FHWA-Indiana Environmental Document

CATEGORICAL EXCLUSION / ENVIRONMENTAL ASSESSMENT FORM

GENERAL PROJECT INFORMATION

Road No./County:	US 20/LaPorte
Designation Number(s):	1702993
Project Description/Termini:	US 20 Auxiliary Lanes Project/ US 20 from 400 feet east of State Road (SR) 39 to 2.85 miles east of SR 39 (Fail Road)

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

Approval

INDOT DE Signature and Date

INDOT ESD Signature and Date

FHWA Signature and Date

Release for Public Involvement

INDOT DE Initials and Date

ATR 4/12/2022

INDOT ESD Initials and Date

Certification of Public Involvement

INDOT Consultant Services Signature and Date

INDOT DE/ESD Reviewer Signature and Date:

Name and Organization of CE/EA Preparer: Elizabet Biggio/Butler, Fairman, & Seufert, Inc.

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.

Notice of Entry letters were mailed to potentially affected property owners near the project area on December 31, 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 G, page G1. A second Notice of Entry letter was sent on September 20, 2020 for additional environmental fieldwork (Appendix G, G20-G21).

A public information meeting was held at the LaPorte County Complex on April 29, 2021. The meeting was held jointly with Des. 1702992, a similar project on US 20 from 4.8 miles east of SR 39 (CR 250 E.) to 7.2 miles east of SR 39 (CR 500 E.). Notices for the meeting were published in the *LaPorte Herald Dispatch* and the *Times* (Northwest Indiana) on April 15, 2021 and April 22, 2021 (Appendix G, G2-G5). At the meeting, a presentation was given by Butler, Fairman, & Seufert, Inc. (BF&S) explaining the project, followed by an open house to answer questions and request feedback from attendees (Appendix G, G6-G16). Approximately 18 members of the public attended. Two written comments were received (Appendix G, G17-G19). The commentors agreed dangerous traffic conditions are a problem on this stretch of US 20 and one had concerns on whether the project would adequately address that problem.

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

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

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

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

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

Local Name of the Facility: US 20

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

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

PURPOSE AND NEED:

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

Need:
The need for the project is based on the significant increase in the average annual daily traffic (AADT) on this segment of US 20 between 2010 and 2016 from 15,220 vehicles per day (VPD) to 26,246 VPD, an increase of 72%. The increase in traffic has also increased the frequency of crashes and the crash severity. A total of 40 crashes were recorded on this segment of US 20 from 2014-2016. Severe crashes are most commonly due to left-turning vehicles stopped in the passing lane. With the increased traffic volumes, there are fewer gaps in opposing traffic for left-turning vehicles to complete their turns. The turning movement delays force left-turning vehicles to stop and to remain stopped for longer periods of time in a through-lane, making them vulnerable to high-speed traffic. Other severe crashes are related to lane departure, primarily crossing the centerline but also running off road to the right (Appendix I, I10-I12).

Purpose:
The purpose of this project is to reduce crashes and improve safety conditions for vehicle traffic on US 20.

PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: LaPorte Municipality: LaPorte County

Limits of Proposed Work: 400 feet east of SR 39 and 2.85 miles east of SR 39 (Fail Road)

Total Work Length: 2.96 Mile(s) Total Work Area: 40.30 Acre(s)

	Yes[1]	No
Is an Interstate Access Document (IAD)[1] required?		X
If yes, when did the FHWA provide a Determination of Engineering and Operational Acceptability?	Date:	

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

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

Location:
The proposed undertaking is on US 20 from 400 feet east of SR 39 to 2.85 miles east of SR 39 (Fail Road), in LaPorte County, Indiana. It is within Springville and Kankakee Townships on the United States Geographical Survey Springville Quadrangle, in Sections 1, 2, and 12 in Township 37 North, Range 3 West and in Sections 6 and 7, Township 37 North, Range 2 West (Appendix B, B2-B4).

Existing Conditions:
US 20 is a four-lane, east-west principal arterial roadway. The typical section consists of two 12-foot through lanes in each direction and a 2-foot paved median, bordered by 2-foot paved shoulders. The intersection with Fail Road is controlled by a traffic signal. There are three other intersections with through-streets in the project area: County Road (CR) 125 West, N. Wilhelm Road, and N. Range Road. These intersections are controlled by stop signs for the cross streets. There are also entrances to three residential subdivisions and approximately 24 private driveways to residential, commercial, and agricultural properties.

Existing drainage is primarily handled through sheet flow away from the road into ditch lines on the outside of the pavement. The storm water management system was established to convey runoff from the roadway to the outside side ditch lines, then to propagate flow to larger ditch lines or streams adjacent to or flowing under/away from US 20. There is existing steel guardrail along locations with steep side slopes. Some of these areas along the steep slopes also have existing curb to help manage sheet runoff from the road. A 72% increase in the AADT on this segment of US 20 between 2010 and 2016 coincided with an increase in the frequency of crashes and the crash severity. Severe crashes are most commonly due to left-turning vehicles stopped in the passing lane, as there are fewer gaps in opposing traffic for left-turning vehicles to complete their turns.

Preferred Alternative:
The preferred alternative consists of the construction of a 16-foot wide two-way left-turn lane (TWLTL) through the length of the project area. The preferred alternative will also include the widening of existing outside shoulders from 2-foot wide paved shoulders to 8-foot paved shoulders, the perpetuation of the edge line rumble strips, the addition of centerline rumble strips, the replacement of existing and the installation of new guardrail and underdrains, and replacement of street signs, if necessary. There are 12 small structures (drainage culverts) within the project area, of which six will be extended, five will be replaced, and one will be cleared of sediment buildup. New riprap may be installed at some existing culvert locations. Existing curb will be maintained or replaced. US 20 will be milled and overlaid throughout the project area, typically to an approximate depth of 2 inches.

US 20 will have a typical section consisting of a 16-foot TWLTL, four 12-foot through lanes, and two 8-foot shoulders (Appendix B, B17-B22). The TWLTL will be tapered, beginning approximately 275 feet east of SR 39. Pavement widening will begin approximately 488 feet east of SR 39. Pavement widening will taper back into the existing pavement over approximately 440 feet, ending approximately 350 feet west of Fail Road. In select locations, the shoulders will be 4 feet wide in order to limit impacts to adjacent properties. New guardrail will be installed in those locations. The superelevation of US 20 will be adjusted to meet current INDOT Design Manual standards.

Approximately 5.72 acres of permanent and 1.03 acres of temporary ROW acquisition will be required. Approximately 11.44 acres of tree removal is anticipated, 9.20 acres of which is within the existing ROW. The maximum depth of excavation will be approximately 3 feet for road widening and 6 feet for work on drainage structures. No permanent lighting exists in the project area, and none will be added. Temporary lighting may be required. The preferred method of traffic maintenance (MOT) will consist of four phases and will include single lane closures. See the MOT section below for details. Construction is expected to begin in the Spring of 2023.

The preferred alternative employs crash mitigation treatments that will facilitate reduction of the rear end, right angle, and sideswipe crash types. According to the INDOT Abbreviated Engineer's Report (Appendix I, I10-I12), the addition of a TWLTL is anticipated to reduce crashes by an approximately 57% and widening the shoulders to 8-feet by approximately 12%. Therefore, this alternative meets the project purpose and need and is the preferred alternative.

Logical Termini/Independent Utility:

The logical termini are SR 39 and Fail Road, the nearest intersections on either end of the project area, encompassing the entirety of the project area between major traffic generators. This project provides independent utility by meeting the purpose and need without relying on other projects to improve safety along US 20 between SR 39 and Fail Road.

OTHER ALTERNATIVES CONSIDERED:

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

No Build

The No Build Alternative proposes no construction take place, leaving all road elements in their current state. No federal funds would be expended. This alternative would result in no environmental impacts and no ROW acquisition. This is a feasible alternative. However, this alternative would not improve safety conditions on US 20. This alternative does not meet the project purpose and need. Therefore, the No Build Alternative was not considered prudent and was dismissed from further consideration.

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

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

ROADWAY CHARACTER: US 20

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

Name of Roadway	US 20				
Functional Classification:	Principal Arterial				
Current ADT:	28,458	VPD (2023)	Design Year ADT:	34,724	VPD (2043)
Design Hour Volume (DHV):	2,778	Truck Percentage (%)	33.8 %		
Designed Speed (mph):	45-55	Legal Speed (mph):	55		

	Existing		Proposed	
Number of Lanes:	2 eastbound 2 westbound		2 eastbound 2 westbound 1 TWLTL	
Type of Lanes:	Through		Through TWLTL	
Pavement Width:	54	ft.	80	ft.
Shoulder Width:	2	ft.	8	ft.
Median Width:	2	ft.	0	ft.
Sidewalk Width:	N/A	ft.	N/A	ft.

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

BRIDGES AND/OR SMALL STRUCTURE(S): 12 Culverts Only

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

Structure/NBI Number(s): Various (see below) Sufficiency Rating: N/A
(Rating, Source of Information)

	Existing		Proposed	
Bridge/Structure Type:	N/A		N/A	
Number of Spans:	N/A		N/A	
Weight Restrictions:	N/A	ton	N/A	ton
Height Restrictions:	N/A	ft.	N/A	ft.
Curb to Curb Width:	N/A	ft.	N/A	ft.
Outside to Outside Width:	N/A	ft.	N/A	ft.
Shoulder Width:	N/A	ft.	N/A	ft.

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

There are 12 small structures within the project area. The following modifications are planned:

Culvert No.	Station	Existing Size	Type	Proposed Size (in.)	Proposed Pipe Length (ft.)	Modification	Scour Protection
CLV-56660	270+03	3 ft. x 2 ft.	Concrete box	No change	105	Extend 20 ft.	Class 1 Riprap
CLV-56661	281+02	24 in.	Vitrified clay pipe	No change	106	Extend 18 ft. with RCP	Class 1 Riprap
CLV-56662	284+88	15 in.	Reinforced concrete pipe	15	124	Replace with RCP	Class 1 Riprap
CLV-56663	290+50	15 in.	Corrugated Metal Pipe	24	126	Replace with RCP	Class 1 Riprap
CV 020-046-49.65	300+91	4 ft. x 3 ft.	Concrete box	No change	268.5	Extend 11.5 ft.	Class 2 Riprap
CLV 020-046-49.69	301+60	3 ft. x 2 ft.	Concrete box	No change	230	Extend 11 ft. with RCP	Class 2 Riprap
CLV-56664	321+50	15 in.	Reinforced concrete pipe	24	104	Replace	Class 1 Riprap
CV 020-046-50.05	327+40	18 ft. x 5.3 ft.	Concrete box	No change	126.5	Extend 30 ft. at 5.5x 20 ft.	Class 2 Riprap
CLV 020-046-50.34	337+50	15 in.	High-density polyethylene pipe	18	106	Replace	Class 1 Riprap
CLV 020-046-50.53	346+50	30 in.	High-density polyethylene pipe	No change	116.5	Clean out	Class 1 Riprap
CLV-56665	359+15	24 in.	Vitrified clay pipe	30	121	Replace	Class 1 Riprap
CLV-56666	392+39	30 in.	Reinforced concrete pipe	No change	95	Extend 8 ft.	Class 2 Riprap

No other small structure work is planned.

County LaPorte Route US 20 Des. No. 1702993

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 below)		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

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

The preferred method of traffic maintenance will consist of four phases and will include single lane closures. The first phase will not restrict traffic (Appendix B, B23-B29). In phase 2, temporary pavement markings and signage will be used to maintain one lane of traffic in each direction of travel on the existing westbound lanes between Springville Road (west of SR 39) and CR 300 East (Fail Road) while construction on the south side of US 20 is completed (Appendix B, B30-B36). Phase 3 will do the opposite on the eastbound lanes so construction on the north side of US 20 can take place (Appendix B, B37-B-B43). Phase 4 will use temporary pavement markings and signage to maintain one lane of traffic in each direction on existing and widened pavement on US 20 during working hours (Appendix B, B37). The mill and overlay will be constructed utilizing flaggers and temporary signage. Access to all properties will be maintained at all times.

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

ESTIMATED PROJECT COST AND SCHEDULE:

Engineering: $ 1,623,607 (2020/2023) Right-of-Way: $ 2,200,000 (2021-2023) Construction: $ 14,251,528 (2021-2023)

Anticipated Start Date of Construction: Spring 2023

RIGHT OF WAY:

Land Use Impacts	Amount (acres) Permanent	Temporary
Residential	4.16	0.80
Commercial	0.53	0.09
Agricultural	1.03	0.14
Forest	0.0	0.0
Wetlands	0.0	0.0
Other: Cemetery	0.0	< 0.01
Other:		
TOTAL	5.72	1.03

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

The project requires approximately 5.72 acres of permanent ROW acquisition, consisting of approximately 4.16 acres of residential property, 0.53 acre of commercial property, and 1.03 acres of agricultural property. The project requires approximately 1.03 acres of temporary ROW, consisting of approximately 0.80 acre residential property, 0.09 acre of commercial property, 0.14 acre of agricultural property, and less than 0.01 acre of cemetery property (see Cultural Resources section below for details on cemetery property). Temporary ROW will be used for driveway reconstruction and grading.

The existing typical ROW on US 20 is highly variable. The minimum ROW width is at the east end of the project is approximately 105 feet. The ROW width on the west end of the project generally varies from 130 feet to 165 feet. The maximum ROW width is approximately 285 feet. The proposed typical ROW width will remain variable. At the east end of the project, the typical ROW will be approximately 115-135 feet. The proposed ROW width on the west end of the project is approximately 130 feet to 200 feet. The proposed maximum ROW width is 285 feet.

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

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

SECTION A - EARLY COORDINATION:

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

Unless otherwise indicated, early coordination letters were sent on April 9, 2021 (Appendix C, C1-C4).

Agency	Date Sent	Date Response Received	Appendix
Federal Highway Administration	April 9, 2021	No response	-
INDOT-Environmental Services	April 9, 2021	No response	-
Indiana Department of Natural Resources (IDNR) Division of Fish and Wildlife	April 9, 2021	May 7, 2021	C13-C18
IDNR Division of Nature Preserves	April 9, 2021	April 22, 2021	C7-C10
INDOT Aviation Office	April 9, 2021	No response	-
U.S. Department of Housing and Urban Development, Chicago Regional Office	April 9, 2021	No response	-
U.S. Fish and Wildlife Service (USFWS)	April 9, 2021	No response	-
Indiana Geological and Water Survey (IGWS)	August 20, 2021	August 20, 2021	C22-C24
National Park Service	April 9, 2021	No response	-
USDA-Natural Resources Conservation Service (NRCS)	April 9, 2021	April 22, 2021	C5-C6
U.S. Army Corps of Engineers, Chicago District	April 9, 2021	No response	-
Indiana Department of Environmental Management (IDEM) (Automated)	August 20, 2021	August 20, 2021	C25-C31
Northwest Indiana Regional Planning Commission (NIRPC)	April 9, 2021	No response	-
LaPorte County Surveyor's Office	April 9, 2021	No response	-
LaPorte County Highway Department	April 9, 2021	No response	-
LaPorte County Board of Commissioners	April 9, 2021	No response	-
LaPorte County Council	April 9, 2021	No response	-
IDEM Office of Water Quality, Drinking Water Branch, Groundwater Section	August 24, 2021	August 25, 2021	C32
Springhill Mobile Home Court (Wellhead Protection Area)	August 25, 2021	No response	-

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

SECTION B – ECOLOGICAL RESOURCES:

	Presence	Impacts	
		Yes	No
Streams, Rivers, Watercourses & Other Jurisdictional Features	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			

Total stream(s) in project area: 200 Linear feet Total impacted stream(s): 34 Linear feet

Stream Name	Classification	Total Size in Project Area (linear feet)	Impacted linear feet	Comments (i.e. location, flow direction, likely Water of the US, appendix reference)
UNT to Galena River	R3UB3	200	53	Likely Waters of the US; flows under US 20 through CV 020-046-50.05

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

Based on the desktop review, the aerial map of the project area, and the Red Flag Investigation (RFI) report (Appendix E) there are 12 streams, rivers, watercourses, or other jurisdictional features within the 0.5 mile search radius. That number was confirmed by the site visit from June 14 through 16, 2021 by Little River Consultants.

There are no Federal, Wild and Scenic Rivers; State Natural, Scenic, and Recreational Rivers; Outstanding Rivers for Indiana; navigable waterways or National Rivers Inventory waterways present in the project area.

A Waters of the U.S. Determination was approved by the INDOT Ecology and Waterway Permitting Office (EWPO) on December 15, 2021. Please refer to Appendix F for the Waters of the U.S. Determination. It was determined that there is one likely Waters of the U.S. within the project area, an unnamed tributary (UNT) to Galena River. There are also 12 roadside ditches and three ephemeral channels within the project area, all of which are likely non-jurisdictional. The U.S. Army Corps of Engineers (USACE) makes all final determinations regarding jurisdiction.

There is one stream, a UNT to Galena River is present within the project area. The 18 ft. x 5.3 ft. three-sided concrete structure will be extended by 34 feet, 10 feet to the north and 24 feet to the south. The ability of the UNT to Galena River to flow under US 20 will not be altered. This work will require permit authorization from the IDNR, IDEM, and USACE prior to construction. No stream mitigation is anticipated.

The Indiana Department of Natural Resources-Division of Fish and Wildlife (IDNR-DFW) responded to early coordination on May 7, 2021 with recommendations for stream crossing structures as well as commitments for erosion control (Appendix C, C13-C18). Recommendations included the use of bridges over culverts and the use of bottomless culverts over pipe and box culverts for stream crossings. No stream crossings will be replaced as a part of this project.

No other responses concerning stream or waterway resources were received.

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

Open Water Feature(s)	Presence	Impacts Yes	Impacts No
Reservoirs			
Lakes			
Farm Ponds			
Retention/Detention Basin			
Storm Water Management Facilities			
Other:			

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

Based on the desktop review, the aerial map of the project area, and the RFI report (Appendix E) there are 19 open water feature(s) within the 0.5 mile search radius. That number was confirmed by the site visit from June 14 through 16, 2021 by Little River Consultants. No open water features are present within or adjacent to the project area, therefore, no impacts are expected.

A Waters of the U.S. Determination was approved by the INDOT-EWPO on December 15, 2021. Please refer to Appendix F for the Waters of the U.S. Determination. No open water features were found. The USACE makes all final determinations regarding jurisdiction.

The IDNR-DFW responded to early coordination on May 7, 2021 with commitments for erosion control (Appendix C, C13-C18). All applicable recommendations are included in the Environmental Commitments section of this CE document.

	Presence	Impacts Yes	Impacts No
Wetlands	X	X	

Total wetland area: 0.095 Acre(s) Total wetland area impacted: 0.054 Acre(s)

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

Wetland No.	Classification	Total Size (Acres)	Impacted Acres	Comments (i.e. location, likely Water of the US, appendix reference)
1	PEM	0.044	0.026	Likely Water of the US; north side of US 20 along the UNT to Galena River
2	PEM	0.051	0.028	Likely Water of the US; south side of US 20 along the UNT to Galena River

Wetlands (*Mark all that apply*)	Documentation	ESD Approval Dates
Wetland Determination	X	December 15, 2021
Wetland Delineation		
USACE Isolated Waters Determination		

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

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

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

Based on the desktop review, the aerial map of the project area, and the RFI report (Appendix E) there are 59 wetlands within the 0.5 mile search radius. That number was confirmed by the site visit from June 14 through 16, 2021 by Little River Consultants. There are five wetlands present within or adjacent to the project area.

Wetland 1 and Wetland 2 are palustrine emergent wetlands adjacent to UNT to Galena River. A total of 0.054 acre of wetlands will be impacted by the extension of CV 020-046-50.05 carrying a UNT to Galena River. Mitigation is not anticipated.

Wetland 1 borders both sides of UNT to Galena River north of US 20 and is approximately 0.044 acre within the investigation area for the project. Since it abuts the UNT to Galena River, it is a likely Water of the US. Wetland 1 is of relatively poor quality given its proximity to US 20. A total of approximately 0.028 acre of impacts to Wetland 1 are anticipated to result from the extension of CV 020-046-50.05. Section 401/404 permits will be required. No mitigation is anticipated. Avoidance of impacts to the wetland is not practical as it would require a unique engineering effort to accommodate the widening of US 20 in this area without extending the culvert.

Wetland 2 borders the west side of UNT to Galena River south of US 20 and is approximately 0.051 acre within the investigation area for the project. Since it abuts the UNT to Galena River, it is a likely Water of the US. Wetland 2 is of relatively average quality since it is surrounded by woods and borders a meandering stream. A total of approximately 0.026 acre of impacts to Wetland 2 are anticipated to result from the extension of CV 020-046-50.05. Section 401/404 permits will be required. No mitigation is anticipated. Avoidance of impacts to the wetland is not practical as it would require a unique engineering effort to accommodate the widening of US 20 in this area without extending the culvert.

A Waters of the U.S. Determination was approved by the INDOT-EWPO on December 15, 2021. Please refer to Appendix F for the Waters of the U.S. Determination. It was determined that two wetlands were present within the project area. The USACE makes all final determinations regarding jurisdiction.

The IDNR-DFW responded to early coordination on May 7, 2021 with recommendations to coordinate with IDEM and USACE and commitments for erosion control to protect water resources (Appendix C, C13-C18).

Additional coordination was sent to the USFWS on October 4, 2021 (Appendix C, C45-C46). The USFWS replied on November 30, 2021, stating, in part, "*sheet runoff from the US 20 pavement has been known to occur, with erosion down the steep slope to the [Springfield] Fen. Therefore, INDOT may need to address this issue beyond the commitment to install erosion control fencing prior to construction such as considering an elevated curb along the north side of the pavement across the length of this low area, generally between Stations 302+00 and 304+00, in order to redirect the sheet flow*," (Appendix C, C59). There is existing Hot Mix Asphalt (HMA) curb along areas with guardrail adjacent to the referenced area. This curb will be maintained or replaced in the same location as part of the project.

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

County LaPorte Route US 20 Des. No. 1702993

	Presence	Impacts Yes	Impacts No
Terrestrial Habitat	X	X	

Total terrestrial habitat in project area: 27.28 Acre(s) Total tree clearing: 11.44 Acre(s)

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

Based on the desktop review, the aerial map of the project area (Appendix B, B5), site visits on April 20, 2021 and July 1, 2021 by BF&S, and the RFI report (Appendix E) there are two types of terrestrial habitats in the project area: grassland/agricultural land and forest.

The land use in the area is mostly rural mixed with residential properties and scattered commercial properties. Approximately 15.42 acres of non-forested terrestrial land will be impacted by the widening of US 20. Of this total, approximately 1.03 acres consists of farmland, and approximately 14.39 acres consists of mowed roadside and commercial and residential lawn areas. These properties mainly contain kept lawns (grassland) which are dominated by grasses and forbs. These lawns may contain some trees and shrubs, but they are not the dominant flora. Approximately 4.78 acres of this habitat type will be impacted by the project. A total of 11.44 acres of trees will be removed for the project, of which 10.99 acres will be removed within 100 feet of the roadway and 0.45 acre will be removed between 100 and 300 feet from the roadway. The dominant tree species are sugar maple (*Acer saccharum*), white ash (*Fraxinus americana*), and slippery elm (*Ulmus rubra*). INDOT will be required to complete mitigation for forested habitat. Mitigation will be determined during permitting.

Early coordination letters were sent to IDNR-DFW, the USFWS, and USACE on April 19, 2021 (Appendix C, C1-C4). IDEM was contacted via their online roadway project portal on August 20, 2021 (Appendix C, C25-C31).

The IDNR-DFW responded to early coordination on May 7, 2021 with recommendations to avoid, minimize, and mitigate impacts to riparian and wetland habitats (Appendix C, C13-C18). The USFWS and USACE did not respond to early coordination.

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

County LaPorte Route US 20 Des. No. 1702993

Protected Species **Federally Listed Bats**	**Yes**	**No**
Information for Planning and Consultation (IPaC) determination key completed	X	
Section 7 informal consultation completed (IPaC cannot be completed)		X
Section 7 formal consultation Biological Assessment (BA) required		X

Determination Received for Listed Bats from USFWS: NE [ ] NLAA [ ] LAA [X]

Other Species not included in IPaC	**Yes**	**No**
Additional federal species found in project area (based on IPaC species list)	X	
State species (not bird) found in project area (based upon consultation with IDNR)	X	

Migratory Birds	**Yes**	**No**
Known usage or presence of birds (i.e. nests)		X
State bird species based upon coordination with IDNR	X	

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

Based on a desktop review and the RFI report (Appendix E) completed by BF&S on October 26, 2020, the IDNR LaPorte County Endangered, Threatened and Rare (ETR) Species List has been checked. A review of the USFWS database by INDOT-Environmental Services (ES) did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. According to the IDNR-DFW early coordination response letter dated May 7, 2021 (Appendix C, C13-C16), the Natural Heritage Program's Database has been checked and 77 species have been documented within 0.5 mile of the project area (complete list in Appendix C, C17-C18). One federally-threatened species, the Eastern Massasauga (*Sistrurus catenatus*), has been documented within 0.5 mile of the project area. The IDNR recommended use of an entrenched silt fence along the southern border of the Springfield Fen Nature Preserve to limit reptile entrance into the construction area.

Project information was submitted through the USFWS's Information for Planning and Consultation (IPaC) portal, and an official species list was generated (Appendix C, C33-C44). The project is within range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (NLEB) (*Myotis septentrionalis*). The official species list generated from IPaC indicated one other species present within the project area. Refer to the paragraph below.

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. Culvert inspections were conducted by BF&S on June 18, 2021 and no evidence of bats was observed (Appendix C, C74-C84). At the request of INDOT, since no response to early coordination was received, BF&S resubmitted early coordination materials to the USFWS on October 4, 2021. The USFWS responded on October 4, 2021, stating they would not provide a determination letter until endangered reptile best management practices (BMPs) were developed for work adjacent to the Springfield Fen Nature Preserve/Galena Marsh for the protection of the Eastern Massasauga (Appendix C, C47-48). The USFWS concurred with the BMPs on November 30, 2021 (Appendix C, C58-C60; see the Section 6(f) section for discussion of BMPs and the Springfield Fen Nature Preserve/Galena Marsh). An effect determination key was completed on March 18, 2022, and based on the responses provided, the project was found "Likely to Adversely Affect (LAA)" the Indiana bat and/or the NLEB (Appendix C, C61-C73) due to tree clearing between 100 feet and 300 feet from the existing roadway. INDOT reviewed and verified the effect finding on March 18, 2022 and requested USFWS's review of the finding. On March 28, 2022, the USFWS concurred with the LAA finding for endangered bats (Appendix C, C85-C88). Avoidance and Minimization Measures (AMMs) to limit tree removal and effects from temporary lighting are included as firm commitments in the Environmental Commitments section of this document.

Additionally, a "Reinitiation Notice" is required if: more than 11.44 acre of suitable habitat is to be cleared; more than 0.45 acre of suitable habitat between 100-300 feet from edge of pavement is to be cleared during the inactive season (which would exceed the incidental take); new information about listed species is encountered; the project is modified in a manner that causes an effect to the listed species; or a new species or critical habitat is listed that the project may affect. These requirements, and the Avoidance and Minimization Measures (AMMs) from the Project Submittal Form, are included as firm commitments for this project.

INDOT shall satisfy the compensatory mitigation requirements of the formal consultation with USFWS through one of the conservation options outlined on page 41 of the May 20, 2016 Programmatic Biological Opinion for Transportation Projects in the Range of the Indiana bat and NLEB. The amount to be paid to the Range-wide In-lieu Fee Program, to be administered by The Conservation Fund, shall be $7,366.28. This amount was determined by the Habitat Block Method. The area of suitable habitat to be cleared, multiplied by the mitigation ratio for inactive season tree clearing for LaPorte County, and the compensatory price per acre; 0.45 acre X 1.75 X $9,354.

The official species list generated from IPaC indicated one other species present within the project area: the Eastern Massasauga (*Sistrurus catenatus*). This project does not qualify for the USFWS interim policy because it will impact more than 0.5 acre of forested ROW. BMPs for endangered reptiles, including protective fencing, site inspections, and worker education, will be employed (see Section 6(f) section for details concerning BMPs). Additional coordination was sent to the USFWS on October 4, 2021 (Appendix C, C45-C46). The USFWS provided a letter on November 30, 2021, stating, in part, "*We believe that the Reptile Avoidance and Minimization Measures are sufficient to protect the eastern Massasauga*." The USFWS also suggested extending erosion control fencing to encompass fen habitat on the Thermco Instrument Corporation property (1201 W. US 20; Appendix C, C60).

The state endangered Cerulean Warbler (*Setophaga cerulea*) has been documented with 0.5 mile of the project area. The IDNR recommended tree clearing be done outside of the nesting season (May 1-July 15) to minimize impacts to this bird species (Appendix C, C13-C18).

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.

Geological and Mineral Resources	**Yes**	**No**
Project located within the Potential Karst Features Area of Indiana		X
Karst features identified within or adjacent to the project area		X
Oil/gas or exploration/abandoned wells identified in the project area	X	

Date Karst Study/Report reviewed by INDOT EWPO (if applicable): N/A

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

Based on a desktop review, the project is located outside the designated karst region of Indiana as outlined as outlined in the July 15, 2021 Protection of Karst Features During Project Development and Construction developed by the INDOT- Ecology and Waterway Permitting Office (EWPO). According to the topo map of the project area (Appendix B, B2) and the RFI report (Appendix E), there are no karst features identified within or adjacent to the project area. In the early coordination response dated August 20, 2021, the Indiana Geological and Water Survey (IGWS) did not indicate that karst features exist in the project area (Appendix C, C22-C24).

IGWS also identified abandoned petroleum exploration wells in the project area. The response from the IGWS has been communicated to the project designer on September 27, 2021. Coordination was sent to IDNR-Oil and Gas on October 20, 2021. IDNR-Oil and Gas responded on November 23, 2021 and stated there were no known oil and gas issue for this project (Appendix C, C51). No impacts are expected.

SECTION C – OTHER RESOURCES

Drinking Water Resources	Presence	Impacts Yes	Impacts No
Wellhead Protection Area(s)	X		X
Source Water Protection Area(s)			
Water Well(s)			
Urbanized Area Boundary			
Public Water System(s)			

	Yes	No
Is the project located in the St. Joseph Sole Source Aquifer (SSA):		X
If Yes, is the FHWA/EPA SSA MOU Applicable?		
If Yes, is a Groundwater Assessment Required?		

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

The project is located in LaPorte 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, a detailed groundwater assessment is not needed, and no impacts are expected.

The IDEM Wellhead Proximity Determinator website (http://www.in.gov/idem/cleanwater/pages/wellhead/) was accessed on August 23, 2021 by BF&S. This project is located with a Wellhead Protection Area and is not located with a Source Water Area. The IDEM Office of Water Quality, Drinking Water Branch, Groundwater Section was directly coordinated with on August 24, 2021 (Appendix C, C32). Early coordination information was sent to the Springhill Mobile Home Court (Wellhead Protection Area) on August 25, 2021. Based on the recommendation from IDEM, coordination was also sent to the Michigan City Department of Water Works' concerning an adjacent Source Water Assessment Area. No response was received within the 30-day time frame. The features will not be impacted. The project will adhere to INDOT BMPs in regard to erosion and sediment control during construction. Excavation greater than three feet will be limited to areas necessary for work on drainage structures.

The Indiana Department of Natural Resources Water Well Record Database website (https://www.in.gov/dnr/water/3595.htm) was accessed on August 23, 2021 by BF&S. Unconsolidated residential wells are located near the project area on both sides of US 20; however, these wells are outside of the construction limits. No impacts are expected. Should it be determined during the ROW phase that these wells will be affected, a cost to cure will be included in the appraisal to restore the wells.

Based on a desktop review of INDOT's MS4 map (https://entapps.indot.in.gov/MS4/) accessed by BF&S on August 23, 2021 and the RFI report (Appendix E), this project is not within an urban area boundary (UAB). No impact is expected.

Based on a desktop review, and site visits on April 20, 2021 and July 1, 2021 by BF&S, the aerial map of the project area (Appendix B, B5), and coordination with LaPorte County, no public water systems were identified. Therefore, no impacts are expected.

Floodplains	Presence	Impacts Yes	Impacts No
Project located within a regulated floodplain			
Longitudinal encroachment			
Transverse encroachment			
Homes located in floodplain within 1000' up/downstream from project			

If applicable, indicate the Floodplain Level?

Level 1 ☐ Level 2 ☐ Level 3 ☐ Level 4 ☐ Level 5 ☐

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

The IDNR's Indiana Floodway Information Portal website (https://indnr.maps.arcgis.com/apps/webappviewer/index.html?id=05026dabc2e8461983e196d56a213c1e) accessed by BF&S on January 7, 2022 it does not fall within the guidelines for the implementation of 23 CFR 650, 23 CFR 771, and 44 CFR. No impacts are expected (Appendix F, F217).

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

Total Points (from Section VII of CPA-106/AD-1006*) **136**

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

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

Based on the desktop review, the aerial map of the project area (Appendix B, B5), and the site visits on April 20, 2021 and July 1, 2021 by BF&S, the project will convert 0.09 acre of farmland as defined by the Farmland Protection Policy Act. An early coordination letter was sent on April 9, 2021 to Natural Resources Conservation Services (NRCS). Coordination with NRCS resulted in a score of 136 on the AD-1006 (03-02) form (Appendix C, C6). 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 D – CULTURAL RESOURCES

	Category(ies) and Type(s)	INDOT Approval Date(s)	N/A
Minor Projects PA	B-3, B-9, B-2, B-4, A-9	October 7, 2021	

Full 106 Effect Finding

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

Eligible and/or Listed Resources Present

NRHP Building/Site/District(s) ☐ Archaeology ☐ NRHP Bridge(s) ☐

Documentation Prepared (mark all that apply)		ESD Approval Date(s)	SHPO Approval Date(s)
APE, Eligibility and Effect Determination			
800.11 Documentation			
Historic Properties Report or Short Report			
Archaeological Records Check and Assessment			
Archaeological Phase Ia Survey Report	X	October 7, 2021	N/A
Archaeological Phase Ic Survey Report			
Other:			

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

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

On October 7, 2021, the INDOT Cultural Resource Office (CRO) determined that this project falls within the guidelines of Categories B-3, B-9, and B-2 under the Minor Projects Programmatic Agreement, (Appendix D, D1-D5). Category B-3 covers added auxiliary lanes and shoulder widening where no archaeological properties eligible for the National Register of Historic Places (National Register) are present (Condition A) and where no above-ground properties listed in or eligible for listing in the National Register are present (Condition B). Category B-9 covers culvert replacement and extension where there are no impacts to unusual features and no wood, stone, or brick exhibited in the structures (Condition A) with no adjacent properties listed in or eligible for listing in the National Register (Condition B). Category B-2 covers the installation of new road signage in previously disturbed soils (Condition A) with no adjacent properties listed in or eligible for listing in the National Register (Condition B). An Archaeological Report was completed on August 12, 2021 by NS Services (Appendix D, D6-D7). No archaeological sites were located. The project also meets Category A-9 covering the installation of riprap.

The project was reevaluated on February 4, 2022 to add Category B-4 (Appendix D, D18-D24). Category B-4 covers the installation and replacement of guardrails not adjacent to properties listed in or eligible for the National Register (above ground or archaeological). No further consultation is required. This completes the Section 106 process and the responsibilities of the FHWA under Section 106 have been fulfilled.

Work will take place within 100 feet of the Rossburg Cemetery, including shoulder widening and grading. A Level 1 Design Exception will allow the shoulder to be widened to 4 feet (rather than 8 feet) with a guardrail protecting 2:1 side slopes in the area of the cemetery in order to reduce impacts. Approximately 0.004 acre, or 186 square feet, of temporary ROW will be acquired from the south side of the cemetery for grading. A Cemetery Development Plan per IC 14-21-1-26.5 was completed on August 11, 2021 (Appendix D, D8-D14). The Springfield Township Trustee, who manages the cemetery, concurred with the plan on September 22, 2021 (Appendix D, D15). The Indiana Division of Historic Preservation and Archaeology (DHPA) concurred with the plan on November 8, 2021 and provided commitments for accidental discoveries and project changes (Appendix D, D16-D17). All applicable recommendations are included in the Environmental Commitments section of this CE document.

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

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

	Evaluations Prepared
Programmatic Section 4(f)	
"De minimis" Impact	
Individual Section 4(f)	
Any exception included in 23 CFR 774.13	

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

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

Based on a desktop review, the aerial map of the project area (Appendix B, B5), and the RFI report (Appendix E), three potential Section 4(f) resources are located within the 0.5 mile search radius. According to additional research, early coordination, the Section 106 process and Cemetery Development plan, and site visits on April 20, 2021 and July 1, 2021 by BF&S, one 4(f) resource, the Galena Marsh/Springfield Fen Nature Preserve is located adjacent to the project area. The Galena Marsh/Springfield Fen Nature Preserve is a state nature preserve. The project will not use this resource by taking permanent ROW and will not indirectly use the resource in such a way that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are substantially impaired. Therefore, no 4(f) use is expected. See the following section for details of coordination with IDNR-DNP concerning the Galena Marsh/Springfield Fen Nature Preserve.

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

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

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

A review of 6(f) properties on the INDOT ESD website revealed a total of 12 properties in LaPorte County (Appendix I, I1). One property, Galena Marsh/Springfield Fen Nature Preserve, is located adjacent to the project area. Galena Marsh/Springfield Fen Nature Preserve is a state nature preserve owned and managed by the IDNR Division of Nature Preserves (DNP) and DFW. The property boundary runs between approximately 62 feet and 133 feet north of US 20 from approximately 515 feet east of N. CR 125 West to N. Wilhelm Road. In their early coordination response of May 7, 2021, the IDNR indicated DNP had concerns about the following items (C13-C18):

- The amount of fill required to address the large slope and steep gradient adjacent to US 20;
- Culvert modifications and placement causing deleterious changes to site hydrology;
- The boundaries of and work within the INDOT ROW.

A meeting was held on May 6, 2021 to address concerns by the IDNR-DNP and Springfield Fen Nature Preserve (Appendix C, C11-C12). As a result, the following commitments were made:

- The Waters of the US Report will be provided to the IDNR-DNP and USFWS;
- A field visit with the IDNR-DNP and USFWS will be held;
- Any trees cut down near the Springfield Fen Nature Preserve will be removed from the site;
- A catalog of any trees removed near the Springfield Fen Nature Preserve will be compiled and provided to nature preserve staff;
- In general, areas of concern include groundwater, hunting, reptiles, revegetation, trees and tree removal, wetlands, erosion, grading and slope, construction timing, ROW clearing, and exclusion barriers/orange fencing (see below for more details);
- The road sign for the Springfield Fen Nature Preserve/Galena Marsh will be replaced by INDOT.

The project's construction limits will stay outside the property and will stop a minimum of 12 feet from the property line for a stretch of approximately 70 feet near Wilhelm Road. The existing ROW as shown on the project plans was confirmed to be properly recorded in 1939/1940. No new ROW will be acquired from the Springfield Fen Nature Preserve. To address the DNP's concerns, the project design was modified to allow all road widening and the pipe extension adjacent to the Galena Marsh/Springfield Fen Nature Preserve to take place on the south side of US 20. Tree clearing and grading will also take place on the south side of the road. The only work on the north side of US 20 will be the addition of riprap to Culvert 020-046-49.65, where the riprap is necessary for erosion control due to the high velocity of water exiting the pipe during large rain events. There are currently limited site distances at the adjacent intersection of US 20 and N. Wilhelm Road due to the roadway curve and rolling terrain. This project would typically address the site distance issue; however, this would require large amounts of fill with the potential to affect the Springfield Fen Nature Preserve. Therefore, it was determined not to make alterations to the intersection in order to improve site distances.

A field visit was conducted on June 17, 2021 by BF&S and the Coastal Region Ecologist, who manages the property. During the field visit, it was confirmed the project will remain outside the boundaries of the Galena Marsh/Springfield Fen Nature Preserve and take place entirely within existing INDOT ROW adjacent to the property. During the on-site meeting, the Coastal Region Ecologist reported Culvert 020-046-49.65 is dry even after large rain events. Therefore, no impacts to site hydrology are expected. As a result of discussions during the field visit, following items will be implemented to minimize project impacts near the Galena Marsh/Springfield Fen Nature Preserve:

- The federally-threatened Eastern Massasauga (*Sistrurus catenatus*) has been documented in the Galena Marsh/Springfield Fen Nature Preserve. Endangered reptile BMPs will be employed near the Galena Marsh/Springfield Fen Nature Preserve, including the following:
    - An entrenched silt fence will be installed along the project boundary on the north side of US 20 at the Springfield Fen Nature Preserve, beginning at CR 125 West and running east to N. Wilhelm Road in order to help minimize the number of reptiles and amphibians entering the work site during construction. The area will be visually inspected before the fence is installed to ensure snakes and turtles are not present;
    - Hand cut shrubs and trees;
    - Avoid removing or destroying unique habitat features, such as fallen trees, logs, rock piles and brush piles that provided habitat;
    - Avoid altering water levels in wetland habitats;
    - Net-like mesh fabrics (plastics, nylon, twine, etc.) for erosion control will not be utilized due to entrapment/entanglement hazards;
    - Compaction and alteration of soil (e.g. from vehicles or heavy equipment) that directly impacts the habitat will be avoided.

- Erosion is occurring within the existing ROW and being deposited within Springfield Fen Nature Preserve. Erosion fencing will be installed prior to the clearing of the of the project area to keep erosion from being deposited on the nature preserve;
- The IDNR-DNP will review the list of plant species to be used to revegetate the project area. Springfield Fen Nature Preserve is a high quality natural area with many conservative plant and animal species. Non-native vegetation will not be seeded adjacent to the nature preserve if it has the potential to become invasive;
- Hunting and trapping occur at Springfield Fen Nature Preserve. The contractor will notify all workers that these are permitted activities.

Unique Special Provisions (USPs) will be used to direct these measures where appropriate. The IDNR-DNP concurred with the BMPs on November 30, 2021 (Appendix C, C57). The USFWS provided additional recommendations on November 30, 2021, including extending the protective fencing to cover the adjacent fen areas not inside the IDNR's property and increasing protective measures for sheet flow from the road (Appendix C, C58-C60).

Coordination with IDNR-DNP and USFWS regarding the Springfield Fen Nature Preserve will continue throughout the design process. All commitments are listed in the Environmental Commitments section of this document.

SECTION F – Air Quality

STIP/TIP and Conformity Status of the Project	**Yes**	**No**
Is the project in the most current STIP/TIP?	X	
Is the project located in an MPO Area?	X	
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?	X	
Is the project exempt from conformity?	X	
If No, then:		
Is the project in the Transportation Plan (TP)?		
Is a hot spot analysis required (CO/PM)?		

Location in STIP: Pg. 410

Name of MPO (if applicable): Northwest Indiana Regional Planning Commission (NIRPC)

Location in TIP (if applicable): 81 (online at https://rtip.nirpc.org/)

Level of MSAT Analysis required?

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

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

This project is included in the Fiscal Year (FY) 2020-2024 Northwest Indiana Regional Planning Commission (NIRPC) Transportation Improvement Program (TIP) and the Statewide Transportation Improvement Program (STIP) (Appendix H, H1-H2).

This project is in LaPorte County, which is currently a maintenance area for Ozone, under the 1997 Ozone 8-hour standard, which was revoked in 2015 but is being evaluated for conformity due to the February 16, 2018, South Coast Air Quality Management District V. Environmental Protection Agency, Et. Al. Decision (https://www.epa.gov/green-book. The project's design concept and scope are accurately reflected in both the NIRPC Transportation Plan (TP) and the Transportation Improvement Program (TIP) and both conform to the State Implementation Plan (SIP). Therefore, the conformity requirements of 40 CFR 93 have been met.

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

SECTION G - NOISE

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

Date Noise Analysis was approved/technically sufficient by INDOT ESD: N/A

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

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

SECTION H – COMMUNITY IMPACTS

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

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

The surrounding area is largely residential and agricultural. No changes in surrounding land use are anticipated. The existing tax base and property values may slightly decrease by these improvements.

The project is included in NIRPC's 2050 Plan, adopted in 2019 as to be completed by 2025.

INDOT has adopted an ADA transition plan (https://www.in.gov/indot/files/2018%20INDOT%20ADA%20Transition%20Plan.pdf). There are no pedestrian facilities within the project area. Therefore, ADA compliance does not apply to this project.

This project is one of four planned projects on US 20 in LaPorte County. The following projects will cumulatively provide US 20 with a consistent typical section in the central part of LaPorte County:

- Des. 1702992: US 20 from 4.8 miles east of SR 39 (CR 250 E.) to 7.2 miles east of SR 39 (CR 500 E.). Scheduled for construction in the spring of 2023;
- Des. 1900049: US 20 from 0.25 mile east of US 35 to 1.25 miles east of US 35. Scheduled for construction in the spring of 2024;
- Des. 1900050: US 20 from 3.1 miles east of SR 39 to 4.85 miles east of SR 39. This project will be nearly contiguous to the subject project on the east side. Scheduled for construction in the summer of 2024.

Public Facilities and Services

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

Based on a desktop review, the aerial map of the project area (Appendix B, B5), and the RFI report (Appendix E) there are seven public facilities within the 0.5 mile search radius. The site visits on September 15, 2020 and April 20, 2021 by BF&S confirmed this number.

Two pipelines, owned by Wolverine Pipeline Co. and Northern Indiana Public Service Co., run through the project area. Relocation is expected and coordination with utilities is ongoing.

One recreational facility/managed land, Springfield Fen Nature Preserve/Galena Marsh is adjacent to the project area. See the Section 6(f) Section of this document for a detailed discussion of coordination activities concerning this property. Access to the property will not be affected. Negative impacts to the Springfield Fen Nature Preserve/Galena Marsh are not anticipated.

No other responses to early coordination concerning public facilities and services were received.

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.

	Yes	No
Environmental Justice (EJ) (Presidential EO 12898)		
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 and disproportionate impacts to EJ populations?		X

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

Under FHWA Order 6640.23A, FHWA and the project sponsor, as a recipient of funding from FHWA, are responsible to ensure that their programs, policies, and activities do not have a disproportionately high and adverse effect on minority or low-income populations. Per the current INDOT Categorical Exclusion Manual, an Environmental Justice (EJ) Analysis is required for any project that has two or more relocations or 0.5 acre of additional permanent ROW. The project will require more than 0.5 acre of permanent ROW acquisition. 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 LaPorte County. The community that overlaps the project area is called the affected community (AC). In this project, the AC is Census Tract 417. 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 2019 American Community Survey 5-year Estimates was obtained from the U.S. Census Bureau (https://data.census.gov/cedsci/) on August 18, 2021 by BF&S. The data collected for minority and low-income populations within the AC are summarized in the below table.

	COC – LaPorte County, Indiana	AC – Census Tract 417, LaPorte County, Indiana
Percent Low-Income	15.2 %	6.8 %
125% of COC	19.0 %	AC < 125% COC
EJ Population of Concern		No
Percent Minority	20.7 %	7.8 %
125% of COC	25.9 %	AC < 125% COC
EJ Population of Concern		No

The AC, Census Tract 417, has a percent low-income population of 6.8%, which is below 50% and is below the 125% COC threshold. Therefore, the AC does not contain a low-income population of EJ concern.

Census Tract 417 has a percent minority population of 7.8%, which is below 50% and is below the 125% COC threshold. Therefore, the AC does not contain a minority population of EJ concern.

The census data sheets, map, and calculations can be found in Appendix I. No populations of EJ concern were identified. 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 BIS or CSRS required?		X

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

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

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

SECTION I – HAZARDOUS MATERIALS & REGULATED SUBSTANCES

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

Date RFI concurrence by INDOT SAM (if applicable): October 27, 2020

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

Based on a review of GIS and available public records, an RFI was approved by INDOT SAM on October 27, 2020 (Appendix E). Two underground storage tank (UST) sites, one Voluntary Remediation Program site, three NPDES facilities, and four leaking underground storage tank (LUST) sites were located within 0.5 mile of the project area. One LUST site could affect the project area.

An unnamed facility with FID #1590 is mapped adjacent to the southwest of the western end of the project area. Only one document associated with this FID was found, and it was for Heinold Citgo, Springville, and is part of a phone message. No additional documents were found except a note with the message stating that tanks were removed from the site in 1990, with a notice of contamination made to IDEM on November 9, 1990. Google Earth aerials indicate that what appears to be a truck stop with a motel on the southeast corner of SR 39 and US 20, and according to IDEM records for 1838 US Hwy 20, the site was also issued a Public Water Supply Permit for less than 25 people under the name Midway Motel. While unlikely, if excavation occurs in this area, proper handling, removal, and disposal of petroleum contaminated soil/groundwater may be necessary. In addition, analysis for lead will be necessary before disposal of soil/groundwater.

Part IV – Permits and Commitments

PERMITS CHECKLIST

Permits (mark all that apply)	**Likely Required**
Army Corps of Engineers (404/Section10 Permit)	
Nationwide Permit (NWP)	
Regional General Permit (RGP)	X
Individual Permit (IP)	
Other	
IN Department of Environmental Management (401/Rule 5)	
Nationwide Permit (NWP)	
Regional General Permit (RGP)	X
Individual Permit (IP)	
Isolated Wetlands	
Rule 5	X
Other	
IN Department of Natural Resources	
Construction in a Floodway	
Navigable Waterway Permit	
Other	
Mitigation Required	
US Coast Guard Section 9 Bridge Permit	
Others (Please discuss in the discussion below)	

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

Since more than 1.0 acre of new ground disturbance will occur, a Rule 5 permit from IDEM will be required.

A Section 401 permit from IDEM and a Section 404 permit from USACE will be required due to the work on CV 020-046-50.05.

INDOT will be required to complete mitigation for removal of forested bat habitat. Mitigation will be determined during permitting.

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

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

ENVIRONMENTAL COMMITMENTS

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

Firm:

1. If the scope of work or permanent or temporary right-of-way amounts change, the INDOT Environmental Services Division (ESD) and the INDOT District Environmental Section will be contacted immediately. (INDOT ESD)
2. It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction that would block or limit access. (INDOT ESD)

3. An unnamed facility with FID #1590 is mapped adjacent to the southwest of the western end of the project area. Only one document associated with this FID was found, and it was for Heinold Citgo, Springville, and is part of a phone message. No additional documents were found except a note with the message stating that tanks were removed from the site in 1990, with a notice of contamination made to IDEM on November 9, 1990. Google Earth aerials indicate that what appears to be a truck stop with a motel on the southeast corner of SR 39 and US 20, and according to IDEM records for 1838 US Hwy 20, the site was also issued a Public Water Supply Permit for <25 people under the name Midway Motel. While unlikely, if excavation occurs in this area, proper handling, removal, and disposal of petroleum contaminated soil/groundwater may be necessary. In addition, analysis for lead will be necessary before disposal of soil/groundwater. (INDOT SAM)
4. Any trees cut down near the Springfield Fen Nature Preserve will be removed from the site. Shrubs and trees will be hand cut. (IDNR-DNP)
5. A catalog of any trees removed near the Springfield Fen Nature Preserve will be compiled and provided to nature preserve staff. (IDNR-DNP)
6. An entrenched silt fence will be installed along the project boundary on the north side of US 20 at the Springfield Fen Nature Preserve, beginning at CR 125 West and running east to N. Wilhelm Road in order to help minimize the number of reptiles and amphibians entering the work site during construction. The area will be visually inspected before the fence is installed to ensure snakes and turtles are not present. (IDNR-DNP, IDNR-DFW)
7. Unique habitat features of the Springfield Nature Preserve, such as fallen trees, logs, rock piles and brush piles, will not be removed or destroyed. Water levels in wetland habitats will not be altered. Compaction and alteration of soil (e.g. from vehicles or heavy equipment) that directly impacts habitat will be avoided. (IDNR-DNP)
8. The sign for the Springfield Fen Nature Preserve will be replaced by INDOT. (IDNR-DNP)
9. Net-like mesh fabrics (plastics, nylon, twine, etc.) for erosion control will not be utilized near the Springfield Nature Preserve due to entrapment/entanglement hazards. (IDNR-DNP)
10. Briefing of all workers by a herpetologist or other qualified environmental specialist on the Eastern Massasauga will take place prior to the start of construction. Protocol for any encounter of reptiles in the project area will be explained to all workers. The eastern box turtle (*Terrapene carolina carolina*), a state species of special concern, will also be covered by this protocol. (IDNR-DNP)
11. Periodic inspection of the worksite near the Springfield Nature Preserve by the herpetologist or environmental specialist will occur. The herpetologist or environmental specialist will inspect the entrenched silt fence at least weekly and will identify when favorable environmental conditions for snake activity are likely to occur in order to target their visits. (IDNR-DNP)
12. Erosion is occurring within the existing ROW and being deposited within Springfield Fen Nature Preserve. Erosion fencing will be installed prior to the clearing of the of the project area to keep erosion and contaminants from being deposited on the nature preserve. (IDNR-DNP)
13. The IDNR-DNP will review and approve the list of plant species to be used to revegetate the project area. Springfield Fen Nature Preserve is a high quality natural area with many conservative plant and animal species. Non-native vegetation will not be seeded adjacent to the nature preserve if it has the potential to become invasive. (IDNR-DNP)
14. Hunting and trapping occur at Springfield Fen Nature Preserve. The contractor will notify all workers that these are permitted activities. (IDNR-DNP)
15. Coordination with IDNR-DNP and USFWS regarding the Springfield Fen Nature Preserve will continue throughout the design process. (IDNR-DNP)
16. (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)
17. (Tree Removal AMM 1) Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal. (USFWS)
18. (Tree Removal AMM 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)
19. (Lighting AMM 1) All temporary lighting will be directed away from suitable habitat during the active season. (USFWS)
20. A “Reinitiation Notice” is required if: more than 11.44 acre of trees are to be cleared; the amount or extent of incidental take of Indiana bat and/or northern long-eared bat is exceeded; new information about listed species is encountered; new species is listed or critical habitat designated that the project may affect more than 0.45 acre of habitat suitable for Indiana bat between 100-300 feet from edge of pavement during the inactive season; the project is modified in a manner that causes an effect to the listed species; or, new information reveals that the project may affect listed species or critical habitat in a manner not considered in the BO or the project information. (USFWS)
21. Contractors must take care when handling dead or injured bats (regardless of species), and any other federally listed species that are found at the Project site in order to preserve biological material in the best possible condition and protect the handler from exposure to diseases, such as rabies. Project personnel are responsible for ensuring that any evidence

about determining the cause of death or injury is not unnecessarily disturbed. Reporting the discovery of dead or injured listed species is required in all cases to enable the Service to determine whether the level of incidental take exempted by the BO is exceeded, and to ensure that the terms and conditions are appropriate and effective. Parties finding a dead, injured, or sick specimen of any bat (regardless of species), or other endangered or threatened species, must promptly notify the USFWS Bloomington Field Office at (812) 334-4261. (USFWS)

22. The INDOT Project Manager will assure that $7,366.28 of Preliminary Engineering funds will be allocated to the Rangewide In-Lieu Fee Program, administered by The Conservation Fund, to resolve formal consultation under the Rangewide Programmatic. Payment shall be in process for Ready for Contracts (RFC) date. Mitigation must be paid within one year of the USFWS concurrence letter, issued March 28, 2022, or prior to the start of construction, whichever comes first. (USFWS)
23. If, during any phase of the proposed project-related ground-disturbing activities, any artifacts or burial objects are discovered, the person shall “immediately cease disturbing the ground and the area within one hundred (100) feet of the artifact or burial object,” and the Indiana DNR-DHPA will be notified within two business days, per IC 14-21-1-29. (DHPA)
24. Except for the elements of the proposed project detailed in the cemetery development plan, the cemetery must be avoided by all ground-disturbing project-related activities (e.g., demolition, construction, grading, dredging, and/or filling, tree clearance, vehicle or equipment staging, materials stockpiling, temporary land use, etc.), and provisions of relevant state statutes regarding cemeteries (including IC 14-21-1 and IC 23-14) must be adhered to. (DHPA)
25. Any proposed changes or modifications to the Rossburg Cemetery Development plan shall be submitted to the Indiana DNR-DHPA in writing for review and comment prior to implementation. (DHPA)
26. Tree clearing should be done outside the nesting season of the Cerulean Warbler, which occurs from May 1 through July 15. (IDNR-DFW)
27. Any work in a wetland area within INDOT's right-of-way or in borrow/waste areas is prohibited unless specifically allowed in the US Army Corps of Engineers or IDEM permit. (INDOT - EWPO)
28. A USFWS Bridge/Structure Assessment shall take place no earlier than two (2) years prior to the start of construction. If construction will begin after June 18, 2023, an inspection of the structure by a qualified individual, must be performed. Inspection of the structure should check for presence of bats/bat indicators and/or presence of birds. The results of the inspection must indicate no signs of bats or birds. If signs of bats or birds are documented during this inspection, the INDOT District Environmental Manager must be contacted immediately. (INDOT - LaPorte District)

For Further Consideration:

29. 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). Riprap may be used only at the toe of the sideslopes up to the ordinary high water mark (OHWM). The banks above the OHWM must be restored, stabilized, and revegetated using geotextiles and a mixture of grasses, sedges, wildflowers, shrubs, and trees native to Northern Indiana and specifically for stream bank/floodway stabilization purposes as soon as possible upon completion. (IDNR-DFW)
30. Impacts to non-wetland forest of one (1) acre or more should be mitigated at a minimum 2:1 ratio. If less than one acre of non-wetland forest is removed in a rural setting, replacement should be at a 1:1 ratio based on area. (IDNR-DFW)
31. Do not cut any trees suitable for Indiana bat or Northern Long-eared bat roosting (greater than 5 inches dbh, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30. (IDNR-DFW)
32. 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)
33. Do not construct any temporary runarounds, access bridges, causeways, cofferdams, diversions, or pumparounds. (IDNR-DFW)
34. On the north side of US 20, just west of the Springfield Fen western boundary, two drainage pipes that extend under US 20 from south to north will receive riprap at their outlets. These outlets are within the existing INDOT ROW, and the land to the north, which includes part of the southwestern corner of the Fen, is privately owned. The designated Springfield Fen Nature Preserve would not be directly impacted by the placement of this riprap, but any discharges from these pipes would ultimately end up within the Preserve. The pipes are within the only valley area directly along the north side of US 20 in the vicinity of Springfield Fen. Sheet runoff from the US 20 pavement has been known to occur, with erosion down the steep slope to the Fen. Therefore, INDOT may need to address this issue beyond the commitment to install erosion control fencing, such as considering an elevated curb along the north side of the pavement across the length of this low area, in order to redirect the sheet flow. (USFWS)

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LaPorte County, Indiana
Des. No. 1702993

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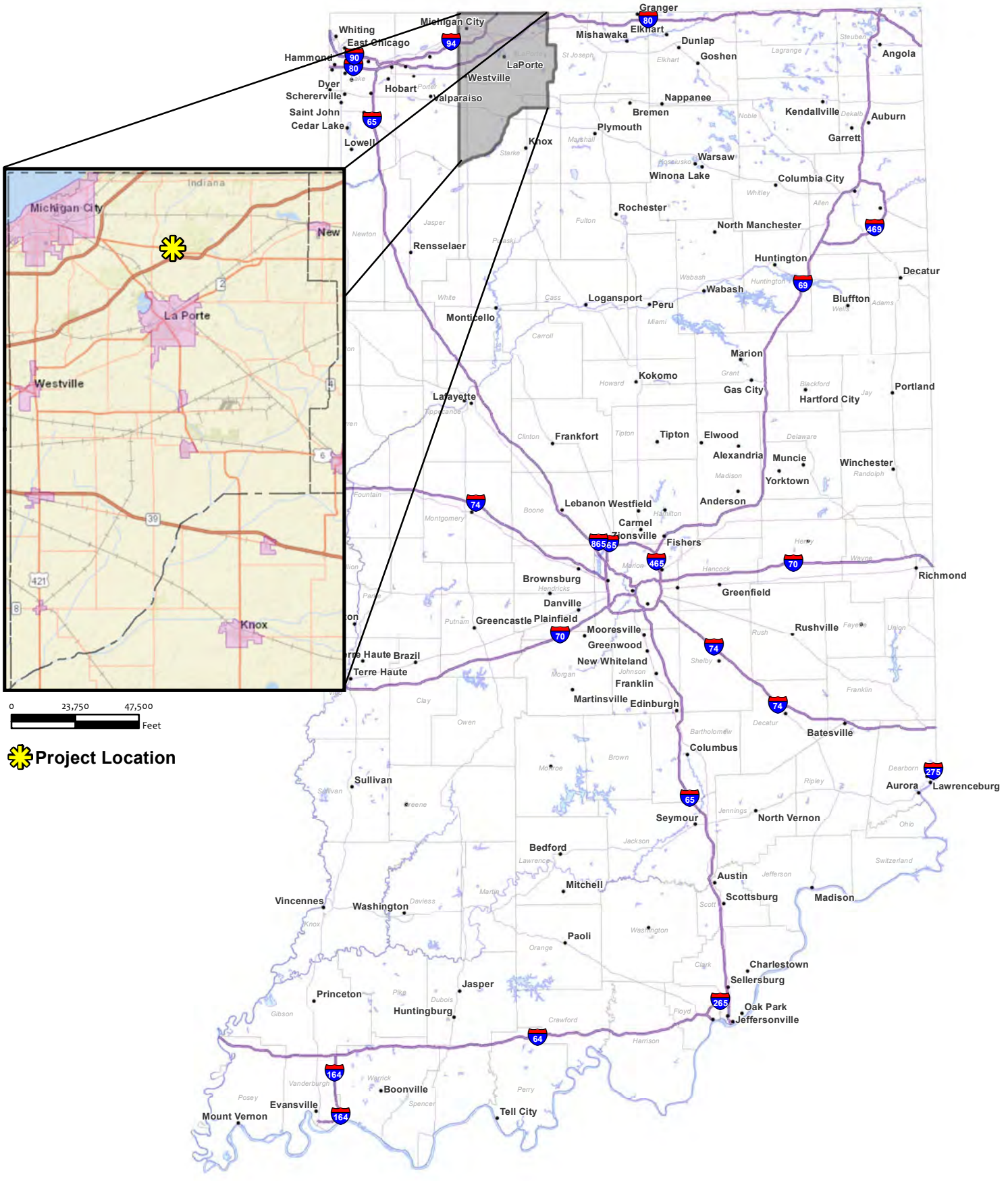
APPENDIX A: INDOT SUPPORTING DOCUMENTATION

Categorical Exclusion Level Thresholds

	PCE	Level 1	Level 2	Level 3	Level 4[1]
Section 106	Falls within guidelines of Minor Projects PA	"No Historic Properties Affected"	"No Adverse Effect"	-	"Adverse Effect" Or Historic Bridge involvement[2]
Stream 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



State Map

US 20 Auxiliary Lanes, Two Way Left Turn Lanes
LaPorte County, Indiana
Des. No. 1702993

B1

Butler Fairman Seufert
CIVIL ENGINEERS

Map Source: Indiana Map

US 20 Auxiliary Lanes, Two Way Left Turn Lanes

Des No. 1702993

US 20 from 400' east of SR 39 to 2.85 miles east of SR 39

LaPorte County, Indiana

Sources:

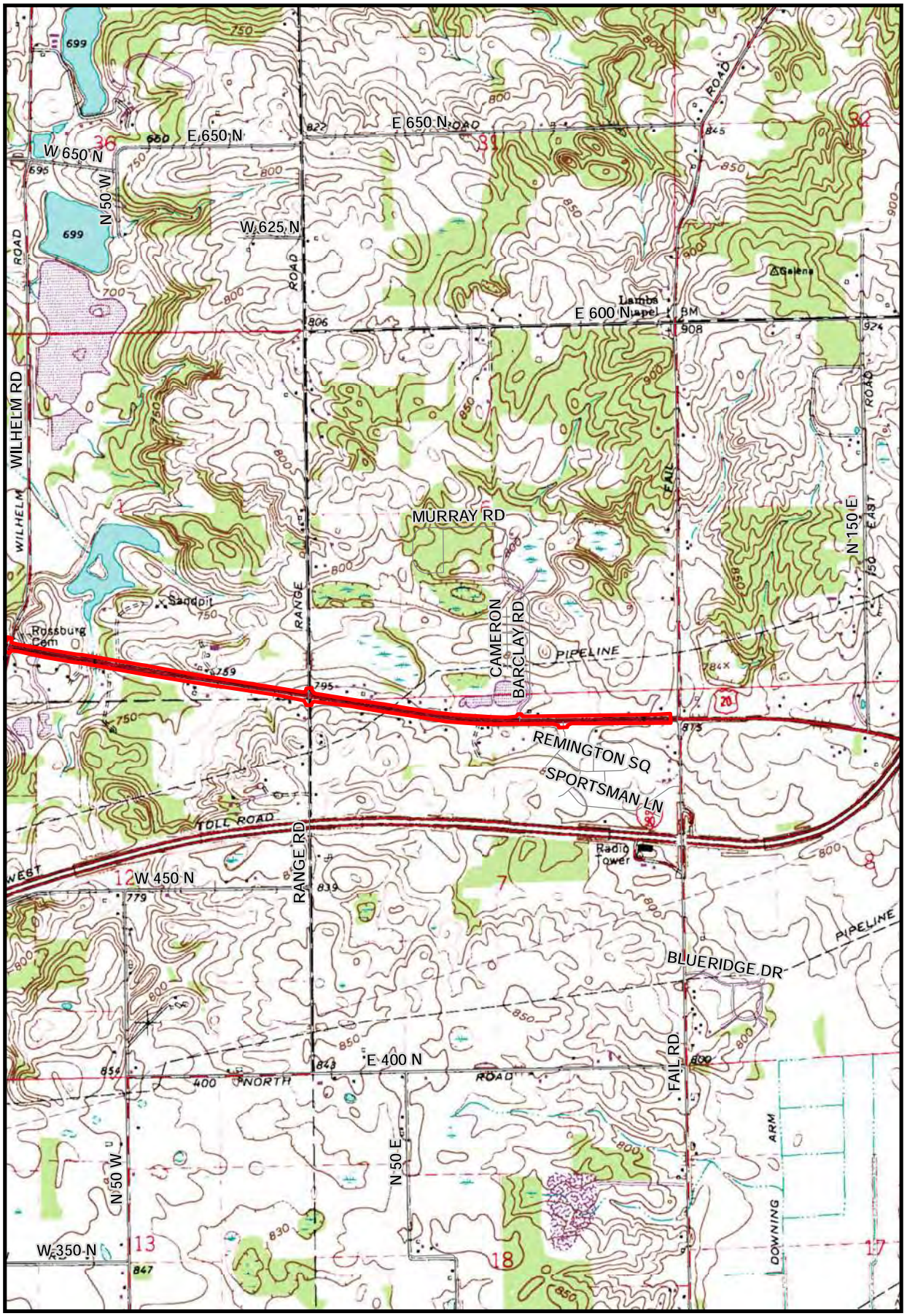
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library

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

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.

SPRINGVILLE QUADRANGLE
INDIANA
7.5 MINUTE SERIES
(TOPOGRAPHIC)



Legend

Project Area

Map Source: Indiana Geological Survey (IGS), IndianaMap, 20## ArcGIS Online (ESRI) World Imagery.

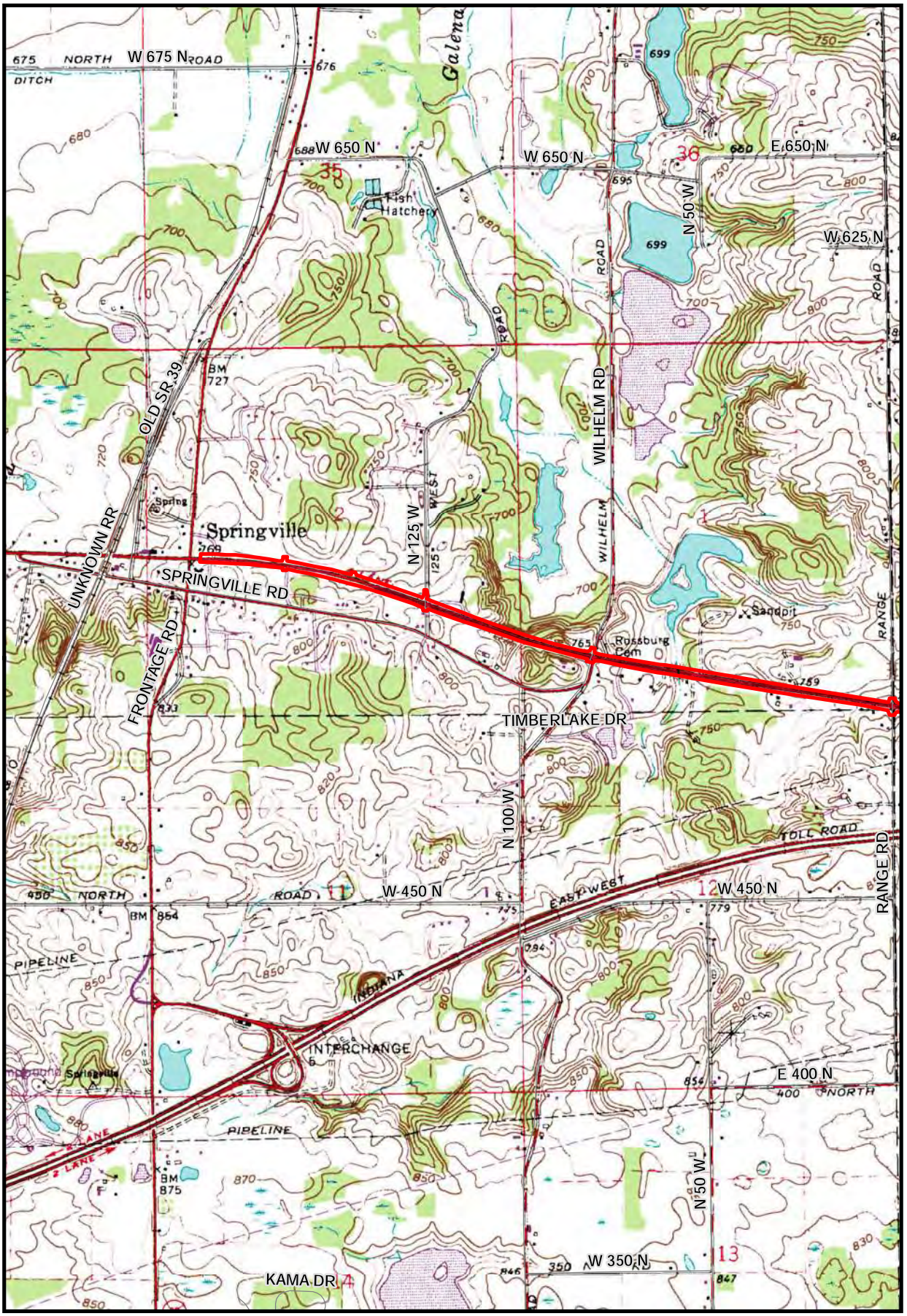
0 950 1,900 3,800 Feet

Springville, IN
7.5-minute USGS Quadrangle
(East Terminus)

US 20 Auxiliary Lanes, LaPorte County, Indiana
Sections 1, 2, & 12, Township 37 North, Range 3 West and
Sections 6 & 7, Township 37 North, Range 2 West
Des. No. 1702993

B3

BF&S CIVIL ENGINEERS



Legend

Project Area

Map Source: Indiana Geological Survey (IGS), IndianaMap, 20## ArcGIS Online (ESRI) World Imagery.

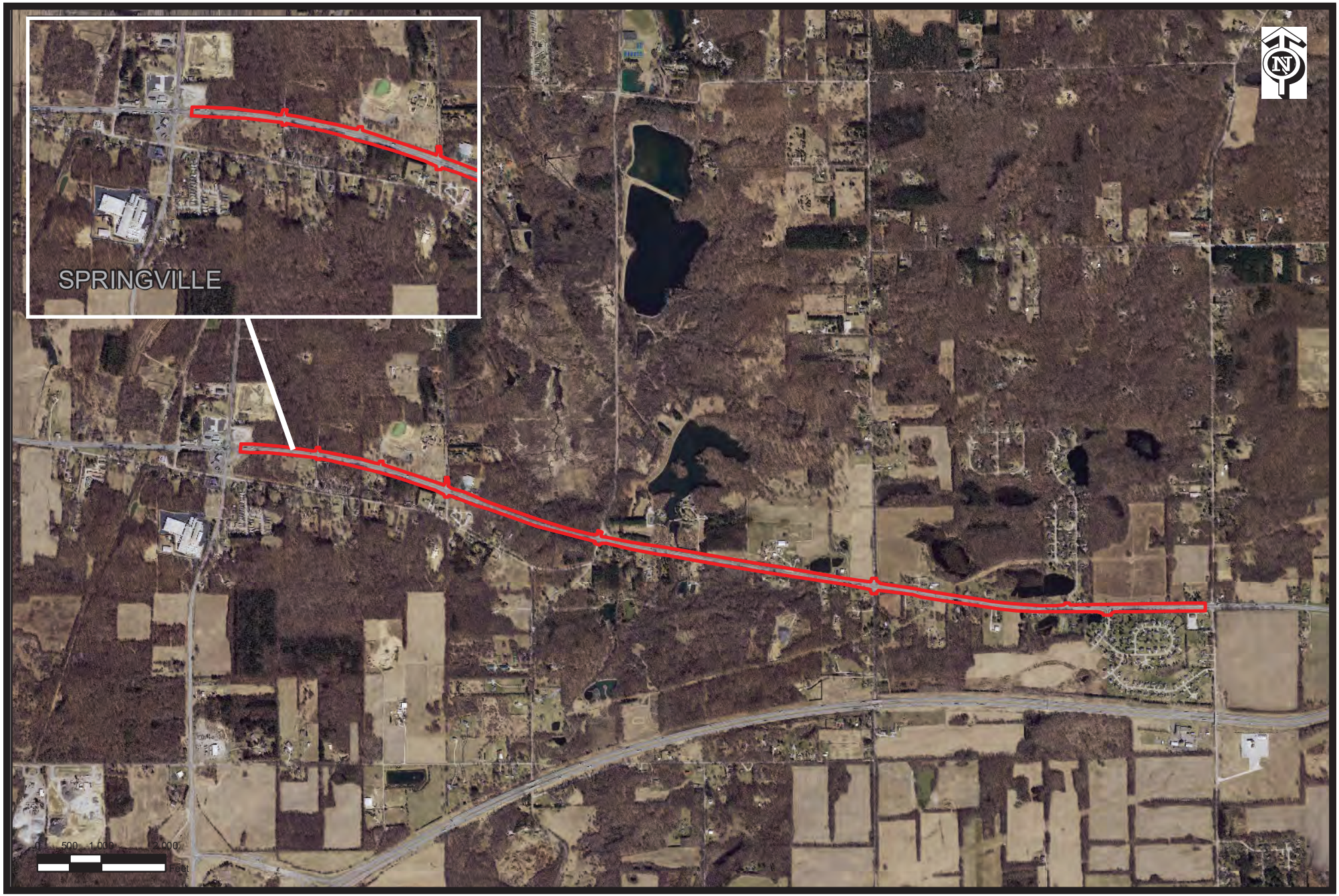
0 950 1,900 3,800 Feet

Springville, IN
7.5-minute USGS Quadrangle
(West Terminus)

US 20 Auxiliary Lanes, LaPorte County, Indiana
Sections 1, 2, & 12, Township 37 North, Range 3 West
and Sections 6 & 7, Township 37 North, Range 2 West
Des. No. 1702993

BF&S CIVIL ENGINEERS

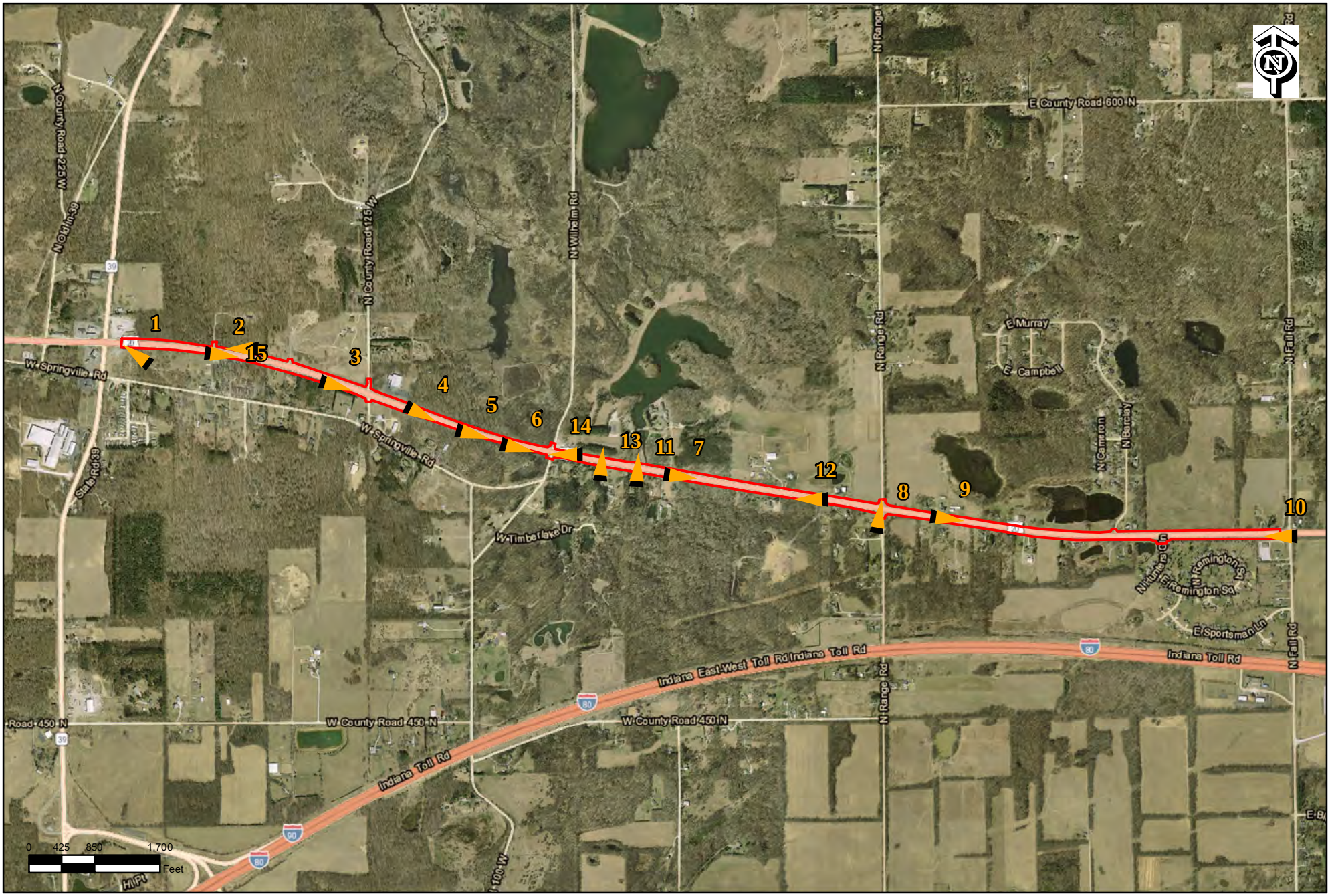
B4



Map Source: Indiana Geological Survey (IGS), IndianaMap, 2018 ArcGIS Online (ESRI) World Imagery.

Aerial Map of Project Area

US 20 Auxiliary Lanes, Two Way Left Turn Lanes
LaPorte County, Indiana
Des. No. 1702993



Aerial Photo Reference Map of Project Area

US 20 Auxiliary Lanes, Two Way Left Turn Lanes
LaPorte County, Indiana
Des. No. 1702993

Legend

Project Area

Photo Location

Map Source: Indiana Geological Survey (IGS), IndianaMap, 2019 ArcGIS Online (ESRI) World Imagery.

Photo 1: Looking northwest along US 20 from the western project terminus

Photo 2: Looking east along US 20 from the western project terminus

Photo 3: Looking east along US 30 at CR 125 W.

Photo 4: Looking east along US 20.

Photo 5: Looking east at along US 20.

Photo 6: Looking east at Wilhelm Road.

Photo 7: Looking east along US 20.

Photo 8: Looking north along US 20 at Range Road.

Photo 9: Looking east along US 20.

Photo 10: Looking west along US 20 at Fail Road and Eastern terminus of project.

Photo 11: Looking north from US 20.

Photo 12: Looking west along US 20.

Photo 13: Looking north at Cemetery along US east of Wilhelm Rd.

Photo 14: Looking west at Galena Marsh and Wilhelm Road.

Photo 15: Looking west along US 20.

Preliminary Plans

PROJECT	DESIGNATION
1702993	1702993
CONTRACT	
R-41437	

STAGE 2 NOTES:

1. Per recommendations from Geotech, underdrains are not anticipated for this project. The Plans will be updated by the next submittal, to address the final approved pavement design and removal of underdrains, simultaneously. However, the cost estimate reflects no underdrains for PM budgeting purposes.
2. End project limits have been adjusted since Stage 1. The intersection of Fail Rd. will now be addressed in DES. No. 1900050.
3. Design Team is working with District Assessment Engineers and Central Hydraulics regarding desired culvert design expectations and solutions. As a result, some structure information within is expected to change by next submittal but currently represents compliance with current INDOT design standards.

INDIANA DEPARTMENT OF TRANSPORTATION

ROAD PLANS
US 20

PROJECT NO. 1702993 P.E.
1702993 R/W
1702993 CONST.

The Indiana Department of Transportation (INDOT) LaPorte District Is Planning To Make Improvements To US 20 From 400' East Of SR 39 To 2.85 Miles East Of SR 39 (Fail Rd.) Including Adding A Two-way Left Turn Lane And Widened Shoulders In Sections 1, 2, And 12, T 37 N. Range 3 W And And Sections 6 And 7, T 37 N. Range 2 W, Kankakee Township, Laporte,Indiana.

GROSS LENGTH: 2.96 Mi.
NET LENGTH: 2.96 Mi.

SCALES:

PLAN {LONG:- 1"=50' / TRANS:- 1"=50' PROFILE {HORIZ:- 1"=50' / VERT:- 1"=10' MAX. GRADE- 3.90%

BEGIN PROJECT
P.O.T. Sta. 255+25.28 "D"

END PROJECT
P.O.T. Sta. 407+41.72 "D"

SCALE: 1"=1000'

VICINITY MAP
LAPORTE COUNTY

TRAFFIC DATA		US 20
A.A.D.T.	(2023)	28,458 V.P.D.
A.A.D.T.	(2043)	34,724 V.P.D.
D.H.V.	(2043)	2778 V.P.H.
DIRECTIONAL DISTRIBUTION		58 %
TRUCKS		33.8 % D.H.V.
		33.8 % A.A.D.T.
DESIGN DATA		
DESIGN SPEED		45/55 MPH
FUNCTIONAL CLASSIFICATION		OTHER PRINCIPAL ARTERIAL
TERRAIN		LEVEL
RURAL/URBAN		RURAL
ACCESS CONTROL		NONE
PROJECT DESIGN CRITERIA		3R NON-FREEWAY

PROJECT LOCATION SHOWN BY

Begin Approx. 41°41'08" N. Lat. & 86°43'46" W. Long.
End Approx. 41°40'43" N. Lat. & 86°40'47" W. Long.

RP 48+9 TO 51+7

HUC - 04040001100050

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

PLANS PREPARED BY: Butler Fairman and Seufert Inc. (317)713-4615 PHONE
CERTIFIED BY: DATE
APPROVED FOR LETTING: INDIANA DEPARTMENT OF TRANSPORTATION DATE

BRIDGE FILE	
DESIGNATION	
1702993	
SURVEY BOOK	SHEET
	01 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

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UTILITIES

CABLE:
Comcast
16 West 84th Drive
Merrillville, In. 46405
(224) 229-6850
Attn. Larry Smith
Larry Smith3@cable.comcast.com

COMMUNICATIONS:
Automated Data (Acme)
618 Franklin Street
Michigan City, In. 46360
(219) 879-6600
Attn. William Ritchey
BWRitchey@adsnet.com

COMMUNICATIONS:
AT&T Distribution
107 Mariner Drive
Michigan City, In. 46360
(219) 972-5687
Attn. Rich Schulte
rs2763@att.com

COMMUNICATIONS:
Frontier Communications
2401 Chicago Street
Valparaiso, In. 46383
(219) 531-2118
Attn. DianaSacks
diana.l.sacks@ftr.com

INDOT SIGNALS:
INDOT LaPorte
315 East Boyd Boulevard
LaPorte, In. 46350
(219) 325-7581
Attn. Adam Banks
abanks1@indot.in.com

GAS:
NIPSCO
1501 St. Rd. 2 West
Laporte, In. 46350
(219) 325-4284
Attn. Lisa Taylor
letaylor@nisource.com

ELECTRIC:
AEP Distribution
2929 Lathrop Street
South Bend, In. 46628
(574) 236-1658
Attn. Antonio Macias
amacias@aep.com

ELECTRIC:
AEP Transmission
8500 Smith's Mill Rd.
New Albany, Oh. 43054
(614) 933-2297
Attn. Josh Adams
TL PublicProjects@aep.com

FIBER:
Century Link Fiber
(317) 736-5309
Attn. James Foutz
James.Foutz@CenturyLink.com

PIPELINE:
Wolverine Pipe Line Company
8075 Creekside Drive, Suite 210
Portage, Mi. 49024
(269) 323-2491
Attn. Louis Kraus
Louis Kraus@wplco.com

PIPELINE:
Wolverine Pipe Line Company
8075 Creekside Drive, Suite 210
Portage, Michigan 49024
Attn. Jessica Hunter
Jessica_Hunter@wplco.com

REVISIONS

SHEET NO.	DATE	REVISED

GENERAL NOTES

	All earth shoulders, median areas, and cut and fill slopes shall be plain or mulch seeded except where sodding is specified.
	The final cross sections of the grading contract will be the original cross sections of the paving contract. However, partial or complete cross sections shall be taken if necessary to determine the actual excavation quantities.
	The paper relocation will be cross sectioned by the Engineer before construction.
	Existing asphalt pavement located outside the construction limits, between Sta. 00+00 and Sta. 00+00 shall be removed as directed.
	The quantity of Peat "Excavation" as shown on the plans has been estimated on the basis of theoretical cross-sections by using treatment of existing fills, treatment by removal, or treatment by displacement where each treatment applies.
	Contractor shall verify the existing flowline elevation to set appropriate sump depth.

** REPRESENTS GENERAL NOTES REQUIRED

INDEX

SHEET NO.	DESIGNATION
01	TITLE SHEET
02	INFORMATION SHEET
03-06	TYPICAL CROSS SECTIONS
07-08	MAINTENANCE OF TRAFFIC TYPICAL CROSS SECTIONS
09-11	PLAT NO. 1
12-32	MAINTENANCE OF TRAFFIC
33-43	PLAN & PROFILES
44-45	SUPERELEVATION DIAGRAM
46-72	CONSTRUCTION DETAILS
73-81	PAVEMENT MARKINGS & SIGNAGE
82-83	STRUCTURE DATA TABLE
84-86	APPROACH TABLE
87-192	CROSS SECTIONS

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER DATE

DESIGNED: JCS DRAWN: BKM

CHECKED: JWG CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

INDEX SHEET

HORIZONTAL SCALE	BRIDGE FILE
N/A	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
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CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

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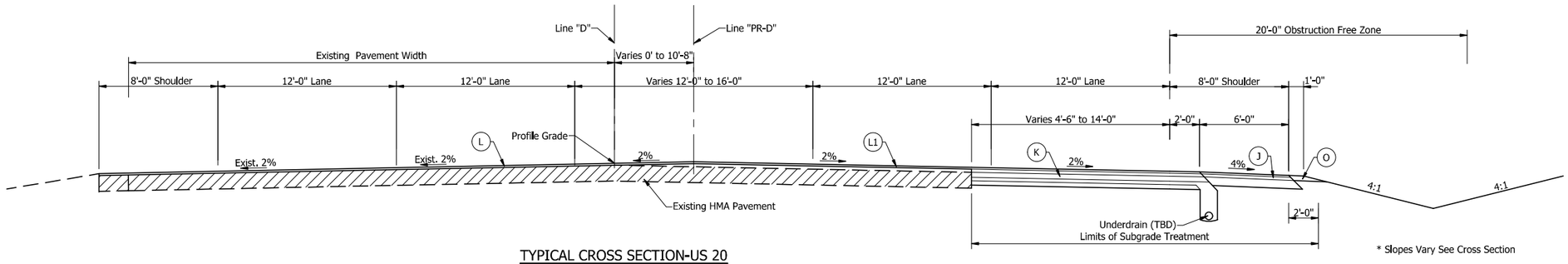
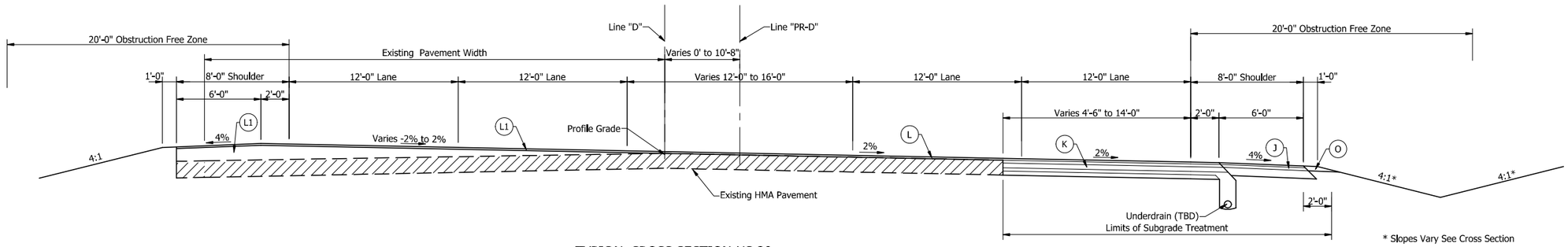


TYPICAL CROSS SECTION-US 20

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

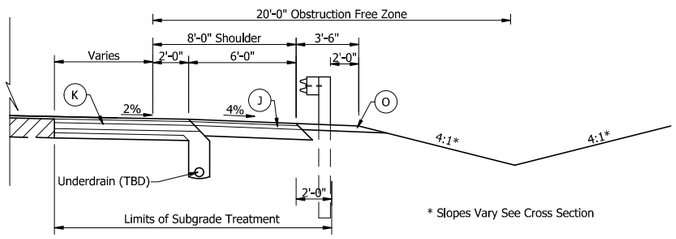
Sta. 255+25.28 "D" to Sta. 255+82.54 "D"
Sta. 287+75.78 "D" to Sta. 289+00.00 "D"



TYPICAL CROSS SECTION-US 20

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

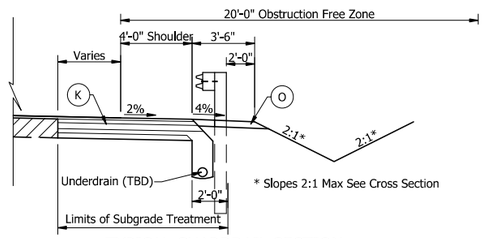
Sta. 255+82.54 "D" to Sta. 287+75.78 "D"



TYPICAL GUARDRAIL SECTION

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

Sta. 278+50.00 "D" to Sta. 280+14.68 "D" Right



TYPICAL GUARDRAIL SECTION

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

Sta. 280+81.56 "D" to Sta. 286+78.00 "D" Right

LEGEND

- (J) HMA SHOULDER (TBD)
- (K) FULL DEPTH HMA PAVEMENT (TBD)
- (L) MILL & OVERLAY EXISTING PAVEMENT (TBD)
- (L1) MILL & VARIABLE DEPTH OVERLAY EXISTING PAVEMENT (TBD)
- (O) COMPACTED AGGREGATE NO. 53

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: JCS DRAWN: BKM

CHECKED: JWG CHECKED: JCS

INDIANA DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS

HORIZONTAL SCALE	BRIDGE FILE
As Shown	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
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BFS NO. 6453.1701

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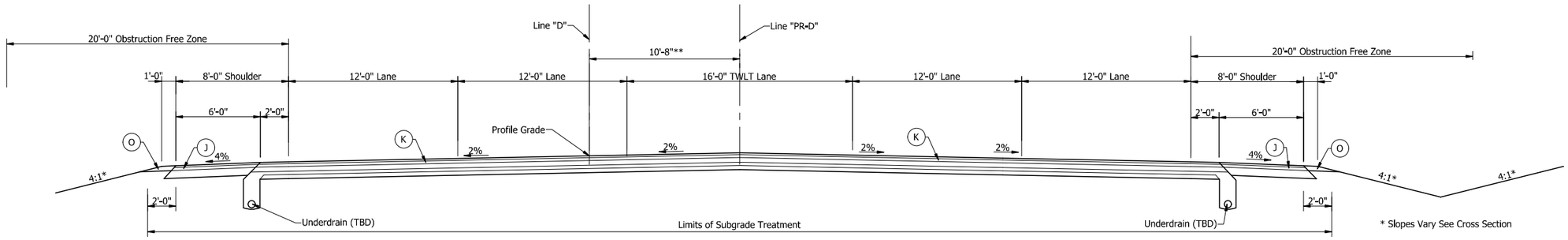
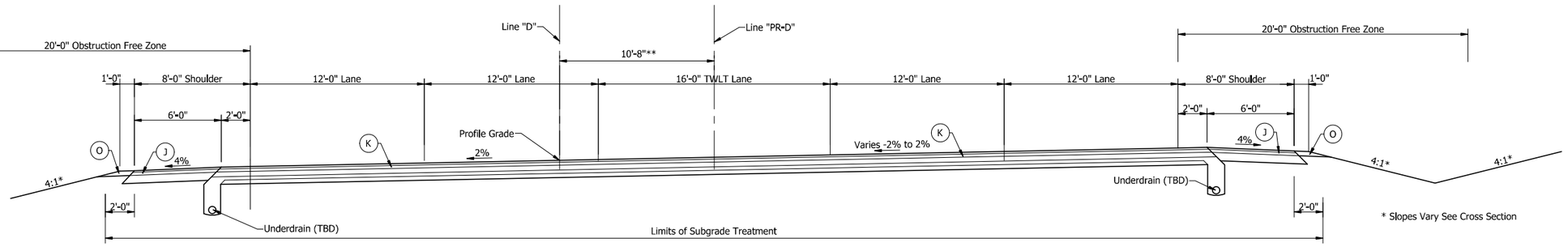


TYPICAL CROSS SECTION-US 20

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

Sta. 289+00.00 "D" to Sta. 300+00.25 "D"

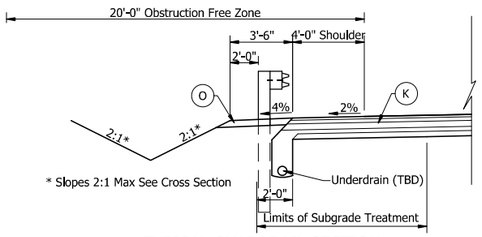


TYPICAL CROSS SECTION-US 20

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

Sta. 300+00.25 "D" to Sta. 318+21.03 "D"

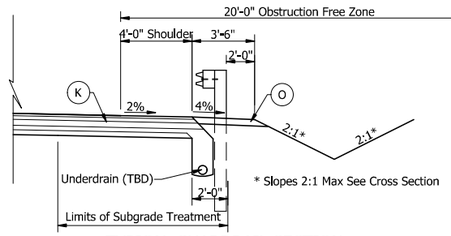
** Varies From 10'-8" to 0'-0" From Sta. 305+00.00 "D" to 317+34.40 "D"



TYPICAL GUARDRAIL SECTION

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

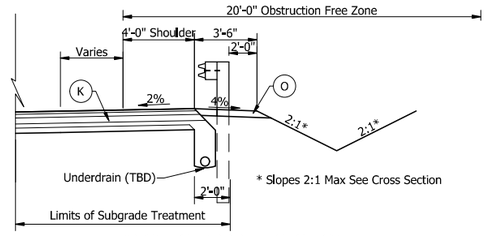
Sta. 298+00.00 "D" to Sta. 311+96.00 "D" Left



TYPICAL GUARDRAIL SECTION

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

Sta. 297+50.00 "D" to Sta. 300+00.25 "D" Right



TYPICAL GUARDRAIL SECTION

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

Sta. 300+00.25 "D" to Sta. 313+00.00 "D" Right

LEGEND

- (J) HMA SHOULDER (TBD)
- (K) FULL DEPTH HMA PAVEMENT (TBD)
- (L) MILL & OVERLAY EXISTING PAVEMENT (TBD)
- (L1) MILL & VARIABLE DEPTH OVERLAY EXISTING PAVEMENT (TBD)
- (O) COMPACTED AGGREGATE NO. 53

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: JCS DRAWN: BKM

CHECKED: JWG CHECKED: JCS

INDIANA DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS

HORIZONTAL SCALE	BRIDGE FILE
As Shown	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
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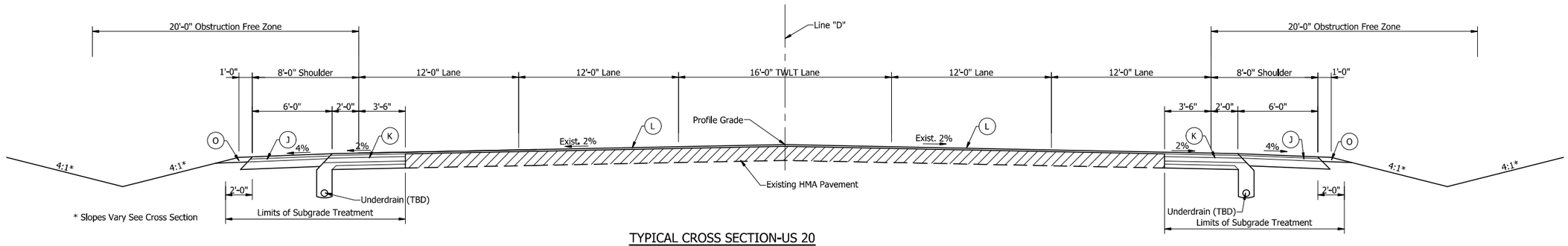
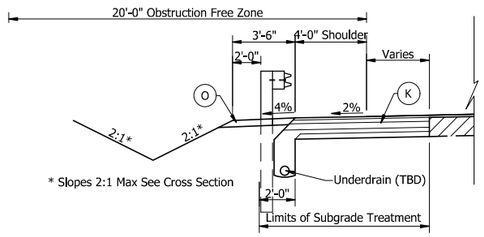


TYPICAL CROSS SECTION-US 20

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

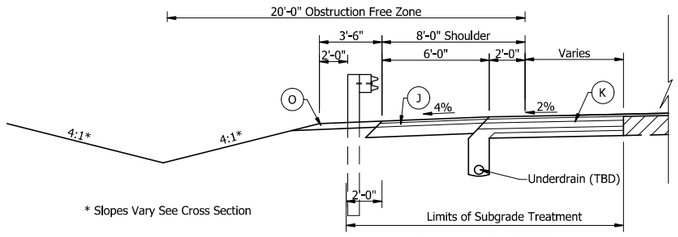
Sta. 318+21.03 "D" to Sta. 374+44.80 "D"
Sta. 389+84.81 "D" to Sta. 400+94.33 "D"



TYPICAL GUARDRAIL SECTION

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

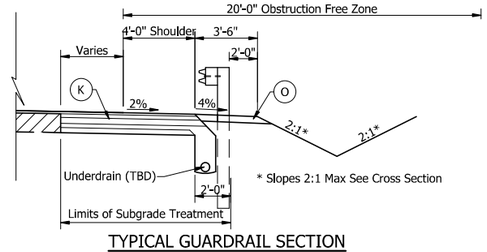
Sta. 316+10.76 "D" to Sta. 354+09.18 "D" Left
Sta. 370+25.00 "D" to Sta. 373+46.41 "D" Left
Sta. 389+36.08 "D" to Sta. 395+24.00 "D" Left



TYPICAL GUARDRAIL SECTION

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

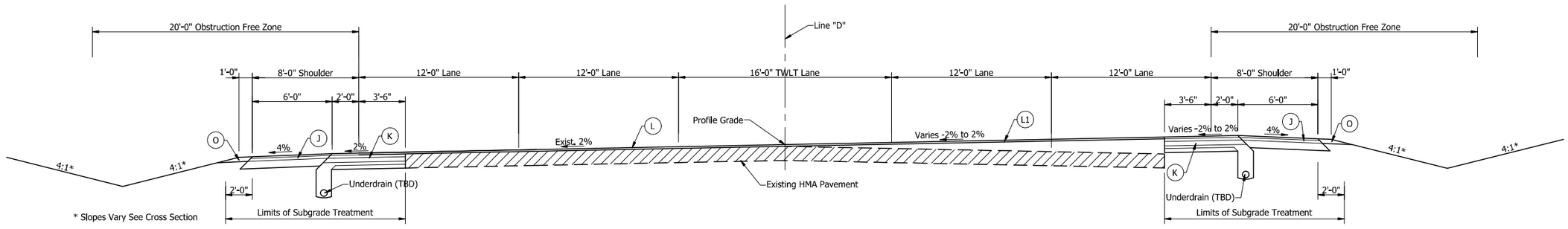
Sta. 373+46.41 "D" to Sta. 375+68.00 "D" Left



TYPICAL GUARDRAIL SECTION

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

Sta. 322+59.58 "D" to Sta. 328+80.00 "D" Right
Sta. 341+38.94 "D" to Sta. 346+02.00 "D" Right
Sta. 352+67.71 "D" to Sta. 358+00.00 "D" Right
Sta. 390+33.58 "D" to Sta. 393+56.00 "D" Right



TYPICAL CROSS SECTION-US 20

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

Sta. 374+44.80 "D" to Sta. 389+84.81 "D"

LEGEND

- (J) HMA SHOULDER (TBD)
- (K) FULL DEPTH HMA PAVEMENT (TBD)
- (L) MILL & OVERLAY EXISTING PAVEMENT (TBD)
- (L1) MILL & VARIABLE DEPTH OVERLAY EXISTING PAVEMENT (TBD)
- (O) COMPACTED AGGREGATE NO. 53

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: JCS DRAWN: BKM

CHECKED: JWG CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS

HORIZONTAL SCALE	BRIDGE FILE
1"=10'	
VERTICAL SCALE	DESIGNATION
1"=10'	1702993
SURVEY BOOK	SHEET
	05 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

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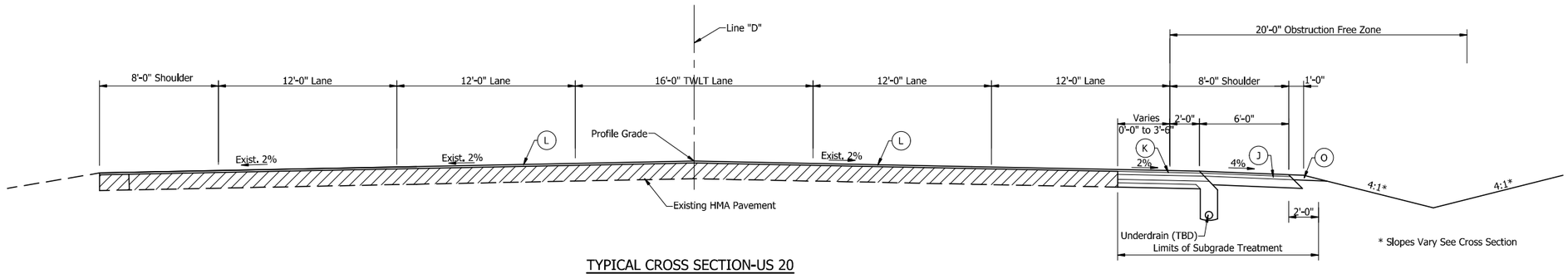
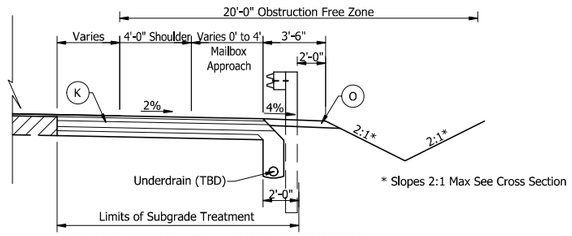


TYPICAL CROSS SECTION-US 20

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

Sta. 400+94.33 "D" to Sta. 407+41.72 "D"



TYPICAL MAILBOX APPROACH SECTION

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

Sta. 323+80.48 "D" to Sta. 324+97.08 "D" Right
Sta. 329+51.00 "D" to Sta. 330+56.49 "D" Right
Sta. 371+84.37 "D" to Sta. 373+65.55 "D" Left
Sta. 389+94.01 "D" to Sta. 391+00.37 "D" Left

LEGEND

- (J) HMA SHOULDER (TBD)
- (K) FULL DEPTH HMA PAVEMENT (TBD)
- (L) MILL & OVERLAY EXISTING PAVEMENT (TBD)
- (O) COMPACTED AGGREGATE NO. 53

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: JCS DRAWN: JMT

CHECKED: JWG CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS

HORIZONTAL SCALE	BRIDGE FILE
1/4"=1'-0"	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	06 OF 192
CONTRACT	PROJECT
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BFS NO. 6453.1701

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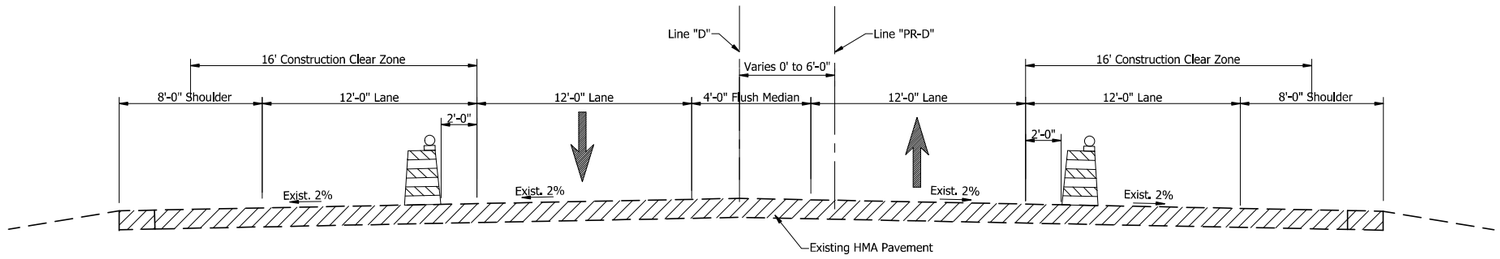
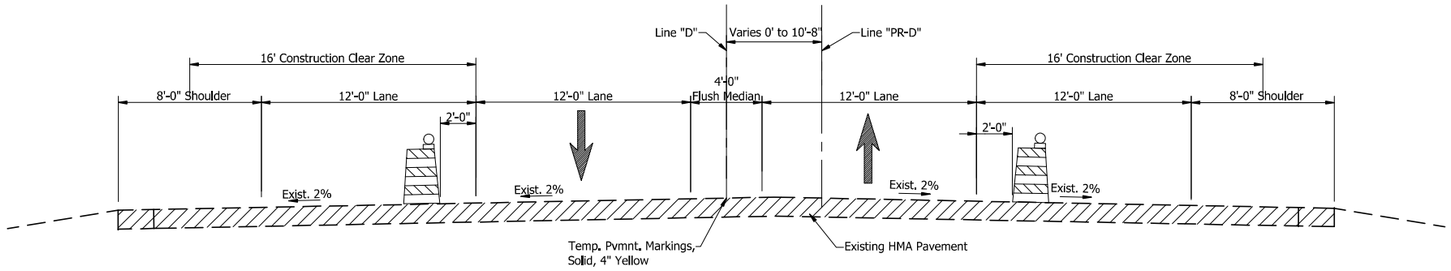


TYPICAL CROSS SECTION M.O.T. PHASE 1

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

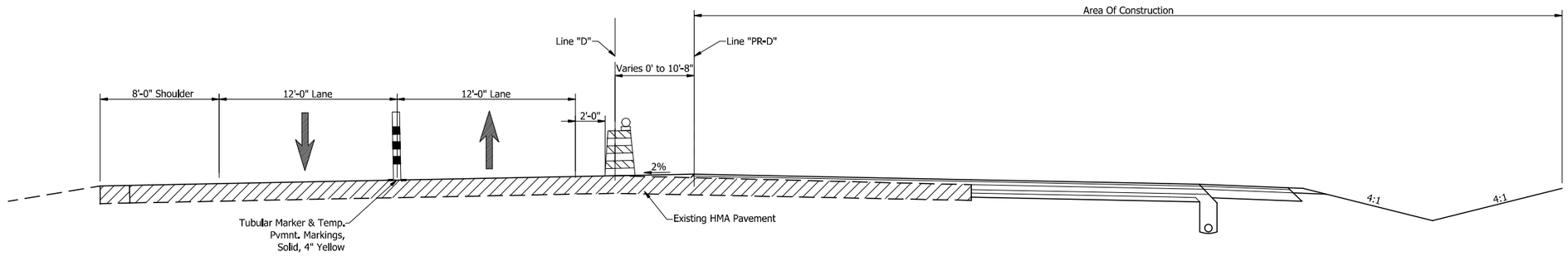
Sta. 255+25.28 "D" to Sta. 264+00.00 "D"



TYPICAL CROSS SECTION M.O.T. PHASE 1

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

Sta. 264+00.00 "D" to Sta. 407+41.72 "D"



TYPICAL CROSS SECTION M.O.T. PHASE 2

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

Sta. 255+25.28 "D" to Sta. 286+00.00 "D"

Sta. 321+00.00 "D" to Sta. 407+41.72 "D"

* Slopes Vary See Cross Section

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: JCS DRAWN: DRM

CHECKED: JWG CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS

HORIZONTAL SCALE	BRIDGE FILE
As Shown	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	07 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

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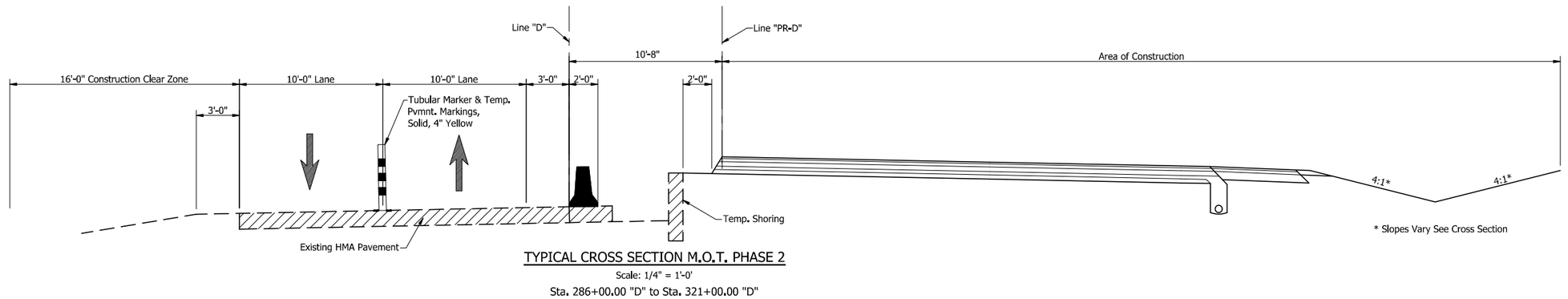
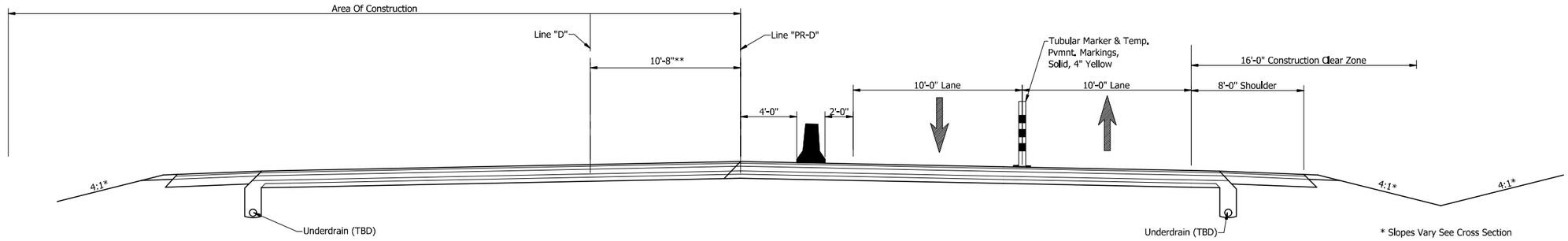


TYPICAL CROSS SECTION M.O.T. PHASE 2

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

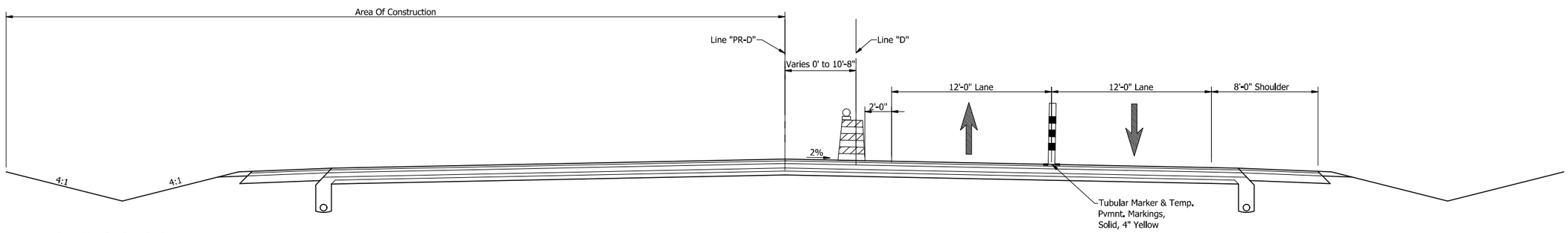
Sta. 286+00.00 "D" to Sta. 321+00.00 "D"



TYPICAL CROSS SECTION M.O.T. PHASE 3

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

Sta. 286+00.00 "D" to Sta. 321+00.00 "D"



TYPICAL CROSS SECTION M.O.T. PHASE 3

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

Sta. 321+00.00 "D" to Sta. 407+41.72 "D"

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER DATE

DESIGNED: JCS DRAWN: DRM

CHECKED: JWG CHECKED: JCS

INDIANA DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS

HORIZONTAL SCALE	BRIDGE FILE
As Shown	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	08 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

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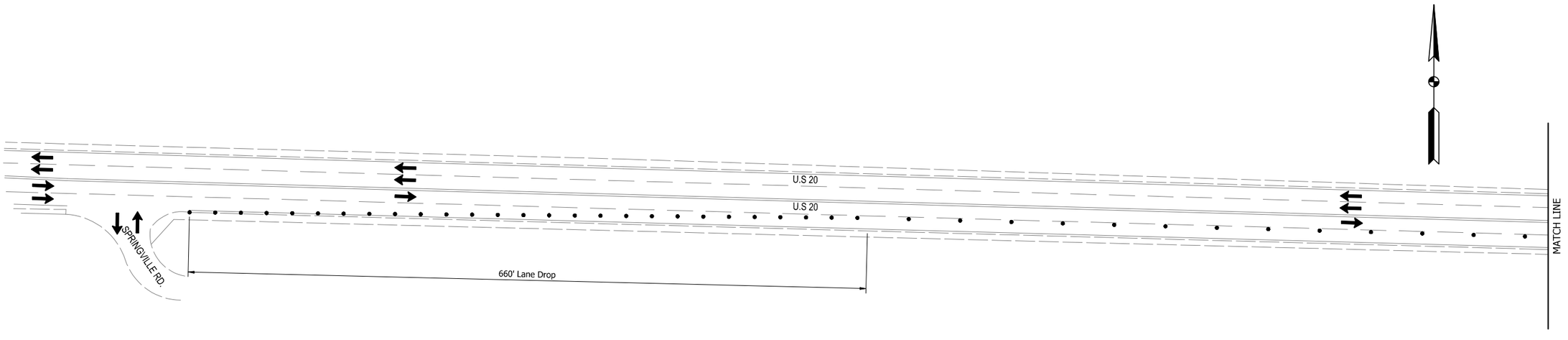
Sequence of Operations

Phase 1 - Clear R/W for utility relocations along US 20

- Place maintenance of traffic devices and signage to maintain at least one lane of traffic in each direction of travel on the inside lanes of US 20 during working hours.
- Cover unnecessary existing signs.
- Construct and maintain erosion control measures for clearing operations.
- Perform clearing of Right-of-Way for utility relocations and proposed roadway improvements on the north and south sides of US 20.
- Maintain ingress and egress to all properties at all times.

STAGE 2 SUBMITTAL - MOT concept shown for review and comment.

MOT signage, pavement markings and additional detail will be added for Stage 3 submittal.



LEGEND

- AREA OF CONSTRUCTION
- TRAFFIC FLOW
- CHANNELIZING DEVICE
- TRAFFIC SIGNS
- TYPE III-B BARRICADE
- ARROW BOARD
- PAVEMENT MARKING REMOVAL
- (43) TEMP. PAVEMENT MARKING, REMOVABLE SOLID WHITE, 4"

CONSTRUCTION ZONE MOT DESIGN SPEED 45 MPH

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: CWW DRAWN: DRM

CHECKED: JCS CHECKED: JCS

INDIANA DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC PHASE 1

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	12 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

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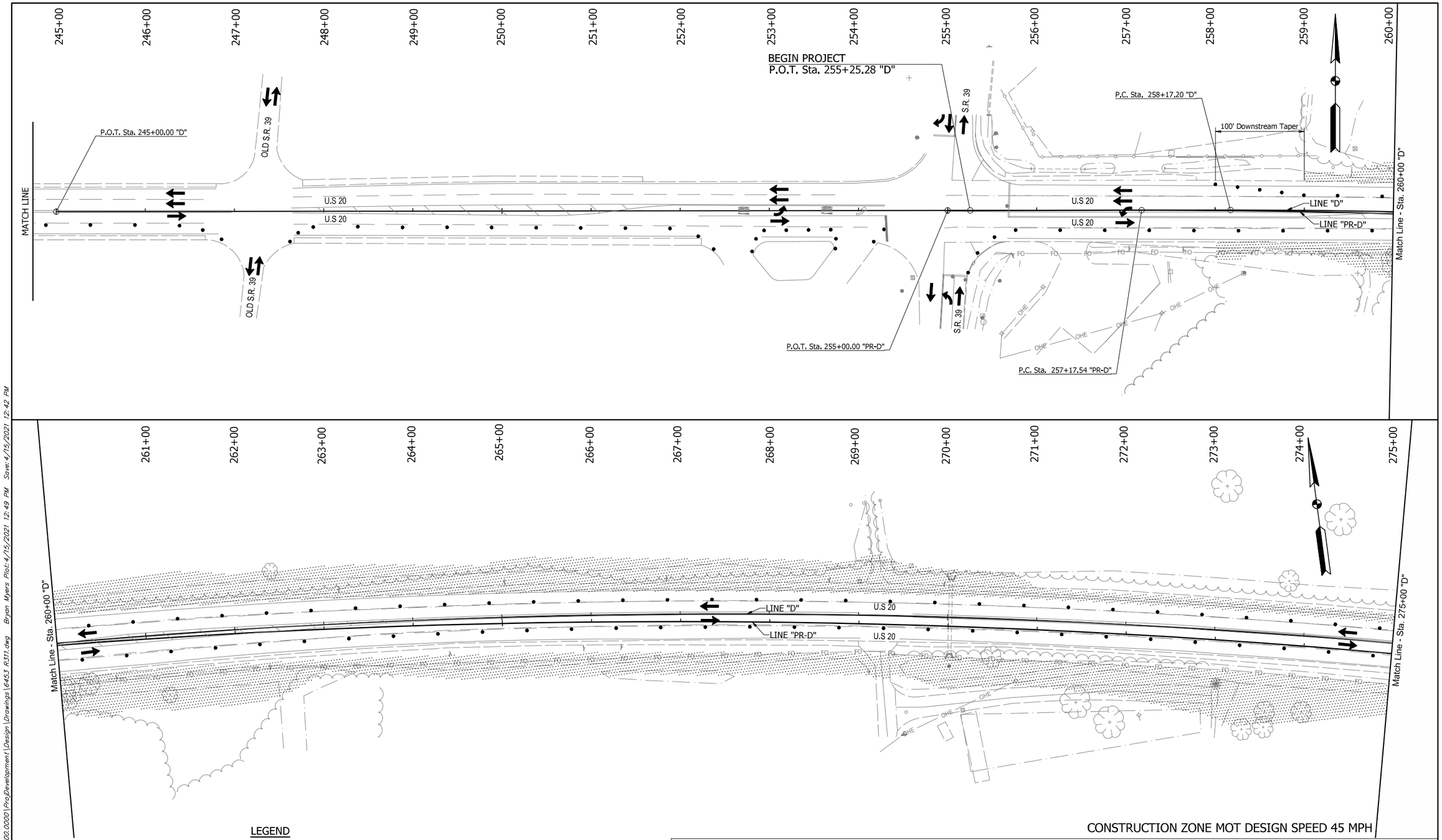


CONSTRUCTION ZONE MOT DESIGN SPEED 45 MPH

LEGEND

- AREA OF CONSTRUCTION
- TRAFFIC FLOW
- CHANNELIZING DEVICE
- TRAFFIC SIGNS
- TYPE III-B BARRICADE
- ARROW BOARD
- PAVEMENT MARKING REMOVAL
- (43) TEMP. PAVEMENT MARKING, REMOVABLE SOLID WHITE, 4"

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: CWW DRAWN: DRM

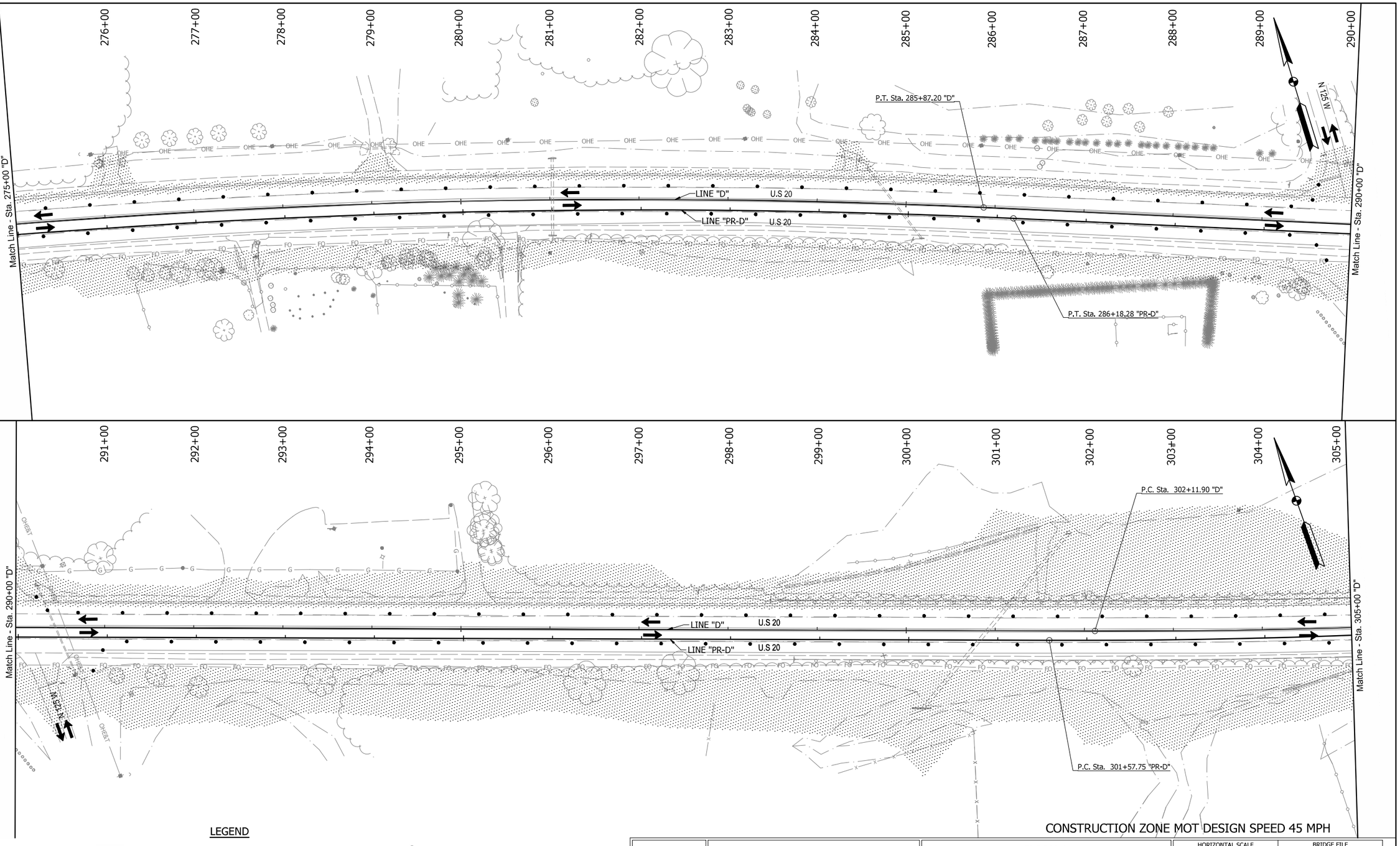
CHECKED: JCS CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 1

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	13 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701



RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: CWW DRAWN: DRM

CHECKED: JCS CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 1

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	14 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

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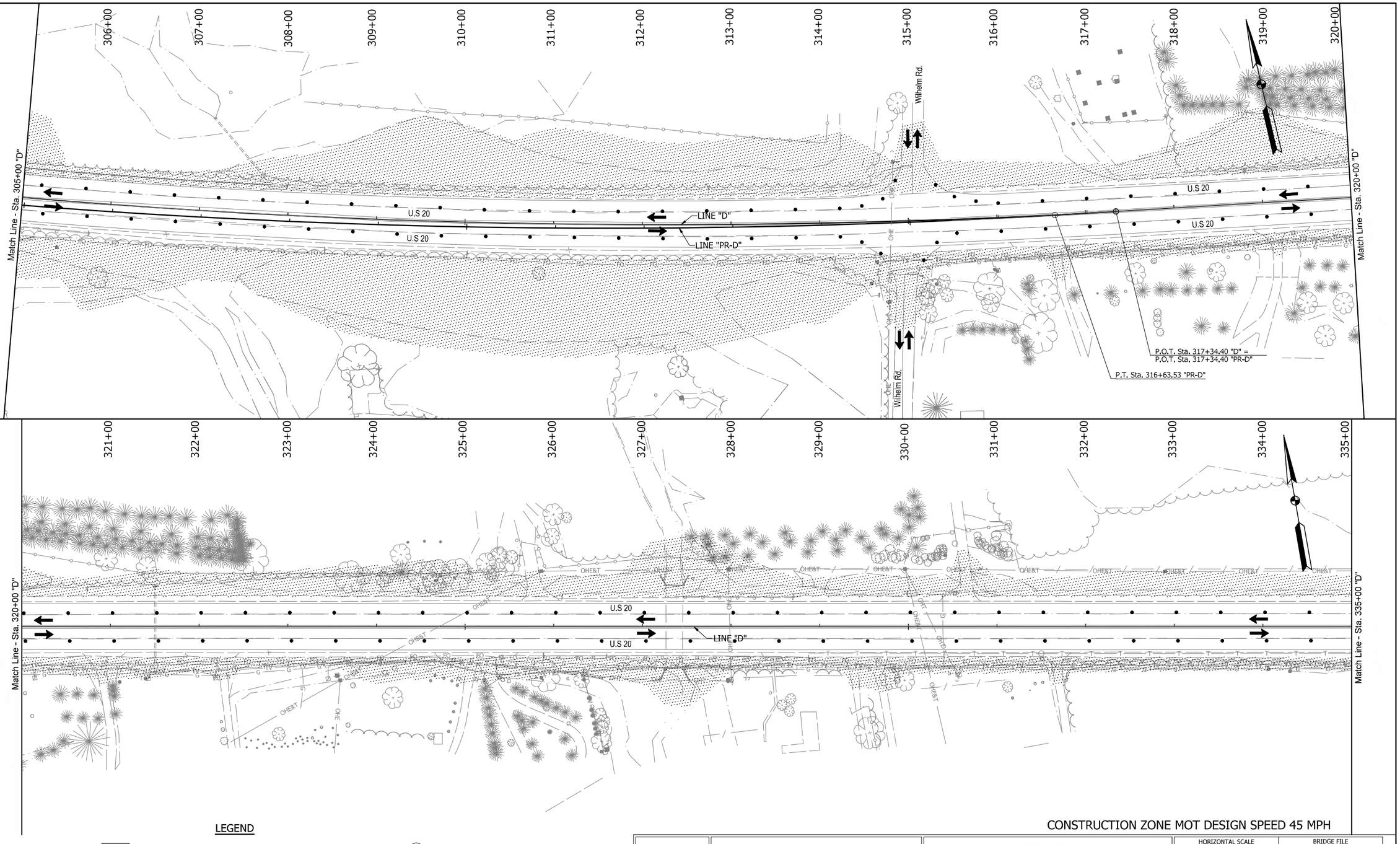

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LEGEND

- AREA OF CONSTRUCTION
- TRAFFIC FLOW
- CHANNELIZING DEVICE
- TRAFFIC SIGNS
- TYPE III-B BARRICADE
- ARROW BOARD
- PAVEMENT MARKING REMOVAL
- (43) TEMP. PAVEMENT MARKING, REMOVABLE SOLID WHITE, 4"

CONSTRUCTION ZONE MOT DESIGN SPEED 45 MPH

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: CWW DRAWN: DRM

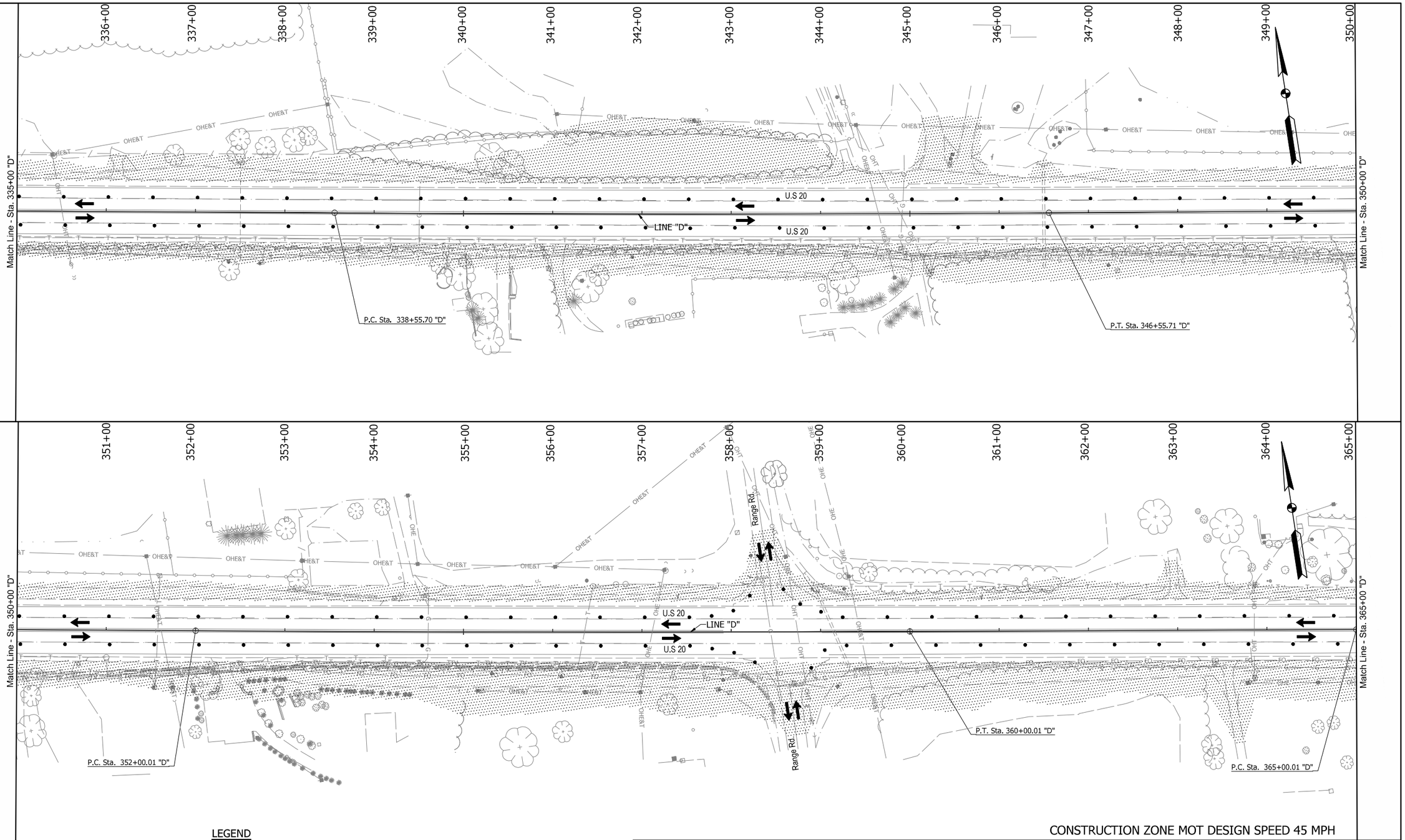
CHECKED: JCS CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 1

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	15 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701



LEGEND

- AREA OF CONSTRUCTION
- TRAFFIC FLOW
- CHANNELIZING DEVICE
- TRAFFIC SIGNS
- TYPE III-B BARRICADE
- ARROW BOARD
- PAVEMENT MARKING REMOVAL
- (43) TEMP. PAVEMENT MARKING, REMOVABLE SOLID WHITE, 4"

CONSTRUCTION ZONE MOT DESIGN SPEED 45 MPH

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: CWW DRAWN: DRM

CHECKED: JCS CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 1

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	16 OF 192
CONTRACT	PROJECT
R-41437	1702993

BRS NO. 6453.1701

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CONSTRUCTION ZONE MOT DESIGN SPEED 35 MPH
(From Sta. 387+00 to Sta. 407+41.72 "D")
CONSTRUCTION ZONE MOT DESIGN SPEED 45 MPH

LEGEND

- AREA OF CONSTRUCTION
- TRAFFIC FLOW
- CHANNELIZING DEVICE
- TRAFFIC SIGNS
- TYPE III-B BARRICADE
- ARROW BOARD
- PAVEMENT MARKING REMOVAL
- (43) TEMP. PAVEMENT MARKING, REMOVABLE SOLID WHITE, 4"

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: CWW DRAWN: DRM

CHECKED: JCS CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 1

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	17 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

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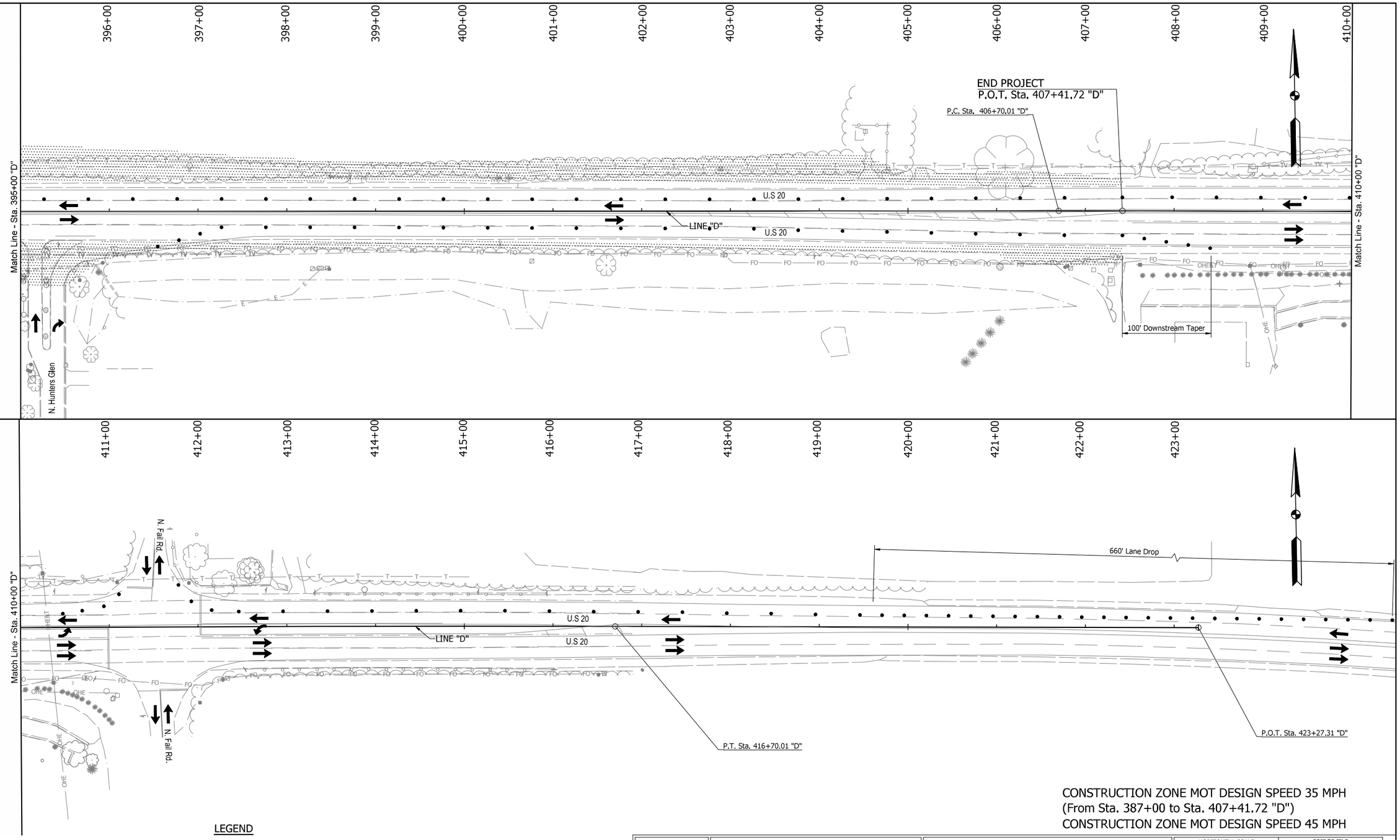

CONSTRUCTION ZONE MOT DESIGN SPEED 35 MPH
(From Sta. 387+00 to Sta. 407+41.72 "D")
CONSTRUCTION ZONE MOT DESIGN SPEED 45 MPH

LEGEND

- AREA OF CONSTRUCTION
- TRAFFIC FLOW
- CHANNELIZING DEVICE
- TRAFFIC SIGNS
- TYPE III-B BARRICADE
- ARROW BOARD
- PAVEMENT MARKING REMOVAL
- (43) TEMP. PAVEMENT MARKING, REMOVABLE SOLID WHITE, 4"

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: CWW DRAWN: DRM

CHECKED: JCS CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 1

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	18 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

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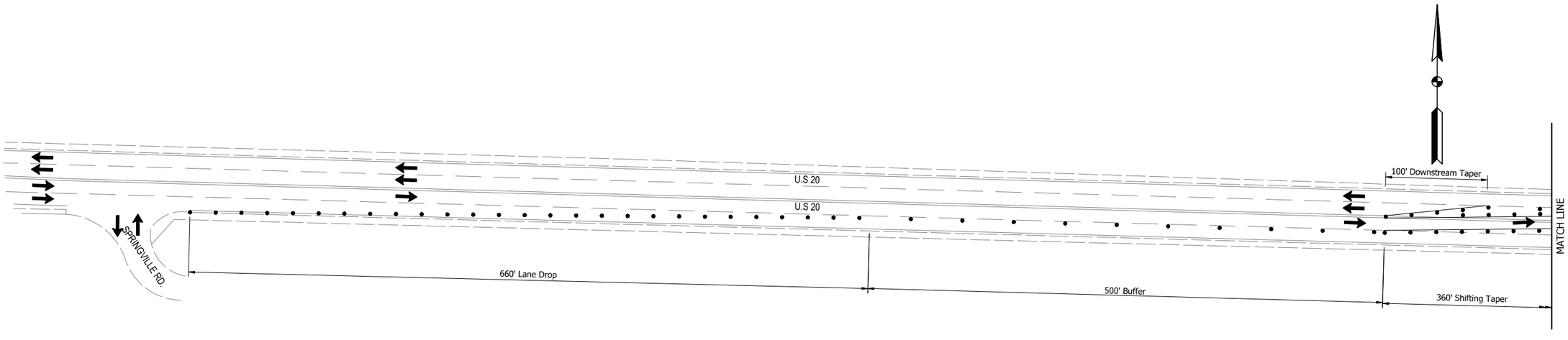
<u>Sequence of Operations</u>

Phase 2 - Construct the south half of US 20

- Place maintenance of traffic devices, temporary pavement markings and signage to maintain one lane of traffic in each direction of travel on the north half of US 20 on existing westbound lanes between Springville Road (west of SR 39) and Fail Road (300E).
- Relocate traffic signal heads and adjust signal timings at the intersections of US 20 with SR 39 and US 20 and Fail Road to accommodate the new traffic pattern.
- Construct and maintain erosion control measures for Phase 2 activities.
- Construct new drainage structures that cross the roadway using trenchless installation methods.
- Extend drainage structures on the south half of US 20.
- Place temporary traffic barrier and narrowed lanes to protect traffic from embankment construction area from west of CR 125 W to east of Wilhelm Road.
- Construct embankment utilizing temporary shoring and full depth pavement section from STA 289+00 Rt. to STA 318+21 Rt.
- Construct widening, pavement patching, guardrail and HMA wedge and level on the south half of US 20.
- Maintain ingress and egress to all properties at all times.

STAGE 2 SUBMITTAL - MOT concept shown for review and comment.

MOT signage, pavement markings and additional detail will be added for Stage 3 submittal.



LEGEND

- AREA OF CONSTRUCTION
- TRAFFIC FLOW
- CHANNELIZING DEVICE
- TRAFFIC SIGNS
- TYPE III-B BARRICADE
- ARROW BOARD
- PAVEMENT MARKING REMOVAL
- (43) TEMP. PAVEMENT MARKING, REMOVABLE SOLID WHITE, 4"

CONSTRUCTION ZONE MOT DESIGN SPEED 45 MPH

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: CWW DRAWN: DRM

CHECKED: JCS CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 2

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	19 OF 192
CONTRACT	PROJECT
R-41437	1702993

BRS NO. 6453.1701

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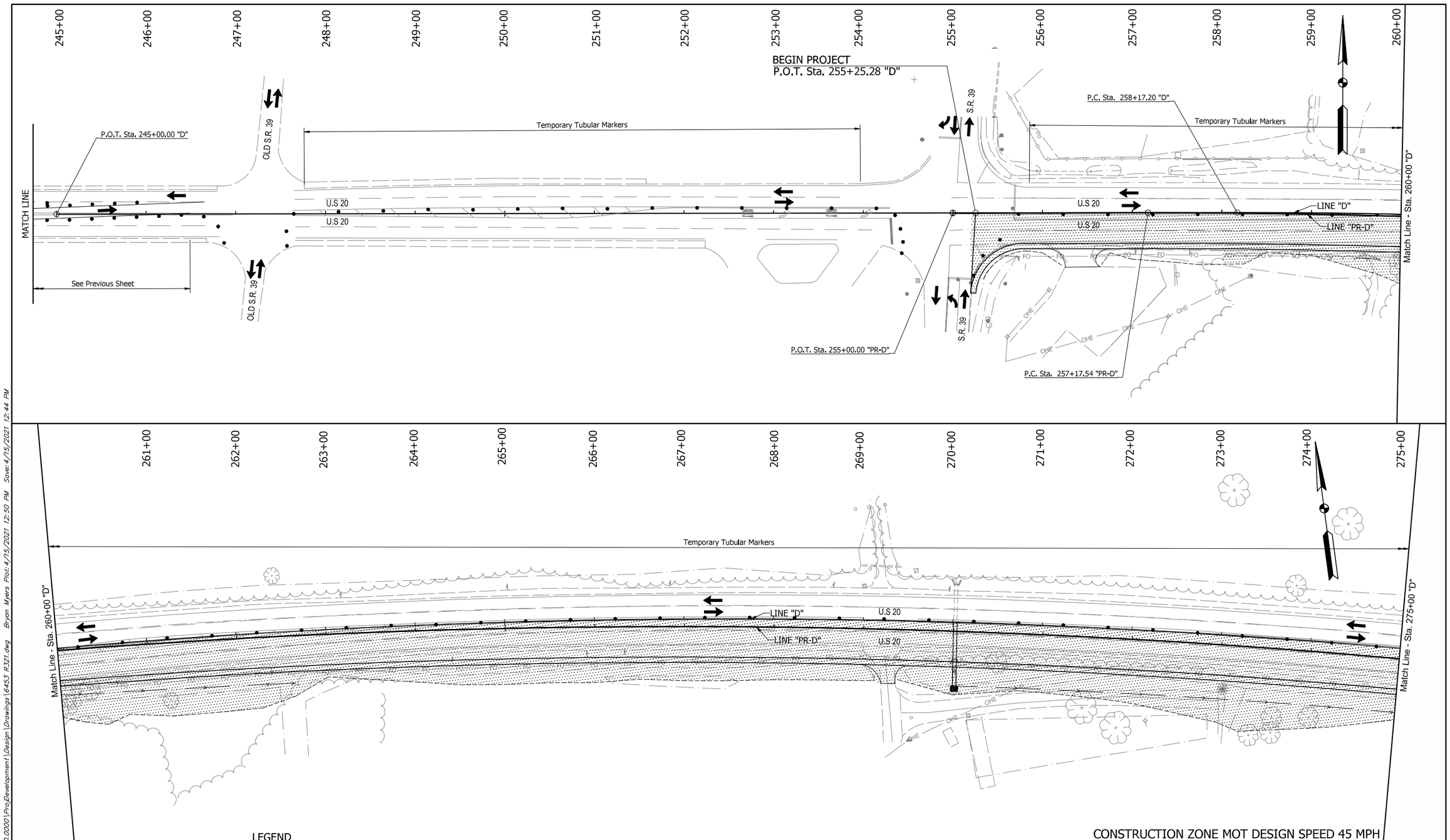

LEGEND

- AREA OF CONSTRUCTION
- TRAFFIC FLOW
- CHANNELIZING DEVICE
- TRAFFIC SIGNS
- TYPE III-B BARRICADE
- ARROW BOARD
- PAVEMENT MARKING REMOVAL
- (43) TEMP. PAVEMENT MARKING, REMOVABLE SOLID WHITE, 4"

CONSTRUCTION ZONE MOT DESIGN SPEED 45 MPH

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: CWW DRAWN: DRM

CHECKED: JCS CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 2

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	20 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

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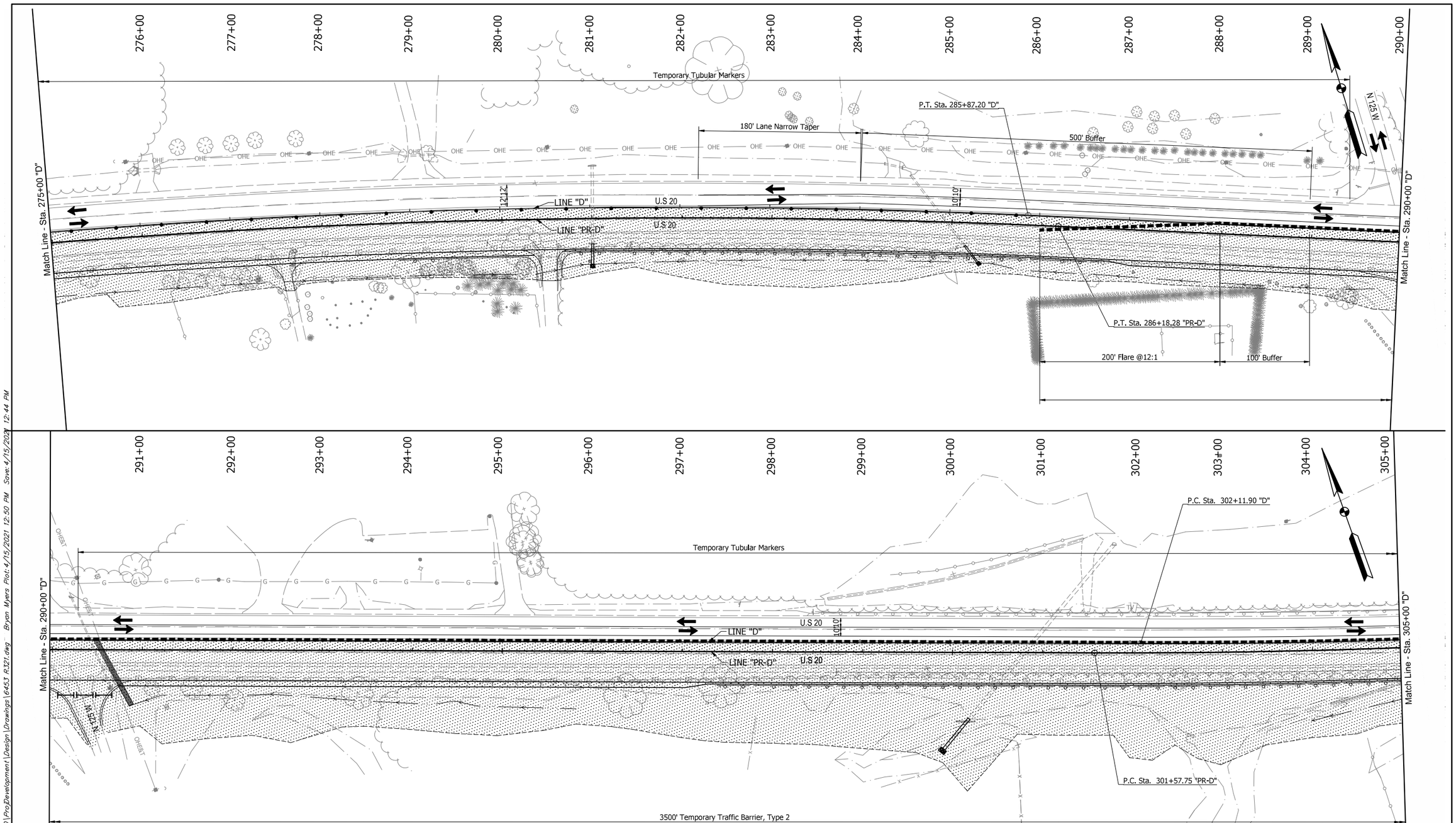

LEGEND

- AREA OF CONSTRUCTION
- TRAFFIC FLOW
- CHANNELIZING DEVICE
- TRAFFIC SIGNS
- TYPE III-B BARRICADE
- ARROW BOARD
- PAVEMENT MARKING REMOVAL
- Temp. Traffic Barrier, Type 2
- (43) TEMP. PAVEMENT MARKING, REMOVABLE SOLID WHITE, 4"

CONSTRUCTION ZONE MOT DESIGN SPEED 45 MPH

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: CWW DRAWN: DRM

CHECKED: JCS CHECKED: JCS

INDIANA DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC PHASE 2

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	21 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

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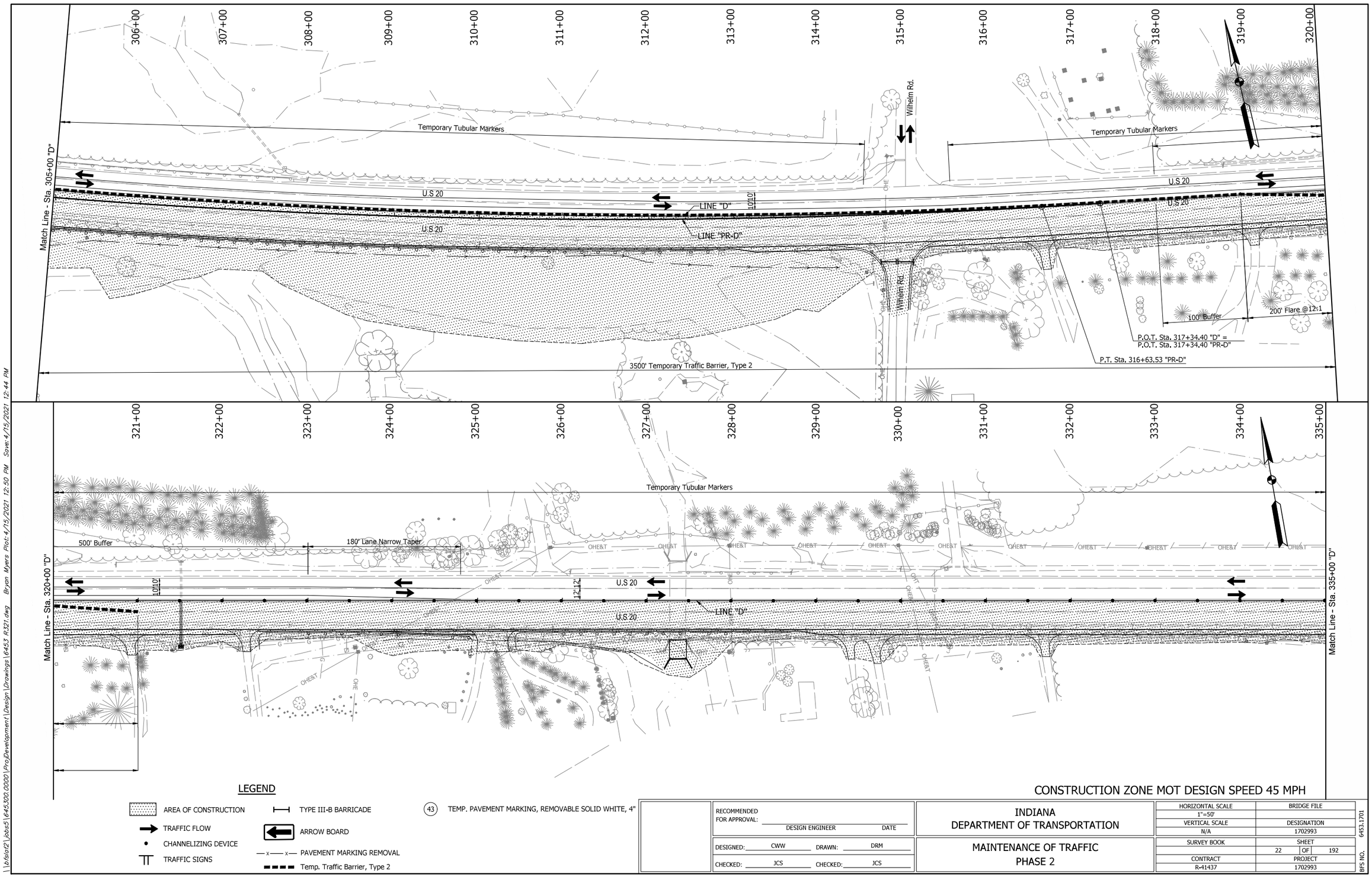

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LEGEND

- AREA OF CONSTRUCTION
- TRAFFIC FLOW
- CHANNELIZING DEVICE
- TRAFFIC SIGNS
- TYPE III-B BARRICADE
- ARROW BOARD
- PAVEMENT MARKING REMOVAL
- Temp. Traffic Barrier, Type 2
- (43) TEMP. PAVEMENT MARKING, REMOVABLE SOLID WHITE, 4"

CONSTRUCTION ZONE MOT DESIGN SPEED 45 MPH

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER DATE

DESIGNED: CWW DRAWN: DRM

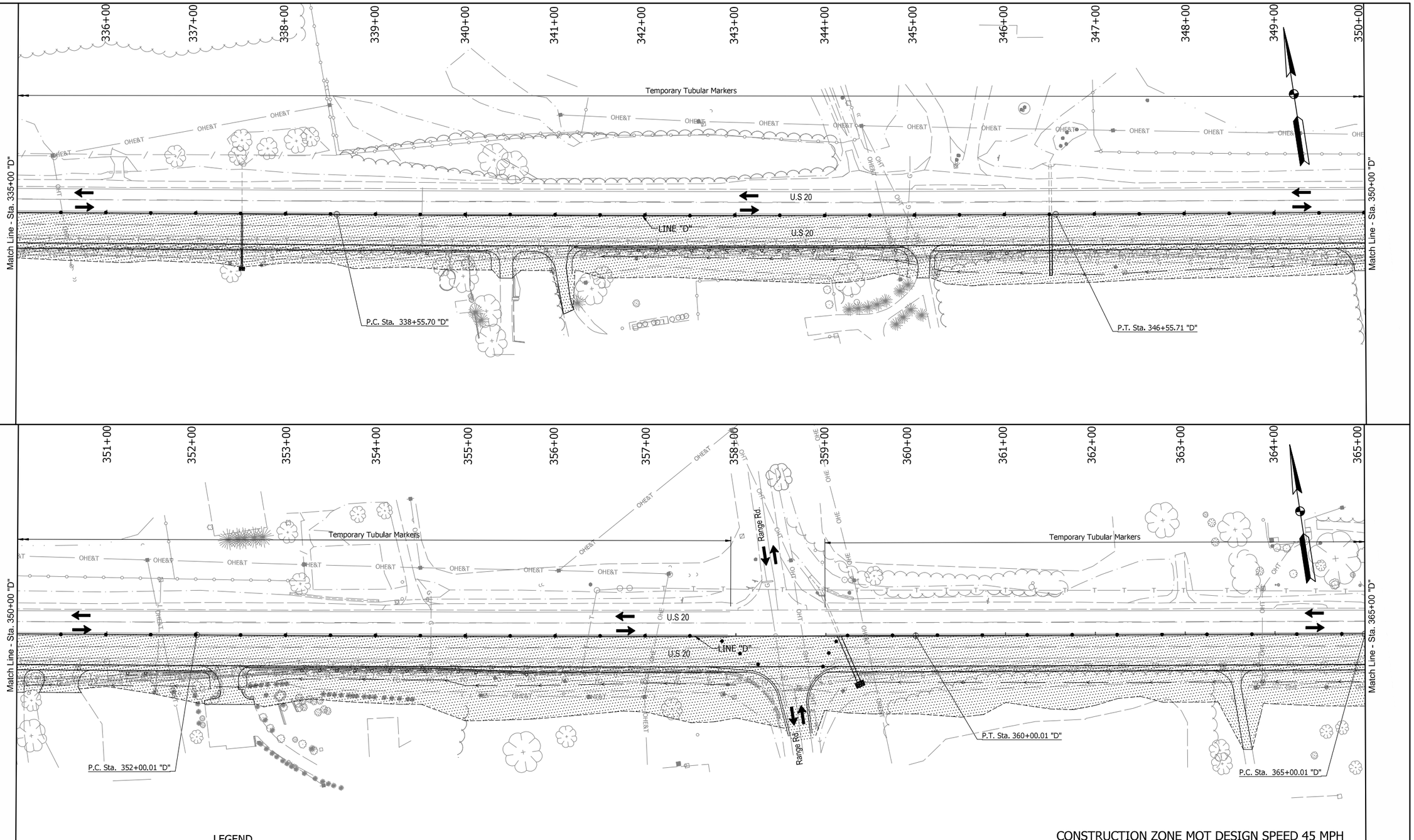
CHECKED: JCS CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 2

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	22 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701



LEGEND

- AREA OF CONSTRUCTION
- TRAFFIC FLOW
- CHANNELIZING DEVICE
- TRAFFIC SIGNS
- TYPE III-B BARRICADE
- ARROW BOARD
- PAVEMENT MARKING REMOVAL
- (43) TEMP. PAVEMENT MARKING, REMOVABLE SOLID WHITE, 4"

CONSTRUCTION ZONE MOT DESIGN SPEED 45 MPH

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: CWW DRAWN: DRM

CHECKED: JCS CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 2

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	23 OF 192
CONTRACT	PROJECT
R-41437	1702993

BRS NO. 6453.1701

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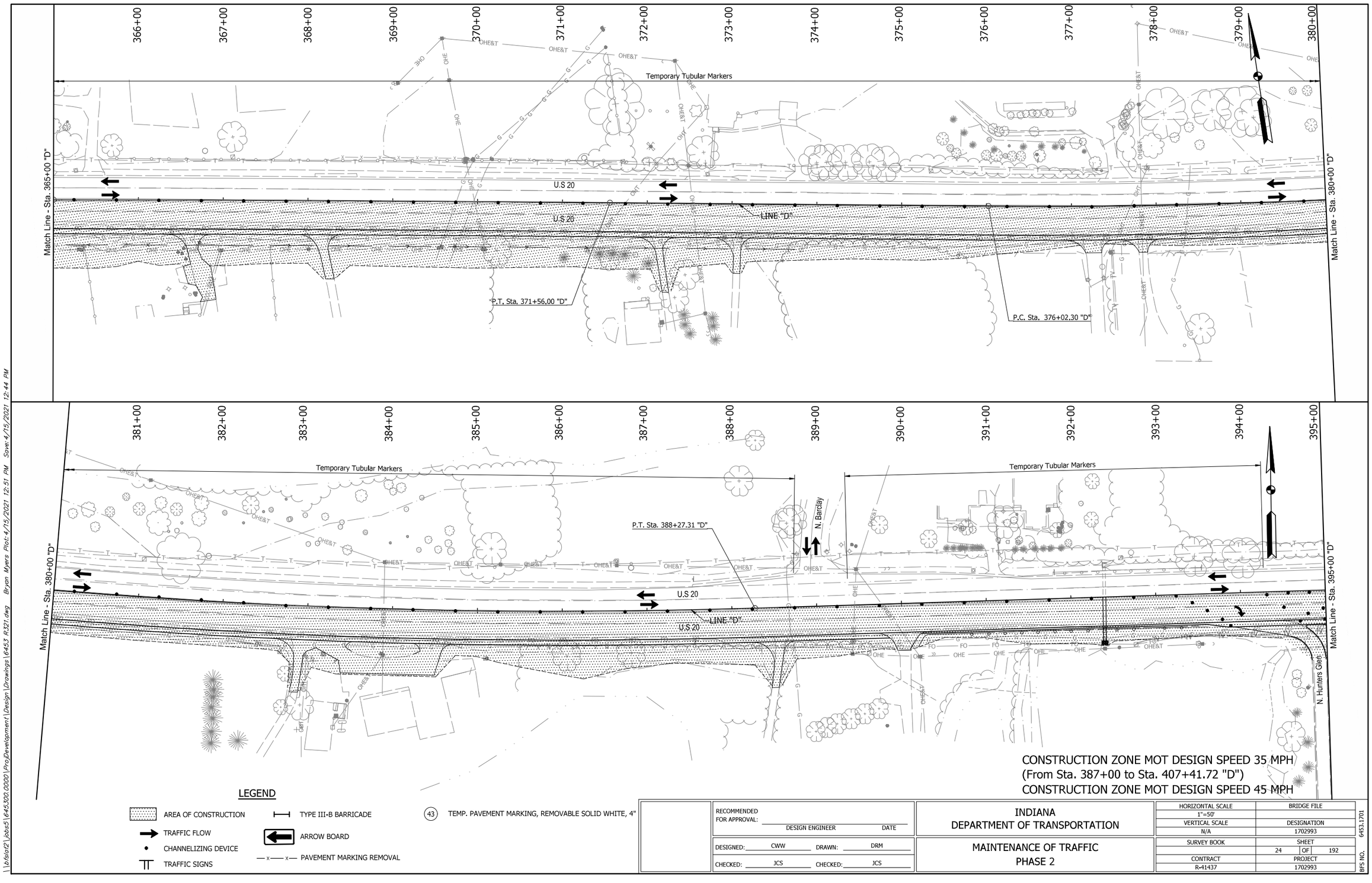

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER DATE

DESIGNED: CWW DRAWN: DRM

CHECKED: JCS CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 2

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	24 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

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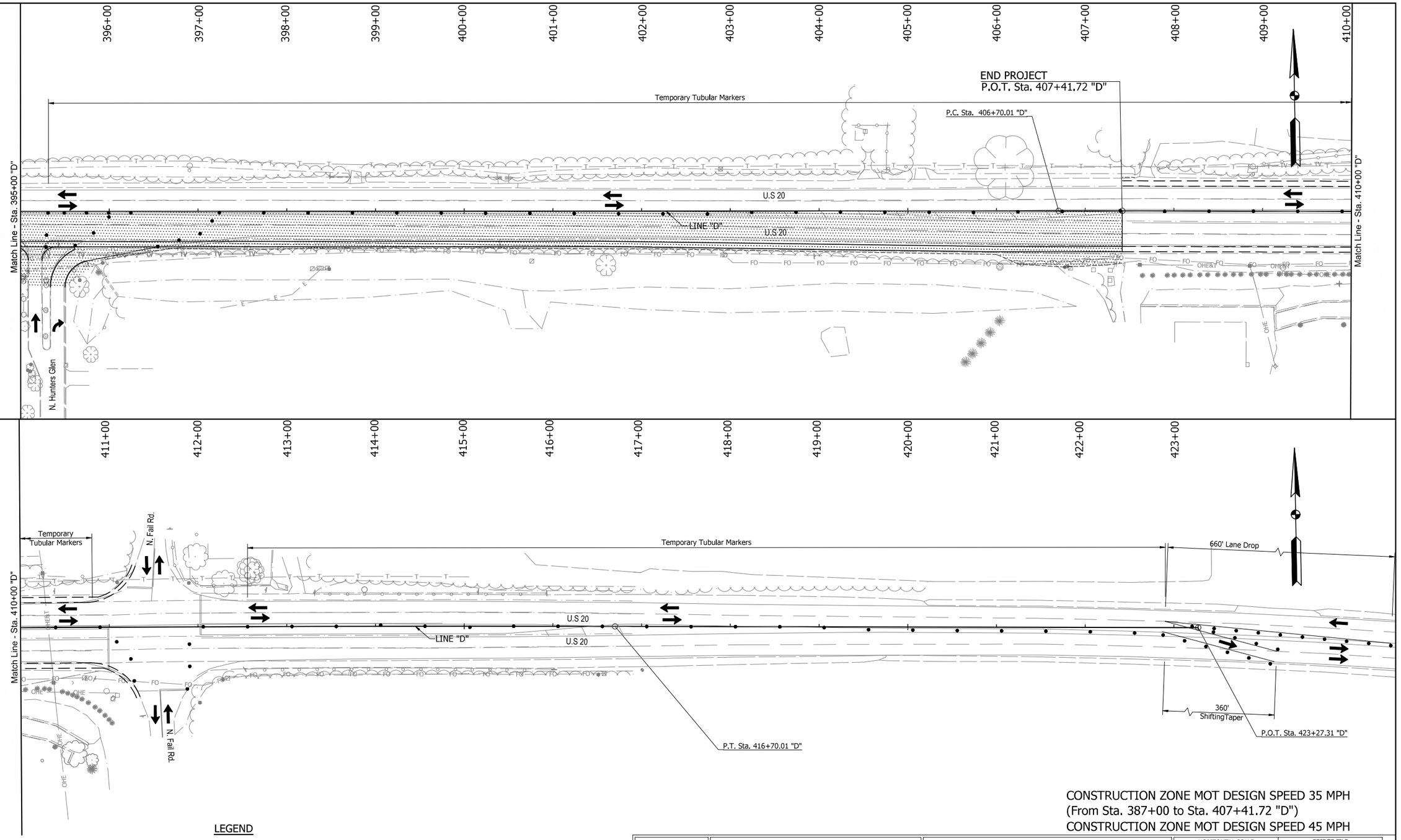


CONSTRUCTION ZONE MOT DESIGN SPEED 35 MPH
(From Sta. 387+00 to Sta. 407+41.72 "D")
CONSTRUCTION ZONE MOT DESIGN SPEED 45 MPH

LEGEND

- AREA OF CONSTRUCTION
- TRAFFIC FLOW
- CHANNELIZING DEVICE
- TRAFFIC SIGNS
- TYPE III-B BARRICADE
- ARROW BOARD
- PAVEMENT MARKING REMOVAL
- (43) TEMP. PAVEMENT MARKING, REMOVABLE SOLID WHITE, 4"

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER DATE

DESIGNED: CWW DRAWN: DRM

CHECKED: JCS CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 2

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	25 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

\\bfs01\Jobs5\6453.0000\Proj\Development\Design\Drawings\6453 R321.dwg Bryan Myers Plot: 4/15/2021 12:51 PM Save: 4/15/2021 12:44 PM

<u>Sequence of Operations</u>

Phase 3 - Construct the north half of US 20

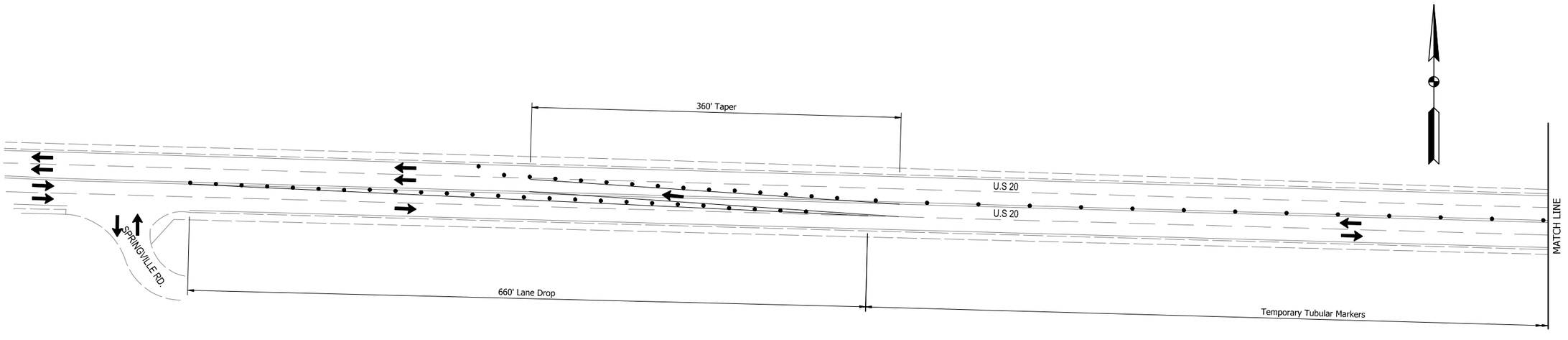
- Place maintenance of traffic devices, temporary pavement markings and signage to maintain one lane of traffic in each direction of travel on the south half of US 20 on newly constructed eastbound lanes between Springville Road (west of SR 39) and Fail Road (300E).
- Relocate traffic signal heads and adjust signal timings at the intersections of US 20 with SR 39 and US 20 and Fail Road to accommodate the new traffic pattern.
- Construct and maintain erosion control measures for Phase 3 activities.
- Extend drainage structures and ditch grading on the north half of US 20.
- Place temporary traffic barrier to protect traffic from embankment construction area from west of CR 125 W to east of Wilhelm Road.
- Construct embankment utilizing temporary shoring and full depth pavement section from STA 289+00 Lt. to STA 318+21 Lt.
- Construct widening, pavement patching, guardrail and HMA wedge and level on the north half of US 20.
- Maintain ingress and egress to all properties at all times.

Phase 4 - HMA Surface course

- Place maintenance of traffic devices, temporary pavement markings and signage to maintain one lane of traffic in each direction of travel on existing and widened pavement on both halves of US 20 during working hours.
- Construct proposed surface mill and overlay on all lanes of US 20 utilizing flaggers, temporary signage and temporary traffic control measures to maintain at least one lane of traffic in each direction of US 20 during working hours.
- Maintain ingress and egress to all properties at all times.

STAGE 2 SUBMITTAL - MOT concept shown for review and comment.

MOT signage, pavement markings and additional detail will be added for Stage 3 submittal.



LEGEND

- AREA OF CONSTRUCTION
- TRAFFIC FLOW
- CHANNELIZING DEVICE
- TRAFFIC SIGNS
- TYPE III-B BARRICADE
- ARROW BOARD
- PAVEMENT MARKING REMOVAL
- (43) TEMP. PAVEMENT MARKING, REMOVABLE SOLID WHITE, 4"

CONSTRUCTION ZONE MOT DESIGN SPEED 45 MPH

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: CWW DRAWN: DRM

CHECKED: JCS CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 3

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	26 OF 192
CONTRACT	PROJECT
R-41437	1702993

BRS NO. 6453.1701

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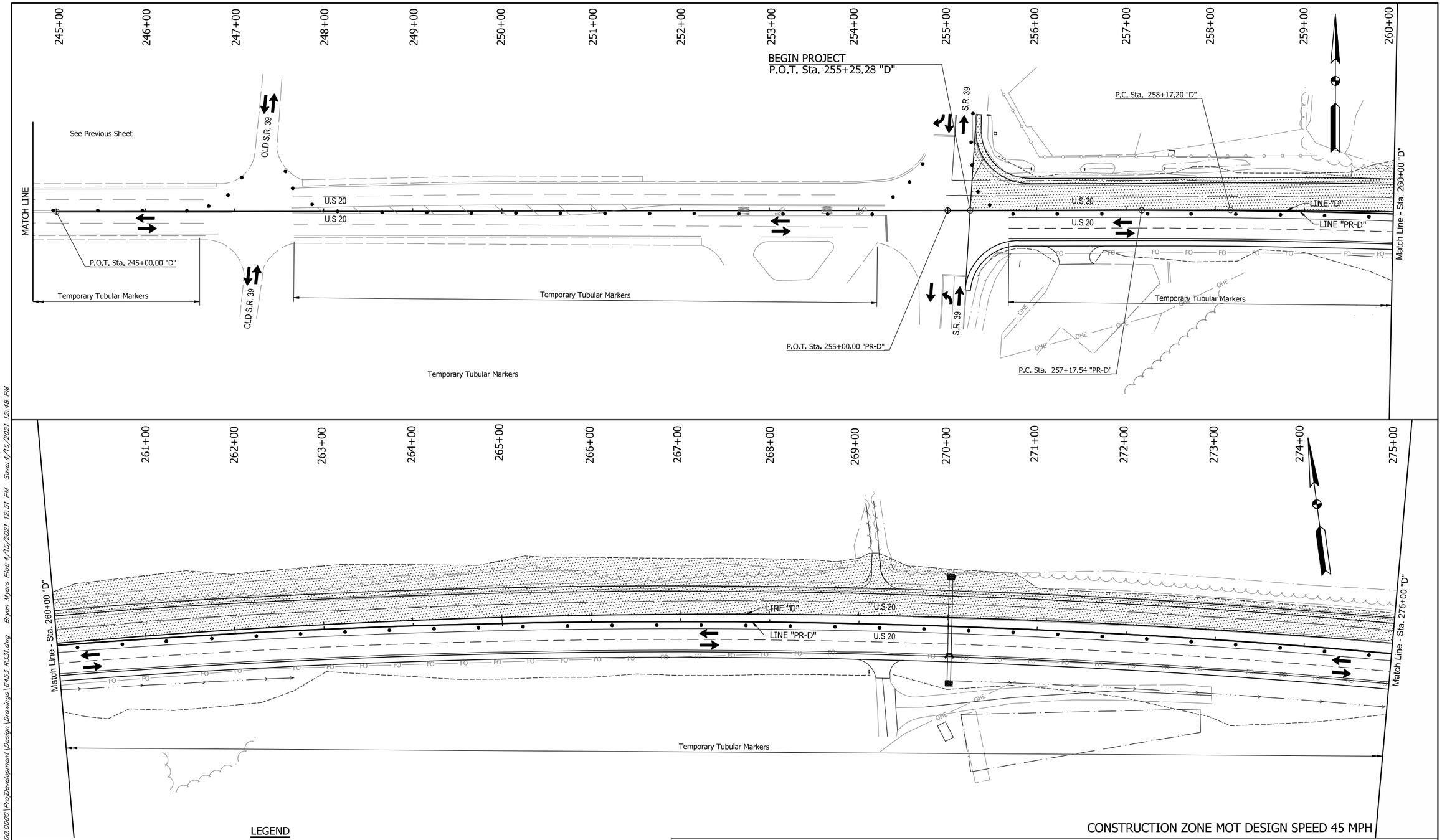


LEGEND

- AREA OF CONSTRUCTION
- TRAFFIC FLOW
- CHANNELIZING DEVICE
- TRAFFIC SIGNS
- TYPE III-B BARRICADE
- ARROW BOARD
- PAVEMENT MARKING REMOVAL
- (43) TEMP. PAVEMENT MARKING, REMOVABLE SOLID WHITE, 4"

CONSTRUCTION ZONE MOT DESIGN SPEED 45 MPH

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: CWW DRAWN: DRM

CHECKED: JCS CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

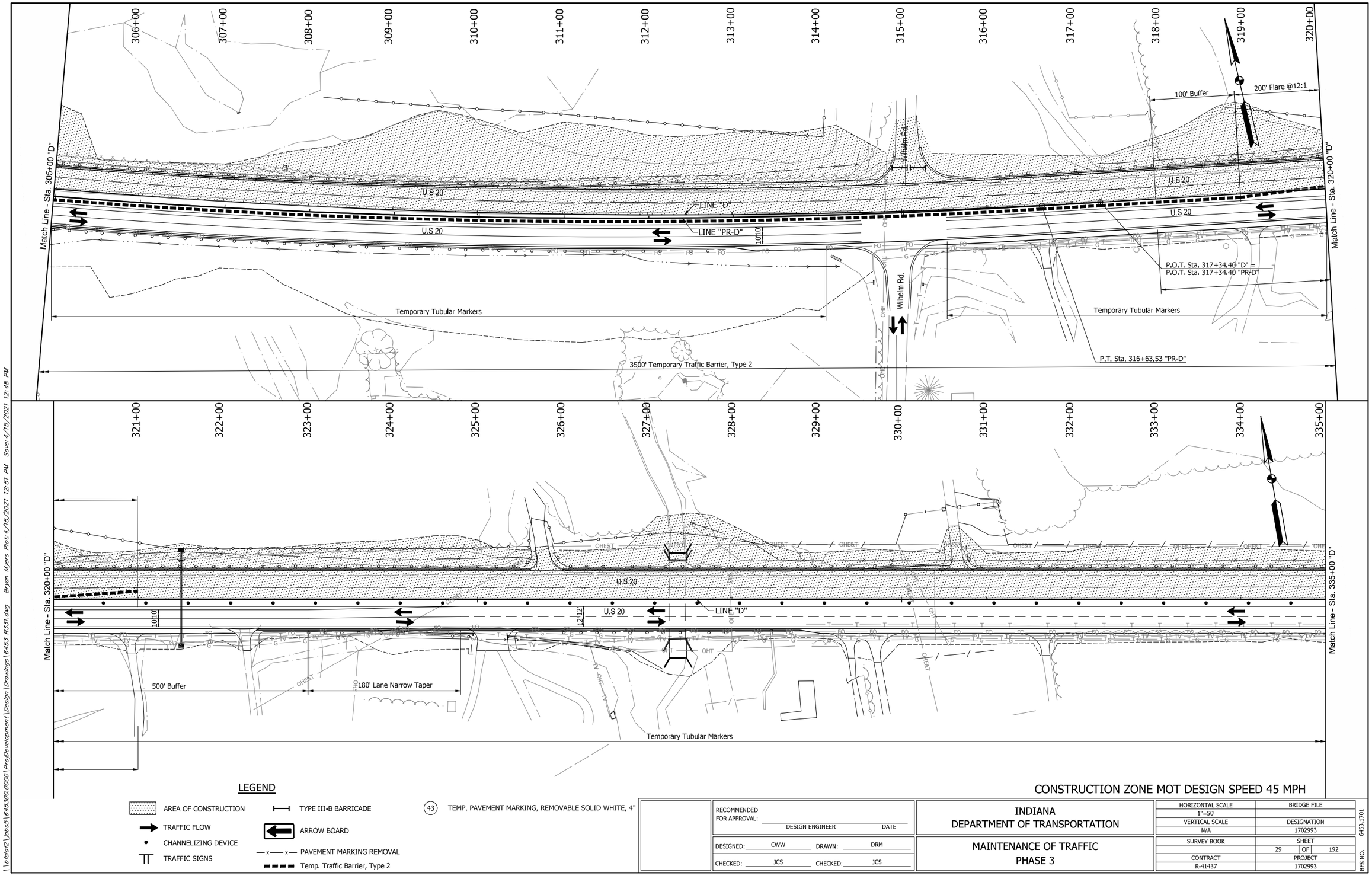
MAINTENANCE OF TRAFFIC
PHASE 3

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	27 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

\\bfsiol2\Jobs5\645300.0000\Proj\Development\Design\Drawings\6453 R331.dwg Bryan Myers Plot: 4/15/2021 12:51 PM Saved: 4/15/2021 12:48 PM

\\bfsfs02\Jobs5\6453200.0000\ProjDevelopment\Design\Drawings\6453 R31t.dwg Bryon Myers Plot: 4/15/2021 12:51 PM Save: 4/15/2021 12:48 PM



\\bfs\p2\jobs5\645300.0000\ProjDevelopment\Design\Drawings\6453 R331.dwg Bryon Myers Plot: 4/15/2021 12:51 PM Save: 4/15/2021 12:48 PM

LEGEND

- AREA OF CONSTRUCTION
- TRAFFIC FLOW
- CHANNELIZING DEVICE
- TRAFFIC SIGNS
- TYPE III-B BARRICADE
- ARROW BOARD
- PAVEMENT MARKING REMOVAL
- Temp. Traffic Barrier, Type 2
- (43) TEMP. PAVEMENT MARKING, REMOVABLE SOLID WHITE, 4"

CONSTRUCTION ZONE MOT DESIGN SPEED 45 MPH

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: CWW DRAWN: DRM

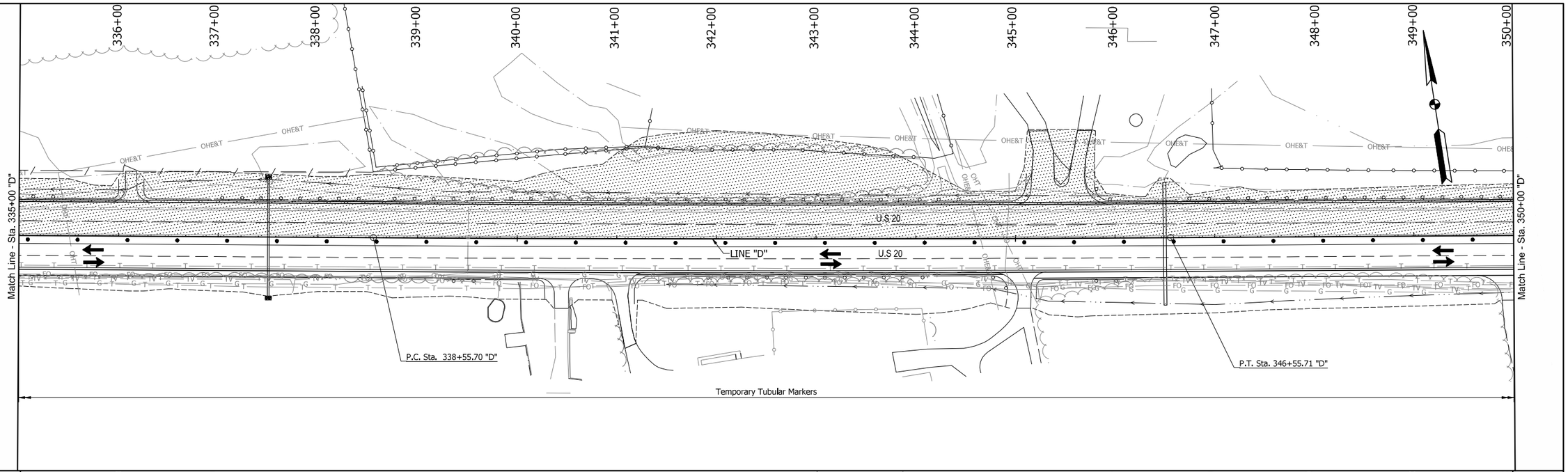
CHECKED: JCS CHECKED: JCS

INDIANA DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC PHASE 3

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	29 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701



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LEGEND

- AREA OF CONSTRUCTION
- TRAFFIC FLOW
- CHANNELIZING DEVICE
- TRAFFIC SIGNS
- TYPE III-B BARRICADE
- ARROW BOARD
- PAVEMENT MARKING REMOVAL
- (43) TEMP. PAVEMENT MARKING, REMOVABLE SOLID WHITE, 4"

CONSTRUCTION ZONE MOT DESIGN SPEED 45 MPH

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: CWW DRAWN: DRM

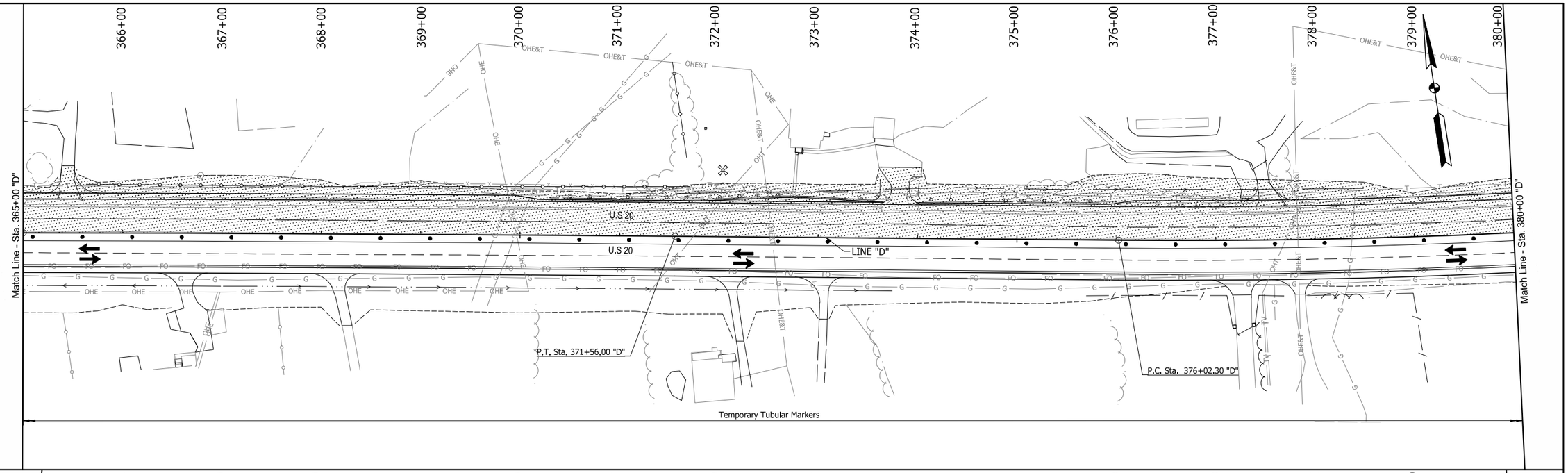
CHECKED: JCS CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 3

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	30 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701



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LEGEND

- AREA OF CONSTRUCTION
- TRAFFIC FLOW
- CHANNELIZING DEVICE
- TRAFFIC SIGNS
- TYPE III-B BARRICADE
- ARROW BOARD
- PAVEMENT MARKING REMOVAL
- (43) TEMP. PAVEMENT MARKING, REMOVABLE SOLID WHITE, 4"

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: CWW DRAWN: DRM

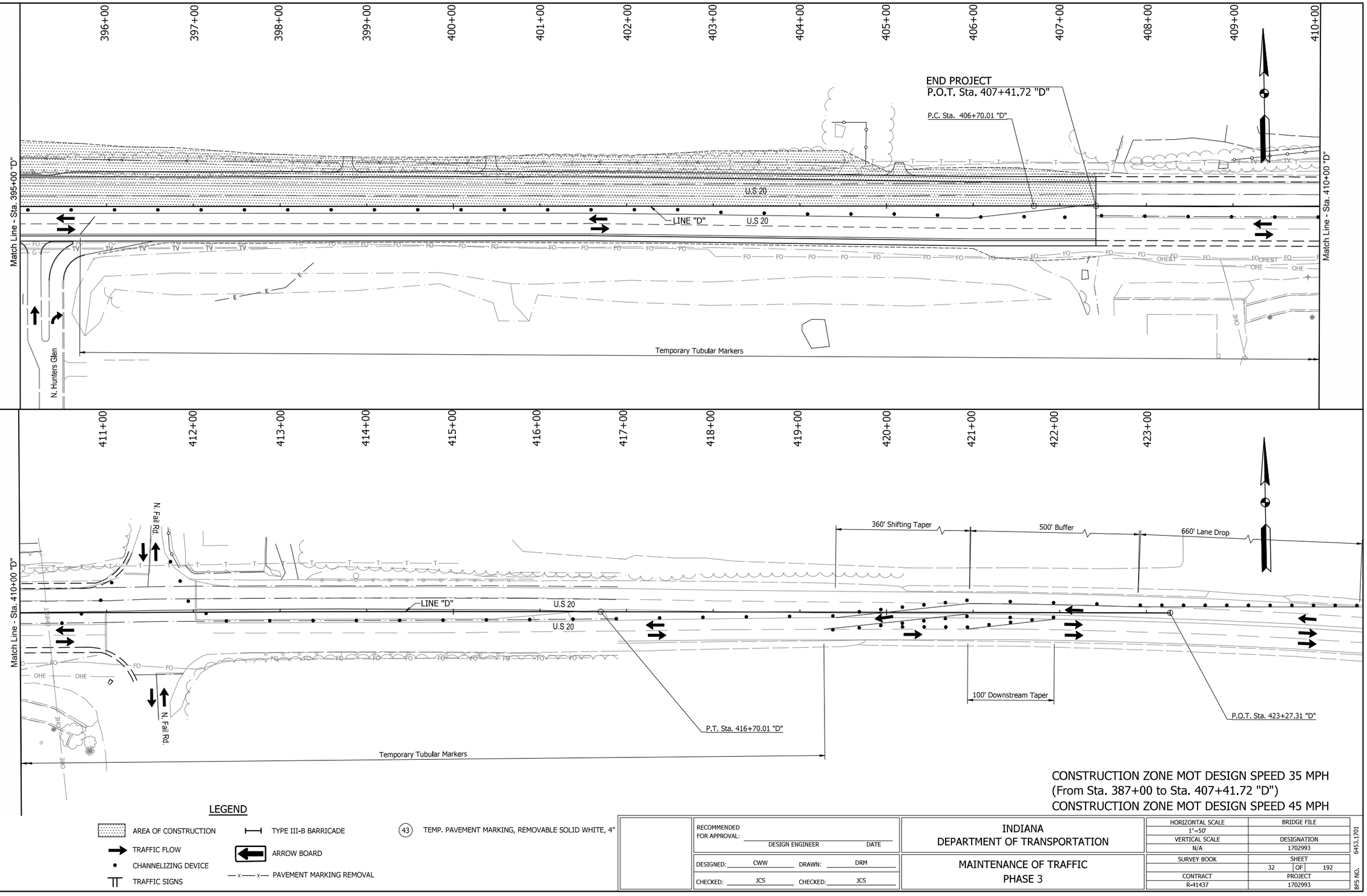
CHECKED: JCS CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 3

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	31 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701



CONSTRUCTION ZONE MOT DESIGN SPEED 35 MPH
(From Sta. 387+00 to Sta. 407+41.72 "D")
CONSTRUCTION ZONE MOT DESIGN SPEED 45 MPH

LEGEND

- AREA OF CONSTRUCTION
- TRAFFIC FLOW
- CHANNELIZING DEVICE
- TRAFFIC SIGNS
- TYPE III-B BARRICADE
- ARROW BOARD
- PAVEMENT MARKING REMOVAL
- (43) TEMP. PAVEMENT MARKING, REMOVABLE SOLID WHITE, 4"

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: CWW DRAWN: DRM

CHECKED: JCS CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 3

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	32 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

\\bfs01\Jobs5\645300.0000\Proj\Development\Design\Drawings\6453 R33I.dwg Bryan Myers Plot: 4/15/2021 12:51 PM Save: 4/15/2021 12:48 PM

250+00 255+00 260+00 265+00

BEGIN PROJECT
P.O.T. Sta. 255+25.28 "D"

P.O.T. Sta. 255+00.00 "PR-D" =
P.O.T. Sta. 255+00.00 "D"

T.B.M. #1
X Chisled in E bolt traffic light support pole
Elev. 768.04

S88°27'52"E

P.C. Sta. 258+17.20 "D"

LAKE COUNTY TRUST COMPANY

SEC. 2, T.37N., R.3W.
SPRINGFIELD TOWNSHIP
LAPORTE COUNTY

CHARLES MOORE
& SHERRI CUDDY

S.R. 39 (Bit. Mat.)

U.S. 20 (Bit. Mat.)

LINE "D"

LINE "PR-D" (To Be Constructed)

Match Line - Sta. 265+00 "D"

App. ℄

App. Ex. R/W

Constr. Limits

Spoil Pile 20ft x 20ft

"Digzy Dogz & Grill"

"Marines"

"Burkhart Billboards"

Tornado Siren

Unused

95' R/W

+℄(+62.46)
95.00'

+00
95.00'

+00
Ex. R/W(70.00')

68'-0"

6'-0"

P.C. Sta. 257+17.54 "PR-D"=
P.O.C. Sta. 257+17+54 "D"

MARUTI'S CORP.

SEC. 2, T.37N., R.3W.
SPRINGFIELD TOWNSHIP
LAPORTE COUNTY

NICHOLAS PARRILLI

ALL R/W ON THIS SHEET DESCRIBED FROM LINE "D" UNLESS OTHERWISE NOTED

FOR STRUCTURE INFORMATION SEE CONSTRUCTION DETAILS

EARTHWORK SUMMARY	
CONCRETE PAVEMENT REMOVAL	1,100 Cys
COMMON EXCAVATION	80,330 Cys.
FILL +25%	83,673 Cys.
BORROW	3,343 Cys.

T.B.M. 1 - Chisled "X" in E. Bolt Traffic Light Support Base, Sta. 254+66.50, 81.92' Lt. "D" Elev. 768.090

BEGIN PROJECT
Sta. 255+25.28 "Line "D"
Elev. 770.20

Existing Grade Along Line "D"

+50, El. 771.00

-2.00%

Grade Spec. "V" Ditch Req'd Rt.
(Plotted 10' Below Datum)

156 Sys. Ditch Sodding Req'd Rt.

+00, El. 764.00

790 780 770 760 750 740 730

769.6 770.2 770.8 771.3 771.7 772.1 772.5 772.9 773.3 773.5 773.7 773.8 774.0 774.0 774.0 774.0 773.9 773.8 773.6 773.4 773.1 772.9 772.5 772.1 771.7 771.3 770.8 770.3 769.9 769.4 768.9 768.5 768.0 767.5 767.1 766.7 766.2 765.8 765.4 765.1 764.7

250+00 251+00 252+00 253+00 254+00 255+00 256+00 257+00 258+00 259+00 260+00 261+00 262+00 263+00 264+00 265+00

300 N: 404251.9695 E: 791129.1460

5/8" Rebar w/ Red Cap (Set), Flush
Sta. 256+15.14, 49.11' Rt. "D"

301 N: 404307.1009 E: 791781.0435

5/8" Rebar w/ Red Cap (Set), Flush
Sta. 262+63.70, 35.11' Lt. "D"

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: JCS DRAWN: JMT

CHECKED: JWG CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN & PROFILES

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	
VERTICAL SCALE	DESIGNATION
1"=10'	1702993
SURVEY BOOK	SHEET
	33 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

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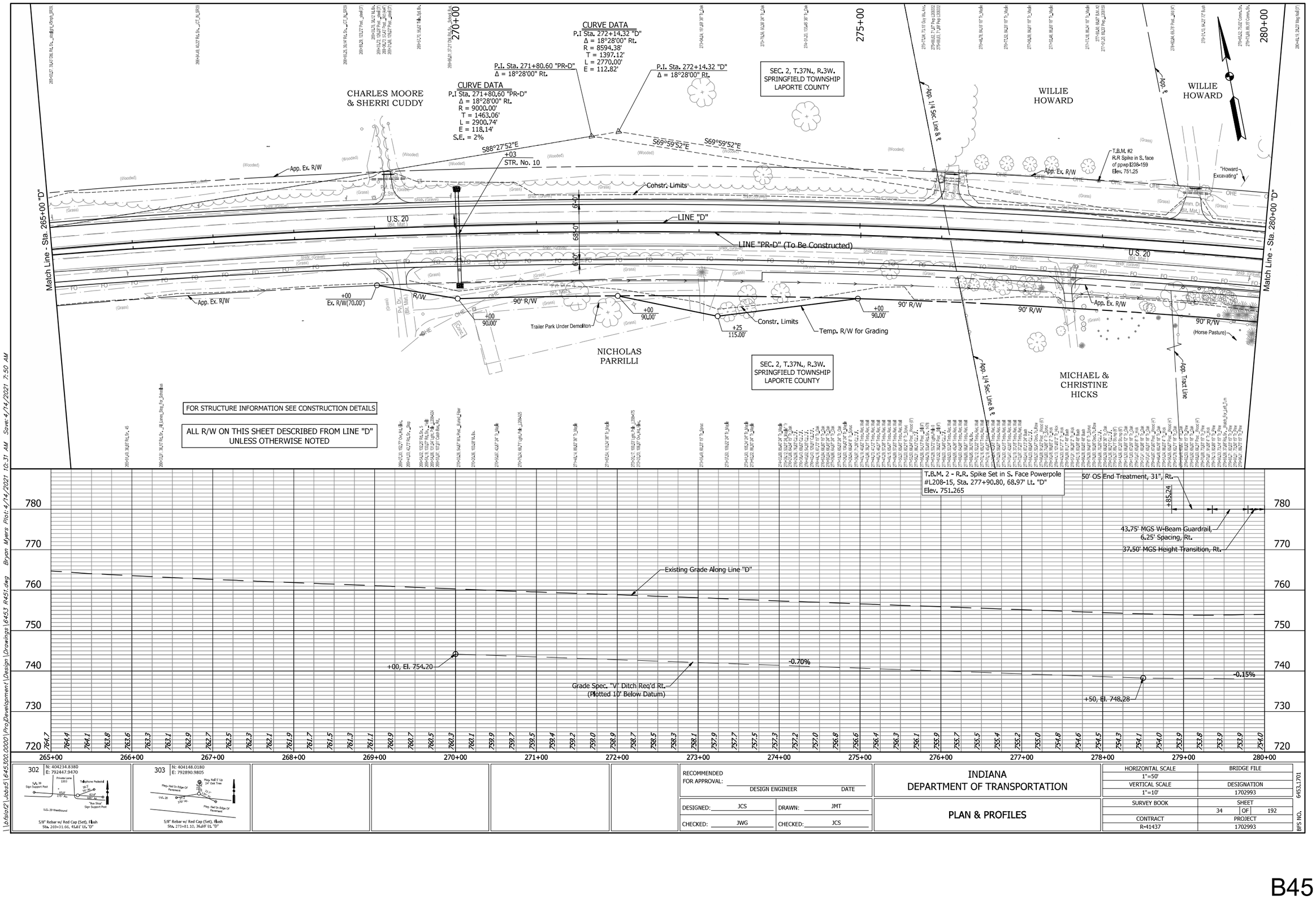

302 N: 404234.8380 E: 792447.9470

5/8" Rebar w/ Red Cap (Set), Flush
Sta. 269+31.66, 41.61' Lt. "D"

303 N: 404148.0180 E: 792890.9805

5/8" Rebar w/ Red Cap (Set), Flush
Sta. 273+81.10, 36.69' Lt. "D"

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER DATE

DESIGNED: JCS DRAWN: JMT

CHECKED: JWG CHECKED: JCS

INDIANA DEPARTMENT OF TRANSPORTATION

PLAN & PROFILES

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	
VERTICAL SCALE	DESIGNATION
1"=10'	1702993
SURVEY BOOK	SHEET
	34 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

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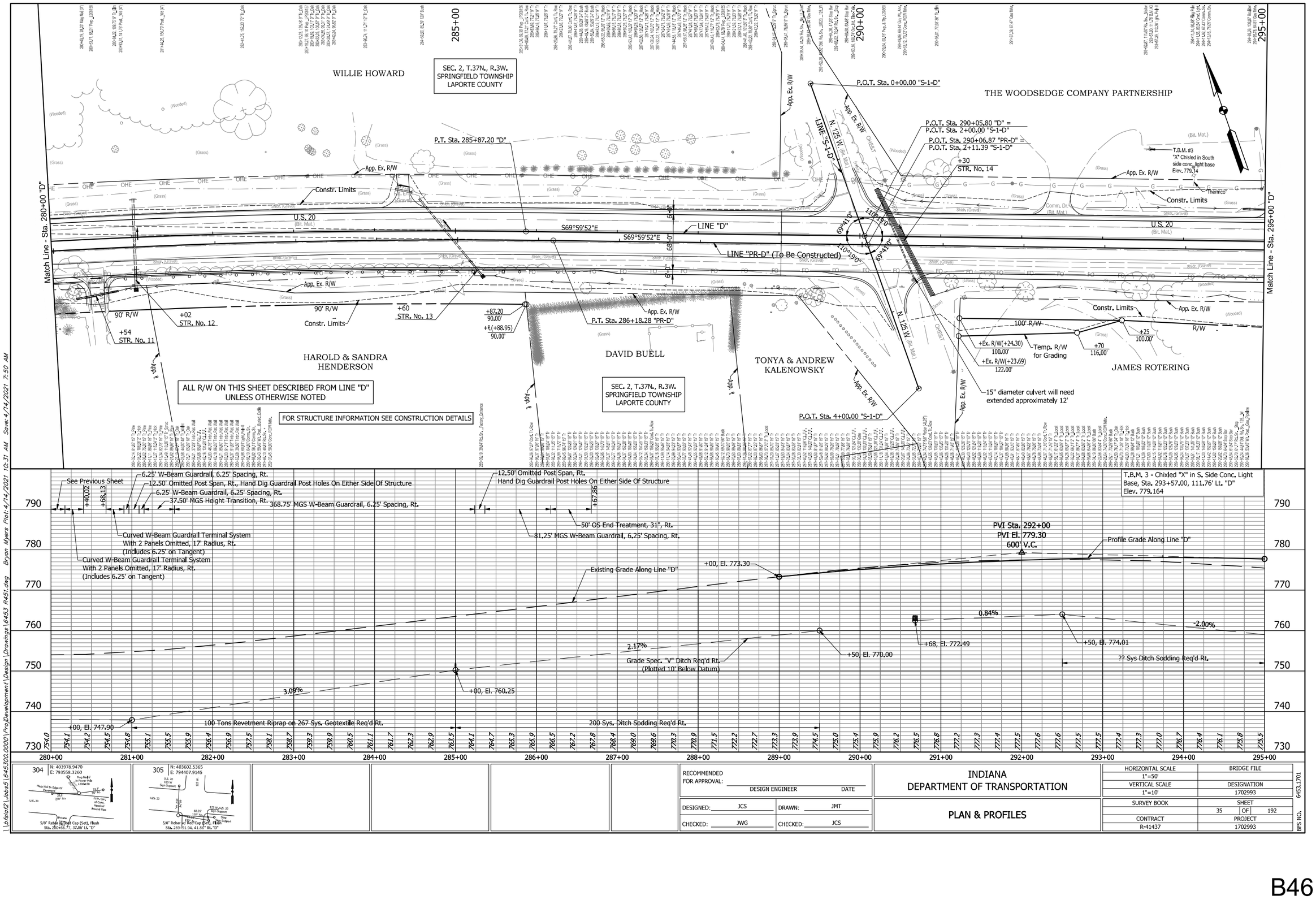
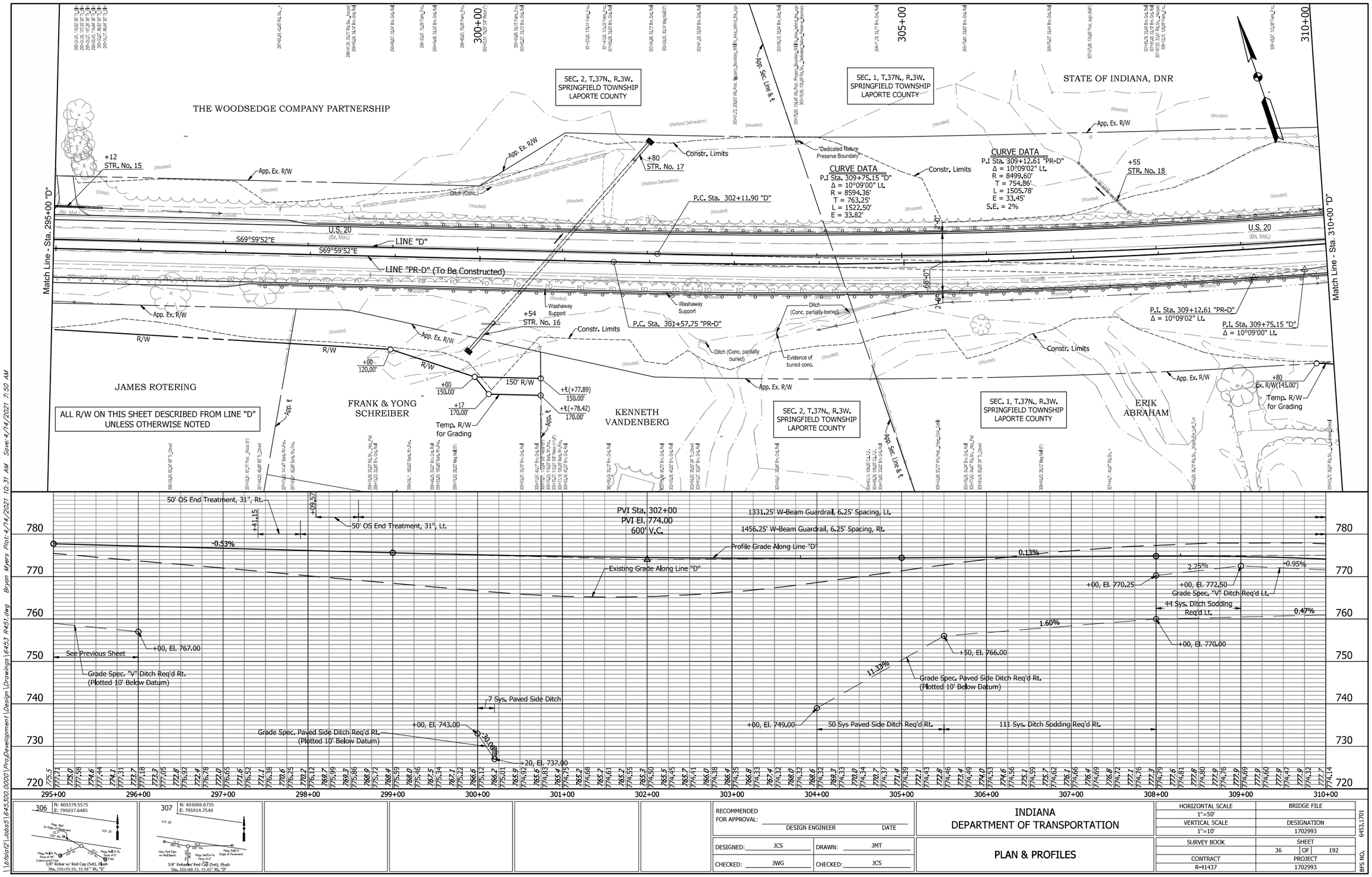

285+00
290+00
295+00
WILLIE HOWARD
SEC. 2, T.37N., R.3W.
SPRINGFIELD TOWNSHIP
LAPORTE COUNTY
THE WOODSEDGE COMPANY PARTNERSHIP
HAROLD & SANDRA HENDERSON
DAVID BUELL
TONYA & ANDREW KALENOWSKY
JAMES ROTERING
SEC. 2, T.37N., R.3W.
SPRINGFIELD TOWNSHIP
LAPORTE COUNTY
ALL R/W ON THIS SHEET DESCRIBED FROM LINE "D" UNLESS OTHERWISE NOTED
FOR STRUCTURE INFORMATION SEE CONSTRUCTION DETAILS
Match Line - Sta. 280+00 "D"
Match Line - Sta. 295+00 "D"
P.T. Sta. 285+87.20 "D"
P.O.T. Sta. 0+00.00 "S-1-D"
P.O.T. Sta. 290+05.80 "D" = P.O.T. Sta. 2+00.00 "S-1-D"
P.O.T. Sta. 290+06.87 "PR-D" = P.O.T. Sta. 2+11.39 "S-1-D"
P.O.T. Sta. 4+00.00 "S-1-D"
P.T. Sta. 286+18.28 "PR-D"
LINE "S-1-D"
LINE "D"
LINE "PR-D" (To Be Constructed)
N 125 W (Bil. Mat.)
S69°59'52"E
110°19'10"
69°41'0"
App. Ex. R/W
Constr. Limits
U.S. 20 (Bit. Mat.)
90' R/W
100' R/W
+02 STR. No. 12
+54 STR. No. 11
+60 STR. No. 13
+30 STR. No. 14
+87.20 90.00'
+℄(+88.95) 90.00'
+25 100.00'
+70 116.00'
+Ex. R/W(+24.30) 100.00'
+Ex. R/W(+23.69) 122.00'
Temp. R/W for Grading
15" diameter culvert will need extended approximately 12'
T.B.M. #3 "X" Chisled in South side conc. light base Elev. 779.14
T.B.M. 3 - Chisled "X" in S. Side Conc. Light Base, Sta. 293+57.00, 111.76' Lt. "D" Elev. 779.164
See Previous Sheet
+40.02
+68.13
+67.86
6.25' W-Beam Guardrail, 6.25' Spacing, Rt.
12.50' Omitted Post Span, Rt., Hand Dig Guardrail Post Holes On Either Side Of Structure
37.50' MGS Height Transition, Rt.
368.75' MGS W-Beam Guardrail, 6.25' Spacing, Rt.
12.50' Omitted Post Span, Rt.
Hand Dig Guardrail Post Holes On Either Side Of Structure
50' OS End Treatment, 31", Rt.
81.25' MGS W-Beam Guardrail, 6.25' Spacing, Rt.
Curved W-Beam Guardrail Terminal System With 2 Panels Omitted, 17' Radius, Rt. (Includes 6.25' on Tangent)
Curved W-Beam Guardrail Terminal System With 2 Panels Omitted, 17' Radius, Rt. (Includes 6.25' on Tangent)
PVI Sta. 292+00
PVI El. 779.30
600' V.C.
Profile Grade Along Line "D"
Existing Grade Along Line "D"
+00, El. 773.30
+68, El. 772.49
+50, El. 774.01
+50, El. 770.00
+00, El. 760.25
+00, El. 747.90
0.84%
-2.00%
2.17%
3.09%
Grade Spec. "V" Ditch Req'd Rt. (Plotted 10' Below Datum)
?? Sys Ditch Sodding Req'd Rt.
100 Tons Revetment Riprap on 267 Sys. Geotextile Req'd Rt.
200 Sys. Ditch Sodding Req'd Rt.
304 N: 403978.9470 E: 793558.3260
Hag Nail In Power Pole
Hag-Nail In Edge Of Pavement
Hi Ho Cry of Conc. Monday Around Pipe
Private
5/8" Rebar w/ Red Cap (Set), Flush
Sta. 280+66.77, 37.06' Lt. "D"
305 N: 403602.5365 E: 794407.9145
U.S. 20
125 W
Sign Support
Stop
5/8" Rebar w/ Red Cap (Set), +1.35 Above Ground
Sta. 289+91.94, 41.86' Rt. "D"
RECOMMENDED FOR APPROVAL:
DESIGN ENGINEER
DATE
DESIGNED: JCS
DRAWN: JMT
CHECKED: JWG
CHECKED: JCS
INDIANA DEPARTMENT OF TRANSPORTATION
PLAN & PROFILES
HORIZONTAL SCALE 1"=50'
VERTICAL SCALE 1"=10'
BRIDGE FILE
DESIGNATION 1702993
SURVEY BOOK
SHEET 35 OF 192
CONTRACT
PROJECT R-41437 1702993
BFS NO. 6453.1701
\\bfsfar2\Jobs5\645300.0000\ProDevelopment\Design\Drawings\6453.1R451.dwg Bryan Myers Plot: 4/14/2021 10:31 AM Save: 4/14/2021 7:50 AM


THE WOODSEDGE COMPANY PARTNERSHIP
SEC. 2, T.37N., R.3W.
SPRINGFIELD TOWNSHIP
LAPORTE COUNTY
SEC. 1, T.37N., R.3W.
SPRINGFIELD TOWNSHIP
LAPORTE COUNTY
STATE OF INDIANA, DNR
App. Sec. Line & ℄
"Dedicated Nature Preserve Boundary"
300+00
305+00
310+00
+12
STR. No. 15
+80
STR. No. 17
+55
STR. No. 18
+54
STR. No. 16
Constr. Limits
App. Ex. R/W
Ditch (Conc.)
P.C. Sta. 302+11.90 "D"
P.C. Sta. 301+57.75 "PR-D"
CURVE DATA
P.I Sta. 309+75.15 "D"
Δ = 10°09'00" Lt.
R = 8594.36'
T = 763.25'
L = 1522.50'
E = 33.82'
CURVE DATA
P.I Sta. 309+12.61 "PR-D"
Δ = 10°09'02" Lt.
R = 8499.60'
T = 754.86'
L = 1505.78'
E = 33.45'
S.E. = 2%
U.S. 20
(Bit. Mat.)
S69°59'52"E
LINE "D"
LINE "PR-D" (To Be Constructed)
Match Line - Sta. 295+00 "D"
Match Line - Sta. 310+00 "D"
Washaway Support
Ditch (Conc. partially buried)
Evidence of buried conc.
P.I. Sta. 309+12.61 "PR-D"
Δ = 10°09'02" Lt.
P.I. Sta. 309+75.15 "D"
Δ = 10°09'00" Lt.
JAMES ROTERING
ALL R/W ON THIS SHEET DESCRIBED FROM LINE "D" UNLESS OTHERWISE NOTED
FRANK & YONG SCHREIBER
KENNETH VANDENBERG
ERIK ABRAHAM
R/W
150' R/W
+00 120.00'
+00 150.00'
+17 170.00'
+℄(+77.89) 150.00'
+℄(+78.42) 170.00'
Temp. R/W for Grading
+80 Ex. R/W(145.00')
Temp. R/W for Grading
SEC. 2, T.37N., R.3W.
SPRINGFIELD TOWNSHIP
LAPORTE COUNTY
SEC. 1, T.37N., R.3W.
SPRINGFIELD TOWNSHIP
LAPORTE COUNTY
68'-0"
12'
2.0%
50' OS End Treatment, 31", Rt.
50' OS End Treatment, 31", Lt.
+41.15
+09.57
PVI Sta. 302+00
PVI El. 774.00
600' V.C.
1331.25' W-Beam Guardrail, 6.25' Spacing, Lt.
1456.25' W-Beam Guardrail, 6.25' Spacing, Rt.
Profile Grade Along Line "D"
Existing Grade Along Line "D"
-0.53%
0.13%
2.75%
-0.95%
0.47%
1.60%
11.33%
+00, El. 770.25
+00, El. 772.50
Grade Spec. "V" Ditch Req'd Lt.
44 Sys. Ditch Sodding Req'd Lt.
+00, El. 770.00
+50, El. 766.00
Grade Spec. Paved Side Ditch Req'd Rt. (Plotted 10' Below Datum)
See Previous Sheet
+00, El. 767.00
Grade Spec. "V" Ditch Req'd Rt. (Plotted 10' Below Datum)
7 Sys. Paved Side Ditch
+00, El. 743.00
-30.00%
+20, El. 737.00
Grade Spec. Paved Side Ditch Req'd Rt. (Plotted 10' Below Datum)
+00, El. 749.00
50 Sys Paved Side Ditch Req'd Rt.
111 Sys. Ditch Sodding Req'd Rt.
780
770
760
750
740
730
720
295+00
296+00
297+00
298+00
299+00
300+00
301+00
302+00
303+00
304+00
305+00
306+00
307+00
308+00
309+00
310+00
306
N: 403379.5575
E: 795037.6485
5/8" Rebar w/ Red Cap (Set), Flush
Sta. 296+59.96, 33.98' Rt. "D"
307
N: 403069.6735
E: 795914.7540
5/8" Rebar w/ Red Cap (Set), Flush
Sta. 303+88.72, 35.45' Rt. "D"
RECOMMENDED FOR APPROVAL:
DESIGN ENGINEER
DATE
DESIGNED: JCS
DRAWN: JMT
CHECKED: JWG
CHECKED: JCS
INDIANA DEPARTMENT OF TRANSPORTATION
PLAN & PROFILES
HORIZONTAL SCALE 1"=50'
VERTICAL SCALE 1"=10'
BRIDGE FILE
DESIGNATION 1702993
SURVEY BOOK 36
SHEET OF 192
CONTRACT R-41437
PROJECT 1702993
BFS NO. 6453-1701
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SEC. 1, T.37N., R.3W.
SPRINGFIELD TOWNSHIP
LAPORTE COUNTY

STATE OF INDIANA, DNR

ROSSBURG CEMETERY

SEVEN SPRINGS LEGACY, LLC.

20' Distribution Esmt. in Favor of Indiana Michigan Power Co. (Unable to Locate)

General Telephone Esmt. in Favor of American Telephone & Telegraph Co.

General Electric Line Esmt. in Favor of I&M Electric Co.

Match Line - Sta. 310+00 "D"

Match Line - Sta. 325+00 "D"

315+00

320+00

325+00

App. Ex. R/W

App. ℄

Constr. Limits

T.B.M. #4
R.R Spike in SE face
Pl t.L209-236
Elev. 764.40
"Galena Marsh"

Wilhelm Rd. (Bit. Mat.)

U.S. 20
(Bit. Mat.)

P.O.C. Sta. 315+00.00 "D"=
P.O.T. Sta. 3+00.00 "S-2-D"

P.T. Sta. 316+63.53 "PR-D"

P.O.T. Sta. 317+32.51 "PR-D" (Back)
P.T. Sta. 317+34.40 "D" (Ahead)

P.O.T. Sta. 317+34.40 "PR-D"

LINE "PR-D" (To Be Constructed)

LINE "D"

97°24'46"
82°35'14"
S80°08'52"E
68.00'

Temp. R/W for Grading
+55
Ex. R/W(100.00')
+75
110.00'
+10
112.00'
+70
Ex. R/W(65.00')
+55
Ex. R/W(91.20')
+75
Ex. R/W(80.00')
+Ex. R/W(+01.87)
75.00'

80' R/W

Ditch (Conc, partially buried)

P.O.C. Sta. 314+97.92 "PR-D"=
P.O.T. Sta. 2+98.40 "S-2-D"

LINE "S-2-D"
N17°45'54"E

Temp. R/W for Grading
+75
156.00'
+65
Ex. R/W(145.00')

ERIK ABRAHAM

SEC. 1, T.37N., R.3W.
SPRINGFIELD TOWNSHIP
LAPORTE COUNTY

ALL R/W ON THIS SHEET DESCRIBED FROM LINE "D" UNLESS OTHERWISE NOTED

FOR STRUCTURE INFORMATION SEE CONSTRUCTION DETAILS

MICHAEL & DIANA KOPCZYK
LOT 7

RICHARD MULLENHOUR
LOT 6

SUTHERLAND HOMES

PT. LOT 5

HENRY & PAMELA PENN
624 W. Hwy 20
1-Sty. Frame Hse.
PT. LOT 4

COREY LOEFFLER
PT. LOT 3

KENT JOHNSON
PT. LOT 2

GRAZYNA URBANCZYK
LOT 1

Temp. R/W for Drive Const.
+85
Ex. R/W(60.00')
+76
80.00'
+60
80.00'
+48
Ex. R/W(60.00')
+78
Ex. R/W(60.00')
+85
67.00'
+℄(+09.58)
Ex. R/W(60.00')
+00
67.00'

App. Lot Line

App. Tract Line

Constr. Limits.

+25
STR. No. 19

554 W. Hwy 20
1-Sty. Brk. Comm. Bldg

OHWEST

Patch Conc.

Grass Swale

Gravel Lot

Wooded

Grass

Gravel

Bit. Mat.

FO

OHT

G

TV

50' OS End Treatment, 31", Lt.
+44.21

See Previous Sheet

50' OS End Treatment, 31", Rt.
+91.97

PVI Sta. 311+50
PVI El. 775.25
700' V.C.

Profile Grade Along Line "D"

-0.95%
-1.90%
-4.04%
-3.07%
-3.30%
-4.56%
1.22%
-1.23%
-1.12%
0.30%

+00, El. 770.60
+00, El. 766.81
+00, El. 761.42
+50, El. 771.65
+50, El. 760.75
+50, El. 761.75
+50, El. 752.06
+46, El. 734.00
+00, El. 737.09
+50, El. 736.50
+00, El. 737.25

Existing Grade Along Line "D"

Grade Spec. "V" Ditch Req'd Lt.
89 Sys. Ditch Sodding Req'd Lt.

38 Tons Revetment Riprap on
100 Sys. Geotextile Req'd Lt.

Grade Spec. "V" Ditch Req'd Rt.
(Plotted 10' Below Datum)

75 Tons Revetment Riprap on 200 Sys. Geotextile Req'd Rt.

100 Tons Revetment Riprap on 267 Sys. Geotextile Req'd Lt.

178 Sys. Ditch Sodding Req'd Lt.

Grade Spec. "V" Ditch Req'd Lt.

+10.27

+42.98

12.50' Omitted Post Span, Lt.
Hand Dig Guardrail Post Holes On Either Side Of Structure

481.25' MGS W-Beam Guardrail, 6.25' Spacing, Lt.

350.00' MGS W-Beam Guardrail, 6.25' Spacing Lt.

131.25' MGS W-Beam Guardrail, 6.25' Spacing Rt.

37.50' MGS Height Transition, Rt.

18.75' W-Beam Guardrail, 6.25' Spacing Rt.

Curved W-Beam Guardrail Terminal System With 2 Panels Omitted, 8.50' Radius Rt. (Includes 6.25' on Tangent)

Curved W-Beam Guardrail Terminal System With 2 Panels Omitted, 8.50' Radius Rt. (Includes 6.25' on Tangent)

T.B.M. 4 - R.R. Spike Set in S.E. Face of Light Pole #L209-23, Sta. 314+84.68, 66.85' Lt. "D" Elev. 764.435

780
770
760
750
740
730
720

777.7 777.6 777.4 777.2 776.8 776.4 776.0 775.6 775.0 774.4 773.9 773.3 772.5 771.8 771.0 770.2 769.3 768.3 767.4 766.4 765.4 764.4 763.4 762.4 761.4 760.4 759.4 758.4 757.4 756.4 755.4 754.4 753.4 752.4 751.5 750.5 749.6 748.7 748.0 747.3 746.6 745.8 745.2 744.6 744.1 743.6 743.2 742.9 742.6 742.3 742.1 741.9 741.8 741.7 741.6 741.5 741.5 741.4 741.4 741.3 741.3

310+00 311+00 312+00 313+00 314+00 315+00 316+00 317+00 318+00 319+00 320+00 321+00 322+00 323+00 324+00 325+00

308
N: 402935.7035
E: 796389.6090
Hvg. Nail In Edge of Pavement
Pg Post of "La Lumiere" Sign
5/8" Rebar w/ Red Cap (Set), Flush
Sta. 310+80.18, 34.62' Rt. "D"

309
N: 402908.9050
E: 796872.6020
Hvg. Nail In E. Face of 24" Cottonwood Tree
Found Tbm Anchor Wire Bore
R.R. Spike in S.E. Face of Pole
Gravel Lot
Boat Spike (Set), Flush
Sta. 315+57.70, 44.81'' Lt. "D"

310
N: 402706.4610
E: 797543.8940
Hvg Nail in Edge of Pavement
Hvg Nail in N. Face of Util. Pole
Telephone Pedestal
5/8" Rebar w/ Red Cap (Set), Flush
Sta. 322+54.66, 37.98'' Rt. "D"

RECOMMENDED FOR APPROVAL:
DESIGN ENGINEER DATE

DESIGNED: JCS DRAWN: JMT
CHECKED: JWG CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN & PROFILES

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	
VERTICAL SCALE	DESIGNATION
1"=10'	1702993
SURVEY BOOK	SHEET
	37 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. G453.1701

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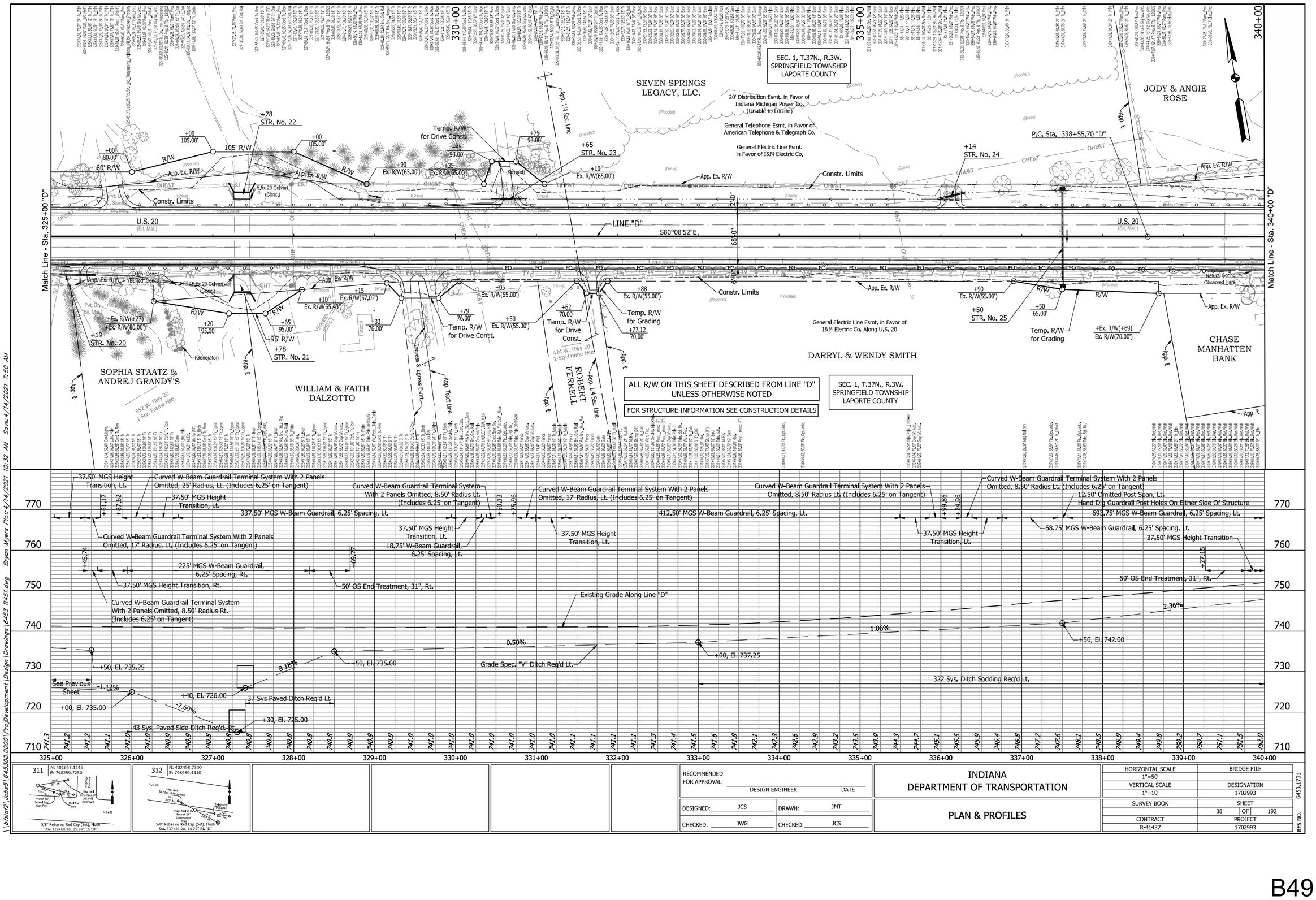
Match Line - Sta. 325+00 "D"
Match Line - Sta. 340+00 "D"
330+00
335+00
340+00
SEC. 1, T.37N., R.3W.
SPRINGFIELD TOWNSHIP
LAPORTE COUNTY
SEVEN SPRINGS
LEGACY, LLC.
JODY & ANGIE
ROSE
SOPHIA STAATZ &
ANDREJ GRANDY'S
WILLIAM & FAITH
DALZOTTO
ROBERT
FERRELL
DARRYL & WENDY SMITH
CHASE
MANHATTEN
BANK
U.S. 20
(Bit. Mat.)
LINE "D"
S80°08'52"E,
68.0'
20' Distribution Esmt. in Favor of
Indiana Michigan Power Co.
(Unable to Locate)
General Telephone Esmt. in Favor of
American Telephone & Telegraph Co.
General Electric Line Esmt.
in Favor of I&M Electric Co.
General Electric Line Esmt. in Favor of
I&M Electric Co. Along U.S. 20
P.C. Sta. 338+55.70 "D"
+78
STR. No. 22
+14
STR. No. 24
+19
STR. No. 20
+78
STR. No. 21
+65
STR. No. 23
+50
STR. No. 25
105' R/W
80' R/W
95' R/W
Temp. R/W
for Drive Const.
Temp. R/W
for Grading
Constr. Limits
App. Ex. R/W
App. 1/4 Sec. Line
App. Tract Line
Ingress & Egress Esmt.
5.5x 20 Culvert
(Conc.)
Ditch (Conc.)
(Buried Conc.)
CH (5x5 20 Culvert)
(Conc.)
424 W. Hwy 20
1-Sty. Frame Hse.
552 W. Hwy 20
1-Sty. Frame Hse.
Natural Spring
Observed Here
ALL R/W ON THIS SHEET DESCRIBED FROM LINE "D"
UNLESS OTHERWISE NOTED
FOR STRUCTURE INFORMATION SEE CONSTRUCTION DETAILS
SEC. 1, T.37N., R.3W.
SPRINGFIELD TOWNSHIP
LAPORTE COUNTY
37.50' MGS Height
Transition, Lt.
Curved W-Beam Guardrail Terminal System With 2 Panels
Omitted, 25' Radius, Lt. (Includes 6.25' on Tangent)
37.50' MGS Height
Transition, Lt.
337.50' MGS W-Beam Guardrail, 6.25' Spacing, Lt.
Curved W-Beam Guardrail Terminal System
With 2 Panels Omitted, 8.50' Radius Lt.
(Includes 6.25' on Tangent)
Curved W-Beam Guardrail Terminal System With 2 Panels
Omitted, 17' Radius, Lt. (Includes 6.25' on Tangent)
412.50' MGS W-Beam Guardrail, 6.25' Spacing, Lt.
Curved W-Beam Guardrail Terminal System With 2 Panels
Omitted, 8.50' Radius Lt. (Includes 6.25' on Tangent)
Curved W-Beam Guardrail Terminal System With 2 Panels
Omitted, 8.50' Radius Lt. (Includes 6.25' on Tangent)
12.50' Omitted Post Span, Lt.
Hand Dig Guardrail Post Holes On Either Side Of Structure
693.75' MGS W-Beam Guardrail, 6.25' Spacing, Lt.
37.50' MGS Height Transition, Lt.
68.75' MGS W-Beam Guardrail, 6.25' Spacing, Lt.
37.50' MGS Height Transition, Rt.
225' MGS W-Beam Guardrail,
6.25' Spacing, Rt.
50' OS End Treatment, 31", Rt.
18.75' W-Beam Guardrail,
6.25' Spacing, Lt.
37.50' MGS Height Transition
50' OS End Treatment, 31", Rt.
Curved W-Beam Guardrail Terminal System
With 2 Panels Omitted, 8.50' Radius Rt.
(Includes 6.25' on Tangent)
Existing Grade Along Line "D"
2.36%
1.06%
0.50%
-1.12%
-7.69%
8.18%
+50, El. 735.25
+50, El. 735.00
+00, El. 737.25
+50, El. 742.00
+00, El. 735.00
+40, El. 726.00
+30, El. 725.00
Grade Spec. "V" Ditch Req'd Lt.
See Previous
Sheet
37 Sys Paved Ditch Req'd Lt.
43 Sys. Paved Side Ditch Req'd. Rt.
322 Sys. Ditch Sodding Req'd Lt.
770
760
750
740
730
720
710
325+00
326+00
327+00
328+00
329+00
330+00
331+00
332+00
333+00
334+00
335+00
336+00
337+00
338+00
339+00
340+00
311
N: 402657.1245
E: 798259.7250
312
N: 402458.7300
E: 798989.4410
5/8" Rebar w/ Red Cap (Set), Flush
Sta. 329+68.38, 35.89' Lt. "D"
5/8" Rebar w/ Red Cap (Set), Flush
Sta. 337+21.28, 34.71' Rt. "D"
RECOMMENDED
FOR APPROVAL:
DESIGN ENGINEER
DATE
DESIGNED: JCS
DRAWN: JMT
CHECKED: JWG
CHECKED: JCS
INDIANA
DEPARTMENT OF TRANSPORTATION
PLAN & PROFILES
HORIZONTAL SCALE
1"=50'
VERTICAL SCALE
1"=10'
BRIDGE FILE
DESIGNATION
1702993
SURVEY BOOK
SHEET
38 OF 192
CONTRACT
R-41437
PROJECT
1702993
BFS NO.
6453.1701
\\bfsiol2\Jobs\6453000\0000\Proj\Development\Design\Drawings\6453_R451.dwg Bryan Myers Plot: 4/14/2021 10:32 AM Save: 4/14/2021 7:50 AM

JODY & ANGIE ROSE

20' Elec. Esmt. for I&M Power

181 W. Hwy 20 1-Sty. Steel Bldg.

CURVE DATA
P.I Sta. 342+55.71 "D"
Δ = 0°44'00" Lt.
R = 62504.73'
T = 400.01'
L = 800.00'
E = 1.28'

20' Ingress & Egress Esmt.

177 W. Hwy 20 1-Sty. Brick Hse.

SEC. 1, T.37N., R.3W. SPRINGFIELD TOWNSHIP LAPORTE COUNTY

THOMAS PERSCHKE, TRUSTEE

GEORGE FULTZ LIVING TRUST & SHELBY FULTZ LIVING TRUST

T.B.M. #5
R. R Spike in surface
PJNT L209-9 N. Side
HWY US 20
Elev. 832.836

57 W. Hwy 20 1-Sty. Frame Comm. Bldg.

Temp. R/W for Drive Const.

Temp. R/W for Grading

P.C. Sta. 352+00.01 "D"

Ditch (Conc.) (Buried Conc.)

Partially Silted

Constr. Limits

P.I. Sta. 342+55.71 "D"
Δ = 0°44'00" Lt.

LINE "D" S80°52'52"E

U.S. 20 (Bit. Mat.)

Match Line - Sta. 340+00 "D"

Match Line - Sta. 355+00 "D"

CHASE MANHATTEN BANK (Wooded)
1-Sty.Frame Garage.

222 W. Hwy 20 1-Sty. Brick Hse.

STEPHEN SCHACKART

RICKY & LESLIE EMERY

JOYAN SUBDIVISION

202 W. Hwy 20 1-Sty.Frame Hse.

20' Util. Esmt. in Favor of County of LaPorte, General Telephone Co., I&M Electric, NIPSCO, Etc.

SEC. 1, T.37N., R.3W. SPRINGFIELD TOWNSHIP LAPORTE COUNTY

General Electric Line Esmt. in Favor of I&M Electric Co. Along U.S. 20

DARRYL & WENDY SMITH

DAVID & SHERRY LYKINS

76 W. Hwy 20 1-Sty.Frame Hse.

44 W. Hwy 20 1-Sty. Brick Hse.

44 W. Hwy 20 3-Sty. Brick Hse.

OPAL LYKINS LIFE ESTATE, ET. AL.

SEC. 12, T.37N., R.3W. CENTER TOWNSHIP LAPORTE COUNTY

EMILI & EVANNA REMEDI

ALL R/W ON THIS SHEET DESCRIBED FROM LINE "D" UNLESS OTHERWISE NOTED

FOR STRUCTURE INFORMATION SEE CONSTRUCTION DETAILS

Curved W-Beam Guardrail Terminal System With 2 Panels Omitted, 17' Radius, Lt. (Includes 6.25' on Tangent)

Curved W-Beam Guardrail Terminal System With 2 Panels Omitted, 8.50' Radius Rt. (Includes 6.25' on Tangent)

T.B.M. 5 - R.R. Spike Set in S. Face Utility Pole #L2099, Sta. 347+19.71, 92.81' Lt. "D"
Elev. 761.738

718.75' MGS W-Beam Guardrail, 6.25' Spacing, Lt.

12.50' Omitted Post Span, Lt.
Hand Dig Guardrail Post Holes On Either Side Of Structure

37.50' MGS Height Transition, Lt.

6.25' W-Beam Guardrail, 6.25' Spacing, Lt.

37.50' MGS Height Transition, Rt.

256.25' MGS W-Beam Guardrail, 6.25' Spacing, Rt.

50' OS End Treatment, 31", Rt.

231.25' MGS W-Beam Guardrail, 6.25' Spacing, Rt.

See Previous Sheet

Existing Grade Along Line "D"

+00, El. 760.00

+00, El. 762.31

+00, El. 756.25

+25, El. 748.50

+75, El. 749.75

2.00%

1.04%

3.03%

3.34%

256 Sys. Ditch Sodding Req'd Lt.

278 Sys. Ditch Sodding Req'd Rt.

250 Tons Revetment Riprap on 667 Sys. Geotextile Req'd Rt.

Grade Spec. "V" Ditch Req'd Lt.

Grade Spec. "V" Ditch Req'd Rt. (Plotted 10' Below Datum)

340+00 341+00 342+00 343+00 344+00 345+00 346+00 347+00 348+00 349+00 350+00 351+00 352+00 353+00 354+00 355+00

313 N: 402319.6405 E: 799780.5990

5/8" Rebar w/ Red Cap (Set), Flush Sta. 345+24.16, 39.96' Rt. "D"

314 N: 402275.3175 E: 800607.2865

5/8" Rebar w/ Red Cap (Set), Flush Sta. 353+47.42, 47.80' Lt. "D"

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER DATE

DESIGNED: JCS DRAWN: JMT

CHECKED: JWG CHECKED: JCS

INDIANA DEPARTMENT OF TRANSPORTATION

PLAN & PROFILES

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	
VERTICAL SCALE	DESIGNATION
1"=10'	1702993
SURVEY BOOK	SHEET
	39 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

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SEC. 1, T.37N., R.3W.
SPRINGFIELD TOWNSHIP
LAPORTE COUNTY

THOMAS PERSCHKE, TRUSTEE

CURVE DATA
P.I Sta. 356+00.01 "D"
Δ = 0°35'00" Lt.
R = 78577.31'
T = 400.00'
L = 800.00'
E = 1.02'

P.I. Sta. 356+00.01 "D"
Δ = 0°35'00" Lt.

P.O.T. Sta. 358+55.00 "D"=
P.O.T. Sta. 3+00.00 "S-3-D"

P.T. Sta. 360+00.01 "D"

SEC. 6, T.37N., R.2W.
KANKAKEE TOWNSHIP
LAPORTE COUNTY

General Gas Pipe Line Esmt. in
Favor of Wolverine Pipe Line Co.

GREGORY THOMAN

P.C. Sta. 365+00.01 "D"

GREGORY THOMAN

CURVE DATA
P.I Sta. 368+28.01 "D"
Δ = 0°23'00" Rt.
R = 98050.00'
T = 328.00'
L = 656.00'
E = 0.55'

P.I. Sta. 368+28.01 "D"
Δ = 0°23'00" Rt.

Match Line - Sta. 355+00 "D"

Match Line - Sta. 370+00 "D"

Range Rd.

LINE "D"

S81°27'52"E

U.S. 20
(Bit. Mat'l.)

Constr. Limits

60' R/W

App. Ex. R/W

App. Sec. Line & Tract Line

Temp. R/W for Drive Const.

Ex. R/W(54.50')

Ex. R/W(50.00')

Ditch (Conc.)

Ditch (Conc. partially buried)

STR. No. 32

STR. No. 33

STR. No. 34

STR. No. 35

95' R/W

85' R/W

Temp. R/W for Drive Const.

12' Util. & Drainage Esmt. Per Plat

10' Ingress & Egress Esmt.

20' Ingress & Egress Esmt.

101 E. Hwy 20
2-Sty. Frame Hse.

44 W. Hwy 20
1-Sty. Steel Bldg.

152 E. Hwy 20
1-Sty. Brick Hse.

122 E. Hwy 20
1-Sty. Frame Hse.

4998 N Range Rd
1-Sty. Frame Hse.

"PSTAX Service"

Blanket Pipe Line Esmt.
in Favor of Wolverine Pipe Line Co.
(Indicated by "*See Esmt. Note")

*See Esmt. Note

EDWIN & IMOGENE ESKRIDGE

COLIN R. SCHROEDER

CHARLES MAINLAND REV. LIV. TRUST

MARGARET STACY
LOT 1

ERNEST KEANE & SHARON STACY
LOT 2

ROBERT STACY JR.
LOT 5

JAMES STACY
LOT 3

STACY MINOR SUBDIVISION

SEC. 12, T.37N., R.3W.
CENTER TOWNSHIP
LAPORTE COUNTY

SEC. 7, T.37N., R.2W.
KANKAKEE TOWNSHIP
LAPORTE COUNTY

ALL R/W ON THIS SHEET DESCRIBED FROM LINE "D"
UNLESS OTHERWISE NOTED

FOR STRUCTURE INFORMATION SEE CONSTRUCTION DETAILS

T.B.M. 7 - Chixled "X" in NW Cor. Headwall,
Sta. 358+90.70, 47.93' Lt. "D"
Elev. 793.610

50' OS End Treatment, 31", Rt.

See Previous Sheet

Existing Grade Along Line "D"

1.00%

+00, El. 789.00

+00, El. 790.00

0.71%

+32, El. 792.10

+00, El. 794.00

0.43%

Grade Spec. "V" Ditch Req'd Rt.
(Plotted 10' Below Datum)

-1.20%

+50, El. 796.35

289 Sys. Ditch Sodding Req'd Rt.

See Previous Sheet

44 Sys. Ditch Sodding Req'd Rt.

315 N: 402101.6595 E: 801126.1235
Mag Nail (Set), Flush
Sta. 358+86.75, 44.80' Rt. "D"

316 N: 402096.5335 E: 801707.7830
5/8" Rebar w/ Red Cap (Set), Flush
Sta. 364+62.67, 36.54' Lt. "D"

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER DATE

DESIGNED: JCS DRAWN: JMT

CHECKED: JWG CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN & PROFILES

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	
VERTICAL SCALE	DESIGNATION
1"=10'	1702993
SURVEY BOOK	SHEET
	40 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

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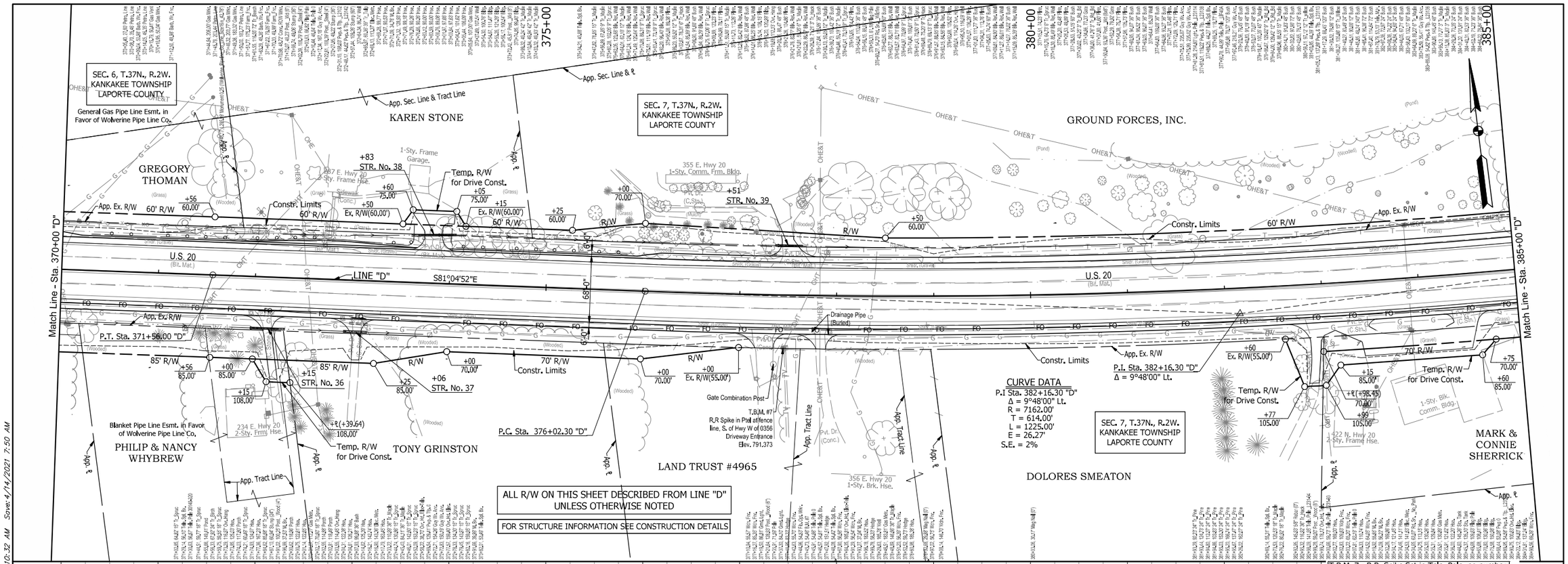

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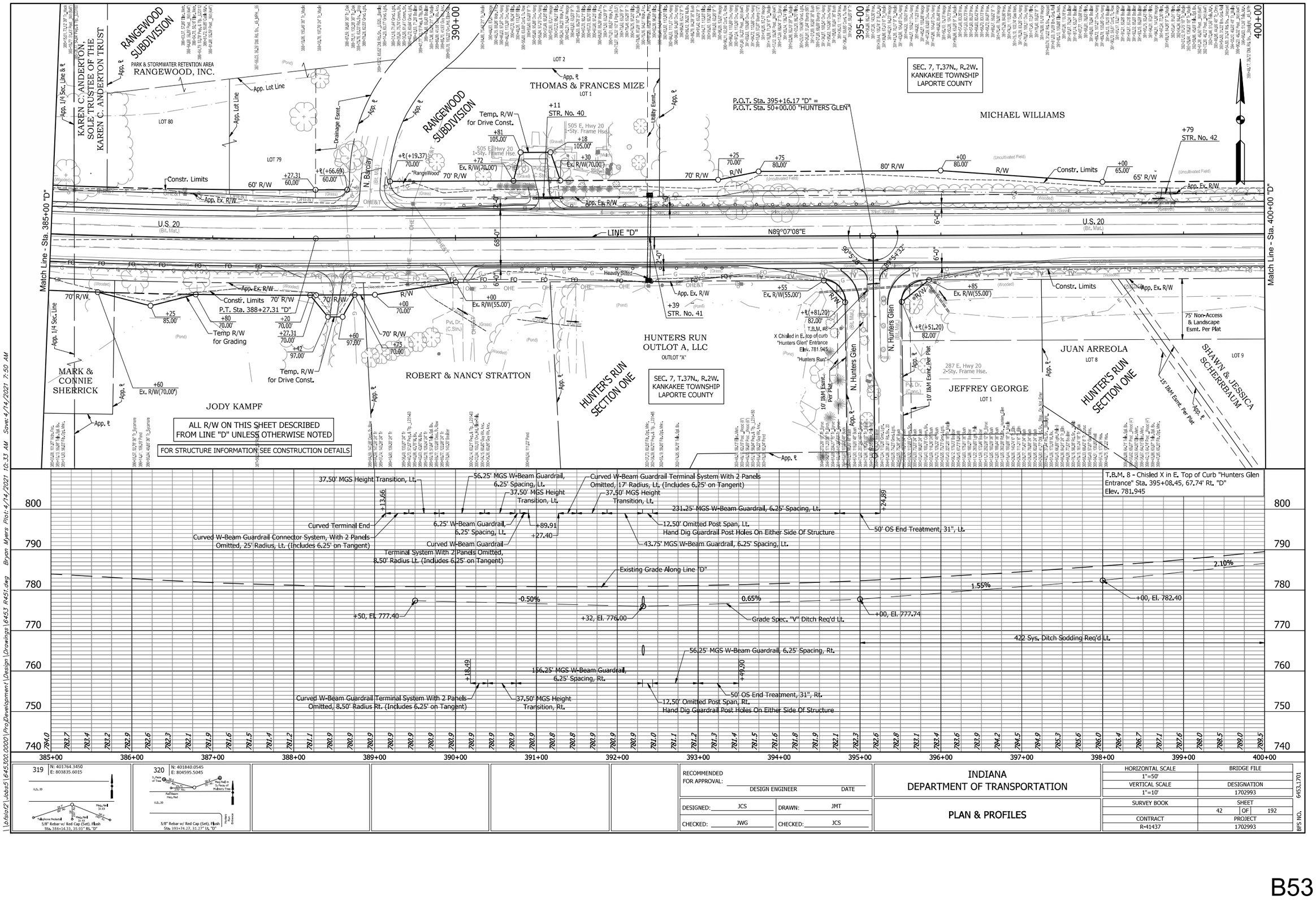

319 N: 401764.3450 E: 803835.6015

5/8" Rebar w/ Red Cap (Set), Flush
Sta. 386+14.33, 35.93' Rt. "D"

320 N: 401840.0545 E: 804595.5045

5/8" Rebar w/ Red Cap (Set), Flush
Sta. 393+74.27, 31.27' Lt. "D"

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER DATE

DESIGNED: JCS DRAWN: JMT

CHECKED: JWG CHECKED: JCS

INDIANA DEPARTMENT OF TRANSPORTATION

PLAN & PROFILES

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	
VERTICAL SCALE	DESIGNATION
1"=10'	1702993
SURVEY BOOK	SHEET
	42 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

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ALL R/W ON THIS SHEET DESCRIBED FROM LINE "D" UNLESS OTHERWISE NOTED

FOR STRUCTURE INFORMATION SEE CONSTRUCTION DETAILS

Match Line - Sta. 400+00 "D"

Match Line - Sta. 415+00 "D"

MICHAEL WILLIAMS

SEC. 7, T.37N., R.2W. KANKAKEE TOWNSHIP LAPORTE COUNTY

STEVEN & MARY SCHAUB

SEC. 8, T.37N., R.2W. KANKAKEE TOWNSHIP LAPORTE COUNTY

GEORGE CYR

DYLAN & COLLEEN CABANAW

LOT 10

JUSTIN MILCAREK

LOT 11

HUNTER'S RUN SECTION ONE

LOT 12

KEVIN & LAURA KALK

LOT 13

KELSEN & ALYSON DEPP

LOT 14

SEC. 7, T.37N., R.2W. KANKAKEE TOWNSHIP LAPORTE COUNTY

ROBERT LANTERO & DAWN ZEMAN

DAVID BUEHRER

SEC. 8, T.37N., R.2W. KANKAKEE TOWNSHIP LAPORTE COUNTY

LIMITS TO BE CONSTRUCTED IN PROJECT DES. NO. 1900050

END PROJECT
P.O.T. Sta. 407+41.72 "D"

P.O.T. Sta. 6+00.00 "S-4-D"

P.O.C. Sta. 411+70.02 "D" =
P.O.T. Sta. 3+50.00 "S-4-D"

P.C. Sta. 406+70.01 "D"

P.I. Sta. 411+70.02 "D"
Δ = 0°44'00" Rt.
1011 Hwy 20
2-Sty. Frame Hse.

CURVE DATA
P.I Sta. 411+70.02 "D"
Δ = 0°44'00" Rt.
R = 78130.62'
T = 500.01'
L = 1000.00'
E = 1.60'

LINE "D"

LINE "S-4-D"

N89°07'08"E

N00°59'52"W

App. Tract Line

App. ℄

App. Ex. R/W

App. Sec. Line

Constr. Limits

Temp. R/W for Grading

Ex. R/W(50.00')

65' R/W

66.0'

68.0'

U.S. 20
(Bit. Mat.)

N. Fail Rd.
(Bit. Mat.)

89°53'0"

90°5'14"

90°0'0"

89°8'56"

+45
STR. No. 43

+℄(+73.97)
65.00'

+℄(+74.01)
56.00'

+86

+50
Ex. R/W(55.00')

+25
65.00'

R/W

"Hestop"
Supply

75' Non-Access
& Landscape Esmt.
Per Plat

Children's Playground
(Gravel)

Steel Shed

Existing Grade Along Line "D"

END PROJECT
Sta. 407+41.72 "Line "D"
Elev. 807.54

+50, El. 796.60

+00, El. 788.71

Grade Spec. "V" Ditch Req'd Lt.
(Plotted 10' Below Datum)

2.25%

See Previous Sheet

789.5	790.1	790.7	791.3	791.9	792.5	793.1	793.7	794.3	794.9	795.5	796.1	796.7	797.3	797.9	798.5	799.2	799.8	800.4	801.0	801.6	802.2	802.8	803.4	804.0	804.6	805.3	805.9	806.5	807.1	807.7	808.4	809.0	809.6	810.2	810.8	811.2	811.6	812.1	812.5	812.9	813.1	813.4	813.6	813.9	814.0	814.2	814.3	814.5	814.7	814.8	815.0	815.1	815.2	815.3	815.5	815.6	815.7	815.9	816.0	816.1

820 810 800 790 780 770 760

400+00 401+00 402+00 403+00 404+00 405+00 406+00 407+00 408+00 409+00 410+00 411+00 412+00 413+00 414+00 415+00

321 N: 401781.1770 E: 805286.1600

Mag Nail (Set), Flush
Sta. 400+83.93, 38.22'' Rt, "D"

322 N: 401782.2255 E: 805862.662

Mag. Nail (Set), Flush
Sta. 406+40.38, 46.04'' Rt, "D"

323 N: 401781.5230 E: 806335.8865

Mag. Nail (Set), Flush
Sta. 411+13.84, 52.76'' Rt, "D"

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: JCS DRAWN: JMT

CHECKED: JWG CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN & PROFILES

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	
VERTICAL SCALE	DESIGNATION
1"=10'	1702993
SURVEY BOOK	SHEET
	43 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

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252+00 253+00 254+00 255+00 256+00 257+00 258+00

CHARLES MOORE & SHERRI CUDDY

LAKE COUNTY TRUST COMPANY

BEGIN PROJECT
P.O.T. Sta. 255+25.28 "D"

SEC. 2, T.37N., R.3W.
SPRINGFIELD TOWNSHIP
LAPORTE COUNTY

T.B.M. #1
X Chisled in E bolt traffic light support pole
Elev. 768.04

S.R. 39 (Bit. Mat.)

App. ℄

+91.6 "D", 90.0 Lt.

488' Taper

R60'-0"

App. Ex. R/W

P.O.T. Sta. 255+00.00 "PR-D" =
P.O.T. Sta. 255+00.00 "D"

12" CMP

Constr. Limits

Shldr. (Gravel)

S88°27'52"E

LINE "D"

U.S. 20 (Bit. Mat.)

LINE "PR-D" (To Be Constructed)

6'-0" J

30'-0" L1

34'-0" L

6'-0" J

Match Line - Sta. 258+00 "D"

"Digzy Dogz & Grill"

+47

P.O.T. Sta. 257+17.54 "D" =
P.O.T. Sta. 257+17.54 "PR-D"

Constr. Limits

"Burkhart Billboards"

34' Mod. Cl. IV Drive Req'd.

App. Ex. R/W

"Marines"

R60'-0"

+79.4 "D", 94.0 Rt.

MARUTI'S CORP.

Unused

SEC. 2, T.37N., R.3W.
SPRINGFIELD TOWNSHIP
LAPORTE COUNTY

See Typical Cross Sections for Compacted Aggregate Shoulder.

ALL R/W ON THIS SHEET DESCRIBED FROM LINE "D" UNLESS OTHERWISE NOTED

LEGEND

- (D) HMA FOR APPROACHES
- (J) HMA SHOULDER
- (K) FULL DEPTH HMA PAVEMENT
- (L) MILL & OVERLAY EXISTING PAVEMENT
- (L1) MILL & VARIABLE DEPTH OVERLAY EXISTING PAVEMENT

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER DATE

DESIGNED: JCS DRAWN: JMT

CHECKED: JWG CHECKED: JCS

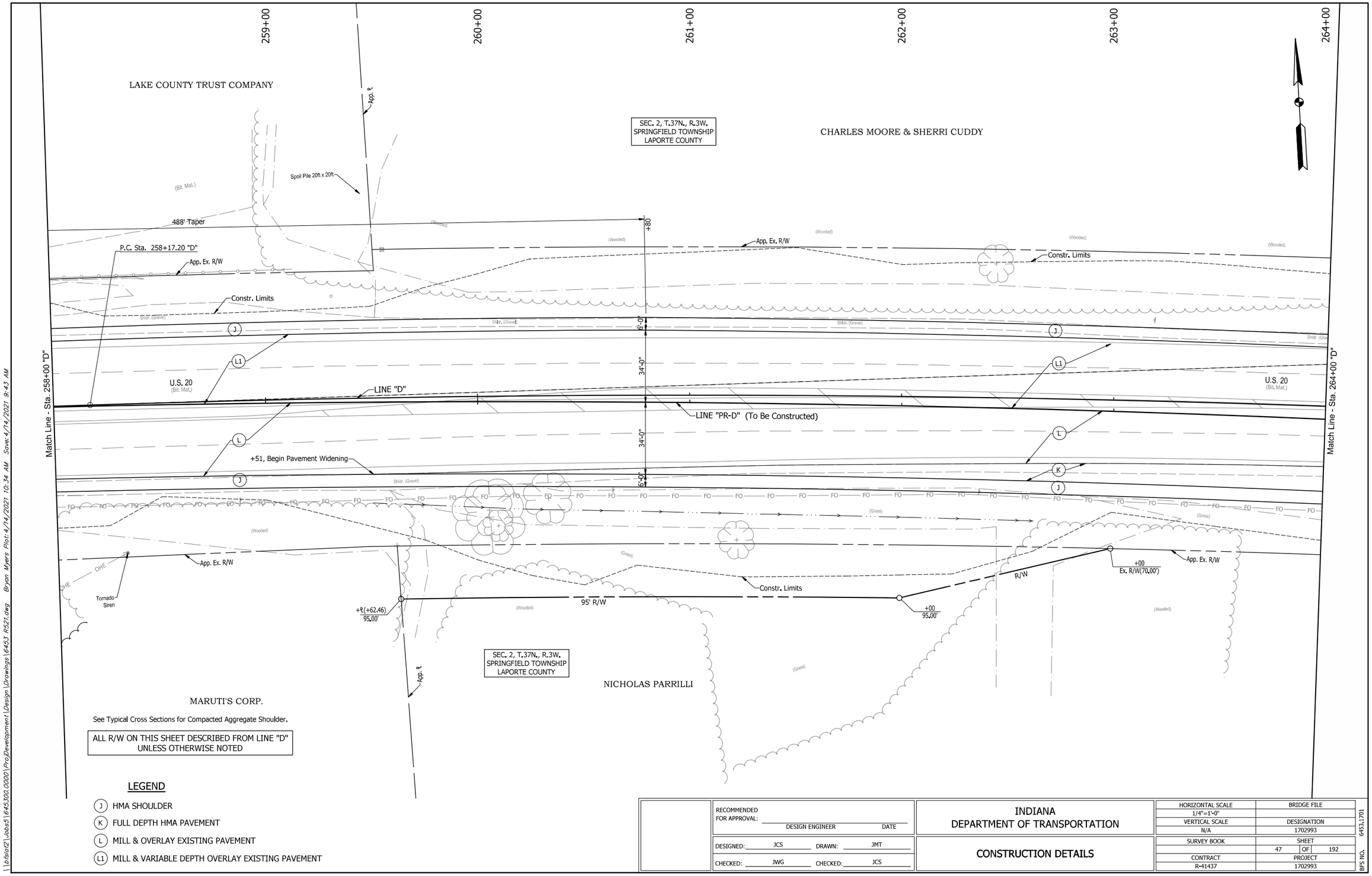
INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE
1/4"=1'-0"	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	46 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

I:\sfs\f2\Jobs\645300.0000\ProjDevelopment\Design\Drawings\6453_R521.dwg Bryan Myers Plot:4/14/2021 10:33 AM Save:4/14/2021 9:43 AM



See Typical Cross Sections for Compacted Aggregate Shoulder.

ALL R/W ON THIS SHEET DESCRIBED FROM LINE "D" UNLESS OTHERWISE NOTED

LEGEND

- (J) HMA SHOULDER
- (K) FULL DEPTH HMA PAVEMENT
- (L) MILL & OVERLAY EXISTING PAVEMENT
- (L1) MILL & VARIABLE DEPTH OVERLAY EXISTING PAVEMENT

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER DATE

DESIGNED: JCS DRAWN: JMT

CHECKED: JWG CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE
1/4"=1'-0"	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	47 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

\\bfsfs2\Jobs5\645300.0000\ProjDevelopment\Design\Drawings\6453 R521.dwg Bryan Myers Plot:4/14/2021 10:34 AM Save:4/14/2021 9:43 AM

265+00 266+00 267+00 268+00 269+00 270+00

CHARLES MOORE & SHERRI CUDDY

SEC. 2, T.37N., R.3W.
SPRINGFIELD TOWNSHIP
LAPORTE COUNTY

8' Cl. II Drive Req'd.
+18
Pvt. Dr. (Comm.)
D
App. Ex. R/W
Constr. Limits
(Wooded)
(Grass)
Shldr. (Gravel)
5'-0"
34'-0"
5'-0"
U.S. 20
(Bit. Mat.)
LINE "D"
LINE "PR-D" (To Be Constructed)
Match Line - Sta. 264+00 "D"
Match Line - Sta. 270+00 "D"
J
L1
L
K
FO
OHE
+00
Ex. R/W(70.00')
+28
16' Mod. Cl. II Drive Req'd.
R/W
+00
90.00'

See Typical Cross Sections for Compacted Aggregate Shoulder.

ALL R/W ON THIS SHEET DESCRIBED FROM LINE "D"
UNLESS OTHERWISE NOTED

NICHOLAS PARRILLI

SEC. 2, T.37N., R.3W.
SPRINGFIELD TOWNSHIP
LAPORTE COUNTY

LEGEND

- (D) HMA FOR APPROACHES
- (J) HMA SHOULDER
- (K) FULL DEPTH HMA PAVEMENT
- (L) MILL & OVERLAY EXISTING PAVEMENT
- (L1) MILL & VARIABLE DEPTH OVERLAY EXISTING PAVEMENT

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: JCS DRAWN: JMT

CHECKED: JWG CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE
1/4"=1'-0"	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	48 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

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271+00 | 272+00 | 273+00 | 274+00 | 275+00 | 276+00

CURVE DATA
P.I Sta. 271+80.60 "PR-D"
Δ = 18°28'00" Rt.
R = 9000.00'
T = 1463.06'
L = 2900.74'
E = 118.14'
S.E. = 2%

CURVE DATA
P.I Sta. 272+14.32 "D"
Δ = 18°28'00" Rt.
R = 8594.38'
T = 1397.12'
L = 2770.00'
E = 112.82'

CHARLES MOORE & SHERRI CUDDY

SEC. 2, T.37N., R.3W.
SPRINGFIELD TOWNSHIP
LAPORTE COUNTY

App. 1/4 Sec. Line S. & E.

P.I. Sta. 271+80.60 "PR-D"
Δ = 18°28'00" Rt.

P.I. Sta. 272+14.32 "D"
Δ = 18°28'00" Rt.

S88°27'52"E

S69°59'52"E

S69°59'52"E

11 Tons of Revetment Riprap
On 15 Sys. Geotextile Req'd.

+03
STR. No. 10
106' of 4'x2' RCB Req'd.

(Wooded)

App. Ex. R/W

(Grass)

Shldr. (Gravel)

Constr. Limits

J

L1

U.S. 20
(Bit. Mat.)

LINE "D"

LINE "PR-D" (To Be Constructed)

L

K

J

5'-0"

34'-0"

6'-0"

Match Line - Sta. 270+00 "D"

Match Line - Sta. 276+00 "D"

FO

OHE

Pvt. Dr.
(Bit. Mat.)

90' R/W

+00
90.00'

Trailer Park Under Demolition

+25
115.00'

11 Tons of Revetment Riprap
On 15 Sys. Geotextile Req'd.

SEC. 2, T.37N., R.3W.
SPRINGFIELD TOWNSHIP
LAPORTE COUNTY

NICHOLAS PARRILLI

See Typical Cross Sections for Compacted Aggregate Shoulder.

ALL R/W ON THIS SHEET DESCRIBED FROM LINE "D"
UNLESS OTHERWISE NOTED

LEGEND

- (J) HMA SHOULDER
- (K) FULL DEPTH HMA PAVEMENT
- (L) MILL & OVERLAY EXISTING PAVEMENT
- (L1) MILL & VARIABLE DEPTH OVERLAY EXISTING PAVEMENT

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER DATE

DESIGNED: JCS DRAWN: JMT

CHECKED: JWG CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE
1/4"=1'-0"	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	49 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

277+00
278+00
279+00
280+00
281+00
282+00

WILLIE HOWARD

SEC. 2, T.37N., R.3W.
SPRINGFIELD TOWNSHIP
LAPORTE COUNTY

App. Tract Line

"Howard Excavating"

15' Cl. V Drive Req'd.

±10

18' Mod. Cl. IV Drive Req'd.

±07

App. Ex. R/W

T.B.M. #2
R.R Spike in S. face
of ppwp I208-159
Elev. 751.25

3X2' Conc.

Fld. Entr. (Gravel)

Comm. Dr. (Bit. Mat.)

Constr. Limits

Match Line - Sta. 276+00 "D"

Match Line - Sta. 282+00 "D"

U.S. 20
(Bit. Mat.)

LINE "D"

LINE "PR-D" (To Be Constructed)

34'-0"

6'-0"

Guardrail Req'd. See Plan & Profiles for Details

"Suncatchers Paintings by Chrissy"

+02
STR. No. 12
Extend 24" VCP
18' w/ 1 P.E.S. Req'd.

5.5 Tons of Revetment Riprap
On 7 Sys. Geotextile Req'd.

90' R/W

+60

10' Cl. II Drive Req'd.

+52

16' Cl. II Drive Req'd.

+52
STR. No. 11
52' of 15" Pipe Req'd.

(Horse Pasture)

MICHAEL & CHRISTINE HICKS

HAROLD & SANDRA HENDERSON

App. 1/4 Sec. Line & ℄

App. ℄

See Typical Cross Sections for Compacted Aggregate Shoulder.

ALL R/W ON THIS SHEET DESCRIBED FROM LINE "D" UNLESS OTHERWISE NOTED

LEGEND

- (D) HMA FOR APPROACHES
- (J) HMA SHOULDER
- (K) FULL DEPTH HMA PAVEMENT
- (L) MILL & OVERLAY EXISTING PAVEMENT
- (L1) MILL & VARIABLE DEPTH OVERLAY EXISTING PAVEMENT
- (O) COMPACTED AGGREGATE NO. 53

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: JCS DRAWN: JMT

CHECKED: JWG CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE
1/4"=1'-0"	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	50 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

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283+00 | 284+00 | 285+00 | 286+00 | 287+00 | 288+00

WILLIE HOWARD

SEC. 2, T.37N., R.3W.
SPRINGFIELD TOWNSHIP
LAPORTE COUNTY

15' Cl. V Drive Req'd.

+34

App. Ex. R/W

Fld. Entr. (Gravel)

18" CMP

Do Not Disturb

Constr. Limits

P.T. Sta. 285+87.20 "D"

App. Ex. R/W

Match Line - Sta. 282+00 "D"

Match Line - Sta. 288+00 "D"

U.S. 20 (Bit. Mat.)

5'-0"

34'-0"

2'-0"

S69°59'52"E

LINE "D"

LINE "PR-D" (To Be Constructed)

+75

+00

Guardrail Req'd. See Plan & Profiles for Details

+60
STR. No. 13
Extend 15" RCP
20' w/ 1 P.E.S. Req'd.

2 Tons of Revetment Riprap
On 3 Sys. Geotextile Req'd.

Constr. Limits

App. Ex. R/W

90' R/W

+87.20
90.00'

+℄(+88.95)
90.00'

P.T. Sta. 286+18.28 "PR-D"=
P.O.T. Sta. 286+21.2 "D", 10.7' Rt.

HAROLD & SANDRA HENDERSON

SEC. 2, T.37N., R.3W.
SPRINGFIELD TOWNSHIP
LAPORTE COUNTY

DAVID BUELL

See Typical Cross Sections for Compacted Aggregate Shoulder.

ALL R/W ON THIS SHEET DESCRIBED FROM LINE "D" UNLESS OTHERWISE NOTED

LEGEND

- (J) HMA SHOULDER
- (K) FULL DEPTH HMA PAVEMENT
- (L) MILL & OVERLAY EXISTING PAVEMENT
- (L1) MILL & VARIABLE DEPTH OVERLAY EXISTING PAVEMENT
- (O) COMPACTED AGGREGATE NO. 53

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: JCS DRAWN: JMT

CHECKED: JWG CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE
1/4"=1'-0"	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	51 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

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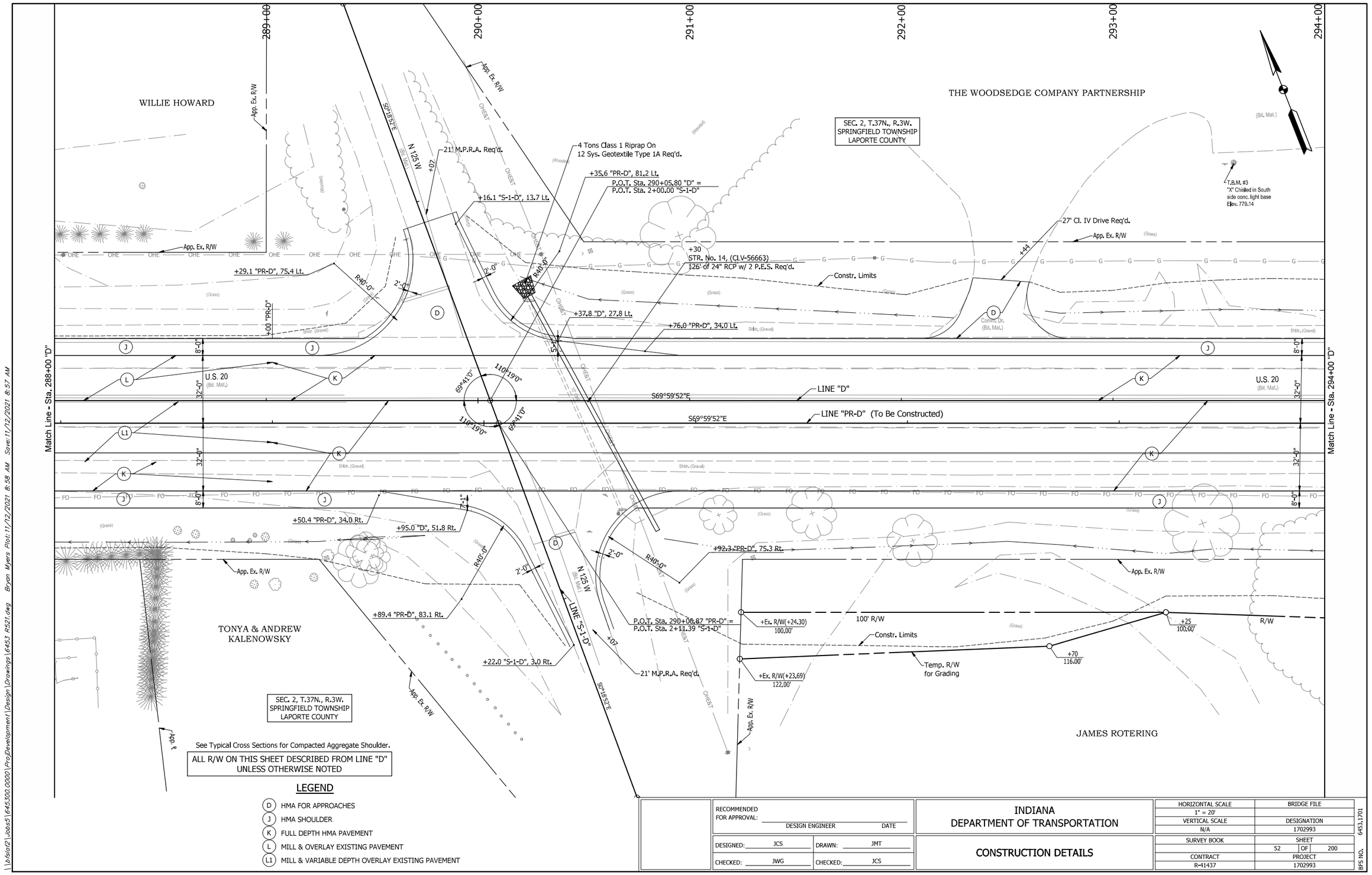
Preliminary Plans



See Typical Cross Sections for Compacted Aggregate Shoulder.

ALL R/W ON THIS SHEET DESCRIBED FROM LINE "D" UNLESS OTHERWISE NOTED

LEGEND

- (D) HMA FOR APPROACHES
- (J) HMA SHOULDER
- (K) FULL DEPTH HMA PAVEMENT
- (L) MILL & OVERLAY EXISTING PAVEMENT
- (L1) MILL & VARIABLE DEPTH OVERLAY EXISTING PAVEMENT

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER DATE

DESIGNED: JCS DRAWN: JMT

CHECKED: JWG CHECKED: JCS

INDIANA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	52 OF 200
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

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Preliminary Plans

295+00 296+00 297+00 298+00 299+00 300+00

THE WOODSEDGE COMPANY PARTNERSHIP

SEC. 2, T.37N., R.3W.
SPRINGFIELD TOWNSHIP
LAPORTE COUNTY

(Bit. Mat.)

19' Cl. IV Drive Req'd.

+12

+12
STR. No. 15
84' of 15" Pipe w/ 2
P.E.S. Req'd.

"Thermco"

App. Ex. R/W

(Wooded)

(Grass)

Comm. Dr.
(Bit. Mat.)

Constr. Limits

Shldr. (Gravel)

Match Line - Sta. 294+00 "D"

8'-0"

32'-0"

U.S. 20
(Bit. Mat.)

J

K

S69°59'52"E

LINE "D"

LINE "PR-D" (To Be Constructed)

Shldr. (Gravel)

FO

±03

±28

4'-0"

Guardrail Req'd. See Plan & Profiles for Details

App. Ex. R/W

Constr. Limits

R/W

+00
120.00'

+00
150.00'

App. ℄

Match Line - Sta. 300+00 "D"

JAMES ROTERING

SEC. 2, T.37N., R.3W.
SPRINGFIELD TOWNSHIP
LAPORTE COUNTY

FRANK & YONG SCHREIBER

See Typical Cross Sections for Compacted Aggregate Shoulder.

ALL R/W ON THIS SHEET DESCRIBED FROM LINE "D"
UNLESS OTHERWISE NOTED

LEGEND

- (D) HMA FOR APPROACHES
- (J) HMA SHOULDER
- (K) FULL DEPTH HMA PAVEMENT

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE 1" = 20'	BRIDGE FILE
		VERTICAL SCALE N/A	DESIGNATION 1702993
DESIGNED: JCS DRAWN: JMT	CONSTRUCTION DETAILS	SURVEY BOOK	SHEET 53 OF 200
CHECKED: JWG CHECKED: JCS		CONTRACT R-41437	PROJECT 1702993

BFS NO. 6453.1701

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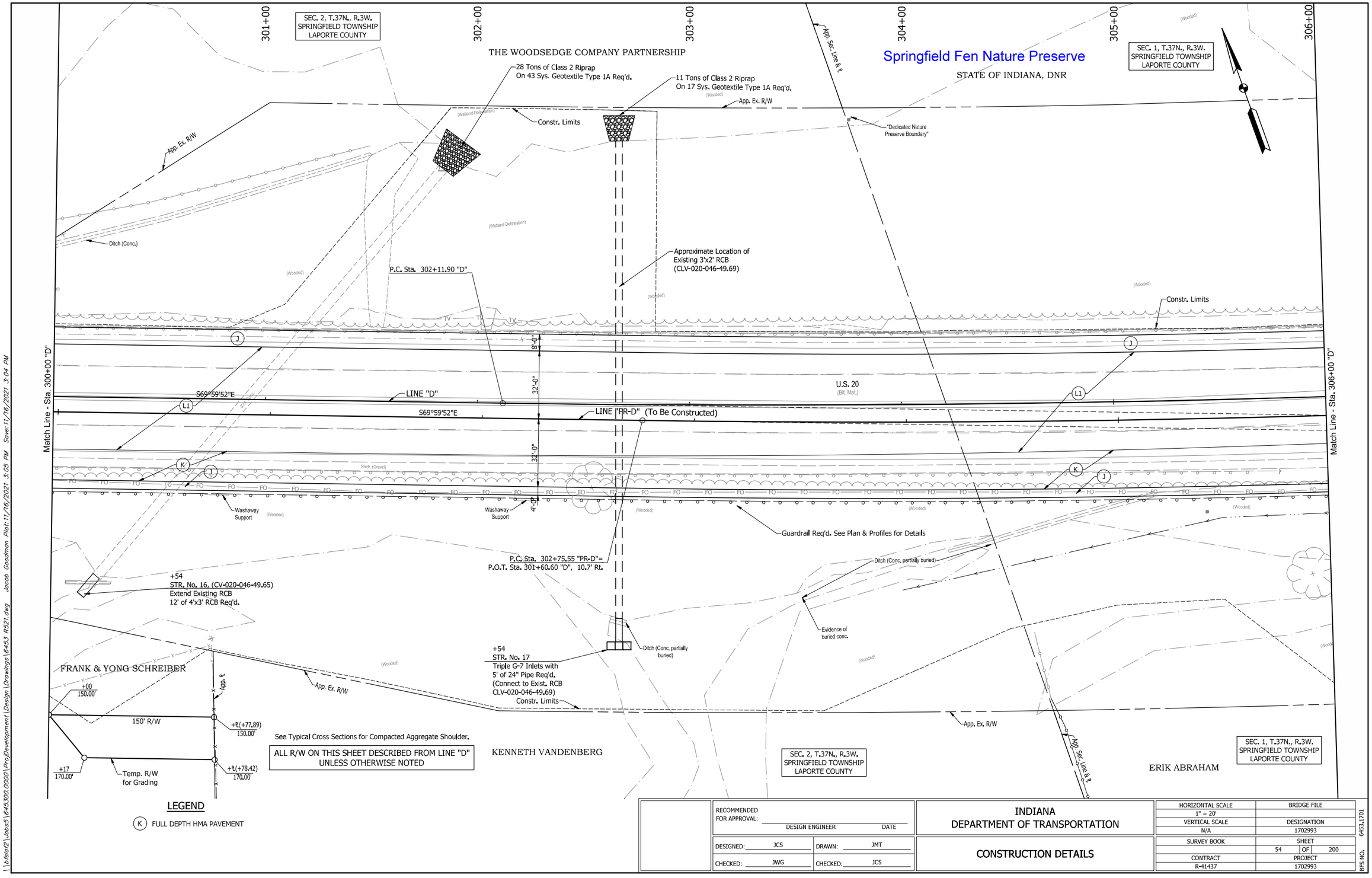
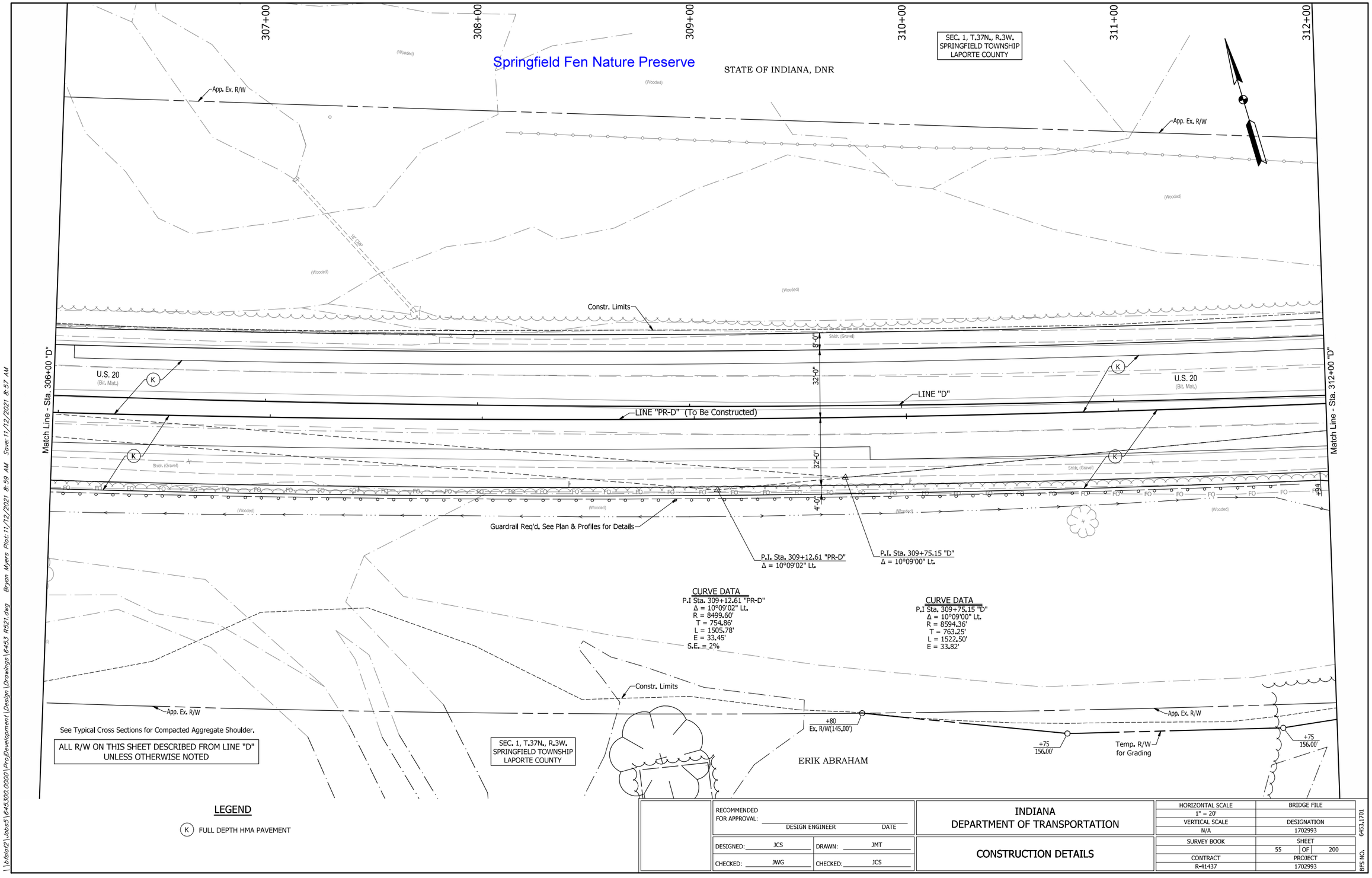
Preliminary Plans



\\bfs\of2\Jobs5\645300.0000\ProjDevelopment\Design\Drawings\6453 R521.dwg Jacob Goodman Plot:11/16/2021 3:05 PM Save:11/16/2021 3:04 PM

Preliminary Plans



	RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE 1" = 20' / BRIDGE FILE
	DESIGNED: JCS DRAWN: JMT	CONSTRUCTION DETAILS	VERTICAL SCALE N/A / DESIGNATION 1702993
	CHECKED: JWG CHECKED: JCS		SURVEY BOOK / SHEET 55 OF 200
			CONTRACT R-41437 / PROJECT 1702993

BFS NO. 6453.1701

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Preliminary Plans

313+00 314+00 315+00 316+00 317+00 318+00

STATE OF INDIANA, DNR

Springfield Fen Nature Preserve

SEC. 1, T.37N., R.3W.
SPRINGFIELD TOWNSHIP
LAPORTE COUNTY

ROSSBURG CEMETERY

App. Ex. R/W

24' M.P.R.A. Req'd.

N17°15'54"E

+98

Wilhelm Rd. (Bit. Mat.)

P.O.C. Sta. 315+00.00 "D" =
P.O.T. Sta. 3+00.00 "S-2-D"

T.B.M. #4
R.R Spike in SE face
Pit Ł 209-236
Elev. 764.40

+53.3 "PR-D", 74.0 Lt.

"Galena Marsh"

R40'-0"

2'-0"

Constr. Limits

+62.6 "PR-D", 78.2 Lt.

P.T. Sta. 316+63.53 "PR-D"

Guardrail Req'd. See Plan & Profiles for Details

P.O.C. Sta. 314+97.92 "PR-D" =
P.O.T. Sta. 2+98.40 "S-2-D"

+57.5 "PR-D", 38.5 Lt.

Begin Widening

+00 "PR-D"

4'-0"

Temp. R/W
for Grading

+70
Ex. R/W(65.00')

P.O.T. Sta. 317+32.51 "PR-D"(Back)
P.T. Sta. 317+34.40 "D"

P.O.T. Sta. 317+34.40 "PR-D"

Match Line - Sta. 312+00 "D"

U.S. 20
(Bit. Mat.)

LINE "D"

LINE "PR-D" (To Be Constructed)

8'-0"

32'-0"

2'-8"

97°24'46"

82°35'14"

S80°08'52"E

Match Line - Sta. 318+00 "D"

+24

+10.0 "PR-D", 32.0 Rt.

+44.2 "PR-D", 36.7 Rt.

Ditch (Conc. partially buried)

+43.7 "PR-D", 79.0 Rt.

Begin Widening

+41.0 "PR-D", 76.5 Rt.

+48
Ex. R/W(60.00')

+85
Ex. R/W(60.00')

+60
80.00'

+64

+76
80.00'

10' Cl. II Drive Req'd.

Temp. R/W
for Drive Const.

Constr. Limits

+82.4 "S-2-D", 5.5 Lt.

LINE "S-2-D"

+65
Ex. R/W(145.00')

ERIK ABRAHAM

MICHAEL & DIANA
KOPCZYK
LOT 7

RICHARD
MULLENHOUR
LOT 6

PT. LOT 5

SUTHERLAND
HOMES

App. Lot Line

See Typical Cross Sections for Compacted Aggregate Shoulder.

ALL R/W ON THIS SHEET DESCRIBED FROM LINE "D"
UNLESS OTHERWISE NOTED

SEC. 1, T.37N., R.3W.
SPRINGFIELD TOWNSHIP
LAPORTE COUNTY

LEGEND

(J) HMA SHOULDER
(K) FULL DEPTH HMA PAVEMENT
(L) MILL & OVERLAY EXISTING PAVEMENT
(L1) MILL & VARIABLE DEPTH OVERLAY EXISTING PAVEMENT

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER DATE

DESIGNED: JCS DRAWN: JMT

CHECKED: JWG CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	56 OF 200
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

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319+00 320+00 321+00 322+00 323+00 324+00

20' Distribution Esmt. in Favor of Indiana Michigan Power Co. (Unable to Locate)

General Telephone Esmt. in Favor of American Telephone & Telegraph Co.

General Electric Line Esmt. in Favor of I&M Electric Co.

SEVEN SPRINGS LEGACY, LLC.

SEC. 1, T.37N., R.3W. SPRINGFIELD TOWNSHIP LAPORTE COUNTY

Temp. R/W for Grading

+75 110.00'

+10 112.00'

App. Ex. R/W

+55 Ex. R/W(100.00')

+55 Ex. R/W(91.20')

+Ex. R/W(+01.87) 75.00'

+25 Ex. R/W(80.00')

80' R/W

5.5 Tons of Revetment Riprap On 3.5 Sys. Geotextile Req'd.

Constr. Limits

Guardrail Req'd. See Plan & Profiles for Details

Ditch (Conc.)

Shldr. (Gravel)

(Wooded)

(Grass)

(Bit. Mat.)

Pvt. Dr. (Bit. Mat.)

Match Line - Sta. 318+00 "D"

Match Line - Sta. 324+00 "D"

U.S. 20 (Bit. Mat.)

S80°08'52"E

LINE "D"

34'-0"

6'-0"

2'-0"

+80

+14

11' Cl. II Drive Req'd.

12" HDPE

+78 Ex. R/W(60.00')

+85 67.00'

10' Cl. II Drive Req'd.

+91

+℄(+09.58) Ex. R/W(60.00')

+00 67.00'

Temp. R/W for Drive Const.

+25 STR. No. 19 110' of 24" RCP w/ 2 P.E.S. Req'd.

9' Cl. II Drive Req'd.

+28

5.5 Tons of Revetment Riprap On 3.5 Sys. Geotextile Req'd.

OHE&T

OHE

G

FO

T

TV

PT. LOT 5

HENRY & PAMELA PENN

PT. LOT 4

624 W. Hwy 20 1-Sty. Frame Hse.

App. Lot Line

PT. LOT 3

SUTHERLAND HOMES

COREY LOEFFLER

PT. LOT 3

SEC. 1, T.37N., R.3W. SPRINGFIELD TOWNSHIP LAPORTE COUNTY

KENT JOHNSON

PT. LOT 2

LOT 1

GRAZYNA URBANCZYK

App. ℄

See Typical Cross Sections for Compacted Aggregate Shoulder.

ALL R/W ON THIS SHEET DESCRIBED FROM LINE "D" UNLESS OTHERWISE NOTED

LEGEND

- (D) HMA FOR APPROACHES
- (J) HMA SHOULDER
- (K) FULL DEPTH HMA PAVEMENT
- (L) MILL & OVERLAY EXISTING PAVEMENT

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER DATE

DESIGNED: JCS DRAWN: JMT

CHECKED: JWG CHECKED: JCS

INDIANA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE
1/4"=1'-0"	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	57 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

325+00 326+00 327+00 328+00 329+00 330+00

SEVEN SPRINGS LEGACY, LLC.

20' Distribution Esmt. in Favor of Indiana Michigan Power Co. (Unable to Locate)

General Telephone Esmt. in Favor of American Telephone & Telegraph Co.

General Electric Line Esmt. in Favor of I&M Electric Co.

SEC. 1, T.37N., R.3W. SPRINGFIELD TOWNSHIP LAPORTE COUNTY

Match Line - Sta. 324+00 "D"

Match Line - Sta. 330+00 "D"

Constr. Limits

App. Ex. R/W

15.5' Cl. II Drive Req'd.

80' R/W

105' R/W

R/W

+00 80.00'

+00 105.00'

+77

+78 STR. No. 22 Extend 20'x5.5' RCB 8'

20x5.5 Culvert (Conc.)

Guardrail Req'd. See Plan & Profiles for Details

+90 Ex. R/W(65.00')

+51

U.S. 20 (Bit. Mat.)

S80°08'52"E

LINE "D"

34'-0"

2'-0"

Mailbox Approach

+60

+19

+19 STR. No. 20 74' of 15" Pipe w/ 2 P.E.S. Req'd.

App. Tract Line

39' Cl. II Drive Req'd.

Ditch (Conc.) (Buried Conc.)

+Ex. R/W(+27) +Ex. R/W(80.00')

+20 95.00'

95' R/W

+65 95.00'

+78 STR. No. 21 Extend 5.5'x20' RCB 22'

+15 Ex. R/W(57.07')

+10 Ex. R/W(65.43')

+33 76.00'

+40

9' Cl. II Drive Req'd.

8' Cl. II Drive Req'd.

Temp. R/W for Drive Const.

+70

+79 76.00'

Ingress & Egress Esmt.

554 W. Hwy 20 1-Sty. Brk Comm. Bldg.

SUTHERLAND HOMES

LOT 1

GRAZYNA URBANCZYK

SOPHIA STAATZ & ANDREJ GRANDY'S

552 W. Hwy 20 1-Sty. Frame Hse.

SEC. 1, T.37N., R.3W. SPRINGFIELD TOWNSHIP LAPORTE COUNTY

WILLIAM & FAITH DALZOTTO

LEGEND

- (D) HMA FOR APPROACHES
- (J) HMA SHOULDER
- (K) FULL DEPTH HMA PAVEMENT
- (L) MILL & OVERLAY EXISTING PAVEMENT

See Typical Cross Sections for Compacted Aggregate Shoulder.

ALL R/W ON THIS SHEET DESCRIBED FROM LINE "D" UNLESS OTHERWISE NOTED

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER DATE

DESIGNED: JCS DRAWN: JMT

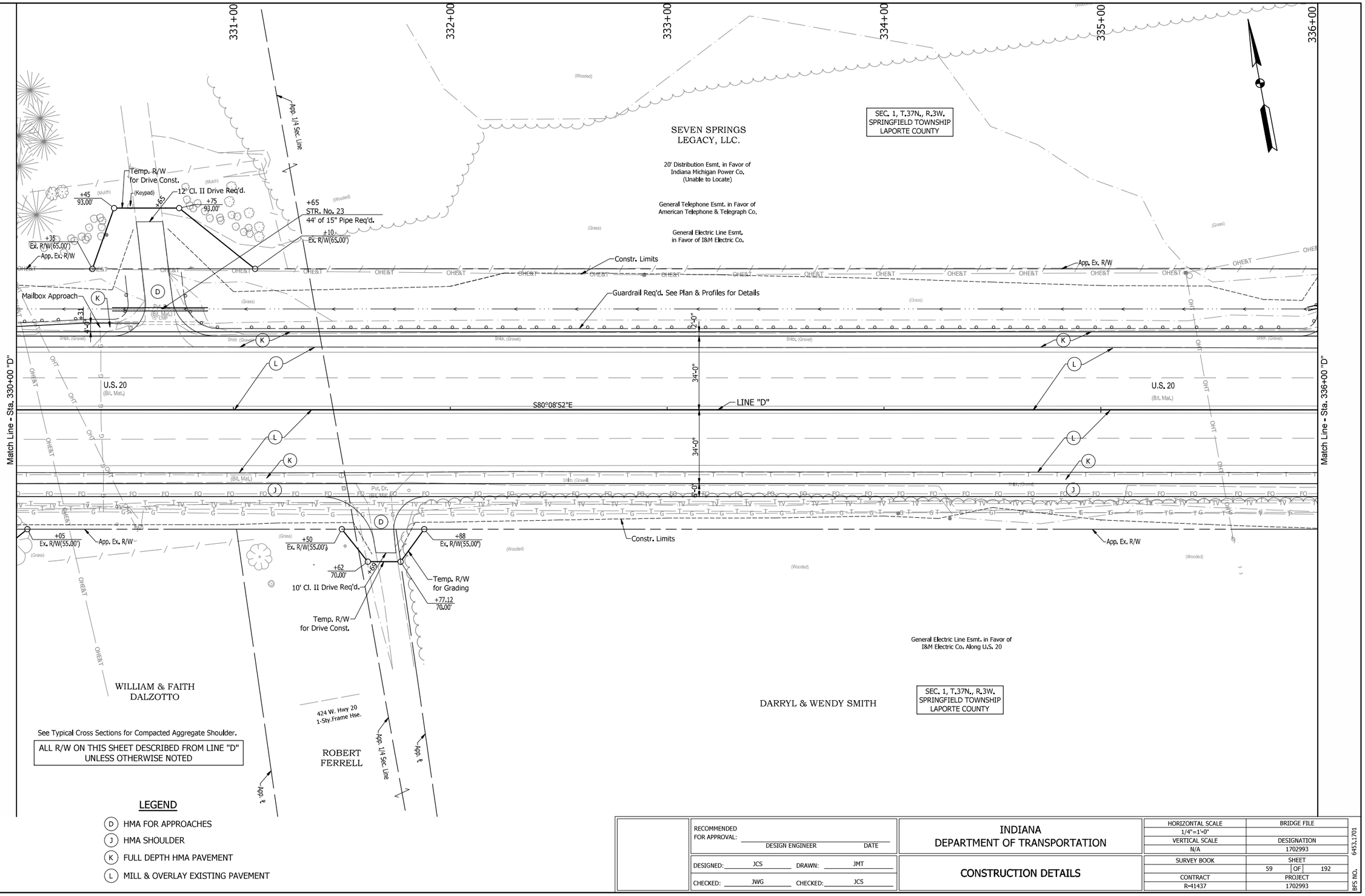
CHECKED: JWG CHECKED: JCS

INDIANA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE
1/4"=1'-0"	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	58 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701



RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER DATE

DESIGNED: JCS DRAWN: JMT

CHECKED: JWG CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE
1/4"=1'-0"	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	59 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

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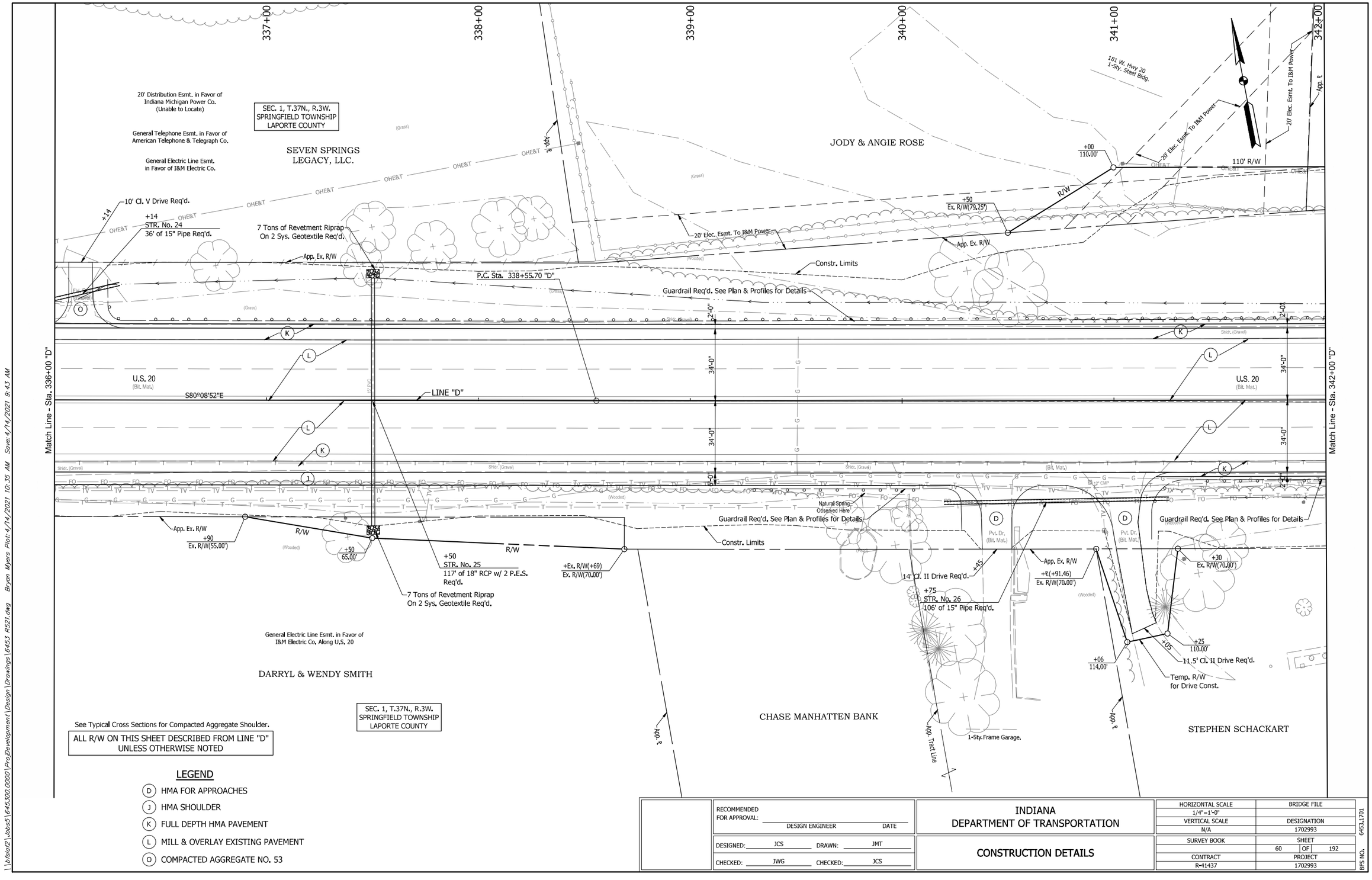
337+00
338+00
339+00
340+00
341+00
342+00
20' Distribution Esmt. in Favor of Indiana Michigan Power Co. (Unable to Locate)
General Telephone Esmt. in Favor of American Telephone & Telegraph Co.
General Electric Line Esmt. in Favor of I&M Electric Co.
SEC. 1, T.37N., R.3W. SPRINGFIELD TOWNSHIP LAPORTE COUNTY
SEVEN SPRINGS LEGACY, LLC.
JODY & ANGIE ROSE
181 W. Hwy 20 1-Sty. Steel Bldg.
20' Elec. Esmt. To I&M Power
App. R
110' R/W
+00 110.00'
+50 Ex. R/W(79.25')
R/W
10' Cl. V Drive Req'd.
+14
STR. No. 24
36' of 15" Pipe Req'd.
7 Tons of Revetment Riprap On 2 Sys. Geotextile Req'd.
App. Ex. R/W
P.C. Sta. 338+55.70 "D"
Constr. Limits
Guardrail Req'd. See Plan & Profiles for Details
U.S. 20
(Bit. Mat.)
S80°08'52"E
LINE "D"
Match Line - Sta. 336+00 "D"
Match Line - Sta. 342+00 "D"
Natural Spring Observed Here
12" CMP
+90 Ex. R/W(55.00')
+50 65.00'
+50
STR. No. 25
117' of 18" RCP w/ 2 P.E.S. Req'd.
+Ex. R/W(+69)
Ex. R/W(70.00')
14' Cl. II Drive Req'd.
+75
STR. No. 26
106' of 15" Pipe Req'd.
+45
+R(+91.46)
Ex. R/W(70.00')
+30
Ex. R/W(70.00')
+25
110.00'
+05
+06
114.00'
11.5' Cl. II Drive Req'd.
Temp. R/W for Drive Const.
Pvt. Dr. (Bit. Mat.)
1-Sty. Frame Garage.
App. Tract Line
General Electric Line Esmt. in Favor of I&M Electric Co. Along U.S. 20
DARRYL & WENDY SMITH
SEC. 1, T.37N., R.3W. SPRINGFIELD TOWNSHIP LAPORTE COUNTY
CHASE MANHATTEN BANK
STEPHEN SCHACKART
See Typical Cross Sections for Compacted Aggregate Shoulder.
ALL R/W ON THIS SHEET DESCRIBED FROM LINE "D" UNLESS OTHERWISE NOTED
LEGEND
(D) HMA FOR APPROACHES
(J) HMA SHOULDER
(K) FULL DEPTH HMA PAVEMENT
(L) MILL & OVERLAY EXISTING PAVEMENT
(O) COMPACTED AGGREGATE NO. 53
RECOMMENDED FOR APPROVAL: DESIGN ENGINEER DATE
DESIGNED: JCS DRAWN: JMT
CHECKED: JWG CHECKED: JCS
INDIANA DEPARTMENT OF TRANSPORTATION
CONSTRUCTION DETAILS
HORIZONTAL SCALE 1/4"=1'-0"
VERTICAL SCALE N/A
BRIDGE FILE
DESIGNATION 1702993
SURVEY BOOK
SHEET 60 OF 192
CONTRACT R-41437
PROJECT 1702993
BFS NO. 6453.1701
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343+00 344+00 345+00 346+00 347+00 348+00

SEC. 1, T.37N., R.3W.
SPRINGFIELD TOWNSHIP
LAPORTE COUNTY

JODY & ANGIE ROSE

GEORGE FULTZ LIVING TRUST &
SHELBY FULTZ LIVING TRUST

Match Line - Sta. 342+00 "D"

Match Line - Sta. 348+00 "D"

+00 110.00'
110' R/W
Constr. Limits
App. Ex. R/W
9' Mod. Cl. II Drive Req'd.
+30
+00 Ex. R/W(85.84')
+00 Ex. R/W(78.34')
19' Cl. II Drive Req'd.
+12 113.00'
+30
Temp. R/W for Drive Const.
+62.5
14.5' Cl. II Drive Req'd.
+82 113.00'
+90 Ex. R/W(71.44')
App. Ex. R/W
20' Ingress & Egress Esmt.
App. Tract Line
T.B.M. #5
R. R Spike in surface
P.I.N.T. L208-9 N. Side
HWY US 20
Elev. 832.836
20' Elec. Esmt. To I&M Power
+50
STR. No. 28
80' of 15" Pipe Req'd.
P.T. Sta. 346+55.71 "D"
Constr. Limits
Guardrail Req'd. See Plan & Profile for Details
Pvt. Dr. (Conc.)
Pvt. Dr. (C. Stone.)
Shldr. (Gravel)
(Bit. Mat.)
(Wooded)
(Grass)
OHE&T
OHT
G
FO
TV
IN
U.S. 20
(Bit. Mat.)
LINE "D"
S80°52'52"E
34'-0"
2'-0"
30" HDPE
(Heavily Silted)
Guardrail Req'd. See Plan & Profile for Details
App. Ex. R/W
R/W
Constr. Limits
P.I. Sta. 342+55.71 "D"
Δ = 0°44'00" Lt.
+℄(+55.39)
Ex. R/W(70.00')
20' Util. Esmt. in Favor of County of LaPorte, General Telephone Co., I&M Electric, NIPSCO, Etc.
+00 80.00'
+09
STR. No. 27
30' of 15" Pipe Req'd.
Unused
14' Cl. II Drive Req'd.
+55.75 80.00'
+20
STR. No. 29
123' of 36" RCP w/ 2 G.B.E.S. Req'd.
80' R/W
Constr. Limits
PT. LOT 1
STEPHEN SCHACKART
222 W. Hwy 20
1-Sty. Brick Hse.
Sidewalk (Conc.)
App. Tract Line
App. ℄
CURVE DATA
P.I Sta. 342+55.71 "D"
Δ = 0°44'00" Lt.
R = 62504.73'
T = 400.01'
L = 800.00'
E = 1.28'
202 W. Hwy 20
1-Sty.Frame Hse.
JOVAN SUBDIVISION
PT. LOT 1
RICKY & LESLIE EMERY
SEC. 1, T.37N., R.3W.
SPRINGFIELD TOWNSHIP
LAPORTE COUNTY
General Electric Line Esmt. in Favor of I&M Electric Co. Along U.S. 20
DARRYL & WENDY SMITH

See Typical Cross Sections for Compacted Aggregate Shoulder.

ALL R/W ON THIS SHEET DESCRIBED FROM LINE "D" UNLESS OTHERWISE NOTED

LEGEND

- (D) HMA FOR APPROACHES
- (J) HMA SHOULDER
- (K) FULL DEPTH HMA PAVEMENT
- (L) MILL & OVERLAY EXISTING PAVEMENT
- (O) COMPACTED AGGREGATE NO. 53

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: JCS DRAWN: JMT

CHECKED: JWG CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE
1/4"=1'-0"	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	61 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

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349+00 | 350+00 | 351+00 | 352+00 | 353+00 | 354+00

Match Line - Sta. 348+00 "D"

Match Line - Sta. 354+00 "D"

SEC. 1, T.37N., R.3W.
SPRINGFIELD TOWNSHIP
LAPORTE COUNTY

GEORGE FULTZ LIVING TRUST &
SHELBY FULTZ LIVING TRUST

THOMAS PERSCHKE, TRUSTEE

57 W. Hwy 20
1-Sty. Frame Comm. Bldg.

1-Sty. Steel Bldg

(Pond)

OHE&T

20' Elec. Esmt. To I&M Power

App. Ex. R/W

+45
Ex. R/W(55.00')

Temp. R/W for Grading

+℄(+75.06)
62.00'

Constr. Limits

P.C. Sta. 352+00.01 "D"

+55
Ex. R/W(55.00')

Ditch (Conc.)
(Buried Conc.)

(Grass)

Guardrail Req'd. See Plan & Profiles for Details

Shldr. (Gravel)

21'-0"

34'-0"

U.S. 20
(Bit. Mat.)

S80°52'52"E

LINE "D"

6'-0"

(Heavily Silted)

18"ø RCP

18" CMP

Ditch (Conc, partially buried)

Unused

+25.9 "D", 56.9 Rt.

+26.5 "D", 64.2 Rt.

+17.8 "D", 70.7 Rt.

+08.9 "D", 72.8 Rt.

+09.5 "D", 77.0 Rt.

+50.7 "D", 60.8 Rt.

+63.4 "D", 70.9 Rt.

+64.7 "D", 77.0 Rt.

(Wooded)

80' R/W

+98

Pvt. Dr.
(C. Stone.)

20' Cl. II Drive Req'd.

+50

37' Cl. II Drive Req'd.

+15
STR. No. 30
102' of 15" Pipe Req'd.

+00.01
80.00'

Pvt. Dr.
(Bit. Mat.)

+36.5

+37
STR. No. 31
50' of 15" Pipe Req'd.

25' Cl. II Drive Req'd.

General Electric Line Esmt. in Favor of
I&M Electric Co. Along U.S. 20

DARRYL & WENDY SMITH

DAVID & SHERRY LYKINS

App. ℄

OPAL LYKINS
LIFE ESTATE, ET. AL.

EMILI & EVANNA
REMEDI

44 W. Hwy 20
1-Sty. Brick Hse.

76 W. Hwy 20
1-Sty.Frame Hse.

App. Sec. Line

SEC. 1, T.37N., R.3W.
SPRINGFIELD TOWNSHIP
LAPORTE COUNTY

See Typical Cross Sections for Compacted Aggregate Shoulder.

ALL R/W ON THIS SHEET DESCRIBED FROM LINE "D"
UNLESS OTHERWISE NOTED

LEGEND

- (D) HMA FOR APPROACHES
- (J) HMA SHOULDER
- (K) FULL DEPTH HMA PAVEMENT
- (L) MILL & OVERLAY EXISTING PAVEMENT

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: JCS DRAWN: JMT

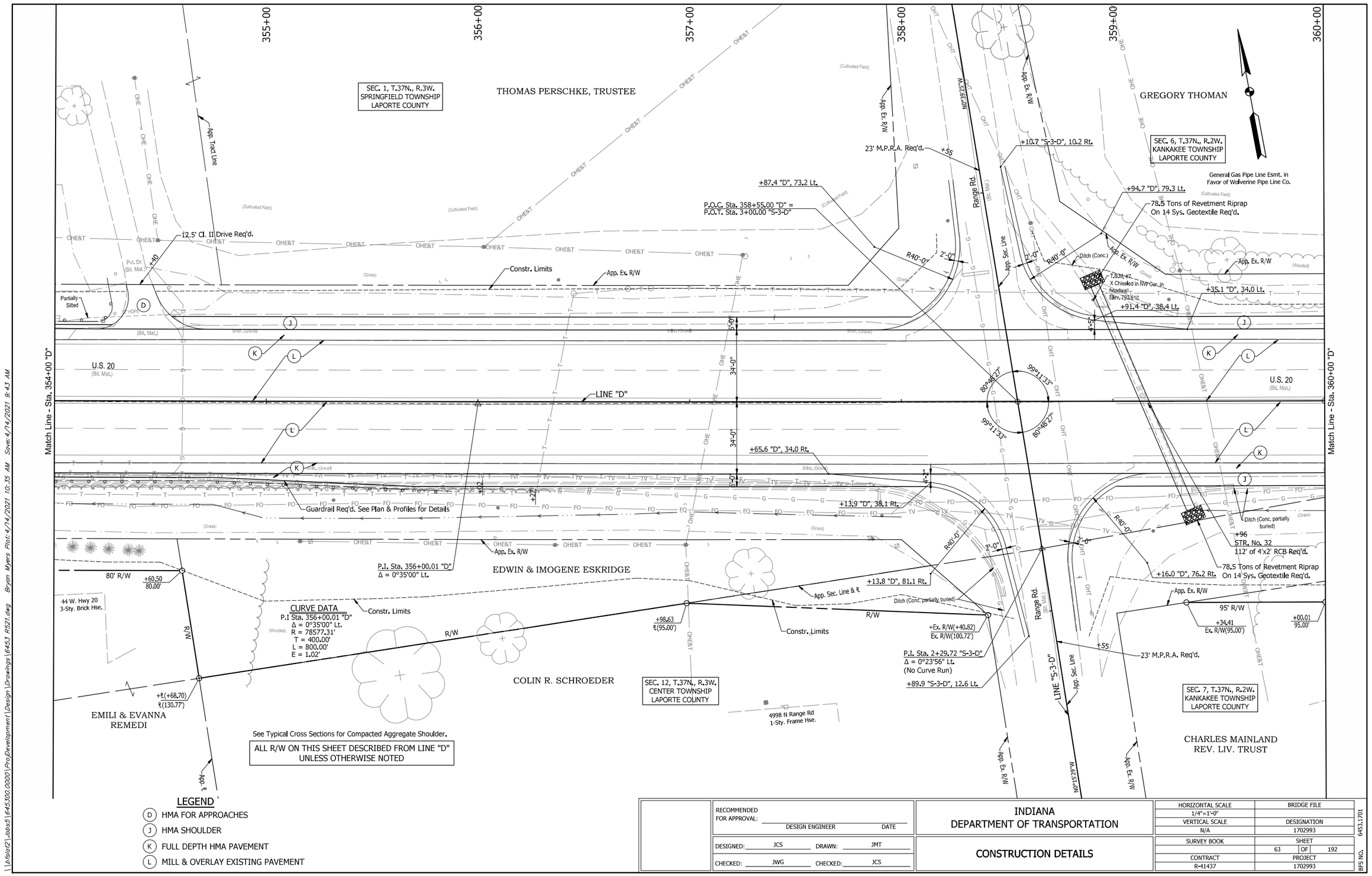
CHECKED: JWG CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE
1/4"=1'-0"	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	62 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701



RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER DATE

DESIGNED: JCS DRAWN: JMT

CHECKED: JWG CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE
1/4"=1'-0"	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	63 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

\\bfsiol2\Jobs5\645300.0000\Proj\Development\Design\Drawings\6453 R521.dwg Byron Myers Plot:4/14/2021 10:35 AM Save:4/14/2021 9:43 AM

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361+00 362+00 363+00 364+00 365+00 366+00

Match Line - Sta. 360+00 "D"

Match Line - Sta. 366+00 "D"

GREGORY THOMAN

General Gas Pipe Line Esmt. in Favor of Wolverine Pipe Line Co.

SEC. 6, T.37N., R.2W.
KANKAKEE TOWNSHIP
LAPORTE COUNTY

(Cultivated Field)

101 E. Hwy 20
2-Sty. Frame Hse.

OHE

OHT

10' Ingress & Egress Esmt.

9' Cl. V Drive Req'd.

+86
85.00'

+97

+03
85.00'

Temp. R/W
for Drive Const.

+55
Ex. R/W(54.50')

Constr. Limits

+15
60.00'

P.T. Sta. 360+00.01 "D"

App. Ex. R/W

(Wooded)

(Grass)

(Cultivated Field)

P.C. Sta. 365+00.01 "D"

+45
Ex. R/W(50.00')

Temp. R/W
for Drive Const.

13' Cl. II Drive Req'd.

+45

+36
70.00'

+30
Ex. R/W(50.00')

+55
70.00'

+62
Ex. R/W(50.00')

App. Sec. Line
& Tract Line

App. Ex. R/W

P.C.C. Dr.
(C. Stone.)

Shldr. (Gravel)

Pkg. Entr.
(Gravel)

(Bit. Mat.)

J K L O D

U.S. 20
(Bit. Mat.)

S81°27'52"E

LINE "D"

App. Sec. Line

34'-0"

5'-0"

App. Ex. R/W

Constr. Limits

95' R/W

R/W

85' R/W

+00.01
95.00'

+00
95.00'

+00
85.00'

+35
85.00'

+95
85.00'

+00.01
85.00'

+57
STR. No. 33
34' of 15" Pipe Req'd.

+60
132.00'

+57

+78
132.00'

10' Cl. II Drive Req'd.

Temp. R/W
for Drive Const.

App. Ex. R/W

OHE

"PSTAX Service"

App. ℄

12' Util. & Drainage Esmt. Per Plat

Blanket Pipe Line Esmt. in Favor of Wolverine Pipe Line Co.

MARGARET STACY
LOT 1

STACY MINOR SUBDIVISION

Blanket Pipe Line Esmt. in Favor of Wolverine Pipe Line Co.

ERNEST KEANE
& SHARON STACY
LOT 2

122 E. Hwy 20
1-Sty. Frame Hse.

SEC. 7, T.37N., R.2W.
KANKAKEE TOWNSHIP
LAPORTE COUNTY

CHARLES MAINLAND REV. LIV. TRUST

See Typical Cross Sections for Compacted Aggregate Shoulder.

ALL R/W ON THIS SHEET DESCRIBED FROM LINE "D" UNLESS OTHERWISE NOTED

LEGEND

- (D) HMA FOR APPROACHES
- (J) HMA SHOULDER
- (K) FULL DEPTH HMA PAVEMENT
- (L) MILL & OVERLAY EXISTING PAVEMENT
- (O) COMPACTED AGGREGATE NO. 53

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: JCS DRAWN: JMT

CHECKED: JWG CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE
1/4"=1'-0"	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	64 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

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367+00 368+00 369+00 370+00 371+00 372+00

Match Line - Sta. 366+00 "D"

Match Line - Sta. 372+00 "D"

SEC. 6, T.37N., R.2W.
KANKAKEE TOWNSHIP
LAPORTE COUNTY

44 W. Hwy 20
1-Sty. Steel Bldg.
(Conc.)

CURVE DATA
P.I Sta. 368+28.01 "D"
Δ = 0°23'00" Rt.
R = 98050.00'
T = 328.00'
L = 656.00'
E = 0.55'

App. Sec. Line & Tract Line

GREGORY THOMAN
General Gas Pipe Line Esmt. in
Favor of Wolverine Pipe Line Co.

P.I. Sta. 368+28.01 "D"
Δ = 0°23'00" Rt.

P.T. Sta. 371+56.00 "D"

+50 60.00' R/W

+56 60.00' 60' R/W

Constr. Limits

App. Ex. R/W

Guardrail Req'd. See Plan & Profiles for Details

+94.5

+19.5

+98

5'-0"

2'-0"

U.S. 20
(Bit. Mat.)

34'-0"

LINE "D"

S81°04'52"E

Pvt. Dr.
(Bit. Mat.)

App. Ex. R/W

12' Util. & Drainage Esmt. Per Plat

Pvt. Dr.
(C. Stone.)

Constr. Limits

85' R/W

+48 85.00'

+95 85.00'

+(+11.43) 85.00'

+45 85.03'

+56 85.00'

+00 85.00'

+18 95.00'

+36 95.00'

+64
STR. No. 34
32' of 15" Pipe w/ 2 P.E.S.
Req'd.

+18
STR. No. 35
32' of 15" Pipe w/ 2 P.E.S.
Req'd.

11.5' Cl. II Drive Req'd.

Temp. R/W
for Drive Const.

Sidewalk (Conc.)

+96 120.00'

+68 125.00'

+61

13' Cl. II Drive Req'd.

Temp. R/W
for Drive Const.

152 E. Hwy 20
1-Sty. Brick Hse.

Blanket Pipe Line Esmt. in Favor
of Wolverine Pipe Line Co.

ERNEST KEANE
& SHARON STACY
LOT 2

Blanket Pipe Line Esmt. in Favor
of Wolverine Pipe Line Co.

ROBERT
STACY JR.
LOT 5

20' Ingress & Egress Esmt.

Blanket Pipe Line Esmt. in Favor
of Wolverine Pipe Line Co.

JAMES STACY
LOT 3

STACY MINOR
SUBDIVISION

SEC. 7, T.37N., R.2W.
KANKAKEE TOWNSHIP
LAPORTE COUNTY

Blanket Pipe Line Esmt. in Favor
of Wolverine Pipe Line Co.

PHILIP & NANCY
WHYBREW

234 E. Hwy 20
2-Sty. Frame Hse.

App. Tract Line

See Typical Cross Sections for Compacted Aggregate Shoulder.

ALL R/W ON THIS SHEET DESCRIBED FROM LINE "D"
UNLESS OTHERWISE NOTED

LEGEND

- (D) HMA FOR APPROACHES
- (J) HMA SHOULDER
- (K) FULL DEPTH HMA PAVEMENT
- (L) MILL & OVERLAY EXISTING PAVEMENT
- (O) COMPACTED AGGREGATE NO. 53

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: JCS DRAWN: JMT

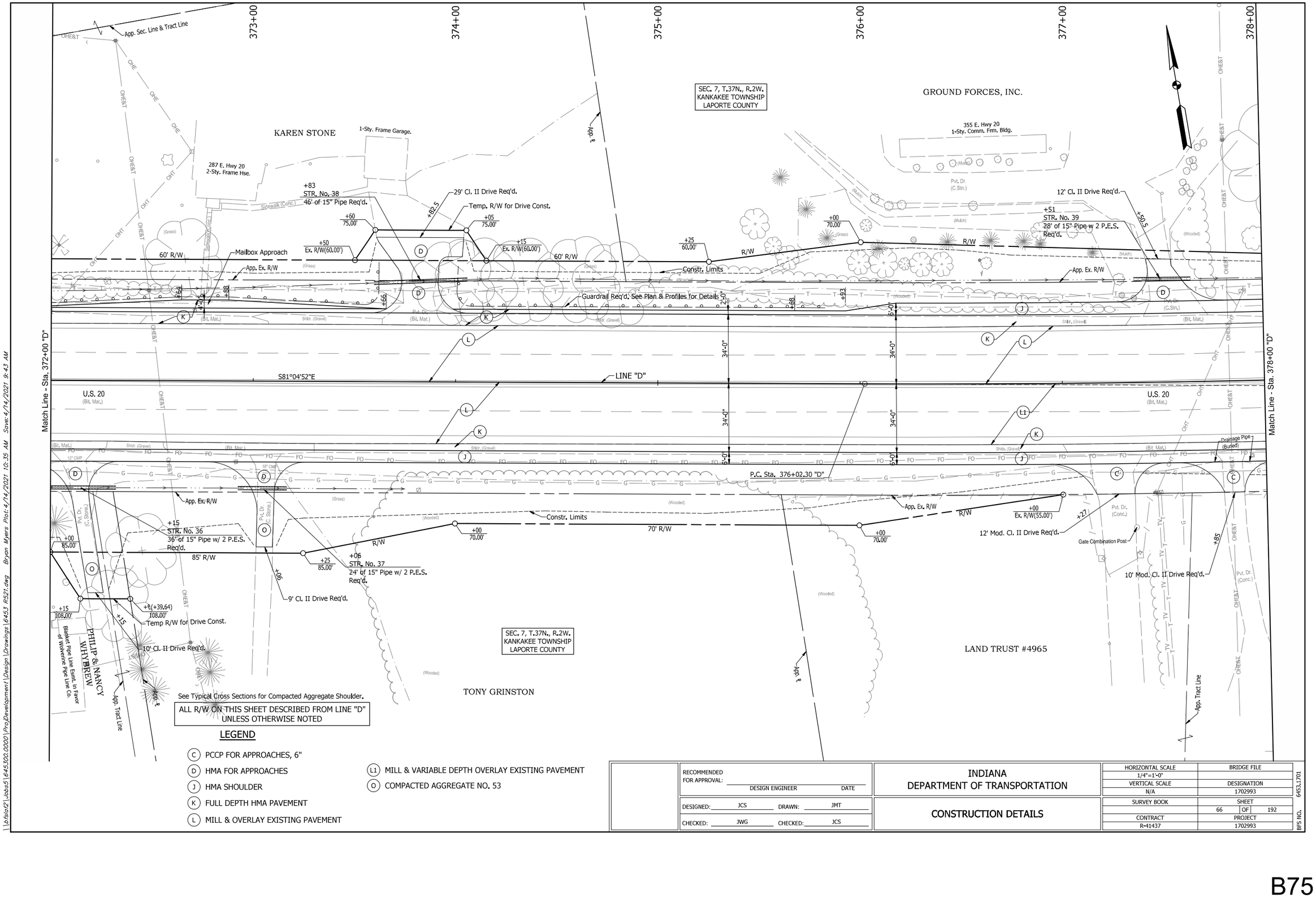
CHECKED: JWG CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE
1/4"=1'-0"	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	65 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701



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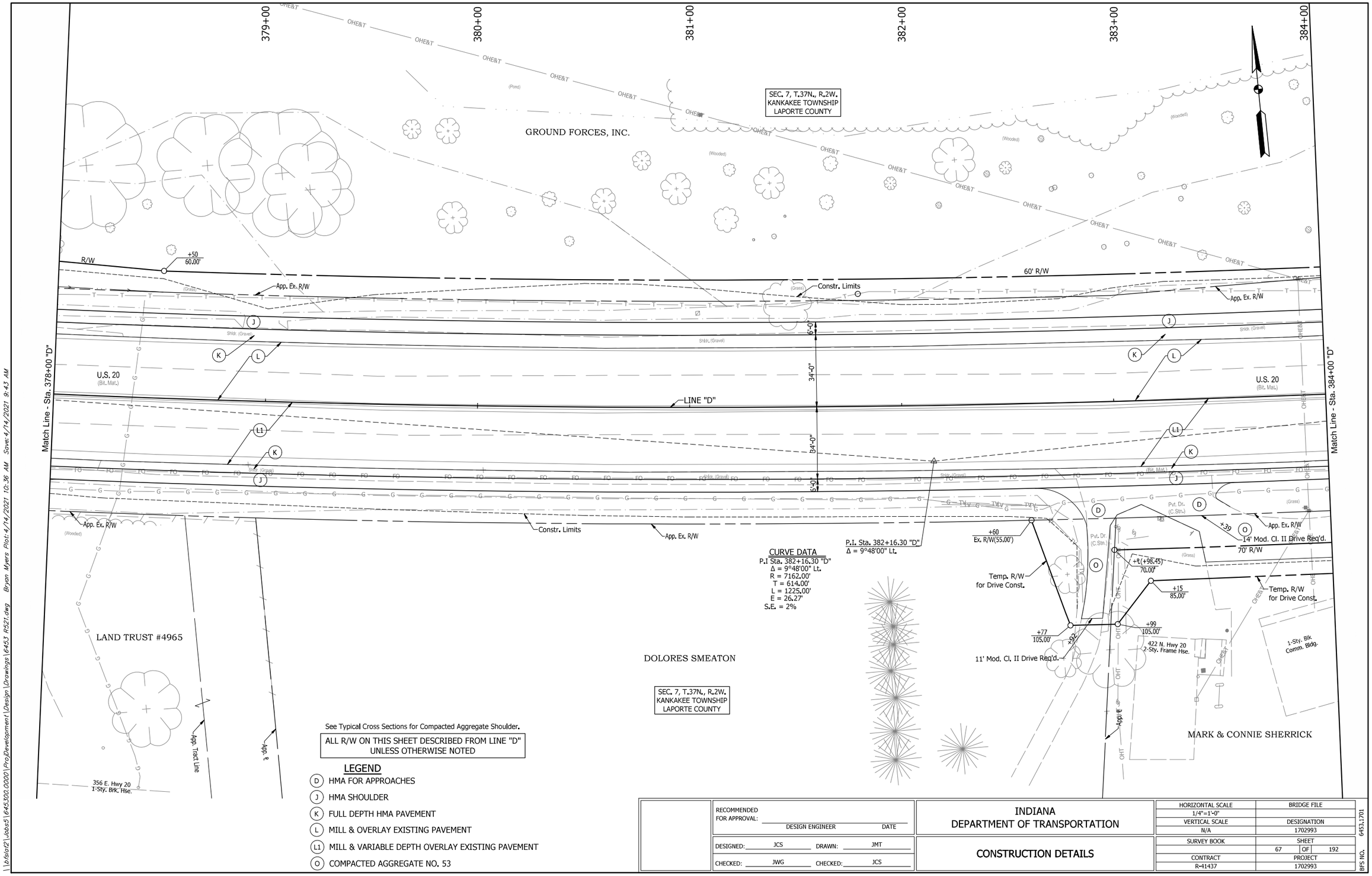

See Typical Cross Sections for Compacted Aggregate Shoulder.

ALL R/W ON THIS SHEET DESCRIBED FROM LINE "D" UNLESS OTHERWISE NOTED

LEGEND

- (D) HMA FOR APPROACHES
- (J) HMA SHOULDER
- (K) FULL DEPTH HMA PAVEMENT
- (L) MILL & OVERLAY EXISTING PAVEMENT
- (L1) MILL & VARIABLE DEPTH OVERLAY EXISTING PAVEMENT
- (O) COMPACTED AGGREGATE NO. 53

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: JCS DRAWN: JMT

CHECKED: JWG CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE
1/4"=1'-0"	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	67 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

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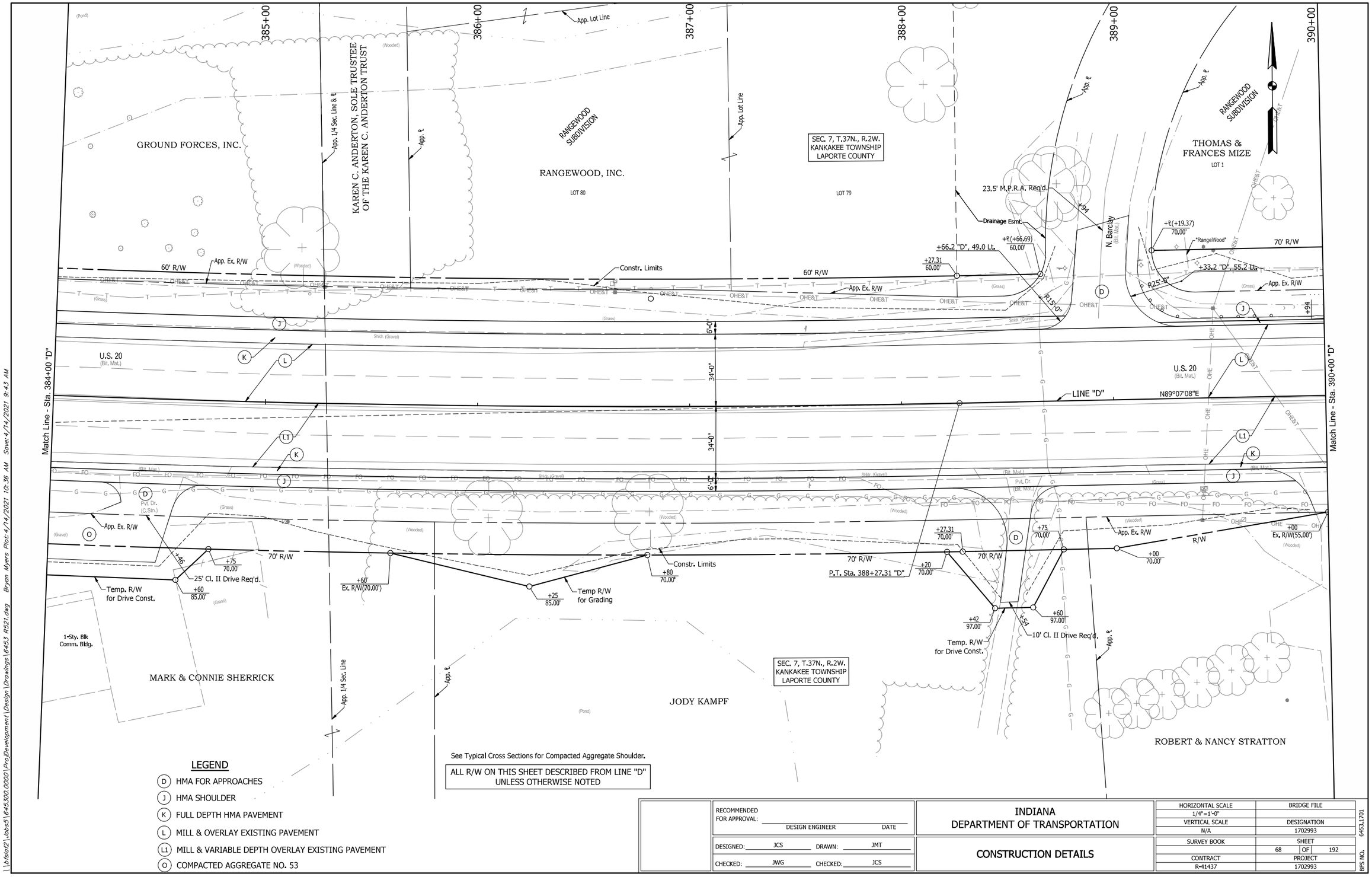

	RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE 1/4"=1'-0" / BRIDGE FILE
	DESIGNED: JCS DRAWN: JMT	CONSTRUCTION DETAILS	VERTICAL SCALE N/A / DESIGNATION 1702993
	CHECKED: JWG CHECKED: JCS		SURVEY BOOK / SHEET 68 OF 192
			CONTRACT R-41437 / PROJECT 1702993

BFS NO. 6453.1701

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391+00 392+00 393+00 394+00 395+00 396+00

RANGEWOOD SUBDIVISION

THOMAS & FRANCES MIZE
LOT 1

MICHAEL WILLIAMS

SEC. 7, T.37N., R.2W.
KANKAKEE TOWNSHIP
LAPORTE COUNTY

Utility Esmt.

App. ℄

Temp. R/W for Drive Const.

15' Cl. II Drive Req'd.

505 E. Hwy 20
1-Sty. Frame Hse.

505 E. Hwy 20
1-Sty. Frame Hse.

+81
105.00'

+18
105.00'

+11

+11
STR. No. 40
32' of 15" Pipe Req'd.

+30
Ex. R/W(70.00')

+72
Ex. R/W(70.00')

70' R/W

70' R/W

92.5 Tons of Revetment Riprap
On 14 Sys. Geotextile Req'd.

+25
70.00'

R/W

+75
80.00'

Constr. Limits

80' R/W

+00
80.00'

P.O.T. Sta. 395+16.17 "D" =
P.O.T. Sta. 50+00.00 "HUNTERS GLEN"

Guardrail Req'd. See Plan & Profiles for Details

Mailbox Approach

App. Ex. R/W

App. Ex. R/W

Match Line - Sta. 390+00 "D"

Match Line - Sta. 396+00 "D"

U.S. 20
(Bit. Mat.)

N89°07'08"E

LINE "D"

U.S. 20
(Bit.Mat.)

90°5'28"

89°54'32"

Heavily Silted

Guardrail Req'd. See Plan & Profiles for Details

App. Ex. R/W

Constr. Limits

+39
STR. No. 41
105' of 4'x2' RCB Req'd.

92.5 Tons of Revetment Riprap
On 14 Sys. Geotextile Req'd.

+91.5 "D", 40.0 Rt.

+55
Ex. R/W(55.00')

+85
Ex. R/W(55.00')

17' Cl. V Drive Req'd.

+38.9 "D", 55.0 Rt.

+94.0 "D", 55.0 Rt.

+52.1 "D", 82.5 Rt.

+℄(+81.20)
82.00'

+℄(+51.20)
82.00'

65' M.P.R.A. Req'd.

+79.9 "D", 85.4 Rt.

T.B.M. #8
X Chisled in E. top of curb
"Hunters Glen" Entrance
Elev. 781.945

"Hunters Run"

N. Hunters Glen
(Bit. Mat.)

LINE "HUNTERS GLEN"

75' Non-Access & Landscape Esmt. Per Plat

10' T&M Esmt. Per Plat

ROBERT & NANCY STRATTON

HUNTERS RUN OUTLOT A, LLC

OUTLOT "A"

HUNTER'S RUN
SECTION ONE

JEFFREY
GEORGE
LOT 1

HUNTER'S RUN
SECTION ONE

SEC. 7, T.37N., R.2W.
KANKAKEE TOWNSHIP
LAPORTE COUNTY

See Typical Cross Sections for Compacted Aggregate Shoulder.

ALL R/W ON THIS SHEET DESCRIBED FROM LINE "D"
UNLESS OTHERWISE NOTED

LEGEND

- (D) HMA FOR APPROACHES
- (J) HMA SHOULDER
- (K) FULL DEPTH HMA PAVEMENT
- (L) MILL & OVERLAY EXISTING PAVEMENT
- (O) COMPACTED AGGREGATE NO. 53

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: JCS DRAWN: JMT

CHECKED: JWG CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE
1/4"=1'-0"	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	69 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

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397+00 | 398+00 | 399+00 | 400+00 | 401+00 | 402+00

SEC. 7, T.37N., R.2W.
KANKAKEE TOWNSHIP
LAPORTE COUNTY

MICHAEL WILLIAMS

+00
80.00'

R/W

+00
65.00'

(Uncultivated Field)

10' Mod. Cl. V Drive Req'd.
+79
STR. No. 42
24' of 15" Pipe w/ 2 P.E.S.
Req'd.

65' R/W

Constr. Limits

11' Mod. Cl. V Drive Req'd.
+45
STR. No. 43
22' of 15" Pipe w/ 2 P.ES.
Req'd.

+57

+07, End Pavement Widening

App. Ex. R/W

(Wooded)

(Grass)

Shldr. (Gravel)

Fld. Entr. (Gravel)

6'-0"

34'-0"

U.S. 20
(Bit. Mat.)

N89°07'08"E

LINE "D"

Match Line - Sta. 396+00 "D"

Match Line - Sta. 402+00 "D"

Constr. Limits

75' Non-Access & Landscape Esmt. Per Plat

15' I&M Esmt. Per Plat

App. ℄

JEFFREY GEORGE
LOT 1

JUAN ARREOLA
LOT 8

SHAWN & JESSICA SCHERRBAUM
LOT 9

DYLAN & COLLEEN CABANAW
LOT 10

HUNTER'S RUN
SECTION ONE

See Typical Cross Sections for Compacted Aggregate Shoulder.

ALL R/W ON THIS SHEET DESCRIBED FROM LINE "D" UNLESS OTHERWISE NOTED

SEC. 7, T.37N., R.2W.
KANKAKEE TOWNSHIP
LAPORTE COUNTY

287 E. Hwy 20
2-Sty. Frame Hse.

LEGEND

- (J) HMA SHOULDER
- (K) FULL DEPTH HMA PAVEMENT
- (L) MILL & OVERLAY EXISTING PAVEMENT
- (O) COMPACTED AGGREGATE NO. 53

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER DATE

DESIGNED: JCS DRAWN: JMT

CHECKED: JWG CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE
1/4"=1'-0"	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	70 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

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403+00 404+00 405+00 406+00 407+00 408+00

MICHAEL WILLIAMS

STEVEN & MARY SCHAUB

SEC. 7, T.37N., R.2W.
KANKAKEE TOWNSHIP
LAPORTE COUNTY

440' Taper

END PROJECT
P.O.C. Sta. 407+41.72 "D"

See Previous Sheet

P.C. Sta. 406+70.01 "D"

App. ℄

App. Tract Line

Steel Shed

App. Tract Line

(Uncultivated Field)

(Wooded)

(Grass)

+℄(+73.97)
65.00'

+℄(+74.01)
56.00'

65' R/W

10' Mod. Cl. V Drive Req'd.

Temp. R/W
for Grading

+15

+97

App. Ex. R/W

+85
Ex. R/W(50.00')

Fld. Entr.
(Gravel)

Constr. Limits

App. Ex. R/W

Pvt. Dr.
(C.Stn.)

J

L

K

O

U.S. 20
(Bit. Mat.)

N89°07'08"E

LINE "D"

56'-0"

28'-0"

40'-0"

Match Line - Sta. 402+00 "D"

Match Line - Sta. 408+00 "D"

(Bit. Mat.)

End Pavement Widening

FO

Constr. Limits

App. Ex. R/W

+50
Ex. R/W(55.00')

R/W

+25
65.00'

65' R/W

App. ℄

"Heston
Supply"

+50
65.00'

75' Non-Access
& Landscape
Esmt. Per Plat

App. ℄

(Chiidrens
Playground)

(Gravel)

JUSTIN MILCAREK
LOT 11

HUNTER'S RUN
SECTION ONE

LOT 12

SEC. 7, T.37N., R.2W.
KANKAKEE TOWNSHIP
LAPORTE COUNTY

KEVIN & LAURA KALK
LOT 13

KELSEN & ALYSON DEPP
LOT 14

ROBERT LANTERO &
DAWN ZEMAN

App. ℄

App. ℄

App. ℄

See Typical Cross Sections for Compacted Aggregate Shoulder.

ALL R/W ON THIS SHEET DESCRIBED FROM LINE "D"
UNLESS OTHERWISE NOTED

LEGEND

- (J) HMA SHOULDER
- (K) FULL DEPTH HMA PAVEMENT
- (L) MILL & OVERLAY EXISTING PAVEMENT
- (O) COMPACTED AGGREGATE NO. 53

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER _____ DATE

DESIGNED: JCS DRAWN: JMT

CHECKED: JWG CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE
1/4"=1'-0"	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	71 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

409+00
410+00
411+00
412+00
413+00
414+00

STEVEN & MARY SCHAUB

SEC. 7, T.37N., R.2W.
KANKAKEE TOWNSHIP
LAPORTE COUNTY

LIMITS TO BE CONSTRUCTED IN PROJECT DES. NO. 1900050

App. Ex. R/W

Pvt. Dr. (C.Stn.)

(Grass)

(Wooded)

OHE&T

N. Fail Rd. (Bit. Mat.)

App. Sec. Line

CURVE DATA
P.I Sta. 411+70.02 "D"
Δ = 0°44'00" Rt.
R = 78130.62'
T = 500.01'
L = 1000.00'
E = 1.60'

SEC. 8, T.37N., R.2W.
KANKAKEE TOWNSHIP
LAPORTE COUNTY

GEORGE CYR

1011 Hwy 20
2-Sty. Frame Hse.

P.I. Sta. 411+70.02 "D"
Δ = 0°44'00" Rt.

Match Line - Sta. 408+00 "D"

U.S. 20
(Bit. Mat.)

LINE "D"

Match Line - Sta. 414+00 "D"

89°55'44"
90°35'14"
90°4'16"
89°3'56"

R/W
+25
Ex. R/W(55.00')

FO
OHE
OHE&T

(Bit. Mat.)

App. Ex. R/W

P.O.C. Sta. 411+70.02 "D" =
P.O.T. Sta. 3+50.00 "S-4-D"

LINE "S-4-D"

N0°59'52"W

DAVID BUEHRER

SEC. 8, T.37N., R.2W.
KANKAKEE TOWNSHIP
LAPORTE COUNTY

SEC. 7, T.37N., R.2W.
KANKAKEE TOWNSHIP
LAPORTE COUNTY

ROBERT LANTERO & DAWN ZEMAN

ALL R/W ON THIS SHEET DESCRIBED FROM LINE "D"
UNLESS OTHERWISE NOTED

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER DATE

DESIGNED: JCS DRAWN: JMT

CHECKED: JWG CHECKED: JCS

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE
1/4"=1'-0"	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	72 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

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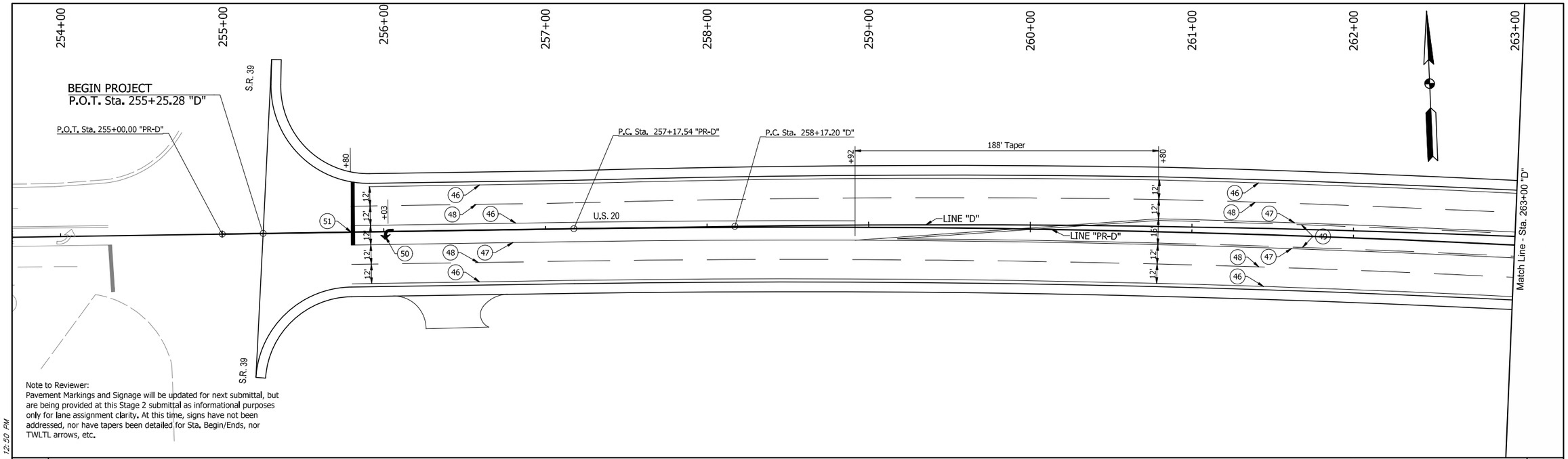
B81



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LEGEND

- (46) Line, Multi-Component, Solid, White, 4"
- (47) Line, Multi-Component, Solid, Yellow, 4"
- (48) Line, Multi-Component, Broken, White, 4"
- (49) Line, Multi-Component, Broken, Yellow, 4"
- (50) Pavement Message Marking, Thermoplastic, Lane Indication Arrow
- (51) Transverse Marking, Thermoplastic, Stop Line, 24"

Note:
1. Center Line & Edge Line Corrugations are to be installed (Details & Limits to be provided at next submittal)

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER DATE

DESIGNED: JCS DRAWN: JMT

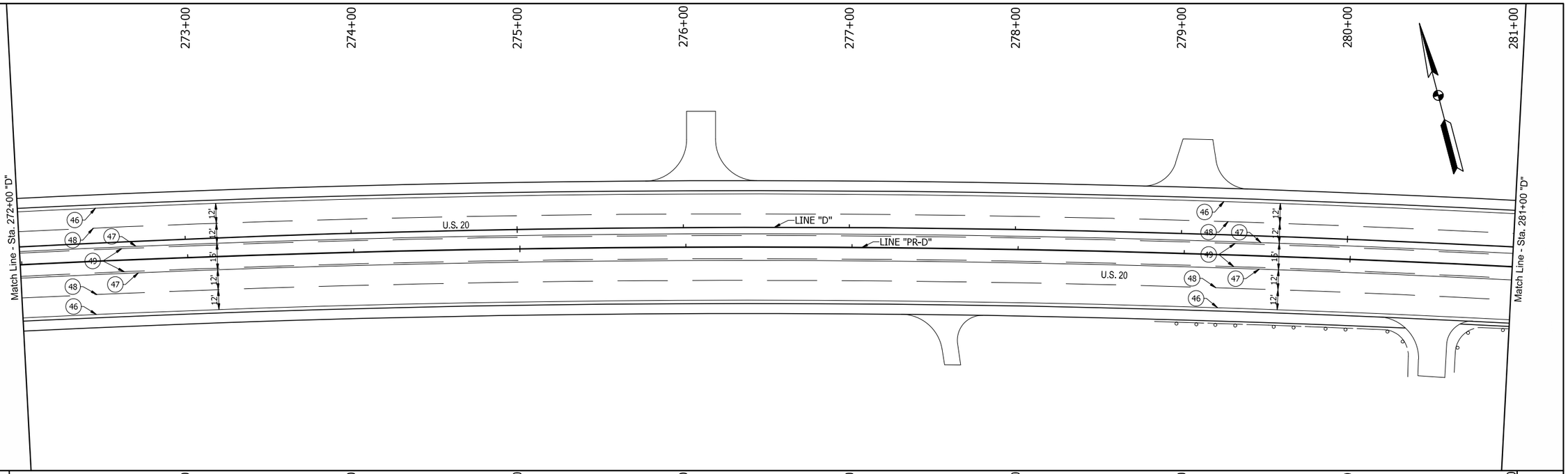
CHECKED: JWG CHECKED: JCS

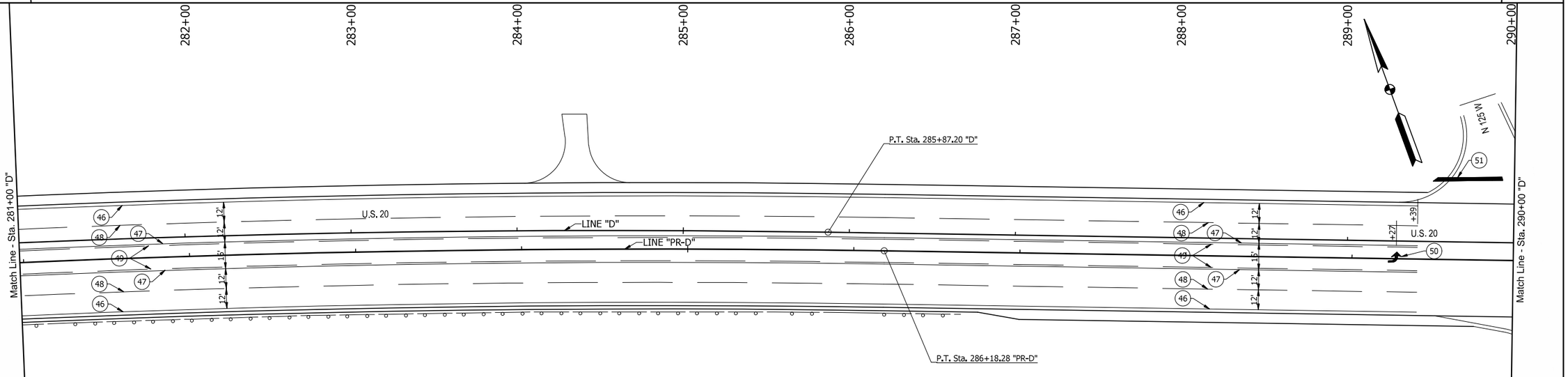
INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING & SIGNAGE

HORIZONTAL SCALE	BRIDGE FILE
1"=30'	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	73 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701





LEGEND

(46) Line, Multi-Component, Solid, White, 4"
(47) Line, Multi-Component, Solid, Yellow, 4"
(48) Line, Multi-Component, Broken, White, 4"
(49) Line, Multi-Component, Broken, Yellow, 4"
(50) Pavement Message Marking, Thermoplastic, Lane Indication Arrow
(51) Transverse Marking, Thermoplastic, Stop Line, 24"

Note:
1. Center Line & Edge Line Corrugations are to be installed (Details & Limits to be provided at next submittal)
2. All Stop Bars are 14.5' from the edge of through lane

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER DATE

DESIGNED: JCS DRAWN: JMT

CHECKED: JWG CHECKED: JCS

INDIANA DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING & SIGNAGE

HORIZONTAL SCALE	BRIDGE FILE
1"=30'	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	74 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

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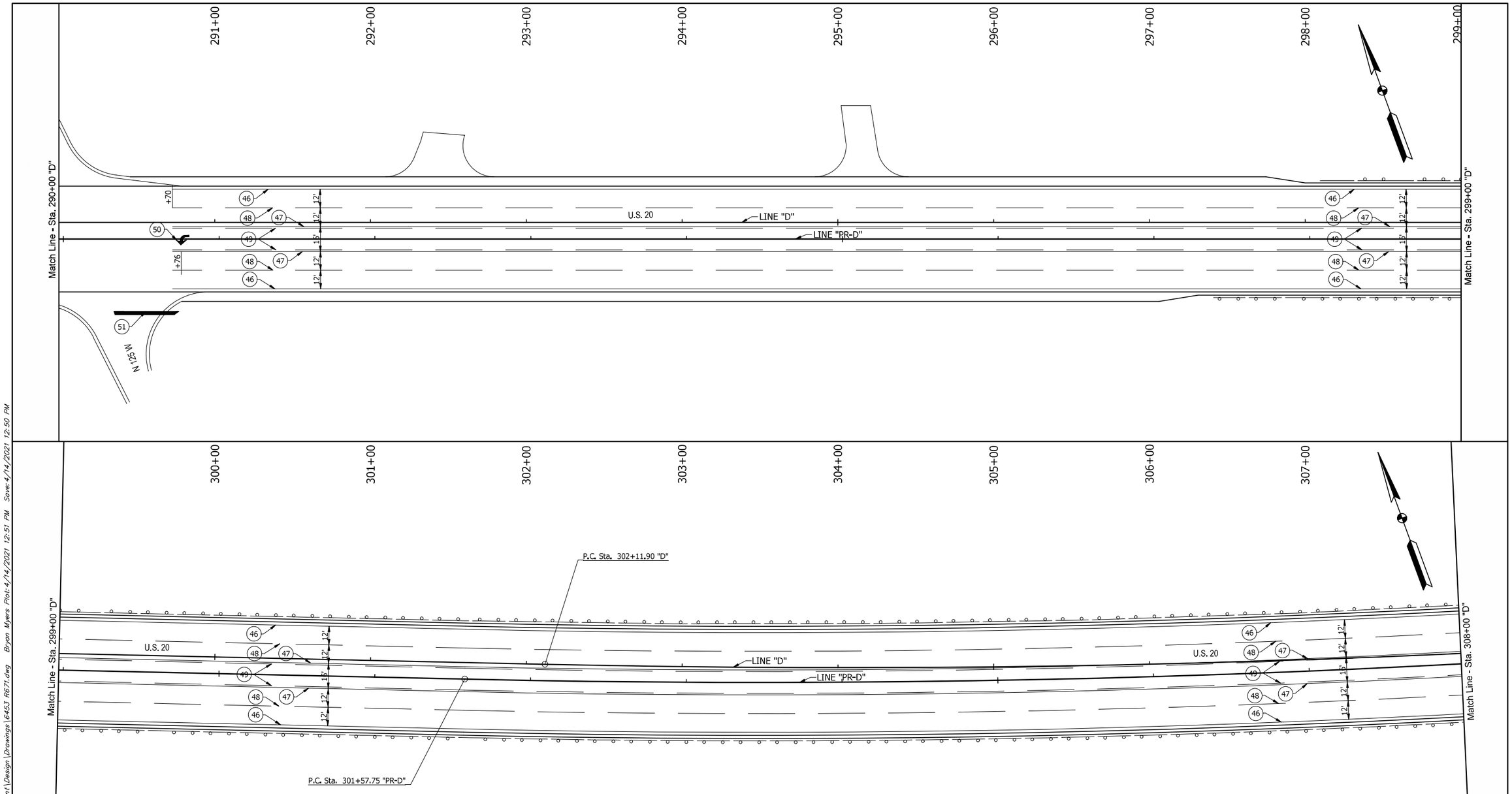


LEGEND

(46) Line, Multi-Component, Solid, White, 4"
(47) Line, Multi-Component, Solid, Yellow, 4"
(48) Line, Multi-Component, Broken, White, 4"
(49) Line, Multi-Component, Broken, Yellow, 4"
(50) Pavement Message Marking, Thermoplastic, Lane Indication Arrow
(51) Transverse Marking, Thermoplastic, Stop Line, 24"

Note:
1. Center Line & Edge Line Corrugations are to be installed (Details & Limits to be provided at next submittal)
2. All Stop Bars are 14.5' from the edge of through lane

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER DATE

DESIGNED: JCS DRAWN: JMT

CHECKED: JWG CHECKED: JCS

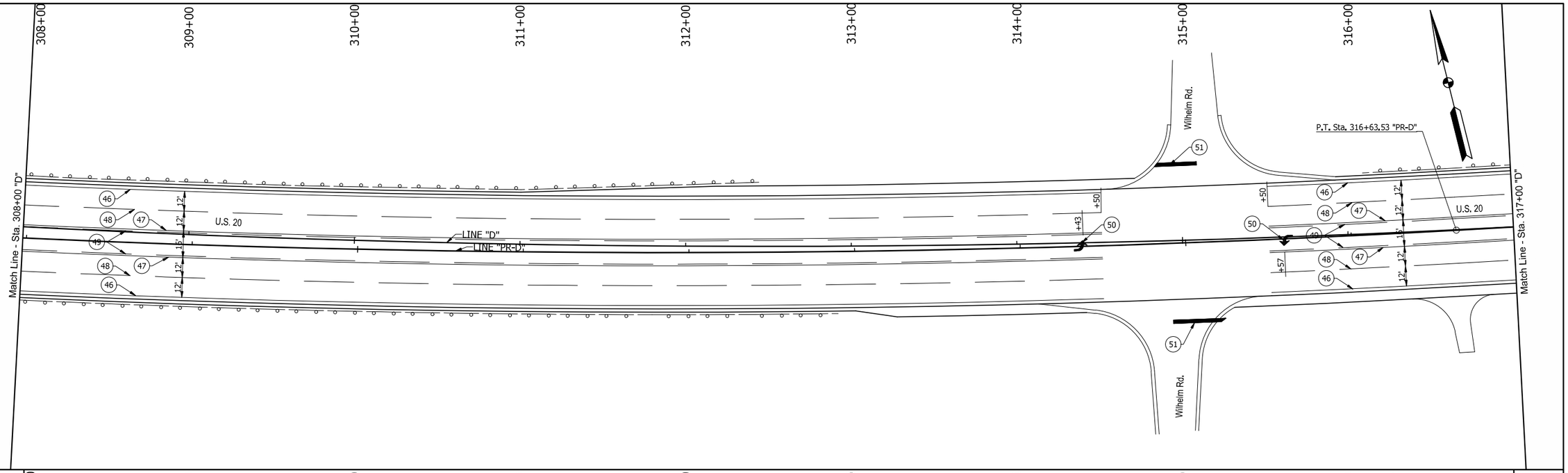
INDIANA DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING & SIGNAGE

HORIZONTAL SCALE	BRIDGE FILE
1"=30'	
VERTICAL SCALE	DESIGNATION
N/A	1702993
SURVEY BOOK	SHEET
	75 OF 192
CONTRACT	PROJECT
R-41437	1702993

BFS NO. 6453.1701

\\Dfs\of2\Jobs\645300.0000\ProDevelopment\Design\Drawings\6453 R671.dwg Bryan Myers Plot: 4/14/2021 12:51 PM Save: 4/14/2021 12:50 PM



LEGEND

(46) Line, Multi-Component, Solid, White, 4"
(47) Line, Multi-Component, Solid, Yellow, 4"
(48) Line, Multi-Component, Broken, White, 4"
(49) Line, Multi-Component, Broken, Yellow, 4"
(50) Pavement Message Marking, Thermoplastic, Lane Indication Arrow
(51) Transverse Marking, Thermoplastic, Stop Line, 24"

Note:
1. Center Line & Edge Line Corrugations are to be installed (Details & Limits to be provided at next submittal)
2. All Stop Bars are 14.5' from the edge of through lane

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INDIANA
DEPARTMENT OF TRANSPORTATION

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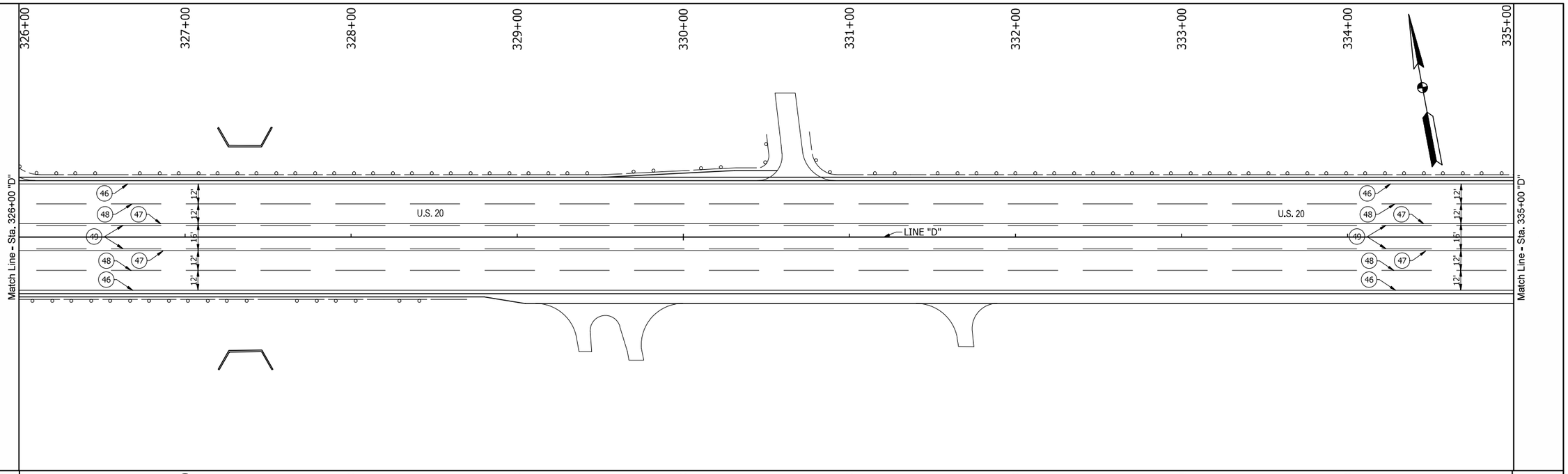

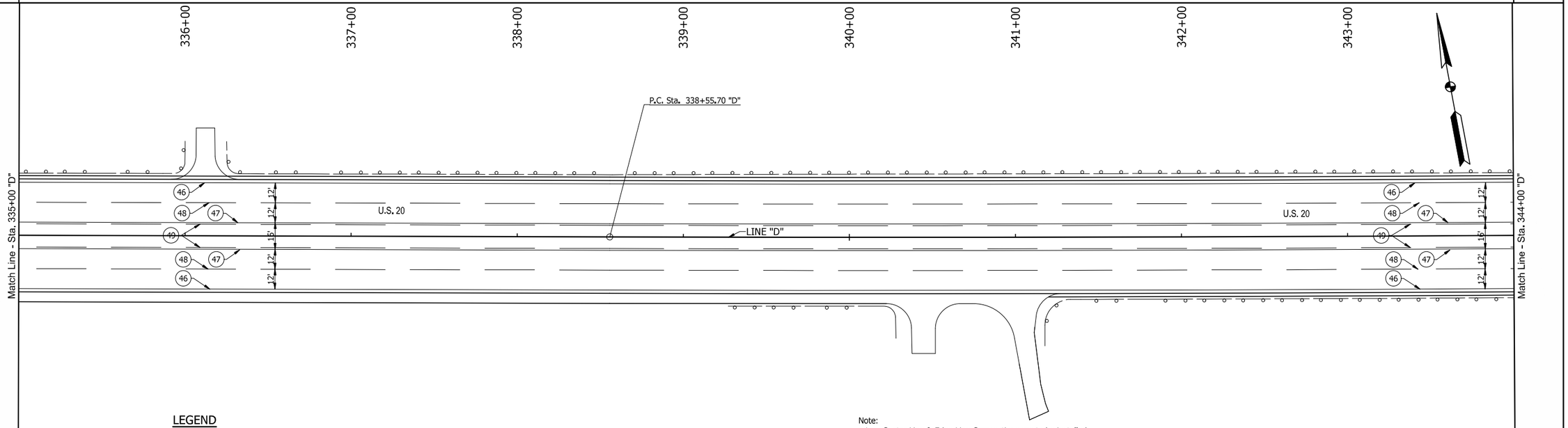

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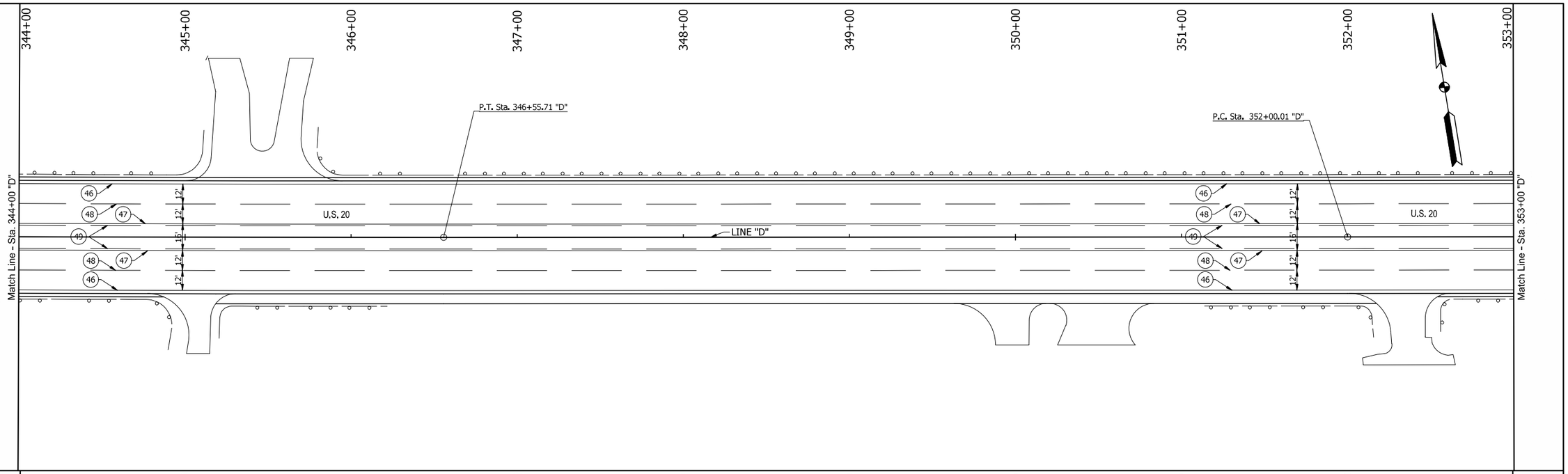

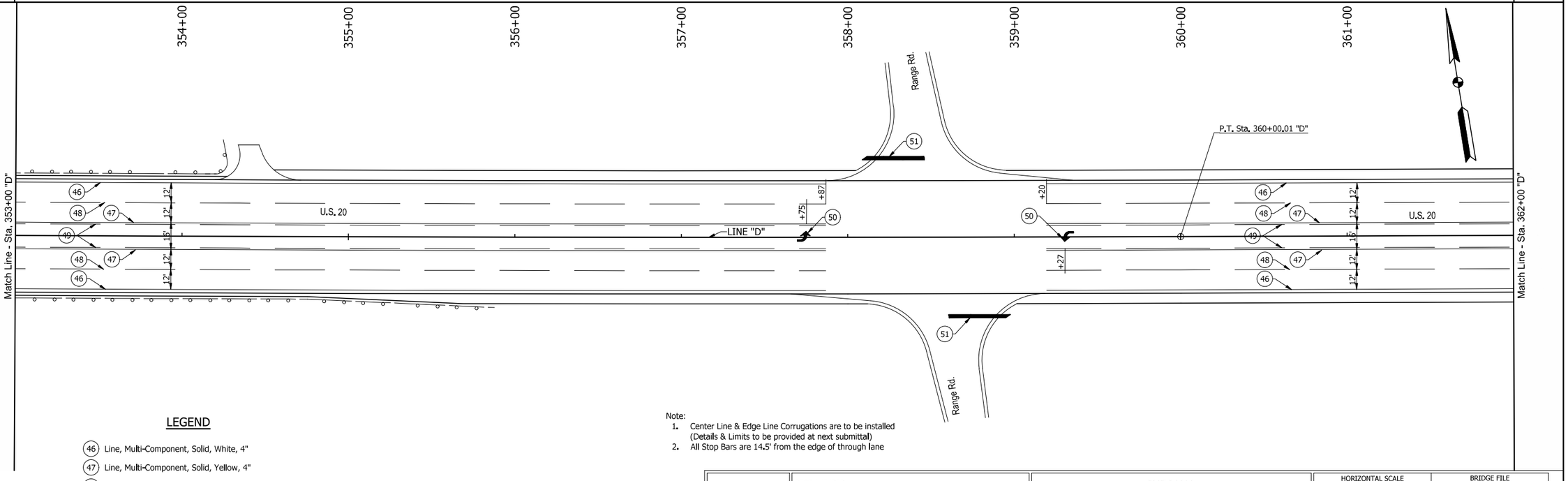

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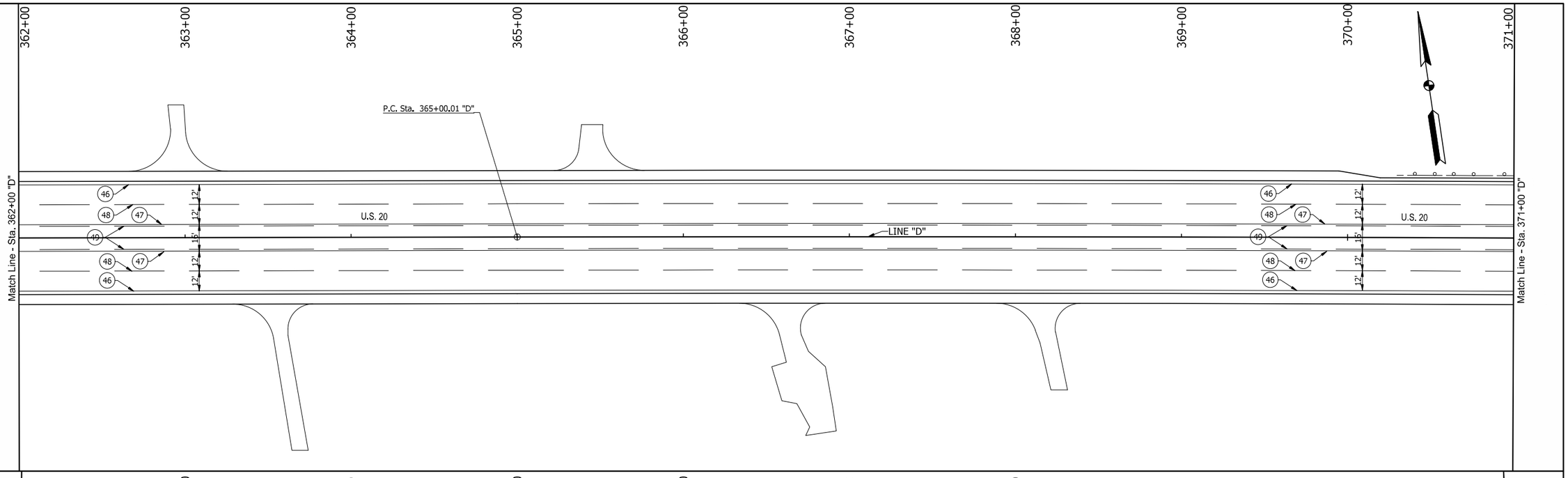

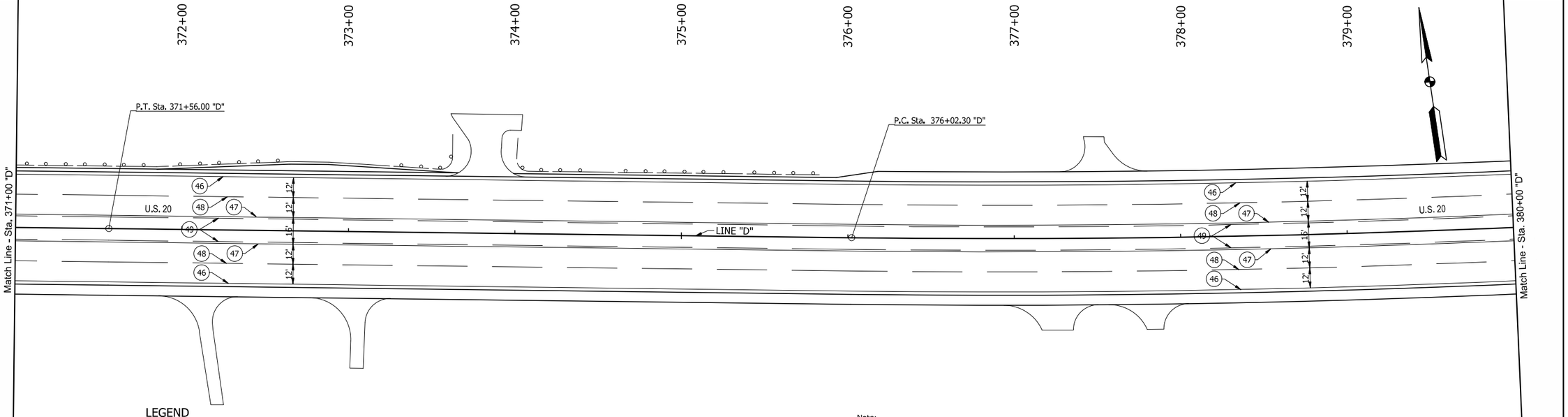

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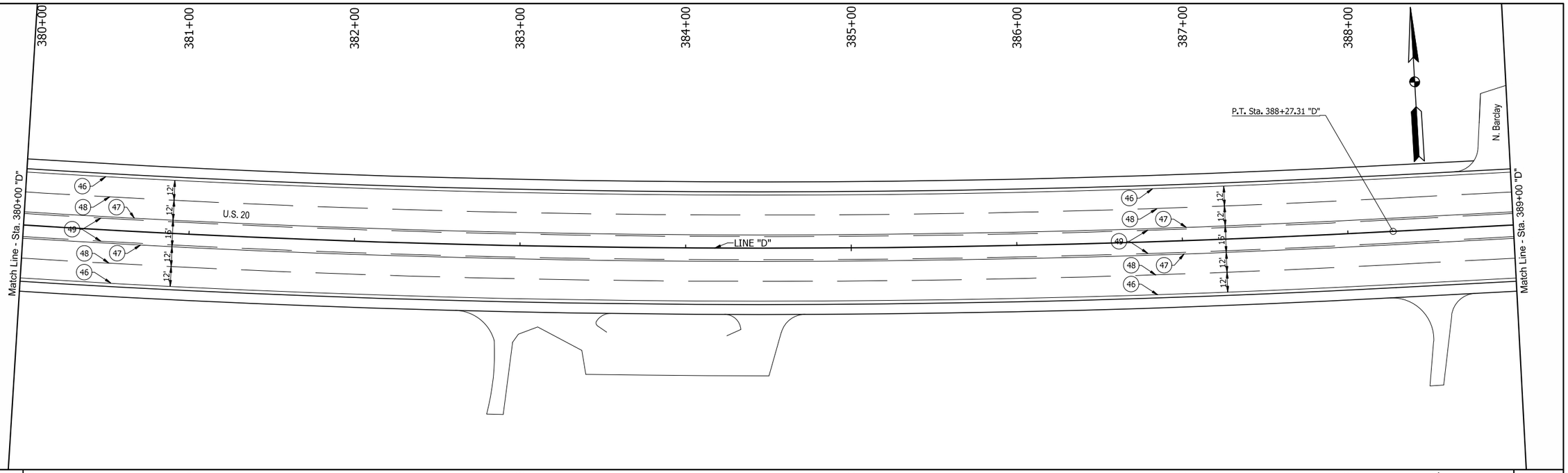

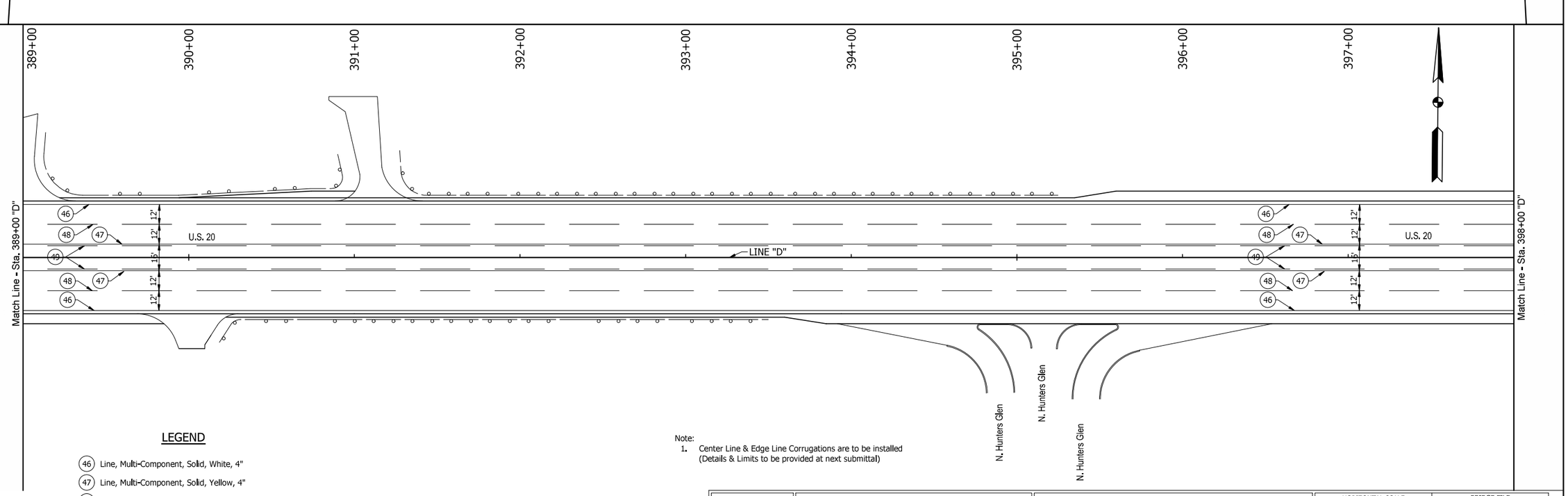

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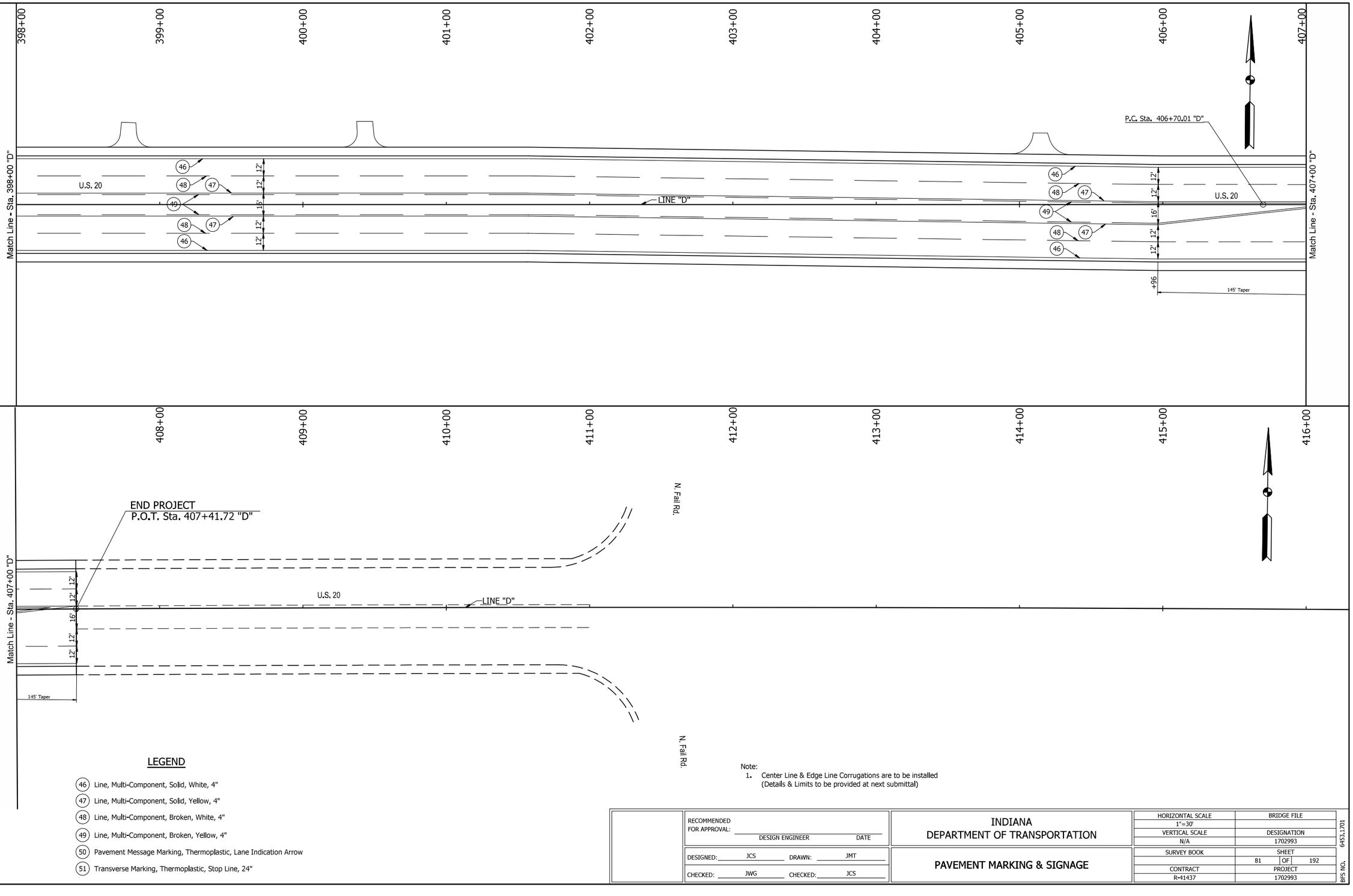

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APPENDIX C: EARLY COORDINATION

INDIANA DEPARTMENT OF TRANSPORTATION

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

Eric Holcomb, Governor
Joe McGuinness, Commissioner

April 9, 2021

To: Attached Early Coordination Recipient List

Re: US 20 Two-Way-Left-Turn-Lane Addition from 400 feet east of SR 39 to 2.85 miles east of SR 39 (Fail Road), Des No. 1702993, LaPorte County, Indiana

Dear Recipient:

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

The proposed undertaking is on US 20 from 4.8 miles east of 400 feet east of SR 39 to 2.85 miles east of SR 39 (Fail Road), in LaPorte County, Indiana. It is within Springville and Kankakee Townships, USGS Springville Quadrangle, in Sections 1, 2, 7, and 8, Township 37 North, Range 2 and 3 West.

The need of this project is based on the significant increase in the average annual daily traffic (AADT) from 15,220 to 26,246 between 2010 and 2016, an increase of 72%. The increase in traffic has caused an increase in crashes and in crash severity. Many of the severe crashes are due to stopped left-turning vehicles in the passing lane. Due to the increased traffic volumes, there are fewer gaps in opposing traffic for left-turning vehicles. This turning movement delay forces left-turning vehicles to stop and to remain stopped for longer periods of time in a through-lane, making them vulnerable to high-speed traffic. Other severe crashes are related to lane departure, primarily crossing the centerline but also running off road to the right. The purpose of this project is to improve safety conditions for vehicle traffic on US 20.

The project proposes to add an approximately 16-foot wide two (2)-way-left-turn lane (TWLTL) to US 20. The two (2)-foot paved shoulder would be expanded to an approximately eight (8)-foot paved shoulder. The project would also install centerline rumble strips, a widened median (2.5-feet existing to 16-feet proposed), extend edge line rumble strips, extend existing pipe culverts, and replace street signs. Drainage structures would be replaced or extended. Some commercial and residential entries to US 20 would be eliminated. Approximately 6.0 acres of permanent right-of-way acquisition is anticipated.

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 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 Hannah Deguch, Environmental Preparer, Butler, Fairman and

Seufert, Inc., hbays@bfsengr.com, or Amber Thomas, PMP, Senior Project Manager, INDOT – LaPorte District., AThomas2@indot.in.gov. Thank you in advance for your input.

Sincerely,

Hannah Deguch
Environmental Scientist
Butler, Fairman and Seufert, Inc.

NB/
Attachments-
Maps (Location, Aerial, Topographic, Photo Key, Water Resources)
Photographs

See Appendix B and Appendix F

The following agencies received Early Coordination Letters:

INDOT Environmental Policy Manager-Central Office
100 N. Senate Avenue
Indiana Government Center 758-ES
Indianapolis, IN 46204
(Electronic Coordination: rbales@indot.in.gov)

Federal Highway Administration
575 North Pennsylvania Street
Room 254, Federal Office Building
Indianapolis, IN 46204
(Electronic Coordination: k.carmanygeorge@dot.gov)

Indiana Geological Survey
611 North Walnut Grove
Bloomington, IN 47405
(Electronic Coordination: https://igs.indiana.edu/eAssessment/)

Field Environmental Officer
Chicago Regional Office
US Department of Housing and Urban Development
Metcalf Federal Building
77 West Jackson Boulevard, Room 2401
Chicago, IL 60604
(Electronic Coordination: Melanie.H.Castillo@hud.gov)

Regional Environmental Coordinator
Midwest Regional Office
National Park Service
601 Riverfront Drive
Omaha, Nebraska 68102
(Electronic Coordination: Mwro_compliance@nps.gov)

Environmental Coordinator
Indiana Department of Natural Resources
Division of Fish and Wildlife
402 West Washington Street, Rm. W273
Indianapolis, IN 46204
(Electronic Coordination: environmentalreview@dnr.in.gov)

Field Supervisor
US Fish and Wildlife Service
Northern Indiana Suboffice
P.O. Box 2616
Chesterton, IN 46304
(Electronic Coordination: elizabeth_mccloskey@fws.gov)

State Conservationist
Natural Resources Conservation Service
6013 Lakeside Blvd.
Indianapolis, IN 46278
(Electronic Coordination: rick.neilson@in.usda.gov)

US Army Corps of Engineers Chicago District
Section 408 Coordinator, ORD-R
231 South LaSalle St, Suite 1500
Chicago, IL 60604
(Electronic Coordination: Eugene.J.Fleming@usace.army.mil)

Groundwater Section
Indiana Department of Environmental Management
(Electronic Coordination)

Indiana Department of Environmental Management
(Electronic Coordination)

Northwestern Indiana Regional Planning Organization
Executive Director
6100 Southport Rd.
Portage, IN 46368
(Electronic Coordination: twarner@nirpc.org)

LaPorte County Surveyor's Office
555 Michigan Ave
LaPorte, IN 46350
(Electronic Coordination: thendricks@laportecounty.org)

LaPorte County Highway Department
1805 W. 5th Street
LaPorte, IN 46350
(Electronic Coordination: ryoung@laportecounty.org)

LaPorte County Board of Commissioners
555 Michigan Ave
LaPorte, IN 46350
(Electronic Coordination rmrozinski@laportecounty.org)

LaPorte County Council
555 Michigan Ave
LaPorte, IN 46350
(Electronic Coordination: jsantana@laportecounty.org)

USDA
United States Department of Agriculture

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

April 22, 2021

Hannah Deguch
Butler, Fairman & Seufert
8450 Westfield Boulevard, Suite 300
Indianapolis, Indiana 46240

Dear Ms. Deguch:

The proposed project to proceed with a two-way-left-turn-lane addition along US 20 in LaPorte County, Indiana, (Des No 1702993), as referred to in your letter received April 9, 2021, will cause a conversion of prime farmland.

The attached packet of information is for your use completing Parts VI and VII of the AD-1106. 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,

JOHN ALLEN Digitally signed by JOHN ALLEN
Date: 2021.04.23 13:10:25 -04'00'

Acting For

RICK NEILSON
State Soil Scientist

Enclosures

USDA is an equal opportunity provider, employer and lender.

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 DES1702993_US20 Two Way Left Turn	Federal Agency Involved
Proposed Land Use	County and State Laporte County, Indiana
PART II *(To be completed by NRCS)*	Date Request Received By NRCS 4/9/2021 / 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: 336 ac
Major Crop(s): Corn	Farmable Land In Govt. Jurisdiction Acres: 348283 % 90	Amount of Farmland As Defined in FPPA Acres: 28329[+] % 73	
Name of Land Evaluation System Used: LESA	Name of State or Local Site Assessment System	Date Land Evaluation Returned by NRCS: 4/22/2021	

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	5.71			
B. Total Acres To Be Converted Indirectly	0			
C. Total Acres In Site	5.71			
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	0.09			
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	102			
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)	41			

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)	15			
4. Protection Provided By State and Local Government	(20)	0			
5. Distance From Urban Built-up Area	(15)	15			
6. Distance To Urban Support Services	(15)	10			
7. Size Of Present Farm Unit Compared To Average	(10)	10			
8. Creation Of Non-farmable Farmland	(10)	0			
9. Availability Of Farm Support Services	(5)	5			
10. On-Farm Investments	(20)	10			
11. Effects Of Conversion On Farm Support Services	(10)	0			
12. Compatibility With Existing Agricultural Use	(10)	5			
TOTAL SITE ASSESSMENT POINTS	160	95	0	0	0
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland *(From Part V)*	100	41	0	0	0
Total Site Assessment *(From Part VI above or local site assessment)*	160	95	0	0	0
TOTAL POINTS ***(Total of above 2 lines)***	260	136	0	0	0

Site Selected: A	Date Of Selection 8/24/2021	Was A Local Site Assessment Used? YES ☐ NO ☑

Reason For Selection:

Name of Federal agency representative completing this form: Elizabet Biggio — Date: Aug. 24 2021

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

From: Swinford, Tom <tswinford@dnr.IN.gov>
Sent: Tuesday, April 27, 2021 9:56 AM
To: Hannah Deguch; Nimetz, Derek
Cc: Ryan Scott; Carly Sheets; Ryan Scott; Carly Sheets
Subject: RE: ER 23628

Categories: Filed by Newforma

Morning Hannah,

Thank you for your diligence. We will have a careful review of your additional materials, thanks for sending along.

As you of course well know, work outside of a NP boundary can affect both biotic and abiotic factors within a natural area. We will give you the best information we have available as professionals, and without the benefit of further studies being done to understand potential impacts. I certainly wouldn't eliminate the need for a herpetologist quite yet, rare herps seem to end up in construction areas near our preserves quite frequently, we just don't want to overlook all of the best practices that we might want to include. But we are with you in avoiding meaningless efforts. But the is a viable reproductive population of Eastern Massasauga Rattlesnakes, not some old records; we feel this is an important site for their future in Indiana.

As you are aware, this macrosite includes the USFWS Galena Wetland Conservation Area. Could we arrange a Teams meeti8ng with the USFWS and you all to go over the plants and options? The USFWS contact for this site is Elizabeth McCloskey. We would ask that an INDOT representative attend?

Is that meeting something you could facilitate?

Tom

Thomas O. Swinford
Asst Director
DNR Nature Preserves
317-697-5508 REMOTE WORK
317-233-4849

Coping with COVID-19:
•**Indiana State Dept. of Health (ISDH) COVID-19 Call Center:** Call 877-826-0011 (open 24/7)
•**Anthem NurseLine:** Call 800-337-4770 or visit the Anthem NurseLine online for a FREE symptom screening. Available to anyone with an Anthem health plan (this includes State of IN employees)
•**Anthem Employee Assistance Program (EAP):** Available to ALL state employees and adults in household regardless of health plan participation. Call 800-223-7723 or visit anthemeap.com (enter State of Indiana) for crisis counseling, help finding child/elder care, legal/financial consultation and much mo

dnr.IN.gov
Next Level Survey Link (https://www.surveymonkey.com/r/FLNDLW8)

From: Hannah Deguch <HBays@bfsengr.com>
Sent: Tuesday, April 27, 2021 9:30 AM
To: Swinford, Tom <tswinford@dnr.IN.gov>; Nimetz, Derek <DNimetz@dnr.IN.gov>
Cc: rscott <rscott@bfsengr.com>; Carly Sheets <csheets@bfsengr.com>
Subject: RE: ER 23628

**** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ****

Good morning,

I have attached the plan sheets along the areas including the nature preserve. I have highlighted our construction limits in yellow and the right-of-way of the Springfield Fen Nature Preserve in red (please excuse my wobbly tracing). As you can see, our work will be outside of the nature preserve boundary, which in my opinion, negates the need for a herpetologist. We will certainly perform our due diligence pertaining to endangered and protected species as well as wetlands within our area of impacts; which I believe is important to note in any responses from early coordination. It has been of utmost importance to me that we do not disturb the nature preserve boundary, which I'm sure the designer can attest to!

I'm happy to jump on a call or into a meeting to discuss this project in more detail, if needed. Of course, if you have a difference in opinion, please don't hesitate to reach out and continue that dialogue with me or either of the cc'd individuals. It's important that we are all on the same page, moving forward.

Thank you,

Hannah Deguch
Environmental Scientist

Butler, Fairman & Seufert, Inc.
8450 Westfield Blvd., Suite 300 | Indianapolis, IN 46240-8302 |
p 317-713-4615 | f 317-713-4616
HBays@bfsengr.com | www.BFSEngr.com

****
CONFIDENTIALITY NOTICE: This Email and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution, or use of this Email or any attachment is prohibited. If you have received this Email in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you. Butler, Fairman & Seufert, Inc.
****

From: Swinford, Tom <tswinford@dnr.IN.gov>
Sent: Monday, April 26, 2021 8:53 AM
To: Nimetz, Derek <DNimetz@dnr.IN.gov>
Cc: Hannah Deguch <HBays@bfsengr.com>
Subject: RE: ER 23628

From: Nimetz, Derek <DNimetz@dnr.IN.gov>
Sent: Monday, April 26, 2021 8:45 AM
To: Swinford, Tom <tswinford@dnr.IN.gov>
Cc: Hannah Deguch <HBays@bfsengr.com>
Subject: Re: ER 23628

Hello Hannah,

Thank you for reaching out to Tom Swinford. To the best of my knowledge, there is no wetland delineation that we have completed with the Indiana Department of Natural Resources. There are flags along a wetland boundary but that was for a restoration project and not a delineation. Also, Brock Stucker, with Cardno, is a herpetologist that is familiar with Springfield Fen Nature Preserve.

I am in the field today and in the office tomorrow. If you would like to speak on the phone my number is (219) 928-3997.

Thank you,

Derek Nimetz

Sent from my iPhone

> On Apr 26, 2021, at 7:08 AM, Swinford, Tom <tswinford@dnr.in.gov> wrote:
>
> Hannah,
>
> No I do not. I have copied our regional ecologist who is the property manager for any insight into your question.
>
> Thanks,
>
> Tom
>
> Thomas Swinford
> Asst Director
> IN-DNR Nature Preserves
> 402 W Washington St W267
> Indianapolis IN 46204
>
> **REMOTE PHONE 317-697-5508**

From: Hannah Deguch <HBays@bfsengr.com>
Sent: Friday, April 23, 2021 8:32 AM
To: Swinford, Tom <tswinford@dnr.IN.gov>
Subject: RE: ER 23628

Hi Tom,

We are working internally on a response to you about the snakes and locating a herpetologist. In the meantime, we are trying to track down a wetland delineation done to the Springfield Pen Nature Preserve. All I have is a photo of a flag. Any intel on who may of done this delineation and where a report might be?

I appreciate your help!

Hannah Deguch
Environmental Scientist

Butler, Fairman & Seufert, Inc.
8450 Westfield Blvd., Suite 300 | Indianapolis, IN 46240-8302 |
p 317-713-4615 | f 317-713-4616
HBays@bfsengr.com | www.BFSEngr.com

****
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****

From: Swinford, Tom <tswinford@dnr.IN.gov>
Sent: Thursday, April 22, 2021 11:22 AM
To: Hannah Deguch <HBays@bfsengr.com>; Thomas, Amber <AThomas2@indot.IN.gov>
Cc: Nimetz, Derek <DNimetz@dnr.IN.gov>; Wyrick, Matthew R <MWyrick@dnr.IN.gov>
Subject: RE: ER 23628

Resend with Amber corrected.

From: Swinford, Tom
Sent: Thursday, April 22, 2021 11:19 AM
To: hbays@bfsengr.com; AThomas2@indot.in.gov.
Cc: Nimetz, Derek <DNimetz@dnr.IN.gov>; Wyrick, Matthew R <MWyrick@dnr.IN.gov>
Subject: ER 23628

Hello Hanna and Amber,

Mat Wyrick is preparing our comments for this project, but I wanted to reach out to you to express our concerns with grade and slope fill, and the culvert that is within the proposed project. These could impact Springfield Fen Nature Preserve, a site with a significant population of Federal ESA species Eastern Massasauga Rattlesnake present. It is a very sensitive site and will require work and planning for that status. We request a staff herpetologist being involved from BFS.

Derek Nimetz the regional ecologist responsible for the site will want a meeting onsite prior to final plans.

Thank you,
Tom

Thomas Swinford
Asst Director
IN-DNR Nature Preserves
402 W Washington St W267
Indianapolis IN 46204

REMOTE PHONE 317-697-5508

Project Impact Meeting Notes

Des 1702993: US 20 TWLTL, INDOT LaPorte District, INDOT

10:00AM CST May 6, 2021, Virtual

Attendees: Amber Thomas (INDOT PM), Thomas Swinford (INDNR-Nature Preserves), Derek Nimetz (Springfield Fen Nature Preserve Manager), Chris Wheatley (BF&S Design), Neal Bennett (BF&S Environmental), Hannah Deguch (BF&S Environmental)

*denotes an action item

Thomas Swinford questions and concerns:

- Most important is what impacts will the US 20 TWLTL have on the adjacent Nature Preserve.
- There is a viable reproductive site of the Eastern Massasauga Rattlesnake, one of the few in the state.
- Concerns related to groundwater, groundwater fed wetlands, and the upland habitat.*
- Groundwater data, if possible, needs to be collected and evaluated.
- Concerns about grading and where that falls into the Nature Preserve Property.*
- Erosion concerns due to grading and slope.*
- What impacts will the timing of construction and ROW clearing have?*
- Would like to be sent letters and kept in the loop about future public meetings to unite with their neighbors and community.*
- Would like to continue to be a member of the “team” to ensure any/all project activities will cause no harm to habitat.*

Derek Nimetz questions and concerns:

- As the property manager, he visits the EMR site multiple times every month-continues to monitor.
- Site was protected in 1980s due to the diverse (endangered and threatened) animal and plant species requiring protection.
- Where does the centerline of the project fall? Who owns up to the centerline?*
- Many large diameter trees within the property and the claimed INDOT property adjacent-prefers that these trees are catalogued, removed from the property if cut down.*
- Requests the ROW be clearly staked prior to construction.*
- Erosion concerns due to grading and slope-requested that grading and new slope be revegetated to restore habitat.
- Notified BF&S field staff and future construction staff about hunting on the site.*

Neal Bennett responses/answers to concerns and questions during meeting:

- Any trees cut down will be removed from the site.
- Trees will be catalogued in the area adjacent to Nature Preserve and information given to Derek to maintain healthy restoration resources.
- Sign will be replaced by INDOT.
- Provided input about the use of exclusion barrier and orange fencing for reptile control during project activities.

Action Items:

- BF&S will review the INDOT ROW along the Nature Preserve Property. (Hannah, Chris, Neal)
    - **Update: BF&S confirms that the INDOT ROW line shown on the plans along the Nature Preserve was purchased and timely recorded in 1939/ 1940.**
- A catalogue of trees and any needing removal in the area of concern will be provided to Derek, Tom and Elizabeth. (Hannah & Neal)
- A list of special commitments and unique special provisions will be created to address the following concerns: groundwater, hunting, reptiles, revegetation, trees and tree removal, wetlands, erosion, grading and slope, construction timing related to habitats, ROW clearing, exclusion barriers and orange fencing. (Hannah, Neal, and Chris with input by the rest of the team)
- Letters and all coordination sent to Tom, Derek and Elizabeth regarding public information meetings and/or public meetings. (Hannah)
- Results of the Waters of the US Report provided to necessary parties in preparation of upcoming construction. (Hannah)
- Schedule a field visit with Derek, Tom and Elizabeth to further address any concerns with the most recent set of plans. (Hannah & Neal)

THIS IS NOT A PERMIT

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

DNR #: ER-23628 **Request Received:** April 9, 2021

Requestor:
Butler Fairman and Seufert Inc
Hannah Deguch
8450 Westfield Boulevard, Suite 300
Indianapolis, IN 46240-8302

Project: US 20 two-way-left-turn-lane addition from 400' east of SR 39 to Fail Road; Des #1702993

County/Site info: LaPorte

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: A portion of this proposal may require the formal approval of our agency pursuant to the Flood Control Act (IC 14-28-1) for any proposal to construct, excavate, or fill in or on the floodway of a stream or other flowing waterbody which has a drainage area greater than one square mile, 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.
A list of managed lands, high quality natural communities, and species that have been documented within 1/2 mile of the project area is attached. The Division of Nature Preserves (DNP) has concerns with the amount of fill that will be required in addressing the large slope and steep gradient that will accompany this work. Careful study of culvert modifications and placement will be required to prevent deleterious changes to site hydrology. The DNP is also concerned with determining the actual boundaries of the INDOT easement and all proposed work being contained within it. An on-site meeting is requested to discuss DNP's concerns and solutions. Please contact Tom Swinford at (317) 233-4849 or tswinford@dnr.in.gov and Derek Nimetz at (219) 928-3997 or dnimetz@dnr.in.gov for further coordination.

Fish & Wildlife Comments: Badgers are a wide ranging species that prefer an open, prairie-type habitat, with Indiana being at the eastern edge of their natural range. The range of the badger continues to expand as a result of land-use changes from forest to farmland and open pastureland. Impacts to the American badger or its preferred habitat are unlikely as a result of this project.

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) Animal Species:
a. CERULEAN WARBLER:
If any tree clearing is required for this project it should be done outside of the nesting season to minimize impacts to this bird species. Nesting season occurs from May 1 through July 15.

Attachments: A - Bridge Exemption Criteria
B - General Information

b. REPTILES:
An entrenched silt fence should be installed along the project boundary on the north side of US 20 at the Springfield Fen Nature Preserve, beginning about 800' east of CR 125 West and running eastward to near Wilhelm Road, which will help minimize the number of reptiles and amphibians entering the work site during construction. Also, the area should be visually inspected before the fence is installed to ensure snakes and turtles are not present and injured by machinery.

2) Stream Crossing Structures:
The information submitted indicated that drainage structures would be replaced or extended, but did not give any details on the structures. For any stream crossing structures to be replaced, the Environmental Unit recommends bridges rather than culverts and bottomless culverts rather than box or pipe culverts for maintaining fish and wildlife passage through the structure. 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.

The new, replacement, or rehabbed structure, and any bank stabilization under the structure, should not create conditions that are less favorable for wildlife passage under the structure compared to the current conditions. Upgrading wildlife passage for rehabilitated structures is encouraged whenever possible to improve wildlife/vehicle safety. There are a number of techniques and materials for incorporating wildlife passage into the design of a crossing structure. The following links are good resources to consider in the design of stream crossing structures to maintain fish and wildlife passage: http://www.fs.fed.us/wildlifecrossings/library/, https://roadecology.ucdavis.edu/files/content/projects/DOT-FHWA_Wildlife_Crossing_Structures_Handbook.pdf, https://www.fs.fed.us/biology/nsaec/fishxing/aop_pdfs.html, https://www.fhwa.dot.gov/engineering/hydraulics/pubs/11008/hif11008.pdf.

3) Bank Stabilization:
Establishing vegetation along the banks is critical for stabilization and erosion control. In addition to vegetation, some other form of bank stabilization may be needed. 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. 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.

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). Riprap may be used only at the toe of the sideslopes up to the ordinary high water mark (OHWM). The banks above the OHWM must be restored, stabilized, and revegetated using geotextiles and a mixture of grasses, sedges, wildflowers, shrubs, and trees native to Northern Indiana and specifically for stream bank/floodway stabilization purposes as soon as possible upon

completion.

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

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

5) Wetland Habitat:
Due to the presence or potential presence of wetland habitat on site, we recommend contacting and coordinating with the Indiana Department of Environmental Management (IDEM) 401 program and also the US Army Corps of Engineers (USACE) 404 program. Impacts to wetland habitat should be mitigated at the appropriate ratio according to the 1991 INDOT/IDNR/USFWS Memorandum of Understanding.

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 grasses (excluding all varieties of tall fescue) and legumes native to Northern Indiana and specifically for stream bank/floodway stabilization purposes as soon as possible upon completion. Turf-type grasses (including low-endophyte, friendly endophyte, and endophyte free tall fescue but excluding all other varieties of tall fescue) may be used in currently mowed areas only.
2. Minimize and contain within the project limits inchannel disturbance and the clearing of trees and brush.
3. Do not work in the waterway from April 1 through June 30 without the prior written approval of the Division of Fish and Wildlife.
4. Do not cut any trees suitable for Indiana bat or Northern Long-eared bat roosting (greater than 5 inches dbh, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30.
5. Do not excavate in the low flow area except for the placement of piers, foundations, and riprap, or removal of the old structure.
6. Do not construct any temporary runarounds, access bridges, causeways, cofferdams, diversions, or pumparounds.
7. Minimize the movement of resuspended bottom sediment from the immediate project area.
8. Do not deposit or allow demolition/construction materials or debris to fall or otherwise enter the waterway.
9. 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
B - General Information

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

10. 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.
11. Do not excavate or place fill in any riparian wetland.

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:** May 7, 2021

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

Attachments: A - Bridge Exemption Criteria
B - General Information

ER-23628: Managed lands, natural communities, and species documented within 1/2 mile of the project area.
(Rank: FT=federally threatened, SE=state endangered, ST=state threatened, SR=state rare, WL=state watch list, SSC=state special concern)

RECORD: RANK:

A) DNR MANAGED LANDS:

Springfield Fen Nature Preserve; LWCF property
Galena Wetland Conservation Area

B) NATURAL COMMUNITY:

Circumneutral Seep
Fen

C) PLANTS:

Hemlock Parsley	(Conioselinum chinense)	SE
Hairy Valerian	(Valeriana edulis var. ciliata)	SE
Marsh Valerian	(Valeriana uliginosa)	SE
Highbush-cranberry	(Viburnum opulus var. americanum)	SE
White Camas	(Anticlea elegans var. glaucus)	ST
Calamint	(Clinopodium arkansanum)	ST
Small White Lady's-slipper	(Cypripedium candidum)	ST
Tufted Hairgrass	(Deschampsia cespitosa)	ST
Northern Witchgrass	(Dichanthelium boreale)	ST
Bog Bluegrass	(Poa paludigena)	ST
Alderleaf Buckthorn	(Rhamnus alnifolia)	ST
Shining Ladies'-tresses	(Spiranthes lucida)	ST
False Asphodel	(Triantha glutinosa)	ST
American Wild Basil	(Clinopodium vulgare)	WL
White-edge Sedge	(Carex debilis var. rudgei)	WL
Wood Lily	(Lilium philadelphicum)	WL

D) INSECTS:

Opalescent Apamea	(Apamea lutosa)	SE
Many-lined Wainscot	(Leucania multilinea)	SE
Gemmed Cordgrass Borer	(Peoria gemmatella)	SE
Patricia's Cochylid Moth	(Aethes patricia)	ST
Spotted Dart Moth	(Agrotis stigmosa)	ST
Spastic Apamea	(Apamea indocilis)	ST
Black-dashed Apamea	(Apamea nigrior)	ST
Curved Halter Moth	(Capis curvata)	ST
Straw-colored Sedge Leafhopper	(Cicadula straminea)	ST
Two-spotted Silphium Borer	(Eucosma bipunctella)	ST
Giant Silphium Eucosma	(Eucosma giganteana)	ST
The Marsh Fern Moth	(Fagitana littera)	ST
A Noctuid Moth	(Gabara subnivosella)	ST
Unarmed Wainscot	(Leucania inermis)	ST
Louisiana Macrochilo	(Macrochilo Louisiana)	ST
Newman's Brocade	(Meropleon ambifusca)	ST
Finned-willow Prominent	(Notodonta scitipennis)	ST
Beer's Blazing Star Borer Moth	(Papaipema beeriana)	ST
Golden Borer Moth	(Papaipema cerina)	ST
The Giant Sunflower Borer Moth	(Papaipema maritima)	ST

The Royal Fern Borer Moth	(Papaipema speciosissima)	ST
The Included Cordgrass Borer	(Photedes includens)	ST
Spartina Borer Moth	(Photedes inops)	ST
Big Broad-winged Skipper	(Poanes viator viator)	ST
Spatterdock Darner	(Rhionaeschna mutata)	ST
Wood-colored Apamea	(Apamea lignicolora)	SR
Silver-bordered Fritillary	(Boloria selene myrina)	SR
The Long-nosed Elephant Hopper	(Bruchomorpha extensa)	SR
Graceful Underwing	(Catocala gracilis)	SR
Praeclara Underwing	(Catocala praeclara)	SR
Two-lined Cosmotettix	(Cosmotettix bilineatus)	SR
Forked Grass-veneer Moth	(Crambus bidens)	SR
Little Beggar Moth	(Eubaphe meridiana)	SR
Two-striped Sunflower Borer	(Eucosma bilineana)	SR
Indiangrass Flexamia	(Flexamia reflexus)	SR
Little Virgin Tiger Moth	(Grammia virguncula)	SR
Waterlily Moth	(Homophoberia cristata)	SR
Large Hypenodes	(Hypenodes caducus)	SR
Pointed Fen Laevicephalus	(Laevicephalus acus)	SR
Salt Marsh Wainscot	(Leucania amygdalina)	SR
Slant-lined Owlet	(Macrochilo absorptalis)	SR
Graceful Spur-throated Grasshopper	(Melanoplus gracilis)	SR
Multicolored Sedgeminer	(Meropleon diversicolor)	SR
Slightly Musical Conehead	(Neoconocephalus exiliscanorus)	SR
Blurry-patched Nola Moth	(Nola cilicoides)	SR
Elegant Prominent	(Odontosia elegans)	SR
Heracleum Stem Borer Moth	(Papaipema harrisii)	SR
The Ironweed Borer Moth	(Papaipema limpida)	SR
The St. John's Wort Borer Moth	(Papaipema lysimachiae)	SR
Rigid Sunflower Borer Moth	(Papaipema rigida)	SR
Stinging Rose Caterpillar Moth	(Parasa indetermina)	SR
Gray Comma	(Polygonia progne)	SR
Orange-head Scaphoideus	(Scaphoideus ochraceus)	SR
Brown Spiketail	(Cordulegaster bilineata)	WL
Black-banded Sunflower Leafhopper	(Mesamia nigridorsum)	WL

E) BIRD:

Cerulean Warbler	(Setophaga cerulea)	SE

F) REPTILES:

Eastern Massasauga	(Sistrurus catenatus)	FT & SE
Spotted Turtle	(Clemmys guttata)	SE
Blanding's Turtle	(Emydoidea blandingii)	SE
Woodland Box Turtle	(Terrapene carolina carolina)	SSC

G) MAMMAL:

American Badger	(Taxidea taxus)	SSC

Elizabet Biggio

From: Swinford, Tom <tswinford@dnr.IN.gov>
Sent: Wednesday, June 30, 2021 2:56 PM
To: Hannah Deguch; McCloskey, Elizabeth; Nimetz, Derek; Ryan Scott; Neal Bennett; Thomas, Amber; Chris Wheatley
Subject: RE: [EXTERNAL] RE: Des 1702993 Project Impact Meeting

Categories: Filed by Newforma

Thank you, Hannah. Thanks Liz for the site research. There was an onsite visit and I understand that the water management there was particular topic of interest.

Thanks,
tom

From: Hannah Deguch
Sent: Wednesday, June 30, 2021 2:51 PM
To: McCloskey, Elizabeth ; Swinford, Tom ; Nimetz, Derek ; rscott ; Neal Bennett ; Thomas, Amber ; Chris Wheatley
Subject: RE: [EXTERNAL] RE: Des 1702993 Project Impact Meeting

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Hi Elizabeth,

A Waters Investigation has been completed for this segment of the project and will be submitted at the end of July. Regarding widening and the pipe- you received a copy of the plan set for that specific area on May 6th and have been included in all correspondence related. Please reference the plans I sent in May for the answers to your questions.

Thank you,

Hannah Deguch
Environmental Scientist

Butler, Fairman & Seufert, Inc.
8450 Westfield Blvd., Suite 300 | Indianapolis, IN 46240-8302 |
p 317-713-4615 | f 317-713-4616
HBays@bfsengr.com | www.BFSEngr.com

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****

From: McCloskey, Elizabeth <elizabeth_mccloskey@fws.gov>
Sent: Tuesday, June 29, 2021 11:06 AM
To: Swinford, Tom <tswinford@dnr.IN.gov>; Hannah Deguch <HBays@bfsengr.com>; Nimetz, Derek <DNimetz@dnr.IN.gov>; Ryan Scott <RScott@bfsengr.com>; Neal Bennett <NBennett@bfsengr.com>; Thomas, Amber <AThomas2@indot.IN.gov>; Chris Wheatley <CWheatley@bfsengr.com>
Subject: Re: [EXTERNAL] RE: Des 1702993 Project Impact Meeting

Good morning, what is the current status of this project? The neighbor of Springfield Fen, Thermco Inc., told me that they were told at a public meeting for landowners that the widening in the Fen area is going to be entirely on the south side of US 20 and not jointly to both north and south (Thermco is on the north side of US 20 adjacent to the west side of the Fen). Is this the case?

Also, I visited the Fen last week after major thunderstorms dropped 2+ inches of rain, in order to see if that old drainage pipe that discharges onto State property was running, or had been. There was no indication that any water had been discharged through the pipe and no erosion down the slope to the fen. I haven't been back after the more recent, and even heavier, rains. But it appeared last week that the pipe isn't working. If so, is it needed? That is the only site with a "ravine" along the south property line along US 20; everything else is hills higher than the roadway. Therefore, that area, and any needed fill, is of the most concern for impacts to Springfield Fen Nature Preserve.

I have photos of the pipe if you would like to see them.

Elizabeth McCloskey
U.S. Fish and Wildlife Service
Northern Indiana Suboffice
Ecological Services
Chesterton, Indiana

From: Swinford, Tom <tswinford@dnr.IN.gov>
Sent: Monday, May 10, 2021 1:33 PM
To: Hannah Deguch <HBays@bfsengr.com>; McCloskey, Elizabeth <elizabeth_mccloskey@fws.gov>; Nimetz, Derek <DNimetz@dnr.IN.gov>; rscott <rscott@bfsengr.com>; Neal Bennett <NBennett@bfsengr.com>; Thomas, Amber <AThomas2@indot.IN.gov>; Chris Wheatley <CWheatley@bfsengr.com>
Subject: [EXTERNAL] RE: Des 1702993 Project Impact Meeting

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Hannah,

Thank you, here is the list of our concerns we expressed at the meeting.

- Tree clearing and site prep
- Legal status- surveys exact boundaries
  - INDOT ownership
  - DNR ownership
  - Construction Limits
- Timeline of work
- Hydrology
  - Groundwater
  - surface
- Grading and filling due to topography
  - Fill material source?
- Erosion control
- Logistics of construction crews
- Herptile staff and SOPs

From: Hannah Deguch <HBays@bfsengr.com>
Sent: Monday, May 10, 2021 7:30 AM
To: Swinford, Tom <tswinford@dnr.IN.gov>; McCloskey, Elizabeth <elizabeth_mccloskey@fws.gov>; Nimetz, Derek <DNimetz@dnr.IN.gov>; rscott <rscott@bfsengr.com>; Neal Bennett <NBennett@bfsengr.com>; Thomas, Amber <AThomas2@indot.IN.gov>; Chris Wheatley <CWheatley@bfsengr.com>
Subject: RE: Des 1702993 Project Impact Meeting

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Good morning.

Attached are the minutes from the meeting on May 6, 2021. Please reach out with any questions or concerns.

Thank you,

Hannah Deguch
Environmental Scientist

Butler, Fairman & Seufert, Inc.
8450 Westfield Blvd., Suite 300 | Indianapolis, IN 46240-8302 |
p 317-713-4615 | f 317-713-4616

Organization and Project Information

Project ID:	6453
Des. ID:	172993
Project Title:	US 20 Aux. Lanes, 400 ft E of SR 39 to 2.85 mi E of SR 39 (Fail Rd)
Name of Organization:	Butler, Fairman, & Seufter
Requested by:	Elizabet Biggio

Environmental Assessment Report

1. Geological Hazards:
    - High liquefaction potential
2. Mineral Resources:
    - Bedrock Resource: Moderate Potential
    - Sand and Gravel Resource: High Potential
3. Active or abandoned mineral resources extraction sites:
    - Petroleum Exploration Wells

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

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This information was furnished by Indiana Geological Survey
Address: 1001 E. 10th St., Bloomington, IN 47405
Email: IGSEnvir@indiana.edu
Phone: 812 855-7428

Date: August 20, 2021

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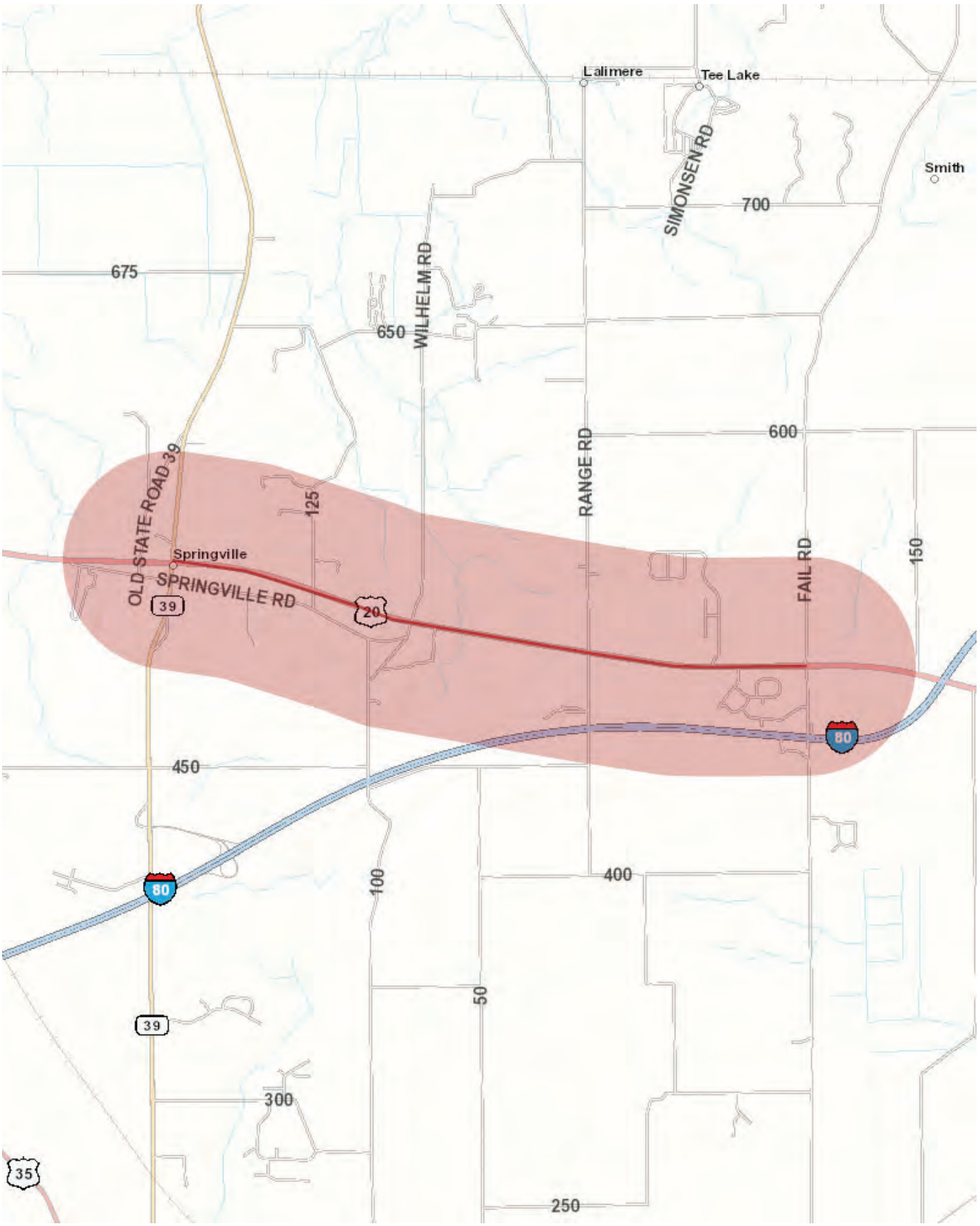

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Metadata:

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

Indiana Department of Transportation
Amber Thomas
315 E. Boyd Blvd.
LaPorte , IN 46350

Butler, Fairman, & Seufert
Elizabet Biggio
8450 Westfield Boulevard
Suite 300
Indianapolis , IN 46240-8302

Date

To Engineers and Consultants Proposing Roadway Construction Projects:

RE: The proposed project consists of the construction of a 16-foot wide two-way left-turn lane through the length of the project area. The project will also include the widening of existing outside shoulders from 2-foot wide paved shoulders to 8-foot paved shoulders, edge line rumble strips, centerline rumble strips, installation of guardrail and underdrains, consolidation of access points around select commercial and residential entrances, and replacement of street signs, if necessary. There are eleven drainage culverts within the project area, of which five will be extended, five will be replaced, and one will be cleared of sediment. US 20 will be milled and overlaid throughout the project area.

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

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

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

WATER AND BIOTIC QUALITY

1. Section 404 of the Clean Water Act requires that you obtain a permit from the U.S. Army Corps of Engineers (USACE) before discharging dredged or fill materials into any wetlands or other waters, such as rivers, lakes, streams, and ditches. Other activities regulated include the relocation, channelization, widening, or other such alteration of a stream, and the mechanical clearing (use of heavy construction equipment) of

wetlands. Thus, as a project owner or sponsor, it is your responsibility to ensure that no wetlands are disturbed without the proper permit. Although you may initially refer to the U.S. Fish and Wildlife Service National Wetland Inventory maps as a means of identifying potential areas of concern, please be mindful that those maps do not depict jurisdictional wetlands regulated by the USACE or the Department of Environmental Management. A valid jurisdictional wetlands determination can only be made by the USACE, using the 1987 Wetland Delineation Manual.

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

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

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

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

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

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

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

- IC 14-29-3 Sand and Gravel Permits Act 312 IAC 6
- IC 14-29-4 Construction of Channels Act No related code

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

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

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

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

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

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

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

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

construction activities are available from the Soil and Water Conservation District (SWCD) offices in each county or from IDEM.

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

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

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

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

AIR QUALITY

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

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

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

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

   Additionally, if construction or demolition is conducted in a wooded area where blackbirds have roosted or abandoned buildings or building sections in which pigeons or bats have roosted for 3-5 years precautionary measures should be taken to avoid an outbreak of histoplasmosis. This disease is caused by the fungus Histoplasma capsulatum, which stems from bird or bat droppings that have accumulated in one area for 3-5 years. The spores from this fungus become airborne when the area is disturbed and can cause infections over an entire community downwind of the site. The area should be wetted down prior to cleanup or demolition of the project site. For more detailed information on histoplasmosis prevention and control, please contact the Acute Disease Control Division of the Indiana State Department of Health at (317) 233-7272.

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

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

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

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

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

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

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

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

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

4. With respect to lead-based paint removal: IDEM encourages all efforts to minimize human exposure to lead-based paint chips and dust. IDEM is particularly concerned that young children exposed to lead can suffer from learning disabilities. Although lead-based paint abatement efforts are not mandatory, any abatement that is conducted within housing built before January 1, 1978 , or a child-occupied facility is required to comply with all lead-based paint work practice standards, licensing and notification requirements. For more information about lead-based paint removal visit: http://www.in.gov/isdh/19131.htm (http://www.in.gov/isdh/19131.htm).

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

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

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

LAND QUALITY

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

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

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

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

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

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

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

FINAL REMARKS

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

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

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

Signature(s) of the Applicant

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

Project Description

The proposed project consists of the construction of a 16-foot wide two-way left-turn lane through the length of the project area. The project will also include the widening of existing outside shoulders from 2-foot wide paved shoulders to 8-foot paved shoulders, edge line rumble strips, centerline rumble strips, installation of guardrail and underdrains, consolidation of access points around select commercial and residential entrances, and replacement of street signs, if necessary. There are eleven drainage culverts within the project area, of which five will be extended, five will be replaced, and one will be cleared of sediment. US 20 will be milled and overlaid throughout the project area.

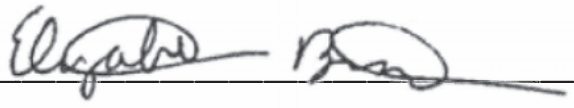
With my signature, I do hereby affirm that I have read the letter from the Indiana Department of Environment that appears directly above. In addition, I understand that in order to complete that project in which I am interested, with a minimum of impact to the environment, I must consider all the issues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

Date: 9/15/2021

Signature of the INDOT
Project Engineer or Other Responsible Agent Amber Thomas

Amber Thomas

Date: 9/15/2021

Signature of the
For Hire Consultant 

Elizabet Biggio

Elizabet Biggio

From: Turnbow, Alisha <ATurnbow@idem.IN.gov>
Sent: Wednesday, August 25, 2021 1:32 PM
To: Elizabet Biggio
Cc: Blazey, Samuel
Subject: RE: WHPA- INDOT Des 1702993- US 20 Aux Lanes, LaPorte County

Hi Elizabet,
The project Des No 1702993 is located in Springhill Mobile Home Court's Wellhead Protection Area. The west edge of the project also boarders the Michigan City Department of Water Works' Source Water Assessment Area.

The contact for Springhill Mobile Home Court is Jacob Pasternac and they can be reached at directcontactmail@yahoo.com and 248-761-6878.

The contact for Michigan City Department of Water Works is Christopher Johnsen and they can be reached at cjohnsen@mcwaterdept.com and 219-880-2328.

Let me know what questions you have.

Sincerely,

Alisha Turnbow
Environmental Manager
Office of Water Quality
Drinking Water Branch, Groundwater Section
(317) 233-9158 • aturnbow@idem.IN.gov

Indiana Department of Environmental Management

IDEM values your feedback.
Please take two minutes and complete this brief survey.

COVID-19 Resources:

- **Indiana State Dept. of Health (ISDH) COVID-19 Call Center:** Call 877-826-0011 (available 8:00 am-5:00 pm daily).
- **Anthem NurseLine:** Call 800-337-4770 or visit the Anthem NurseLine online for a FREE symptom screening. Available to anyone with an Anthem health plan (this includes State of IN employees)
- **Anthem Employee Assistance Program (EAP)**: Available to full-time state employees and their household members regardless of health plan participation. Call 800-223-7723 or visit anthemeap.com (enter State of Indiana) for crisis counseling, help finding child/elder care, legal/financial consultation and much more.

United States Department of the Interior

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

In Reply Refer To: March 14, 2022
Project Code: 2022-0019440
Project Name: US 20, Road Improvement Project with Added Turn Lanes, Des No 1702993

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

To Whom It May Concern:

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

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

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

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

determine if your project will have an adverse effect on listed species and will help lead you through the Section 7 process. For all **wind energy projects** and **projects that include installing towers that use guy wires or are over 200 feet in height**, please contact this field office directly for assistance, even if no federally listed plants, animals or critical habitat are present within your proposed project or may be affected by your proposed project.

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

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

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

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

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

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

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

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. **Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.**

Attachment(s):

- Official Species List
- Migratory Birds
- Wetlands

Official Species List

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

This species list is provided by:

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

Project Summary

Project Code: 2022-0019440
Event Code: None
Project Name: US 20, Road Improvement Project with Added Turn Lanes, Des No 1702993
Project Type: Road/Hwy - Maintenance/Modification
Project Description: INDOT-LaPorte District is planning improvements to US 20 between 400-feet east of SR 39 (CR 300 E) and 2.85 miles east of SR 39 (Fail Road) (Des 1702993). The proposed project includes the construction of a 16-foot wide two-way left-turn lane through the length of the project area, the addition of centerline rumble strips, the consolidation of access points around select commercial and residential entrances, the widening of existing outside shoulders from 2-foot wide paved shoulders to 8-foot paved shoulders, the perpetuation of the edge line rumble strips, and replacement of sheet signs, if necessary. There are eleven small structures within the project area, of which five will be extended, five will be replaced, and one will be cleared of sediment. Approximately 5.71 acres of permanent and 0.83 acre of temporary right-of-way acquisition will be required. The preferred method of traffic maintenance will consist of three phases and will include single lane closures and shifting traffic.

The eleven (11) small structures in the vicinity of the project were inspected on June 18, 2021, and no bats or signs thereof were present. There is suitable summer habitat along the entire project corridor of the proposed project area. The USFWS database check did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. Approximately 11.44 acres of tree removal will be required for this project, of which 10.99 acre is within 100 feet of the existing pavement . 0.45 acre. of trees will be cleared between 100 to 300 feet from the road, requiring and In-Lieu Fee Program fee of $4,210. The dominant tree species are sugar maple, white ash, and slippery elm. Tree clearing will occur outside the active bat season. No permanent lighting exists in the project area and none will be added. Temporary lighting may be required for nighttime work. Construction is anticipated to begin in the Spring of 2024.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@41.681990863947355,-86.71815981598836,14z

Counties: LaPorte County, Indiana

Endangered Species Act Species

There is a total of 4 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. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5949	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

Reptiles

NAME	STATUS
Eastern Massasauga (=rattlesnake) *Sistrurus catenatus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2202	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus*	Candidate

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9743

Critical habitats

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

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

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

---

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

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

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

NAME	BREEDING SEASON
Black-billed Cuckoo *Coccyzus erythropthalmus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10

Probability Of Presence Summary

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

Probability of Presence (■)

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

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

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

Breeding Season (■)

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

Survey Effort (|)

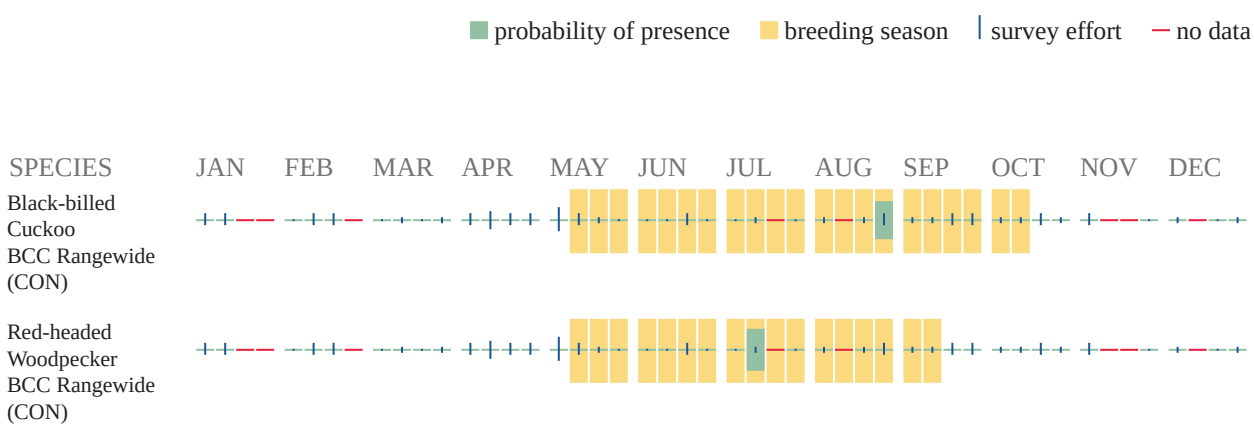
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (–)

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

Survey Timeframe

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



Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

Wetlands

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

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

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

LAKE

- L2UBHx

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1C

Elizabet Biggio

From: Nimetz, Derek <DNimetz@dnr.IN.gov>
Sent: Monday, September 27, 2021 3:03 PM
To: Swinford, Tom; Elizabet Biggio
Cc: McCloskey, Elizabeth
Subject: RE: [EXTERNAL] RE: Des 1702993 US 20 Project Impact Meeting

Hello Elizabet,

Thank you for the e-mail and information. I have reviewed the Des 1702993 - Galena Marsh Writeup document. I agree with Mr. Tom Swinford's comments below concerning the Eastern Massasauga Rattlesnake population.

Furthermore, it appears that the bullet line item "Unique Special Provisions (USPs)" is a catch all and is not very detailed. During the June 17, 2021 field meeting, the following items were discussed.

- Erosion is occurring on the INDOT property and being deposited within Springfield Fen Nature Preserve. Erosion fencing should be installed prior to the clearing of the of the project area on INDOT property to keep erosion from being deposited on the nature preserve. This project should reduce the potential of erosion in the future.
- The Indiana Department of Natural Resources, Division of Nature Preserves would like to review any list of plant species to be used to revegetate the project area. Springfield Fen Nature Preserve is a high quality natural area with many conservative plant and animal species. We do not want non-native vegetation seeded adjacent to the nature preserve if it has the potential to become invasive. Staff from the Division of Nature Preserves has worked to control invasive plants at this property for many years and we want to minimize the potential of additional invasive species.
- As a safety concern to property visitors, hunting and trapping occurs at Springfield Fen Nature Preserve.

I look forward to working with you on this project. Please let me know if you have any questions or would like to meet and discuss the project.

Sincerely,

Derek Nimetz
Coastal Ecologist
Indiana Department of Natural Resources
Division of Nature Preserves
240 East 750 North
Valparaiso, IN 46383
dnimetz@dnr.IN.gov
219-928-3997
www.dnr.IN.gov

** Please let us know about the quality of our service by taking this brief* customer survey.

From: Swinford, Tom <tswinford@dnr.IN.gov>
Sent: Monday, September 27, 2021 1:02 PM
To: Elizabet Biggio <EBiggio@bfsengr.com>; Nimetz, Derek <DNimetz@dnr.IN.gov>
Cc: McCloskey, Elizabeth <elizabeth_mccloskey@fws.gov>
Subject: RE: [EXTERNAL] RE: Des 1702993 US 20 Project Impact Meeting

Hello Elizabet,

Thank you, this looks very thorough and accurate. The one item missing is threatened and endangered reptile best management practices. The site has an apparently viable population of the Federal ESA Threatened Species, Eastern Massasauga Rattlesnake. We want to be certain that they are protected from short-term, as well as long-term, impacts. Derek has been our point man for Nature Preserves and I will rely upon him to review for details.

Thanks,
Tom

From: Elizabet Biggio <EBiggio@bfsengr.com>
Sent: Monday, September 27, 2021 12:31 PM
To: Swinford, Tom <tswinford@dnr.IN.gov>; Nimetz, Derek <DNimetz@dnr.IN.gov>
Cc: McCloskey, Elizabeth <elizabeth_mccloskey@fws.gov>
Subject: RE: [EXTERNAL] RE: Des 1702993 US 20 Project Impact Meeting

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Good afternoon, all,

I have taken over the NEPA document for this project- US 20 Aux. Lanes, 400 ft E of SR 39 to 2.85 mi E of SR 39 (Fail Rd) near the Galena Marsh. Since I was not present for any of the discussions concerning this property, I thought it would be prudent to check with you to make sure I have my facts straight. I have drafted the attached based on the documentation we have. If you could take a look and let me know if I have anything wrong or if there is anything missing, it would be much appreciated. Also, if there are additional comments/concerns, feel free to let me know at this time as well.

Thank you for your help.

Elizabet Biggio
Architectural Historian

Butler, Fairman & Seufert, Inc.
8450 Westfield Blvd., Suite 300 | Indianapolis, IN 46240-8302 |
p 317-713-4615 | f 317-713-4616
EBiggio@bfsengr.com | www.BFSEngr.com

Elizabet Biggio

From: Elizabet Biggio
Sent: Monday, October 4, 2021 4:51 PM
To: 'McCloskey, Elizabeth'
Cc: tom swinford; Derek Nimetz; Murray, Bridgette M
Subject: RE: [EXTERNAL] RE: Des 1702993 US 20 Project Impact Meeting

Categories: Filed by Newforma

Elizabeth,

Thank you for the quick response. I apologize about the Waters Report. The report was submitted to INDOT in July, but it has not yet been reviewed.

We do not have a new set of full plans set to go, but the designer will get working plans which show the changes for use tomorrow. As far as the pipe goes, the hydraulics calculations showed the velocity of water existing the pipe is causing erosion. The riprap is to protect against that erosion. If it turns out the riprap is not necessary, it will be dropped. I am also working on a new draft of the commitments for Tom and Derek.

Thanks again,

Elizabet Biggio
Architectural Historian

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p 317-713-4615 | f 317-713-4616
EBiggio@bfsengr.com | www.BFSEngr.com

From: McCloskey, Elizabeth <elizabeth_mccloskey@fws.gov>
Sent: Monday, October 4, 2021 3:54 PM
To: Elizabet Biggio <EBiggio@bfsengr.com>
Cc: tom swinford <tswinford@dnr.in.gov>; Derek Nimetz <dnimetz@dnr.in.gov>; Murray, Bridgette M <BMurray@indot.IN.gov>
Subject: Re: [EXTERNAL] RE: Des 1702993 US 20 Project Impact Meeting

Good afternoon Elizabet, regarding your email this morning resending the April 9th early coordination letter on this project, it is my understanding that the project has changed since that original letter due to the Nature Preserve, with the May, and maybe more recent, information superseding the April 9th letter, especially with the construction being shifted to the south in that section. Stage 2 Plans were provided on May 6th and a meeting was held later that day, which I could not attend due to illness. Have those plans been superseded by more recent plans because of that meeting? It would seem that they should have been, especially the construction limits and the work only on the south side of the highway. Why is riprap proposed at the outlet of the culvert that discharges onto the Fen property (your note of September 27th)? If it is still proposed, how will the site be reached in order to place the riprap? There are invasive shrub honeysuckles along the INDOT ROW in that area and some are invading the Fen property down the slope near the pipe outlet, so that is a concern along with the access down that very steep slope and the likelihood of erosion.

The USFWS has not been provided the Waters of the US report for the project, which was supposed to have been sent at the end of July.

The USFWS will not provide a letter about the massasauga until we receive the BMP's requested by Tom Swinford and Derek Nimetz.

Thank you.

Elizabeth McCloskey
U.S. Fish and Wildlife Service
Northern Indiana Suboffice
Ecological Services
Chesterton, Indiana

From: Elizabet Biggio
Sent: Monday, October 4, 2021 11:26 AM
To: McCloskey, Elizabeth
Cc: 'Murray, Bridgette M'
Subject: INDOT Des No 1702993- US 20 TWLTL, LaPorte Co.
Attachments: Des 1702993 Request for Coordination_2021-04-09.pdf; E-USFWS-IDNR_Galena Marsh email chain_2021-06-30.pdf; ENV_EarlyCoodination_Des1702993_ForRoadwayServices.pdf

Categories: Filed by Newforma

Ms. McCloskey,

I am writing in regard to one of INDOT's two-way-left-turn-lane projects on US 20 in LaPorte County. Early coordination was sent by email on April 9, 2021. We did not receive a response. This project is adjacent to the Galena Marsh/Springfield Fen Nature Preserve, where the Eastern Massasauga has been documented. You might be familiar with this situation from the ongoing coordination with IDNR Nature Preserves.

This project received an LAA for the Indiana Bat and NLEB. The Bloomington office would like a determination on the Eastern Massasauga. Would it be possible to have one done?

Thank you for your help.

Elizabet Biggio
Architectural Historian

Butler, Fairman & Seufert, Inc.
8450 Westfield Blvd., Suite 300 | Indianapolis, IN 46240-8302 |
p 317-713-4615 | f 317-713-4616
EBiggio@bfsengr.com | www.BFSEngr.com

From: McCloskey, Elizabeth <elizabeth_mccloskey@fws.gov>
Sent: Thursday, November 4, 2021 2:50 PM
To: Elizabet Biggio <EBiggio@bfsengr.com>; tom swinford <tswinford@dnr.in.gov>; Nimetz, Derek <DNimetz@dnr.IN.gov>
Cc: Murray, Bridgette M <BMurray@indot.IN.gov>
Subject: Re: [EXTERNAL] RE: Des 1702993 US 20 Project Impact Meeting-Galena Marsh

Good afternoon Elizabet, I am working on the FWS letter on this project and need additional information.

The document you provided on October 5 (a memo from which the USP will be drafted?) states that the work past Springfield Fen State Nature Preserve will be done entirely on the south side of US 20 except for riprap at the outlet of Culvert 020-046-49.65. However, the INDOT Road Plans you provided on October 6 show Construction Limits well to the north of US 20, right up to the DNP property line in several locations.

Also, the south ends of the 2 large culverts that outlet in the hill above the Fen just west of the DNP property line into Thermco/Woodsedge Company Partnership land are labeled Str. 16 and Str. 17; Str. 16 is also labeled as CV-020-046-49.65 but Str. 17 has no other designation. However, the outlets of both structures, which do not have Str. labels, are shown on the Plans to receive Class 2 riprap over geotextiles; the Str. 16 outlet shows 28 tons and the Str. 17 outlet shows 11 tons. Further, the Stage 2 Plans provided on May 6, 2021 show a Str. 17 at the location that is the outlet of Str. 16 on the October 6 Plans; no other culvert is shown in that area, but further east is a Str. 18.

I am personally aware of one culvert in what I assumed is the area where Str. 16 and 17 are located, and based upon the location I assumed it it Str. 17; I did not think I was far enough east for it to be Str. 18. This past summer I noted that the culvert I know about was dry after a heavy rain. The USP states that the DNP Ecologist who manages Springfield Fen stated that Culvert 020-046-49.65 is dry even after heavy rains. So I wonder if we are all talking about the same culvert. All the agencies involved with this project need to be sure we all know exactly where the various structures are located and what is going to be done where.

Also, both the May 6th and the October 6th Plan shows "Ditch (Conc)" on the north side of US 20 just west of Str. 17 (May)/outlet of Str. 16 (October), west and east of Station 300+00. This seems to indicate that a new ditch would be constructed through the hillside in that area; no further information is provided about this ditch and no riprap is indicated at the end of the ditch, even though it would surely affect flows downhill to the Fen.

It would be very helpful if you could provide aerial photographs of the project area with the work boundaries and culverts clearly marked so we can more clearly determine where these sites are on the ground (the line drawings in the October 6th Plan are not adequate to provide this). The aerials should extend far enough to the north to show the edge of upland and wetland in order for us to orient the locations. Maybe we need another site visit to verify what is where.

The October 5th document is rather confusing concerning the property line on DNP land. The first paragraph states: "The property boundary runs between approximately 62 feet and 133 feet north of US 20 from approximately 515 feet east of N. CR 125 West to N. Wilhelm Road." However, the DNP west property line is about 1400 feet east of N. CR 125 West, or about 1200 feet west of N. Wilhelm Road. It seems like the document is talking about the entire north INDOT property line between the 2 County Roads and not the width of the ROW past the DNP property. But since the rest of that first paragraph is entirely about Springfield Fen, that description of the ROW is confusing. Please clarify the description by indicating how much of the north line between the 2 County Roads is adjacent to the DNP property, and its width, and how much is adjacent to Thermco/Woodsedge Company Partnership land, and its width.

Please provide a copy of the actual Unique Special Provisions document stating the commitments that will be part of the construction contract.

Thank you.

Elizabeth McCloskey
U.S. Fish and Wildlife Service
Northern Indiana Suboffice
Ecological Services
Chesterton, Indiana

Elizabet Biggio

From: Royer, Brian <BRoyer@dnr.IN.gov>
Sent: Tuesday, November 23, 2021 1:53 PM
To: Elizabet Biggio
Subject: RE: INDOT Des. 1702993- US 20 Aux. Lanes, 400 ft E of SR 39 to 2.85 mi E of SR 39 (Fail Rd), LaPorte Co.

There are no known oil and gas related issues that will be encountered during this project.

Thanks,

Brian Royer
Orphan Well Manager
Indiana Department of Natural Resources
Division of Oil & Gas
Cell- 317-417-6556
www.dnr.IN.gov

** Please let us know about the quality of our service by taking this brief* customer survey.

From: Elizabet Biggio <EBiggio@bfsengr.com>
Sent: Wednesday, October 20, 2021 4:12 PM
To: Royer, Brian <BRoyer@dnr.IN.gov>
Subject: INDOT Des. 1702993- US 20 Aux. Lanes, 400 ft E of SR 39 to 2.85 mi E of SR 39 (Fail Rd), LaPorte Co.

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Mr. Royer,

The IGWS report for the above-referenced INDOT project indicated there are petroleum exploration wells present near the project area. Are you the correct person to coordinate with concerning the possibility for impacts? Project information is attached.

Thank you for your help.

Elizabet Biggio
Architectural Historian

Butler, Fairman & Seufert, Inc.
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p 317-713-4615 | f 317-713-4616
EBiggio@bfsengr.com | www.BFSEngr.com

From: Elizabet Biggio
Sent: Friday, November 12, 2021 12:30 PM
To: 'McCloskey, Elizabeth' <elizabeth_mccloskey@fws.gov>; 'tom swinford' <tswinford@dnr.in.gov>; 'Nimetz, Derek' <DNimetz@dnr.IN.gov>
Cc: 'Murray, Bridgette M' <BMurray@indot.IN.gov>; Jacob Goodman <jgoodman@bfsengr.com>
Subject: RE: [EXTERNAL] RE: Des 1702993 US 20 Project Impact Meeting-Galena Marsh

Apologies- correction on the attached photos, I had them labeled wrong.

Also, as additional clarification:
CV 020-046-49.65 (formerly Strs 16 and 17) is the skewed box culvert at Sta. 300-302
CLV 020-046-49.69 (Str. 17) is he buried north-south pipe at Sta 302+54
The 18-inch CMP at about Sta. 307 was formerly Str. 18 but will no longer have any work done to it as a part of this project.

Thank you,

Elizabet Biggio
Architectural Historian

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8450 Westfield Blvd., Suite 300 | Indianapolis, IN 46240-8302 |
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EBiggio@bfsengr.com | www.BFSEngr.com

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From: Elizabet Biggio
Sent: Friday, November 12, 2021 11:54 AM
To: 'McCloskey, Elizabeth' <elizabeth_mccloskey@fws.gov>; tom swinford <tswinford@dnr.in.gov>; Nimetz, Derek <DNimetz@dnr.IN.gov>
Cc: Murray, Bridgette M <BMurray@indot.IN.gov>; Jacob Goodman <jgoodman@bfsengr.com>
Subject: RE: [EXTERNAL] RE: Des 1702993 US 20 Project Impact Meeting-Galena Marsh

Elizabeth,

We have assembled the attached material to help answer your questions.

- The document you provided on October 5 (a memo from which the USP will be drafted?) states that the work past Springfield Fen State Nature Preserve will be done entirely on the south side of US 20 except for riprap at the outlet of Culvert 020-046-49.65. However, the INDOT Road Plans you provided on October 6 show Construction Limits well to the north of US 20, right up to the DNP property line in several locations.
    - It appears the construction limits had not been adjusted since it was decided not to fix sight distance limitations at Wilhelm Rd. in order to reduce impacts. The attached plans are more consistent with the limited work planned for the north side of US 20.

- Also, the south ends of the 2 large culverts that outlet in the hill above the Fen just west of the DNP property line into Thermco/Woodsedge Company Partnership land are labeled Str. 16 and Str. 17; Str. 16 is also labeled as CV-020-046-49.65 but Str. 17 has no other designation. However, the outlets of both structures, which do not have Str. labels, are shown on the Plans to receive Class 2 riprap over geotextiles; the Str. 16 outlet shows 28 tons and the Str. 17 outlet shows 11 tons. Further, the Stage 2 Plans provided on May 6, 2021 show a Str. 17 at the location that is the outlet of Str. 16 on the October 6 Plans; no other culvert is shown in that area, but further east is a Str. 18.
    - Str 16/ CV-020-046-49.65 had riprap installation on both sides in the Stage 2 plans and had separate designations on each side. Riprap was subsequently removed from the south side.
    - Str 17 is a burred pipe whose location was discovered subsequently to the Stage 2 plans. Since Str 17 was now open, it was redesignated to this pipe.

- I am personally aware of one culvert in what I assumed is the area where Str. 16 and 17 are located, and based upon the location I assumed it it Str. 17; I did not think I was far enough east for it to be Str. 18. This past summer I noted that the culvert I know about was dry after a heavy rain. The USP states that the DNP Ecologist who manages Springfield Fen stated that Culvert 020-046-49.65 is dry even after heavy rains. So I wonder if we are all talking about the same culvert. All the agencies involved with this project need to be sure we all know exactly where the various structures are located and what is going to be done where.
    - Str 18 is also largely silted in on the north side.
    - Photos of all three structures are attached.

- Also, both the May 6th and the October 6th Plan shows "Ditch (Conc)" on the north side of US 20 just west of Str. 17 (May)/outlet of Str. 16 (October), west and east of Station 300+00. This seems to indicate that a new ditch would be constructed through the hillside in that area; no further information is provided about this ditch and no riprap is indicated at the end of the ditch, even though it would surely affect flows downhill to the Fen.
    - The concrete ditch is an existing structure within the existing ROW. It will not be altered by this project.

- It would be very helpful if you could provide aerial photographs of the project area with the work boundaries and culverts clearly marked so we can more clearly determine where these sites are on the ground (the line drawings in the October 6th Plan are not adequate to provide this). The aerials should extend far enough to the north to show the edge of upland and wetland in order for us to orient the locations. Maybe we need another site visit to verify what is where.
    - These are being updated to match the construction limits and will be provided next week. In the meantime, we wanted to try to keep everything moving along,.

- The October 5th document is rather confusing concerning the property line on DNP land. The first paragraph states: "The property boundary runs between approximately 62 feet and 133 feet north of US 20 from approximately 515 feet east of N. CR 125 West to N. Wilhelm Road." However, the DNP west property line is about 1400 feet east of N. CR 125 West, or about 1200 feet west of N. Wilhelm Road. It seems like the document is talking about the entire north INDOT property line between the 2 County Roads and not the width of the ROW past the DNP property. But since the rest of that first paragraph is entirely about Springfield Fen, that description of the ROW is confusing. Please clarify the description by indicating how much of the north line between the 2 County Roads is adjacent to the DNP property, and its width, and how much is adjacent to Thermco/Woodsedge Company Partnership land, and its width.
    - The ROW description was updated for clarification.

- Please provide a copy of the actual Unique Special Provisions document stating the commitments that will be part of the construction contract.
    - Attached (3)

Please let me know if you still have outstanding concerns.

Thank you,

Elizabet Biggio
Architectural Historian

Butler, Fairman & Seufert, Inc.
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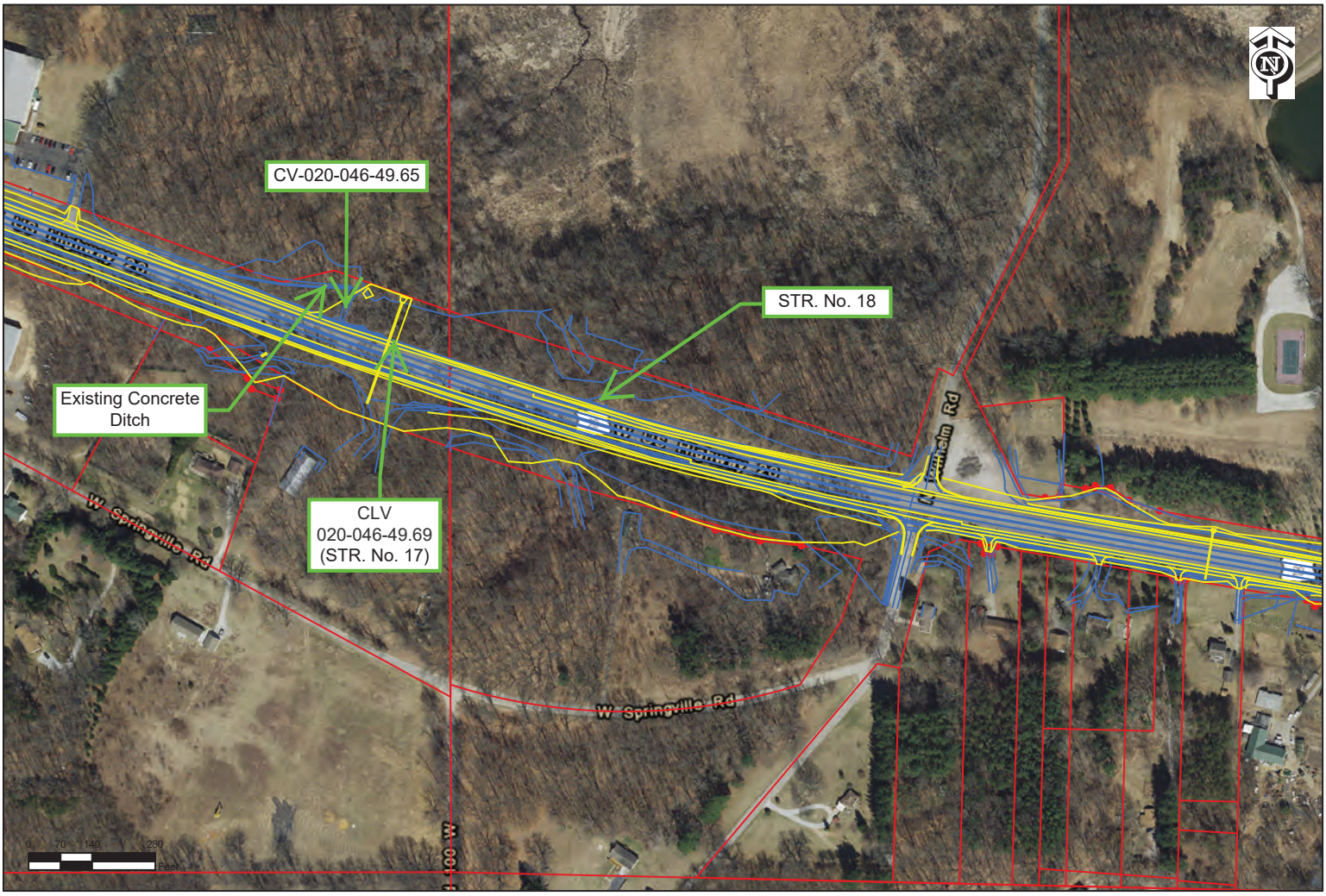

BF&S CIVIL ENGINEERS

Aerial Map of Project Construction Limits, Existing Topography, and Property Limits of the Galena Marsh

US 20 Auxiliary Lanes, Two Way Left Turn Lanes
LaPorte County, Indiana
Des. No. 1702993

Proposed ROW
Existing Topography
Property Limits

Map Source: Indiana Geological Survey (IGS), IndianaMap, 20## ArcGIS Online (ESRI) World Imagery.

South side of CV 020-046-49.65 (Str 16)

North side of CV 020-046-49.65 (Str 16)

CLV 020-046-49.69 (Str 17)

Elizabet Biggio

From: Swinford, Tom <tswinford@dnr.IN.gov>
Sent: Tuesday, November 30, 2021 8:52 AM
To: Elizabet Biggio; McCloskey, Elizabeth; Nimetz, Derek
Cc: Murray, Bridgette M; Jacob Goodman
Subject: RE: [EXTERNAL] RE: Des 1702993 US 20 Project Impact Meeting-Galena Marsh

Elizabet,

Thank you. I have nothing new at this time to provide updates on.

Tom

Thomas O. Swinford
Asst Director
DNR Nature Preserves
317-697-5508 REMOTE WORK
317-233-4849

dnr.IN.gov
Next Level Survey Link (https://www.surveymonkey.com/r/FLNDLW8)

United States Department of the Interior
Fish and Wildlife Service

Indiana Field Office (ES)
620 South Walker Street
Bloomington, IN 47403-2121
Phone: (812) 334-4261 Fax: (812) 334-4273

November 30, 2021

Ms. Elizabet Biggio
Butler, Fairman & Seufert, Inc.
8450 Westfield Boulevard, Suite 300
Indianapolis, Indiana 46240-8302

Project No.: Des. 1702993
Project: US 20 Center Left Turn Lane SR 39 to Fail Road
Location: Springville, LaPorte County

Dear Ms. Biggio:

This responds to the letter of April 9, 2021 and subsequent materials concerning the aforementioned project.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (l6 U.S.C. 661 et. seq.) and are consistent with the intent of the National Environmental Policy Act of l969, the Endangered Species Act of l973, and the U. S. Fish and Wildlife Service's Mitigation Policy.

The proposed project consists of the widening of US 20 to accommodate a 2-way center left turn lane for the approximate 4.8 miles between SR 39 and Fail Road. The existing US 20 is 4 lanes without a center median, which creates safety issues for vehicles making left turns; these vehicles must sit in the left through lane while waiting for on-coming traffic to clear. Wider shoulders and drainage improvements would also be provided. Some private driveway entrances from residential and commercial properties would be eliminated, although no information was provided to indicate where these are located and what alternative access would be provided.

Originally it was planned to widen the highway equally both to the north and the south throughout the length of the project. However, Springfield Fen State Nature Preserve is located in the northwest quadrant of US 20 and Wilhelm Road, about 1 mile east of SR 39. The shared boundary of US 20 and Springfield Fen is a wooded hillside up to 60 feet higher than the Fen; the property line is uphill from the elevation of US 20, but it drops steeply below US 20 just west of the Fen's western boundary. A large spring runs year round into the Fen at the base of the hillside, and several seeps are present at various sites higher up the hillside, including at the approximate elevation of US 20. Therefore, widening of US 20 to the north could adversely affect the natural hydrology of the area and the springs and seeps that feed ground water to the Fen.

Springfield Fen encompasses 45 acres at the south end of the Springfield Fen Nature Preserve/Galena Marsh Wetland Conservation Area wetland/upland complex, with Galena Marsh consisting of 120 acres. Over 100 acres of the western and northern portions of the Fen/Marsh complex remain in private ownership but contain the same wetland/upland habitats as the protected lands. East of Wilhelm Road, Seven Springs Legacy LLC consists of similar habitats, including springs and seeps, with rivulets and the Galena River flowing westward into either the Fen or the Marsh. Therefore, these adjacent private lands on the north side of US 20 and their hydrology are important to the overall conservation of this very high quality wetland complex.

In the section adjacent to Springfield Fen, the Indiana Department of Transportation (INDOT) has committed to conduct the highway widening along the south side of US 20, with only incidental work on the north side. INDOT already owns considerable right-of-way to the south, but some additional permanent right-of-way will be necessary for about 1,000 feet east from CR North 125 West. From that point east to Wilhelm Road the existing southern right-of-way extends approximately 150 from the highway centerline, so only a small amount of temporary right-of-way will be needed for grading at the edge of the permanent right-of-way.

On the north side of US 20, the construction limits along Springfield Fen would essentially be at the edge of the new 8-foot paved west-bound shoulder. Just west of the Fen western boundary, 2 drainage pipes that extend under US 20 from south to north (designated Structures 16 and 17) will receive riprap at their outlets. These outlets are within the existing INDOT north right-of-way, and the land to the north, which includes part of the southwestern corner of the Fen, is privately owned. The designated Nature Preserve would not be directly impacted by the placement of this riprap, but any discharges from these pipes would ultimately end up within the Preserve. These pipes are within the only valley area directly along the north side of US 20 in the vicinity of Springfield Fen. Although the pipes have not been observed to have discharges, sheet runoff from the US 20 pavement has been known to occur, with erosion down the steep slope to the Fen. Therefore, INDOT may need to address this issue beyond the commitment to install erosion control fencing prior to construction, such as considering an elevated curb along the north side of the pavement across the length of this low area, generally between Stations 302+00 and 304+00, in order to redirect the sheet flow.

In addition to widening US 20 to the south, INDOT has committed to other protective measures to ensure that Springfield Fen is not adversely affected by the proposed project. These include the previously mentioned erosion control fencing and utilizing a native seed mix to revegetate disturbed areas within 150 feet of the Nature Preserve. The tree clearing plan requires that any trees cut down within 150 feet of the Nature Preserve will be hand cut and removed from the site rather than felled and left in place. The Division of Nature Preserves will be informed of the species and sizes of the trees that are removed. Tree clearing will occur during the time period when Indiana and/or Federal listed bat species would not be present. Reptile Avoidance and Minimization Measures will be incorporated into the project in order to protect Indiana and/or Federal listed species, including eastern massasauga and eastern box turtle. An entrenched silt fence will be installed along the US 20/Springfield Fen boundary to entirely separate the Fen from the work area and exclude these and other species, such as amphibians and small mammals, from the construction area. This fence will be inspected at least weekly by qualified personnel. Erosion control blankets that are safe for snakes and other animals (not containing net-like mesh fabrics) will be utilized. In addition, contractors will be briefed about the presence of the Nature Preserve and the protected species that are found there, including protocols for any encounters with reptiles or other important species.

ENDANGERED SPECIES

The proposed project is within the range of the Federally endangered Indiana bat (Myotis sodalis) and the threatened northern long-eared bat (Myotis septentrionalis) and eastern massasauga rattlesnake (Sistrurus catenatus). Project impacts on the 2 bat species will be evaluated utilizing the Range-wide Programmatic Section 7 Informal Consultation process. Eastern massasauga are known to be present at Springfield Fen Nature Preserve.

We believe that the Reptile Avoidance and Minimization Measures are sufficient to protect the eastern massasauga, although the protective fence will also need to separate the fen portion of the Thermco Instrument Corporation property from the highway construction area since the snakes and turtles could be on that property as well. The herpetologist may recommend additional measures, depending upon specific conditions during construction, so the Measures need to be flexible enough to address changed circumstances.

With the exclusion fencing separating both the State and private portions of the Fen from the construction area and the other provisions of the Reptile Avoidance and Minimization Measures in place, plus the flexibility for any additional measures if needed, we concur that the project will be sufficiently protective of the threatened eastern massasauga.

This precludes the need for further consultation on this project for the eastern massasauga as required under Section 7 of the Endangered Species Act of l973, as amended. However, should new information arise pertaining to project plans or a revised species list be published, it will be necessary for the Federal agency to reinitiate consultation.

We appreciate the opportunity to comment on this proposed project. Thank you for all the coordination on this project; we look forward to continued coordination as needed. For further discussion, please contact Elizabeth McCloskey at elizabeth_mccloskey@fws.gov.

Sincerely yours,

/s/ *Elizabeth S. McCloskey*

for Scott E. Pruitt
Supervisor

Sent via email November 30, 2021; no hard copy to follow.

cc: Tom Swinford, IDNR Division of Nature Preserves, Indianapolis, IN
Derek Nimetz, IDNR Division of Nature Preserves, Chesterton, IN

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Indiana Ecological Services Field Office
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Phone: (812) 334-4261 Fax: (812) 334-4273
http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html

In Reply Refer To: March 18, 2022
Project code: 2022-0019440
Project Name: US 20, Road Improvement Project with Added Turn Lanes, Des No 1702993

Subject: Consistency letter for the 'US 20, Road Improvement Project with Added Turn Lanes, Des No 1702993' project under the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

To whom it may concern:

The U.S. Fish and Wildlife Service (Service) has received your request dated March 18, 2022 to verify that the **US 20, Road Improvement Project with Added Turn Lanes, Des No 1702993** (Proposed Action) may rely on 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 (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, and is likely to adversely affect the endangered Indiana bat (*Myotis sodalis*) and/or the threatened Northern long-eared bat (*Myotis septentrionalis*). Consultation with the Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) is required.

This "may affect - likely to adversely affect" determination becomes effective when the lead Federal action agency or designated non-federal representative requests the Service rely on the PBO to satisfy the agency's consultation requirements for this project. Please provide this consistency letter to the lead Federal action agency or its designated non-federal representative for review, and as the agency deems appropriate, transmit to this Service Office for verification that the project is consistent with the PBO.

This Service Office will respond by letter to the requesting Federal action agency or designated non-federal representative within 30 calendar days after receiving request for verification to:

- verify that the Proposed Action is consistent with the scope of actions covered under the PBO;
- verify that all applicable avoidance, minimization, and compensation measures are included in the action proposal;
- identify any action-specific monitoring and reporting requirements, consistent with the monitoring and reporting requirements of the PBO, and
- identify anticipated incidental take.

ESA Section 7 compliance for this Proposed Action is not complete until the Federal action agency or its designated non-federal representative receives a verification letter from 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.

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

If the Proposed Action may affect any other federally-listed or proposed species and/or 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 advise the lead Federal action agency accordingly.

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

- Eastern Massasauga (=rattlesnake) *Sistrurus catenatus* Threatened
- Monarch Butterfly *Danaus plexippus* Candidate

Project Description

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

Name

US 20, Road Improvement Project with Added Turn Lanes, Des No 1702993

Description

INDOT-LaPorte District is planning improvements to US 20 between 400-feet east of SR 39 (CR 300 E) and 2.85 miles east of SR 39 (Fail Road) (Des 1702993). The proposed project includes the construction of a 16-foot wide two-way left-turn lane through the length of the project area, the addition of centerline rumble strips, the consolidation of access points around select commercial and residential entrances, the widening of existing outside shoulders from 2-foot wide paved shoulders to 8-foot paved shoulders, the perpetuation of the edge line rumble strips, and replacement of sheet signs, if necessary. There are eleven small structures within the project area, of which five will be extended, five will be replaced, and one will be cleared of sediment. Approximately 5.71 acres of permanent and 0.83 acre of temporary right-of-way acquisition will be required. The preferred method of traffic maintenance will consist of three phases and will include single lane closures and shifting traffic.

The eleven (11) small structures in the vicinity of the project were inspected on June 18, 2021, and no bats or signs thereof were present. There is suitable summer habitat along the entire project corridor of the proposed project area. The USFWS database check did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. Approximately 11.44 acres of tree removal will be required for this project, of which 10.99 acre is within 100 feet of the existing pavement . 0.45 acre. of trees will be cleared between 100 to 300 feet from the road, requiring and In-Lieu Fee Program fee of $7366.28. The dominant tree species are sugar maple, white ash, and slippery elm. Tree clearing will occur outside the active bat season. No permanent lighting exists in the project area and none will be added. Temporary lighting may be required for nighttime work. Construction is anticipated to begin in the Spring of 2024.

Determination Key Result

Based on your answers provided, this project is 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 conclusion and Incidental Take Statement 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?

    Yes

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

    - *Des190293_Culvert Inspection Forms.pdf https://ipac.ecosphere.fws.gov/project/VKD7VV5OWBFE3HC3I26WK3ZPNY/projectDocuments/104312634*

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?

    Yes

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

    Yes

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

    No

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

    No

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

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

    Yes

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

    No

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

    Automatically answered

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

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

    Automatically answered

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

38. Is the habitat removal portion of this project consistent with a Likely to Adversely Affect determination in this key?

    Automatically answered

    Yes, because the tree removal that occurs outside the Indiana bat's active season is 100-300 feet from the existing road/rail surface, and is not in documented roosting/ foraging habitat or travel corridors.

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

    Automatically answered

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

40. Is the habitat removal portion of this project consistent with a Likely to Adversely Affect determination in this key?

    Automatically answered

    Yes, because the tree removal that occurs outside the NLEB's active season is 100-300 feet from the existing road/rail surface, and is not in documented roosting/foraging habitat or travel corridors.

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

Yes

46. For Indiana bat, if applicable, compensatory mitigation measures are required to offset adverse effects on the species (see Section 2.10 of the BA). Please select the mechanism in which compensatory mitigation will be implemented:

1. Range-wide In Lieu Fee Program, The Conservation Fund

Project Questionnaire

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

   No

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

   Yes

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.

   11.44

4. How many acres[1] of trees are proposed for removal between 100-300 feet of the existing road/rail surface?

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

   0.45

5. **Please verify:**
   All tree removal will occur greater than 0.5 mile from any hibernaculum.

   Yes, I verify that all tree removal will occur greater than 0.5 miles from any hibernaculum.

6. Is the project location 0-100 feet from the edge of existing road/rail surface?

   No

7. Is the project location 100-300 feet from the edge of existing road/rail surface?

   Yes

8. **Please verify:**
   No documented Indiana bat roosts or surrounding summer habitat within 0.25 mile of documented roosts will be impacted between May 1 and July 31.

   Yes, I verify that no documented Indiana bat roosts or surrounding summer habitat within 0.25 mile of documented roosts will be impacted during this period.

9. **Please verify:**
   No documented NLEB roosts or surrounding summer habitat within 150 feet of documented roosts will be impacted between June 1 and July 31.

   Yes, I verify that no documented NLEB roosts or surrounding summer habitat within 150 feet of documented roosts will be impacted during this period.

10. Please describe the proposed bridge work:

    Five culverts will be replaced, four will be replaced with larger culverts, one will be replaced at the same size, and one will be cleared of sediment

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

    Spring 2024

12. Please enter the date of the bridge assessment:

    June 18, 2021

13. You have indicated that the following Avoidance and Minimization Measures (AMMs) will be implemented as part of the proposed project:
    - *Tree Removal AMM 3*
    - *General AMM 1*
    - *Tree Removal AMM 1*
    - *Lighting AMM 1*

Avoidance And Minimization Measures (AMMs)

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

TREE REMOVAL AMM 3

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

GENERAL AMM 1

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

TREE REMOVAL AMM 1

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

LIGHTING AMM 1

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

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

This key was last updated in IPaC on February 24, 2022. Keys are subject to periodic revision.

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

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

CLV-56660

Bridge/Structure Bat Assessment Form

Date & Time of Assessment: 6/18/2021	DOT Project Number: 1702993	Route/Facility Carried: US 20	County: LaPorte
Federal Structure ID: Culv 1	Structure Coordinates (latitude and longitude): 41.685021 -86.731227	Structure Height (approximate): 3' x 2'	Structure Length: 85

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:	

Culvert Material

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

Creosote Evidence

- ○ Yes ○ No
- ○ Unknown

Notes:

Crossings Traversed (check all that apply)

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

Surrounding Habitat (check all that apply)

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

Signature:

CLV-56661

Bridge/Structure Bat Assessment Form

Date & Time of Assessment: 6/18/2021	DOT Project Number: 1702993	Route/Facility Carried: US 20	County: LaPorte
Federal Structure ID: Culv 2	Structure Coordinates (latitude and longitude): 41.684348 -86.727398	Structure Height (approximate): 24"	Structure Length: 58'

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: Hannah Degush

Signature: Hannah Degush

CLV-56662

Bridge/Structure Bat Assessment Form

Date & Time of Assessment	DOT Project Number	Route/Facility Carried	County
6/18/2021	1702993	US 20	LaPorte
Federal Structure ID	**Structure Coordinates (latitude and longitude)**	**Structure Height (approximate)**	**Structure Length**
CULV 3	41.683981, -86.726036	15"	88'

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

Surrounding Habitat (check all that apply)

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

Signature: Hannah Deguch

CLV-56663

Bridge/Structure Bat Assessment Form

Date & Time of Assessment: 6/18/21	DOT Project Number: 1702993	Route/Facility Carried: US 20	County: LaPorte
Federal Structure ID: Culv 4	Structure Coordinates (latitude and longitude): 41.6083473 -86.724024	Structure Height (approximate): 15'	Structure Length: ~108.9'

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

Surrounding Habitat (check all that apply)

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

Signature: Hannah Deguch

CV 020-046-49.65

Bridge/Structure Bat Assessment Form

Date & Time of Assessment: 6/18/2021	DOT Project Number: 1702993	Route/Facility Carried: US 20	County: LaPorte
Federal Structure ID: Culv. 5	Structure Coordinates (latitude and longitude): 41.682662 -86.720764	Structure Height (approximate): 3'x4'	Structure Length: 256.7

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: Hannah Deguch

Signature: Hannah Deguch

CLV-56664

Bridge/Structure Bat Assessment Form

Date & Time of Assessment	DOT Project Number	Route/Facility Carried	County
6/18/2021	1702993	US 20	LaPorte
Federal Structure ID	**Structure Coordinates (latitude and longitude)**	**Structure Height (approximate)**	**Structure Length**
Culv 6	41.681169 -86.713243	15'	98'

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:	

Culvert Material

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

Creosote Evidence

- ○ Yes ○ No
- ○ Unknown

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: Hannah Deguch

Signature: [signature]

CV 020-046-50.05

Bridge/Structure Bat Assessment Form

Date & Time of Assessment: 6/18/21	DOT Project Number: 1702993	Route/Facility Carried: US 20	County: LaPorte
Federal Structure ID: cdv 7	Structure Coordinates (latitude and longitude): 41.680993 -86.711070	Structure Height (approximate): 55' x 20'	Structure Length: 95.7

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

Surrounding Habitat (check all that apply)

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

Signature: Hannah Deguch

CV 020-046-50.34

Bridge/Structure Bat Assessment Form

Date & Time of Assessment: 6/18/2021	DOT Project Number: 1702993	Route/Facility Carried: US20	County: LaPorte
Federal Structure ID: CULV 8	Structure Coordinates (latitude and longitude): 41.606626 -86.767876	Structure Height (approximate): 15"	Structure Length: 105.9'

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

Surrounding Habitat (check all that apply)

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

Signature: HDeBy

CV 020-046-50.53

Bridge/Structure Bat Assessment Form

Date & Time of Assessment: 6/18/2021	DOT Project Number: 1702993	Route/Facility Carried: US20	County: LaPorte
Federal Structure ID: CulV 9	Structure Coordinates (latitude and longitude): 41.680173 -86.701186	Structure Height (approximate): 30"	Structure Length: 116'

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

Surrounding Habitat (check all that apply)

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

Signature: Hannah Deguch

CLV-56665

Bridge/Structure Bat Assessment Form

Date & Time of Assessment: 6/18/2021	DOT Project Number: 1702993	Route/Facility Carried: US 20	County: LaPorte
Federal Structure ID: CulvID	Structure Coordinates (latitude and longitude): 41.679579, -86.609521	Structure Height (approximate): 24"	Structure Length: 92.5'

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

Surrounding Habitat (check all that apply)

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

Signature:

CLV-56666

Bridge/Structure Bat Assessment Form

Date & Time of Assessment: 6/18/2021	DOT Project Number: 1702993	Route/Facility Carried: US20	County: LaPorte
Federal Structure ID: CLV 11	Structure Coordinates (latitude and longitude): 41.678717 -86.687528	Structure Height (approximate): 30'	Structure Length: 87.1

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.
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☐ 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: Hannah Degoda

Signature:

United States Department of the Interior
Fish and Wildlife Service

Indiana Field Office (ES)
620 South Walker Street
Bloomington, IN 47403-2121
Phone: (812) 334-4261 Fax: (812) 334-4273

March 28, 2022

Karstin Carmany-George
Federal Highway Administration
575 N. Pennsylvania St. Room 254
Indianapolis, Indiana 46204
(sent via email)

IPAC Project Code: 2022-0019440

RE: US 20 Road Improvement Project with Added Turn Lanes, Des. 1702993, LaPorte County, Indiana

Dear Ms. Carmany-George:

The U.S. Fish and Wildlife Service (Service) is responding to your request dated March 28, 2022, to verify that the proposed US 20 Road Improvement Project (the Project) may rely on the February 5, 2018, Programmatic Biological Opinion (BO) for federally funded or approved transportation projects that may affect the federally listed endangered Indiana bat (*Myotis sodalis*) and/or federally listed threatened northern long-eared bat (NLEB) (*Myotis septentrionalis*). We received your request and the associated LAA Consistency Letter on March 18, 2022.

This letter provides the Service's response as to whether the Federal Highway Administration may rely on the BO to comply with Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) for the Project's effects to the Indiana bat and/or NLEB.

The Federal Highway Administration has determined that the Project is *likely to adversely affect* the Indiana bat and/or the NLEB.

The Federal Highway Administration has also determined that the Project is not likely to adversely affect (NLAA) the following species:

Eastern Massasauga rattlesnake (*Sistrurus catenatus*) (federally threatened)

The Service concurs with this NLAA determination because the Indiana Department of Transportation/Federal Highway Administration has agreed to implement specific Reptile Avoidance and Minimization Measures to protect the federally listed eastern massasauga rattlesnake as well as the state-listed eastern box turtle. The Service's concurrence letter for this species is attached.

Conclusion

The Service has reviewed the effects of the proposed Project, which includes the Federal Highway Administration's commitment to implement any applicable mitigation measures as indicated on the LAA Consistency Letter. We confirm that the proposed Project's effects are consistent with those analyzed in the BO. The Service has determined that projects consistent with the conservation measures and scope of the program analyzed in the BO are not likely to jeopardize the continued existence of the Indiana bat and/or the NLEB. In coordination with your agency and the other sponsoring Federal Transportation Agencies, the Service will reevaluate this conclusion annually in light of any new pertinent information under the adaptive management provisions of the BO.

Incidental Take

Indiana Bat

The Service anticipates that tree removal associated with the proposed Project will cause incidental take of Indiana bats. As described in the Incidental Take Statement (ITS) of the BO, such taking will be difficult to detect. The Service determined that it is appropriate to measure the amount or extent of incidental taking resulting from BO projects using the proposed acreage of tree removal from Indiana bat suitable habitat as a surrogate for the numbers of individuals taken.

The proposed Project will remove **11.44 acres** of trees from habitat that is suitable for the Indiana bat. All tree removal will occur in winter (October 1 – March 30) and comply with all other conservation measures in the BO. Based on the BO, **10.99 acres** of the removal are within 100 feet of the edge of pavement and therefore not anticipated to result in any adverse effects; **0.45 acre(s)** are within 100-300 feet and expected to result in adverse effects.

The Federal Highway Administration will use the mitigation ratio of **1.75** from Table 3 of the BO[1] to calculate the compensatory mitigation required to offset these adverse impacts for a total of **0.7875 acres**[2]of trees that is suitable for the Indiana bat.

To comply with the mitigation requirements of the BO, the Federal Highway Administration will contribute **$7,366.28** to TCF, the Program Sponsor, within 1 year of this letter or prior to the start of construction, whichever is earliest. These calculations are based on the mitigation identified above[2] and the 2020-2021 Land Use Values in Table 2 of Exhibit E in TCF's ILF Instrument. If payment is made later than 1 year from the date of this letter, the mitigation cost may change because of updated land use values in Table 2 of Exhibit E[3]. At the time of payment, the Federal Highway Administration or designated non-federal representative shall notify the Service of compliance with the compensatory mitigation requirements as described above. **The Federal Highway Administration or non-federal representative must notify TCF at least five days prior to payment so TCF can verify that the appropriate land value has been used.**

The purchase of species conservation credits and/or in-lieu fee contributions shall occur prior to construction of a transportation project covered under this programmatic consultation. Exceptions to this program stipulation include emergency projects that do not require a letting prior to construction. In these cases, purchase of credits and/or in-lieu fee contributions shall occur within three months of completion of the project. This timeframe allows for measuring the acres of habitat affected by the emergency project and for financial processing.

[1] https://www.fws.gov/midwest/endangered/section7/fhwa/pdf/IBAT_ILF_ratios_transportation_agencies.pdf
[2] XX acres * XX ratio
[3] https://www.fws.gov/midwest/endangered/section7/fhwa/pdf/IBAT_ExhibitE_Table2_FeeSchedule_LandValues.pdf

The Service will add the acreage of Project-related tree removal to the annual total acreage attributed to the BO as a surrogate measure of Indiana bat incidental take and exempted from the prohibitions of Section 9 of the ESA. Such exemption is effective as long as your agency implements the reasonable and prudent measure (RPM) and accompanying terms and conditions of the BO's ITS. The sole RPM of the BO's ITS requires the Federal Transportation Agencies to ensure that State/Local transportation agencies, who choose to include eligible projects under the programmatic action, incorporate all applicable conservation measures in the project proposals submitted to the this RPM require the Federal Transportation Agencies to offer training to appropriate personnel about using the BO, and promptly report sick, injured, or dead bats (regardless of species) or any other federally listed species located in project action areas.

Northern Long-eared Bat

The Service anticipates that tree removal associated with the Project will cause incidental take of NLEBs. However, the Project is consistent with the BO, and such projects will not cause take of NLEB that is prohibited under the ESA section 4(d) rule for this species (50 CFR §17.40(o)). Therefore, the incidental take of NLEBs resulting from the Project does not require exemption from the Service.

Reporting Dead or Injured Bats

The Federal Highway Administration, its State/Local cooperators, and any contractors must take care when handling dead or injured Indiana bats and/or NLEBs, or any other federally listed species that are found at the Project site to preserve biological material in the best possible condition and to protect the handler from exposure to diseases, such as rabies. Project personnel are responsible for ensuring that any evidence about determining the cause of death or injury is not unnecessarily disturbed. Reporting the discovery of dead or injured listed species is required in all cases to enable the Service to determine whether the level of incidental take exempted by this BO is exceeded, and to ensure that the terms and conditions are appropriate and effective. Parties finding a dead, injured, or sick specimen of any endangered or threatened species must promptly notify this Service Office.

Reinitiation Notice

This letter concludes consultation for the Project, which qualifies for inclusion in the BO issued to the Federal Transportation Agencies. To maintain this inclusion, a reinitiation of this Project-level consultation is required where the Federal Highway Administration discretionary involvement or control over the Project has been retained (or is authorized by law) and if:

1. the amount or extent of incidental take of Indiana bat is exceeded;
2. new information reveals that the Project may affect listed species or critical habitat in a manner or to an extent not considered in the BO or in the Project information that supported Service concurrence with NLAA determinations; or
3. the Project is subsequently modified in a manner that causes an effect to listed species or designated critical habitat not considered in the BO or in the Project information that supported Service concurrence with NLAA determinations; or
4. a new species is listed or critical habitat designated that the Project may affect.

Per condition #1 above, the anticipated incidental take is exceeded when:

- the Project removes more than **0.45 acre(s)** of habitat suitable for the Indiana bat between 100-300 feet from the edge of pavement during the inactive season.

In instances where the amount or extent of incidental take is exceeded, the Federal Highway Administration is required to immediately request a reinitiation of this Project-level consultation.

We appreciate your continued efforts to ensure that this Project is fully consistent with all applicable provisions of the BO. If you have any questions regarding our response or if you need additional information, please contact Robin McWilliams Munson at Robin_Mcwilliams@fws.gov.

Sincerely,

SCOTT PRUITT Digitally signed by SCOTT PRUITT
Date: 2022.03.28 16:24:15 -04'00'

Scott Pruitt
Field Supervisor

Attachment

Cc: (via email)
Sandy Bowman, INDOT, Indianapolis, IN
Stewart Michels, INDOT, LaPorte, IN
Elizabeth McCloskey, USFWS, Chesterton, IN
Ibat ILF coordinator – to be sent by INDOT at later date

APPENDIX D: SECTION 106

Date: 10/7/2021

Project Designation Number: 1702993

Route Number: US 20

Project Description: Auxiliary Lanes, two-way-left-turn-lanes from 400 feet east of SR 39 to 2.85 miles east of SR 39 (Fail Rd)

The Indiana Department of Transportation-LaPorte District (INDOT) is planning a federal-aid project to add a two-way-left-turn-lane (TWLTL) to US 20 from 400 feet east of State Road (SR 39) to 2.85 miles east of SR 39 (Fail Road) in LaPorte County, Indiana. US 20 is a four-lane principal arterial with a speed limit of 55 mph.

A 16-foot-wide TWLTL will be added throughout the project area, including centerline rumble strips. The project will also include the installation of two-stage movements for left-turns from driveways and unsignalized roadways. The existing shoulders will be expanded from 2-foot-wide paved shoulders to 8-foot-wide paved shoulders. Existing concrete and metal drainage structures (listed below) will be extended to accommodate the widened roadway and perpetuate the edge line rumble strips. Replacement of street signs will take place as necessary.

Culvert No.	NBI No.	Feature Crossed	Type
CLV-56660	N/A	Roadside ditch	Concrete box
CLV-56661	N/A	Roadside ditch	Vitrified clay pipe
CLV-56662	N/A	Roadside ditch	Corrugated Metal Pipe
CLV-56663	N/A	Roadside ditch	Corrugated Metal Pipe
CV 020-046-49.65	N/A	Roadside ditch	Concrete box
CLV-56664	N/A	Roadside ditch	Concrete box
CV 020-046-50.05	N/A	UNT to Galena River	Concrete box
CLV 020-046-50.34	N/A	Roadside ditch	High-density polyethylene pipe
CLV 020-046-50.53	N/A	Roadside ditch	High-density polyethylene pipe
CLV-56665	N/A	Roadside ditch	Vitrified clay pipe
CLV-56666	N/A	Roadside ditch	Reinforced concrete pipe

Land use in the project vicinity is generally agricultural and residential. The preferred method of traffic maintenance will consist of three phases and will include single lane closures and shifting traffic. Construction is anticipated to begin in the Spring of 2024.

Approximately 5.71 acres of permanent and 0.83 acre of temporary right-of-way (ROW) will be required.

Feature crossed (if applicable): Unnamed Tributary (UNT) to Galena River

City/Township: Springfield and Kankakee townships **County:** LaPorte 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 ☑ SHAARD ☑ SHAARD GIS ☑ Streetview Imagery

Other (please specify): Indiana Buildings, Bridges, and Cemeteries Map (IBBCM) website; Arc Map GIS; LaPorte County GIS (accessed via https://beacon.schneidercorp.com/); Bridge Inspection Application System (BIAS); online street-view imagery; Des 1701420 Minor Projects PA determination form (8/21/2021); MPPA application (including maps and photographs) sent by Butler, Fairman, & Seufert, dated August 17, 2021, and on file at INDOT Cultural Resources Office (CRO);

Plunkett, Jeffrey A.
2021 A Phase Ia Archaeological Field Reconnaissance for the Construction of a Two-way Left Turn Lane on US 20 from 400' east of SR 39 to 2.85 miles east of SR 39 (Fail Rd), in LaPorte County, Indiana (INDOT Des. No. 1702993). NS Services, Zionsville. Document on file at INDOT-CRO.

Please specify all applicable categories and condition(s) (applicable conditions are highlighted):

B-2. Installation of new lighting, signals, signage and other traffic control devices under the following conditions ***[BOTH Condition A, which pertains to Archaeological Resources, and Condition B, which pertains to Above-Ground Resources, must be satisfied]***:

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

Condition B (Above-Ground Resources)
Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource.

B-3. Construction of added travel, turning, or auxiliary lanes (e.g., bicycle, truck climbing, acceleration and deceleration lanes) and shoulder widening under the following conditions ***[BOTH Condition A, which pertains to Archaeological Resources, and Condition B, which pertains to Above-Ground Resources, must be satisfied]***:

Condition A (Archaeological Resources)
One of the two conditions listed below must be met *(EITHER Condition i or Condition ii must be satisfied):*
i. Work occurs in previously disturbed soils; *OR*
ii. Work occurs in undisturbed soils and an archaeological investigation conducted by the applicant and reviewed by INDOT Cultural Resources Office determines that no National Register-listed or potentially National Register-eligible archaeological resources are present within the project area. If the archaeological investigation locates National Register-listed or potentially National Register-eligible archaeological resources, then full Section 106 review will be required. Copies of any archaeological reports prepared for the project will be provided to the DHPA and any archaeological site form

information will be entered directly into the SHAARD by the applicant. The archaeological reports will also be available for viewing (by Tribes only) on INSCOPE**.**

Condition B (Above-Ground Resources)
Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource.

B-9. Installation, replacement, repair, lining, or extension of culverts and other drainage structures under the conditions listed below ***[BOTH Condition A, which pertains to Archaeological Resources, and Condition B, which pertains to Above-Ground Resources, must be satisfied]***:

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

i. Work does not involve installation of a new culvert and other drainage structure, and there are no impacts to unusual features, including but not limited to historic brick or stone sidewalks, curbs or curb ramps, stepped or elevated sidewalks and retaining walls, under one of the following conditions *(Condition a, Condition b, or Condition c must be satisfied)*:
   a. The structure exhibits no wood, stone, or brick structures or parts therein; *OR*
   b. The structure exhibits only modern wood, stone, or brick structures or parts therein; *OR*
   c. The structure exhibits non-modern wood, stone, or brick structures or parts therein and the following conditions are met *(BOTH Condition 1 AND Condition 2 must be met):*
      1. Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource; *AND*
      2. The structure lacks sufficient integrity and/or a context that suggests it might have engineering or historical significance. Under this condition, a qualified professional (meeting the Secretary of Interior's Professional Qualification standards [48 Federal Register (FR) 44716]) must prepare an analysis and justification that the structure lacks sufficient integrity and/or a context that suggests it might have engineering or historical significance. This documentation must be reviewed and approved by INDOT Cultural Resources Office.

ii. Work involves the installation of a new culvert and other drainage structures AND/OR there may be impacts to unusual features, including historic brick or stone sidewalks, curbs or curb ramps, stepped or elevated sidewalks and retaining walls, under the following conditions *(BOTH Condition a and Condition b must be satisfied)*:
   a. Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource; *AND*
   b. The subject structure exhibits one of the characteristics described below *(Condition 1, Condition 2 or Condition 3 must be satisfied)*.
      1. The structure exhibits no wood, stone, or brick structures or parts therein; *OR*
      2. The structure exhibits only modern wood, stone, or brick structures or parts therein; *OR*
      3. The structure exhibits non-modern wood, stone, or brick structures or parts therein but lacks sufficient integrity and/or a context that suggests it might have engineering or historical

significance. Under this condition, a qualified professional (meeting the Secretary of Interior's Professional Qualification standards [48 Federal Register (FR) 44716]) must prepare an analysis and justification that the structure lacks sufficient integrity and/or a context that suggests it might have engineering or historical significance. This documentation must be reviewed and approved by INDOT Cultural Resources Office.

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

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

Additional Comments:

Above-ground Resources

An INDOT Cultural Resources Office (CRO) historian who meets the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61 performed a desktop review, checking the Indiana Register of Historic Sites and Structures (State Register) and National Register of Historic Places (National Register) lists for LaPorte 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 Indiana Historic Sites and Structures Inventory (IHSSI) and National Register information for LaPorte County are available in the Indiana State Historic Architectural and Archaeological Research Database (SHAARD) and the Indiana Historic Buildings, Bridges, and Cemeteries Map (IHBBCM). All sites were reviewed through the IHBBCM, which contains the most recently updated SHAARD information. The following IHSSI resources are recorded within 0.25 mile of the project:

IHSSI #091-606-40002 (Farm; US 20; c. 1845; demolished)
IHSSI #091-606-10033 (Springville Cemetery; SR 37; c. 1856-present; "contributing")
IHSSI #091-606-10034 (House; Springville Road; c. 1900; "contributing")
IHSSI #091-606-10035 (Rossburg Cemetery; Wilhilm Road; c. 1855-c. 1900; "contributing")

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

The INDOT-CRO historian reviewed structures adjacent to the project area utilizing online aerial, street-view photography, and the LaPorte County GIS website. Land surrounding the project area is semi-rural and above-ground properties are present surrounding the roadway. Properties surrounding the project area range in date from the late nineteenth century to the twenty-first century. Most of the properties did not possess the cultural significance and/or material integrity necessary to be considered potentially eligible for the National Register. However, one property constructed in 1957, according to property card records, merited additional investigation.

A qualified professional (QP) historian from Butler, Fairman & Seufert, Inc. conducted fieldwork and took photos of the property in question. The QP found that the property includes a contemporary ranch house with a detached garage. The house largely maintains its material integrity, but the north façade (rear) has different siding than the rest of the house and the windows and doors are replacements. Decorative shutters, a metal canopy over the back patio, and a shed-roof carport addition to the detached garage have further altered the property. The house does not appear to possess architectural significance. Though identified as a contemporary ranch style, this is largely due to its prominent stone chimney (on the south/primary façade) and the fenestration pattern. The massing is

more indicative of a T-plan house. Other nearby properties/subdivisions which date to the late twentieth century and twenty-first century, but the house is set apart and isolated from these properties; there is no mid-twentieth century historic district present in the area. Based on this description and for the purposes of this determination, the house does not meet the *Residential Planning and Development in Indiana, 1940-1973* requirements to be individually eligible to the National Register but does merit a "contributing" IHSSI rating.

The subject structures are concrete boxes, corrugated metal pipes, polyethylene pipes, and concrete pipes. Only CV 020-046-49.65 and CV 020-024-50.05 (construction dates are unknown) are in BIAS. CV 020-046-49.65 was previously reviewed under Des 1701420 in 2019 and an MPPA determination form was completed. Neither structure exhibits wood, stone, or brick structures or parts therein. In addition, there is no evidence to suggest that they possess historical or engineering significance. The other structures do not appear in BIAS due to their small size of less than four feet in diameter/width. Based on an examination of photos and a description of the structures provided by Butler, Fairman, & Seufert, the structures do not exhibit wood, stone or brick structures or parts therein, and there is no evidence to suggest that they possess historical or engineering significance.

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

Archaeological Resources

An INDOT-CRO archaeologist who meets the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61 reviewed the Phase Ia field reconnaissance survey report completed for the project by NS Services (Plunkett 2021). No archaeological sites were previously recorded within or adjacent to the project area.

The approximately 54.13-acre survey area was investigated by a combination of systematic shovel probing (n=120), pedestrian survey in agricultural fields, and visual inspection of obviously disturbed areas. Approximately 50.3 acres of the survey area were determined to be previously disturbed, steeply sloping, or inundated. The remaining 3.83 acres were investigated via pedestrian survey and shovel probing. No archaeological sites were documented as a result of the survey and no further investigation is recommended (Plunkett 2021).

Therefore, there are no archaeological concerns provided the project scope does not change.

Accidental Discovery: If any archaeological artifacts or human remains are uncovered during construction, demolition, or earth moving activities, construction within 100 feet of the find shall be stopped, and the INDOT Cultural Resources Office and the Division of Historic Preservation and Archaeology shall be notified immediately.

INDOT Cultural Resources staff reviewer(s): Kelyn Alexander and Matt Coon

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

INDIANA ARCHAEOLOGICAL SHORT REPORT

State Form 54566 (R2 / 11-20)

INDIANA DEPARTMENT OF NATURAL RESOURCES
DIVISION OF HISTORIC PRESERVATION AND ARCHAEOLOGY
402 West Washington Street, Room W274
Indianapolis, Indiana 46204-2739
Telephone Number: (317) 232-1646
Fax Number: (317) 232-0693
E-mail: dhpa@dnr.IN.gov

Where applicable, the use of this form is recommended but not required by the Division of Historic Preservation and Archaeology (DHPA).

Name(s) of author(s)	Date *(month, day, year)*
Jeffrey A. Plunkett	8/12/2021

Title of project
A Phase Ia Archaeological Field Reconnaissance for the Construction of a Two-way Left Turn Lane on US 20 from 400' east of SR 39 to 2.85 miles east of SR 39 (Fail Rd), in LaPorte County, Indiana (INDOT Des. No. 1702993)

This document is being used to report on the results of:
☐ Records check only ☒ Records check and Phase Ia archaeological reconnaissance
☐ An addendum to a previous archaeological report. *For an addendum, provide the following information.*

Name(s) of author(s) of previous report

Title of previous report

Date of previous report *(month, day, year)*	DHPA number

PROJECT OVERVIEW

Description of project
The proposed project includes the construction of a 16-foot wide, two-way left-turn lane through the length of the project area and the addition of centerline rumble strips. The project will also include the installation of two-stage movements for left-turns from driveways and unsignalized roadways. The existing shoulders will be expanded from 2-foot wide paved shoulders to 8-foot wide paved shoulders. Existing concrete and metal drainage structures will be extended to accommodate the widened roadway and perpetuate the edge line rumble strips and replacement of street signs, if necessary. The preferred method of traffic maintenance will consist of three phases and will include single lane closures and shifting traffic.

The need for this project is based on the significant increase in the average annual daily traffic from 13,624 to 23,203 between 2010 and 2016, an increase of 70%. The increase in traffic has caused an increase in crashes and in crash severity. Many of the severe crashes are due to stopped left-turning vehicles in the passing lane. Due to the increased traffic volumes, there are fewer gaps in opposing traffic for left-turning vehicles. This turning movement delay forces left-turning vehicles to stop and to remain stopped for longer periods of time in a through-lane, making them vulnerable to high-speed traffic. Other severe crashes are related to lane departure, primarily crossing the centerline but also running off road to the right. The purpose of this project is to improve safety conditions for vehicle traffic on US 20.

Although this project will require only about 5.71 acres of new permanent and temporary right-of-way (ROW), the survey area for this study encompasses approximately 54.13 acres of property and includes both the new permanent and temporary ROW and the existing ROW.

INDOT designation number(s)	Project number	DHPA number	DHPA plan number
1702993	21322b		

Prepared for: *(Company / Institution / Agency)*
Butler, Fairman & Seufert, Inc.

Name of contact
Elizabet Biggio

Address *(number and street, city, state, and ZIP code)*
8450 Westfield Blvd., Suite 300, Indianapolis, Indiana 46240

Telephone number	E-mail address
(317) 713-4615	EBiggio@bfsengr.com

Name of principal investigator
Jeffrey A. Plunkett

Name of company / institution
NS Services, LLC

Address *(number and street, city, state, and ZIP code)*
4974 South Cobblestone Drive, Zionsville, Indiana 46077

Telephone number	E-mail address
(317)773-2774	j.plunkett@nsenvservices.com

Signature of principal investigator *(Required)*	Date *(month, day, year)*
Jeffrey A. Plunkett	8/12/2021

Explanation / justification

The presence of number of nearby archaeological sites and the potential for undisturbed ground within the survey area suggested that the project may impact undocumented archaeological resources. As a result, a Phase Ia archaeological reconnaissance of the project was determined to be necessary.

Phase Ia archaeological reconnaissance *(Check all that apply.)*

- ☐ No Phase Ia reconnaissance was conducted.
- ☒ Phase Ia reconnaissance located no archaeological resources.
- ☐ Previously recorded sites were in the project area.
  - ☐ Artifacts and/or features at a previously recorded site(s) within the project area were not discovered. *List the site(s) below.*
- ☐ Phase Ia reconnaissance has identified landforms conducive to buried archaeological deposits. *Describe below.*

List sites.

Describe landforms.

Number of shovel probes excavated	Number of cores / auger probes
120	

Describe disturbances. Attach photographs documenting disturbances.

Disturbances within the survey area were the result of the construction of the existing roadways, driveways, sidewalks, and parking lots; the excavation and installation of various buried utilties (i.e. gas, telephone, water, and sewer); the construction of drainage provisions, severe erosion in steeply sloped areas, erosion and channeling along waterways, and residential landscaping.

Actual area surveyed *(hectares)*	Actual area surveyed *(acres)*
21.91	54.13

Explain results of fieldwork.

Although the survey area consisted of a total of approximately 54.13 acres of property, 50.3 acres of this area were visually determined to either have been previously disturbed, severely sloped, or are located in low wet areas with standing water or the prescence of wetland vegetation. As a result, only about 3.83 acres were examined by pedestrian survey or shovel probes. The typical profile of the shovel probes excavated during this study consisted of either 20 cm of dark brown (10YR 4/3) fine sand over a subsoil consisting of dark yellowish brown (10YR 4/4) fine sand or 23 cm of dark brown (10YR 3/3) sandy loam over a subsoil consisting of dark brown (7.5YR 4/4) sandy loam.

RECOMMENDATIONS

Records check *(Check all that apply.)*

- ☐ No archaeological investigation is recommended before the project is allowed to proceed because the records check has determined that the project area does not have the potential to contain archaeological resources.
- ☒ A Phase Ia archaeological reconnaissance is recommended.
- ☐ A cemetery development plan may be required under Indiana Code 14-21-1-26.5 because project ground disturbance will be within 100 feet of a cemetery.

Phase Ia archaeological reconnaissance *(Check all that apply.)*

- ☒ It is recommended that the project be allowed to proceed as planned because the Phase Ia archaeological reconnaissance has located no archaeological sites within the project area and/or previously recorded sites that were investigated warrant no additional investigation.
- ☐ It is recommended that Phase Ic archaeological subsurface reconnaissance be conducted before the project is allowed to proceed. The Phase Ia archaeological reconnaissance has determined that the project area includes landforms which have the potential to contain buried archaeological deposits.

Other recommendations / commitments

Pursuant to IC-14-21-1, if any archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and 29) requires that the discovery must be reported to the Department of Natural Resources within two (2) business days. In that event, please call (317) 232-1646.

REQUIRED ATTACHMENTS

- ☒ Figure showing project location within Indiana
- ☒ USGS topographic map showing the project area *(1:24,000 scale)*
- ☒ Aerial photograph showing the project area, land use and survey methods
- ☒ Photographs of the project area, including, if applicable, photographs documenting disturbances
- ☐ Project plans *(if available)*

Cemetery Development Plan

Rossburg Cemetery
US 20 and N. Wilhelm Road
Springfield Township, LaPorte County, Indiana

For the US 20 Auxiliary Lanes Project
US 20 from 400 feet east of SR 39 to 2.85 miles east of SR 39 (Fail Road)
Des. No. 1702993

Prepared for:
Indiana Department of Transportation
LaPorte District
315 E. Boyd Blvd.
LaPorte, IN 46350

Prepared by:
Elizabet Biggio, Architectural Historian II
Butler, Fairman, & Seufert, Inc.
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Indianapolis, IN 46240-8302
(317) 713-4615
ebiggio@bfsengr.com

August 11, 2021

BF&S
CIVIL ENGINEERS

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Introduction

The Indiana Department of Transportation-LaPorte District (INDOT) is planning a federal-aid project to add a two-way-left-turn-lane (TWLTL) to US 20 from 400 feet east of State Road (SR 39) to 2.85 miles east of SR 39 (Fail Road) in LaPorte County, Indiana.

A 16-foot wide TWLTL and centerline rumble strips will be added throughout the project area. The project will also include the installation of two-stage movements for left-turns from driveways and unsignalized roadways. The existing shoulders will be expanded from 2-foot wide paved shoulders to 8-foot wide paved shoulders. Existing drainage structures will be extended to accommodate the widened roadway and perpetuate the edge line rumble strips and replacement of street signs, if necessary.

Land use in the project vicinity is generally agricultural and residential. Approximately 5.71 acres of permanent right-of-way acquisition is anticipated. Approximately 0.83 acre of temporary right-of-way acquisition is anticipated for grading and driveway reconstruction.

The project termini are the east leg of the intersection of US 20 with SR 39 and 2.96 miles east of SR 39 (Fail Road). The total project length is approximately 2.96 miles. The project area is located Springville and Kankakee Townships on the USGS Springville Quadrangle, in Sections 1, 2, 7, and 8, Township 37 North, Range 2 and 3 West.

The need for the project is based on the significant increase in the average annual daily traffic (AADT) using US 20 from 15,220 vehicles per day (VPD) to 26,246 VPD between 2010 and 2016. The increase in traffic has caused a rise in crashes and crash severity. Many of the severe crashes are due to left-turning vehicles stopped in the passing lane. Due to the increased traffic volumes, there are now fewer gaps in opposing traffic for these left-turning vehicles. This turning movement delay forces left-turning vehicles to stop and to remain stopped for longer periods of time in a through-lane, making them vulnerable to high-speed traffic. Other severe crashes are related to lane departure, primarily crossing the centerline but also running off the road to the right. The purpose of this project is to improve safety conditions for vehicular traffic on US 20.

The Rossburg Cemetery (CR-43-70) is located in the northeastern quadrant of the intersection of US 20 and N. Wilhelm Road. According to state law and regulations (IC 14-21-1-26.5 and 312 IAC 22.5-2-2), a cemetery development plan is required for any project which would excavate or cover over ground, construct a new structure, or alter or repair an existing structure within 100 feet of a cemetery and which would impact the cemetery.

This document serves to identify and summarize relevant historical information, existing conditions, and project details pertaining to the Rossburg Cemetery order to predict and mitigate any potential impacts resulting from the US 20 Auxiliary Turn Lanes from 400 feet east of SR 39 to 2.85 miles east of SR 39 (Fail Road). This document was prepared for INDOT, in general accordance with the criteria for development plans, as described in IC 14-21-1-26.5.

Cemetery Description

The Rossburg Cemetery (CR-46-70) is located in the northeastern quadrant of the intersection of US 20 and N. Wilhelm Road. The cemetery is surrounded by forested areas to the north and east. There is a large area paved with gravel southwest of the cemetery between the cemetery and the roads. The cemetery sits on a hill above the adjacent road elevations.

The Indiana State Historic Architectural and Archaeological Database (SHAARD) Cemetery Registry lists the date of the first burials in Rossburg Cemetery as about 1855, which is the date of the oldest extant headstone. The cemetery is also included in the Indiana Historic Sites and Structures Inventory as IHSSI #091-606-10035.

The cemetery apparently takes its name from the (Solomon) Ross family, who owned land nearby. There is not a clear religious affiliation; however, an 1866 map of Laporte County, which does not show the cemetery, marks a Christian Church in what is now the northwest quadrant of the intersection of US 20 (Michigan Road) and N. Wilhelm Road. At that time, N. Wilhelm Road continued on a straight north-south alignment all the way to US 20 (Michigan Road), running closer to the cemetery's western border. US 20 took a more winding route south of the cemetery at the time. The 1874 *LaPorte County Atlas* shows both the cemetery and church. *La Porte Weekly Herald* articles in the early 1900s note Dunkard services were being held in the church at that time.

The cemetery was deeded by private owners to the Rossburg Cemetery Association in 1891. A formal plat of the cemetery was recorded May 3, 1902 after the cemetery acquired additional land. The full plat contained 90 plots. The standard size was 25 feet by 10 feet, although many were shortened to accommodate the cemetery's irregular shape. At this time, the cemetery was a trapezoid with the following dimensions: 271 feet (east side), 71.5 feet (southwest side), 264 feet (west side), and 194.5 feet (north side). The plat shows a 10-foot wide driveway on the east side of the cemetery as well as an 8-foot wide driveway 83 feet south of the northern property line as measured on the east side. There was a public road running northwest-southeast from the present-day N. Wilhelm Road to US 20 on the cemetery's southwestern border.

The cemetery retained these dimensions until 1939-1940, when approximately 0.096 acre of right-of-way consisting of a 43-foot wide strip was purchased from the south side of the cemetery for an expansion of US 20, although this figure appears to have included the apparent right-of-way. The alignment of US 20 was straightened to approximately its current position. This right-of-way purchase relocated the southern property line of the cemetery to approximately 65 feet north of the centerline of US 20. Eleven plots were affected. There are no records pertaining to any previous use of these plots. As part of the road project, 10 rods (165 feet) of fencing around the cemetery and two corner posts set in concrete were relocated. The road on the west side of the cemetery was relocated west to its existing alignment (N. Wilhelm Road).

The last burial at Rossburg Cemetery was in 1997, although most burials occurred prior to 1942. There are about 68 extent headstones and approximately 90 total burials recorded. The extant stone are concentrated on a northeast-southwest axis between the fence corners. At least six Civil War veterans are buried there. The current cemetery parcel is 0.71 acre. The Rossburg Cemetery is owned by the defunct Rossburg Cemetery Association and managed by the Springfield Township Trustee.

The gravel area on the west side of the cemetery has existed at approximately its present dimensions since at least 1998, according to aerial photography, and the former road adjacent to the cemetery appears to have been on the edge of the lot. The gravel area is within the existing right-of-way. Aerial photography and site visits by BF&S show the gravel parking lot is informally used for staging construction equipment

and materials. The driveways in the cemetery are not extant. The current chain link and wire fencing with a gate on the west side was installed in the 1980s. A small wooden sign, erected by the LaPorte County Pioneer Cemetery Commission, sits at the southwest corner and reads "Rossburg Cemetery, est. 1845".

Rossburg's most well-known burial is that of Ray Lamphere (1870-1909), the handyman associated with the infamous Belle Gunness murders. He was convicted of arson for the burning of Gunness' house in 1908 and died of tuberculosis at the Indiana State Prison in Michigan City the following year. In 2015, current LaPorte County Historian Bruce Johnson placed a marker for Lamphere in the cemetery.

A few stones have been reset in concrete. According to the Cemetery & Research Association of LaPorte County, Mark Davis was employed to conduct repairs and cleaning of stones in Rossburg Cemetery in April of 2004.

Ground Conditions

No structures are present in the cemetery. There is a modern, chain link fence surrounding the cemetery. The cemetery sits on the slope of a hill above US 20. The alignments of US 20 and N. Wilhelm Road have shifted slightly several times, but available maps suggest Rossburg Cemetery was always setback from the roads.

In addition to the 1940 road construction and driveways described in the preceding section, previous disturbances include an attempt by vandals to dig up two graves in September of 1980. At this time, the uncovered coffins were found to be buried 7 feet underground. There is a flagpole near the graves of Amanda and Augustus Burr at the cemetery's high point. A large tree near the center of the cemetery was removed in 2019.

The soil is mapped as

- Chelsea fine sand, 12 to 18 percent slopes (ChD): Excessively drained
- Chelsea fine sand, 6 to 12 percent slopes (ChC): Excessively drained

An archaeological analysis of the US 20 Auxiliary Lanes project was conducted by a qualified professional archaeologist with NS Services on July 22, 2021 and found no archaeological resources within the project area.

Project Effects

Ground disturbance within 100 feet of the cemetery will include installation of a TWLTL on US 20 and the widening of the shoulders. A Level 1 Design Exception for the shoulder width will allow the shoulder to be widened to 4 feet (rather than 8 feet) with a guardrail protecting 2:1 side slopes in the area of the cemetery in order to reduce impacts. Approximately 0.004 acre, or 186 square feet, of temporary right-of-way will be acquired from the south side of the cemetery for grading. This area is approximately 25 feet south of the cemetery fence line at its closest point. The area will be restored following regrading.

No other effects to the cemetery are anticipated.

Conclusions

The US 20 Auxiliary Turn Lanes project is not anticipated to impact the Rossburg Cemetery. In the case that burials are uncovered, remains will be reinterred within the Rossburg Cemetery.

Based on the documentation available, the proposed project is not anticipated to disturb any existing burial areas. However, if during any phase of the construction any buried human remains are disturbed, the Department of Natural Resources at (317) 232-1646 will be notified of the discovery within two business days, per IC 14-21-1-27. If any human remains or burials are discovered, the relevant state statutes, including IC 23-14 and IC 14-21-1, will be adhered to. If during any phase of the development activities any artifacts or burial objects are discovered, ground disturbing activities shall cease, and the Department of Natural Resources will be notified within two business days, per IC 14-21-1-29.

Contact Information

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Springfield Township Trustee
Howard Conley
0227 W. 650 N.
La Porte, IN 46350
(219) 325-0809

Rossburg Cemetery Development Plan Des. 1702993

I have reviewed the Rossburg Cemetery Development Plan for the For the US 20 Auxiliary Lanes Project from 400 feet east of SR 39 to 2.85 miles east of SR 39 (Fail Road) and approve the report.

Howard Conley
Springfield Township Trustee

9-22-21
Date

Division of Historic Preservation & Archaeology • 402 W. Washington Street, W274 • Indianapolis, IN 46204-2739
Phone 317-232-1646 • Fax 317-232-0693 • dhpa@dnr.IN.gov • www.IN.gov/dnr/historic

HISTORIC PRESERVATION AND ARCHAEOLOGY

November 8, 2021

Elizabet Biggio
Architectural Historian II
Butler, Fairman, & Seufert, Inc.
8450 Westfield Boulevard, Suite 300
Indianapolis, Indiana 46240-8302

State Agency: Indiana Department of Transportation ("INDOT")

Re: Cemetery Development Plan for Rossburg Cemetery (CR-46-70) (Biggio, 10/11/2021), relating to the construction of a two-way left turn lane on US 20, from 400 feet east of SR 39 to 2.85 miles east of SR 39 (Fail Road), located in Springfield Township, LaPorte County, Indiana (Des. No. 1702993; DHPA No. 28306)

Dear Mr. Biggio:

Pursuant to IC 14-21-1-26.5, the State of Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology ("Indiana DNR-DHPA") has reviewed the Cemetery Development Plan for Rossburg Cemetery (CR-46-70) (Biggio, 10/11/2021), relating to the construction of a two-way left turn lane on US 20, from 400 feet east of SR 39 to 2.85 miles east of SR 39 (Fail Road), located in Springfield Township, LaPorte County, Indiana (Des. No. 1702993; DHPA No. 28306).

Thank you for submitting the above-referenced cemetery development plan. The plan that you submitted is acceptable, with the following conditions:

1. If, during any phase of the proposed project-related ground-disturbing activities, any human remains are disturbed, the Indiana DNR-DHPA must be notified of the discovery within two (2) business days, per IC 14-21-1-27. In that event, please call (317) 232-1646. If human remains or burials are discovered, the relevant state statutes, including IC 23-14, IC 14-21-1, and 312 IAC 22, will be adhered to.
2. If, during any phase of the proposed project-related ground-disturbing activities, any artifacts or burial objects are discovered, the person shall "immediately cease disturbing the ground and the area within one hundred (100) feet of the artifact or burial object," and the Indiana DNR-DHPA will be notified within two business days, per IC 14-21-1-29. In that event, please call (317) 232-1646.
3. Except for the elements of the proposed project detailed in the cemetery development plan, the cemetery must be avoided by all ground-disturbing project-related activities (e.g., demolition, construction, grading, dredging, and/or filling, tree clearance, vehicle or equipment staging, materials stockpiling, temporary land use, etc.), and provisions of relevant state statutes regarding cemeteries (including IC 14-21-1 and IC 23-14) must be adhered to.
4. Any proposed changes or modifications to this cemetery development plan shall be submitted to the Indiana DNR-DHPA in writing for review and comment prior to implementation.
5. This approved cemetery development plan is not transferable.

As a reminder, please be aware of Indiana Code 23-14-44-1 and Indiana Code 23-14-44-2, regarding restrictions on roads and utility construction in cemeteries.

If you have any questions regarding this matter, please do not hesitate to contact Wade T. Tharp at (317) 232-1650 or wtharp1@dnr.in.gov.

Very truly yours,

Beth K. McCord
Deputy State Historic Preservation Officer

BKM:WTT:wtt

emc: Anuradha V. Kumar, INDOT
Shaun Miller, INDOT
Susan Branigin, INDOT
Elizabet Biggio, Butler, Fairman, & Seufert, Inc.
Chad W. Slider, Indiana DNR-DHPA
Wade Tharp, Indiana DNR-DHPA

Date: 10/7/2021 ****UPDATE** 2/4/2022

Project Designation Number: 1702993

Route Number: US 20

Project Description: Auxiliary Lanes, two-way-left-turn-lanes from 400 feet east of SR 39 to 2.85 miles east of SR 39 (Fail Rd)

The Indiana Department of Transportation-LaPorte District (INDOT) is planning a federal-aid project to add a two-way-left-turn-lane (TWLTL) to US 20 from 400 feet east of State Road (SR 39) to 2.85 miles east of SR 39 (Fail Road) in LaPorte County, Indiana. US 20 is a four-lane principal arterial with a speed limit of 55 mph.

A 16-foot-wide TWLTL will be added throughout the project area, including centerline rumble strips. The project will also include the installation of two-stage movements for left-turns from driveways and unsignalized roadways. The existing shoulders will be expanded from 2-foot-wide paved shoulders to 8-foot-wide paved shoulders. Existing concrete and metal drainage structures (listed below) will be extended to accommodate the widened roadway and perpetuate the edge line rumble strips. Replacement of street signs will take place as necessary.

Culvert No.	NBI No.	Feature Crossed	Type
CLV-56660	N/A	Roadside ditch	Concrete box
CLV-56661	N/A	Roadside ditch	Vitrified clay pipe
CLV-56662	N/A	Roadside ditch	Corrugated Metal Pipe
CLV-56663	N/A	Roadside ditch	Corrugated Metal Pipe
CV 020-046-49.65	N/A	Roadside ditch	Concrete box
CLV-56664	N/A	Roadside ditch	Concrete box
CV 020-046-50.05	N/A	UNT to Galena River	Concrete box
CLV 020-046-50.34	N/A	Roadside ditch	High-density polyethylene pipe
CLV 020-046-50.53	N/A	Roadside ditch	High-density polyethylene pipe
CLV-56665	N/A	Roadside ditch	Vitrified clay pipe
CLV-56666	N/A	Roadside ditch	Reinforced concrete pipe

Land use in the project vicinity is generally agricultural and residential. The preferred method of traffic maintenance will consist of three phases and will include single lane closures and shifting traffic. Construction is anticipated to begin in the Spring of 2024.

Approximately 5.71 acres of permanent and 0.83 acre of temporary right-of-way (ROW) will be required.

**On January 5, 2022, INDOT-CRO was provided an updated project description (see below), which requires the addition of Category B-4 to this project. The project limits did not change, but a small amount of temporary ROW was added.

The Indiana Department of Transportation-LaPorte District (INDOT) is planning a federal-aid project to add a two-way-left-turn-lane (TWLTL) to US 20 from 400 feet east of State Road (SR 39) to 2.85 miles east of SR 39 (Fail Road) in LaPorte County, Indiana. US 20 is a four-lane principal arterial with a speed limit of 55 mph.

The preferred alternative consists of the construction of a 16-foot-wide TWLTL through the length of the project area. The preferred alternative will also include the widening of existing outside shoulders from 2-foot-wide paved shoulders to 8-foot paved shoulders, the perpetuation of the edge line rumble strips, the addition of centerline rumble strips, the replacement of existing and the installation of new guardrail and underdrains, and the replacement of street signs, if necessary. There are 12 small structures (drainage culverts) within the project area, of which six will be extended, five will be replaced, and one will be cleared of sediment buildup (see table below). New riprap may be installed at some culverts. Existing curb will be maintained or replaced. US 20 will be milled and overlaid throughout the project area, typically to an approximate depth of 2 inches. In select locations, the shoulders will be 4 feet wide in order to limit impacts to adjacent properties. New guardrail will be installed in those locations. The superelevation of US 20 will be adjusted to meet current INDOT Design Manual standards.

Culvert No.	NBI No.	Feature Crossed	Type
CLV-56660	N/A	Roadside ditch	Concrete box
CLV-56661	N/A	Roadside ditch	Vitrified clay pipe
CLV-56662	N/A	Roadside ditch	Corrugated Metal Pipe
CLV-56663	N/A	Roadside ditch	Corrugated Metal Pipe
CV 020-046-49.65	N/A	Roadside ditch	Concrete box
CLV 020-046-49.69	N/A	Roadside ditch	Concrete box
CLV-56664	N/A	Roadside ditch	Concrete box
CV 020-046-50.05	N/A	UNT to Galena River	Concrete box
CLV 020-046-50.34	N/A	Roadside ditch	High-density polyethylene pipe
CLV 020-046-50.53	N/A	Roadside ditch	High-density polyethylene pipe
CLV-56665	N/A	Roadside ditch	Vitrified clay pipe
CLV-56666	N/A	Roadside ditch	Reinforced concrete pipe

Approximately 5.72 acres of permanent and 1.03 acres of temporary ROW acquisition will be required. Approximately 11.44 acres of tree removal is anticipated, 9.20 acres of which is within the existing ROW. The maximum depth of excavation will be approximately 3 feet for road widening and 6 feet for work on drainage structures. No permanent lighting exists in the project area, and none will be added. Temporary lighting may be required. The preferred method of traffic maintenance (MOT) will consist of four phases and will utilize single lane closures. See the MOT section below for details. Construction is expected to begin in the Spring of 2023.

Feature crossed (if applicable): Unnamed Tributary (UNT) to Galena River

City/Township: Springfield and Kankakee townships **County:** LaPorte 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 ☑ SHAARD ☑ SHAARD GIS ☑ Streetview Imagery

Other (please specify): Indiana Buildings, Bridges, and Cemeteries Map (IBBCM) website; Arc Map GIS; LaPorte County GIS (accessed via https://beacon.schneidercorp.com/); Bridge Inspection Application System

(BIAS); online street-view imagery; Des 1701420 Minor Projects PA determination form (8/21/2021); MPPA application (including maps and photographs) sent by Butler, Fairman, & Seufert, dated August 17, 2021, and on file at INDOT Cultural Resources Office (CRO);

Plunkett, Jeffrey A.
2021 A Phase Ia Archaeological Field Reconnaissance for the Construction of a Two-way Left Turn Lane on US 20 from 400' east of SR 39 to 2.85 miles east of SR 39 (Fail Rd), in LaPorte County, Indiana (INDOT Des. No. 1702993). NS Services, Zionsville. Document on file at INDOT-CRO.

Please specify all applicable categories and condition(s) (applicable conditions are highlighted):

B-2. Installation of new lighting, signals, signage and other traffic control devices under the following conditions ***[BOTH Condition A, which pertains to Archaeological Resources, and Condition B, which pertains to Above-Ground Resources, must be satisfied]***:

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

Condition B (Above-Ground Resources)
Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource.

B-3. Construction of added travel, turning, or auxiliary lanes (e.g., bicycle, truck climbing, acceleration and deceleration lanes) and shoulder widening under the following conditions ***[BOTH Condition A, which pertains to Archaeological Resources, and Condition B, which pertains to Above-Ground Resources, must be satisfied]***:

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

Condition B (Above-Ground Resources)
Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource.

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

Condition A (Archaeological Resources)

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

i. Work occurs in previously disturbed soils; *OR*

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

Condition B (Above-Ground Resources)

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

B-9. Installation, replacement, repair, lining, or extension of culverts and other drainage structures under the conditions listed below ***[BOTH Condition A, which pertains to Archaeological Resources, and Condition B, which pertains to Above-Ground Resources, must be satisfied]***:

Condition A (Archaeological Resources)

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)

One of the conditions below must be met *(EITHER Condition i or Condition ii must be satisfied)*:

i. Work does not involve installation of a new culvert and other drainage structure, and there are no impacts to unusual features, including but not limited to historic brick or stone sidewalks, curbs or curb ramps, stepped or elevated sidewalks and retaining walls, under one of the following conditions *(Condition a, Condition b, or Condition c must be satisfied)*:

   a. The structure exhibits no wood, stone, or brick structures or parts therein; *OR*

   b. The structure exhibits only modern wood, stone, or brick structures or parts therein; *OR*

   c. The structure exhibits non-modern wood, stone, or brick structures or parts therein and the following conditions are met *(BOTH Condition 1 AND Condition 2 must be met):*

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

      2. The structure lacks sufficient integrity and/or a context that suggests it might have engineering or historical significance. Under this condition, a qualified professional (meeting the Secretary of Interior's Professional Qualification standards [48 Federal Register (FR) 44716]) must prepare an analysis and justification that the structure lacks sufficient integrity and/or a context that suggests it might have engineering or historical significance. This documentation must be reviewed and approved by INDOT Cultural Resources Office.

ii. Work involves the installation of a new culvert and other drainage structures AND/OR there may be impacts to unusual features, including historic brick or stone sidewalks, curbs or curb ramps, stepped or

elevated sidewalks and retaining walls, under the following conditions *(BOTH Condition a and Condition b must be satisfied)*:

a. Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource; *AND*
b. The subject structure exhibits one of the characteristics described below *(Condition 1, Condition 2 or Condition 3 must be satisfied)*.
    1. The structure exhibits no wood, stone, or brick structures or parts therein; *OR*
    2. The structure exhibits only modern wood, stone, or brick structures or parts therein; *OR*
    3. The structure exhibits non-modern wood, stone, or brick structures or parts therein but lacks sufficient integrity and/or a context that suggests it might have engineering or historical significance. Under this condition, a qualified professional (meeting the Secretary of Interior's Professional Qualification standards [48 Federal Register (FR) 44716]) must prepare an analysis and justification that the structure lacks sufficient integrity and/or a context that suggests it might have engineering or historical significance. This documentation must be reviewed and approved by INDOT Cultural Resources Office.

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

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

Additional Comments:

Above-ground Resources

An INDOT Cultural Resources Office (CRO) historian who meets the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61 performed a desktop review, checking the Indiana Register of Historic Sites and Structures (State Register) and National Register of Historic Places (National Register) lists for LaPorte 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 Indiana Historic Sites and Structures Inventory (IHSSI) and National Register information for LaPorte County are available in the Indiana State Historic Architectural and Archaeological Research Database (SHAARD) and the Indiana Historic Buildings, Bridges, and Cemeteries Map (IHBBCM). All sites were reviewed through the IHBBCM, which contains the most recently updated SHAARD information. The following IHSSI resources are recorded within 0.25 mile of the project:

IHSSI #091-606-40002 (Farm; US 20; c. 1845; demolished)
IHSSI #091-606-10033 (Springville Cemetery; SR 37; c. 1856-present; "contributing")
IHSSI #091-606-10034 (House; Springville Road; c. 1900; "contributing")
IHSSI #091-606-10035 (Rossburg Cemetery; Wilhilm Road; c. 1855-c. 1900; "contributing")

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

The INDOT-CRO historian reviewed structures adjacent to the project area utilizing online aerial, street-view photography, and the LaPorte County GIS website. Land surrounding the project area is semi-rural and above-

ground properties are present surrounding the roadway. Properties surrounding the project area range in date from the late nineteenth century to the twenty-first century. Most of the properties did not possess the cultural significance and/or material integrity necessary to be considered potentially eligible for the National Register. However, one property constructed in 1957, according to property card records, merited additional investigation.

A qualified professional (QP) historian from Butler, Fairman & Seufert, Inc. conducted fieldwork and took photos of the property in question. The QP found that the property includes a contemporary ranch house with a detached garage. The house largely maintains its material integrity, but the north façade (rear) has different siding than the rest of the house and the windows and doors are replacements. Decorative shutters, a metal canopy over the back patio, and a shed-roof carport addition to the detached garage have further altered the property. The house does not appear to possess architectural significance. Though identified as a contemporary ranch style, this is largely due to its prominent stone chimney (on the south/primary façade) and the fenestration pattern. The massing is more indicative of a T-plan house. Other nearby properties/subdivisions which date to the late twentieth century and twenty-first century, but the house is set apart and isolated from these properties; there is no mid-twentieth century historic district present in the area. Based on this description and for the purposes of this determination, the house does not meet the *Residential Planning and Development in Indiana, 1940-1973* requirements to be individually eligible to the National Register but does merit a "contributing" IHSSI rating.

The subject structures are concrete boxes, corrugated metal pipes, polyethylene pipes, and concrete pipes. Only CV 020-046-49.65 and CV 020-024-50.05 (construction dates are unknown) are in BIAS. CV 020-046-49.65 was previously reviewed under Des 1701420 in 2019 and an MPPA determination form was completed. Neither structure exhibits wood, stone, or brick structures or parts therein. In addition, there is no evidence to suggest that they possess historical or engineering significance. The other structures do not appear in BIAS due to their small size of less than four feet in diameter/width. Based on an examination of photos and a description of the structures provided by Butler, Fairman, & Seufert, the structures do not exhibit wood, stone or brick structures or parts therein, and there is no evidence to suggest that they possess historical or engineering significance.

**UPDATE—A small structure included in the planned scope of work was not previously evaluated. CLV 020-046-49.69 is a buried concrete box culvert that does not appear in BIAS due to its small size of less than four feet. Based on the description of the structure provided by Butler, Fairman, & Seufert, the structure does do not exhibit wood, stone or brick structures or parts therein, and there is no evidence to suggest that it possesses historical or engineering significance.

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

Archaeological Resources

An INDOT-CRO archaeologist who meets the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61 reviewed the Phase Ia field reconnaissance survey report completed for the project by NS Services (Plunkett 2021). No archaeological sites were previously recorded within or adjacent to the project area.

The approximately 54.13-acre survey area was investigated by a combination of systematic shovel probing (n=120), pedestrian survey in agricultural fields, and visual inspection of obviously disturbed areas. Approximately 50.3 acres of the survey area were determined to be previously disturbed, steeply sloping, or inundated. The remaining 3.83 acres were investigated via pedestrian survey and shovel probing. No archaeological sites were documented as a result of the survey and no further investigation is recommended (Plunkett 2021).

Therefore, there are no archaeological concerns provided the project scope does not change.

Accidental Discovery: If any archaeological artifacts or human remains are uncovered during construction, demolition, or earth moving activities, construction within 100 feet of the find shall be stopped, and the INDOT Cultural Resources Office and the Division of Historic Preservation and Archaeology shall be notified immediately.

INDOT Cultural Resources staff reviewer(s): Kelyn Alexander and Matt Coon

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

APPENDIX E: RED FLAG INVESTIGATION

INDIANA DEPARTMENT OF TRANSPORTATION

Driving Indiana's Economic Growth

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204-2216 (317) 232-5348 FAX: (317) 233-4929

Eric Holcomb, Governor
Joe McGuinness, Commissioner

Date: October 26, 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: Hannah Bays
Butler, Fairman and Seufert, Inc.
8450 Westfield Boulevard, Suite 300
Indianapolis, IN 46240
hbays@bfsengr.com

Re: RED FLAG INVESTIGATION
DES# 1702993, State Project
Auxiliary Lanes, Two Way Left Turn Lanes
US 20, from 400 feet east of SR 39 to 2.85 miles east of SR 39 (Fail Road)
Kankakee Township, LaPorte County, Indiana

PROJECT DESCRIPTION

Brief Description of Project: The Indiana Department of Transportation (INDOT) LaPorte District is planning to make improvements to US 20 from 400-feet east of SR 39 (CR 300 E) to 2.85 miles east of SR 39 (Fail Road). Improvements include constructing a 16-foot wide two-way left-turn lane (TWLTL) through the length of the project area, adding centerline rumble strips, constructing a two-stage movement for left-turns from driveways and unsignalized roadways, improving the existing outside shoulders from 2-foot paved shoulder widths to 8-foot paved should widths, extending the drainage structures throughout the project area to accommodate the widened roadway, and perpetuate the edge line rumble strips, and replacement of street signs if necessary.

Bridge and/or Culvert Project: Yes ☐ No ☒ Structure # N/A

If this is a bridge project, is the bridge Historical? Yes ☐ No ☐ , Select ☐ Non-Select ☐
(Note: If the project involves a historical bridge, please include the bridge information in the Recommendations Section of the report).

Proposed right of way: Temporary ☐ # Acres _____ Permanent ☒ # Acres _6.0____, Not Applicable ☐

Type of excavation: The maximum depth of excavation at any point along the existing pavement will be 24 inches. The maximum depth of excavation for necessary road widening may be up to 3 feet and up to 6 feet for drainage structures.

Maintenance of traffic: The method of traffic maintenance will be done in three phases and will include single lane closures and shifting traffic.

Work in waterway: Yes ☒ No ☐ Below ordinary high water mark: Yes ☒ No ☐

State Project: ☒ LPA: ☐

Any other factors influencing recommendations: The project description is subject to additional changes as preliminary design progresses.

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	**1***	Recreational Facilities	**2**
Airports[1]	**N/A**	Pipelines	**3**
Cemeteries	**3**	Railroads	**1**
Hospitals	**N/A**	Trails	**1**
Schools	**N/A**	Managed Lands	**2**

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

Explanation:

Religious Facilities*: One (1) unmapped religious facility is located within the 0.5 mile search radius. One (1) religious facility, Springville Community Church (5244 IN 39, LaPorte, IN 46350), is located 0.13 mile southwest of the project area. No impact is expected.

Recreational Facilities: Two (2) recreational facilities are located within the 0.5 mile search radius. Springfield Fen Nature Preserve is located adjacent to the project area. Coordination with IDNR Division of Nature Preserves will occur.

Pipelines: Three (3) pipeline segments are located within the 0.5 mile search radius. Two (2) pipelines, owned by Wolverine Pipeline Co. and Northern Indiana Public Service Co., are mapped through the project area. Coordination with INDOT Utilities and Railroads will occur.

Cemeteries: Three (3) cemeteries are located within the 0.5 mile search radius. One (1) cemetery, Rossburg Cemetery is located adjacent to the project area. A Cemetery Development Plan may be required since this project is within 100 feet of the cemetery. Coordination with INDOT Cultural Resources will occur.

Railroads: One (1) railroad segment is located within the 0.5 mile search radius. The railroad segment is located approximately 0.28 mile west of the project area. No impact is expected.

Trails: One (1) trail segment is located within the 0.5 mile search radius. The State Line south to Kankakee River potential trail segment is located 0.28 mile west of the project area. No impact is expected.

Managed Lands: Two (2) managed lands polygons are located within the 0.5 mile search radius. Springfield Fen Nature Preserve is located adjacent to the project area. Coordination with IDNR Division of Nature Preserves will occur.

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	**2**	Canal Routes - Historic	**N/A**
Karst Springs	**N/A**	NWI - Wetlands	**59**
Canal Structures – Historic	**N/A**	Lakes	**19**
NPS NRI Listed	**N/A**	Floodplain - DFIRM	**N/A**
NWI-Lines	**2**	Cave Entrance Density	**N/A**

IDEM 303d Listed Streams and Lakes (Impaired)	**8**	Sinkhole Areas	**N/A**
Rivers and Streams	**12**	Sinking-Stream Basins	**N/A**

Explanation:

NWI-Points: Two (2) NWI-Points are located within the 0.5 mile search radius. The closest mapped NWI-Point is located approximately 0.26 mile south of the project area. No impact is expected.

NWI - Wetlands: A total of 59 NWI Wetland polygons are located within the 0.5 mile search radius. Five (5) NWI-Wetland polygons are located adjacent to the project area. A Waters of the U.S. Report will be prepared and coordination with INDOT ESD Ecology and Waterway Permitting will occur.

Lakes: Nineteen (19) Lake polygons are located within the 0.5 mile search radius. The closest lake is located approximately 0.02 mile north of the project area. No impact is expected.

NWI - Lines: Two (2) NWI Line segments are located within the 0.5 mile search radius. The closest NWI Line segment is located approximately 0.35 mile north of the project area. No impact is expected.

IDEM 303d Listed Streams and Lakes (Impaired): Eight (8) 303d Listed Streams and Lake segments are located within the 0.5 mile search radius. A 303d impaired stream segment is shown crossing the project area; however, the updated IDEM 303d mapper shows that this stream segment is no longer impaired. No impact is expected.

Rivers and Streams: Twelve (12) stream segments are located within the 0.5 mile search radius. One (1) stream segment flows through the project area. A Waters of the U.S. Report will be prepared and coordination with INDOT ESD Ecology and Waterway Permitting will occur.

URBANIZED AREA BOUNDARY SUMMARY (UAB) – The project area is not mapped within a UAB.

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	**N/A**	Mines – Underground	**N/A**

Explanation:

Petroleum Wells: One (1) petroleum well is located within the 0.5 mile search radius. The well is located 0.14 mile south of the east end 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	**2**	Confined Feeding Operations (CFO)	**N/A**
Voluntary Remediation Program	**1**	Brownfields	**N/A**
Construction Demolition Waste	**N/A**	Institutional Controls	**N/A**
Solid Waste Landfill	**N/A**	NPDES Facilities	**3**
Infectious/Medical Waste Sites	**N/A**	NPDES Pipe Locations	**N/A**
Leaking Underground Storage (LUST) Sites	**4**	Notice of Contamination Sites	**N/A**

Explanation:

Underground Storage Tank (UST) Sites: Two (2) UST sites are located within the 0.5 mile search radius.

- Springville Truck Stop, 5435 N SR 39, Agency Interest ID# 33072, is located adjacent to the project area on the west end of the project. According to the IDEM VFC, the USTs were closed by removal in 1996. Confirmation sampling was conducted at the time of removal and during a subsequent Phase II investigation. All analytical results were below the laboratory detection limits. No impact is expected.
- Family Express Corporation, 1874 W US 20, Agency Interest ID #33517 is located approximately 0.05 mile southwest of the western project terminus. IDEM conducted an Underground Storage Tank Inspection on November 1, 2016, and the facility was found to be out of compliance with the equipment, operating, and maintenance requirements set forth in Indiana's UST Rule 329 IAC 9; however, documentation reviewed does not indicate that a release occurred. No impact is expected.

Composting Facility: One (1) composting facility is located within the 0.5 mile search radius. E Farm LLC Composting Facility, N Old SR 39, Agency Interest ID#101151, is located 0.17 mile west of the west end of the project area. IDEM conducted a site inspection on June 17, 2020, and the facility was found to be out of compliance for an expired permit. No other violations concerning hazardous waste were observed. No impacts are expected.

Voluntary Remediation Program (VRP): One (1) VRP site is located within the 0.5 mile search radius. Jakes Auto Body, 8501 West Smith Street, Agency Interest ID#7139, is mapped 0.05 mile east of the east end of the project area; however, the icon for the site is incorrectly mapped and the site is actually located in Yorktown, Indiana. No impact is expected.

NPDES Facilities: Three (3) NPDES Facilities are located within the 0.5 mile search radius. The Singh Petroleum Corporation Convenience Center Expansion, 1877 W US HWY 20, Permit Number: INR10K748, is located 0.07 mile west of the west end of the project area. The permit for the facility expired September 1, 2020. No impact is expected.

Leaking Underground Storage Tank (LUST) Sites: Four (4) LUST sites are located within the 0.5 mile search radius. Three (3) LUST sites are located adjacent to or mapped near the project area along US 20.

- An unnamed facility with FID #1590 is mapped adjacent to the southwest of the western end of the project area. Only one (1) document associated with this FID was found, and it was for Heinold Citgo, Springville, and is part of a phone message. No additional documents were found except a note with the message stating that tanks were removed from the site in 1990, with a notice of contamination made to IDEM on November 9, 1990. Google Earth aerials indicate that what appears to be a truck stop with a motel on the southeast corner of SR 39 and US 20, and according to IDEM records for 1838 US Hwy 20, the site was also issued a Public Water Supply Permit for <25 people under the name Midway Motel. While unlikely, if excavation occurs in this area, proper handling, removal, and disposal of petroleum contaminated soil/groundwater may be necessary. In addition, analysis for lead will be necessary before disposal of soil/groundwater.

- K & B Food Mart #1/Former Heinold Citgo, 2300 Central Avenue, Agency Interest ID # 19918 is mapped approximately 0.05 mile southwest of the western project terminus; however, the site is actually located in Lake Station, Indiana. The Family Express discussed above under the UST Section is actually at this location. No impact is expected.
- Singh Petroleum Corporation, 1877 West Highway US 20, Agency ID # 33315 is located approximately 0.05 mile northwest of the western end of the project area. According to documents in the IDEM VFC, free product is present at the site and quarterly groundwater monitoring is ongoing. Depth to the free product/shallow groundwater aquifer ranges from 17 to 24 feet below ground surface. Since the maximum anticipated depth of excavation for the project is six (6) feet below ground surface and the project area is 0.05 mile to the east, no impact is expected.

ECOLOGICAL INFORMATION SUMMARY

The LaPorte 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 range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFW's IPaC System for Listed Bat Consultation for INDOT Projects".

RECOMMENDATIONS SECTION

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

INFRASTRUCTURE:

Recreational Facilities: Springfield Fen Nature Preserve is located adjacent to the project area. Coordination with IDNR Division of Nature Preserves will occur.

Pipelines: Two (2) pipelines, Wolverine Pipeline Co. and Northern Indiana Public Service Co., are mapped through the project area. Coordination with INDOT Utilities and Railroads will occur.

Cemeteries: One (1) cemetery, Rossburg Cemetery, is located adjacent to the project area. A Cemetery Development Plan may be required since this project is within 100 feet of the cemetery. Coordination with INDOT Cultural Resources will occur.

Managed Lands: Springfield Fen Nature Preserve is located adjacent to the project area. Coordination with IDNR Division of Nature Preserves will occur.

WATER RESOURCES:

The presence of the following water resources will require the preparation of a Waters of the U.S. Report and coordination with INDOT ESD Ecology and Waterway Permitting:

NWI - Wetlands: Five (5) NWI-Wetland polygons are located adjacent to the project area.

Rivers and streams: One (1) stream segment flows through the project area.

URBANIZED AREA BOUNDARY: N/A

MINING/MINERAL EXPLORATION: N/A

HAZARDOUS MATERIAL CONCERNS:

Leaking Underground Storage Tank (LUST) Sites:

- An unnamed facility with FID #1590 is mapped adjacent to the southwest of the western end of the project area. Only one (1) document associated with this FID was found, and it was for Heinold Citgo, Springville, and is part of a phone message. No additional documents were found except a note with the message stating that tanks were removed from the site in 1990, with a notice of contamination made to IDEM on November 9, 1990. Google Earth aerials indicate that what appears to be a truck stop with a motel on the southeast corner of SR 39 and US 20, and according to IDEM records for 1838 US Hwy 20, the site was also issued a Public Water Supply Permit for <25 people under the name Midway Motel. While unlikely, if excavation occurs in this area, proper handling, removal, and disposal of petroleum contaminated soil/groundwater may be necessary. In addition, analysis for lead will be necessary before disposal of soil/groundwater.

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 USFW's IPaC System for Listed Bat Consultation for INDOT Projects".

INDOT Environmental Services concurrence: Marlene Mathas Digitally signed by Marlene Mathas Date: 2020.10.27 13:17:40 -04'00' (Signature)

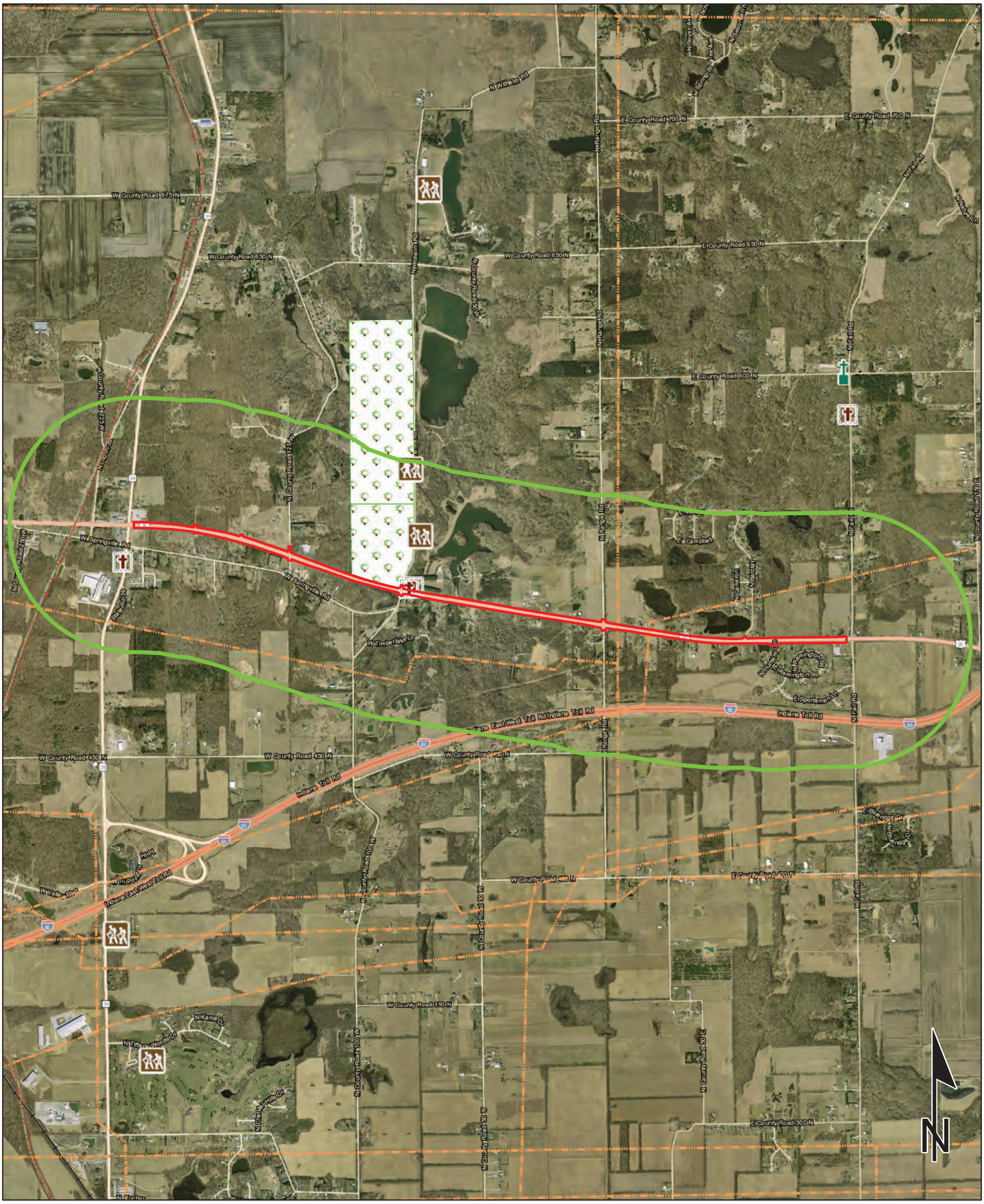
Prepared by:
Hannah Bays
Environmental Scientist
Butler, Fairman and Seufert, Inc.

Graphics:

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

SITE LOCATION: YES
INFRASTRUCTURE: YES
WATER RESOURCES: YES
URBANIZED AREA BOUNDARY: N/A
MINING/MINERAL EXPLORATION: YES
HAZARDOUS MATERIAL CONCERNS: YES

Red Flag Investigation - Infrastructure
US 20 Auxiliary Lanes, Two Way Left Turn Lanes
Des No. 1702993, US 20 from 400' east of SR 39 to 2.85 miles east of SR 39
LaPorte County, Indiana



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

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

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

Red Flag Investigation -Water Resources
US 20 Auxiliary Lanes, Two Way Left Turn Lanes
Des No. 1702993, US 20 from 400' east of SR 39 to 2.85 miles east of SR 39
LaPorte County, Indiana

Sources:

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

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

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
US 20 Auxiliary Lanes, Two Way Left Turn Lanes
Des No. 1702993, US 20 from 400' east of SR 39 to 2.85 miles east of SR 39
LaPorte County, Indiana

Sources:

Non Orthophotography

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

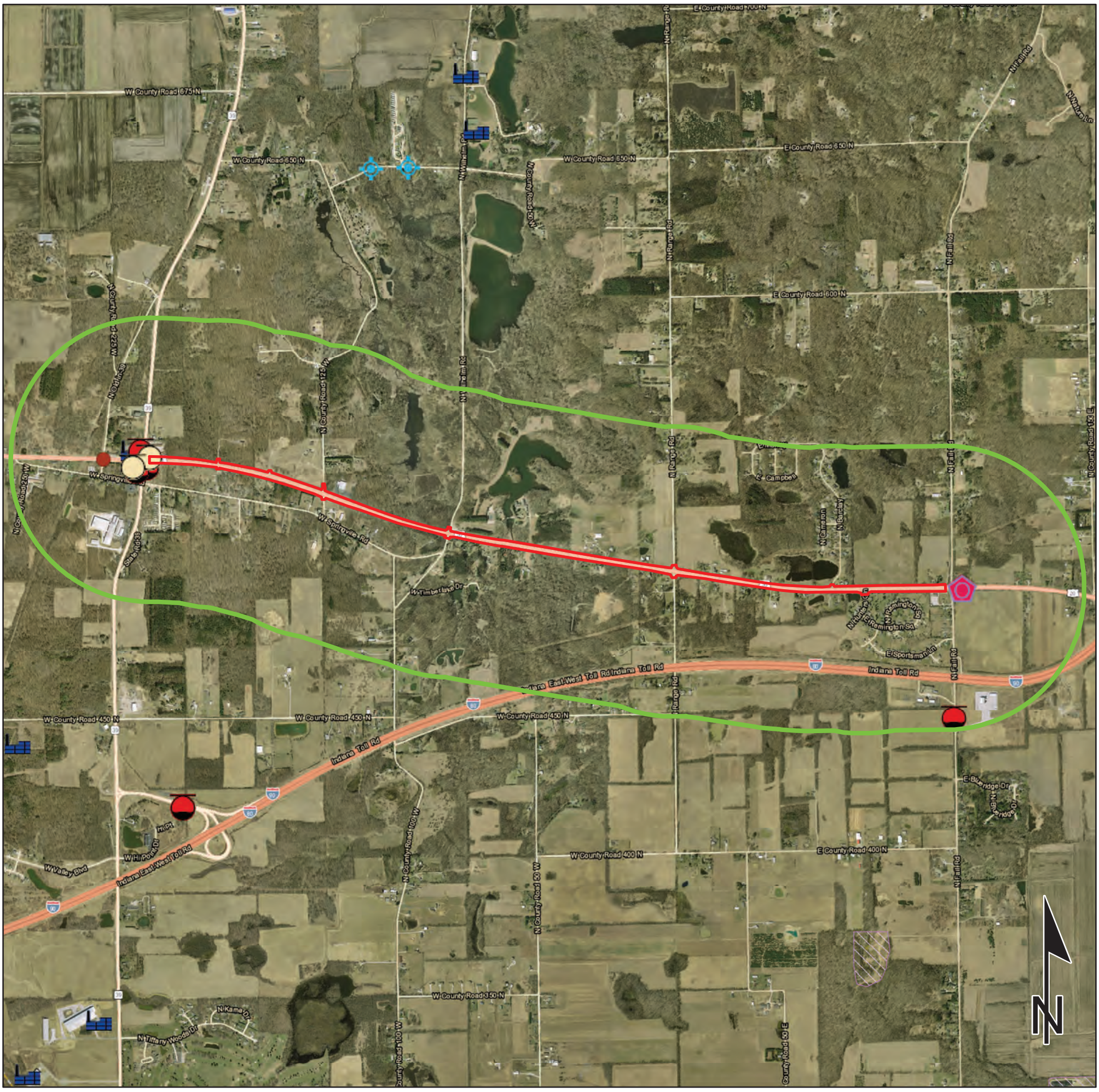
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

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
US 20 Auxiliary Lanes, Two Way Left Turn Lanes
Des No. 1702993, US 20 from 400' east of SR 39 to 2.85 miles east of SR 39
LaPorte 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

0.5 0.25 0 0.5 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)

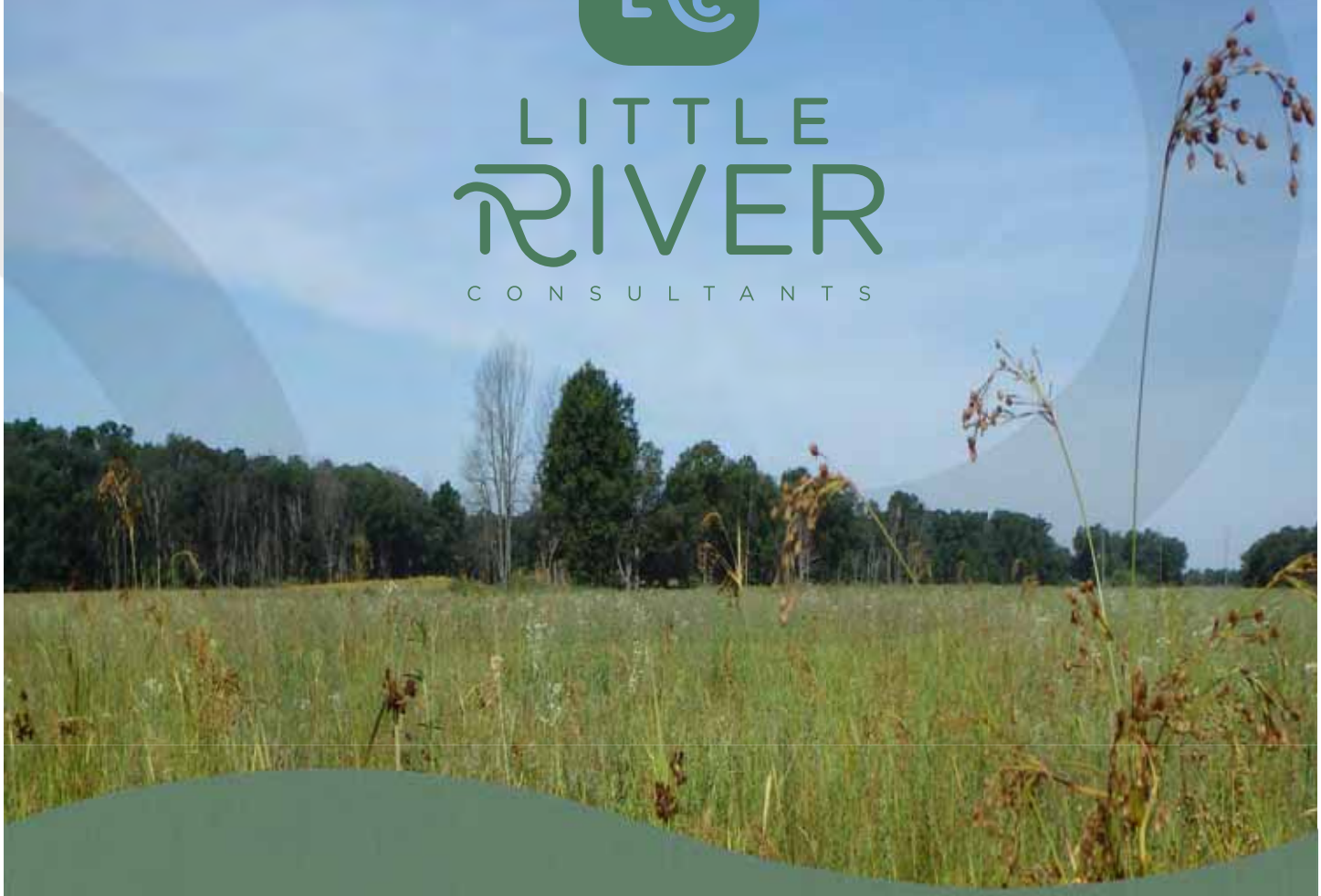
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

APPENDIX F: ECOLOGICAL AND WATER RESOURCES

EXPERIENCED | RELIABLE | CREATIVE

- LITTLE RIVER CONSULTANTS -
PROJECT 21-024A | R. Baker
9675 SOUTH CR 100 EAST, CLAYTON, IN

LITTLE RIVER CONSULTANTS



WETLAND AND WATERBODY DELINEATION

US 20 Roadway Improvements
400 feet east of SR 39 to 2.85 miles east of SR 39 on US 20
Laporte County, Indiana

INDOT Des. No. 1702993

Field Work Completed: June 14-16, 2021
Report Date: December 9, 2021

PREPARED FOR PRIME CONSULTANT:
Butler, Fairman & Seufert, Inc.
8450 Westfield Blvd., Suite 300
Indianapolis, IN 46240-8302

PREPARED BY:
Courtney Haverbusch
courtney@littleriverconsultants.com
Office Phone: 317-702-7291
Little River Consultants, LLC
9675 South CR 100E
Clayton, Indiana 46118

1.0 INTRODUCTION

1.1 Project Information

Dates of Field Reconnaissance: June 14-16, 2021
Location: Sections 1 & 2; Township: 37N; Range: 3W
Section 7; Township: 37N; Range: 2W
Springville Quadrangle (1980)
Laporte County, IN
US 20 from 400 feet east of SR 39 to 2.85 miles east of SR 39
41.685108, -86.731842

1.2 Project Description

The proposed project is located in northern Laporte County, Indiana. The project is approximately 2.9 miles long on US 20, beginning approximately 400 feet east of the SR 39 junction and ending approximately 2.85 miles east of the SR 39 junction. The project involves roadway improvements to US 20 in response to increased traffic resulting in an increase in the number and severity of accidents. Many of the accidents are due to left-turning vehicles waiting in the passing lane. Currently, US 20 has 4 lanes with a 2.5-foot wide median and 2-foot wide paved shoulders. The improvements would involve road widening to add a 16-foot wide two-way-left-turn lane (TWLTL) and expand the paved shoulders to 8-foot wide on both sides of US 20.

Along with the roadway improvements, nine small structures and two large culverts are scheduled for improvements. CLV-56660, which is currently an 82-foot long 3' x 2' concrete box culvert, will be extended to be 105-foot long. CLV-56661, which is currently a 85-foot long 24-inch clay pipe culvert, will be extended to be 106-foot long. CLV-56662, which is currently a 100.5-foot long 15-inch metal pipe culvert, will be replaced with a 124-foot long 15-inch metal pipe culvert. CLV-56663, which is currently a 108.9-foot long 15-inch metal pipe culvert, will be replaced with a 126-foot long 24-inch metal pipe culvert. CV 020-046-49.65, which is currently a 256.7-foot long 4' x 3' three-sided concrete culvert, will be extended to be 312.2-foot long. CLV-56664, which is currently a 98.1-foot long 15-inch reinforced concrete pipe, will be replaced with a 104-foot long 24-inch reinforced concrete pipe. CV 020-046-50.05, which is currently a 95.7-foot long 18' x 5.3' concrete box culvert, will be extended to be 126.5-foot long. CLV 020-046-50.34, which is currently a 108.9-foot long 15-inch pipe, will be replaced with a 106-foot long 18-inch pipe. CLV 020-046-50.53, which is currently a 116.5-foot long 30-inch pipe, will be cleaned out. CLV-56665, which is currently a 92.5-foot long 24-inch clay pipe, will be replaced with a 121-foot long 30-inch clay pipe. CLV-56666, which is currently an 87-foot long 30-inch reinforced concrete pipe, will be extended to be 95-foot long. Table 1 below summarizes the planned structure improvements.

Table 1: Small Structures and Culvert Improvements Summary Table

Structure ID	Lat/Long	Existing Type	Existing Length	Proposed Type	Proposed Length	Associated Channel
CLV-56660	41.685128 -86.731319	3' X 2' concrete box	82'	3' X 2' concrete box	105'	Non-Jurisdictional Channel 1
CLV-56661	41.684439 -86.727389	24' concrete pipe	85'	24' concrete pipe	106'	No defined channel
CLV-56662	41.684150 -86.726208	15-inch metal pipe	100.5'	15-inch metal pipe	124'	No defined channel
CLV-56663	41.683633 -86.724297	15-inch metal pipe	108.9'	24-inch metal pipe	126'	* No defined channel
CV 020-046-49.65	41.682592 -86.720514	3' x 3' three-sided concrete culvert	256.7'	3' x 3' three-sided concrete culvert	312.2'	Non-Jurisdictional Channel 2
CLV-56664	41.681206 -86.713281	12-inch reinforced concrete pipe	98.1'	24-inch reinforced concrete pipe	104'	* No defined channel

CV 020-046-50.05	41.680922 -86.711119	18' x 5.3' concrete box	95.7'	18' x 5.3' concrete box	126.5'	UNT to Galena River
CLV 020-046-50.34	41.680444 -86.707489	15-inch pipe	108.9'	18-inch pipe	106'	No defined channel
CLV 020-046-50.53	41.680047 -86.704206	30-inch pipe	116.5'	N/A	N/A	No defined channel
CLV-56665	41.679514 -86.699633	24-inch concrete pipe	92.5'	30-inch concrete pipe	131'	* No defined channel
CLV-56666	41.678578 -86.687578	30-inch reinforced concrete pipe	87'	30-inch reinforced concrete pipe	95'	No defined channel

* Indicates the structure does not lie within the Investigated Areas. No potential waterways were identified at these structures by desktop review.

In preparation for the roadway improvement project, a desktop review of the entire length of the project area was conducted by Butler, Fairman & Seufert (BFS) staff to identify areas with the potential for water resources. That desktop review included online investigation of feature crossings, previously mapped wetlands and NHD features, and hydric soils. BFS then identified six separate Investigation Areas that would need further investigation. This approach and the proposed onsite investigation areas were approved by INDOT. A wetland and waterway delineation was then conducted by Little River Consultants at the six separate Investigation Areas identified along the roadway improvement project. The general project vicinity is shown on Exhibit 1a, the Investigation Areas within the roadway project area are shown on Exhibit 1b, and the location and study limits of the Investigation Areas are shown on Exhibits 2-7.

Land use within the project boundary is primarily roadway, agricultural fields, residential lawns and wooded areas. Beyond the project limits, land use is a mix of agricultural lands, low to medium density residential, and woodlands. Aerial photographs showing land use in the immediate vicinity of the Investigation Areas can be found on Exhibit 6.

2.0 DESKTOP RECONNAISSANCE

Prior to conducting field work, Little River staff reviewed the U.S. Geological Survey (USGS) topographic mapping (Exhibits 2 & 3), U.S. Fish & Wildlife Service (USFWS) National Wetlands Inventory (NWI) Map (Exhibit 4), Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) (Exhibit 4), USGS National Hydrography Dataset (NHD) (Exhibit 4), U.S. Department of Agriculture (USDA) Web Soil Survey (Exhibit 5), and current aerial photography (Exhibits 6). These resources were used to identify potential wetlands and waterways within the project limits and establish historic conditions.

2.1 Soils

According to the Natural Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) Database for Laporte County, Indiana, nine soil types are present within the project area. Table 2 summarizes the soil types, which Investigation Areas each soil type was found, the drainage class, flooding and ponding frequency, the depth to water table, and hydric rating of each soil type. Exhibit 5 shows the orientation of the soils mapped at each Investigation Area.

Table 2: Soil Survey Data Regarding Hydrology and Hydric Soil

Soil Name	Soil Symbol	Investigation Area(s)	Drainage Class	Flooding Frequency	Ponding Frequency	Depth to Water Table	Hydric Rating
Chelsea fine sand, 2-6% slopes	ChB	1, 2	Excessively Drained	None	None	>78.75 in	0
Chelsea fine sand, 6-12% slopes	ChC	1	Excessively Drained	None	None	>78.75 in	0

Fluvaquents, loamy	Fh	3	Somewhat Poorly Drained	Frequent	Frequent	0 in	100
Houghton muck, undrained, 0-1% slopes	Hm	4, 5	Very Poorly Drained	None	Frequent	11.8 in	100
Riddles loam, 6-12% slopes, eroded	RlC2	4, 5	Well Drained	None	None	>78.75 in	0
Tracy sandy loam, 0-2% slopes	TcA	6	Well Drained	None	None	>78.75 in	0
Tracy sandy loam, 2-6% slopes	TcB	5, 6	Well Drained	None	None	>78.75 in	0
Tracy sandy loam, 6-12% slopes, eroded	TcC2	3, 4, 5, 6	Well Drained	None	None	>78.75 in	0
Tracy sandy loam, 25-45% slopes	TcF	2	Well Drained	None	None	>78.75 in	0

2.2 National Wetland Inventory (NWI) Information

The NWI Maps show one wetland is mapped within Investigation Area 5 and wetlands are mapped in the vicinity of Investigation Areas 3, 4, 5, and 6 (Exhibit 4). A freshwater forested/shrub wetland (PFO1C) is mapped partially within the southwestern corner of Investigation Area 5. A lake (L1UBHh) is mapped approximately 10 feet north of Investigation Area 3. A freshwater forested/shrub wetland (PFO1C) is mapped approximately 25 feet south of Investigation Area 4. A freshwater emergent wetland (PEM1B) is mapped approximately 30 feet north of Investigation Area 5. Three wetlands are mapped in the vicinity of Investigation Area 6, including a freshwater pond (PUBGx) approximately 130 feet north of the project area, another freshwater pond (PUBGx) approximately 50 feet south of the project area, and a freshwater emergent wetland (PEM1C) approximately 40 feet south of the project area.

2.3 HUC

12 Digit Hydrologic Unit Code: 040400010205
12-Digit Hydrologic Unit Name: Headwaters South Branch Galien River

2.4 Additional Information

A review of the USGS topo maps (Exhibits 2 & 3) shows one stream crossing US 20 at Investigation Area 3 through CV 020-046-50.05. The NHD map (Exhibit 4) shows multiple ditches, connectors and streams throughout the project area. At Investigation Area 1, 3 roadside ditches, 2 connectors, and 4 streams are mapped. At Investigation Area 2, 3 streams are mapped. At Investigation Area 3, 1 stream and 1 roadside ditch are mapped. The stream identified on the NHD map at Investigation Area 3 corresponds to the stream identified on the USGS topo map. At Investigation Area 4, no water features are mapped. At Investigation Area 5, 1 stream is mapped. At Investigation Area 6, 2 streams, 2 connectors and 1 roadside ditch is mapped. The FEMA map (Exhibit 4) shows no floodplain areas mapped within any of the Investigation Areas. Segments of a few of the roadside ditches throughout the Investigation Areas and the stream identified on the USGS topo map and the NHD map at Investigation Area 3 can also be seen on the aerial photography (Exhibit 6).

2.5 Attached Documents

Maps reviewed as part of the desktop reconnaissance are attached to this report as follows:

Exhibit 1 – Project Vicinity
Exhibit 2 – USGS Quadrangle Map
Exhibit 3 – USQS Quadrangle Map Zoomed In
Exhibit 4 – Wetland, Floodplain and Flowline Map
Exhibit 5 – Soil Survey

Exhibit 6 – Aerial Photograph
Exhibit 7 – Feature Locations

Photographs of the project can be found in Appendix A. Wetland Data Sheets are included in Appendix B. The Pre-JD form is located in Appendix C. The locations of all photo points, data points, and mapped features are shown on Exhibit 7.

3.0 FIELD RECONNAISSANCE

Onsite data collection was conducted June 14 through 16, 2021, by Shannon Bonifacio and Courtney Haverbusch. Local precipitation data was reviewed to provide context for observations of hydrology. Precipitation data on the Community Collaborative Rain, Hail, and Snow Network website (Cocorahs.org) showed the area received approximately 1.5 inches of precipitation in the 2 weeks preceding the site visit. Three significant rain events occurred on June 8, 9 & 11, 2021, resulting in 0.48, 0.70, and 0.29 inches of precipitation, respectively. Field data collection was based on the technical criteria presented in the 1987 U.S. Army Corps of Engineers Wetlands Delineation Manual (1987 Corps Manual) and 2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region Version 2.0 (Regional Supplement). Field methods did not deviate from standard methods found in the 1987 Corps Manual or the Regional Supplement. The locations of identified streams, wetlands, and data points were mapped using sub-meter accurate GPS.

Stream conditions such as morphology, substrate, and riparian habitat were recorded, along with measurements of width and depth at the ordinary high water mark (OHWM). Jurisdictional wetland and stream determinations were based on the Navigable Waters Protection Rule that went into effect on June 22, 2020.

3.1 Waterways

All runoff in the project area drains into the Galena River, which is north of US 20 and the Investigation Areas. The Galena River drains into the South Branch of Galien River, approximately 9 miles downstream of the project area and approximately 6.3 miles to the northeast of the project area. The Galien River is a traditional navigable water (TNW). The stream identified at Investigation Area 3 on the USGS topo map and the NHD map was identified onsite (UNT to Galena River). Roadside ditches identified on the NHD map at Investigation Areas 1, 3, and 6, were also identified onsite. All waterways identified onsite are shown on Exhibit 7, and photos are included in Appendix A.

3.1.1 UNT to Galena River

UNT to Galena River is located in Investigation Area 3 and flows north under US 20 through culvert CV 020-046-50.05. It flows into the Galena River north of the project area via a lake. It is a dashed blue-line (intermittent) USGS stream symbol shown on the 1980 Springville Quadrangle (Exhibits 2 & 3). Based on field observations, UNT to Galena River appears to be perennial. StreamStats reports the upstream drainage area of UNT to Galena River as 3.405 square miles. The area surrounding the UNT, north of US 20, includes Wetland 1 and a mowed area along the fence line. The area surrounding the UNT, south of US 20, includes a wooded area and Wetland 2. UNT to Galena River drains to the Galien River, a TNW. As a relatively permanent waterway that directly connects to a TNW, it is anticipated that UNT to Galena River would be considered a Water of the U.S.

UNT to Galena River is shown in photos 112, 113, 115, 121, 123, 133, 135, 136, 138, 141, 142, and 143. UNT to Galena River has mud substrate, riffle/pool complexes, and limited riparian cover. Approximately 190 linear feet of stream falls within the project area. The creek is moderately sinuous with riffle and pool complexes along this reach. UNT to Galena River has an ordinary high-water mark (OHWM) of 18’ 3” wide and 5” deep north of US 20, and an OHWM of 10’10” wide and 7” deep south of US 20. The Cowardin classification is R3UB3 (riverine, upper perennial, unconsolidated bottom, mud). Quality of UNT to Galena River is average since there is some sinuosity, riffle and pool complexes, and some riparian cover south of US 20.

3.1.2 Roadside Ditches

Twelve roadside ditches were also identified during the site visit, distributed across all six investigation areas.

Three roadside ditches were identified at Investigation Area 1. Roadside Ditch 1 (RD1) runs along the north side of US 20 for nearly the entire length of the area. RD1 can be seen in photos 6, 8-10, 12, 14, 16, 19-24, and 26-30. RD2 runs along the south side of US 20 at the east end of the area. RD2 can be seen in photos 32-34, 36-38, and 40-42. RD3 runs along the south side of US 20 at the west end of the area. RD3 can be seen in photos 48, 50, 52, and 54. All of the roadside ditches discussed above were shallow, grassy ditches with no defined bed and banks. Dominant vegetation in the roadside ditches at Investigation Area 1 were facultative upland species including wild onion (*Allium cernuum* – FACU), tall fescue (*Schedonorus arundinaceus* – FACU), yellow sweetclover (*Melilotus officinalis* – FACU), hairy aster (*Symphyotrichum pilosum* – FACU), orchard grass (*Dactylis glomerata* – FACU) and Kentucky blue grass (*Poa pratensis* – FAC).

One roadside ditch was identified at Investigation Area 2. RD4 is concrete and runs along the north side of US 20 along the guardrail and down the hill into the woods. RD4 can be seen in photos 60, 64, and 66. Dominant vegetation in the woods bordering RD4 were facultative upland species including Virginia creeper (*Parthenocissus quinquefolia* – FACU), mayapple (*Podophyllum peltatum* – FACU), multiflora rose (*Rosa multiflora* – FACU), and sugar maple (*Acer saccharum* – FACU).

Three roadside ditches were identified at Investigation Area 3. RD5 runs along the north side of US 20 just to the first driveway from the west end of area. RD5 can be seen in photos 102 and 104. RD6 runs along the north side of US 20 east of UNT to Galena River. RD6 can be seen in photo 120. RD7 is concrete and runs along the south side of US 20 west of UNT to Galena River. RD7 can be seen in photos 146 and 148. RD5 and RD6 were shallow, grassy ditches with no defined bed and banks. Dominant vegetation in RD5 were primarily facultative upland species including orchard grass (FACU), wild onion (FACU), and tall fescue (FACU). Vegetation in RD6 was primarily tall fescue (FACU). Dominant vegetation bordering RD7 included common periwinkle (*Vinca minor* – NI) covering the slope to the south and mowed tall fescue (FACU) on the slope to the north between US 20 and the ditch.

One roadside ditch was identified at Investigation Area 4. RD8 runs along the north side of US 20 for the entire length of the area. RD8 can be seen in photos 154, 165, 158, 160, 162, 164, 166, 168, 170, and 172. RD8 is a shallow, grassy ditch with no defined bed and banks. Vegetation in RD8 is dominated by tall fescue (FACU) and Kentucky blue grass (FAC).

Two roadside ditches were identified at Investigation Area 5. RD9 runs along the north side of US 20 for most of the length of the area. RD9 can be seen in photos 200, 202, 204, and 206. RD10 runs along the south side of US 20 for the entire length of the area. RD10 can be seen in photos 208, 210, 212, 214, 218, and 220. RD9 and RD10 were shallow, grassy ditches with no defined bed and banks. Dominant vegetation in RD9 included orchard grass (FACU), Kentucky blue grass (FAC), and tall fescue (FACU). Dominant vegetation in RD10 included tall fescue (FACU), reed canary grass (*Phalaris arundinacea* – FACW), queen Anne's lace (*Daucus carota* – UPL), common ragweed (*Ambrosia trifida* – FAC), and poison ivy (*Toxicodendron radicans* – FAC).

Two roadside ditches were identified at Investigation Area 6. RD11 runs along the north side of US 20 for a short distance between N Barclay and the nearest driveway to the east. RD11 can be seen in photo 228. RD12 runs along the north side of US 20 from the driveway east of N Barclay to the eastern edge of the investigation area. RD12 can be seen in photos 230, 232, 234, 236, 238, 240, 242, 244, 246, 248, 250, and 252. RD11 and RD12 were shallow, grassy ditches with no defined bed and banks. Vegetation in RD11 was primarily tall fescue (FACU). Dominant vegetation in RD12 included orchard grass (FACU), tall fescue (FACU), and Kentucky blue grass (FAC).

None of the roadside ditches identified across the six investigation areas appear to be jurisdictional. They do not replace natural channels, were not excavated through wetlands, have no defined beds and banks,

and they only carry ephemeral, not relatively permanent or seasonal, flow. All of the roadside ditches appear to have been excavated in and wholly drain uplands. As such, none of the roadside ditches meet the definition of Waters of the U.S.

All roadside ditches are shown on Exhibit 7, and photos are included in Appendix A.

3.1.3 Channels

Three channels, Channels 1, 2, and 3, were found within Investigation Areas 1 and 2. Channel 1 at Investigation Area 1 was not previously identified on the NHD or USGS topo maps (Exhibits 2-4), but Channels 2 and 3 at Investigation Area 2 were identified on the NHD map (Exhibit 4).

Channel 1 was identified at CLV-56660 at the west end of Investigation Area 1 and can be seen in photos 5, 7, and 51. North of US 20, there is a bare path that indicates flow, however south of US 20 no channel is visible. Channel 1 has no defined bed and banks or OHWM. Based on the NHD, USGS topo maps, and what was observed in the field, it appears that Channel 1 is ephemeral in nature. Additionally, there was no flowing or standing water in the channel at the time of the site visit, and it does not connect to any other flowline or waterbody. As an ephemeral water feature that lacks a defined bed and banks and OHWM, Channel 1 is not anticipated to be considered a Water of the U.S.

Channel 2 flows northeast through CV 020-046-49.65 under US 20 in Investigation Area 2 and can be seen in photos 75, 77, 91, and 92. The structure inlet (south of US 20) is open, however north of US 20 the structure is blocked by soil and debris. Channel 2 continues north from the blocked structure as a small undefined channel. No defined bed, banks or OHWM are present for Channel 2 either north or south of US 20. Channel 3 flows west into Channel 2 south of the structure inlet south of US 20. Channel 3 can be seen in photo 94 and does not have a defined bed, banks, or OHWM. Based on the NHD map, Channels 2 and 3 eventually drain to the Galena River and subsequently the Galien River. However, both Channels 2 and 3 appear to be ephemeral in nature and neither had any flowing or standing water present at the time of the site visit. As ephemeral features that lack defined beds and banks and OHWMs, Channels 1 and 2are not anticipated to be considered Waters of the U.S.

All channels are shown on Exhibit 7, and photos are included in Appendix A.

3.1.4 Waterways Summary

Table 3 is a summary of potentially jurisdictional waterways identified within the project limits.

Table 3: Summary of Waterways

Feature	Photos	Lat/Long	OHWM	USGS Blue-Line	Substrate	Riffles, Pools	Quality	Stream Type	Likely Jurisdictional Water of the U.S.?
UNT to Galena River	112, 113, 115, 121, 123, 133, 135, 136, 138, 141, 142, 143	41.681106, -86.711075 (Area 3)	18’ 3” x 5” 10’10” x 7”	Yes	Mud	Yes	Average	R3UB3	Yes

3.2 Wetlands

Six potential wetland areas were investigated during the site visit. Data points (DP) were collected within the potential wetland areas where wetland conditions were most likely.

3.2.1 Wetland 1

Wetland 1 is located in Investigation Area 3 bordering both sides of UNT to Galena River north of US 20 and CV 020-046-50.05. Wetland 1 is approximately 0.044 acres in size within the investigation area boundaries. Since UNT to Galena River is anticipated to be a Water of the U.S. and Wetland 1 directly abuts UNT to Galena River, it is anticipated that Wetland 1 would also be considered a Water of the U.S.

DP3 was collected in an area with a large number of cattails (*Typha x glauca* – OBL) north of US 20 and west of UNT to Galena River where photos 105 and 106 were taken. Other vegetation identified at DP3 included Kentucky blue grass (FAC), side-flowering aster (*Symphyotrichum lateriflorum* – FACW), blue lettuce (*Lactuca biennis* – FAC), cleavers (*Galium aparine* – FACU), and common milkweed (*Asclepias syriaca* – FACU). Since cattails and Kentucky blue grass are the dominant species, the hydrophytic vegetation criterion was met. Multiple secondary hydrology indicators were found, including drainage patterns (B10), geomorphic position (D2), and FAC-Neutral test (D5), so the wetland hydrology criterion was met. The soil was also found to be hydric, meeting the Sandy Redox (S5) indicator. DP3 meets all three wetland criteria and is representative of conditions within Wetland 1. Wetland 1 is a palustrine emergent wetland (PEM) using the Cowardin Classification System. The quality of the wetland was considered poor due to its proximity to US 20.

DP4 was collected approximately 5 feet away from DP3 where photos 107 and 108 were taken and is characteristic of the upland area surrounding Wetland 1. Vegetation identified at DP4 included black medick (*Medicago lupulina* – FACU), tall fescue (FACU), narrowleaf plantain (*Plantago lanceolata* – FACU), and queen Anne's lace (UPL). With all vegetation classified as facultative upland or upland species, the vegetation failed to meet the wetland hydrophytic vegetation criterion. No hydrologic indicators were found, so the wetland hydrology criterion was not met. The soil was found to be non-hydric, so the wetland hydric soil indicator was not met. DP4 is not located within a wetland.

The wetland boundary was delineated using the presence of cattails as well as geomorphic position. The same indicators were used for Wetland 1 on either side of UNT to Galena River. Wetland 1 continues north of the project area along both the east and west edges of UNT to Galena River, but it was not delineated past the boundaries of the Investigation Area. The wetland data sheets are included in Appendix B and photos of Wetland 1 are included in Appendix A.

3.2.2 Wetland 2

Wetland 2 is located in Investigation Area 3 bordering the west side of UNT to Galena River south of US 20 and CV 020-046-50.05. Wetland 2 is approximately 0.051 acres in size. Since UNT to Galena River is anticipated to be a Water of the U.S. and Wetland 2 directly abuts UNT to Galena River, it is anticipated that Wetland 2 would also be considered a Water of the U.S.

DP5 was collected upslope of the wet depression found on the south side of US 20 west of UNT to Galena River where photos 125 and 126 were taken. Vegetation identified at DP5 included white ash (*Fraxinus americana* – FACU), Virginia creeper (FACU), queen Anne's lace (UPL), spotted jewelweed (*Impatiens capensis* – FACW), and hedge bindweed (*Calystegia sepium* – FAC). Since white ash, Virginia creeper, and queen Anne's lace are the dominant species and are all facultative upland and upland species, the vegetation failed to meet the wetland hydrophytic vegetation criterion. No hydrologic indicators were found, so the wetland hydrology criterion was not met. The soil was found to be non-hydric, so the wetland hydric soil indicator was not met. DP5 is not located within a wetland.

DP6 was collected within the wet depression found on the south side of US 20 west of UNT to Galena River where photos 127 and 128 were taken. Vegetation identified at DP6 included common reed (*Phragmites australis* – FACW), cattails (OBL), halberd-leaved tearthumb (*Persicaria arifolia* – OBL), and riverbank grapevine (*Vitis riparia* – FACW). With all vegetation identified as facultative wetland or obligate wetland

species, the vegetation meets the wetland hydrophytic vegetation criterion. Multiple primary and secondary hydrological indicators were found, including high water table (A2) at a depth of 3 inches, saturation (A3) at the surface, geomorphic position (D2), and FAC-Neutral test (D5), so the wetland hydrology criterion was met. The soil was found to be hydric, meeting the Histic Epipedon (A2) indicator. Due to the high organic matter content of the soil and the high water table, the soil pit was only dug to a depth of 6 inches as the soil kept washing away or disintegrating and a deeper slice couldn't be obtained. DP6 meets all three wetland criteria and is representative of conditions within Wetland 2. Wetland 2 is a palustrine emergent wetland (PEM) using the Cowardin Classification System. The quality of the wetland was considered average since it is surrounded by woods and borders a meandering stream.

The wetland boundary was delineated using the presence of cattails and common reed as well as pooling surface water and soil saturation at the surface. The wetland data sheets are included in Appendix B and photos of Wetland 2 are included in Appendix A.

3.2.3 Non-Wetland Areas

Four other potential wetland areas were investigated at Investigation Areas 1, 2, 4, and 5. Data points were taken within the area where wetland conditions were most likely.

DP1 was collected in RD1 north of US 20 near the middle of Investigation Area 1 where photos 17 and 18 were taken. Vegetation identified at DP1 included smooth brome (*Bromus inermis* – FACU), common milkweed (FACU), tall fescue (FACU), and wild onion (FACU). As all identified vegetation are facultative upland species, the vegetation failed to meet the hydrophytic vegetation criteria. No hydrology indicators were found, so the wetland hydrology criterion was not met. The soil was found to be non-hydric, so the wetland hydric soil indicator was not met. DP1 is not located within a wetland.

DP2 was collected in Channel 2 south of US 20 near the southside end of CV 020-046-49.65 at Investigation Area 2 where photos 95 and 96 were taken. Vegetation identified at DP2 included sugar maple (*Acer saccharum* – FACU), Virginia creeper (FACU), and yellow jewelweed (*Impatiens pallida* – FACW). Since sugar maple and Virginia creeper are the dominant species and are facultative upland species, the vegetation failed to meet the wetland hydrophytic vegetation criterion. One secondary hydrology indicator was found, geomorphic position (D2), however one secondary indicator is not enough for the wetland hydrology criterion to be met. The soil was found to be non-hydric, so the wetland hydric soil indicator was not met. DP2 is not located within a wetland.

DP7 was collected south of US 20 near the east end of Investigation Area 4 where photos 189 and 190 were taken. Vegetation identified at DP7 included slippery elm (*Ulmus rubra* – FAC), spotted jewelweed (FACW), prickly lettuce (*Lactuca serriola* – FACU), and reed canary grass (FACW). Since slippery elm, spotted jewelweed, and prickly lettuce are the dominant species, the vegetation meets with wetland hydrophytic vegetation criterion with the dominance test and prevalence index. One secondary hydrology indicator was found, FAC-Neutral test (D5), however one secondary indicator is not enough for the wetland hydrology criterion to be met. The soil was found to be non-hydric, so the wetland hydric soil indicator was not met. DP7 is not located within a wetland.

DP8 was collected south of US 20 in RD10 near the west end of Investigation Area 5 where the NWI wetland was mapped (Exhibit 4) and photos 215 and 216 were taken. Vegetation identified at DP8 included slippery elm (FAC), spotted jewelweed (FACW), tall fescue (FACU), reed canary grass (FACW), common reed (FACW), and wild parsnip (*Pastinaca sativa* – NI). With all listed species except wild parsnip identified as dominants, the vegetation meets the wetland hydrophytic vegetation criterion with the dominance test and prevalence index. One secondary hydrology indicator was found, FAC-Neutral test (D5), however one secondary indicator is not enough for the wetland hydrology criterion to be met. The soil was found to be non-hydric, so the wetland hydric soil indicator was not met. DP8 is not located within a wetland.

The wetland data sheets are included in Appendix B and photos of the surrounding areas and soil pits are included in Appendix A.

3.2.4 Wetland Summary

Table 4 is a summary of the data points collected within the investigated areas. Table 5 is a summary of the wetlands identified within the investigated areas.

Table 4: Data Point Summary

Data Point	Investigation Area	Latitude Longitude	Hydrophytic Vegetation	Hydric Soils	Wetland Hydrology	Wetland
DP1	1	41.684928 -86.729075	No	No	No	No
DP2	2	41.682406 -86.720886	No	No	Yes	No
DP3	3	41.681103 -86.711133	Yes	Yes	Yes	Yes
DP4	3	41.681119 -86.711133	No	No	No	No
DP5	3	41.680786 -86.711281	No	No	No	No
DP6	3	41.680761 -86.711286	Yes	Yes	Yes	Yes
DP7	4	41.680294 -86.707372	Yes	No	No	No
DP8	5	41.679911 -86.70425	Yes	No	No	No

Table 5: Summary of Wetlands

Wetland Name	Photos	Investigation Area	Lat/Long	Type	Total Acres	Quality	Likely Jurisdictional Water of the U.S.?
Wetland 1	110, 111, 112, 114, 116, 118, 121	3	41.681119 -86.711106	PEM	0.044	Poor	Yes
Wetland 2	123, 131, 133, 138, 141, 142	3	41.680739 -86.711236	PEM	0.051	Average	Yes

3.3 Open Water

There are no open water features located in the study area.

4.0 CONCLUSION

A meander survey of the site found 2 wetlands, 1 stream, 3 channels, and 12 roadside ditches. The stream, UNT to Galena River, is perennial in nature. UNT to Galena River is connected to a TNW, the Galien River, via the Galena River and is considered a Waters of the U.S. Channels 1, 2, and 3, are all ephemeral in nature and lack defined beds and banks and OHWMS. Further, the size, location, watershed, and flow regime of the channels result in an insubstantial effect on the chemical, physical, or biological integrity of the Galien River. As such, Channels 1, 2, and 3 are not anticipated to be Waters of the U.S.

Roadside Ditches within the investigation areas do not appear to fall under federal jurisdiction. They do not replace natural channels, were not excavated through wetlands, have no defined bed and banks, and carry ephemeral flow. Further, the size, location, watershed, and flow regime of the roadside ditches result in an insubstantial effect on the chemical, physical, or biological integrity of the Galien River. Ditches that are excavated or occur wholly in and drain uplands and do not carry relatively permanent flow are non-

jurisdictional. All identified roadside ditches appear to be ephemeral in nature, and are not relatively permanent and do not carry continuous flow at least seasonally. As such, none of the roadside ditches meet the definition of Waters of the U.S. as outlined by the Pre-2015 Waters of the U.S. regulatory guidance as outlined on the Clean Water Act following the *Rapanos v. United States* Supreme Court Decision (1986).

Wetlands 1 and 2 both directly abut UNT to Galena River, which is likely to be considered a Waters of the U.S., which means they meet the definition of adjacent wetland as outlined in the Clean Water Act guidance following the *Rapanos v. United States* Supreme Court Decision. As such, it is anticipated that both Wetlands 1 and 2 are also to be considered Waters of the U.S.

UNT to Galena River as well as Wetlands 1 and 2 should be presumed to be under the jurisdiction of both US Army Corps of Engineers (USACE) and Indiana Department of Environmental Management (IDEM). Every effort should be taken to avoid and minimize impacts to the stream and wetlands. Waterway permitting will be required if impacts will occur. If impacts exceed 300 linear feet or 0.1 acres, mitigation will be required. The INDOT Environmental Services Division should be contacted immediately if impacts will occur. The final determination of jurisdictional waters is ultimately made by the USACE. This report is our best judgment based on the guidelines set forth by the USACE.

5.0 ACKNOWLEDGEMENT

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.

Printed Name: Courtney Haverbusch

Signature, Title: C Haverbusch Project Scientist
Little River Consultants

6.0 REFERENCES

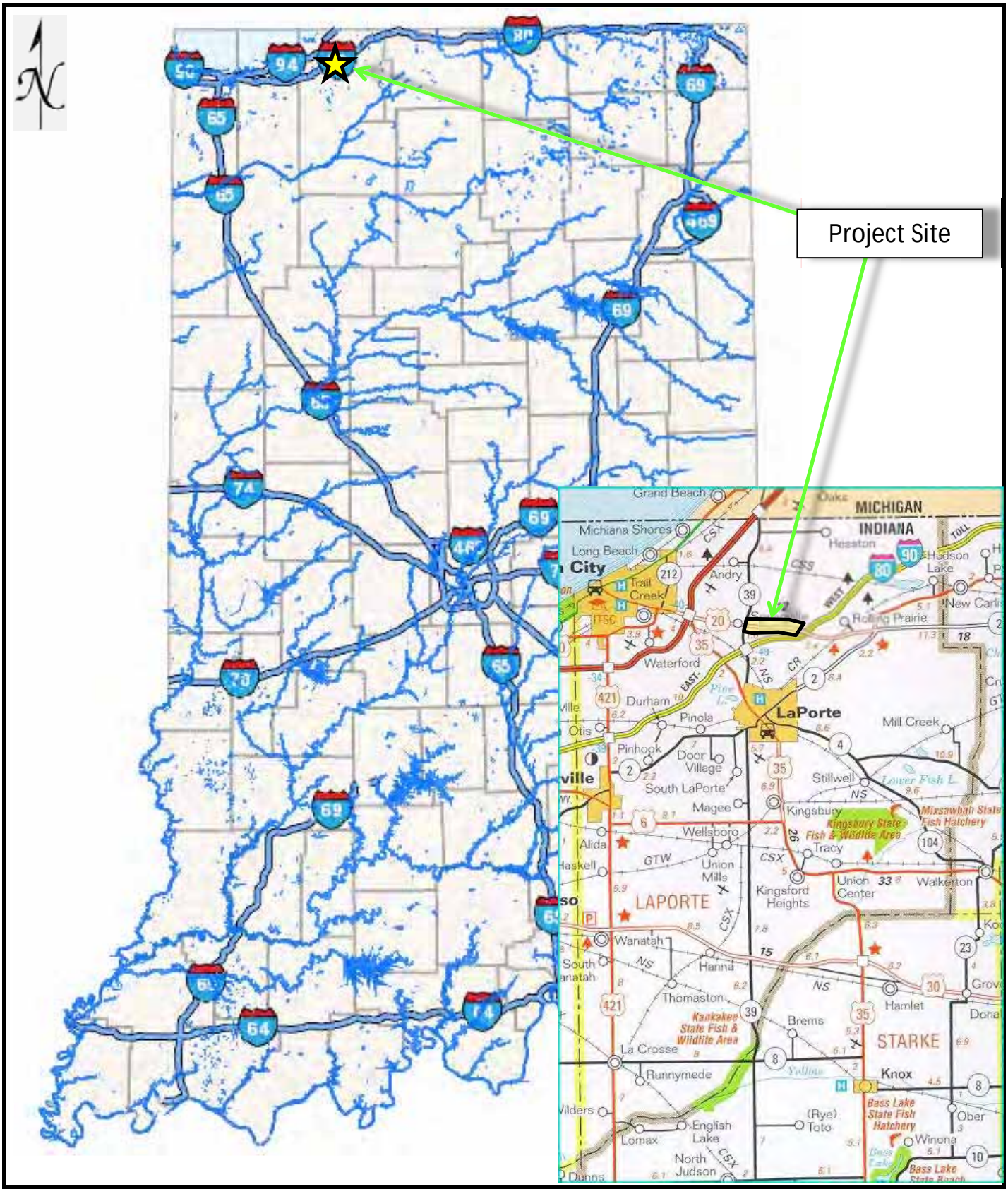
Navigable Waters Protection Rule, 85 CFR Part 328 (2020).

U.S. Army Corps of Engineers (USACE), Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterway Experiment Station, Vicksburg, Mississippi.

U.S. Army Corps of Engineers (USACE), Environmental Laboratory. 2012. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region Version 2.0. U.S. Army Engineer Research and Development Center, Vicksburg, Mississippi.

United States Department of Agriculture, Natural Resources Conservation Service (USDA). Web Soil Survey.

Exhibits

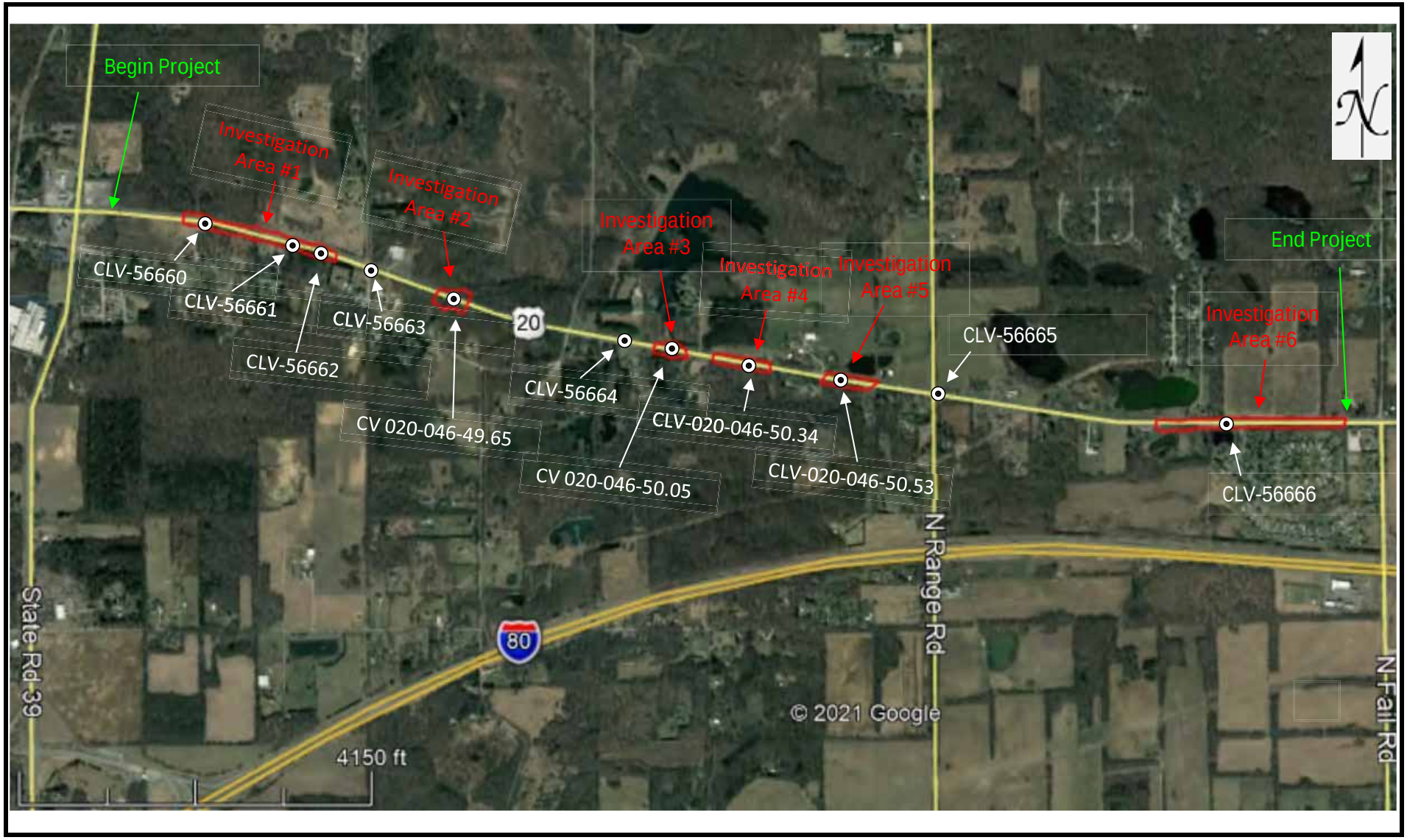


Project Vicinity

Created: June 9, 2021
Source: INDOT Transportation Map County Excerpt
Scale: No Scale
Proj No: 21-024A

Project Name: US 20 Roadway Improvements
Des No: 1702993
Location: US 20 400 feet east of SR 39 to 2.85 mi east of SR 39
Laporte County, IN

EX1a



Project Vicinity – Investigation Areas

Created: July 8, 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

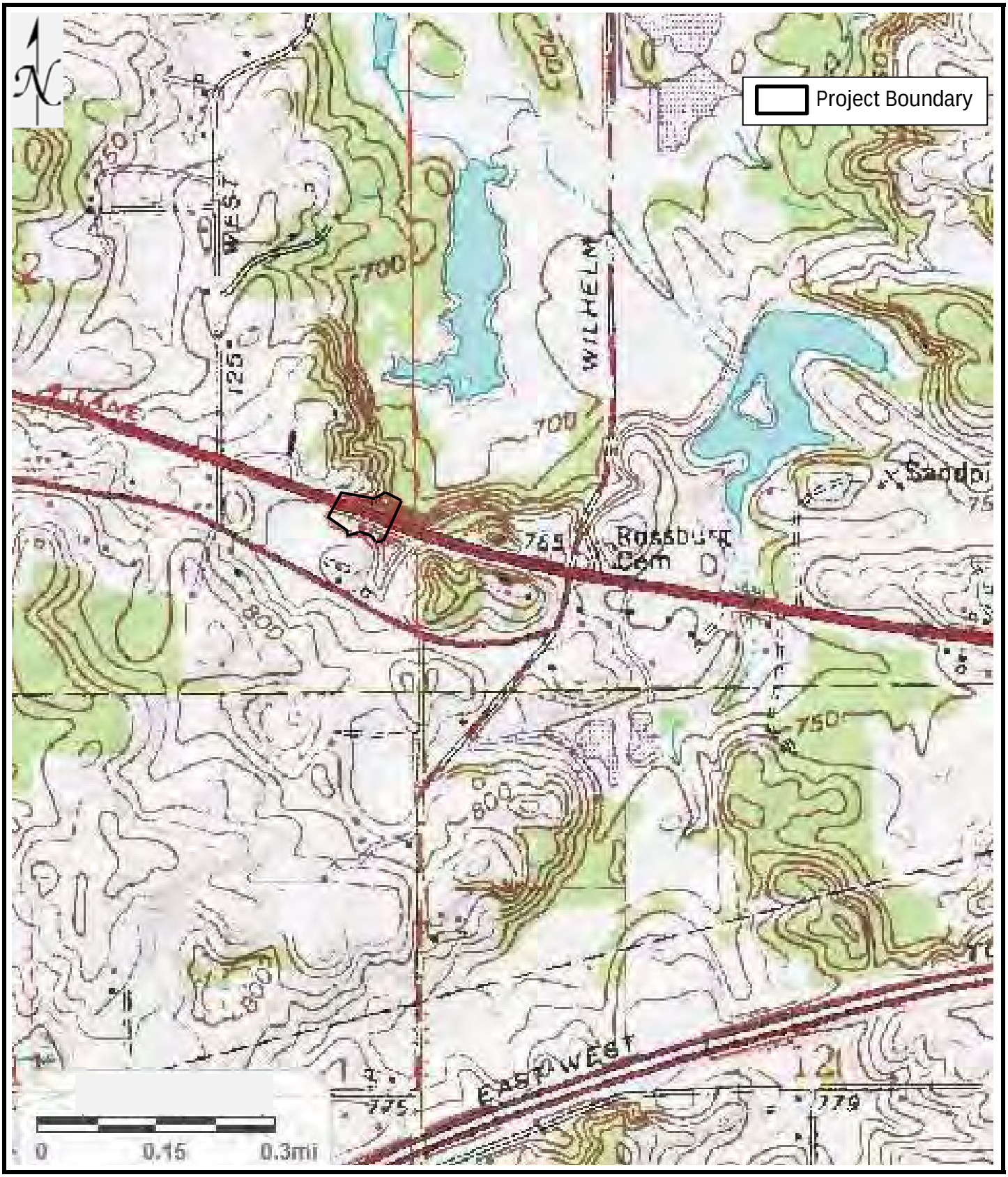
EX1b

USGS Quadrangle Map – Investigation Area 1

Created: June 23, 2021
Source: Ind anaMap USGS Spr ngv lle uad
Scale: As Shown

Project Name: US 20 Roadway Improvements Des No 1702993
Location: US 20 East of SR 39 Laporte County, IN
Project No: 21-024A

EX2a

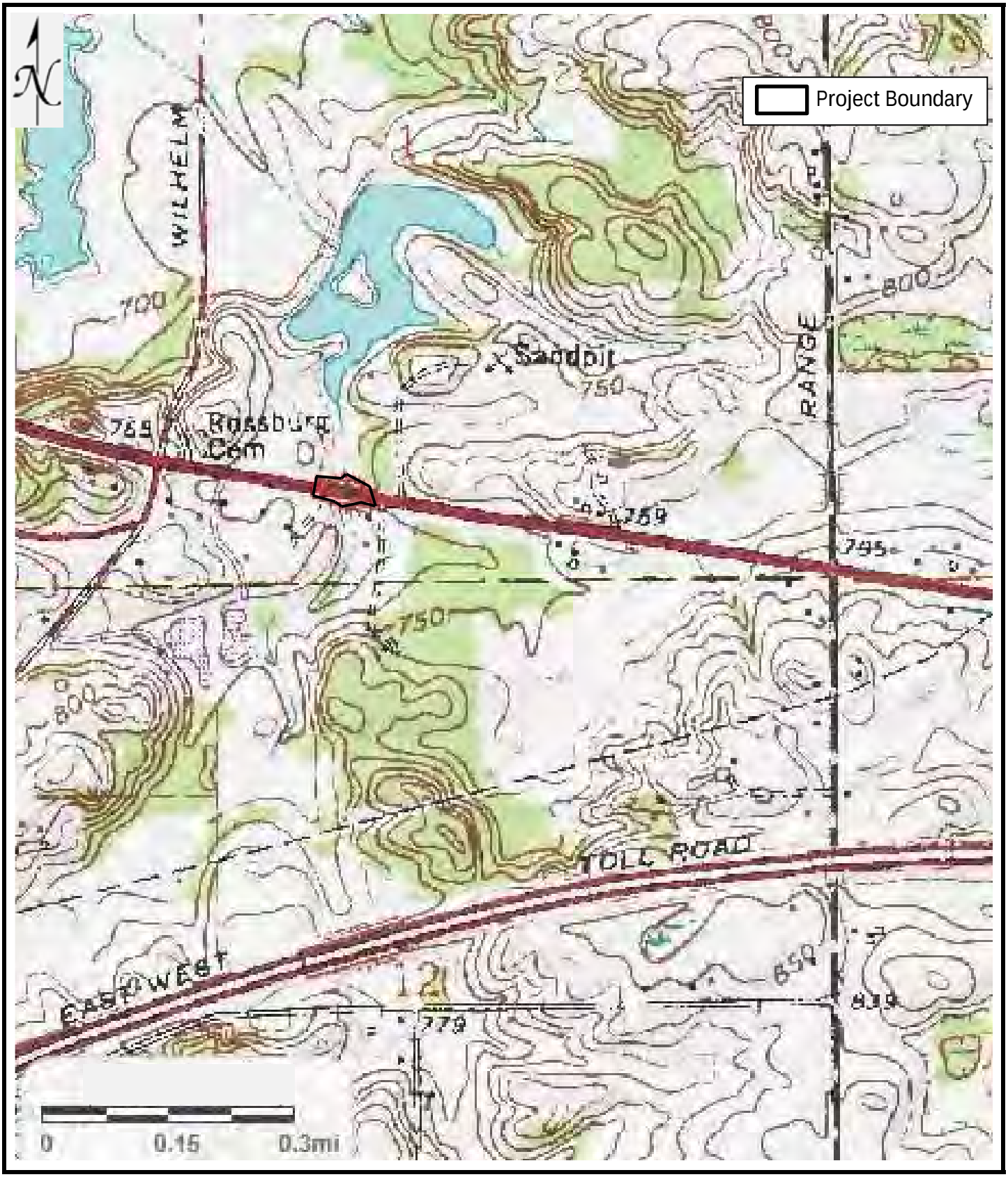


USGS Quadrangle Map – Investigation Area 2

Created: June 23, 2021
Source: Ind anaMap USGS Spr ngv lle uad
Scale: As Shown

Project Name: US 20 Roadway Improvements Des No 1702993
Location: US 20 East of SR 39 Laporte County, IN
Project No: 21-024A

EX2b

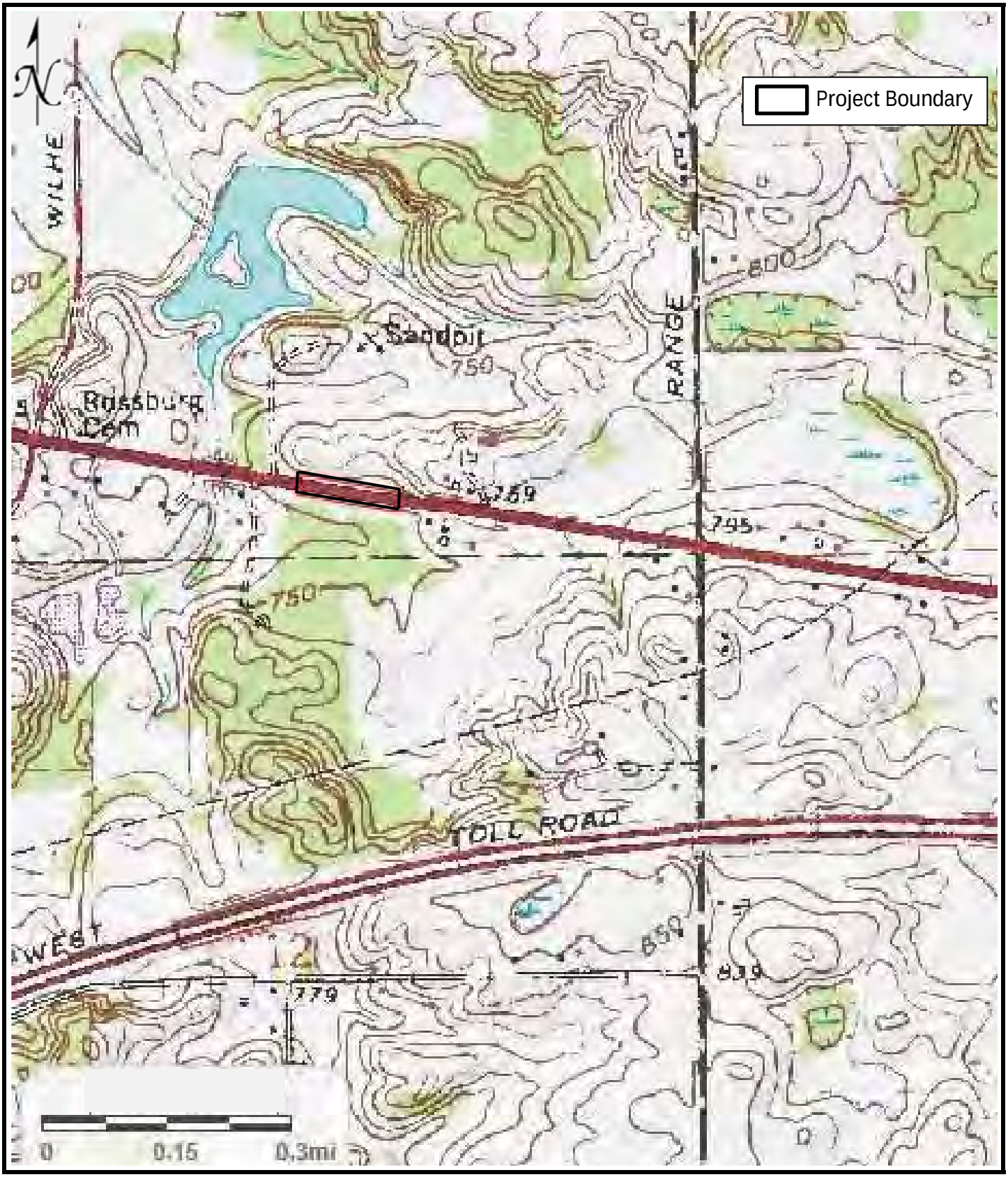


USGS Quadrangle Map – Investigation Area 3

Created: June 23, 2021
Source: Ind anaMap USGS Spr ngv lle uad
Scale: As Shown

Project Name: US 20 Roadway Improvements Des No 1702993
Location: US 20 East of SR 39 Laporte County, IN
Project No: 21-024A

EX2c



USGS Quadrangle Map – Investigation Area 4

Created: June 23, 2021
Source: Ind anaMap USGS Spr ngv lle uad
Scale: As Shown

Project Name: US 20 Roadway Improvements Des No 1702993
Location: US 20 East of SR 39 Laporte County, IN
Project No: 21-024A

EX2d

USGS Quadrangle Map – Investigation Area 5

Created: June 23, 2021
Source: Ind anaMap USGS Spr ngv lle uad
Scale: As Shown

Project Name: US 20 Roadway Improvements Des No 1702993
Location: US 20 East of SR 39 Laporte County, IN
Project No: 21-024A

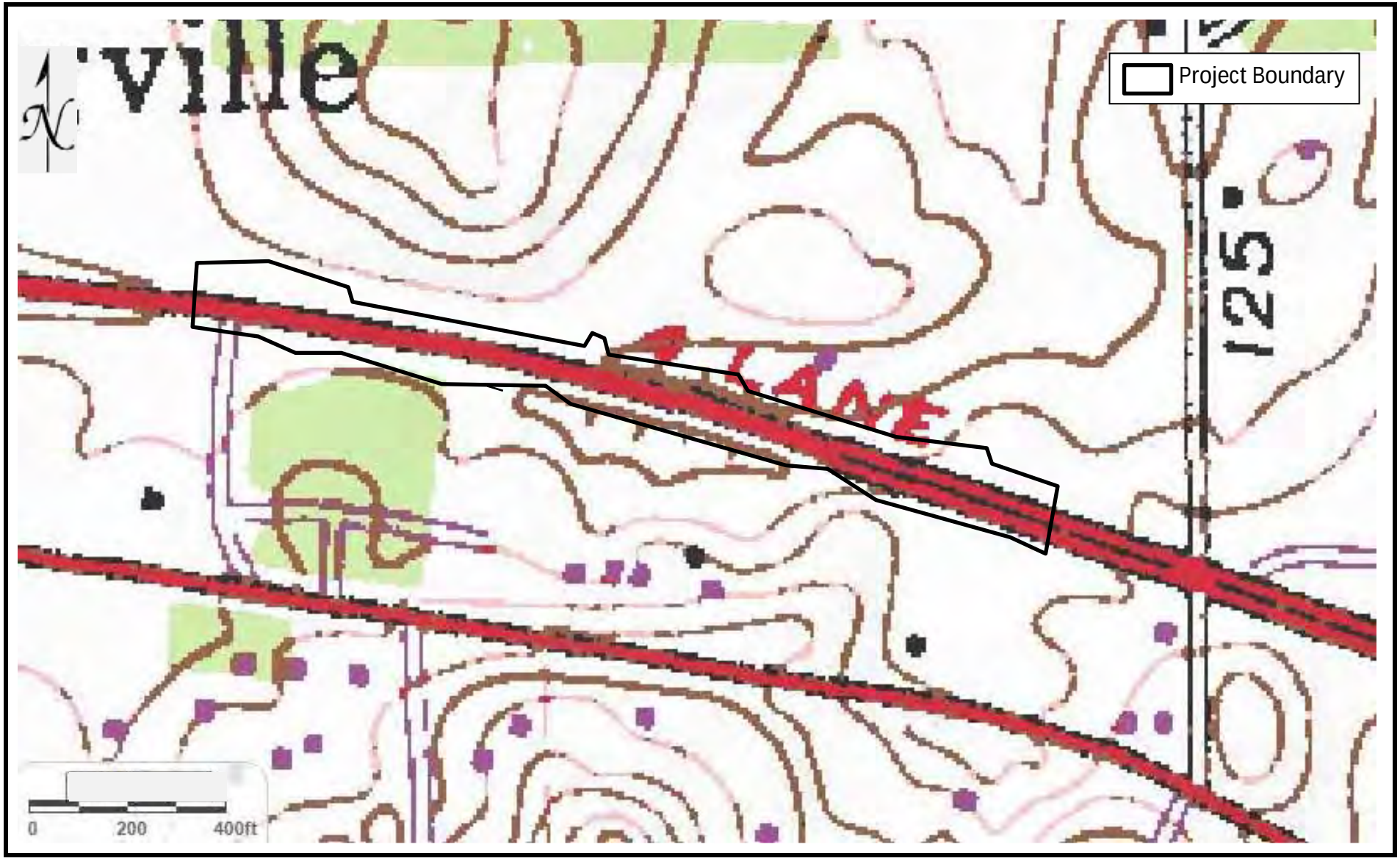
EX2e

USGS Quadrangle Map – Investigation Area 6

Created: June 23, 2021
Source: Ind anaMap USGS Spr ngv lle uad
Scale: As Shown

Project Name: US 20 Roadway Improvements Des No 1702993
Location: US 20 East of SR 39 Laporte County, IN
Project No: 21-024A

EX2f

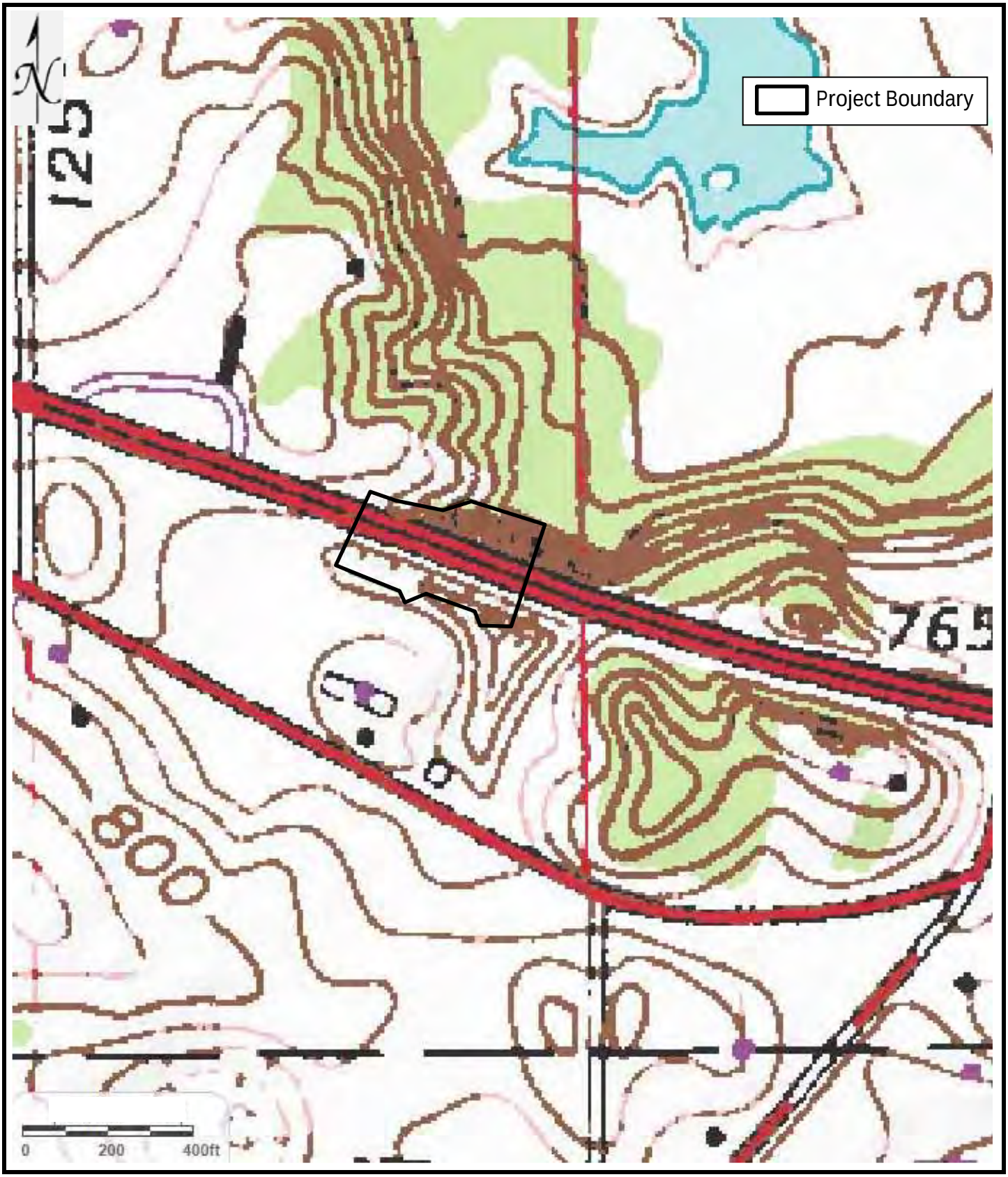


USGS Quadrangle Map Zoomed In – Investigation Area 1

Created: June 23, 2021
Source: IndianaMap
USGS Springville Quad
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No: 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX3a

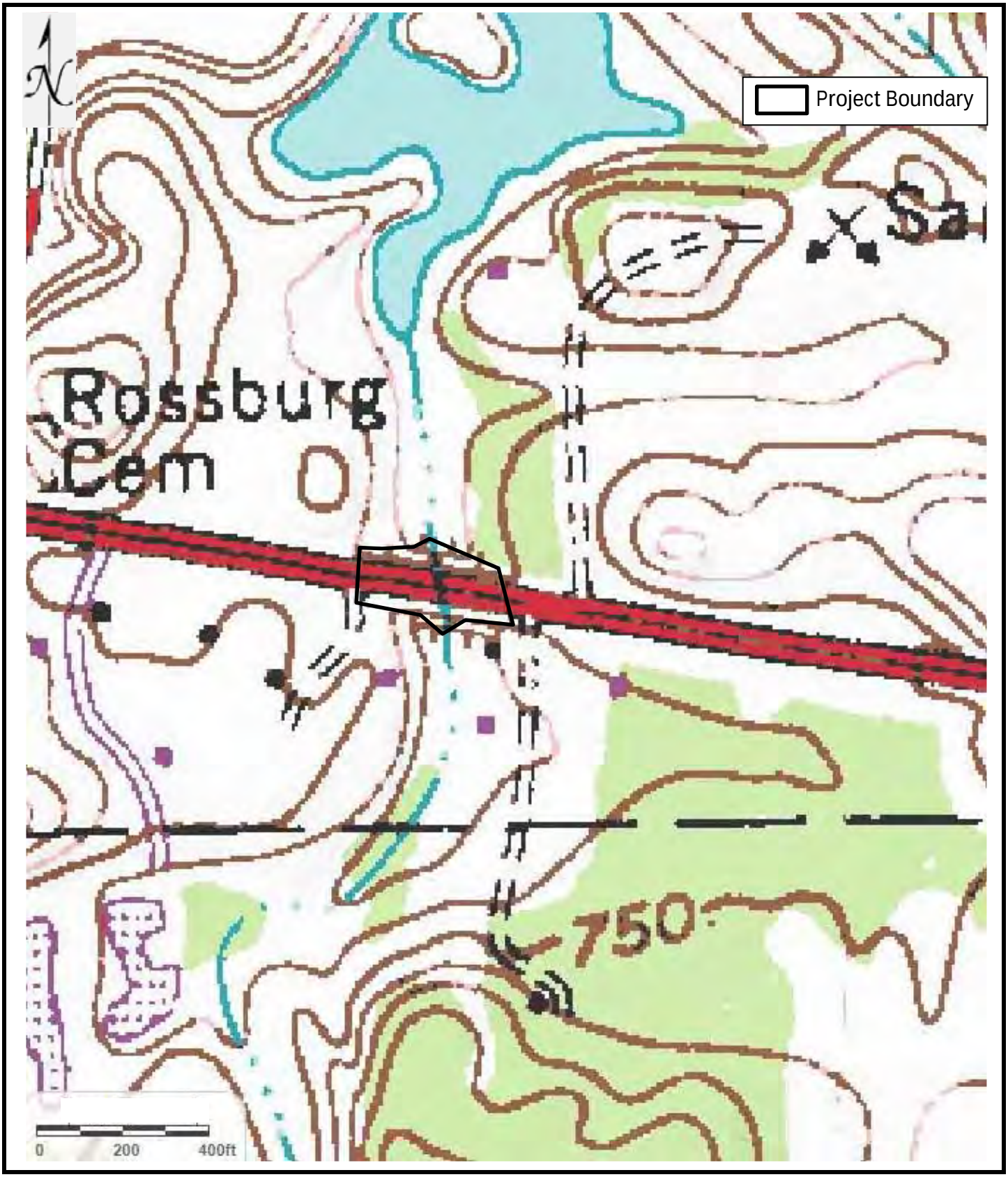


USGS Quadrangle Map Zoomed In – Investigation Area 2

Created: June 23, 2021
Source: IndianaMap
USGS Springville Quad
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No: 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX3b

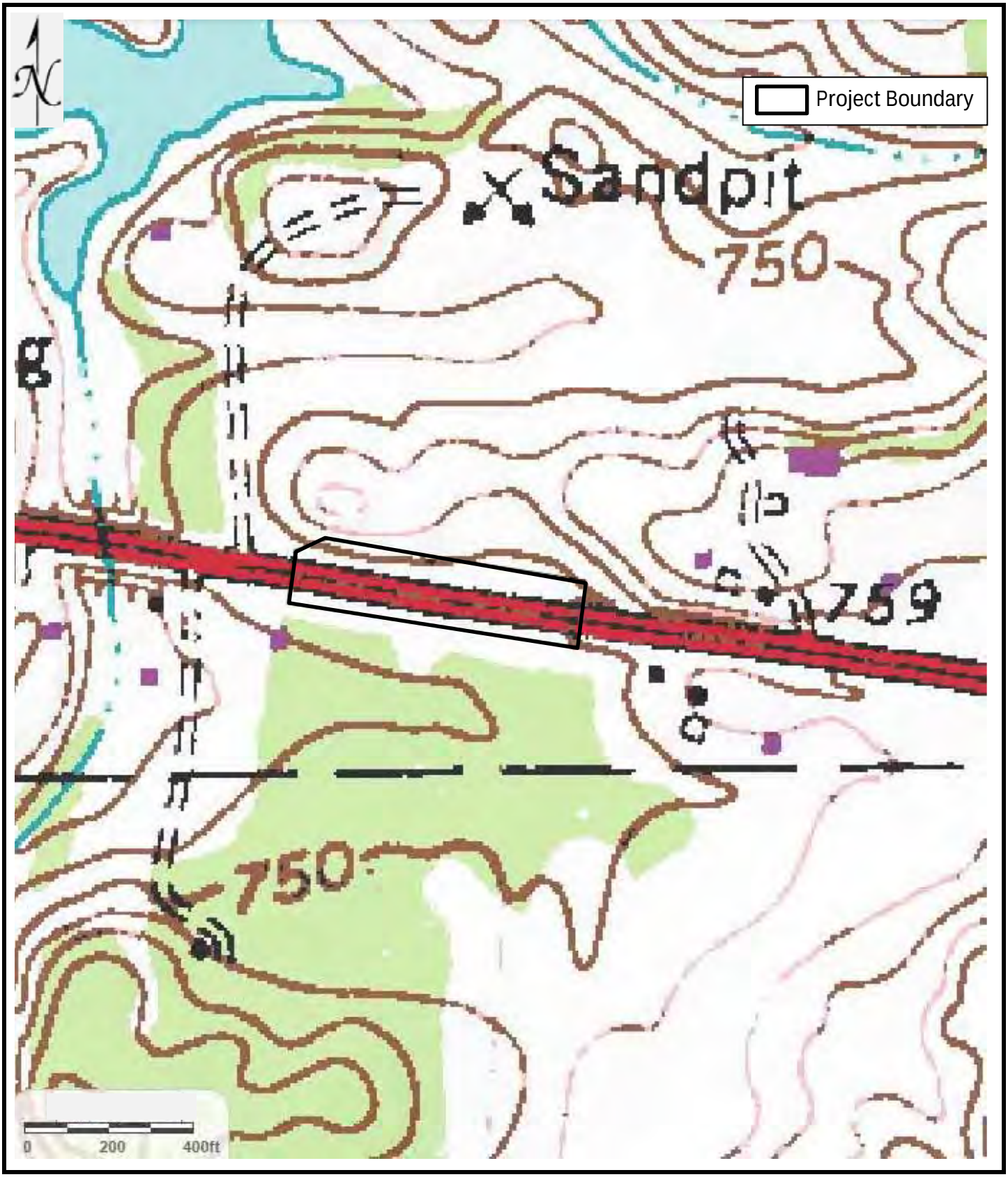


USGS Quadrangle Map Zoomed In – Investigation Area 3

Created: June 23, 2021
Source: IndianaMap
USGS Springville Quad
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No: 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX3c

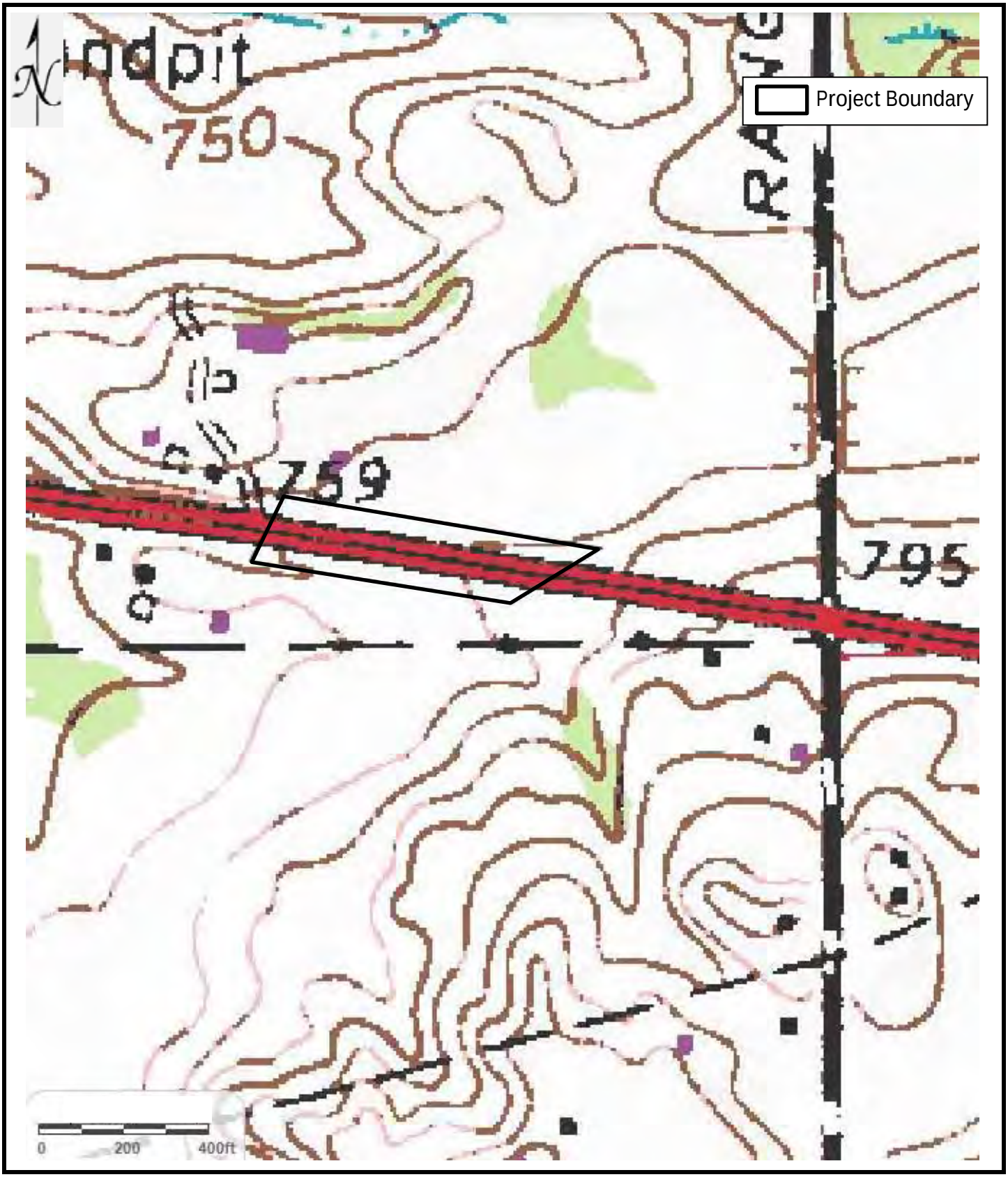


USGS Quadrangle Map Zoomed In – Investigation Area 4

Created: June 23, 2021
Source: IndianaMap
USGS Springville Quad
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No: 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX3d

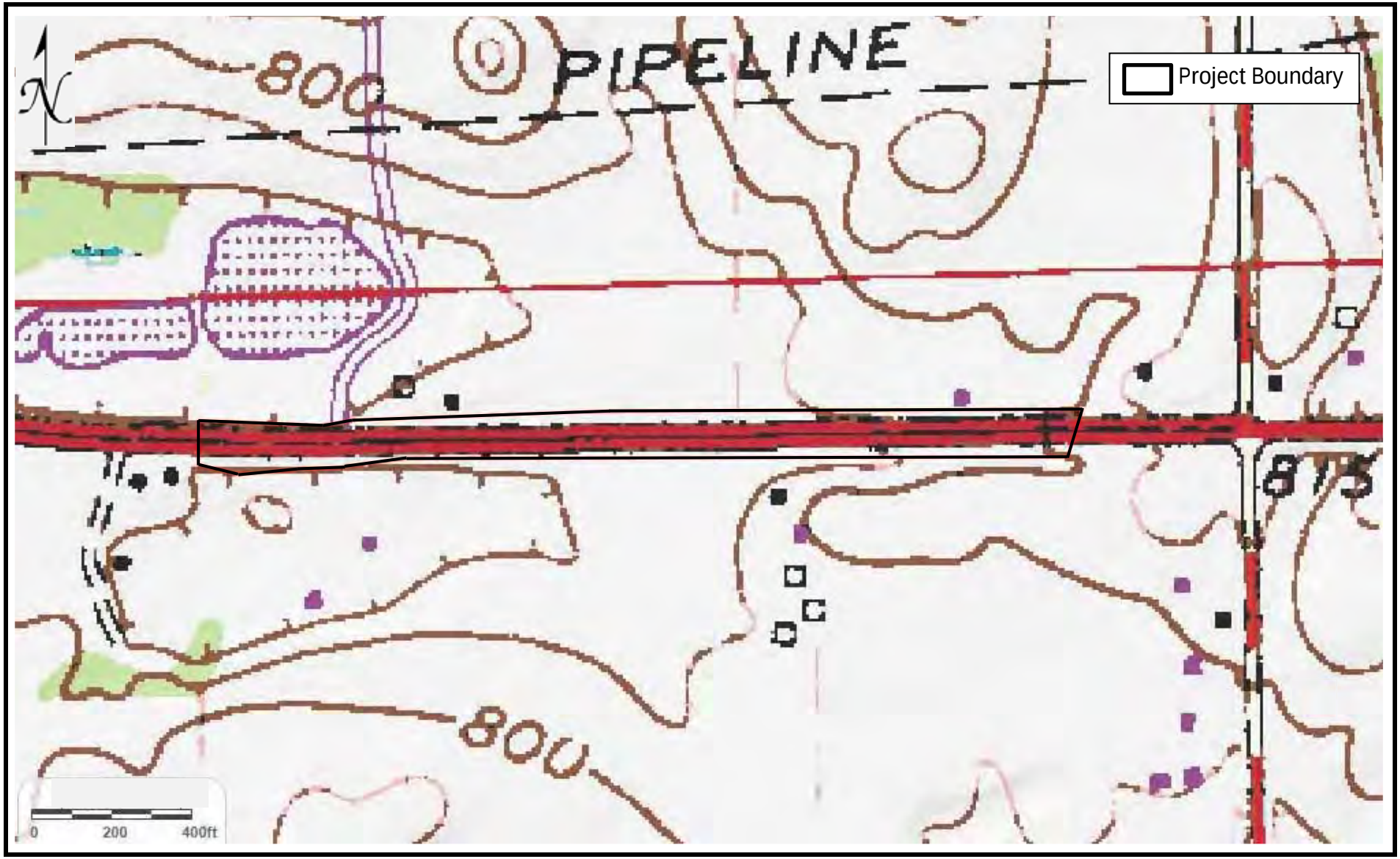


USGS Quadrangle Map Zoomed In – Investigation Area 5

Created: June 23, 2021
Source: IndianaMap
USGS Springville Quad
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No: 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX3e



USGS Quadrangle Map Zoomed In – Investigation Area 6

Created: June 23, 2021
Source: Ind anaMap
USGS Spr ngv lle uad
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX3f

Wetland, Floodplain, and Flowline Map – Investigation Area 1

Created: June 23, 2021
Source: US S National Wetland Inventory Map
FEMA Flood Insurance Rate Map
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

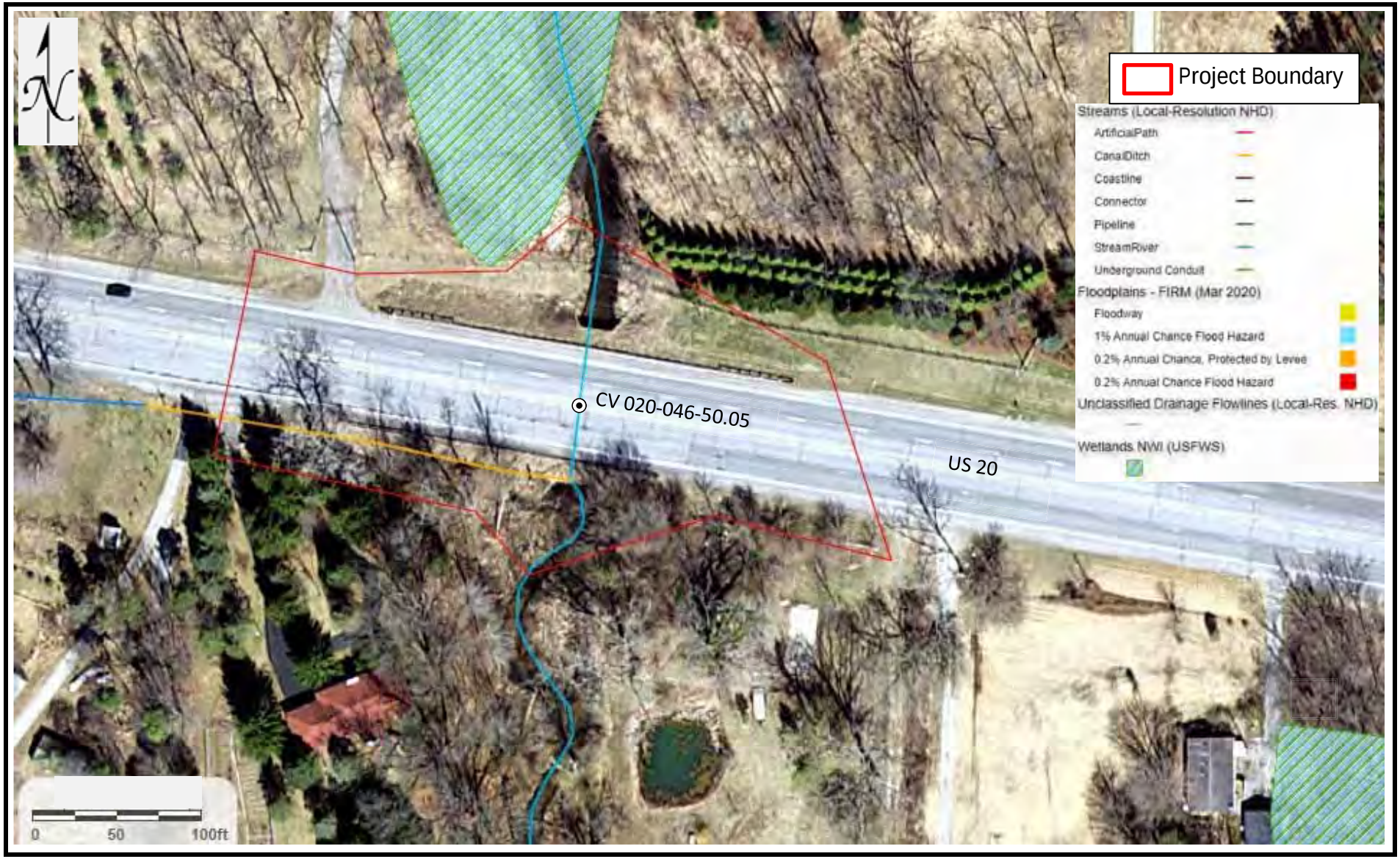
EX4a

Wetland, Floodplain, and Flowline Map – Investigation Area 2

Created: June 23, 2021
Source: US S Nat onal etland Inventory Map
EMA lood Insurance Rate Map
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX4b



Wetland, Floodplain, and Flowline Map – Investigation Area 3

Created: June 23, 2021
Source: US S National Wetland Inventory Map
FEMA Flood Insurance Rate Map
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

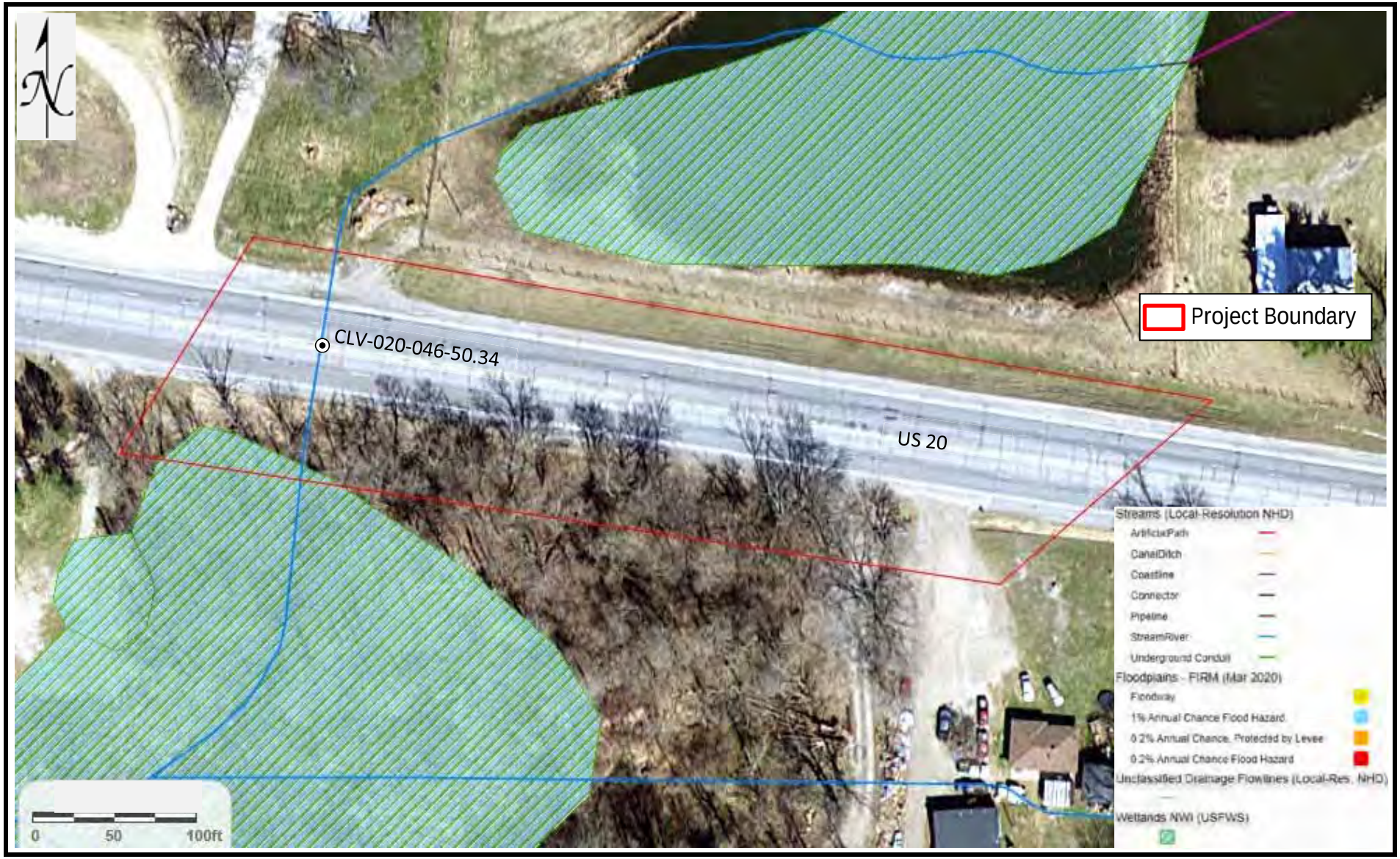
EX4c

Wetland, Floodplain, and Flowline Map – Investigation Area 4

Created: June 23, 2021
Source: US S National Wetland Inventory Map
EMA Flood Insurance Rate Map
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX4d



Wetland, Floodplain, and Flowline Map – Investigation Area 5

Created: June 23, 2021
Source: US S Nat onal etland Inventory Map
EMA lood Insurance Rate Map
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

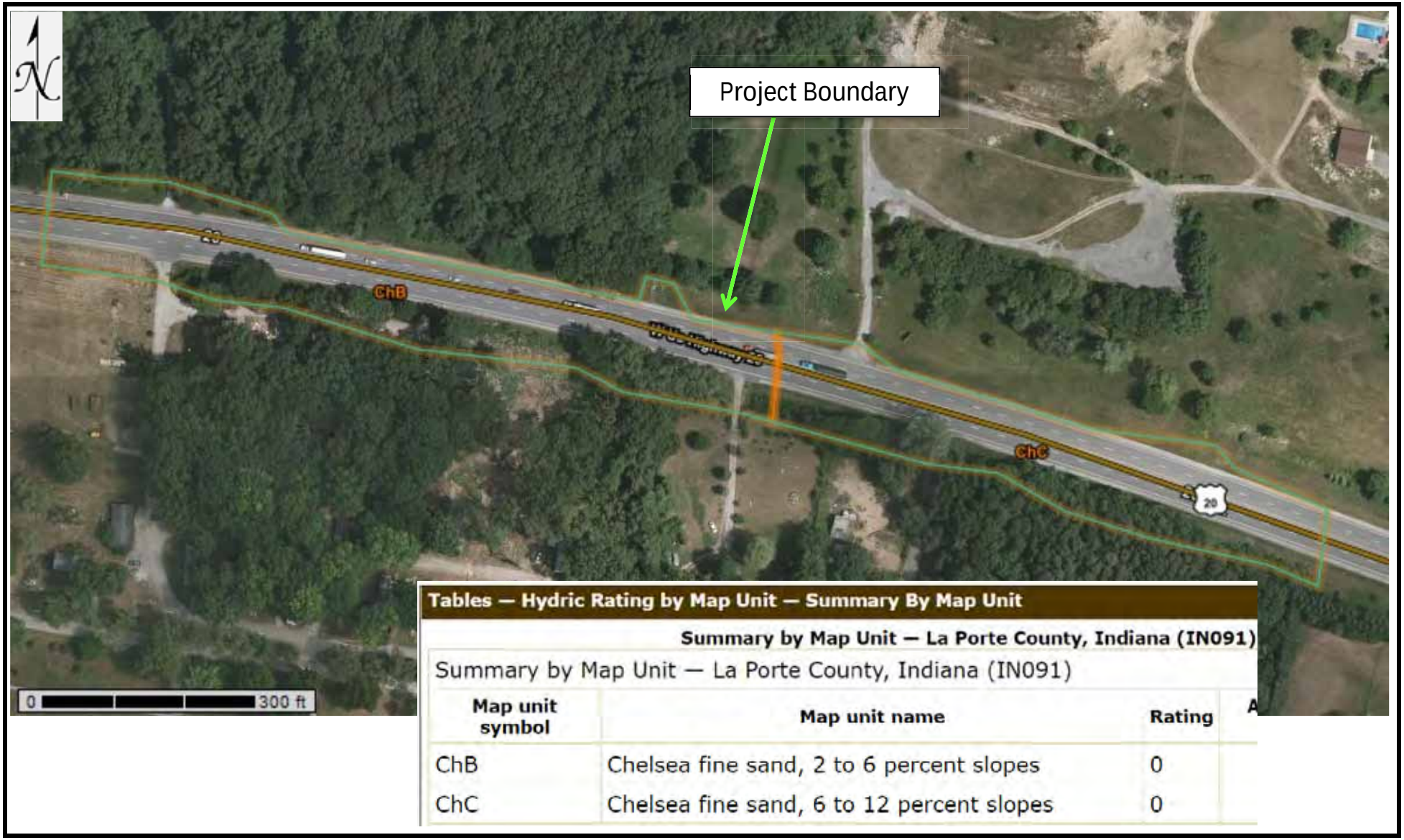
EX4e

Wetland, Floodplain, and Flowline Map – Investigation Area 6

Created: June 23, 2021
Source: US S Nat onal etland Inventory Map
EMA lood Insurance Rate Map
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX4f



Tables — Hydric Rating by Map Unit — Summary By Map Unit

Summary by Map Unit — La Porte County, Indiana (IN091)

Summary by Map Unit — La Porte County, Indiana (IN091)

Map unit symbol	Map unit name	Rating
ChB	Chelsea fine sand, 2 to 6 percent slopes	0
ChC	Chelsea fine sand, 6 to 12 percent slopes	0

Soil Survey – Investigation Area 1

Created: June 14, 2021
Source: NRCS e So l Survey
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX5a

Tables — Hydric Rating by Map Unit — Summary By Map Unit

Summary by Map Unit — La Porte County, Indiana (IN091)

Summary by Map Unit — La Porte County, Indiana (IN091)

Map unit symbol	Map unit name	Rating	Acres
ChB	Chelsea fine sand, 2 to 6 percent slopes	0	
TcF	Tracy sandy loam, 25 to 45 percent slopes	0	

Soil Survey – Investigation Area 2

Created: June 14, 2021
Source: NRCS e Soil Survey
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX5b

Tables — Hydric Rating by Map Unit — Summary By Map Unit

Summary by Map Unit — La Porte County, Indiana (IN091)

Summary by Map Unit — La Porte County, Indiana (IN091)

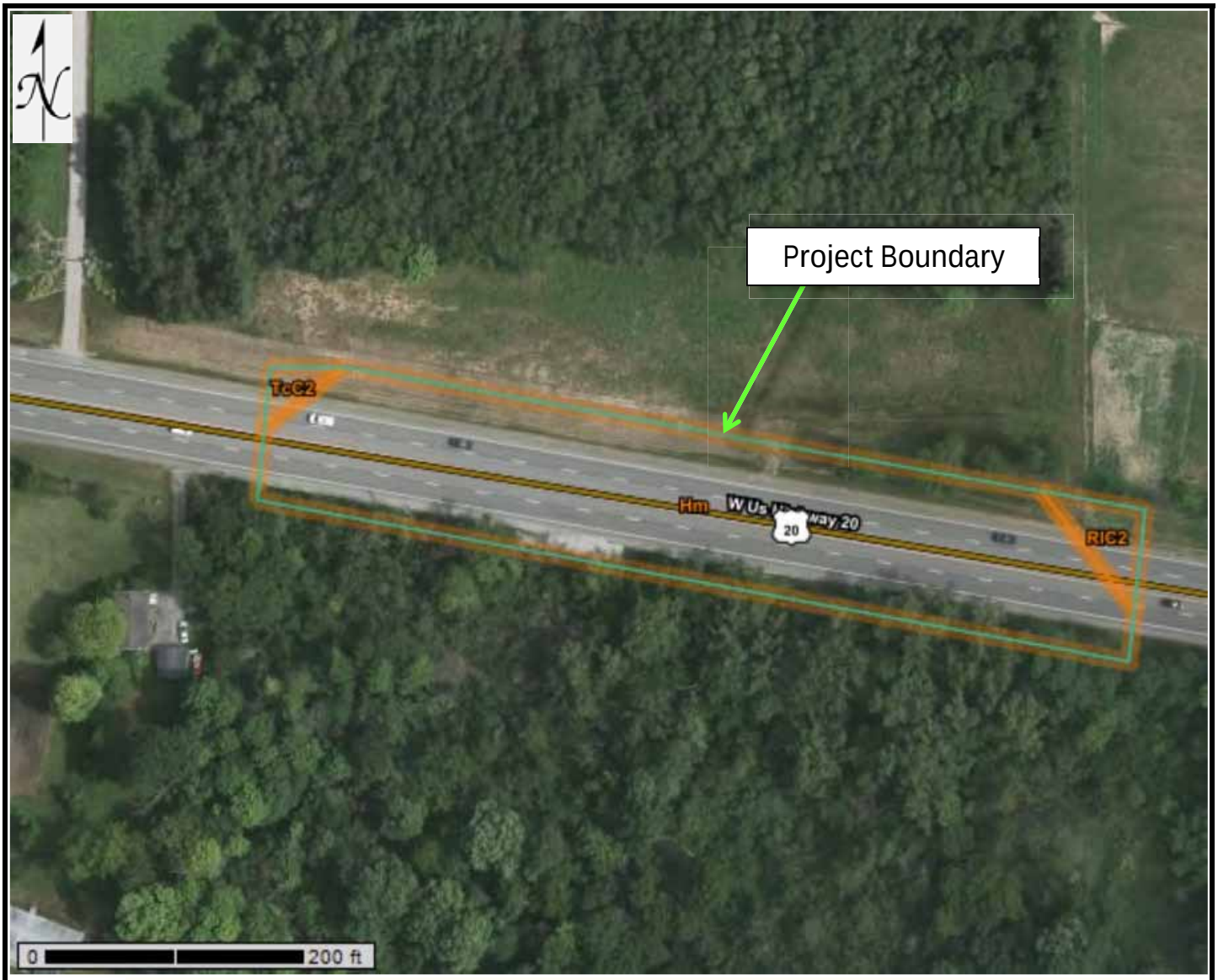
Map unit symbol	Map unit name	Rating	A
Fh	Fluvaquents, loamy	100	
TcC2	Tracy sandy loam, 6 to 12 percent slopes, eroded	0	

Soil Survey – Investigation Area 3

Created: June 14, 2021
Source: NRCS e Soil Survey
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX5c



Tables — Hydric Rating by Map Unit — Summary By Map Unit

Summary by Map Unit — La Porte County, Indiana (IN091)

Summary by Map Unit — La Porte County, Indiana (IN091)

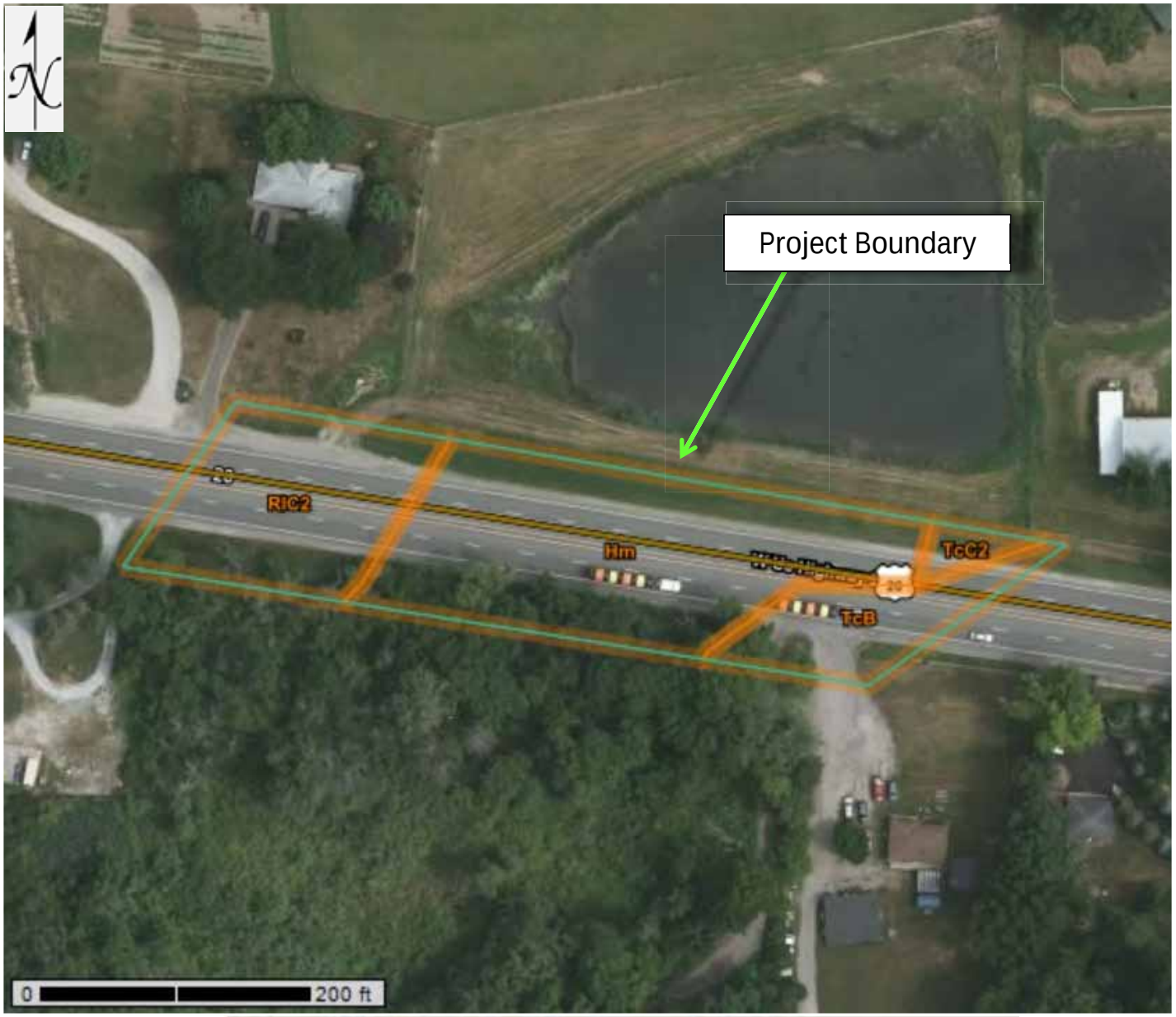
Map unit symbol	Map unit name	Rating	A
Hm	Houghton muck, undrained, 0 to 1 percent slopes	100	
RlC2	Riddles loam, 6 to 12 percent slopes, eroded	0	
TcC2	Tracy sandy loam, 6 to 12 percent slopes, eroded	0	

Soil Survey – Investigation Area 4

Created: June 14, 2021
Source: NRCS e Soil Survey
Scale: As Shown

Project Name: US 20 Roadway Improvements Des No 1702993
Location: US 20 East of SR 39 Laporte County, IN
Project No: 21-024A

EX5d



Tables — Hydric Rating by Map Unit — Summary By Map Unit

Summary by Map Unit — La Porte County, Indiana (IN091)

Summary by Map Unit — La Porte County, Indiana (IN091)

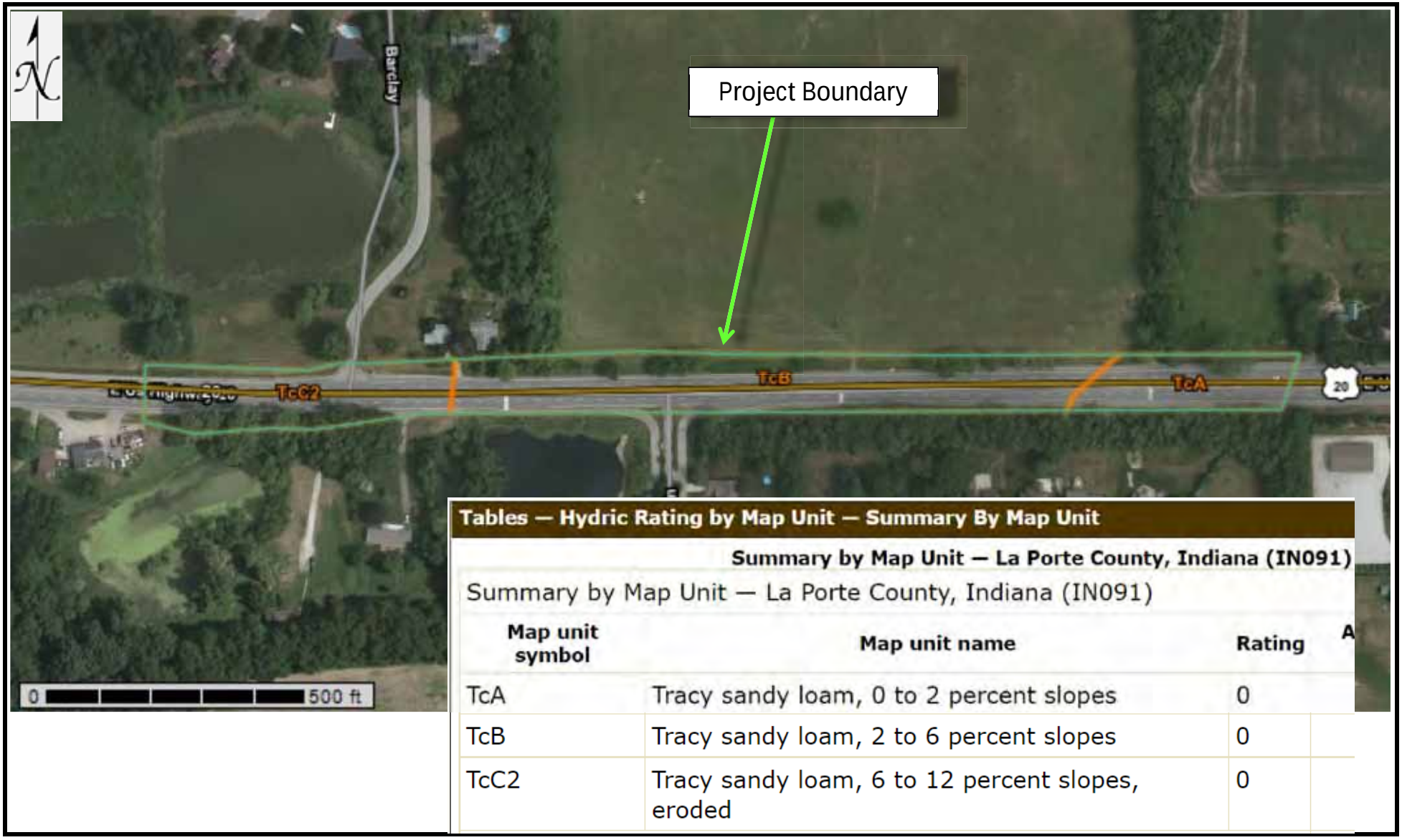
Map unit symbol	Map unit name	Rating	A
Hm	Houghton muck, undrained, 0 to 1 percent slopes	100	
RIC2	Riddles loam, 6 to 12 percent slopes, eroded	0	
TcB	Tracy sandy loam, 2 to 6 percent slopes	0	
TcC2	Tracy sandy loam, 6 to 12 percent slopes, eroded	0	

Soil Survey – Investigation Area 5

Created: June 14, 2021
Source: NRCS e Soil Survey
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX5e



Tables — Hydric Rating by Map Unit — Summary By Map Unit

Summary by Map Unit — La Porte County, Indiana (IN091)

Summary by Map Unit — La Porte County, Indiana (IN091)

Map unit symbol	Map unit name	Rating	A
TcA	Tracy sandy loam, 0 to 2 percent slopes	0	
TcB	Tracy sandy loam, 2 to 6 percent slopes	0	
TcC2	Tracy sandy loam, 6 to 12 percent slopes, eroded	0	

Soil Survey – Investigation Area 6

Created: June 14, 2021
Source: NRCS e So l Survey
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX5f

Aerial Photo – Investigation Area 1

Created: June 14, 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX6a

Aerial Photo – Investigation Area 2

Created: June 14, 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX6b

Aerial Photo – Investigation Area 3

Created: June 14, 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX6c

Aerial Photo – Investigation Area 4

Created: June 14, 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX6d

Aerial Photo – Investigation Area 5

Created: June 14, 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX6e

Aerial Photo – Investigation Area 6

Created: June 14, 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

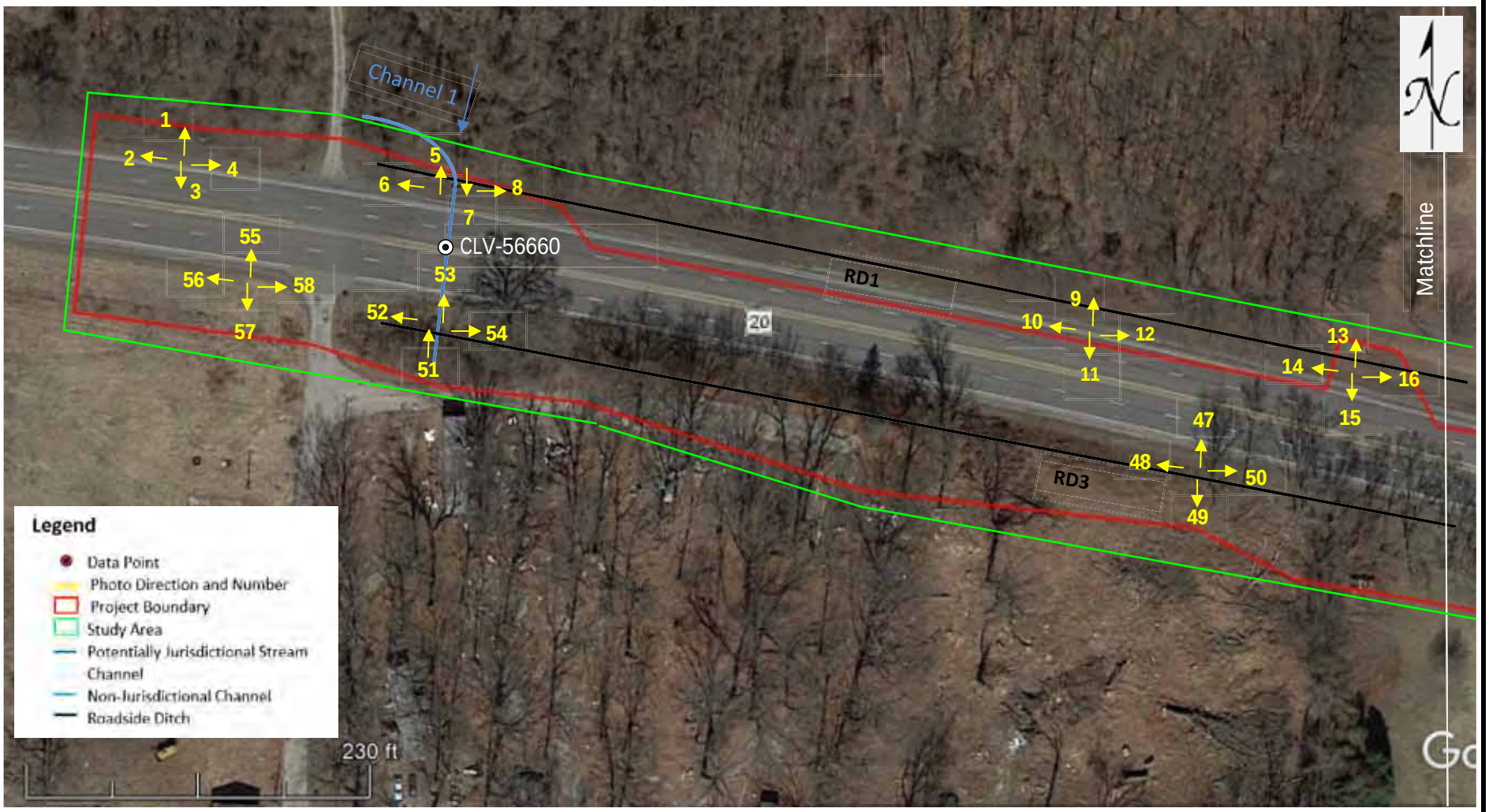
EX6f

Feature Locations – Investigation Area 1 Index

Created: June 14, 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39 Laporte County, IN
Project No: 21-024A

EX7a

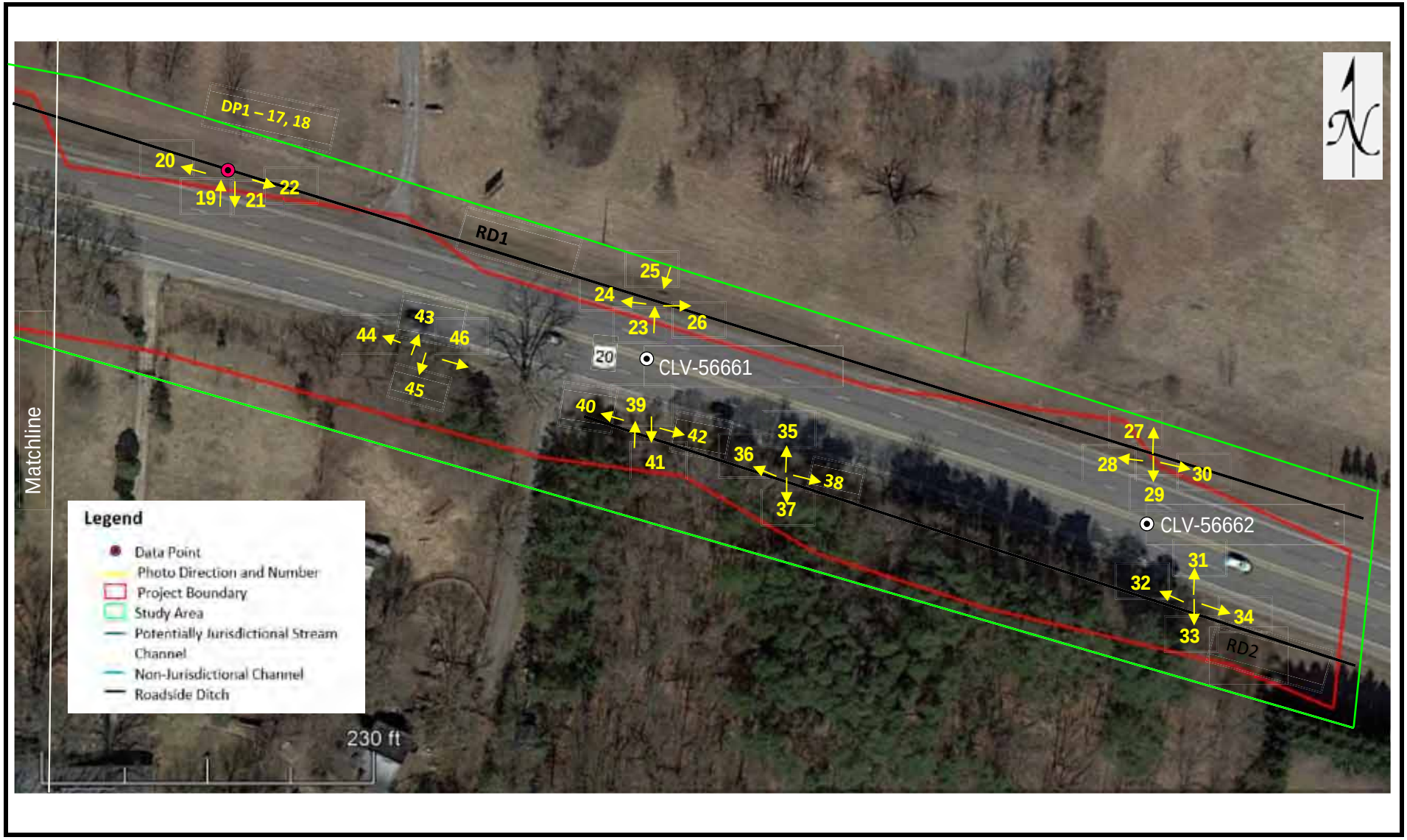


Feature Locations – Investigation Area 1a

Created: June 14, 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39 Laporte County, IN
Project No: 21-024A

EX7b

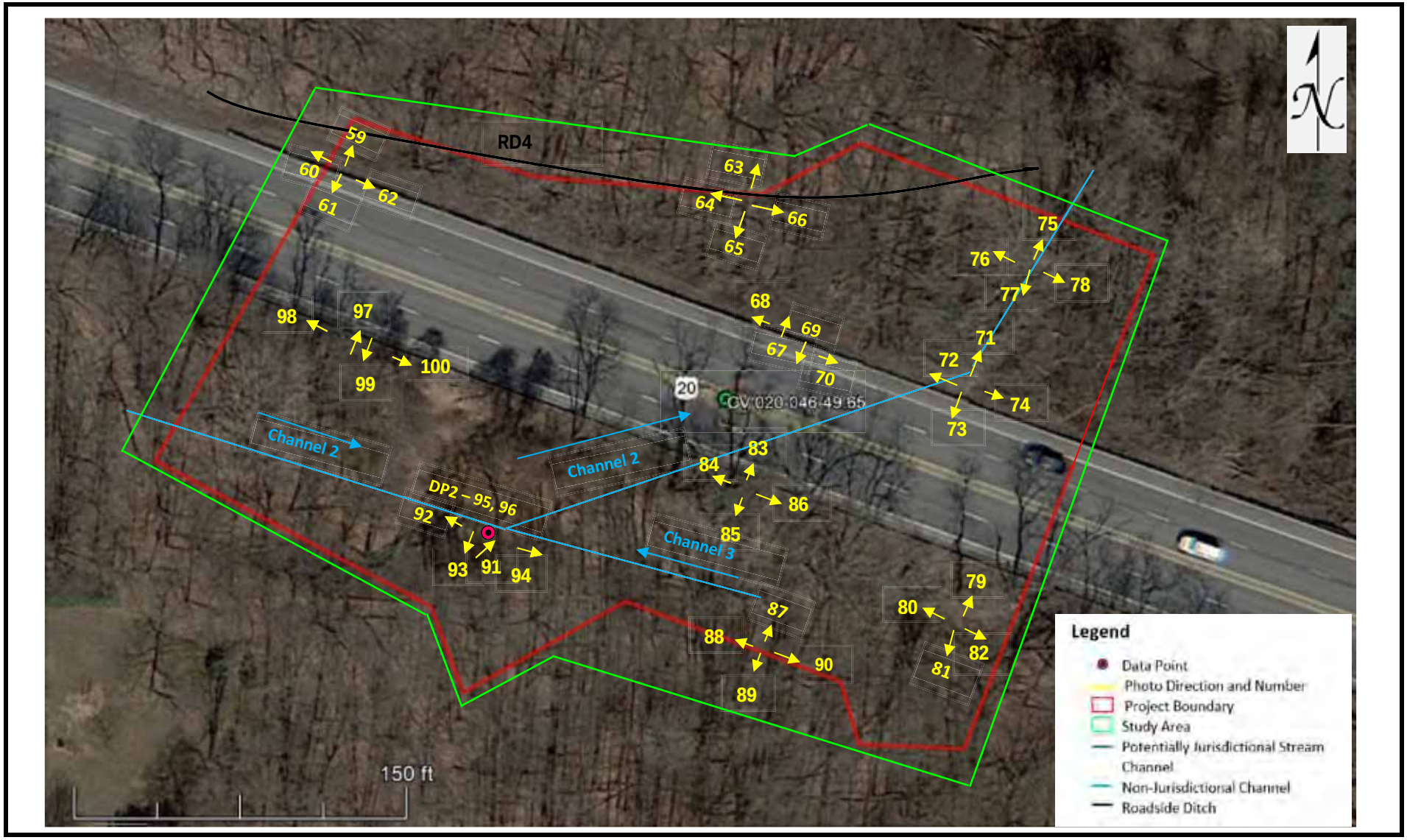


Feature Locations – Investigation Area 1b

Created: June 14, 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39 Laporte County, IN
Project No: 21-024A

EX7c

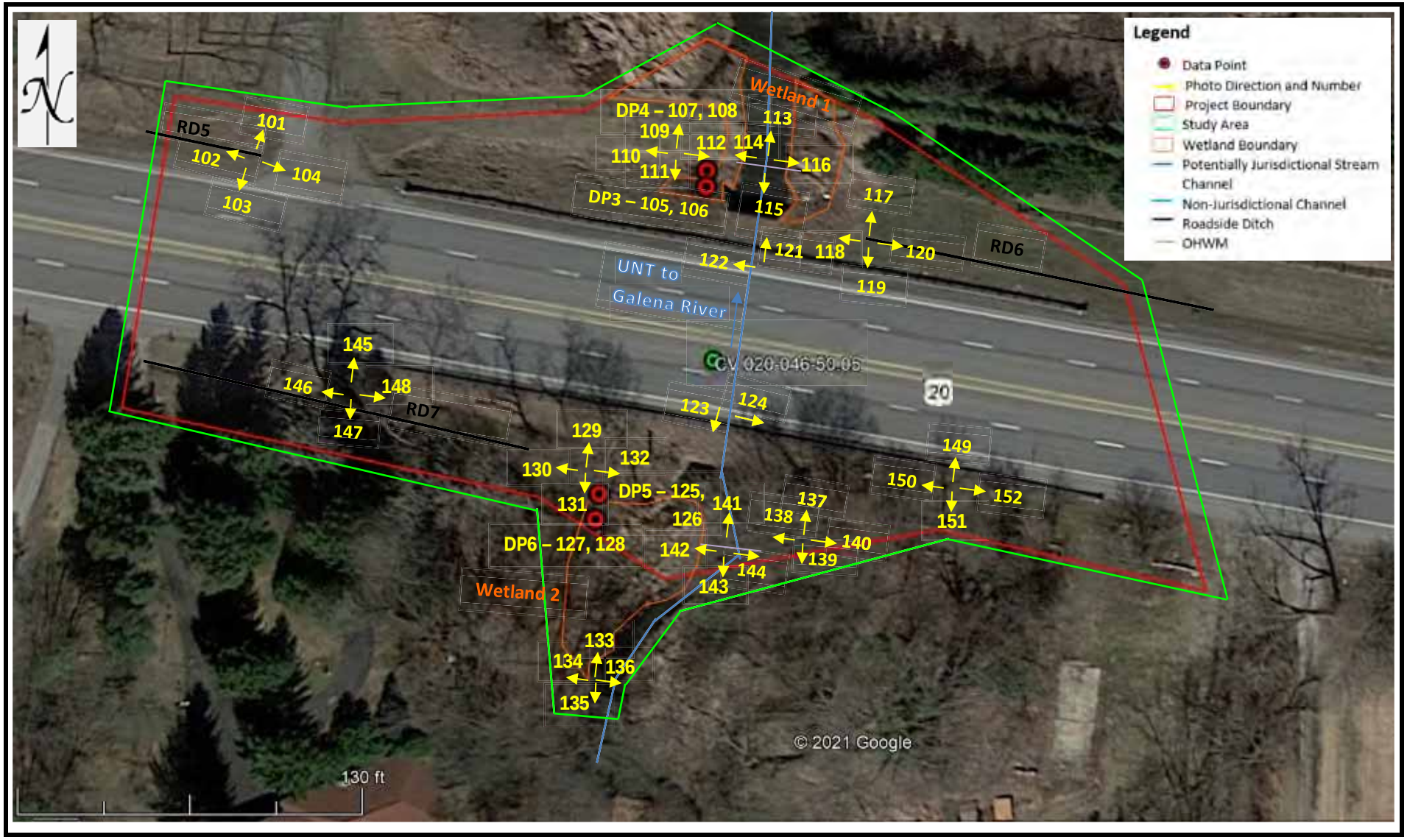


Feature Locations – Investigation Area 2

Created: June 14, 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39 Laporte County, IN
Project No: 21-024A

EX7d

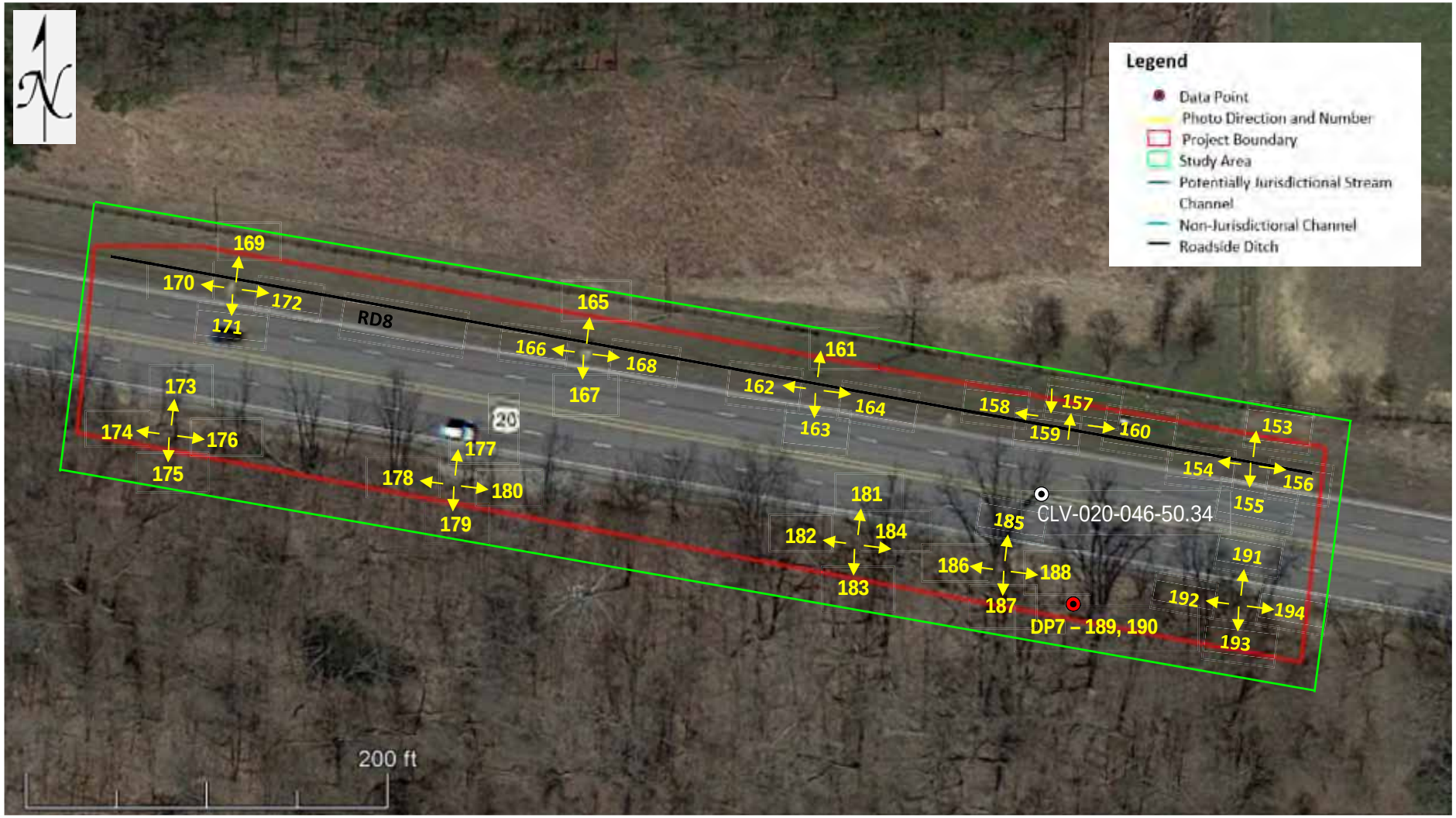


Feature Locations – Investigation Area 3

Created: June 1 , 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39 Laporte County, IN
Project No: 21-024A

EX7e

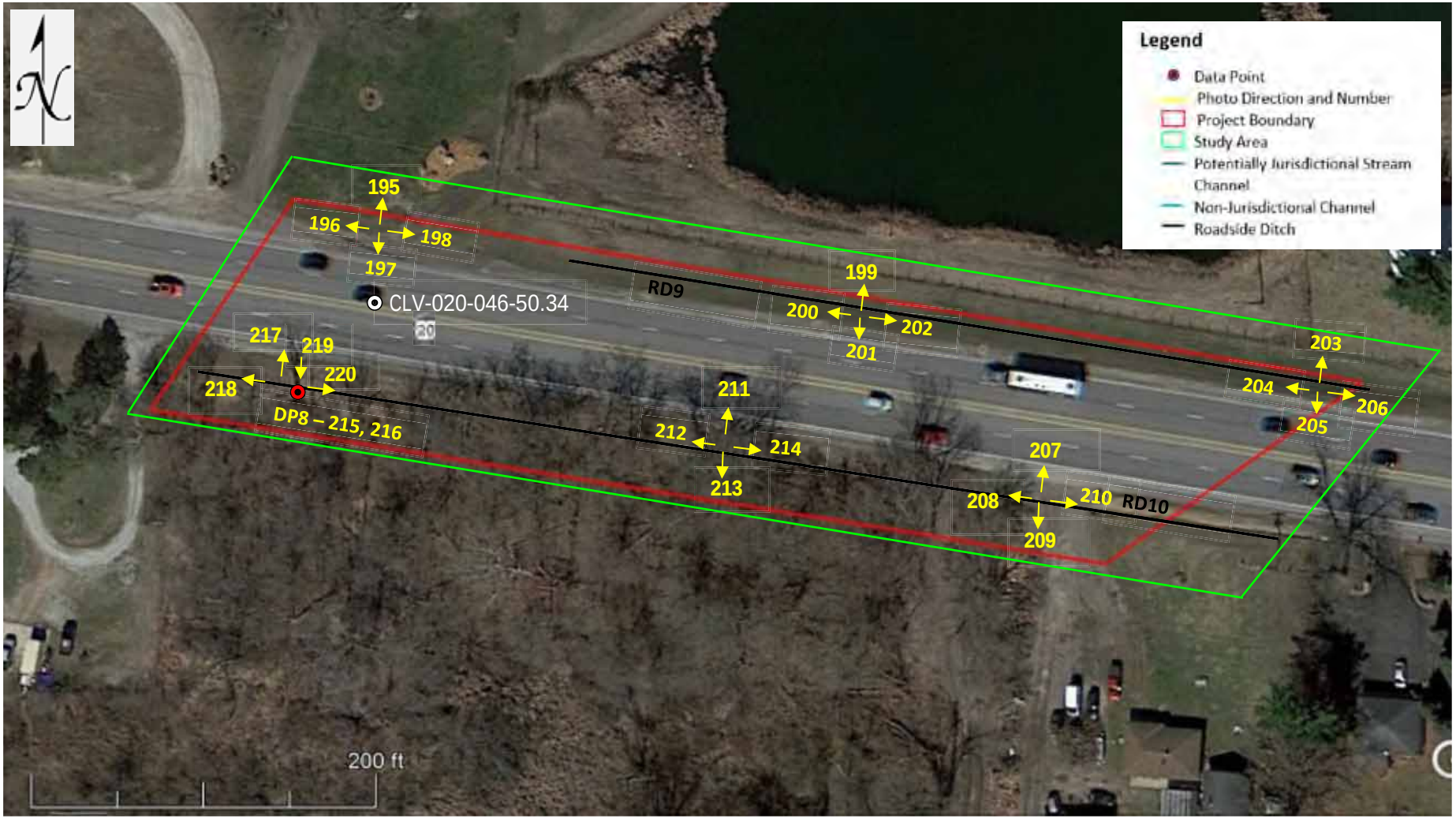


Feature Locations – Investigation Area 4

Created: June 1 , 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39 Laporte County, IN
Project No: 21-024A

EX7f

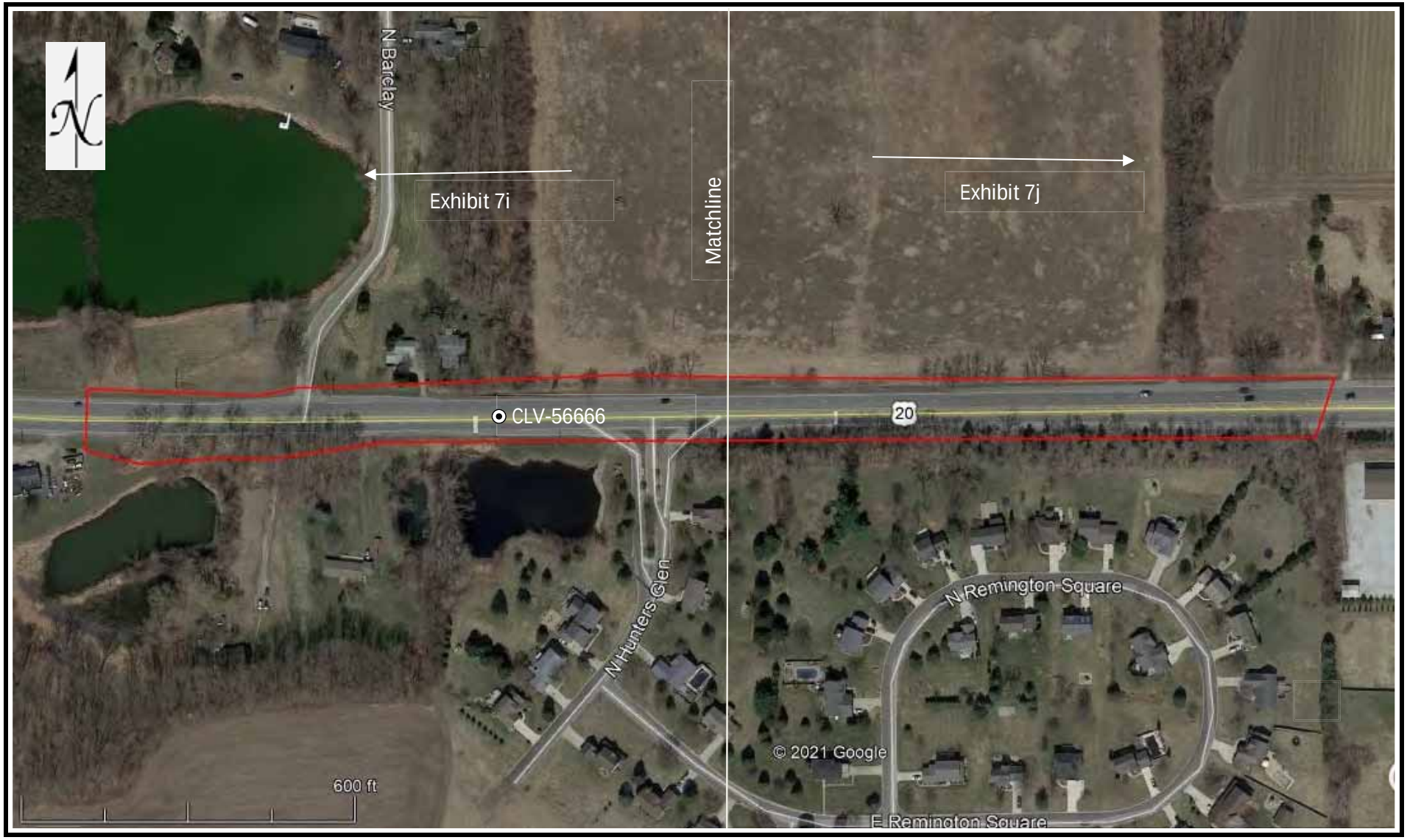


Feature Locations – Investigation Area 5

Created: June 1 , 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39 Laporte County, IN
Project No: 21-024A

EX7g

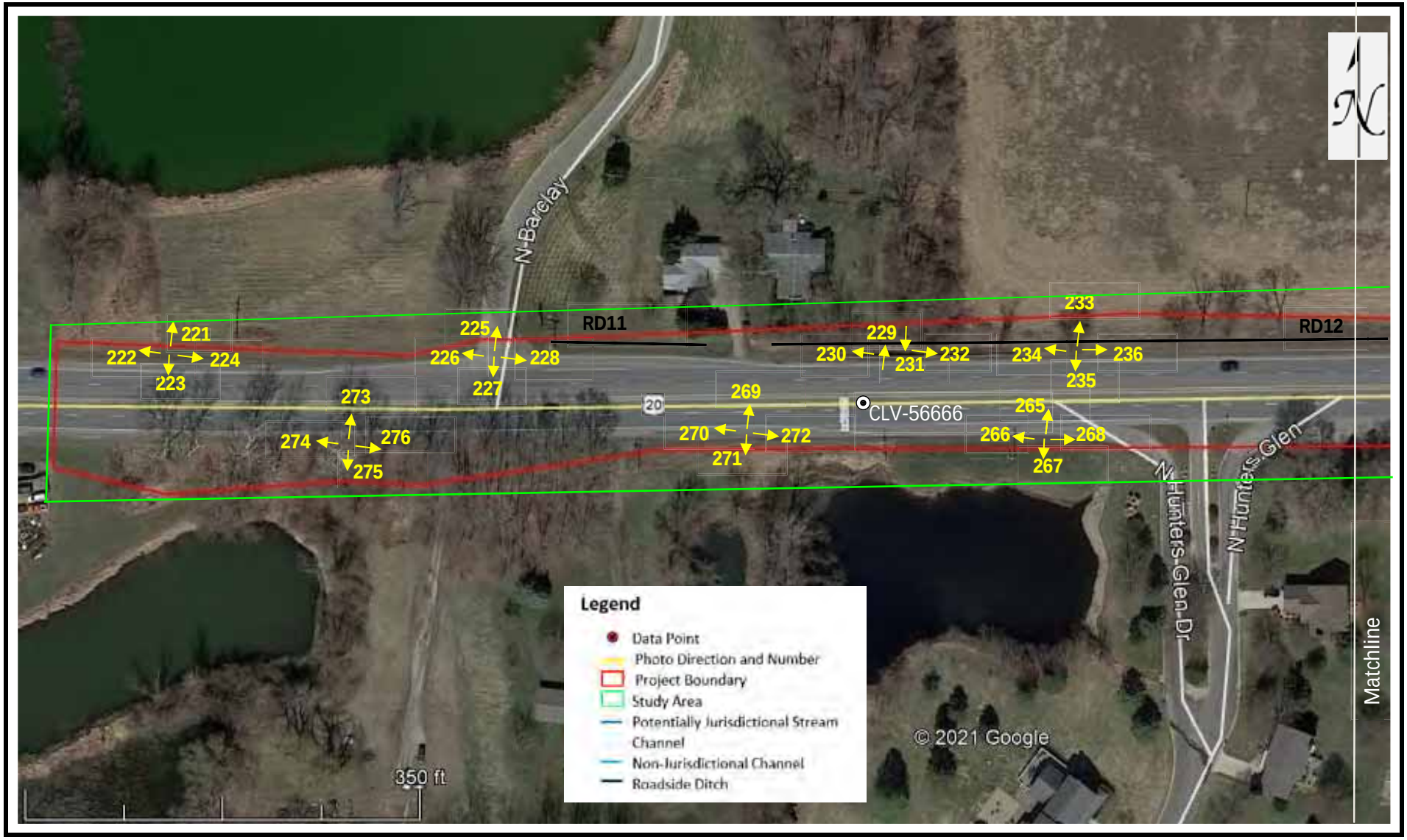


Feature Locations – Investigation Area 6 Index

Created: June 1 , 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39 Laporte County, IN
Project No: 21-024A

EX7h



Feature Locations – Investigation Area 6a

Created: June 1 , 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39 Laporte County, IN
Project No: 21-024A

EX7i

Feature Locations – Investigation Area 6b

Created: June 1 , 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39 Laporte County, IN
Project No: 21-024A

EX7j

Appendix A

Photographs

EXPERIENCED | RELIABLE | CREATIVE

- LITTLE RIVER CONSULTANTS -
PROJECT 21-024A | R. Baker
9675 SOUTH CR 100 EAST, CLAYTON, IN

LITTLE RIVER CONSULTANTS

WETLAND AND WATERBODY DELINEATION

US 20 Roadway Improvements
400 feet east of SR 39 to 2.85 miles east of SR 39 on US 20
Laporte County, Indiana

INDOT Des. No. 1702993

Field Work Completed: June 14-16, 2021
Report Date: December 9, 2021

PREPARED FOR PRIME CONSULTANT:
Butler, Fairman & Seufert, Inc.
8450 Westfield Blvd., Suite 300
Indianapolis, IN 46240-8302

PREPARED BY:
Courtney Haverbusch
courtney@littleriverconsultants.com
Office Phone: 317-702-7291
Little River Consultants, LLC
9675 South CR 100E
Clayton, Indiana 46118

1.0 INTRODUCTION

1.1 Project Information

Dates of Field Reconnaissance: June 14-16, 2021
Location: Sections 1 & 2; Township: 37N; Range: 3W
Section 7; Township: 37N; Range: 2W
Springville Quadrangle (1980)
Laporte County, IN
US 20 from 400 feet east of SR 39 to 2.85 miles east of SR 39
41.685108, -86.731842

1.2 Project Description

The proposed project is located in northern Laporte County, Indiana. The project is approximately 2.9 miles long on US 20, beginning approximately 400 feet east of the SR 39 junction and ending approximately 2.85 miles east of the SR 39 junction. The project involves roadway improvements to US 20 in response to increased traffic resulting in an increase in the number and severity of accidents. Many of the accidents are due to left-turning vehicles waiting in the passing lane. Currently, US 20 has 4 lanes with a 2.5-foot wide median and 2-foot wide paved shoulders. The improvements would involve road widening to add a 16-foot wide two-way-left-turn lane (TWLTL) and expand the paved shoulders to 8-foot wide on both sides of US 20.

Along with the roadway improvements, nine small structures and two large culverts are scheduled for improvements. CLV-56660, which is currently an 82-foot long 3' x 2' concrete box culvert, will be extended to be 105-foot long. CLV-56661, which is currently a 85-foot long 24-inch clay pipe culvert, will be extended to be 106-foot long. CLV-56662, which is currently a 100.5-foot long 15-inch metal pipe culvert, will be replaced with a 124-foot long 15-inch metal pipe culvert. CLV-56663, which is currently a 108.9-foot long 15-inch metal pipe culvert, will be replaced with a 126-foot long 24-inch metal pipe culvert. CV 020-046-49.65, which is currently a 256.7-foot long 4' x 3' three-sided concrete culvert, will be extended to be 312.2-foot long. CLV-56664, which is currently a 98.1-foot long 15-inch reinforced concrete pipe, will be replaced with a 104-foot long 24-inch reinforced concrete pipe. CV 020-046-50.05, which is currently a 95.7-foot long 18' x 5.3' concrete box culvert, will be extended to be 126.5-foot long. CLV 020-046-50.34, which is currently a 108.9-foot long 15-inch pipe, will be replaced with a 106-foot long 18-inch pipe. CLV 020-046-50.53, which is currently a 116.5-foot long 30-inch pipe, will be cleaned out. CLV-56665, which is currently a 92.5-foot long 24-inch clay pipe, will be replaced with a 121-foot long 30-inch clay pipe. CLV-56666, which is currently an 87-foot long 30-inch reinforced concrete pipe, will be extended to be 95-foot long. Table 1 below summarizes the planned structure improvements.

Table 1: Small Structures and Culvert Improvements Summary Table

Structure ID	Lat/Long	Existing Type	Existing Length	Proposed Type	Proposed Length	Associated Channel
CLV-56660	41.685128 -86.731319	3' X 2' concrete box	82'	3' X 2' concrete box	105'	Non-Jurisdictional Channel 1
CLV-56661	41.684439 -86.727389	24' concrete pipe	85'	24' concrete pipe	106'	No defined channel
CLV-56662	41.684150 -86.726208	15-inch metal pipe	100.5'	15-inch metal pipe	124'	No defined channel
CLV-56663	41.683633 -86.724297	15-inch metal pipe	108.9'	24-inch metal pipe	126'	* No defined channel
CV 020-046-49.65	41.682592 -86.720514	3' x 3' three-sided concrete culvert	256.7'	3' x 3' three-sided concrete culvert	312.2'	Non-Jurisdictional Channel 2
CLV-56664	41.681206 -86.713281	12-inch reinforced concrete pipe	98.1'	24-inch reinforced concrete pipe	104'	* No defined channel

CV 020-046-50.05	41.680922 -86.711119	18' x 5.3' concrete box	95.7'	18' x 5.3' concrete box	126.5'	UNT to Galena River
CLV 020-046-50.34	41.680444 -86.707489	15-inch pipe	108.9'	18-inch pipe	106'	No defined channel
CLV 020-046-50.53	41.680047 -86.704206	30-inch pipe	116.5'	N/A	N/A	No defined channel
CLV-56665	41.679514 -86.699633	24-inch concrete pipe	92.5'	30-inch concrete pipe	131'	* No defined channel
CLV-56666	41.678578 -86.687578	30-inch reinforced concrete pipe	87'	30-inch reinforced concrete pipe	95'	No defined channel

* Indicates the structure does not lie within the Investigated Areas. No potential waterways were identified at these structures by desktop review.

In preparation for the roadway improvement project, a desktop review of the entire length of the project area was conducted by Butler, Fairman & Seufert (BFS) staff to identify areas with the potential for water resources. That desktop review included online investigation of feature crossings, previously mapped wetlands and NHD features, and hydric soils. BFS then identified six separate Investigation Areas that would need further investigation. This approach and the proposed onsite investigation areas were approved by INDOT. A wetland and waterway delineation was then conducted by Little River Consultants at the six separate Investigation Areas identified along the roadway improvement project. The general project vicinity is shown on Exhibit 1a, the Investigation Areas within the roadway project area are shown on Exhibit 1b, and the location and study limits of the Investigation Areas are shown on Exhibits 2-7.

Land use within the project boundary is primarily roadway, agricultural fields, residential lawns and wooded areas. Beyond the project limits, land use is a mix of agricultural lands, low to medium density residential, and woodlands. Aerial photographs showing land use in the immediate vicinity of the Investigation Areas can be found on Exhibit 6.

2.0 DESKTOP RECONNAISSANCE

Prior to conducting field work, Little River staff reviewed the U.S. Geological Survey (USGS) topographic mapping (Exhibits 2 & 3), U.S. Fish & Wildlife Service (USFWS) National Wetlands Inventory (NWI) Map (Exhibit 4), Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) (Exhibit 4), USGS National Hydrography Dataset (NHD) (Exhibit 4), U.S. Department of Agriculture (USDA) Web Soil Survey (Exhibit 5), and current aerial photography (Exhibits 6). These resources were used to identify potential wetlands and waterways within the project limits and establish historic conditions.

2.1 Soils

According to the Natural Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) Database for Laporte County, Indiana, nine soil types are present within the project area. Table 2 summarizes the soil types, which Investigation Areas each soil type was found, the drainage class, flooding and ponding frequency, the depth to water table, and hydric rating of each soil type. Exhibit 5 shows the orientation of the soils mapped at each Investigation Area.

Table 2: Soil Survey Data Regarding Hydrology and Hydric Soil

Soil Name	Soil Symbol	Investigation Area(s)	Drainage Class	Flooding Frequency	Ponding Frequency	Depth to Water Table	Hydric Rating
Chelsea fine sand, 2-6% slopes	ChB	1, 2	Excessively Drained	None	None	>78.75 in	0
Chelsea fine sand, 6-12% slopes	ChC	1	Excessively Drained	None	None	>78.75 in	0

Fluvaquents, loamy	Fh	3	Somewhat Poorly Drained	Frequent	Frequent	0 in	100
Houghton muck, undrained, 0-1% slopes	Hm	4, 5	Very Poorly Drained	None	Frequent	11.8 in	100
Riddles loam, 6-12% slopes, eroded	RlC2	4, 5	Well Drained	None	None	>78.75 in	0
Tracy sandy loam, 0-2% slopes	TcA	6	Well Drained	None	None	>78.75 in	0
Tracy sandy loam, 2-6% slopes	TcB	5, 6	Well Drained	None	None	>78.75 in	0
Tracy sandy loam, 6-12% slopes, eroded	TcC2	3, 4, 5, 6	Well Drained	None	None	>78.75 in	0
Tracy sandy loam, 25-45% slopes	TcF	2	Well Drained	None	None	>78.75 in	0

2.2 National Wetland Inventory (NWI) Information

The NWI Maps show one wetland is mapped within Investigation Area 5 and wetlands are mapped in the vicinity of Investigation Areas 3, 4, 5, and 6 (Exhibit 4). A freshwater forested/shrub wetland (PFO1C) is mapped partially within the southwestern corner of Investigation Area 5. A lake (L1UBHh) is mapped approximately 10 feet north of Investigation Area 3. A freshwater forested/shrub wetland (PFO1C) is mapped approximately 25 feet south of Investigation Area 4. A freshwater emergent wetland (PEM1B) is mapped approximately 30 feet north of Investigation Area 5. Three wetlands are mapped in the vicinity of Investigation Area 6, including a freshwater pond (PUBGx) approximately 130 feet north of the project area, another freshwater pond (PUBGx) approximately 50 feet south of the project area, and a freshwater emergent wetland (PEM1C) approximately 40 feet south of the project area.

2.3 HUC

12 Digit Hydrologic Unit Code: 040400010205
12-Digit Hydrologic Unit Name: Headwaters South Branch Galien River

2.4 Additional Information

A review of the USGS topo maps (Exhibits 2 & 3) shows one stream crossing US 20 at Investigation Area 3 through CV 020-046-50.05. The NHD map (Exhibit 4) shows multiple ditches, connectors and streams throughout the project area. At Investigation Area 1, 3 roadside ditches, 2 connectors, and 4 streams are mapped. At Investigation Area 2, 3 streams are mapped. At Investigation Area 3, 1 stream and 1 roadside ditch are mapped. The stream identified on the NHD map at Investigation Area 3 corresponds to the stream identified on the USGS topo map. At Investigation Area 4, no water features are mapped. At Investigation Area 5, 1 stream is mapped. At Investigation Area 6, 2 streams, 2 connectors and 1 roadside ditch is mapped. The FEMA map (Exhibit 4) shows no floodplain areas mapped within any of the Investigation Areas. Segments of a few of the roadside ditches throughout the Investigation Areas and the stream identified on the USGS topo map and the NHD map at Investigation Area 3 can also be seen on the aerial photography (Exhibit 6).

2.5 Attached Documents

Maps reviewed as part of the desktop reconnaissance are attached to this report as follows:

Exhibit 1 – Project Vicinity
Exhibit 2 – USGS Quadrangle Map
Exhibit 3 – USQS Quadrangle Map Zoomed In
Exhibit 4 – Wetland, Floodplain and Flowline Map
Exhibit 5 – Soil Survey

Exhibit 6 – Aerial Photograph
Exhibit 7 – Feature Locations

Photographs of the project can be found in Appendix A. Wetland Data Sheets are included in Appendix B. The Pre-JD form is located in Appendix C. The locations of all photo points, data points, and mapped features are shown on Exhibit 7.

3.0 FIELD RECONNAISSANCE

Onsite data collection was conducted June 14 through 16, 2021, by Shannon Bonifacio and Courtney Haverbusch. Local precipitation data was reviewed to provide context for observations of hydrology. Precipitation data on the Community Collaborative Rain, Hail, and Snow Network website (Cocorahs.org) showed the area received approximately 1.5 inches of precipitation in the 2 weeks preceding the site visit. Three significant rain events occurred on June 8, 9 & 11, 2021, resulting in 0.48, 0.70, and 0.29 inches of precipitation, respectively. Field data collection was based on the technical criteria presented in the 1987 U.S. Army Corps of Engineers Wetlands Delineation Manual (1987 Corps Manual) and 2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region Version 2.0 (Regional Supplement). Field methods did not deviate from standard methods found in the 1987 Corps Manual or the Regional Supplement. The locations of identified streams, wetlands, and data points were mapped using sub-meter accurate GPS.

Stream conditions such as morphology, substrate, and riparian habitat were recorded, along with measurements of width and depth at the ordinary high water mark (OHWM). Jurisdictional wetland and stream determinations were based on the Navigable Waters Protection Rule that went into effect on June 22, 2020.

3.1 Waterways

All runoff in the project area drains into the Galena River, which is north of US 20 and the Investigation Areas. The Galena River drains into the South Branch of Galien River, approximately 9 miles downstream of the project area and approximately 6.3 miles to the northeast of the project area. The Galien River is a traditional navigable water (TNW). The stream identified at Investigation Area 3 on the USGS topo map and the NHD map was identified onsite (UNT to Galena River). Roadside ditches identified on the NHD map at Investigation Areas 1, 3, and 6, were also identified onsite. All waterways identified onsite are shown on Exhibit 7, and photos are included in Appendix A.

3.1.1 UNT to Galena River

UNT to Galena River is located in Investigation Area 3 and flows north under US 20 through culvert CV 020-046-50.05. It flows into the Galena River north of the project area via a lake. It is a dashed blue-line (intermittent) USGS stream symbol shown on the 1980 Springville Quadrangle (Exhibits 2 & 3). Based on field observations, UNT to Galena River appears to be perennial. StreamStats reports the upstream drainage area of UNT to Galena River as 3.405 square miles. The area surrounding the UNT, north of US 20, includes Wetland 1 and a mowed area along the fence line. The area surrounding the UNT, south of US 20, includes a wooded area and Wetland 2. UNT to Galena River drains to the Galien River, a TNW. As a relatively permanent waterway that directly connects to a TNW, it is anticipated that UNT to Galena River would be considered a Water of the U.S.

UNT to Galena River is shown in photos 112, 113, 115, 121, 123, 133, 135, 136, 138, 141, 142, and 143. UNT to Galena River has mud substrate, riffle/pool complexes, and limited riparian cover. Approximately 190 linear feet of stream falls within the project area. The creek is moderately sinuous with riffle and pool complexes along this reach. UNT to Galena River has an ordinary high-water mark (OHWM) of 18’ 3” wide and 5” deep north of US 20, and an OHWM of 10’10” wide and 7” deep south of US 20. The Cowardin classification is R3UB3 (riverine, upper perennial, unconsolidated bottom, mud). Quality of UNT to Galena River is average since there is some sinuosity, riffle and pool complexes, and some riparian cover south of US 20.

3.1.2 Roadside Ditches

Twelve roadside ditches were also identified during the site visit, distributed across all six investigation areas.

Three roadside ditches were identified at Investigation Area 1. Roadside Ditch 1 (RD1) runs along the north side of US 20 for nearly the entire length of the area. RD1 can be seen in photos 6, 8-10, 12, 14, 16, 19-24, and 26-30. RD2 runs along the south side of US 20 at the east end of the area. RD2 can be seen in photos 32-34, 36-38, and 40-42. RD3 runs along the south side of US 20 at the west end of the area. RD3 can be seen in photos 48, 50, 52, and 54. All of the roadside ditches discussed above were shallow, grassy ditches with no defined bed and banks. Dominant vegetation in the roadside ditches at Investigation Area 1 were facultative upland species including wild onion (*Allium cernuum* – FACU), tall fescue (*Schedonorus arundinaceus* – FACU), yellow sweetclover (*Melilotus officinalis* – FACU), hairy aster (*Symphyotrichum pilosum* – FACU), orchard grass (*Dactylis glomerata* – FACU) and Kentucky blue grass (*Poa pratensis* – FAC).

One roadside ditch was identified at Investigation Area 2. RD4 is concrete and runs along the north side of US 20 along the guardrail and down the hill into the woods. RD4 can be seen in photos 60, 64, and 66. Dominant vegetation in the woods bordering RD4 were facultative upland species including Virginia creeper (*Parthenocissus quinquefolia* – FACU), mayapple (*Podophyllum peltatum* – FACU), multiflora rose (*Rosa multiflora* – FACU), and sugar maple (*Acer saccharum* – FACU).

Three roadside ditches were identified at Investigation Area 3. RD5 runs along the north side of US 20 just to the first driveway from the west end of area. RD5 can be seen in photos 102 and 104. RD6 runs along the north side of US 20 east of UNT to Galena River. RD6 can be seen in photo 120. RD7 is concrete and runs along the south side of US 20 west of UNT to Galena River. RD7 can be seen in photos 146 and 148. RD5 and RD6 were shallow, grassy ditches with no defined bed and banks. Dominant vegetation in RD5 were primarily facultative upland species including orchard grass (FACU), wild onion (FACU), and tall fescue (FACU). Vegetation in RD6 was primarily tall fescue (FACU). Dominant vegetation bordering RD7 included common periwinkle (*Vinca minor* – NI) covering the slope to the south and mowed tall fescue (FACU) on the slope to the north between US 20 and the ditch.

One roadside ditch was identified at Investigation Area 4. RD8 runs along the north side of US 20 for the entire length of the area. RD8 can be seen in photos 154, 165, 158, 160, 162, 164, 166, 168, 170, and 172. RD8 is a shallow, grassy ditch with no defined bed and banks. Vegetation in RD8 is dominated by tall fescue (FACU) and Kentucky blue grass (FAC).

Two roadside ditches were identified at Investigation Area 5. RD9 runs along the north side of US 20 for most of the length of the area. RD9 can be seen in photos 200, 202, 204, and 206. RD10 runs along the south side of US 20 for the entire length of the area. RD10 can be seen in photos 208, 210, 212, 214, 218, and 220. RD9 and RD10 were shallow, grassy ditches with no defined bed and banks. Dominant vegetation in RD9 included orchard grass (FACU), Kentucky blue grass (FAC), and tall fescue (FACU). Dominant vegetation in RD10 included tall fescue (FACU), reed canary grass (*Phalaris arundinacea* – FACW), queen Anne's lace (*Daucus carota* – UPL), common ragweed (*Ambrosia trifida* – FAC), and poison ivy (*Toxicodendron radicans* – FAC).

Two roadside ditches were identified at Investigation Area 6. RD11 runs along the north side of US 20 for a short distance between N Barclay and the nearest driveway to the east. RD11 can be seen in photo 228. RD12 runs along the north side of US 20 from the driveway east of N Barclay to the eastern edge of the investigation area. RD12 can be seen in photos 230, 232, 234, 236, 238, 240, 242, 244, 246, 248, 250, and 252. RD11 and RD12 were shallow, grassy ditches with no defined bed and banks. Vegetation in RD11 was primarily tall fescue (FACU). Dominant vegetation in RD12 included orchard grass (FACU), tall fescue (FACU), and Kentucky blue grass (FAC).

None of the roadside ditches identified across the six investigation areas appear to be jurisdictional. They do not replace natural channels, were not excavated through wetlands, have no defined beds and banks,

and they only carry ephemeral, not relatively permanent or seasonal, flow. All of the roadside ditches appear to have been excavated in and wholly drain uplands. As such, none of the roadside ditches meet the definition of Waters of the U.S.

All roadside ditches are shown on Exhibit 7, and photos are included in Appendix A.

3.1.3 Channels

Three channels, Channels 1, 2, and 3, were found within Investigation Areas 1 and 2. Channel 1 at Investigation Area 1 was not previously identified on the NHD or USGS topo maps (Exhibits 2-4), but Channels 2 and 3 at Investigation Area 2 were identified on the NHD map (Exhibit 4).

Channel 1 was identified at CLV-56660 at the west end of Investigation Area 1 and can be seen in photos 5, 7, and 51. North of US 20, there is a bare path that indicates flow, however south of US 20 no channel is visible. Channel 1 has no defined bed and banks or OHWM. Based on the NHD, USGS topo maps, and what was observed in the field, it appears that Channel 1 is ephemeral in nature. Additionally, there was no flowing or standing water in the channel at the time of the site visit, and it does not connect to any other flowline or waterbody. As an ephemeral water feature that lacks a defined bed and banks and OHWM, Channel 1 is not anticipated to be considered a Water of the U.S.

Channel 2 flows northeast through CV 020-046-49.65 under US 20 in Investigation Area 2 and can be seen in photos 75, 77, 91, and 92. The structure inlet (south of US 20) is open, however north of US 20 the structure is blocked by soil and debris. Channel 2 continues north from the blocked structure as a small undefined channel. No defined bed, banks or OHWM are present for Channel 2 either north or south of US 20. Channel 3 flows west into Channel 2 south of the structure inlet south of US 20. Channel 3 can be seen in photo 94 and does not have a defined bed, banks, or OHWM. Based on the NHD map, Channels 2 and 3 eventually drain to the Galena River and subsequently the Galien River. However, both Channels 2 and 3 appear to be ephemeral in nature and neither had any flowing or standing water present at the time of the site visit. As ephemeral features that lack defined beds and banks and OHWMs, Channels 1 and 2are not anticipated to be considered Waters of the U.S.

All channels are shown on Exhibit 7, and photos are included in Appendix A.

3.1.4 Waterways Summary

Table 3 is a summary of potentially jurisdictional waterways identified within the project limits.

Table 3: Summary of Waterways

Feature	Photos	Lat/Long	OHWM	USGS Blue-Line	Substrate	Riffles, Pools	Quality	Stream Type	Likely Jurisdictional Water of the U.S.?
UNT to Galena River	112, 113, 115, 121, 123, 133, 135, 136, 138, 141, 142, 143	41.681106, -86.711075 (Area 3)	18’ 3” x 5” 10’10” x 7”	Yes	Mud	Yes	Average	R3UB3	Yes

3.2 Wetlands

Six potential wetland areas were investigated during the site visit. Data points (DP) were collected within the potential wetland areas where wetland conditions were most likely.

3.2.1 Wetland 1

Wetland 1 is located in Investigation Area 3 bordering both sides of UNT to Galena River north of US 20 and CV 020-046-50.05. Wetland 1 is approximately 0.044 acres in size within the investigation area boundaries. Since UNT to Galena River is anticipated to be a Water of the U.S. and Wetland 1 directly abuts UNT to Galena River, it is anticipated that Wetland 1 would also be considered a Water of the U.S.

DP3 was collected in an area with a large number of cattails (*Typha x glauca* – OBL) north of US 20 and west of UNT to Galena River where photos 105 and 106 were taken. Other vegetation identified at DP3 included Kentucky blue grass (FAC), side-flowering aster (*Symphyotrichum lateriflorum* – FACW), blue lettuce (*Lactuca biennis* – FAC), cleavers (*Galium aparine* – FACU), and common milkweed (*Asclepias syriaca* – FACU). Since cattails and Kentucky blue grass are the dominant species, the hydrophytic vegetation criterion was met. Multiple secondary hydrology indicators were found, including drainage patterns (B10), geomorphic position (D2), and FAC-Neutral test (D5), so the wetland hydrology criterion was met. The soil was also found to be hydric, meeting the Sandy Redox (S5) indicator. DP3 meets all three wetland criteria and is representative of conditions within Wetland 1. Wetland 1 is a palustrine emergent wetland (PEM) using the Cowardin Classification System. The quality of the wetland was considered poor due to its proximity to US 20.

DP4 was collected approximately 5 feet away from DP3 where photos 107 and 108 were taken and is characteristic of the upland area surrounding Wetland 1. Vegetation identified at DP4 included black medick (*Medicago lupulina* – FACU), tall fescue (FACU), narrowleaf plantain (*Plantago lanceolata* – FACU), and queen Anne's lace (UPL). With all vegetation classified as facultative upland or upland species, the vegetation failed to meet the wetland hydrophytic vegetation criterion. No hydrologic indicators were found, so the wetland hydrology criterion was not met. The soil was found to be non-hydric, so the wetland hydric soil indicator was not met. DP4 is not located within a wetland.

The wetland boundary was delineated using the presence of cattails as well as geomorphic position. The same indicators were used for Wetland 1 on either side of UNT to Galena River. Wetland 1 continues north of the project area along both the east and west edges of UNT to Galena River, but it was not delineated past the boundaries of the Investigation Area. The wetland data sheets are included in Appendix B and photos of Wetland 1 are included in Appendix A.

3.2.2 Wetland 2

Wetland 2 is located in Investigation Area 3 bordering the west side of UNT to Galena River south of US 20 and CV 020-046-50.05. Wetland 2 is approximately 0.051 acres in size. Since UNT to Galena River is anticipated to be a Water of the U.S. and Wetland 2 directly abuts UNT to Galena River, it is anticipated that Wetland 2 would also be considered a Water of the U.S.

DP5 was collected upslope of the wet depression found on the south side of US 20 west of UNT to Galena River where photos 125 and 126 were taken. Vegetation identified at DP5 included white ash (*Fraxinus americana* – FACU), Virginia creeper (FACU), queen Anne's lace (UPL), spotted jewelweed (*Impatiens capensis* – FACW), and hedge bindweed (*Calystegia sepium* – FAC). Since white ash, Virginia creeper, and queen Anne's lace are the dominant species and are all facultative upland and upland species, the vegetation failed to meet the wetland hydrophytic vegetation criterion. No hydrologic indicators were found, so the wetland hydrology criterion was not met. The soil was found to be non-hydric, so the wetland hydric soil indicator was not met. DP5 is not located within a wetland.

DP6 was collected within the wet depression found on the south side of US 20 west of UNT to Galena River where photos 127 and 128 were taken. Vegetation identified at DP6 included common reed (*Phragmites australis* – FACW), cattails (OBL), halberd-leaved tearthumb (*Persicaria arifolia* – OBL), and riverbank grapevine (*Vitis riparia* – FACW). With all vegetation identified as facultative wetland or obligate wetland

species, the vegetation meets the wetland hydrophytic vegetation criterion. Multiple primary and secondary hydrological indicators were found, including high water table (A2) at a depth of 3 inches, saturation (A3) at the surface, geomorphic position (D2), and FAC-Neutral test (D5), so the wetland hydrology criterion was met. The soil was found to be hydric, meeting the Histic Epipedon (A2) indicator. Due to the high organic matter content of the soil and the high water table, the soil pit was only dug to a depth of 6 inches as the soil kept washing away or disintegrating and a deeper slice couldn't be obtained. DP6 meets all three wetland criteria and is representative of conditions within Wetland 2. Wetland 2 is a palustrine emergent wetland (PEM) using the Cowardin Classification System. The quality of the wetland was considered average since it is surrounded by woods and borders a meandering stream.

The wetland boundary was delineated using the presence of cattails and common reed as well as pooling surface water and soil saturation at the surface. The wetland data sheets are included in Appendix B and photos of Wetland 2 are included in Appendix A.

3.2.3 Non-Wetland Areas

Four other potential wetland areas were investigated at Investigation Areas 1, 2, 4, and 5. Data points were taken within the area where wetland conditions were most likely.

DP1 was collected in RD1 north of US 20 near the middle of Investigation Area 1 where photos 17 and 18 were taken. Vegetation identified at DP1 included smooth brome (*Bromus inermis* – FACU), common milkweed (FACU), tall fescue (FACU), and wild onion (FACU). As all identified vegetation are facultative upland species, the vegetation failed to meet the hydrophytic vegetation criteria. No hydrology indicators were found, so the wetland hydrology criterion was not met. The soil was found to be non-hydric, so the wetland hydric soil indicator was not met. DP1 is not located within a wetland.

DP2 was collected in Channel 2 south of US 20 near the southside end of CV 020-046-49.65 at Investigation Area 2 where photos 95 and 96 were taken. Vegetation identified at DP2 included sugar maple (*Acer saccharum* – FACU), Virginia creeper (FACU), and yellow jewelweed (*Impatiens pallida* – FACW). Since sugar maple and Virginia creeper are the dominant species and are facultative upland species, the vegetation failed to meet the wetland hydrophytic vegetation criterion. One secondary hydrology indicator was found, geomorphic position (D2), however one secondary indicator is not enough for the wetland hydrology criterion to be met. The soil was found to be non-hydric, so the wetland hydric soil indicator was not met. DP2 is not located within a wetland.

DP7 was collected south of US 20 near the east end of Investigation Area 4 where photos 189 and 190 were taken. Vegetation identified at DP7 included slippery elm (*Ulmus rubra* – FAC), spotted jewelweed (FACW), prickly lettuce (*Lactuca serriola* – FACU), and reed canary grass (FACW). Since slippery elm, spotted jewelweed, and prickly lettuce are the dominant species, the vegetation meets with wetland hydrophytic vegetation criterion with the dominance test and prevalence index. One secondary hydrology indicator was found, FAC-Neutral test (D5), however one secondary indicator is not enough for the wetland hydrology criterion to be met. The soil was found to be non-hydric, so the wetland hydric soil indicator was not met. DP7 is not located within a wetland.

DP8 was collected south of US 20 in RD10 near the west end of Investigation Area 5 where the NWI wetland was mapped (Exhibit 4) and photos 215 and 216 were taken. Vegetation identified at DP8 included slippery elm (FAC), spotted jewelweed (FACW), tall fescue (FACU), reed canary grass (FACW), common reed (FACW), and wild parsnip (*Pastinaca sativa* – NI). With all listed species except wild parsnip identified as dominants, the vegetation meets the wetland hydrophytic vegetation criterion with the dominance test and prevalence index. One secondary hydrology indicator was found, FAC-Neutral test (D5), however one secondary indicator is not enough for the wetland hydrology criterion to be met. The soil was found to be non-hydric, so the wetland hydric soil indicator was not met. DP8 is not located within a wetland.

The wetland data sheets are included in Appendix B and photos of the surrounding areas and soil pits are included in Appendix A.

3.2.4 Wetland Summary

Table 4 is a summary of the data points collected within the investigated areas. Table 5 is a summary of the wetlands identified within the investigated areas.

Table 4: Data Point Summary

Data Point	Investigation Area	Latitude Longitude	Hydrophytic Vegetation	Hydric Soils	Wetland Hydrology	Wetland
DP1	1	41.684928 -86.729075	No	No	No	No
DP2	2	41.682406 -86.720886	No	No	Yes	No
DP3	3	41.681103 -86.711133	Yes	Yes	Yes	Yes
DP4	3	41.681119 -86.711133	No	No	No	No
DP5	3	41.680786 -86.711281	No	No	No	No
DP6	3	41.680761 -86.711286	Yes	Yes	Yes	Yes
DP7	4	41.680294 -86.707372	Yes	No	No	No
DP8	5	41.679911 -86.70425	Yes	No	No	No

Table 5: Summary of Wetlands

Wetland Name	Photos	Investigation Area	Lat/Long	Type	Total Acres	Quality	Likely Jurisdictional Water of the U.S.?
Wetland 1	110, 111, 112, 114, 116, 118, 121	3	41.681119 -86.711106	PEM	0.044	Poor	Yes
Wetland 2	123, 131, 133, 138, 141, 142	3	41.680739 -86.711236	PEM	0.051	Average	Yes

3.3 Open Water

There are no open water features located in the study area.

4.0 CONCLUSION

A meander survey of the site found 2 wetlands, 1 stream, 3 channels, and 12 roadside ditches. The stream, UNT to Galena River, is perennial in nature. UNT to Galena River is connected to a TNW, the Galien River, via the Galena River and is considered a Waters of the U.S. Channels 1, 2, and 3, are all ephemeral in nature and lack defined beds and banks and OHWMS. Further, the size, location, watershed, and flow regime of the channels result in an insubstantial effect on the chemical, physical, or biological integrity of the Galien River. As such, Channels 1, 2, and 3 are not anticipated to be Waters of the U.S.

Roadside Ditches within the investigation areas do not appear to fall under federal jurisdiction. They do not replace natural channels, were not excavated through wetlands, have no defined bed and banks, and carry ephemeral flow. Further, the size, location, watershed, and flow regime of the roadside ditches result in an insubstantial effect on the chemical, physical, or biological integrity of the Galien River. Ditches that are excavated or occur wholly in and drain uplands and do not carry relatively permanent flow are non-

jurisdictional. All identified roadside ditches appear to be ephemeral in nature, and are not relatively permanent and do not carry continuous flow at least seasonally. As such, none of the roadside ditches meet the definition of Waters of the U.S. as outlined by the Pre-2015 Waters of the U.S. regulatory guidance as outlined on the Clean Water Act following the *Rapanos v. United States* Supreme Court Decision (1986).

Wetlands 1 and 2 both directly abut UNT to Galena River, which is likely to be considered a Waters of the U.S., which means they meet the definition of adjacent wetland as outlined in the Clean Water Act guidance following the *Rapanos v. United States* Supreme Court Decision. As such, it is anticipated that both Wetlands 1 and 2 are also to be considered Waters of the U.S.

UNT to Galena River as well as Wetlands 1 and 2 should be presumed to be under the jurisdiction of both US Army Corps of Engineers (USACE) and Indiana Department of Environmental Management (IDEM). Every effort should be taken to avoid and minimize impacts to the stream and wetlands. Waterway permitting will be required if impacts will occur. If impacts exceed 300 linear feet or 0.1 acres, mitigation will be required. The INDOT Environmental Services Division should be contacted immediately if impacts will occur. The final determination of jurisdictional waters is ultimately made by the USACE. This report is our best judgment based on the guidelines set forth by the USACE.

5.0 ACKNOWLEDGEMENT

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.

Printed Name: Courtney Haverbusch

Signature, Title: C. Haverbusch Project Scientist
Little River Consultants

6.0 REFERENCES

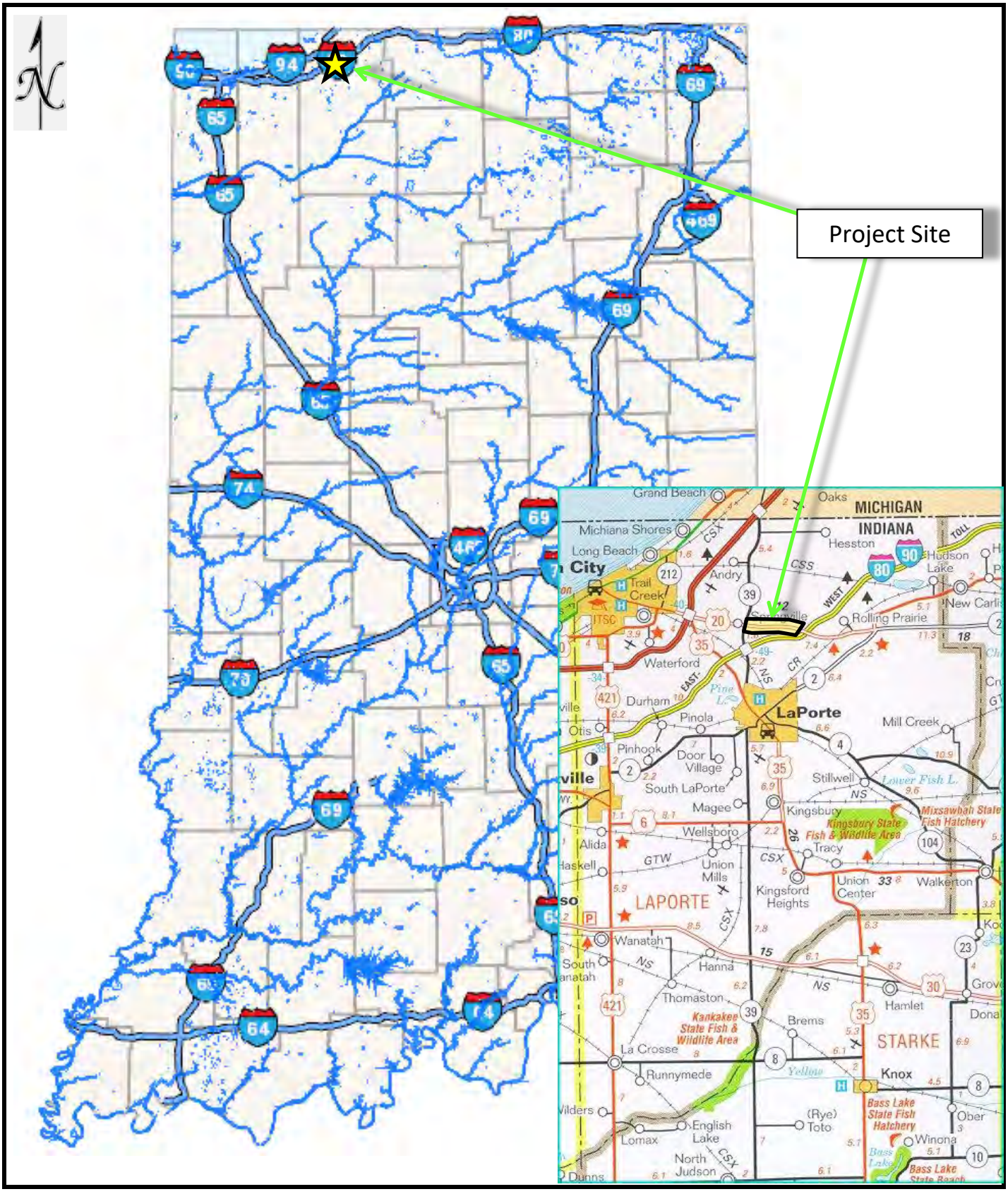
Navigable Waters Protection Rule, 85 CFR Part 328 (2020).

U.S. Army Corps of Engineers (USACE), Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterway Experiment Station, Vicksburg, Mississippi.

U.S. Army Corps of Engineers (USACE), Environmental Laboratory. 2012. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region Version 2.0. U.S. Army Engineer Research and Development Center, Vicksburg, Mississippi.

United States Department of Agriculture, Natural Resources Conservation Service (USDA). Web Soil Survey.

Exhibits

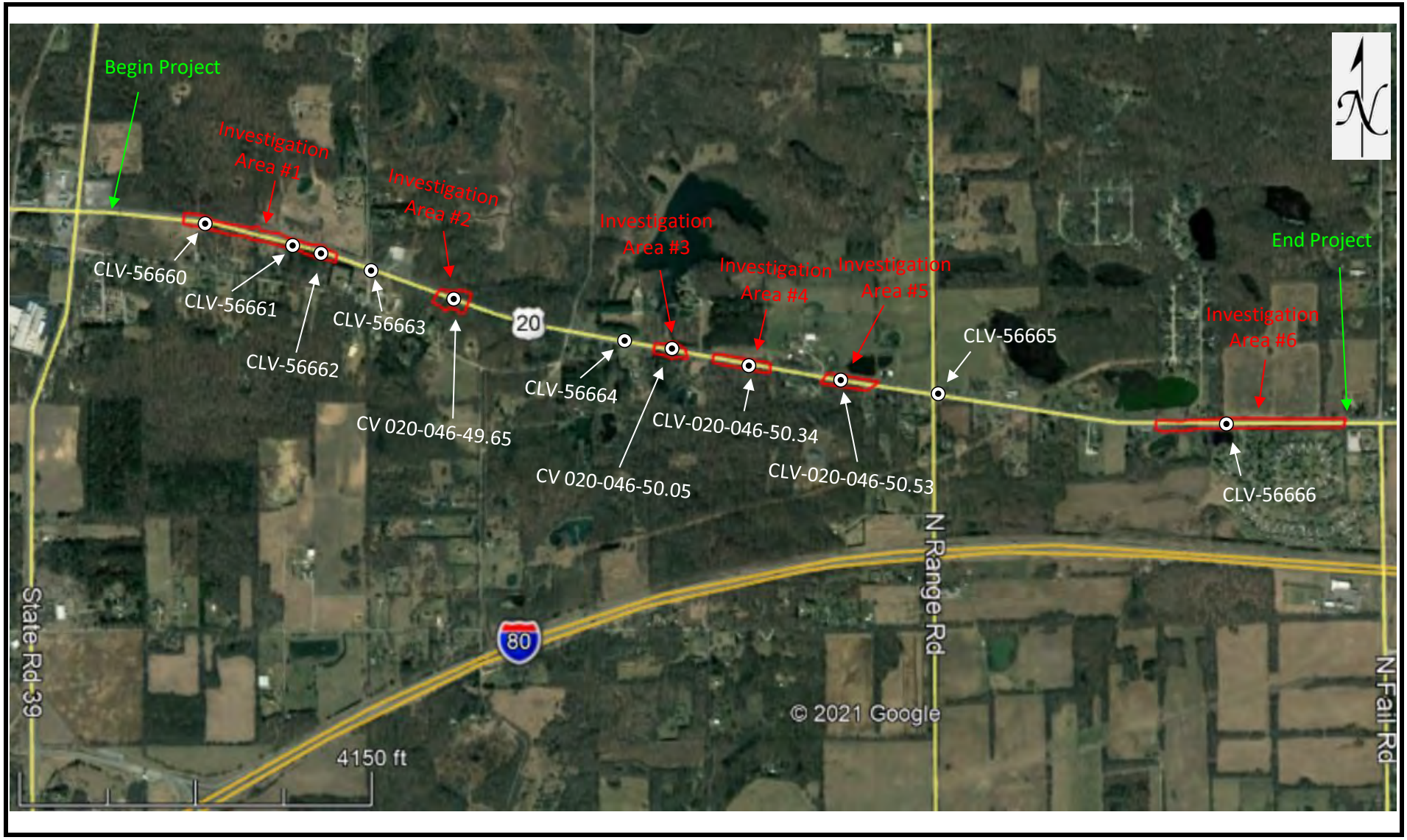


Project Vicinity

Created: June 9, 2021
Source: INDOT Transportation Map County Excerpt
Scale: No Scale
Proj No: 21-024A

Project Name: US 20 Roadway Improvements
Des No: 1702993
Location: US 20 400 feet east of SR 39 to 2.85 mi east of SR 39
Laporte County, IN

EX1a



Project Vicinity – Investigation Areas

Created: July 8, 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

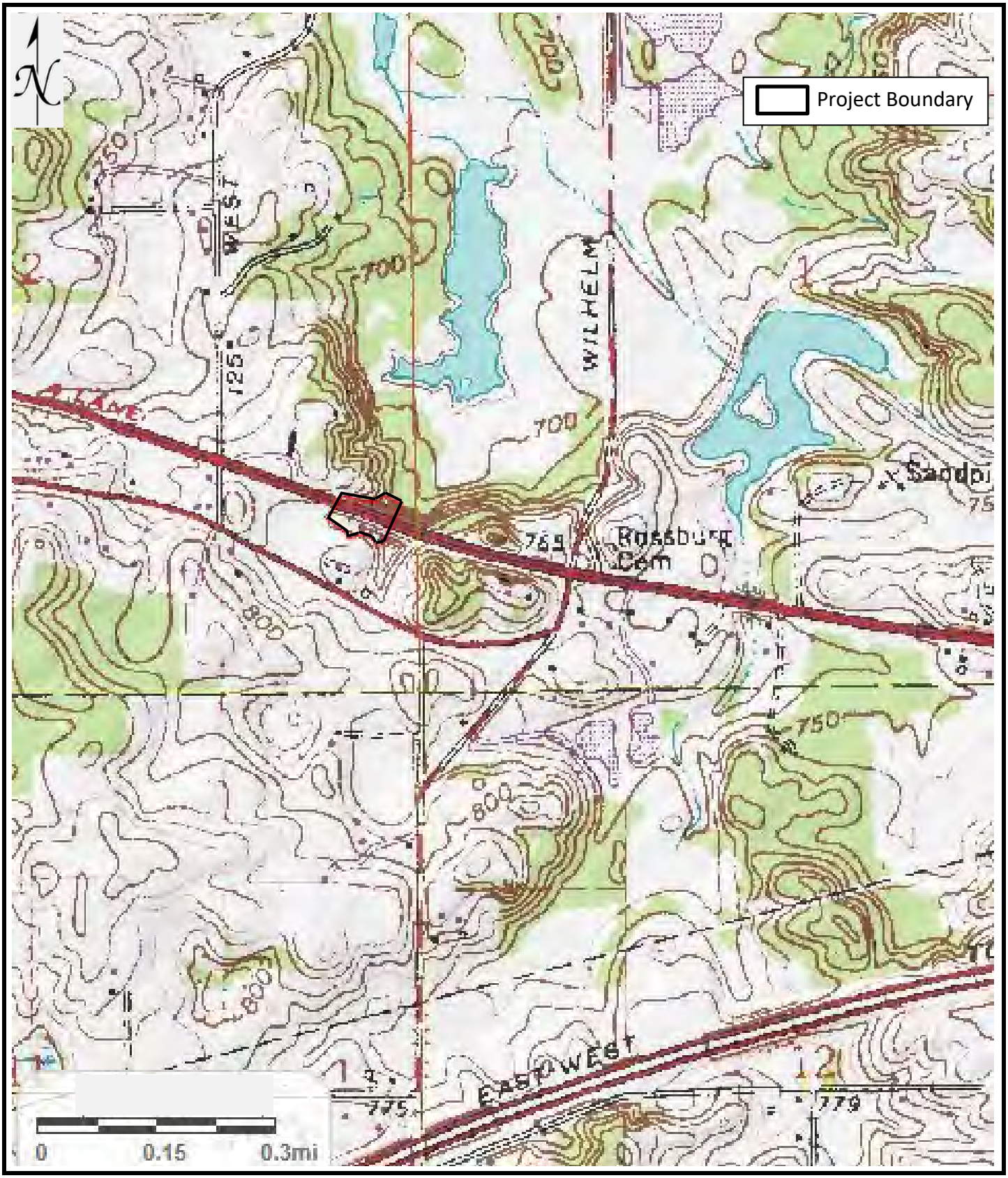
EX1b

USGS Quadrangle Map – Investigation Area 1

Created: June 23, 2021
Source: IndianaMap
USGS Springville Quad
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No: 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX2a



USGS Quadrangle Map – Investigation Area 2

Created: June 23, 2021
Source: IndianaMap
USGS Springville Quad
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No: 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

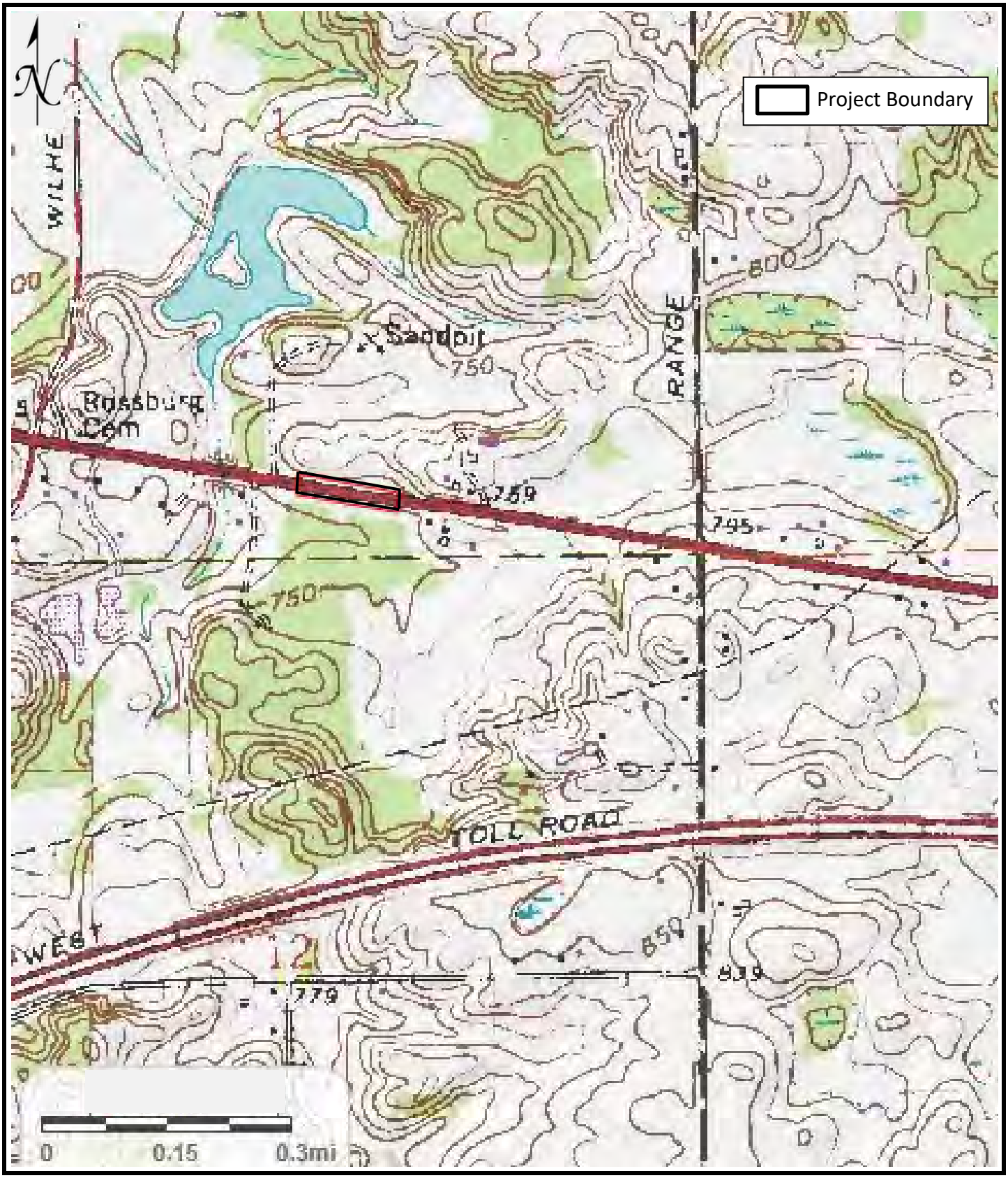
EX2b

USGS Quadrangle Map – Investigation Area 3

Created: June 23, 2021
Source: IndianaMap
USGS Springville Quad
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No: 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX2c



USGS Quadrangle Map – Investigation Area 4

Created: June 23, 2021
Source: IndianaMap
USGS Springville Quad
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No: 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

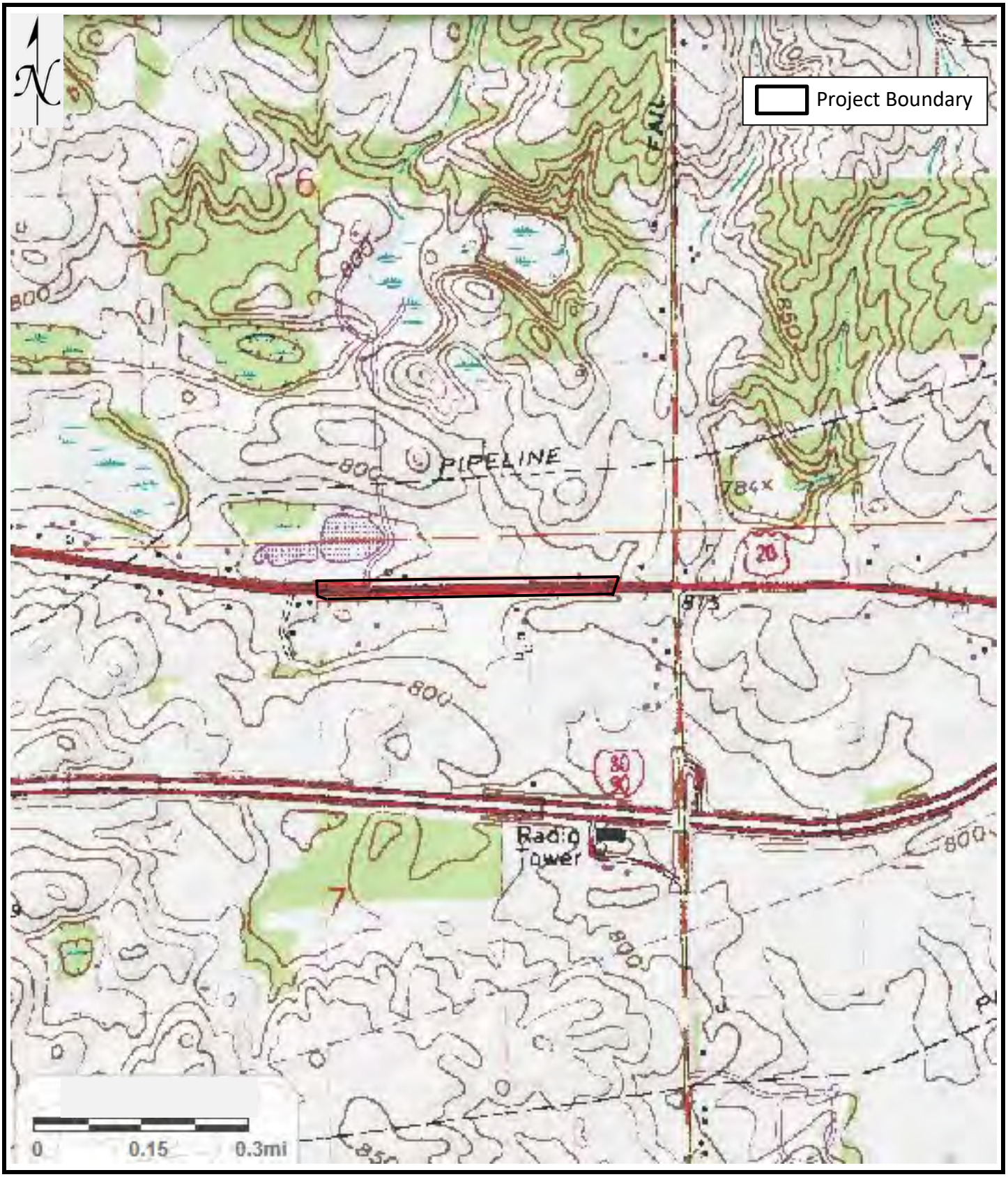
EX2d

USGS Quadrangle Map – Investigation Area 5

Created: June 23, 2021
Source: IndianaMap
USGS Springville Quad
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No: 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX2e

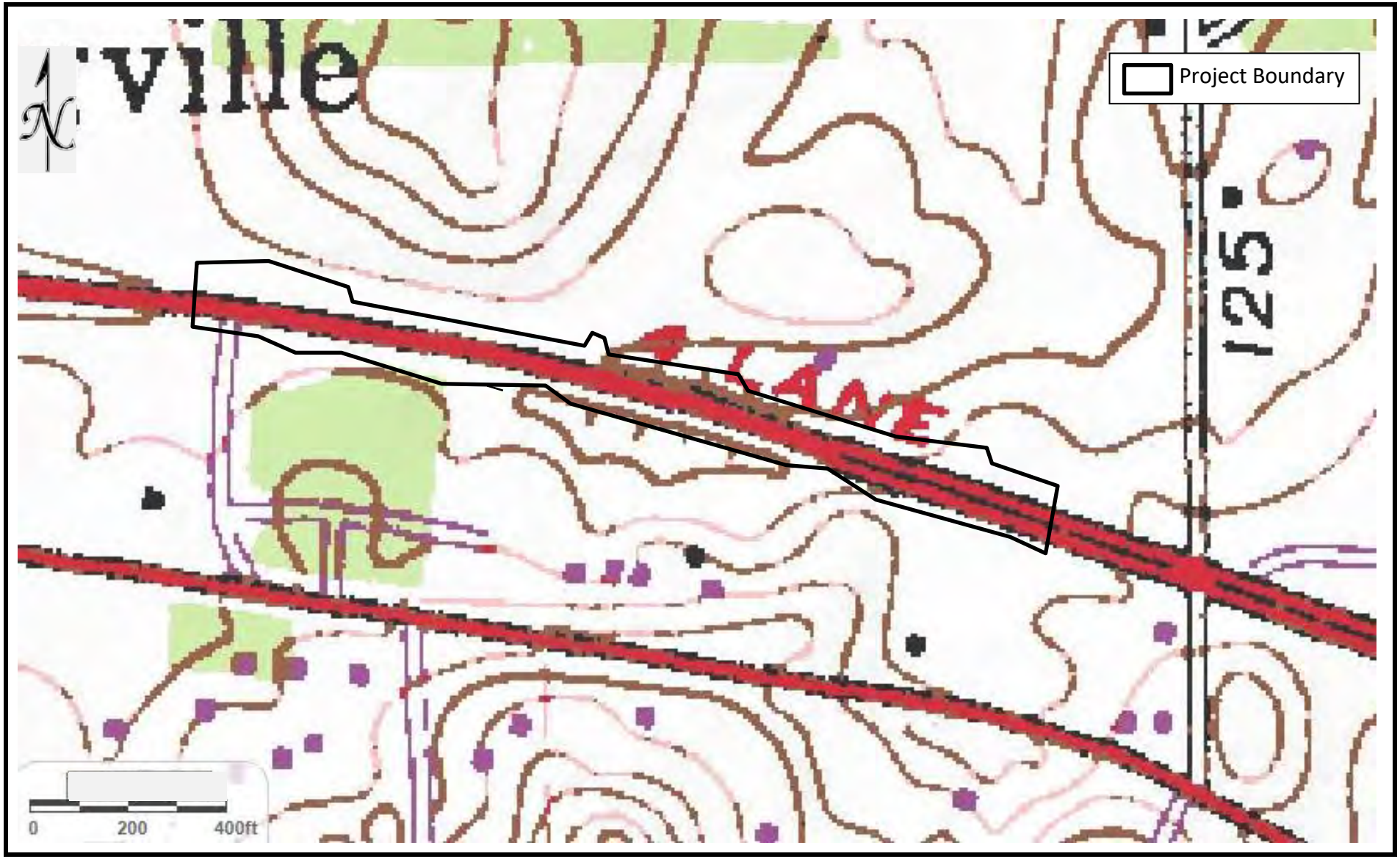


USGS Quadrangle Map – Investigation Area 6

Created: June 23, 2021
Source: IndianaMap
USGS Springville Quad
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No: 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX2f

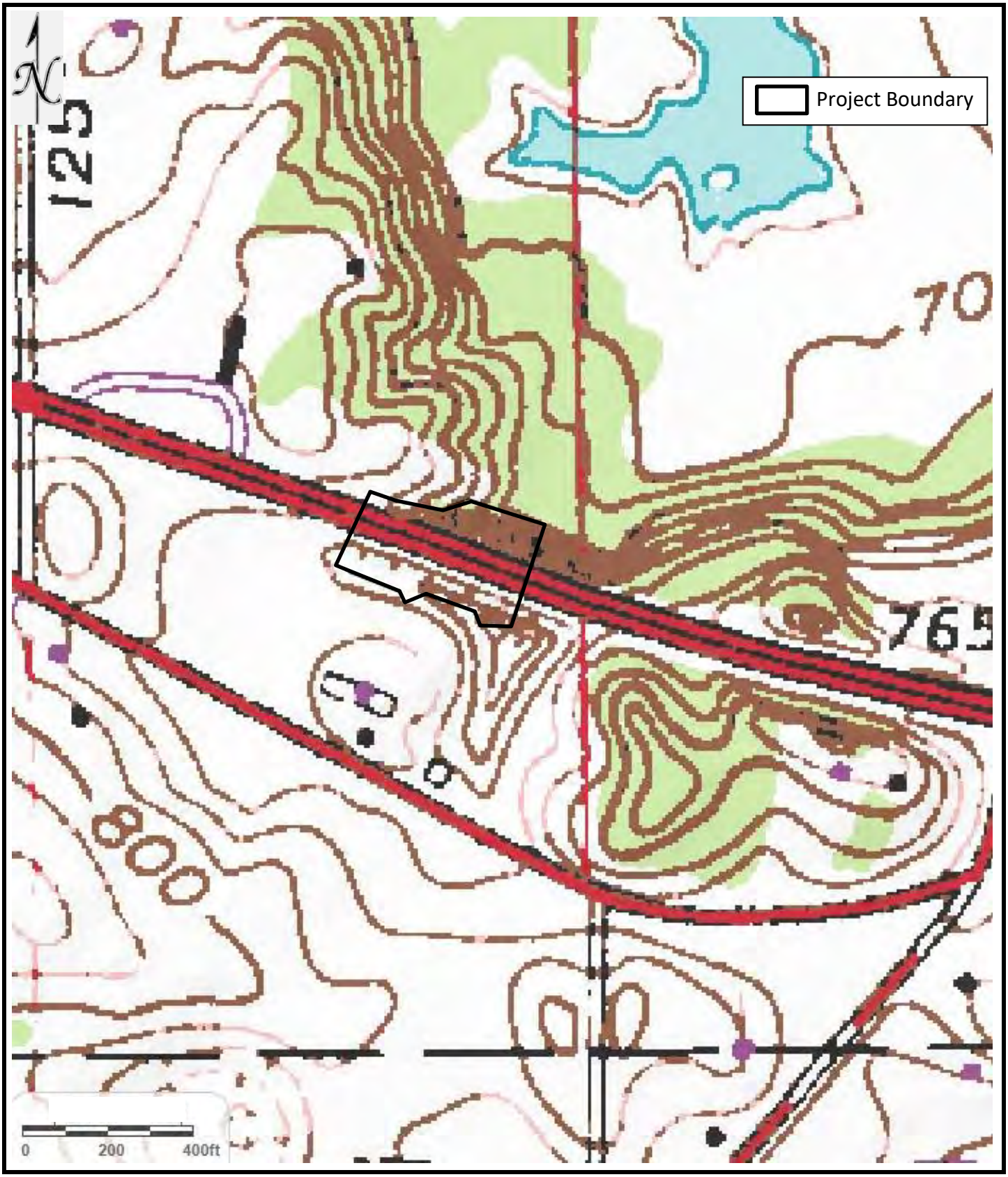


USGS Quadrangle Map Zoomed In – Investigation Area 1

Created: June 23, 2021
Source: IndianaMap
USGS Springville Quad
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No: 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX3a

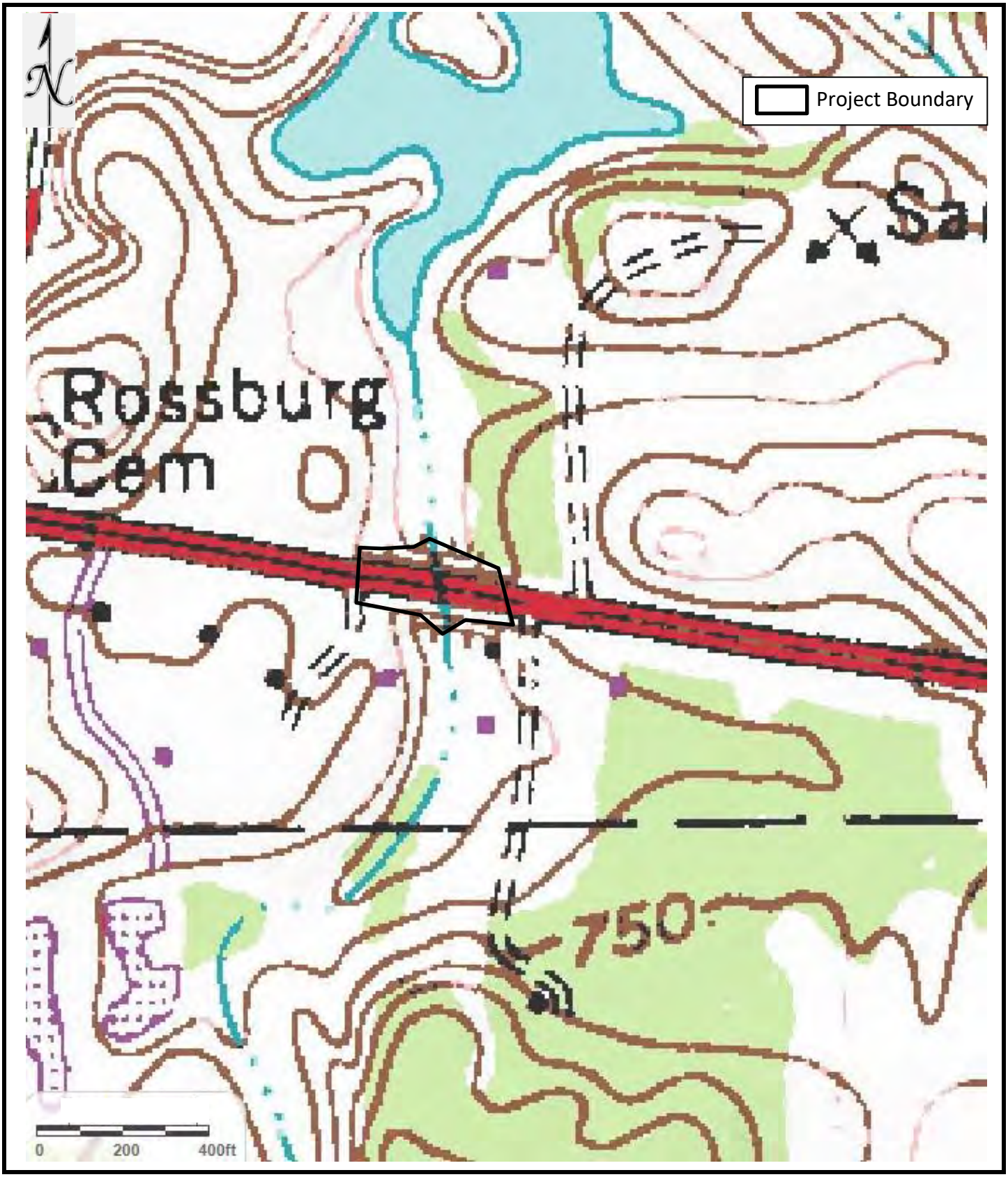


USGS Quadrangle Map Zoomed In – Investigation Area 2

Created: June 23, 2021
Source: IndianaMap
USGS Springville Quad
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No: 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX3b

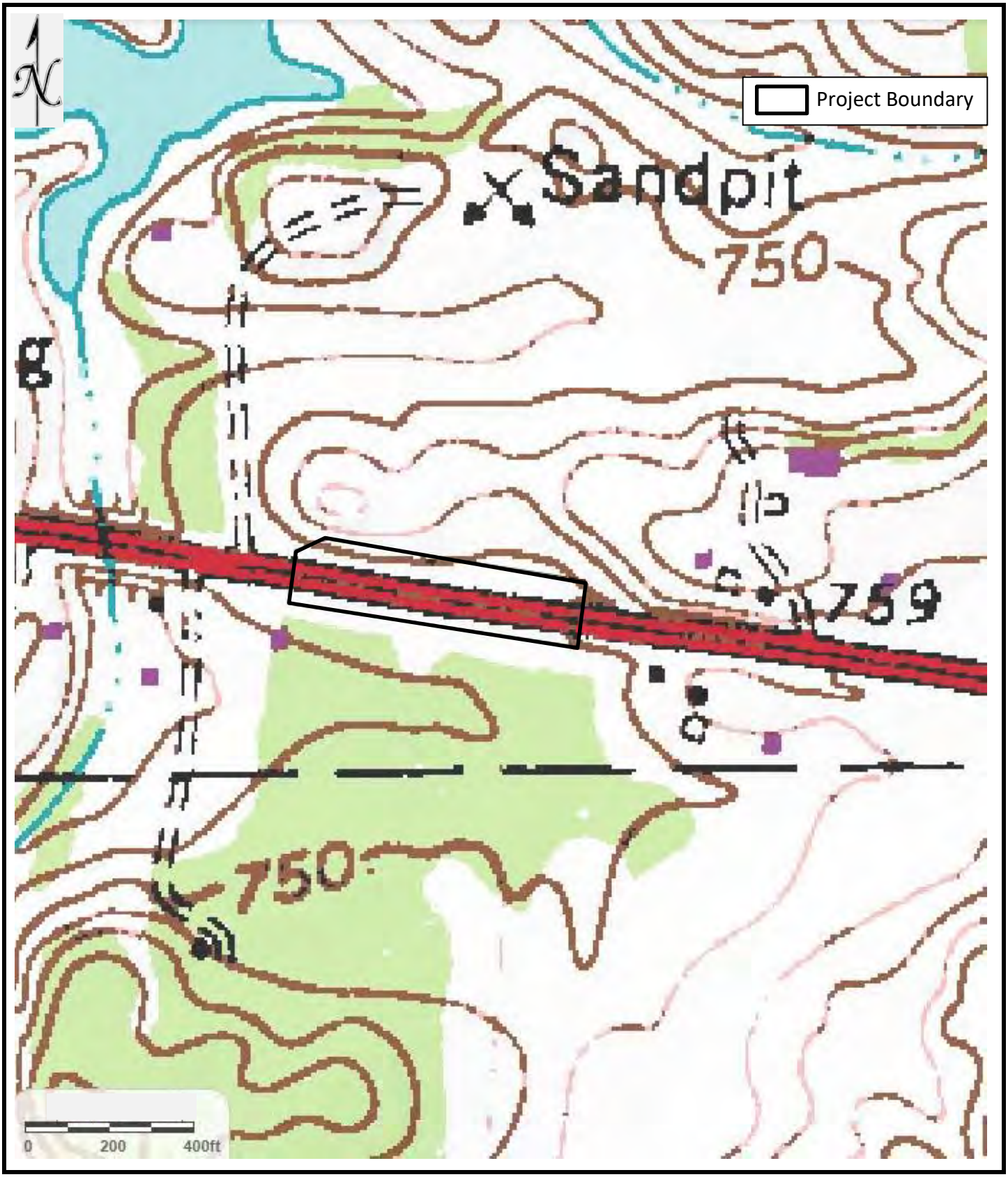


USGS Quadrangle Map Zoomed In – Investigation Area 3

Created: June 23, 2021
Source: IndianaMap
USGS Springville Quad
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No: 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX3c

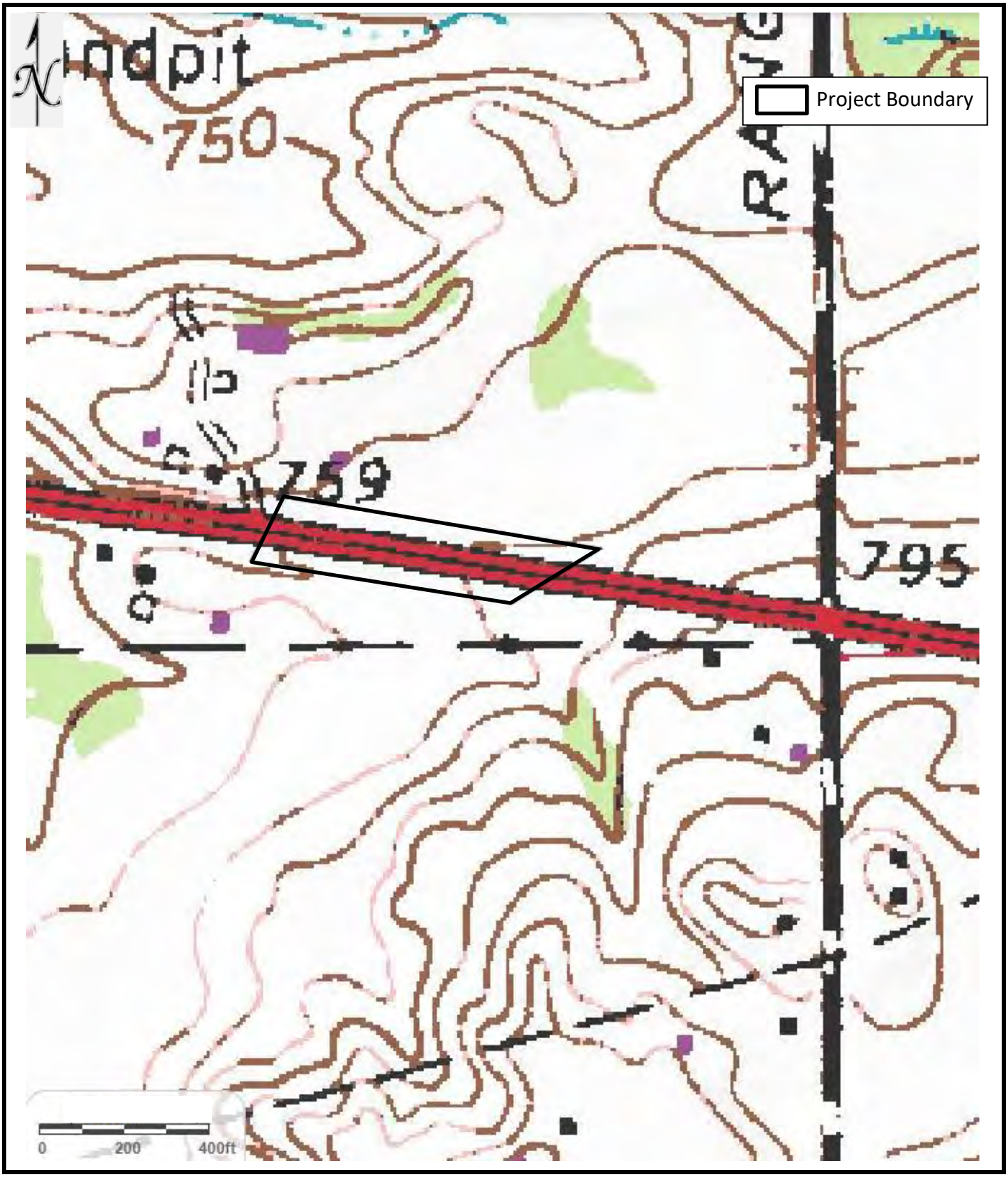


USGS Quadrangle Map Zoomed In – Investigation Area 4

Created: June 23, 2021
Source: IndianaMap
USGS Springville Quad
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No: 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX3d

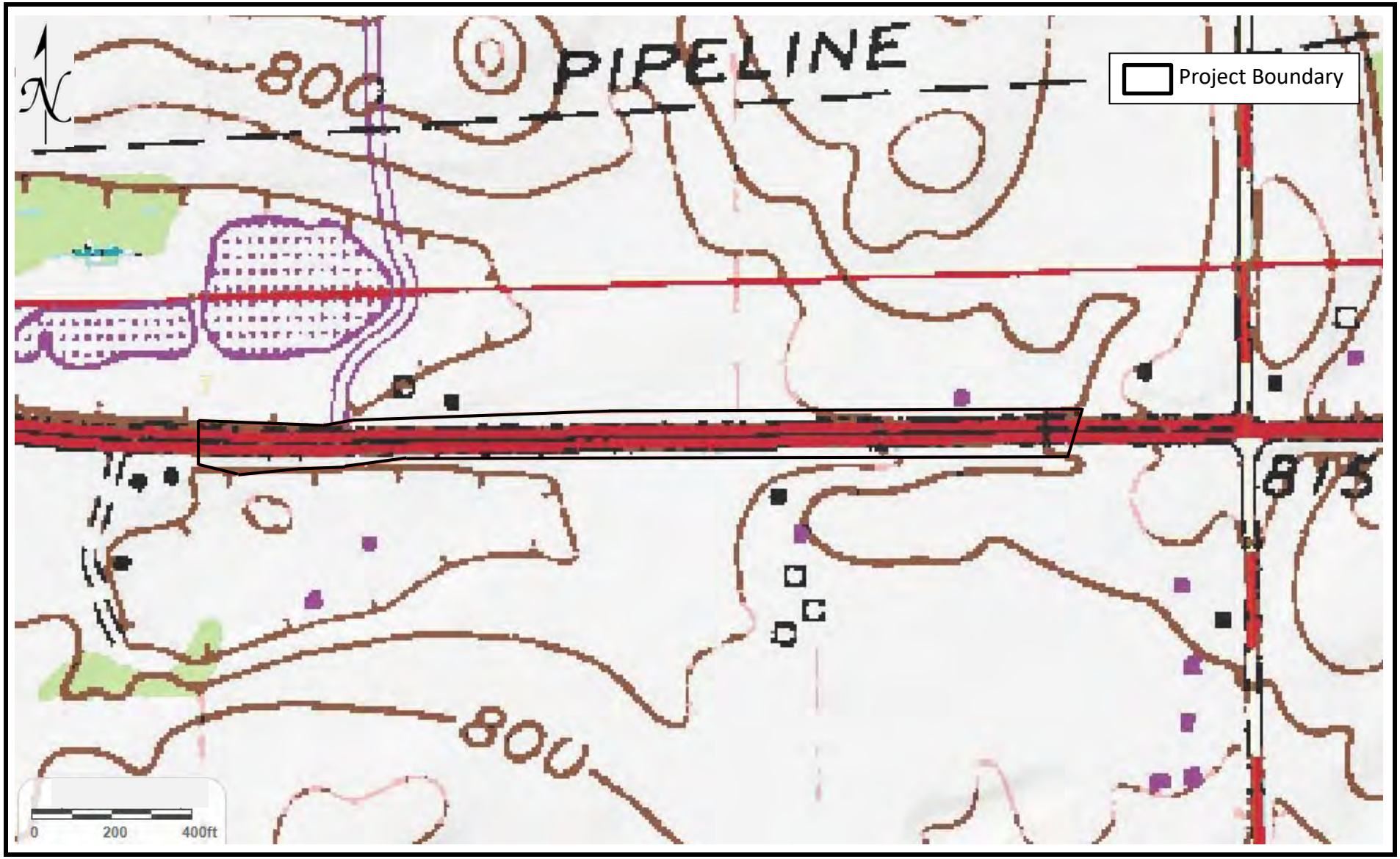


USGS Quadrangle Map Zoomed In – Investigation Area 5

Created: June 23, 2021
Source: IndianaMap
USGS Springville Quad
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No: 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX3e



USGS Quadrangle Map Zoomed In – Investigation Area 6

Created: June 23, 2021
Source: IndianaMap
USGS Springville Quad
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No: 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

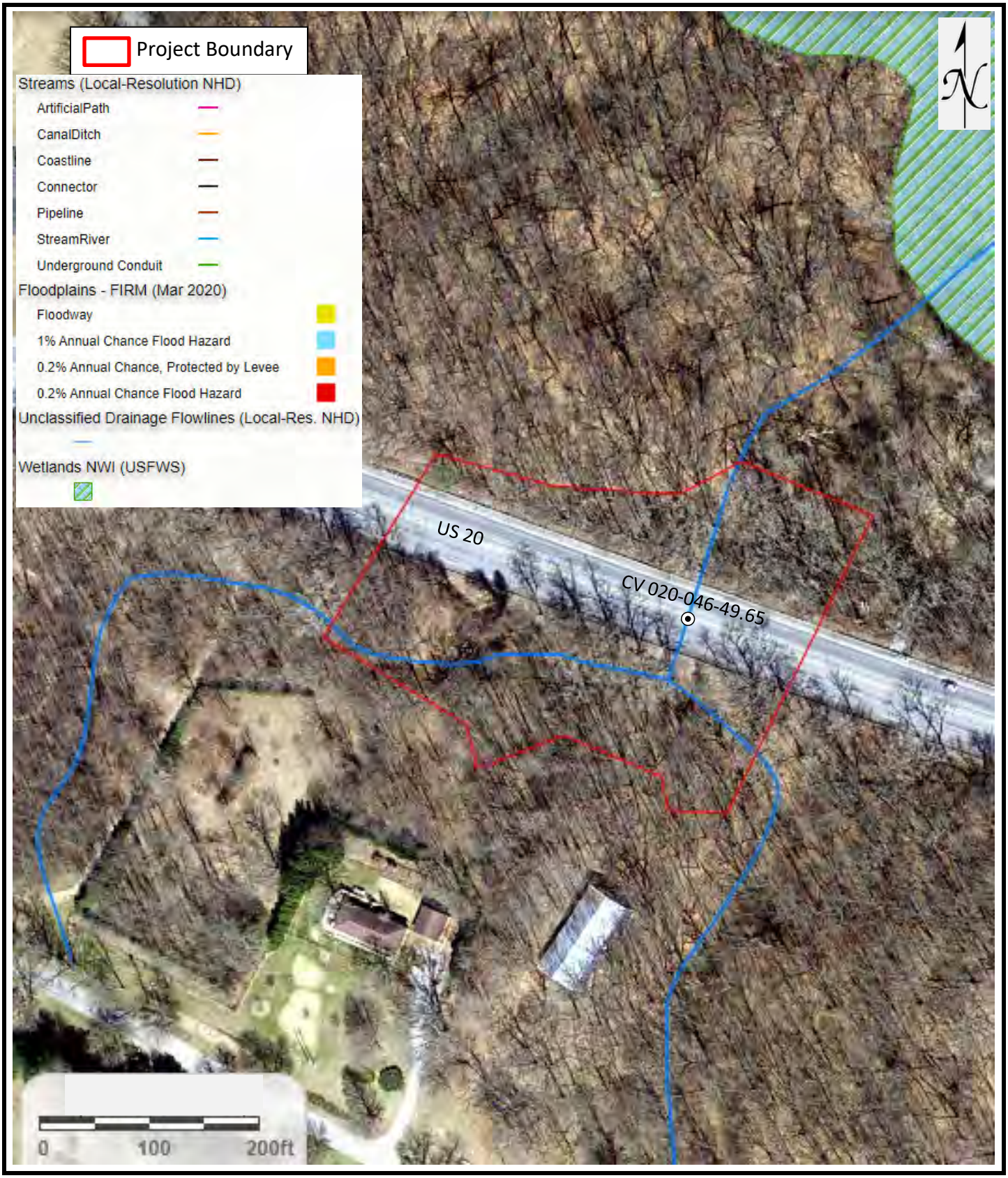
EX3f

Wetland, Floodplain, and Flowline Map – Investigation Area 1

Created: June 23, 2021
Source: USFWS National Wetland Inventory Map
FEMA Flood Insurance Rate Map
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No: 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX4a

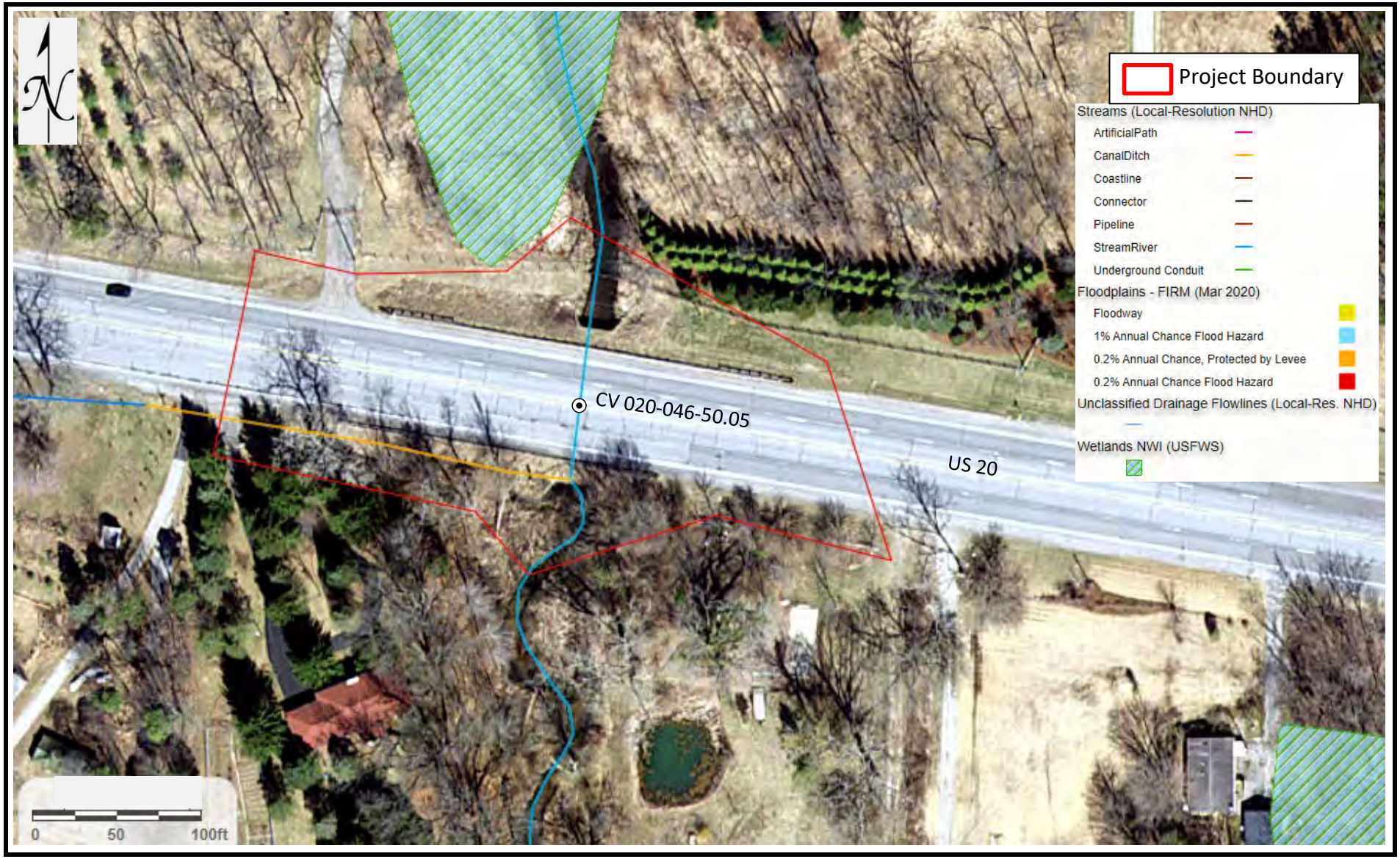


Wetland, Floodplain, and Flowline Map – Investigation Area 2

Created: June 23, 2021
Source: USFWS National Wetland Inventory Map
FEMA Flood Insurance Rate Map
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No: 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX4b



Wetland, Floodplain, and Flowline Map – Investigation Area 3

Created: June 23, 2021
Source: USFWS National Wetland Inventory Map
FEMA Flood Insurance Rate Map
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No: 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

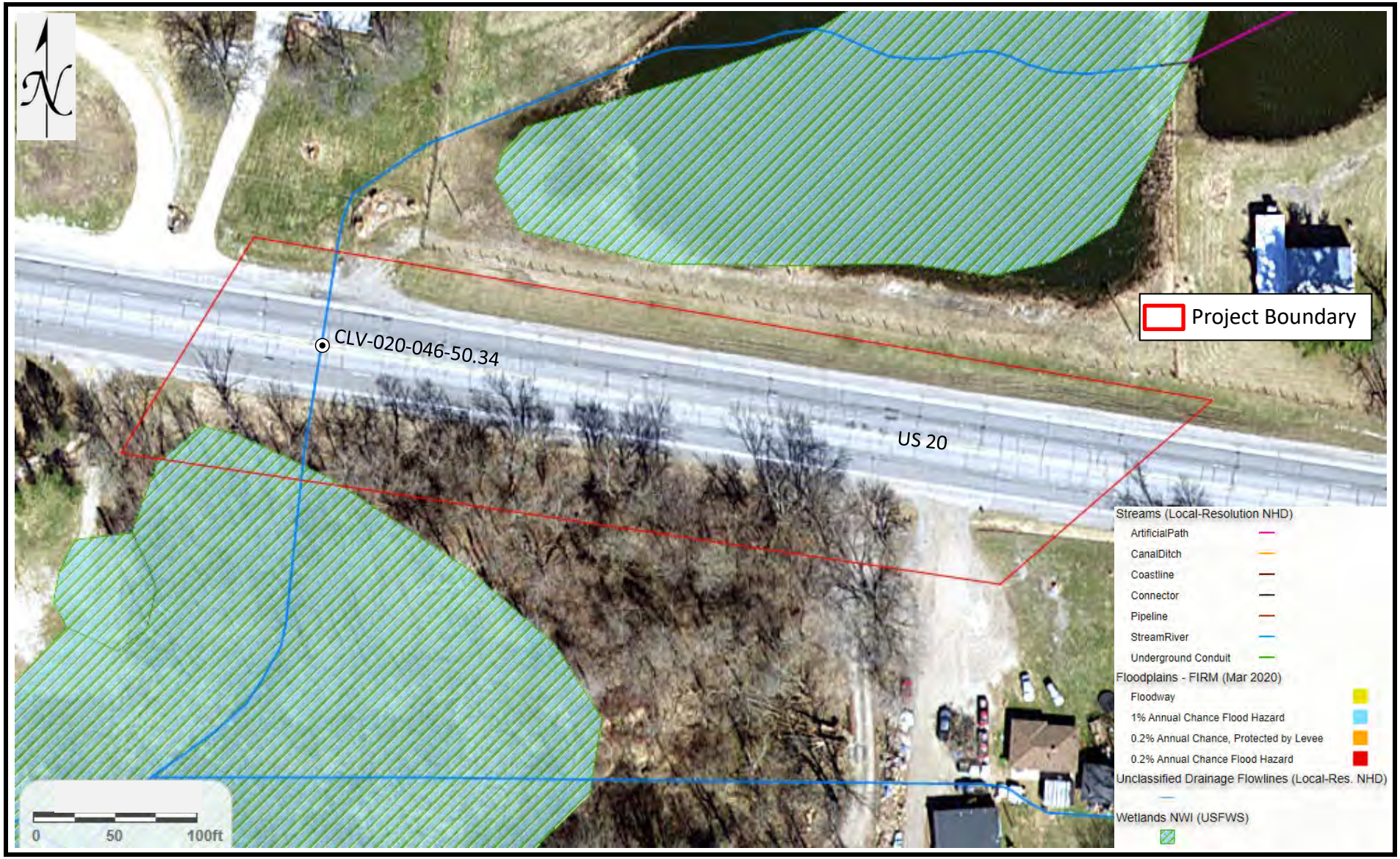
EX4c

Wetland, Floodplain, and Flowline Map – Investigation Area 4

Created: June 23, 2021
Source: USFWS National Wetland Inventory Map
FEMA Flood Insurance Rate Map
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No: 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX4d



Wetland, Floodplain, and Flowline Map – Investigation Area 5

Created: June 23, 2021
Source: USFWS National Wetland Inventory Map
FEMA Flood Insurance Rate Map
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No: 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX4e

Wetland, Floodplain, and Flowline Map – Investigation Area 6

Created: June 23, 2021
Source: USFWS National Wetland Inventory Map
FEMA Flood Insurance Rate Map
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No: 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX4f

Tables — Hydric Rating by Map Unit — Summary By Map Unit

Summary by Map Unit — La Porte County, Indiana (IN091)

Summary by Map Unit — La Porte County, Indiana (IN091)

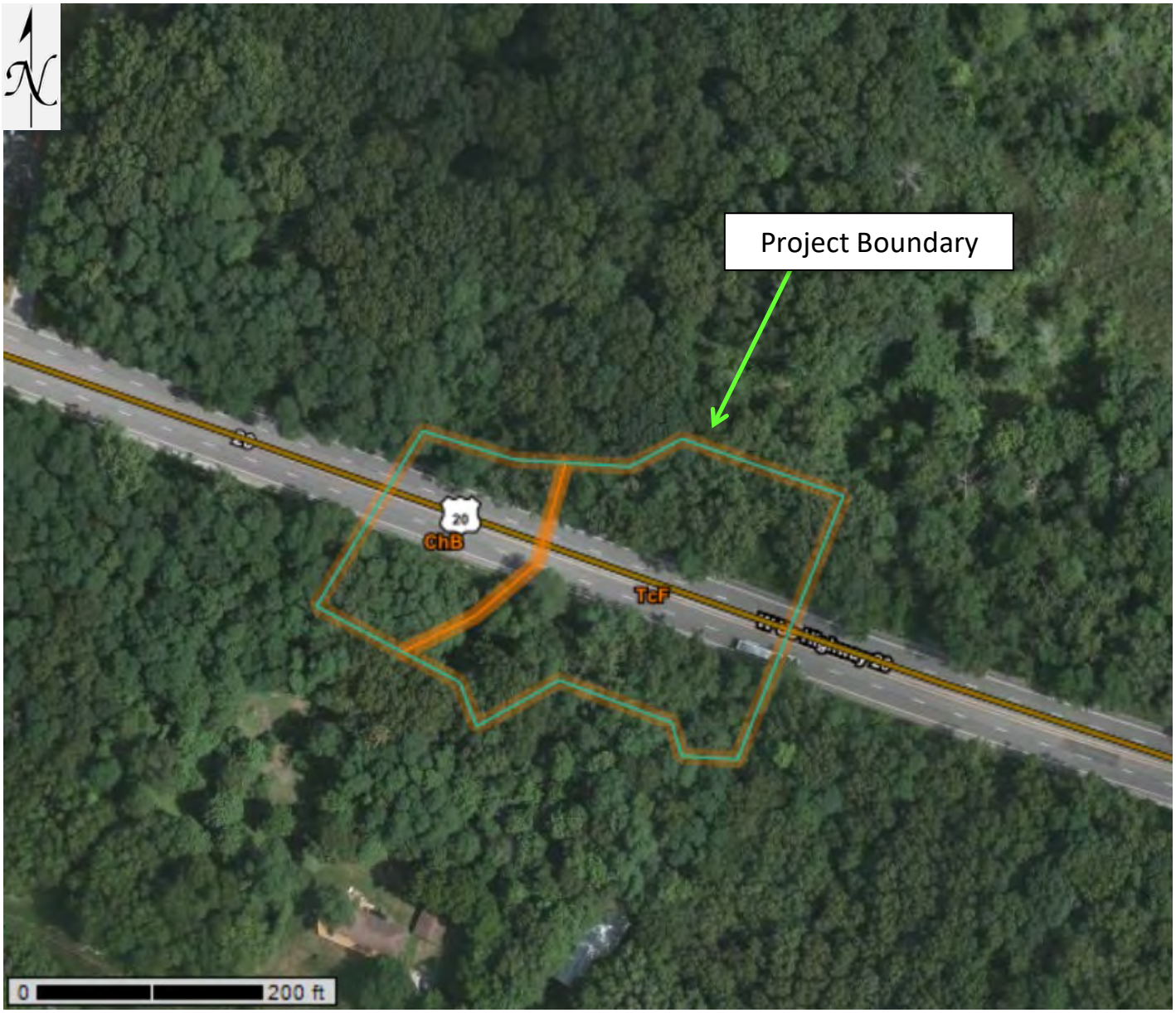
Map unit symbol	Map unit name	Rating	A
ChB	Chelsea fine sand, 2 to 6 percent slopes	0	
ChC	Chelsea fine sand, 6 to 12 percent slopes	0	

Soil Survey – Investigation Area 1

Created: June 14, 2021
Source: NRCS Web Soil Survey
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No: 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX5a



Tables — Hydric Rating by Map Unit — Summary By Map Unit

Summary by Map Unit — La Porte County, Indiana (IN091)

Summary by Map Unit — La Porte County, Indiana (IN091)

Map unit symbol	Map unit name	Rating	Acres
ChB	Chelsea fine sand, 2 to 6 percent slopes	0	
TcF	Tracy sandy loam, 25 to 45 percent slopes	0	

Soil Survey – Investigation Area 2

Created: June 14, 2021
Source: NRCS Web Soil Survey
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No: 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX5b

Tables — Hydric Rating by Map Unit — Summary By Map Unit

Summary by Map Unit — La Porte County, Indiana (IN091)

Summary by Map Unit — La Porte County, Indiana (IN091)

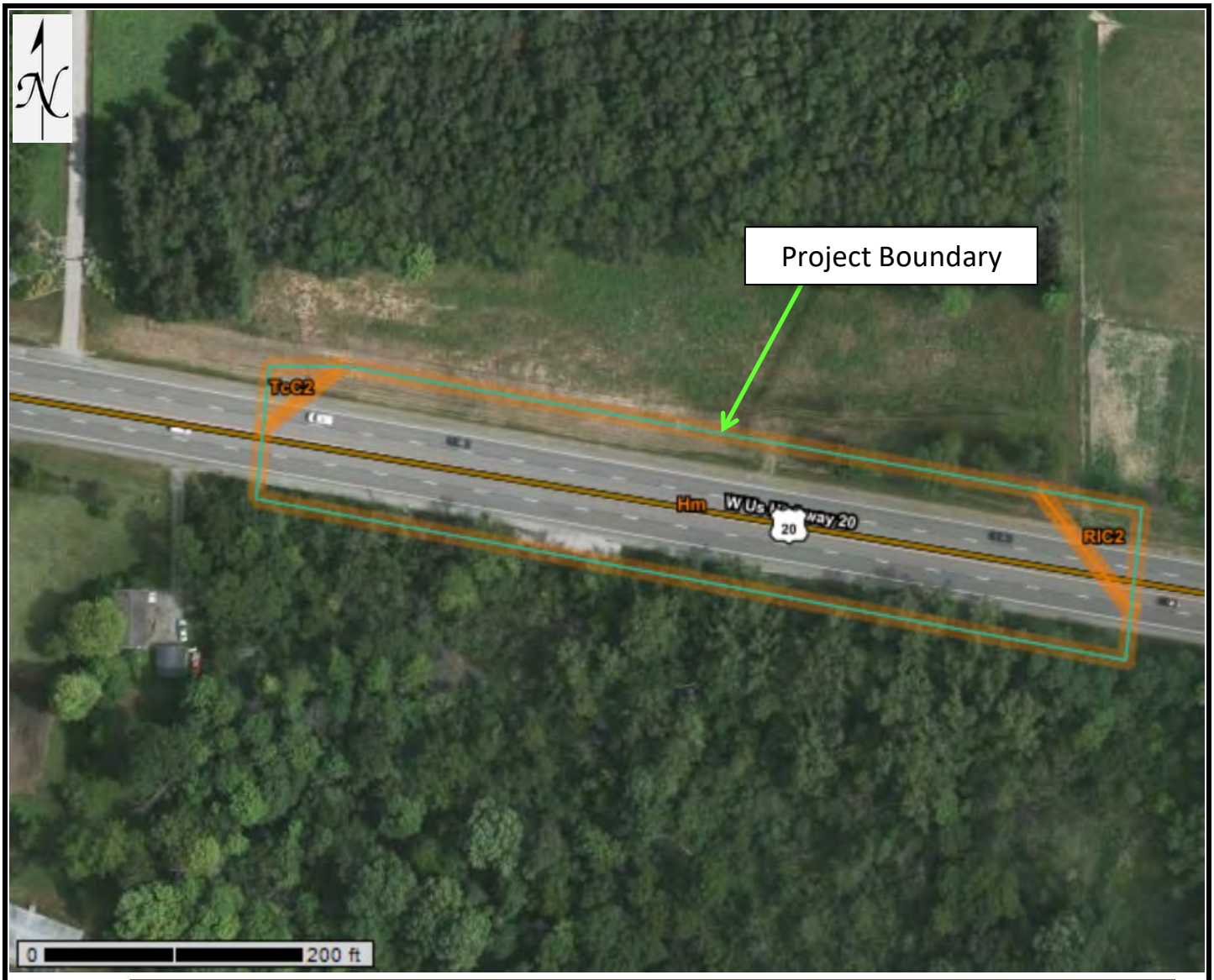
Map unit symbol	Map unit name	Rating	A
Fh	Fluvaquents, loamy	100	
TcC2	Tracy sandy loam, 6 to 12 percent slopes, eroded	0	

Soil Survey – Investigation Area 3

Created: June 14, 2021
Source: NRCS Web Soil Survey
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No: 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX5c



Tables — Hydric Rating by Map Unit — Summary By Map Unit

Summary by Map Unit — La Porte County, Indiana (IN091)

Summary by Map Unit — La Porte County, Indiana (IN091)

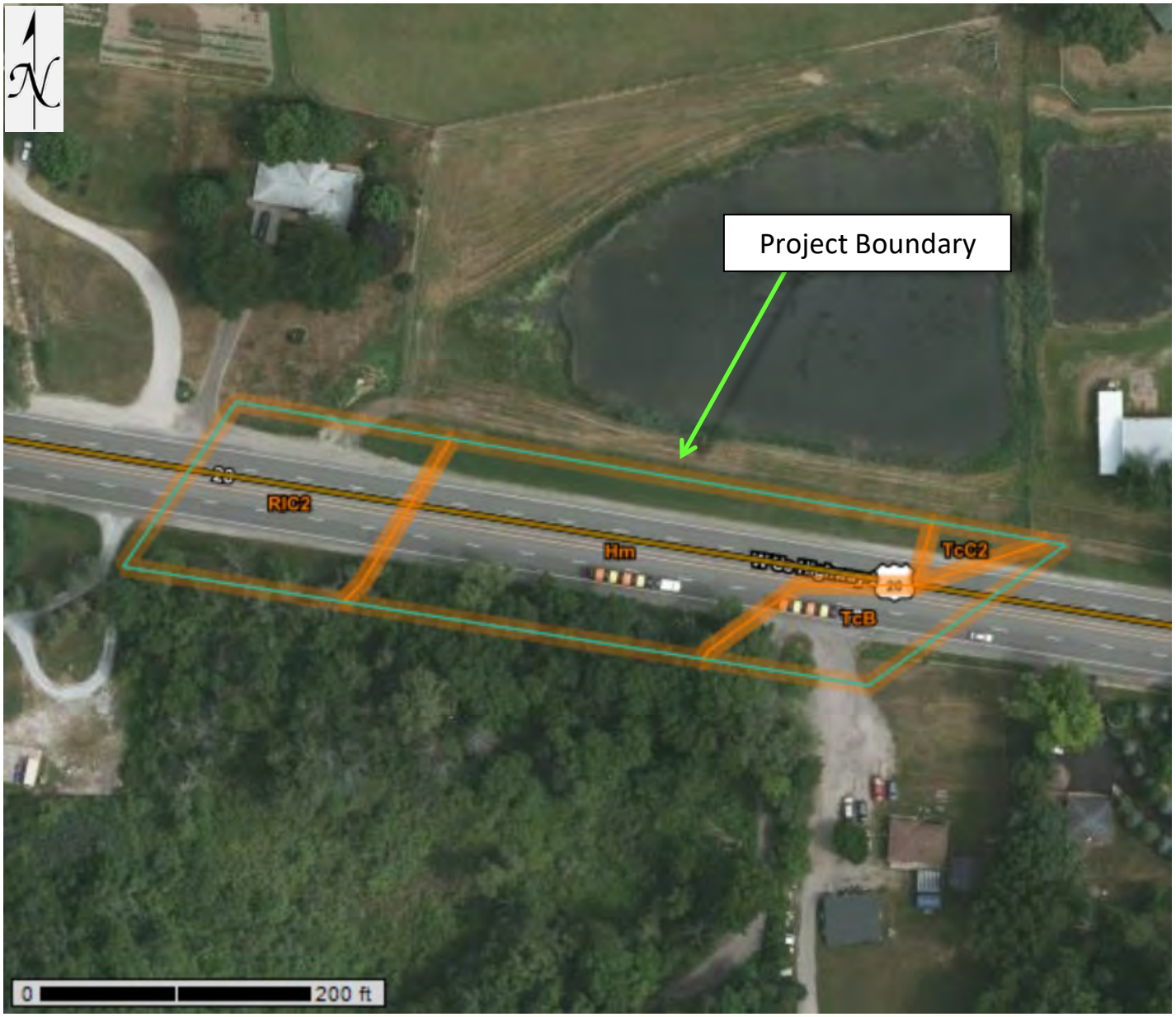
Map unit symbol	Map unit name	Rating	A
Hm	Houghton muck, undrained, 0 to 1 percent slopes	100	
RlC2	Riddles loam, 6 to 12 percent slopes, eroded	0	
TcC2	Tracy sandy loam, 6 to 12 percent slopes, eroded	0	

Soil Survey – Investigation Area 4

Created: June 14, 2021
Source: NRCS Web Soil Survey
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No: 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX5d



Tables — Hydric Rating by Map Unit — Summary By Map Unit

Summary by Map Unit — La Porte County, Indiana (IN091)

Summary by Map Unit — La Porte County, Indiana (IN091)

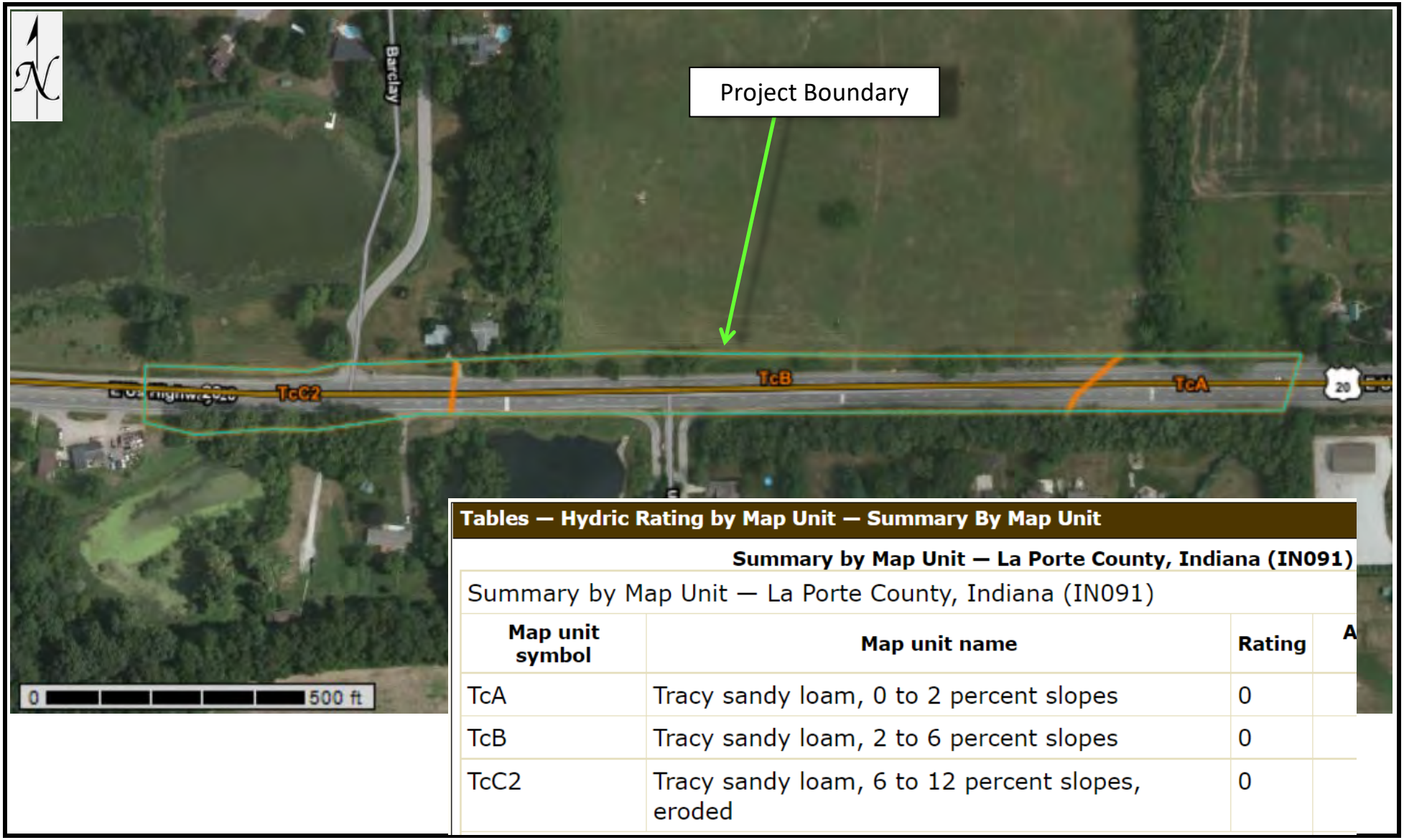
Map unit symbol	Map unit name	Rating	A
Hm	Houghton muck, undrained, 0 to 1 percent slopes	100	
RIC2	Riddles loam, 6 to 12 percent slopes, eroded	0	
TcB	Tracy sandy loam, 2 to 6 percent slopes	0	
TcC2	Tracy sandy loam, 6 to 12 percent slopes, eroded	0	

Soil Survey – Investigation Area 5

Created: June 14, 2021
Source: NRCS Web Soil Survey
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No: 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX5e



Tables — Hydric Rating by Map Unit — Summary By Map Unit

Summary by Map Unit — La Porte County, Indiana (IN091)

Summary by Map Unit — La Porte County, Indiana (IN091)

Map unit symbol	Map unit name	Rating	A
TcA	Tracy sandy loam, 0 to 2 percent slopes	0	
TcB	Tracy sandy loam, 2 to 6 percent slopes	0	
TcC2	Tracy sandy loam, 6 to 12 percent slopes, eroded	0	

Soil Survey – Investigation Area 6

Created: June 14, 2021
Source: NRCS Web Soil Survey
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des No: 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX5f

Aerial Photo – Investigation Area 1

Created: June 14, 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX6a

Aerial Photo – Investigation Area 2

Created: June 14, 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX6b

Aerial Photo – Investigation Area 3

Created: June 14, 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX6c

Aerial Photo – Investigation Area 4

Created: June 14, 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

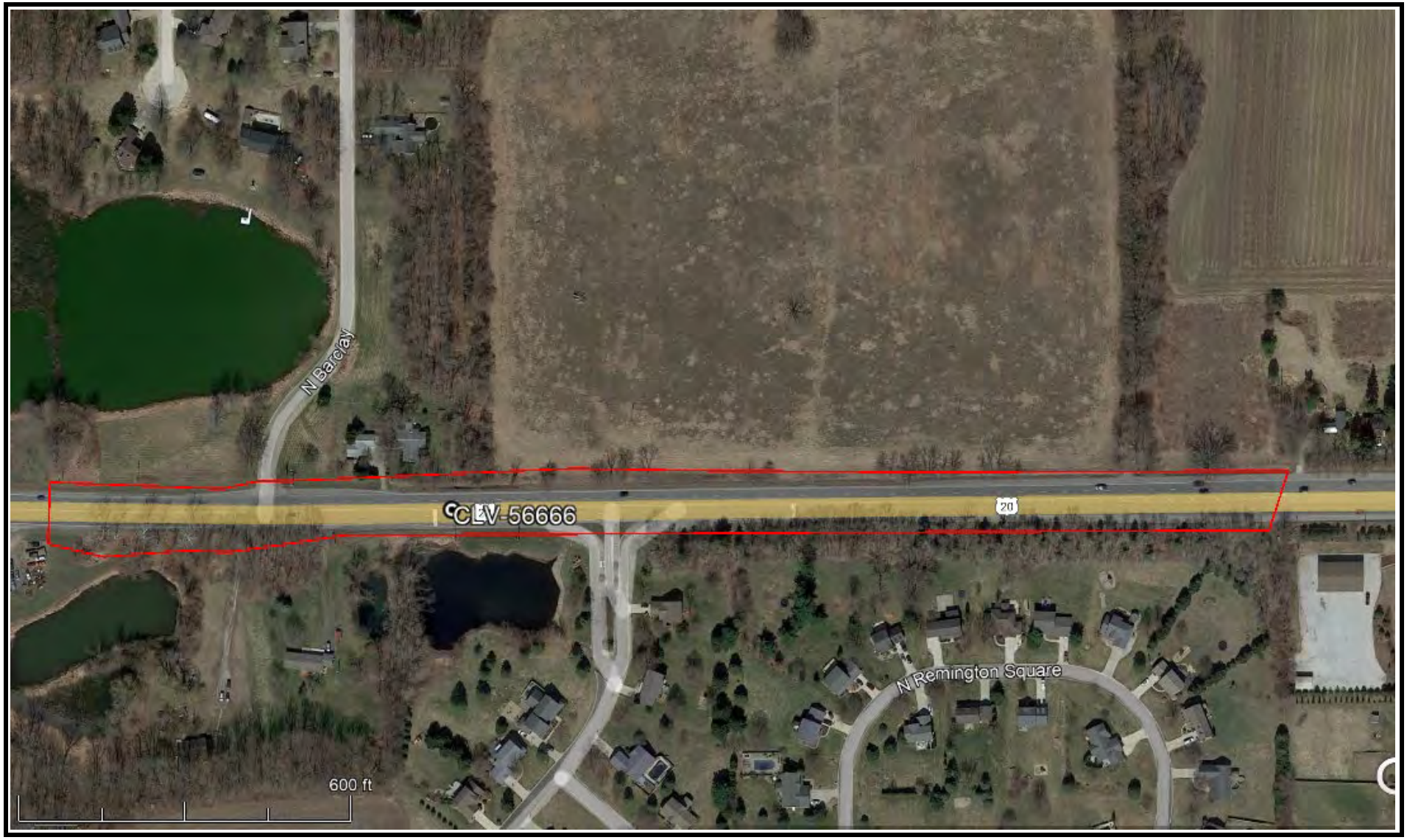
EX6d

Aerial Photo – Investigation Area 5

Created: June 14, 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

EX6e



Aerial Photo – Investigation Area 6

Created: June 14, 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39
Laporte County, IN
Project No: 21-024A

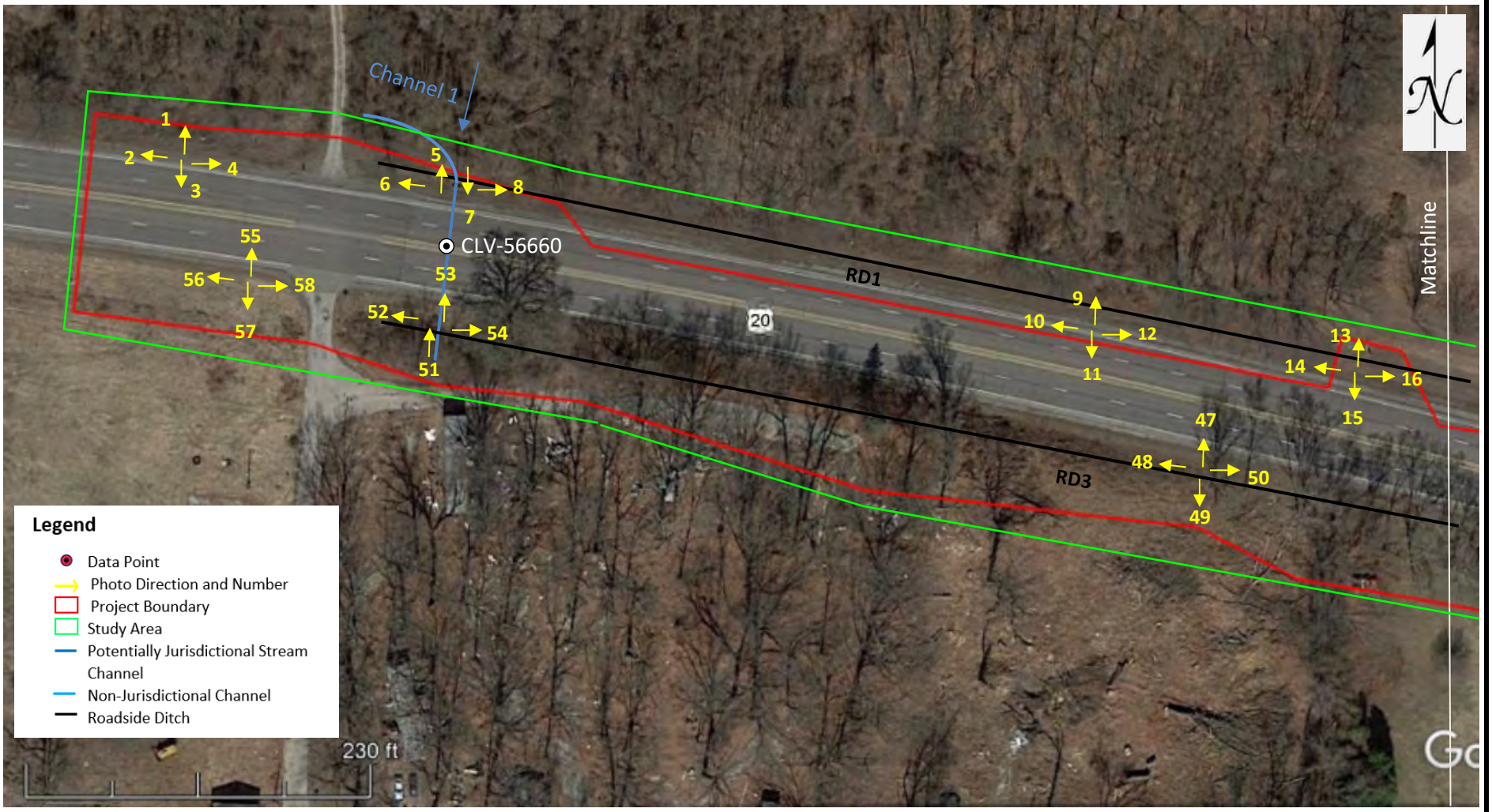
EX6f

Feature Locations – Investigation Area 1 Index

Created: June 14, 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39 Laporte County, IN
Project No: 21-024A

EX7a



Feature Locations – Investigation Area 1a

Created: June 14, 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39 Laporte County, IN
Project No: 21-024A

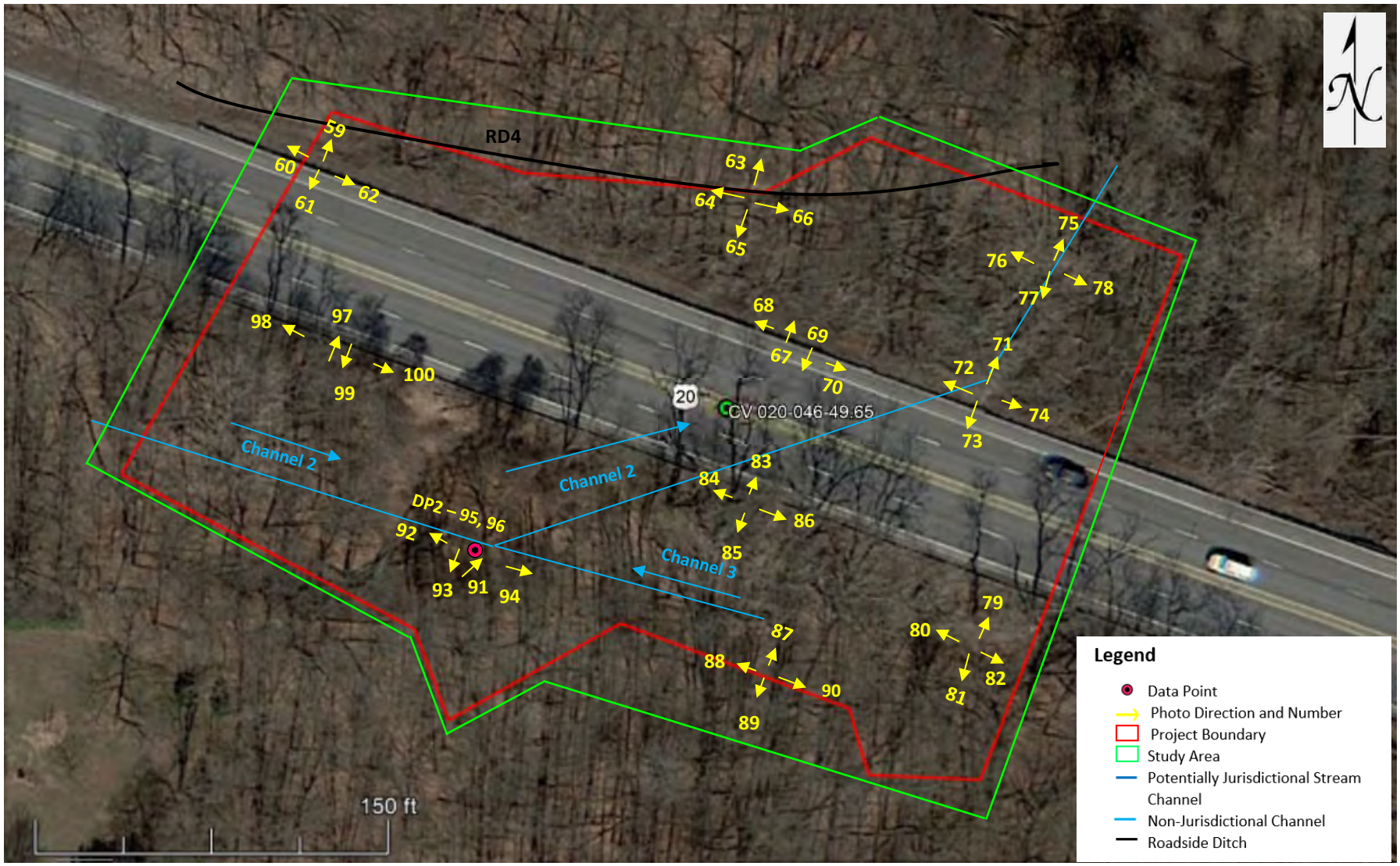
EX7b

Feature Locations – Investigation Area 1b

Created: June 14, 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39 Laporte County, IN
Project No: 21-024A

EX7c

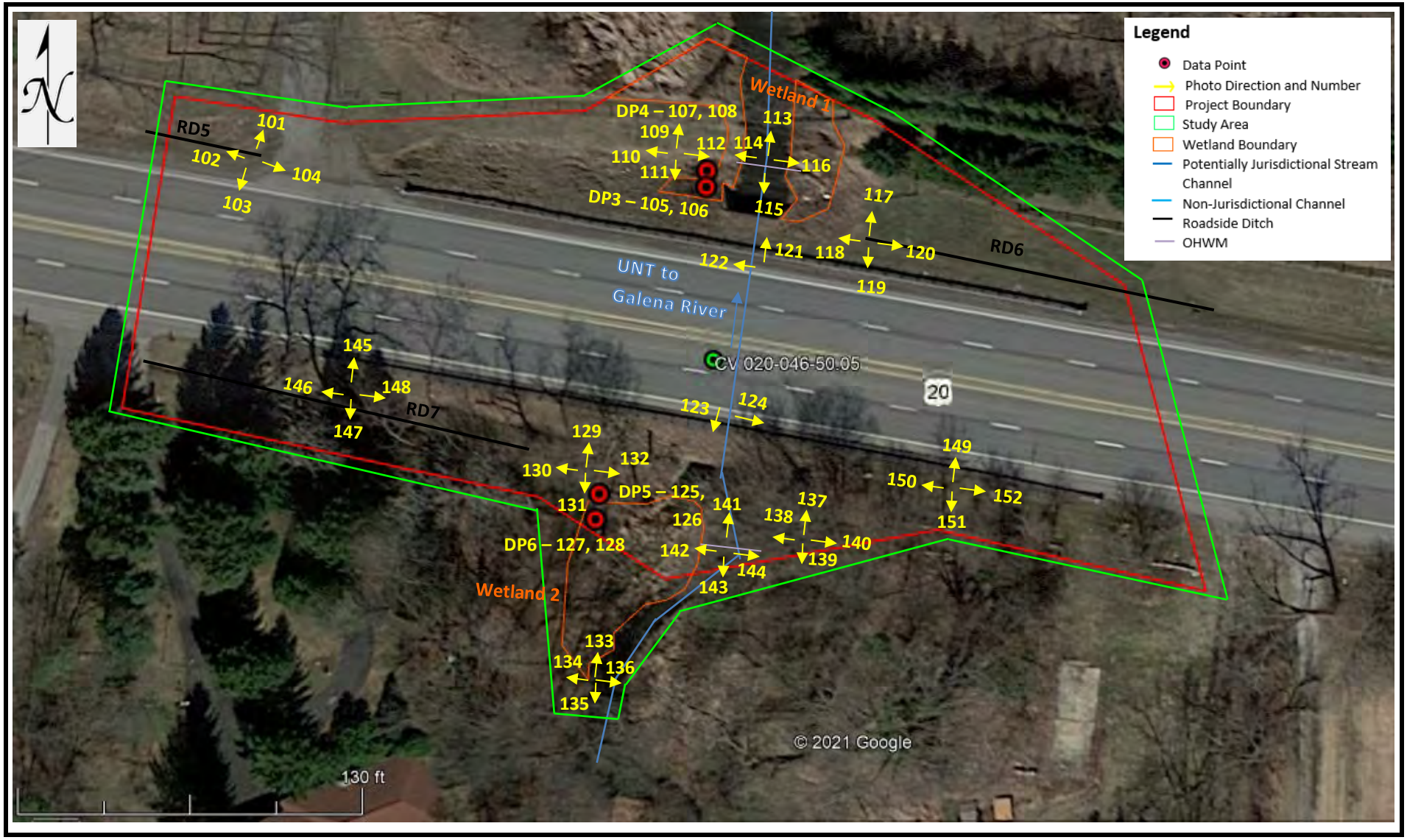


Feature Locations – Investigation Area 2

Created: June 14, 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39 Laporte County, IN
Project No: 21-024A

EX7d

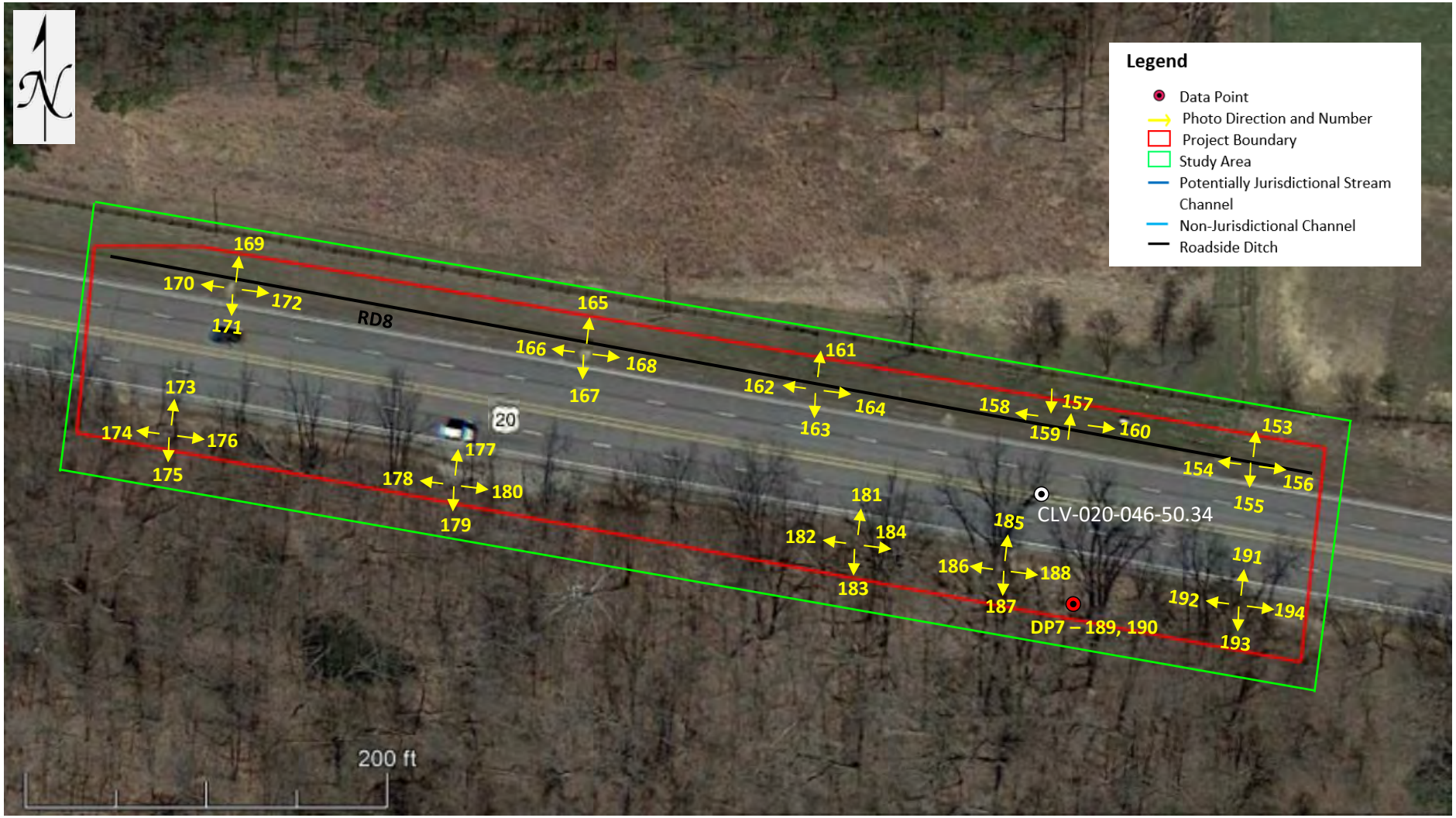


Feature Locations – Investigation Area 3

Created: June 15, 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39 Laporte County, IN
Project No: 21-024A

EX7e

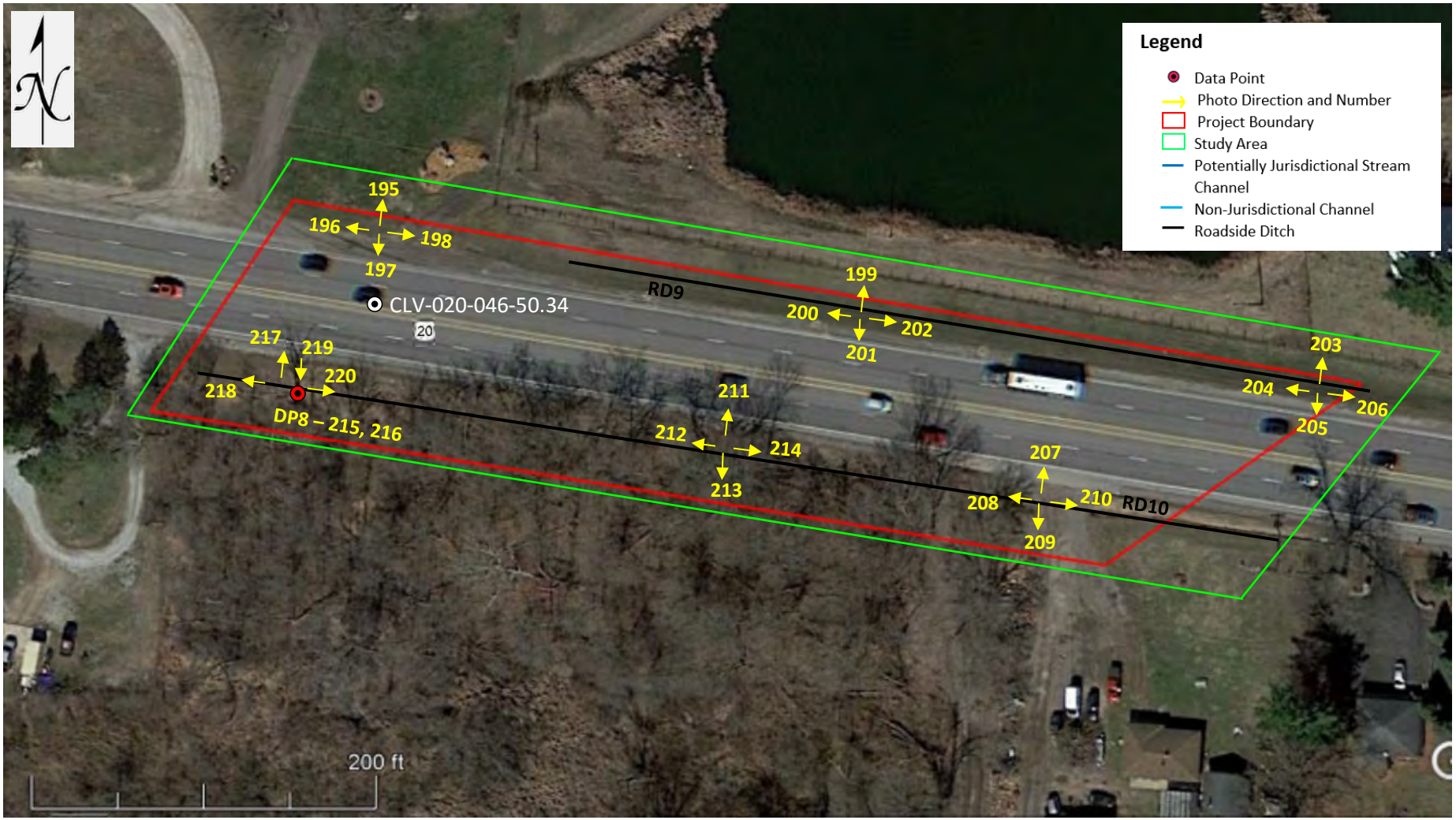


Feature Locations – Investigation Area 4

Created: June 15, 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39 Laporte County, IN
Project No: 21-024A

EX7f

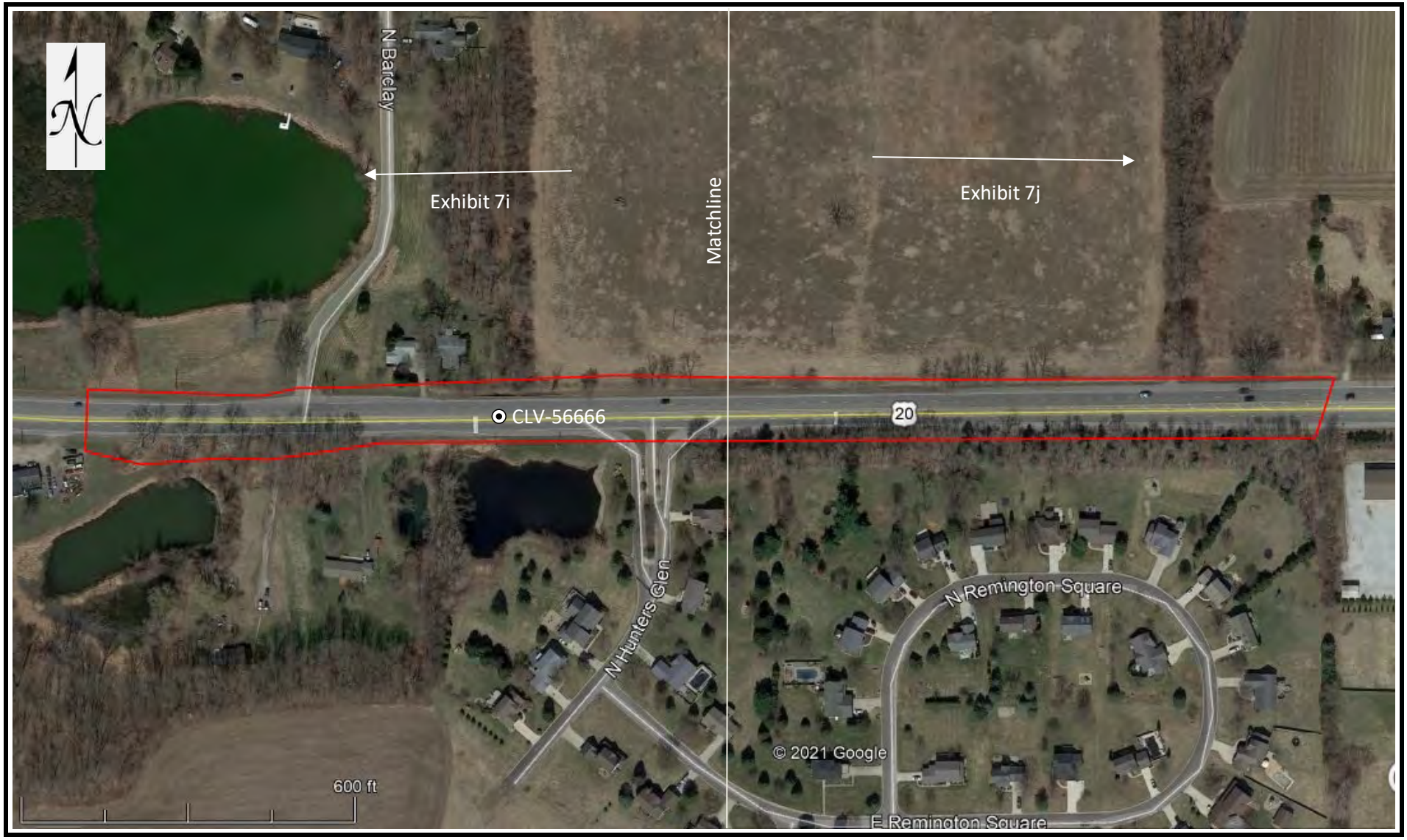


Feature Locations – Investigation Area 5

Created: June 15, 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39 Laporte County, IN
Project No: 21-024A

EX7g

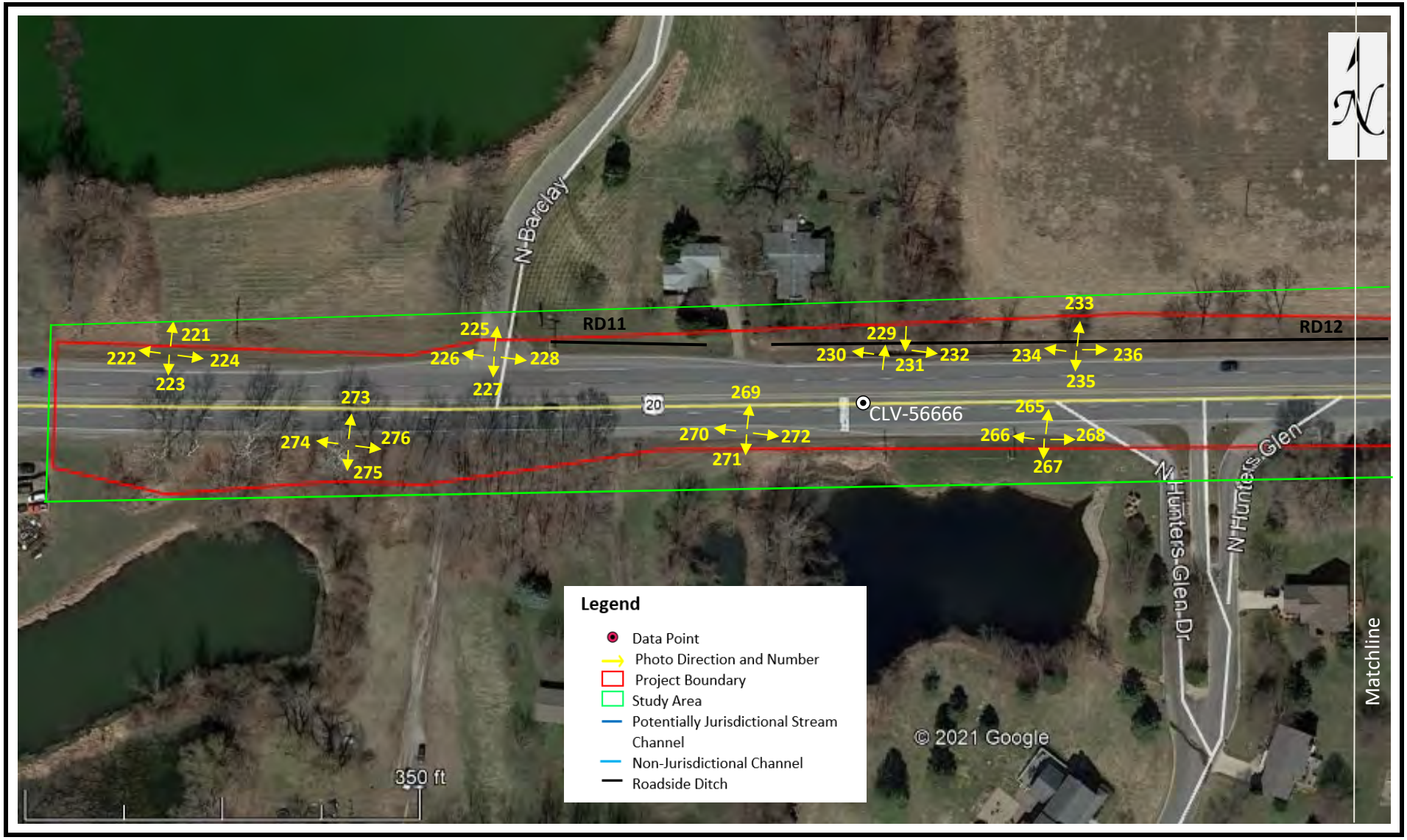


Feature Locations – Investigation Area 6 Index

Created: June 15, 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39 Laporte County, IN
Project No: 21-024A

EX7h

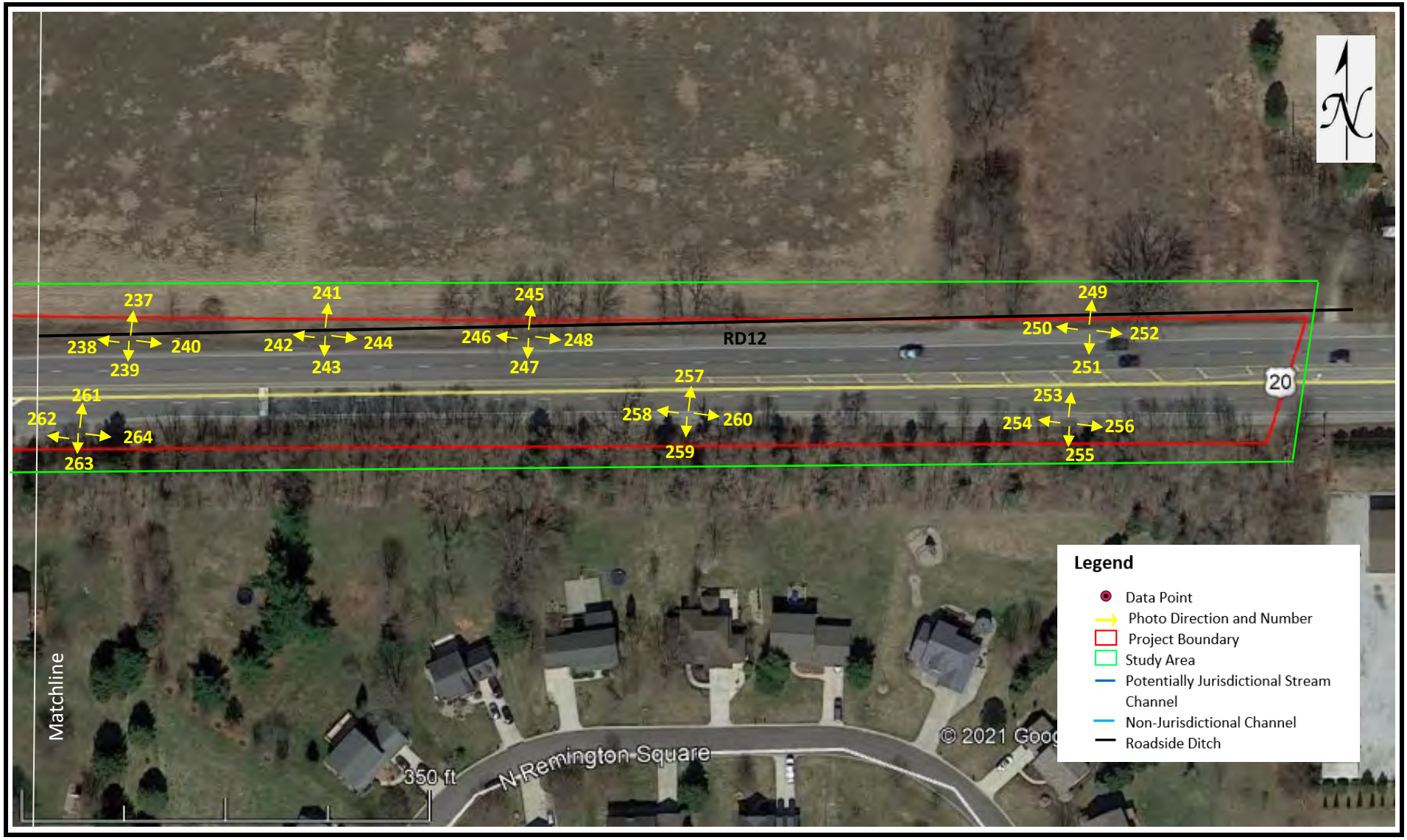


Feature Locations – Investigation Area 6a

Created: June 15, 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39 Laporte County, IN
Project No: 21-024A

EX7i



Feature Locations – Investigation Area 6b

Created: June 15, 2021
Source: Google Earth, March 2021
Scale: As Shown

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 East of SR 39 Laporte County, IN
Project No: 21-024A

EX7j

Appendix A

Photographs

Photo 1: Taken from the north side of US 20, facing north away from US 20. Upland. Investigation Area 1, 6/14/2021.

Photo 2: Taken from the north side of US 20, facing west along US 20. No RD. Investigation Area 1, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A1

Photo 3: Taken from the north side of US 20, facing south across US 20. Investigation Area 1, 6/14/2021.

Photo 4: Taken from the north side of US 20, facing east along US 20. No RD. Investigation Area 1, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A2

Photo 5: Taken from the north side of US 20, facing north away from US 20 and showing CLV-56660 under US 20 and Channel 1 (red arrow). Investigation Area 1, 6/14/2021.

Photo 6: Taken from the north side of US 20, facing west along US 20 showing RD1. Investigation Area 1, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A3

Photo 7: Taken from the north side of US 20, facing south towards US 20 showing CLV-5660 under US 20 and Channel 1. Investigation Area 1, 6/14/2021.

Photo 8: Taken from the north side of US 20, facing east along US 20 showing RD1. Investigation Area 1, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A4

Photo 9: Taken from the north side of US 20, facing north away from US 20. Upland. Investigation Area 1, 6/14/2021.

Photo 10: Taken from the north side of US 20, facing west along US 20 showing RD1. Investigation Area 1, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A5

Photo 11: Taken from the north side of US 20, facing south across US 20. Investigation Area 1, 6/14/2021.

Photo 12: Taken from the north side of US 20, facing east along US 20showing RD1. Investigation Area 1, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A6

Photo 13: Taken from the north side of US 20, facing north away from US 20. Upland. Investigation Area 1, 6/14/2021.

Photo 14: Taken from the north side of US 20, facing west along US 20 showing RD1. Investigation Area 1, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A7

Photo 15: Taken from the north side of US 20, facing south across US 20. Investigation Area 1, 6/14/2021.

Photo 16: Taken from the north side of US 20, facing east along US 20 showing RD1. Investigation Area 1, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A8

Photo 17: Data Point 1 (DP1) Soil pit taken within RD1 where wetland conditions were most likely. Investigation Area 1, 6/14/2021.

Photo 18: DP1 Soil profile. Soil is not hydric. Investigation Area 1, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A9

Photo 19: Taken from the north side of US 20, facing north towards RD1 where DP1 was collected. Investigation Area 1, 6/14/2021.

Photo 20: Taken from the north side of US 20, facing west along US 20 showing RD1 outside of the project area. Investigation Area 1, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A10

Photo 21: Taken from the north side of US 20, facing south towards US 20 from within RD1. Investigation Area 1, 6/14/2021.

Photo 22: Taken from the north side of US 20, facing east along US 20 from within RD1. Investigation Area 1, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A11

Photo 23: Taken from the north side of US 20, facing north looking over CLV-56661. Upland, no defined channel present. Investigation Area 1, 6/14/2021.

Photo 24: Taken from the north side of US 20, facing west along US 20 showing RD1 outside of the project area. Investigation Area 1, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A12

Photo 25: Taken from the north side of US 20, facing south showing CLV-56661 under US 20. No defined channel present. Investigation Area 1, 6/14/2021.

Photo 26: Taken from the north side of US 20, facing east along US 20 from within RD1. Investigation Area 1, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A13

Photo 27: Taken from the north side of US 20, facing north. Upland. Investigation Area 1, 6/14/2021.

Photo 28: Taken from the north side of US 20, facing west showing a small driveway culvert that directs RD1. Investigation Area 1, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A14

Photo 29: Taken from the north side of US 20, facing south across US 20 showing RD1. Investigation Area 1, 6/14/2021.

Photo 30: Taken from the north side of US 20, facing east along US 20 showing RD1. Investigation Area 1, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A15

Photo 31: Taken from the south side of US 20, facing north showing CLV-56662 under US20. No defined channel present. Investigation Area 1, 6/14/2021.

Photo 32: Taken from the south side of US 20, facing west along US 20 showing RD2. Investigation Area 1, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A16

Photo 33: Taken from the south side of US 20, facing south looking over clv-56662. Upland, no defined channel present. Investigation Area 1, 6/14/2021.

Photo 34: Taken from the south side of US 20, facing east along US 20 showing RD2. Investigation Area 1, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A17

Photo 35: Taken from the south side of US 20, facing north across US 20. Investigation Area 1, 6/14/2021.

Photo 36: Taken from the south side of US 20, facing west along US 20 showing RD2. Investigation Area 1, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A18

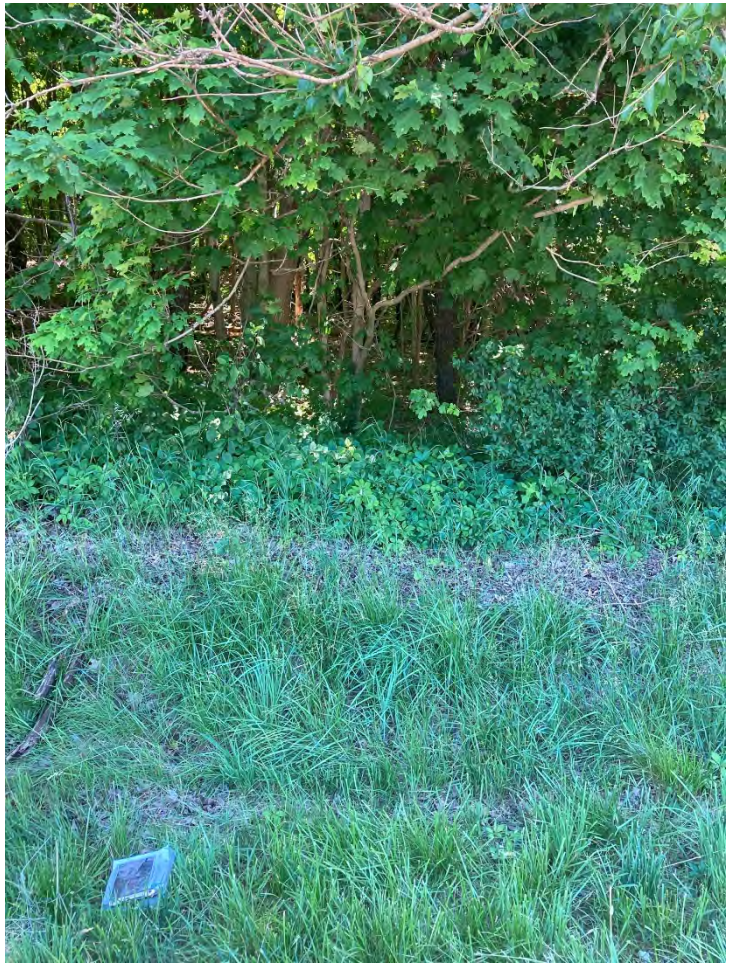


Photo 37: Taken from the south side of US 20, facing south away from US 20. Upland. Investigation Area 1, 6/14/2021.

Photo 38: Taken from the south side of US 20, facing east along US 20 showing RD2. Investigation Area 1, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A19

Photo 39: Taken from the south side of US 20, facing north showing CLV-56661 under US 20. No defined channel present. Investigation Area 1, 6/14/2021.

Photo 40: Taken from the south side of US 20, facing west along US 20 showing RD2. Investigation Area 1, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A20

Photo 41: Taken from the south side of US 20, facing south away from US 20 over the small structure. Upland, no defined channel present. Investigation Area 1, 6/14/2021.

Photo 42: Taken from the south side of US 20, facing east along US 20 showing RD2. Investigation Area 1, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A21

Photo 43: Taken from the south side of US 20, facing north across US 20. Investigation Area 1, 6/14/2021.

Photo 44: Taken from the south side of US 20, facing west along US 20. No RD. Investigation Area 1, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A22

Photo 45: Taken from the south side of US 20, facing south away from US 20. Upland. Investigation Area 1, 6/14/2021.

Photo 46: Taken from the south side of US 20, facing east along US 20. No RD. Investigation Area 1, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A23

Photo 47: Taken from the south side of US 20, facing north across US 20. Investigation Area 1, 6/14/2021.

Photo 48: Taken from the south side of US 20, facing west along US 20 showing RD3. Investigation Area 1, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A24

Photo 49: Taken from the south side of US 20, facing south away from US 20. Upland. Investigation Area 1, 6/14/2021.

Photo 50: Taken from the south side of US 20, facing east along US 20 showing RD3. Investigation Area 1, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A25

Photo 51: Taken from the south side of US 20, facing north showing CLV-56660 under US 20. Channel 1 with no defined bed or banks; dominant vegetation is tall fescue (*Schedonorus arundinaceus* - FACU) with a few stems of curly dock (*Rumex crispus* - FAC) and giant ragweed (*Ambrosia trifida* - FAC). Investigation Area 1, 6/14/2021.

Photo 52: Taken from the south side of US 20, facing west along US 20 showing RD3. Investigation Area 1, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A26

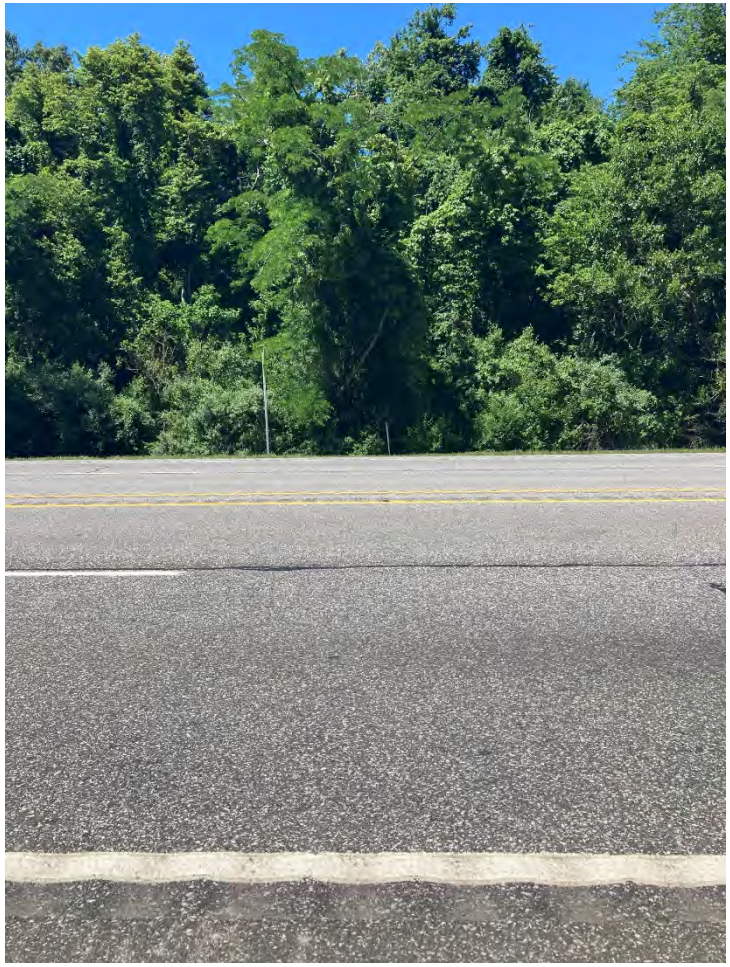


Photo 53: Taken from the south side of US 20, facing north across US 20. Investigation Area 1, 6/14/2021.

Photo 54: Taken from the south side of US 20, facing east along US 20 showing RD3. Investigation Area 1, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A27

Photo 55: Taken from the south side of US 20, facing north across US 20. Investigation Area 1, 6/14/2021.

Photo 56: Taken from the south side of US 20, facing west along US 20. No RD. Investigation Area 1, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A28

Photo 57: Taken from the south side of US 20, facing south away from US 20. Upland. Investigation Area 1, 6/14/2021.

Photo 58: Taken from the south side of US 20, facing east along US 20. No RD. Investigation Area 1, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A29

Photo 59: Taken from the north side of US 20, facing north away from US 20. Notice steep decline. Investigation Area 2, 6/14/2021.

Photo 60: Taken from the north side of US 20, facing west along US 20 showing RD4. Investigation Area 2, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A30

Photo 61: Taken from the north side of US 20, facing south across US 20. Investigation Area 2, 6/14/2021.

Photo 62: Taken from the north side of US 20, facing east along US 20 showing road edge and slope uphill of RD4. Investigation Area 2, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A31

Photo 63: Taken from the north side of US 20, facing north into the woods. Upland. Investigation Area 2, 6/14/2021.

Photo 64: Taken from the north side of US 20, facing west (upstream) in RD4 in the woods. Investigation Area 2, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A32

Photo 65: Taken from the north side of US 20, facing south up the slope towards US 20. Investigation Area 2, 6/14/2021.

Photo 66: Taken from the north side of US 20, facing east (downstream) in RD4. Investigation Area 2, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A33

Photo 67: Taken from the north side of US 20, facing north down the slope away from US 20. Investigation Area 2, 6/14/2021.

Photo 68: Taken from the north side of US 20, facing west along US 20 showing the steep slope along the guardrail. Investigation Area 2, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A34

Photo 69: Taken from the north side of US 20, facing south across US 20. Investigation Area 2, 6/14/2021.

Photo 70: Taken from the north side of US 20, facing east along US 20 showing the steep slope along the guardrail. Investigation Area 2, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A35

Photo 71: Taken from the north side of US 20, facing north from above the buried culvert outlet (CV 020-046-49.65). Investigation Area 2, 6/14/2021.

Photo 72: Taken from the north side of US 20, facing west along US 20 showing the steep slope along the guardrail. Investigation Area 2, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A36

Photo 73: Taken from the north side of US 20, facing south across US 20. Investigation Area 2, 6/16/2021.

Photo 74: Taken from the north side of US 20, facing east along US 20. No RD. Investigation Area 2, 6/16/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

Photo 75: Taken from the north side of US 20, facing north away from US 20 and downstream in Channel 2. Investigation Area 2, 6/14/2021.

Photo 76: Taken from the north side of US 20, facing west along US 20 into the woods. Upland. Investigation Area 2, 6/16/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A38

Photo 77: Taken from the north side of US 20, facing south towards US 20 where the buried outlet of CV 020-046-49.65 should be and upstream in Channel 2. Investigation Area 2, 6/14/2021.

Photo 78: Taken from the north side of US 20, facing east along US 20 into the woods. Upland. Investigation Area 2, 6/16/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A39

Photo 79: Taken from the south side of US 20, facing north up the steep slope towards US 20. Investigation Area 2, 6/16/2021.

Photo 80: Taken from the south side of US 20, facing west along US 20. Investigation Area 2, 6/16/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A40

Photo 81: Taken from the south side of US 20, facing south away from US 20. Upland. Investigation Area 2, 6/16/2021.

Photo 82: Taken from the south side of US 20, facing east. Upland. Investigation Area 2, 6/16/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A41

Photo 83: Taken from the south side of US 20, facing north across US 20. Investigation Area 2, 6/14/2021.

Photo 84: Taken from the south side of US 20, facing west along US 20. No RD. Investigation Area 2, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A42

Photo 85: Taken from the south side of US 20, facing south away from US 20. Notice steep slope. Investigation Area 2, 6/14/2021.

Photo 86: Taken from the south side of US 20, facing east along US 20. No RD. Investigation Area 2, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A43

Photo 87: Taken from the south side of US 20, facing north up the slope towards US 20. Investigation Area 2, 6/14/2021.

Photo 88: Taken from the south side of US 20, facing west. Upland. Investigation Area 2, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A44

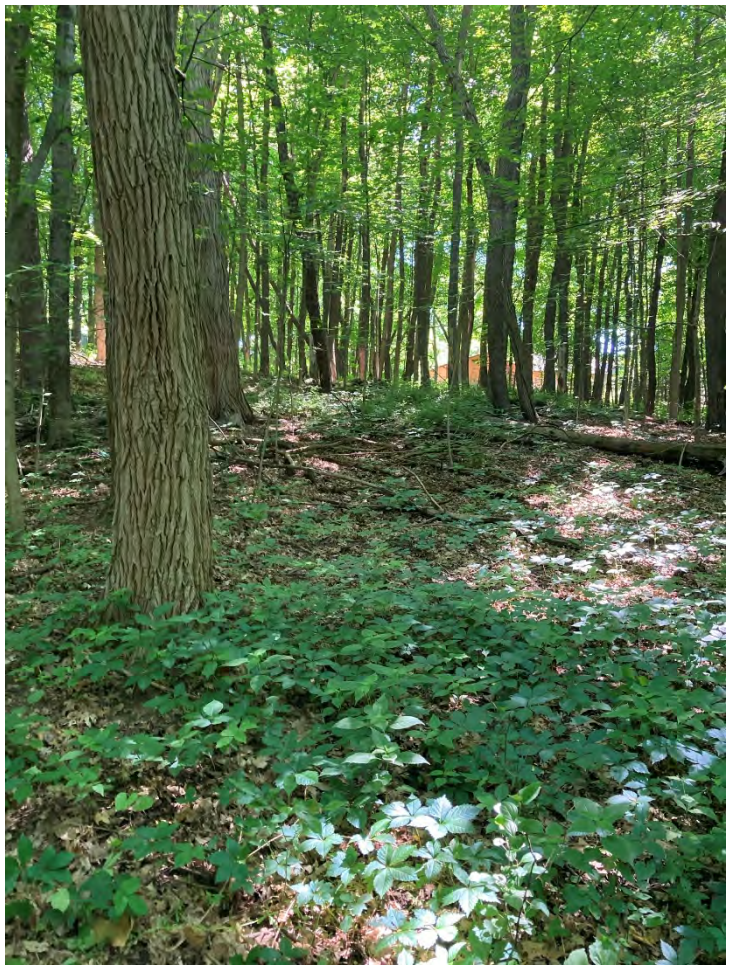


Photo 89: Taken from the south side of US 20, facing south in the woods away from US 20. Upland. Investigation Area 2, 6/14/2021.

Photo 90: Taken from the south side of US 20, facing east. Upland. Investigation Area 2, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A45

Photo 91: Taken from the south side of US 20, facing north showing CV 020-046-49.65 under US 20 and where Channel 2 meets the structure. Investigation Area 2, 6/14/2021.

Photo 92: Taken from the south side of US 20, facing west upstream in Channel 2. Investigation Area 2, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A46

Photo 93: Taken from the south side of US 20, facing south away from US 20. Upland. Investigation Area 2, 6/14/2021.

Photo 94: Taken from the south side of US 20, facing east upslope and upstream in Channel 3 with no defined bed or banks. Upland. Investigation Area 2, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A47

Photo 95: DP2 Soil pit taken in an area near Channel 2 in a sparsely vegetated concave surface. Investigation Area 2, 6/14/2021.

Photo 96: DP2 Soil profile. Soil is not hydric. Investigation Area 2, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A48

Photo 97: Taken from the south side of US 20, facing north across US 20. Investigation Area 2, 6/14/2021.

Photo 98: Taken from the south side of US 20, facing west along US 20 showing the steep slope along the guardrail. Investigation Area 2, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A49

Photo 99: Taken from the south side of US 20, facing south away from US 20 down steep incline. Investigation Area 2, 6/14/2021.

Photo 100: Taken from the south side of US 20, facing east along US 20 showing the steep slope along the guardrail. Investigation Area 2, 6/14/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A50

Photo 101: Taken from the north side of US 20, facing north away from US 20. Upland. Investigation Area 3, 6/15/2021.

Photo 102: Taken from the north side of US 20, facing west along US 20 showing RD5. Investigation Area 3, 6/15/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A51

Photo 103: Taken from the north side of US 20, facing south across US 20. Investigation Area 3, 6/15/2021.

Photo 104: Taken from the north side of US 20, facing east along US 20 showing RD5 ends at the driveway. Investigation Area 3, 6/15/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A52

Photo 105: DP3 Soil profile. Photo taken in an adjacent upland area. Soil is hydric. Investigation Area 3, 6/15/2021.

Photo 106: DP3 Soil pit taken to 21 inches in Wetland 1. Investigation Area 3, 6/15/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

Photo 107: DP4 Soil pit taken outside of Wetland 1 to 20 inches in nearby upland area. Investigation Area 3, 6/15/2021.

Photo 108: DP4 Soil profile. Soil is non-hydric. Investigation Area 3, 6/15/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A54

Photo 109: Taken from the north side of US 20, facing north showing Wetland 1a behind the fence. Investigation Area 3, 6/15/2021.

Photo 110: Taken from the north side of US 20, facing west along US 20 and showing the edge of Wetland 1a. No defined roadside ditch. Investigation Area 3, 6/15/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A55

Photo 111: Taken from the north side of US 20, facing south towards US 20 and DP3 showing Wetland 1a. Investigation Area 3, 6/15/2021.

Photo 112: Taken from the north side of US 20, facing east showing UNT to Galena River and part of Wetland 1a. White line indicates where the OHWM was taken. Investigation Area 3, 6/15/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A56

Photo 113: Taken in UNT to Galena River north of US 20, facing north (downstream)in UNT to Galena River away from US 20. Investigation Area 3, 6/15/2021.

Photo 114: Taken in UNT to Galena River north of US 20, facing west showing Wetland 1a. Investigation Area 3, 6/15/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A57

Photo 115: Taken in UNT to Galena River north of US 20, facing south (upstream) towards US 20 and CV 020-046-50.05. Investigation Area 3, 6/15/2021.

Photo 116: Taken in UNT to Galena River north of US 20, facing east showing Wetland 1b. Investigation Area 3, 6/15/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A58

Photo 117: Taken from the north side of US 20, facing north away from US 20. Upland. Investigation Area 3, 6/15/2021.

Photo 118: Taken from the north side of US 20, facing west along US 20 showing the edge of Wetland 1b. Investigation Area 3, 6/15/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A59

Photo 119: Taken from the north side of US 20, facing south across US 20. Investigation Area 3, 6/15/2021.

Photo 120: Taken from the north side of US 20, facing east along US 20 showing RD6. Investigation Area 3, 6/15/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A60

Photo 121: Taken from the top of the structure (CV 020-046-50.05) along the north guardrail, facing north (upstream) showing UNT to Galena River. White line indicates where the OHWM was taken. Investigation Area 3, 6/15/2021.

Photo 122: Taken from the top of the structure along the north guardrail, facing west. No RD. Investigation Area 3, 6/15/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A61

Photo 123: Taken from the top of the structure (CV 020-046-50.05) along the south guardrail, facing south (upstream) showing UNT to Galena River. Investigation Area 3, 6/15/2021.

Photo 124: Taken from the top of the structure along the south guardrail, facing east. No RD. Investigation Area 3, 6/15/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A62

Photo 125: DP5 Soil pit taken to 20 inches outside of Wetland 2. Investigation Area 3, 6/15/2021.

Photo 126: DP5 Soil profile. Soil is non-hydric. Investigation Area 3, 6/15/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A63

Photo 127: DP6 Soil pit taken within Wetland 2. Water table at a depth of 3 inches and saturation to the surface. Investigation Area 3, 6/15/2021.

Photo 128: DP6 Soil profile. Soil is hydric. Investigation Area 3, 6/15/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A64

Photo 129: Taken from the south side of US 20 near the boundary of Wetland 2, facing north upslope towards US 20 and away from Wetland 2. Investigation Area 3, 6/15/2021.

Photo 130: Taken from the south side of US 20 near the boundary of Wetland 2, facing west towards RD7. Investigation Area 3, 6/15/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A65

Photo 131: Taken from the south side of US 20 near the boundary of Wetland 2, facing south into Wetland 2. Investigation Area 3, 6/15/2021.

Photo 132: Taken from the south side of US 20 in Wetland 2, facing east towards UNT to Galena River and the structure (CV 020-046-50.05). Investigation Area 3, 6/15/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A66

Photo 133: Taken from the south side of US 20 in Wetland 2, facing north (downstream) in UNT to Galena River showing part of Wetland 2 west of UNT to Galena River. Investigation Area 3, 6/15/2021.

Photo 134: Taken from the south side of US 20 in Wetland 2, facing west. Upland, notice the slope. Investigation Area 3, 6/15/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A67

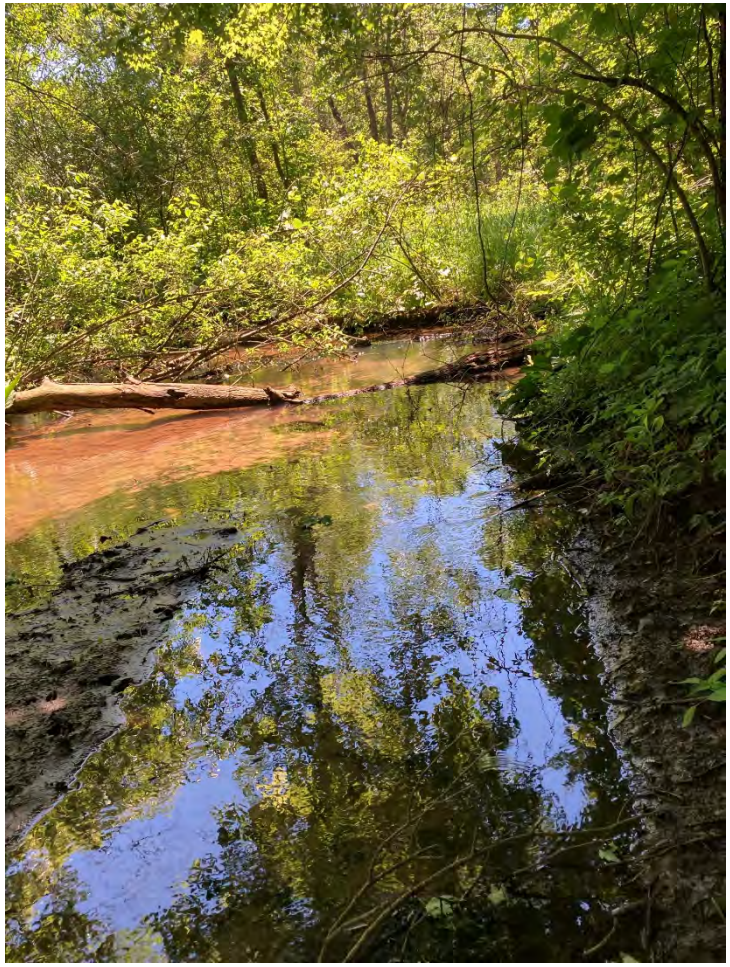


Photo 135: Taken from the south side of US 20 in Wetland 2, facing south (upstream) in UNT to Galena River. Investigation Area 3, 6/15/2021.

Photo 136: Taken from the south side of US 20 in Wetland 2, facing east across UNT to Galena River. Notice the steep bank. Investigation Area 3, 6/15/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A68

Photo 137: Taken from the south side of US 20 east of UNT to Galena River, facing north upslope towards US 20. Investigation Area 3, 6/15/2021.

Photo 138: Taken from the south side of US 20 east of UNT to Galena River, facing west towards UNT to Galena River and Wetland 2. White line indicates where the OHWM was taken. Investigation Area 3, 6/15/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A69

Photo 139: Taken from the south side of US 20 east of UNT to Galena River, facing south away from US 20. Upland. Investigation Area 3, 6/15/2021.

Photo 140: Taken from the south side of US 20 east of UNT to Galena River, facing east away from UNT to Galena River. Investigation Area 3, 6/15/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A70

Photo 141: Taken in UNT to Galena River south of US 20, facing north (downstream) towards US 20 and CV 020-046-50.05. Investigation Area 3, 6/15/2021.

Photo 142: Taken in UNT to Galena River south of US 20, facing west into Wetland 2. Investigation Area 3, 6/15/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A71

Photo 143: Taken in UNT to Galena River south of US 20, facing south (upstream) away from US 20. Investigation Area 3, 6/15/2021.

Photo 144: Taken in UNT to Galena River south of US 20, facing east. Upland. Investigation Area 3, 6/15/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A72

Photo 145: Taken from the south side of US 20, facing north towards US 20. Investigation Area 3, 6/15/2021.

Photo 146: Taken from the south side of US 20, facing west along US 20 upstream in RD7. Investigation Area 3, 6/15/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A73

Photo 147: Taken from the south side of US 20, facing south away from US 20 up a steep incline. Investigation Area 3, 6/15/2021.

Photo 148: Taken from the south side of US 20, facing east along US 20 downstream in RD7. Investigation Area 3, 6/15/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A74

Photo 149: Taken from the south side of US 20, facing north towards US 20. Investigation Area 3, 6/15/2021.

Photo 150: Taken from the south side of US 20, facing west along US 20 towards the structure. No RD. Investigation Area 3, 6/15/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A75

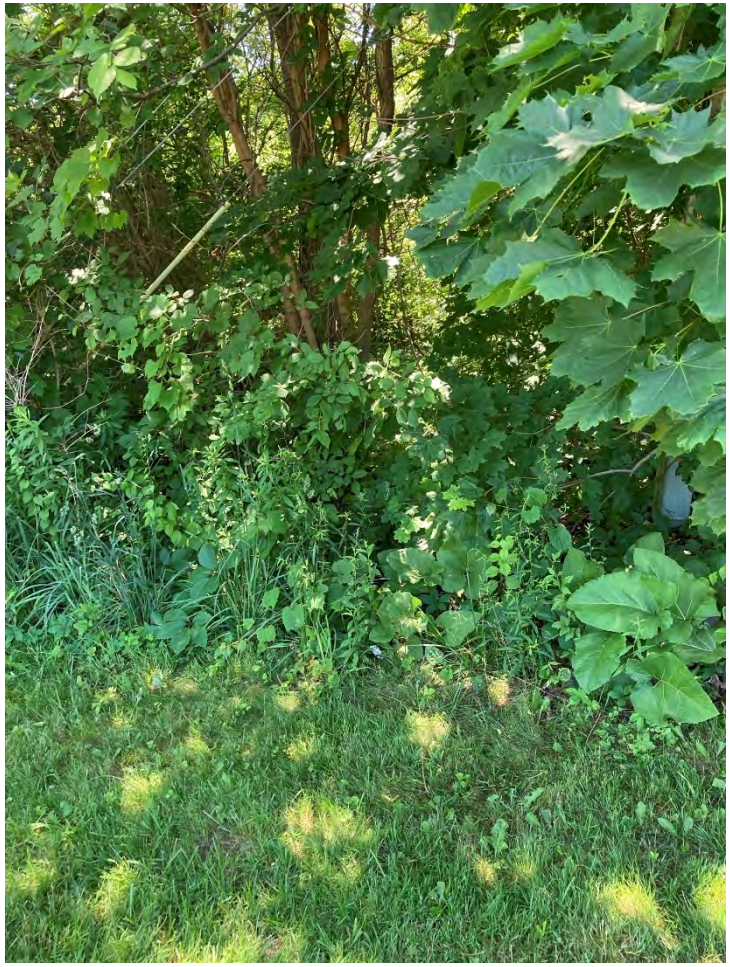


Photo 151: Taken from the south side of US 20, facing south away from US 20. Upland. Investigation Area 3, 6/15/2021.

Photo 152: Taken from the south side of US 20, facing east along US 20. No RD. Investigation Area 3, 6/15/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A76

Photo 153: Taken from the north side of US 20, facing north away from US 20. Upland. Investigation Area 4, 6/15/2021.

Photo 154: Taken from the north side of US 20, facing west along US 20 showing RD8. Investigation Area 4, 6/15/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A77

Photo 155: Taken from the north side of US 20, facing south across US 20. Investigation Area 4, 6/15/2021.

Photo 156: Taken from the north side of US 20, facing east along US 20 showing RD8. Vegetation in RD8 remains the same, just not mowed. Investigation Area 4, 6/15/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A78

Photo 157: Taken from the north side of US 20, facing north away from US 20 showing a pipe that runs under US 20. No defined channel present. Upland. Investigation Area 4, 6/15/2021.

Photo 158: Taken from the north side of US 20, facing west along US 20 showing RD8. Investigation Area 4, 6/15/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A79

Photo 159: Taken from the north side of US 20, facing south towards US 20 showing CLV-020-046-50.34 that runs under US 20. Investigation Area 4, 6/15/2021.

Photo 160: Taken from the north side of US 20, facing east along US 20 showing CLV-020-046-50.34 and RD8. Investigation Area 4, 6/15/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A80

Photo 161: Taken from the north side of US 20, facing north away from US 20. Upland. Investigation Area 4, 6/15/2021.

Photo 162: Taken from the north side of US 20, facing west along US 20 showing RD8. Investigation Area 4, 6/15/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A81

Photo 163: Taken from the north side of US 20, facing south across US 20. Investigation Area 4, 6/15/2021.

Photo 164: Taken from the north side of US 20, facing east along US 20 showing RD8. Investigation Area 4, 6/15/2021.

Appendix A – Site Photographs

Created: June 14, 2021
Photos Taken: June 14 - 16, 2021
Project No: 21-024a

Project Name: US 20 Roadway Improvements
Des. No. 1702993
Location: US 20 east of SR 39
Laporte County, Indiana

A82

Appendix B

Wetland Data Sheets

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Laporte US 20 east of SR 39 City/County: Laporte, Laporte Sampling Date: 2021-06-14

Applicant/Owner: INDOT State: Indiana Sampling Point: DP1

Investigator(s): Shannon Bonifacio & Courtney Haverbusch Section, Township, Range: Sec 2 T37N R3W

Landform (hillslope, terrace, etc.): Basin Local relief (concave, convex, none): Concave

Slope (%): 2-6 Lat: 41.684928 Long: -86.729075 Datum: WGS 84

Soil Map Unit Name: Chelsea fine sand (ChB) NWI classification: Non-wetland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____ No ✓	
Wetland Hydrology Present?	Yes _____ No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Bromus inermis	60	✓	FACU
2. Asclepias syriaca	15		FACU
3. Schedonorus arundinaceus	10		FACU
4. Allium cernuum	5		FACU
5.			
6.			
7.			
8.			
9.			
10.			
	90% = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	90	x 4 =	360
UPL species	0	x 5 =	0
Column Totals:	90 (A)		360 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0 - 8	10YR 3/2	100					Sandy Loam	High OM, lots of sand
8 - 13	10YR 3/2	40					Sandy Loam	
8 - 13	10YR 4/4	60					Sandy Loam	
13 - 20	10YR 6/6	80					Sand	
13 - 20	10YR 3/2	20					Sand	
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Laporte US 20 east of SR 39 City/County: Laporte, Laporte Sampling Date: 2021-06-14

Applicant/Owner: INDOT State: Indiana Sampling Point: DP2

Investigator(s): Shannon Bonifacio & Courtney Haverbusch Section, Township, Range: Sec 2 T37N R3W

Landform (hillslope, terrace, etc.): Basin Local relief (concave, convex, none): Concave

Slope (%): 25-45 Lat: 41.682406 Long: -86.720886 Datum: WGS 84

Soil Map Unit Name: Tracy Sandy Loam (TcF) NWI classification: Non-wetland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer saccharum	50	✓	FACU
2.			
3.			
4.			
5.			
	50%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Acer saccharum	20	✓	FACU
2.			
3.			
4.			
5.			
	20%	= Total Cover	
Herb Stratum (Plot size: 5 ft r)			
1. Parthenocissus quinquefolia	20	✓	FACU
2. Impatiens pallida	2		FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	22%	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	2	x 2 =	4
FAC species	0	x 3 =	0
FACU species	90	x 4 =	360
UPL species	0	x 5 =	0
Column Totals:	92 (A)		364 (B)

Prevalence Index = B/A = 3.96

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 20	10YR 4/3	90	10YR 6/4	10	C	M	Sand	
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ✓ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Laporte US 20 east of SR 39 City/County: Laporte, Laporte Sampling Date: 2021-06-15

Applicant/Owner: INDOT State: Indiana Sampling Point: DP3

Investigator(s): Shannon Bonifacio & Courtney Haverbusch Section, Township, Range: Sec 1 T37N R3W

Landform (hillslope, terrace, etc.): Basin Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 41.681103 Long: -86.711133 Datum: WGS 84

Soil Map Unit Name: Loamy Fluvaquents (Fh) NWI classification: Non-wetland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Poa pratensis	60	✓	FAC
2. Typha X glauca	50	✓	OBL
3. Symphyotrichum lateriflorum	7		FACW
4. Lactuca biennis	5		FAC
5. Galium aparine	3		FACU
6. Asclepias syriaca	2		FACU
7.			
8.			
9.			
10.			
	127% = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	50	x 1 =	50
FACW species	7	x 2 =	14
FAC species	65	x 3 =	195
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	127 (A)		279 (B)

Prevalence Index = B/A = 2.20

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 2	10YR 2/1	100					Sand	
2 - 5	10YR 2/1	80					Sand	
2 - 5	10YR 5/6	20					Sand	
5 - 14	10YR 2/2	60	10YR 6/8	40	C	PL / M	Sand	
14 - 21	10YR 2/1	100					Silt Loam	
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ✓ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ✓ Geomorphic Position (D2)
- ✓ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No ✓ Depth (inches): _____

Water Table Present? Yes ✓ No ____ Depth (inches): 18

Saturation Present? (includes capillary fringe) Yes ✓ No ____ Depth (inches): 14

Wetland Hydrology Present? Yes ✓ No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Laporte US 20 east of SR 39 City/County: Laporte, Laporte Sampling Date: 2021-06-15

Applicant/Owner: INDOT State: Indiana Sampling Point: DP4

Investigator(s): Shannon Bonifacio & Courtney Haverbusch Section, Township, Range: Sec 1 T37N R3W

Landform (hillslope, terrace, etc.): Basin Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 41.681119 Long: -86.711133 Datum: WGS 84

Soil Map Unit Name: Loamy Fluvaquents (Fh) NWI classification: non-wetland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Medicago lupulina	50	✓	FACU
2. Schedonorus arundinaceus	45	✓	FACU
3. Plantago lanceolata	7		FACU
4. Daucus carota	5		UPL
5.			
6.			
7.			
8.			
9.			
10.			
	107% = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
	_____ = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	102	x 4 =	408
UPL species	5	x 5 =	25
Column Totals:	107 (A)		433 (B)

Prevalence Index = B/A = 4.05

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0 - 2	10YR 4/3	80					Sand	
0 - 2	10YR 5/6	20					Sand	
2 - 10	10YR 4/6	80					Sand	
2 - 10	10YR 2/1	20					Sand	
10 - 15	10YR 5/2	95	10YR 5/6	5	C	M	Sand	
15 - 20	10YR 2/1	95	10YR 5/6	5	C	PL	Sand	
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Laporte US 20 east of SR 39 City/County: Laporte, Laporte Sampling Date: 2021-06-15

Applicant/Owner: INDOT State: Indiana Sampling Point: DP5

Investigator(s): Shannon Bonifacio & Courtney Haverbusch Section, Township, Range: Sec 1 T37N R3W

Landform (hillslope, terrace, etc.): Basin Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 41.680786 Long: -86.711281 Datum: WGS 84

Soil Map Unit Name: Loamy Fluvaquents (Fh) NWI classification: non-wetland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus americana	40	✓	FACU
2.			
3.			
4.			
5.			
	40%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft r)			
1. Parthenocissus quinquefolia	50	✓	FACU
2. Daucus carota	20	✓	UPL
3. Impatiens capensis	10		FACW
4. Calystegia sepium	5		FAC
5.			
6.			
7.			
8.			
9.			
10.			
	85%	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	5	x 3 =	15
FACU species	90	x 4 =	360
UPL species	20	x 5 =	100
Column Totals:	125 (A)		495 (B)

Prevalence Index = B/A = 3.96

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 12	10YR 3/3	100					Silt Loam	Dense roots
12 - 20	10YR 3/4	50	10YR 5/8	25	C	M	Silt Loam	
12 - 20	10YR 5/6	25					Silt Loam	
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 13

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Laporte US 20 east of SR 39 City/County: Laporte, Laporte Sampling Date: 2021-06-15

Applicant/Owner: INDOT State: Indiana Sampling Point: DP6

Investigator(s): Shannon Bonifacio & Courtney Haverbusch Section, Township, Range: Sec 1 T37N R3W

Landform (hillslope, terrace, etc.): Basin Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 41.680761 Long: -86.711286 Datum: WGS 84

Soil Map Unit Name: Loamy Fluvaquents (Fh) NWI classification: non-wetland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Phragmites australis	80	✓	FACW
2. Typha X glauca	15		OBL
3. Persicaria arifolia	10		OBL
4. Vitis riparia	5		FACW
5.			
6.			
7.			
8.			
9.			
10.			
	110% = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	25	x 1 =	25
FACW species	85	x 2 =	170
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	110 (A)		195 (B)

Prevalence Index = B/A = 1.77

Hydrophytic Vegetation Indicators:

✓ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 6	10YR 2/1	100						
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ✓ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

Pit only dug to depth of 6 inches as it kept filling in and soils would not hold to shovel.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ✓ Geomorphic Position (D2)
- ✓ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes ✓ No _____ Depth (inches): 3

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 0

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Laporte US 20 east of SR 39 City/County: Laporte, Laporte Sampling Date: 2021-06-15

Applicant/Owner: INDOT State: Indiana Sampling Point: DP7

Investigator(s): Shannon Bonifacio & Courtney Haverbusch Section, Township, Range: Sec 1 T37N R3W

Landform (hillslope, terrace, etc.): Basin Local relief (concave, convex, none): Concave

Slope (%): 0-1 Lat: 41.680294 Long: -86.707372 Datum: WGS 84

Soil Map Unit Name: Houghton muck (Hm) NWI classification: non-wetland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Ulmus rubra	25	✓	FAC
2.			
3.			
4.			
5.			
	25%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft r)			
1. Impatiens capensis	50	✓	FACW
2. Lactuca serriola	20	✓	FACU
3. Phalaris arundinacea	7		FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	77%	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	57	x 2 =	114
FAC species	25	x 3 =	75
FACU species	20	x 4 =	80
UPL species	0	x 5 =	0
Column Totals:	102 (A)		269 (B)

Prevalence Index = B/A = 2.64

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 20	10YR 3/3	100					Silty Clay Loam	
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ✓ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Laporte US 20 east of SR 39 City/County: Laporte, Laporte Sampling Date: 2021-06-15

Applicant/Owner: INDOT State: Indiana Sampling Point: DP8

Investigator(s): Shannon Bonifacio & Courtney Haverbusch Section, Township, Range: Sec 1 T37N R3W

Landform (hillslope, terrace, etc.): Basin Local relief (concave, convex, none): Concave

Slope (%): 6-12 Lat: 41.679911 Long: -86.70425 Datum: WGS 84

Soil Map Unit Name: Riddles loam (RIC2) NWI classification: non-wetland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____ No ✓	
Wetland Hydrology Present?	Yes _____ No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Ulmus rubra	20	✓	FAC
2.			
3.			
4.			
5.			
	20% = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Impatiens capensis	30	✓	FACW
2. Schedonorus arundinaceus	30	✓	FACU
3. Phalaris arundinacea	25	✓	FACW
4. Phragmites australis	25	✓	FACW
5. Pastinaca sativa	15		NI
6.			
7.			
8.			
9.			
10.			
	125% = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
	_____ = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	80	x 2 =	160
FAC species	20	x 3 =	60
FACU species	30	x 4 =	120
UPL species	0	x 5 =	0
Column Totals:	130 (A)		340 (B)

Prevalence Index = B/A = 2.62

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0 - 6	10YR 3/2	100					Sandy Clay Loam	
6 - 14	10YR 3/2	20					Sandy Clay Loam	
6 - 14	10YR 4/4	80					Sandy Clay Loam	
14 - 20	10YR 3/2	50					Sandy Clay Loam	
14 - 20	10YR 4/4	50					Sandy Clay Loam	
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Gravel mixed in soil

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ✓ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Appendix C

Preliminary JD Form

Appendix 2 - PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD: December 9, 2021

B. NAME AND ADDRESS OF PERSON REQUESTING PJD: Courtney Haverbusch, Little River Consultants
9675 S. CR100E, Clayton, IN 46118

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:

Des. No. 1702993: The project is located approximately 400 feet east of the SR 39 and US 20 junction to approximately 2.85 miles east of the SR 39 and US 20 junction (Fair Road) on US 20 in Laporte. The project involves improvements to US 20 in response to increased traffic and increased vehicles accidents. The improvements would add a 16-foot wide two-lane-left-turn lane and expand the paved shoulders to 8-feet wide. Additionally, seven small culverts are schedule for improvements-including replacement with either larger pipes or concrete structures and elongation.

(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES)

State: Indiana County/parish/borough: Laporte City: Springville

Center coordinates of site (lat/long in degree decimal format):

Lat.: 41.6805 Long.: -86.707775

Universal Transverse Mercator: 524322.08, 4614344.74, 16T

Name of nearest waterbody: Galena River

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

■ Office (Desk) Determination. Date: June 2021

■ Field Determination. Date(s): June 14-16, 2021

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)
UNT to Galena River	41.681106	-86.711075	190 LF	perennial stream	Section 404/401
Wetland 1	41.681119	-86.711106	0.044 ac	wetland	Section 404/401
Wetland 2	41.680739	-86.711236	0.051 ac	wetland	Section 404/401

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.Appropriatelyreferencesources below where indicatedforallchecked items:

- [x] Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:
  Map: USGS topo, NWI, FIRM, NHD, soils, aerial photos .
- [x] 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.
- [x] U.S. Geological Survey map(s). Cite scale & quad name: 1:24,000 Springville Quad.
- [x] Natural Resources Conservation Service Soil Survey. Citation: web soil survey/Laporte Co.
- [x] National wetlands inventory map(s). Cite name: USFWS NWI, Springville Quad.
- [ ] State/local wetland inventorymap(s): _____.
- [x] FEMA/FIRM maps: Panel 18091C.
- [ ] 100-year Floodplain Elevation is: _____.(National Geodetic Vertical Datum of 1929)
- [x] Photographs: [x] Aerial (Name & Date): Mar 2021.
  or [x] Other (Name & Date): Site photos June 2021.
- [ ] Previous determination(s). File no. and date of response letter: _____.
- [x] Other information (please specify): EX7 in Waters Report showing mapped features.

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.

C. Haverbusch December 9, 2021

Signature and date of Regulatory staff member completing PJD

Signature and date of person requesting PJD (REQUIRED, unless obtaining the signature is impracticable)[1] Acting as agent for INDOT

[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.

INdiana Floodplain Information Portal

Indiana Department of Natural Resources DNR

Find an address

Example: 300 Michigan Avenue, Auburn, IN, 46706

Go To Address

- or -

Jump to a county

Select your county from below

LaPorte

View your county's Flood Insurance Study.

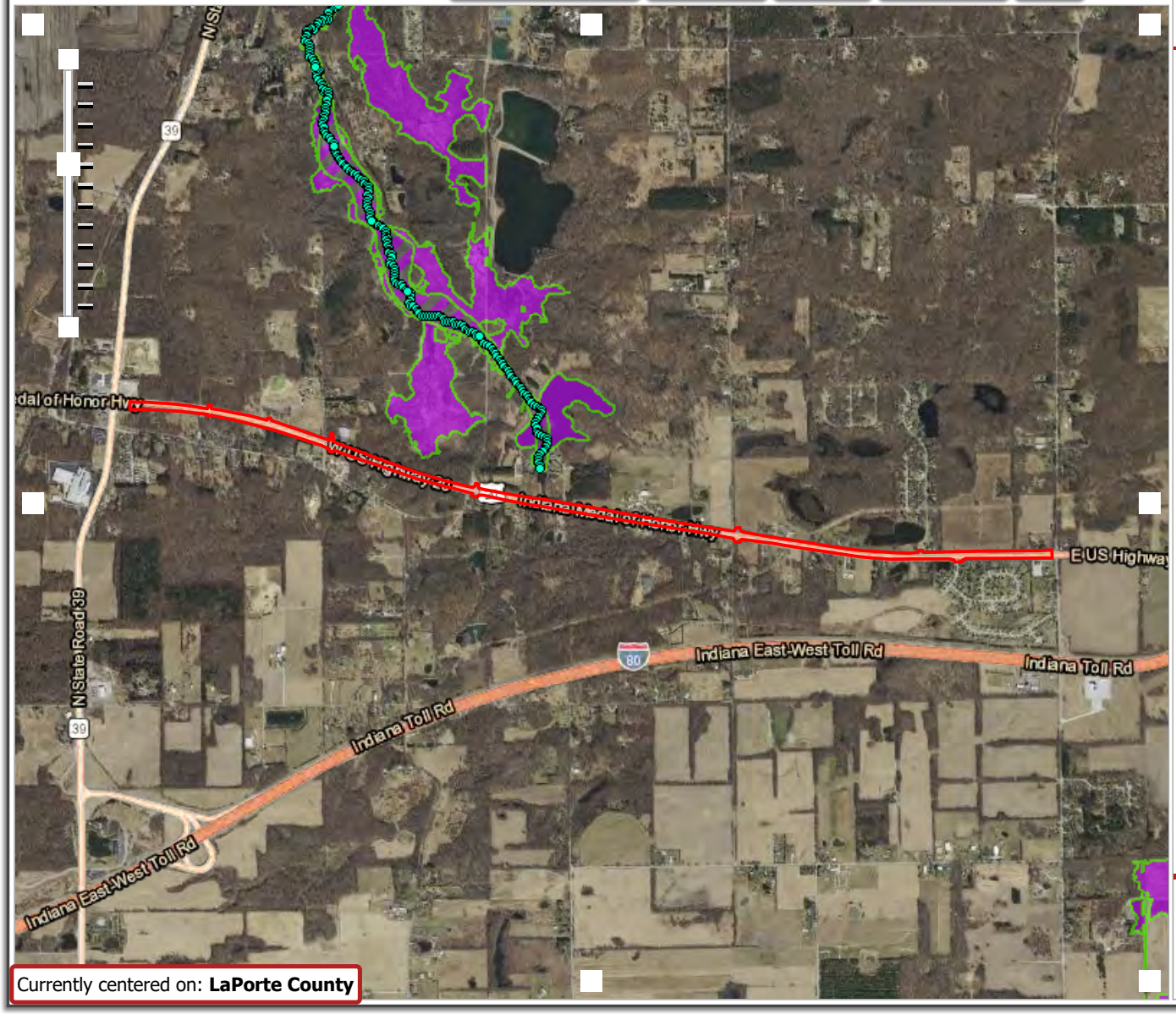
For the best feel and performance, use FireFox 3.5+, Internet Explorer 8+, Chrome, or Safari 4+.

< Previous Tips | Next Tips >

Map | FEMA Flood Insurance Study | Floodplain Layers | Frequently Asked Questions

Minimize

Profile Charter | Layers | Legend | Options | Help



Currently centered on: **LaPorte County**

Follow instructions under "How to navigate the map" to select a Point of Interest.

US 20 Auxiliary Lanes
US 20 from 400' east of SR 39 to 2.85 miles east of SR 39
LaPorte County, Indiana
Des No. 1702993

Project Area

F217

APPENDIX G: PUBLIC INVOLVEMENT

December 31, 2019

Butler Fairman Seufert
CIVIL ENGINEERS

Headquarters:
8450 Westfield Blvd., Suite 300
Indianapolis, IN 46240-5920
T 317.713.4615
F 317.713.4616
E bfs@BFSEngr.com
www.BFSEngr.com

Branch Locations:
Fort Wayne
Jeffersonville
Lafayette
Merrillville
Plainfield

Founded 1961

Member ACEC INDIANA

NOTICE OF SURVEY

EJ&E West Company
2422 Gaylord St.
Joilet, IL 60435

RE: Auxiliary Turn Lanes and Road Improvements, U.S. 20 from S.R. 39 to Fail Road, Springville, Indiana.

Dear Property Owner(s):

Butler, Fairman and Seufert, Inc., has been contracted to survey the referenced project. Courthouse records show that you are a property owner within the limits of the area where data will be collected for the project survey.

Our survey crews will commence the survey in the near future. In the process, they will be walking on your land to take measurements to locate features such as buildings, trees, drives, utilities and necessary drainage features. We appreciate your cooperation in this effort. Unless we are notified to the contrary, we will assume your permission to walk on your property.

Please forward this information to any tenants that may be occupying your property.

Should you have questions concerning the survey, please contact the undersigned in this office at 765-423-5602 or by the supplied e-mail.

Sincerely,

BUTLER, FAIRMAN and SEUFERT, INC.
Gene K. Gosewehr, L.S.
egosewehr@bfsengr.com

AFFP

NOTICE OF PUBLIC INFORMATION M

Affidavit of Publication

STATE OF IN }
COUNTY OF LA PORTE } SS

Isis Cains, being duly sworn, says:

That she is Advertising Director of the LaPorte County Herald Dispatch, a daily newspaper of general circulation, printed and published in Michigan City, La Porte County, IN; that the publication, a copy of which is attached hereto, was published in the said newspaper on the following

April 15, 2021
April 22, 2021

Publisher's Fee: $ 141.13

That said newspaper was regularly issued and circulated on those dates:

SIGNED:

Subscribed to and sworn to me this 22nd day of April 2021.

Jennifer P. Mann, Notary Public 07/23/2024

Jennifer P. Mann
Notary Public, State of Indiana
LaPorte County
Commission Number 686859
My Commission Expires
July 23, 2024

00005965 70032182

Lori Halloran
Butler, Fairman and Seufert Inc
8450 Westfield Boulevard
Suite 300
Indianapolis, IN 46240

NOTICE OF PUBLIC INFORMATION MEETING

DES# 1702992: US 20 Auxiliary Lanes/Two-way Left Turn Lanes from 4.8 miles East of SR 39 (CR 300 E) to 7.2 miles East of SR 39 (CR 500 East), La Porte County

DES# 1702993: US 20 Auxiliary Lanes/Two-way Left Turn Lanes from 400 feet east of SR 39 to 2.85 miles east of
SR 39 (Fail Road), La Porte County

The Indiana Department of Transportation (INDOT) will host a public information meeting for the proposed projects on April 29, 2021 at the La Porte County Complex, Rooms 2 and 3, 809 State Street, La Porte, Indiana 46350. The public information meeting will begin with a formal presentation by INDOT and their hired design consultant at 6:00PM CST. INDOT and their design team will be available after the formal presentation for informal discussions until 8:00PM CST. Attendees are advised that face coverings and adherence to CDC guidelines for social distancing are required. A limited supply of face coverings will be available for use upon entry.

The purpose of the public information meeting is to offer all interested persons an opportunity to review the current preliminary plans for the projects, speak informally with INDOT and design consultant representatives, ask questions and provide feedback. Opportunities to request formal public hearings for both projects will be offered at later dates.

The need for both projects was identified by engineering assessments that showed significant increases in daily traffic along US 20 between 2010 and 2016, and the related increase in crashes and crash severity. Many of the severe crashes were found to be related to stopped left-turning vehicles in the passing lanes and lane departures, primarily where vehicles crossed the centerline. The primary purpose of both projects is to improve safety conditions for vehicular traffic along US 20.

Initial considerations to address the purpose and need of the project includes the addition of a 16-foot wide two-way left turn lane, widening of the existing 2-foot wide paved shoulders to 8-foot wide paved shoulders, and the installation centerline and edge line rumble strips. Due to the proposed widening of the roadway, existing drainage structures would be replaced or extended and street signs would be replaced.

The proposed project area for DES# 1702992 is approximately 2.4 miles long and extends from 4.8 miles east of SR 39 (CR 300 E) to 7.2 miles east of SR 39 (CR 500 East). Approximately 6.0 acres of permanent right-of-way acquisition for the project is anticipated. At this time, no commercial and/or residential relocations are anticipated; however, some existing commercial and residential access points to US 20 are being considered for modification, including at Michigan Street and at E. Lynn Street/W. Mechanic Street in Rolling Prairie. The intersection of Byron Road and W. Michigan Street would be repaved. Initial stages of construction expected to begin in Winter 2022/2023.

The proposed project area for DES# 1702993 is approximately 2.8 miles long and extends from 400 feet east of SR 39 to 2.85 miles east of SR 39 (Fail Road). Approximately 6.0 acres of permanent right-of-Way acquisition for the project is anticipated. At this time, no commercial and/or residential relocations are anticipated. Initial stages of construction expected to begin in Winter 2022/2023.

Federal and state funds are proposed to be used for construction of this project. INDOT and the Federal Highway Administration have agreed that both of these projects pose minimal impact to the natural environment. Therefore, both projects are being processed as Categorical Exclusions.

A link to the public information meeting presentation will be posted to the project website via the project sponsor's web page (https://www.in.gov/indot/2371.htm) by

April 29, 2021.

The public is encouraged to provide statements regarding the project utilizing one or more of the following methods: fill out the enclosed comment form and return it to the design consultant (contact information provided below); fill out a comment form at the public information meeting and leave it with the design consultant or INDOT staff members (at any of the project information stations); call or email Hannah Deguch, Environmental Scientist for the projects, at 317-713-4615 or hdeguch@bfsengr.com.

Please RSVP to Hannah Deguch at the phone number or email address listed above if you plan to attend one of the public meeting sessions. An RSVP is requested for planning purposes in accordance with CDC guidelines, but is not required for entry.

hspaxlp

*** Proof of Publication ***

State of Indiana)
) ss:
Lake County)

Personally appeared before me, a notary public in and for said county and state, the undersigned NICOLE MUSCARI who, being duly sworn, says that She/he is Legal Clerk of the Northwest Indiana Times newspaper of general circulation printed and published in the English language in the Town of Munster in state and county afore-said, and that the printed matter attached hereto is a true copy, which was duly published in said paper for 2 time(s), the date(s) of publication being as follows:
APRIL 15, 22 2021

BUTLER, FAIRMAN & SEUFERT, INC / LEGALS

8450 WESTFIELD BLVD, SUITE 300
!INDIANAPOLIS IN 46240-8302

ORDER NUMBER 67386

The undersigned further states that the Northwest Indiana Times newspaper maintains an Internet website, which is located at www.nwi.com website and that a copy of the above referenced printed matter was posted on such website on the date(s) of publication set forth above.

Nicole Muscari, Legal Clerk

By:

Subscribed and sworn to before me this 22 day of
APRIL 2021.

Dawn Renee Heili
Notary Public

DAWN RENEE HEILI
Notary Public, State of Indiana
Lake County
Commission #696125
My Commission Expires 01/31/25

My commission expires:

Section: Legals
Category: 198 Legal - Lake County
PUBLISHED ON: 04/15/2021, 04/22/2021

TOTAL AD COST:	101.38
FILED ON:	4/22/2021

NOTICE OF PUBLIC INFORMATION MEETING

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Please RSVP to Hannah Deguch at the phone number or email address listed above if you plan to attend one of the public meeting sessions. An RSVP is requested for planning purposes in accordance with CDC guidelines, but is not required for entry.

4/15,22 - 67386 -hspaxlp

Butler Fairman Seufert
CIVIL ENGINEERS

MEETING ATTENDANCE RECORD

PROJECT: US 20 – SR 39 to Fail Rd & 300 E to 500 E
DESCRIPTION: Public Information Meeting
LaPorte County
DATE: April 29, 2021; 6:00 Central Time

NAME	PROPERTY ADDRESS	E-MAIL ADDRESS	TELEPHONE
Doris Krenzke	4405 N 400 E BP	Personal Information Redacted	
Alice Harrington	5441 N Barclay		
Tom Ludwig	" " "		
Jackie Furlie	1047 W Springville Rd		
Erik Abraham	0827 W Springville Rd		
Mike & Debra Beichley	4932 N 200 E		
Mary Dennis Wozniak	3508 - E - US #20 mswd		
Matt Sherrod	0442 / 0444 E US 20		
Gary / Gina Lauffer	0355 E. Hwy 20		
Richard Singer	3372 E US 20 Rolling		

Butler Fairman Seufert
CIVIL ENGINEERS

MEETING ATTENDANCE RECORD

PROJECT: US 20 – SR 39 to Fail Rd & 300 E to 500 E
DESCRIPTION: Public Information Meeting
LaPorte County
DATE: April 29, 2021; 6:00 Central Time

NAME	PROPERTY ADDRESS	E-MAIL ADDRESS	TELEPHONE
Robert Schultz	3470 E US HWY 20 R.P. IN	Personal Information Redacted	
Doug Atherton	4404 N 400 E R.P. IN		
Glen Richardson	1201 W. US Highway 20 LP IN		
Joe Honey			

Public Information Meeting / April 29, 2021
US 20 Widening for Two-Way-Left-Turn-Lane (TWLTL)
Des. No. 1702992 and 1702993

Please visit https://www.in.gov/indot/4283.htm to review the presentation

Contact Information:

Amber Thomas
INDOT Senior Project Manager, LaPorte District
athomas2@indot.in.gov
219-344-0046

Qasim Asghar
DLZ Right of Way Acquisition
qasghar@dlz.com
574-236-4400 x626

Hannah Deguch
BF&S Environmental Studies
hbays@bfsengr.com
317-713-4615

Public Information Meeting / April 29, 2021
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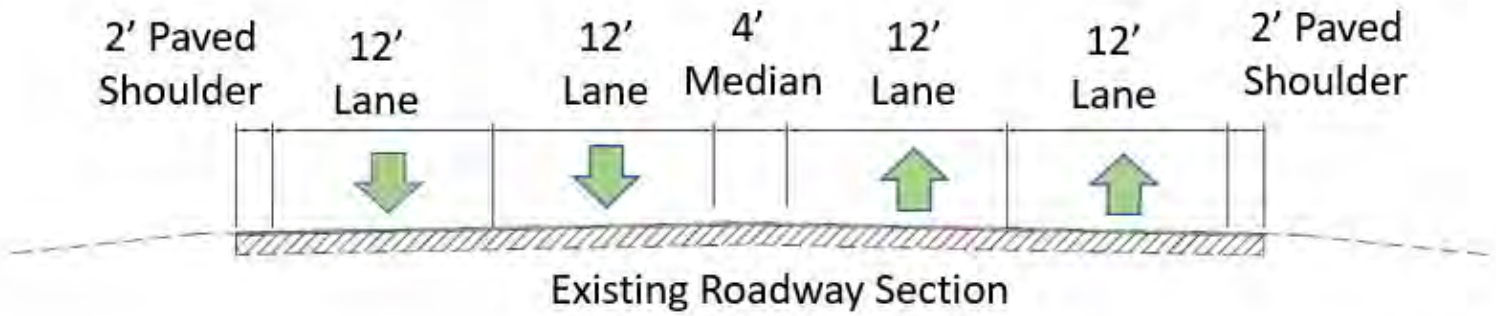
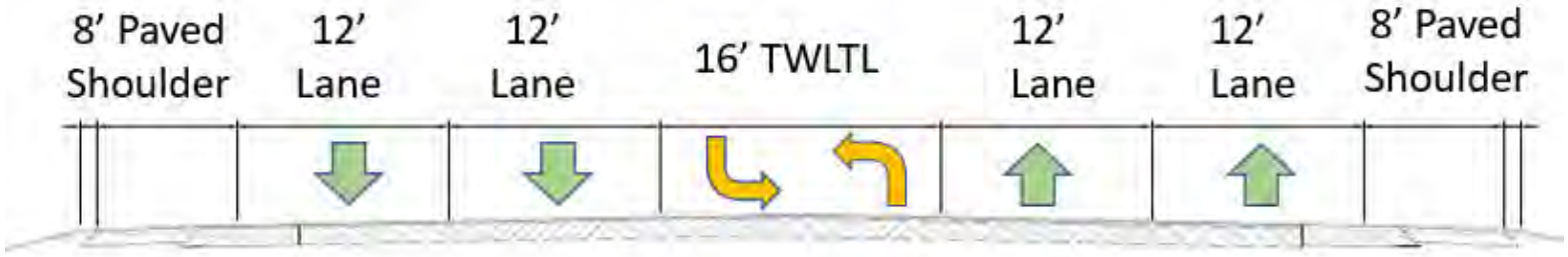


Existing Roadway Section



Proposed Roadway Section

PUBLIC INFORMATION MEETING

US 20 Widening for a Two-Way Left Turn Lane (TWLTL)

Section 1: **from SR 39 to Fail Road (3 miles)**

Section 2: **from CR 300 E to CR 500 East (2.25 miles)**

in LaPorte County

Thursday, April 29th, 2021

AGENDA

- Project Team
- Welcome / Opening Remarks
- Public Information Meeting
- Environmental Process
- Project Overview
- Project Schedule
- Q&A

TEAM OVERVIEW

Amber Thomas
INDOT Senior Project Manager, LaPorte District
athomas2@indot.in.gov
219-344-0046

Adam Parkhouse
INDOT Director of Communications, Northwest District
aparkhouse@indot.in.gov
219-325-7526

Carly Sheets, PE, PTOE
BF&S Project Manager, Road Design

Chris Wheatley, PE
BF&S QA/QC Manager, Road Design

Ryan Scott
BF&S Environmental Studies Manager

Hannah Deguch
BF&S Environmental Studies

WELCOME

THANK YOU for taking time out of your day to partner with INDOT on the US 20 Two-way Left Turn Lanes. Your insight and understanding is ***valuable and critical*** to the success of this project!

PURPOSE OF MEETING

US 20 Widening for TWLTL

- Share information about the project
- Provide feedback
- Ask questions

FEEDBACK

US 20 Widening for TWLTL

Ways to provide feedback:

- Fill out a comment form
- Email team member
- Call a team member
- Visit INDOT website: https://www.in.gov/indot/4283.htm

Please Submit comments by May 14, 2021

US 20 OVERVIEW

US 20 Widening for TWLTL

ENVIRONMENTAL

US 20 Widening for TWLTL

NEPA - National Environmental Policy Act of 1970

- Required for all federally funded highway improvements
- Level of review based on location and scope

Levels:
Categorical Exclusion*< Environmental Assessment < Environmental Impact Statement

**This project will be processed as a Categorical Exclusion (CE)*

ENVIRONMENTAL

US 20 Widening for TWLTL

GENERAL PROCESS

Verify Purpose and Need (P&N) of Project

Consider Alternatives to meet P&N
(including "Do Nothing")

Assess resources present
- Social, economic, cultural and natural resources

ENVIRONMENTAL

US 20 Widening for TWLTL

GENERAL PROCESS (cont.)

Select preliminary preferred alternative

Schedule public information meetings & get feedback

Coordinate with local/state/federal resource agencies

Design to avoid/minimize/mitigate for project impacts

ENVIRONMENTAL

US 20 Widening for TWLTL

GENERAL PROCESS (cont.)

Obtain INDOT approval of Draft CE document

Offer Public Hearing for Preferred Alternative

Finalize plans based on public hearing input

Submit Final CE document after Hearing Certification

PROJECT LOCATIONS

US 20 Widening for TWLTL

PROJECT LOCATIONS

US 20 Widening for TWLTL

PROJECT LOCATIONS

US 20 Widening for TWLTL

EXISTING CONDITIONS

US 20 Widening for TWLTL

- 4 Lane Highway
- 4-ft Median
- Variable Shoulder Widths
- Guardrail
- Rumble Grooving

PROJECT NEED

US 20 Widening for TWLTL

- Same cross section since 1941
- **70% volume increase** from 2010 to 2016
- Increased volume = Increased crashes and severity

PROJECT PURPOSE: Improve project safety conditions for vehicle traffic on US 20

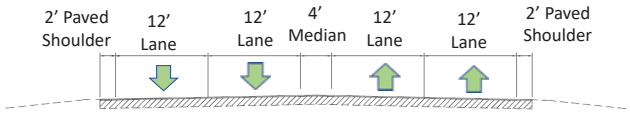
SAFETY BENEFITS

US 20 Widening for TWLTL

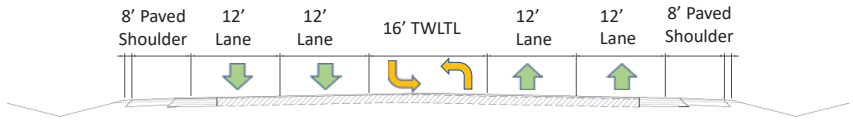
- Added Center Lane
  - Safe haven to complete lefts out of drives in two-maneuvers
  - Safe haven to turn left from US 20

SAFETY BENEFITS

US 20 Widening for TWLTL



Existing Roadway Section



Proposed Roadway Section

SAFETY BENEFITS

US 20 Widening for TWLTL

- Widened Paved Shoulder
- Added Guardrail
- Median/Shoulder Rumble Grooving

SAFETY BENEFITS

US 20 Widening for TWLTL

- Corrected Curve Banking (Cross Slopes)
- Improved Stopping Sight Lines
- Improved Intersection Sight Distance
- New Asphalt Surface and Pavement Markings

OTHER IMPACTS

US 20 Widening for TWLTL

- Right-of-Way Acquisition
- Environmental Impacts
- Drainage Impacts
- Utility Relocations

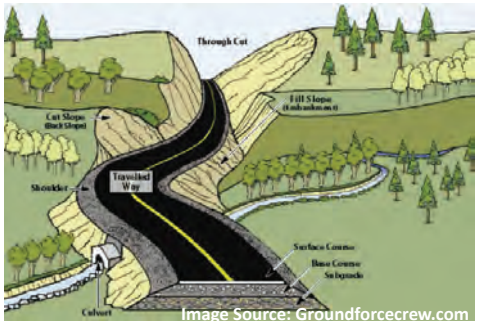
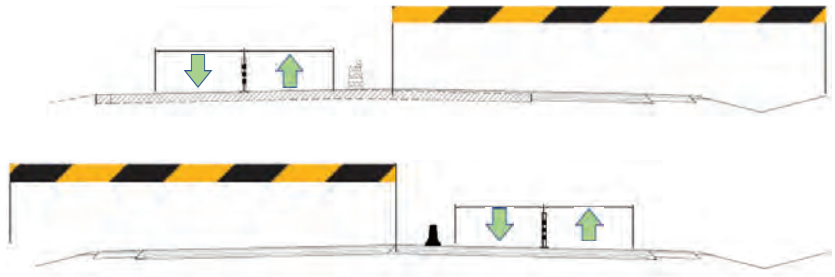


Image Source: Groundforcecrew.com

MAINTENANCE OF TRAFFIC

US 20 Widening for TWLTL



- One lane of traffic in each direction will be maintained

PROPOSED CONDITION

US 20 Widening for TWLTL

- Exhibits Around the Room
  - Proposed Improvements
  - Construction Limits
  - Proposed Right-of-Way Limits
    - No Relocations Required

PROPOSED PROJECT SCHEDULE

US 20 Widening for TWLTL

R/W Acquisition	Clearing of R/W	Utility Relocation	Construction
Begin Summer 2021	Begin Winter 2022-2023	Begin Winter 2022-2023	Begin Spring 2023

Note: The above timeline is subject to change, depending on available funding.

FEEDBACK

US 20 Widening for TWLTL

Public Comment Period

FEEDBACK

US 20 Widening for TWLTL

Ways to provide feedback:

- Fill out a comment form
- Email team member
- Call a team member
- Visit INDOT website: https://www.in.gov/indot/4283.htm

Please Submit comments by May 14, 2021

THANK YOU!

US 20 Widening for TWLTL

Contact Information

INDOT

Amber Thomas
INDOT Senior Project Manager, LaPorte District
athomas2@indot.in.gov
219-344-0046

Design/Environmental

Hannah Deguch
BF&S Environmental Studies
hbays@bfsengr.com
317-713-4615

Right-of-Way

Qasim Asghar
DLZ Right of Way Acquisition
qasghar@dlz.com
574-236-4400 x626

COMMENT SHEET

U.S. 20 Widening for Two-Way Left Turn Lane (TWLTL)
La Porte County, Indiana
DES. NO. 1702992 AND 1702993

Name / Date: 4-29-2021

Address: 0442 E / 0444 E US 20

COMMENTS: Lived at these ADDRESS for 28 years, The Highway White Line is 60 ft from My House AND GARAGE Over the years I have Seen 3 Deaths AND Numerous Accidents in front of My Property. Over time my DRYWALL AND Concrete Block Keep Cracking, WHICH stopped me from Getting Refinanced till I fixed it. This Center LANE is NOT Going to help because People will use it for A PASSING LANE

My other Property is 350 E. - 215 ± 30

COMMENT SHEET

U.S. 20 Widening for Two-Way Left Turn Lane (TWLTL)
La Porte County, Indiana
DES. NO. 1702992 AND 1702993

Name / Date: Dennis + MARY S. Wozniak (Son, Paul)

Address: 4415 N. -350 E - Rolling Prairie, IN. 46371

COMMENTS: Finally! and Thank you. Something is being done! So many Tragic deaths on this US 20 and I and my Son Paul almost one of them when he was in High School and learning how to drive, So I went to pick him up after his Track meet, and he drove home, so as always we would have to wait for Traffic to clear to turn left on to 350 E (South) because even then Traffic was heavy. But on that one day, he was waiting, waiting to turn left, and I was watching by the side mirror and saw "2" Semi's coming down with speed in both lanes at us from the back. I told my son when he had a chance to turn to go Quickly because the Semi's were coming and the one in the same lane behind us was not slowing down. But Traffic was not clearing to turn left for him So then last minutes I jumped over and pressed my foot on his and told him to hold the wheel straight and press the foot pedal too. So we Sped that Car as fast in speed my son got so scared and shaking, both Semi's were right on top of us, only a Second feet away from our bumper. We would have been one of those Tragic accidents... Now these Days, its not any better But worse + and takes 15-20 mins to get on 215 ± 30.

G19

fold on line

Mary Wozniak
4478 N. - 350 E.
Rolling Pr. In. 46371

S SUBURBAN IL 601
13 MAY 2021 PM 2 L

Hannah Deguch
Butler, Fairman and Seufert, Inc.
8450 Westfield Boulevard, Suite 300
Indianapolis, IN 46240
(email: hbays@bfsengr.com)

RECEIVED
MAY 18 2021
Butler, Fairman & Seufert, Inc.

46240-830299

fold on line

I'm glad it's finally happening. More Sonics news
Sure don't have to stress. I want to
that they don't own, but it needs to
be addressed and Shirley, the Chairman,
thinks the State is sorry the Chairman,
Sincerely,

INDIANA DEPARTMENT OF TRANSPORTATION

Driving Indiana's Economic Growth

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204-2216 (317) 232-5348 FAX: (317) 233-4929

Eric Holcomb, Governor
Joe McGuinness, Commissioner

Date: September 22, 2020

Re: Des No. 1702993, US 20, Auxiliary Lanes, Two-way Left Turn Lanes, LaPorte County, Indiana

Notice of Entry for Survey or Investigation

Dear Property Owner,

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

Please read the attached notice to inform you of what the "Notice of Entry for Survey or Investigation" means. The survey work may include the identification and mapping of streams and wetlands, and various other environmental studies. The information we obtain from such studies is necessary for the proper planning and design of this highway project. It is our sincere desire to cause you as little inconvenience as possible during this survey. If any problems do occur, please contact Amber Thomas at (219) 325-7494or athomas2@indot.in.gov.

Please be aware that Indiana Code § 8-23-7-27 and 28 provides that you may seek compensation form INDOT for damages occurring to your property (land or water) that result from INDOT's entry for the purposes mentioned above in Indiana Code § 8-23-7-26. In this case, a basic procedure that may be followed is for you and/or and INDOT employee or representative to present an account of the damages to one of the two above named INDOT staff. They will check the information and forward it to the appropriate person at INDOT who will contact you to discuss the situation and compensation.

In addition, you may contact the LaPorte District Real Estate Manager (855-463-6848 / 315 E. Boyd Blvd., LaPorte, IN 46350. The District Real Estate Manager (DREM) can provide you with a form to request compensation for damages. After filling out the form, you can return it to the DREM for consideration, and the DREM may be contacted if you have questions regarding the matter, rights, and procedures.

If you are not satisfied with the compensation that INDOT determines is owed you, Indiana Code § 8-23-7-8 provides the following: The amount of damages shall be assessed by the county agricultural extension educator of the county in which the land or water is located and two (2) disinterested residents of the county, one (1) appointed by the aggrieved party and one (1) appointed by the department. A written report of the assessment of the 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. It our sincere desire to cause as little inconvenience as possible during our work, and we thank you in advance for your cooperation.

If you have received a "Notice of Entry for Survey or Investigation" from INDOT or an INDOT representative, you may be wondering what it means. In the early stages of a project's development, INDOT must collect as much information as possible to ensure that sound decisions are made in designing the proposed project. Before entering onto private

property to collect that data, INDOT is required to notify landowners that personnel will be in the area and may need to enter onto their property. Indiana Code, Title 8, Article 23, Chapter 7, Section 26 deals with the department's authority to enter onto any property within Indiana.

Receipt of a Notice of Entry for Survey or Investigation does not necessarily mean that INDOT will be buying property from you. It doesn't even necessarily mean that the project will involve your property at all. Since the Notice of Entry for Survey or Investigation is sent out in the very early stages and since we want to collect data within AND surrounding the project's limits more landowners are contacted than will actually fall within the eventual project limits. It may also be that your property falls within the project limits, but we will not need to purchase property from you to make improvements to the roadway. Another thing to keep in mind is that when you receive a Notice of Entry for Survey or Investigation, very few specifics have been worked out and actual construction of the project may be several years in the future.

Before INDOT begins a project that requires them to purchase property from landowners, they must first offer the opportunity for a public hearing. If you were on the list of people who received a Notice of Entry for Survey or Investigation, you should also receive a notice informing you of your opportunity to request a public hearing. These notices will also be published in your local newspaper so interested individuals who are not adjacent to the project will also have the opportunity to request a public hearing. If a public hearing is to be held, INDOT will publicize the date, location, and time. INDOT will present detailed project information at the public hearing, comments will be taken from the public in spoken and written form, and question and answer sessions will be offered. Based on the feedback INDOT receives from the public, a project can be modified and improved to better serve the public.

So, if you have received a "Notice of Entry for Survey or Investigation", remember:

1. You do not need to take any action at this time. It is merely letting you know that people in orange/lime vests are going to be in your neighborhood.
2. The project is still in its very early planning stages.
3. You will be notified of your opportunity to comment on the project at a later date.

APPENDIX H: AIR QUALITY

Indiana Department of Transportation (INDOT)

State Preservation and Local Initiated Projects FY 2020 - 2024

SPONSOR	CONTRACT # / LEAD DES	STIP NAME	ROUTE	WORK TYPE	LOCATION	DISTRICT	MILES	FEDERAL CATEGORY	Total Cost of Project*	PROGRAM	PHASE	FEDERAL	MATCH	2020	2021	2022	2023	2024
Indiana Department of Transportation	41201 / 1701532	Init.	SR 212	HMA Overlay, Preventive Maintenance	From US 20 to US 12	LaPorte	2.326	NHPP		Road Construction	CN	$2,948,872.80	$737,218.20	$470,000.00	$3,216,091.00			
Performance Measure Impacted: Pavement Condition																		
Indiana Department of Transportation	41201 / 1701532	A 13	SR 212	HMA Overlay, Preventive Maintenance	From US 20 to US 12	LaPorte	2.326	NHPP	$5,100,554.00	Toll Lease Amendment Proceeds	PE	$0.00	$327,037.00	$327,037.00				
Performance Measure Impacted: Pavement Condition																		
Comments:NIRPC approved Resolution 19-26, Amendment #2 November 21, 2019. (Page 16) FY 20 PE $327,037. AQC Exempt on 9/12/2019.																		
Indiana Department of Transportation	41205 / 1800863	Init.	I 94	Bridge Deck Overlay	JOHNSON ROAD@.-I-94 EB/WB, NORRIS DITCH, 2.93mi E of US 421	LaPorte	0	NHPP		Bridge Construction	CN	$8,702,330.40	$966,925.60	$80,000.00	$9,589,256.00			
Performance Measure Impacted: Bridge Condition																		
Indiana Department of Transportation	41431 / 1703002	Init.	SR 8	Bridge Replacement, Concrete	Sr 8@.-Dahl Ditch, 00.24 W US 421	LaPorte	0	STBG		Bridge Construction	CN	$575,251.20	$143,812.80			$20,000.00	$699,064.00	
										Bridge Consulting	PE	$65,992.00	$16,498.00	$82,490.00				
										Bridge ROW	RW	$24,000.00	$6,000.00			$30,000.00		
Indiana Department of Transportation	41432 / 1800661	Init.	US 20	Small Structure Replacement	0.67mi W of US 421	LaPorte	.01	STBG		Bridge Construction	CN	$580,135.20	$145,033.80	$725,169.00				
Performance Measure Impacted: Bridge Condition																		
Indiana Department of Transportation	41437 / 1702993	Init.	US 20	Auxiliary Lanes, Two-way Left Turn Lanes	US20 from 400' east of SR39 to 2.85 miles east of SR39 (Fail Rd)	LaPorte	2.985	STBG		Safety Construction	CN	$11,401,222.40	$2,850,305.60		$670,000.00	$760,000.00	$12,821,528.00	
										Safety Consulting	PE	$1,298,885.60	$324,721.40	$1,203,607.00			$420,000.00	
										Safety ROW	RW	$1,760,000.00	$440,000.00		$1,000,000.00	$1,100,000.00	$100,000.00	
Performance Measure Impacted: Reliability and Freight Reliability																		
LaPorte County	41660 / 1801831	Init.	IR 1023	Bike/Pedestrian Facilities	Lincoln Trail Extension 421/2 to south entrance to Purdue NW	LaPorte	1.7	STBG		Local Funds	RW	$0.00	$70,000.00	$70,000.00				
										Local Funds	CN	$0.00	$365,000.00			$365,000.00		
										Michigan City MPO	RW	$280,000.00	$0.00	$280,000.00				
										Michigan City MPO	CN	$1,460,000.00	$0.00			$1,460,000.00		
Performance Measure Impacted: Reliability and Freight Reliability																		
LaPorte County	41660 / 1801831	A 36	IR 1023	Bike/Pedestrian Facilities	Lincoln Trail Extension 421/2 to south entrance to Purdue NW	LaPorte	1.7	STBG	$2,260,968.30	Demonstration Fund Program	RW	$85,968.00	$0.00		$85,968.00			

*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.

Des #	Route	Sponsor	Work Type	Location	STIP Cate	Phase	Total	Federal Funding	Match	2020	2021	2022	2023	2024
1703004	US 30	INDOT	Bridge Replacement, Concrete	Us 30@.-Dyer Ditch, 01.10 W US 41	NHPP	CN	$ 1,276,844	$ 1,021,475	$ 255,369			$ 20,000	$ 1,256,844	
1703004	US 30	INDOT	Bridge Replacement, Concrete	Us 30@.-Dyer Ditch, 01.10 W US 41	NHPP	PE	$ 88,000	$ 70,400	$ 17,600	$ 88,000				
1703004	US 30	INDOT	Bridge Replacement, Concrete	Us 30@.-Dyer Ditch, 01.10 W US 41	NHPP	RW	$ 40,000	$ 32,000	$ 8,000			$ 40,000		
1703002	SR 8	INDOT	Bridge Replacement, Concrete	Sr 8@.-Dahl Ditch, 00.24 W US 421	STPBG	CN	$ 719,064	$ 575,251	$ 143,813			$ 20,000	$ 699,064	
1703002	SR 8	INDOT	Bridge Replacement, Concrete	Sr 8@.-Dahl Ditch, 00.24 W US 421	STPBG	PE	$ 82,490	$ 65,992	$ 16,498	$ 82,490				
1703002	SR 8	INDOT	Bridge Replacement, Concrete	Sr 8@.-Dahl Ditch, 00.24 W US 421	STPBG	RW	$ 30,000	$ 24,000	$ 6,000			$ 30,000		
1800661	US 20	INDOT	Small Structure Replacement	1.02mi W of US 421	NHPP	CN	$ 740,169	$ 592,135	$ 148,034			$ 15,000	$ 725,169	
1800661	US 20	INDOT	Small Structure Replacement	1.02mi W of US 421	NHPP	PE	$ 76,800	$ 61,440	$ 15,360	$ 76,800				
1800661	US 20	INDOT	Small Structure Replacement	1.02mi W of US 421	NHPP	RW	$ 20,000	$ 16,000	$ 4,000			$ 20,000		
1702993	US 20	INDOT	Auxiliary Lanes, Two-way Left Turn Lanes	US20 from 400' east of SR39 to 2.85 miles east of SR39 (Fail Rd)	STPBG	CN	$ 14,251,528	$ 11,401,222	$ 2,850,306		$ 670,000	$ 760,000	$ 12,821,528	
1702993	US 20	INDOT	Auxiliary Lanes, Two-way Left Turn Lanes	US20 from 400' east of SR39 to 2.85 miles east of SR39 (Fail Rd)	STPBG	PE	$ 1,623,607	$ 1,298,886	$ 324,721	$ 1,203,607			$ 420,000	
1702993	US 20	INDOT	Auxiliary Lanes, Two-way Left Turn Lanes	US20 from 400' east of SR39 to 2.85 miles east of SR39 (Fail Rd)	STPBG	RW	$ 2,200,000	$ 1,760,000	$ 440,000		$ 1,000,000	$ 1,100,000	$ 100,000	
1703005	US 30	INDOT	Bridge Replacement, Concrete	Us 30@.-Crooked Creek, 03.52 E SR 49	NHPP	CN	$ 2,652,174	$ 2,121,739	$ 530,435			$ 20,000	$ 2,632,174	
1703005	US 30	INDOT	Bridge Replacement, Concrete	Us 30@.-Crooked Creek, 03.52 E SR 49	NHPP	PE	$ 184,000	$ 147,200	$ 36,800	$ 184,000				
1703005	US 30	INDOT	Bridge Replacement, Concrete	Us 30@.-Crooked Creek, 03.52 E SR 49	NHPP	RW	$ 40,000	$ 32,000	$ 8,000			$ 40,000		
1800257	US 6	INDOT	Bridge Replacement, Concrete	Us 6@.-I-80/94 Eb/Wb, 02.27 W SR 51	NHPP	CN	$ 7,583,380	$ 6,066,704	$ 1,516,676			$ 35,000	$ 7,548,380	
1800257	US 6	INDOT	Bridge Replacement, Concrete	Us 6@.-I-80/94 Eb/Wb, 02.27 W SR 51	NHPP	PE	$ 528,000	$ 422,400	$ 105,600	$ 528,000				
1800257	US 6	INDOT	Bridge Replacement, Concrete	Us 6@.-I-80/94 Eb/Wb, 02.27 W SR 51	NHPP	RW	$ 35,000	$ 28,000	$ 7,000			$ 35,000		
1703043	SR 51	INDOT	Replace Superstructure	Sr 51@.-Deep River, 02.00mi N of US 30	NHPP	CN	$ 1,753,117	$ 1,402,494	$ 350,623			$ 25,000	$ 1,728,117	
1703043	SR 51	INDOT	Replace Superstructure	Sr 51@.-Deep River, 02.00mi N of US 30	NHPP	PE	$ 134,040	$ 107,232	$ 26,808	$ 134,040				
1703043	SR 51	INDOT	Replace Superstructure	Sr 51@.-Deep River, 02.00mi N of US 30	NHPP	RW	$ 20,000	$ 16,000	$ 4,000			$ 20,000		
1800067	SR 912	INDOT	Concrete Pavement Restoration (CPR)	US 41 to US 12 (Columbus) - including ramps (CPR)	NHPP	CN	$ 18,615,419	$ 14,892,335	$ 3,723,084		$ 50,000	$ 50,000	$ 18,515,419	

APPENDIX I: ADDITIONAL STUDIES

Section 6(f) Properties in LaPorte County

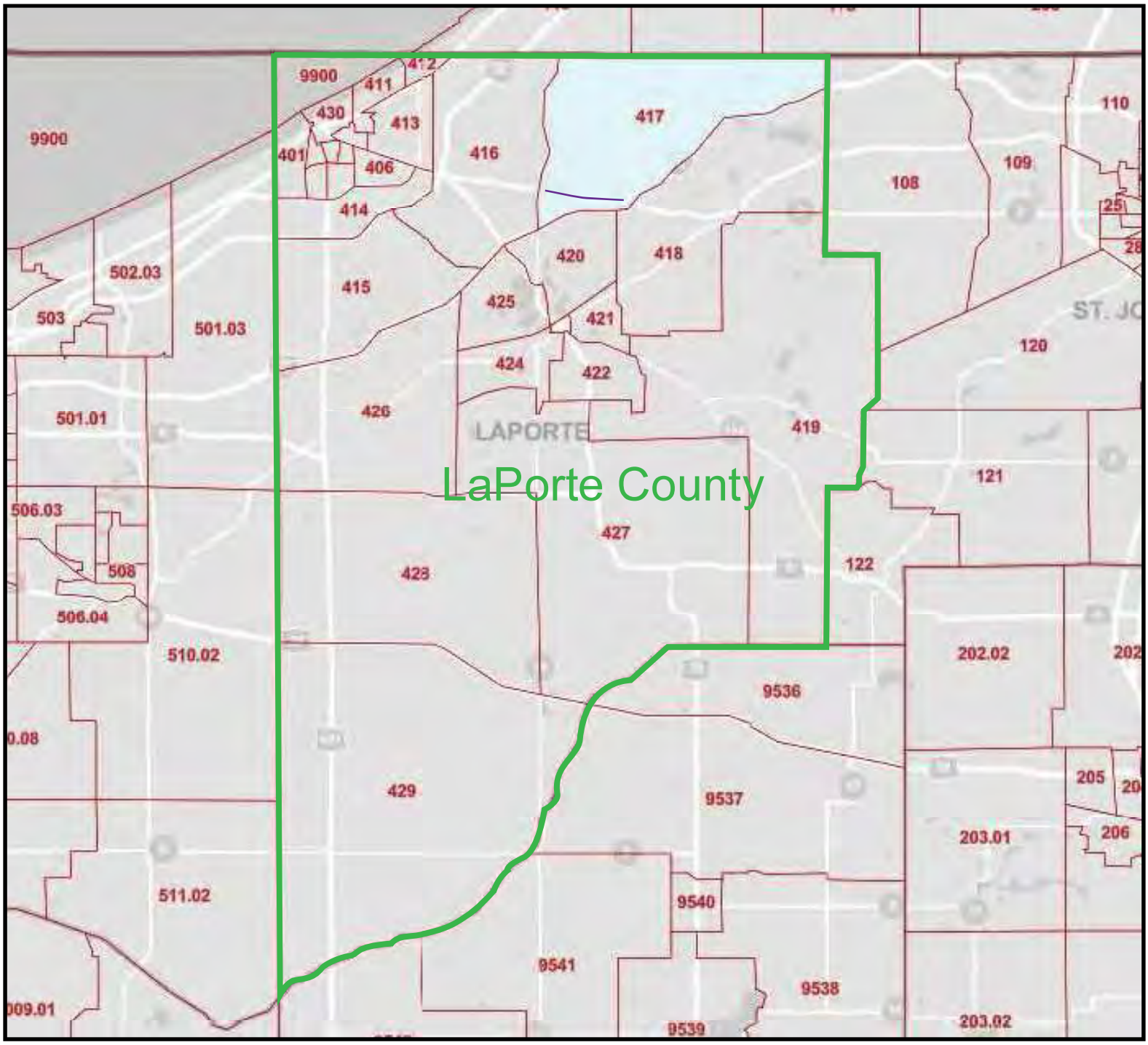
Project Number	Sponsor	Year	Property
1800200	LaPorte County Park Board	1975	Fox Memorial Park
1800228	LaPorte County Park Board	1976	Fox Memorial Park
1800265	LaPorte County Park Board	1977	Kesling Park
1800332	LaPorte County Park Board	1979	Rumley Park
1800351	Westville Park Board	1979	Westville Park (Prairie Meadow Park)
1800373	LaPorte County Park Board	1983	Kesling Park
1800402	Trail Creek Park Board	1981	Nelson Park
1800405	Indiana Department of Natural Resources	2005	Galena Marsh Nature Preserve
1800453	LaPorte County Park Board	1986	Luhr Park
1800547	Michigan City Park Board	2004	Hansen & Gifford Parks/Old Spur Trail
1800608	LaPorte County Park Board	2018	Luhr County Park
1800549	LaPorte County Park Board	2004	Red Mill County Park

Source: https://lwcf.tplgis.org/mappast/

Environmental Justice Data Analysis
Des. No. 1702993: US 20 Aux. Lanes, 400 ft E of SR 39 to 2.85 mi E of SR 39 (Fail Rd)
Source: U.S. Census Bureau 2019 ACS 5-year Estimates

		COC	AC
		LaPorte County, Indiana	Census Tract 417, LaPorte County, Indiana
B17001	**LOW-INCOME**		
	Population for whom poverty status is determined: Total	101,804	3,310
	Income in the past 12 months below poverty level	15,490	226
	Percent Low-income	**15.2%**	**6.8%**
	125 Percent of COC	**19.0%**	**AC <125% COC**
	Potential Population of EJ Concern?		**No**
B03002	**MINORITY**		
	Total population: Total	110,154	3,357
	Total population: Not Hispanic or Latino	102,885	3,240
	Total population: Not Hispanic or Latino; White alone	87,323	3,095
	Total population: Not Hispanic or Latino; Black or African American alone	12,027	10
	Total population: Not Hispanic or Latino; American Indian and Alaska Native alone	314	0
	Total population: Not Hispanic or Latino; Asian alone	627	135
	Total population: Not Hispanic or Latino; Native Hawaiian and Other Pacific Islander alone	5	0
	Total population: Not Hispanic or Latino; Some other race alone	93	0
	Total population: Not Hispanic or Latino; Two or more races	2,496	0
	Total population: Hispanic or Latino	7,269	117
	Total population: Hispanic or Latino; White alone	3,937	29
	Total population: Hispanic or Latino; Black or African American alone	142	0
	Total population: Hispanic or Latino; American Indian and Alaska Native alone	39	0
	Total population: Hispanic or Latino; Asian alone	12	0
	Total population: Hispanic or Latino; Native Hawaiian and Other Pacific Islander alone	19	0
	Total population: Hispanic or Latino; Some other race alone	2,019	88
	Total population: Hispanic or Latino; Two or more races	1,101	0
	Number Non-white/minority	**22,831**	**262**
	Percent Non-white/Minority	**20.7%**	**7.8%**
	125 Percent of COC	**25.9%**	**AC <125% COC**
	Potential Population of EJ Concern?		**No**

Environmental Justice Community Map



Community of Comparison
Affected Community
Project Area

US 20 Auxiliary Lanes, Two Way Left Turn Lanes
Des No. 1702993, US 20 from 400' east of SR 39 to 2.85 miles east of SR 39
LaPorte County, Indiana

BF&S CIVIL ENGINEERS

POVERTY STATUS IN THE PAST 12 MONTHS BY SEX BY AGE

Note: This is a modified view of the original table produced by the U.S. Census Bureau. This download or printed version may have missing information from the original table.

	LaPorte County, Indiana		Census Tract 417, LaPorte County, Indiana	
Label	Estimate	Margin of Erro	Estimate	Margin of Error
Total:	101,967	±427	3,310	±288
Income in the past 12 months below poverty level:	15,490	±1,165	226	±104
Male:	6,841	±651	116	±75
Female:	8,649	±764	110	±64
Income in the past 12 months at or above poverty level:	86,477	±1,173	3,084	±295
Male:	42,117	±690	1,306	±165
Female:	44,360	±760	1,778	±218

Table Notes

POVERTY STATUS IN THE PAST 12 MONTHS BY SEX BY AGE

Survey/Program: American Community Survey
Universe: Population for whom poverty status is determined
Year: 2019
Estimates: 5-Year
Table ID: B17001

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

Source: U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see ACS Technical Documentation). The effect of nonsampling error is not represented in these tables.

The 2015-2019 American Community Survey (ACS) data generally reflect the September 2018 Office of Management and Budget (OMB) delineations of metropolitan and micropolitan statistical areas. In certain instances, the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB delineation lists due to differences in the effective dates of the geographic entities.

Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Explanation of Symbols:

An "**" entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
An "-" entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution, or the margin of error associated with a median was larger than the median itself.
An "-" following a median estimate means the median falls in the lowest interval of an open-ended distribution.
An "+" following a median estimate means the median falls in the upper interval of an open-ended distribution.
An "***" entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.

An "*****" entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.

An "N" entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.
An "(X)" means that the estimate is not applicable or not available.

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

HISPANIC OR LATINO ORIGIN BY RACE

United States™ Census Bureau

Note: This is a modified view of the original table produced by the U.S. Census Bureau. This download or printed version may have missing information from the original table.

	LaPorte County, Indiana		Census Tract 417, LaPorte County, Indiana	
Label	**Estimate**	**Margin of Error**	**Estimate**	**Margin of Error**
⌄ Total:	110,154	*****	3,357	±292
⌄ Not Hispanic or Latino:	102,885	*****	3,240	±323
White alone	87,323	±50	3,095	±340
Black or African American alone	12,027	±448	10	±15
American Indian and Alaska Native alone	314	±107	0	±12
Asian alone	627	±148	135	±183
Native Hawaiian and Other Pacific Islander alone	5	±7	0	±12
Some other race alone	93	±80	0	±12
› Two or more races:	2,496	±519	0	±12
⌄ Hispanic or Latino:	7,269	*****	117	±134
White alone	3,937	±422	29	±34
Black or African American alone	142	±63	0	±12
American Indian and Alaska Native alone	39	±45	0	±12
Asian alone	12	±22	0	±12
Native Hawaiian and Other Pacific Islander alone	19	±24	0	±12
Some other race alone	2,019	±400	88	±131
› Two or more races:	1,101	±311	0	±12

17

Table Notes

HISPANIC OR LATINO ORIGIN BY RACE

Survey/Program: American Community Survey
Universe: Total population
Year: 2019
Estimates: 5-Year
Table ID: B03002

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

Source: U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see ACS Technical Documentation). The effect of nonsampling error is not represented in these tables.

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Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

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An "**" entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
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Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

INDIANA DEPARTMENT OF TRANSPORTATION

LaPorte District
315 E. Boyd Boulevard
LaPorte, Indiana, 46352

PHONE: (855) 464-6368

Eric Holcomb, Governor
Joe McGuinness, Commissioner

ABBREVIATED ENGINEER'S REPORT

ROAD PROJECT

US20, Auxiliary Lanes, Two-way Left Turn Lanes
From 400' east of SR39 to 2.85 miles east of SR39 (Fail Rd)
RP 48+0.90 to RP 51+0.70

PROJECT NUMBER: 1702993
CONTRACT: R-41437

Prepared by LaPorte District Technical Services Division
January, 2019

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ABBREVIATED ENGINEER'S REPORT

PROJECT NUMBER: 1702993

ROUTE IDENTIFICATION AND FEATURE CROSSED:
US20 from 400' east of SR39 to 2.85 miles east of SR39 (Fail Rd)

PROJECT LOCATION: Kankakee Township, LaPorte County, Sections 1, 2 & 12, Twp 37 N, Range 3 W, Sections 6 & 7, Twp 37 N, Range 2 W

REFERENCE POST: RP 48+0.90 to RP 51+0.70

Purpose of Report

The purpose of this report is to document the engineering assessment phase of project development, including all coordination that has been completed in preparation for this bridge project. This document outlines the proposal and is intended to serve as a guide for subsequent survey, design, environmental, right of way and other project activities leading to construction. The preferred alternative identified in this document is considered predecisional, pending the outcome of environmental studies.

Project Location

This project is located on US20, from a point 400 feet east of SR39 to a point 2.85 miles east of SR39 (Fail Road) in LaPorte County. The project is in the Indiana Department of Transportation's LaPorte District, LaPorte Sub-District. This location is in a rural planning organization region, the Northern Indiana Regional Planning Commission (NIRPC).

Project Need and Purpose

The need of this project is based on the significant increase in AADT as well as increase in crash frequency and severity. The existing cross section configuration of US20 has been in place since 1941 with safe and efficient operation until recent years. The AADT has increase from 15,220 to 26,246 in period from 2010 to 2016 which is a 72% increase in volume. The increase in traffic has brought an increase in crashes and severity. Many of the severe crashes are due to stopped left-turning vehicles in the passing lane. There are less gaps in opposing traffic for left-turning vehicles, due to the increased traffic volumes. This turning movement delay forces left-turning vehicles to stop and remain stopped for longer periods of time on the mainline through lane, making them vulnerable to high-speed traffic (63 MPH, 85th percentile from tube count). Some of the other severe crashes are related to lane departure, primarily crossing the centerline but also running off road to the right. Besides heavy truck traffic, the increase in traffic has also come from motorists making interstate-style trips on this outdated section of the Old Michigan Road.

The purpose of this project is to improve safety conditions for vehicle traffic on US20.

Existing Facility

Basic Design Elements

	US20
Functional Class	Other Principal Arterial

Index of Crash Frequency and Cost - Form F1

Location	500' E of SR39 to 500' W of Fail Rd	
US20 in LaPorte County		
GIS		
Post		
Analyst	AHOLDERREAD	
Date		

INPUT	
Road Facility Type	Rural Multilane Segment
AADT (veh/day)	26246
Segment Length (mi)	2.75
Intersection Density (int/mi)	1.82
First Year with Crash Data (yyyy)	2014
Last Year with Crash Data (yyyy)	2016
Number of Crashes (crash/period)	
Fatal and Incapacitating Injury Crashes	11
Non-Incapacitating and Possible Injury Crashes	11
Property Damage Only Crashes	18
Route or Road Type	Rural Multilane Segment
Average Crash Costs ($)	
Fatal and Incapacitating Injury Crashes	426000
Non-Incapacitating and Possible Injury Crashes	32350
Property Damage Only Crashes	5330
Crash Cost Year (yyyy)	2013
OUTPUT	
Expected Crash Frequency (crash/year)	
Fatal and Incapacitating Injury Crashes	0.614
Non-Incapacitating and Possible Injury Crashes	2.74
Property Damage Only Crashes	11.70
All Crashes	15.05
Index of Crash Frequency	**-0.13**
Index of Crash Cost	**2.14**

Index of Crash Frequency and Cost - Form F1

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