

Indiana Department of Transportation

County Elkhart

Route US 20

Des. No. 1900095

FHWA-Indiana Environmental Document

CATEGORICAL EXCLUSION / ENVIRONMENTAL ASSESSMENT FORM GENERAL PROJECT INFORMATION

Road No./County:	US Highway 20 (US 20) / Elkhart County
Designation Number:	Lead Des (1900095), Pumpkinvine Trail Structure (Des. 2000038), Tree Clearing (Des. TBD)
Project Description/Termini:	US 20 Improvement Project – County Road 35 (CR 35) to State Road 13 (SR 13)/approximately 565 feet east of the intersection of US 20 and CR 35 to approximately 315 feet west of the intersection of US 20 and SR 13.

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

<input type="checkbox"/>	Categorical Exclusion, Level 2 – The proposed action meets the criteria for Categorical Exclusion Manual Level 2 - table 1, CE Level Thresholds. Required Signatories: ESM (Environmental Scoping Manager)
<input type="checkbox"/>	Categorical Exclusion, Level 3 – The proposed action meets the criteria for Categorical Exclusion Manual Level 3 - table 1, CE Level Thresholds. Required Signatories: ESM, ES (Environmental Services Division)
<input type="checkbox"/>	Categorical Exclusion, Level 4 – The proposed action meets the criteria for Categorical Exclusion Manual Level 4 - table 1, CE Level Thresholds. Required Signatories: ESM, ES, FHWA
<input type="checkbox"/>	Environmental Assessment (EA) – EAs require a separate FONSI. Additional research and documentation is necessary to determine the effects on the environment. Required Signatories: ES, FHWA
<input checked="" type="checkbox"/>	Additional Information Addendum (AI) – This is an additional information document to the CE-4 document for Des. No 1600517 approved on October 11, 2019. Required Signatories: ESM, ES, FHWA

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

Approval _____
ESM Signature Date ES Signature Date

_____ Date

Release for Public Involvement

N/A _____ BDM for REB 3/24/2021
ESM Initials Date ES Initials Date

Certification of Public Involvement _____
Office of Public Involvement Date

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

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

Name and Organization of CE/EA
 Preparer: Richard Connolly, HNTB Inc.

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Introduction

The Indiana Department of Transportation (INDOT) and the Federal Highway Administration (FHWA) propose the addition of a two-way left turn lane and additional travel lanes along United States Highway 20 (US 20) between County Road 35 (CR 35) and State Road 13 (SR 13) (Des. No. 1900095; referred to as Section 2) in Elkhart County, Indiana.

The INDOT Fort Wayne District initiated the National Environmental Policy Act (NEPA) environmental review process for the portion of US 20 corridor from SR 15 to CR 35 (Des. No. 1600517; referred to as Section 1). This environmental process concluded with the approval of a Categorical Exclusion Level 4 (CE-4) by FHWA on October 10, 2019 (Appendix J, page 1).

During the environmental studies associated with US 20 Section 1 (SR 15 to CR 35), INDOT and project stakeholders identified additional concerns associated with the portion of US 20 from CR 35 to SR 13. In recognition of these additional concerns, INDOT began additional preliminary engineering studies to independently evaluate these concerns. The additional studies completed by INDOT resulted in the identification of additional transportation needs, which are detailed below in the purpose and need section of this document. Although these needs were valid, no foreseeable funding was available to complete additional studies or implement any potential recommendations. Therefore, INDOT made the decision to continue forward with the implementation of US 20 Section 1 (SR 15 to CR 35) since it would be a useful and reasonable expenditure even if no other transportation improvements were made.

After the CE-4 for US 20 Section 1 was approved, additional funding was provided to the INDOT Fort Wayne District via proceeds from the amendment(s) to the Indiana Toll Road Lease. Based on the needs of the corridor, the INDOT Fort Wayne District decided to initiate the environmental review for US 20 Section 2 (CR 35 to SR 13) as a continuation of the US 20 Section 1 project.

This Additional Information (AI) document is being prepared to analyze and document the anticipated changes in environmental effects associated with implementation of US 20 Section 2 (CR 35 to SR 13). The revised impacts to resources resulting from the addition of US 20 Section 2 to the overall US 20 improvements project are described below in detail. The preceding information provides an overview of modifications to the approved environmental document. Unless specifically addressed in this AI document, all project impacts and conditions as described in the approved environmental document remain the same.

Early coordination letters describing the US 20 Section 2 (CR 35 to SR 13) improvements were sent to resource agencies, local officials, and other stakeholders on November 20, 2019 (Appendix C, pages 1 to 3). Responses received from these agencies have been included in the appropriate sections.

Purpose and Need:

As part of the analysis completed for this AI document, the purpose and need of the US 20 project was reexamined to confirm that it comprehensively considered the transportation needs between SR 15 and SR 13 (Sections 1 and 2). Refinements to the purpose and need included location-specific factors associated with Section 2 (CR 35 to SR 13), as well as adding drainage to the geometric deficiencies need. Additionally, public and stakeholder involvement during the environmental review process also identified specific need elements for consideration under local community needs and interests.

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The refined purpose of the US 20 project between SR 15 and SR 13 (Sections 1 and 2) is to improve safety, reduce traffic congestion, correct geometric and drainage deficiencies, and address local community needs and interests.

The refined purpose and need statement is not substantially different than that considered in the US 20 Section 1 Categorical Exclusion Level 4 (CE-4) document, which was approved by the Federal Highway Administration (FHWA) on October 10, 2019 (Appendix J, pages 4 to 5). The only change was the addition of drainage deficiencies, which were not identified in Section 1. Therefore, the alternatives developed and analyzed for the Section 1 project (SR 15 to CR 35) remain unchanged (Appendix J, pages 5 to 8). As a result, the decisions made and documented in the approved CE-4 remain unchanged and are still valid (Appendix J, pages 6 to 7).

Following is a detailed discussion of the transportation needs specific to Section 2 (CR 35 to SR 13).

Need: Improve Safety

INDOT generated crash data for this corridor which has been used in this evaluation. This data is documented in the project's Engineer's Report dated March 24, 2020 (Appendix I, page 2) and Draft Traffic & Safety Analysis Revision (Appendix I, page 26). These reports examined US 20 from the intersection of US 20 and CR 35 to the intersection of US 20 and SR 13 over a three-year period from January 1, 2016 to December 31, 2018. During this period, there were 96 crashes within this study area, half of which were rear end crashes. In general, rear end collisions are indicative of elevated levels of traffic congestion, lack of turn lanes, and/or closely spaced driveways. RoadHAT analysis shows a higher than expected crash frequency from CR 35 to CR 16 (Wayne Street) and from CR 22 (Orpha) to SR 13 (Appendix I, page 29).

Need: Reduce Traffic Congestion

The primary measure of traffic congestion is Level of Service (LOS), which the Highway Capacity Manual (2000) defines as a quality measure describing operational conditions within a traffic stream. LOS A represents near ideal traffic flow, while LOS F represents a breakdown of the traffic flow. LOS relates to operations, not the physical condition of the roadway. Currently, the arterial roadway portion of US 20 between from CR 35 to SR 13 operates at LOS B in the worst-case condition (Appendix I, page 16); however, over time, traffic operations are anticipated to deteriorate due to the projected travel demand. More specifically, the Michiana Area Council of Governments (MACOG), which acts as the Municipal Planning Organization (MPO) for Elkhart County, *Michiana on the Move 2045 Transportation Plan* (LRTP) (http://www.macog.com/docs/transportation/tp/2045_TransportationPlan_ApG.pdf, page 185 to 186) indicates that US 20 immediately west of the Wayne Street (CR 16) intersection will operate at LOS F in 2045. The MACOG LRTP also indicates that US 20 immediately west of SR 13 will operate at LOS D in 2045. Trucks account for approximately 27% of all traffic on US 20, further reducing capacity.

Need: Geometric and Drainage Deficiencies

Two existing geometric deficiencies, where the roadway does not meet critical safety design requirements, have been identified within the project area.

The horizontal alignment of US 20 has one existing curve located near Wayne Street (CR 16) that lacks adequate banking and visibility. This inadequate banking has necessitated posting an advisory speed limit of 40 MPH, while the rest of the corridor is signed as 45 MPH. The existing sight distance at this curve is 305 feet, which does not meet safe design requirements and could lead to rear end crashes.

This segment of US 20 also has multiple areas where the vertical alignment does not meet the minimum grade requirement of 0.5%, increasing the likelihood of stormwater ponding in the travel lanes during rain events.

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Need: Local Community Needs and Interests

Pedestrians traveling to and from Northridge High School are currently crossing US 20 west of Spring Valley Drive where a designated crossing does not exist. Safety concerns have been expressed about students crossing in this location.

Horse drawn buggies are the primary mode of transportation for the local Amish community. This section of US 20 is regularly utilized by horse drawn buggies and bicyclists. These buggies primarily use the existing shoulders. Currently, US 20 through the project area has shoulders with varying widths, some of which do not provide adequate separation between motorized vehicles and drawn buggies and increase the potential of crashes.

The area between Wayne Street (CR 16) and Orpha Drive (CR 22) south of US 20 is primarily industrial and the existing US 20 traffic lanes are near the commercial truck loading docks for the industrial buildings. The near continuous driveway for several of these facilities creates the potential for conflict between the commercial vehicles and live traffic on US 20.

Project Purpose

The refined purpose of the US 20 project between SR 15 and SR 13 (Sections 1 and 2) is to improve safety, reduce traffic congestion, correct geometric and drainage deficiencies, and address local community needs and interests. Alternatives considered as part of the US 20 improvement project between CR 35 and SR 13 (Section 2) must:

- Improve safety
 - Reduce the number of rear end crashes on the facility.
- Reduce traffic congestion
 - Reduce traffic congestion and improve arterial level of service to LOS C or better in the design year of 2044.
- Correct geometric and drainage deficiencies
 - Correct the undesirable horizontal geometry to increase the sight distance at the curve near Wayne Street (CR16) to meet INDOT design criteria for a 50 mph design speed
 - Correct the undesirable vertical geometry to meet or exceed current INDOT standards for minimum grades to improve roadway drainage through reduced likelihood of stormwater ponding in the travel lanes.
- Address local community needs and interests
 - Provide adequate separation between pedestrians, vehicles, and provide appropriate pedestrian crossings based on known origins and destinations.
 - Provide adequate separation between buggies and vehicles.
 - Improve ingress/egress routes for trucks accessing industrial businesses adjacent to US 20.

Resource impacts discussed in the remainder of this AI will focus on the additional impacts realized during the development of Section 2 (CR 35 to SR 13). Impacts associated with US 20 Section 1 (SR 15 to CR 35) are documented in the approved CE-4 document found in Appendix J (Appendix J, pages 1 to 53). The Impact Summary Table (Appendix I, page 1) summarizes the overall total increase in impacts to specific resources.

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Public Involvement:

Notice of Survey letters were mailed to the property owners potentially affected by the US 20 Section 2 project on September 26, 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 Survey letter is included in Appendix G, pages 1 to 2.

INDOT has developed a project-specific Public Involvement and Stakeholder Engagement Plan for the US 20 Section 2 project (Appendix G, page 3). This plan details the public outreach that will be conducted during the project development process. This outreach includes a project website, kitchen table meetings, stakeholder meetings, a public hearing, and a direct line of communication with the Amish community via the Amish Safety Committee.

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 comment and/or request a public hearing. Due to public interest in this project, a public hearing will be held to provide information to the public and gather public input. Therefore, a legal notice will appear in a local publication contingent upon the release of this document for public involvement.

In accordance with the requirements of Section 4(f), the public will also be afforded an opportunity to review and comment on the effects of the proposed project to the Pumpkinvine Nature Trail via a legal advertisement that will be placed in a local publication. This legal notice will occur separately from the legal notice associated with the publication of this AI and will provide a 30-day review period.

This AI document will be revised after the public involvement requirements outlined above are fulfilled.

Project Description (Preferred Alternative):

County: Elkhart

Municipality: Middlebury

Limits of Proposed Work: Beginning approximately 565 feet east of the intersection of US 20 and CR 35 and proceeding east on US 20 to approximately 315 feet west of the intersection of US 20 and SR 13.

Total Work Length: 1.95 Mile(s)

Total Work Area: 35.2 Acre(s)

Is an Interchange Modification Study / Interchange Justification Study (IMS/IJS) required?
If yes, when did the FHWA grant a conditional approval for this project?

Yes¹	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>
Date: <input type="text"/>	

Location

INDOT and FHWA propose to proceed with additional improvements as part of the US 20 Improvement Project. These additional improvements, which are referred to as US 20 Section 2 (Des. No. 1900095), are located west of the town of Middlebury in Elkhart County, Indiana. More specifically, the US 20 Section 2 improvements will extend from approximately 565 feet east of the intersection of US 20 and CR 35 to approximately 315 feet west of the intersection of US 20 and SR 13. The project is located within Middlebury Township; Middlebury US Geological Survey (USGS) Quadrangle, Sections 9, 15, 16, and 22 of Township 37 North, Range 7 East (Appendix B, page 1 and 2).

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Existing Conditions

US 20 is classified as a 2-lane rural minor arterial and has a posted speed of 45 miles per hour (MPH) throughout the project area. Most of the existing typical section of US 20 consists of two 12-foot travel lanes (one in each direction), a variable width shoulder ranging from approximately 4-feet to 10-feet wide, and a ditch of variable width. The existing cross-section widens at the signalized intersections where left turn lanes are provided. There are no existing sidewalks along US 20. The apparent average existing right-of-way width throughout the corridor is 100 feet.

There are two signalized intersections along this segment of US 20, one at the intersection of US 20 and Wayne Street (CR 16), and one at the intersection of US 20 and Orpha Drive (CR 22).

The US 20 and Wayne Street (CR 16) intersection consists of one through lane in all directions with a single left turn lane on the US 20 EB and WB approaches. The US 20 and Orpha Drive (CR 22) intersection consists of one through lane in each direction, and a single left turn lane for the east and west approaches. All other intersections along the corridor are stop controlled on the minor approach.

The horizontal alignment US 20 has one existing curve located near Wayne Street (CR 16) that lacks adequate banking and stopping sight distance. This inadequate banking has necessitated posting an advisory speed limit of 40 MPH, while the rest of the corridor is signed as 45 MPH. This portion of US 20 also has multiple areas where the vertical alignment does not meet the minimum grade requirement of 0.5%.

US 20 from CR 35 to SR 13 had a high rate of rear end collisions, approximately 50%, during the time period between January 2016 to December 2018. The rear end collisions are often related to multiple factors, including congested conditions, lack of turn lanes, and/or closely spaced driveways along the corridor (Appendix I, pages 28 to 30).

Traffic through the corridor is projected to increase over the next 20 years, which will result in worsened traffic congestion levels. The traffic congestion and safety issues are exacerbated by the frequent use of the roadway and roadway shoulders by non-motorized vehicles, including Amish buggies.

Land use within the project area can generally be divided between the east and west halves. The western half of the project area consists of residential subdivisions, schools, religious facilities, a hotel, restaurant, and retail stores. The eastern half of the project area consists of individual residential, commercial, and industrial buildings. Two multi-use paths, the Pumpkinvine Nature Trail and the Ridge Run Trail, are located between Wayne Street (CR 16) and Orpha Drive (CR 22). Local utilities, including electric transmission lines, telephone, cable, and gas transmission lines, are located on the north and south sides of the roadway within the apparent existing right-of-way.

Preferred Alternative: Alternative 2 – 4-lane with Two-way Left Turn Lane (TWLTL) (Urban)

The preferred alternative includes reconstruction of existing 2-lane US 20 to a 5-lane cross-section including a 14-foot TWLTL, two 12-foot travel lanes in each direction, and two 10-foot paved shoulders. The addition of a TWLTL will remove left turning vehicles from live traffic, which is anticipated to provide an approximate 39% reduction in rear end crashes between major intersections (Appendix I, page 29). The additional through lane, in conjunction with the TWLTL, contribute to the preferred alternative achieving a LOS of B or better in the design year (Appendix I, page 16). Sidewalks will be added on the north side of US 20 from Northridge High School to Wayne Street (CR 16) and to the south side of US 20 between Westlake Drive and Spring Valley Road. The proposed sidewalks will provide separation between vehicular and pedestrian traffic. A High-Intensity Activated Crosswalk Beacon (HAWK Beacon) will be installed in the vicinity of the Northridge Middle School and Northridge High School to provide a pedestrian crossing and increase pedestrian safety. The addition of a through lane in each direction will increase the capacity of the roadway, while also facilitating ingress/egress movements for trucks accessing the industrial businesses between Wayne Street (CR 16) and Orpha Drive (CR 22). The 10-foot paved shoulders are wide

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enough to safely accommodate horse drawn buggy traffic and will be specifically designed to support long term buggy traffic without forming ruts. The preferred alternative will eliminate the horizontal alignment deficiencies that exist near the intersection of US 20 and Wayne Street (CR 16) by smoothing out the curve in the road through this area. The preferred alternative also meets the minimum vertical grade requirement of 0.5% through the project area.

The preferred alternative will be a “closed system” with all roadway drainage being conveyed via curb and gutters, as well as storm sewers that will discharge into proposed detention ponds. This “closed system” will minimize the overall footprint of the project and will reduce impacts to the natural and human environment. From the western end of the project to Wayne Street (CR 16), the storm sewer system will discharge to the proposed detention pond located in the northwest quadrant of the US 20/Wayne Street (CR 16) intersection (Appendix B, page 97 and 98). From Wayne Street to a high point approximately 0.5 mile east of US 20 and Wayne street (CR 16), near the Goshen Physicians Family Medicine office, the storm sewer system will discharge to the proposed detention pond located in the southeast quadrant of US 20/Wayne Street (CR 16) (Appendix B, page 98). From this high point to another high point near the Pumpkinvine Nature Trail, the storm sewer system will discharge to the proposed detention basin located near the property of Bill’s Collision Service; however, the stormwater runoff will ultimately be discharged to the existing ditch along the Pumpkinvine Nature Trail (Appendix B, page 101). From the high point near the Pumpkinvine Nature Trail to eastern end of the project, the storm sewer system will be discharged to the ditch along the Pumpkinvine Nature Trail (Appendix B, page 101).

There are three culverts across US 20 and the adjacent county roads that will be constructed, replaced, or rehabilitated (Appendix B, pages 95 to 110).

Local road intersections with US 20 will be improved from the existing condition as necessary. The preferred alternative does not require design exceptions.

The preferred alternative will include the relocation of the connection between the Ridge Run Trail and the Pumpkinvine Nature Trail. This relocation will be constructed prior to the closure and demolition of the current Ridge Run Trail alignment to allow for continued use of the trail during construction.

Description of improvements to local and county roads at each intersection are described below:

US 20 and West Lake Drive – Roadway lanes will be widened from 10 feet to 12 feet in both directions along West Lake Drive. Useable shoulder width will remain the same at 1 foot in both directions. Approximately 125 feet of roadway and shoulder widening will occur along West Lake Drive south of US 20.

US 20 and Spring Valley Drive – Roadway lanes will remain the same width as existing at 12 feet in both directions along Spring Valley Drive. Useable shoulder width will also remain the same at 6 feet in both directions. Approximately 180 linear feet of roadway and shoulder reconstruction will occur along Spring Valley Drive south of US 20.

US 20 and Heritage Drive – Roadway lanes will remain the same width as existing at 12 feet in both directions along Heritage Drive. Useable shoulder width will be widened from 5 feet to 6 feet in both directions. Approximately 175 feet of roadway and shoulder widening will occur along Heritage Drive south of US 20. The north leg of the Heritage Drive intersection with US 20 will be closed. Heritage Drive will connect traffic coming from the school to the parking lot south of the athletic fields.

US 20 and Wayne Street (CR 16) – Roadway through lanes will remain the same as existing at 12 feet while the right turn lanes will be widened from approximately 12 feet to 15 feet. Useable shoulder width will remain the same at approximately 6 feet in both directions. Approximately 260 feet and 205 feet of roadway and shoulder widening will occur along Wayne Street (CR 16) north and south of US 20, respectively.

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US 20 and CR 37 – CR 37 will no longer have access to US 20 and a cul-de-sac will be constructed.

US 20 and Orpha Drive (CR 22) – Roadway lanes will not be widened along Orpha Drive (CR 22). However, useable shoulder width will be widened from approximately 5 feet to 6 feet in both directions. Approximately 240 linear feet and 220 linear feet of shoulder widening will occur along Orpha Drive (CR 22) north and south of US 20, respectively.

Logical Termini and Fulfillment of Purpose and Need

The US 20 Improvement Project (Sections 1 and 2) has independent utility and will provide a fully functional road segment without any additional transportation improvements beyond the project limits. The western terminus of SR 15 remains unchanged. In recognition of the needs detailed above, the eastern logical terminus of the project was extended east from CR 35 to approximately 300 feet west of SR 13. Logical termini for improvements to the local road system are approximately 200 feet north and south of US 20 (Appendix B, page 1). These termini were established to encompass an area of elevated accidents, geometric and drainage deficiencies, and traffic congestion.

The proposed project fulfills the purpose and need of the project by improving safety, reducing traffic congestion, correcting geometric and drainage deficiencies, and addressing local community needs and interests.

Maintenance of Traffic (MOT)

Two lanes of traffic, one in each direction, will be maintained during construction. The MOT plan will be implemented in three phases. In Phase 1, MOT will be accomplished by shifting traffic to the current eastbound shoulders and constructing temporary pavement on the northern portion of US 20. In Phase 2, after completion of temporary pavement on the northern portion of the project, traffic will be switched over to the temporary pavement while the southern half of the project is constructed. In Phase 3, traffic will be shifted to the newly constructed road on the southern portion of the project area while the construction of the northern portion of the roadway is finalized. During construction, a suitable path for use by bicyclists and pedestrians that wish to use the Pumpkinvine Nature Trail will be provided. Additional detail can be found in the MOT section of this document. MOT plan sheets are included in (Appendix B, pages 75 to 95).

Cost Estimate

The total estimated construction, right-of-way, and engineering costs for the US 20 Section 2 project are \$22,817,402, \$2,000,000, and \$4,000,000, respectively. Construction is anticipated to start in 2024. MACOG has included the project in the Fiscal Year (FY) 2020-2024 Transportation Improvement Program (TIP). This project is also included in the INDOT FY 2020-2024 Statewide Transportation Improvement Program (STIP) (Appendix H, pages 1 to 2).

Other Alternatives Considered:

A range of alternatives were evaluated to meet the transportation needs identified for the portion of US 20 between CR 35 to SR 13 (US 20 Section 2). Each of these alternatives would tie into the eastern terminus of the US 20 Section 1 project and extend to approximately 315 west of SR 15. Ultimately these alternatives were not selected.

Alternative 1 – 2-lane with TWLTL

Alternative 1 was considered to minimize impacts to the human and natural environments. This alternative would widen US 20 to allow for the addition of a center TWLTL. This alternative would improve the safety of the roadway by removing left turning vehicles from the travel lane and address the horizontal and vertical geometric issues. However, this alternative would not maintain lane continuity from US 20 Section 1, would

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Functional Classification: West Lake Drive - Local
 Current ADT: 303 VPD (2024) Design Year ADT: 358 VPD (2044)
 Design Hour Volume (DHV): 33 Truck Percentage (%) 0
 Designed Speed (mph): 30 Legal Speed (mph): 25

Existing **Proposed**

Number of Lanes:	2		2	
Type of Lanes:	10 ft through lanes		12 ft through lanes	
Pavement Width:	20	ft.	24	ft.
Shoulder Width:	1	ft.	1	ft.
Median Width:	N/A	ft.	N/A	ft.
Sidewalk Width:	N/A	ft.	N/A	ft.

Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

Functional Classification: Spring Valley Drive - Local
 Current ADT: 1,585 VPD (2024) Design Year ADT: 1,868 VPD (2044)
 Design Hour Volume (DHV): 185 Truck Percentage (%) 0
 Designed Speed (mph): 30 Legal Speed (mph): 30

Existing **Proposed**

Number of Lanes:	2		2	
Type of Lanes:	12 ft through lanes		12 ft through lanes	
Pavement Width:	36	ft.	36	ft.
Shoulder Width:	6	ft.	6	ft.
Median Width:	N/A	ft.	N/A	ft.
Sidewalk Width:	5	ft.	5	ft.

Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

Functional Classification: Heritage Drive - Local
 Current ADT: 1,519 N 2,955 S VPD (2024) Design Year ADT: 1,785 N 3,484 S VPD (2044)
 Design Hour Volume (DHV): 339 N 332 S Truck Percentage (%) 0 N 1 S
 Designed Speed (mph): 30 Legal Speed (mph): 30

Existing **Proposed***

Number of Lanes:	2		2	
Type of Lanes:	12 ft through lanes		12 ft through lanes 12 ft right in right out.	
Pavement Width:	34	ft.	36	ft.
Shoulder Width:	5	ft.	6	ft.
Median Width:	N/A	ft.	N/A	ft.
Sidewalk Width:	N/A	ft.	N/A	ft.

Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

*Heritage Drive will be closed North of US 20.

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Functional Classification: Wayne Street (CR 16) - Local
 Current ADT: 7,745 N 119S VPD (2024) Design Year ADT: 9,918 N 137 S VPD (2044)
 Design Hour Volume (DHV): 888N, 4S Truck Percentage (%) 2N, 0S
 Designed Speed (mph): 30 Legal Speed (mph): 30

Existing

Proposed

Number of Lanes:	3		3	
Type of Lanes:	12 ft through lane 12 ft right turn		12 ft right turn, 12 and 15ft through lanes	
Pavement Width:	48	ft.	51	ft.
Shoulder Width:	6	ft.	6	ft.
Median Width:	N/A	ft.	N/A	ft.
Sidewalk Width:	N/A	ft.	N/A	ft.

Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

Functional Classification: CR 37 - Local
 Current ADT: 878 VPD (2024) Design Year ADT: 1,050 VPD (2044)
 Design Hour Volume (DHV): 121 Truck Percentage (%) 8
 Designed Speed (mph): 30 Legal Speed (mph): 30

Existing

Proposed*

Number of Lanes:	2		N/A	
Type of Lanes:	12 ft right turn 12 ft left turn		N/A	
Pavement Width:	34	ft.	N/A	ft.
Shoulder Width:	5	ft.	N/A	ft.
Median Width:	N/A	ft.	N/A	ft.
Sidewalk Width:	N/A	ft.	N/A	ft.

Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

* CR 37 will not have access to US 20 in the build condition.

Functional Classification: Orpha Drive (CR 22) - Local
 Current ADT: 3,896 N, 4,227 S VPD (2024) Design Year ADT: 4,416 N 4,798S VPD (2044)
 Design Hour Volume (DHV): 441 N, 539 S Truck Percentage (%) 0 N, 5S
 Designed Speed (mph): 30 Legal Speed (mph): 30

Existing

Proposed

Number of Lanes:	2		2	
Type of Lanes:	12 ft through lanes		12 ft through lanes	
Pavement Width:	34	ft.	36	ft.
Shoulder Width:	5	ft.	6	ft.
Median Width:	N/A	ft.	N/A	ft.
Sidewalk Width:	N/A	ft.	N/A	ft.

Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

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Design Criteria for Bridges:

Structure/NBI Number(s): Small Structure No. 205 Sufficiency Rating: N/A
 (Rating, Source of Information)

	Existing		Proposed	
Bridge Type:	N/A		2 ft. Corrugated Metal Pipe	
Number of Spans:	N/A		1	
Weight Restrictions:	N/A	ton	N/A	ton
Height Restrictions:	N/A	ft.	N/A	ft.
Curb to Curb Width:	N/A	ft.	N/A	ft.
Outside to Outside Width:	N/A	ft.	99	ft.
Shoulder Width:	2	ft.	6	ft.
Length of Channel Work:			0	ft.

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

Remarks: The proposed small structure, identified as Structure Number 205 on the plan sheet, conveys roadside drainage beneath Wayne Street (CR 22) north of US 20. Structure Number 205 carries roadside drainage west from a roadside ditch east of Wayne Street (CR 22) to another roadside ditch west of Wayne Street (CR 22). An existing structure is not currently present at this location. The proposed small structure will be located approximately 90 feet north of the US 20 and Wayne Street (CR 22) intersection. The proposed structure will be a 2-foot Reinforced Concrete Pipe (RCP). This small structure will carry roadside drainage; thus, no impacts to a jurisdictional waterway will occur due to the placement of this new structure (Appendix B, page 98).

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

Structure/NBI Number(s): CV020-020-104.91 Structure No. 101 Sufficiency Rating: 8, Culvert Inspection Report 10/28/2020
 (Rating, Source of Information)

	Existing		Proposed	
Bridge Type:	66' X 14' X 10" Reinforced Concrete Box Culvert.		112' X 14' X 10' Reinforced Concrete Box Culvert	
Number of Spans:	1		1	
Weight Restrictions:	N/A	ton	N/A	ton
Height Restrictions:	N/A	ft.	N/A	ft.
Curb to Curb Width:	46	ft.	82	ft.
Outside to Outside Width:	64	ft.	112	ft.
Shoulder Width:	8	ft.	10	ft.
Length of Channel Work:			N/A	ft.

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

Remarks: The existing small structure, identified as Structure Number 101 on the plan sheet, carries US 20 over the Pumpkinvine Nature Trail. The existing small structure is located approximately 500 feet west of the US 20 and Orpha Drive (CR 22) intersection. The existing Reinforced Concrete Box Culvert will be lengthened 21 feet to the north and 25 feet to the south. This

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structure carries the Pumpkinvine Nature Trail; thus, no impacts to a jurisdictional waterway will occur due to the structure replacement (Appendix B, page 101).

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

Structure/NBI Number(s): CV 020-020-104.92 Structure No. 202 Sufficiency Rating: 7, Culvert Inspection Report 7/31/2018
(Rating, Source of Information)

	Existing	Proposed
Bridge Type:	60 in CMP	72 in RCP
Number of Spans:	1	1
Weight Restrictions:	N/A	N/A
Height Restrictions:	N/A	N/A
Curb to Curb Width:	N/A	N/A
Outside to Outside Width:	166	228
Shoulder Width:	8	10
Length of Channel Work:		

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

Remarks:

The proposed small structure, identified as Structure Number 202 on the plan sheet, conveys roadside drainage beneath US 20 just east of the Pumpkinvine Nature Trail. Structure Number 202 carries roadside drainage south from a roadside ditch north of US 20 to a roadside ditch south of US 20. The existing structure is approximately 40 feet east of the Pumpkinvine Nature Trail. The proposed structure will be approximately 10 feet east of the existing structure. The proposed structure will a 72-inch Corrugated Metal Pipe (CMP). This small structure will carry roadside drainage; thus, no impacts to a jurisdictional waterway will occur due to the placement of this new structure (Appendix B, page 101).

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

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

Maintenance of Traffic (MOT) During Construction:

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

Two lanes of traffic, one in each direction, will be maintained during construction. The MOT plan will be implemented in three phases. In Phase 1, the MOT will be accomplished by shifting traffic to the current eastbound shoulders and constructing temporary pavement on the northern portion of US 20. In Phase 2, after completion of temporary pavement on the northern portion of the project, traffic will be switched over to the temporary pavement while the southern half of the project is constructed. In Phase 3, traffic will be

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shifted to the newly constructed road on the southern portion of the project area while the construction of the northern portion of the roadway is finalized. To maintain access for the residential subdivision at the eastern end of the project, Westlake Drive and Heritage Drive will not be closed concurrently with Spring Valley Drive. Temporary lane closures may be required near the SR 13 intersection to tie back into the existing four lane section. The project’s MOT plan is included in Appendix B, pages 74 to 95.

During construction, buggies and other non-motorized traffic will use a combination of the shoulder and travel lanes as necessary. Although intersecting county roads may be closed for a brief period, detours will be clearly marked and should not substantially impair travel routes. During construction, a suitable path for use by the pedestrians along the Pumpkinvine Nature Trail will be provided. Further details associated with the detour route including, but not limited to, signage and anticipated closure dates will be coordinated with the Officials with Jurisdiction (OWJs) and residential landowner during the final engineering design and land acquisition phases of the project. In the event the proposed detour route becomes infeasible during final design, the coordination with the OWJs will be re-initiated and a suitable alternative detour route will be developed for OWJ concurrence.

Early coordination letters were sent to the Elkhart County Surveyor, Elkhart County Sheriff, Middlebury Town Manager, Elkhart County Commissioners, Elkhart County Highway Department, Elkhart County Emergency Management, Northridge High School, Middlebury Town Council Members, Middlebury Parks and Recreation, Das Dutchman Essenhaus, and Middlebury Community Schools on November 20, 2019 (Appendix C, pages 1 to 3). In their early coordination response dated December 16, 2019 Middlebury Community Schools stated that the entrance/exit to and from the transportation maintenance garage is near the intersection of US 20 and Wayne Street (CR 16) and they will require access to that area during construction (Appendix C, pages 9 to 10). In their early coordination response dated December 16, 2019, the Middlebury Town Council stated that it will be important to provide a safe detour route for the trail users during the construction of the tunnel extension (Appendix C, pages 14 to 15). These have been added as firm project commitments in the Environmental Commitments section of this CE document.

The MOT will pose a temporary inconvenience to traveling motorists (including school buses and emergency services); however, no significant delays are anticipated, and all inconveniences will cease upon project completion. Delays would occur during construction but would cease with project completion. Construction is anticipated to span two construction seasons.

Estimated Project Cost and Schedule:

Engineering: \$ 4,000,000 (2020) Right-of-Way: \$ 2,000,000 (2022) Construction: \$ 22,817,402 (2024)

Anticipated Start Date of Construction: Spring 2024

Date project incorporated into STIP March 26, 2020 (FY 20-24) (Appendix H, page 3)

Is the project in an MPO Area?

Yes	No
X	

If yes,

Name of MPO MACOG

Location of Project in TIP MACOG TIP FY 20-24 per Resolutions 33-19 and 02-20 (Appendix H, page 2)

Date of incorporation by reference into the STIP March 26, 2020 (FY 20-24)

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Right-of-Way Impacts:

The US 20 Section 2 project will require approximately 12.3 acres of permanent right-of-way. The project also requires 7.3 acres of temporary right-of-way. No right-of-way re-acquisition will be required for this project.

The current land uses of the new, permanent right-of-way includes approximately 2.5 acres of residential property, 3.8 acres of commercial property, 0.9 acre of agricultural property, 0.9 acre of forested property, 0.1 acre of wetlands, 1.3 acres of industrial property, 2.2 acres of educational and religious property, and 0.6 acre of open water. The current land uses of the temporary right-of-way includes approximately 1.6 acres of residential property, 2.1 acres of commercial property, 1.8 acre of agricultural property, 0.5 acre of forest, 0.5 acre of industrial property, and 0.8 acre of educational and religious property.

The proposed right-of-way acquisition for US 20 Section 1 and Section 2 are summarized in the Impact Summary Table in Appendix I, page 1. The maximum existing right-of-way width is approximately 105 feet north and 110 feet south of the US 20 centerline. The average width of the existing right-of-way is approximately 55 feet north and 45 feet south of the current US 20 centerline.

The maximum proposed right-of-way width is approximately 124 feet north and 135 feet south of the US 20 centerline. The average width of the proposed right-of-way is approximately 68 feet north and 62 feet south of the proposed US 20 centerline.

The use of new, permanent right-of-way will be converted from residential, commercial, agricultural, forest, wetlands, industrial and religious facility property into new pavement, maintained roadside, and storm water detention for the project. The use of temporary right-of-way will continue to be residential, commercial, agricultural, wetland, industrial and religious facility property (Appendix B, pages 3 to 8). Tree clearing is anticipated to be completed within the entire proposed permanent and temporary right-of-way.

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.

Streams, Rivers, Watercourses & Jurisdictional Ditches:

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

Based on a desktop review, a site visit on October 14, 2019 by HNTB, the aerial map of the project area (Appendix B, pages 3 to 8), the USGS topographic map (Appendix B, page 2), and the water resource map in the Red Flag Investigation (RFI) report (Appendix E, page 10) there are 19 streams, rivers, watercourse or jurisdictional ditches within the 0.5 mile search radius. No streams, rivers, watercourses, or jurisdictional ditches are present within the project area; therefore, the US 20 Section 2 project will result in no additional impacts.

A Waters of the U.S. Determination / Wetland Delineation Report was approved by INDOT Ecology and Waterway Permitting Office on March 26, 2020 (Appendix F, pages 1 to 10). It was determined that no jurisdictional streams or ditches are located within the proposed right-of-way. The USACE makes all final determinations regarding jurisdiction.

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Early coordination letters were sent to the U.S. Fish and Wildlife Service (USFWS), the Indiana Department of Natural Resources Division of Fish and Wildlife (IDNR-DFW), and the U.S. Army Corps of Engineers (USACE) on November 20, 2019 (Appendix C, pages 1 to 3). USACE did not respond to the early coordination letter. In their early coordination response letter dated November 21, 2019, USFWS stated that because the proposed project would have minor impacts on natural resources, and no Federally endangered species are known to be present, the USFWS would not be providing a comment letter (Appendix C, page 7). In their early coordination response letter date December 19, 2019, IDNR-DFW provided standard recommendations but did not provide any recommendations specific to streams, rivers, watercourses or jurisdictional ditches (Appendix C, pages 19 to 20).

An automated letter was generated from IDEM’s website on November 9, 2020. The letter contained recommendations pertaining to coordination with USACE and IDEM for permitting of stream impacts.

Other Surface Waters:

Other Surface Waters	<u>Presence</u>	<u>Impacts</u>	
		Yes	No
Reservoirs			
Lakes			
Farm Ponds			
Detention Basins			
Storm Water Management Facilities			
Other: <u>Pond</u>	X	X	

Based on a desktop review, a site visit October 14, 2020 by HNTB, the USGS topographic map (Appendix B, page 2), the aerial map of the project area (Appendix B, pages 3 to 8), and the water resources map in the RFI report (Appendix E, page 10), there are 24 lakes located within the 0.5 mile search radius. One pond is adjacent to the US 20 Section 2 project area.

A Waters of the U.S. Determination / Wetland Delineation Report was approved by INDOT Ecology and Waterway Permitting Office on March 26, 2020 (Appendix F, pages 1 to 10). It was determined that one pond is located within the proposed right-of-way. Pond A is classified as a palustrine, unconsolidated bottom, intermittently exposed, excavated wetland (PUBGx) according to the classification defined by Cowardin et al. (1979). Pond A is approximately 0.57 acre and the entire pond will be permanently impacted by the project. The USACE makes all final determinations regarding jurisdiction. Mitigation for pond impacts is anticipated and will be determined during permitting.

Impacts to other surface waters for US 20 Section 1 and Section 2 are summarized in the Impact Summary Table in Appendix I, page 1. Early coordination letters were sent to the USFWS, IDNR-DFW, and the USACE on November 20, 2019 (Appendix C, pages 1 to 3). USACE did not respond to the early coordination letter. In their early coordination response letter date December 19, 2019, IDNR-DFW provided standard recommendations but did not provide any recommendations specific to surface waters (Appendix C, pages 19 to 20).

An automated letter was generated from IDEM’s website on November 9, 2020. The letter contained recommendations pertaining to coordination with USACE and IDEM for permitting of stream impacts (Appendix C, pages 23 to 29).

Wetlands:

Wetlands	<u>Presence</u>	<u>Impacts</u>	
		Yes	No
	X	X	

Total wetland area: 0.05 acre(s)

Total wetland area impacted: 0.05 acre(s)

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

US 20 Section 2 Wetland Impacts

Wetland No.	Classification	Total Size (Acres)	Impacted Acres	Comments
Wetland A	Palustrine Emergent (PEM1A)	0.05	0.05	Delineated wetland located immediately adjacent to the existing fill slope. Wetland A is within the proposed right-of-way and will be permanently impacted by roadway fill required to widen US 20 (Appendix B, page 4).

Documentation

ES Approval Dates

Wetlands (Mark all that apply)

Wetland Determination	X
Wetland Delineation	X
USACE Isolated Waters Determination	
Mitigation Plan	

March 26, 2020
March 26, 2020

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;	X
Unique engineering, traffic, maintenance, or safety problems;	X
Substantial adverse social, economic, or environmental impacts, or	
The project not meeting the identified needs.	X

Based on a review of the National Wetlands Inventory (NWI) online mapper (<https://www.fws.gov/wetlands/data/Mapper.html>), a site visit on October 14, 2019 by HNTB, the USGS topographic map (Appendix B page 2), and the RFI report (Appendix E, page 10) there are forty-seven wetlands located within the 0.5 mile search radius. There are four wetlands present adjacent to the project area.

A *Waters of the U.S. Determination / Wetland Delineation Report* was approved by INDOT Ecology and Waterway Permitting Office on March 26, 2020 (Appendix F, pages 1 to 10). It was determined that one wetland is located within the proposed right-of-way. Wetland A is classified as a palustrine, emergent, persistent, temporary flooded wetland (PEM1A) according to the classification defined by Cowardin et al. (1979). Wetland A is approximately 0.05 acre and the entire wetland will be permanently impacted by the project. The USACE makes all final determinations regarding jurisdiction.

Avoidance and minimization of impacts to Wetland A was considered. Avoidance and minimization measures included a combination of shifting the roadway alignment to the north and constructing a retaining wall. Avoidance and minimization measures would result in additional construction and long-term maintenance costs, as well as increase impacts to residential or commercial properties on the north side of US 20. Therefore, these measures were dismissed. Wetland mitigation is anticipated and will be determined during permitting.

The total wetland impacts for US 20 Section 1 and US 20 Section 2 are summarized in the Impact Summary Table in Appendix I, page 1.

Early coordination letters were sent to the USFWS, IDNR-DFW, and the USACE on November 20, 2019 (Appendix C, pages 1 to 3). USACE did not respond to the early coordination letter. In their early coordination response letter date December 19, 2019, IDNR-DFW stated that the presence or potential presence of wetland habitat on site would require contacting and coordinating with IDEM and USACE for permitting of wetland impacts (Appendix C, pages 19 to 20).

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An automated letter was generated from IDEM’s website on November 9, 2020. The letter contained recommendations pertaining to coordination with USACE and IDEM for permitting of wetland impacts (Appendix C, page 23 to 29).

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

Terrestrial Habitat:

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

Based on a desktop review, a site visit on October 14, 2019 by HNTB, the aerial map of the project area (Appendix B, pages 3 to 8), and the USGS topographic map, the terrestrial habitat in the project area consists primarily of residential, commercial, and industrial land use. Dominant vegetation within the project area consists of green ash (*Fraxinus pennsylvanica*), bur oak (*Quercus macrocarpa*), honeysuckle (*Lonicera maackii*), sassafras (*Sassafras albidum*), tall fescue (*Festuca arundinacea*), common dandelion (*Taraxacum officinale*), white clover (*Trifolium repens*), common rush (*Juncus effuses*), spikerush (*Eleocharis nodosus*), and narrowleaf cattail (*Typha angustifolia*). It can be assumed that small animals such as squirrels, raccoons, birds, etc. likely inhabit the surrounding area.

Proposed permanent and temporary impacts for terrestrial habitat include approximately 1.4 acres of tree clearing, 2.7 acres of agricultural land, 0.6 acre of open water, 0.1 acre of wetland, and 14.8 acres of mowed and maintained right-of-way. The tree clearing acreage quantified during the initial design stages, 2.15 acres, was minimized during project development. Tree clearing will be limited to areas within 100 feet of the edge of pavement of US 20 and connecting local and county roads. The remainder of the project area is largely existing pavement (Appendix B, pages 3 to 8). No core forest will be impacted by the project. Animal movement should not be permanently restricted or impacted due to the proposed project. All areas will be restored per the current INDOT Standard Specifications.

Impacts to terrestrial habitat for US 20 Section 1 and Section 2 are summarized in the Impact Summary Table in Appendix I, page 1.

A separate tree clearing contract will be required to fell trees outside of the active season for the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (NLEB) (*Myotis septentrionalis*). This work is anticipated to be performed one year prior to the main construction contract. The designation number for this work will be determined during project development.

Early coordination letters were sent to the USFWS, IDNR-DFW, and the USACE on November 20, 2019 (Appendix C, pages 1 to 3). USACE did not respond to the early coordination letter. In their early coordination response letter dated November 21, 2019, USFWS stated that because the proposed project would have minor impacts on natural resources, and no Federally endangered species are known to be present, the USFWS would not be providing a comment letter (Appendix C, page 7). In their early coordination response letter dated December 19, 2019, IDNR-DFW made recommendations to minimize any effects to terrestrial habitat, revegetate disturbed areas, restrict tree clearing to the inactive season, and implement appropriate erosion and sediment control measures (Appendix C, pages 19 to 20).

An automated letter was generated from IDEM’s website on November 9, 2020. The letter contained recommendations minimizing effects to terrestrial habitat (Appendix C, pages 23 to 29).

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

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Karst:

Karst

Is the proposed project located within or adjacent to the potential Karst Area of Indiana?

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

Are karst features located within or adjacent to the footprint of the proposed project?

If yes, will the project impact any of these karst features?

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

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

Based on a desktop review, the project is located outside the designated karst region of Indiana as outlined in the October 13, 1993 Memorandum of Understanding (MOU). According to the topo map of the project area (Appendix B, page 2), and the RFI report (Appendix E, page 10) there are no karst features identified within or adjacent to the project area.

In the auto response generated on November 9, 2020, the Indiana Geological Survey (IGS) did not indicate that karst features exist in the project area (Appendix C, pages 30 to 32). IGS indicated this project is located in an area with moderate liquefaction potential, low potential for bedrock resources, high potential of sand and gravel resources, and the presence of abandoned industrial mineral sand gravel pits. Response from IGS has been communicated with the designer November 9, 2020. No impacts are expected.

Threatened and Endangered Species:

Threatened or Endangered Species

Within the known range of any federal species

Any critical habitat identified within project area

Federal species found in project area (based upon informal consultation)

State species found in project area (based upon consultation with IDNR)

Presence

Impacts

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

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

Is Section 7 formal consultation required for this action?

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

Based on a desktop review and the RFI report (Appendix E, pages 1 to 13), completed by HNTB on December 3, 2019, the IDNR Elkhart County Endangered, Threatened and Rare (ETR) Species List has been checked and is included in (Appendix E, pages 12 to 14). The highlighted species on the list reflect the federal and state identified ETR species located within the county. According to the IDNR-DFW early coordination response letter dated December 19, 2019 (Appendix C, pages 19 to 20), the Natural Heritage Program's Database has been checked and the blanding's turtle (*Emydoidea blandingii*) has been documented within 0.5 mile of the project area. IDNR-DFW requested an entrenched silt fence should be placed between the road and the adjacent wetlands near Spring Valley Road and should remain in place through the duration of the project. If the wetlands near Spring Valley Road are to be filled in their entirety, then they should be live-trapped for turtles prior to filling, and any turtles captured should be relocated to nearby areas of suitable habitat. Removal of any state endangered species and eastern box turtles would require a permit issued by the Division of Fish and Wildlife. Recommendations provided by the IDNR-DFW requiring threatened and endangered species are included as firm commitments in the Environmental Commitments section of this document.

Project information was submitted through the USFWS's Information for Planning and Consultation (IPaC) portal, and an official species list was generated (Appendix C, pages 42 to 47). The project is within range of the Indiana bat and the NLEB. No additional species were found within or adjacent to the project area other than the Indiana bat and northern long-eared bat.

The project qualifies for the *Range-wide Programmatic Informal Consultation for the Indiana bat and northern long-eared bat (NLEB)*, dated May 2016 (revised February 2018), between FHWA, Federal

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Railroad Administration (FRA), Federal Transit Administration (FTA), and USFWS. An effect determination key was completed on February 11, 2021, and based on the responses provided, the project was found to “may affect – not likely to adversely affect” the Indiana bat and/or the NLEB. INDOT reviewed and verified the effect finding on February 11, 2021 and requested USFWS’s review of the finding (Appendix C, page 62). No response was received from USFWS within the 14-day review period; therefore, it was concluded they concur with the finding. Avoidance and Mitigation Measures (AMMs) are included as firm commitments in the Environmental Commitments section of this document.

USFWS Bridge/Structure Assessment shall take place no earlier than two (2) years prior to the start of construction. Since construction will begin after October 14, 2021, 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. This has been added as a firm project commitment in the Environmental Commitments section of this 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.

Drinking Water Resources:

	Presence	Impacts	
		Yes	No
Wellhead Protection Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public Water System(s)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Residential Well(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Source Water Protection Area(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sole Source Aquifer (SSA)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If a SSA is present, answer the following:

	Yes	No
Is the Project in the St. Joseph Aquifer System?	<input type="checkbox"/>	<input type="checkbox"/>
Is the FHWA/EPA SSA MOU Applicable?	<input type="checkbox"/>	<input type="checkbox"/>
Initial Groundwater Assessment Required?	<input type="checkbox"/>	<input type="checkbox"/>
Detailed Groundwater Assessment Required?	<input type="checkbox"/>	<input type="checkbox"/>

The project is located in Elkhart County, but located outside the area of the St. Joseph Sole Source Aquifer, the only legally designated sole source aquifer in the state of Indiana (Appendix B, page 2). Therefore, the FHWA/EPA Sole Source Aquifer Memorandum of Understanding (MOU) is not applicable to this project. Therefore, a detailed groundwater assessment is not needed, and no impacts are expected.

An early coordination letter was sent to the US Environmental Protection Agency (EPA) Groundwater and Drinking Water Branch on November 20, 2019 (Appendix C, pages 1 to 3). EPA responded on December 10, 2019, stating that the project is not within a designated Sole Source Aquifer review area, so an EPA Sole Source Aquifer project review of this project is not required (Appendix C, page 8). The EPA suggested that during construction appropriate safeguards are in place to ensure that ground water is not endangered. Such safeguards would include securing adequate precautions for fueling/servicing large equipment, using “green infrastructure” practices where possible, and developing contingency plans to handle the release of any hazardous materials. Recommendations provided by the EPA are included as firm commitments in the Environmental Commitments section of this document.

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The Indiana Department of Environmental Management’s Wellhead Proximity Determinator website (<http://www.in.gov/idem/cleanwater/pages/wellhead/>) was accessed on November 9, 2020 by HNTB. This project is not located within a Wellhead Protection Area or Source Water Area. No impacts are expected.

The Indiana Department of Natural Resources Water Well Record Database website (<https://www.in.gov/dnr/water/3595.htm>) was accessed on November 9, 2020 by HNTB. The nearest water well is shown close to the intersection of County Road 22 and US 20; however, the well appears to be mapped incorrectly. One additional well is located adjacent to the project area. The features will not be affected because they appear to be located outside of the proposed right-of-way. Therefore, no impacts are expected. Should it be determined during the right-of-way phase that these wells are affected, a cost to cure will likely be included in the appraisal to restore the wells.

Based on a desktop review of the INDOT MS4 website (<https://entapps.indot.in.gov/MS4/>) by HNTB on November 9, 2020, and the RFI report; this project is not located in an Urban Area Boundary location. No impacts are expected.

Based on a desktop review, a site visit on October 14, 2020 by HNTB, the aerial map of the project area (Appendix B, pages 3 to 8), and coordination with the Middlebury Department of Public Works, this project is located where there is a public water system. The public water system will be affected because there are water mains and multiple lateral crossings within the project area. Early coordination letters were sent on December 16, 2019 to the Middlebury Department of Public Works. No response to this early coordination was received; however, multiple water utilities were identified during the survey for the project and confirmed during the Preliminary Field Check meeting on November 4, 2020 (Appendix I, pages 33 to 45). Due to the proximity of the lines to the project area, as well as their shallow depth, impacts to this utility are unavoidable. Coordination with the Middlebury Department of Public Works will continue through design to relocate these utilities.

Floodplains:

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

The Indiana Department of Natural Resources Indiana Floodway Information Portal website (<http://dnrmmaps.dnr.in.gov/appsphp/fdms/>) was accessed on November 9, 2020 by HNTB. This project is not located in a regulatory floodplain as determined from approved IDNR floodplain maps (Appendix B, page 2). Therefore, it does not fall within the guidelines for the implementation of 23 CFR 650, 23 CFR 771, and 44 CFR. No impacts are expected.

Farmland:

Farmland	Presence	Impacts	
		Yes	No
Agricultural Lands	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prime Farmland (per NRCS)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

Based on a desktop review, a site visit on October 14, 2020 by HNTB, a review of the aerial map of the project area (Appendix B, pages 3 to 8), there is no land that meets the definition of farmland under the Farmland Protection Policy Act (FPPA) within or adjacent to the project area. The requirements of the

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FPPA do not apply to this project; therefore, no impacts are expected. An early coordination letter was sent on November 20, 2019 to Natural Resources Conservation Services (NRCS). In their early coordination response letter dated November 21, 2019, NRCS stated that the proposed project will not cause a conversion of prime farmland.

Cultural Resources:

	Category	Type	INDOT Approval Dates	N/A
Minor Projects PA Clearance	B	3	February 20, 2020	<input type="checkbox"/>

Eligible and/or Listed Resource Present

Results of Research

Archaeology	<input type="checkbox"/>
NRHP Buildings/Site(s)	<input type="checkbox"/>
NRHP District(s)	<input type="checkbox"/>
NRHP Bridge(s)	<input type="checkbox"/>

Project Effect

No Historic Properties Affected No Adverse Effect Adverse Effect

Documentation Prepared

Documentation (mark all that apply)

		ES/FHWA Approval Date(s)	SHPO Approval Date(s)
Historic Properties Short Report	<input type="checkbox"/>		
Historic Property Report	<input type="checkbox"/>		
Archaeological Records Check/ Review	<input type="checkbox"/>		
Archaeological Phase Ia Survey Report	<input type="checkbox"/>		
Archaeological Phase Ic Survey Report	<input checked="" type="checkbox"/>	February 20, 2020	
Archaeological Phase II Investigation Report	<input type="checkbox"/>		
Archaeological Phase III Data Recovery	<input type="checkbox"/>		
APE, Eligibility and Effect Determination	<input type="checkbox"/>		
800.11 Documentation	<input type="checkbox"/>		

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

On February 20, 2020 the INDOT Cultural Resource Office (CRO) determined that this project falls within the guidelines of Category B, Type 3 under the Minor Projects Programmatic Agreement, (Appendix D, page 7). MPPA Category B, Type 3 projects include construction of added travel, turning, or auxiliary lanes (e.g., bicycle, truck climbing, acceleration and deceleration lanes) and shoulder widening under certain conditions.

Between January 6 and 8, 2020, Cultural Resource Analysts, Inc., personnel conducted a phase Ia archaeological reconnaissance for the project. The background research found that no archaeological sites were recorded and that historic maps did not indicate a structure had been present within the proposed project area. Two archaeological reconnaissance studies have been conducted at the western edge of the project, one reconnaissance was completed recently utilizing current methods and so that area was not resurveyed (Arnold 2018). One historic archaeological site was located during the reconnaissance. The site

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was found to lack integrity and is ineligible to the state and national registers. This report did recommend archaeological clearance for the project and was approved by INDOT CRO on February 20, 2020.

No further consultation is required. This completes the Section 106 process and the responsibilities of the FHWA under Section 106 have been fulfilled.

Section 4(f) Resources:

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

Parks & Other Recreational Land

- Publicly owned park
- Publicly owned recreation area
- Other (school, state/national forest, bikeway, etc.)

Presence

X

Use

Yes	No
X	

Evaluations

Prepared

- Programmatic Section 4(f)*
- "De minimis" Impact*
- Individual Section 4(f)

X

FHWA **Approval date**

--

Wildlife & Waterfowl Refuges

- National Wildlife Refuge
- National Natural Landmark
- State Wildlife Area
- State Nature Preserve

Presence

Use

Yes	No

Evaluations

Prepared

- Programmatic Section 4(f)*
- "De minimis" Impact*
- Individual Section 4(f)

FHWA **Approval date**

--

Historic Properties

- Sites eligible and/or listed on the NRHP

Presence

--

Use

Yes	No

Evaluations

Prepared

- Programmatic Section 4(f)*
- "De minimis" Impact*
- Individual Section 4(f)

FHWA **Approval date**

--

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. Lands subject to this law are considered Section 4(f) resources.

Based on a desktop review, site visits on October 14, 2019 and November 4, 2020 by HNTB, the aerial map of the project area (Appendix B, pages 3 to 8), a November 4, 2020 on-site meeting with the Middlebury Parks and Recreation Department and HNTB, and the RFI report (Appendix E, pages 1 to 14), there are two Section 4(f) resources located within the 0.5 mile search radius. There are two Section 4(f)

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resources located within or adjacent to the project area. These resources are the Pumpkinvine Nature Trail and the Ridge Run Trail.

Pumpkinvine Nature Trail (Section 4(f) De minimis Use)

Based on the trail maps available, the Pumpkinvine Nature Trail, a recreational multi-use trail, is within the project area. The Pumpkinvine Nature Trail crosses under US 20 approximately 500 feet west of CR 22, between CR 22 and Orpha Drive (see Appendix B, page 7).

The Pumpkinvine Nature Trail is a former railroad that has been converted to a multi-use trail. This trail connects Goshen, Middlebury and Shipshewana. Within the project area, the trail is owned by the Town of Middlebury (north of US 20) and the Elkhart County Parks and Recreation Board (south of US 20). The trail is publicly-owned, open to the public year-round, and is primarily used for recreation. As a result, it is eligible for protection under Section 4(f). The trail is managed by the Middlebury Department of Parks and Recreation. Therefore, in accordance with 23 CFR 774.17, the Middlebury Department of Parks and Recreation and the Elkhart County Parks and Recreation Board are considered the OWJs for the Section 4(f) resource.

The Pumpkinvine Nature Trail is currently carried under US 20 by a concrete box culvert approximately 65 feet in length. The widened roadway will require the box culvert to be extended approximately 20 feet to the north and 20 feet to the south for a total of approximately 40 feet in additional length. The widened roadway will also require the replacement of a 60-inch corrugated metal pipe (CMP) that runs parallel to the box culvert with a longer 72-inch CMP in the same location. This 72-in CMP will require a slight shift in the trail alignment to the south of US 20 (see Appendix I, page 51).

The proposed culvert extension and pipe replacement will require the purchase of approximately 0.047 acre of permanent right-of-way and 0.075 acre of temporary right-of-way from the Town of Middlebury. Approximately 0.071 acre of permanent right-of-way will be required from the Elkhart County Parks and Recreation Board. This right-of-way acquisition will be considered a use under Section 4(f). INDOT intends to perpetuate the use of the trail through an easement allowing the trail to remain operational within the INDOT right-of-way. Construction will also require the temporary closure of the trail and implementation of a detour during construction for trail traffic. The temporary closure of the Pumpkinvine Natural Trail is anticipated to last no longer than nine months while the construction of US 20 Section 2 is anticipated to last 24 months.

During the environmental review process, a detour route was developed in coordination with the OWJs and other stakeholders. This detour, which will meet the design criteria for a multi-use path, will begin at the trailhead near the intersection of CR 22 and CR 37, south of US 20. From this trailhead, the detour will be routed east utilizing the westbound shoulder of CR 22. The westbound shoulder of CR 22 will be widened to provide safe separation between pedestrian and vehicular traffic. The detour will continue east through the intersection of US 20 and CR 22 before turning north up the residential driveway of the residence at 130 1/2 Orpha Drive and connecting back to the Pumpkinvine Nature Trail. Coordination with the residential landowner on Orpha Drive has occurred. The landowner has agreed in principle to the viability of the detour route (see Appendix I, page 52). In the event the proposed detour route becomes infeasible during final design, the concurrence with the OWJs will be re-initiated and a suitable alternative detour route will be developed for OWJ concurrence.

Further details associated with the detour route including, but not limited to, signage and anticipated closure dates will be coordinated with the OWJs and residential landowner during the final engineering design and land acquisition phases of the project.

Under Section 4(f) of the U.S. Department of Transportation Act of 1966 (23 CFR 774.3(b)), this trail is considered a Section 4(f) resource as it is publicly-owned land that permits public access for primarily recreational purposes. A *de minimis* impact is one that, after taking into account any measure to minimize

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harm (such as avoidance, minimization, mitigation or enhancement measures), the project will not adversely affect the activities, features, or attributes qualifying a park, recreation area, or refuge for protection under Section 4(f). A *de minimis* impact determination requires public involvement and concurrence from the OWJs that the proposed impacts will not affect the resource's features, attributes, and activities that qualify it for protection under Section 4(f). Coordination with the OWJs is currently in progress; however, concurrence from the OWJs has not occurred prior to the release of this AI for public involvement. Draft concurrence letters are included in Appendix I pages 47 to 58.

The public will be afforded an opportunity to review and comment on the effects of the proposed project to the Pumpkinvine Nature Trail via a legal advertisement that will be placed in a local publication. The legal notice, which will occur separately from the legal notice for this AI, will notify the public of the Section 4(f) *de minimis* finding and provide a 30-day review period. In accordance with the requirements of 23 CFR 774.17, concurrence from the OWJs that this project's effects on the Pumpkinvine Nature Trail will constitute *de minimis* use of the Section 4(f) resource will be obtained prior to the approval of this AI document. The 30-day review period for the Section 4(f) *de minimis* finding will occur after the OWJs have concurred with the Section 4(f) *de minimis* finding. The OWJs will be informed of all public comments received that pertain to the Section 4(f) impact determination and, if warranted, concurrence can be reevaluated.

Ridge Run Trail (Section 4(f) Enhancement)

The Ridge Run Trail is a multi-use trail that connects the grounds of the Essenhous facility to the Pumpkinvine Nature Trail. The Ridge Run Trail runs parallel to the north side of US 20 for approximately 660 feet between the Pumpkinvine Nature Trail and an existing driveway to the west (see Appendix I, page 52).

The trail, within the project area, is leased by the Town of Middlebury from a local property owner and is maintained by the Town of Middlebury. The trail is publicly-owned, open to the public year-round, and is primarily used for recreation. As a result, it is eligible for protection under Section 4(f). The trail is managed by the Middlebury Department of Parks and Recreation. Therefore, in accordance with 23 CFR 774.17, the Middlebury Department of Parks and Recreation is considered the OWJ for the Section 4(f) resource.

Due to the widening of the roadway, the Ridge Run Trail will need to be reconstructed and realigned as part of the project. This realignment will require the acquisition of right-of-way from the local property owner with whom the Town of Middlebury has an easement to operate and maintain the trail. Therefore, a use of the property will occur as part of US 20 Section 2 which is not considered temporary; however, the use will preserve the recreational attributes of the trail by realigning to avoid permanent impacts. The proposed use will also enhance the trail's physical condition through reconstruction of the pavement structure.

According to 23 CFR 774.13(g), transportation enhancement projects that meet the following stipulations are excepted from the requirement for Section 4(f) approval:

- The use of the Section 4(f) property is solely for the purpose of preserving or enhancing an activity, feature, or attribute that qualifies the property for Section 4(f) protection; and
- The OWJ over the Section 4(f) resource agrees in writing to paragraph (g)(1) of this section.

Given the anticipated scope of work associated with the Ridge Run Trail, INDOT and FHWA believe it qualifies for an enhancement exception to Section 4(f) under the conditions found at 23 CFR 774.13(g). In accordance with the requirements of 23 CFR 774.13(f), concurrence from the OWJ that this project's effects on the Ridge Run Trail will not constitute a use of the Section 4(f) resource will be obtained prior to the approval of this AI document. Coordination with the OWJ is currently in progress; however, concurrence from the OWJ has not occurred prior to the release of this AI for public involvement. The OWJ will be

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informed of all public comments received that pertain to the Section 4(f) impact determination and, if warranted, concurrence can be reevaluated.

Further details associated with the acquisition of the right-of-way and perpetuating the easement from the local landowner will be coordinated with the OWJ and landowner during the final engineering design and land acquisition phases of the project. The draft concurrence letter is included in Appendix I pages 47 to 53.

In addition to the Section 4(f) resources listed above, three other resources were identified as having the potential to receive protection under Section 4(f). These resources include Das Dutchman Essenhaus, Northridge High School, and Northridge Middle School. A discussion of why these resources do not meet the criteria for protection under Section 4(f) is included below.

Das Dutchman Essenhaus

The RFI identified Das Dutchman Essenhaus as a recreational facility adjacent to the project area. Das Dutchman Essenhaus is a hotel, restaurant, and conference center. It is not publicly owned and therefore Section 4(f) does not apply to this property.

Northridge High School

The RFI identified Northridge High School as a school within the project area (Appendix E, page 9). The project will require the acquisition of approximately 1 acre of permanent right-of-way from Northridge High School. Portions of public schools that are used for recreation purposes and are open for public use may be considered a Section 4(f) resource if the OWJ for the property considers the recreational activities to be significant. The right-of-way that will be acquired from Northridge High School does not include any recreational facilities (Appendix I, page 59). Therefore, there will be no Section 4(f) use of this property.

Northridge Middle School

The RFI identified Northridge Middle School as a school within the project area (Appendix E, page 9). The project will require the acquisition of approximately 1 acre of permanent right-of-way from Northridge Middle School. The athletic fields on the grounds of the middle school are fenced, not open to the public during normal hours of operation, and therefore are not subject to Section 4(f) requirements. The right-of-way that will be acquired from Northridge Middle School does not include any recreational facilities open to the public. Therefore, there will be no Section 4(f) use of this property.

Section 6(f) Property:

Section 6(f) Involvement

Presence

Use

Yes

No

Section 6(f) Property

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

A review of 6(f) properties on the Land and Water Conservation Fund (LWCF) website at <https://www.in.gov/indot/2523.htm> revealed a total of 20 properties in Elkhart County (Appendix I, page 60). None of these properties are located within or adjacent to the project area. Therefore, there will be no impacts to 6(f) resources as a result of this project.

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Air Quality:

Air Quality

Conformity Status of the Project

Is the project in an air quality non-attainment or maintenance area?

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

If YES, then:

Is the project in the most current MPO TIP?

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

Is the project exempt from conformity?

<input type="checkbox"/>	<input checked="" type="checkbox"/>
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If the project is NOT exempt from conformity, then:

Is the project in the Transportation Plan (TP)?

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

Is a hot spot analysis required (CO/PM)?

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

Level of MSAT Analysis required?

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

STIP/TIP

This project is included in the Fiscal Year (FY) 2020-2024 Michiana Council of Governments (MACOG) Metropolitan Planning Organization (MPO) Transportation Improvement Program (TIP) (Appendix H, page 2) and the 2020-2024 Statewide Transportation Improvement Program (STIP) (Appendix H, page 3).

Attainment Status

This project is located in Elkhart County which is currently in attainment for PM_{2.5} and CO, and a maintenance area for Ozone (O₃) according to the IDEM County List: All Regulated Pollutants (https://www.in.gov/idem/airquality/files/nonattainment_county_list.pdf).

Ozone: This project is located in Elkhart County, which is current 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. The project's design concept and scope are accurately reflected in both the MACOG *Michiana On the Move: 2045 Transportation Plan* (Appendix H, page 1) and the TIP and both conform to the State Implementation Plan (SIP). Therefore, the conformity requirements of 40 CFR 93 have been met.

Mobile Source Air Toxics

The purpose of this project is to decrease traffic congestion and increase safety by constructing an additional travel lane in each direction, as well as a two-way left turn lane along US 20. This project has been determined to generate minimal air quality impacts for Clean Air Act criteria pollutants and has not been linked with any special mobile source air toxics (MSAT) concerns. As such, this project will not result in changes in traffic volumes, vehicle mix, basic project location, or any other factor that will cause an increase in MSAT impacts of the project from that of the No Build Alternative.

Moreover, Environmental Protection Agency (EPA) regulations for vehicle engines and fuels will cause overall MSAT emissions to decline significantly over the next several decades. Based on regulations now in effect, an analysis of national trends with EPA's MOVES2014 model forecasts a combined reduction of over 90 percent in the total annual emissions rate for the priority MSAT from 2010 to 2050 while vehicle-miles of travel are projected to increase by over 45 percent. This will both reduce the background level of MSAT as well as the possibility of even minor MSAT emissions from this project.

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Noise:

Noise

Yes No

Is a noise analysis required in accordance with FHWA regulations and INDOT's traffic noise policy?

	No	Yes/ Date
ES Review of Noise Analysis		Yes, February 5, 2021

The addition of an added travel lane classifies the proposed project as a Type I project. Therefore, in accordance with the FHWA noise regulations (23 CFR 772) and the *INDOT Traffic Noise Procedure (2017)*, this action requires a traffic noise analysis.

INDOT approved a Traffic Noise Analysis report on February 5, 2021 (Appendix I, page 61). The latest version of the FHWA Traffic Noise Model, TNM® 2.5 (TNM), was used to model existing (2024) and design year (2044) worse (i.e., noisiest) hourly traffic noise levels within the US 20 study area.

Ninety-eight (98) noise receivers representing the 168 receptors were modeled in the existing and proposed conditions. The study area includes receivers located within 500 feet from the roadway.

Existing exterior noise levels range from 53.5 to 69.4 dB(A) Leq(1h). Predicted future exterior design year (2044) noise levels adjacent to the proposed project would approach or exceed the Noise Abatement Criteria (NAC) at 18 noise sensitive receptors. Predicted future exterior design year noise levels would range from 55.3 to 70.6 dB(A) Leq(1h). Predicted future exterior noise levels change over existing noise levels range from -0.7 to 4.0 dB(A). Therefore, none of the predicted future noise levels would substantially exceed existing noise levels. A reduction in predicted noise levels is shown at some receptor locations. This reduction is a result of splitting traffic volumes across multiple lanes within the model under the build alternative.

To address the predicted noise impacts, three noise barriers (Noise Barriers 1, 2 and 3) were modeled in the study area.

1. Noise Barrier 1 (NB-1) was evaluated in the vicinity of Westlake Drive to provide attenuation at nine impacted receivers (R5, R6, R11- R14, and R30 - R32). Noise Barrier 1 would be considered a feasible abatement measure and Noise Barrier 1 would achieve INDOT's design goal of 7.0 dB(A) reduction for a majority of the benefited first row receivers. Noise Barrier 1 would be approximately 1,317 feet in length and would average 18 feet in height. The estimated cost of Noise Barrier 1 would be approximately \$710,940 or approximately \$39,497 per benefited receptor. Because the cost per benefited receptor exceeded the maximum allowable cost of \$25,000, Noise Barrier 1 was found to not be reasonable. Two variations of NB1 were modeled to evaluate separate noise walls east and west of Westlake Drive. Both iterations of NB1 were found to be not reasonable.

2. Noise Barrier 2 (NB-2) was evaluated north of US 20 at the intersection of US 20 and the Pumpkinvine Nature Trail. Noise Barrier 2 would provide abatement for one impacted receiver (R68). Noise Barrier 2 would be considered a feasible abatement measure and Noise Barrier 2 would achieve INDOT's design goal of 7.0 dB(A) reduction for the benefited first row receivers. Noise Barrier 2 would be approximately 904 feet in length and would average 16 feet in height. The estimated cost of Noise Barrier 2 would be approximately \$434,070 or approximately \$217,035 per benefited receptor. Because cost per benefited receptor exceeded the maximum allowable cost of \$25,000, Noise Barrier 2 was found to not be reasonable.

3. Noise Barrier 3 (NB-3) was evaluated south of US 20 at the intersection of US 20 and the Pumpkinvine Nature Trail. Noise Barrier 3 would provide abatement for impacted receiver (R67). While Noise Barrier 3 would be considered a feasible abatement measure and Noise Barrier 3 would achieve INDOT's design goal of 7.0 dB(A) reduction for the benefited first row receivers.

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Noise Barrier 3 would be approximately 903 feet in length and would average 16 feet in height. The estimated cost of Noise Barrier 3 would be approximately \$433,320 or approximately \$216,660 per benefited receptor. Because cost per benefited receptor exceeded the maximum allowable cost of \$25,000, Noise Barrier 3 was found to not be reasonable.

Based on the studies thus far accomplished, the State of Indiana has not identified any locations for the US 20 Section 2 project where noise abatement is likely. Noise abatement has been found to be feasible, but not reasonable as the cost per benefited receptor exceeded the maximum allowable cost of \$25,000. A reevaluation of the noise analysis will occur during final design. If during final design it has been determined that conditions have changed such that noise abatement is feasible and reasonable, the abatement measures might be provided. The final decision on the installation of any abatement measure(s) will be made upon the completion of the project’s final design and the public involvement processes.

Community Impacts:

Regional, Community & Neighborhood Factors

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

Yes	No
X	
	X
	X
	X
X	
X	

The project is located in the Town of Middlebury, which is an urban portion of Elkhart County. The proposed project will require acquisition of approximately 12.3 acres of new permanent right-of-way. The right-of-way acquisition is not anticipated to have a substantial impact on the tax base or property values. The project will not result in substantial impacts to community cohesion as it will require only a single residential relocation and will not divide existing neighborhoods or change community access. There may be temporary inconveniences associated with construction, such as increased travel times, construction, noise, and fugitive dust. However, these will cease upon completion of construction activities.

According to the Fairs and Festivals website (www.fairsandfestivals.net), the Indiana Festivals website (<https://www.indianafestivals.org/>), and the Town of Middlebury website (<http://www.middleburyin.com/attractions/festivals.php>), accessed on November 4, 2020 by HNTB, there are three regularly scheduled festivals and events located within 10 miles of the project: Middlebury Summer Festival (August), Middlebury Fall Festival (September), and Hometown Holidays Annual Festival (November). The project includes a phased maintenance of traffic plan that allows for vehicular and bicycle traffic to be maintained for the duration of construction. Intersecting roads may be closed for a brief period; however, detours will be clearly marked and should not substantially impair travel routes to these fairs and festivals. Access to individual properties will be maintained, but typical delays in construction zones with reduced speeds and potential restrictions can be expected during construction of the project.

The Town of Middlebury’s most recent Americans with Disabilities (ADA) transition/accessibility implementation plan was adopted in 2013 (http://www.middleburyin.com/community_information/americans_with_disabilities_act_information/index.php). The project will be designed in accordance with the plan and all applicable ADA requirements.

There is a known local Amish community that was identified as a key stakeholder and a community of concern during the environmental study process. The project will be designed with wider shoulders and sinuous rumble strips to accommodate buggy traffic and will equally benefit both the Amish and non-Amish

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communities. Incorporation of these design elements into the preferred alternative were the result of coordination with the Amish Safety Committee (see the Environmental Justice section for additional detail).

Indirect and Cumulative Impacts:

Indirect and Cumulative Impacts

Will the proposed action result in substantial indirect or cumulative impacts?

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

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

The project will not affect traffic patterns after construction, provide new access to undeveloped lands, or result in changes in land use patterns. The project will not cause changes in neighborhoods or contribute to an increase in industrial, commercial, or residential development in the project area. Therefore, no substantial indirect or cumulative impacts are anticipated with this project.

Public Facilities & Services:

Public Facilities & Services

Will the proposed action result in substantial impacts on health and educational facilities, public and private utilities, emergency services, religious institutions, airports, public transportation or pedestrian and bicycle facilities? *Discuss how the maintenance of traffic will affect public facilities and services.*

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

Based on a desktop review, a site visit on October 14, 2019 by HNTB, the aerial maps of the project area (Appendix B, pages 3 to 8), and the RFI report (Appendix E, page 9), there are four religious facilities, four schools, four recreational facilities, one pipeline, one trail, one managed land, and one unmapped health facility located within the 0.5 mile search radius,. The following properties or resources are adjacent to or near the project area:

Health Facilities

One health facility, Goshen Physicians Family Medicine (Appendix B, page 6) is located adjacent to the project. Although right-of-way acquisition will be required from this property, the required right-of-way will be narrow strips of land near the existing US 20 roadway. Access to this facility will be maintained throughout construction. Therefore, no permanent negative effects to the use of this facility are anticipated.

Religious Facilities

Two religious facilities, Pathway Assembly of God Church and Crystal Valley Missionary Church (Appendix B, page 4 and 5), are located adjacent to the project. Although right-of-way acquisition will be required from both properties, the required right-of-way will be narrow strips of land near the existing US 20 roadway. Therefore, no permanent negative effects to the use of the facilities are anticipated. An early coordination letter was sent on November 20, 2019 to Pathway Assembly of God Church and on December 16, 2019 to Crystal Valley Missionary Church. The early coordination letter for Crystal Valley Missionary Church was re-sent via e-mail on November 13, 2020. No responses were received. Access to all religious facilities will be maintained during construction.

Schools

Northridge High School is located adjacent to the project area (Appendix B, page 3). An early coordination letter was sent on November 20, 2019 to Middlebury Community Schools. Middlebury Community Schools responded in a letter dated December 16, 2019 with several recommendations focusing on student safety.

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Despite the concerns and suggestions identified in the early coordination letter response, the Middlebury Community Schools also expressed general support for the project. Responses to the Middlebury Community School's comments were provided to the school on December 27, 2019 (Appendix C, pages 11 to 13). Recommendations from the school, and the INDOT response to these recommendations are summarized below.

Recommendations from the school are summarized below:

- The lack of barrier/fencing along the north side of US 20 and student crossings of a widened US 20 create concerns for student safety.
- A median cross walk with a median island should be considered between CR 35 and the traffic signal at Wayne Street (CR 16).
- A traffic signal installation at US 20 and Wayne Street (CR 16) would be beneficial for safety.
- The speed limit on US 20 should be adjusted in consideration of pedestrian crossings near the high school and Heritage Drive.
- The additional turn lane will help despite increasing the distance of roadway width to travel.
- Access to the school's transportation maintenance garage near US 20 and Wayne Street (CR 16) both during and after construction will be required.
- Any potential impacts to Heritage Drive and the soccer fields and parking areas north of US 20 would be of particular concern.

Responses from INDOT are summarized below:

- Construction of barrier fencing along the north side of US 20 is beyond the scope of this project and has not been incorporated into the project.
- A sidewalk and pedestrian crossing of US 20 between CR 35 and Wayne Street (CR 16), along with the closure of Heritage Drive into the parking lot will be included in the design of the project (Appendix B, pages 3 and 4).
- The proposed project will straighten the curve in the road in the vicinity of US 20 and Wayne Street (CR 16). The intersection of US 20 and Wayne Street (CR16) will continue to be signalized after the project is complete.
- This project is being designed for 50 MPH with a posted speed limit of 45 MPH. A school zone speed limit is being considered to reduce the enforceable speed limit during school days.
- With the increase of traffic along US 20, a 2nd travel lane in each direction is needed. A center two-way left turn lane will be installed for vehicles to safely turn left at driveways and side roads. The traffic signal at CR 35 can also be used to access the subdivision to the south.
- Temporary access will be maintained during construction, and all existing access points along US 20 will be preserved with the project.
- Straightening the curve at US 20 and Wayne Street (CR 16) will move the road further south than the existing location. Impacts to the north side of the road will be minimal and there will be no impact to the parking lot or athletic fields.

The proposed project will acquire right-of-way from the Middlebury Community Schools and, at the request of the Middlebury Community Schools, remove access from Heritage Drive to US 20. The acquisition will be narrow strips of land that are currently as mowed lawn near the existing US 20 roadway. Heritage Drive will continue to provide access from the school to the parking lot and athletic fields during construction.

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Therefore, no permanent negative effects to the use of the school facilities are anticipated. Access to all schools and appurtenant facilities will be maintained for the duration of construction. All applicable Middlebury Community Schools recommendations are included in the Environmental Commitments section of this CE document.

Recreational Facilities

Das Dutchman Essenhaus is a restaurant, hotel, and conference center located adjacent to the project area (Appendix B, page 4). An early coordination letter was sent on November 20, 2019 to Das Dutchman Essenhaus. Das Dutchman Essenhaus responded in a letter dated January 2, 2020 that consideration should be given to removing the utility poles and replacing them via installation of underground conduit to accommodate utilities. The proposed project will acquire right-of-way from Das Dutchman Essenhaus. The acquisition will be narrow strips of land near the existing US 20 roadway. Therefore, no permanent negative effects to the use of the facility are anticipated. Access to the property will be maintained during construction. The feasibility of relocating the utilities underground will be evaluated during final engineering design development. This has been added as a “for further consideration” commitment in the Environmental Commitments section of this CE. All applicable Das Dutchman Essenhaus recommendations are included in the Environmental Commitments section of this CE document.

Pipelines

One pipeline, owned by Northern Indiana Public Indiana Gas Company, crosses the project 0.18 mile south of the US 20 and CR 16 intersection (Appendix B, page 4). Utility coordination has been initiated by HNTB and is ongoing.

Trails / Managed Lands

Two trails/managed lands, the Pumpkinvine Nature Trail and Ridge Run Trail, are located both within and adjacent to the project area. The Pumpkinvine Nature Trail crosses under US 20 approximately 500 feet west of CR 22, between CR 22 and Orpha Drive. The Ridge Run Trail runs parallel to the north side of US 20 for approximately 660 feet between the Pumpkinvine Nature Trail and an existing driveway to the west (Appendix B, page 7).

An early coordination letter was sent on November 20, 2019 to Middlebury Parks and Recreation Department and Middlebury Town Council. No response was received from the Parks and Recreation Department. The Middlebury Town Council responded in a letter dated December 16, 2019 with three comments concerning the Pumpkinvine Nature Trail, the Ridge Run Trail, and a potential future multi-use trail connecting the Spring Valley Neighborhood to the Pumpkinvine Nature Trail. These three comments are summarized below:

- The letter stated that the Pumpkinvine Nature Trail is used extensively throughout the year for recreational and commuting purposes; that a safe detour during construction will be important to accommodate these trail users; and that the addition of lighting should be considered due to the lengthening of the tunnel under US 20. Access to this resource will be maintained during construction through implementation of a detour. Cyclists and pedestrians using the trail during construction will be accommodated via a temporary detour. During the environmental review process, a detour route was developed in coordination with the OWJ and other stakeholders. This detour, which will meet the design criteria for a multi-use path, will begin at the trailhead near the intersection of CR 22 and CR 37, south of US 20. From this trailhead, the detour will be routed east utilizing the westbound shoulder of CR 22. The westbound shoulder of CR 22 will be widened to provide safe separation between pedestrian and vehicular traffic. The detour will continue east through the intersection of US 20 and CR 22 before turning north up the residential driveway of the residence at 130 1/2 Orpha Drive and connecting back to the Pumpkinvine Nature Trail (see Appendix I, page 52).

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Further details associated with the detour route including, but not limited to, signage and anticipated closure dates will be coordinated with the OWJ and residential landowner during the final engineering design and land acquisition phases of the project.

- The letter stated a concern among residents regarding how the project will affect the Ridge Run Trail. Access to this resource will be maintained during construction. The trail will continue to be open and available for public use during construction by constructing the new trail and new connection to the Pumpkinvine Trail prior to closure and demolition of the existing Ridge Run Trail.
- The letter stated that a multi-use trail may need to be constructed connecting the Spring Valley Neighborhood to the Pumpkinvine Nature Trail. The proposed design will provide a pedestrian connection between the Spring Valley neighborhood and Wayne Street (CR 16) via a combination of proposed sidewalks on the south side of US 20, a designated pedestrian crossing with a HAWK signal just west of Spring Valley Drive, and proposed sidewalks on the north side of US 20. The inclusion of additional infrastructure to completely connect Spring Valley Neighborhood with the Ridge Run Trail, which connects to the Pumpkinvine Nature Trail, will be considered during the final design of the project. This has been added as a “for consideration” commitment in the Environmental Commitments section of this CE document.

Emergency Services

Emergency services within the project area are provided by the Middlebury Township Fire and Emergency Management Services (EMS). An early coordination letter was sent on November 20, 2019 to Middlebury Township EMS. No response was received.

Utilities

Water, sewer, gas, electric, cable, fiber optic, and telephone utility lines are present throughout the project area. Utility coordination has been initiated for the project and several utilities attended a preliminary field check meeting on November 4, 2020 (Appendix I, pages 33 to 45). Utility coordination will continue through the final design of the project.

There are no airports, public transportation facilities, or pedestrian and bicycle facilities, other than those discussed above, within the project area.

The MOT plan for the project may pose delays and temporary inconveniences to traveling motorists (including school buses and emergency services); however, all inconveniences will cease upon project completion. The MOT is not expected to substantially impact public facilities or services.

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.

Amish Mobility

To support the needs of the local Amish community the project includes wider shoulders and sinuous rumble strips to accommodate buggy traffic. Incorporation of these design elements into the preferred alternative were the result of coordination with the Amish Safety Committee (see the Community Impacts section for additional detail).

Environmental Justice (EJ):

Environmental Justice (EJ) (Presidential EO 12898)

During the development of the project were EJ issues identified?

Does the project require an EJ analysis?

If YES, then:

Are any EJ populations located within the project area?

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

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

Under FHWA Order 6640.23A, FHWA and the project sponsor, as a recipient of funding from FHWA, are responsible to ensure that their programs, policies, and activities do not have a disproportionately high and adverse effect on minority or low-income populations. Per the current INDOT Categorical Exclusion Manual, an Environmental Justice (EJ) Analysis is required for any project that has two or more relocations or 0.5 acre of additional permanent right-of-way. The project will require 19.6 acres of permanent and temporary right-of-way and one residential relocation. 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 Elkhart County. The community that overlaps the project area is called the affected community (AC). In this project, the AC is Census Tract 8.02. An AC has a population of concern for EJ if the population is more than 50% minority or low-income or if the low-income or minority population is 125% of the COC. Data from the 2018 American Community Survey 5-Year Estimates was obtained from the US Census Bureau Website <https://data.census.gov/cedsci/> on November 13, 2020 by HNTB. The data collected for minority and low-income populations within the AC are summarized in the below table.

Summary of Minority and Low-income Populations

	COC - Elkhart County, Indiana	AC - Census Tract 8.02, Elkhart County, Indiana
Percent Minority	24.9%	7.1%
125% of COC	31.2%	AC < 125% COC
EJ Population of Concern		No
Percent Low-Income	13.3%	2.5%
125% of COC	16.7%	AC < 125% COC
EJ Population of Concern		No

The AC, Census Tract 8.02, has a percent minority of 7.13% which is below 50% and is below the 125% COC threshold. Therefore, the AC does not contain minority populations of EJ concern.

The AC, Census Tract 8.02, has a percent low-income of 2.51% which is below 50% and is below the 125% COC threshold. Therefore, the AC does not contain low-income populations of EJ concern.

Although the EJ analysis that was performed using US Census data did not identify any low-income or minority EJ populations within the project area, there is a known local Amish community that is considered to be a population of concern. Amish populations were identified in the 2019 MACOG Environmental Justice report (http://www.macog.com/docs/about/ej/2019_EJ-report_v.pdf) that utilized a method for identifying EJ communities based on “Indicators of Potential Disadvantage” (IPD). In addition to minority and low-income populations, the report considered carless households and limited English proficiency as two of several IPDs for EJ analysis. The Amish population generally falls into those two IPDs and thus was identified as a population of potential EJ concern for the US 20 Section 2 project.

Although the Amish population generally falls into two IPDs, the specific location of this project was not identified in the MACOG Environmental Justice report as being above average in potential disadvantage.

INDOT has developed a project-specific Public Involvement and Stakeholder Engagement Plan for the US 20 Section 2 project (Appendix G, page 3). This plan details the public outreach that will be conducted during the project development process. This outreach includes a direct line of communication with the Amish community via the Amish Safety Committee.

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In general, outreach to the Amish community has consisted of regular phone conversions between the project team and representatives of the Amish Safety Committee. The Safety Committee serves to provide best practice guidance to the Amish community on the safe navigation of roadways and any upcoming road closures and detour routes. The Safety Committee also provides suggestions to INDOT and local road departments on how roadways can best accommodate horse drawn buggy traffic. For this project, the Safety Committee recommended the use of sinuous rumble strips that are easier for buggies to cross and providing shoulders that can withstand horse drawn buggy use without forming ruts. These design elements have been incorporated into the preferred alternative.

Conclusion

The US 20 Section 2 project will require right-of-way acquisition and a single residential relocation. The project will not disrupt community cohesion, nor will it create a physical barrier within the community. These adverse impacts, when considered in the context of the total US 20 improvement project from SR 15 to approximately 315 feet west of SR 13, are not anticipated to disproportionately affect Amish populations in the project area. Furthermore, the design of the preferred alternative for both Section 1 and Section 2 includes wider shoulders and sinuous rumble strips to accommodate buggy traffic. These design elements will improve safety for all roadway users, as well as provide additional mobility benefits for Amish communities. As a result of these considerations, the US 20 project will not result in disproportionately high and adverse impacts to Amish populations.

The census data sheets, map, and calculations can be found in Appendix I, pages 92 to 98. No further environmental justice analysis is warranted.

Relocation of People, Businesses or Farms:

- Will the proposed action result in the relocation of people, businesses or farms?
- Is a Business Information Survey (BIS) required?
- Is a Conceptual Stage Relocation Study (CSRS) required?
- Has utility relocation coordination been initiated for this project?

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

Number of relocations: Residences: 1 Businesses: 0 Farms: 0 Other: 0

The proposed project is anticipated to require one residential relocation (Appendix B, page 6). Avoidance and minimization measures will be further explored as design progresses. The acquisition and relocation program will be conducted in accordance with 49 CFR 24 of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as amended. Relocation resources are available to all residential and business relocatees without discrimination. No person displaced by this project will be required to move from a displaced dwelling unless comparable replacement housing is available to that person.

Utility coordination has been initiated and is ongoing. Based on a review of the RFI approved on March 31, 2020, there are two pipelines in the 0.5-mile search radius. One pipeline, owned by Northern Indiana Public Service Co. (NIPSCO), crosses the project 0.18 mile south of the US 20 and CR 16 intersection (see Appendix E, page 9). Additional utilities adjacent to and within the project area include: municipal sewer and water (Town of Middlebury), fiber optic lines (AT&T, CenturyLink, Community Fiber Network, RVP Fiber Company, and possibly Elkhart Fiber), and electric poles and transmission lines (NIPSCO). Utility relocation work plans are in preparation and will be executed. All utility relocations will be completed prior to construction.

Impacts to residential units, businesses, farms, and other properties for US 20 Section 1 and Section 2 are summarized in the Impact Summary Table in Appendix I, page 1.

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Hazardous Materials and Regulated Substances:

Documentation

Hazardous Materials & Regulated Substances (Mark all that apply)

Red Flag Investigation

Phase I Environmental Site Assessment (Phase I ESA)

Phase II Environmental Site Assessment (Phase II ESA)

Design/Specifications for Remediation required?

X
X
X

	No	Yes/ Date
ES Review of Investigations		RFI - Yes/March 31, 2020 Phase II ESA – 1/12/2021

Based on a review of GIS and available public records, a RFI was completed on March 31, 2020 by HNTB (Appendix E, pages 1 to 14). Three RCRA Generator/TSD sites, two Underground Storage Tank (UST) sites, one Voluntary Remediation Program site, one Solid Waste Landfill, one Leaking Underground Storage Tank (LUST) site, one Institutional Controls site, and seven National Pollutant Discharge Elimination System (NPDES) facilities are located within 0.5 mile of the project area. One LUST site and one NPDES facility are located in the project area and could potentially impact this project.

- Leaking Underground Storage (LUST) Sites: One (1) LUST is located within the 0.5 mile search radius. Long Convenience, 995 US Highway 20, AI # 33707, is the site of a gas station. According to the IDEM Virtual File Cabinet (VFC), IDEM issued a No Further Action Approval Determination Pursuant on November 15, 2007. Low levels of soil contamination may still remain on the site in the south west portion of the canopy. If excavation occurs in this area, that petroleum contamination may be encountered. Proper handling, removal, and disposal of soil and/or groundwater may be necessary.
- NPDES Facilities: BP Gas Station and Convenience Store is adjacent to the southern portion of the project area. BP Gas Station and Convenience Store’s permit is effective until October 28, 201. Coordination with BP Gas Station and Convenience Store will occur during final design.

During geotechnical investigations by Earth Exploration, Inc. (EEI), field staff collected soil samples in the range of 7 to 11.5 feet below existing grade at one of the borings in the area of the intersection of US 20 and Wayne Street (CR16) Street that exhibited a suspected petroleum odor. Review of available IDEM VFC and UST database records and available aerial photographs from the area completed by EEI indicated that a large apparent commercial building south of US 20 and east of US 16 existed in 1998 and was removed by 2003. INDOT Site Assessment & Management (SAM) was notified of these findings and conducted research in the area. INDOT SAM found that the removed building was a Recreational Vehicle (RV) frame manufacturer and that several gas stations were located on the east side of US 20 in this area as late as the early 1970s. INDOT SAM requested soil and groundwater investigation for both petroleum and chlorinated solvents related compounds to a maximum depth of 10 feet below the existing ground surface.

A Phase II Environmental Site Assessment (ESA) was completed by Terracon Consultants, Inc. and approved by INDOT SAM on January 12, 2021 (Appendix E, pages 16 to 32). The Phase II ESA concluded that soil and groundwater associated with the site are not thought to pose a risk to worker health during construction activities. If dewatering is required during construction activities, water may be able to be discharged to sanitary sewers pending agreement from the appropriate regulatory body in the area. Additionally, excess soil and groundwater produced as investigation derived waste or during the construction of the proposed road improvements can be classified as nonhazardous waste and disposed of accordingly.

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Permits:

	<u>Likely Required</u>
Army Corps of Engineers (404/Section10 Permit)	
Individual Permit (IP)	<input type="checkbox"/>
Nationwide Permit (NWP)	<input type="checkbox"/>
Regional General Permit (RGP)	<input checked="" type="checkbox"/>
Pre-Construction Notification (PCN)	<input type="checkbox"/>
Other	<input type="checkbox"/>
Wetland Mitigation required	<input type="checkbox"/>
Stream Mitigation required	<input type="checkbox"/>
IDEM	
Section 401 WQC	<input checked="" type="checkbox"/>
Isolated Wetlands determination	<input type="checkbox"/>
Rule 5	<input checked="" type="checkbox"/>
Other	<input type="checkbox"/>
Wetland Mitigation required	<input type="checkbox"/>
Stream Mitigation required	<input type="checkbox"/>
IDNR	
Construction in a Floodway	<input type="checkbox"/>
Navigable Waterway Permit	<input type="checkbox"/>
Lake Preservation Permit	<input type="checkbox"/>
Other	<input type="checkbox"/>
Mitigation Required	<input type="checkbox"/>
US Coast Guard Section 9 Bridge Permit	
Others (Please discuss in the remarks box below)	
	<input type="checkbox"/>

Based on the preliminary permit determination from INDOT EWPO, received on November 18, 2020 (Appendix F, page 11 to 12), a USACE Regional General Permit (RGP) and IDEM Individual Water Quality Certification (WQC) will likely be required due to impacts to Wetland A and Pond A. An IDEM Rule 5 permit will also be required. As noted above, the permitting process for US 20 Section 1 is underway. As a result, coordination with USACE and IDEM will continue through project development to determine the appropriate permitting process of US 20 Section 2.

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 permits 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.

Commitments:

The environmental commitments in the CE-4 approved for the US 20 Section 1 project document still apply to the US 20 Section 1 Project (Des. No. 1600517), the US 20 Section 1 building demolition contract (Des. No. 1802043), and the US 20 Section 1 tree clearing contract (Des. No. 1802045). The following environmental commitments identified during the development of US 20 Section 2 are applicable to Des. No. 1900095 (Lead Des. No.), Des. No. 2000038 (Pumpkinvine Nature Trail), and the Des. No. for the tree clearing contract (To Be Determined).

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

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3. To minimize impacts to the Blanding's Turtle, an entrenched silt fence should be placed between the road and the adjacent wetlands near Spring Valley Road and should remain in place through the duration of the project. If these wetlands are to be filled in their entirety, then they should be live-trapped for turtles prior to filling, and any turtles captured should be relocated to nearby areas of suitable habitat. Removal of any state endangered species and eastern box turtles would require a permit issued by the Division of Fish and Wildlife. (IDNR – DFW)
4. Coordination with BP Gas Station and Convenience Store, located at 995 US 20, Middlebury, IN 46540, will occur prior to the projects Ready for Contracts (RFC) date. (INDOT SAM)
5. The project will be designed with wider shoulders and sinuous rumble strips to accommodate buggy traffic. (INDOT)
6. It is recommended that during construction appropriate safeguards are in place to ensure that ground water is not endangered. Such safeguards would include securing adequate precautions for fueling/servicing large equipment, using “green infrastructure” practices where possible, and developing contingency plans to handle the release of any hazardous materials. (US EPA)
7. In the event the proposed detour route for the Pumpkinvine Natural Trail becomes infeasible during final design, the coordination with the OWJs will be re-initiated and a suitable alternative detour route will be developed for OWJ concurrence. (INDOT ESD)
8. USFWS Bridge/Structure Assessment shall take place no earlier than two (2) years prior to the start of construction. If construction will begin after October 14, 2021, an inspection of the structure by a qualified individual, must be performed. Inspection of the structure should check for presence of bats/bat indicators and/or presence of birds. The results of the inspection must indicate no signs of bats or birds. If signs of bats or birds are documented during this inspection, the INDOT District Environmental Manager must be contacted immediately. (INDOT ESD)
9. 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 Avoidance and Minimization Measures. (USFWS)
10. Tree Removal AMM 1: Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal. (USFWS)
11. Tree Removal AMM 2: Apply time of year restrictions for tree removal when bats are not likely to be present, or limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/rail surface and outside of documented roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed. Tree removal may not occur during the active season for bats, which extends from April 1st through September 30th. (USFWS)
12. 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)
13. Tree Removal AMM 4: Do not remove documented Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 miles of roosts, or documented foraging habitat any time of year. (USFWS)
14. Lighting AMM 1: Direct temporary lighting away from suitable habitat during the active season. (USFWS)
15. Lighting AMM2: When installing new or replacing existing permanent lights, use downward-facing, full cut-off lens lights (with same intensity or less for replacement lighting); or for those

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transportation agencies using the BUG system developed by the Illuminating Engineering Society, be as close to 0 for all three ratings with a priority of "uplight" of 0 and "backlight" as low as practicable. (USFWS)

For Further Consideration:

16. 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" diameter at breast height (dbh) or greater (5:1 mitigation based on the number of large trees). (IDNR – DFW)
17. Do not cut any trees suitable for Indiana bat or Northern Long-eared bat roosting (greater than 3 inches dbh, living or dead) from April 1 through September 30. (IDNR-DFW)
18. Evaluate the feasibility of removing the utility poles and installing underground conduit to house the utilities. This would decrease the frequency of power outages, provide for safer travel of vehicles, and improve the aesthetics of our community. (Essenhaus Inc.)
19. The inclusion of additional infrastructure to completely connect Spring Valley Neighborhood with the Ridge Run Trail will be considered during the final design of the project. (Town of Middlebury)
20. A school zone speed limit is being considered to reduce the enforceable speed limit during school days. (Middlebury School District)

Early Coordination:

Early coordination for US 20 Section 2 was initiated on November 20, 2019 with federal, state, and local agencies (Appendix C, pages 1 to 3).

Agency	Response Received	Appendix Location
IDNR – Division of Fish and Wildlife	December 19, 2019	Appendix C, pages 19 to 20
IDNR – Division of Outdoor Recreation	No response received	N/A
INDOT– Public Involvement Office	No response received	N/A
INDOT – Ft. Wayne District	December 9, 2019	Appendix C, page 5
INDOT – Central Office	November 22, 2019	Appendix C, page 4
INDOT – Utilities and Railroad	No response received	N/A
USACE – Detroit District	No response received	N/A
Indiana Geological Survey (IGS)	November 9, 2019	Appendix C, pages 30 to 32
USEPA, Ground Water and Drinking Water Branch	December 10, 2019	Appendix C, page 8
USDA-NRCS	November 27, 2019	Appendix C, page 6

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USFWS, Chesterton Field Office	November 27, 2019	Appendix C, page 7
Middlebury Town Manager via the Middlebury Town Council Response	December 16, 2019	Appendix C, page 14 to 15
IDEM Auto Response	November 9, 2020	Appendix C, pages 23 to 29
Elkhart County Surveyor	No response received	N/A
Elkhart County Sheriff	No response received	N/A
Elkhart County Highway Department	No response received	N/A
Middlebury Community Schools	December 16, 2019	Appendix C, pages 9 to 10
Essenhaus, Inc.	January 2, 2020	Appendix C, page 21
US Department of Housing and Urban Development	No response received	N/A
Elkhart County Soil and Water Conservation District	No response received	N/A
Greater Elkhart County Storm Water Partnership	No response received	N/A
Elkhart County Planning and Development	No response received	N/A
Middlebury Parks and Recreation Department	No response received	N/A
Amish Safety Committee	No response received	N/A
Middlebury Water Department	No response received	N/A
Elkhart County Emergency Management	No response received	N/A
Pathway Assembly of God	No response received	N/A
Crystal Valley Missionary Church	No response received	N/A
Michiana Area Council of Governments (MACOG)	No response received	N/A
Northridge High School	No response received	N/A

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Conclusion:

This AI document was prepared to analyze and document the potential impacts associated with the additional roadway improvements proposed on US 20 from approximately 565 feet east of CR 35 to approximately 315 west of SR 13 (Des. No. 1900095; referred to as Section 2). The impacts documented in this AI are considered additive to those contained the approved CE-4 prepared for the US 20 Section 1 Project (Des. No. 1600517). In total, US 20 Section 1 and Section 2 will improve US 20 from SR 15 to approximately 315 feet west of SR 13.

The additional roadway improvements in US 20 Section 2 will result in increases to right-of way acquisition, open water impacts, wetland impacts, terrestrial habitat impacts, Section 4(f) impacts, and an additional residential relocation. There are no additional adverse impacts to environmental features or communities of concern other than those outlined in this document. Unless specifically discussed and addressed in this AI, all information provided, and statements made in the approved CE-4 for US 20 Section 1 remain valid. Additionally, all environmental commitments identified in the approved CE-4 for US 20 Section 1 remain valid for US 20 Section 1 Project (Des. No. 1600517), the US 20 Section 1 building demolition contract (Des. No. 1802043), and the US 20 Section 1 tree clearing contract (Des. No. 1802045). The environmental commitments identified in this AI are applicable to No. 1900095 (Lead Des. No.), Des. No. 2000038 (Pumpkinvine Nature Trail), and the Des. No. for the tree clearing contract (To Be Determined).

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Appendix A: INDOT Supporting Documentation

Categorical Exclusion Level Thresholds

This CE threshold table includes all impacts from US 20 Section 1 and US 20 Section 2.

	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-way³	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 <ul style="list-style-type: none"> • District Env. Supervisor • Env. Services Division • FHWA 	Concurrence by INDOT District Environmental or Environmental Services	Yes	Yes	Yes Yes	Yes Yes Yes

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

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

³Permanent and/or temporary right-of-way.

⁴AMMs = Avoidance and Mitigation Measures.

⁵AMMs 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”.

⁶Potential for causing a disproportionately high and adverse impact.

⁷Hot Spot Analysis and/or MSAT Quantitative Emission Analysis.

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

Appendix B: Graphics

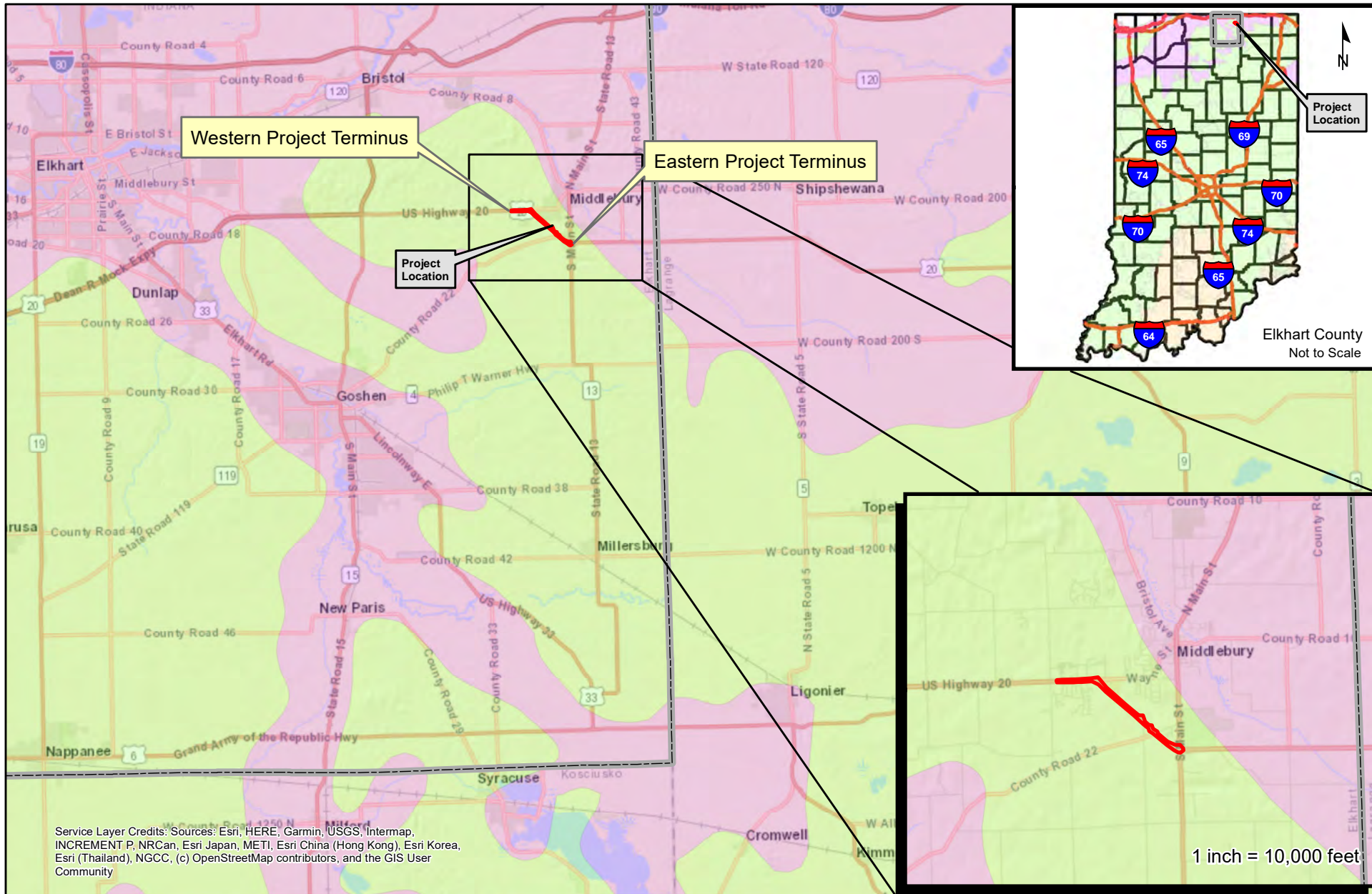
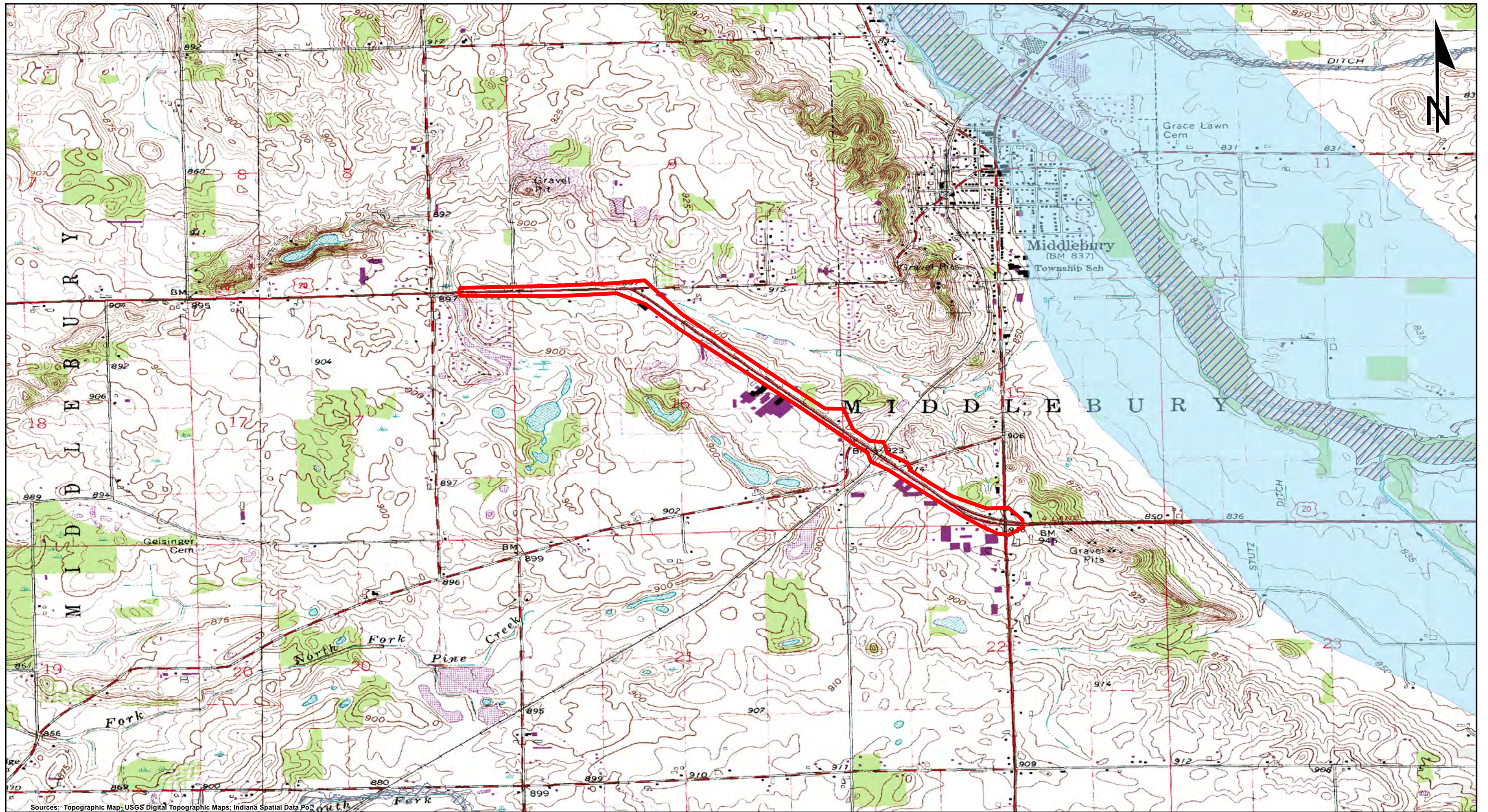


Figure 1: Project Location Map
 US 20 Improvement Project - Section 2
 CR 35 to SR 13 Added Travel Lanes
 Elkhart County, Indiana

Des. No. 1900095
 1 inch = 4 miles

HNTB
 Graphics created by HNTB Corporation (2020)



- Investigated Area
- 100 Year Floodplains
- Sole Source Aquifer

0 1,000 2,000
 Feet

Figure 2: Topographic and Floodplain Map

US 20 Improvement Project - Section 2
 CR 35 to SR 13 Added Travel Lanes
 Elkhart County, Indiana

Des. No. 1900095

1 inch = 2,000 feet

HNTB

Graphics created by HNTB Corporation (2020)



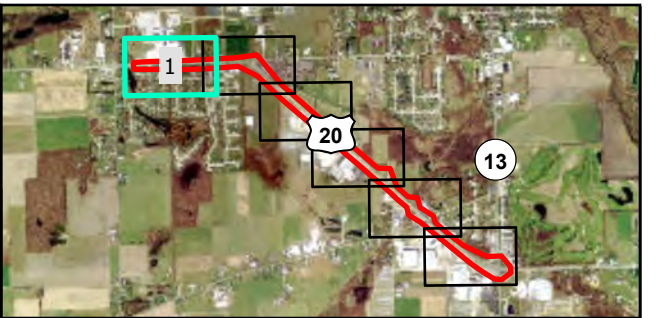
Design Features — Proposed ROW - - - Temporary ROW — Construction Limits - - - Sidewalk — Edge of Pavement — Lane Line ✕ Noise Measurements		Local Resources ◻ Parcel Boundary — Pipeline — Trails		Hazardous Material Concerns ◻ Landfill Boundaries — NPDES Facilities — NPDES Pipe Locations — RCRA Generator/TSD — Voluntary Remediation Program — Underground Storage Tank — Leaking Underground Storage Tank		Water Resources — Managed Lands — School — Religious Facility — Recreation Facility — Delineated Ponds — Delineated Wetlands		Land Use Class Codes Agr Agricultural Res Residential Com Commercial Exp Exempt Ind Industrial Min Mineral SLA State/Local Assessed		Brownfield ✱	
---	--	---	--	--	--	---	--	---	--	------------------------	--

Figure 3: Environmental Features Map
 US 20 Improvement Project - Section 2
 CR 35 to SR 13 Added Travel Lanes
 Elkhart County, Indiana

Des. No. 1900095 1 inch = 200 ft

0 100 200
 Feet

HNTB
 Graphics created by HNTB Corporation (2020)





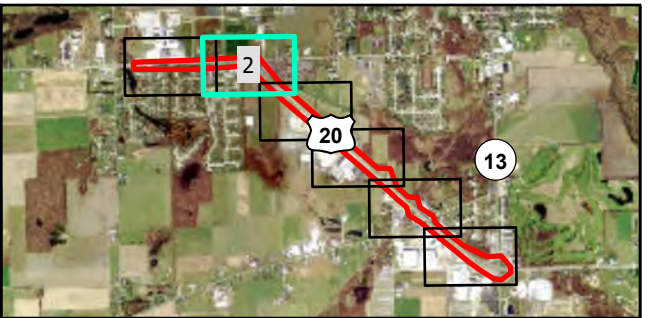
Design Features Proposed ROW Temporary ROW Construction Limits Sidewalk Edge of Pavement Lane Line Noise Measurements		Local Resources Tree clearing area Potential Residential Relocation Parcel Boundary Pipeline Trails		Hazardous Material Concerns Landfill Boundaries NPDES Facilities NPDES Pipe Locations RCRA Generator/TSD Voluntary Remediation Program Underground Storage Tank Leaking Underground Storage Tank		Water Resources Delineated Ponds Delineated Wetlands		Land Use Class Codes Brownfield Agr Agricultural Res Residential Com Commercial Exp Exempt Ind Industrial Min Mineral SLA State/Local Assessed	
Managed Lands School Religious Facility Recreation Facility									

Figure 3: Environmental Features Map
 US 20 Improvement Project - Section 2
 CR 35 to SR 13 Added Travel Lanes
 Elkhart County, Indiana

Des. No. 1900095 1 inch = 200 ft

0 100 200
 Feet

HNTB
 Graphics created by HNTB Corporation (2020)





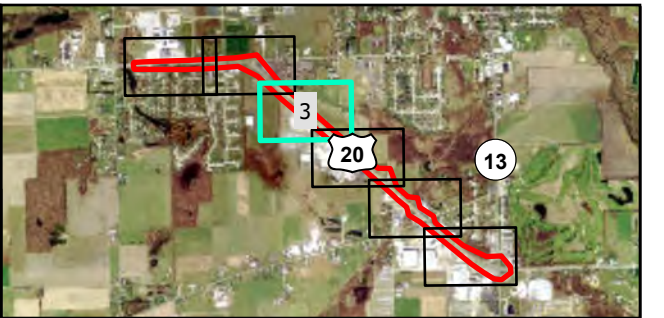
Design Features Proposed ROW Temporary ROW Construction Limits Sidewalk Edge of Pavement Lane Line Noise Measurements	Tree clearing area Potential Residential Relocation Local Resources Parcel Boundary Pipeline Trails Water Resources Delineated Ponds Delineated Wetlands	Hazardous Material Concerns Landfill Boundaries NPDES Facilities NPDES Pipe Locations RCRA Generator/TSD Voluntary Remediation Program Underground Storage Tank Leaking Underground Storage Tank	Brownfield Land Use Class Codes Agr Agricultural Res Residential Com Commercial Exp Exempt Ind Industrial Min Mineral SLA State/Local Assessed
---	--	--	---

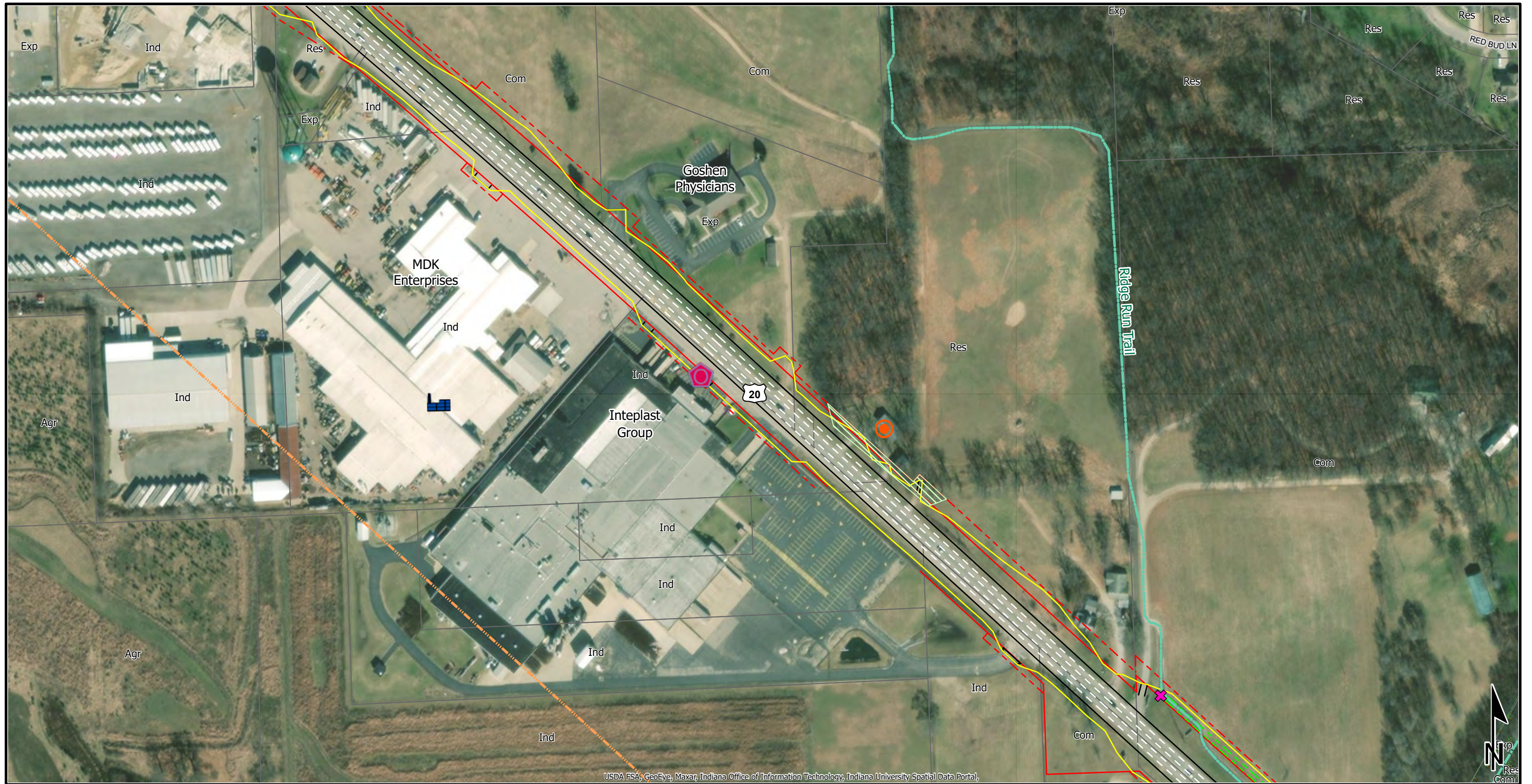
Figure 3: Environmental Features Map
 US 20 Improvement Project - Section 2
 CR 35 to SR 13 Added Travel Lanes
 Elkhart County, Indiana

Des. No. 1900095 1 inch = 200 ft

0 100 200
 Feet

HNTB
 Graphics created by HNTB Corporation (2020)





USDA FSA, GeoEye, Maxar, Indiana Office of Information Technology, Indiana University Spatial Data Portal,

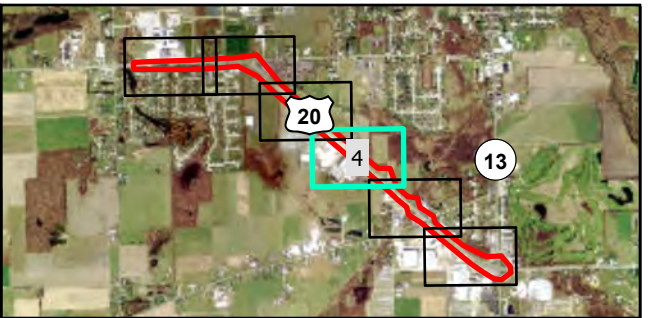
Design Features - Proposed ROW - Temporary ROW - Construction Limits - Sidewalk - Edge of Pavement - Lane Line - Noise Measurements		Local Resources - Parcel Boundary - Pipeline - Trails		Managed Lands - School - Religious Facility - Recreation Facility		Water Resources - Delineated Ponds - Delineated Wetlands		Hazardous Material Concerns - Landfill Boundaries - NPDES Facilities - NPDES Pipe Locations - RCRA Generator/TSD - Voluntary Remediation Program - Underground Storage Tank - Leaking Underground Storage Tank		Land Use Class Codes Agr Agricultural Res Residential Com Commercial Exp Exempt Ind Industrial Min Mineral SLA State/Local Assessed		Brownfield	
---	--	---	--	---	--	---	--	--	--	---	--	-------------------	--

Figure 3: Environmental Features Map
 US 20 Improvement Project - Section 2
 CR 35 to SR 13 Added Travel Lanes
 Elkhart County, Indiana

Des. No. 1900095 1 inch = 200 ft

0 100 200
 Feet

HNTB
 Graphics created by HNTB Corporation (2020)





USDA FSA, GeoEye, Maxar, Indiana Office of Information Technology, Indiana University Spatial Data Portal,

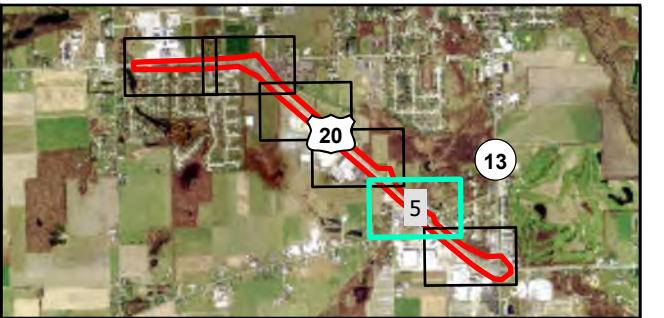
Design Features — Proposed ROW - - Temporary ROW — Construction Limits - - Sidewalk — Edge of Pavement — Lane Line ✕ Noise Measurements		Local Resources ◻ Parcel Boundary — Pipeline — Trails		Hazardous Material Concerns ◻ Landfill Boundaries NPDES Facilities NPDES Pipe Locations RCRA Generator/TSD Voluntary Remediation Program Underground Storage Tank Leaking Underground Storage Tank		Water Resources Delineated Ponds Delineated Wetlands		Land Use Class Codes Agr Agricultural Res Residential Com Commercial Exp Exempt Ind Industrial Min Mineral SLA State/Local Assessed		Managed Lands School Religious Facility Recreation Facility		Other Features Tree clearing area Potential Residential Relocation Brownfield	
---	--	---	--	--	--	---	--	---	--	---	--	---	--

Figure 3: Environmental Features Map
 US 20 Improvement Project - Section 2
 CR 35 to SR 13 Added Travel Lanes
 Elkhart County, Indiana

Des. No. 1900095 1 inch = 200 ft

0 100 200
 Feet

HNTB
 Graphics created by HNTB Corporation (2020)



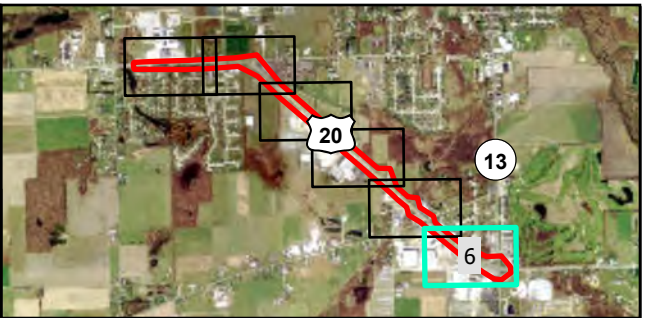


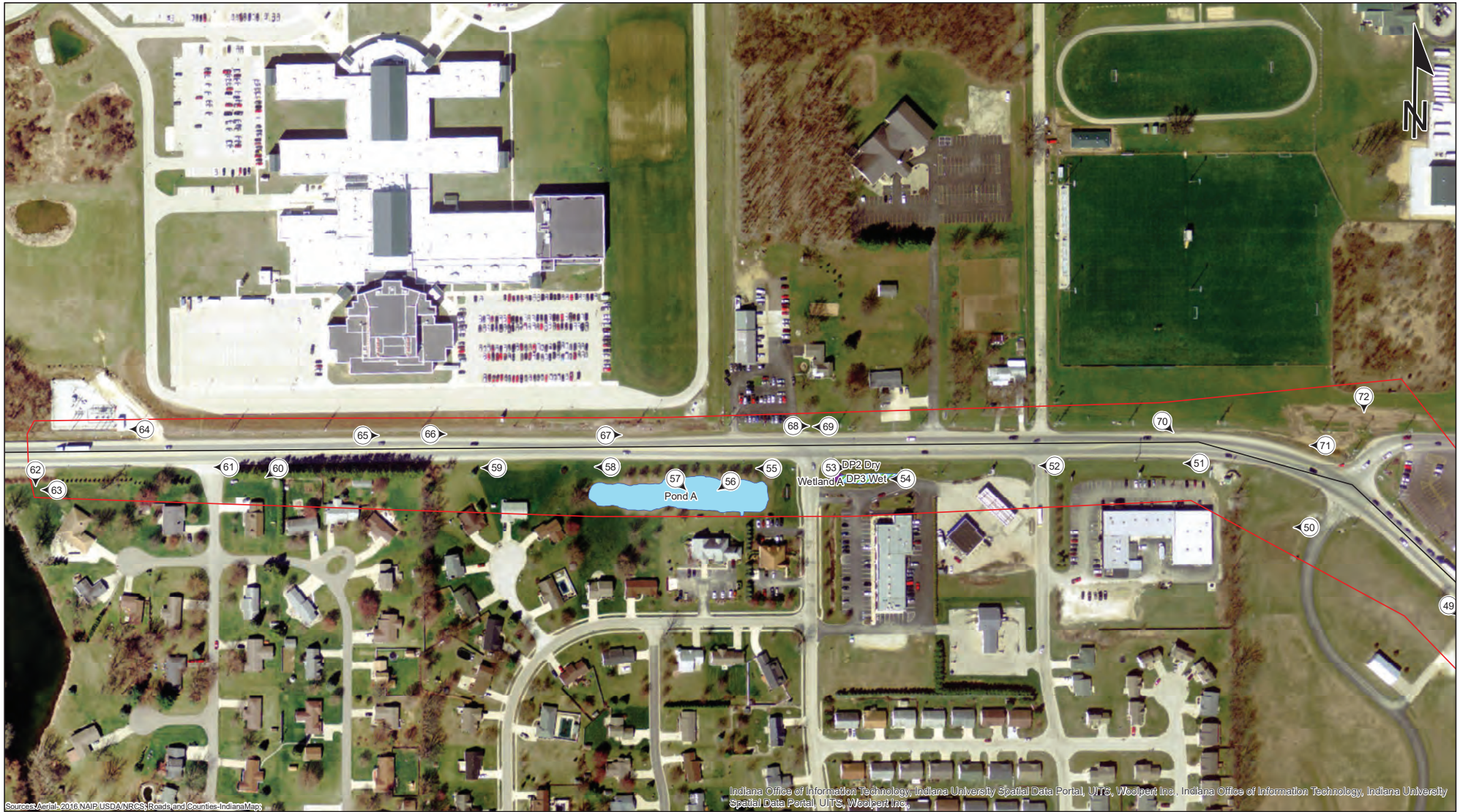
USDA FSA, GeoEye, Maxar, Indiana Office of Information Technology, Indiana University Spatial Data Portal,

Design Features Proposed ROW Temporary ROW Construction Limits Sidewalk Edge of Pavement Lane Line Noise Measurements		Local Resources Tree clearing area Potential Residential Relocation Parcel Boundary Pipeline Trails		Hazardous Material Concerns Landfill Boundaries NPDES Facilities NPDES Pipe Locations RCRA Generator/TSD Voluntary Remediation Program Underground Storage Tank Leaking Underground Storage Tank		Land Use Class Codes Brownfield Agr Agricultural Res Residential Com Commercial Exp Exempt Ind Industrial Min Mineral SLA State/Local Assessed		Water Resources Managed Lands School Religious Facility Recreation Facility Delineated Ponds Delineated Wetlands	
---	--	---	--	--	--	---	--	---	--

Figure 3: Environmental Features Map
 US 20 Improvement Project - Section 2
 CR 35 to SR 13 Added Travel Lanes
 Elkhart County, Indiana

Des. No. 1900095	1 inch = 200 ft
Graphics created by HNTB Corporation (2020)	





Sources: Aerial-2016 NAIP, USDA/NRCS, Roads and Counties-IndianaMap

Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc., Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

- Investigated Area
- Photo Locations
- Pond
- Data Points
- Wetland

0 100 200
 Feet

Des. No. 1900095
 1 inch = 200 feet

Photo Location Map
 U.S. 20 - SR 13 to CR 35, Section 2
 Added Travel Lanes Elkhart County, Indiana

HNTB

Graphics created by HNTB Corporation (2019)



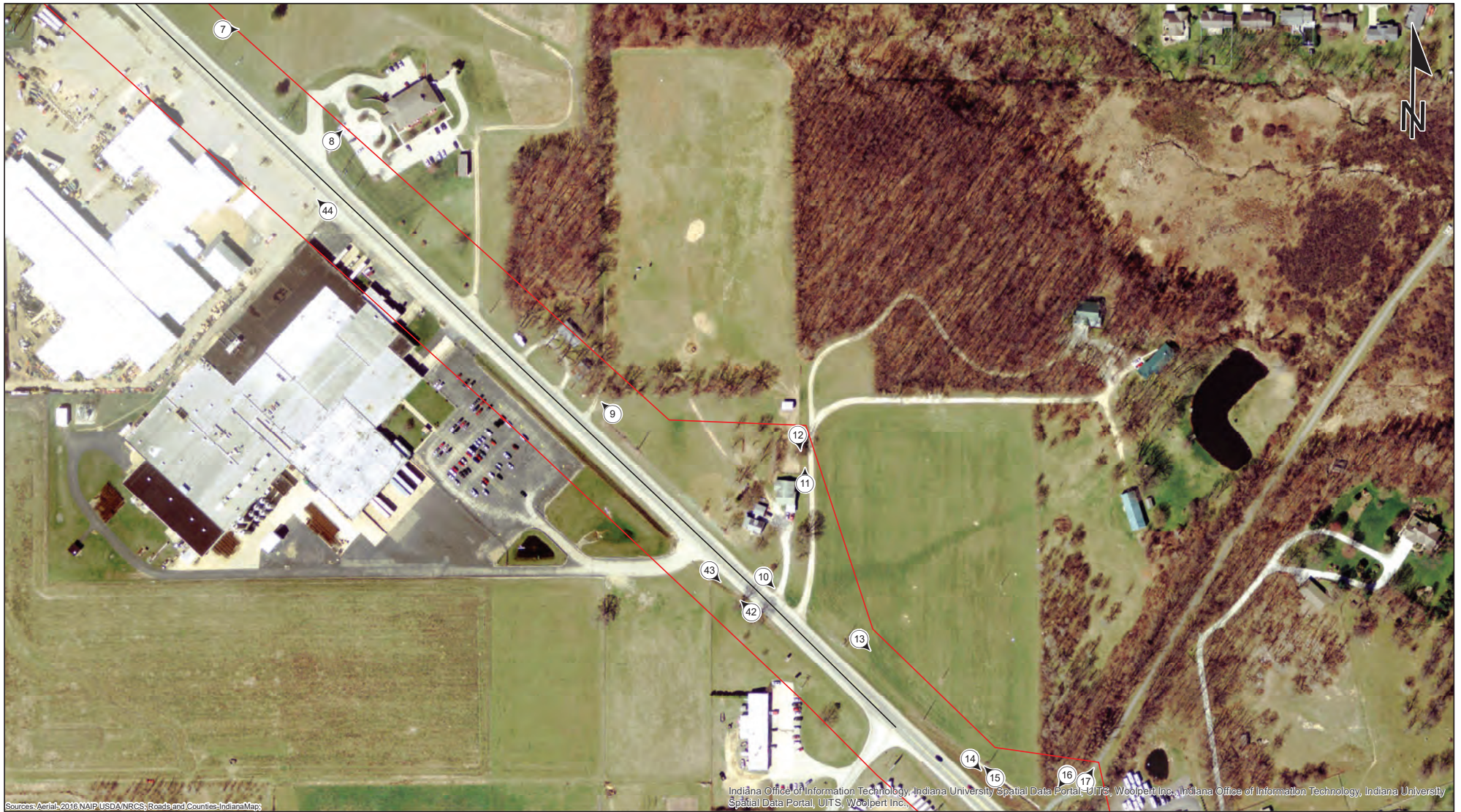
- Investigated Area
- Pond
- Wetland
- Photo Locations
- Data Points

0 100 200
 Feet

Des. No. 1900095
 1 inch = 200 feet

Photo Location Map
 U.S. 20 - SR 13 to CR 35, Section 2
 Added Travel Lanes Elkhart County, Indiana





- Investigated Area
- Photo Locations
- Pond
- Data Points
- Wetland

0 100 200
 Feet

Des. No. 1900095
 1 inch = 200 feet

Photo Location Map
 U.S. 20 - SR 13 to CR 35, Section 2
 Added Travel Lanes Elkhart County, Indiana





- Investigated Area
- Photo Locations
- Pond
- Data Points
- Wetland

0 100 200
 Feet

Des. No. 1900095
 1 inch = 200 feet

Photo Location Map
 U.S. 20 - SR 13 to CR 35, Section 2
 Added Travel Lanes Elkhart County, Indiana

HNTB
 Graphics created by HNTB Corporation (2019)



Sources: Aerial-2016 NAIP, USDA/NRCS, Roads and Counties-IndianaMap;

- Investigated Area
- Photo Locations
- Pond
- Data Points
- Wetland

0 100 200
 Feet

Des. No. 1900095
 1 inch = 200 feet

Photo Location Map
 U.S. 20 - SR 13 to CR 35, Section 2
 Added Travel Lanes Elkhart County, Indiana

HNTB
 Graphics created by HNTB Corporation (2019)



1. Looking north west along roadside US 20



2. Looking east along roadside US 20



3. Looking north west along roadside US 20



4. Looking east along roadside US 20



5. Looking north west along roadside US 20



6. Looking east along roadside US 20



7. Looking north west along roadside US 20



8. Looking east along roadside US 20



9. Looking north west along roadside US 20



10. Looking east along roadside US 20



11. Looking north west along roadside US 20



12. Looking north east along roadside US 20



13. Looking north west from wooded area



14. Looking east from wooded area



15. Looking north west along roadside US 20



16. Looking north east along roadside US 20



17. Looking north west along roadside US 20



18. Looking south east along roadside US 20



19. Looking north down pumpkin vine path



20. Looking south east toward US 20



21. Looking south east along roadside US 20



22. Looking south east down concrete side ditch



23. Looking north west along concrete side ditch



24. Looking east into the wooded area



25. Looking south west at Pumpkinvine Trail



26. Looking north east on Pumpkinvine Trail



27. Looking south east up concrete side ditch



28. Looking north west down concrete side ditch



29. Looking west at culvert



30. Looking south west from culvert



31. Looking north east from culvert



32. Looking north west along roadside US 20



33. Looking east at retention area



34. Looking north west along roadside US 20



35. Looking north west at US 20 and SR 22



36. Looking north west along roadside US 20



37. Looking north west along roadside US 20



38. Looking east at upland area



39. Looking north west along roadside US 20



40. Looking east toward upland wooded area



41. Looking west at wooded area



42. Looking south east at US 20 / SR 13 intersection



43. Looking west along roadside US 20



44. Looking north along roadside US 20



45. Looking south at US 20 / SR 13



46. Looking west along roadside US 20



47. Looking west at US 20 / SR 13 intersection



48. Looking north at US 20 / SR 13 intersection



49. Looking south along side SR 13



50. Looking north at US 20 / SR 13 intersection

PROJECT	DESIGNATION
1900095	1900095
CONTRACT	
R-42379	

INDIANA DEPARTMENT OF TRANSPORTATION



ROAD PLANS

ROUTE: U.S. 20 FROM: RP 103+11 TO: RP 105+64
 PROJECT NO. 1900095 P.E.
 1900095 R/W
 1900095 CONST.

PROJECT DESCRIPTION

ROAD CONSTRUCTION BEGINNING APPROXIMATELY 565' EAST OF THE INTERSECTION OF U.S. 20 AND C.R. 35, AND PROCEEDING EAST ON U.S. 20 TO THE INTERSECTION OF U.S. 20 AND S.R. 13 IN SECTIONS 9, 15, 16 AND 22, TOWNSHIP 37 NORTH, RANGE 7 EAST, MIDDLEBURY TOWNSHIP, ELKHART COUNTY, INDIANA.
 R-7-E

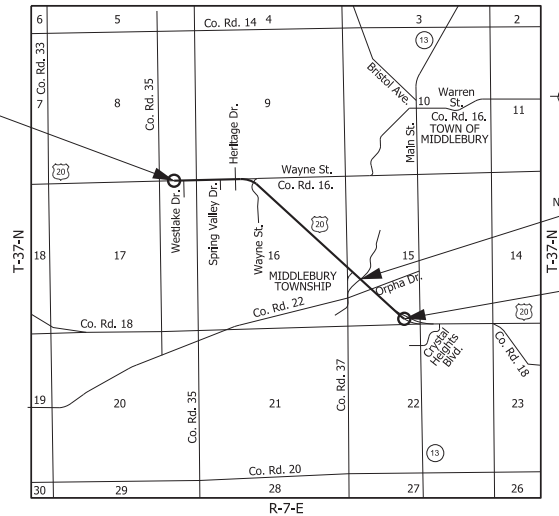
PFC MEETING PLANS
 OCTOBER 21, 2020

BEGIN PROJECT
 PROJECT NO. 1900095
 STA. 569+14.17
 LINE "PR-A"

STR. NO. 101
 Pumpkinvine Trail Tunnel
 Extension, Des. No. 2000038
 Sta. 648+87.19 Line "PR-A"

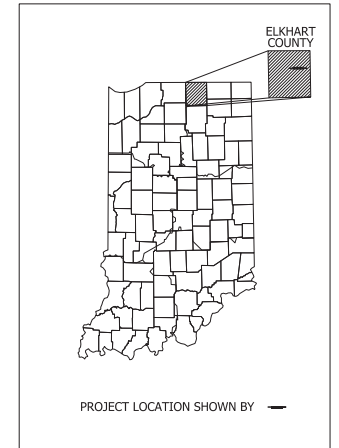
END PROJECT
 PROJECT NO. 1900095
 STA. 672+00.00
 LINE "PR-A-WB"

NOTE TO REVIEWER
 PLEASE SEE
 CORRESPONDENCE FILE
 FOR DOCUMENTATION OF
 DESIGN DECISIONS



LOCATION MAP
 MIDDLEBURY TOWNSHIP,
 ELKHART COUNTY

TRAFFIC DATA U.S. 20	
A.A.D.T. (2031)	17,300 VPD
A.A.D.T. (2044)	21,300 VPD
D.H.V. (2044)	1,800 VPH
DIRECTIONAL DISTRIBUTION	
	48% EB
	25% OF DMT
	27% OF AADT
DESIGN DATA U.S. 20	
DESIGN SPEED	50 MPH
PROJECT DESIGN CRITERIA	NEW RECONSTRUCTION (NON-FREIGHT)
FUNCTIONAL CLASSIFICATION	MINOR ARTERIAL
RURAL/URBAN	URBAN (SUBURBAN)
TERRAIN	LEVEL
ACCESS CONTROL	NONE



LATITUDE: 41°39'50.20" LONGITUDE: 85°43'17.01"

GROSS LENGTH:	1.95	MI.
NET LENGTH:	1.95	MI.
MAX. GRADE:	2.35%	

HYDROLOGIC UNIT CODE: 0405000112

"PRELIMINARY
 NOT FOR CONSTRUCTION"

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



HNTB CORPORATION
 THE HNTB COMPANIES
 INFRASTRUCTURE SOLUTIONS
 111 MONUMENT CIRCLE
 SUITE 1200
 INDIANAPOLIS, IN 46204

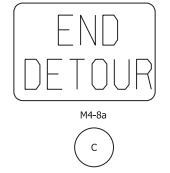
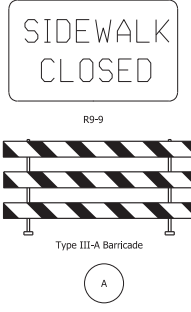
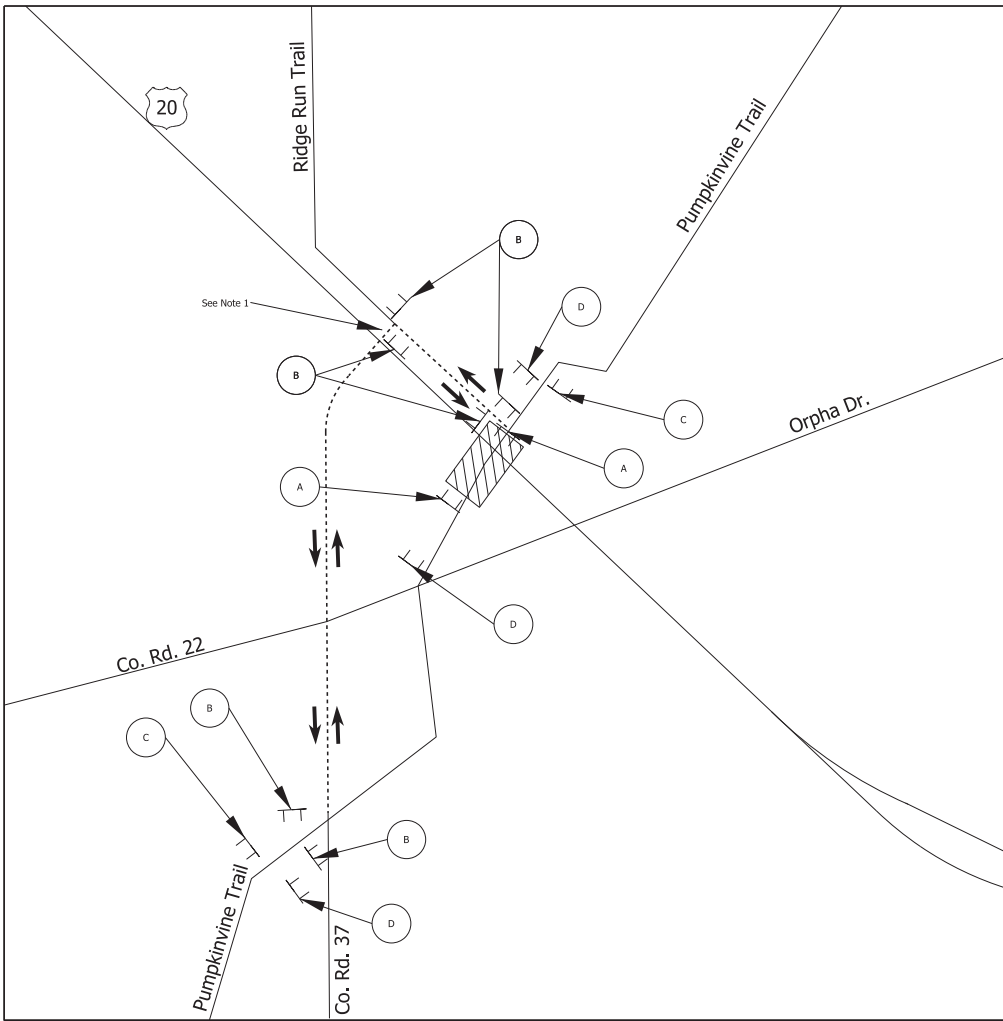
DRAFT
 NOT FOR CONSTRUCTION

PLANS PREPARED BY:	HNTB INDIANA, INC.	(317) 636-4682 PHONE NUMBER
CERTIFIED BY:		DATE
APPROVED FOR LETTING:		DATE

INDIANA DEPARTMENT OF TRANSPORTATION

DESIGNATION	
1900095	
SURVEY BOOK	SHEETS
ELECTRONIC	1 of 161
CONTRACT	PROJECT
R-42379	1900095

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 Plot: I:\2020\1900095\mxd\of-constr.dwg
 Plot: I:\2020\1900095\mxd\of-constr.dwg



NOTES
 ① Temporary mid-block crossing with median refuge

LEGEND

----- Path Detour

▨▨▨▨ Construction Area

DRAFT
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: LMC	DRAWN: LMC	
CHECKED: NSX	CHECKED: NSX	

INDIANA
 DEPARTMENT OF TRANSPORTATION
 MAINTENANCE OF TRAFFIC
 PEDESTRIAN DETOUR

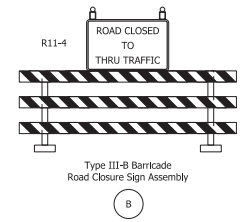
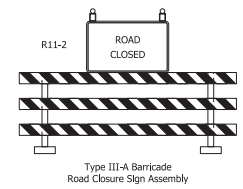
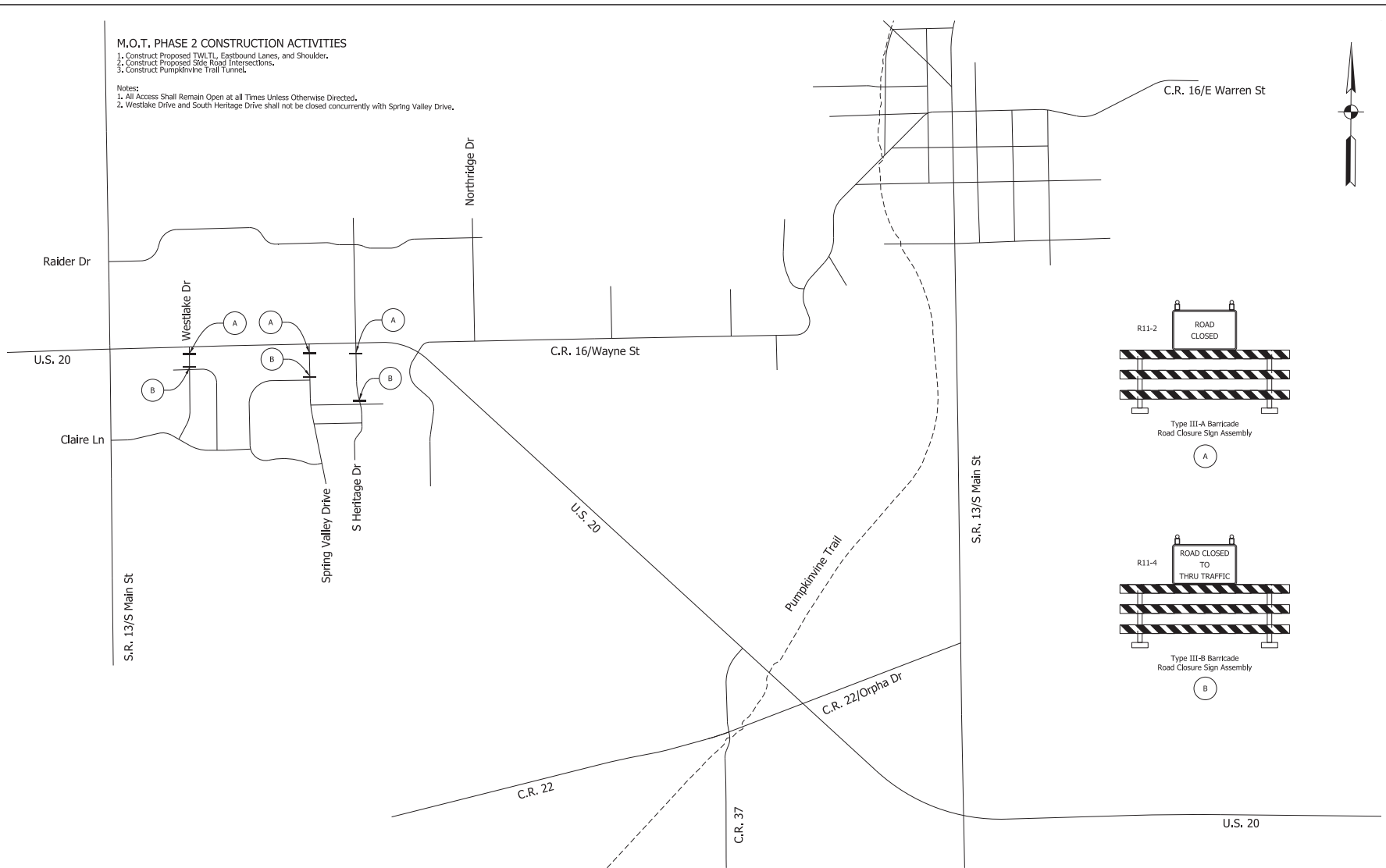
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CUSTOM 0.25	N/A
VERTICAL SCALE	DESIGNATION
N/A	1900095
SURVEY BOOK	SHEETS DTR-01
ELECTRONIC	10 of 151
CONTRACT	PROJECT
R-42279	1900095

M.O.T. PHASE 2 CONSTRUCTION ACTIVITIES

1. Construct Proposed TWLTL, Eastbound Lanes, and Shoulder.
2. Construct Proposed Side Road Intersections.
3. Construct Pumpkinvine Trail Tunnel.

Notes:

1. All Access Shall Remain Open at all Times Unless Otherwise Directed.
2. Westlake Drive and South Heritage Drive shall not be closed concurrently with Spring Valley Drive.



Legend

- ⊥ Typical Sign Standard
- Type III-A or III-B Barricade as Specified

DRAFT
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL		DESIGN ENGINEER	DATE
DESIGNED: LMC	DRAWN: LMC		
CHECKED: NSX	CHECKED: NSX		

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 2 DETOUR

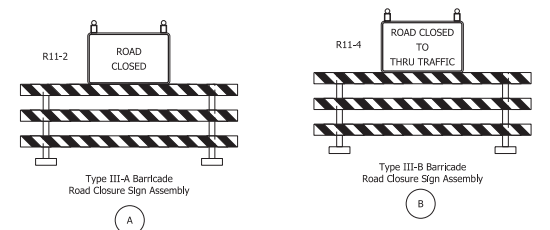
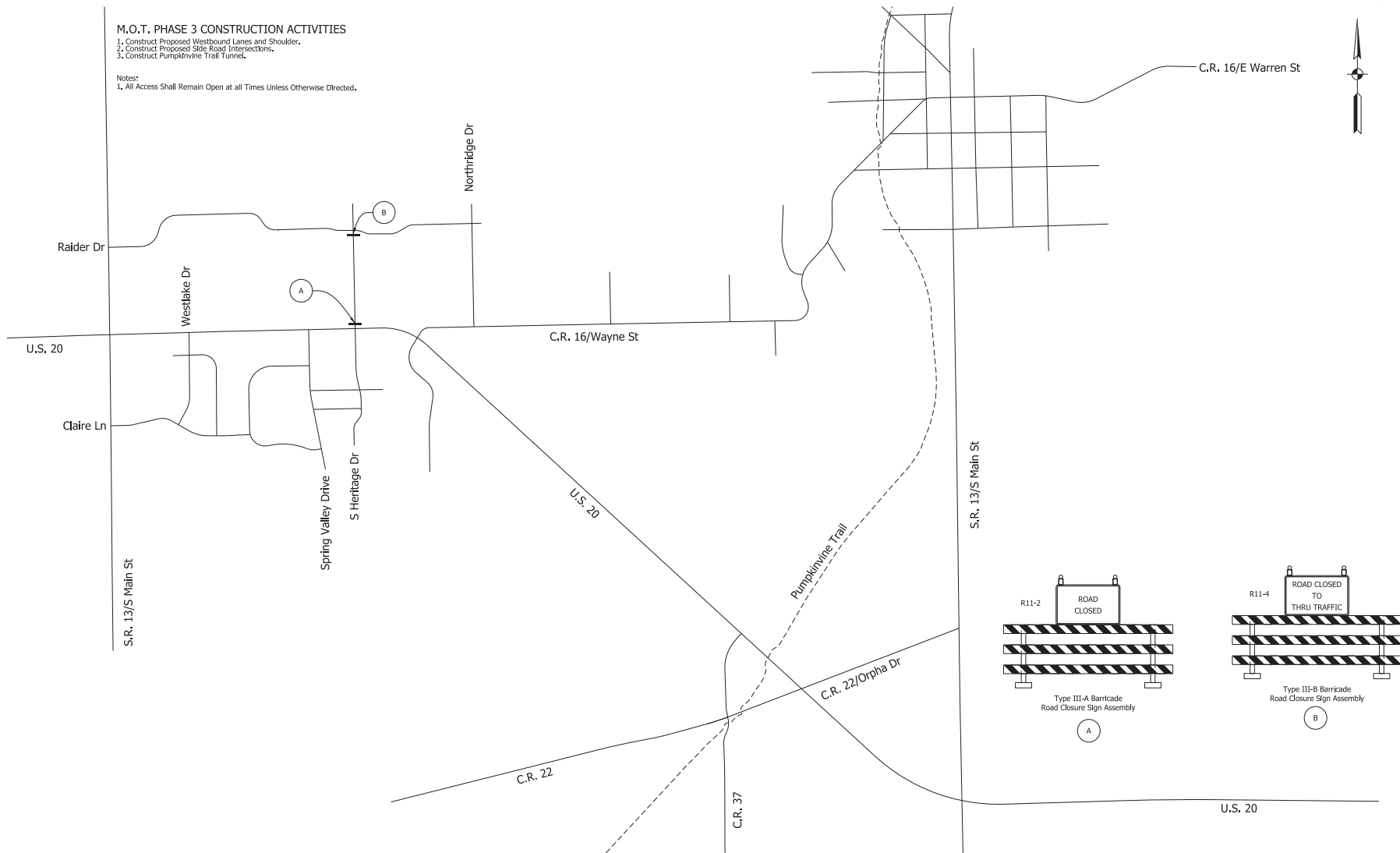
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VERTICAL SCALE	DESIGNATION
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SURVEY BOOK	SHEETS DTR-01
ELECTRONIC	11 of 151
CONTRACT	PROJECT
R-42279	1900955

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 User: j123456789\j123456789
 Plot: 11/15/2022 11:15:22 am
 Plot Device: HP DesignJet 5000

M.O.T. PHASE 3 CONSTRUCTION ACTIVITIES

1. Construct Proposed Westbound Lanes and Shoulder.
2. Construct Proposed Side Road Intersections.
3. Construct Pumpkinvine Trail Tunnel.

Notes:
1. All Access Shall Remain Open at all Times Unless Otherwise Directed.



Legend
 Typical Sign Standard
 Type IIIA or IIIB Barricade As Specified

DRAFT
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: LMC	DRAWING: LMC	
CHECKED: NSX	CHECKED: NSX	

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 3 DETOUR

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	N/A
VERTICAL SCALE	DESIGNATION
N/A	1900955
SURVEY BOOK	SHEETS DTR-02
ELECTRONIC	12 of 151
CONTRACT	PROJECT
R-42279	1900955

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