.
  - [ ] Office does not concur with data sheets/delineation report. Rationale: _____.
- [ ] Data sheets prepared by the Corps: _____.
- [ ] Corps navigable waters' study: _____.
- [x] U.S. Geological Survey Hydrologic Atlas: NHD Hydrography layers, 2014.
  - [x] USGS NHD data.
  - [x] USGS 8 and 12 digit HUC maps.
- [x] U.S. Geological Survey map(s). Cite scale & quad name: Bicknell and Plainville 1:24,000 Quadrangle.
- [x] Natural Resources Conservation Service Soil Survey. Citation: Web of soil service, 2018.
- [x] National wetlands inventory map(s). Cite name: NWI mapper online tool, 2018.
- [ ] State/local wetland inventory map(s): _____.
- [x] FEMA/FIRM maps: IDNR polygon shapefile, 2019.
- [x] 100-year Floodplain Elevation is: 466.7 feet.(National Geodetic Vertical Datum of 1929)
- [x] Photographs: [x] Aerial (Name & Date): 2013 Knox County Aerial Photography.
  or [x] Other (Name & Date): Ground Photos taken 10/5/2018.
- [ ] Previous determination(s). File no. and date of response letter: _____.
- [ ] Other information (please specify): _____.

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

_____	Kathryn Lucier Digitally signed by Kathryn Lucier Date: 2019.03.07 16:28:31 -05'00'
Signature and date of Regulatory staff member completing PJD	Signature and date of person requesting PJD (REQUIRED, unless obtaining the signature is impracticable)[1]

[1] Districts may establish timeframes for requestor to return signed PJD forms. If the requestor does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

From: Engstrom, Maryssa H
To: Kate Williams
Cc: Matthew Stocker; Falls, Ryan G; Rehder, Crystal; Arnold, Troy
Subject: RE: Waters Report Addendum Approvedl: Des. 1700156 SR 58 over Pollard Ditch Bridge Project
Date: Friday, August 7, 2020 12:44:26 PM
Attachments: image001.png
image002.png
image003.png
image004.png
image005.png
image006.png
1700156 & 1700159 Waters Report Addendum Apprvoed 8.7.2020.pdf

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Thanks Katie,

Thank you for submitting the waters report for **Sr 58 over Pollard Ditch in Knox Co., des. no 1700156 & 1700159**. Your most recent submission has been reviewed and approved. For the INDOT PM, the approved report can be found on Projectwise through this link: **Des. No. 1700156 & 1700159 Waters Report - Final**. It is the responsibility of the Project Manager to forward a copy of this report to the Project Designer.

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

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

It will not be sent to the United States Army Corps of Engineers (USACE) or the Indiana Department of Environmental Management (IDEM) until the waterways permit applications are submitted to these agencies.
Please be sure to include this report along with the 4.3.2019 approved WOTUS in the Permit applications. Reach out to me with any questions!
Thank you,

Maryssa H. Engstrom
Vincennes District, Ecology and Waterway Permitting Office
INDOT Environmental Services
100 N Senate Ave, Room 642-ES
Indianapolis, IN 46204
Phone: (317).234.5241

From: Kate Williams <klwilliams@HNTB.com>
Sent: Monday, July 27, 2020 3:16 PM
To: Engstrom, Maryssa H <MEngstrom@indot.IN.gov>
Cc: Matthew Stocker <mstocker@HNTB.com>; Falls, Ryan G <RFalls@indot.IN.gov>
Subject: RE: Waters Report Addendum First Submittal: Des. 1700156 SR 58 over Pollard Ditch Bridge Project

Approved August 7, 2020 by:
Marryssa Engstrom

Waters of the U.S. Addendum

SR 58 Bridge Replacement Project

Knox County

Des. No.
1700156 &
1700159

Photolog Omitted
Please See Appendix B

Prepared by:
HNTB

111 Monument Circle, Suite 1200
Indianapolis, IN, 46204
317.636.4682

July 24, 2020

1. PROJECT INFORMATION

Date(s) of Field Reconnaissance: June 3, 2020

1.1 LOCATION

The project is located along State Road (SR 58) over Pollard Ditch and a unnamed tributary (UNT) to Pollard Ditch, in Knox County, Indiana. Section 13, Township 5N, Range 8W, Bicknell and Plainville Indiana, Quadrangle (Attachment Page 1 and 2).

1.2 PROJECT DESCRIPTION

The Federal Highway Administration (FHWA) and Indiana Department of Transportation (INDOT), Vincennes District is planning to proceed with a bridge replacement project of two bridges at State Road (SR) 58 over Pollard Ditch and UNT to Pollard Ditch in Knox County, Indiana. The project will address poor existing structure conditions by replacing the bridges. An additional field investigation was undertaken to delineate water resources within the addendum area.

1.3 SUMMARY

HNTB Indiana staff performed a field review of the addendum area on June 3, 2020. The addendum area expanded to accommodate potential acreage needed to relocate a UNT to Pollard Ditch as well as complete approach work on SR 58. The purpose of the investigation was to determine the presence of waters of the U.S. within the addendum area. HNTB Indiana staff collected data during the field review to appropriately characterize the addendum area and determine the presence or absence of jurisdictional waters. HNTB staff photographed select features and areas of interest. A photo location map and selected photographs are included in the attachments (Attachment Page 10 – 36).

Three soil units are mapped within the addendum area. Kings silty clay (Kn): very deep, very poorly drained soils formed in as much as 152 cm (60 inches) of silty clay in depressions on lake plains. Slope ranges from 0 to 1 percent. Kings silty clay is a hydric soil. This soil type has a hydric rating of 100%. They formed in clayey lacustrine deposits. Hosmer silt loams, 0 to 2 percent slopes, (HoA) consists very deep, moderately well drained soils formed in loess on hills. They are moderately deep to a fragipan. Slopes are 0-2 percent. Hosmer silt loams, 2 to 5 percent slopes, eroded (HoB2) consists of very deep, moderately well drained soils formed in loess on hills. They are moderately deep to a fragipan. These soils are not considered hydric and have a hydric rating of 0% (Attachment Page 8 – 9).

1.4 WETLANDS

No additional National Wetland Inventory (NWI) wetlands are mapped within the addendum area. As described in the approved April 19, 2019 Waters of the U.S. Report, Pollard Ditch and UNT to Pollard Ditch are mapped as riverine NWI wetlands. Pollard Ditch is riverine, lower perennial, unconsolidated bottom, permanently flooded, excavated (R2UBHx) wetland. UNT to Pollard Ditch is mapped as riverine, intermittent, streambed, seasonally flooded (R4SBC) (Attachment Page 5).

The general topography of the addendum area was flat, agricultural field with mowed, maintained roadside within the right-of-way. Agricultural fields were drained with numerous field drains as well as the excavated stream of Pollard Ditch and associated unnamed tributaries. Vegetation not associated with agriculture were limited to roadside slopes and right-

of-way fences. Dominant vegetation includes white mulberry (*Morus alba,* FAC), as well as invasive honeysuckle (*Lonicera maackii,* UPL), and reed canarygrass (*Phalaris arundinacea,* FACW). The June 2020 waters investigation of the additional investigated area revealed one additional jurisdictional stream, unnamed tributary (UNT) 1 to Pollard Ditch. This UNT was observed as an intermittent channel with discrete pools flowing west to east to Pollard Ditch. This channel appears to be recovering from its excavation and location at the base of a berm between an agricultural field and the right-of-way of SR 58. According to the USGS streamstats website, the drainage area upstream of SR 58 – inclusive of Pollard Ditch, UNT to Pollard Ditch and UNT 1 to Pollard Ditch - is approximately 17.718 square miles. The investigated area is relatively flat but is extensively drained and not conducive to ponding and the formation of wetlands.

1.5 STREAMS

Stream assessment and details regarding Pollard Ditch and UNT to Pollard Ditch can be found in the approved Waters of the U.S. Report (dates April 19, 2019). No additional investigation was completed for these streams, though QHEI forms were completed (Attachment page 34-39). UNT to Pollard Ditch was confirmed to flow east to west to Pollard Ditch within the expanded investigated area (i.e. Addendum area). Additionally, photos 2 through 4 (Attachment page 11-12) illustrate a field drain that appears to have been recently excavated to drain overflow water from a riser pipe located west of a field access road. This feature was observed on private property within an actively farmed agricultural field. To the south, this feature becomes erosional in nature and drains into UNT 1 to Pollard Ditch. Precipitation prior to the field investigation (0.13 inches on 6/3/20) resulted in stagnant water within the channel. This feature is not considered a jurisdictional feature and was not evaluated as part of this project.

UNT 1 to Pollard Ditch is not mapped as a USGS blueline stream, indicating that this stream is not a perennial resource, the presence of discrete pools within the channel indicate an intermittent regime. According to the Cowardin et al. (1979) classifications, this stream would be a riverine, intermittent, streambed (R4SB) resource. Located at the base of the roadside berm, UNT 1 to Pollard Ditch appears to function as a field drain for the surrounding fields and outfall for an upstream pond/area of excavation. This feature is recovering from recent construction as a channelized drainage ditch. Minimal riparian corridor was observed, though some small trees were observed within the right-of-way and some sandbar willow (*Salix interior* FACW) was observed growing within the channel of UNT 1 to Pollard Ditch. Stream substrate was composed of silt and gravel. The ordinary high-water mark (OHWM) at this location is 3 feet wide by 2 inches deep. A QHEI was completed for this stream. Based on this qualitative assessment a score of 28 indicates that this stream is of very poor quality. The stream channel flows east to Pollard Ditch. Additional stream characteristics are summarized in the table below.

No roadside ditches with Ordinary High-Water Mark (OHWM) characteristics or hydrophytic vegetation indicating wetland conditions were observed within the survey area. Ground level photos of the investigated area include photos within the northwest quadrant (photos 29-31, 41) that appear to illustrate an incised channel. This area did not demonstrate a consistent OHWM and appeared to be erosional (and incised partially by mowing) in nature, therefore, this was not mapped as a roadside ditch or jurisdictional feature.

STREAM SUMMARY TABLE

Stream Name	Photo Number	Lat/Long	Linear feet within Project Area	Blueline	Quality	OHWM	Substrate	Drainage Area (sq. mi.) upstream of inves. area	Waters of the U.S.	Riffles/Pools present?
UNT 1 to Pollard Ditch	36-40	38.867365° -87.253876°	707	No	Very Poor (QHEI =28)	3 feet wide by 2 inches deep	Silt and gravel	17.718*	Yes	Yes

*this drainage area represents the upstream watershed of Pollard Ditch, UNT to Pollard Ditch and UNT 1 to Pollard Ditch

2. CONCLUSION

UNT 1 to Pollard Ditch is considered to be jurisdictional due to its hydrological connectivity to Traditional Navigable Waters (TNWs) the White River.

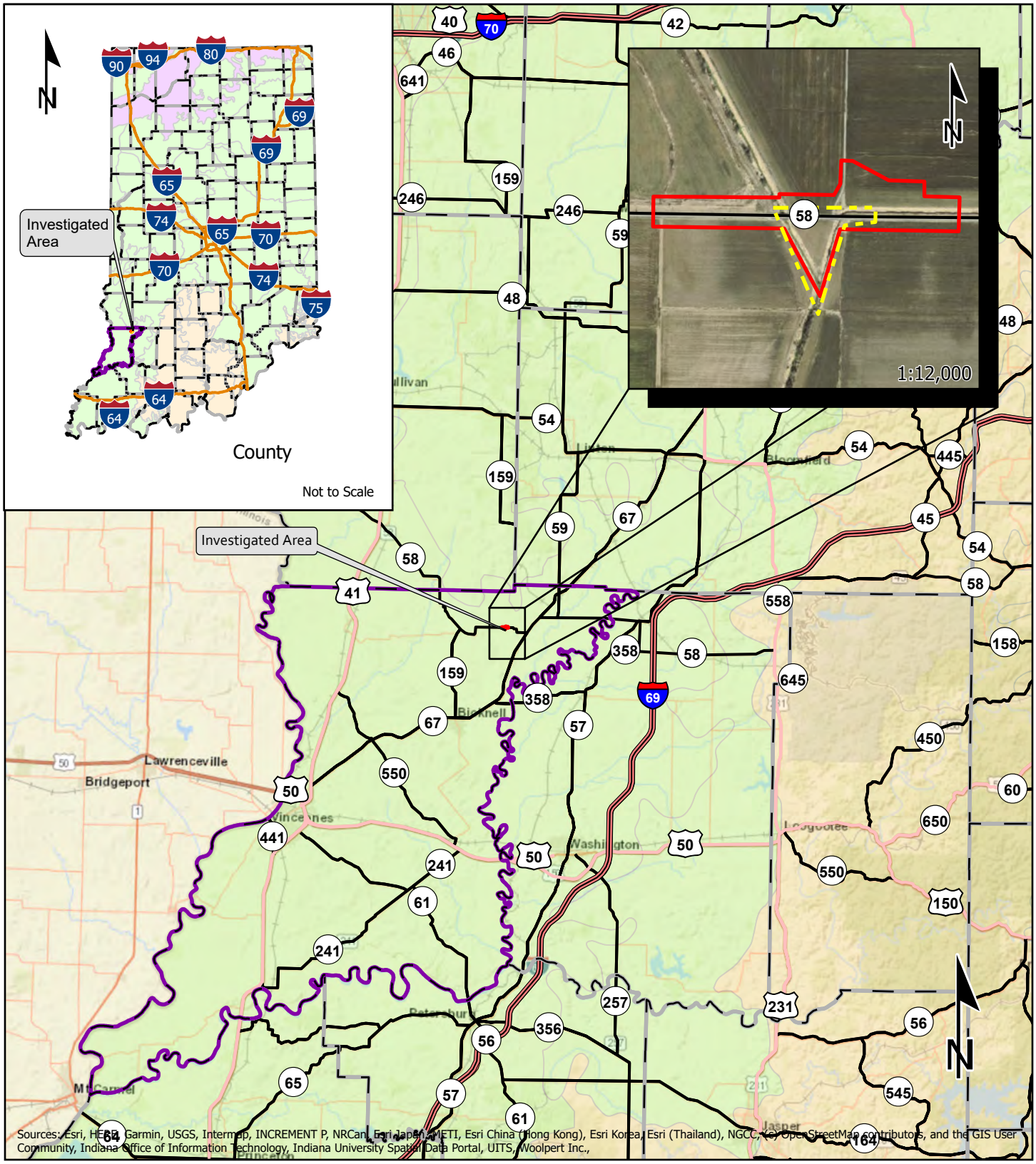
Every effort should be taken to avoid and minimize the impacts to the water resources listed above. Disturbance of a wetland or stream could result in a mitigation requirement to secure the required permits for the SR 58 Bridge Replacement project. If construction exceeds the limits of the survey review area illustrated in this document, further field investigation will be needed. This report is this office's best judgment of water resources that are likely to be under federal jurisdiction, based on the guidelines set forth by the U.S. Army Corps of Engineers (USACE). The final determination of jurisdictional waters is ultimately the responsibility of the USACE. The INDOT Office of Environmental Services should be contacted immediately if impacts occur.

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

Kate Williams, Science Project Manager

PREPARERS:

HNTB Inc., Staff	Position	Contributing Effort
Kate Williams, PWS	Science Project Manager	Project Management Report Preparation Field Data Collection
Sharon Anton	Scientist I	Figure Preparation
Landon Little	Scientist I	Field Data Collection



Addendum Investigated Area

Initial Investigated Area

Knox County

County Boundaries

NRCS Land Resource Regions

Northeast and Northcentral

Midwest

Eastern Mountains and Piedmont

0 4.5 9 Miles

Project Location Map

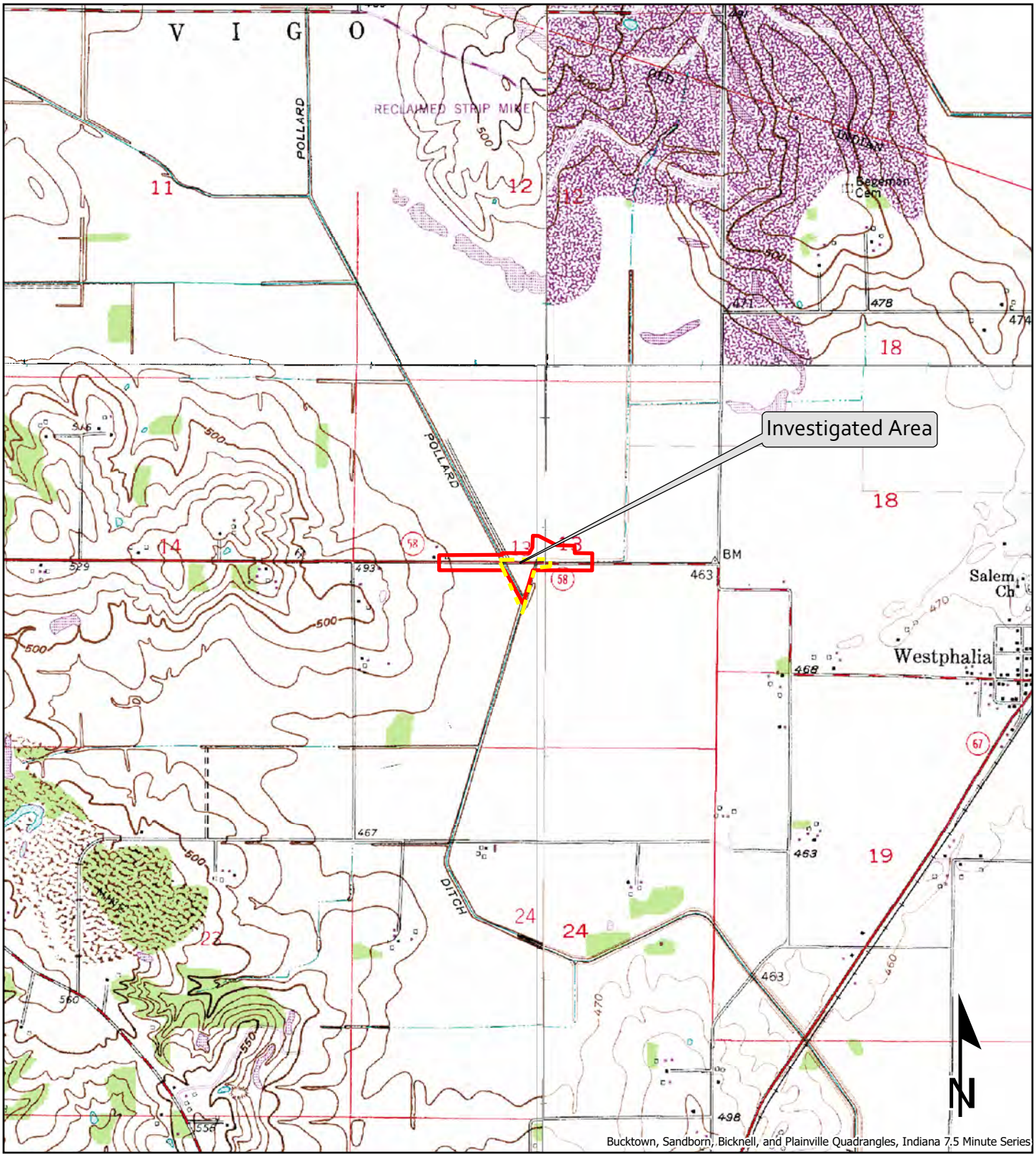
SR 58 over Pollard Ditch and UNT to Pollard Ditch
Bridge Replacement Project
Knox County, Indiana

Des. Nos.
1700156 & 1700159

1 inch = 9 miles

HNTB

Graphics created by HNTB Corporation (2020)



Addendum Investigated Area

Initial Investigated Area

0 2,000 Feet

USGS (1:24,000 scale) Topographic Map

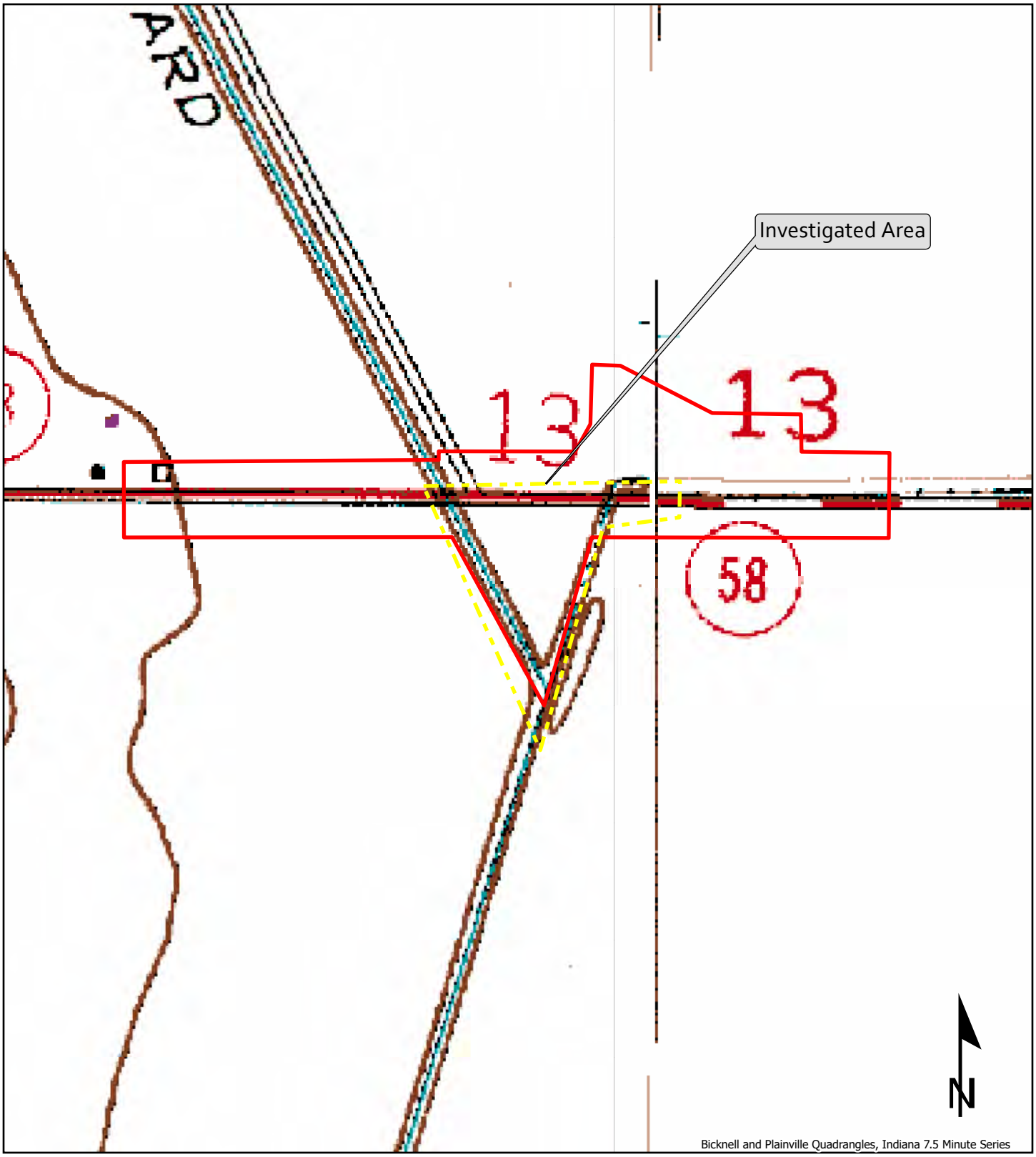
SR 58 over Pollard Ditch and UNT to Pollard Ditch
Bridge Replacement Project
Knox County, Indiana

Des. Nos.
1700156 & 1700159

1 inch =2,000 ft

HNTB

Graphics created by HNTB Corporation (2020)



Addendum Investigated Area

Initial Investigated Area

0 400 Feet

USGS (1:4,800 scale) Topographic Map

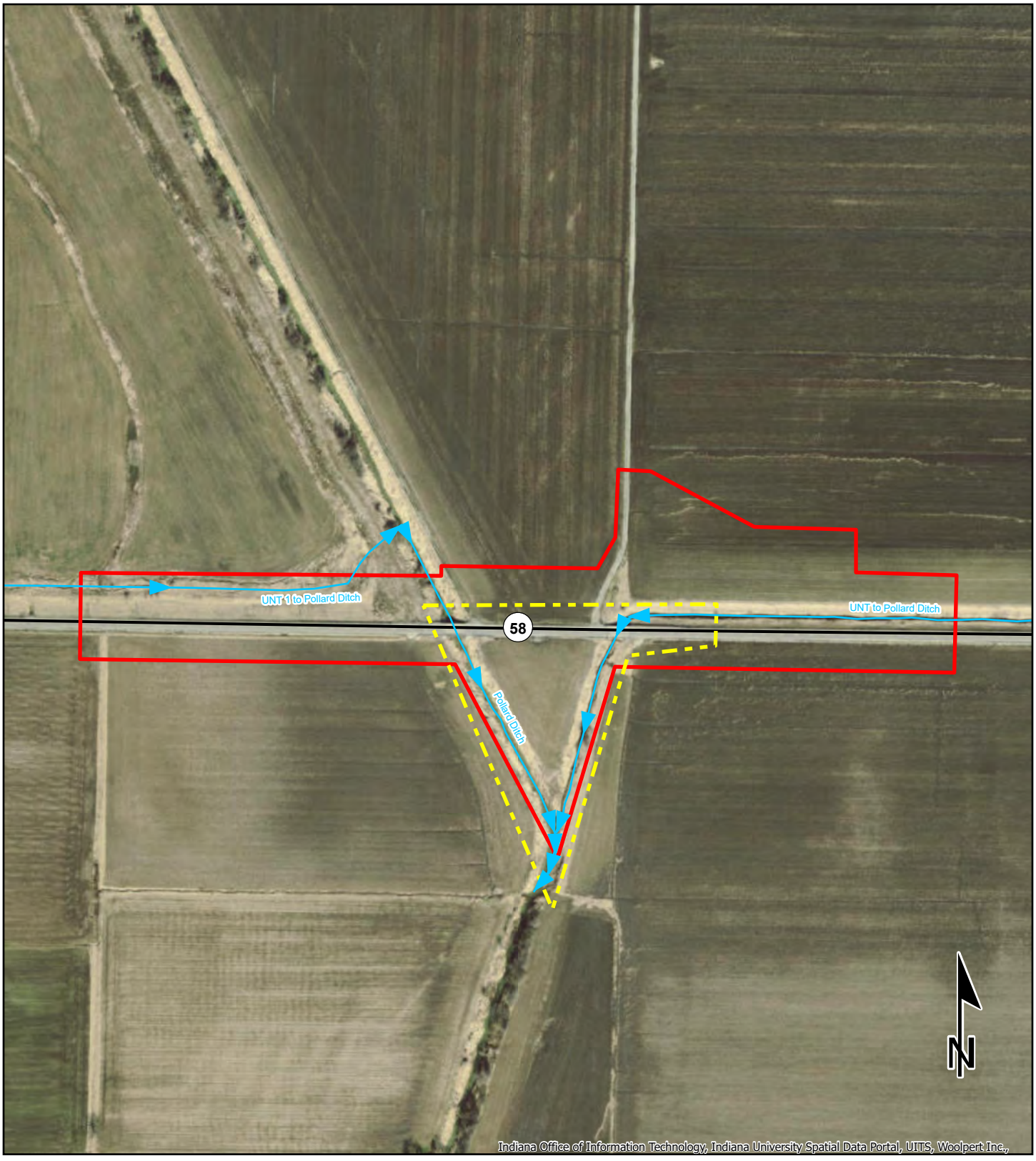
SR 58 over Pollard Ditch and UNT to Pollard Ditch
Bridge Replacement Project
Knox County, Indiana

Des. No.
1700156 & 1700159

1 inch = 400 ft

HNTB

Graphics created by HNTB Corporation (2020)



Addendum Investigated Area

Initial Investigated Area

Delineated Streams

0 175 350 Feet

Water Resources Map

SR 58 over Pollard Ditch and UNT to Pollard Ditch
Bridge Replacement Project
Knox County, Indiana

Des. Nos.
1700156 & 1700159

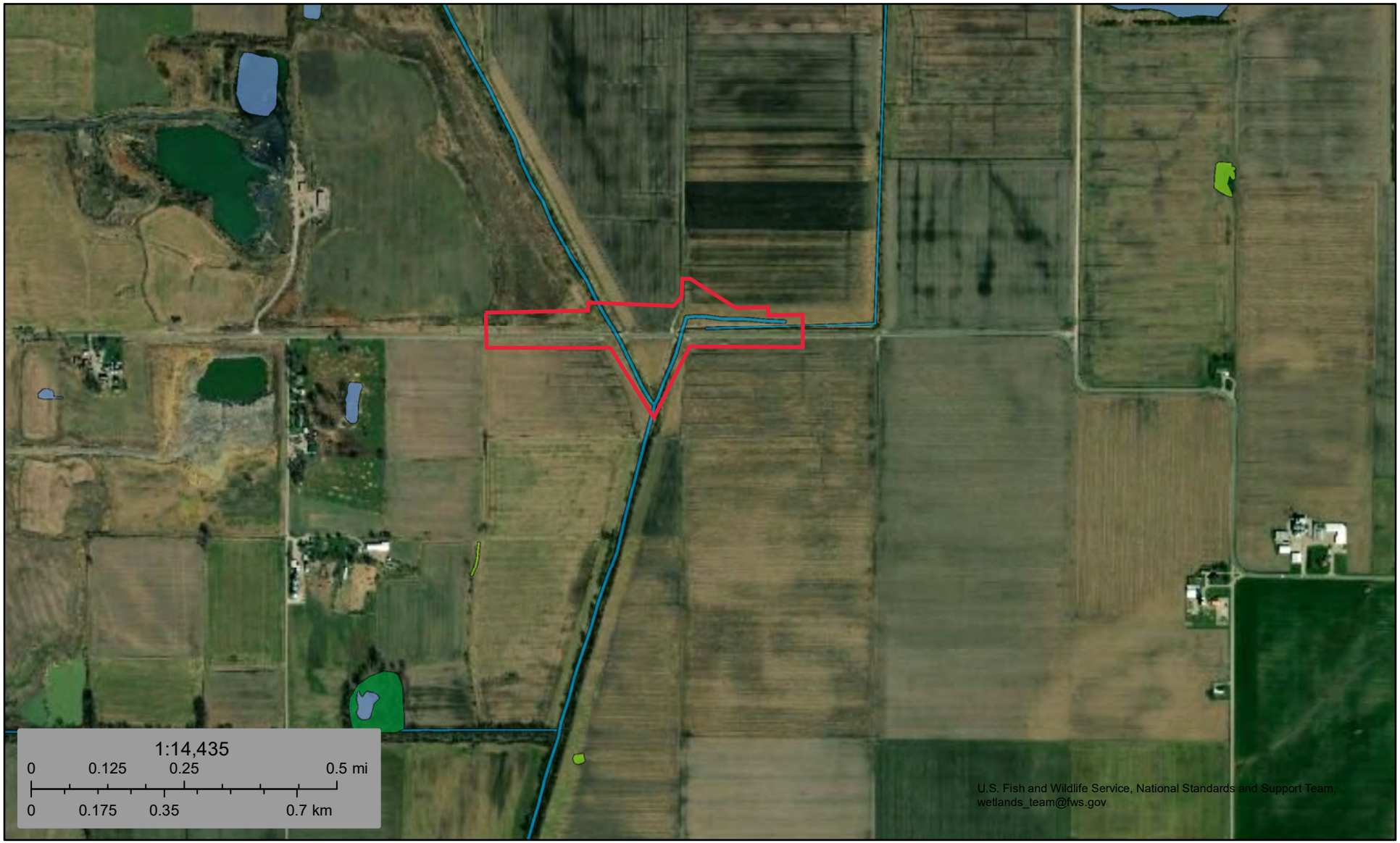
1 inch = 350 ft

HNTB

Graphics created by HNTB Corporation (2020)

U.S. Fish and Wildlife Service
National Wetlands Inventory

Des. No. 1700156 & 1700159



March 1, 2019

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

Indiana Floodplain Information Portal Report

Point of Interest

Approximate Address:
T5N R8W 13
,
Effective Flood Zone:
X
Preliminary Flood Zone:
N/A
Best Available Flood Zone:
A
Approximate Flood Elevation:
466.6ft NAVD88
Source:
Zone A Model Delineation
Nearest Stream:
POLLARD DITCH

Map Legend

Point of Interest

Nearest Point on Stream

Best Available Flood Zone

- FEMA Zone AE Floodway
- DNR Detailed Floodway
- DNR Approximate Floodway
- FEMA Zone A
- FEMA Zone AE
- DNR Detailed Fringe
- DNR Approximate Fringe
- Additional Floodplain Area
- FEMA Protected by Levee
- FEMA Floodplain - Ponding (Depth)
- FEMA Floodplain - Sheet Flow (Depth)

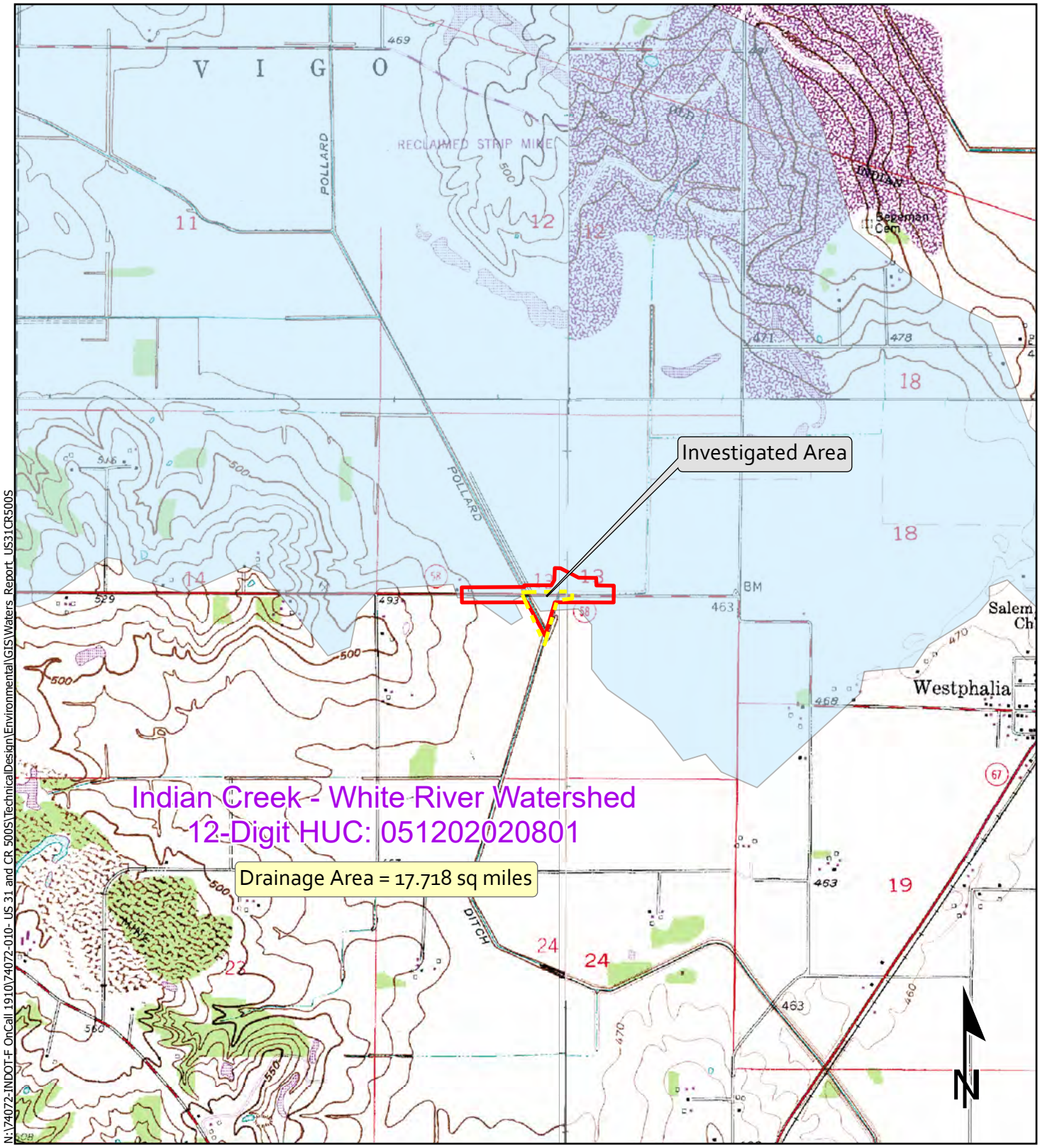
Site Map with Best Available Flood Zone

Approximate scale 1:2,400

Disclaimer

Generated on Tuesday June 9th 2020 at 11:52:03am

The data shown on this map represents FEMA floodplain data enhanced with additional studies that have been rev jewed and approved by the Division of Water. While this data has not yet been submitted to FEMA for inclusion in the Flood Insurance Rate



N:\74072-INDOT-F OnCall 1910\74072-010- US 31 and CR 500S\TechnicalDesign\Environmental\GIS\Waters_Report_US31CR500S

Addendum Investigated Area

Drainage Area

0 1,000 2,000 Feet

StreamStats Map

SR 58 over Pollard Ditch and UNT to Pollard Ditch
Bridge Replacement Project
Knox County, Indiana

Des. Nos.
1700156 & 1700159

1 inch =2,000 ft

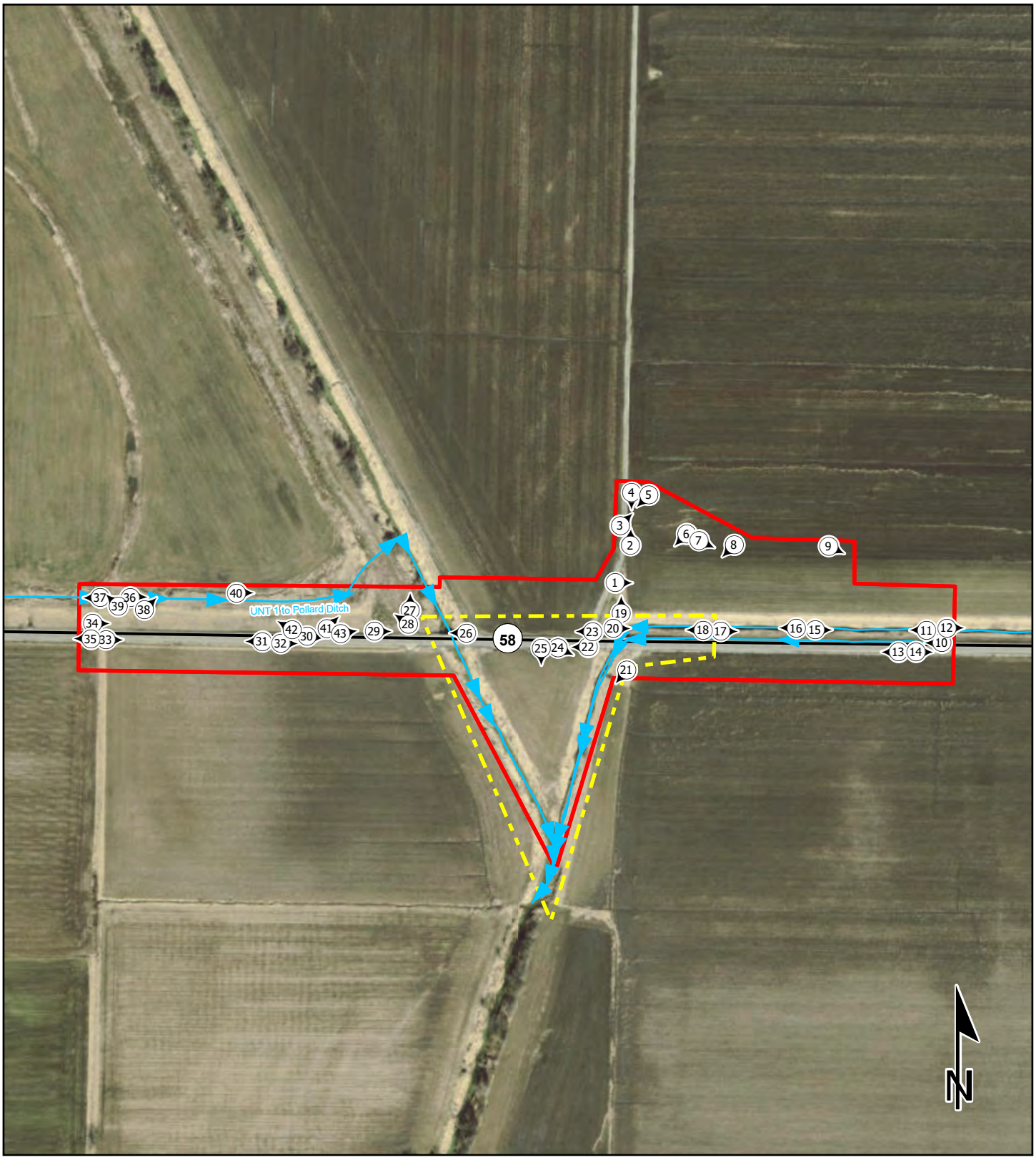
HNTB

Graphics created by HNTB Corporation (2020)

Custom Soil Resource Report
Soil Map

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HoA	Hosmer silt loam, 0 to 2 percent slopes	1.4	8.0%
HoB2	Hosmer silt loam, 2 to 5 percent slopes, eroded	0.0	0.2%
Kn	Kings silty clay	15.5	91.8%
Totals for Area of Interest		**16.8**	**100.0%**



Addendum Investigated Area

Initial Investigated Area

Photo Location

Delineated Streams

0 175 350 Feet

Photo Location Map

Waters of the U.S. Report Addendum
SR 58 over Pollard Ditch, Bridge Replacement Project
Knox County, Indiana

Des. Nos.
1700156 & 1700159

1 inch = 350 ft

HNTB

Graphics created by HNTB Corporation (2020)

Very Poor

OhioEPA Qualitative Habitat Evaluation Index and Use Assessment Field Sheet

QHEI Score: 22

Stream & Location: Pollard Ditch RM: ___.__ Date: 6/3/2020

Scorers Full Name & Affiliation: Kate Williams HNTB corp.

River Code: ___-___-___ STORET #: _____ Lat./Long.: (NAD 83 - decimal °) __.____ /8_.____ Office verified location ☐

1] SUBSTRATE Check ONLY **Two** substrate TYPE BOXES; estimate % or note every type present

Check ONE (Or 2 & average)

BEST TYPES	POOL	RIFFLE	OTHER TYPES	POOL	RIFFLE
☐☐ BLDR /SLABS [10]	___	___	☐☐ HARDPAN [4]	___	___
☐☐ BOULDER [9]	___	___	☐☐ DETRITUS [3]	___	___
☐☐ COBBLE [8]	___	___	☐☐ MUCK [2]	___	___
☐☐ GRAVEL [7]	___	___	☒☒ SILT [2]	100	___
☐☐ SAND [6]	___	___	☐☐ ARTIFICIAL [0]	___	___
☐☐ BEDROCK [5]	___	___	(Score natural substrates; ignore sludge from point-sources)		

NUMBER OF BEST TYPES: ☐ 4 or more [2] ☐ 3 or less [0]

ORIGIN	QUALITY	
☐ LIMESTONE [1]	☒ HEAVY [-2]	
☒ TILLS [1]	☐ MODERATE [-1]	SILT
☐ WETLANDS [0]	☐ NORMAL [0]	
☐ HARDPAN [0]	☐ FREE [1]	
☐ SANDSTONE [0]	☐ EXTENSIVE [-2]	EMBEDDEDNESS
☐ RIP/RAP [0]	☒ MODERATE [-1]	
☐ LACUSTURINE [0]	☐ NORMAL [0]	
☐ SHALE [-1]	☐ NONE [1]	
☐ COAL FINES [-2]		

Substrate 0 Maximum 20

Comments

2] INSTREAM COVER Indicate presence 0 to 3: **0**-Absent; **1**-Very small amounts or if more common of marginal quality; **2**-Moderate amounts, but not of highest quality or in small amounts of highest quality; **3**-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools.

0 UNDERCUT BANKS [1]	1 POOLS > 70cm [2]	0 OXBOWS, BACKWATERS [1]
0 OVERHANGING VEGETATION [1]	1 ROOTWADS [1]	0 AQUATIC MACROPHYTES [1]
0 SHALLOWS (IN SLOW WATER) [1]	0 BOULDERS [1]	1 LOGS OR WOODY DEBRIS [1]
1 ROOTMATS [1]		

AMOUNT (Check ONE (Or 2 & average))

☐ EXTENSIVE >75% [11]
☐ MODERATE 25-75% [7]
☐ SPARSE 5-<25% [3]
☒ NEARLY ABSENT <5% [1]

Comments Minimal functional instream cover

Cover Maximum 20: 6

3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average)

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY
☐ HIGH [4]	☐ EXCELLENT [7]	☐ NONE [6]	☐ HIGH [3]
☐ MODERATE [3]	☐ GOOD [5]	☐ RECOVERED [4]	☐ MODERATE [2]
☐ LOW [2]	☐ FAIR [3]	☐ RECOVERING [3]	☒ LOW [1]
☒ NONE [1]	☒ POOR [1]	☒ RECENT OR NO RECOVERY [1]	

Comments

Channel Maximum 20: 4

4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank & average)

River right looking downstream

EROSION (L R)	RIPARIAN WIDTH (L R)	FLOOD PLAIN QUALITY (L R)	(L R)
☐☐ NONE / LITTLE [3]	☐☐ WIDE > 50m [4]	☐☐ FOREST, SWAMP [3]	☐☐ CONSERVATION TILLAGE [1]
☒☒ MODERATE [2]	☐☐ MODERATE 10-50m [3]	☐☐ SHRUB OR OLD FIELD [2]	☐☐ URBAN OR INDUSTRIAL [0]
☐☐ HEAVY / SEVERE [1]	☐☐ NARROW 5-10m [2]	☐☐ RESIDENTIAL, PARK, NEW FIELD [1]	☐☐ MINING / CONSTRUCTION [0]
	☐☐ VERY NARROW < 5m [1]	☐☐ FENCED PASTURE [1]	
	☒☒ NONE [0]	☒☒ OPEN PASTURE, ROWCROP [0]	

Indicate predominant land use(s) past 100m riparian.

Comments

Riparian Maximum 10: 2

5] POOL / GLIDE AND RIFFLE / RUN QUALITY

MAXIMUM DEPTH	CHANNEL WIDTH	CURRENT VELOCITY
Check ONE (ONLY!)	Check ONE (Or 2 & average)	Check ALL that apply
☐ > 1m [6]	☐ POOL WIDTH > RIFFLE WIDTH [2]	☐ TORRENTIAL [-1] ☒ SLOW [1]
☐ 0.7-<1m [4]	☐ POOL WIDTH = RIFFLE WIDTH [1]	☐ VERY FAST [1] ☐ INTERSTITIAL [-1]
☒ 0.4-<0.7m [2]	☒ POOL WIDTH < RIFFLE WIDTH [0]	☐ FAST [1] ☐ INTERMITTENT [-2]
☐ 0.2-<0.4m [1]		☐ MODERATE [1] ☐ EDDIES [1]
☐ < 0.2m [0]		Indicate for reach - pools and riffles.

Recreation Potential
Primary Contact
Secondary Contact
(circle one and comment on back)

Comments

Pool / Current Maximum 12: 3

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species: Check ONE (Or 2 & average). ☐ NO RIFFLE [metric=0]

RIFFLE DEPTH	RUN DEPTH	RIFFLE / RUN SUBSTRATE	RIFFLE / RUN EMBEDDEDNESS
☐ BEST AREAS > 10cm [2]	☐ MAXIMUM > 50cm [2]	☐ STABLE (e.g., Cobble, Boulder) [2]	☐ NONE [2]
☒ BEST AREAS 5-10cm [1]	☒ MAXIMUM < 50cm [1]	☐ MOD. STABLE (e.g., Large Gravel) [1]	☐ LOW [1]
☐ BEST AREAS < 5cm [metric=0]		☒ UNSTABLE (e.g., Fine Gravel, Sand) [0]	☒ MODERATE [0] ☐ EXTENSIVE [-1]

Comments

Riffle / Run Maximum 8: 2

6] GRADIENT (ft/mi) ☐ VERY LOW - LOW [2-4] ☐ MODERATE [6-10] ☐ HIGH - VERY HIGH [10-6]

DRAINAGE AREA (17.7 mi²)

%POOL: 5 %GLIDE: 90 %RUN: \ %RIFFLE: 5

Gradient Maximum 10: 4

A] SAMPLED REACH

Check ALL that apply

METHOD

- ☐ BOAT
- ☒ WADE
- ☐ L. LINE
- ☐ OTHER

STAGE

1st-sample pass-	2nd
☐ HIGH	☐
☐ UP	☐
☐ NORMAL	☐
☐ LOW	☐
☐ DRY	☐

DISTANCE

- ☐ 0.5 Km
- ☐ 0.2 Km
- ☐ 0.15 Km
- ☐ 0.12 Km
- ☐ OTHER

_____ meters

CLARITY

1st --sample pass--	2nd
☐ <20 cm	☐
☐ 20-<40 cm	☐
☐ 40-70 cm	☐
☐ > 70 cm/ CTB	☐
☐ SECCHI DEPTH	☐

CANOPY

- ☒ > 85%- OPEN
- ☐ 55%-<85%
- ☐ 30%-<55%
- ☐ 10%-<30%
- ☐ <10%- CLOSED

pass 1st _____ cm

pass 2nd _____ cm

C] RECREATION

AREA DEPTH

POOL: ☐ >100ft² ☐ >3ft

Comment RE: Reach consistency/ Is reach typical of steam?, Recreation/ Observed - Inferred, Other/ Sampling observations, Concerns, Access directions, etc.

B] AESTHETICS

- ☐ NUISANCE ALGAE
- ☐ INVASIVE MACROPHYTES
- ☐ EXCESS TURBIDITY
- ☐ DISCOLORATION
- ☐ FOAM / SCUM
- ☐ OIL SHEEN
- ☐ TRASH / LITTER
- ☐ NUISANCE ODOR
- ☐ SLUDGE DEPOSITS
- ☐ CSOs/SSOs/OUTFALLS

D] MAINTENANCE

Circle some & COMMENT

PUBLIC / PRIVATE / BOTH / NA
ACTIVE / HISTORIC / BOTH / NA
YOUNG-SUCCESSION-OLD
SPRAY / SNAG / REMOVED
MODIFIED / DIPPED OUT / NA
LEVEED / ONE SIDED
RELOCATED / CUTOFFS
MOVING-BEDLOAD-STABLE
ARMOURED / SLUMPS
ISLANDS / SCOURED
IMPOUNDED / DESICCATED
FLOOD CONTROL / DRAINAGE

agricultural drainage w numerous field drains as source hydrology

E] ISSUES

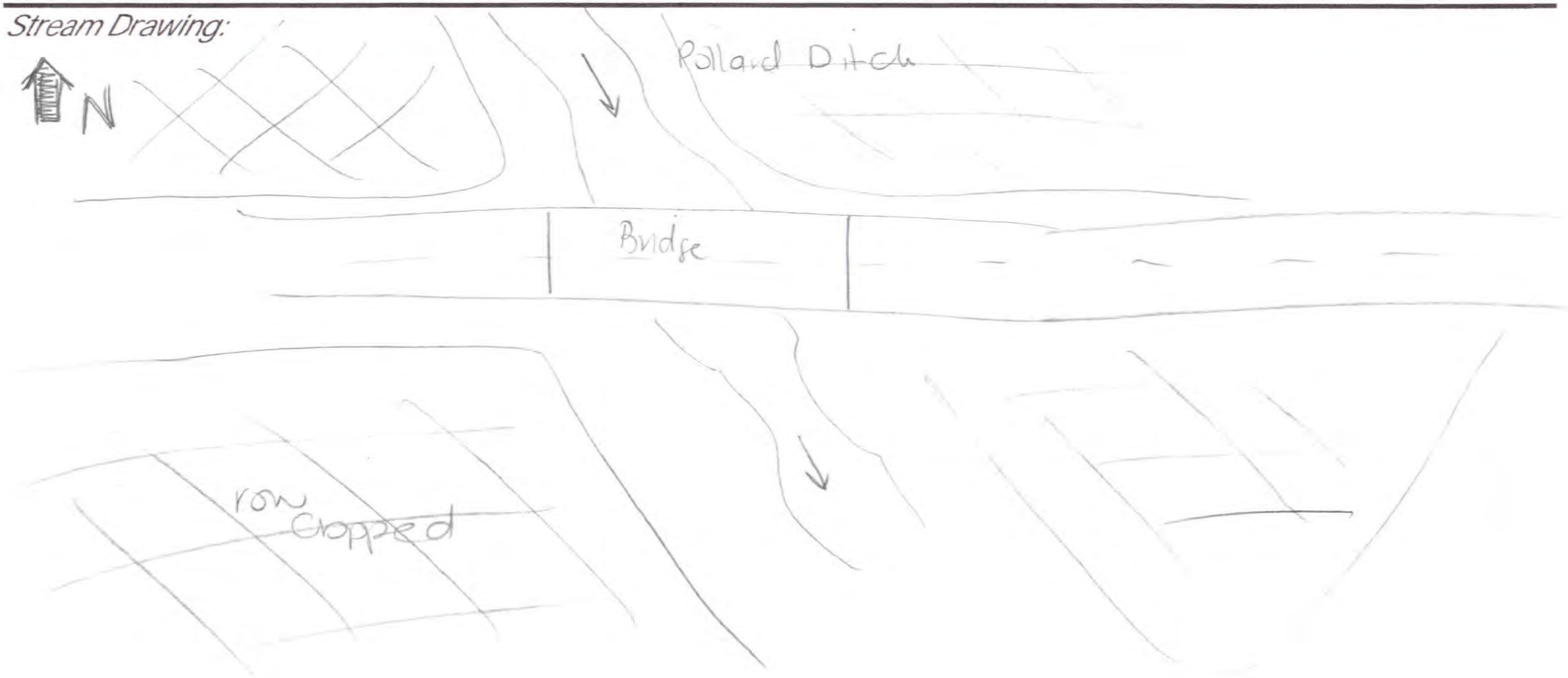
WWTP / CSO / NPDES / INDUSTRY
HARDENED / URBAN / DIRT&GRIME
CONTAMINATED / LANDFILL
BMPs-CONSTRUCTION-SEDIMENT
LOGGING / IRRIGATION / COOLING
BANK / EROSION / SURFACE
FALSE BANK / MANURE / LAGOON
WASH H_20 / TILE / H_20 TABLE
ACID / MINE / QUARRY / FLOW
NATURAL / WETLAND / STAGNANT
PARK / GOLF / LAWN / HOME
ATMOSPHERE / DATA PAUCITY

F] MEASUREMENTS

- $\bar{x}$ width
- $\bar{x}$ depth
- max. depth
- $\bar{x}$ bankfull width
- bankfull $\bar{x}$ depth
- W/D ratio
- bankfull max. depth
- floodprone x^2 width
- entrench. ratio

Legacy Tree:

Stream Drawing:



Very Poor

OhioEPA Qualitative Habitat Evaluation Index and Use Assessment Field Sheet

OHEI Score: 18

Stream & Location: UNT to Pollard Ditch RM: ___.__ Date: 6/3/20

Scorers Full Name & Affiliation: Kate Williams, NNTB Corp

River Code: ___-___-___ STORET #: _____ Lat./Long.: (NAD 83 - decimal °) __.____ /8_.____ Office verified location ☐

1] *SUBSTRATE* Check *ONLY* **Two** substrate *TYPE BOXES*; estimate % or note every type present

BEST TYPES	POOL	RIFFLE	OTHER TYPES	POOL	RIFFLE
☐☐ BLDR /SLABS [10]	____	____	☐☐ HARDPAN [4]	____	____
☐☐ BOULDER [9]	____	____	☐☐ DETRITUS [3]	____	____
☐☐ COBBLE [8]	____	____	☐☐ MUCK [2]	____	____
☐☐ GRAVEL [7]	____	____	☒☒ SILT [2]	____	____
☐☐ SAND [6]	____	____	☐☐ ARTIFICIAL [0]	____	____
☐☐ BEDROCK [5]	____	____	(Score natural substrates; ignore sludge from point-sources)		

NUMBER OF BEST TYPES: ☐ 4 or more [2] ☒ 3 or less [0]

Check ONE (*Or 2 & average*)

ORIGIN		QUALITY	
☐ LIMESTONE [1]	SILT	☐ HEAVY [-2]	
☒ TILLS [1]		☒ MODERATE [-1]	Substrate
☐ WETLANDS [0]		☐ NORMAL [0]	
☐ HARDPAN [0]		☐ FREE [1]	-2
☐ SANDSTONE [0]	EMBEDDEDNESS	☐ EXTENSIVE [-2]	
☐ RIP/RAP [0]		☐ MODERATE [-1]	Maximum 20
☐ LACUSTURINE [0]		☒ NORMAL [0]	
☐ SHALE [-1]		☐ NONE [1]	
☐ COAL FINES [-2]			

Comments

2] *INSTREAM COVER* Indicate presence 0 to 3: **0**-Absent; **1**-Very small amounts or if more common of marginal quality; **2**-Moderate amounts, but not of highest quality or in small amounts of highest quality; **3**-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools.

0 UNDERCUT BANKS [1]	0 POOLS > 70cm [2]	0 OXBOWS, BACKWATERS [1]
0 OVERHANGING VEGETATION [1]	1 ROOTWADS [1]	0 AQUATIC MACROPHYTES [1]
0 SHALLOWS (IN SLOW WATER) [1]	0 BOULDERS [1]	0 LOGS OR WOODY DEBRIS [1]
1 ROOTMATS [1]		

AMOUNT Check ONE (*Or 2 & average*)

☐ EXTENSIVE >75% [11]
☐ MODERATE 25-75% [7]
☐ SPARSE 5-<25% [3]
☒ NEARLY ABSENT <5% [1]

Comments

Cover Maximum 20: 3

3] *CHANNEL MORPHOLOGY* Check ONE in each category (*Or 2 & average*)

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY
☐ HIGH [4]	☐ EXCELLENT [7]	☐ NONE [6]	☐ HIGH [3]
☐ MODERATE [3]	☐ GOOD [5]	☐ RECOVERED [4]	☐ MODERATE [2]
☐ LOW [2]	☐ FAIR [3]	☐ RECOVERING [3]	☒ LOW [1]
☒ NONE [1]	☒ POOR [1]	☒ RECENT OR NO RECOVERY [1]	

Comments

Channel Maximum 20: 4

4] *BANK EROSION AND RIPARIAN ZONE* Check **ONE** in each category for *EACH BANK* (*Or 2 per bank & average*)

River right looking downstream

EROSION (L R)	RIPARIAN WIDTH (L R)	FLOOD PLAIN QUALITY (L R)	(L R)
☐☐ NONE / LITTLE [3]	☐☐ WIDE > 50m [4]	☐☐ FOREST, SWAMP [3]	☐☐ CONSERVATION TILLAGE [1]
☒☒ MODERATE [2]	☐☐ MODERATE 10-50m [3]	☐☐ SHRUB OR OLD FIELD [2]	☐☐ URBAN OR INDUSTRIAL [0]
☐☐ HEAVY / SEVERE [1]	☐☐ NARROW 5-10m [2]	☐☐ RESIDENTIAL, PARK, NEW FIELD [1]	☐☐ MINING / CONSTRUCTION [0]
	☐☐ VERY NARROW < 5m [1]	☐☐ FENCED PASTURE [1]	
	☒☒ NONE [0]	☒☒ OPEN PASTURE, ROWCROP [0]	

Indicate predominant land use(s) past 100m riparian.

Comments

Riparian Maximum 10: 2

5] *POOL / GLIDE AND RIFFLE / RUN QUALITY*

MAXIMUM DEPTH Check **ONE** (*ONLY!*)

☐ > 1m [6]
☐ 0.7-<1m [4]
☐ 0.4-<0.7m [2]
☒ 0.2-<0.4m [1]
☐ < 0.2m [0]

CHANNEL WIDTH Check ONE (*Or 2 & average*)

☐ POOL WIDTH > RIFFLE WIDTH [2]
☐ POOL WIDTH = RIFFLE WIDTH [1]
☒ POOL WIDTH < RIFFLE WIDTH [0]

CURRENT VELOCITY Check ALL that apply

☐ TORRENTIAL [-1] ☒ SLOW [1]
☐ VERY FAST [1] ☐ INTERSTITIAL [-1]
☐ FAST [1] ☐ INTERMITTENT [-2]
☐ MODERATE [1] ☐ EDDIES [1]

Indicate for reach - pools and riffles.

Recreation Potential
Primary Contact
Secondary Contact
(circle one and comment on back)

Comments

Pool / Current Maximum 12: 2

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species: Check ONE (*Or 2 & average*). ☐ NO RIFFLE [metric=0]

RIFFLE DEPTH	RUN DEPTH	RIFFLE / RUN SUBSTRATE	RIFFLE / RUN EMBEDDEDNESS
☐ BEST AREAS > 10cm [2]	☐ MAXIMUM > 50cm [2]	☐ STABLE (e.g., Cobble, Boulder) [2]	☐ NONE [2]
☐ BEST AREAS 5-10cm [1]	☒ MAXIMUM < 50cm [1]	☐ MOD. STABLE (e.g., Large Gravel) [1]	☐ LOW [1]
☒ BEST AREAS < 5cm [metric=0]		☒ UNSTABLE (e.g., Fine Gravel, Sand) [0]	☒ MODERATE [0]
			☐ EXTENSIVE [-1]

Comments

Riffle / Run Maximum 8: 1

6] *GRADIENT* (ft/mi) ☒ VERY LOW - LOW [2-4] ☐ MODERATE [6-10] ☐ HIGH - VERY HIGH [10-6]

DRAINAGE AREA (177 mi²)

%POOL: 5 %GLIDE: 90 %RUN: \ %RIFFLE: 5

Gradient Maximum 10: 4

EPA 4520 06/16/06

A] SAMPLED REACH

Check ALL that apply

METHOD
- ☐ BOAT
- ☒ WADE
- ☐ L. LINE
- ☐ OTHER

STAGE (1st -sample pass- 2nd)
- ☐ HIGH ☐
- ☐ UP ☐
- ☒ NORMAL ☐
- ☐ LOW ☐
- ☐ DRY ☐

DISTANCE
- ☐ 0.5 Km
- ☐ 0.2 Km
- ☐ 0.15 Km
- ☐ 0.12 Km
- ☐ OTHER

_____ meters

CLARITY (1st --sample pass-- 2nd)
- ☐ <20 cm ☐
- ☐ 20-<40 cm ☐
- ☐ 40-70 cm ☐
- ☐ > 70 cm/ CTB ☐
- ☐ SECCHI DEPTH ☐

CANOPY
- ☒ > 85%- OPEN
- ☐ 55%-<85%
- ☐ 30%-<55%
- ☐ 10%-<30%
- ☐ <10%- CLOSED

1st pass: _____ cm
2nd: _____ cm

Comment RE: Reach consistency/ Is reach typical of steam?, *Recreation/* Observed - Inferred, *Other/* Sampling observations, Concerns, Access directions, etc.

B] AESTHETICS

- ☐ NUISANCE ALGAE
- ☐ INVASIVE MACROPHYTES
- ☐ EXCESS TURBIDITY
- ☐ DISCOLORATION
- ☐ FOAM / SCUM
- ☐ OIL SHEEN
- ☐ TRASH / LITTER
- ☐ NUISANCE ODOR
- ☐ SLUDGE DEPOSITS
- ☐ CSOs/SSOs/OUTFALLS

C] RECREATION

AREA DEPTH

POOL: ☐ >100ft² ☐ >3ft

D] MAINTENANCE

Circle some & COMMENT

PUBLIC / PRIVATE / BOTH / NA
ACTIVE / HISTORIC / BOTH / NA
YOUNG-SUCCESSION-OLD
SPRAY / SNAG / REMOVED
MODIFIED / DIPPED OUT / NA
LEVEED / ONE SIDED
RELOCATED / CUTOFFS
MOVING-BEDLOAD-STABLE
ARMOURED / SLUMPS
ISLANDS / SCOURED
IMPOUNDED / DESICCATED
FLOOD CONTROL / (DRAINAGE)

E] ISSUES

WWTP / CSO / NPDES / INDUSTRY
HARDENED / URBAN / DIRT&GRIME
CONTAMINATED / LANDFILL
BMPs-CONSTRUCTION-SEDIMENT
LOGGING / IRRIGATION / COOLING
BANK / EROSION / SURFACE
FALSE BANK / MANURE / LAGOON
WASH H_20 / (TILE) / H_20 TABLE
ACID / MINE / QUARRY / FLOW
NATURAL / WETLAND / STAGNANT
PARK / GOLF / LAWN / HOME
ATMOSPHERE / DATA PAUCITY

F] MEASUREMENTS

- $\bar{x}$ width
- $\bar{x}$ depth
- max. depth
- $\bar{x}$ bankfull width
- bankfull $\bar{x}$ depth
- W/D ratio
- bankfull max. depth
- floodprone x^2 width
- entrench. ratio

Legacy Tree:

Stream Drawing:

very poor

OhioEPA Qualitative Habitat Evaluation Index and Use Assessment Field Sheet

OHEI Score: 28

Stream & Location: UNT 1 To Pollard Ditch RM: ___.__ Date: 6/3/2020

Scorers Full Name & Affiliation: Kate Williams, HNTB Corp

River Code: ___-___-___ STORET #: _____ Lat./Long.: 38.8674N/87.2563W (NAD 83 - decimal °) Office verified location ☐

1] SUBSTRATE

Check ONLY Two substrate TYPE BOXES; estimate % or note every type present

BEST TYPES	POOL	RIFFLE	OTHER TYPES	POOL	RIFFLE
☐☐ BLDR /SLABS [10]	___	___	☐☐ HARDPAN [4]	___	___
☐☐ BOULDER [9]	___	___	☐☐ DETRITUS [3]	___	___
☐☐ COBBLE [8]	___	___	☐☐ MUCK [2]	___	___
☐☒ GRAVEL [7]	10	25	☒☐ SILT [2]	90	75
☐☐ SAND [6]	___	___	☐☐ ARTIFICIAL [0]	___	___
☐☐ BEDROCK [5]	___	___	(Score natural substrates; ignore sludge from point-sources)		

NUMBER OF BEST TYPES: ☐ 4 or more [2] ☐ 3 or less [0]

Check ONE (Or 2 & average)

ORIGIN: ☐ LIMESTONE [1] ☒ TILLS [1] ☐ WETLANDS [0] ☐ HARDPAN [0] ☐ SANDSTONE [0] ☐ RIP/RAP [0] ☐ LACUSTURINE [0] ☐ SHALE [-1] ☐ COAL FINES [-2]

QUALITY: ☐ HEAVY [-2] ☐ MODERATE [-1] ☒ NORMAL [0] ☐ FREE [1]

EMBEDDEDNESS: ☐ EXTENSIVE [-2] ☐ MODERATE [-1] ☒ NORMAL [0] ☐ NONE [1]

Substrate Maximum 20: 10

Comments

2] INSTREAM COVER

Indicate presence 0 to 3: **0**-Absent; **1**-Very small amounts or if more common of marginal quality; **2**-Moderate amounts, but not of highest quality or in small amounts of highest quality; **3**-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools.

0 UNDERCUT BANKS [1]	0 POOLS > 70cm [2]	0 OXBOWS, BACKWATERS [1]
0 OVERHANGING VEGETATION [1]	1 ROOTWADS [1]	0 AQUATIC MACROPHYTES [1]
0 SHALLOWS (IN SLOW WATER) [1]	0 BOULDERS [1]	0 LOGS OR WOODY DEBRIS [1]
1 ROOTMATS [1]		

AMOUNT — Check ONE (Or 2 & average)

☐ EXTENSIVE >75% [11] ☐ MODERATE 25-75% [7] ☐ SPARSE 5-<25% [3] ☒ NEARLY ABSENT <5% [1]

Comments

Cover Maximum 20: 3

3] CHANNEL MORPHOLOGY

Check ONE in each category (Or 2 & average)

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY
☐ HIGH [4]	☐ EXCELLENT [7]	☐ NONE [6]	☐ HIGH [3]
☐ MODERATE [3]	☐ GOOD [5]	☐ RECOVERED [4]	☐ MODERATE [2]
☒ LOW [2]	☐ FAIR [3]	☒ RECOVERING [3]	☒ LOW [1]
☐ NONE [1]	☒ POOR [1]	☐ RECENT OR NO RECOVERY [1]	

Comments

Channel Maximum 20: 7

4] BANK EROSION AND RIPARIAN ZONE

Check ONE in each category for EACH BANK (Or 2 per bank & average)

River right looking downstream

EROSION (L R)	RIPARIAN WIDTH (L R)	FLOOD PLAIN QUALITY (L R)	(L R)
☒☒ NONE / LITTLE [3]	☐☐ WIDE > 50m [4]	☐☐ FOREST, SWAMP [3]	☐☐ CONSERVATION TILLAGE [1]
☐☐ MODERATE [2]	☐☐ MODERATE 10-50m [3]	☐☐ SHRUB OR OLD FIELD [2]	☐☐ URBAN OR INDUSTRIAL [0]
☐☐ HEAVY / SEVERE [1]	☐☐ NARROW 5-10m [2]	☐☐ RESIDENTIAL, PARK, NEW FIELD [1]	☐☐ MINING / CONSTRUCTION [0]
	☐☐ VERY NARROW < 5m [1]	☐☐ FENCED PASTURE [1]	
	☒☒ NONE [0]	☒☒ OPEN PASTURE, ROWCROP [0]	

Indicate predominant land use(s) past 100m riparian.

Comments

Riparian Maximum 10: 3

5] POOL / GLIDE AND RIFFLE / RUN QUALITY

MAXIMUM DEPTH — Check ONE (ONLY!)

☐ > 1m [6] ☐ 0.7-<1m [4] ☐ 0.4-<0.7m [2] ☐ 0.2-<0.4m [1] ☒ < 0.2m [0]

CHANNEL WIDTH — Check ONE (Or 2 & average)

☐ POOL WIDTH > RIFFLE WIDTH [2] ☒ POOL WIDTH = RIFFLE WIDTH [1] ☐ POOL WIDTH < RIFFLE WIDTH [0]

CURRENT VELOCITY — Check ALL that apply

☐ TORRENTIAL [-1] ☐ SLOW [1] ☐ VERY FAST [1] ☐ INTERSTITIAL [-1] ☐ FAST [1] ☒ INTERMITTENT [-2] ☐ MODERATE [1] ☐ EDDIES [1]

Indicate for reach - pools and riffles.

Recreation Potential
Primary Contact
Secondary Contact
(circle one and comment on back)

Comments

Pool / Current Maximum 12: -1

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species: Check ONE (Or 2 & average). ☐ NO RIFFLE [metric=0]

RIFFLE DEPTH	RUN DEPTH	RIFFLE / RUN SUBSTRATE	RIFFLE / RUN EMBEDDEDNESS
☐ BEST AREAS > 10cm [2]	☐ MAXIMUM > 50cm [2]	☐ STABLE (e.g., Cobble, Boulder) [2]	☐ NONE [2]
☐ BEST AREAS 5-10cm [1]	☒ MAXIMUM < 50cm [1]	☐ MOD. STABLE (e.g., Large Gravel) [1]	☒ LOW [1]
☒ BEST AREAS < 5cm [metric=0]		☒ UNSTABLE (e.g., Fine Gravel, Sand) [0]	☐ MODERATE [0] ☐ EXTENSIVE [-1]

Comments

Riffle / Run Maximum 8: 2

6] GRADIENT

DRAINAGE AREA (17 mi²) ft/mi)

☒ VERY LOW - LOW [2-4] ☐ MODERATE [6-10] ☐ HIGH - VERY HIGH [10-6]

%POOL: 50 %GLIDE: 45 %RUN: — %RIFFLE: 5

Gradient Maximum 10: 4

A] SAMPLED REACH

Check ALL that apply

METHOD

- ☐ BOAT
- ☒ WADE
- ☐ L. LINE
- ☐ OTHER

STAGE

1st -sample pass- 2nd

- ☐ HIGH ☐
- ☐ UP ☐
- ☐ NORMAL ☐
- ☐ LOW ☐
- ☐ DRY ☐

DISTANCE

- ☐ 0.5 Km
- ☐ 0.2 Km
- ☐ 0.15 Km
- ☐ 0.12 Km
- ☐ OTHER

_____ meters

CLARITY

1st --sample pass-- 2nd

- ☐ < 20 cm ☐
- ☐ 20-<40 cm ☐
- ☐ 40-70 cm ☐
- ☐ > 70 cm/ CTB ☐
- ☐ SECCHI DEPTH ☐

CANOPY

- ☐ > 85%- OPEN
- ☐ 55%-<85%
- ☐ 30%-<55%
- ☐ 10%-<30%
- ☐ <10%- CLOSED

1st pass _____ cm

2nd _____ cm

Comment RE: Reach consistency/ Is reach typical of steam?, Recreation/ Observed - Inferred, Other/ Sampling observations, Concerns, Access directions, etc.

- vegetation within bankfull of channel
- channel recovering from excavation
- intermittent regime
- not likely impacted by bridge project

B] AESTHETICS

- ☐ NUISANCE ALGAE
- ☐ INVASIVE MACROPHYTES
- ☐ EXCESS TURBIDITY
- ☐ DISCOLORATION
- ☐ FOAM / SCUM
- ☐ OIL SHEEN
- ☐ TRASH / LITTER
- ☐ NUISANCE ODOR
- ☐ SLUDGE DEPOSITS
- ☐ CSOs/SSOs/OUTFALLS

C] RECREATION

AREA DEPTH

POOL: ☐ >100ft² ☐ >3ft

D] MAINTENANCE

Circle some & COMMENT

PUBLIC / PRIVATE / (BOTH) / NA
ACTIVE / HISTORIC / BOTH / NA
(YOUNG-SUCCESSION-OLD)
SPRAY / SNAG / REMOVED
MODIFIED / DIPPED OUT / NA
LEVEED / ONE SIDED
RELOCATED / CUTOFFS
MOVING-BEDLOAD-STABLE
ARMOURED / SLUMPS
ISLANDS / SCOURED
IMPOUNDED / DESICCATED
FLOOD CONTROL / (DRAINAGE)

E] ISSUES

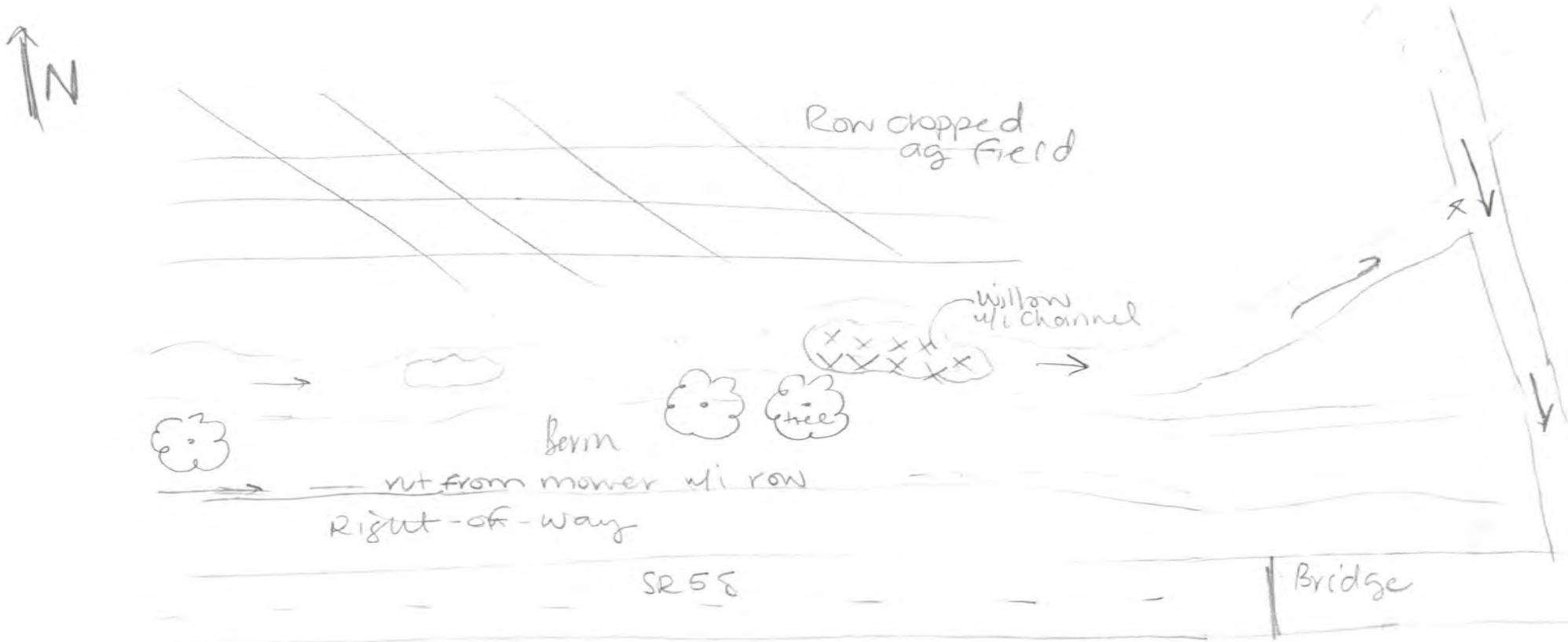
WWTP / CSO / NPDES / INDUSTRY
HARDENED / URBAN / DIRT&GRIME
CONTAMINATED / LANDFILL
BMPs-CONSTRUCTION-SEDIMENT
LOGGING / IRRIGATION / COOLING
BANK / EROSION / SURFACE
FALSE BANK / MANURE / LAGOON
WASH H_20 / TILE / H_20 TABLE
ACID / MINE / QUARRY / FLOW
NATURAL / WETLAND / STAGNANT
PARK / GOLF / LAWN / HOME
ATMOSPHERE / DATA PAUCITY

F] MEASUREMENTS

- $\bar{x}$ width 3 feet
- $\bar{x}$ depth 2 inches
- max. depth 8 inches
- $\bar{x}$ bankfull width
- bankfull $\bar{x}$ depth
- W/D ratio
- bankfull max. depth
- floodprone x^2 width
- entrench. ratio

Legacy Tree:

Stream Drawing:



Appendix 2 - PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD: 6/9/2020

B. NAME AND ADDRESS OF PERSON REQUESTING PJD: K.Williams, HNTB, 111 Monument Circle, Suite 1200, Indianapolis IN, 46204

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:

The Federal Highway Administration (FHWA) and Indiana Department of Transportation (INDOT), Vincennes District are planning to proceed with a bridge project involving two bridges over Pollard Ditch and UNT to Pollard Ditch along State Road (SR) 58 in Vigo Township, Indiana. Des. No. 1700156 and 1700159.

(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES)

State: IN County/parish/borough: Knox City: Edwardsport

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

Lat.: 38.867101 Long.: -87.251346

Universal Transverse Mercator: Easting 478.194.8 Northing 4302058.8

Name of nearest waterbody: Pollard Ditch, UNT to Pollard Ditch, UNT 1 to Pollard Ditch

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☐ Office (Desk) Determination. Date:

☐ Field Determination. Date(s):

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION.

Site number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resource (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
Pollard Ditch	38.867084	-87.252085	820 linear feet	non-wetland	Section 404
UNT to Pollard Ditch	38.867084	-87.250638	1423 linear feet	non-wetland	Section 404
UNT 1 to Pollard Ditch	38.867365	-87.253876	707 linear feet	non-wetland	Section 404

1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.

2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there *"may be"* waters of the U.S. and/or that there *"may be"* navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for PJD (check all that apply)

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:

- ☒ Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:
  Map: Aerial, USGS Topo, streamstats, Web of Soil, NWI.
- ☐ Data sheets prepared/submitted by or on behalf of the PJD requestor.
  - ☐ Office concurs with data sheets/delineation report.
  - ☐ Office does not concur with data sheets/delineation report. Rationale: _____.
- ☐ Data sheets prepared by the Corps: _____.
- ☐ Corps navigable waters' study: _____.
- ☐ U.S. Geological Survey Hydrologic Atlas: _____.
  - ☒ USGS NHD data.
  - ☒ USGS 8 and 12 digit HUC maps.
- ☒ U.S. Geological Survey map(s). Cite scale & quad name: Bicknell and Plainville 1:24,000 Quadrangle.
- ☒ Natural Resources Conservation Service Soil Survey. Citation: Web of soil service, 2018.
- ☒ National wetlands inventory map(s). Cite name: NWI mapper online tool, 2018.
- ☐ State/local wetland inventory map(s): _____.
- ☐ FEMA/FIRM maps: _____.
- ☒ 100-year Floodplain Elevation is: 466.7 feet.(National Geodetic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date): 2016 Knox County Aerial Photography.
  or ☒ Other (Name & Date): Ground Photos taken 10/5/2018, 6/3/2020.
- ☐ Previous determination(s). File no. and date of response letter: _____.
- ☐ Other information (please specify): _____.

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

_____	Kate Williams Digitally signed by Kate Williams Date: 2020.06.09 13:40:43 -04'00'
Signature and date of Regulatory staff member completing PJD	Signature and date of person requesting PJD (REQUIRED, unless obtaining the signature is impracticable)[1]

[1] Districts may establish timeframes for requestor to return signed PJD forms. If the requestor does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

APPENDIX G

Air Quality

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

SPONSOR	CONTRACT # / LEAD DES	STIP NAME	ROUTE	WORK TYPE	LOCATION	DISTRICT	MILES	FEDERAL CATEGORY	Estimated Cost left to Complete Project*	PROGRAM	PHASE	FEDERAL	MATCH	2020	2021	2022	2023	2024
Knox County																		
Knox County	1592991	Init.	VA VARI	Bridge Inspections	Countywide Bridge Inspection and Inventory Program for Cycle Years 2017-2020	Vincennes	0	Multiple		Local Funds	PE	$0.00	$44,282.45	$41,555.73	$2,726.72			
										Local Bridge Program	PE	$177,129.84	$0.00	$166,222.94	$10,906.90			
Indiana Department of Transportation	31284 / 0800579	Init.	SR 550	Bridge Replacement, Concrete	Over Smalls Creek, 01.57 mi W SR-67	Vincennes	0	STPBG		Bridge Construction	CN	$1,141,600.00	$285,400.00				$1,427,000.00	
Indiana Department of Transportation	39119 / 1593057	Init.	SR 67	HMA Overlay, Preventive Maintenance	From 0.01 mile E of US-41 to 0. 52 mile North of SR-550	Vincennes	5.498	STPBG		Road Construction	CN	$3,900,000.00	$975,000.00		$4,875,000.00			
Knox County	39839 / 1600892	Init.	IR 1009	Bridge Replacement, Other Construction	Bridge on Old US 41 over CSX Railroad	Vincennes	.16	STPBG		Local Funds	RW	$0.00	$20,000.00	$20,000.00				
										Local Funds	CN	$0.00	$537,500.00		$100,000.00	$437,500.00		
										Local Bridge Program	RW	$80,000.00	$0.00	$80,000.00				
										Local Bridge Program	CN	$2,150,000.00	$0.00		$400,000.00	$1,750,000.00		
Vincennes	39842 / 1600727	Init.	ST 1022	Road Reconstruction (3R/4R Standards)	Main Street from 900' NW of Ramsey Rd. to 200' SE of Felt King Rd.	Vincennes	.27	STPBG		Group III Program	RW	$160,000.00	$0.00	$160,000.00				
										Group III Program	CN	$2,675,200.00	$0.00		$240,000.00	$2,435,200.00		
										Local Funds	RW	$0.00	$40,000.00	$40,000.00				
										Local Funds	CN	$0.00	$668,800.00		$60,000.00	$608,800.00		
Indiana Department of Transportation	39927 / 1600734	Init.	SR 550	Small Structure Replacement	0.90 mi E Jct SR-67	Vincennes	0	STPBG		Bridge Construction	CN	$734,394.40	$183,598.60	$350,000.00	$567,993.00			
Indiana Department of Transportation	40029 / 1600066	Init.	US 41	Bridge Deck Overlay	Over South Fork Smalls Creek, 2.97 miles N SR-67, SBL	Vincennes	0	NHPP		Bridge Construction	CN	$1,529,939.20	$382,484.80	$1,912,424.00				
Indiana Department of Transportation	40552 / 1500082	Init.	US 50	HMA Functional Overlay on PCCP	From E. Jct of US-41 SBL to 4.7 5 east of E Jct of US-41 SBL	Vincennes	3.466	NHPP		Road Construction	CN	$8,928,649.60	$2,232,162.40			$11,160,812.00		
Indiana Department of Transportation	40554 / 1700149	Init.	SR 159	Bridge Replacement, Concrete	Over Wells Ditch, 02.49 miles North SR-67	Vincennes	0	STPBG		Bridge Construction	CN	$4,077,786.40	$1,019,446.60			$5,097,233.00		
										Bridge ROW	RW	$126,400.00	$31,600.00	$158,000.00				
Indiana Department of Transportation	40639 / 1701410	Init.	US 50	Replace Superstructure	Old SR67 Over US50 , 0.59 mile W US-41	Vincennes	0	NHPP		Bridge Construction	CN	$2,141,131.20	$535,282.80		$2,676,414.00			
Indiana Department of Transportation	41132 / 1800911	Init.	SR 58	Bridge Thin Deck Overlay	Over White River, 01.73 mi W SR-57	Vincennes	0	STPBG		Bridge Construction	CN	$1,451,206.40	$362,801.60		$1,814,008.00			

 Report Created:6/25/2019 2:09:57PM

*Estimated Costs left to Complete Project column is for costs that may extend beyond the four years of a STIP. This column is not fiscally constrained and is for information purposes.

APPENDIX H

Additional Studies

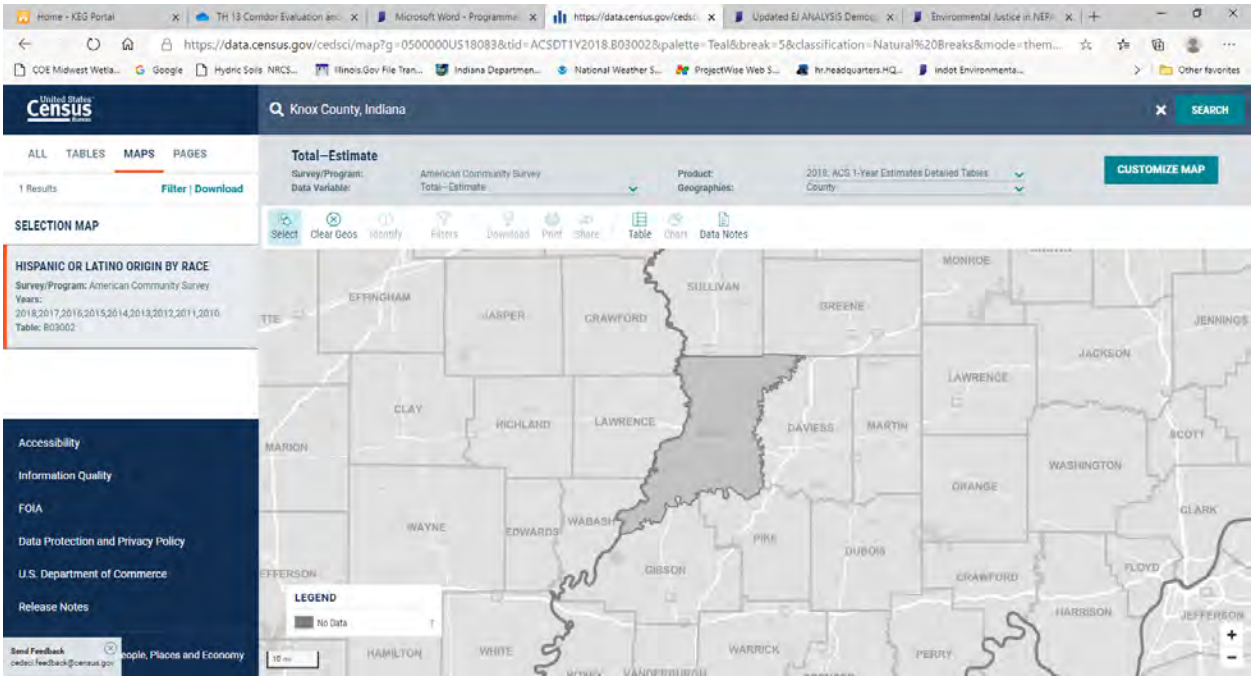
Land and Water Conservation Fund (LWCF) County Property List for Indiana (Last Updated December 2019)

ProjectNumber	SubProjectCode	County	Property
1800197	1800197	Knox	Four Lakes Park
1800278	1800278	Knox	Sandborn Community Park
1800344	1800344	Knox	Ouabache Trails Park
1800589	1800589	Knox	Fox Ridge Nature Park

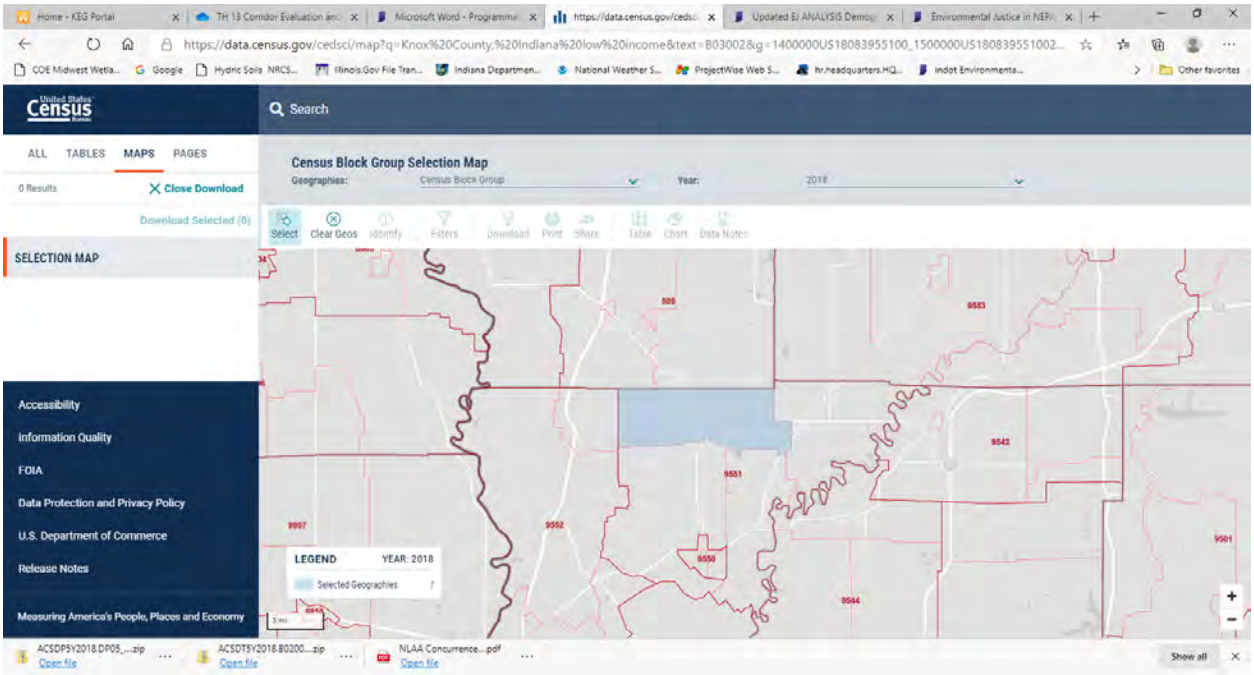
Please note, some of the property names are cut off on the ends due to character limits
Also, park names may have changed and is not reflected on the list.
*Various - this may include multiple sites in multiple counties and should always be included in your searches by co

APPENDIX I

Environmental Justice



Knox County – Community of Comparison (COC)



Census Tract 9551, Census Block Group 2 – Affected Community (AC)

Hispanic or Latino Origin By Race
TableID: B03002
2018 ACS 5-Year Estimates Detailed Tables
American Community Survey

	Knox County, Indiana / Estimate	Knox County, Indiana / Margin of Error	Census Tract 9551, Knox County, Indiana / Estimate	Census Tract 9551, Knox County, Indiana / Margin of Error	Block Group 2, Census Tract 9551, Knox County, Indiana / Estimate	Block Group 2, Census Tract 9551, Knox County, Indiana / Margin of Error
Total:	37409	*****	3050	255	826	272
Not Hispanic or Latino:	36692	*****	3021	261	826	272
White alone	34727	24	3006	255	813	262
Black or African American alone	1070	130	0	11	0	11
American Indian and Alaska Native alone	36	37	0	11	0	11
Asian alone	299	44	2	4	0	11
Native Hawaiian and Other Pacific Islander alone	47	48	0	11	0	11
Some other race alone	16	19	0	11	0	11
Two or more races:	497	140	13	20	13	20
Two races including Some other race	0	24	0	11	0	11
Two races excluding Some other race, and three or more races	497	140	13	20	13	20
Hispanic or Latino:	717	*****	29	31	0	11
White alone	508	97	29	31	0	11
Black or African American alone	12	17	0	11	0	11
American Indian and Alaska Native alone	0	24	0	11	0	11
Asian alone	0	24	0	11	0	11
Native Hawaiian and Other Pacific Islander alone	10	19	0	11	0	11
Some other race alone	171	88	0	11	0	11
Two or more races:	16	21	0	11	0	11
Two races including Some other race	8	15	0	11	0	11
Two races excluding Some other race, and three or more races	8	13	0	11	0	11

Poverty Status in the Past 12 Months by Sex by Age
TableID: B17001
2018 ACS 5-Year Estimates Detailed Tables
American Community Survey

	Knox County, Indiana / Estimate	Knox County, Indiana / Margin of Error	Census Tract 9551, Knox County, Indiana / Estimate	Census Tract 9551, Knox County, Indiana / Margin of Error
Total:	34977	307	2983	245
Income in the past 12 months below poverty level:	6009	708	203	108
Male:	2811	397	91	56
Under 5 years	459	156	12	17
5 years	72	47	2	3
6 to 11 years	376	151	0	11
12 to 14 years	119	82	0	11
15 years	26	29	0	11
16 and 17 years	60	41	8	13
18 to 24 years	503	179	12	17
25 to 34 years	301	119	1	3
35 to 44 years	178	95	2	3
45 to 54 years	342	120	18	23
55 to 64 years	268	103	15	13
65 to 74 years	73	43	13	14
75 years and over	34	31	8	12
Female:	3198	425	112	65
Under 5 years	179	120	2	6
5 years	14	13	0	11
6 to 11 years	323	155	15	20
12 to 14 years	86	48	0	11
15 years	58	42	7	12
16 and 17 years	81	37	8	10
18 to 24 years	653	129	10	13
25 to 34 years	353	122	3	4
35 to 44 years	480	162	0	11
45 to 54 years	263	92	35	38
55 to 64 years	360	110	22	19
65 to 74 years	199	87	2	3
75 years and over	149	56	8	11
Income in the past 12 months at or above poverty level:	28968	710	2780	265
Male:	14537	405	1495	179

Under 5 years	678	135	99	60
5 years	237	105	14	16
6 to 11 years	995	172	121	71
12 to 14 years	433	127	51	40
15 years	150	69	14	14
16 and 17 years	406	73	23	15
18 to 24 years	1334	178	139	70
25 to 34 years	1870	130	183	63
35 to 44 years	1811	94	162	58
45 to 54 years	2003	118	178	59
55 to 64 years	2153	107	242	62
65 to 74 years	1495	63	158	44
75 years and over	972	43	111	49
Female:	14431	415	1285	154
Under 5 years	819	109	25	23
5 years	138	75	46	39
6 to 11 years	917	134	58	31
12 to 14 years	476	122	80	49
15 years	187	61	26	32
16 and 17 years	356	93	34	36
18 to 24 years	855	123	105	52
25 to 34 years	1693	152	154	66
35 to 44 years	1621	126	134	53
45 to 54 years	1963	106	136	52
55 to 64 years	2237	111	178	55
65 to 74 years	1708	96	169	56
75 years and over	1461	90	140	58

	COC	AC-1
	Knox County, Indiana	**Census Tract 9551, Knox County, Indiana**
LOW-INCOME (B17001)		
Poverty Status in the Past 12 Months by Sex by Age: Total	34977	2983
Poverty Status in the Past 12 Months by Sex by Age: Income in the past 12 months below poverty level	6009	203
Percent Low-Income	17.2	6.8
125 Percent of COC	21.5	8.5
Potential Low-Income EJ Impact		No
MINORITY (B03002)		
Hispanic or Latino Orgin By Race: Total Population	37409	3050
Hispanic or Latino Origin By Race: Not Hispanic or Latino: White Alone	34727	3006
Number of Non-white/minority	2682	44
Percent non-white/minority	7.2	1.4
125 Percent of COC	9.0	1.8
Potential Minority EJ Impact		No

Product: 2018: ACS 5-Year Estimates Detailed Tables