

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

_____ _____
FHWA Signature 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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not address projected traffic demand, and would not perform as well at improving access to the businesses between Wayne Street (CR 16) and Orpha Drive (CR22). Therefore, Alternative 1 would not meet the purpose and need and was eliminated from consideration.

Alternative 2 – 4-lane with TWLTL (Rural):

Similar to the preferred alternative, this alternative would reconstruct US 20 to a 5-lane section carrying two lanes of traffic in each direction with a TWLTL in the center. Alternative 2 was developed to widen the road to a 5-lane cross section with roadway drainage being accommodated by shoulders and open ditches. As both Alternative 2 and Alternative 3 (preferred alternative) meet the purpose and need of the project, a cursory evaluation of impacts was conducted to quantify the potential impacts associated with Alternative 2 and Alternative 3. The results of this analysis are summarized in the Alternatives Comparison Table (Appendix I, page 32). When compared against Alternative 3, Alternative 2 was found to have greater overall impacts; therefore, it was eliminated from consideration.

Alternative 4 – No Build Alternative:

This alternative would not involve roadway work along US 20. The No Build Alternative does not address the safety concerns, reduce traffic congestion, address geometric deficiencies, and would not address the local community needs and interests discussed above in the Purpose and Need section. If this alternative were selected, traffic congestion would continue to increase throughout the corridor. This alternative does not meet the purpose and need of the project and was therefore dismissed from further consideration.

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

It would not correct existing capacity deficiencies;

It would not correct existing safety hazards;

It would not correct the existing roadway geometric deficiencies;

It would not correct existing deteriorated conditions and maintenance problems; or

It would result in serious impacts to the motoring public and general welfare of the economy.

Other (Describe)

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

Roadway Character:

Functional Classification:	US 20 Rural Minor Arterial			
Current ADT:	17,300	VPD (2024)	Design Year ADT:	21,300
			VPD (2044)	
Design Hour Volume (DHV):	1,800	Truck Percentage (%)	25% of DHV	
Designed Speed (mph):	50	Legal Speed (mph):	45	

Existing

Proposed

Number of Lanes:	2		5	
Type of Lanes:	12 ft. through lanes		12 ft through lanes with a 14 ft. two-way left turn -lane	
Pavement Width:	Avg. 60	ft.	82	ft.
Shoulder Width:	Avg. 10	ft.	10	ft.
Median Width:	N/A	ft.	N/A	ft.
Sidewalk Width:	N/A	ft.	8	ft.

Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

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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	ton	N/A
Height Restrictions:	N/A	ft.	N/A
Curb to Curb Width:	N/A	ft.	N/A
Outside to Outside Width:	166	ft.	228
Shoulder Width:	8	ft.	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?
- Is a temporary roadway proposed?
- Will the project involve the use of a detour or require a ramp closure? (describe in remarks)
 - Provisions will be made for access by local traffic and so posted.
 - Provisions will be made for through-traffic dependent businesses.
 - Provisions will be made to accommodate any local special events or festivals.
- Will the proposed MOT substantially change the environmental consequences of the action?
- Is there substantial controversy associated with the proposed method for MOT?

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lakes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Farm Ponds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Detention Basins	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Storm Water Management Facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other: <u>Pond</u>	X	X	<input type="checkbox"/>

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	<input type="checkbox"/>

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:

	<u>Presence</u>	<u>Impacts</u>	
		<u>Yes</u>	<u>No</u>
Terrestrial Habitat	X	X	
Unique or High Quality Habitat			

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

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

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

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

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			
Public Water System(s)	X	X	
Residential Well(s)			
Source Water Protection Area(s)			
Sole Source Aquifer (SSA)			

If a SSA is present, answer the following:

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

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 checked="" type="checkbox"/>	February 20, 2020	
Archaeological Phase Ic Survey Report	<input type="checkbox"/>		
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

Section 6(f) Property

Yes

No

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"/>
--------------------------	-------------------------------------

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	<input type="checkbox"/>	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

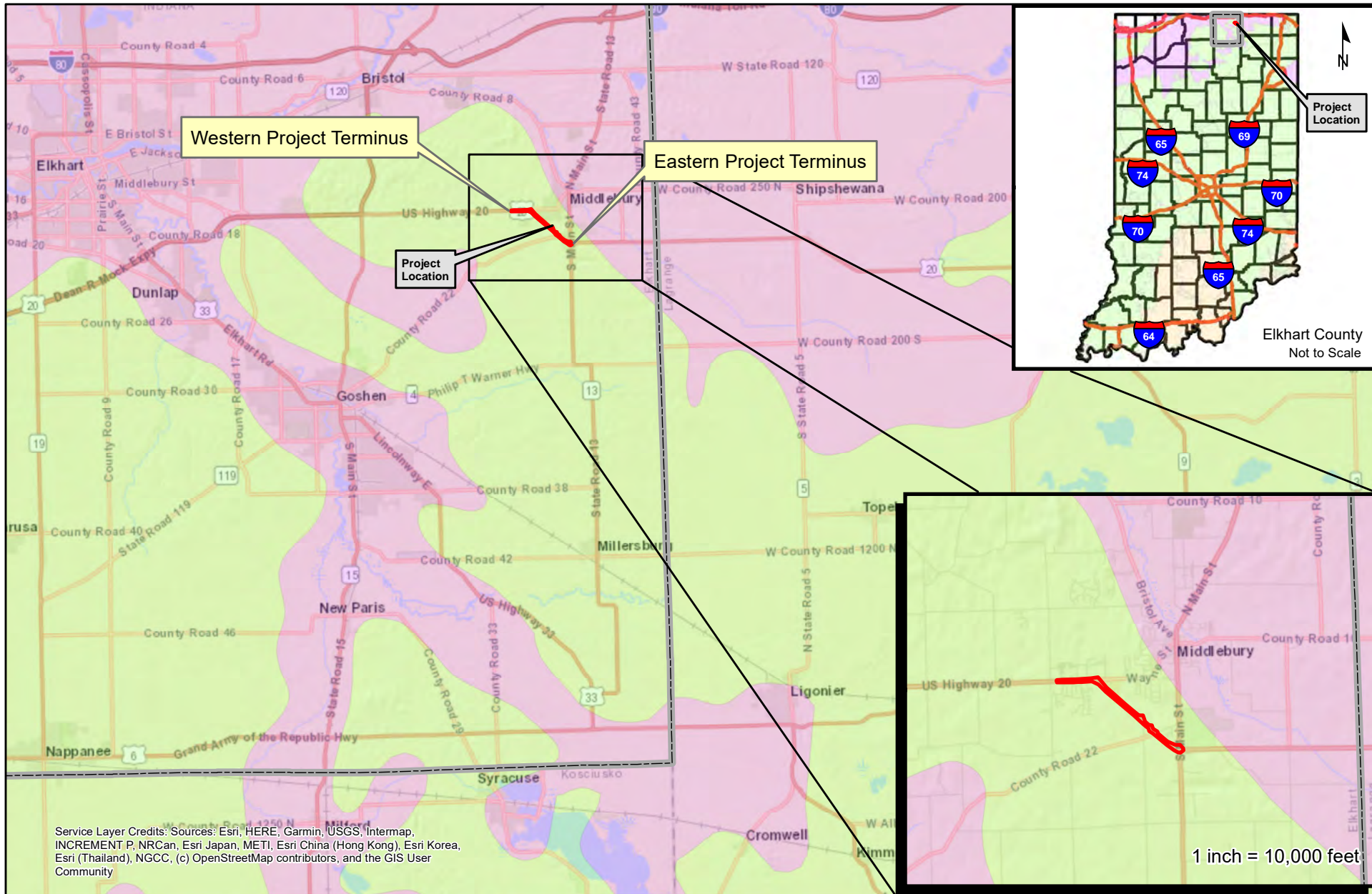
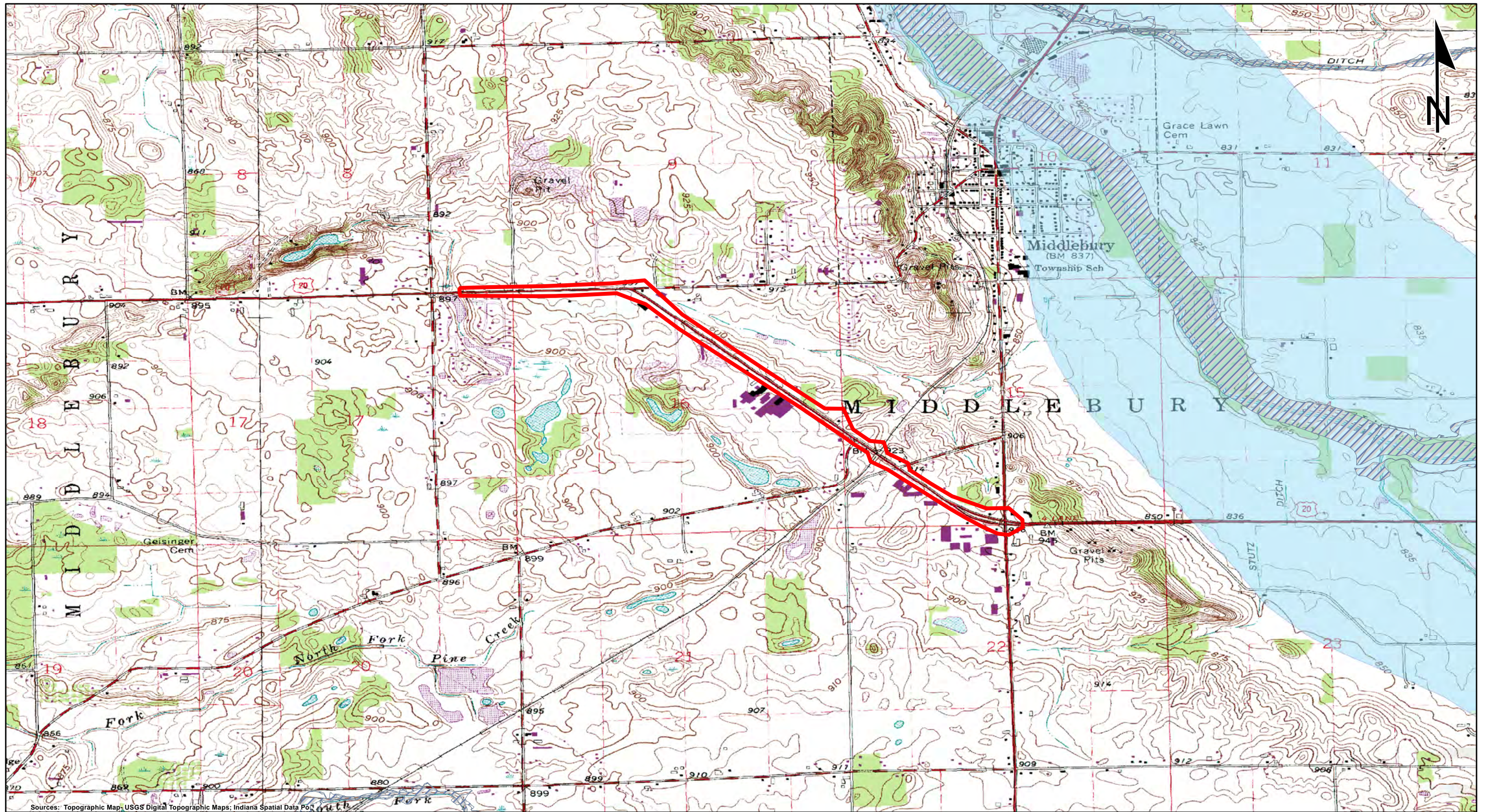


Figure 1: Project Location Map
 US 20 Improvement Project - Section 2
 CR 35 to SR 13 Added Travel Lanes
 Elkhart County, Indiana

Des. No. 1900095
 1 inch = 4 miles

HNTB
 Graphics created by HNTB Corporation (2020)



Sources: Topographic Map, USGS Digital Topographic Maps; Indiana Spatial Data Po

- Investigated Area
- 100 Year Floodplains
- Sole Source Aquifer

0 1,000 2,000
 Feet

Figure 2: Topographic and Floodplain Map

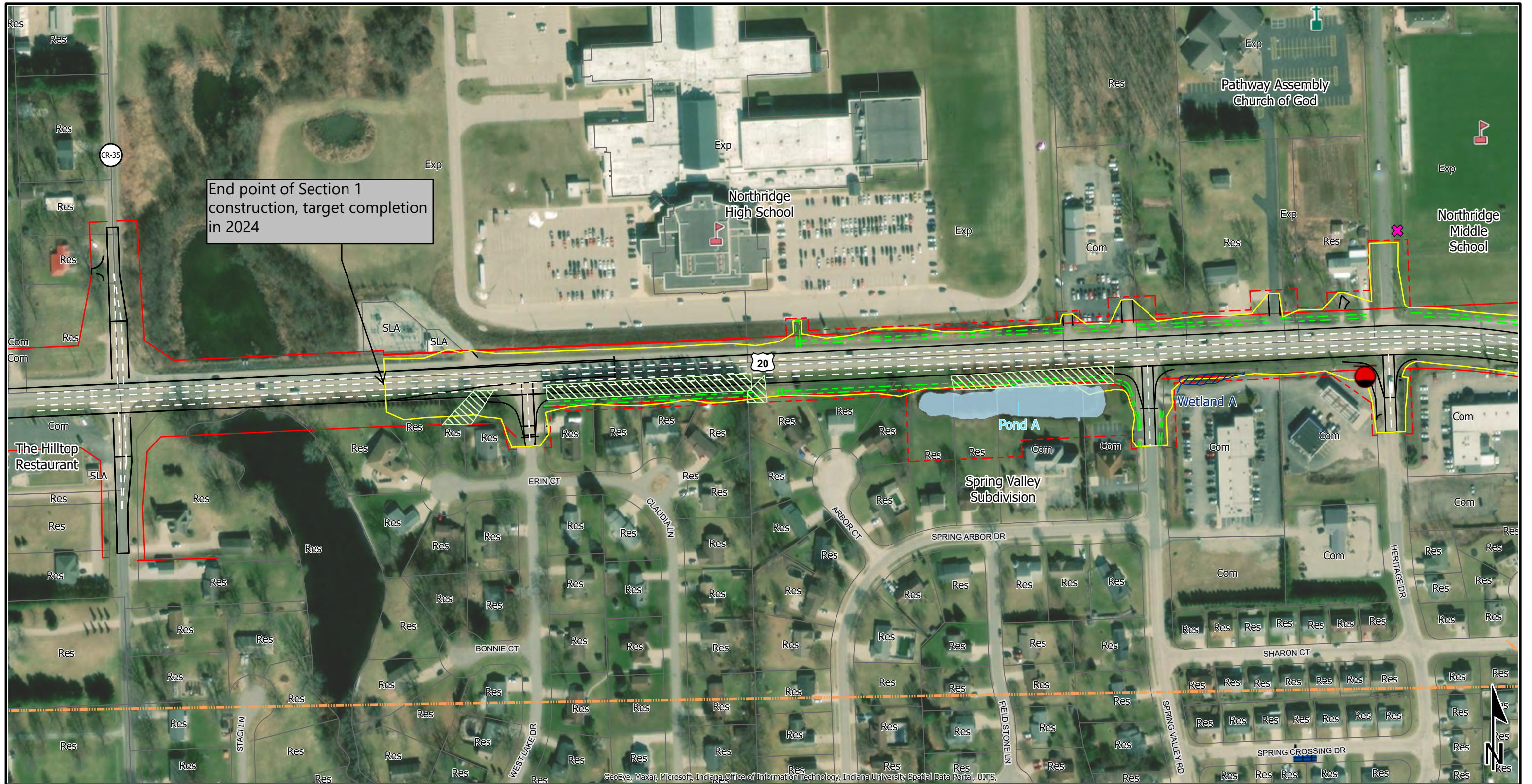
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 CR 35 to SR 13 Added Travel Lanes
 Elkhart County, Indiana

Des. No. 1900095

1 inch = 2,000 feet



Graphics created by HNTB Corporation (2020)



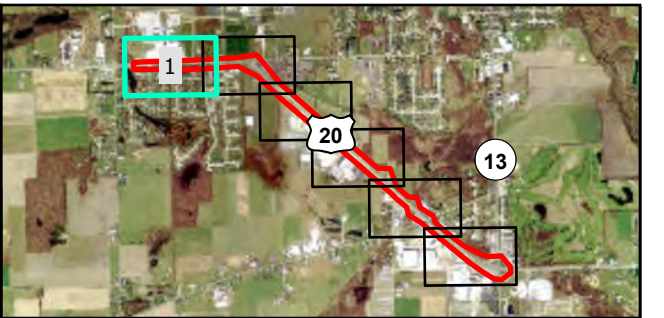
Design Features - Proposed ROW - Temporary ROW - Construction Limits - Sidewalk - Edge of Pavement - Lane Line - Noise Measurements		Local Resources - Parcel Boundary - Pipeline - Trails		Hazardous Material Concerns - Landfill Boundaries - NPDES Facilities - NPDES Pipe Locations - RCRA Generator/TSD - Voluntary Remediation Program - Underground Storage Tank - Leaking Underground Storage Tank		Water Resources - Delineated Ponds - Delineated Wetlands		Land Use Class Codes Agr Agricultural Res Residential Com Commercial Exp Exempt Ind Industrial Min Mineral SLA State/Local Assessed		Other Features - Managed Lands - School - Religious Facility - Recreation Facility - Brownfield	
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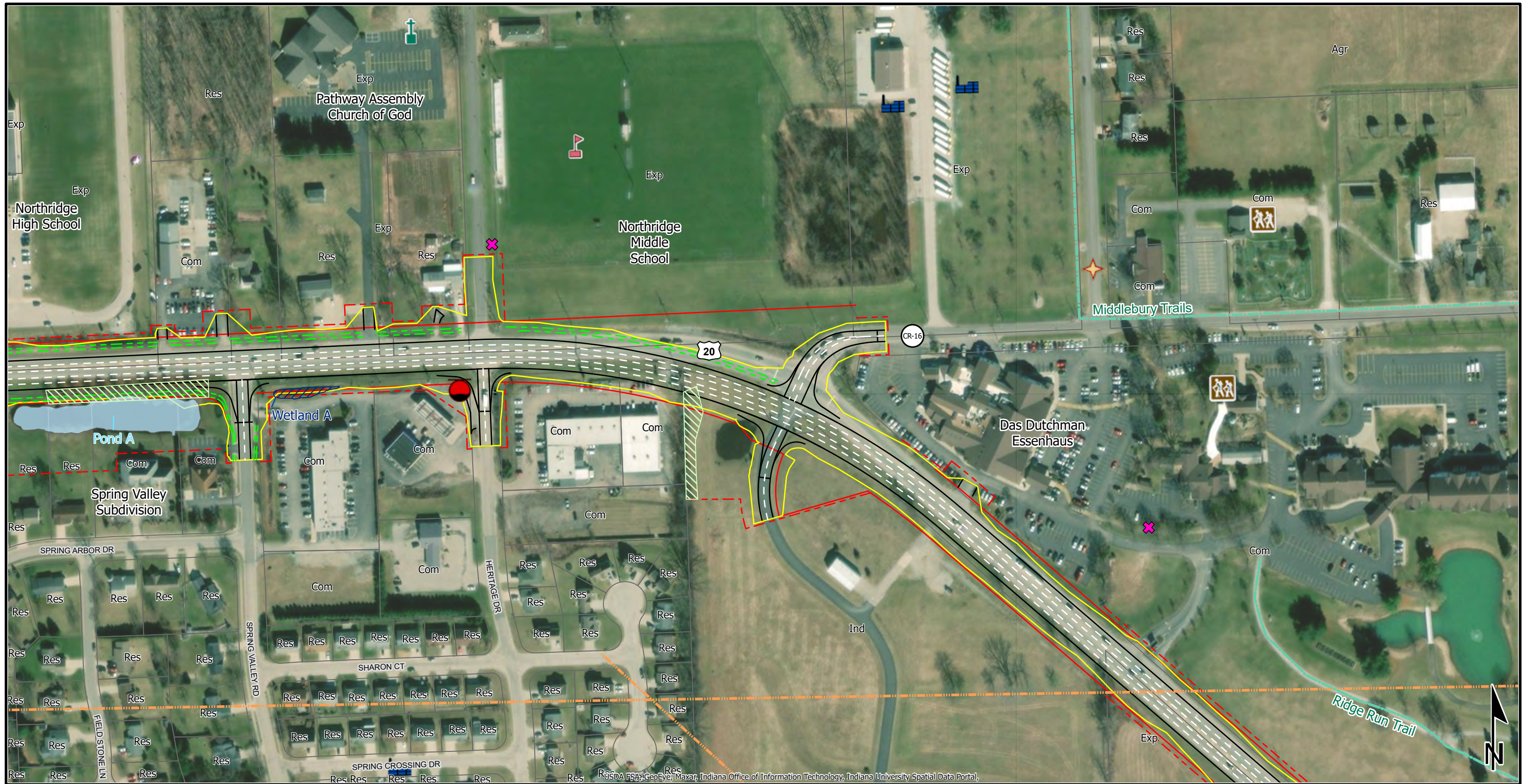
Figure 3: Environmental Features Map
 US 20 Improvement Project - Section 2
 CR 35 to SR 13 Added Travel Lanes
 Elkhart County, Indiana

Des. No. 1900095 1 inch = 200 ft

0 100 200
 Feet

HNTB
 Graphics created by HNTB Corporation (2020)





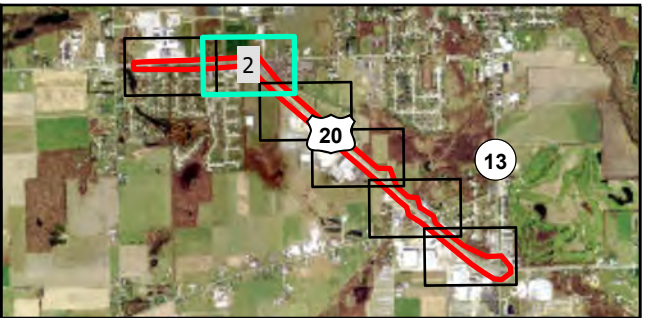
Design Features Proposed ROW Temporary ROW Construction Limits Sidewalk Edge of Pavement Lane Line Noise Measurements		Local Resources Tree clearing area Potential Residential Relocation Parcel Boundary Pipeline Trails		Hazardous Material Concerns Landfill Boundaries NPDES Facilities NPDES Pipe Locations RCRA Generator/TSD Voluntary Remediation Program Underground Storage Tank Leaking Underground Storage Tank		Water Resources Managed Lands School Religious Facility Recreation Facility 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	
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 US 20 Improvement Project - Section 2
 CR 35 to SR 13 Added Travel Lanes
 Elkhart County, Indiana

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0 100 200
 Feet

HNTB
 Graphics created by HNTB Corporation (2020)





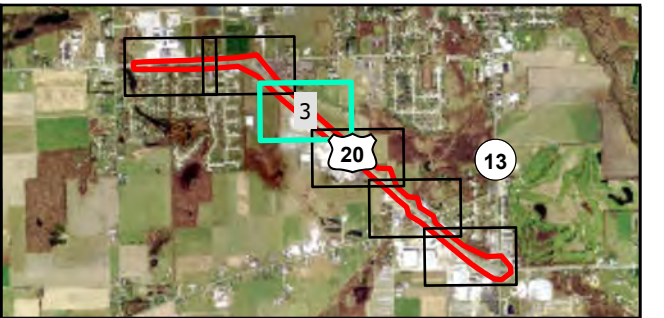
Design Features Proposed ROW Temporary ROW Construction Limits Sidewalk Edge of Pavement Lane Line Noise Measurements	Tree clearing area Potential Residential Relocation Local Resources Parcel Boundary Pipeline Trails Water Resources Delineated Ponds Delineated Wetlands	Hazardous Material Concerns Landfill 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
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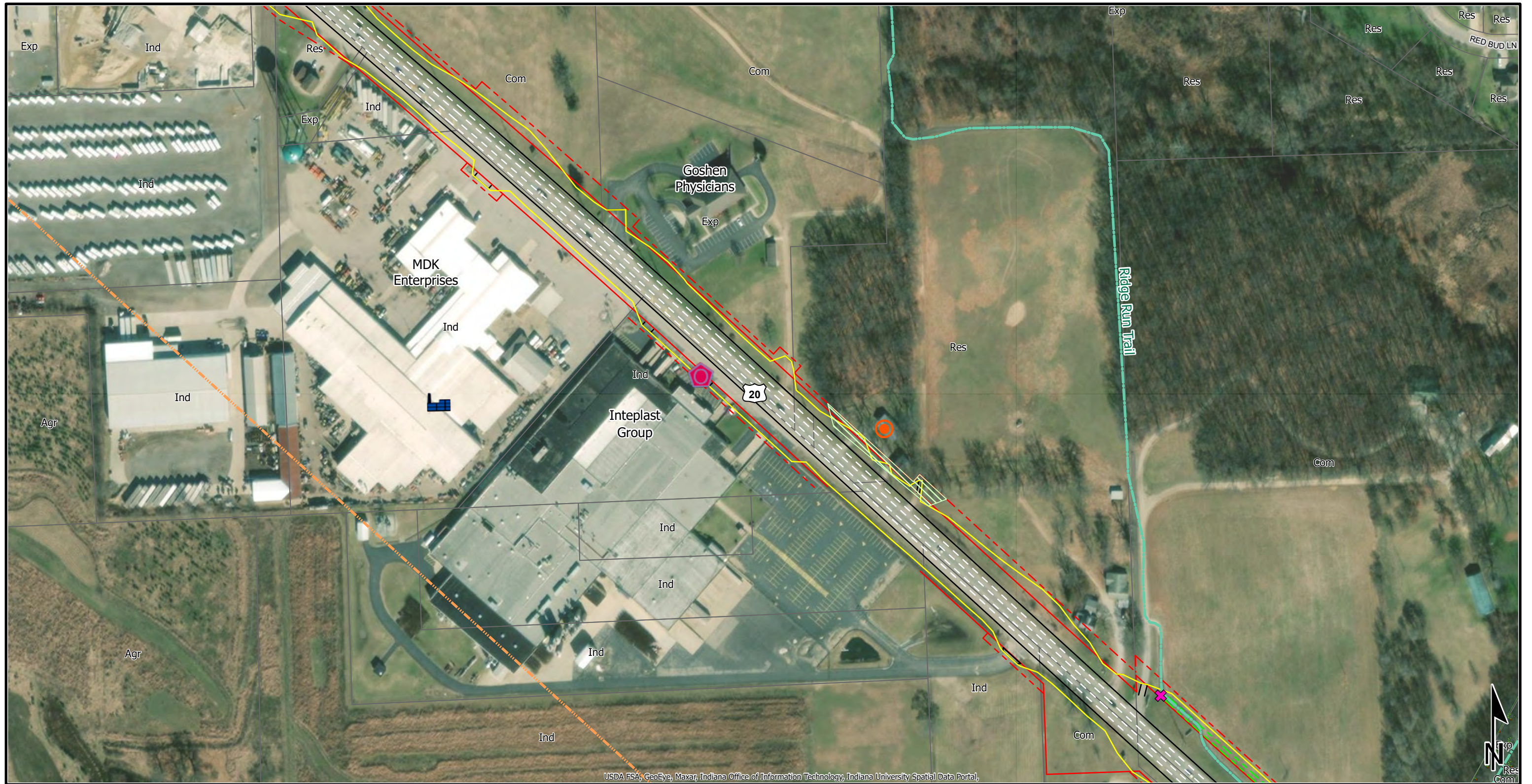
Figure 3: Environmental Features Map
 US 20 Improvement Project - Section 2
 CR 35 to SR 13 Added Travel Lanes
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0 100 200
 Feet

HNTB
 Graphics created by HNTB Corporation (2020)





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

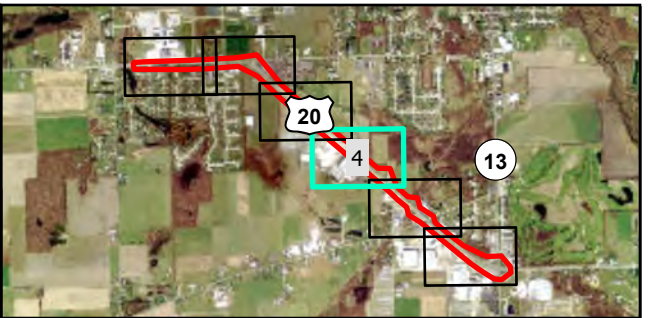
Design Features - Proposed ROW - Temporary ROW - Construction Limits - Sidewalk - Edge of Pavement - Lane Line - Noise Measurements		Local Resources - Parcel Boundary - Pipeline - Trails		Hazardous Material Concerns - Landfill Boundaries - NPDES Facilities - NPDES Pipe Locations - RCRA Generator/TSD - 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		Other - Tree clearing area - Potential Residential Relocation - Managed Lands - School - Religious Facility - Recreation Facility - Brownfield	
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 CR 35 to SR 13 Added Travel Lanes
 Elkhart County, Indiana

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 Feet

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

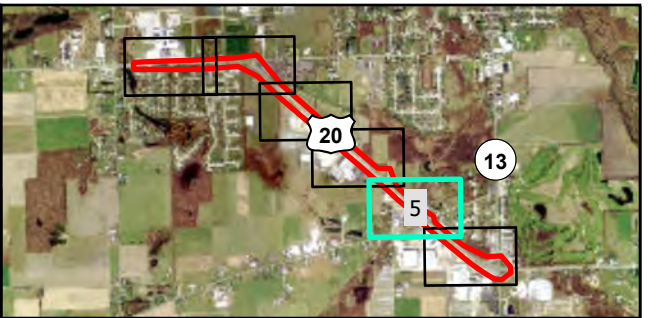
Design Features — Proposed ROW - - Temporary ROW — Construction Limits - - Sidewalk — Edge of Pavement — Lane Line ✕ Noise Measurements		[Green Hatched] Tree clearing area [Orange Circle] Potential Residential Relocation Local Resources [Grey Outline] Parcel Boundary [Orange Dashed] Pipeline [Green Dashed] Trails	[Green Hatched] Managed Lands [Red Flag] School [Green Cross] Religious Facility [Person Icon] Recreation Facility Water Resources [Blue Outline] Delineated Ponds [Blue Hatched] Delineated Wetlands	Hazardous Material Concerns [Purple Hatched] Landfill Boundaries [Blue Building] NPDES Facilities [Blue Circle] NPDES Pipe Locations [Orange Star] RCRA Generator/TSD [Pink Star] Voluntary Remediation Program [Yellow Circle] Underground Storage Tank [Red Circle] Leaking Underground Storage Tank	[Green Star] Brownfield Land Use Class Codes Agr Agricultural Res Residential Com Commercial Exp Exempt Ind Industrial Min Mineral SLA State/Local Assessed
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 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,

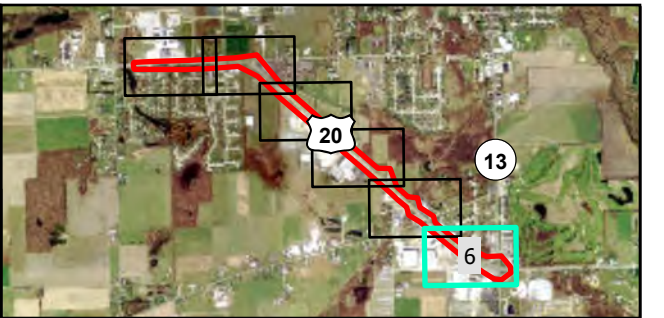
<p>Design Features</p> <ul style="list-style-type: none"> Proposed ROW Temporary ROW Construction Limits Sidewalk Edge of Pavement Lane Line Noise Measurements 	<p>Local Resources</p> <ul style="list-style-type: none"> Parcel Boundary Pipeline Trails 	<p>Hazardous Material Concerns</p> <ul style="list-style-type: none"> Landfill Boundaries NPDES Facilities NPDES Pipe Locations RCRA Generator/TSD Voluntary Remediation Program Underground Storage Tank Leaking Underground Storage Tank 	<p>Land Use Class Codes</p> <ul style="list-style-type: none"> Agr Agricultural Res Residential Com Commercial Exp Exempt Ind Industrial Min Mineral SLA State/Local Assessed
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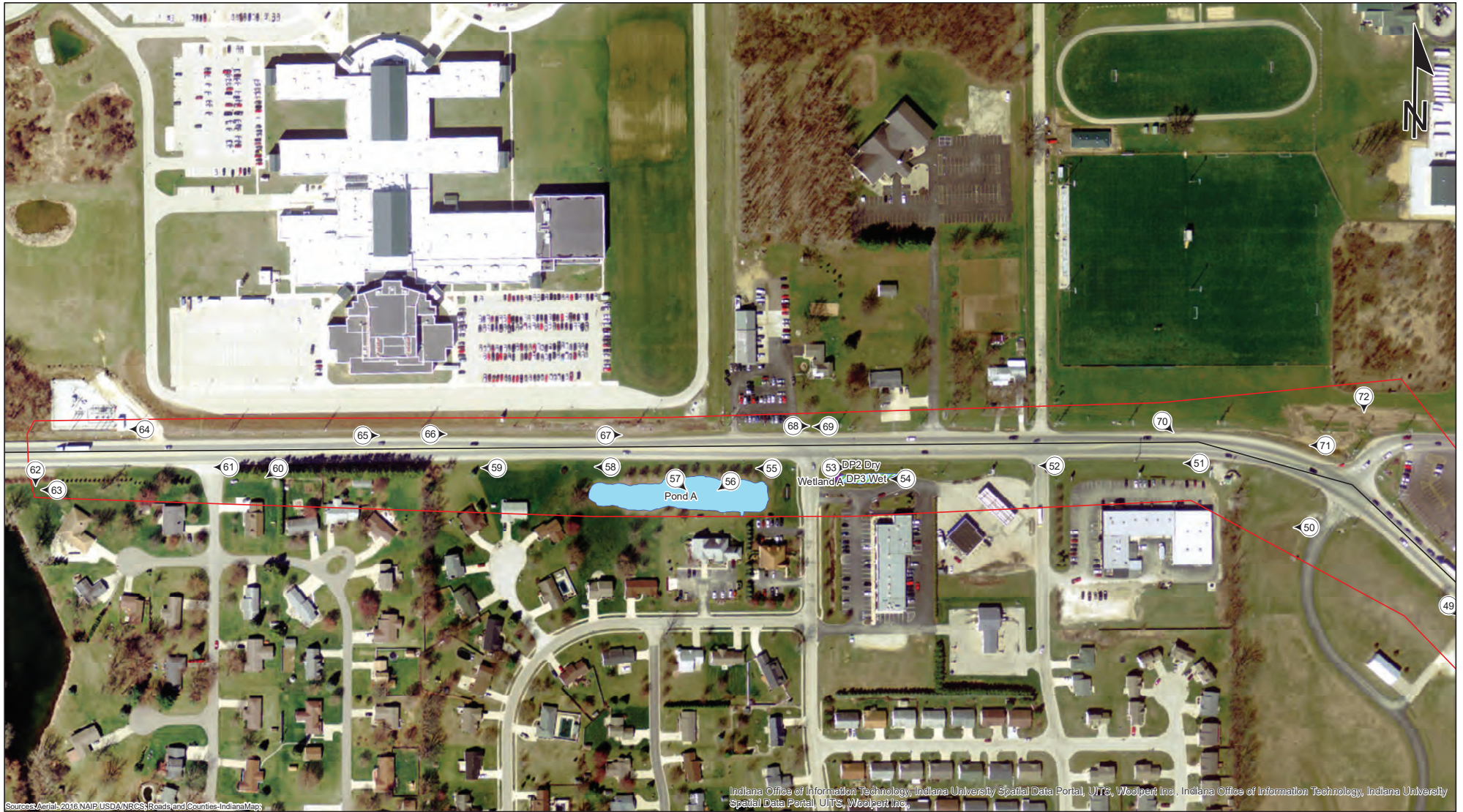
Figure 3: Environmental Features Map
 US 20 Improvement Project - Section 2
 CR 35 to SR 13 Added Travel Lanes
 Elkhart County, Indiana

Des. No. 1900095 1 inch = 200 ft

0 100 200
 Feet

HNTB
 Graphics created by HNTB Corporation (2020)





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

0 100 200
 Feet

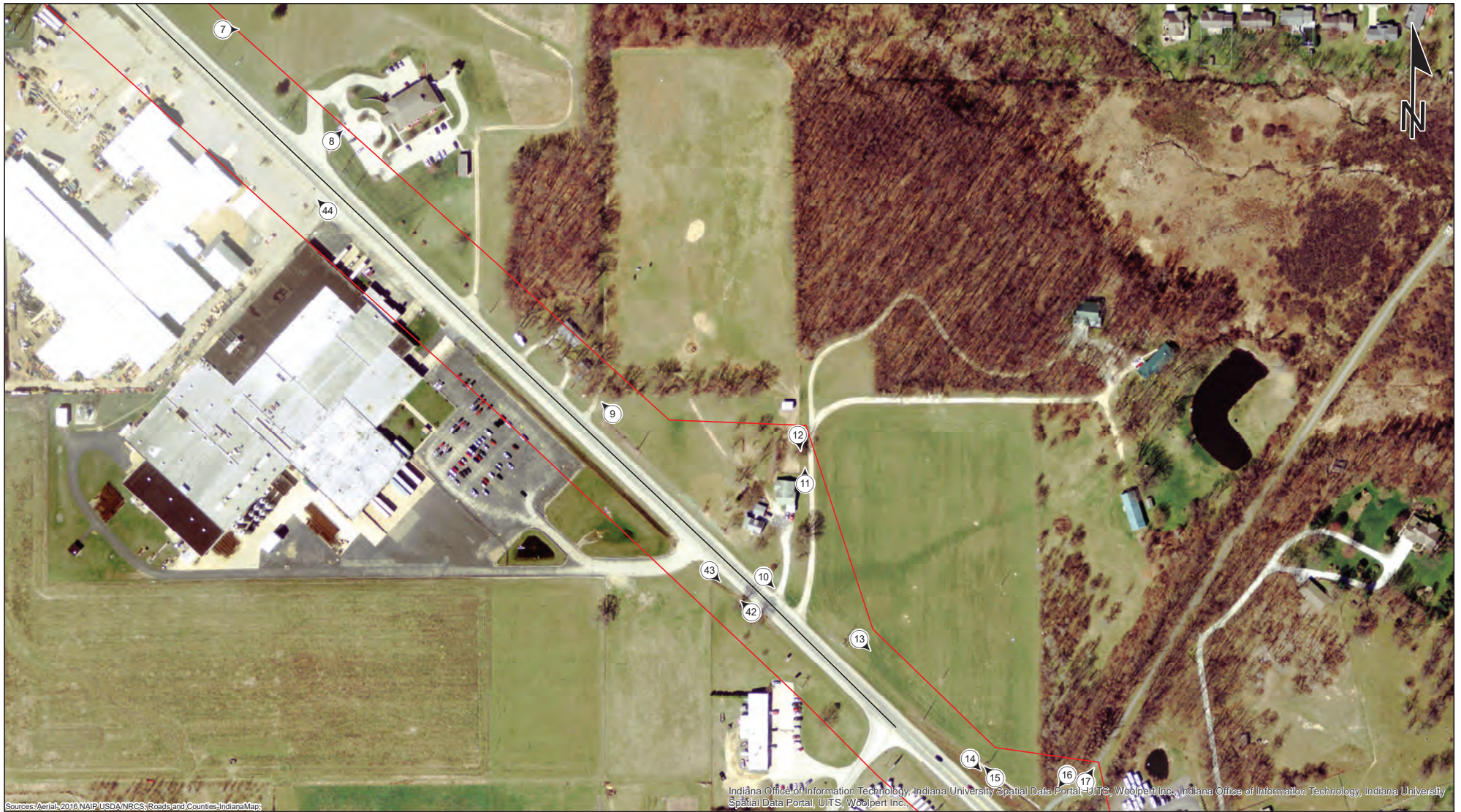
Des. No. 1900095
 1 inch = 200 feet

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)



<ul style="list-style-type: none"> Investigated Area Pond Wetland Photo Locations ● Data Points 	<p>0 100 200</p> <p>Feet</p>	<p>Photo Location Map U.S. 20 - SR 13 to CR 35, Section 2 Added Travel Lanes Elkhart County, Indiana</p>	
			<p>Des. No. 1900095</p> <hr/> <p>1 inch = 200 feet</p>



- 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





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)



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



51. Looking east at US 20 / SR 13 intersection



52. Looking north west along roadside US 20



53. Looking east along roadside US 20



54. Looking north west along roadside US 20



55. Looking north west along roadside US 20



56. Looking north west along roadside US 20



57. Looking north west along roadside US 20



58. Looking north at roadside drainage area



59. Looking north east at US 20 / CR 22 intersection



60. Looking north west that concrete side ditch



61. Looking north east within wooded area



62. Looking north east at Pumpkinvine Trail



63. Looking north at Culverts along side Pumpkinvine Trail



64. Looking south east at concrete side ditch



65. Looking north west at concrete side ditch



66. Looking south west at concrete side ditch



67. Looking north west along roadside US 20



68. Looking northwest along roadside US 20



69. Looking southeast along roadside US 20



70. Looking northwest along roadside US 20



71. Looking south east along roadside US 20



72. Looking northwest along roadside US 20



73. Looking southeast along roadside US 20



74. Looking north west along roadside US 20



75. Look at north west along roadside US 20



76. Looking south east along roadside US 20



77. Looking north west along roadside US 20



78. Looking north west along roadside US 20



79. Looking north west along roadside US 20



80. Looking west along roadside US 20



81. Looking north at upland wooded area



82. Looking south east in upland wooded area



83. Looking north west along roadside US 20



84. Looking south east along roadside US 20



85. Looking south east along roadside US 20



86. Looking north west at US 20 / CR 16 intersection



87. Looking west at upland retention area



88. Looking west along roadside US 20



89. Looking west along roadside US 20



90. Looking east note wetland A on the right



91. Looking north east at wetland A



92. Looking west at wetland A



93. Looking west along roadside US 20



94. Looking south west at pond



95. Looking south east at pond



96. Looking west



97. Looking west along roadside US 20



98. Looking east along roadside US 20



99. Looking south west at housing addition



100. looking west along roadside US 20



101. Looking west along roadside US 20



102. Looking south toward pond



103. Looking west at pond



104. Looking west along roadside US 20



105. Looking east along roadside US 20



106. Looking west along roadside US 20



107. Looking east along roadside US 20



108. Looking east along roadside US 20



109. Looking east along roadside US 20



110. Looking west along roadside US 20



111. Looking east along roadside US 20



112. Looking west along roadside US 20



113. Looking east along roadside US 20



114. Looking west along roadside US 20



115. Looking south east along roadside US 20



116. Looking south west along roadside US 20



117. Looking west along roadside US 20



118. Looking south at US 20 / CR 16 intersection



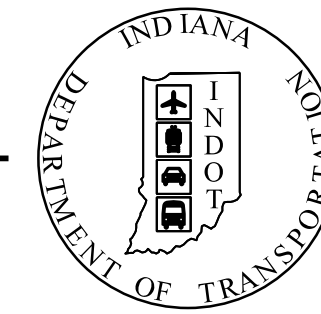
119. Looking south east along CR 16



120. Looking south at CR 16 / US 20 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.

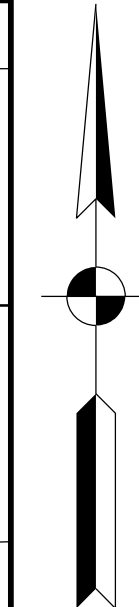
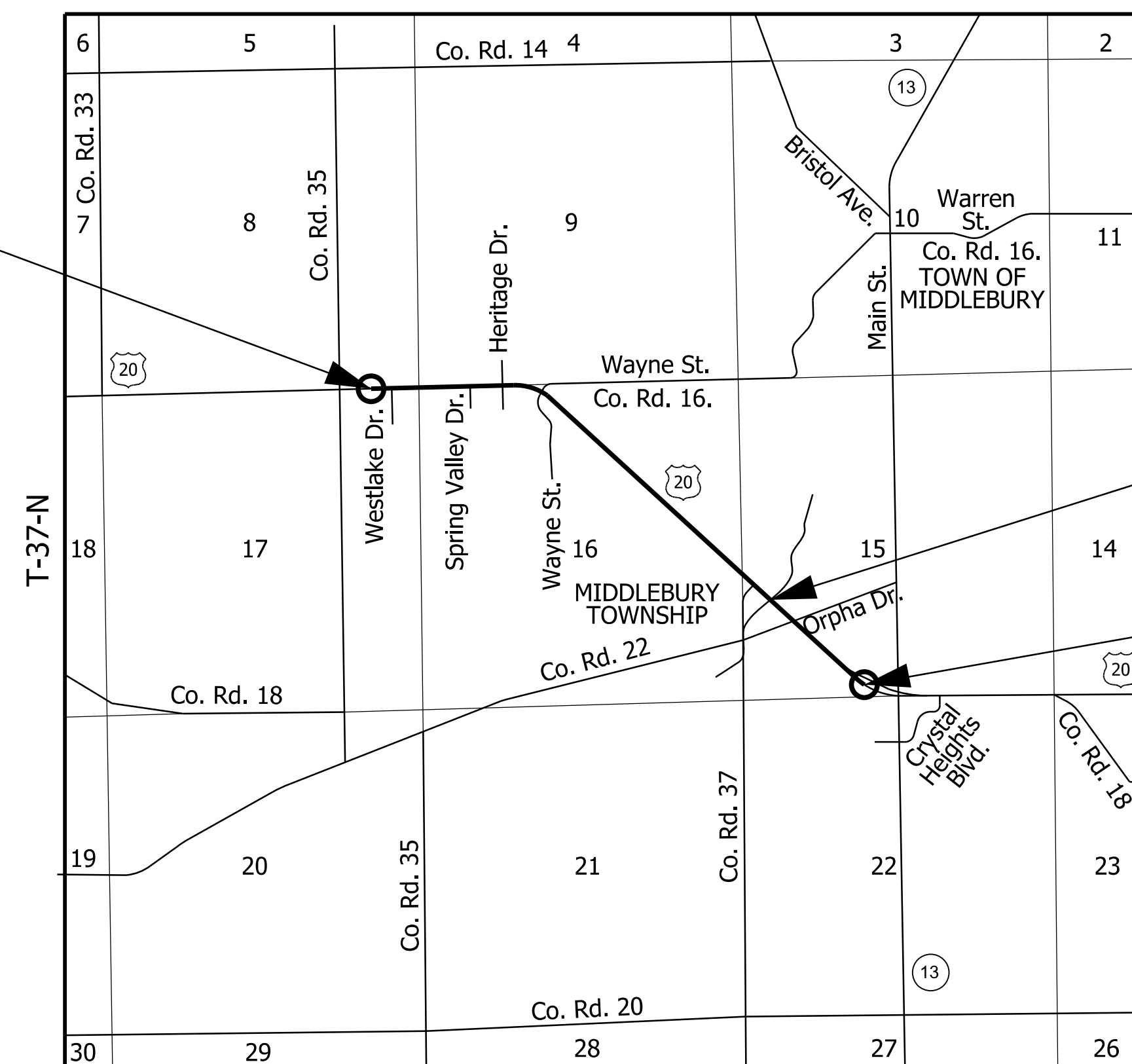
PROJECT DESCRIPTION

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"

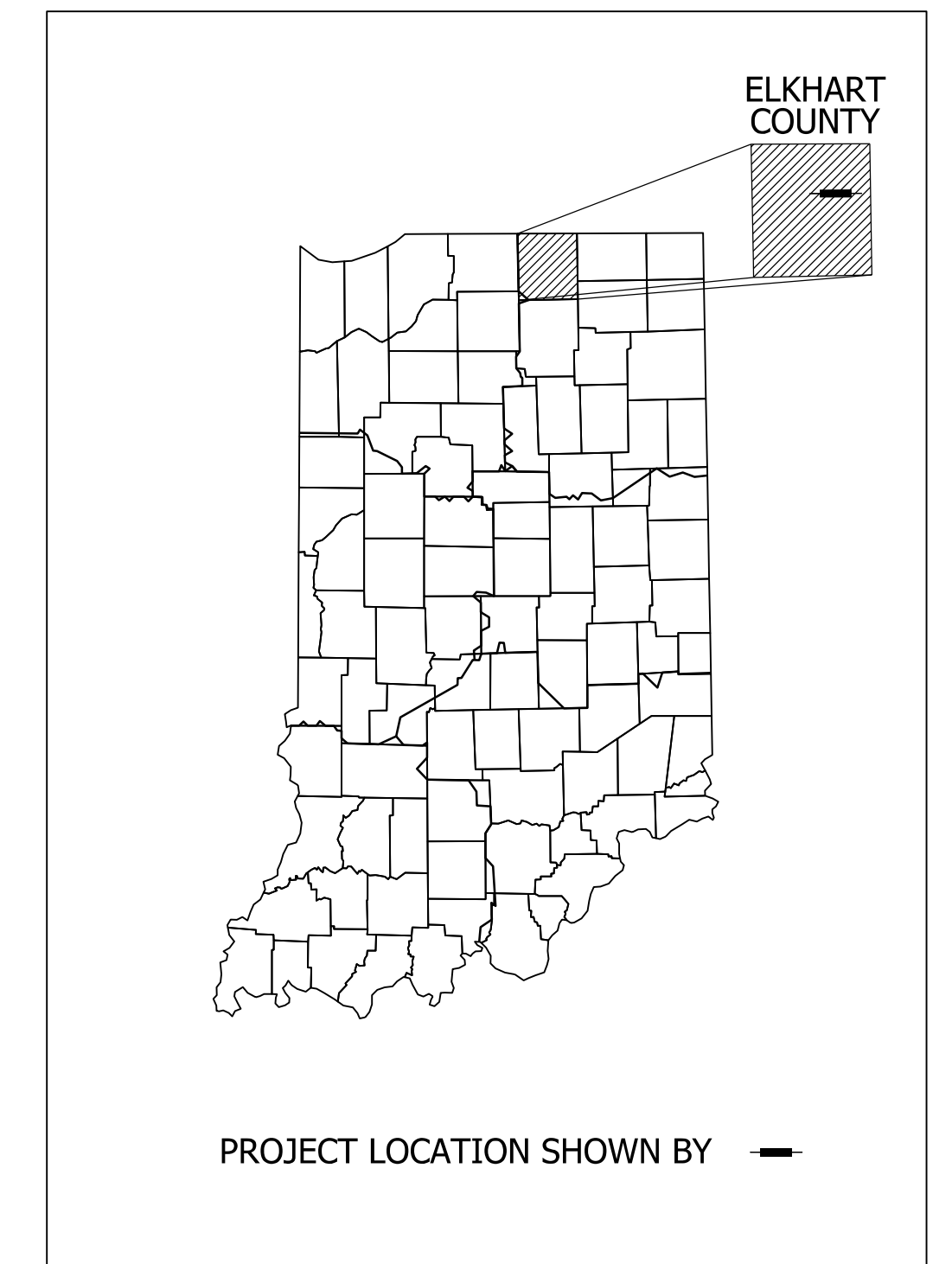
END PROJECT
PROJECT NO. 1900095
STA. 672+00.00
LINE "PR-A-WB"

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. (2024)		17,300 VPD
A.A.D.T. (2044)		21,300 VPD
D.H.V (2044)		1,800 VPH
DIRECTIONAL DISTRIBUTION		48% EB
TRUCKS		25% OF DHV 27% OF AADT

DESIGN DATA U.S. 20	
DESIGN SPEED	50 MPH
PROJECT DESIGN CRITERIA	NEW RECONSTRUCTION (NON-FREEWAY)
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



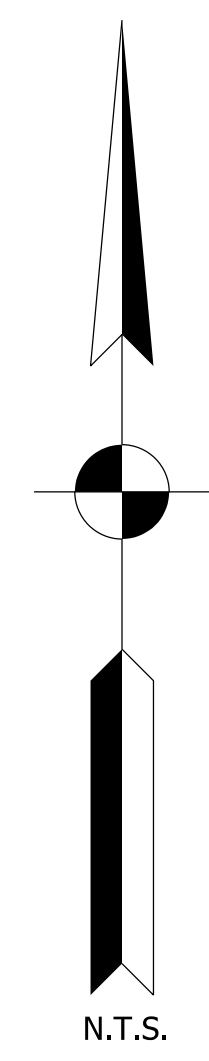
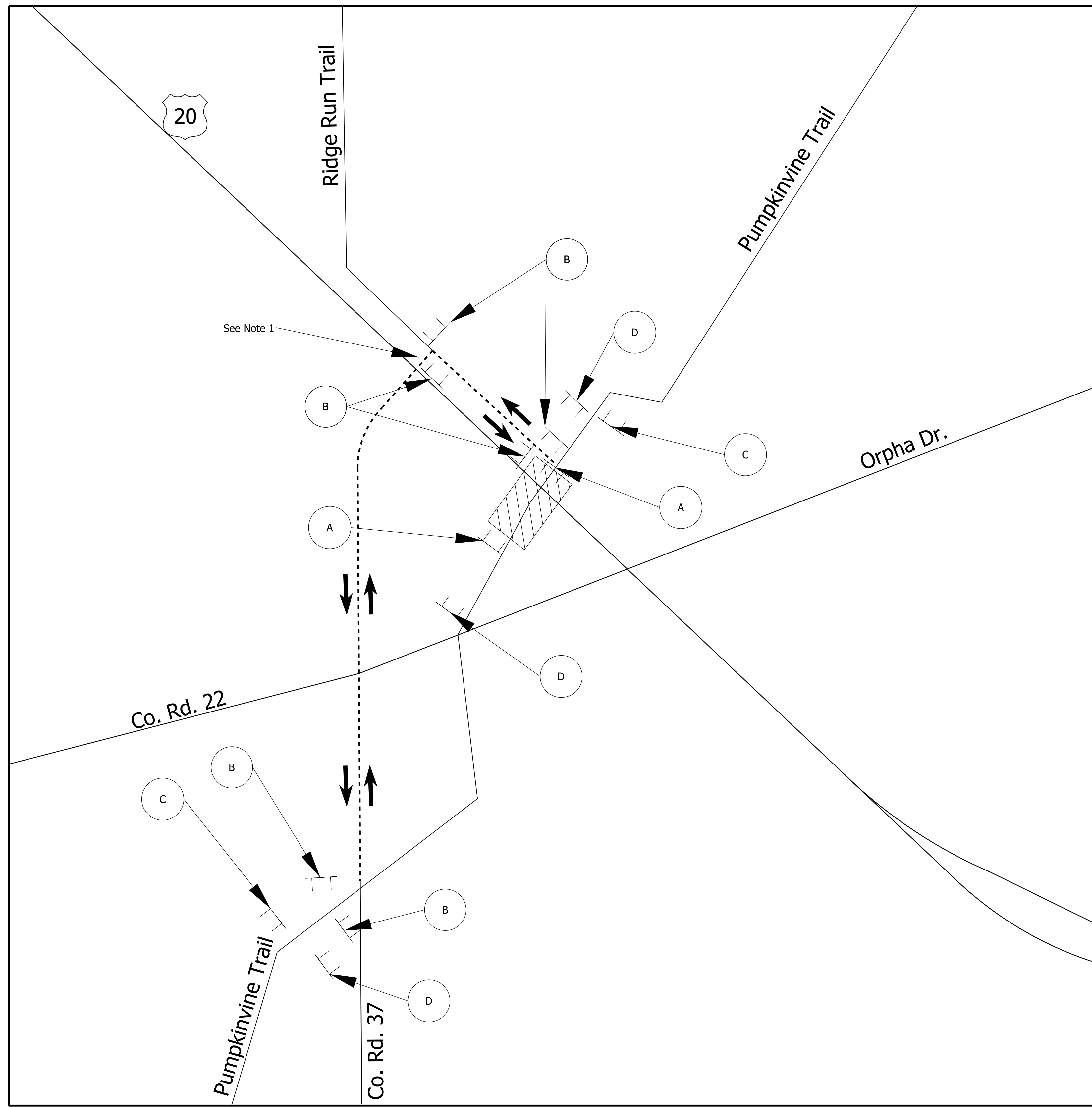
HNTB CORPORATION
THE HNTB COMPANIES
INFRASTRUCTURE SOLUTIONS
111 MONUMENT CIRCLE
SUITE 1200
INDIANAPOLIS, IN 46204

DRAFT
NOT FOR CONSTRUCTION

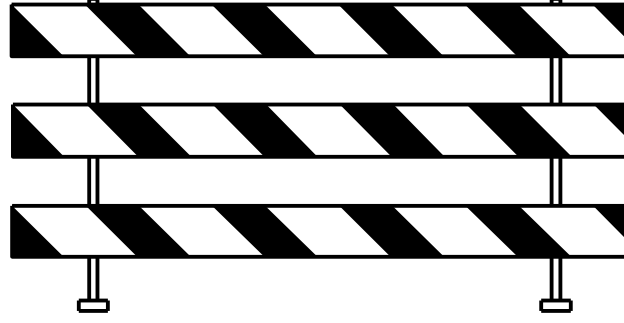
PLANS PREPARED BY: HNTB INDIANA, INC. (317) 636-4682 PHONE NUMBER
CERTIFIED BY: _____ DATE _____
APPROVED FOR LETTING: _____ DATE _____
INDIANA DEPARTMENT OF TRANSPORTATION

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

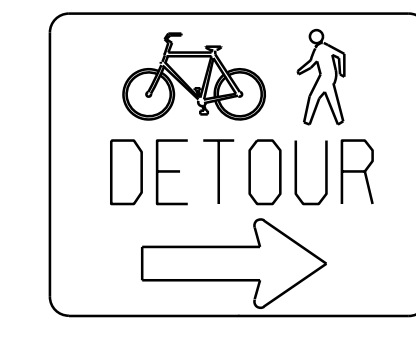
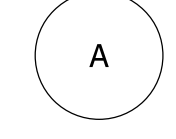
rpwilliams
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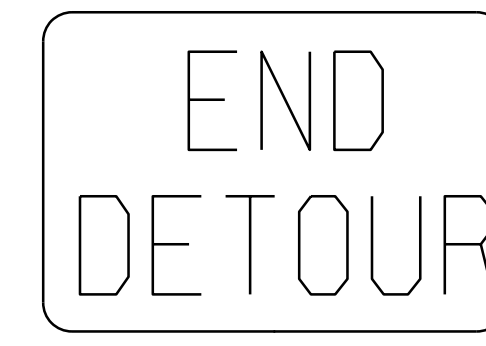
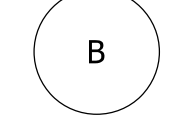
R9-9



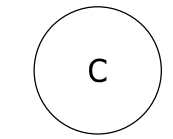
Type III-A Barricade



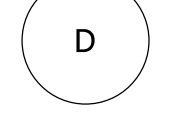
M4-9a (R or L)



M4-8a



R9-11



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

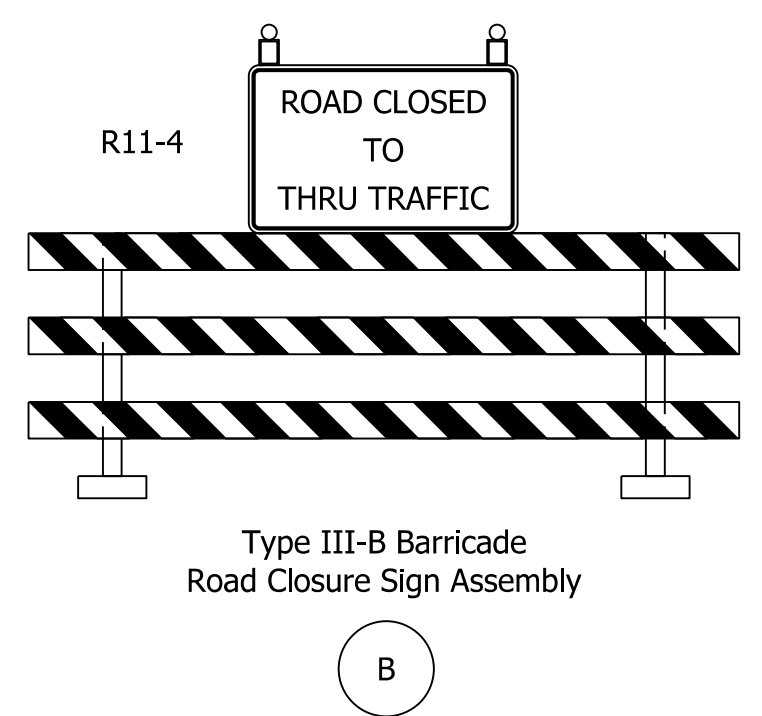
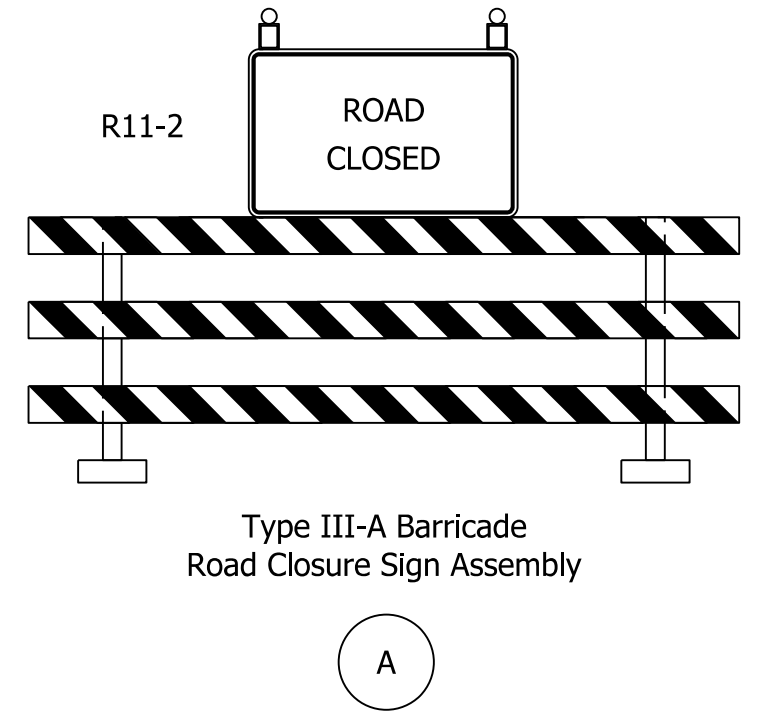
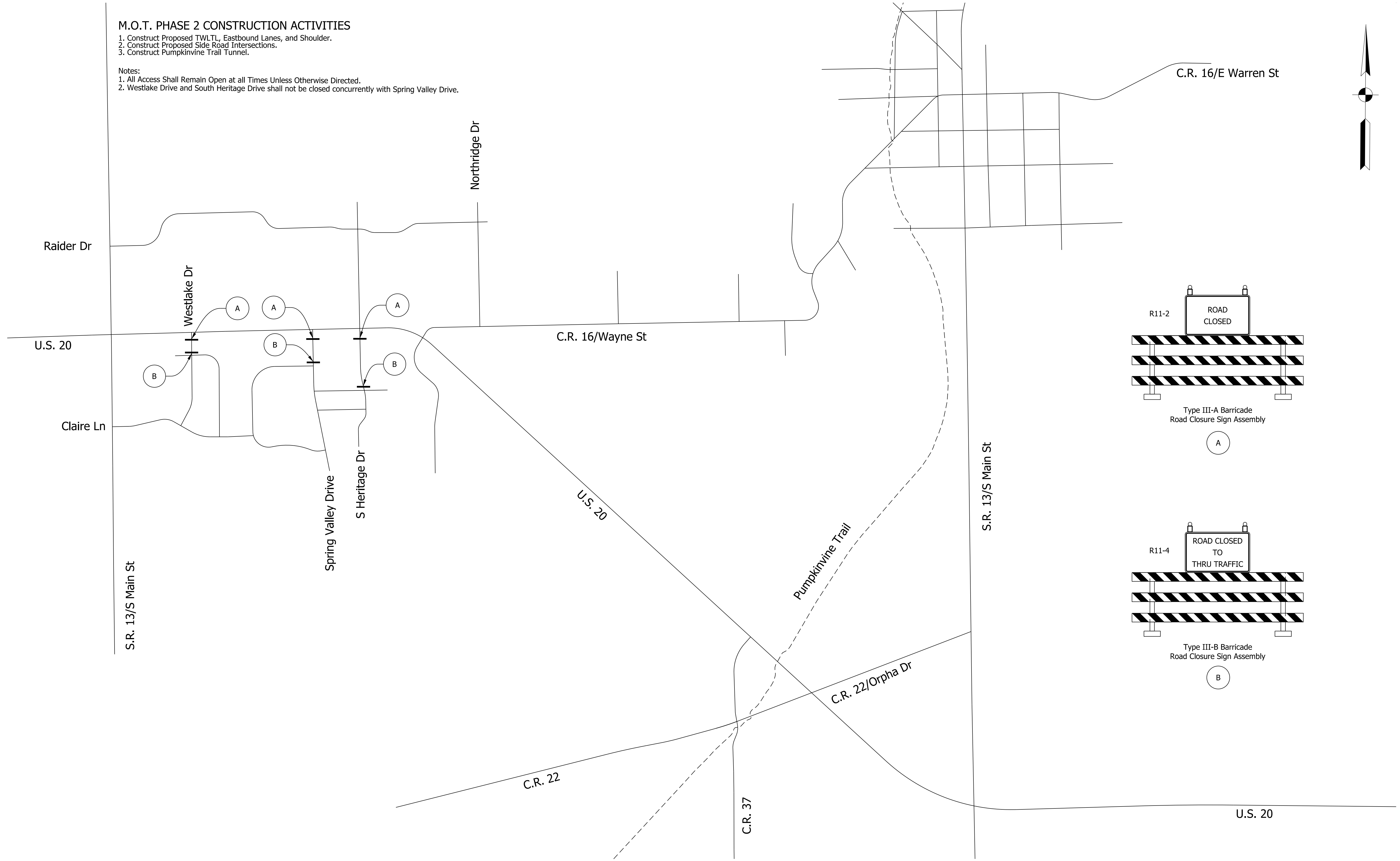
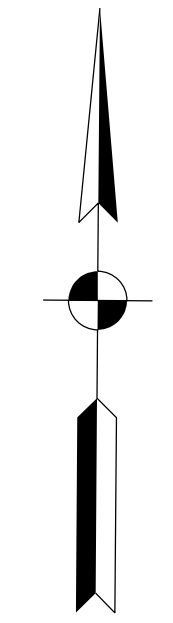
 MAINTENANCE OF TRAFFIC
 PEDESTRIAN DETOUR

HORIZONTAL SCALE	BRIDGE FILE
CUSTOM 0.25	N/A
VERTICAL SCALE	DESIGNATION
N/A	1900095
SURVEY BOOK	SHEETS
ELECTRONIC	10 of 161
CONTRACT	PROJECT
R-42379	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

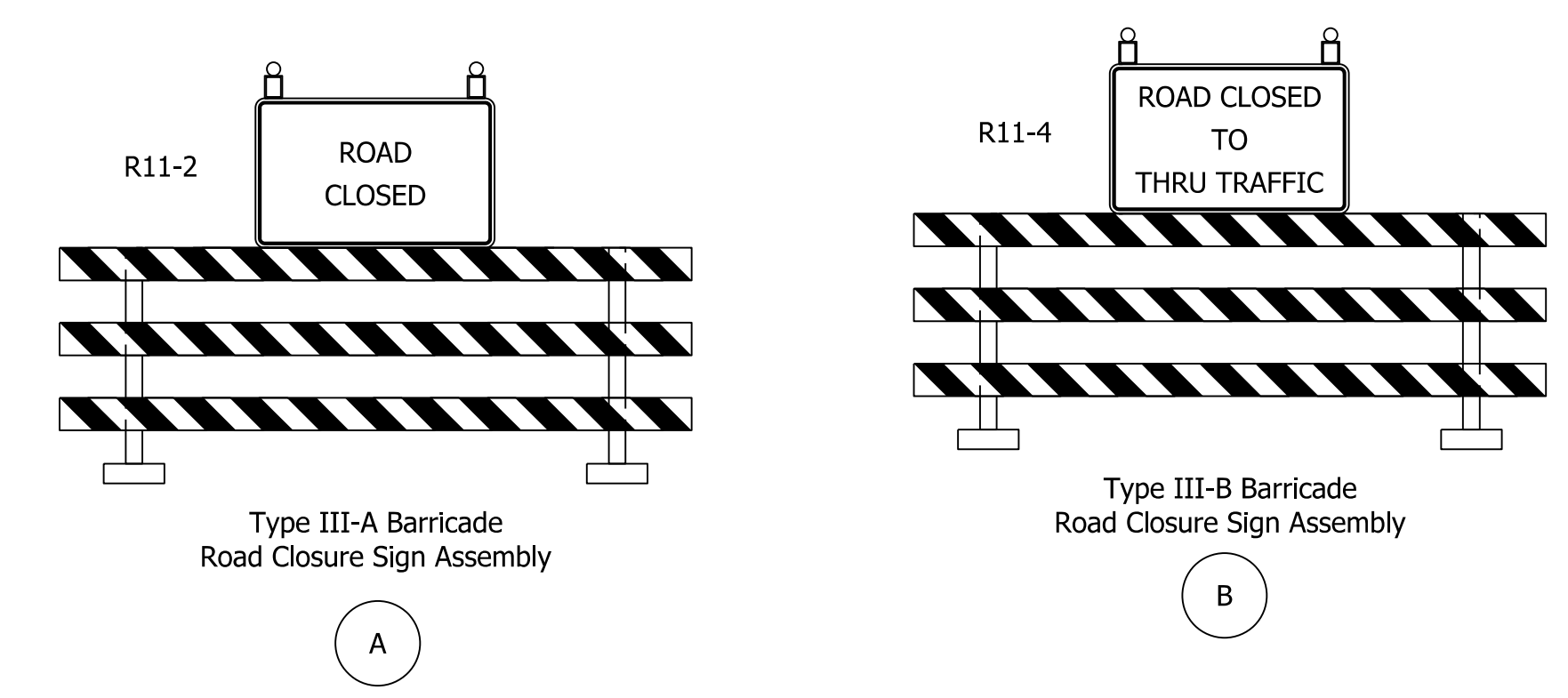
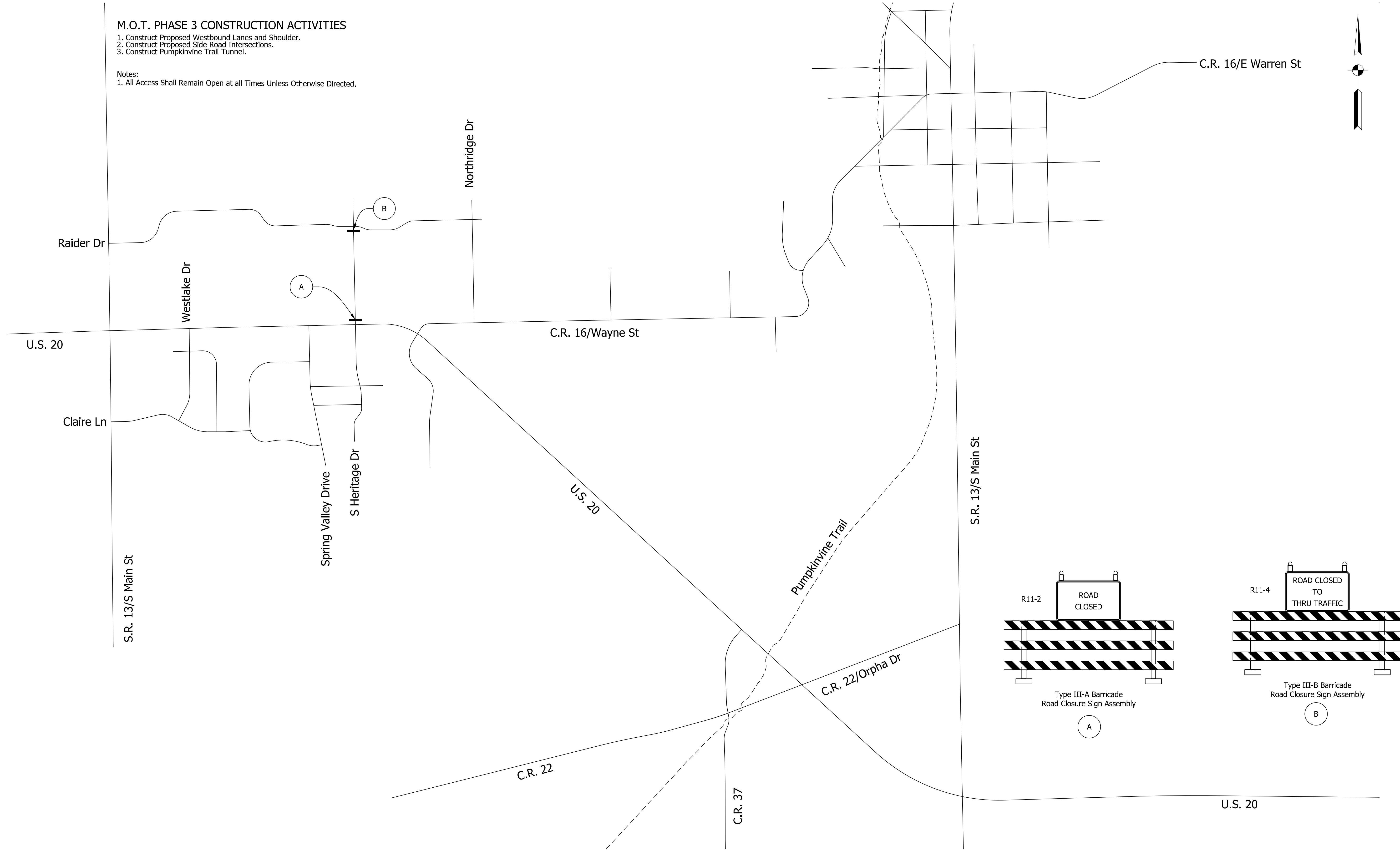
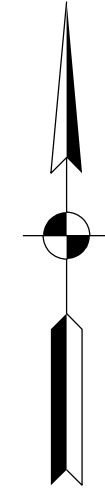
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1"=500'	N/A
VERTICAL SCALE	DESIGNATION
N/A	1900095
SURVEY BOOK	SHEETS
ELECTRONIC	11 of 161
CONTRACT	PROJECT
R-42379	1900095

lucarlson
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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 _____	DRAWN: _____ LMC _____	
CHECKED: _____ NSX _____	CHECKED: _____ NSX _____	

INDIANA DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC PHASE 3 DETOUR

HORIZONTAL SCALE	BRIDGE FILE	
1"=500'	N/A	
VERTICAL SCALE	DESIGNATION	
N/A	1900095	
SURVEY BOOK	SHEETS	DTR-02
ELECTRONIC	12	of 161
CONTRACT	PROJECT	
R-42379	1900095	

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535+00

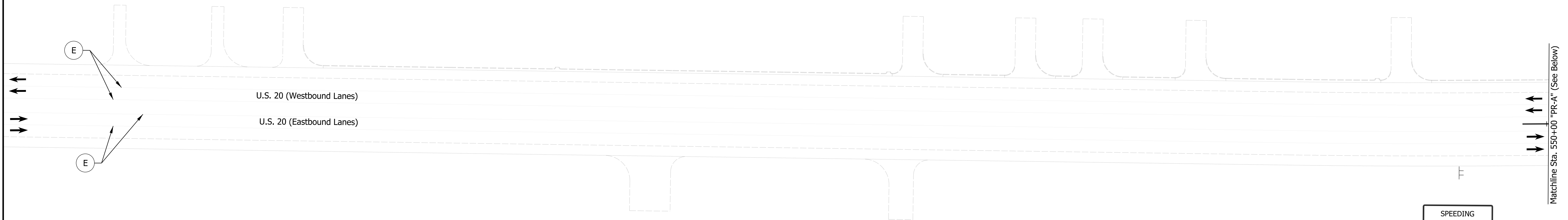
- Phase 1: CONSTRUCTION ACTIVITIES
1. Remove Existing Pavement Marking To Remain
 2. Construct Temporary Pavement on Westbound Side.
 3. Construct Pumpkinvine Trail Tunnel.

Construction Design Speed: 50 MPH
Construction Clear Zone: 16'-0"

540+00

545+00

550+00



- Notes:
1. All Sign Spacing Shall be 500' Unless Otherwise Directed.
 2. Contractor Shall Maintain 6' Minimum Shoulders At All Times.
 3. Drum Spacing in Tapers Shall Be 50'.
 4. Drum Spacing in Tangents Shall Be 100'.
 5. All Stations Referenced from Line "PR-A" Unless Otherwise Noted.
 6. Existing Transverse Rumble Strips to Remain In Place.
 7. All Access Shall Remain Open at all Times Unless Otherwise Directed.

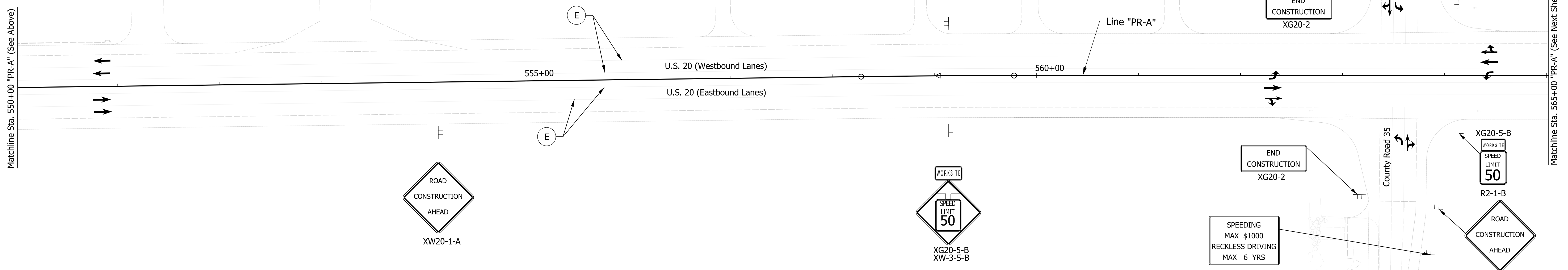
SPEEDING
MAX \$1000
RECKLESS DRIVING
MAX 6 YRS
XW2-6

550+00

555+00

560+00

565+00



Maintenance Of Traffic Legend

	Construction Area
	Standard Drum
	Direction Of Traffic
	Barricade, III-A (12 Lft.)
	Construction Sign, A

Temporary Pavement Marking Legend

	Temporary Pavement Marking, Removable, 5 In. (White)		Existing Pavement Marking To Remain
	Temporary Pavement Marking, Removable, 5 In. (Yellow)		
	Temporary Pavement Marking, Removable, 5 In. (Dotted White 3' Line 9' Gap)		

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 1

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	N/A
VERTICAL SCALE	DESIGNATION
N/A	1900095
SURVEY BOOK	SHEETS MOT-01
ELECTRONIC	13 of 161
CONTRACT	PROJECT
R-42379	1900095

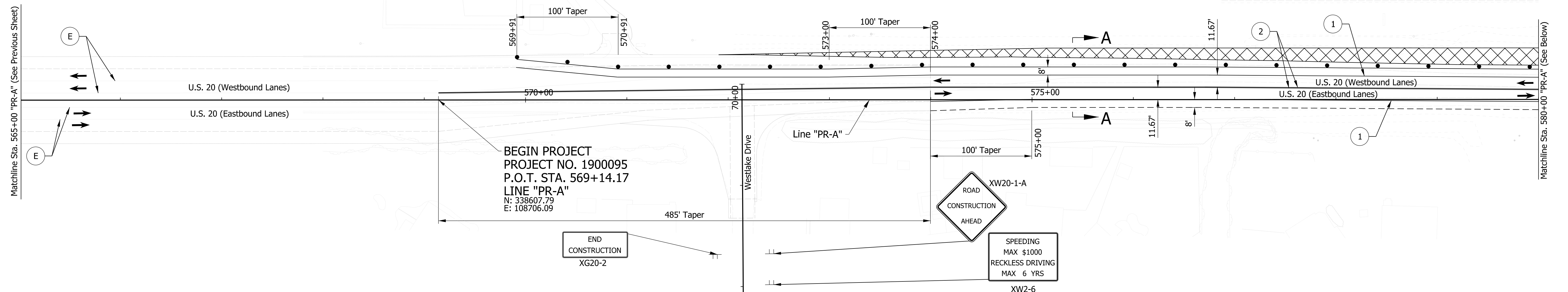
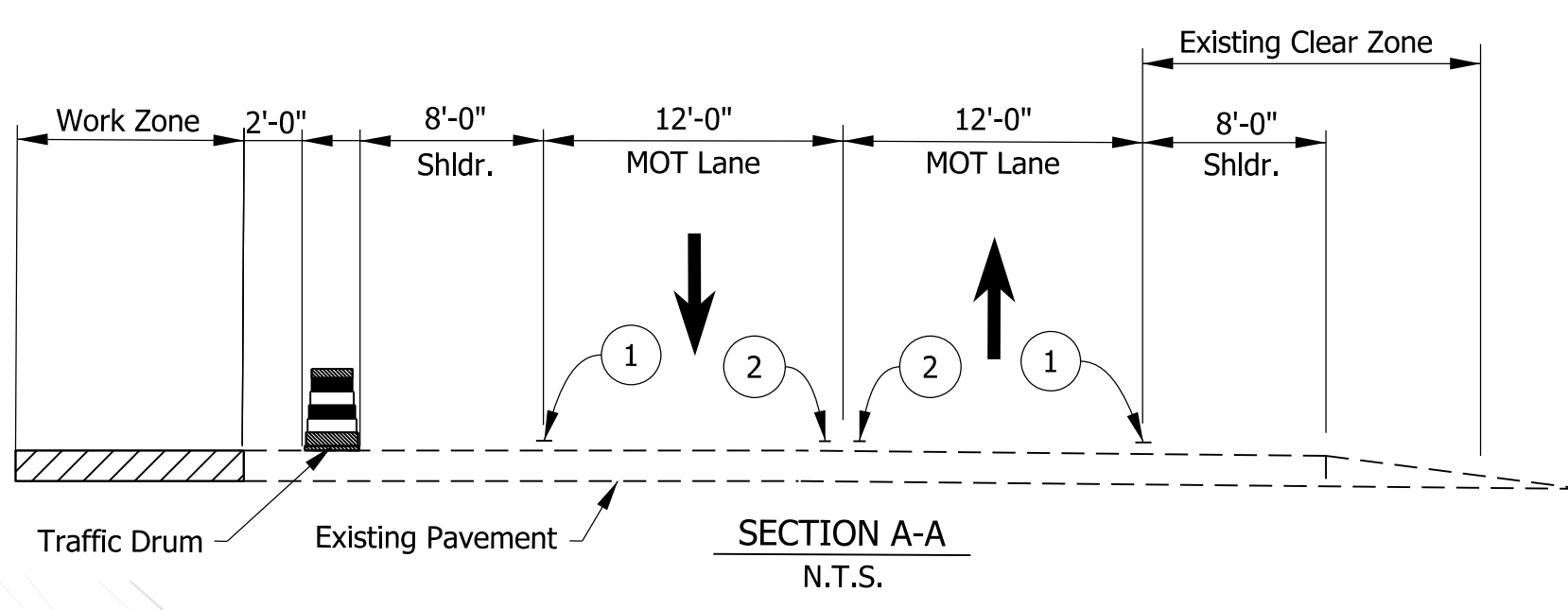
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- Notes:
1. All Sign Spacing Shall be 500' Unless Otherwise Directed.
 2. Contractor Shall Maintain 6' Minimum Shoulders At All Times.
 3. Drum Spacing in Tapers Shall Be 50'.
 4. Drum Spacing in Tangents Shall Be 100'.
 5. All Stations Referenced from Line "PR-A" Unless Otherwise Noted.
 6. Existing Transverse Rumble Strips to Remain In Place.
 7. All Access Shall Remain Open at all Times Unless Otherwise Directed.

570+00

575+00

580+00

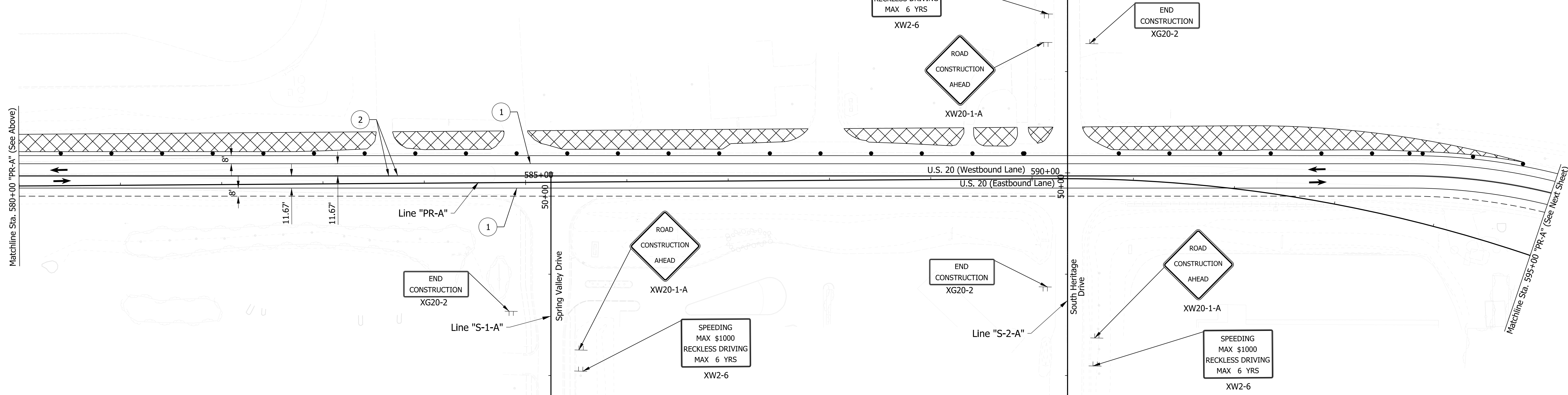


580+00

585+00

590+00

595+00



Maintenance Of Traffic Legend		Temporary Pavement Marking Legend	
	Construction Area		Temporary Pavement Marking, Removable, 5 In. (White)
	Standard Drum		Temporary Pavement Marking, Removable, 5 In. (Yellow)
	Direction Of Traffic		Temporary Pavement Marking, Removable, 5 In. (Dotted White 3' Line 9' Gap)
	Barricade, III-A (12 Lft.)		Existing Pavement Marking To Remain
	Construction Sign, A		

DRAFT
NOT FOR CONSTRUCTION

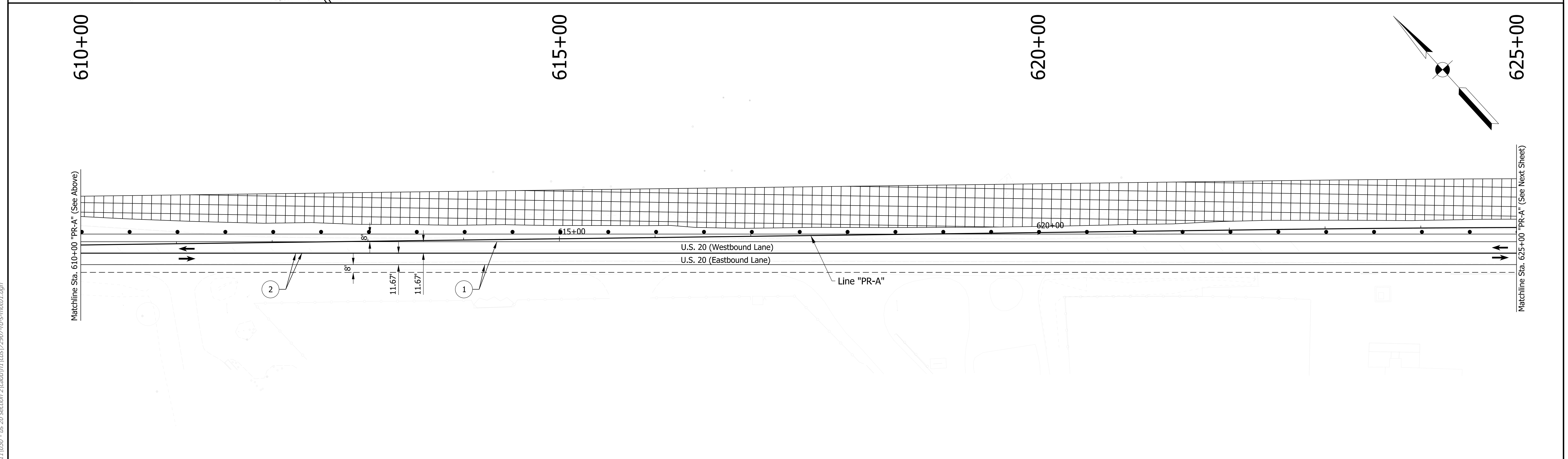
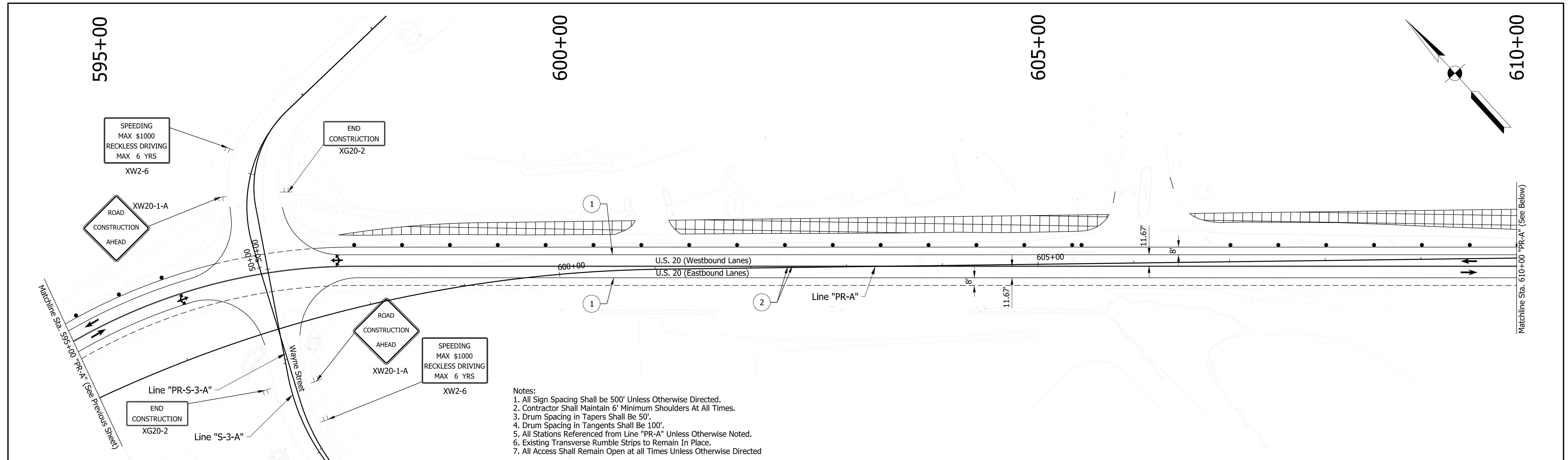
RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: _____ LMC _____	DRAWN: _____ LMC _____	
CHECKED: _____ NSX _____	CHECKED: _____ NSX _____	

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 1

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	N/A
VERTICAL SCALE	DESIGNATION
N/A	1900095
SURVEY BOOK	SHEETS MOT-02
ELECTRONIC	14 of 161
CONTRACT	PROJECT
R-42379	1900095

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Maintenance Of Traffic Legend		Temporary Pavement Marking Legend	
	Construction Area		Temporary Pavement Marking, Removable, 5 In. (White)
	Standard Drum		Temporary Pavement Marking, Removable, 5 In. (Yellow)
	Direction Of Traffic		Temporary Pavement Marking, Removable, 5 In. (Dotted White 3' Line 9' Gap)
	Barricade, III-A (12 Lft.)		Existing Pavement Marking To Remain
	Construction Sign, A		

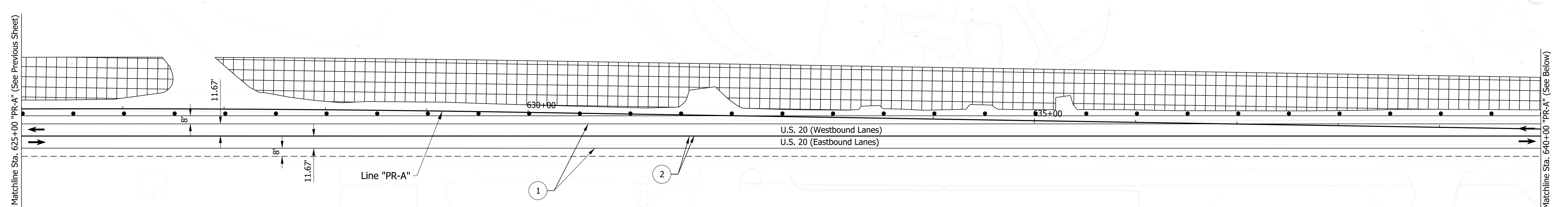
DRAFT NOT FOR CONSTRUCTION	RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
	DESIGNED: _____ LMC _____	DRAWN: _____ LMC _____	
	CHECKED: _____ NSX _____	CHECKED: _____ NSX _____	

INDIANA
 DEPARTMENT OF TRANSPORTATION

 MAINTENANCE OF TRAFFIC
 PHASE 1

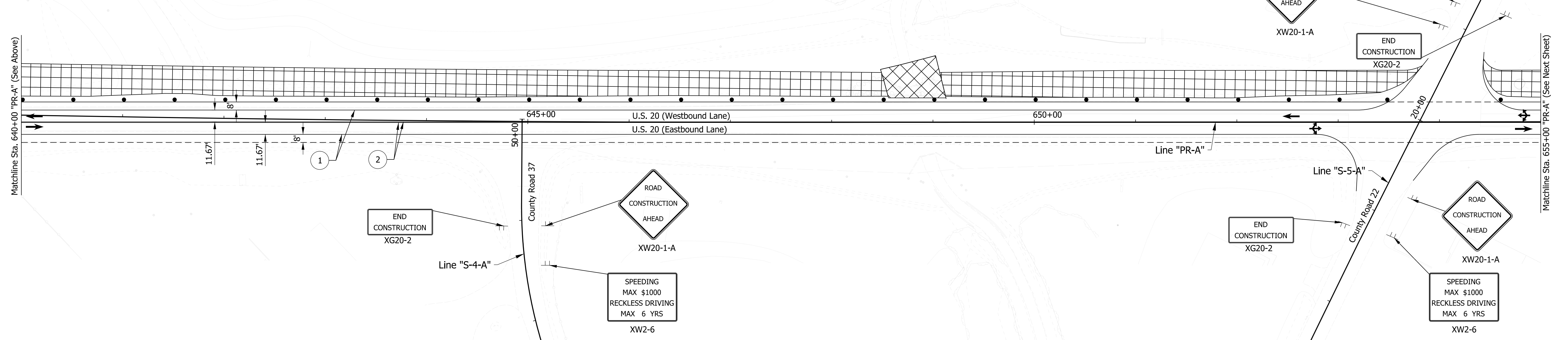
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1"=50'	N/A
VERTICAL SCALE	DESIGNATION
N/A	1900095
SURVEY BOOK	SHEETS MOT-03
ELECTRONIC	15 of 161
CONTRACT	PROJECT
R-42379	1900095

625+00 630+00 635+00 640+00



- Notes:
1. All Sign Spacing Shall be 500' Unless Otherwise Directed.
 2. Contractor Shall Maintain 6' Minimum Shoulders At All Times.
 3. Drum Spacing in Tapers Shall Be 50'.
 4. Drum Spacing in Tangents Shall Be 100'.
 5. All Stations Referenced from Line "PR-A" Unless Otherwise Noted.
 6. Existing Transverse Rumble Strips to Remain In Place.
 7. All Access Shall Remain Open at all Times Unless Otherwise Directed.

640+00 645+00 650+00 655+00



Maintenance Of Traffic Legend	Temporary Pavement Marking Legend
Construction Area	1 Temporary Pavement Marking, Removable, 5 In. (White)
Standard Drum	2 Temporary Pavement Marking, Removable, 5 In. (Yellow)
Direction Of Traffic	E Existing Pavement Marking To Remain
Barricade, III-A (12 Lft.)	3 Temporary Pavement Marking, Removable, 5 In. (Dotted White 3' Line 9' Gap)
Construction Sign, A	

DRAFT
NOT FOR CONSTRUCTION

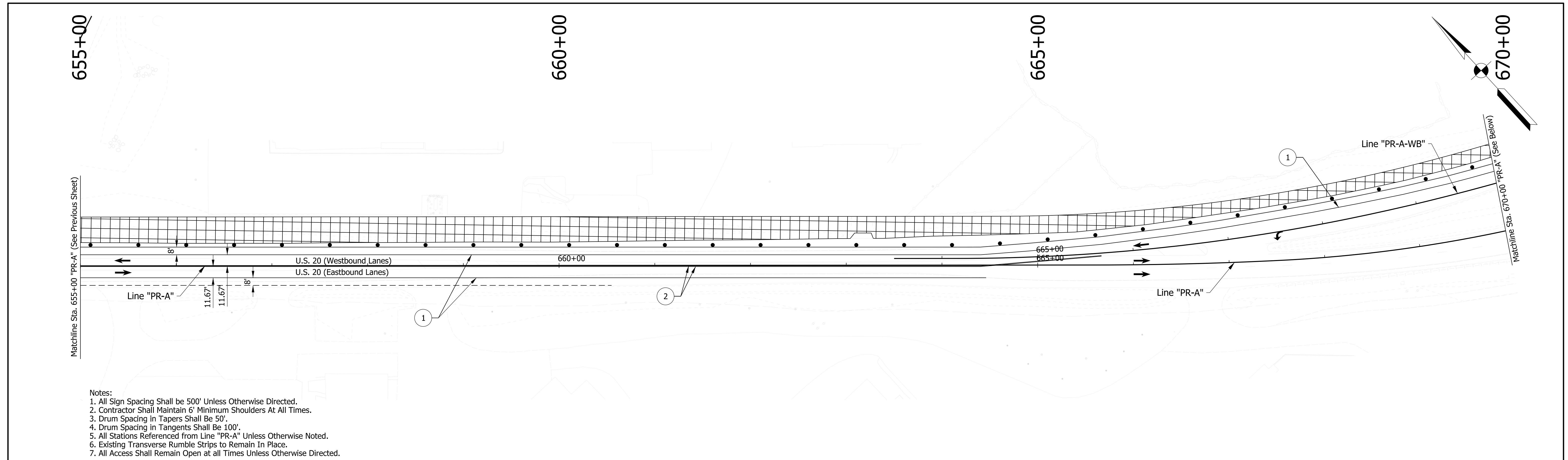
RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: _____ LMC _____	DRAWN: _____ LMC _____	
CHECKED: _____ NSX _____	CHECKED: _____ NSX _____	

INDIANA
DEPARTMENT OF TRANSPORTATION

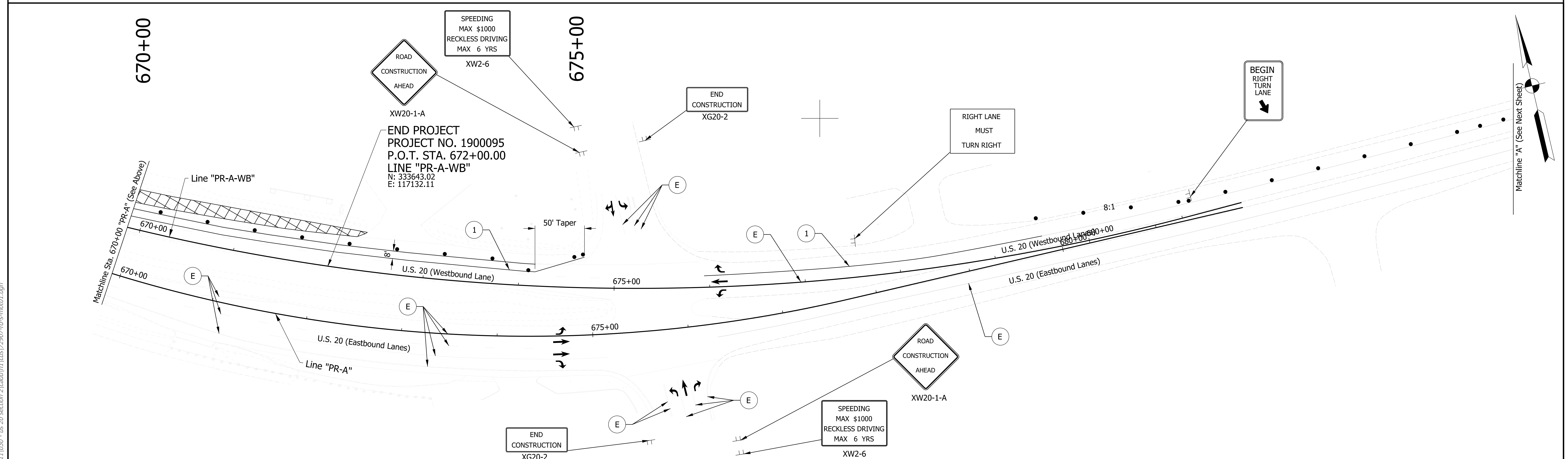
MAINTENANCE OF TRAFFIC
PHASE 1

HORIZONTAL SCALE 1"=50'	BRIDGE FILE N/A
VERTICAL SCALE N/A	DESIGNATION 1900095
SURVEY BOOK ELECTRONIC	SHEETS 16 of 161
CONTRACT R-42379	PROJECT 1900095

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- Notes:
1. All Sign Spacing Shall be 500' Unless Otherwise Directed.
 2. Contractor Shall Maintain 6' Minimum Shoulders At All Times.
 3. Drum Spacing in Tapers Shall Be 50'.
 4. Drum Spacing in Tangents Shall Be 100'.
 5. All Stations Referenced from Line "PR-A" Unless Otherwise Noted.
 6. Existing Transverse Rumble Strips to Remain In Place.
 7. All Access Shall Remain Open at all Times Unless Otherwise Directed.



Maintenance Of Traffic Legend	Temporary Pavement Marking Legend
<ul style="list-style-type: none"> Construction Area Standard Drum Direction Of Traffic Barricade, III-A (12 Lft.) Construction Sign, A 	<ul style="list-style-type: none"> 1 Temporary Pavement Marking, Removable, 5 In. (White) 2 Temporary Pavement Marking, Removable, 5 In. (Yellow) 3 Temporary Pavement Marking, Removable, 5 In. (Dotted White 3' Line 9' Gap) E Existing Pavement Marking To Remain

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 1

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	N/A
VERTICAL SCALE	DESIGNATION
N/A	1900095
SURVEY BOOK	SHEETS
ELECTRONIC	17 of 161
CONTRACT	PROJECT
R-42379	1900095

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 model:Sheet5
 file:n:\72907-indot-f-oncall\18111030 - us_20_section_2\cadd\h1\cadd\72907-rd-s-mot01.dgn

Matchline "A" (See Below)

U.S. 20 (Westbound Lanes)
U.S. 20 (Eastbound Lanes)

Matchline "B" (See Below)

- Notes:
1. All Sign Spacing Shall be 500' Unless Otherwise Directed.
 2. Contractor Shall Maintain 6' Minimum Shoulders At All Times.
 3. Drum Spacing in Tapers Shall Be 50'.
 4. Drum Spacing in Tangents Shall Be 100'.
 5. All Stations Referenced from Line "PR-A" Unless Otherwise Noted.
 6. Existing Transverse Rumble Strips to Remain In Place.
 7. All Access Shall Remain Open at all Times Unless Otherwise Directed.

Matchline "B" (See Above)

U.S. 20 (Westbound Lanes)
U.S. 20 (Eastbound Lanes)

XG20-5-B
WORKSITE
SPEED LIMIT 50
R2-1-B

XG20-5-B
WORKSITE
XW-3-5-B

XW20-1-A
ROAD CONSTRUCTION AHEAD

END CONSTRUCTION
XG20-2

SPEED LIMIT 50
R2-1-B

SPEEDING
MAX \$1000
RECKLESS DRIVING
MAX 6 YRS
XW2-6

nx60ng
 10/21/2020 11:20:10 am
 model:Sheet6
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Maintenance Of Traffic Legend

	Construction Area
	Standard Drum
	Direction Of Traffic
	Barricade, III-A (12 Lft.)
	Construction Sign, A

Temporary Pavement Marking Legend

	1 Temporary Pavement Marking, Removable, 5 In. (White)		E Existing Pavement Marking To Remain
	2 Temporary Pavement Marking, Removable, 5 In. (Yellow)		
	3 Temporary Pavement Marking, Removable, 5 In. (Dotted White 3' Line 9' Gap)		

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 1

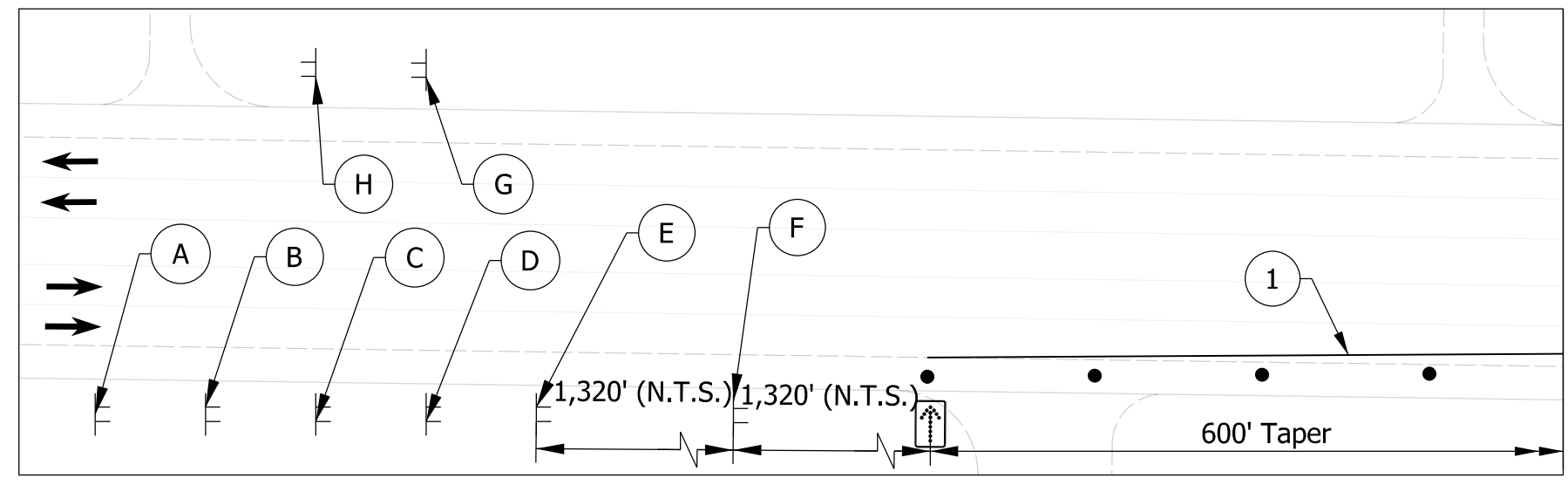
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1"=50'	N/A
VERTICAL SCALE	DESIGNATION
N/A	1900095
SURVEY BOOK	SHEETS MOT-06
ELECTRONIC	18 of 161
CONTRACT	PROJECT
R-42379	1900095

535+00

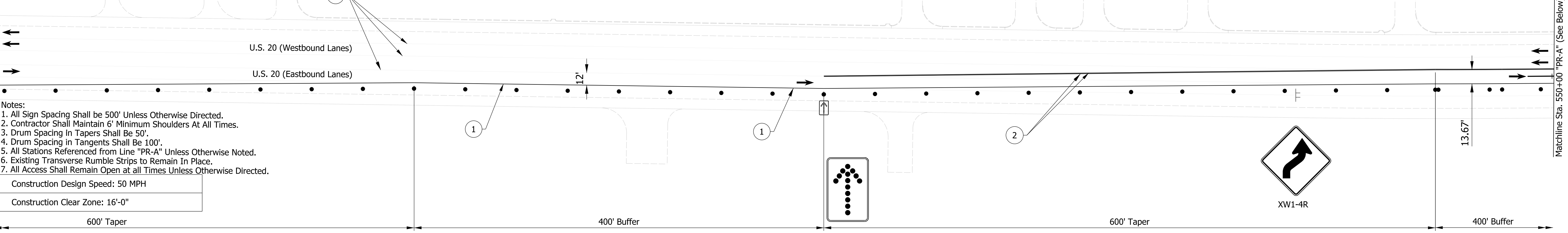
540+00

545+00

550+00



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 Sign Spacing Shall be 500' Unless Otherwise Directed.
 2. Contractor Shall Maintain 6' Minimum Shoulders At All Times.
 3. Drum Spacing in Tapers Shall Be 50'.
 4. Drum Spacing in Tangents Shall Be 100'.
 5. All Stations Referenced from Line "PR-A" Unless Otherwise Noted.
 6. Existing Transverse Rumble Strips to Remain In Place.
 7. All Access Shall Remain Open at all Times Unless Otherwise Directed.

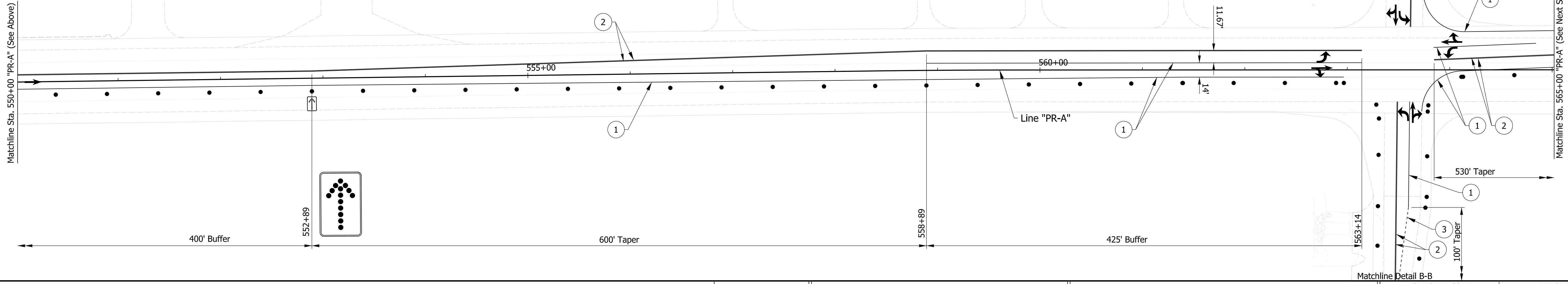
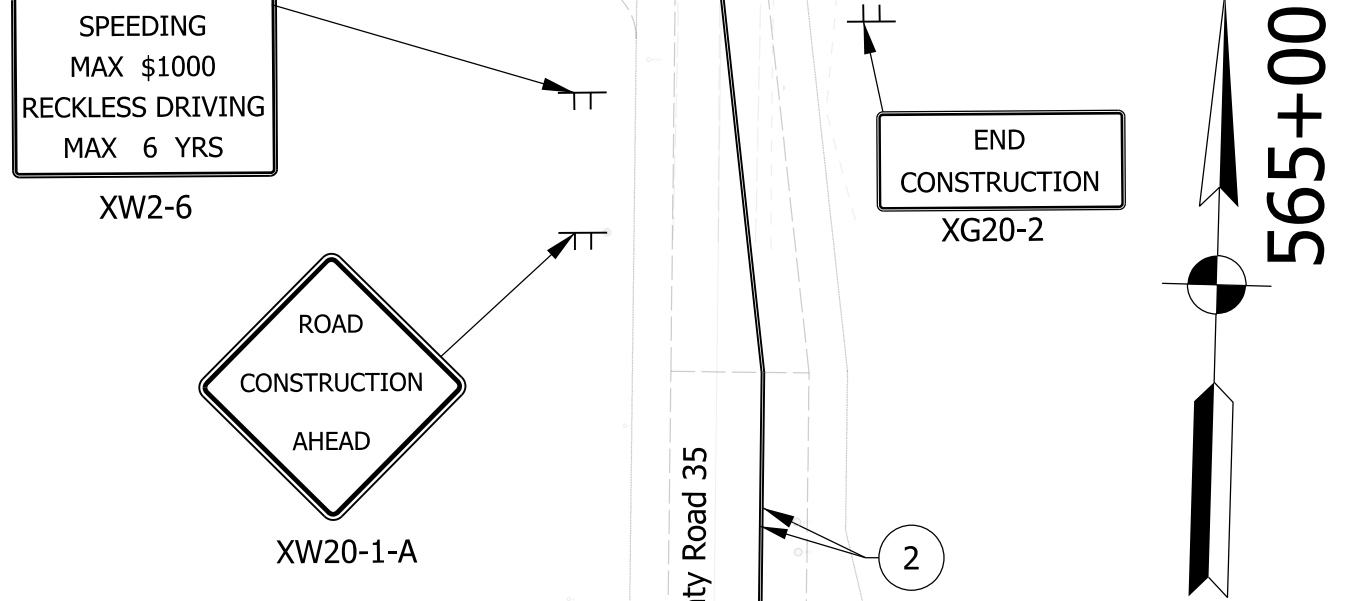
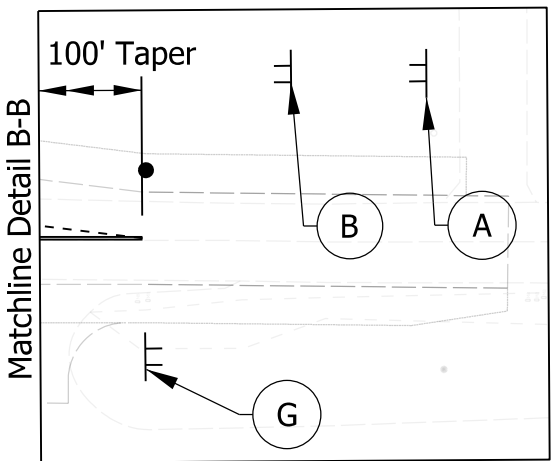
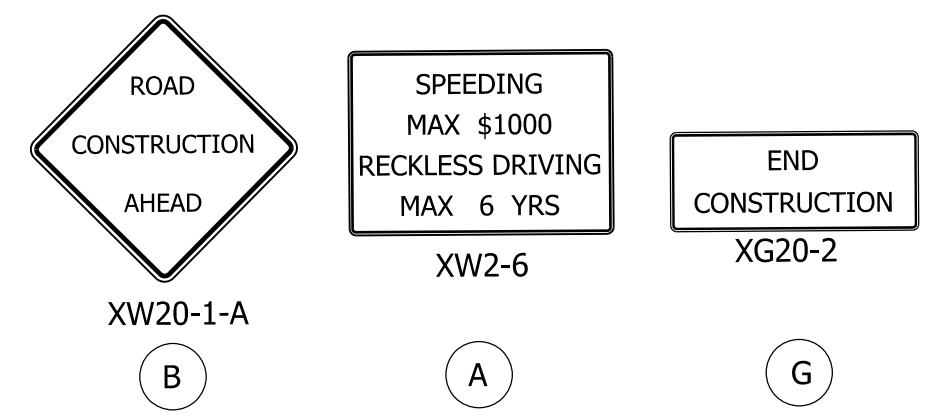
Construction Design Speed: 50 MPH
Construction Clear Zone: 16'-0"

550+00

555+00

560+00

565+00



Maintenance Of Traffic Legend

	Temporary Pavement		Arrow Board
	Construction Area		
	Standard Drum		
	Direction Of Traffic		
	Barricade, III-A (12 Lft.)		
	Construction Sign, A		

Temporary Pavement Marking Legend

1	Temporary Pavement Marking, Removable, 5 In. (White)	E	Existing Pavement Marking To Remain
2	Temporary Pavement Marking, Removable, 5 In. (Yellow)		
3	Temporary Pavement Marking, Removable, 5 In. (Dotted White 3' Line 9' Gap)		

NOTE TO REVIEWER
 TEMPORARY PAVEMENT DESIGN PENDING

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

HORIZONTAL SCALE	BRIDGE FILE	
1"=50'	N/A	
VERTICAL SCALE	DESIGNATION	
N/A	1900095	
SURVEY BOOK	SHEETS	MOT-07
ELECTRONIC	19	of 161
CONTRACT	PROJECT	
R-42379	1900095	

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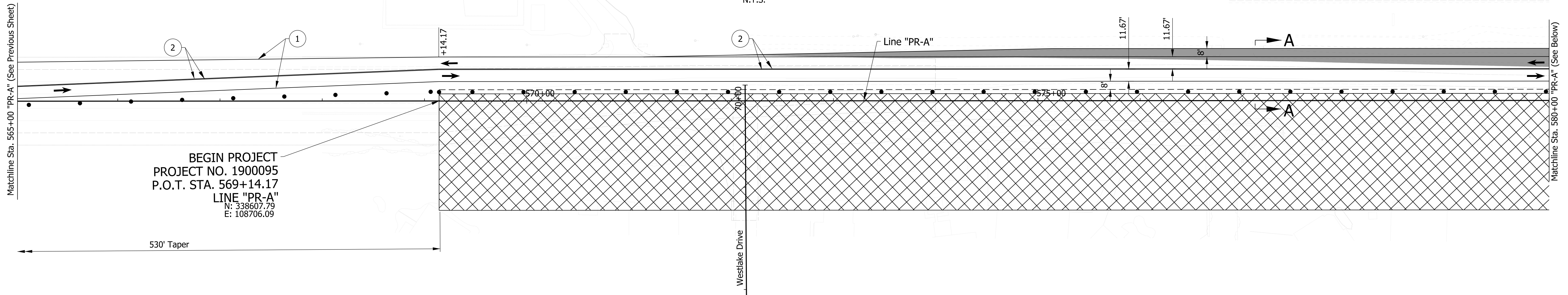
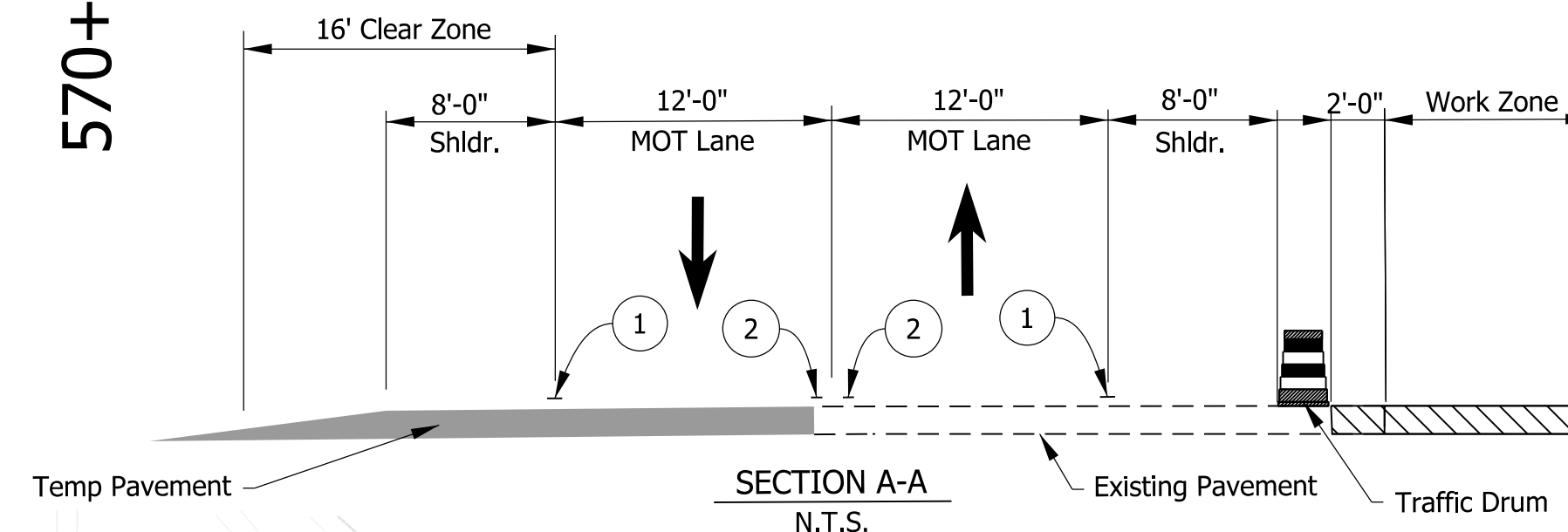
565+00

- Notes:
1. All Sign Spacing Shall be 500' Unless Otherwise Directed.
 2. Contractor Shall Maintain 6' Minimum Shoulders At All Times.
 3. Drum Spacing in Tapers Shall Be 50'.
 4. Drum Spacing in Tangents Shall Be 100'.
 5. All Stations Referenced from Line "PR-A" Unless Otherwise Noted.
 6. Existing Transverse Rumble Strips to Remain In Place.
 7. All Access Shall Remain Open at all Times Unless Otherwise Directed.

570+00

575+00

580+00



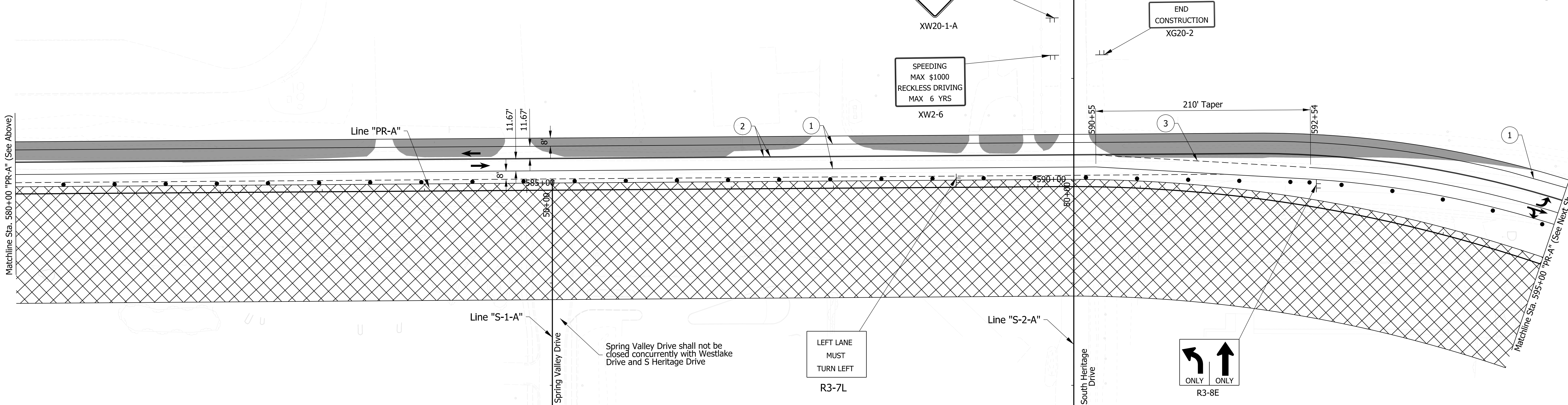
BEGIN PROJECT
PROJECT NO. 1900095
P.O.T. STA. 569+14.17
LINE "PR-A"
N: 338607.79
E: 108706.09

580+00

585+00

590+00

595+00



Spring Valley Drive shall not be closed concurrently with Westlake Drive and S Heritage Drive

LEFT LANE MUST TURN LEFT
R3-7L

ONLY ONLY
R3-8E

Maintenance Of Traffic Legend		Temporary Pavement Marking Legend	
	Temporary Pavement	①	Temporary Pavement Marking, Removable, 5 In. (White)
	Construction Area	②	Temporary Pavement Marking, Removable, 5 In. (Yellow)
	Standard Drum	③	Temporary Pavement Marking, Removable, 5 In. (Dotted White 3' Line 9' Gap)
	Direction Of Traffic	E	Existing Pavement Marking To Remain
	Barricade, III-A (12 Lft.)		
	Construction Sign, A		

NOTE TO REVIEWER
TEMPORARY PAVEMENT DESIGN PENDING

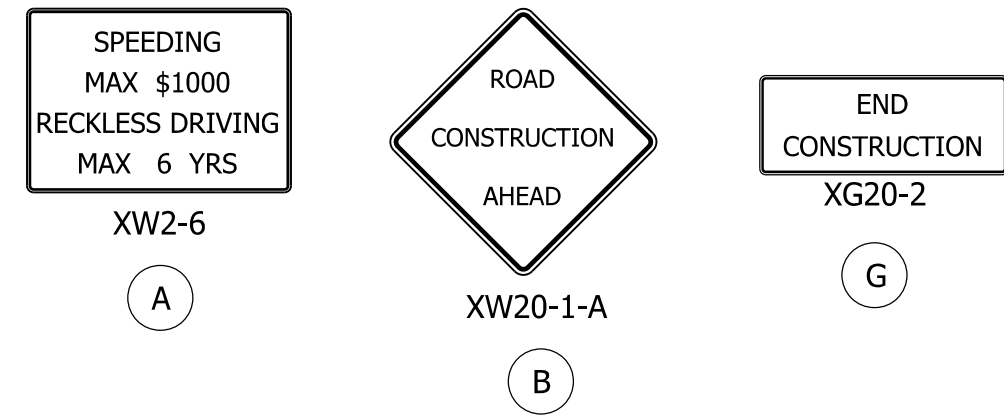
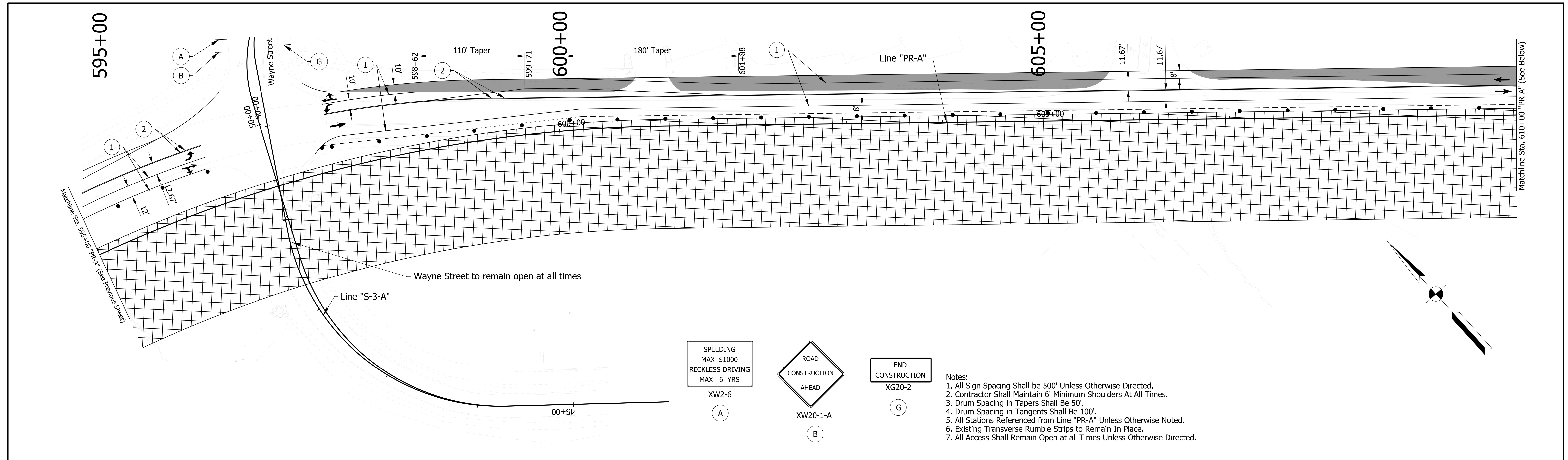
DRAFT
NOT FOR CONSTRUCTION

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

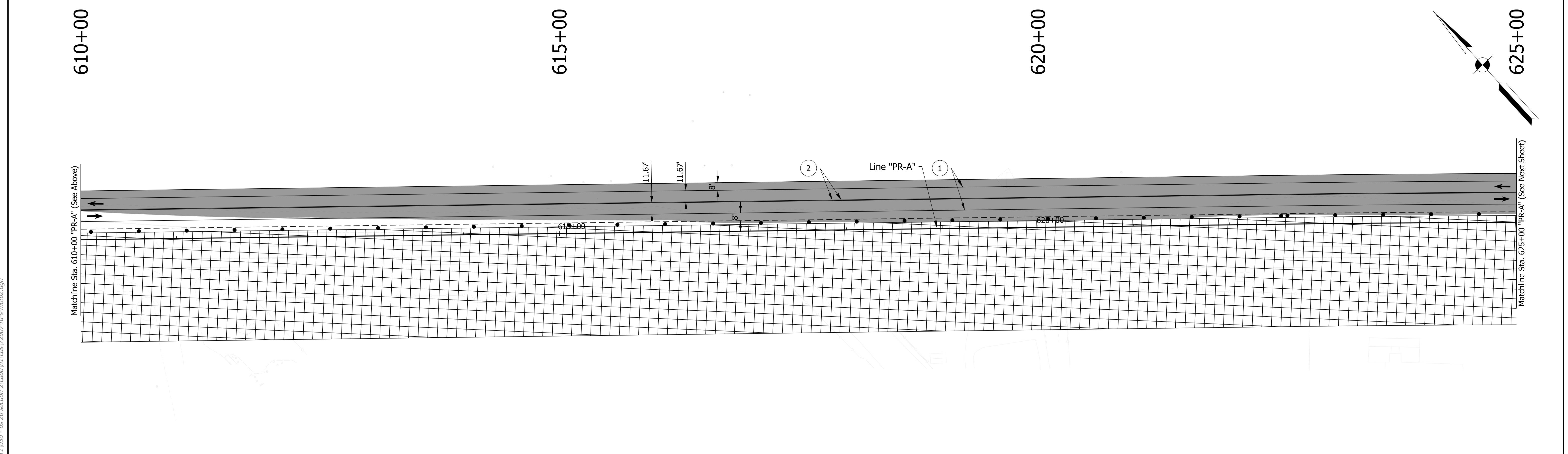
INDIANA DEPARTMENT OF TRANSPORTATION
MAINTENANCE OF TRAFFIC PHASE 2

HORIZONTAL SCALE	BRIDGE FILE
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VERTICAL SCALE	DESIGNATION
N/A	1900095
SURVEY BOOK	SHEETS MOT-08
ELECTRONIC	20 of 161
CONTRACT	PROJECT
R-42379	1900095

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- Notes:
1. All Sign Spacing Shall be 500' Unless Otherwise Directed.
 2. Contractor Shall Maintain 6' Minimum Shoulders At All Times.
 3. Drum Spacing in Tapers Shall Be 50'.
 4. Drum Spacing in Tangents Shall Be 100'.
 5. All Stations Referenced from Line "PR-A" Unless Otherwise Noted.
 6. Existing Transverse Rumble Strips to Remain In Place.
 7. All Access Shall Remain Open at all Times Unless Otherwise Directed.



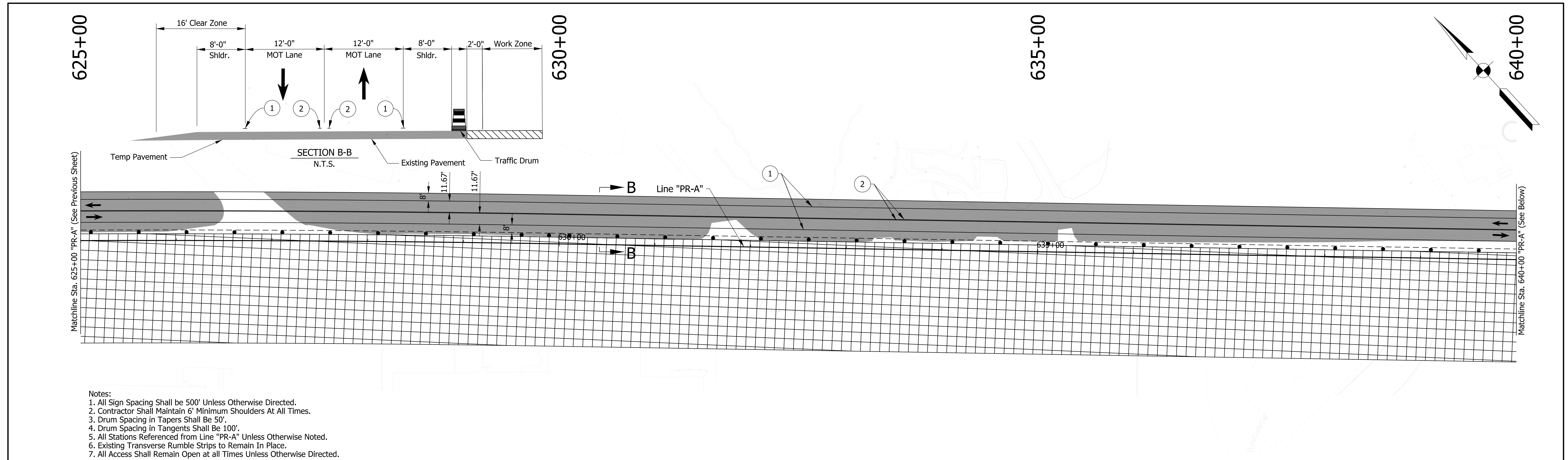
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Maintenance Of Traffic Legend		Temporary Pavement Marking Legend	
	Temporary Pavement		Temporary Pavement Marking, Removable, 5 In. (White)
	Construction Area		Temporary Pavement Marking, Removable, 5 In. (Yellow)
	Standard Drum		Temporary Pavement Marking, Removable, 5 In. (Dotted White 3' Line 9' Gap)
	Direction Of Traffic		Existing Pavement Marking To Remain
	Barricade, III-A (12 Lft.)		
	Construction Sign, A		

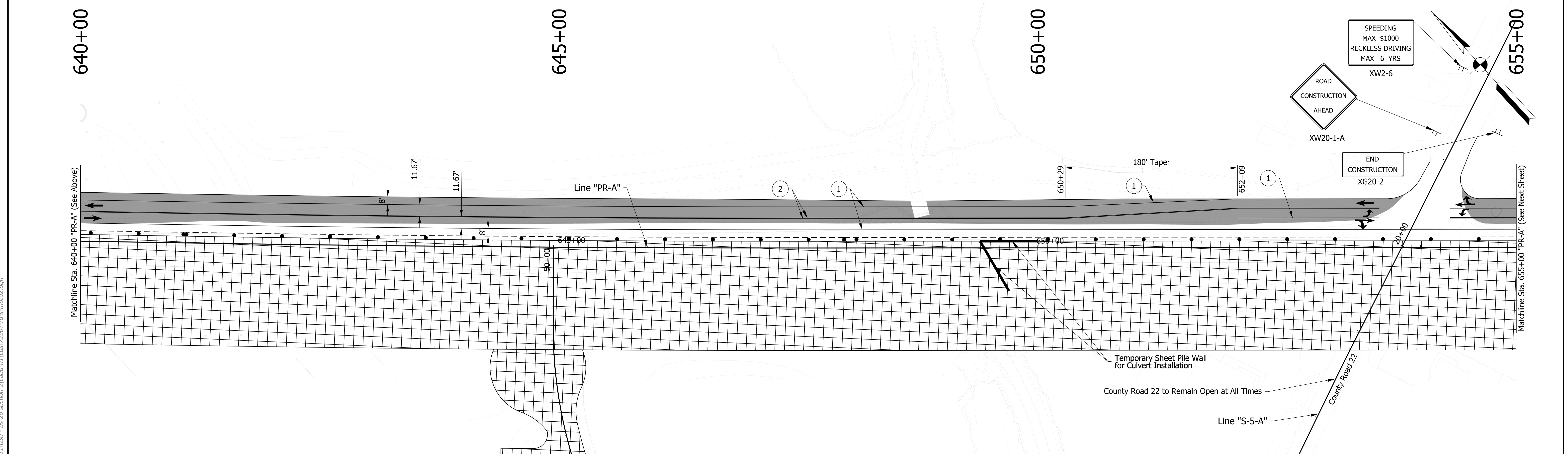
NOTE TO REVIEWER TEMPORARY PAVEMENT DESIGN PENDING		DRAFT NOT FOR CONSTRUCTION	
DESIGNED: _____ LMC _____	DRAWN: _____ LMC _____		
CHECKED: _____ NSX _____	CHECKED: _____ NSX _____		

INDIANA DEPARTMENT OF TRANSPORTATION	
MAINTENANCE OF TRAFFIC PHASE 2	

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	N/A
VERTICAL SCALE	DESIGNATION
N/A	1900095
SURVEY BOOK	SHEETS
ELECTRONIC	21 of 161
CONTRACT	PROJECT
R-42379	1900095



- Notes:
1. All Sign Spacing Shall be 500' Unless Otherwise Directed.
 2. Contractor Shall Maintain 6' Minimum Shoulders At All Times.
 3. Drum Spacing in Tapers Shall Be 50'.
 4. Drum Spacing in Tangents Shall Be 100'.
 5. All Stations Referenced from Line "PR-A" Unless Otherwise Noted.
 6. Existing Transverse Rumble Strips to Remain In Place.
 7. All Access Shall Remain Open at all Times Unless Otherwise Directed.



Maintenance Of Traffic Legend

	Temporary Pavement
	Construction Area
	Standard Drum
	Direction Of Traffic
	Barricade, III-A (12 Lft.)
	Construction Sign, A

Temporary Pavement Marking Legend

	1 Temporary Pavement Marking, Removable, 5 In. (White)		E Existing Pavement Marking To Remain
	2 Temporary Pavement Marking, Removable, 5 In. (Yellow)		
	3 Temporary Pavement Marking, Removable, 5 In. (Dotted White 3' Line 9' Gap)		

NOTE TO REVIEWER
TEMPORARY PAVEMENT DESIGN PENDING

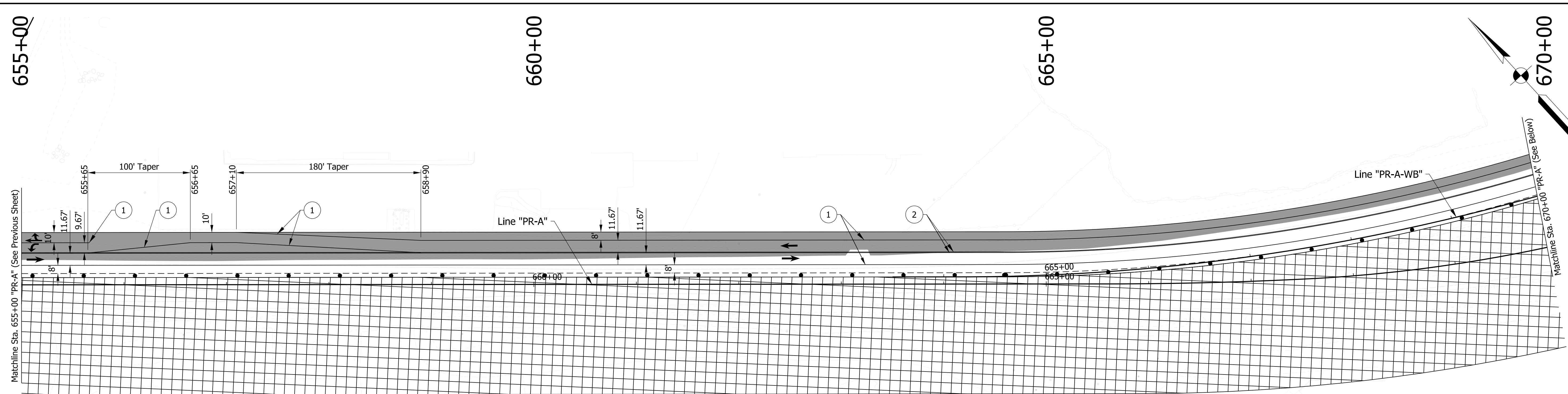
DRAFT
NOT FOR CONSTRUCTION

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

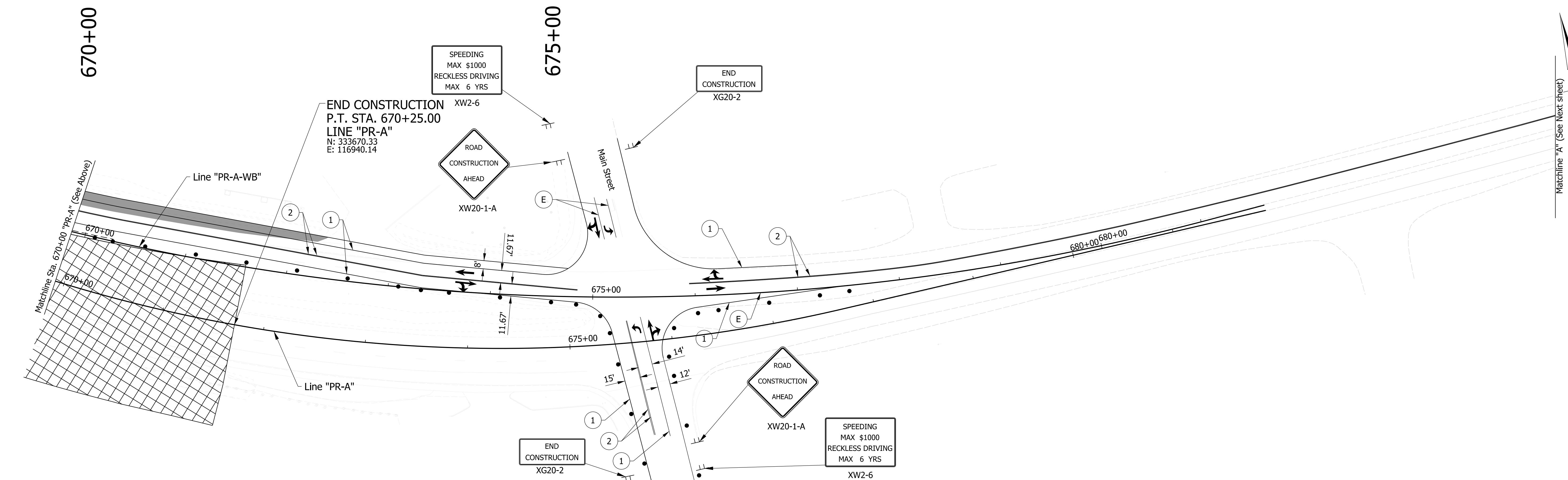
INDIANA DEPARTMENT OF TRANSPORTATION
MAINTENANCE OF TRAFFIC PHASE 2

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	N/A
VERTICAL SCALE	DESIGNATION
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SURVEY BOOK	SHEETS MOT-10
ELECTRONIC	22 of 161
CONTRACT	PROJECT
R-42379	1900095

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- Notes:
1. All Sign Spacing Shall be 500' Unless Otherwise Directed.
 2. Contractor Shall Maintain 6' Minimum Shoulders At All Times.
 3. Drum Spacing in Tapers Shall Be 50'.
 4. Drum Spacing in Tangents Shall Be 100'.
 5. All Stations Referenced from Line "PR-A" Unless Otherwise Noted.
 6. Existing Transverse Rumble Strips to Remain In Place.
 7. All Access Shall Remain Open at all Times Unless Otherwise Directed.



Maintenance Of Traffic Legend	Temporary Pavement Marking Legend
Temporary Pavement	Temporary Pavement Marking, Removable, 5 In. (White)
Construction Area	Temporary Pavement Marking, Removable, 5 In. (Yellow)
Standard Drum	Existing Pavement Marking To Remain
Direction Of Traffic	Temporary Pavement Marking, Removable, 5 In. (Dotted White 3' Line 9' Gap)
Barricade, III-A (12 Lft.)	
Construction Sign, A	

NOTE TO REVIEWER
TEMPORARY PAVEMENT DESIGN PENDING

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

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	N/A
VERTICAL SCALE	DESIGNATION
N/A	1900095
SURVEY BOOK	SHEETS MOT-11
ELECTRONIC	23 of 161
CONTRACT	PROJECT
R-42379	1900095

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Matchline "A" (See Below)

Matchline "B" (See Below)

U.S. 20 (Westbound Lanes)
U.S. 20 (Eastbound Lanes)

11.67'
11.67'

- Notes:
1. All Sign Spacing Shall be 500' Unless Otherwise Directed.
 2. Contractor Shall Maintain 6' Minimum Shoulders At All Times.
 3. Drum Spacing in Tapers Shall Be 50'.
 4. Drum Spacing in Tangents Shall Be 100'.
 5. All Stations Referenced from Line "PR-A" Unless Otherwise Noted.
 6. Existing Transverse Rumble Strips to Remain In Place.
 7. All Access Shall Remain Open at all Times Unless Otherwise Directed.

Matchline "B" (See Previous Sheet)

U.S. 20 (Westbound Lanes)
U.S. 20 (Eastbound Lanes)

600' Taper

 XW2-6 A	 XW20-1-A B	 XG20-5-B XW-3-5-B C	 R2-1-B D
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Maintenance Of Traffic Legend

	Temporary Pavement		Arrow Board
	Construction Area		
	Standard Drum		
	Direction Of Traffic		
	Barricade, III-A (12 Lft.)		
	Construction Sign, A		

NOTE TO REVIEWER
TEMPORARY PAVEMENT
DESIGN PENDING

Temporary Pavement Marking Legend

①	Temporary Pavement Marking, Removable, 5 In. (White)	E	Existing Pavement Marking To Remain
②	Temporary Pavement Marking, Removable, 5 In. (Yellow)		
③	Temporary Pavement Marking, Removable, 5 In. (Dotted White 3' Line 9' Gap)		

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

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	N/A
VERTICAL SCALE	DESIGNATION
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SURVEY BOOK	SHEETS MOT-12
ELECTRONIC	24 of 161
CONTRACT	PROJECT
R-42379	1900095

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535+00

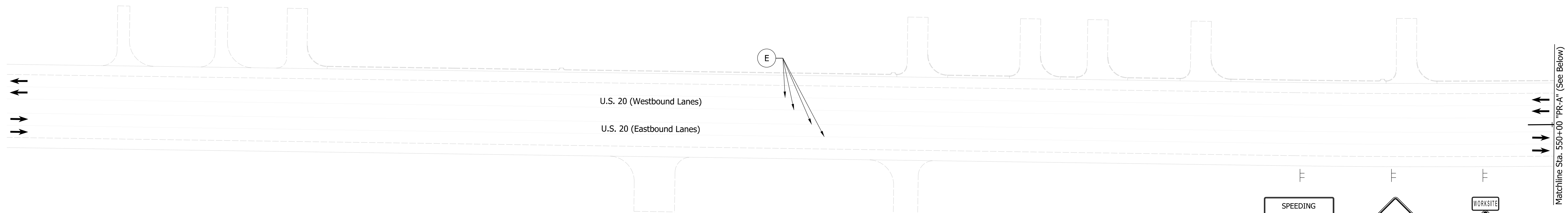
PHASE 3 CONSTRUCTION ACTIVITIES
1. Construct Westbound Lanes, and Shoulder.
2. Construct Proposed Side Road Intersections

Construction Design Speed: 50 MPH
Construction Clear Zone: 16'-0"

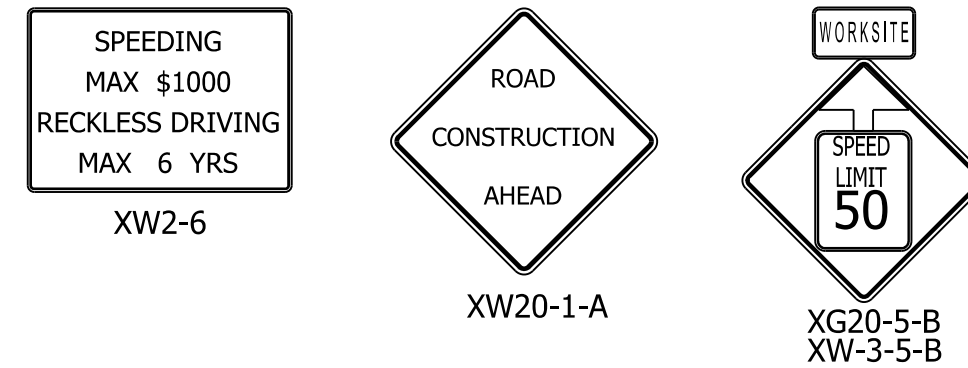
540+00

545+00

550+00



- Notes:
1. All Sign Spacing Shall be 500' Unless Otherwise Directed.
 2. Contractor Shall Maintain 6' Minimum Shoulders At All Times.
 3. Drum Spacing in Tapers Shall Be 50'.
 4. Drum Spacing in Tangents Shall Be 100'.
 5. All Stations Referenced from Line "PR-A" Unless Otherwise Noted.
 6. Existing Transverse Rumble Strips to Remain In Place.
 7. All Access Shall Remain Open at all Times Unless Otherwise Directed.

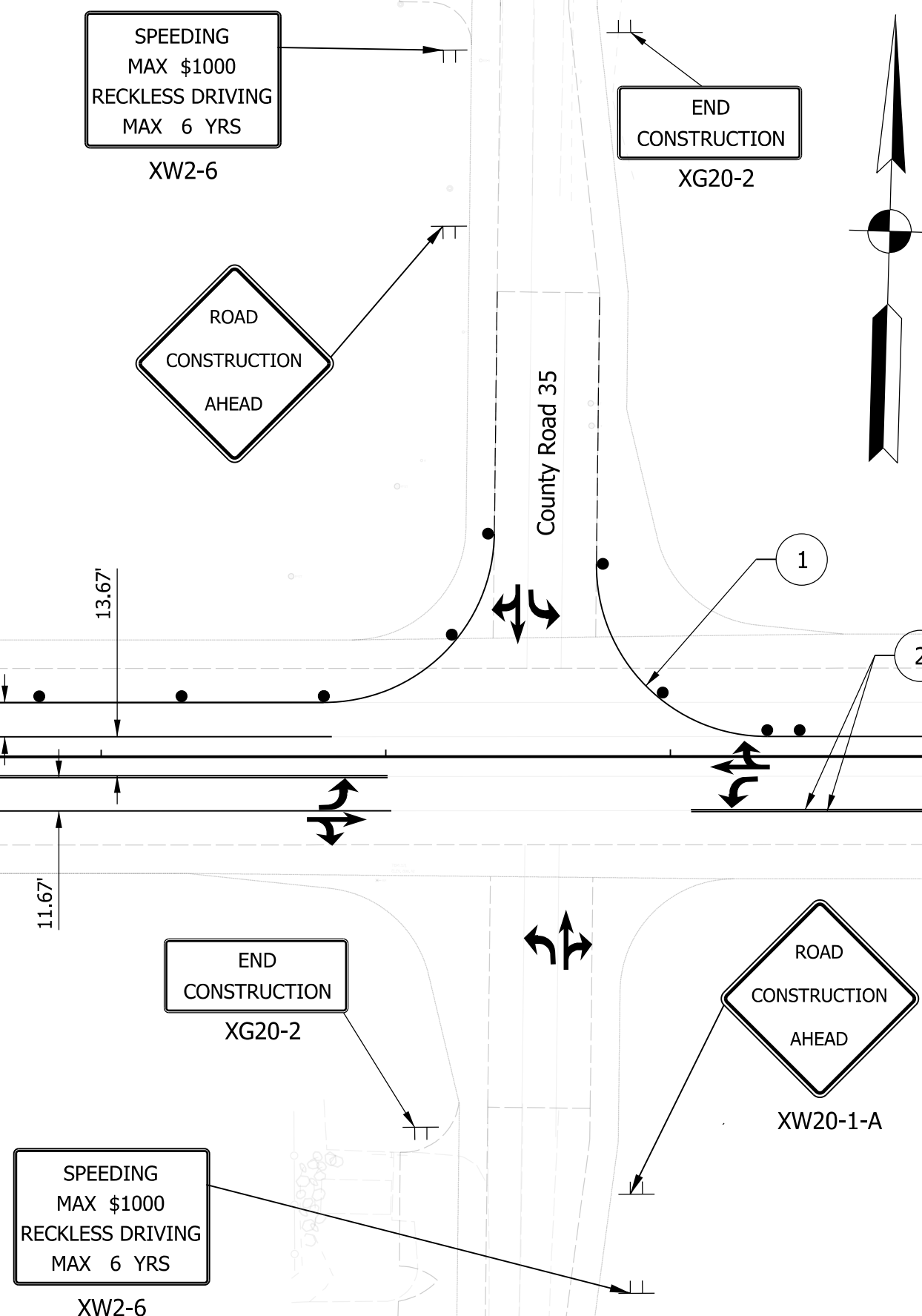
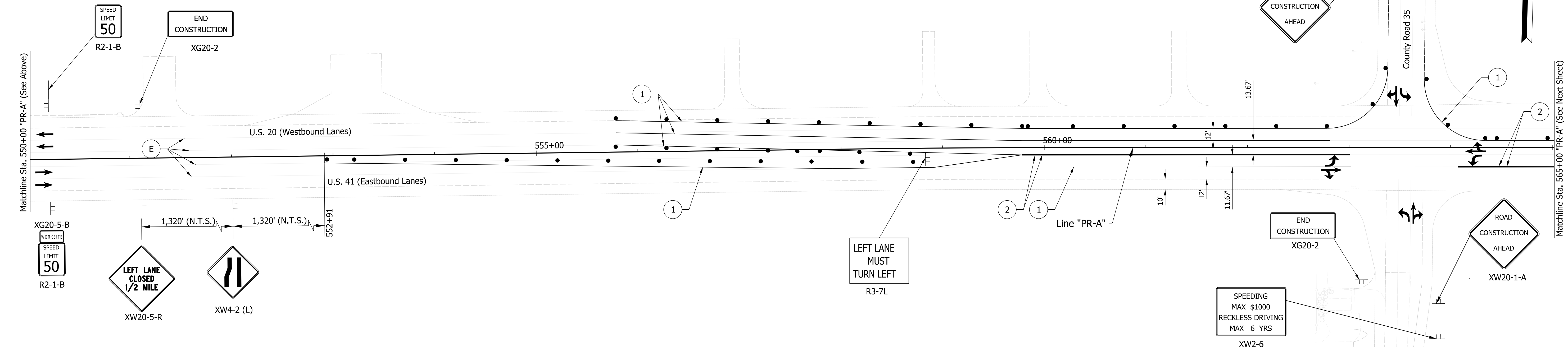


550+00

555+00

560+00

565+00



Maintenance Of Traffic Legend	Temporary Pavement Marking Legend
Construction Area	① Temporary Pavement Marking, Removable, 5 In. (White)
Standard Drum	② Temporary Pavement Marking, Removable, 5 In. (Yellow)
Direction Of Traffic	③ Temporary Pavement Marking, Removable, 5 In. (Dotted White 3' Line 9' Gap)
Barricade, III-A (12 Lft.)	ⓔ Existing Pavement Marking To Remain
Construction Sign, A	

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 3

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	N/A
VERTICAL SCALE	DESIGNATION
N/A	1900095
SURVEY BOOK	SHEETS
ELECTRONIC	25 of 161
CONTRACT	PROJECT
R-42379	1900095

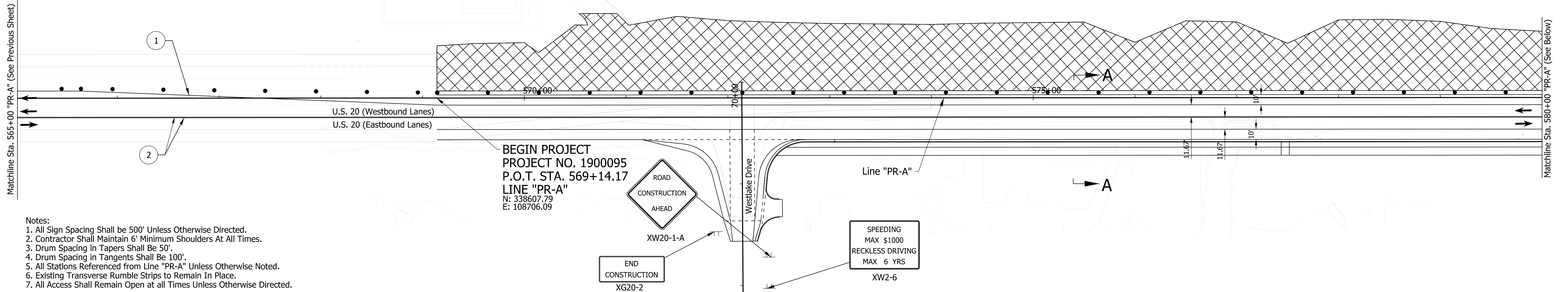
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565+00

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580+00

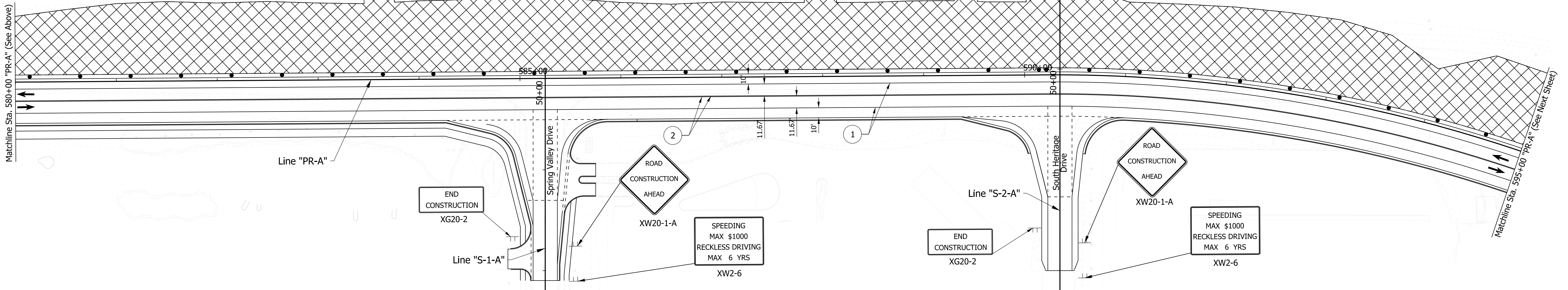


580+00

585+00

590+00

595+00



Maintenance Of Traffic Legend		Temporary Pavement Marking Legend	
	Construction Area	1	Temporary Pavement Marking, Removable, 5 In. (White)
	Standard Drum	2	Temporary Pavement Marking, Removable, 5 In. (Yellow)
	Direction Of Traffic	3	Temporary Pavement Marking, Removable, 5 In. (Dotted White 3' Line 9' Gap)
	Barricade, III-A (12 Lft.)	E	Existing Pavement Marking To Remain
	Construction Sign, A		

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NOT FOR CONSTRUCTION

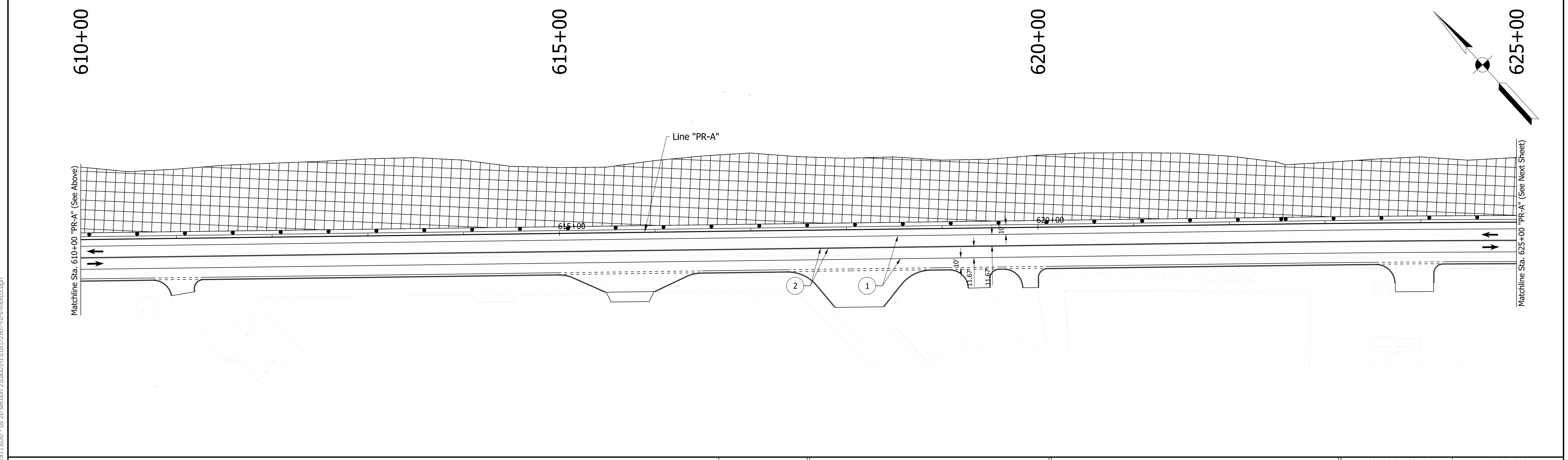
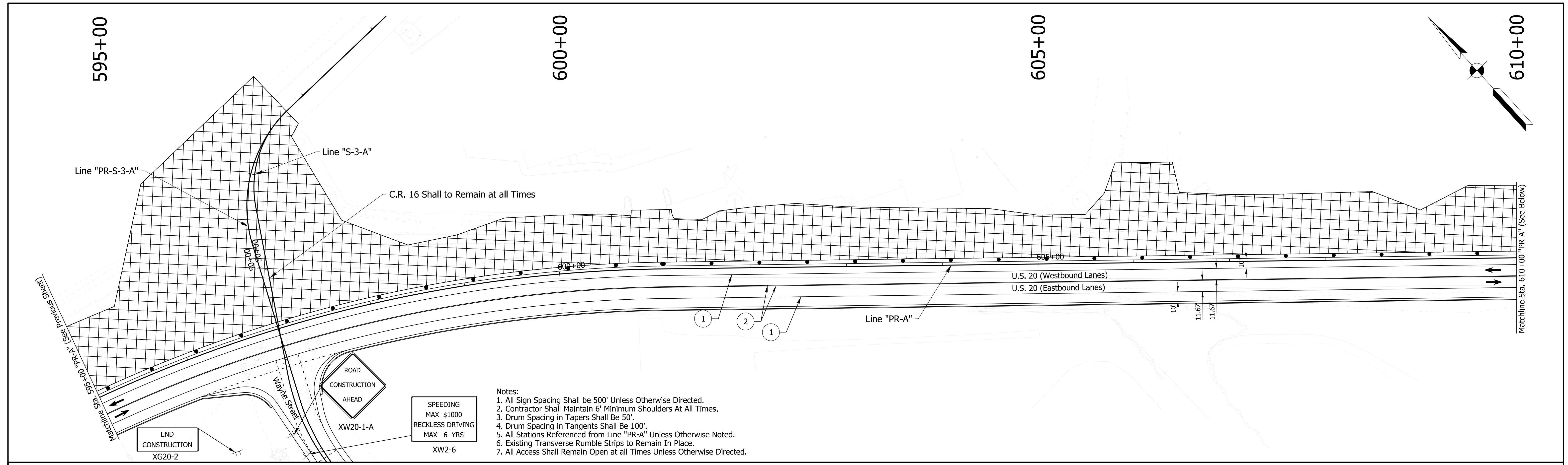
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DESIGNED: _____ LMC _____	DRAWN: _____ LMC _____	
CHECKED: _____ NSX _____	CHECKED: _____ NSX _____	

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 3

HORIZONTAL SCALE	BRIDGE FILE
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VERTICAL SCALE	DESIGNATION
N/A	1900095
SURVEY BOOK	SHEETS MOT-14
ELECTRONIC	26 of 161
CONTRACT	PROJECT
R-42379	1900095

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Maintenance Of Traffic Legend		Temporary Pavement Marking Legend	
	Construction Area		1 Temporary Pavement Marking, Removable, 5 In. (White)
	Standard Drum		2 Temporary Pavement Marking, Removable, 5 In. (Yellow)
	Direction Of Traffic		E Existing Pavement Marking To Remain
	Barricade, III-A (12 Lft.)		3 Temporary Pavement Marking, Removable, 5 In. (Dotted White 3' Line 9' Gap)
	Construction Sign, A		

DRAFT NOT FOR CONSTRUCTION	RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
	DESIGNED: _____ LMC _____	DRAWN: _____ LMC _____	
	CHECKED: _____ NSX _____	CHECKED: _____ NSX _____	

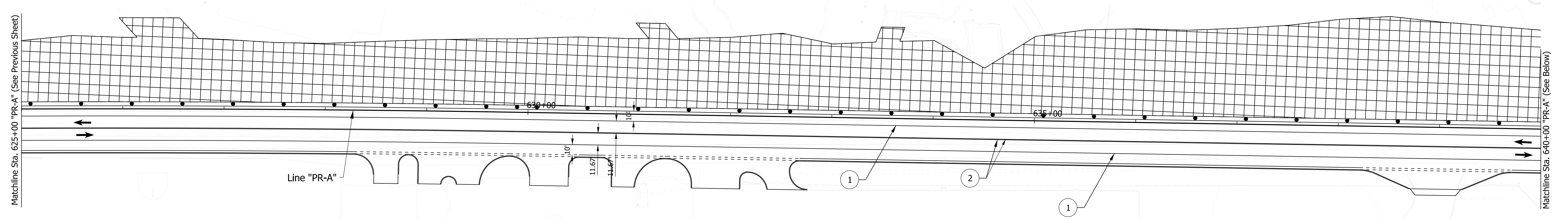
INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 3

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VERTICAL SCALE	DESIGNATION
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SURVEY BOOK	SHEETS MOT-15
ELECTRONIC	27 of 161
CONTRACT	PROJECT
R-42379	1900095

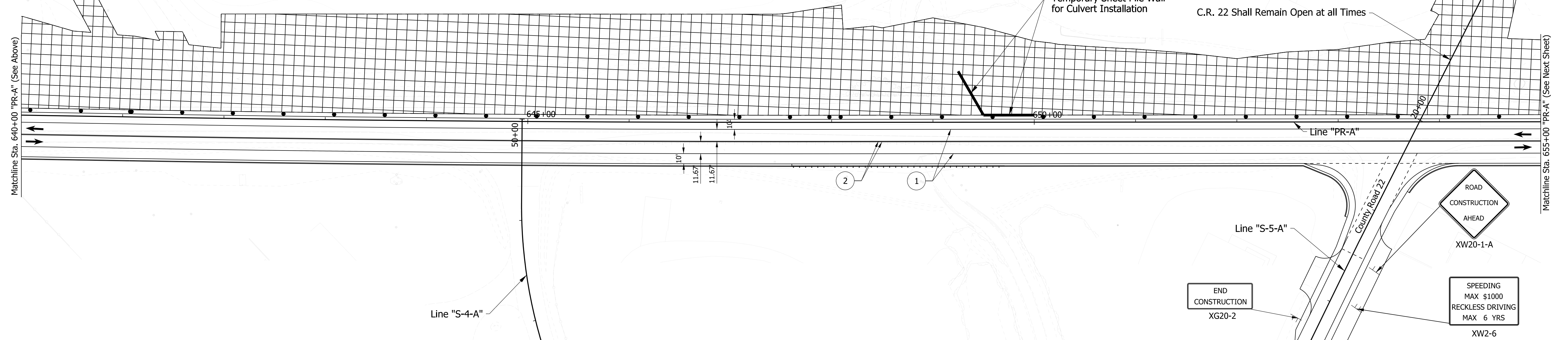
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625+00 630+00 635+00 640+00



- Notes:
1. All Sign Spacing Shall be 500' Unless Otherwise Directed.
 2. Contractor Shall Maintain 6' Minimum Shoulders At All Times.
 3. Drum Spacing in Tapers Shall Be 50'.
 4. Drum Spacing in Tangents Shall Be 100'.
 5. All Stations Referenced from Line "PR-A" Unless Otherwise Noted.
 6. Existing Transverse Rumble Strips to Remain In Place.
 7. All Access Shall Remain Open at all Times Unless Otherwise Directed.

640+00 645+00 650+00 655+00



- Maintenance Of Traffic Legend
- Construction Area
 - Standard Drum
 - Direction Of Traffic
 - Barricade, III-A (12 Lft.)
 - Construction Sign, A

- Temporary Pavement Marking Legend
- 1 Temporary Pavement Marking, Removable, 5 In. (White)
 - 2 Temporary Pavement Marking, Removable, 5 In. (Yellow)
 - 3 Temporary Pavement Marking, Removable, 5 In. (Dotted White 3' Line 9' Gap)
 - E Existing Pavement Marking To Remain

DRAFT
NOT FOR CONSTRUCTION

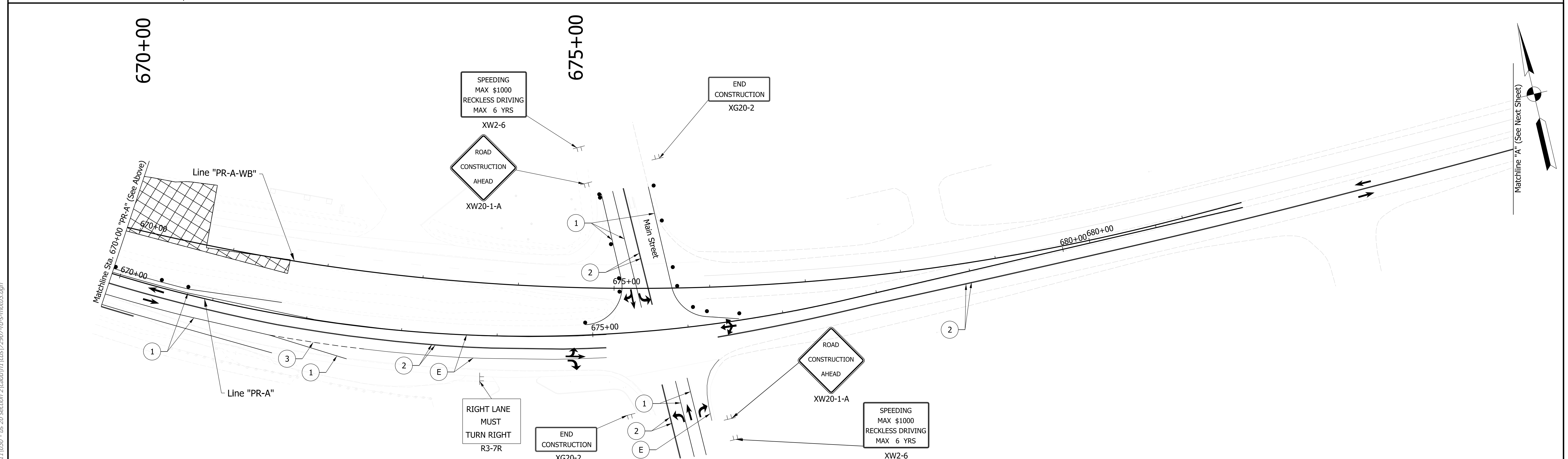
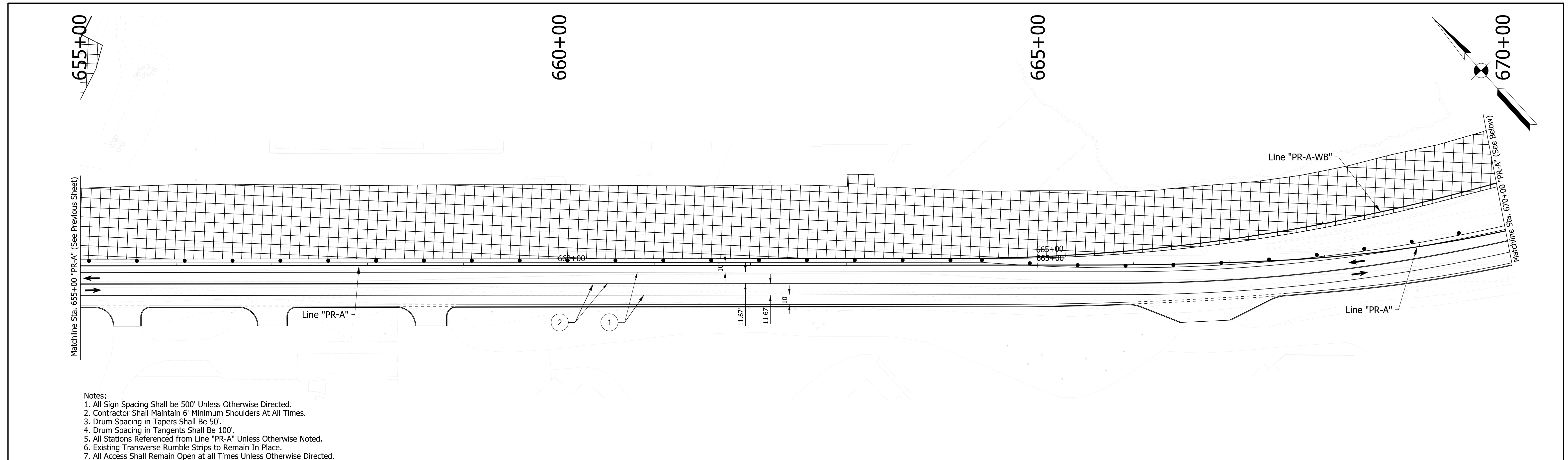
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DESIGNED: LMC	DRAWN: LMC	
CHECKED: NSX	CHECKED: NSX	

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 3

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	N/A
VERTICAL SCALE	DESIGNATION
N/A	1900095
SURVEY BOOK	SHEETS
ELECTRONIC	28 of 161
CONTRACT	PROJECT
R-42379	1900095

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Maintenance Of Traffic Legend		Temporary Pavement Marking Legend	
	Construction Area		1 Temporary Pavement Marking, Removable, 5 In. (White)
	Standard Drum		2 Temporary Pavement Marking, Removable, 5 In. (Yellow)
	Direction Of Traffic		3 Temporary Pavement Marking, Removable, 5 In. (Dotted White 3' Line 9' Gap)
	Barricade, III-A (12 Lft.)		E Existing Pavement Marking To Remain
	Construction Sign, A		

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 3

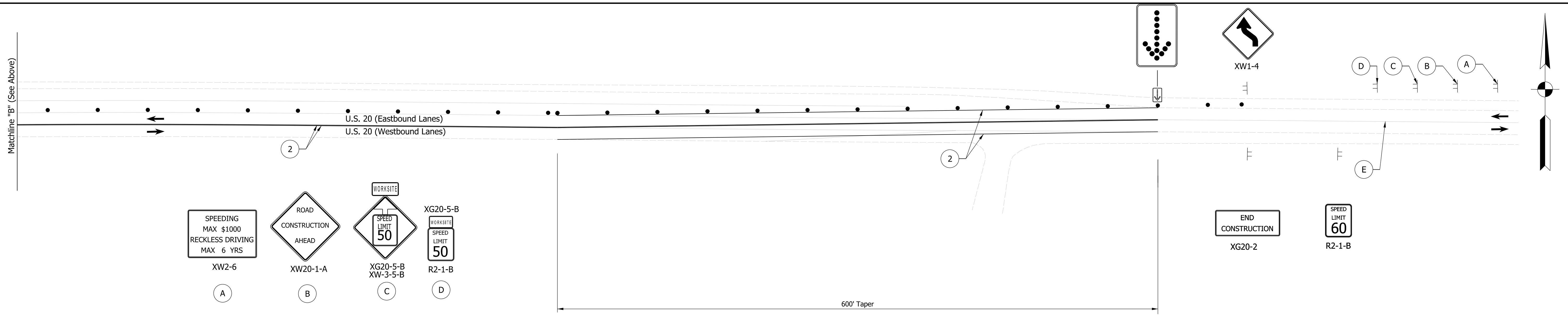
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VERTICAL SCALE	DESIGNATION
N/A	1900095
SURVEY BOOK	SHEETS MOT-17
ELECTRONIC	29 of 161
CONTRACT	PROJECT
R-42379	1900095

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Matchline "A" (See Previous Sheet)

Matchline "B" (See Below)

- Notes:
1. All Sign Spacing Shall be 500' Unless Otherwise Directed.
 2. Contractor Shall Maintain 6' Minimum Shoulders At All Times.
 3. Drum Spacing in Tapers Shall Be 50'.
 4. Drum Spacing in Tangents Shall Be 100'.
 5. All Stations Referenced from Line "PR-A" Unless Otherwise Noted.
 6. Existing Transverse Rumble Strips to Remain In Place.
 7. All Access Shall Remain Open at all Times Unless Otherwise Directed.



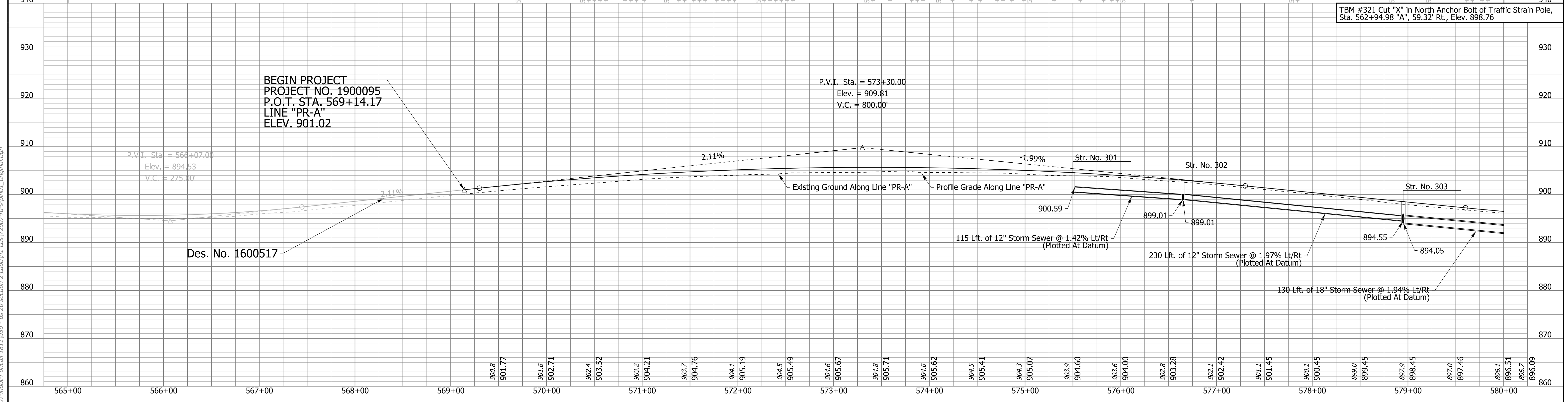
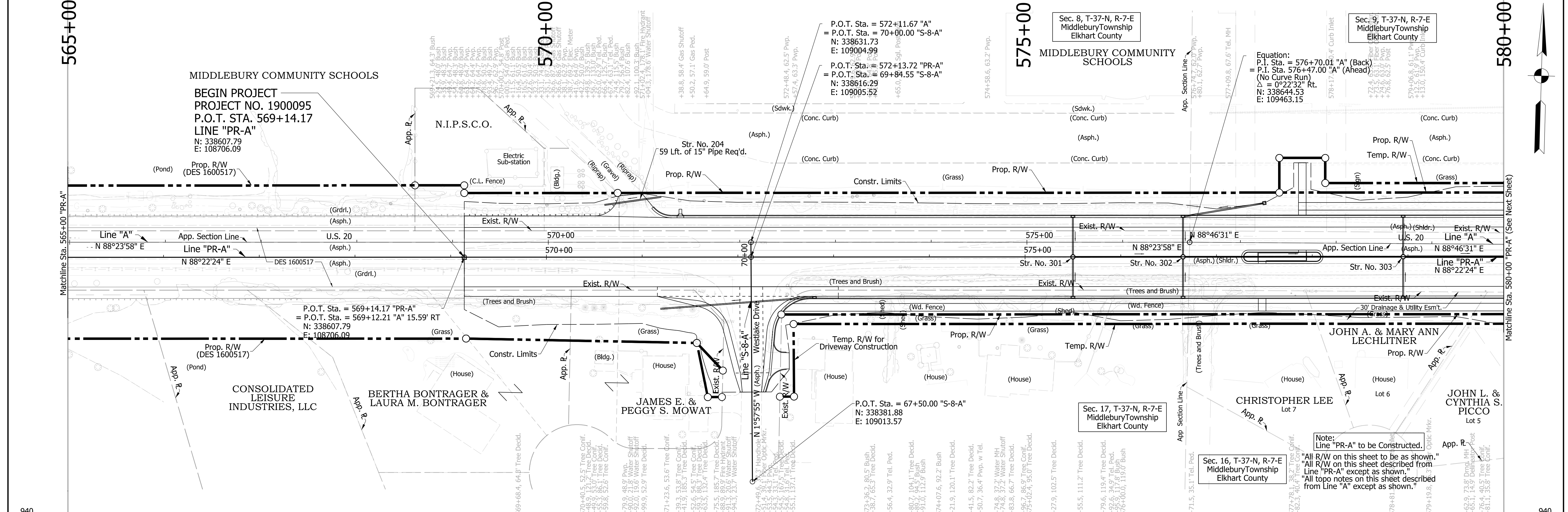
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Maintenance Of Traffic Legend	Temporary Pavement Marking Legend
Construction Area Standard Drum Direction Of Traffic Barricade, III-A (12 Lft.) Construction Sign, A	1 Temporary Pavement Marking, Removable, 5 In. (White) 2 Temporary Pavement Marking, Removable, 5 In. (Yellow) 3 Temporary Pavement Marking, Removable, 5 In. (Dotted White 3' Line 9' Gap) E Existing Pavement Marking To Remain

DRAFT NOT FOR CONSTRUCTION	RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____
	DESIGNED: _____ LMC _____ DRAWN: _____ LMC _____
	CHECKED: _____ NSX _____ CHECKED: _____ NSX _____

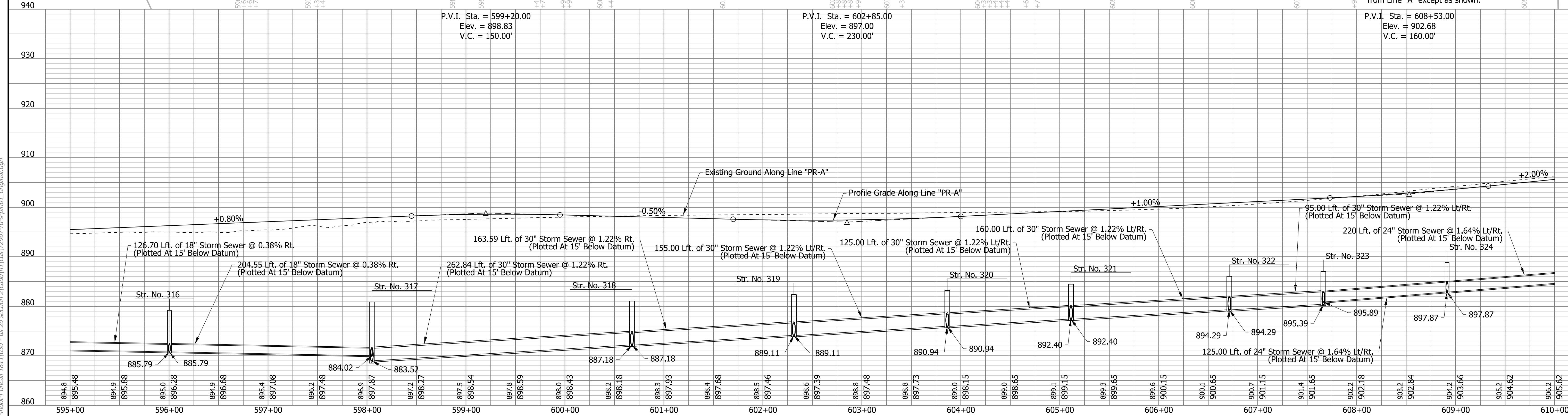
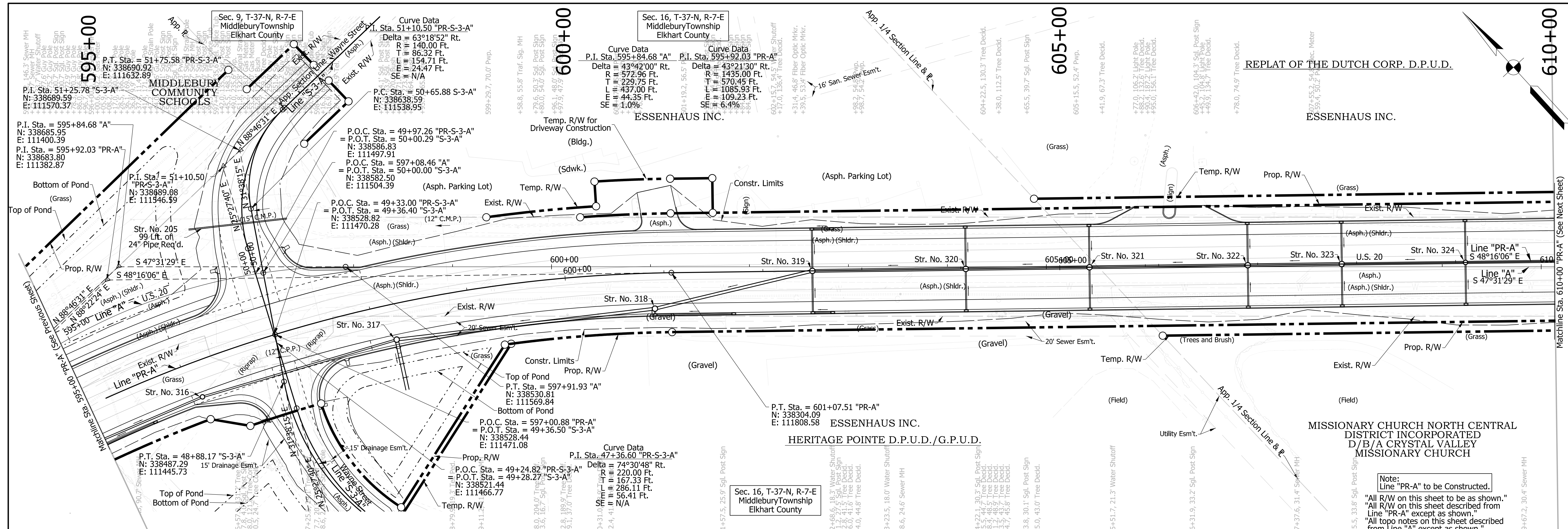
INDIANA DEPARTMENT OF TRANSPORTATION
MAINTENANCE OF TRAFFIC PHASE 3

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	N/A
VERTICAL SCALE	DESIGNATION
N/A	1900095
SURVEY BOOK	SHEETS
ELECTRONIC	30 of 161
CONTRACT	PROJECT
R-42379	1900095



DRAFT NOT FOR CONSTRUCTION	RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____ DATE _____	INDIANA DEPARTMENT OF TRANSPORTATION ROADWAY PLAN AND PROFILE LINE "PR-A"	SCALE 1"=50'	BRIDGE FILE N/A
	DESIGNED: _____ LMC	DRAWN: _____ LMC		VERTICAL SCALE 1"=10'	DESIGNATION 1900095
	CHECKED: _____ NSX	CHECKED: _____ NSX		SURVEY BOOK ELECTRONIC	SHEETS 31 of 161
				CONTRACT R-42379	PROJECT 1900095

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DRAFT
NOT FOR CONSTRUCTION

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

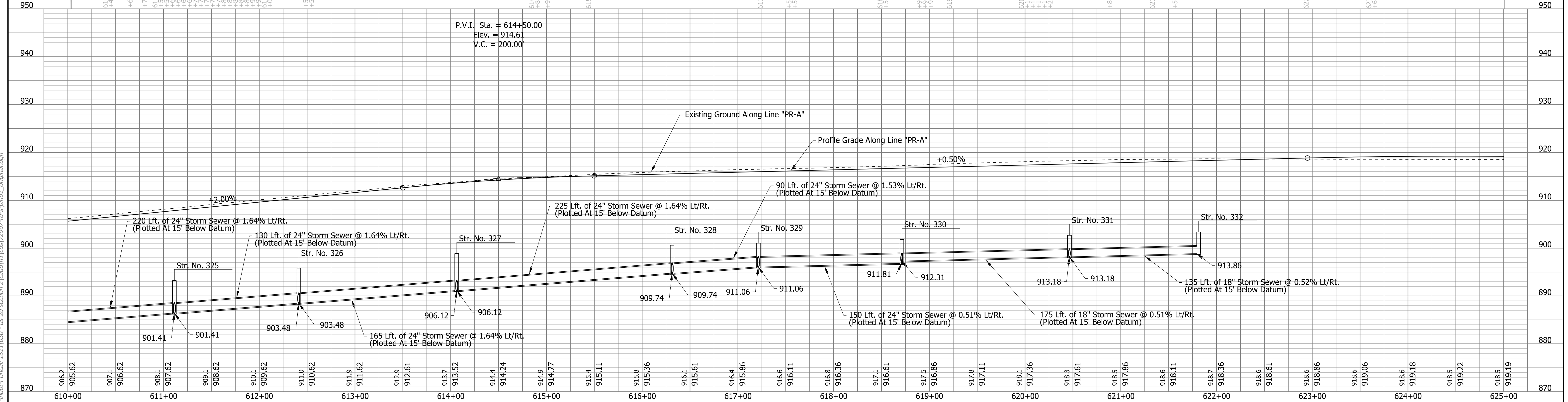
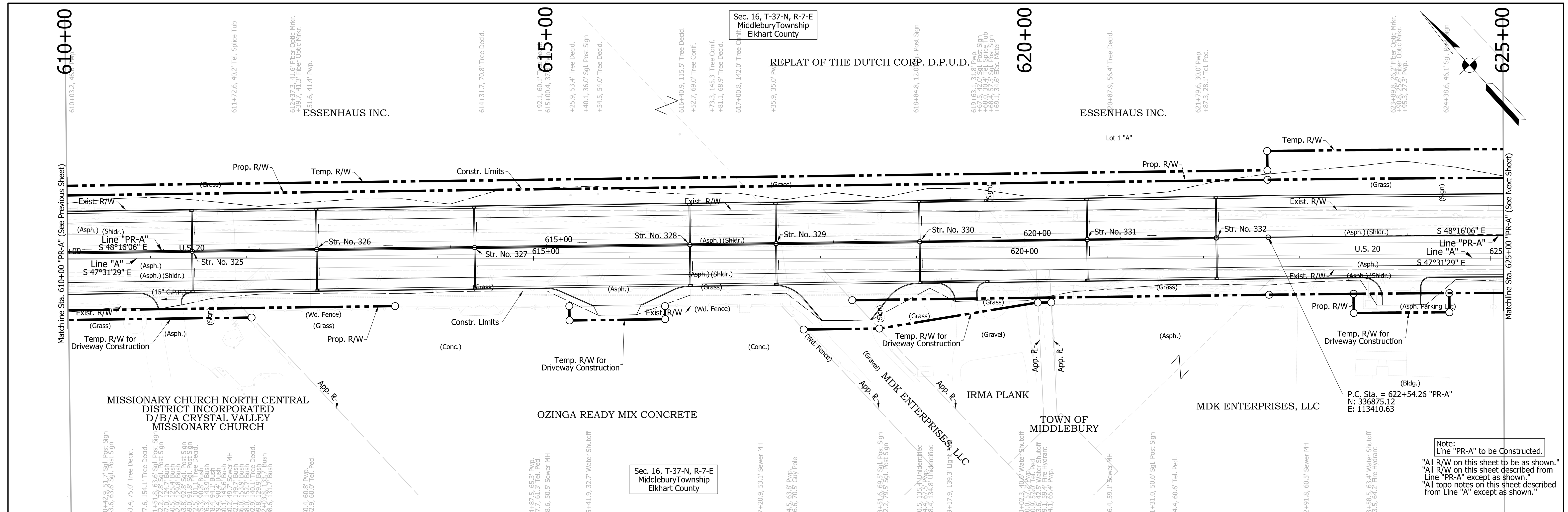
INDIANA
DEPARTMENT OF TRANSPORTATION

ROADWAY PLAN AND PROFILE
LINE "PR-A"

SCALE	BRIDGE FILE
1"=50'	N/A
VERTICAL SCALE	DESIGNATION
1"=10'	1900095
SURVEY BOOK	SHEETS
ELECTRONIC	33 of 161
CONTRACT	PROJECT
R-42379	1900095

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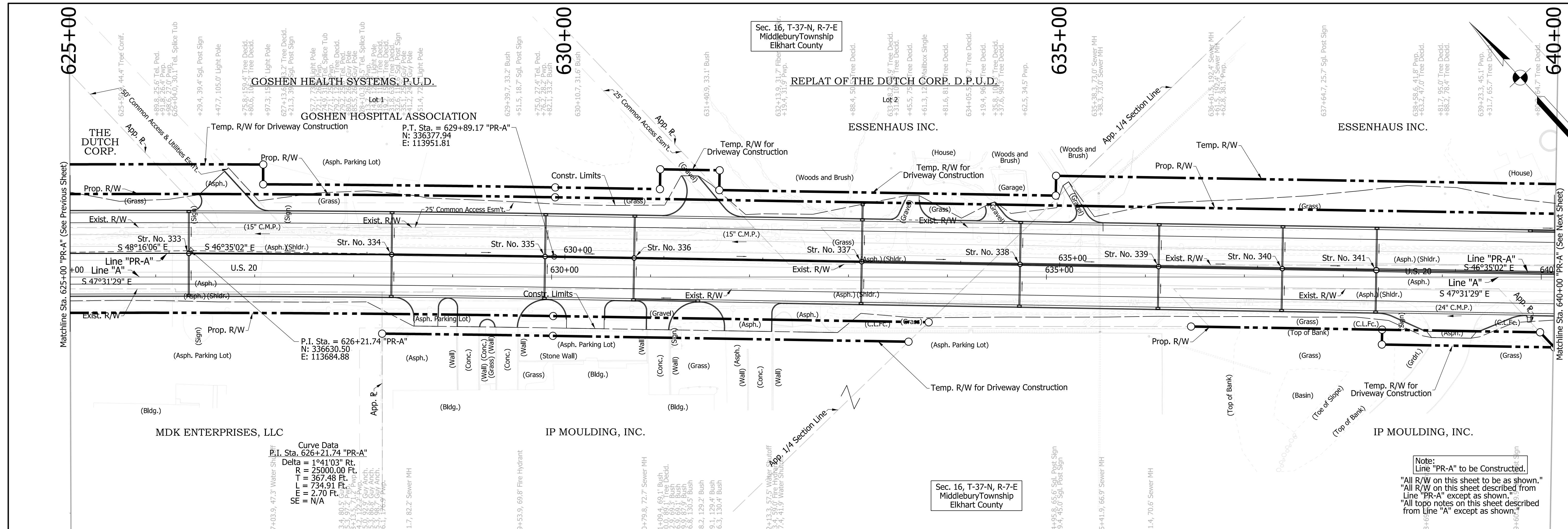
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DESIGNED: LMC	DRAWN: LMC	
CHECKED: NSX	CHECKED: NSX	

INDIANA
DEPARTMENT OF TRANSPORTATION

ROADWAY PLAN AND PROFILE
LINE "PR-A"

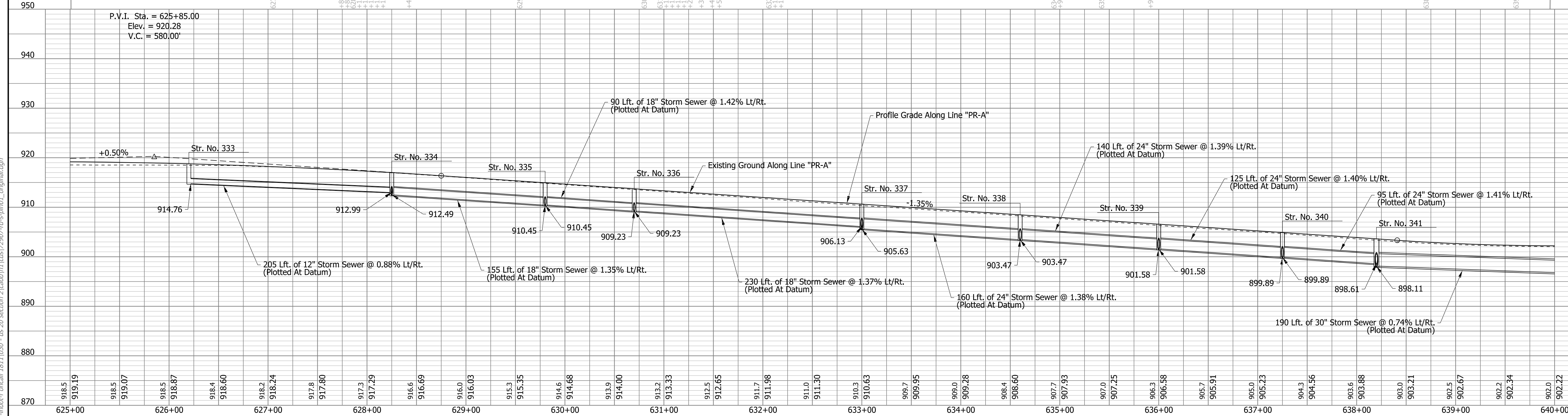
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VERTICAL SCALE	DESIGNATION
1"=10'	1900095
SURVEY BOOK	SHEETS
ELECTRONIC	34 of 161
CONTRACT	PROJECT
R-42379	1900095

Note:
 Line "PR-A" to be Constructed.
 "All R/W on this sheet to be as shown."
 "All R/W on this sheet described from Line "PR-A" except as shown."
 "All topo notes on this sheet described from Line "A" except as shown."



Curve Data
 P.I. Sta. 626+21.74 "PR-A"
 Delta = 1°41'03" Rt.
 R = 25000.00 Ft.
 L = 367.48 Ft.
 T = 734.91 Ft.
 M = 2.70 Ft.
 SE = N/A

Note:
 Line "PR-A" to be Constructed.
 "All R/W on this sheet to be as shown."
 "All R/W on this sheet described from Line "PR-A" except as shown."
 "All topo notes on this sheet described from Line "A" except as shown."



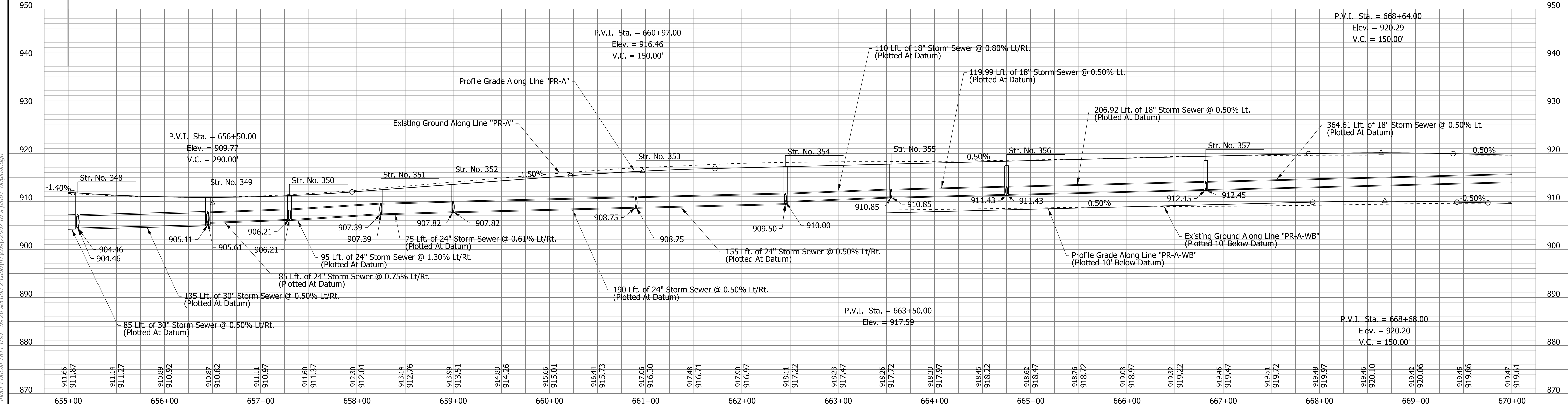
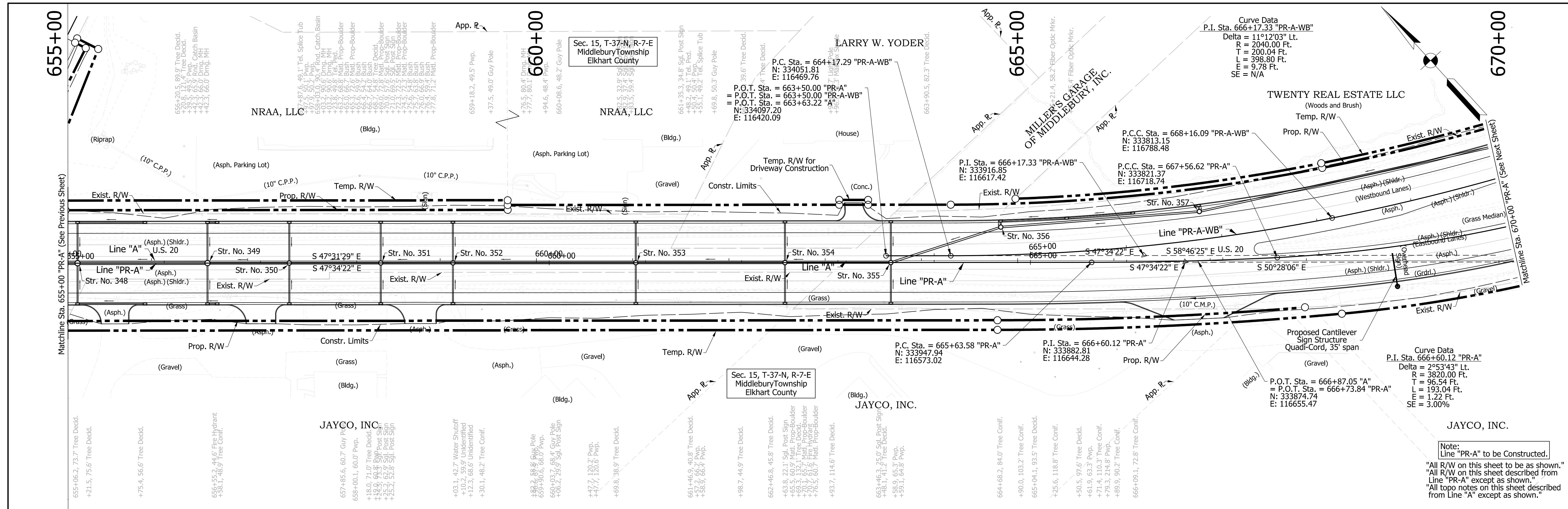
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 NOT FOR CONSTRUCTION

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

INDIANA DEPARTMENT OF TRANSPORTATION
 ROADWAY PLAN AND PROFILE
 LINE "PR-A"

SCALE	BRIDGE FILE
1"=50'	N/A
VERTICAL SCALE	DESIGNATION
1"=10'	1900095
SURVEY BOOK	SHEETS
ELECTRONIC	35 of 161
CONTRACT	PROJECT
R-42379	1900095



Note: Line "PR-A" to be Constructed.
 "All R/W on this sheet to be shown."
 "All R/W on this sheet described from Line "PR-A" except as shown."
 "All topo notes on this sheet described from Line "A" except as shown."

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 NOT FOR CONSTRUCTION

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

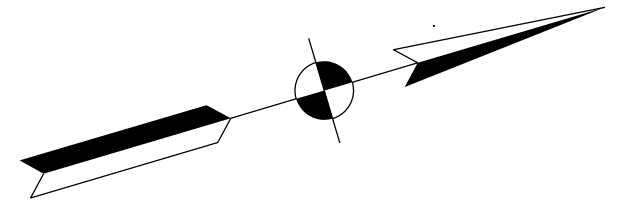
INDIANA DEPARTMENT OF TRANSPORTATION

ROADWAY PLAN AND PROFILE LINE "PR-A"

SCALE	BRIDGE FILE
1"=50'	N/A
VERTICAL SCALE	DESIGNATION
1"=10'	1900095
SURVEY BOOK	SHEETS
ELECTRONIC	37 of 161
CONTRACT	PROJECT
R-42379	1900095

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Sec. 9, T-37-N, R-7-E
Middlebury Township
Elkhart County



Curve Data
P.I. Sta. 47+62.42 "S-3-A"
Delta = 80°41'24" Rt.
R = 225.00 Ft.
T = 191.12 Ft.
L = 316.87 Ft.
E = 70.21 Ft.
SE = N/A

Curve Data
P.I. Sta. 47+36.60 "PR-S-3-A"
Delta = 74°30'48" Rt.
R = 220.00 Ft.
T = 167.33 Ft.
L = 286.11 Ft.
E = 56.41 Ft.
SE = N/A

BEGIN CONSTRUCTION
P.O.T. Sta. = 47+00.00 "PR-S-3-A"
N: 338307.20
E: 111423.05

P.O.T. Sta. = 49+36.50 "S-3-A"
N: 338199.33
E: 111489.83

P.O.C. Sta. = 45+69.27 "PR-S-3-A"
N: 338198.00
E: 111491.37

P.I. Sta. = 47+62.42 "S-3-A"
N: 338324.58
E: 111345.48

P.I. Sta. = 47+36.60 "PR-S-3-A"
N: 338307.66
E: 111364.98

P.T. Sta. = 48+88.17 "S-3-A"
N: 338487.29
E: 111445.73

P.O.T. Sta. = 597+00.00 "PR-A"
= P.O.T. Sta. = 49+33.00 "PR-S-3-A"
N: 338528.82
E: 111470.29

P.T. Sta. = 48+55.38 "PR-S-3-A"
N: 338458.74
E: 111436.92

P.O.T. Sta. = 597+00.66 "A"
= P.O.T. Sta. = 49+97.26 "PR-S-3-A"
N: 338586.83
E: 111497.91

P.O.T. Sta. = 50+00.00 "S-3-A"
= P.O.C. Sta. = 597+08.46 "A"
N: 338582.50
E: 111504.39

P.C. Sta. = 50+24.18 PR-S-3-A"
N: 338611.14
E: 111509.48

P.C. Sta. = 50+65.88 S-3-A"
N: 338638.59
E: 111538.95

Curve Data
P.I. Sta. 595+92.03 "PR-A"
Delta = 43°21'30" Rt.
R = 1435.00 Ft.
T = 570.45 Ft.
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E = 109.23 Ft.
SE = N/A

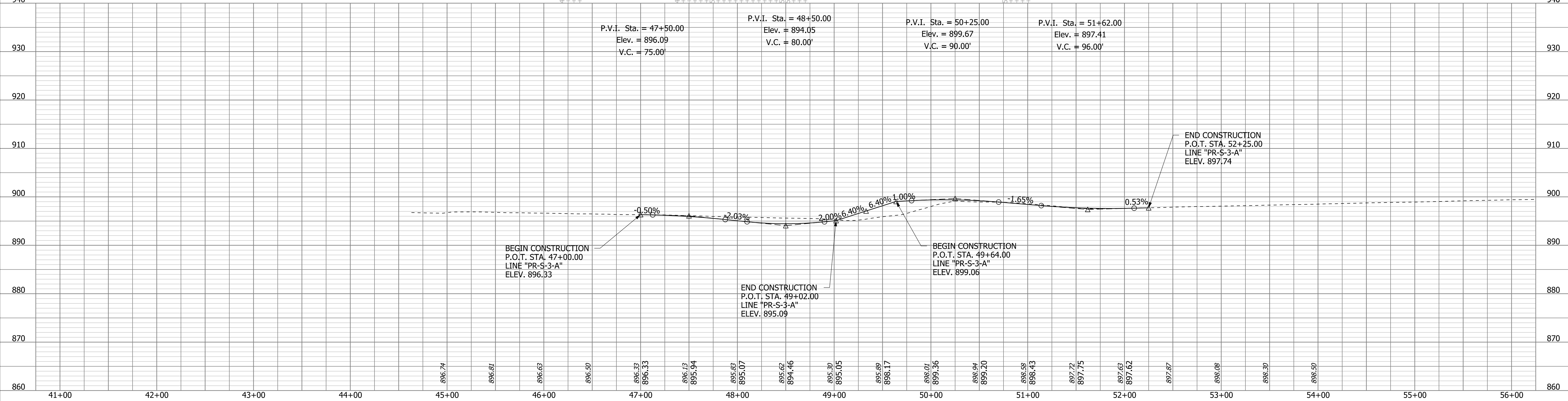
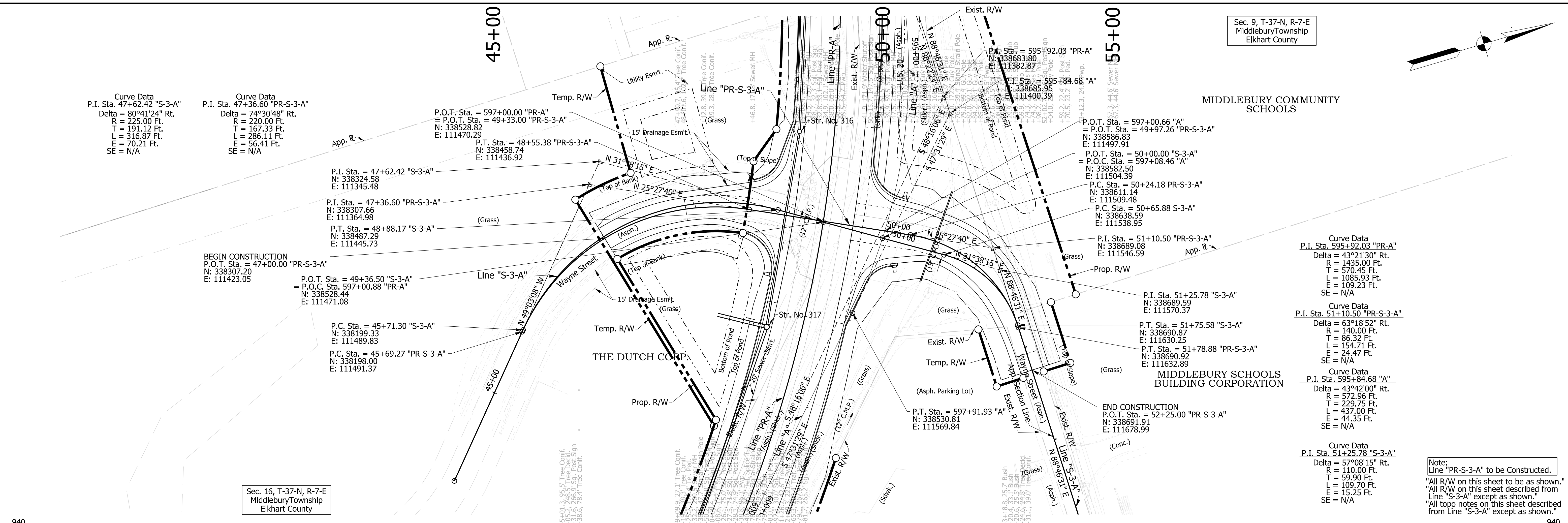
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Delta = 63°18'52" Rt.
R = 140.00 Ft.
T = 86.32 Ft.
L = 154.71 Ft.
E = 24.47 Ft.
SE = N/A

Curve Data
P.I. Sta. 595+84.68 "A"
Delta = 43°42'00" Rt.
R = 572.96 Ft.
T = 229.75 Ft.
L = 437.00 Ft.
E = 44.35 Ft.
SE = N/A

Curve Data
P.I. Sta. 51+25.78 "S-3-A"
Delta = 57°08'15" Rt.
R = 110.00 Ft.
T = 59.90 Ft.
L = 109.70 Ft.
E = 15.25 Ft.
SE = N/A

Note:
Line "PR-S-3-A" to be Constructed.
"All R/W on this sheet to be as shown."
"All R/W on this sheet described from Line "S-3-A" except as shown."
"All topo notes on this sheet described from Line "S-3-A" except as shown."

Sec. 16, T-37-N, R-7-E
Middlebury Township
Elkhart County



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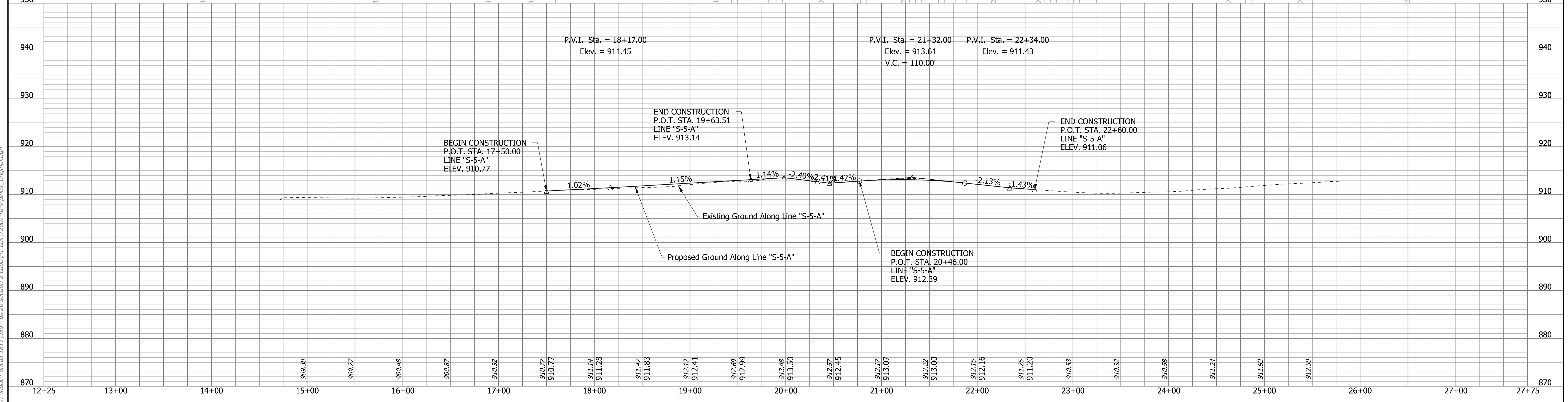
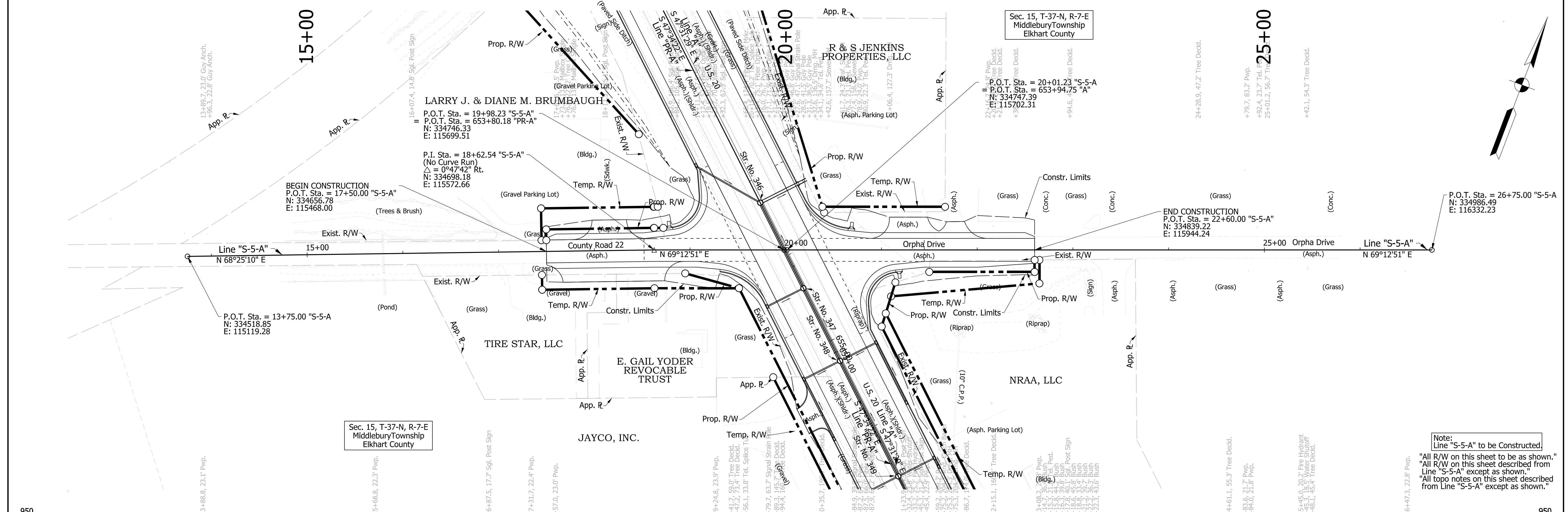
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: LMC	DRAWN: LMC	
CHECKED: NSX	CHECKED: NSX	

INDIANA
DEPARTMENT OF TRANSPORTATION

ROADWAY PLAN AND PROFILE
LINE "PR-S-3-A"

SCALE	BRIDGE FILE
1"=50'	N/A
VERTICAL SCALE	DESIGNATION
1"=10'	1900095
SURVEY BOOK	SHEETS
ELECTRONIC	41 of 161
CONTRACT	PROJECT
R-42379	1900095

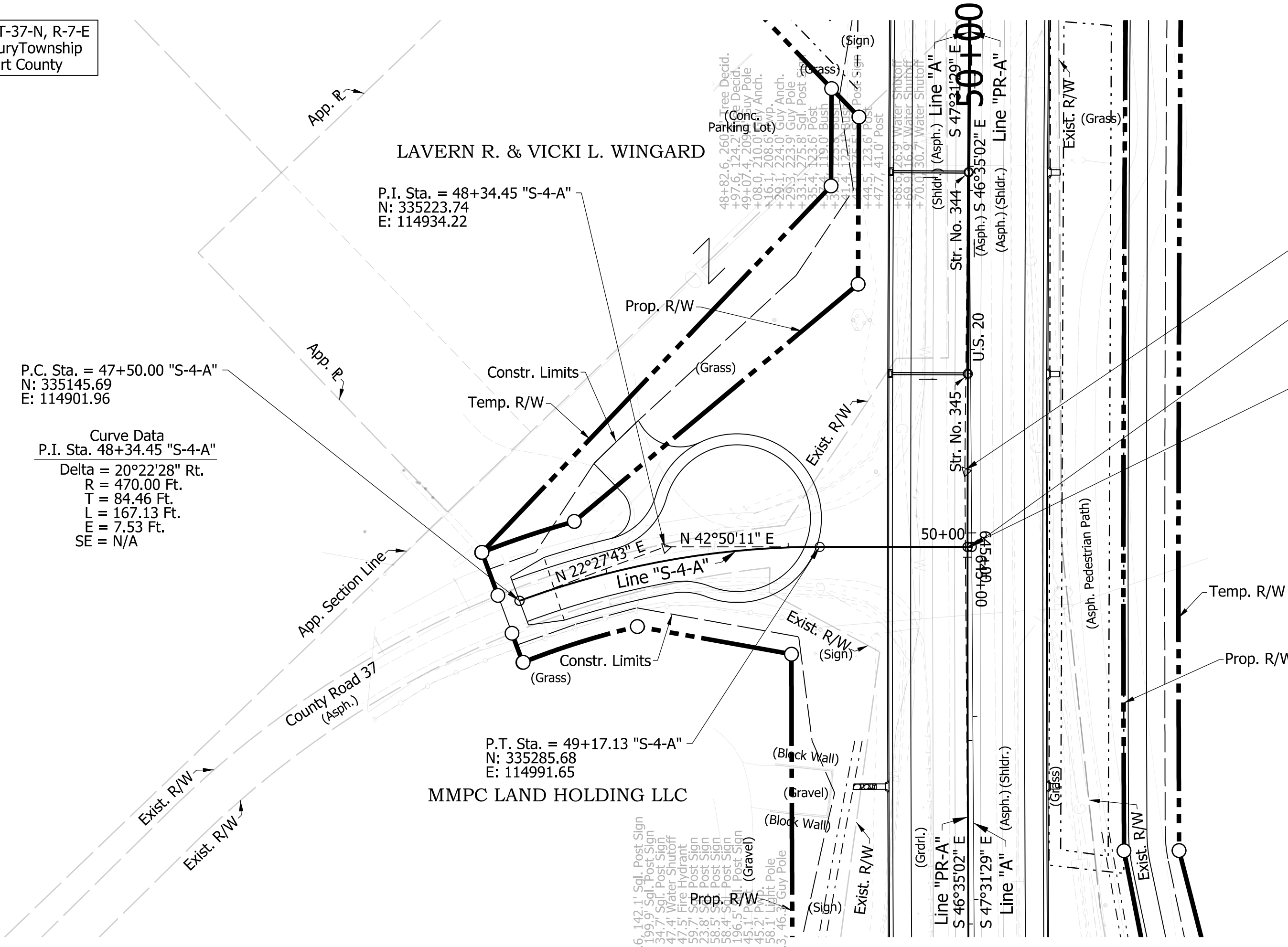
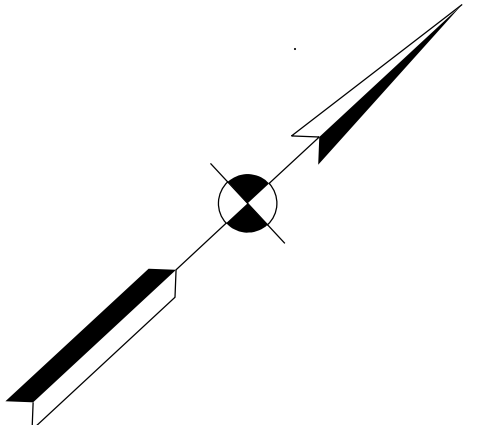
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DRAFT NOT FOR CONSTRUCTION	RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____	INDIANA DEPARTMENT OF TRANSPORTATION		SCALE 1"=50'	BRIDGE FILE N/A
	DESIGNED: _____ LMC	DRAWN: _____ LMC		ROADWAY PLAN AND PROFILE LINE "S-5-A"		VERTICAL SCALE 1"=10'	DESIGNATION 1900095
	CHECKED: _____ NSX	CHECKED: _____ NSX				SURVEY BOOK	SHEETS PP-13
						ELECTRONIC 43 of 161	PROJECT
					CONTRACT R-42379	PROJECT 1900095	

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Sec. 16, T-37-N, R-7-E
Middlebury Township
Elkhart County



P.C. Sta. = 47+50.00 "S-4-A"
N: 335145.69
E: 114901.96

Curve Data
P.I. Sta. 48+34.45 "S-4-A"
Delta = 20°22'28" Rt.
R = 470.00 Ft.
T = 84.46 Ft.
L = 167.13 Ft.
E = 7.53 Ft.
SE = N/A

P.I. Sta. = 48+34.45 "S-4-A"
N: 335223.74
E: 114934.22

P.T. Sta. = 49+17.13 "S-4-A"
N: 335285.68
E: 114991.65

P.I. Sta. = 644+52.59 "PR-A"
N: 335372.14
E: 115014.81

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= P.O.T. Sta. = 645+07.62 "A"
N: 335346.44
E: 115047.99

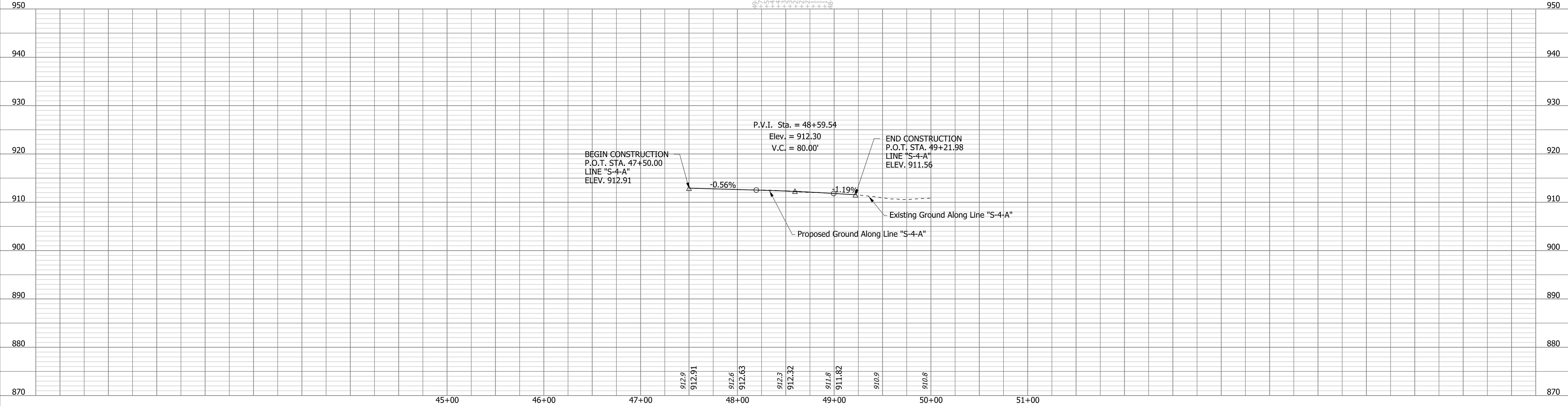
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N: 335344.78
E: 1150416.45

Curve Data
P.I. Sta. 644+52.59 "PR-A"
Delta = 0°59'20" Lt.
R = 40000.00 Ft.
T = 345.18 Ft.
L = 690.35 Ft.
E = 1.49 Ft.
SE = N/A

CRYSTAL VALLEY INVESTMENTS
(Cultivated Field)

Sec. 15, T-37-N, R-7-E
Middlebury Township
Elkhart County

Note:
Line "S-4-A" to be Constructed.
"All R/W on this sheet to be as shown."
"All R/W on this sheet described from Line "S-4-A" except as shown."
"All topo notes on this sheet described from Line "S-4-A" except as shown."



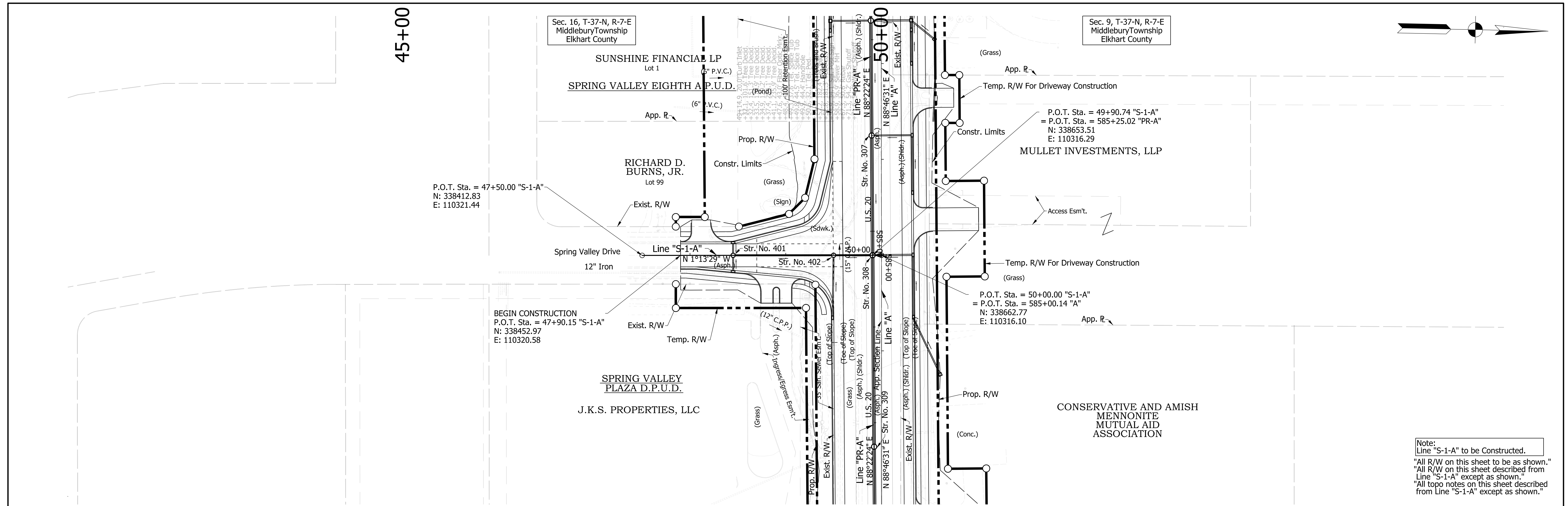
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NOT FOR CONSTRUCTION

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

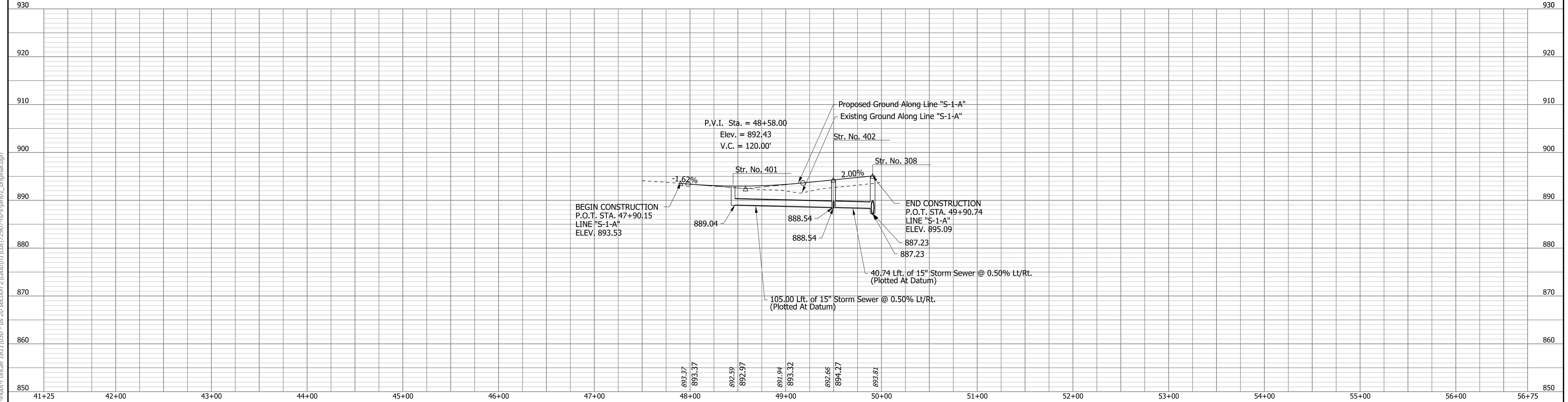
INDIANA DEPARTMENT OF TRANSPORTATION
ROADWAY PLAN AND PROFILE
LINE "S-4-A"

SCALE	BRIDGE FILE
1"=50'	N/A
VERTICAL SCALE	DESIGNATION
1"=10'	1900095
SURVEY BOOK	SHEETS
ELECTRONIC	42 of 161
CONTRACT	PROJECT
R-42379	1900095

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Note:
 Line "S-1-A" to be Constructed.
 "All R/W on this sheet to be as shown."
 "All R/W on this sheet described from
 Line "S-1-A" except as shown."
 "All topo notes on this sheet described
 from Line "S-1-A" except as shown."



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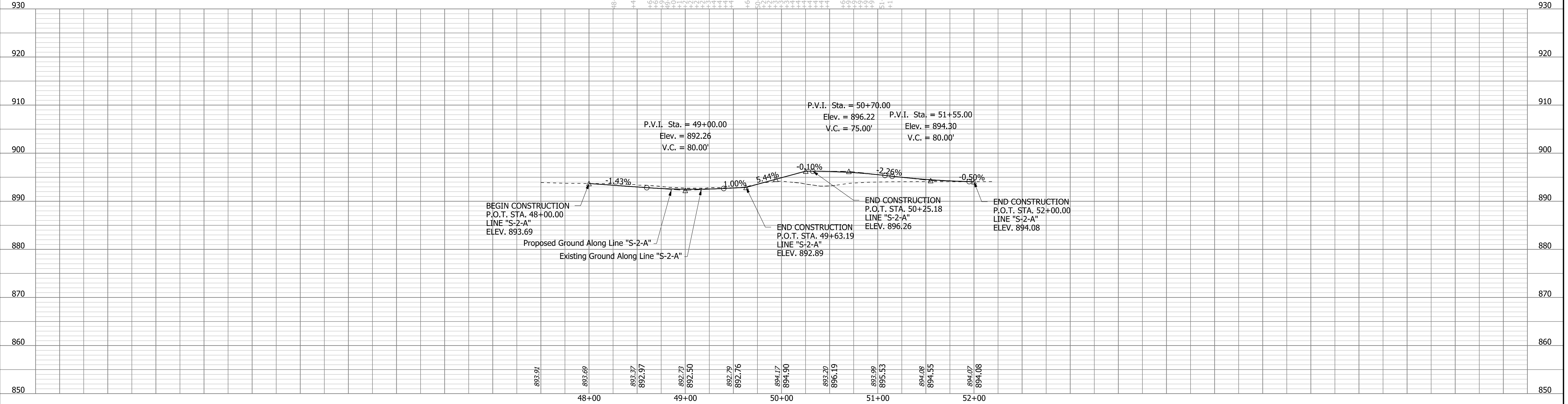
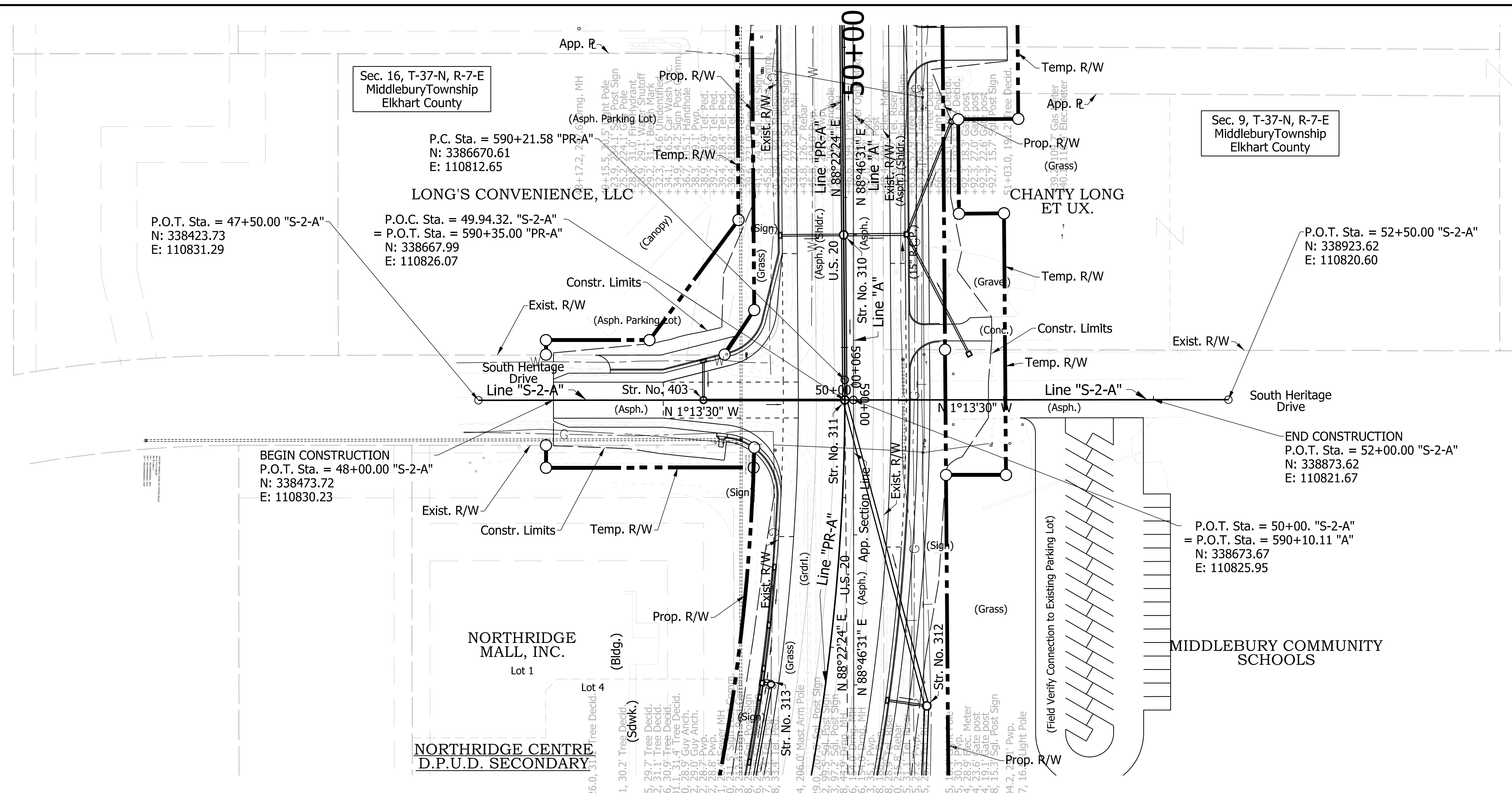
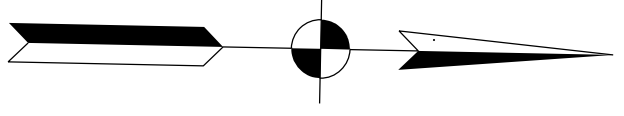
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 NOT FOR CONSTRUCTION

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

INDIANA
 DEPARTMENT OF TRANSPORTATION

**ROADWAY PLAN AND PROFILE
 LINE "S-1-A"**

SCALE 1"=50'	BRIDGE FILE N/A
VERTICAL SCALE 1"=10'	DESIGNATION 1900095
SURVEY BOOK ELECTRONIC	SHEETS 39 of 161
CONTRACT R-42379	PROJECT 1900095



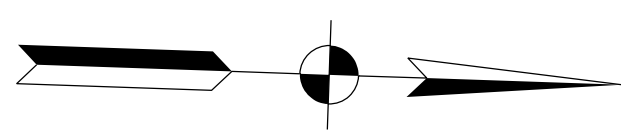
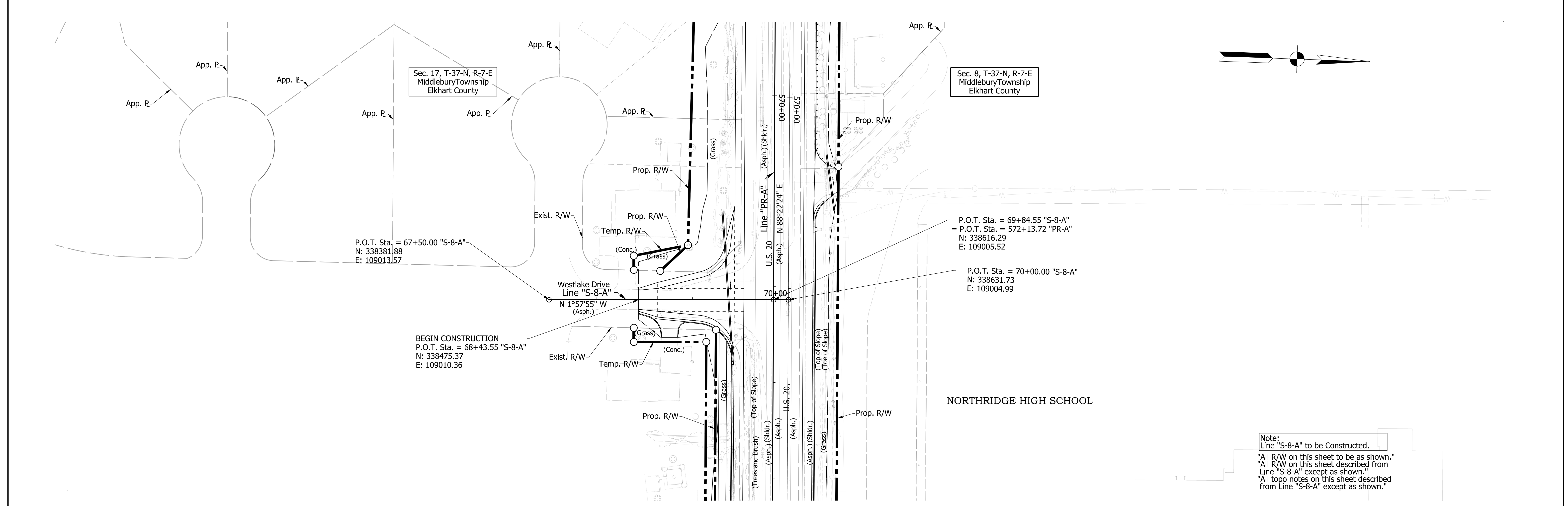
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RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: LMC	DRAWN: LMC	
CHECKED: NSX	CHECKED: NSX	

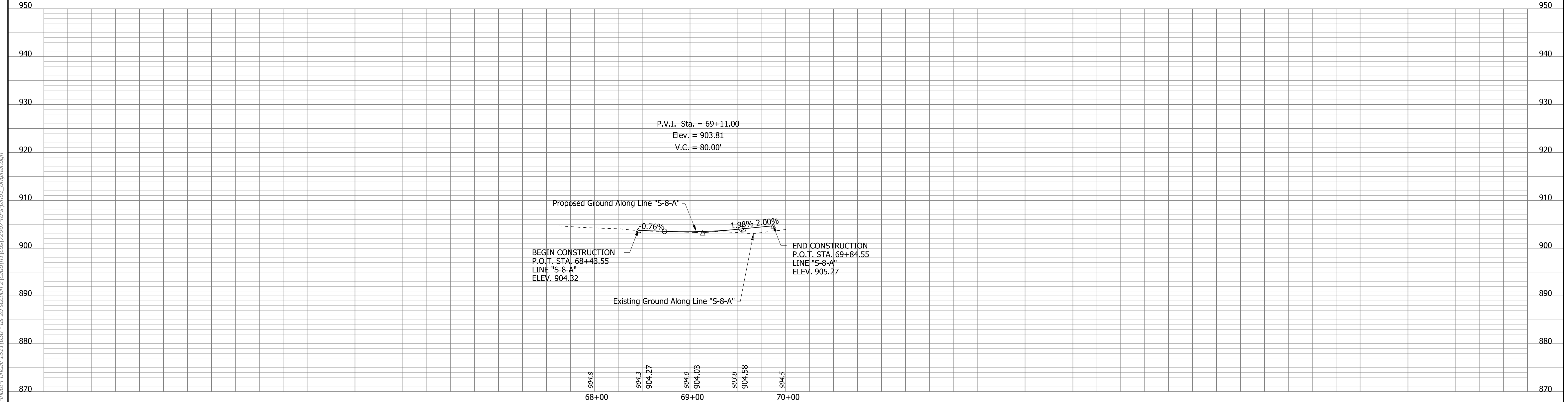
INDIANA
DEPARTMENT OF TRANSPORTATION

ROADWAY PLAN AND PROFILE
LINE "S-2-A"

SCALE	BRIDGE FILE
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VERTICAL SCALE	DESIGNATION
1"=10'	1900095
SURVEY BOOK	SHEETS PP-10
ELECTRONIC	40 of 161
CONTRACT	PROJECT
R-42379	1900095



Note:
Line "S-8-A" to be Constructed.
"All R/W on this sheet to be as shown."
"All R/W on this sheet described from Line "S-8-A" except as shown."
"All topo notes on this sheet described from Line "S-8-A" except as shown."



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NOT FOR CONSTRUCTION

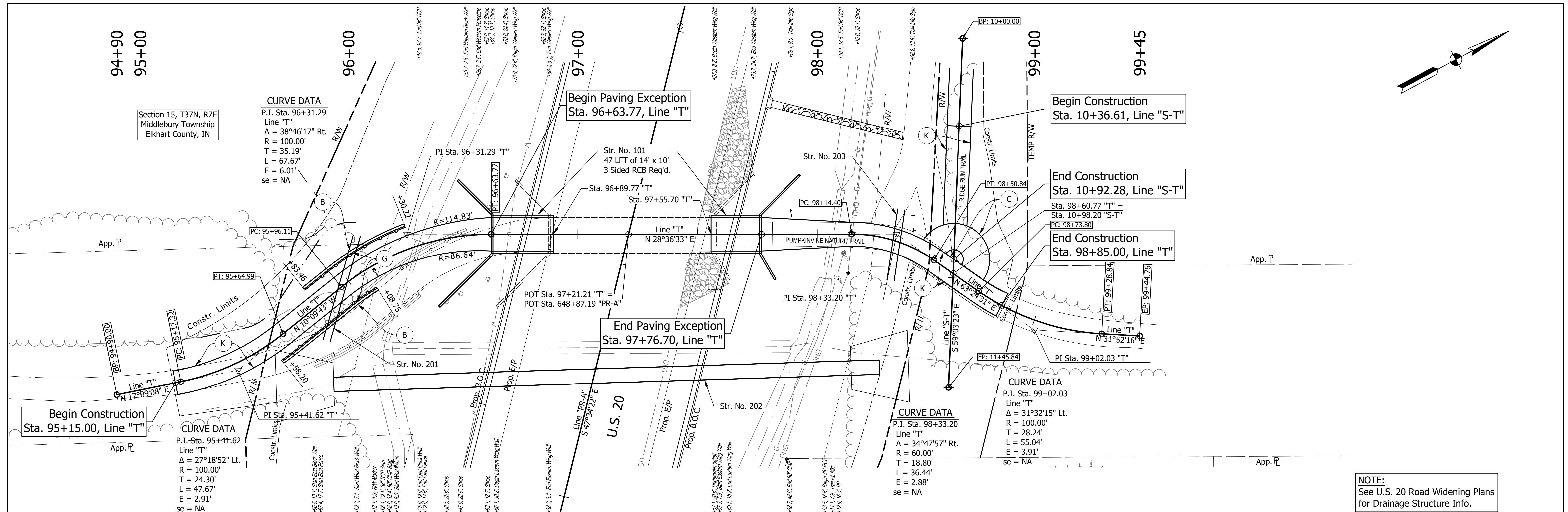
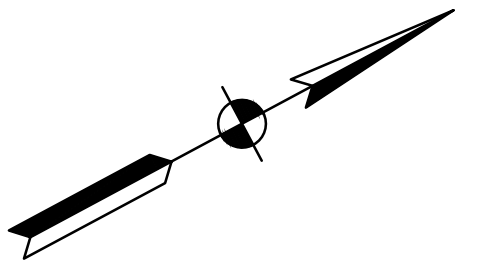
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DESIGNED: _____ LMC _____	DRAWN: _____ LMC _____	
CHECKED: _____ NSX _____	CHECKED: _____ NSX _____	

INDIANA
DEPARTMENT OF TRANSPORTATION

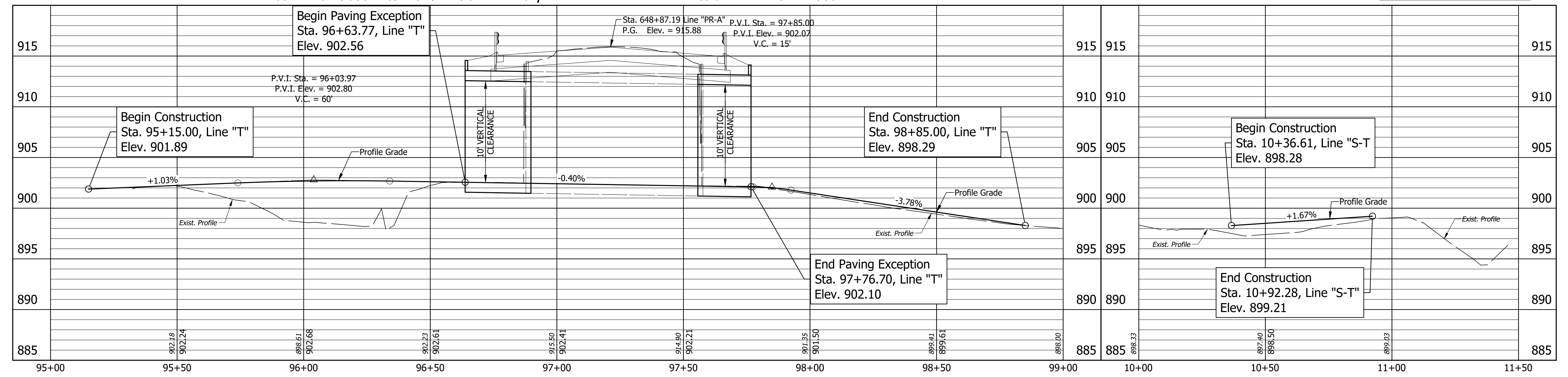
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LINE "S-8-A"

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1"=50'	N/A
VERTICAL SCALE	DESIGNATION
1"=10'	1900095
SURVEY BOOK	SHEETS
ELECTRONIC	44 of 161
CONTRACT	PROJECT
R-42379	1900095

lucarlson
 10/21/2020 8:09:20 am
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NOTE:
See U.S. 20 Road Widening Plans
for Drainage Structure Info.



- (B) Modular Block Wall
- (C) PCCP for Approaches, 6in.
- (G) Wood Fence
- (K) 140 lb/yd² HMA Surface, Type B, on 220 lb/yd² HMA Intermediate, Type B, on 6" Compacted Aggregate No. 53, Base on Subgrade Treatment Type III

DRAFT
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: JAD	DRAWN: ABM	
CHECKED: MAH	CHECKED: JAD	

INDIANA
DEPARTMENT OF TRANSPORTATION

**PLAN & PROFILE
LINE "T" & LINE "S-T"**

HORIZONTAL SCALE 1" = 20'	BRIDGE FILE N/A
VERTICAL SCALE 1" = 5'	DESIGNATION 2000038
SURVEY BOOK ELECTRONIC CONTRACT R-42379	SHEETS 45 of 161 PROJECT 1900095

DIRECTORY...F:\2019\19-4230 US 20 Widening\30 SheetDrawings\1
 FILE NAME...7297-RD-C-P00.dwg
 PLOTTED BY...TJ...
 DATE...Oct 15, 2020 - 5:24pm

Appendix C: Early Coordination



The HNTB Companies
Infrastructure Solutions

111 Monument Circle
Suite 1200
Indianapolis, IN 46204-5178

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

November 20, 2019

Sample Early Coordination Letter - Initial Letter to Recipients

Cam Sholly
Regional Director
National Parks Service- Midwest Regional Office
601 Riverfront Drive
Omaha, NE 68102

Re: Des. No. 1900095
Added Travel Lanes
U.S. 20 - Section 2 (CR 35 to SR 13)
Elkhart County, Indiana

Dear Mr. Sholly:

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) in Elkhart County, Indiana. This letter is part of the early coordination phase of the environmental review process. We request comments from you within your area of expertise regarding any potential environmental or community effects associated with this proposed project. **Please use the above designation number and description in your reply.** We will incorporate your comments into a study of the project's environmental effects.

Project Location: The project area is located from 2.13 miles west of SR 13 to SR 13 in Elkhart County between Elkhart and Middlebury, Indiana. The project area lies within Sections 9, 16, 15, 22, Township 37 North, Range 7 East on the United States Geological Survey (USGS) 7.5 Minute Middlebury Quadrangle Topographic Map.

Need and Purpose: The need for this project is based on congestion and geometric deficiencies of roadway. The current and projected traffic volumes are causing unacceptable traffic delays. The purpose of the project is to reduce congestion and correct geometric deficiencies through the corridor.

Existing Conditions: U.S. 20 is currently a two-lane undivided highway, functionally classified as a Rural Minor Arterial. Within the project area, U.S. 20 has two travel lanes (each approximately 12-foot wide) and two paved shoulders (each approximately 6-foot wide).

Proposed Project: The proposed project will widen a portion of U.S. 20 to accommodate the addition of one travel lane in each direction and a Two-Way Left Turn Lane throughout the corridor. The proposed project will include widening of the pavement and embankment, and installation of new pavement markings. The resulting typical section would be a five-lane section with paved shoulders.

Right-of-Way (ROW): INDOT anticipates the need to acquire right-of-way to complete this project. The exact amount has not yet been determined, but it is expected to be greater than 0.5 acre (approximately 40 acres).

Maintenance of Traffic (MOT): Traffic along U.S. 20 is expected to be maintained throughout construction by maintaining one lane in each direction on US 20 at all times.

Surrounding Resources: Land use in the vicinity of the project area is primarily agricultural, residential, and industrial. Pumpkinvine Nature Trail passes through the project area. A waters/wetland determination will be performed and possible wetlands delineated. A Waters Report will summarize the findings. The project is not located within a regulated floodplain, and is not located within a wellhead protection area or an Urban Area Boundary (UAB).

This project qualifies for the application of the United States Fish and Wildlife Service (USFWS) range-wide programmatic informal consultation for the Indiana bat and northern long-eared bat. The USFWS Information, Planning, and Consultation System (IPaC) will be utilized to determine the project's potential to affect the Indiana bat and northern long-eared bat.

Comments Request: You are asked to review this information and provide any comments you may have relative to the anticipated effects of the project on areas which you have jurisdiction or special expertise. Please send your comments to Richard Connolly, of HNTB Corporation, at rconnolly@hntb.com or 317-917-5333. Should we not receive your response **within thirty (30) calendar days** from the date of this letter, it will be assumed that your agency feels that there will be no adverse effects incurred as a result of the proposed project. However, should you find that an extension to the response time is necessary; a reasonable amount may be granted upon request.

If you have any questions regarding this matter, please feel free to contact Richard Connolly, of HNTB Corporation, at rconnolly@hntb.com or 317-917-5333 or Steve Seculoff, INDOT Project Manager, at sseculoff@indot.in.gov or 260-399-7337. Thank you in advance for your input.

Sincerely,

HNTB CORPORATION



Richard Connolly

Science Project Manager

Attachments: Figure 1: Project Location Map
Figure 2: Project Area Aerial
Figure 3: USGS 7.5 Minute Topographic Quad Map
Project Location Photographs

Cc: Phillip Barker, Elkhart County Surveyor
Jeff Siegel, Elkhart County Sheriff
Charlie McKenzie, Elkhart County Highway Department
Mike Yoder, Elkhart County Commissioners
Andrew Wood, Northridge High School
Jane Allen, Middlebury Community Schools
Jennifer Tobey, Elkhart County Emergency Management
Mary Cripe, Middlebury Town Manager
Gary O'Dell, Middlebury Town Council
Ronald Chupp, Middlebury Water Department

Tom Enright, Middlebury Parks and Recreation Department
Business Manager, Das Dutchman Essenhaus
David Yoder, Elkhart LaGrange Settlement Representative, Amish Steering Committee
John Heiliger, Elkhart County MS4 Stormwater Coordinator
Jim Hess, Elkhart County Soil and Water Conservation District
Chris Godlewski, Elkhart County Planning and Development
Dale Brier, IDNR Outdoor Recreation Streams and Trails Section
Scott Miller, Pathway Assembly of God
James Turnwald, Michiana Area Council of Governments (MACOG)
Rick Neilson, NRCS State Conservationist
Rickie Clark, Indiana Department of Transportation, Manager of Public Hearings
Michael Jett, Indiana Department of Transportation, Utilities and Railroad
Ron Bales, Indiana Department of Transportation, Environmental Services Division
Karen Novak, Indiana Department of Transportation, Fort Wayne District
Paul Allerding, US Army Corps of Engineers, Detroit District
Cam Sholly, National Parks Service-Acting Midwest Regional Director
Paul J. Lehmann, US Department of Housing & Development
Indiana Geological Survey
Christie Stanifer, Indiana Department of Natural Resources
Joyce Newland, Federal Highway Administration
Elizabeth McCloskey, US Fish and Wildlife Service
William Spaulding, USEPA Region 5 Groundwater and Drinking Water Branch
Steve Seculoff, INDOT Project Manager
Chris Schultz, HNTB Corporation

An early coordination letter was sent to the Crystal Valley Missionary Church on December 16, 2019

Attachments were removed to avoid duplication. They can be found in Appendix B of this CE document.



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204

PHONE: (855) 463-6848

Eric Holcomb, Governor
Joe McGuinness, Commissioner

Richard Connolly
HNTB Corporation
(317) 917-5333
rconnolly@hntb.com

November 22, 2019

Re: Early Coordination Review, Des. 1900095

U.S. 20 from County Road (CR) 35 to State Road (SR) 13 – Added Travel Lanes, Elkhart County, Indiana

Dear Mr. Connolly:

The Indiana Department of Transportation (INDOT) Environmental Services Division (ESD) appreciates the opportunity to assist you on the project referenced above. Pursuant to your early coordination request for an environmental review, we have performed a preliminary search of the project area.

There appears to be at least **four** active project you should be aware of near the project area. A summary of each project is provided below.

Project Sponsor: Indiana Department of Transportation; Project Manager: Steven Seculoff

- **DES: 1802043** – Demolition Building Removal from SR 15 to CR 35; Timeline: Construction 2021
- **DES: 1600517** – Added Travel Lanes on U.S. 20 from SR 15 to CR 35; Timeline: Construction 2022
- **DES: 1802025** – Small Structure Replacement over Hilltop Pond Timeline; Construction 2022

Project Sponsor: Indiana Department of Transportation; Project Manager: Matthew Witt

- **DES: 1600219** – HMA Overlay on U.S. 20 from SR 13 to 2.48 Miles East of SR 13; Timeline: Construction 2022

If your project will require the use of state right-of-way please contact the In-House Services Manager at the INDOT Fort Wayne District Office.

As always, be sure to follow all applicable processes as well as federal and state laws and local requirements. Thank you for the opportunity to assist you with your project. If you have any questions, please contact a member of my staff, Meghan Hinkle: 317-232-1490 or MHinkle@indot.IN.gov.

Sincerely,

Ron Bales
Environmental Policy Manager,
Environmental Services Division

From:
To:
Subject: RE: Early Coordination Letter - US 20 Added Travel Lanes Elkhart County Section 2 (CR 35 to SR 13) Des. No. 1900095
Date: Monday, December 9, 2019 12:27:26 PM
Attachments:

Hi Richard,

We have reviewed the enclosed early coordination packet and we do not have any environmental concerns regarding the project (Des. No. 1900095, US 20, Section 2) at this time. Therefore, we will not be providing a comment letter.

Best Regards,

Karen M. Novak

Sr Environmental Mgr Supervisor

5333 Hatfield Road

Fort Wayne, IN 46808

Office: (260) 969-8302

Email: knovak@indot.in.gov



From: Richard Connolly [mailto:rconnolly@HNTB.com]

Sent: Thursday, November 21, 2019 8:22 AM

To: Novak, Karen <KNovak@indot.IN.gov>

Subject: Early Coordination Letter - US 20 Added Travel Lanes Elkhart County Section 2 (CR 35 to SR 13) Des. No. 1900095

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

Ms. Novak,

Please see the attached early coordination letter and supporting graphics for the US 20 Added Travel Lanes Elkhart County Section 2 (CR 35 to SR 13) Des. No. 1900095. If you have any questions regarding this project, please feel free to contact me by phone or email.

Thanks.

Richard J. Connolly, CPESC

Science Project Manager

November 27, 2019

Richard Connolly
HNTB Corporation
111 Monument Circle, Suite 1200
Indianapolis, Indiana 46204

Dear Mr. Connolly:

The proposed project to proceed with added travel lanes along US 20 – Section 2 (County Road 35 to State Road 13) in Elkhart County, Indiana, (Des No 1900095), as referred to in your letter received November 20, 2019, will not cause a conversion of prime farmland.

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

Sincerely,

JERRY RAYNOR Digitally signed by JERRY RAYNOR
Date: 2019.11.29 17:10:07 -05'00'

JERRY RAYNOR
State Conservationist



From: [McCloskey, Elizabeth](#)
To: [Richard Connolly](#)
Subject: Re: [EXTERNAL] Early Coordination Letter - US 20 Added Travel Lanes Elkhart County Section 2 (CR 35 to SR 13) Des. No. 1900095
Date: Wednesday, November 27, 2019 1:11:15 PM
Attachments: [image002.png](#)

Good afternoon, because the proposed project will have minor impacts on natural resources, and no Federally endangered species are known to be present, the U.S. Fish and Wildlife Service will not be providing a comment letter.

Elizabeth McCloskey
U.S. Fish and Wildlife Service
Northern Indiana Suboffice
Chesterton, Indiana

On Thu, Nov 21, 2019 at 7:21 AM Richard Connolly <rconnolly@hntb.com> wrote:

Ms. McCloskey,

Please see the attached early coordination letter and supporting graphics for the US 20 Added Travel Lanes Elkhart County Section 2 (CR 35 to SR 13) Des. No. 1900095. If you have any questions regarding this project, please feel free to contact me by phone or email.

Thanks.

Richard J. Connolly, CPESC

Science Project Manager

Environmental Planning

Tel (317) 917-5333 Fax (317) 917-5211

HNTB CORPORATION

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

 **100+ YEARS OF INFRASTRUCTURE SOLUTIONS**



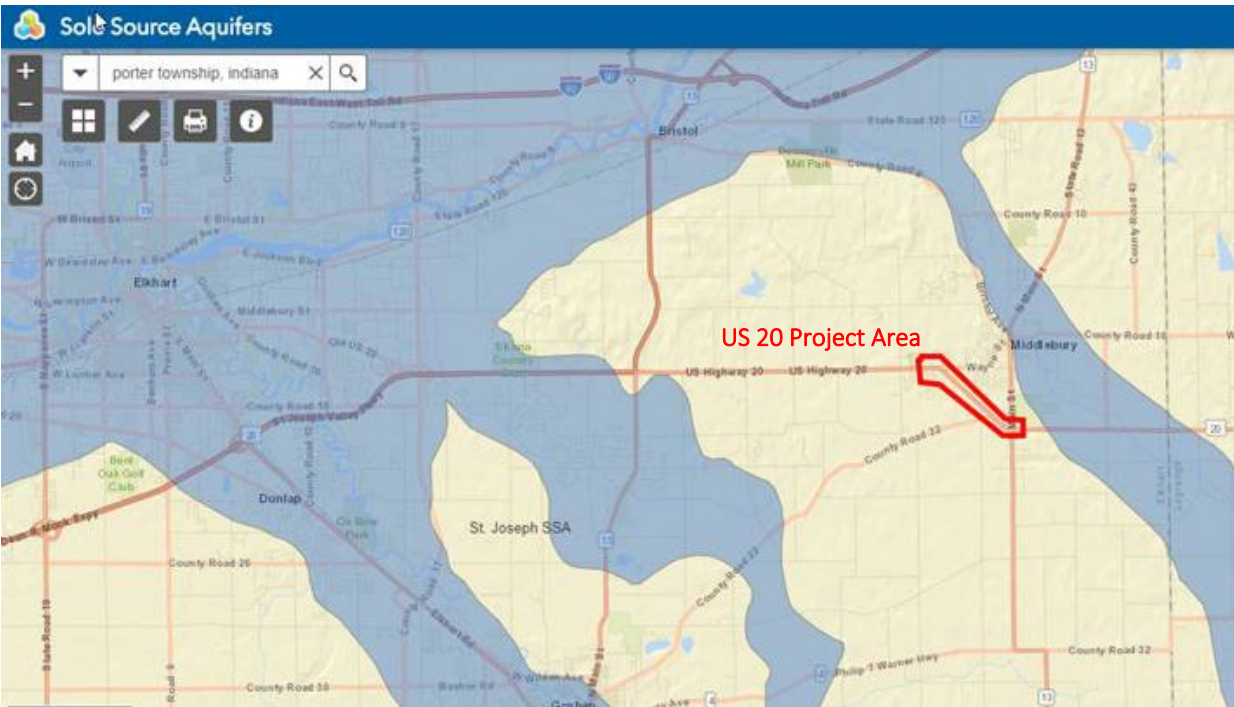
This e-mail and any files transmitted with it are confidential and are intended solely for the use of the

From: [Bosscher, Valerie](#)
To: [Richard Connolly](#)
Cc: sseculoff@indot.in.gov
Subject: U.S. 20 between S.R. 13 and C.R. 35 - Added travel lanes - Des. No. 1900095
Date: Tuesday, December 10, 2019 11:48:18 AM

Good morning, Mr. Connolly,

In reply to your early coordination letter about the above referenced project, my review confirmed your project location along U.S. 20 between S.R. 13 and C.R. 35, located between Middlebury and Elkhart, Indiana, is not located within a designated Sole Source Aquifer review area, so an EPA Sole Source Aquifer project review of this project is not required.

The project location (highlighted in red below) is outside the St. Joseph SSA project review area, as shown in this screen shot from the searchable maps online at <https://www.epa.gov/dwssa>:



While this project is not subject to Sole Source Aquifer review, we suggest 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.

Please let me know if you have any questions, or if you would like a formal response letter.

Thank you,
Val

Valerie Bosscher, P.E.
Environmental Engineer
Ground Water & Drinking Water Branch
Ph 312-886-6731
U.S. EPA Region 5
77 W. Jackson Blvd. (WG-15J)
Chicago, IL 60604

MIDDLEBURY COMMUNITY SCHOOLS

December 16, 2019

HNTB

111 Monument Circle

Suite 1200

Indianapolis, IN 46204-5178

RE: Des. No. 1900095
Added Travel Lanes
U.S. 20 – Section 2 (CR 35 to SR 13)
Elkhart, Indiana

Dear HNTB,

Thank you for the opportunity to present our comments concerning the INDOT and FHWA proposed addition of a two-way left turn lane and additional travel lanes along US Highway 20 between County Road 35 and State Road 13 in Elkhart County, Indiana. US 20 going east is adjacent to our Middlebury Community Schools district property. Our main campus has a high school, middle school, intermediate school, elementary school, Boys and Girls Club and an administration central office. Consequently, our input about this proposed project is going to concentrate on the safety of our students.

- Student Safety:
 - Barrier/Fencing on north side of US 20 from CR 35 to Mullet Property and from Heritage Drive to Wayne Street stoplight:
 - Additional lanes of traffic plus the wider shoulders for buggy lanes will be very dangerous for our students to cross the highway. There is currently no barrier/fencing along the north side of US 20 where it borders our campus near the high school or near Heritage Drive where our soccer fields are located.
 - We currently have students crossing US 20 to go south to the housing additions, restaurants, and gas station across from the school property. Additional lanes would increase the danger of students crossing US 20.
 - Median Crosswalk: It is our opinion that a crosswalk from north to south with a median island would be necessary between CR 35 and the stoplight at Wayne Street.
 - Stoplight at US 20 and Wayne Street: We feel that the stoplight is necessary for student safety because it slows down the traffic. We would be in favor of changing the configuration of the curve and straightening the intersection.



Administration Center: 56853 Northridge Drive, Middlebury, Indiana 46540
Phone: (574) 825-9425 * Fax: (574) 825-9426 * Web: www.mcsin.k12.org

- Speed Limit: The speed limit will need to be adjusted to compensate for all of the pedestrians (students and school patrons) crossing US 20 near the high school and Heritage Drive.
- School Bus/Buggy Safety:
 - Over 35 of our school buses travel on US 20 and turn north onto the school campus and south into the subdivisions that border the south side of US 20 many times every day during the school year. The turn lane will help, however adding two lanes on both sides of the turn lane will increase the distance of road travel. The additional lanes will also affect the large horse and buggies turning left.
 - The entrance/exit to and from our Transportation Maintenance garage is near the intersection of US 20 and Wayne Street. We will still need to access that area during any road construction and after the project is completed.
- School District Property Modification:
 - Heritage Drive: Concern about the impact of the project on the school district's ability to use this road to and from campus onto US 20.
 - Soccer Fields/Parking: We will be constructing parking along the south edge of the soccer fields this year. The parking area will avoid the current right-of-way on the north side of US 20 but we are concerned the expansion of US 20 will need to go further north.

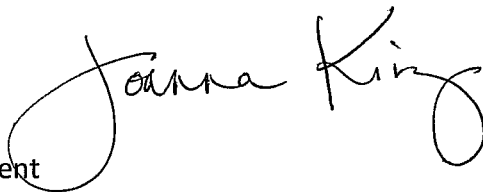
We have discussed the widening of US 20 between CR 35 and SR 13 with the Town of Middlebury, the Middlebury Chamber of Commerce, and other business and property owners. We are in favor of this project. We know that traffic issues we currently experience with our student drivers, patrons, and buses along that corridor will improve.

We appreciate your willingness to allow us to address our comments and concerns early in the planning stages. As I stated earlier, our number one concern is our student safety. We would be more than willing to continue discussion of this proposed project in the future. Thank you for including us.

Sincerely,



Jane Allen, Superintendent



Joanna King, President of Middlebury Community Schools Board of Trustees



December 27, 2019

Middlebury Community Schools
56853 Northridge Drive
Middlebury, IN 46540

Attn: Ms. Jane Allen

RE: US 20 From CR 35 to SR 13, INDOT Des No 1900095

Dear Ms. Allen,

Thank you for providing the valuable feedback on this project. We have prepared responses below for each of the items identified in the letter dated December 16, 2019.

Comment:

- Student Safety:
 - Barrier/Fencing on north side of US 20 from CR 35 to Mullet Property and from Heritage Drive to Wayne Street stoplight:
 - Additional lanes of traffic plus the wider shoulders for buggy lanes will be very dangerous for our students to cross the highway. There is currently no barrier/fencing along the north side of US 20 where it borders our campus near the high school or near Heritage Drive where our soccer fields are located.

Response:

A pedestrian fence will be considered to prevent pedestrians from crossing US 20 at unmarked locations.

Comment:

- We currently have students crossing US 20 to go south to the housing additions, restaurants, and gas station across from the school property. Additional lanes would increase the danger of students crossing US 20.

Response:

The design team is considering options for a pedestrian crossing near Heritage Drive. Options are being evaluated including the cost benefit analysis of a grade separated crossing that will consider the number of pedestrians crossing US 20 today.

Comment:

- Median Crosswalk: It is our opinion that a crosswalk from north to south with a median island would be necessary between CR 35 and the stoplight at Wayne Street.

Response:

The design team is carefully considering a pedestrian crossing at the Wayne Street / CR 16 intersection. A pedestrian crossing phase at the traffic signal would be long enough for pedestrians to cross the entire roadway width without having to stop in a center refuge island or median.

Comment:

- Stoplight at US 20 and Wayne Street: We feel that the stoplight is necessary for student safety because it slows down the traffic. We would be in favor of changing the configuration of the curve and straightening the intersection.

Response:

The design team is looking at improving the horizontal curve along US 20 at the Wayne Street / CR 16 intersection by lengthening the curve which would shift US 20 slightly to the south. The intersection will continue to be signalized after the project is complete.

Comment:

- Speed Limit: The speed limit will need to be adjusted to compensate for all of the pedestrians (students and school patrons) crossing US 20 near the high school and Heritage Drive.

Answer:

The project is being designed for 45 mph. The posted speed limit will be set to encourage safe driving conditions along the road. A school zone speed limit can be considered to reduce the enforceable speed limit during school days.

Comment:

- School Bus/Buggy Safety:
 - Over 35 of our school buses travel on US 20 and turn north onto the school campus and south into the subdivisions that border the south side of US 20 many times every day during the school year. The turn lane will help, however adding two lanes on both sides of the turn lane will increase the distance of road travel. The additional lanes will also affect the large horse and buggies turning left.

Answer:

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.

Comment:

- The entrance/exit to and from our Transportation Maintenance garage is near the intersection of US 20 and Wayne Street. We will still need to access that area during any road construction and after the project is completed.

Answer:

Temporary access will be maintained during construction, and all existing access points along US 20 will be preserved with the project.

Comment:

- School District Property Modification:
 - Heritage Drive: Concern about the impact of the project on the school district's ability to use this road to and from campus onto US 20.

Response:

Access to Heritage Drive will be maintained with the project. Traffic counts have been performed recently along US 20 including the Heritage Drive intersection. The design team will look into the recent counts and consider options for improvements at this intersection, including the feasibility of removing access to US 20, or creating a pronounced splitter island preventing vehicles from turning left.

Comment:

- Soccer Fields/Parking: We will be constructing parking along the south edge of the soccer fields this year. The parking area will avoid the current right-of-way on the north side of US 20 but we are concerned the expansion of US 20 will need to go further north.

Response:

Preliminary widening options are being developed and will be examined for overall impacts to the properties along the corridor. Impacts to the north side of US 20 near the soccer fields/parking area are anticipated to be minimal. Any impacts to the property will be assessed by an appraiser and the property owner will be compensated during land acquisition.

Sincerely,

HNTB Indiana, Inc.



Christopher J. Schultz, PE
Sr. Project Manager



418 North Main Street
Middlebury, Indiana 46540
Phone: 574-825-1499
Fax: 574-825-1485
www.middleburyin.com

December 16, 2019

HNTB Corporation
111 Monument Circle, Suite 1200
Indianapolis, IN 46204-5178

Attention: Mr. Richard Connolly

RE: US 20 FROM CR 35 TO SR 13 – DES. NO. 1900095

Dear Mr. Connolly,

Thank you to HNTB and INDOT for reaching out to the Town for comments regarding the US 20 Project from CR 35 to SR 13. We have several concerns to pass along for consideration when developing this much needed project. We concur with INDOT that it is important to provide for the safety of all modes of transportation (motorists, bicyclists, pedestrians, horse & buggy, etc.), especially when there is over 15% truck traffic traveling along this corridor.

Water & Sewer Infrastructure – The Town has water main and sanitary sewer along the US 20 corridor from Westlake Drive to SR 13, and we believe that this infrastructure will be impacted as a part of the US 20 project. There are two lift stations that could potentially be impacted by this project – Spring Valley Lift Station (in the southwest corner of the intersection of US 20 and Wayne Street/CR 16) and Northridge Lift Station (in the southeast corner of the High School property). We can provide plans and information on the Town’s infrastructure, if needed. The Town would like to receive copies of the INDOT design submittals and the field check so that we can be a part of the process.

Pumpkinvine Nature Trail Tunnel Construction – The Pumpkinvine Nature Trail is used extensively throughout the year for both recreational purposes and for people who bike to work. It will be important to provide some type of safe detour route for the bikers during the construction of the tunnel extension. With the significant increase in the tunnel length, it might be good to consider lighting in the tunnel for the safety of trail users.

Ridge Run Trail – A couple of years ago, the community raised funds to build the Ridge Run Trail, and portions of the trail run parallel to US 20 just northwest of the crossing of US 20 over the Pumpkinvine Trail Tunnel. Residents are concerned how the widening will affect the Ridge Run Trail.

Connector Trail – In order to provide the Spring Valley neighborhood access to the Pumpkinvine Nature Trail, a multi-use trail may need to be built along US 20 between the two locations. Having a connector trail would provide many options for residents on how they choose to travel.

Pedestrian Crossing – As a part of the Transportation section of the Town’s 10-Year Comprehensive Plan, several residents are concerned about the safety of pedestrians (especially the school children) who cross US 20 in the area of Spring Valley Drive and Heritage Drive. It would be ideal to have some type of grade separated crossing, such as a bridge or tunnel for the pedestrians.

Possible Closure of Heritage Drive North of US 20 – Currently, there are safety concerns with Heritage Drive north of US 20. Motorists are only supposed to turn right onto US 20 at this location, but many completely ignore the signs. This intersection is not safe especially with the signalized intersection of CR 16/Wayne Street being on a curve along with the significant volume of traffic on US 20.

Reconfiguration/Realignment of US 20, Wayne Street/CR 16 and Heritage Drive – Without knowing the actual layout of US 20, one possible layout could consider the reconfiguration of the signalized intersection of US 20 and Wayne Street/CR 16 to also include a realignment of Heritage Drive to be one of the approaches. By realigning Heritage Drive, it would provide a safe location for the residents/patrons in the Spring Valley Subdivision area to safely enter onto US 20.

Typical Cross Section – With the typical cross section to the west of CR 35 being 5 lanes plus horse and buggy lanes with drainage swales, the Town is anticipating that US 20 east of CR 35 will be at least 5 lanes wide, with hopes of designated horse and buggy lanes. However, the footprint of a typical cross section with drainage swales seems enormous, and we were hoping that this section could potentially incorporate curb and gutters with storm sewer.

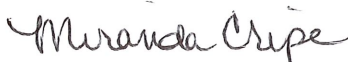
Trees Along Spring Valley Subdivision – The Middlebury Tree Board is concerned with tree removal along this corridor, especially along the pond in Spring Valley Subdivision. If the trees are to be removed, it would be nice to consider the planting of new trees at various locations along the newly aligned US 20.

Intersection of US 20 and SR 13 – If possible, the removal of the grass strip in the median of US 20 near the intersection of SR 13 would be beneficial. This grass area gets overgrown, and then the Town must call two different INDOT Subdistricts to mow it. The Elkhart Subdistrict mows the area to the west of SR 13 and the Shishewana Subdistrict mows the area to the east. Also, a right turn lane on the north approach for southbound traffic at the intersection of US 20 and SR 13 would be helpful to alleviate traffic congestion.

Drainage Issues – A significant drainage issue exists just south of the intersection of US 20 and Orpha Drive/ CR 22. With many of the rain events, the stormwater ponds on US 20 and creates a roadway safety hazard. Drainage is an issue at the intersection of SR 13 and US 20, too.

We look forward to working with HNTB and INDOT on this project. Thank you for your time and consideration of these concerns. Please feel free to contact Town Manager Mary Cripe with any questions or concerns at 574-825-1499.

Sincerely,



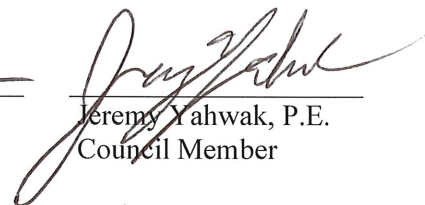
Miranda Cripe
Council Vice Pres.



Dan Shoup
Council Member



Dan Frederick
Council Member



Jeremy Yahwak, P.E.
Council Member



December 19, 2019

Town of Middlebury
418 North Main Street
Middlebury, IN 46540

Attn: Ms. Mary Cripe

RE: US 20 From CR 35 to SR 13, INDOT Des No 1900095

Dear Ms. Cripe,

Thank you for providing the valuable feedback on this project. We have prepared responses below for each of the items identified in the letter dated December 16, 2019.

Comment:

Water & Sewer Infrastructure – The Town has water main and sanitary sewer along the US 20 corridor from Westlake Drive to SR 13, and we believe that this infrastructure will be impacted as a part of the US 20 project. There are two lift stations that could potentially be impacted by this project – Spring Valley Lift Station (in the southwest corner of the intersection of US 20 and Wayne Street/CR 16) and Northridge Lift Station (in the southeast corner of the High School property). We can provide plans and information on the Town’s infrastructure, if needed. The Town would like to receive copies of the INDOT design submittals and the field check so that we can be a part of the process.

Response:

The design team will coordinate the improvements with the Town’s utility manager during the development of this project. Impacts to these lift stations will be carefully considered during design. Preliminary widening options are being developed and will be examined for overall impacts to the utilities along the corridor.

Comment:

Pumpkinvine Nature Trail Tunnel Construction – The Pumpkinvine Nature Trail is used extensively throughout the year for both recreational purposes and for people who bike to work. It will be important to provide some type of safe detour route for the bikers during the construction of the tunnel extension. With the significant increase in the tunnel length, it might be good to consider lighting in the tunnel for the safety of trail users.

Response:

A detour route will be developed and in place during construction of the Pumpkinvine Nature Trail Tunnel extension. The design team will coordinate this detour route with the Town during design for the timing and route of the detour. The design team can assist in public awareness for this closure during the public hearing process.

Comment:

Ridge Run Trail – A couple of years ago, the community raised funds to build the Ridge Run Trail, and portions of the trail run parallel to US 20 just northwest of the crossing of US 20 over the Pumpkinvine Trail Tunnel. Residents are concerned how the widening will affect the Ridge Run Trail.

Response:

Any impacts to the existing Ridge Run Trail as a result of project will be mitigated by installing a new trail where the existing trail could not be avoided.

Comment:

Connector Trail – In order to provide the Spring Valley neighborhood access to the Pumpkinvine Nature Trail, a multi-use trail may need to be built along US 20 between the two locations. Having a connector trail would provide many options for residents on how they choose to travel.

Response:

A new pedestrian trail along US 20 will be considered if it is part of the Town’s long-term comprehensive pedestrian access plan.

Comment:

Pedestrian Crossing – As a part of the Transportation section of the Town’s 10-Year Comprehensive Plan, several residents are concerned about the safety of pedestrians (especially the school children) who cross US 20 in the area of Spring Valley Drive and Heritage Drive. It would be ideal to have some type of grade separated crossing, such as a bridge or tunnel for the pedestrians.

Response:

The design team is considering options for a pedestrian crossing near Heritage Drive. Options are being evaluated including the cost benefit analysis of a grade separated crossing that will consider the number of pedestrians crossing US 20 today.

Comment:

Possible Closure of Heritage Drive North of US 20 – Currently, there are safety concerns with Heritage Drive north of US 20. Motorists are only supposed to turn right onto US 20 at this location, but many completely ignore the signs. This intersection is not safe especially with the signalized intersection of CR 16/Wayne Street being on a curve along with the significant volume of traffic on US 20.

Response:

Traffic counts have been performed recently along US 20 including the Heritage Drive intersection. The design team will look into the recent counts and consider options for improvements at this intersection, including the feasibility of removing access to US 20 or creating a pronounced splitter island preventing vehicles from turning left.

Comment:

Reconfiguration/Realignment of US 20, Wayne Street/CR 16 and Heritage Drive – Without knowing the actual layout of US 20, one possible layout could consider the reconfiguration of the signalized intersection of US 20 and Wayne Street/CR 16 to also include a realignment of Heritage Drive to be one of the approaches. By realigning Heritage Drive, it would provide a safe location for the residents/patrons in the Spring Valley Subdivision area to safely enter onto US 20.

Response:

We will need additional feedback from the Town on the feasibility of realigning Heritage Drive. The design team is looking at improving the horizontal curve along US 20 at the Wayne Street / CR 16 intersection by lengthening the curve which would shift US 20 slightly to the south.

Comment:

Typical Cross Section – With the typical cross section to the west of CR 35 being 5 lanes plus horse and buggy lanes with drainage swales, the Town is anticipating that US 20 east of CR 35 will be at least 5 lanes wide, with hopes of designated horse and buggy lanes. However, the footprint of a typical cross section with drainage swales seems enormous, and we were hoping that this section could potentially incorporate curb and gutters with storm sewer.

Response:

The proposed typical cross section will match the project to the west and will be 5 lanes with 10' shoulders in each direction wide enough to accommodate horse and buggies. Drainage options for the area outside the shoulders will be considered during early design.

Comment:

Trees Along Spring Valley Subdivision – The Middlebury Tree Board is concerned with tree removal along this corridor, especially along the pond in Spring Valley Subdivision. If the trees are to be removed, it would be nice to consider the planting of new trees at various locations along the newly aligned US 20.

Answer:

Existing trees that need to be removed will be considered with the environmental impacts of the project. In general, trees that are removed will either need to be compensated as a cost to cure item to the property owner during the land acquisition process or replaced as part of the project.

Comment:

Intersection of US 20 and SR 13 – If possible, the removal of the grass strip in the median of US 20 near the intersection of SR 13 would be beneficial. This grass area gets overgrown, and then the Town must call two different INDOT Subdistricts to mow it. The Elkhart Subdistrict mows the area to the west of SR 13 and the Shipshewana Subdistrict mows the area to the east. Also, a right turn lane on the north approach for southbound traffic at the intersection of US 20 and SR 13 would be helpful to alleviate traffic congestion.

Answer:

This project does not include the intersection at SR 13 and will stop to the west of this intersection where the grass median begins.

Comment:

Drainage Issues – A significant drainage issue exists just south of the intersection of US 20 and Orpha Drive/ CR 22. With many of the rain events, the stormwater ponds on US 20 and creates a roadway safety hazard. Drainage is an issue at the intersection of SR 13 and US 20, too.

Answer:

The design team will look into options to improve the existing drainage conditions along US 20 including the intersection at Orpha Drive / CR 22. Stormwater runoff within INDOT's right of way will be collected and conveyed to suitable outfalls within the project limits. Retention ponds or similar measures to control the stormwater release rates at these outfalls will be included as part of the project.

Sincerely,

HNTB Indiana, Inc.



Christopher J. Schultz, PE
Sr. Project Manager

THIS IS NOT A PERMIT

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

DNR #: ER-22021

Request Received: November 21, 2019

Requestor: HNTB Corporation
Richard J Connolly
111 Monument Circle, Suite 1200
Indianapolis, IN 46204-5178

Project: US 20 (Section 2) added travel lanes between CR 35 and SR 13; Des #1900095

County/Site info: Elkhart

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

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

Regulatory Assessment: Formal approval by the Department of Natural Resources under the regulatory programs administered by the Division of Water is not required for this project.

Natural Heritage Database: The Natural Heritage Program's data have been checked. The state endangered Blanding's Turtle (*Emydoidea blandingii*) has been documented within 1/2 mile of the project area.

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

1) Blanding's Turtle:

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. If a permit is needed, please contact Linnea Petercheff at (317) 233-6527 or lpetercheff@dnr.in.gov.

2) Riparian Habitat:

We recommend a mitigation plan be developed for any unavoidable habitat impacts that will occur. The DNR's Floodway Habitat Mitigation guidelines (and plant lists) can be found online at: <http://www.in.gov/legislative/iac/20190130-IR-312190041NRA.xml.pdf>.

Impacts to non-wetland forest of one (1) acre or more should be mitigated at a minimum 2:1 ratio. If less than one acre of non-wetland forest is removed in a rural setting, replacement should be at a 1:1 ratio based on area. Impacts to non-wetland forest under one (1) acre in an urban setting should be mitigated by planting five trees, at least 2 inches in diameter-at-breast height (dbh), for each tree which is removed that is 10" dbh or greater (5:1 mitigation based on the number of large trees).

3) Wetland Habitat:

Due to the presence or potential presence of wetland habitat on site, we recommend contacting and coordinating with the Indiana Department of Environmental Management

THIS IS NOT A PERMIT

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

(IDEM) 401 program and also the US Army Corps of Engineers (USACE) 404 program. Impacts to wetland habitat should be mitigated at the appropriate ratio according to the 1991 INDOT/IDNR/USFWS Memorandum of Understanding.

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

1. Revegetate all bare and disturbed areas with a mixture of grasses (excluding all varieties of tall fescue) and legumes as soon as possible upon completion; low endophyte tall fescue may be used in the ditch bottom and side slopes only.
2. Do not cut any trees suitable for Indiana bat or Northern Long-eared bat roosting (greater than 5 inches dbh, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30.
3. Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the stream or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.
4. Seed and protect all disturbed streambanks and slopes not protected by other methods that are 3:1 or steeper with erosion control blankets that are heavy-duty, biodegradable, and net free or that use loose-woven / Leno-woven netting to minimize the entrapment and snaring of small-bodied wildlife such as snakes and turtles (follow manufacturer's recommendations for selection and installation); seed and apply mulch on all other disturbed areas.
5. Do not excavate or place fill in any riparian wetland.

Contact Staff:

Christie L. Stanifer, Environ. Coordinator, Fish & Wildlife
Our agency appreciates this opportunity to be of service. Please contact the above staff member at (317) 232-4080 if we can be of further assistance.



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

Date: December 19, 2019



Essenhaus, Inc.

240 U.S. 20 P.O. Box 1217 Middlebury, IN 46540 www.essenhaus.com

January 2, 2020

Richard Connolly
HNTB
111 Monument Circle, Suite 1200
Indianapolis, IN 46207-5178

Re: Des. No. 1900095 US 20 Section 2

Mr. Richard Connolly,

Thanks for your letter dated November 20, 2019 communicating the commencement of study for the expansion of US 20 from CR 35 to SR 13 in Middlebury. As a business owner with substantial real estate road frontage in this stretch, I appreciate the opportunity to be informed about the project from the early stages.

I did have a phone conversation with Steve Seculoff a few weeks ago and he was very helpful in answering some general questions.

This project is needed in our community and has our support. I understand there are many complexities with this particular portion of highway and adding additional travel lanes will take careful planning.

At this point in the project, I have one suggestion for consideration. That requests is to include the feasibility of removing the utility poles and installing underground conduit to house the utility. This would decrease the frequency of power outages, provide for safer travel of vehicles and improve the aesthetics of our community.

Thanks again for my inclusion in this process and know that I welcome discussion on any issues related to the improvements proposed.

Sincerely,

Lance K. Miller, CPA
President & CFO

Cc: Steve Seculoff

**Corporate
Offices**

PH:574-825-0052
FX: 574-825-0455
TF: 800-455-9471

**Restaurant &
Catering**

PH:574-825-9471
FX: 574-825-1458

**Essenhaus Inn &
Conference Center**

PH:574-825-9447
FX: 574-825-1303
TF: 800-455-9471

**Essenhaus
Village Shops**

PH:574-825-9471
FX: 574-825-7849

**Essenhaus
Foods**

PH:574-825-6790
FX: 574-825-0828



The HNTB Companies
Infrastructure Solutions

111 Monument Circle
Suite 1200
Indianapolis, IN 46204-5178

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

January 7, 2020

Essenhaus, Inc.
240 U.S. 20
P.O. Box 1217
Middlebury, IN 46540

Attn: Mr. Lance K. Miller, CPA

RE: US 20 Section 2 From CR 35 to SR 13, INDOT Des. No. 1900095

Dear Mr. Miller,

Thank you for providing the valuable feedback on this project. We have prepared the response below for the comment identified in the letter dated January 2, 2020.

Comment:

At this point in the project, I have one suggestion for consideration. That request is to include 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.

Response:

The design team is in the process of starting coordination efforts with utilities to identify which utilities would be in conflict with the proposed roadway improvements. During this process, the team will discuss the feasibility of relocating impacted utilities underground. Since we cannot require existing overhead utilities to go underground, we will start the conversations to see what additional relocation costs would be incurred to relocate underground.

Sincerely,

HNTB Indiana, Inc.

Christopher J. Schultz, PE
Sr. Project Manager



Indiana Department of Environmental Management

We Protect Hoosiers and Our Environment.

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

INDOT
Steve Seculoff
5333 Hatfield Rd
Fort Wayne , IN 47274
Date

HNTB Corporation
Dan Logsdon
111 Monument Circle, Suite 1200
Indianapolis , IN 46204

To Engineers and Consultants Proposing Roadway Construction Projects:

RE: Roadway construction for this project (INDOT Des. No. 1900095) will begin approximately 565 feet east of the intersection of U.S. 20 and C.R. 35, and proceed east on U.S. 20 to the intersection of U.S. 20 and S.R. 13 in Elkhart County, Indiana. The proposed project will include widening a portion of U.S. 20 to accommodate the addition of one travel lane in each direction and a two-way left turn lane throughout the corridor. The proposed project will include widening of the pavement and embankment, and the installation of new pavement markings. The resulting typical section will be a five-lane section with paved shoulders. Approximately 0.57 acre of permanent impacts will occur to Pond A. Approximately 0.05 acre of permanent impacts will occur to Wetland A as a result of the project. There are no known wildlife concerns for this road project.

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

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

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

WATER AND BIOTIC QUALITY

1. Section 404 of the Clean Water Act requires that you obtain a permit from the U.S. Army Corps of Engineers (USACE) before discharging dredged or fill materials into any wetlands or other waters, such as rivers, lakes, streams, and ditches. Other activities regulated include the relocation, channelization, widening, or other such alteration of a stream, and the mechanical clearing (use of heavy construction equipment) of

wetlands. Thus, as a project owner or sponsor, it is your responsibility to ensure that no wetlands are disturbed without the proper permit. Although you may initially refer to the U.S. Fish and Wildlife Service National Wetland Inventory maps as a means of identifying potential areas of concern, please be mindful that those maps do not depict jurisdictional wetlands regulated by the USACE or the Department of Environmental Management. A valid jurisdictional wetlands determination can only be made by the USACE, using the 1987 Wetland Delineation Manual.

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

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

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

2. In the event a Section 404 wetlands permit is required from the USACE, you also must obtain a Section 401 Water Quality Certification from the IDEM Office of Water Quality Wetlands Program. To learn more about the Wetlands Program, visit: <http://www.in.gov/idem/4384.htm> (<http://www.in.gov/idem/4384.htm>).
3. If the USACE determines that a wetland or other water body is isolated and not subject to Clean Water Act regulation, it is still regulated by the state of Indiana . A State Isolated Wetland permit from IDEM's Office of Water Quality (OWQ) is required for any activity that results in the discharge of dredged or fill materials into isolated wetlands. To learn more about isolated wetlands, contact the OWQ Wetlands Program at 317-233-8488.
4. If your project will involve over a 0.5 acre of wetland impact, stream relocation, or other large-scale alterations to water bodies such as the creation of a dam or a water diversion, you should seek additional input from the OWQ Wetlands Program staff. Consult the Web at: <http://www.in.gov/idem/4384.htm> (<http://www.in.gov/idem/4384.htm>) for the appropriate staff contact to further discuss your project.
5. Work within the one-hundred year floodway of a given water body is regulated by the Department of Natural Resources, Division of Water. The Division issues permits for activities regulated under the follow statutes:
 - o IC 14-26-2 Lakes Preservation Act 312 IAC 11
 - o IC 14-26-5 Lowering of Ten Acre Lakes Act No related code
 - o IC 14-28-1 Flood Control Act 310 IAC 6-1
 - o IC 14-29-1 Navigable Waterways Act 312 IAC 6

- IC 14-29-3 Sand and Gravel Permits Act 312 IAC 6
- IC 14-29-4 Construction of Channels Act No related code

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

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

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

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

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

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

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

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

construction activities are available from the Soil and Water Conservation District (SWCD) offices in each county or from IDEM.

7. For projects involving impacts to fish and botanical resources, contact the Department of Natural Resources - Division of Fish and Wildlife (317/232-4080) for additional project input.
8. For projects involving water main construction, water main extensions, and new public water supplies, contact the Office of Water Quality - Drinking Water Branch (317-308-3299) regarding the need for permits.
9. For projects involving effluent discharges to waters of the State of Indiana, contact the Office of Water Quality - Permits Branch (317-233-0468) regarding the need for a National Pollutant Discharge Elimination System (NPDES) permit.
10. For projects involving the construction of wastewater facilities and sewer lines, contact the Office of Water Quality - Permits Branch (317-232-8675) regarding the need for permits.

AIR QUALITY

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

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

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

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

Additionally, if construction or demolition is conducted in a wooded area where blackbirds have roosted or abandoned buildings or building sections in which pigeons or bats have roosted for 3-5 years, precautionary measures should be taken to avoid an outbreak of histoplasmosis. This disease is caused by the fungus *Histoplasma capsulatum*, which stems from bird or bat droppings that have accumulated in one area for 3-5 years. The spores from this fungus become airborne when the area is disturbed and can cause infections over an entire community downwind of the site. The area should be wetted down prior to cleanup or demolition of the project site. For more detailed information on histoplasmosis prevention and control, please contact the Acute Disease Control Division of the Indiana State Department of Health at (317) 233-7272.

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

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

To learn more about radon, radon risks, and ways to reduce exposure visit:

<http://www.in.gov/isdh/regsvcs/radhealth/radon.htm> (<http://www.in.gov/isdh/regsvcs/radhealth/radon.htm>), <http://www.in.gov/idem/4145.htm> (<http://www.in.gov/idem/4145.htm>), or <http://www.epa.gov/radon/index.html> (<http://www.epa.gov/radon/index.html>).

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

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

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

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

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

For more information about IDEM policy regarding asbestos removal and disposal, visit:

<http://www.in.gov/idem/4983.htm> (<http://www.in.gov/idem/4983.htm>).

4. With respect to lead-based paint removal: IDEM encourages all efforts to minimize human exposure to lead-based paint chips and dust. IDEM is particularly concerned that young children exposed to lead can suffer from learning disabilities. Although lead-based paint abatement efforts are not mandatory, any abatement that is conducted within housing built before January 1, 1978, or a child-occupied facility is required to comply with all lead-based paint work practice standards, licensing and notification requirements. For more information about lead-based paint removal visit: <http://www.in.gov/isdh/19131.htm> (<http://www.in.gov/isdh/19131.htm>).

5. Ensure that asphalt paving plants are permitted and operate properly. The use of cutback asphalt, or asphalt emulsion containing more than seven percent (7%) oil distillate, is prohibited during the months April through October. See 326 IAC 8-5-2 , Asphalt Paving Rule (<http://www.ai.org/legislative/iac/T03260/A00080.PDF> (<http://www.ai.org/legislative/iac/T03260/A00080.PDF>)).
6. If your project involves the construction of a new source of air emissions or the modification of an existing source of air emissions or air pollution control equipment, it will need to be reviewed by the IDEM Office of Air Quality (OAQ). A registration or permit may be required under 326 IAC 2 (View at: www.ai.org/legislative/iac/t03260/a00020.pdf (<http://www.ai.org/legislative/iac/t03260/a00020.pdf>)). New sources that use or emit hazardous air pollutants may be subject to Section 112 of the Clean Air Act and corresponding state air regulations governing hazardous air pollutants.
7. For more information on air permits visit: <http://www.in.gov/idem/4223.htm> (<http://www.in.gov/idem/4223.htm>), or to initiate the IDEM air permitting process, please contact the Office of Air Quality Permit Reviewer of the Day at (317) 233-0178 or OAMPROD atdem.state.in.us.

LAND QUALITY

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

1. If the site is found to contain any areas used to dispose of solid or hazardous waste, you need to contact the Office of Land Quality (OLQ) at 317-308-3103.
2. All solid wastes generated by the project, or removed from the project site, need to be taken to a properly permitted solid waste processing or disposal facility. For more information, visit <http://www.in.gov/idem/4998.htm> (<http://www.in.gov/idem/4998.htm>).
3. If any contaminated soils are discovered during this project, they may be subject to disposal as hazardous waste. Please contact the OLQ at 317-308-3103 to obtain information on proper disposal procedures.
4. If PCBs are found at this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding management of any PCB wastes from this site.
5. If there are any asbestos disposal issues related to this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding the management of asbestos wastes (Asbestos removal is addressed above, under Air Quality).
6. If the project involves the installation or removal of an underground storage tank, or involves contamination from an underground storage tank, you must contact the IDEM Underground Storage Tank program at 317/308-3039. See: <http://www.in.gov/idem/4999.htm> (<http://www.in.gov/idem/4999.htm>).

FINAL REMARKS

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

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

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

Signature(s) of the Applicant

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

Project Description

Roadway construction for this project (INDOT Des. No. 1900095) will begin approximately 565 feet east of the intersection of U.S. 20 and C.R. 35, and proceed east on U.S. 20 to the intersection of U.S. 20 and S.R. 13 in Elkhart County, Indiana. The proposed project will include widening a portion of U.S. 20 to accommodate the addition of one travel lane in each direction and a two-way left turn lane throughout the corridor. The proposed project will include widening of the pavement and embankment, and the installation of new pavement markings. The resulting typical section will be a five-lane section with paved shoulders. Approximately 0.57 acre of permanent impacts will occur to Pond A. Approximately 0.05 acre of permanent impacts will occur to Wetland A as a result of the project. There are no known wildlife concerns for this road project.

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

Date: 11/09/2020

Signature of the INDOT
Project Engineer or Other Responsible Agent 

Steve Seculoff

Date: 11/9/2020

Signature of the
For Hire Consultant 

Dan Logsdon

Organization and Project Information

Project ID:
Des. ID: 1900095
Project Title: US 20 - Section 2 (CR 35 to SR 13) - Added Travel
Name of Organization: HNTB Corporation
Requested by: Dan Logsdon

Environmental Assessment Report

1. Geological Hazards:
 - Moderate liquefaction potential
2. Mineral Resources:
 - Bedrock Resource: Low Potential
 - Sand and Gravel Resource: High Potential
3. Active or abandoned mineral resources extraction sites:
 - Abandoned Industrial Minerals Sand Gravel Pits

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

DISCLAIMER:

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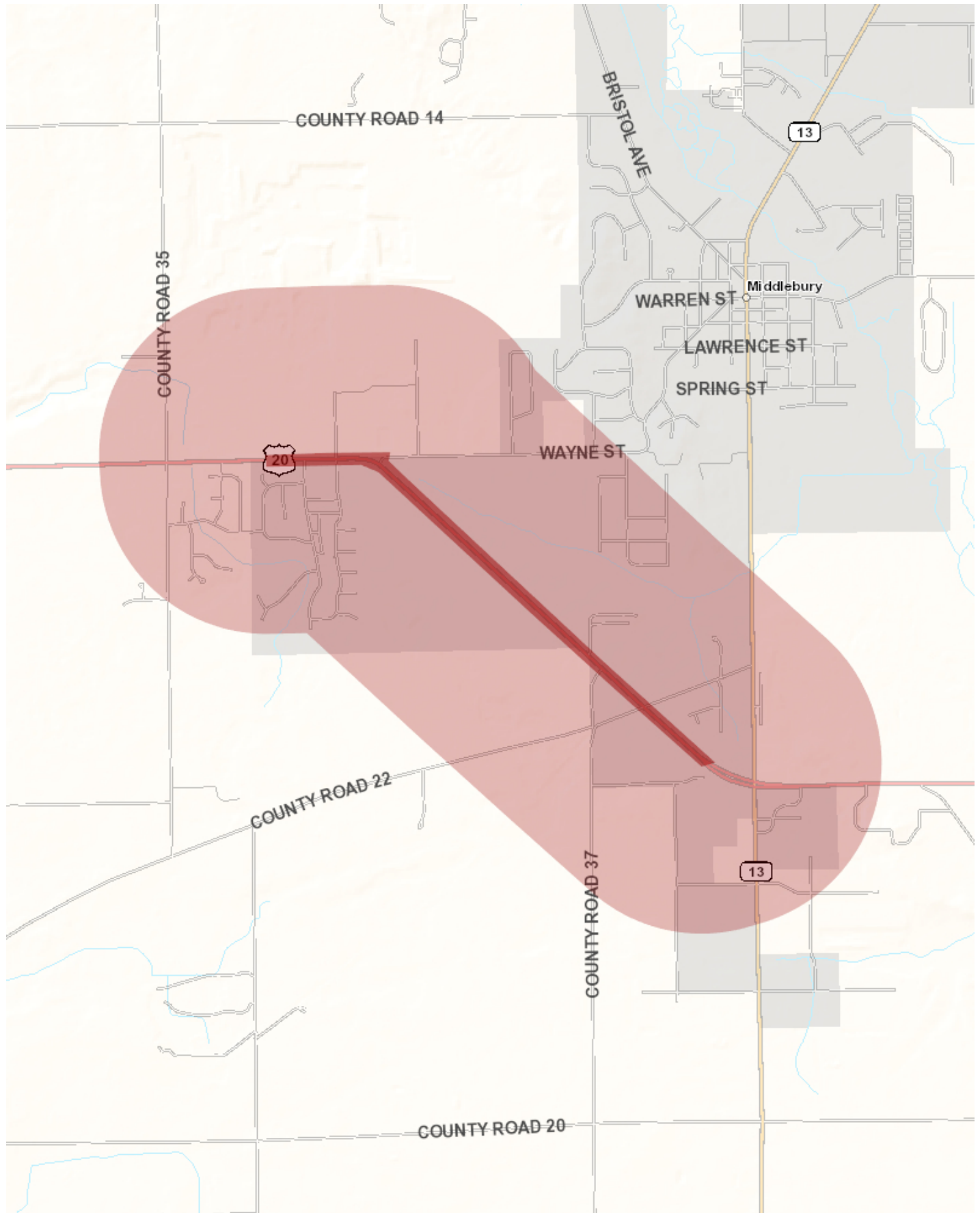
This information was furnished by Indiana Geological Survey

Address: 420 N. Walnut St., Bloomington, IN 47404

Email: IGSEnvir@indiana.edu

Phone: 812 855-7428

Date: November 09, 2020



Metadata:

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

INDOT Bridge/Small Structure Bat Inspection Data Sheet (Rev 4/29/2016)

General Information		
Date of Inspection: 10/14/2019	Initial Inspection <input checked="" type="checkbox"/>	Temp: 43 °F
Time of Inspection: 10:00 am	Follow-up Inspection <input type="checkbox"/>	Wind: 10 mph
County: Elkhart	Construction <input type="checkbox"/>	Precip: 0
Inspected by: R. Connolly, L. Little		Sunrise: 7:25 Sunset: 7:59
GPS Northing: 4612657.06	Contract Number:	Anticipated Start Date for
Easting: 607123.22	R-42379, Des. 1900095	Construction:
UTM Zone: 16		Spring 2024

Bridge or Culvert	Bridge or Culvert
Stream or Road Crossed: N/A	Station: N/A
Bridge/Culvert number: CV 020-020-104.91	Number of Spans: N/A
Type of Structure: <input type="checkbox"/> Concrete box beam <input type="checkbox"/> Steel beam <input type="checkbox"/> Concrete I-beam <input type="checkbox"/> Steel girder <input type="checkbox"/> Concrete bulb tee beam <input type="checkbox"/> Steel pony truss <input type="checkbox"/> Concrete arch <input type="checkbox"/> Welded steel thru girder <input type="checkbox"/> Concrete girder <input checked="" type="checkbox"/> Concrete box culvert <input type="checkbox"/> Concrete slab <input type="checkbox"/> Concrete pipe <input type="checkbox"/> Multi-plate arch <input type="checkbox"/> Corrugated steel pipe <input type="checkbox"/> Other (list):	Material: <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Steel <input type="checkbox"/> Other (describe): Shape: <input type="checkbox"/> Box Culvert <input type="checkbox"/> Pipe <input type="checkbox"/> Arch <input checked="" type="checkbox"/> Slab <input type="checkbox"/> Other (describe)
Searched entire structure? If not, why not? Yes	Location of bats or signs of use (w/drawing and photos): N/A
Bats Present? <input type="checkbox"/> Seen? <input type="checkbox"/> Heard? No	
In Clusters? Number of clusters: N/A	
Number of bats in largest cluster: N/A	
Approximate total number of bats found: N/A	
Signs of previous bat use? <input type="checkbox"/> Guano <input type="checkbox"/> Staining No	

If Bats Present
Date and Time Project Supervisor was notified: N/A
Name of Project Supervisor notified: N/A

For bridges and culverts, provide plan, longitudinal and cross section views as appropriate.



N/A

INDOT Bridge/Small Structure Bat Inspection Data Sheet (Rev 4/29/2016)

General Information		
Date of Inspection: 10/14/2019	Initial Inspection <input checked="" type="checkbox"/>	Temp: 43 °F
Time of Inspection: 10:00 am	Follow-up Inspection <input type="checkbox"/>	Wind: 10 mph
County: Elkhart	Construction <input type="checkbox"/>	Precip: 0
Inspected by: R. Connolly, L. Little		Sunrise: 7:25 Sunset: 7:59
GPS Northing: 4612657.06	Contract Number: R-42379, Des. 1900095	Anticipated Start Date for Construction: Spring 2024
Easting: 607123.22		
UTM Zone: 16		

Bridge or Culvert	Bridge or Culvert
Stream or Road Crossed: N/A	Station: N/A
Bridge/Culvert number: CV 020-020-104.91	Number of Spans: N/A
Type of Structure: <input type="checkbox"/> Concrete box beam <input type="checkbox"/> Steel beam <input type="checkbox"/> Concrete I-beam <input type="checkbox"/> Steel girder <input type="checkbox"/> Concrete bulb tee beam <input type="checkbox"/> Steel pony truss <input type="checkbox"/> Concrete arch <input type="checkbox"/> Welded steel thru girder <input type="checkbox"/> Concrete girder <input checked="" type="checkbox"/> Concrete box culvert <input type="checkbox"/> Concrete slab <input type="checkbox"/> Concrete pipe <input type="checkbox"/> Multi-plate arch <input type="checkbox"/> Corrugated steel pipe <input type="checkbox"/> Other (list):	Material: <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Steel <input type="checkbox"/> Other (describe): Shape: <input type="checkbox"/> Box Culvert <input type="checkbox"/> Pipe <input type="checkbox"/> Arch <input checked="" type="checkbox"/> Slab <input type="checkbox"/> Other (describe)
Searched entire structure? If not, why not? Yes	Location of bats or signs of use (w/drawing and photos): N/A
Bats Present? <input type="checkbox"/> Seen? <input type="checkbox"/> Heard? No	
In Clusters? Number of clusters: N/A	
Number of bats in largest cluster: N/A	
Approximate total number of bats found: N/A	
Signs of previous bat use? <input type="checkbox"/> Guano <input type="checkbox"/> Staining No	

If Bats Present
Date and Time Project Supervisor was notified: N/A
Name of Project Supervisor notified: N/A

For bridges and culverts, provide plan, longitudinal and cross section views as appropriate.

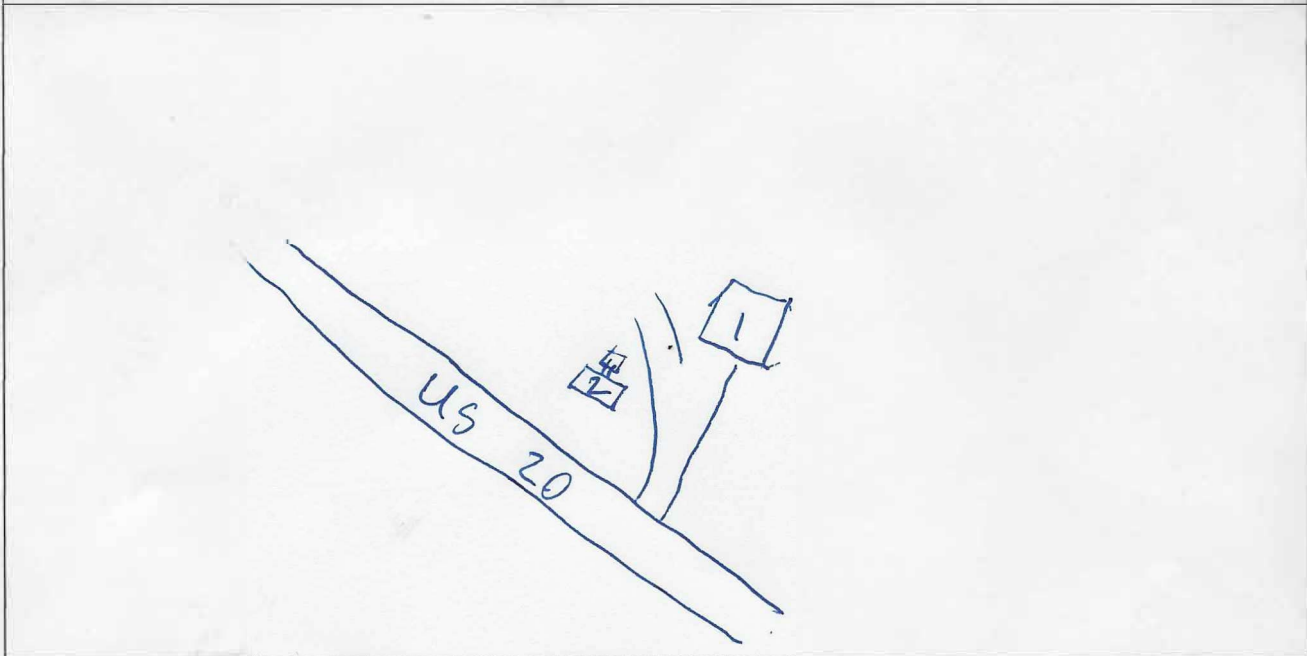


N/A

INDOT Building Bat Inspection Data Sheet (Rev. 4/29/2016)

General Information		
Date of Inspection: <i>2/8/2021</i>	Initial Inspection <input checked="" type="checkbox"/>	Temp: <i>13°C</i>
Time of Inspection: <i>1:30pm</i>	Follow-up Inspection <input type="checkbox"/>	Wind: <i>3 mph</i>
County: <i>Elkhart</i>		Precip: <i>60%</i>
Inspected by: <i>Candon L.</i>		Sunrise: <i>7:13am</i> Sunset: <i>6:14pm</i>
GPS Northing: <i>4612878.38</i>	Contract Number:	Scheduled Demolition Date:
Easting: <i>606419.01</i>	<i>42379</i>	
UTM Zone: <i>16</i>		
Street Address	LA Code	State Parcel ID
<i>214 US20</i>		<i>20-08-16-276-008.000-035</i>

Draw the position of each building on the parcel and give each building a number. Indicate North. A labeled aerial may be used instead—attach.



Building Number: <i>1</i>	
Type of Structure: <input type="checkbox"/> Residence <input checked="" type="checkbox"/> Detached garage <input type="checkbox"/> Metal pole barn <input type="checkbox"/> Wood sided barn <input type="checkbox"/> Shed <input type="checkbox"/> Open-sided shelter <input type="checkbox"/> Commercial Bldg <input type="checkbox"/> Industrial Bldg <input type="checkbox"/> Other (describe):	
Check: loose siding, shutters, eaves, interior and exterior gaps between building components, and attic.	
Estimated building height: <i>15 feet</i>	Location of bats or signs of use (w/drawing and photos): <i>N/A</i>
Searched entire building? If not, why not? <i>No, Owners Not home</i>	
Bats Present? <input type="checkbox"/> Seen? <input type="checkbox"/> Heard? <i>N/A</i>	
In Clusters? Number of clusters: <i>N/A</i>	
Number of bats in largest cluster: <i>N/A</i>	
Approximate total number of bats found: <i>N/A</i>	
Signs of bat use? <input type="checkbox"/> Guano <input type="checkbox"/> Staining <i>N/A</i>	

Date:

LA Code:

Parcel ID:

Sheet Number:

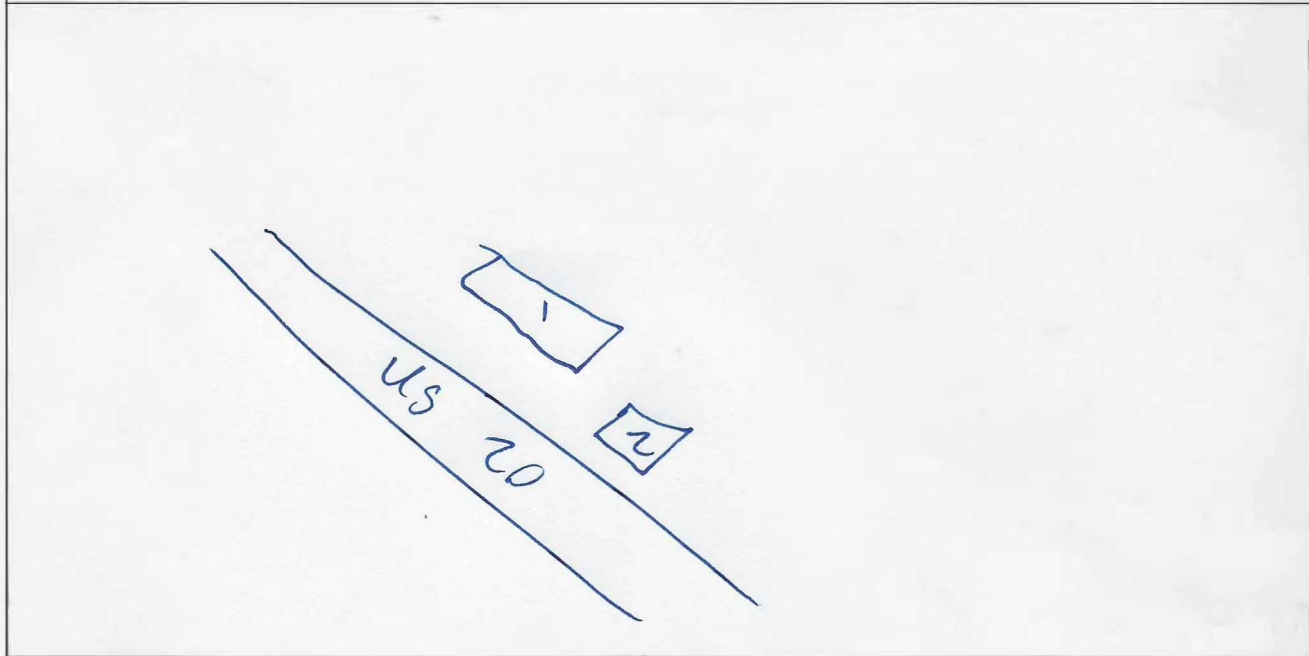
Building Number: 2	
Type of Structure: <input checked="" type="checkbox"/> Residence <input type="checkbox"/> Detached garage <input type="checkbox"/> Metal pole barn <input type="checkbox"/> Wood sided barn <input type="checkbox"/> Shed <input type="checkbox"/> Open-sided shelter <input type="checkbox"/> Commercial Bldg <input type="checkbox"/> Industrial Bldg <input type="checkbox"/> Other (describe):	
Check: loose siding, shutters, eaves, interior and exterior gaps between building components, and attic.	
Estimated building height: 20 feet	Location of bats or signs of use (w/drawing and photos): N/A
Searched entire building? If not, why not? No, Owners not home	
Bats Present? <input type="checkbox"/> Seen? <input type="checkbox"/> Heard? N/A	
In Clusters? Number of clusters: N/A	
Number of bats in largest cluster: N/A	
Approximate total number of bats found: N/A	
Signs of previous bat use? <input type="checkbox"/> Guano <input type="checkbox"/> Staining N/A	
Building Number:	
Type of Structure: <input type="checkbox"/> Residence <input type="checkbox"/> Detached garage <input type="checkbox"/> Metal pole barn <input type="checkbox"/> Wood sided barn <input type="checkbox"/> Shed <input type="checkbox"/> Open-sided shelter <input type="checkbox"/> Commercial Bldg <input type="checkbox"/> Industrial Bldg <input type="checkbox"/> Other (describe):	
Check: loose siding, shutters, eaves, interior and exterior gaps between building components, and attic.	
Estimated building height:	Location of bats or signs of use (w/drawing and photos):
Searched entire building? If not, why not?	
Bats Present? <input type="checkbox"/> Seen? <input type="checkbox"/> Heard?	
In Clusters? Number of clusters:	
Number of bats in largest cluster:	
Approximate total number of bats found:	
Signs of previous bat use? <input type="checkbox"/> Guano <input type="checkbox"/> Staining	
Building Number:	
Type of Structure: <input type="checkbox"/> Residence <input type="checkbox"/> Detached garage <input type="checkbox"/> Metal pole barn <input type="checkbox"/> Wood sided barn <input type="checkbox"/> Shed <input type="checkbox"/> Open-sided shelter <input type="checkbox"/> Commercial Bldg <input type="checkbox"/> Industrial Bldg <input type="checkbox"/> Other (describe):	
Check: loose siding, shutters, eaves, interior and exterior gaps between building components, and attic.	
Estimated building height:	Location of bats or signs of use (w/drawing and photos):
Searched entire building? If not, why not?	
Bats Present? <input type="checkbox"/> Seen? <input type="checkbox"/> Heard?	
In Clusters? Number of clusters:	
Number of bats in largest cluster:	
Approximate total number of bats found:	
Signs of previous bat use? <input type="checkbox"/> Guano <input type="checkbox"/> Staining	

If Bats Present in any building on parcel	
Date and Time Project Manager was notified:	
Name of Project Manager notified:	

INDOT Building Bat Inspection Data Sheet (Rev. 4/29/2016)

General Information		
Date of Inspection: <u>2/8/2021</u>	Initial Inspection <input checked="" type="checkbox"/>	Temp: <u>13°C</u>
Time of Inspection: <u>1:00 pm</u>	Follow-up Inspection <input type="checkbox"/>	Wind: <u>3 mph</u>
County: <u>Elkhart</u>		Precip: <u>60%</u>
Inspected by: <u>London L.</u>		Sunrise: <u>7:43 am</u> Sunset: <u>6:14 pm</u>
GPS Northing: <u>4612990.47</u> Easting: <u>606745.82</u> UTM Zone: <u>16</u>	Contract Number: <u>42379</u>	Scheduled Demolition Date:
Street Address <u>218 US 20</u>	LA Code	State Parcel ID <u>20-08-16-276-008.000-055</u>

Draw the position of each building on the parcel and give each building a number. Indicate North. A labeled aerial may be used instead—attach.



Building Number: <u>1</u>	
Type of Structure: <input checked="" type="checkbox"/> Residence <input type="checkbox"/> Detached garage <input type="checkbox"/> Metal pole barn <input type="checkbox"/> Wood sided barn <input type="checkbox"/> Shed <input type="checkbox"/> Open-sided shelter <input type="checkbox"/> Commercial Bldg <input type="checkbox"/> Industrial Bldg <input type="checkbox"/> Other (describe):	
Check: loose siding, shutters, eaves, interior and exterior gaps between building components, and attic.	
Estimated building height: <u>15 ft</u>	Location of bats or signs of use (w/drawing and photos): <u>N/A</u>
Searched entire building? If not, why not? <u>N/A Owners Not Home</u>	
Bats Present? <input type="checkbox"/> Seen? <input type="checkbox"/> Heard? <u>N/A</u>	
In Clusters? Number of clusters: <u>N/A</u>	
Number of bats in largest cluster: <u>N/A</u>	
Approximate total number of bats found: <u>N/A</u>	
Signs of bat use? <input type="checkbox"/> Guano <input type="checkbox"/> Staining <u>N/A</u>	

Date:

LA Code:

Parcel ID:

Sheet Number:

Building Number: 2	
Type of Structure: <input type="checkbox"/> Residence <input type="checkbox"/> Detached garage <input checked="" type="checkbox"/> Metal pole barn <input type="checkbox"/> Wood sided barn <input type="checkbox"/> Shed <input type="checkbox"/> Open-sided shelter <input type="checkbox"/> Commercial Bldg <input type="checkbox"/> Industrial Bldg <input type="checkbox"/> Other (describe):	
Check: loose siding, shutters, eaves, interior and exterior gaps between building components, and attic.	
Estimated building height: 25 feet	Location of bats or signs of use (w/drawing and photos): N/A
Searched entire building? If not, why not? No, Owner not home	
Bats Present? <input type="checkbox"/> Seen? <input type="checkbox"/> Heard? N/A	
In Clusters? Number of clusters: N/A	
Number of bats in largest cluster: N/A	
Approximate total number of bats found: N/A	
Signs of previous bat use? <input type="checkbox"/> Guano <input type="checkbox"/> Staining N/A	
Building Number:	
Type of Structure: <input type="checkbox"/> Residence <input type="checkbox"/> Detached garage <input type="checkbox"/> Metal pole barn <input type="checkbox"/> Wood sided barn <input type="checkbox"/> Shed <input type="checkbox"/> Open-sided shelter <input type="checkbox"/> Commercial Bldg <input type="checkbox"/> Industrial Bldg <input type="checkbox"/> Other (describe):	
Check: loose siding, shutters, eaves, interior and exterior gaps between building components, and attic.	
Estimated building height:	Location of bats or signs of use (w/drawing and photos):
Searched entire building? If not, why not?	
Bats Present? <input type="checkbox"/> Seen? <input type="checkbox"/> Heard?	
In Clusters? Number of clusters:	
Number of bats in largest cluster:	
Approximate total number of bats found:	
Signs of previous bat use? <input type="checkbox"/> Guano <input type="checkbox"/> Staining	
Building Number:	
Type of Structure: <input type="checkbox"/> Residence <input type="checkbox"/> Detached garage <input type="checkbox"/> Metal pole barn <input type="checkbox"/> Wood sided barn <input type="checkbox"/> Shed <input type="checkbox"/> Open-sided shelter <input type="checkbox"/> Commercial Bldg <input type="checkbox"/> Industrial Bldg <input type="checkbox"/> Other (describe):	
Check: loose siding, shutters, eaves, interior and exterior gaps between building components, and attic.	
Estimated building height:	Location of bats or signs of use (w/drawing and photos):
Searched entire building? If not, why not?	
Bats Present? <input type="checkbox"/> Seen? <input type="checkbox"/> Heard?	
In Clusters? Number of clusters:	
Number of bats in largest cluster:	
Approximate total number of bats found:	
Signs of previous bat use? <input type="checkbox"/> Guano <input type="checkbox"/> Staining	

If Bats Present in any building on parcel	
Date and Time Project Manager was notified:	
Name of Project Manager notified:	

Landon Little

From: Novak, Karen <KNovak@indot.IN.gov>
Sent: Tuesday, November 12, 2019 9:18 AM
To: Landon Little
Subject: RE: USFWS Bat Layer Check - Des. No. 1900095 US 20 added travel lanes, Elkhart County

Good Morning,

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat shall be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

Thank You,

Karen M. Novak

Sr Environmental Mgr Supervisor

5333 Hatfield Road

Fort Wayne, IN 46808

Office: (260) 969-8302

Email: knovak@indot.in.gov



From: Landon Little [mailto:ltlittle@hntb.com]
Sent: Monday, November 04, 2019 3:37 PM
To: Novak, Karen <KNovak@indot.IN.gov>
Subject: USFWS Bat Layer Check - Des. No. 1900095 US 20 added travel lanes, Elkhart County

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

Hello Karen,

HNTB would like to request a check of the USFWS bat data to determine the presence of any protected bat species in the area of this INDOT US 20 added travel lane project in Elkhart County. See attached graphic for location information. Please let me know if you need any additional information.

Thank you,

Landon Little

Scientist

Environmental Planning

Tel (317)917-5328 Email ltlittle@hntb.com

HNTB CORPORATION

111 Monument Circle, Suite 1200, Indianapolis, IN 46024 | www.hntb.com



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Indiana Ecological Services Field Office

620 South Walker Street

Bloomington, IN 47403-2121

Phone: (812) 334-4261 Fax: (812) 334-4273

<http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html>

In Reply Refer To:

February 09, 2021

Consultation Code: 03E12000-2020-SLI-1036

Event Code: 03E12000-2021-E-03435

Project Name: US 20 Section 2 (CR 35 to SR 13) (Des. 1900095)

Subject: Updated list of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

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

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

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

Please use the species list provided and visit the U.S. Fish and Wildlife Service’s Region 3 Section 7 Technical Assistance website at - <http://www.fws.gov/midwest/endangered/section7/s7process/index.html>. This website contains step-by-step instructions which will help you determine if your project will have an adverse effect on listed species and will help lead you through the Section 7 process.

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

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

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

Indiana Ecological Services Field Office

620 South Walker Street
Bloomington, IN 47403-2121
(812) 334-4261

Project Summary

Consultation Code: 03E12000-2020-SLI-1036

Event Code: 03E12000-2021-E-03435

Project Name: US 20 Section 2 (CR 35 to SR 13) (Des. 1900095)

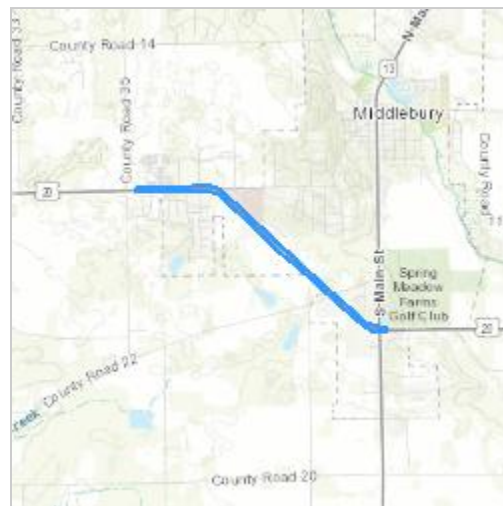
Project Type: TRANSPORTATION

Project Description: The Indiana Department of Transportation (INDOT) and the Federal Highway Administration (FHWA) propose the addition of a two-way left turn and additional travel lanes along United States Highway 20 (US 20) between County Road 35 (CR 35) and State Road 13 (SR 13) in Elkhart County, Indiana. There are culverts within the project area that will be replaced or extended as part of this project. There is potentially suitable summer bat habitat located within and adjacent to the project area. Tree clearing will be required (2.15 acres) for this project during the inactive season before construction begins (October 1, 2024 and March 1, 2024). No tree clearing will be required greater than 100 feet from the edge of pavement. Dominant tree species in the area are *Quercus macrocarpa* (Bur oak) and *Fraxinus pennsylvanica* (Green ash). No bats or evidence of bats were observed during the October 14, 2019 or February 8, 2021 field visit.

A search of the USFWS database by INDOT Fort Wayne District on November 22, 2019, did not identify any documented bat habitat sites within a half mile of the project area. The project will not involve permanent lighting alterations but will require the use of temporary lighting during construction. The project is scheduled to let in December 2023.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@41.66120599329237,-85.71746802689543,14z>



Counties: Elkhart County, Indiana

Endangered Species Act Species

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

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

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

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

Mammals

NAME	STATUS
Indiana Bat <i>Myotis sodalis</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none">▪ Incidental take of the NLEB is not prohibited here. Federal agencies may consult using the 4(d) rule streamlined process. Transportation projects may consult using the programmatic process. See www.fws.gov/midwest/endangered/mammals/nleb/index.html Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

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



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Indiana Ecological Services Field Office

620 South Walker Street

Bloomington, IN 47403-2121

Phone: (812) 334-4261 Fax: (812) 334-4273

<http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html>

IPaC Record Locator: 520-98953456

February 11, 2021

Subject: Consistency letter for the 'US 20 Section 2 (CR 35 to SR 13) (Des. 1900095)' project (no current TAILS record) under the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

To whom it may concern:

The U.S. Fish and Wildlife Service (Service) has received your request to verify that the **US 20 Section 2 (CR 35 to SR 13) (Des. 1900095)** (Proposed Action) may rely on the concurrence provided in the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 *et seq.*).

Based on the information you provided (Project Description shown below), you have determined that the Proposed Action is within the scope and adheres to the criteria of the PBO, including the adoption of applicable avoidance and minimization measures, and may affect, but is not likely to adversely affect the endangered Indiana bat (*Myotis sodalis*) and/or the threatened Northern long-eared bat (*Myotis septentrionalis*). Consultation with the Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) is required.

This "may affect - not likely to adversely affect" determination becomes effective when the lead Federal action agency or designated non-federal representative requests the Service rely on the PBO to satisfy the agency's consultation requirements for this project.

Please provide this consistency letter to the lead Federal action agency or its designated non-federal representative with a request for review, and as the agency deems appropriate, to submit for concurrence verification through the IPaC system. The lead Federal action agency or designated non-federal representative should log into IPaC using their agency email account and click "Search by record locator". They will need to enter the record locator **520-98953456**.

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

If the Proposed Action may affect any other federally-listed or proposed species and/or designated critical habitat, additional consultation between the lead Federal action agency and this Service Office is required. If the proposed action has the potential to take bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act may also be required. In either of these circumstances, please advise the lead Federal action agency accordingly.

Project Description

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

Name

US 20 Section 2 (CR 35 to SR 13) (Des. 1900095)

Description

The Indiana Department of Transportation (INDOT) and the Federal Highway Administration (FHWA) propose the addition of a two-way left turn and additional travel lanes along United States Highway 20 (US 20) between County Road 35 (CR 35) and State Road 13 (SR 13) in Elkhart County, Indiana. There are culverts within the project area that will be replaced or extended as part of this project. There is potentially suitable summer bat habitat located within and adjacent to the project area. Tree clearing will be required (2.15 acres) for this project during the inactive season before construction begins (October 1, 2024 and March 1, 2024). No tree clearing will be required greater than 100 feet from the edge of pavement. Dominant tree species in the area are *Quercus macrocarpa* (Bur oak) and *Fraxinus pennsylvanica* (Green ash). No bats or evidence of bats were observed during the October 14, 2019 or February 8, 2021 field visit.

A search of the USFWS database by INDOT Fort Wayne District on November 22, 2019, did not identify any documented bat habitat sites within a half mile of the project area. The project will not involve permanent lighting alterations but will require the use of temporary lighting during construction. The project is scheduled to let in December 2023.

Determination Key Result

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

Qualification Interview

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

[1] See [Indiana bat species profile](#)

Automatically answered

Yes

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

[1] See [Northern long-eared bat species profile](#)

Automatically answered

Yes

3. Which Federal Agency is the lead for the action?

A) Federal Highway Administration (FHWA)

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

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

No

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

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

No

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

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

No

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

No

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

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

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

Yes

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

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

Yes

10. Will the project clear more than 20 acres of suitable habitat per 5-mile section of road/rail?
No

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

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

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

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

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

No

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

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

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

No

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

Yes

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

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

B) During the inactive season

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

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

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

No

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

Yes

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

B) During the inactive season

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

Yes

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

No

20. Are *all* trees that are being removed clearly demarcated?
Yes
21. Will the removal of habitat or the removal/trimming of trees include installing new or replacing existing **permanent** lighting?
No
22. Does the project include wetland or stream protection activities associated with compensatory wetland mitigation?
No
23. Does the project include slash pile burning?
No
24. Does the project include *any* bridge removal, replacement, and/or maintenance activities (e.g., any bridge repair, retrofit, maintenance, and/or rehabilitation work)?
Yes
25. Is there *any* suitable habitat^[1] for Indiana bat or NLEB **within** 1,000 feet of the bridge? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

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

Yes

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

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

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

Yes

SUBMITTED DOCUMENTS

- *INDOT_Bridge_Culvert_020.020.104.pdf* <https://ecos.fws.gov/ipac/project/H5WZORNJPNGB3ITV2XE2XBTB5Q/projectDocuments/21260812>
- *INDOT_Bridge_Culvert_Assessment_020.020.104.91.pdf* <https://ecos.fws.gov/ipac/project/H5WZORNJPNGB3ITV2XE2XBTB5Q/projectDocuments/21260814>

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

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

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

No

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

No

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

Yes

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

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

Yes

31. Has a structure assessment^[1] been conducted **within** the last 24 months^[2] to determine if bats are using the structure(s)?

[1] Structure assessment for occupied buildings means a cursory inspection for bat use. For abandoned buildings a more thorough evaluation is required (See [User Guide Appendix D](#) for bridge/abandoned structure assessment guidance).

[2] Assessments must be completed no more than 2 years prior to conducting any work on the structures, regardless of whether assessments have been conducted in the past. Due to the transitory nature of bat use, a negative result in one year does not guarantee that bats will not use that structure in subsequent years.

Yes

SUBMITTED DOCUMENTS

- 218 US 21 Building Inspection Form.pdf <https://ecos.fws.gov/ipac/project/H5WZORNJPNGB3ITV2XE2XBTB5Q/projectDocuments/99120738>
- 214 US 21 Building Inspection Form.pdf <https://ecos.fws.gov/ipac/project/H5WZORNJPNGB3ITV2XE2XBTB5Q/projectDocuments/99120739>

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

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

No

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

No

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

Yes

35. Is there *any* suitable habitat **within** 1,000 feet of the location(s) where **temporary** lighting will be used?

Yes

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

No

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

Yes

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

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

Yes

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

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

Yes

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

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

Yes

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

No

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

Automatically answered

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

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

Automatically answered

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

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

Automatically answered

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

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

Automatically answered

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

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

Automatically answered

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

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

Automatically answered

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

48. **General AMM 1**

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

Yes

49. **Tree Removal AMM 1**

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

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

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

Yes

50. **Tree Removal AMM 3**

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

Yes

51. **Tree Removal AMM 4**

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

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

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

Yes

52. **Lighting AMM 1**

Will *all* **temporary** lighting be directed away from suitable habitat during the active season?

Yes

Project Questionnaire

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

N/A

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

N/A

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

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

2.15

4. Please describe the proposed bridge work:

Culverts within the project area will be extended or replaced with longer culverts to accommodate the widened roadway.

5. Please state the timing of all proposed bridge work:

Bridge work is planned to begin in Spring/Summer of 2024 and be complete in the Summer/Fall of 2026.

6. Please enter the date of the bridge assessment:

October 14, 2019

7. Please describe the proposed structure work:

Once residence, including outbuildings may be demolished as part of the project.

8. Please state the timing of all proposed structure work:

November 2022.

9. Please enter the date of the structure assessment:

February 8, 2021

Avoidance And Minimization Measures (AMMs)

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

TREE REMOVAL AMM 1

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

LIGHTING AMM 1

Direct temporary lighting away from suitable habitat during the active season.

TREE REMOVAL AMM 2

Apply time of year restrictions for tree removal when bats are not likely to be present, or limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/

rail surface and **outside of documented** roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed.

TREE REMOVAL AMM 3

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

TREE REMOVAL AMM 4

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

GENERAL AMM 1

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

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

This key was last updated in IPaC on December 29, 2020. Keys are subject to periodic revision.

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

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

Richard Connolly

Subject: FW: Des 1900095 US 20 Elkhart County USFWS IPAC

Thank You Rich. The letter has been sent to USFWS for their 14 day concurrence review.

Have a great day!

Karen M. Novak

Sr Environmental Mgr Supervisor

5333 Hatfield Road

Fort Wayne, IN 46808

Office: (260) 969-8302

Email: knovak@indot.in.gov



From: Richard Connolly <rconnolly@HNTB.com>

Sent: Tuesday, February 09, 2021 1:16 PM

To: Novak, Karen <KNovak@indot.IN.gov>

Subject: RE: Des 1900095 US 20 Elkhart County USFWS IPAC

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

Karen,

The information of the USFWS IPAC website has been revised to document the potential for demolition of one residence.

Please verify the project information and the MA-NLAA determination. The USFWS finding letter is uploaded to the IPAC website.

The IPaC Record Locator for Des. 520-98953456

Please let me know if you have any questions.

Thanks

Richard J. Connolly, CPESC

Science Project Manager

Environmental Planning

Tel (317) 917-5333 Cell (317) 627-5311 Email rconnolly@hntb.com

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Appendix D: Section 106 of the NHPA

Minor Projects PA Project Assessment Form – Category B Projects with Archaeology Work

Date: 2/20/2020

Project Designation Number: 1900095

Route Number: US 20

Project Description: Added Travel Lanes, US 20 from 2.13 miles W of SR 13 (CR 35) to SR 13

The proposed US 20 Added Travel Lane Project in Elkhart County begins approximately 422 feet (.08 mile) east of its intersection with County Road (CR) 35 and extends 2.53 miles southeast along the current route of US 20. The proposed project will widen a portion of US 20 between CR 35 and SR 13 to accommodate the addition of one (1) travel lane in each direction and a two-way left turn lane throughout the corridor. The proposed project will include widening of the pavement and embankment, and installation of new pavement markings. The resulting typical section would be a five (5)-lane section with paved shoulders. Approximately 40 acres of permanent right-of-way (ROW) are anticipated to be acquired.

Feature crossed (if applicable): N/A

Township: Middlebury

City/County: Middlebury, Elkhart County

Information reviewed (please check all that apply):

- General project location map USGS map Aerial photograph
Written description of project area General project area photos
Previously completed archaeology reports Interim Report
Previously completed historic property reports
Soil survey data Bridge inspection information

Other (please specify): Indiana State Historic Architectural and Archaeological Research Database (SHAARD); Indiana Buildings, Bridges, and Cemeteries Map website; *Elkhart County Interim Report*; Arc Map GIS; online street-view imagery; MPPA application (including maps and photographs) sent by HNTB Corporation, dated December 17th, 2019 and on file at INDOT-CRO.

Arnold, Craig

2018 Archaeological Records Check and Phase Ia Reconnaissance US 20 Two-way Left Turn Lane Project from Indiana State Road 15 to Elkhart County Road 35 in Jefferson Township, Elkhart County, Indiana. Weintraut and Associates. Submitted to HNTB Corporation. Report on file at IDNR, DHPA.

Harth, Aaron

2020 An Archaeological Reconnaissance for a Proposed Road Widening Project on US 20, from County Road 35 to State Road 13, in Elkhart County, Indiana (INDOT Des. No. 1900095). Cultural Resource Analysts, Inc. Submitted to HNTB Corporation. Report on file at IDNR, DHPA.

Results of the Records Review for Above-Ground Resources:

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

The Indiana Historic Sites and Structures Inventory (IHSSI) and National Register information for Elkhart County are available in the Indiana State Historic Architectural and Archaeological Research Database (SHAARD) and the Indiana Historic Buildings, Bridges, and Cemeteries Map (IHBBCM). The *Elkhart County Interim Report* (2005; Middlebury Township) of the Indiana Historic Sites and Structures Inventory (IHSSI) was also consulted. An INDOT-CRO historian reviewed the SHAARD online map and checked it against the Interim Report hard-copy maps. No resources rated higher than "contributing" are located within 0.25 mile of the project area.

According to the IHSSI rating system, generally properties rated "contributing" do not possess the level of historical or architectural significance necessary to be considered individually National Register-eligible, although they would contribute to a historic district. If they retain material integrity, properties rated "notable" might possess the necessary level of significance after further research. Properties rated "outstanding" usually possess the necessary level of significance to be considered National Register-eligible, if they retain material integrity.

The INDOT-CRO historian reviewed structures adjacent to the project area utilizing online aerial and street-view photography. The project area is located in an exurban setting along US 20 with adjacent above-ground resources consisting of mid-twentieth to early twenty-first century residential and commercial buildings. None of the visible resources appear to possess the significance or integrity required to be considered NRHP-eligible.

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

Archaeology Report Author/Date:

Aaron Hearth/ January 27, 2020

Summary of Archaeology Investigation Results:

With regard to archaeological resources, an INDOT Cultural Resources archaeologist who meets the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61 reviewed the report of investigation for the project and concurred with the results and recommendations (Harth 2020). 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 had been conducted at the western edge of the project, one reconnaissance was recent utilizing current methods and so that area was not resurveyed (Arnold 2018). One historic archaeological sites was located during the reconnaissance. The site was found to lack integrity and is ineligible to the state and national registers. No additional archaeological investigation was recommended.

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

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

B-3. Construction of added travel, turning, or auxiliary lanes (e.g., bicycle, truck climbing, acceleration and deceleration lanes) and shoulder widening under the following conditions [***BOTH Condition A, which pertains to Archaeological Resources, and Condition B, which pertains to Above-Ground Resources, must be satisfied***]:

Condition A (Archaeological Resources)

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

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

Condition B (Above-Ground Resources)

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

Additional comments:

INDOT Cultural Resources staff reviewer(s): Clint Kelly and David Moffatt

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

A PHASE IA ARCHAEOLOGICAL RECONNAISSANCE FOR
A PROPOSED ROAD WIDENING PROJECT ON US 20,
FROM COUNTY ROAD 35 TO STATE ROAD 13, IN
ELKHART COUNTY, INDIANA
(INDOT DES. NO. 1900095)



by
Aaron L. Harth

Prepared for

HNTB
Corporation

Prepared by



Kentucky | West Virginia | Wyoming
Indiana | Louisiana | Tennessee | Virginia

**A PHASE IA ARCHAEOLOGICAL RECONNAISSANCE FOR
A PROPOSED ROAD WIDENING PROJECT ON US 20,
FROM COUNTY ROAD 35 TO STATE ROAD 13, IN
ELKHART COUNTY, INDIANA
(INDOT DES. NO. 1900095)**

by
Aaron L. Harth

Prepared for

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CRA Project No.: I19H013



Andrew V. Martin, RPA 61710
Principal Investigator

January 27, 2020

Lead Agency: Indiana Department of Transportation
Des. No.: 1900095
Indiana State Museum Accession No.: 71.19.1744

ABSTRACT

Between January 6 and 8, 2020, Cultural Resource Analysts, Inc., personnel conducted a phase Ia archaeological reconnaissance for the proposed widening of US 20 in Middlebury, Elkhart County, Indiana (Indiana Department of Transportation Designation Number 1900095). The survey was conducted at the request of HNTB Corporation. The proposed project will be conducted along approximately 3.2 km (2.0 mi) of US 20, between County Road 35 and State Road 13. The survey area encompasses a total of approximately 27 ha (67 acres) of new, temporary, and existing right-of-way, and was investigated in its entirety. Survey methods consisted of systematic screened shovel testing and visual inspection of obviously disturbed areas.

Prior to conducting this survey, an archaeological records review was completed using the Indiana Division of Historic Preservation and Archaeology's State Historic Architectural and Archaeological Research Database. The records review revealed that no previously recorded archaeological sites have been documented within the survey boundaries. The records search also showed that approximately 0.8 ha (2.0 acres) of the western extent of the survey area was previously investigated. The previously surveyed area was not reinvestigated during the current survey.

One previously unrecorded archaeological site (12E494) was documented as a result of this survey. Site 12E494 is a moderate-density late nineteenth- through twentieth-century historic artifact scatter. Overall, Site 12E494 exhibited poor archaeological integrity and is recommended not eligible for inclusion in the National Register of Historic Places. Thus, no further work is recommended for this site, and archaeological clearance is recommended for the proposed project.

Richard Connolly

From: Moffatt, Charles D <CMoffatt@indot.IN.gov>
Sent: Thursday, February 20, 2020 8:42 AM
To: Andrew Martin
Cc: Kelly, Clint; Miller, Shaun (INDOT); Richard Connolly; Novak, Karen; Seculoff, Steven
Subject: RE: Des. No. 1900095, US 20 Travel Lane Addition Project, Elkhart County, MPPA Approval
Attachments: Minor Projects PA determination form_B-3_Des 1900095.pdf

Andy,

Thank you for the submittal of this project information for our review. We have determined that this project falls under Category B-3 of the MPPA, thus concluding the Section 106 process. Please find attached the completed determination forms for inclusion in the CE.

The archaeological report has been reviewed and approved by INDOT-CRO. Please forward one hard copy of the report to DHPA, indicating in the cover letter that the project qualified as a Minor Project and therefore the report is for their records only and no formal review is required under Section 106. In addition, we ask that a copy of the DHPA submittal letter be sent to INDOT CRO care of David Moffatt during the time of submission and that the archaeological report be posted to IN SCOPE (please ensure that the uploaded file follows the IN SCOPE naming conventions).

Please keep in mind that if the scope of the project or project limits should change, our office will need to re-examine the information to determine whether the MPPA still applies. Please don't hesitate to contact us should you have any questions or need additional information.

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

From: Miller, Shaun (INDOT)
Sent: Tuesday, January 28, 2020 2:36 PM
To: Moffatt, Charles D <CMoffatt@indot.IN.gov>
Cc: Kelly, Clint <CKelly1@indot.IN.gov>; Andrew Martin <amartin@crai-ky.com>; Richard Connolly <rconnolly@HNTB.com>; Novak, Karen <KNovak@indot.IN.gov>; Seculoff, Steven <SSeculoff@indot.IN.gov>
Subject: FW: Des. No. 1900095, US 20 Travel Lane Addition Project, Elkhart County, MPPA Approval

Dave,

Please review the attached report and complete your portion of the MPPA B-3 form by February 19. Clint has started the form here: [Minor Projects PA determination form B-3 Des 1900095.docx](#)
Be sure to add the accidental discovery clause at the end.

Thank you,

Appendix E: Red Flag and Hazardous Materials



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204

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

Eric Holcomb, Governor
Joe McGuinness,
Commissioner

Date: December 3, 2019

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

From: Landon Little
111 Monument Circle, Suite 1200
Indianapolis, IN 46204
ltlittle@hntb.com

Re: RED FLAG INVESTIGATION
Des. No. 1900095, State Project
Added Travel Lanes
U.S. 20 – Section 2 (CR 35 to SR 13)
Elkhart County, Indiana

PROJECT DESCRIPTION

Brief Description of Project: The Indiana Department of Transportation (INDOT) and the Federal Highway Administration (FHWA) propose the widening of United States Highway 20 (US 20) from a 2-lane/3-lane typical section to a 5-lane typical section including a two way left turn lane between County Road 35 (CR 35) and State Road 13 (SR 13) in Elkhart County, Indiana. Culverts, traffic signals, and intersections will be upgraded to accommodate the added travel lanes throughout the corridor. Utility relocation will be required on both the north and south sides of US 20.

Bridge and/or Culvert Project: Yes No Structure # N/A

If this is a bridge project, is the bridge Historical? Yes No , Select Non-Select

(Note: If the project involves a historical bridge, please include the bridge information in the Recommendations Section of the report).

Proposed right of way: Temporary # Acres N/A Permanent # Acres approximately 40 acres

Type of excavation: Up to 20 feet of excavation will be required for roadway reconstruction, utility relocation, installation of new culverts, and extension of the culvert carrying the Pumpkinvine Nature Trail.

Maintenance of traffic: During construction, 1 lane in each direction on US 20 will be maintained at all times.

Work in waterway: Yes No Below ordinary high water mark: Yes No

State Project: LPA:

Any other factors influencing recommendations: N/A

INFRASTRUCTURE TABLE AND SUMMARY

Infrastructure			
Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Religious Facilities*	4*	Recreational Facilities	4
Airports ¹	N/A	Pipelines	2
Cemeteries	N/A	Railroads	1
Hospitals	N/A	Trails	6
Schools	4	Managed Lands	1

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

Explanation:

- Religious Facilities*: Four (4) unmapped religious facilities are located within the 0.5 mile search radius. The nearest facility, Crystal Valley Missionary Church is adjacent to the project area, located at 233 US-20, Middlebury, IN. Coordination with Crystal Valley Missionary Church will occur. Pathway Assembly of God is adjacent to the project area, located at 13805 US -20, Middlebury, IN. Coordination with Pathway Assembly of God will occur.
- Schools: Four (4) schools are located within the 0.5 mile search radius. Northridge High School is mapped incorrectly and is located at 56779 Northridge Dr, Middlebury, IN, which is adjacent to the project area. No impact is expected; however, coordination with Northridge High School will occur.
- Recreational Facilities: Four (4) recreational facilities are located within the 0.5 mile search radius. Das Dutchman Essanhaus is mapped incorrectly and is located at 240 US-20, Middlebury, IN, which is located adjacent to the project area. Coordination with Das Dutchman Essanhaus will occur.
- Pipelines: Two (2) pipeline segments are located within the 0.5 mile search radius. One (1) pipeline, owned by Northern Indiana Public Service Co., crosses the project area 0.18 mile south of the US 20 and CR 16 intersection. Coordination with INDOT Utilities and Railroads should occur.
- Railroads: One (1) railroad segment is located within the 0.5 mile search radius. Although one segment, Conrail Railroad, crosses the project area it is listed as not active. Further investigation indicated that Conrail RR has been repurposed into Pumpkinvine Trail. Coordination will Elkhart County Parks and Recreation Department will occur.
- Trails: Six (6) trail segments are located within the 0.5 mile search radius. One (1) trail segment, Pumpkinvine Nature Trail, is located in the project area approximately 0.5 mile north west of the US 20 and SR 13 intersection. Coordination with Elkhart County Parks and Recreation Department will occur.
- Managed Lands: One (1) managed land is located within the 0.5 mile search radius. Pumpkinvine Nature Trail is located within the project area. Coordination with Elkhart County Parks and Recreation Department will occur.

WATER RESOURCES TABLE AND SUMMARY

Water Resources			
Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
NWI - Points	1	Canal Routes - Historic	N/A
Karst Springs	N/A	NWI - Wetlands	47
Canal Structures – Historic	N/A	Lakes	24
NPS NRI Listed	N/A	Floodplain - DFIRM	N/A
NWI-Lines	1	Cave Entrance Density	N/A
IDEM 303d Listed Streams and Lakes (Impaired)	6	Sinkhole Areas	N/A
Rivers and Streams	19	Sinking-Stream Basins	N/A

Explanation:

- **NWI-Points:** One (1) NWI-Point is located within the 0.5 mile search radius. The point is located 0.48 mile north of the northern portion of the project area. No impact is expected.
- **NWI-Lines:** One (1) line is located within the project area. The line is located approximately 0.18 mile southwest of the northern portion of the project area. No impact is expected.
- **IDEM 303d Listed Streams and Lakes (Impaired):** Six (6) 303d Listed Streams are located within the 0.5 mile search radius. Little Elkhart River is located 0.05 mile northeast of the project area. No impact is expected.
- **River and Streams:** Nineteen (19) rivers and streams are located within the 0.5 mile search radius. The nearest stream is located adjacent to the project area approximately 0.05 mile east of CR 35. A Waters of the U.S. Report will be prepared and coordination with INDOT Ecology and Waterway Permitting (INDOT EWPO) will occur.
- **NWI-Wetlands:** Forty-seven (47) wetlands are located within the project area. The nearest wetland is located at the intersection of Spring Valley Drive and US 20 and is considered adjacent to the project area. Three other wetlands are located adjacent to the northwestern termini of the project area. A Waters of the U.S. Report will be prepared and coordination with INDOT EWPO will occur.
- **Lakes:** Twenty four (24) lakes are located within the 0.5 mile search radius. The nearest lake is located adjacent to the north portion of the project area. A Waters of the U.S. Report will be prepared and coordination with INDOT EWPO will occur.

URBANIZED AREA BOUNDARY SUMMARY

Explanation: The project area is not mapped within a UAB

MINING AND MINERAL EXPLORATION TABLE AND SUMMARY

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

Explanation:

- Mineral Resources: One (1) mineral resource is located within the 0.5 mile search radius. Elkhart County Gravel Inc is located approximately 0.5 mile north of the project area. No impact is expected.

HAZARDOUS MATERIAL CONCERNS TABLE AND SUMMARY

Hazardous Material Concerns			
Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Superfund	N/A	Manufactured Gas Plant Sites	N/A
RCRA Generator/ TSD	3	Open Dump Waste Sites	N/A
RCRA Corrective Action Sites	N/A	Restricted Waste Sites	N/A
State Cleanup Sites	N/A	Waste Transfer Stations	N/A
Septage Waste Sites	N/A	Tire Waste Sites	N/A
Underground Storage Tank (UST) Sites	2	Confined Feeding Operations (CFO)	N/A
Voluntary Remediation Program	1	Brownfields	N/A
Construction Demolition Waste	N/A	Institutional Controls	1
Solid Waste Landfill	1	NPDES Facilities	7
Infectious/Medical Waste Sites	N/A	NPDES Pipe Locations	N/A
Leaking Underground Storage (LUST) Sites	1	Notice of Contamination Sites	N/A

Explanation:

- RCRA Generator/TSD: Three (3) RCRA Generator/TSD are located within the 0.5 mile search radius. Louisiana Pacific Corporation is located at 219 US HWY 20 W, AI # 12005, IDEM conducted an inspection of IP Moulding, on February 6, 2018 and was found to be in compliance. No impact is expected.
- Underground Storage Tank (UST) Sites: Two (2) USTs are located within the 0.5 mile search radius. Middlebury Express is located at 901 S Main St, AI # 32025, IDEM conducted an Underground Storage Tank Inspection on August 18, 2016, and the facility was found to be in compliance with equipment, operating, and maintenance requirements set forth in Indiana’s UST Rule 329 IAC 9. No impact is expected.
- Voluntary Remediation Program: One (1) voluntary remediation program is location within the 0.5 mile search radius. Louisiana Pacific Corporation, located at 219 US 20 W, is adjacent to the project area. IDEM issued a Covenant Not To Sue on September 16, 1999, which stated that Louisiana Pacific Corporation completed the voluntary clean up and fulfilled the requirements of the VRP. No impact is expected.

*www.in.gov/dot/
An Equal Opportunity Employer*

- Solid Waste Landfill: One (1) solid waste landfill is located within the 0.5 mile search radius. This site, Schult Homes Solid Fill Site, AI # 36494, is located approximately 0.13 mile south west of the project area. IDEM issued a Deed Notation for Closed Landfills letter, dated June 24, 2013, requesting deed information to provide information about the property. No impact is expected.
- 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, petroleum contamination may be encountered. Proper handling, removal, and disposal of soil and/or groundwater may be necessary.
- Institutional Controls: One (1) institutional control is located within the 0.5 mile search radius. This site, Schult Homes Solid Fill Site, AI # 36494, is located approximately 0.13 mile south west of the project area. A deed restriction has been placed on the deed of the property summarizing site-specific requirements for the closed landfill. No impact is expected.
- NPDES Facilities: Seven (7) NPDES facilities are located within the 0.5 mile search radius. 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, 2021. Coordination with BP Gas Station and convenience Store will occur.

ECOLOGICAL INFORMATION SUMMARY

The Elkhart County listing of the Indiana Natural Heritage Data Center information on endangered, threatened, or rare (ETR) species and high quality natural communities is attached with ETR species highlighted. A preliminary review of the Indiana Natural Heritage Database by INDOT Environmental Services did indicate the presence of endangered species. Coordination with USFWS and IDNR will occur.

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The project area is located in a rural area surrounded by farm fields. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

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

RECOMMENDATIONS SECTION

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

INFRASTRUCTURE:

Trails: One (1) trail segment is located within the project area, located approximately 0.5 mile north west of the US 20 and SR 13 intersection. Coordination with Elkhart County Parks and Recreation Department will occur.

Schools: One (1) school is located at 56779 Northridge Dr, Middlebury, IN, which is adjacent to the project area. Coordination with Middlebury community Schools will occur.

Pipelines: One (1) pipeline crosses the project area. Coordination with INDOT Utilities and Railroads will occur.

Recreational Facilities: One (1) recreational facility is located adjacent to the project area located at 240 US-20, Middlebury, IN. Coordination with Das Dutchman Essanhaus will occur.

Managed Lands: One (1) managed land, Pumpkinvine Trail, is located within the project area. Coordination with Elkhart County Parks and Recreation Department will occur.

WATER RESOURCES: The presence of the following water resources will require the preparation of a Waters of the U.S. Report and coordination with INDOT EWPO:

3 wetlands are located adjacent to the project area.

1 stream segment is located adjacent to the project area.

1 lake is located adjacent to the project area.

URBANIZED AREA BOUNDARY: N/A

MINING/MINERAL EXPLORATION: N/A

HAZARDOUS MATERIAL CONCERNS:

- 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, 2021. Coordination with BP Gas Station and convenience Store will occur.

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

INDOT Environmental Services concurrence:

Nicole
Fohey-
Breting

Digitally signed by
Nicole Fohey-Breting
Date: 2020.03.31
17:35:34 -04'00'

(Signature)



Prepared by:
Landon Little
Scientist
HNTB Corporation

Graphics:

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

SITE LOCATION: YES

INFRASTRUCTURE: YES

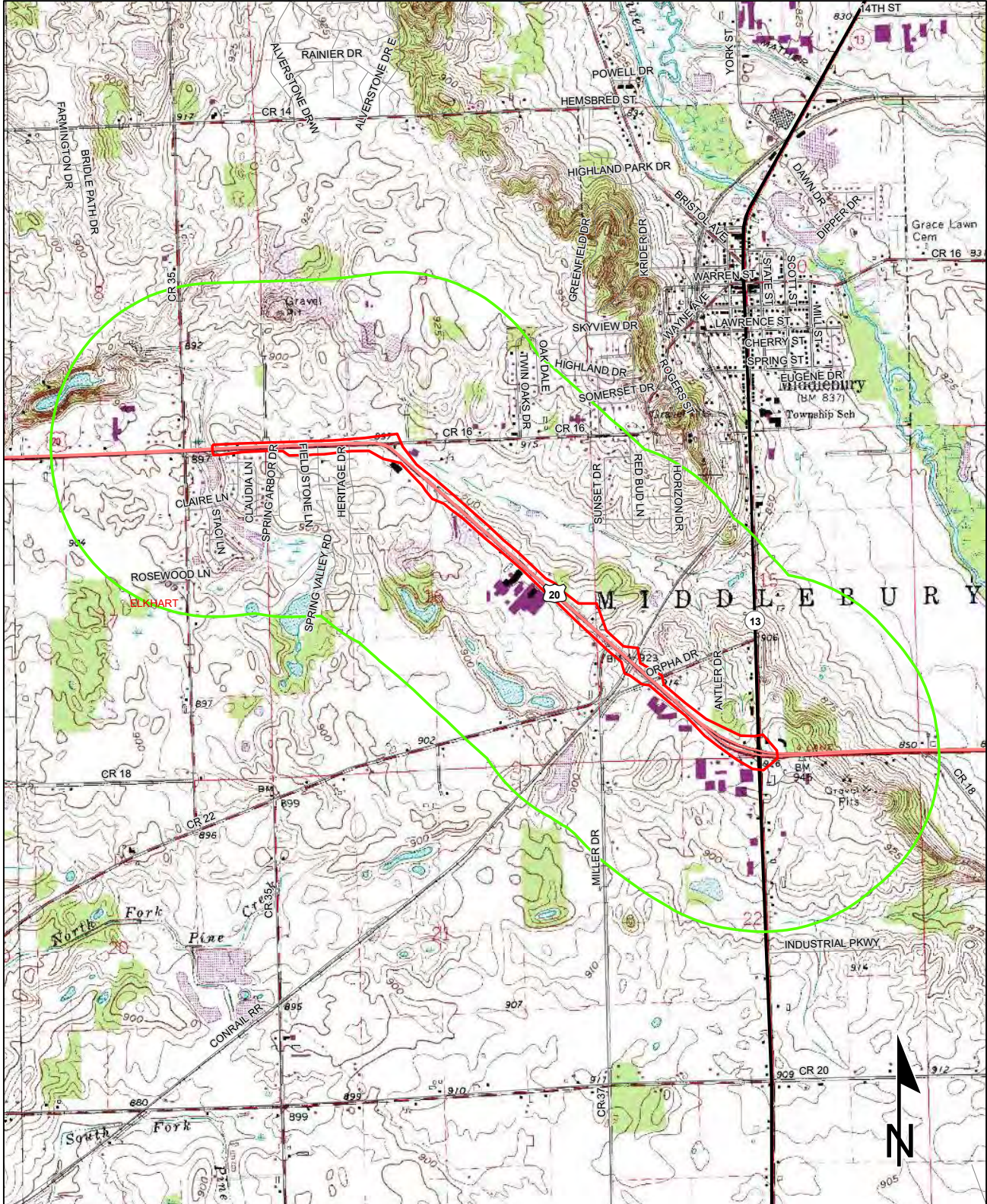
WATER RESOURCES: YES

URBANIZED AREA BOUNDARY: N/A

MINING/MINERAL EXPLORATION: YES

HAZARDOUS MATERIAL CONCERNS: YES

Red Flag Investigation - Project Location
 U.S. 20 - SR 15 to CR 35
 Des. No. 1900095, Added Travel Lanes
 Elkhart County, Indiana



Sources: 0.35 0.175 0 0.35 Miles
Non Orthophotography
Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83
 This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

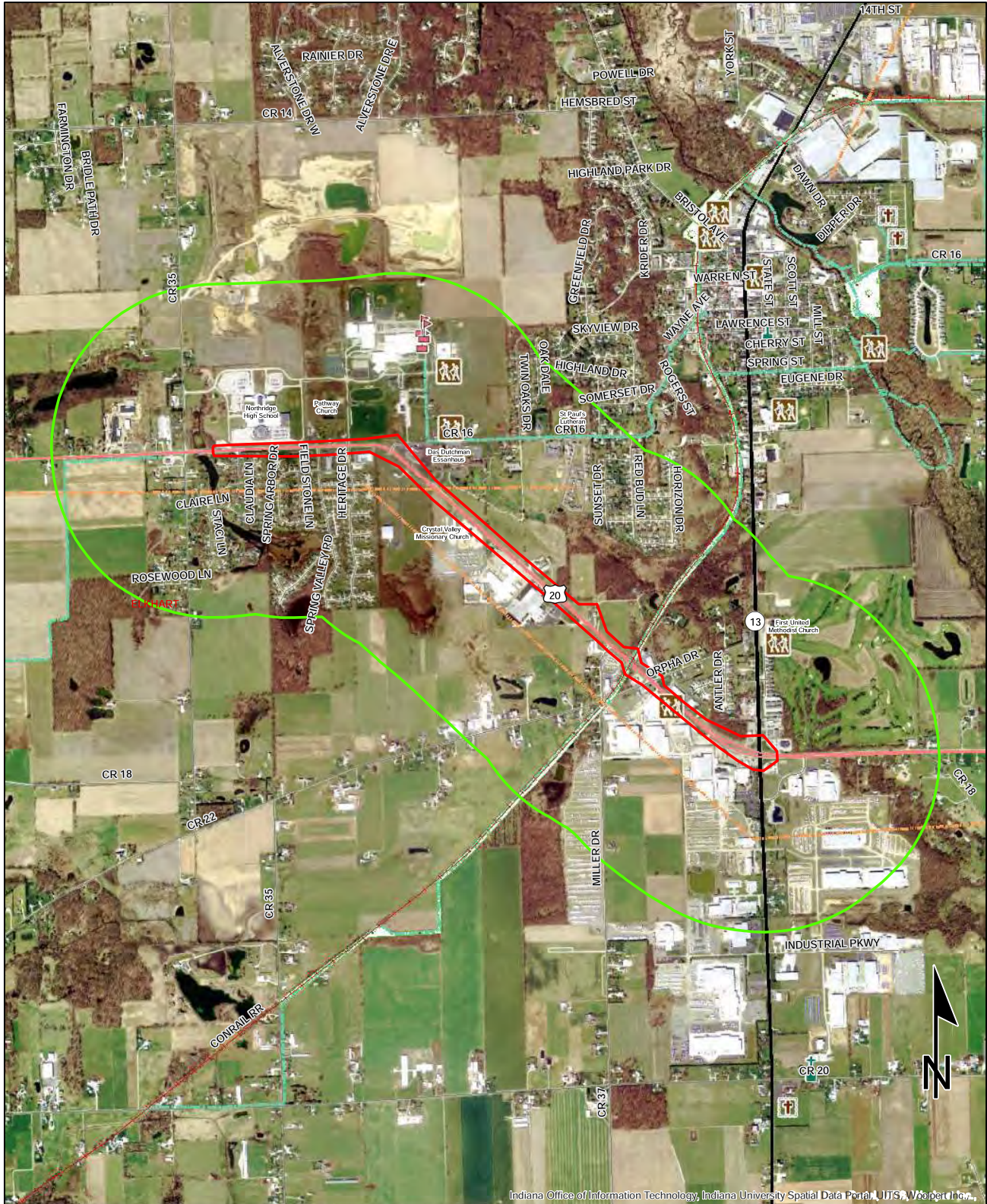
MIDDLEBURY QUADRANGLE
 INDIANA
 7.5 MINUTE SERIES
 (TOPOGRAPHIC)

Red Flag Investigation - Infrastructure

U.S. 20 - SR 15 to CR 35

Des. No. 1900095, Added Travel Lanes

Elkhart County, Indiana



Indiana Office of Information Technology, Indiana University Spatial Data Portal, UTM, WGS 1984, NAD83

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

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

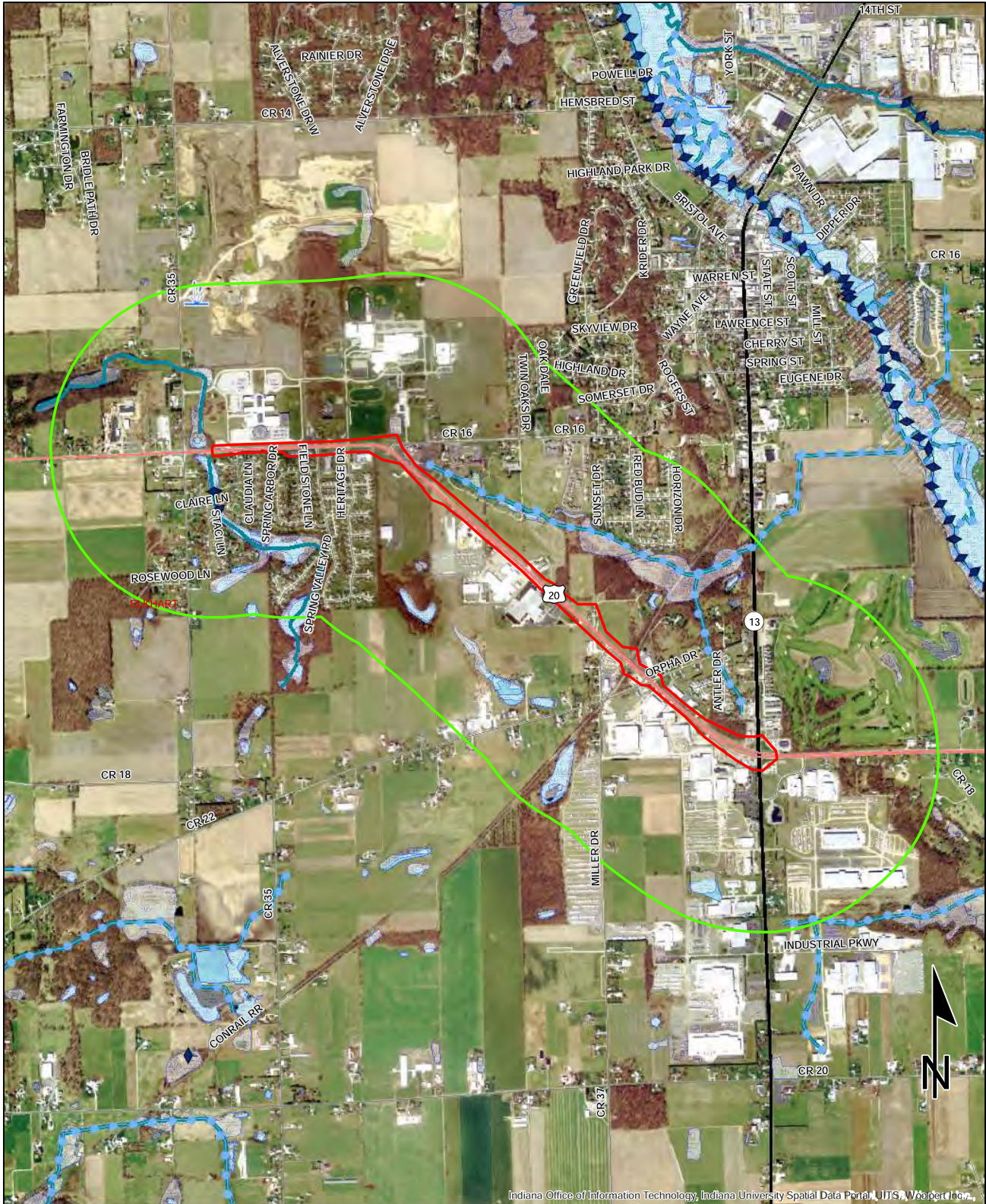
	Religious Facility		Recreation Facility		Project Area
	Airport		Pipeline		Half Mile Radius
	Cemeteries		Railroad		Toll
	Hospital		Trails		Interstate
	School		Managed Lands		State Route
			County Boundary		US Route
					Local Road

Red Flag Investigation - Water Resources

U.S. 20 - SR 15 to CR 35

Des. No. 1900095, Added Travel Lanes

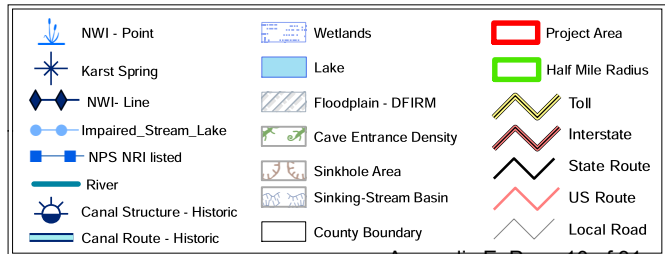
Elkhart County, Indiana



Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Version 1.0

Sources:
 0.35 0.175 0 0.35 Miles
 Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
 Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
 Map Projection: UTM Zone 16 N Map Datum: NAD83

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

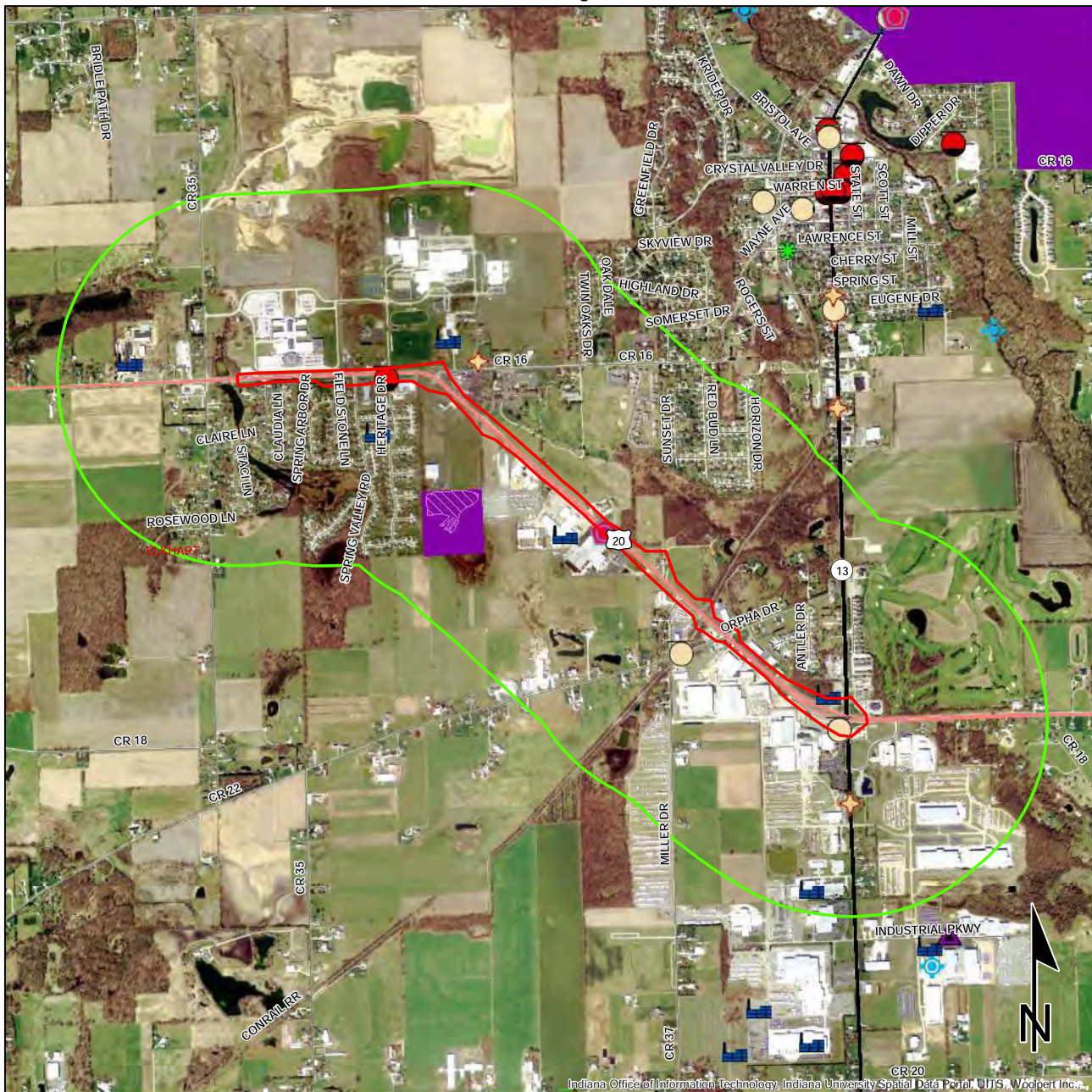


Red Flag Investigation - Hazardous Material Concerns

U.S. 20 - SR 15 to CR 35

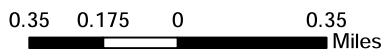
Des. No. 1900095, Added Travel Lanes

Elkhart County, Indiana



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

<ul style="list-style-type: none"> Brownfield RCRA Corrective Action Sites Confined Feeding Operation Notice_of_Contamination Construction/Demolition Site Infectious/Medical Waste Site Leaking Underground Storage Tank Manufactured Gas Plant NPDES Facilities NPDES Pipe Locations Open Dump Waste Site 	<ul style="list-style-type: none"> RCRA Generator/TSD Restricted Waste Site Septage Waste Site Solid Waste Landfill State Cleanup Site Superfund Tire Waste Site Underground Storage Tank Voluntary Remediation Program Waste Transfer Station 	<ul style="list-style-type: none"> Institutional Controls County Boundary Project Area Half Mile Radius Toll Interstate State Route US Route Local Road
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This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

Sources:
Non Orthophotography
 Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
 Map Projection: UTM Zone 18N · Map Datum: NAD83

Indiana County Endangered, Threatened and Rare Species List

County: Elkhart

Species Name	Common Name	FED	STATE	GRANK	SRANK
Mollusk: Bivalvia (Mussels)					
Venustaconcha ellipsiformis	Ellipse		SSC	G4	S2
Mollusk: Gastropoda					
Campeloma decisum	Pointed Campeloma		SSC	G5	S2
Insect: Coleoptera (Beetles)					
Nicrophorus americanus	American Burying Beetle	LE	SX	G2G3	SX
Insect: Hymenoptera					
Formica ulkei				G5	S1
Insect: Lepidoptera (Butterflies & Moths)					
Apamea lignicolora	The Wood-colored Apamea		ST	G5	S1S2
Apamea nigrior	Black-dashed Apamea		SR	G5	S2S3
Capis curvata	Curved Halter Moth		ST	G5	S2S3
Catocala praeclara	Praeclara Underwing		SR	G5	S2S3
Crambus girardellus	Orange-striped Sedge Moth		SR	GNR	S2S3
Dasychira cinnamomea	Cinnamon Tussock Moth		SR	G4	S1
Exyra fax	Pitcher Window Moth		SE	G4	S1S2
Iodopepla u-album	White-eyed Borer Moth		SR	G5	S2
Leucania multilinea	Many-lined Wainscot		SR	G5	S1S2
Macrochilo absorptalis	Slant-lined Owlet		SR	G4G5	S2S3
Macrochilo hypocritalis	Twin-dotted Macrochilo		SR	G4	S2
Melanomma auricinctaria	Huckleberry Eye-spot Moth		SR	G4	S2S3
Papaipema appassioanata	The Pitcher Plant Borer Moth		SE	G4	S1
Papaipema speciosissima	The Royal Fern Borer Moth		ST	G4	S2S3
Insect: Odonata (Dragonflies & Damselflies)					
Sympetrum semicinctum	Band-winged Meadowhawk		SR	G5	S2S3
Insect: Tricoptera (Caddisflies)					
Setodes oligius	A Caddisfly		SE	G5	S1
Fish					
Coregonus artedi	Cisco		SSC	G5	S2
Ichthyomyzon fossor	Northern Brook Lamprey		SE	G4	S1
Moxostoma valenciennesi	Greater Redhorse		SE	G4	S2
Rhinichthys cataractae	Longnose Dace		SSC	G5	S2
Amphibian					
Necturus maculosus	Common mudpuppy		SSC	G5	S2
Reptile					
Clemmys guttata	Spotted Turtle	C	SE	G5	S2
Clonophis kirtlandii	Kirtland's Snake		SE	G2	S2
Emydoidea blandingii	Blanding's Turtle	C	SE	G4	S2
Macrochelys temminckii	Alligator Snapping Turtle	C	SE	G3G4	SH

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

Fed: LE = Endangered; LT = Threatened; C = candidate; PDL = proposed for delisting
State: SE = state endangered; ST = state threatened; SR = state rare; SSC = state species of special concern; SX = state extirpated; SG = state significant; WL = watch list
GRANK: Global Heritage Rank: G1 = critically imperiled globally; G2 = imperiled globally; G3 = rare or uncommon globally; G4 = widespread and abundant globally but with long term concerns; G5 = widespread and abundant globally; G? = unranked; GX = extinct; Q = uncertain rank; T = taxonomic subunit rank
SRANK: State Heritage Rank: S1 = critically imperiled in state; S2 = imperiled in state; S3 = rare or uncommon in state; G4 = widespread and abundant in state but with long term concern; SG = state significant; SH = historical in state; SX = state extirpated; B = breeding status; S? = unranked; SNR = unranked; SNA = nonbreeding status unranked

Indiana County Endangered, Threatened and Rare Species List

County: Elkhart

Species Name	Common Name	FED	STATE	GRANK	SRANK
Sistrurus catenatus	Eastern Massasauga	LT	SE	G3	S2
Terrapene carolina carolina	Eastern Box Turtle		SSC	G5T5	S3
Bird					
Bartramia longicauda	Upland Sandpiper		SE	G5	S3B
Botaurus lentiginosus	American Bittern		SE	G5	S2B
Certhia americana	Brown Creeper			G5	S2B
Circus hudsonius	Northern Harrier		SE	G5	S2
Cistothorus palustris	Marsh Wren		SE	G5	S3B
Cistothorus platensis	Sedge Wren		SE	G5	S3B
Empidonax alnorum	Alder Flycatcher			G5	S2B
Grus canadensis	Sandhill Crane		SSC	G5	S2B,S1N
Haliaeetus leucocephalus	Bald Eagle		SSC	G5	S2
Ixobrychus exilis	Least Bittern		SE	G5	S3B
Lanius ludovicianus	Loggerhead Shrike		SE	G4	S3B
Pandion haliaetus	Osprey		SSC	G5	S1B
Rallus elegans	King Rail		SE	G4	S1B
Rallus limicola	Virginia Rail		SE	G5	S3B
Mammal					
Condylura cristata	Star-nosed Mole		SSC	G5	S2?
Mustela nivalis	Least Weasel		SSC	G5	S2?
Taxidea taxus	American Badger		SSC	G5	S2
Vascular Plant					
Actaea rubra	Red Baneberry		ST	G5	S2
Amelanchier humilis	Running Serviceberry		SE	G5	S1
Andromeda glaucophylla	Bog Rosemary		ST	G5T5	S2
Besseyia bullii	Kitten Tails		SE	G3	S1
Boechera stricta	Drummond Rockcress		SE	G5	S1
Borodinia missouriensis	Missouri Rockcress		SE	G5	S1
Carex bebbii	Bebb's Sedge		SR	G5	S3
Carex debilis var. rudgei	White-edge Sedge		WL	G5T5	S3
Carex straminea	Straw Sedge		ST	G5	S2
Chimaphila umbellata ssp. cisatlantica	Pipsissewa		SE	G5T5	S1
Dendrolycopodium hickeyi	Hickey's Clubmoss		SR	G5	S3
Dendrolycopodium obscurum	Tree Clubmoss		SR	G5	S3
Eleocharis equisetoides	Horse-tail Spikerush		SE	G4	S1
Eleocharis robbinsii	Robbins Spikerush		ST	G4G5	S2
Epigaea repens	Trailing Arbutus		SR	G5	S3
Eriocaulon aquaticum	Pipewort		SE	G5	S1
Eriophorum gracile	Slender Cotton-grass		ST	G5	S2
Eriophorum viridicarinatum	Green-keeled Cotton-grass		SR	G5	S2

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

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Indiana County Endangered, Threatened and Rare Species List

County: Elkhart

Species Name	Common Name	FED	STATE	GRANK	SRANK
<i>Fuirena pumila</i>	Dwarf Umbrella-sedge		ST	G4	S2
<i>Geranium robertianum</i>	Herb-robert		SR	G5	S3
<i>Juniperus communis</i> var. <i>depressa</i>	Ground Juniper		SR	G5T5	S3
<i>Linum striatum</i>	Ridged Yellow Flax		WL	G5	S3
<i>Malaxis unifolia</i>	Green Adder's-mouth Orchid		SE	G5	S1
<i>Matteuccia struthiopteris</i>	Ostrich Fern		SR	G5	S3
<i>Milium effusum</i>	Tall Millet-grass		ST	G5	S1
<i>Minuartia michauxii</i> var. <i>michauxii</i>	Michaux's Stitchwort		ST	G5T5	S2
<i>Pinus strobus</i>	Eastern White Pine		SR	G5	S3
<i>Piptochaetium avenaceum</i>	Blackseed Needlegrass		SR	G5	S3
<i>Platanthera leucophaea</i>	Prairie White-fringed Orchid	LT	SE	G2G3	S1
<i>Platanthera psycodes</i>	Small Purple-fringe Orchis		SR	G5	S2
<i>Poa paludigena</i>	Bog Bluegrass		SR	G3	S3
<i>Potamogeton pulcher</i>	Spotted Pondweed		ST	G5	S2
<i>Pseudognaphalium macounii</i>	Winged Cudweed		SX	G5	SX
<i>Pyrola americana</i>	American Wintergreen		ST	G5	S2
<i>Quercus prinoides</i>	Dwarf Chinquapin Oak		SE	G5	S1
<i>Rhynchospora macrostachya</i>	Tall Beaked-rush		SR	G4	S3
<i>Rhynchospora scirpoides</i>	Long-beaked Baldrush		SR	G4	S3
<i>Schoenoplectiella purshiana</i>	Weakstalk Bulrush		SR	G4G5	S3
<i>Schoenoplectiella smithii</i>	Smith's Bulrush		ST	G5?	S2
<i>Selaginella rupestris</i>	Ledge Spike-moss		SE	G5	S1
<i>Spiranthes lucida</i>	Shining Ladies'-tresses		SR	G4	S3
<i>Symphotrichum boreale</i>	Rushlike Aster		ST	G5	S2
<i>Triantha glutinosa</i>	False Asphodel		ST	G5	S2
<i>Utricularia cornuta</i>	Horned Bladderwort		SE	G5	S1
<i>Utricularia minor</i>	Lesser Bladderwort		ST	G5	S1
<i>Utricularia purpurea</i>	Purple Bladderwort		SR	G5	S3
<i>Vaccinium oxycoccos</i>	Small Cranberry		ST	G5	S2
<i>Valerianella chenopodiifolia</i>	Goose-foot Corn-salad		WL	G4	S3
<i>Xyris difformis</i>	Carolina Yellow-eyed Grass		ST	G5	S2
High Quality Natural Community					
Forest - floodplain mesic	Mesic Floodplain Forest		SG	G3?	S1
Forest - floodplain wet-mesic	Wet-mesic Floodplain Forest		SG	G3?	S3
Forest - upland mesic Northern Lakes	Northern Lakes Mesic Upland Forest		SG	GNR	S1
Lake - lake	Lake		SG	GNR	S2
Prairie - sand dry-mesic	Dry-mesic Sand Prairie		SG	G3	S3
Wetland - beach marl	Marl Beach		SG	G3	S2
Wetland - bog acid	Acid Bog		SG	G3	S2

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Indiana County Endangered, Threatened and Rare Species List

County: Elkhart

Species Name	Common Name	FED	STATE	GRANK	SRANK
Wetland - bog circumneutral	Circumneutral Bog		SG	G3	S3
Wetland - fen	Fen		SG	G3	S3
Wetland - flat muck	Muck Flat		SG	G2	S2
Wetland - flat sand	Sand Flat		SG	G2	S1
Wetland - marsh	Marsh		SG	GU	S4
Wetland - swamp shrub	Shrub Swamp		SG	GU	S2

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Phase II Environmental Site Assessment

**US 20 Improvements
Middlebury, Elkhart County, Indiana
November 10, 2020**

INDOT Des No, 1900095
Terracon Project No. CJ207118



Prepared for:
HNTB Corporation and the Indiana Department of Transportation
Indianapolis, Indiana

Prepared by:
Terracon Consultants, Inc.
Indianapolis, Indiana



November 10, 2020

HNTB Corporation
111 Monument Circle Ste 1200
Indianapolis, IN 46204

Attn: Christopher Schultz
E: cjschultz@hntb.com

Re: Phase II Environmental Site Assessment
US 20 Improvements
Middlebury, Elkhart County, Indiana
INDOT Des No. 1900095
Terracon Project No. CJ207118

Dear Mr. Schultz

Terracon Consultants, Inc. (Terracon) is pleased to submit our report of Phase II Environmental Site Assessment (Phase II ESA) activities completed at the above referenced site. This investigation was performed in general accordance with our Task Order dated September 14, 2020. This report includes the findings of the investigation and our conclusions and recommendations.

Terracon appreciates this opportunity to provide environmental consulting services to you. Should you have any questions or require additional information, please do not hesitate to contact our office.

Sincerely,
Terracon Consultants, Inc.

Matt Robey, LPG - Terracon
Environmental Project Manager

Paul Melillo, CHMM - Terracon
Environmental Department Manager

Copied- Marlene Mathas, CHMM
SAM Team Lead
Office of Environmental Policy
INDOT

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APPENDIX A – EXHIBIT

- Exhibit 1 – Site Map

APPENDIX B – SOIL BORING LOGS

APPENDIX C – ANALYTICAL REPORT AND CHAIN OF CUSTODY

Phase II Environmental Site Assessment

US 20 Improvements

Terracon Project No. CJ207118

INDOT Des No. 1900095

November 10, 2020

1.0 INTRODUCTION

The Indiana Department of Transportation (INDOT) is planning improvements to US 20 in Elkhart County, Indiana. Geotechnical investigations were conducted by Earth Exploration, Inc (EEI). Geotechnical services were proceeding under EEI Project No. CJ195411 when EEI staff processing the soil samples for laboratory testing noted that samples in the range of 7 to 11½ ft below the existing grade at one of the borings were exhibiting a suspected petroleum odor. Review of available Indiana Department of Environmental Management (IDEM) database (IDEM Virtual File Cabinet (VFC) and Underground Storage Tank (UST) database) and available aerial photographs from the area 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 their own research in the area. The INDOT SAM found through their own research that the removed building was an 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 1970's. The INDOT SAM Team Lead has requested soil and groundwater investigation for both petroleum and chlorinated solvents related compounds to a maximum depth of 10 ft below the existing ground surface.

US 20 serves as a main east-west route from Angola to Elkhart, Indiana. The site is centered around the intersection of US 20 and Indiana SR 16 (Wayne Street). A site location map is included as Exhibit 1 in Appendix A.

2.0 SCOPE OF SERVICES

The following scope was developed to address INDOT concerns associated with historically documented activities and business in the area that maybe have resulted to petroleum hydrocarbon and chlorinated releases and impacts identified during the EEI geotechnical investigation.

2.1 Standard of Care

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time. Terracon makes no warranties, either express or implied, regarding the findings, conclusions, or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies, or other third parties supplying information used in the preparation of the report. These Phase II ESA services were performed in accordance with the scope of work agreed with you, our client, as reflected in our original proposal, parenting agreement and supplemental Agreement for Services.

2.2 Additional Scope Limitations

Findings, conclusions, and recommendations resulting from these services are based upon information derived from the onsite activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, nondetectable, or not present during these services. We cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this Phase II ESA. Subsurface conditions may vary from those encountered at specific borings or wells or during other surveys, tests, assessments, investigations, or exploratory services. The data, interpretations, findings, and our recommendations are based solely upon data obtained at the time and within the scope of these services.

2.3 Reliance

This Phase II ESA report is prepared for the exclusive use and reliance of HNTB (the client) and INDOT. Use or reliance by any other party is prohibited without the written authorization of the client and Terracon Consultants, Inc. (Terracon).

Any unauthorized distribution or reuse is at client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions, and limitations stated in the proposal, Phase II ESA report, the Agreement for Services, and supplemental agreement for

Phase II Environmental Site Assessment

US 20 Improvements Des No. 1900095 ■ Middlebury, Indiana

November 10, 2020 ■ Terracon Project No. CJ207118



services. The limitation of liability defined in the terms and conditions is the aggregate limit of Terracon's liability to the client and all relying parties.

3.0 FIELD INVESTIGATION

Terracon conducted the fieldwork under a safety plan developed for this project. Work was performed using the Occupational Health & Safety Administration (OSHA) Level D work attire consisting of hard hats, safety glasses, protective gloves, and protective boots. Terracon contacted Indiana 811 and a private utility locator to mark utilities that the services were responsible for, or in the immediate vicinity of the soil boring locations, before commencing intrusive activities at the site.

3.1 Soil Sampling

On October 7, 2020, Terracon mobilized a direct push sampling rig to advance six soil borings (SB-01 through SB-06) at the site. Borings were advanced to maximum depths of up to 12 feet below ground surface (bgs) at which depth groundwater bearing stratum was encountered, for the collection of both soil and groundwater samples (via temporary assessment wells). A site diagram with the boring locations is included as Exhibit 1 in Appendix A. The soil boring logs can be found in Appendix B.

Headspace screening of soil samples was conducted utilizing a calibrated photoionization detector (PID) equipped with a 11.7 electron-volt (eV) ultraviolet lamp source, which provides measurements of total volatile organic vapors in parts per million (ppm) isobutylene equivalents. Sampling personnel wore disposable nitrile gloves to minimize the potential for sample contamination. Samples were placed in laboratory prepared containers, labeled, and preserved on ice in a cooler, which was secured with custody seals. The samples were submitted to Pace Laboratories in Indianapolis, Indiana for laboratory analysis. Analytical parameters (detailed below) were selected based on Terracon experience with potential contaminants associated with the prior business identified in the area.

Soil samples were collected from each boring and were analyzed for volatile organic compounds (VOCs) via USEPA SW846 Methods 8260 which includes lead scavengers, polyaromatic hydrocarbons (PAHs) via USEPA SW846 Method 8270SIM, and the RCRA Metal Lead via USEPA SW846 Method 6010.

3.2 Groundwater Sampling

Upon completion of soil sampling activities, the soil borings were converted to one-inch diameter temporary assessment wells for the collection of groundwater samples. The wells were constructed of polyvinyl chloride (PVC) screen (0.010-inch factory slotted) and PVC riser.

Phase II Environmental Site Assessment

US 20 Improvements Des No. 1900095 ■ Middlebury, Indiana

November 10, 2020 ■ Terracon Project No. CJ207118



Groundwater was collected from the temporary wells using dedicated disposable PVC bailers). Due to insufficient groundwater recharge, groundwater sampling was not possible at temporary well SB-04-GW and SB-06-GW.

Groundwater samples from temporary assessment wells were submitted for laboratory analysis. Groundwater samples were analyzed for VOCs via USEPA SW846 Method 8260, Lead Scavengers via USEPA SW846 Method 8011, PAHs via USEPA SW846 Method 8270SIM, and total and dissolved metals via USEPA SW846 Method 6010/7470.

4.0 RESULTS OF THE FIELD INVESTIGATION

4.1 Geology/Hydrogeology

The boring logs in Appendix B detail the observed soil stratigraphy. In general, Terracon encountered topsoil underlain by clays and sand to the maximum depth of exploration (up to 12 feet bgs), at which drilling was terminated. Groundwater was encountered at SB-01, SB-02, SB-03 and SB-05 at depths ranging from 8 to 10 feet bgs at the time of borehole advancement.

4.2 Field Screening

The field screening results are summarized on the boring/monitoring well logs in Appendix B. Olfactory evidence indicative of potential impact was encountered in SB-05 at 2 feet bgs.

5.0 ANALYTICAL RESULTS

The laboratory analytical reports and chain-of-custody records are attached in Appendix C. The following sections describe the results of the testing.

5.1 Soil Sample Results

The soil analytical results were compared to IDEM 2020 screening levels (SLs), per the IDEM Remediation Closure Guide (RCG) as specified in the INDOT SAM. Soil SLs include residential, commercial/industrial, and excavation SLs, as well as soil migration to groundwater (MTG) SLs for vadose zone soils.

VOCs were below detection limits for all the soil samples submitted for analysis.

The PAH Napthalene was detected at a concentration of 0.39 mg/kg in soil sample SB-01 (8-10) which exceeds the IDEM RCGSL MTG SL of 0.11 mg/kg.

For the remaining samples, the reported concentrations were below IDEM MTG, Residential, and Industrial/Commercial Screening Levels. Refer to Table 1 (VOCs PAHs, and lead in Soil).

5.2 Groundwater Sample Results

The groundwater analytical results were compared to the IDEM 2020 RCG Tap Water SLs. IDEM Groundwater SLs include residential tap water SLs, and groundwater-based residential and commercial/industrial soil gas SLs. Refer to Table 2 (VOCs, PAHs, and lead (dissolved) in groundwater.

No VOCs, PAHs, lead or lead scavengers were detected in Phase II ESA groundwater samples submitted for analysis.

6.0 WELL ABANDONMENT

Temporary assessment wells were abandoned following sample collection in accordance with applicable regulations. Surplus soil sample materials that were not submitted for laboratory analysis were disposed of as solid waste. Remaining investigation derived wastes (temporary well casing, sample gloves, bailers, etc.) were disposed as solid waste.

7.0 CONCLUSIONS

Based on the scope of services described in this report and subject to the limitations described herein, Terracon concludes the following:

- The PAH Napthalene was detected above the IDEM RCG MTG SL in one of the soil samples (SB-01 (8-10)). A groundwater sample collected from the same location exhibited no detections of Napthalene, therefore the migration pathway is considered incomplete.
- Standard Personal Protective Equipment (PPE) is considered sufficient for providing worker safety.
- Laboratory analytical results for all collected samples indicate no exceedances of IDEM RCG Excavation Worker SLs, therefore soil and groundwater 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.
- Excess soil and groundwater produced as investigation derived waste or during the construction of the proposed road improvements can be classified as non-hazardous waste and disposed of accordingly except for soils from the area of SB-01 which will require disposal at a licensed landfill facility.

Tables

Table 1 – VOCs, PAHs and Metals in Soil

Table 2 – VOCs, PAHs and Metals in Groundwater

**Table 1. VOCs, PAHs, Lead in Soil (mg/kg)
US 20 Improvements
Des No. 190095
Middlebury, Indiana**

				All VOCs	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene	Lead	
RCG Residential - Migration to Groundwater (mg/kg)				Various	110		1200	2.1	4.7	60		590	1800	19	1800	200	1.2	3.7	0.11		260	270	
RCG Residential - Direct Contact (mg/kg)				Various	5000		25000	15	1.5	15		150	1500	1.5	3400	15	250	340	53		2500	400	
RCG Industrial/Commercial - Direct Contact (mg/kg)				Various	45000		100000	210	21	210		2100	21000	21	30000	210	390	3000	170		23000	800	
Boring ID	Depth (ft bgs)			Date																			
SB-01	4	-	8	10/7/2020	BDL	<0.0046	<0.0046	<0.0046	0.0064	0.0079	0.012	<0.0051	<0.0046	0.009	<0.0046	0.017	0.0058	<0.0046	<0.0046	<0.0046	0.0082	0.013	4.7
SB-01	8	-	10	10/7/2020	BDL	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	0.0077	<0.0052	<0.0052	<0.0052	0.0057	<0.0052	0.44	0.81	0.39	0.0095	0.0052	2.8
SB-02	6	-	8	10/7/2020	BDL	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	6.6
SB-02	8	-	10	10/7/2020	BDL	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	2.9
SB-03	2	-	4	10/7/2020	BDL	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	5.9
SB-03	6	-	8	10/7/2020	BDL	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	3.2
DUP SB-03	6	-	8	10/7/2020	BDL	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0048	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	2.1
SB-04	2	-	4	10/7/2020	BDL	<0.0053	<0.0053	<0.0053	0.0074	0.0071	0.0095	<0.0053	<0.0053	0.0078	<0.0053	0.015	<0.0053	<0.0053	<0.0053	<0.0053	0.0061	0.013	5.8
SB-04	8	-	10	10/7/2020	BDL	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	0.0057	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	7.6
SB-05	4	-	6	10/7/2020	BDL	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	3.2
SB-05	8	-	10	10/7/2020	BDL	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	2.6
SB-06	6	-	8	10/7/2020	BDL	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	3.5
SB-06	8	-	10	10/7/2020	BDL	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	5.1

Notes:
VOCs = Volatile Organic Compounds
PAHs = Polyaromatic Hydrocarbons
Samples Analyzed using EPA SW-846 Method 8260, 8270SIM & 6010
mg/kg = milligrams per kilogram
BDL or <# = Below Laboratory Detection Limits
BDL = Detection below applicable IDEM RCG Screening Level
*From IDEM Remediation Closure Guide, Appendix A, Table A-6:Screening Level Summary Table (March, 2020)

Table 2. VOCs, PAHs, Lead in Groundwater (mg/kg)
US 20 Improvements
Des No. 1900095
Middlebury, Indiana

			All VOCs	All PAHs	Lead (dissolved)
RCG Residential - Tap (µg/L)			Various	Various	15
RCG Residential - Vapor Intrusion (µg/L)			Various	Various	
RCG Industrial/Commercial - Vapor Intrusion (µg/L)			Various	Various	
Boring ID	Screen Interval (ft bgs)	Date			
SP-GW-01	5-10	9/2/2020	BDL	BDL	BDL
SP-GW-02	5-10	9/2/2020	BDL	BDL	BDL
SP-GW-03	5-10	9/2/2020	BDL	BDL	BDL
SP-GW-05	5-10	9/2/2020	BDL	BDL	BDL

Notes:

VOCs = Volatile Organic Compounds

PAHs = Polyaromatic Hydrocarbons

Samples Analyzed using EPA SW-846 Method 8260, 8270SIM & 6010

mg/kg = milligrams per kilogram

BDL or <# = Below Laboratory Detection Limits

*From IDEM Remediation Closure Guide, Appendix A, Table A-6:Screening Level Summary Table (March, 2020)

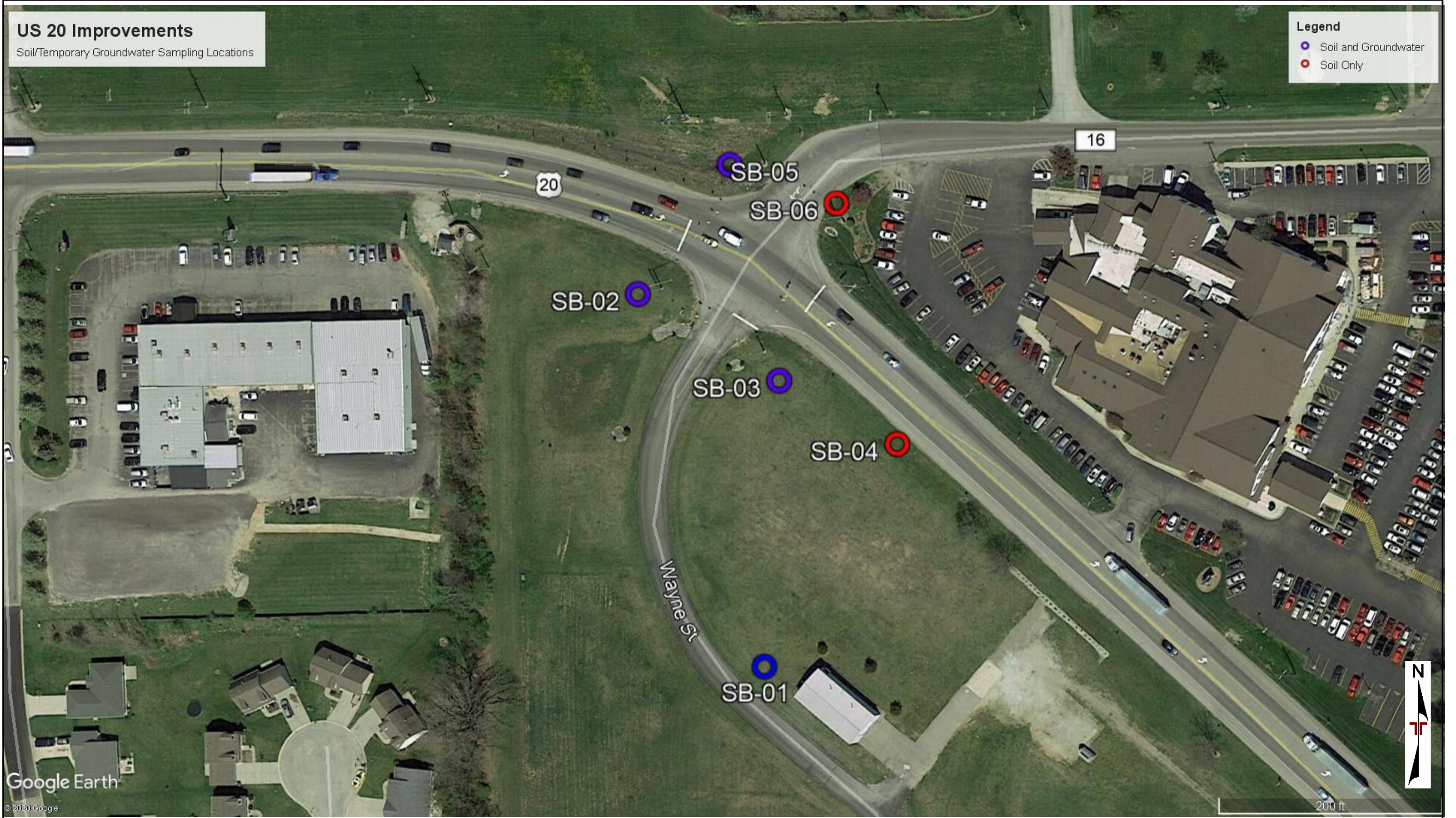
APPENDIX A – EXHIBIT
Exhibit 1 – Site Map

US 20 Improvements

Soil/Temporary Groundwater Sampling Locations

Legend

- Soil and Groundwater
- Soil Only



Google Earth

© 2020 Google

Project Manager:	PRM
Drawn by:	MJR
Checked by:	PRM
Approved by:	PRM
Project No.:	CJ207118
Scale:	AS SHOWN
File Name:	Boring 118
Date:	10/15/20

Terracon
 7770 W New York St
 Indianapolis, IN 46214-2988

SITE DIAGRAM
 US-20 Improvement Project
 US-20 & IN-16
 Middlebury, IN

Exhibit
X

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

AERIAL PHOTOGRAPHY PROVIDED BY GOOGLE EARTH

Appendix F: Water Resources

Waters of the US Report Attachments were removed to minimize file size. Maps showing wetlands and streams can be found in Appendix B.

Aaron Kochlinger

3/26/2020

Waters of the U.S. Report

U.S. 20 – SECTION 2 (CR 35 TO SR 13) ADDED TRAVEL LANES



**ELKHART
COUNTY**

**DES. NO.
1900095**

Prepared by:

HNTB

111 Monument Circle, Suite 1200

Indianapolis, IN, 46204

317.636.4682

March 24, 2020

1. PROJECT INFORMATION

Date(s) of Field Reconnaissance: October 14, 2019

Location

The project is located on U.S. 20 between CR 35 to SR 13 in Elkhart County, Indiana.

- Section 9, 16, 15, 22, Township 37 N, Range 7 E
- Middlebury Quadrangle, Indiana
- 41.66338 N, -85.72056 W (NAD83)

Project Description

The Federal Highway Administration (FHWA) and Indiana Department of Transportation (INDOT), Fort Wayne District are planning to proceed with an 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) in Elkhart County, Indiana.

2. DESKTOP RECONNAISSANCE

2.1 SOIL ASSOCIATIONS AND SERIES TYPES

According to the Soil Survey Geographic (SSURGO) Database for Elkhart County, Indiana, the following mapped soils series are within the US 20 investigated area (Attachment Pages 15-19).

- **Bristol loamy sand (BtxB):** very deep, excessively drained soils formed in sandy outwash on outwash plains, outwash terraces, or kames. Slopes range from 0 to 20 percent. This soil type has a hydric rating of 0%.
- **Bristol loamy sand (BtxC):** very deep, excessively drained soils formed in sandy outwash on outwash plains, outwash terraces, or kames. Slopes range from 0 to 20 percent. This soil type has a hydric rating of 0%.
- **Bronson sandy loam (BufA):** very deep, moderately well drained soils formed in loamy and sandy materials overlying loamy sand or gravelly sand deposits on outwash plains, valley trains, and low-lying moraines. Slope ranges from 0 to 7 percent. Bronson sandy loam is not considered a hydric soil; however, hydric inclusions of Gilford are known within the drainageways. The hydric soil rating is 6%.
- **Coloma sand (CnbA):** very deep, moderately well drained soils formed in loamy and sandy materials overlying loamy sand or gravelly sand deposits on outwash plains, valley trains, and low-lying moraines. This soil type has a hydric rating of 0%.
- **Urban land-Bristol complex (UdpA):** very deep, excessively drained soils formed in outwash plains, outwash terraces, and kames. Slopes range from 0 to 1 percent. This soil type has a hydric rating of 0%.
- **Urban land-Bristol complex (UdpB):** very deep, excessively drained soils formed in outwash plains, outwash terraces, and kames. Slopes range from 1 to 5 percent. This soil type has a hydric rating of 0%.

2.2 NATIONAL WETLANDS INVENTORY

Based on the U.S. Fish and Wildlife National Wetland Inventory (NWI) data (www.fws.gov/wetlands/Data/State-Downloads.html) there is 1 wetland within the project area (Attachment Page 14). Below is the NWI area mapped within the investigated area.

- One wetland within the investigated area is mapped as palustrine, unconsolidated bottom, intermittently exposed, excavated (PUBGx).

2.3 HYDROLOGY

According to the Indiana Floodplain Information Portal, the project is not within a 100-year floodplain or regulatory floodway (<http://dnrmmaps.dnr.in.gov/appsphp/fdms/>) (Attachment Page 8).

3. FIELD RECONNAISSANCE

HNTB Indiana staff performed a field review of the investigated area on October 14, 2019. The purpose was to determine the presence of waters of the U.S. within the investigated area and determine the presence or absence of jurisdictional waters. The field investigation area encompassed the area required for construction access and completion of the added travel lanes work. HNTB staff photographed select features and areas of interest throughout the investigated area. A photo location map and selected photographs are included as Attachment Pages 20-84.

The proposed investigated area was analyzed using the methods outlined in the Routine Determination, On-site Inspection Necessary procedure in the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual Midwest Region* (US Army corps of Engineers, 2010). Identification of indicator status of plant species utilized the 2016 Midwest Region National Wetland Plant List. Field GIS data was collected using a Trimble R1 GNSSGPS with submeter accuracy.

4. WATERS

The October 14, 2019 field reconnaissance for the US 20 added travel lanes project revealed one stream (UNT-1), one open water (Pond A) and one wetland (Wetland A).

4.1 WETLANDS

WETLAND A

Wetland A formed as a result of ponding within the right of way of US 20. Hydrology is sourced from stormwater runoff from US 20 and surrounding parking lots. Wetland A, approximately 0.05 acre in size, that exists a manmade drainage feature. According to the Cowardin *et al.* (1979) classification system, Wetland A is a palustrine, emergent, persistent, temporary flooded wetland (PEM1A). Wetland A is a poor-quality resource based on the poor species richness and position with the ditchline of US 20. Wetland A is likely a Water of the U.S. due to the proximity of NHD flow lines found within and outside the investigated area.

TABLE 1: WETLAND SUMMARY TABLE

Wetland	Photo	Lat/Long	Cowardin Classification	Areas (Acre)	Quality	Water of the U.S?
A	90, 91, 92	41.66801 N -85.73107 W	PEM1A	0.05	Poor	Yes

DATA POINT 1 (DP1 DRY)

This data point was taken an upland forest area north of US 20. Dominant vegetation consisted of green ash (*Fraxinus pennsylvanica*, FACW), bur oak (*Quercus macrocarpa*, FAC), honeysuckle (*Lonicera maackii*, UPL), sassafras (*Sassafras albidum*, FACU). This data point passed the dominance test for hydrophytic vegetation since greater than 50% of the dominant species were FAC or wetter. Hydrophytic vegetation was observed. Soils within the pit were excavated to a depth of 20 inches. From 0-8 inches soils were 10YR 3/3 silt loam with no redox features. From 8-20 inches, soils were 10YR 5/6 silt loam with no redox features. Soil characteristics do not support hydric soil status. No wetland hydrology indicators were observed. This point is not within a wetland due to the observation of no hydric soil and no wetland hydrology. The data form for this point is included as Attachment Pages 85-87.

DATA POINT 2 (DP2 DRY)

This data point was taken in the investigated area within the right of way south of US 20. Dominant vegetation consisted of tall fescue (*Festuca arundinacea*, FACU), common dandelion (*Taraxacum officinale*, UPL), white clover (*Trifolium repens*, UPL). This data point did not pass the dominance test for hydrophytic vegetation or have a prevalence index of less than 3; therefore, the hydrophytic vegetation criteria is not met. Soils within the pit were excavated to a depth of 20 inches. From 0-6 inches, soils were 10YR 3/3 silt loam with no redox features. From 6-20 inches, soils were 10YR 4/6 silt loam with no redox features. Soil characteristics do not support hydric soil status. No wetland hydrology indicators were observed. This point is not within a wetland due to the observation of non-hydrophytic vegetation, no hydric soil, and no wetland hydrology. The data form for this point is included as Attachment Pages 88-90.

DATA POINT 3 (DP3 WET)

This data point was taken in the investigated area within the right of way south of US 20. Dominant vegetation consisted of tall fescue (*Festuca arundinacea*, FACU), common rush (*Juncus effuses*, OBL), spikerush (*Eleocharis nodosus*, OBL), narrowleaf cattail (*Typha angustifolia*, OBL). This data point passed the dominance test for hydrophytic vegetation since greater than 50% of the dominant species were FAC or wetter. The entire vegetative composition has a prevalence index of less than three. Hydrophytic vegetation was observed. Soils within the pit were excavated to a depth of 20 inches. From 0-7 inches soils were 10YR 3/1 mucky loam/clay. From 7-20 inches soils are 10YR 4/2 mucky loam/clay with 15% redox concentrations of 10YR 4/6. The soil profile is representative of hydric soil indicator loamy mucky mineral (F1). Wetland hydrology indicators observed were surface water (A1) and high water table (A2). This point is within a wetland due to the observation of hydrophytic vegetation, hydric soil, and wetland hydrology. The data form for this point is included as Attachment Pages 91-93.

TABLE 2: DATA POINT SUMMARY TABLE

Data Point-ID	Vegetation	Soils	Hydrology	Within a Wetland?
DP1 Dry	Yes	No	No	No
DP2 Dry	No	No	No	No
DP3 Wet	Yes	Yes	Yes	Yes

4.2 STREAMS

Site investigations did not identify any stream features within the investigated area. An equalizer pipe is located underneath US 20, east of Pumpkinvine Nature Trail, causes a pronounced scour feature in this section of the investigated area.

4.3 ROADSIDE DRAINAGE FEATURES

HNTB staff did not identify any roadside drainage features within the investigated area.

4.4 OPEN WATERS

Site investigations identified one open water feature within the investigated area. Pond A is a freshwater pond and is classified as a palustrine, unconsolidated bottom, intermittently exposed, excavated wetland (PUBGx) according to the classifications defined by Cowardin *et al.* (1979). Pond A is considered poor based on lack of a buffer, lack of shading, proximity to commercial property and lack of aquatic habitat. Pond A has an area of 0.57 acres. As demonstrated by the Delineated Features map (Attachment Page 9), Pond A is located south of US 20. Pond A was constructed on a commercial property adjacent to US 20.

Pond A is not identified on the USGS 7.5 Minute Middlebury Quadrangle Topographic Map (Attachment Pages 2-7). The USGS 7.5 Minute Middlebury Quadrangle Topographic Map and the 2018 National Hydrography Dataset Local-Resolution Flowline data do not indicate the presence of an inlet or outlet flow line. Pond A is likely a Waters of the U.S. due to the proximity of NHD flow lines found within and outside the investigated area.

TABLE 3: OPEN WATER SUMMARY TABLE

Stream Name	Photo #	Lat/Long	Quality	Acreage within Investigated Area	Waters of U.S.
Pond A	94, 95	41.66777 N -85.73299 W	Poor	0.57	Yes

5. CONCLUSION

The October 2019 field review for the US 20 added travel lanes project identified two likely jurisdictional features within the identified investigated area, Pond A and Wetland A. Wetland A and Pond A are likely waters of the U.S. with connection with classified and unclassified NHD flow lines found within and outside the investigated area.

Every effort should be taken to avoid and minimize the impacts to the water resources listed above. Disturbance of a wetland or stream could result in a mitigation requirement to secure the required permits for the added travel lanes project. If construction exceed the limits of the survey review area illustrated in this document, further field investigation will be needed. This report is this office’s best judgement of water resources that are likely to be under federal jurisdiction, based on the guidelines set forth by the U.S. Army corps of Engineers (USACE). The final determination of jurisdictional waters is ultimately the responsibility of the USACE. The INDOT Office of Environmental Services should be contacted immediately if impacts occur.

This waters determination has been prepared based on the best available information, interpreted in the light of the investigator’s training, experience and professional judgement in conformance with the 1987 Corps of Engineers Wetlands Delineation Manual, the appropriate regional supplement, the USACE Jurisdictional Determination Form Instructional Guidebook, and other appropriate agency guidelines.



Landon Little, Scientist

PREPARERS:

HNTB Inc., Staff	Position	Contributing Effort
Rich Connolly	Science Project Manager	Project Management Field Data Collection
Landon Little	Scientist	Field Data Collection Report Preparation

Appendix 2 - PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD: March 24, 2019

B. NAME AND ADDRESS OF PERSON REQUESTING PJD: Landon Little, 111 Monument Circle Suite 1200, Indianapolis, IN, 46204

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:

This project is located on US 20 between CR 35 and SR 13, near the town of Middlebury in Elkhart County, Des. No. 1900095. Proposed work is a added two-way left turn lane and additional travel lane along US 20. Work that may affect water resources in the area include added travel lanes.

(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES)

State: **IN** County/parish/borough: **Elkhart** City: **Middlebury**

Center coordinates of site (lat/long in degree decimal format):

Lat.: **41.65793 N** Long.: **-85.73039 W**

Universal Transverse Mercator: Northing: 4613085 Easting: 606640 Zone: 16S

Name of nearest waterbody: **Little Elkhart River**

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

Office (Desk) Determination. Date:

Field Determination. Date(s):

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH “MAY BE” SUBJECT TO REGULATORY JURISDICTION.

Site number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resource (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource “may be” subject (i.e., Section 404 or Section 10/404)
Wetland A	41.66801 N	-85.73107 W	0.05 acre	wetland	Section 404
Pond A	41.66777 N	-85.73299 W	0.57 acre	wetland	Section 404

- 1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.
- 2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there "*may be*" waters of the U.S. and/or that there "*may be*" navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for PJD (check all that apply)

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:

- Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:
Map: HNTB Indiana
- Data sheets prepared/submitted by or on behalf of the PJD requestor.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report. Rationale: _____
- Data sheets prepared by the Corps: _____
- Corps navigable waters' study: _____
- U.S. Geological Survey Hydrologic Atlas: _____
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: 1:24,000 scale Middlebury Quadrangle
- Natural Resources Conservation Service Soil Survey. Citation: <https://websoilsurvey.sc.egov.usda.gov>
- National wetlands inventory map(s). Cite name: <https://www.fws.gov/wetlands/data/mapper/html>
- State/local wetland inventory map(s): _____
- FEMA/FIRM maps: IDNR Floodplain Database
- 100-year Floodplain Elevation is: _____.(National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): 2016 USDA/NRCS Ortho
or Other (Name & Date): October 14, 2019
- Previous determination(s). File no. and date of response letter: _____
- Other information (please specify): _____

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

Signature and date of
Regulatory staff member
completing PJD



3-24-2020

Signature and date of
person requesting PJD
(REQUIRED, unless obtaining
the signature is impracticable)¹

¹ Districts may establish timeframes for requestor to return signed PJD forms. If the requestor does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

Richard Connolly

From: Landon Little
Sent: Wednesday, November 18, 2020 1:15 PM
To: Richard Connolly
Subject: FW: Permit determination: DES# 1900095 US 20 Section 2 (CR 35 to SR 13) added travel lanes Elkhart County

Landon Little

Scientist

Environmental Planning

Tel (317)917-5328 Email ltlittle@hntb.com

HNTB CORPORATION

111 Monument Circle, Suite 1200, Indianapolis, IN 46024 | www.hntb.com

100+ YEARS OF INFRASTRUCTURE SOLUTIONS



From: Koehlinger, Aaron <AKoehlinger@indot.IN.gov>

Sent: Friday, November 13, 2020 10:55 AM

To: Landon Little <ltlittle@HNTB.com>

Cc: Curry, Jennifer <JCurry1@indot.IN.gov>; Seculoff, Steven <SSeculoff@indot.IN.gov>; Berk, Jennifer E <JBerk@indot.IN.gov>

Subject: Permit determination: DES# 1900095 US 20 Section 2 (CR 35 to SR 13) added travel lanes Elkhart County

Landon

As a note for future permit determination please respond in kind to the email chain and do not use attachments/word documents/pdfs for answering the questions as it makes it more difficult to load them up to our file share programs. Also the original document indicated that there was no tree clearing but the acres of soil disturbance indicated tree clearing. Talking with the Landon on 11/13/2020 this was a mistake and has since been corrected to say "Tree clearing will be required (24 trees) and will be out of active bat season "

Thanks for the information. Based on the information provided, the following permits are needed for **DES# 1900095 US 20 Section 2 (CR 35 to SR 13) added travel lanes RFC 9/20/2023** (the designer should confirm all schedules with the Project Manager):

- **401 IP/ 404 RGP** (Use State Form 51821) Impacts are greater than .1 acres but below 1.0 acre to an individual resource, mitigation will be required for this project due to impacts. **Please submit this application to our office by 12/20/2022**
- **Rule 5:** Soil disturbance is greater than 0.9 acres **Please submit this application to our office by 5/20/2023**

Permits that will not be required

- IDNR CIF: no work is planned below the Q100

- County Regulated Drain: Project is not impacting a county regulated drain.

We are providing preliminary permit determinations based on the information presented at the time of the request. If scope and plans change the designer should contact us for a revised determination. A final permit determination will be done at the time of permit application submittal and/or any changes to the scope of the project.

Aaron Koehlinger

Permitting Specialist, Ecology and Waterway Permitting

INDOT Environmental Services

100 N Senate Ave, Room 642-ES

Indianapolis, IN 46204

Office: (317)234-5268

Email: Akoehlinger@indot.IN.gov



- Will work be confined to the existing pavement? Please bear in mind that full-depth replacement and shoulder work is soil disturbance. If the answer to this is yes, then the remaining questions to not need answered.
Work will extend out from the existing pavement.
- What kind of structure work is associated with this project (replacement, painting, scour protection, etc.)? If a pipe liner project, please specify the type and include an INDOT hydraulics memo if available.
The proposed project will widen a portion of U.S. 20 to accommodate the addition of one travel lane in each direction and a Two-Way Left Turn Lane throughout the corridor. The proposed project will include widening of the pavement and embankment, and installation of new pavement markings. The resulting typical section would be a five-lane section with pave shoulders.
 - Shoulder work
 - 12.15 acres of shoulder work (from shoulder to construction limits)
 - 20.81 acres of Full Depth
 - Construction entrances (Construction Access);
 - Since this is a full reconstruction project, construction access and storage of construction equipment will utilize the full depth pavement area
 - Riprap drainage turnouts riprap around bridge cones; **N/A no bridge work**
 - However, we do have riprap drainage/turnouts riprap on this project by the pumpkinvine tunnel location.
 - 0.01 acres
 - Area under the bridge where equipment will be driving and working; **N/A no bridge work**
 - But there are 0.51 acres for the pumpkinvine tunnel extension
 - Cofferdams or dewatering systems scour work **N/A no cofferdams or dewatering systems scour**
 - But there are 2.15 acres of proposed detention pond
 - Excavation around piers **N/A**
 - Tree clearing (list how many trees will be cleared) **approximately 24 trees**

Appendix G: Public Involvement



September 26, 2019

ANAHAT Inc
50980 SR 13
Middlebury, IN 46540-9653

Re: Elkhart County Tax Parcels [REDACTED]

NOTICE OF SURVEY

Dear Property Owner:

HNTB, on behalf of The Indiana Department of Transportation (INDOT), will perform a survey for the proposed US 20 improvement project from CR 35 to SR 13, Des No. 1900095, in Elkhart County, Indiana. A portion of this survey work may be performed on your property in order to provide design engineers information for project design. The survey work will include mapping the location of features such as trees, buildings, fences, drives, ground elevations, etc. The survey is needed for the proper planning and design of this highway project.

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

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

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

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

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

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

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

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

Matt Witt
5333 Hatfield Road
Fort Wayne, IN 46808
(260) 399-7320

Thank you in advance for your cooperation in this matter.

Sincerely,

HNTB Corporation

A handwritten signature in blue ink that reads "William M. Jones". The signature is cursive and fluid.

William M. Jones
Supervisory Survey Technician

Public Involvement and Stakeholder Engagement Plan

Des. No.: 1900095

US 20 Improvement Project CR 35 to SR 13
Elkhart County, Indiana

January 21, 2021



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Summary

Public involvement for the US 20 Improvement Project from CR 35 to SR 13 (Des. No.: 1900095) includes several different approaches intended to achieve meaningful engagement with property owners, stakeholders, and the community. Planned public involvement will include the following items:

- Project Website;
- Kitchen Table Meetings;
- Stakeholder Meeting; and
- Public Hearing.

With this project, there are several populations that require special consideration with regards to public involvement. The predominant populations of concern are the Amish community, the traveling public, and school children. Representatives of the Amish community will be engaged during the months prior to the public hearing to share information and receive feedback on the project prior to the public hearing. Information available to the public through the project website will be provided in hard copy format to representatives of the Amish community to achieve equity in information sharing.

All notices for public involvement activities, including launching of the project website and scheduling of the public hearing, will be shared via email and United States Postal Service (USPS) to all property owners, stakeholders, and representatives of the community. Notices will also be published in the local newspaper and Amish newsletter. Notices for the stakeholder meeting will be shared via email and USPS only with key stakeholders. Stakeholders will receive copies of all public notices two days in advance of publication or mailing.

Approximately three to four weeks prior to the public hearing, the project team will conduct a virtual stakeholder meeting. The intent of the stakeholder meeting is to share project information with key local community officials and receive project feedback prior to the public hearing.

Kitchen table meetings will be held with highly-impacted property owners to review parcel-specific and project concerns. Highly-impacted property owners are those that will have a substantial property acquisition, relocation, or change in access. It is anticipated that the kitchen table meetings will be virtual, if possible. If virtual meetings are not possible, appropriate social distancing and meeting restrictions will be implemented.

A public hearing in accordance with the Indiana Department of Transportation (INDOT) standard practices will be conducted in the spring of 2021 and will include both virtual and in-person components.

Introduction

This Public Involvement Plan has been developed for the United States Highway 20 (US 20) Improvement Project, in Elkhart County Indiana. The project corridor extends from the western terminus at County Road (CR) 35 to the eastern terminus at State Road (SR) 13. The project corridor is approximately 2 miles long. The project corridor passes through the town of Middlebury. The project will include construction of additional travel lanes along US 20 in the project corridor to alleviate congestion and improve safety. The existing horizontal and vertical alignment will require some adjustments.

Elkhart County residents and local public officials play an important role in shaping the transportation decisions that will affect their community. They rely on the transportation system to move around the community and through the State for work and leisure activities. Residents rely on this facility to reach their destinations and return safely home. Businesses rely on this facility to move products and materials. In addition to their reliance on the facility to meet transportation needs, all of these users have a stake in transportation decisions because they are taxpayers, stakeholders, and users of the facility proposed for improvement.

As the Indiana Department of Transportation (INDOT) makes decisions on transportation improvement projects, it must integrate:

- Input from the public;
- Input from other local governmental agencies;
- Input from resource agencies (federal and state agencies which have responsibility for environmental resources, such as water resources, historic resources, air quality, and endangered species); and
- INDOT's own assessment of transportation needs, cost, funding availability and engineering constraints.

INDOT recognizes that a key component in the success of any transportation project depends on many factors, none of which are more essential than the involvement of members of the local community. It also understands the importance of involving the public in information exchange when providing transportation facilities and services to best meet the transportation challenges of Elkhart County along US 20. The public involvement procedures for the US 20 Improvement Project, as outlined in this plan, provide opportunities for early and continuing involvement of the public in developing this transportation project. The plan identifies the specific methods to provide information to the public, including timely public access to information and public notice of key project-related decisions.

Public involvement is a two-way communication aimed at providing information to the public and incorporating the views, concerns, and issues of the public in the transportation decision-making process. On a project such as the US 20 Improvement Project, the public typically has the opportunity to provide input on transportation needs, community concerns, and environmental considerations.

An open line of communication between local officials, the public, and the Project Team is a key component in developing a transportation project that will best address the concerns of the community. The Project Team involved with this project consists of representatives of the INDOT Fort Wayne District; INDOT Central Office; Federal Highway Administration (FHWA); and the consulting firm of HNTB. The Project Team will manage the overall project relative to interpretations of scope and work products, establishing and tracking progress toward the achievement of the project schedule milestones, resolving project issues, implementing agency and public involvement activities, and coordinating with Elkhart County and the Town of Middlebury, and other members of the Project Team.

The public involvement process begins with gathering of information from the local officials and community members that will be involved with the project. The process continues by providing information to these same stakeholders and keeping them informed of the project's progress and direction. This exchange of information is a dynamic process that continues throughout the life of the project. Goals of the Public Involvement Plan include the following:

- Identify potential project stakeholders such as local officials and community members affected by the project;
- Develop partnering activities that assist with gathering information from stakeholders;
- Foster a positive relationship with stakeholders and keep them informed of the project progress and key decisions;
- Adequately evaluate potential levels of controversy and, where possible, address specific concerns and develop context sensitive plans;
- Work together to develop a transportation solution that has broad public support; and
- Provide productive forums for members of the public to provide comments.

The Public Involvement Plan for the US 20 Improvement Project contains communication details such as how, when, and where stakeholders can expect to hear project status reports, as well as how they can participate in the project development process. It is made up of a variety of activities and forums to allow many opportunities for involvement.

Elements of the Plan include the following:

- Project information and updates on the US 20 Improvement Project website;
- Kitchen Table Meetings (i.e., individual property owner meetings);
- Stakeholder Meeting (i.e., small group meeting or presentation); and
- Public Hearing.

Following the initiation of the project and at various key points (milestones) throughout the project development process, the Project Team will make the most current information related to the study available for review and comment. The Project Team members will review all comments received and will incorporate comments into the development of the project, as appropriate.

Populations with Special Consideration for Public Engagement

As part of the project development process, two populations which may require special consideration were noted. The first population noted is the Amish community in the project area. The second population is those with limited English proficiency.

As part of the public involvement process for Phase I of the US 20 widening project, the Project Team identified two effective ways to coordinate with the Amish community. These include coordination with the Amish owned businesses in the area and coordination with the Amish Steering Committee. The Amish Steering Committee acts as a liaison between the Amish community, the greater community, and governmental agencies. The Amish Steering Committee can also provide information to the bishops in their community to be shared with their congregations or churches.

All property owners and large employers on the project corridor, including the Essenhaus, Inc., will receive written notification of the launch of the project website, the stakeholder meeting, and public hearing. Note that Essenhaus, Inc. is not an Amish-owned business, but does employ a significant number of Amish staff. Additionally, Lavern Yoder, the Elkhart LaGrange Settlement Representative on the Amish Steering Committee is included as a stakeholder and is the designated representative of the Amish community.

Lavern Yoder was also involved on the US 20 Phase I project development in this role and is familiar with providing information from INDOT to the Amish community.

All virtual meetings will have the option to join by phone only. As the Amish community will use the telephone for communication, this will allow the opportunity for virtual engagement. Advanced coordination will be completed to ensure the Amish community and representatives are engaged for virtual-only meetings. If necessary, other alternatives may be provided locally for those stakeholders that cannot attend virtually.

All notices that are emailed or mailed will also be published twice in The Elkhart Truth and Die Blatt, the Amish newsletter. The contact information for The Elkhart Truth, Die Blatt, and the list of parties to whom the invitation will be sent are included as attachments to this document.

The second population of concern that was noted is non-English speakers. According to the EJSCREEN EPA's Environmental Justice Screening and Mapping Tool (Version 2019)¹ (<https://ejscreen.epa.gov/mapper/>), the census tract on the south side of US 20 west of CR 35 has a 6 percent linguistic isolation rate and 9 percent of the population speaks English less than well. Additionally, the census tract to the east of SR 13 on both the north and south side of US 20 has a 5 percent linguistic isolation rate and 14 percent of the population speaks English less than well. Spanish speakers in the project area range up to 56 percent of the population. The census tracts in the project area also range from 2 to 14 percent minority populations and 8 to 45 percent low-income population. The data suggest that a language barrier for public engagement may be a consideration. In addition to the standard INDOT commitment to have project documents translated upon request, the project website will include an option to translate project documents into Spanish and German. To date, neither this phase of the US 20 project development nor the first phase of US 20 project development has received a request for documentation to be translated.

Previous Public Engagement

Notice of Survey letters were mailed to potentially affected property owners near the project area on September 26, 2019 notifying them about the project and that individuals responsible for land surveying and field survey activities may be seen in the area, as well as on their property. The notice of survey mailing list was originally compiled using Elkhart County tax assessment data and that the mailing list has been expanded over the course of the project, as needed.

Additionally, this project is the second phase of the US 20 widening project in Elkhart County and contacts with stakeholders in the project area have already been developed. These contacts are included in this phase of the project. Furthermore, contacts with the Amish community were established that will continue through the development of this project.

Proposed Public Engagement

The project will meet the minimum requirements described in the current INDOT Public Involvement Procedures 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. The public hearing will be held after the

¹ EJ Screen uses data from the U.S Census Bureau's American Community Survey 5-year summary estimates for the period 2013-2017.

release of the environmental document for public involvement. The environmental document will be updated to reflect the feedback received during the public comment period, including the public hearing.

Prior to the public hearing, it is recommended that project information be shared with the public via the project website, kitchen table meetings be held with highly-impacted property owners, and a stakeholder meeting be held to brief selected stakeholders on the information which will be presented at the public hearing. Following the public hearing, the environmental document will be revised and provided to the public detailing the final project description and response to comments received during public involvement.

PROJECT WEBSITE

In order to provide the public with as much information as possible regarding the US 20 Improvement Project, a project website will be created and released in early 2021 prior to kitchen table meetings, the stakeholder meeting, and the public hearing. The project website will include information about the proposed project including a project description, the project schedule, and graphics to illustrate the potential improvements. As additional information, such as the environmental document and meeting materials, become available, the project website will be updated. The project website will include a link to provide comments to the Project Team and to contact the Project Team with questions. The project website will use Google Translate to make this information available in multiple languages. A link to the project website will also be included on the INDOT Fort Wayne District website.

A video of the presentation for the public hearing will be posted on the project website at the time of the public hearing so that interested parties that cannot attend either the in-person or virtual components of the public hearing can view the same material as those that attended the meeting.

A notice regarding the availability of the project website will be emailed and mailed to the project contact list, including all adjacent property owners and all identified project stakeholders. The notice and hard copies of the materials posted on the project website will be provided to Lavern Yoder, the Elkhart LaGrange Settlement Representative on the Amish Steering Committee, with a request to provide this information to the local business leaders and bishops for discussion. All materials which are circulated will include contact information for the Project Team including phone, email, and physical address which to send questions and comments. The contact information for The Elkhart Truth, Die Blatt, and the list of parties to whom the invitation will be sent are included as attachments to this document.

KITCHEN TABLE MEETINGS

Kitchen table meetings (KTMs) are one-on-one meetings with property owners and project representatives to review parcel specific information regarding the proposed design, access, location of wells, septic systems, or other parcel specific concerns. It is anticipated that a kitchen table meeting will be held with each property owner that will have a substantial amount of property acquired, have a relocation, or have a change in access. Kitchen table meetings will be held prior to the public hearing so that any parcel-specific design considerations can be incorporated into the final design.

A Project Team member will reach out to each highly-impacted property owner to schedule a kitchen table meeting. If possible, kitchen table meetings will be conducted virtually. If a virtual meeting is not possible, a socially distanced meeting will be held. For reference to possible kitchen table meeting format see the attachments.

STAKEHOLDER MEETING

A virtual stakeholder meeting will be held prior to the public hearing to brief key stakeholders on the project and provide a preview of the information to be presented at the public hearing. The intent of this meeting is for key stakeholders to provide feedback to the Project Team regarding the public hearing materials and to inform the stakeholders so that they can relay project information to their constituents and/or communities they represent. Ideally the stakeholder meeting would occur 3 to 4 weeks in advance of the public hearing. The virtual stakeholder meeting will utilize Microsoft Teams.

Stakeholders will receive notification of the meeting via email and/or USPS for both the virtual stakeholder meeting and the public hearing. Invitations sent via email will include links to the virtual stakeholder meeting and the virtual public hearing and the project website. Hard copies of materials will be mailed to those stakeholders that do not have access to the project website. Stakeholders will also receive copies of all public notices two days in advance of publication or mailings.

The list of recommended stakeholders is below.

Table 1: Key Stakeholders

Town of Middlebury	
Tim Odell	Middlebury Public Works
Robert Miller	Middlebury Public Works
Ronal Chupp	Middlebury Water
Ton Enright	Middlebury Parks
Miranda Cripe	Middlebury Council Vice President
Dan Shoup	Middlebury Council Member
Dan Fredrick	Middlebury Council Member
Jeremy Yahwak	Middlebury Council Member
Middlebury Community Schools	
Jane Allen	Middlebury Schools
Jeremy Miller	Middlebury School Corp.
Robby Goodman	Middlebury Schools
Andrews Wood	Northridge High School
Elkhart County	
Phillip Barker	Surveyor
Jeff Siegel	Sheriff
Charlie McKenzie	Superintendent
Mike Yoder	County Commissioner
Jennifer Tobey	Director Elkhart County Emergency Management
James Turnwald	Executive Director Michiana Area Council of Governments
John Heiliger	Greater Elkhart Stormwater Partnership
Jim Hess	Elkhart County Soil and Water Conservation District
Chris Godlewski	Elkhart County Planning and Development
US 20 Corridor Businesses	
Lance Miller	President and CFP - Essenhaus
JayCo Inc.	

MDK Enterprise	
IP Moulding	
Amish Community	
Lavern Yoder	Elkhart LaGrange Settlement - Amish Steering Committee

The stakeholder meeting is intended to be a virtual meeting only. As a result, advanced coordination will be completed to determine the best way to engage the Amish community and Lavern Yoder in this meeting. With either Microsoft Teams, the meeting can be accessed on the computer or via telephone.

All stakeholders will be asked to provide comments regarding the public hearing presentation and the best method to engage the public for the public hearing. Any specific comments received regarding engaging the Amish community or any other stakeholder community will be considered by the Project Team to achieve the goal meaningful engagement.

PUBLIC HEARING

A public hearing that includes both in-person and virtual components will be held. All interested parties and stakeholders will receive an invitation to the public hearing a minimum of 15 days prior to the hearing. The invitation will be sent to all property owners who received a notice of survey, all parties that received early coordination letters, previously identified stakeholders, and participants of the preliminary field check meeting. The project mailing list is included as an attachment to this document. Invitations will be sent via email, if available, and via USPS. Invitations will follow the standard format for the INDOT Notice of Planned Improvement, which is the formal legal notice of the action that INDOT will undertake. Invitations will include project contact information, the project website, details associated with how to register for and attend the virtual component of the public hearing, as well as instructions on how to submit public comments, request hard copies of project materials, and to request accommodations for special needs or translations of project materials. A mailing address will be provided to make special requests and to submit comments.

In accordance with INDOT requirements, the public hearing notice will also be published twice in The Elkhart Truth and Die Blatt, the Amish newsletter. The publication of the first notice will occur at least 15 days prior to the public hearing. The second notice will occur approximately 5 to 7 days prior to the public hearing. The project website will also include a link to register for the virtual component of the public hearing. The contact information for The Elkhart Truth, Die Blatt, and the list of parties to whom the invitation will be sent are included as attachments to this document.

Project materials will be posted on the project website. Once released for public involvement, the environmental document will be made available for public review at the local public library, town of Middlebury offices, and mailed to interested stakeholders, as requested. All documents on the project website, in the library, and at the town of Middlebury offices will be made available for public review at the time the legal notice is sent out and published in The Elkhart Truth and Die Blatt. Please note that public spaces may be open by appointment only due to COVID restrictions. If these types of restrictions exist, they will also be announced in the public hearing notice(s).

The in-person component of the public hearing will be held at the Northridge High School which has ample space to hold meetings and overflow space, if needed. Prior to public hearing, coordination with the Middlebury School District and Elkhart County Health Department will be completed to determine limitations on public gatherings and/or availability of the public schools as a potential venue. The virtual component of the public hearing will be hosted via Microsoft Teams or WebEx. The public hearing may

also be broadcast live through the INDOT Facebook page. With either Microsoft Teams or WebEx, the meeting can be accessed on the computer or via telephone. A recording of the public hearing presentation will also be available on the project website.

Materials available in-person and on the project website for the hearing should include, at a minimum, the following documents:

- INDOT Notice of Planned Improvement;
- Environmental document that has been released for public involvement;
- Public hearing handouts;
- Public hearing boards;
- Public hearing presentation;
- Public comment form or link to submit public comments; and
- Property acquisition brochures – FHWA Green and Blue Books.

The public hearing will include an open house before the meeting in which the public may review project documents and ask questions of the Project Team. The stations for the open house could include the following:

- Sign-in – Obtain attendee contact information and provide hand-outs. This station will also include speaker sign-up sheets to document those individuals who intend to make a public comment.
- Project overview
- Project details, including typical sections and current design plans
- Project schedule
- Environmental document and summary of potential environmental impacts
- Land acquisition – Staffed by INDOT land acquisition staff, if possible
- Public comments – A court reporter will be available to take public verbal comments. Comment forms will also be available for written comments.

Following the open house, a formal presentation will be made. This presentation will be pre-recorded so that all interested parties receive the same information – regardless of how they access it. Following the presentation, verbal public comments will be received. These comments will be recorded by a court reporter at the in-person hearing as part of the official project record. Participants in the virtual component of the public hearing will also have the opportunity to provide comments via the meeting chat function or verbally through the meeting audio and video, which will be recorded as part of the official record. Comments received at the public hearing will not be responded to during the meeting. All comments will be responded to in the final environmental document. Comments received via social media or on the INDOT Facebook page will not be included as part of the official project record. Comments submitted via the project website during the public comment period will also be considered as part of the official project record.

After all comments are received a table of all comments and responses will be prepared. Responses to comments will be provided in writing as part of the final environmental document. Comments will not be responded to during the public hearing. Comments will be accepted from the first legal notice until 15 days after the public hearing. Comments will be accepted verbally at the public hearing, via email, via the project website, and via USPS or other mail service.

NOTICE OF FINAL APPROVED CATEGORICAL EXCLUSION (CE) DOCUMENT

After the public hearing is completed and comments have been included in the final environmental document, the document will be submitted to INDOT and FHWA for review and final approval. After final approval of the Categorical Exclusion, a legal notice of Final Approved CE document will be prepared and published, and the final Approved CE will be released for public review. This notice will be sent to all property owners who received a notice of survey, all parties that received early coordination, stakeholders, and participants of the preliminary field check meeting as well as any additional persons that requested to be included in the project mailing list as part of the public involvement process. The Notice of Final Approved CE document will also be published once in The Elkhart Truth and Die Blatt, the Amish Newsletter. The final approved CE will be made available on the project website and hard copies provided upon request.

Attachments

Attachments removed to reduce file size.

Appendix H: Air Quality

Table A-1: Elkhart County Proposed Project List

Sponsor	Open to Traffic By	Project Route	Beginning Termini	Ending Termini	Type of Work	Length (Miles)
Elkhart County	2045	Kerryhaven Dr	Current Termini	CR 10	New Road Construction	0.78
Elkhart County	2045	CR 52	CR 101	SR 19 (Main St)	Road Reconstruction	1.50
Goshen	2025	US 33	Fairfield Ave	Plymouth Ave	Auxiliary Lanes	0.20
Goshen	2025	College Ave	US 33	Century Dr	Auxiliary Lanes	0.87
Goshen	2025	Waterford Mills Parkway	CR 40	SR 15	New Road Construction	0.32
Goshen	2025	Wilden Ave	Current Terminus	Middlebury St	New Road Construction	0.18
Goshen	2030	CR 40	Dierdorff Rd (CR 27)	US 33	Auxiliary Lanes	1.25
INDOT	2020	SR 15	SR 120		Intersection Improvement	
INDOT	2020	US 33	CR 36 (College Ave)		Intersection Improvement	
INDOT	2020	US 6	SR 13/US 33		Intersection Improvement	
INDOT	2020	US 6	CR 29		Intersection Improvement	
INDOT	2025	US 20	SR 15	CR 35	Added Travel Lanes	4.23
INDOT	2025	US 20	CR 35	SR 13	Added Travel Lanes	2.13
INDOT	2025	SR 15	CR 42 North Junction		Auxiliary Lanes	1.03
INDOT	2025	SR 15	CR 142		Intersection Improvement	
INDOT	2025	SR 15	CR 18		Intersection Improvement	
Middlebury/Elkhart County	2045	CR 16 (Warren St)	SR 13 (Main St)	County Line Rd	Auxiliary Lanes	2.51
Nappanee	2025	CR 101	Market St (US 6)	CR 52	Road Reconstruction	0.96
Nappanee/Elkhart County	2030	CR 150	SR 19	CR 3	New Road Construction	1.00

Indiana Department of Transportation (INDOT)
 State Preservation and Local Initiated Projects FY 2020 - 2024

SPONSOR	CONTRACT # / LEAD DES	STIP NAME	ROUTE	WORK TYPE	LOCATION	DISTRICT	MILES	FEDERAL CATEGORY	Estimated Cost left to Complete Project*	PROGRAM	PHASE	FEDERAL	MATCH	2020	2021	2022	2023	2024
Elkhart County	42006 / 1900486	A 10	IR 1003	New Road Construction	CR 17 Phase 1: from CR 142 to CR 38	Fort Wayne	2.51	STBG	\$25,944,000.00	Elkhart-Goshen MPO	PE	\$2,090,400.00	\$0.00	\$2,090,400.00				
										Elkhart-Goshen MPO	RW	\$100,000.00	\$0.00				\$100,000.00	
										Local Funds	PE	\$0.00	\$522,600.00	\$522,600.00				
Comments: Add project to STIP. MACOG 2020-2024 TIP. Conformity Finding on 7/2/2019																		
Indiana Department of Transportation	42032 / 1802043	Init.	US 20	Demolition, Remove Buildings, Foundations	US 20 from SR 15 to 4.14 miles E of SR 15 (CR 35)	Fort Wayne	4.11	NHPP		Safety Construction	CN	\$564,053.60	\$141,013.40		\$705,067.00			
Indiana Department of Transportation	42032 / 1802045	Init.	US 20	Tree Removal/Trimming	US 20 from SR 15 to 4.14 miles E of SR 15 (CR 35).	Fort Wayne	4.11	NHPP		Safety Construction	CN	\$98,906.40	\$24,726.60		\$123,633.00			
Indiana Department of Transportation	42037 / 1901354	A 03	US 20	Repairs To Approach Slab	20 EB Bridge over CR 9, 02.06 East of SR 19.	Fort Wayne	0	NHPP	\$746,218.00	Toll Lease Amendment Proceeds	PE	\$240,000.00	\$60,000.00	\$300,000.00				
										Toll Lease Amendment Proceeds	CN	\$356,974.40	\$89,243.60		\$446,218.00			
Comments: MACOG MPO TIP Resolution M 10-19 for DES 1901319, 1901320, 1901352, 1901353, 1901354, 1901355. Add PE to FY 2020 for \$300,000, and CN to FY 2021 for \$446,218.																		
Indiana Department of Transportation	42378 / 1900073	A 03	SR 13	Box Culvert Replacement	0.90 Miles South of US 6, Carries UNT of Turkey Creek	Fort Wayne	1	STBG	\$834,000.00	Bridge Construction	CN	\$479,200.00	\$119,800.00					\$599,000.00
										Toll Lease Amendment Proceeds	PE	\$128,000.00	\$32,000.00	\$160,000.00				
										Toll Lease Amendment Proceeds	RW	\$32,000.00	\$8,000.00			\$40,000.00		
										Toll Lease Amendment Proceeds	CN	\$28,000.00	\$7,000.00			\$35,000.00		
Comments: MACOG MPO TIP Resolution M 10-19 for DES 1900073. Add PE to FY 2020 for \$160,000, RW to FY 2022 for \$40,000 and CN to FY 2022 for \$35,000.																		
Indiana Department of Transportation	42379 / 1900095	A 03	US 20	Added Travel Lanes	US 20 from 2.13 miles W of SR 13 (CR 35) to SR 13	Fort Wayne	2.53	NHPP	\$33,567,402.00	Toll Lease Amendment Proceeds	PE	\$3,200,000.00	\$800,000.00	\$4,000,000.00				
Comments: MACOG MPO TIP Resolution A 33-19 dated 7-10-19 for DES 1900095. Add PE to FY 2020 for \$4,000,000.																		
Indiana Department of Transportation	42379 / 1900095	A 17	US 20	Added Travel Lanes	US 20 from 2.13 miles W of SR 13 (CR 35) to SR 13	Fort Wayne	2.53	NHPP	\$33,567,402.00	Toll Lease Amendment Proceeds	RW	\$1,600,000.00	\$400,000.00			\$2,000,000.00		
										Toll Lease Amendment Proceeds	CN	\$3,800,000.00	\$950,000.00				\$4,750,000.00	
										Mobility Construction	CN	\$18,253,921.60	\$4,563,480.40					\$22,817,402.00
Comments: MACOG MPO TIP Resolution M02-20 for DES 2000038. Adding RW to FY 2020 for \$1,000,000, and CN to FY 2022 for \$4,750,000, and phase is illustrative of FY 2024 for \$22,817,402. AQC findings 04/04/2020																		
Indiana Department of Transportation	42379 / 2000038	A 17	US 20	Small Structure Maint and Repair	0.43 Miles West of SR 13. (Pumpkinvine Trail structure)	Fort Wayne	0	NHPP	\$219,652.00	Bridge Construction	CN	\$175,721.60	\$43,930.40					\$219,652.00
Comments: MACOG MPO TIP Resolution M02-20 for DES 2000038. Adding CN to Phase is illustrative of FY 2024 for \$219,652. AQC N/A																		

*Estimated Costs left to Complete Project column is for costs that may extend beyond the four years of a STIP. This column is not fiscally constrained and is for information purposes.

FY 2020-2024 Transportation Improvement Program

Elkhart County

Sponsor	DES	Contract	Resolution	Route	Location	Work Type	Fund Type	Phase	Federal	Match	SFY 2020	SFY 2021	SFY 2022	SFY 2023	SFY 2024	Estimated to Complete	Letting Date
INDOT	1601008	RS-39912	Res. 26-19	SR 19	SR 19, from 5.53 Miles S of US 6 (CR 900N) to 0.49 Miles N of US 6 (Berlin Court Ditch)	HMA Overlay Minor Structural	ST STBG	CN	\$ 3,040,727	\$ 760,182		\$ 3,800,909				\$ 3,800,909	1/13/2021
INDOT	1602099	R-40477	Res. 43-19	SR 119	SR 119, Bridge Over Elkhart River, 0.36 Miles south of SR 15	Bridge Replacement, Other Construction	ST STBG	PE	\$ 10,000	\$ 2,500		\$ 12,500				\$ 2,719,888	1/12/2022
INDOT	1602099	R-40477	Res. 43-19	SR 119	SR 119, Bridge Over Elkhart River, 0.36 Miles south of SR 15	Bridge Replacement, Other Construction	ST STBG	RW	\$ 88,000	\$ 22,000		\$ 15,000	\$ 95,000			\$ 3,057,360	1/12/2022
INDOT	1602099	R-40477	Res. 43-19	SR 119	SR 119, Bridge Over Elkhart River, 0.36 Miles south of SR 15	Bridge Replacement, Other Construction	ST STBG	CN	\$ 2,087,910	\$ 521,978		\$ 12,500	\$ 2,597,388			\$ 3,057,360	1/12/2022
INDOT	1602253	R-40080	Res. 26-19	US 20	US 20, Bridge over Yellow Creek, Eastbound, 0.59 Miles East of US 33	Superstructure replacement	NHPP	CN	\$ 2,050,377	\$ 512,594	\$ 2,562,971					\$ 2,562,971	9/11/2019
INDOT	1602255	R-40080	Res. 26-19	US 20	US 20, Bridge over Yellow Creek, Westbound, 0.59 Miles East of US 33	Superstructure replacement	NHPP	CN	\$ 2,050,377	\$ 512,594	\$ 2,562,971					\$ 2,562,971	9/11/2019
INDOT	1700127	R-41821	Res. 26-19	SR 119	SR 119, From 1.83 Miles West of SR 15 to SR 15.	HMA Overlay, Preventative Maintenance	ST STBG	CN	\$ 425,506	\$ 106,376	\$ 531,882					\$ 531,882	10/9/2019
INDOT	1700129	R-40477	Res. 26-19	SR 15	SR 15 at CR 142, 4.64 miles north of US 6	Intersect. Improv. W/ Added Turn Lanes	ST STBG	RW	\$ 16,000	\$ 4,000		\$ 5,000	\$ 15,000			\$ 499,042	1/12/2022
INDOT	1700129	R-40477	Res. 26-19	SR 15	SR 15 at CR 142, 4.64 miles north of US 6	Intersect. Improv. W/ Added Turn Lanes	ST STBG	CN	\$ 383,234	\$ 95,808			\$ 479,042			\$ 499,042	1/12/2022
INDOT	1701337	RS-41820	Res. 26-19	US 33	US 33, From 4.57 Miles North of SR 15 North Jct. (CR 15) to US 20	HMA Overlay, Preventative Main	NHPP	CN	\$ 1,241,122	\$ 310,280	\$ 1,551,402					\$ 1,551,402	10/9/2019
INDOT	1701372	R-39912	Res. 43-19	US 6	US 6, From 1.79 Miles West of SR 19 to SR 15	HMA Overlay, Preventative Maintenance	ST STBG	RW	\$ 16,000	\$ 4,000	\$ 20,000					\$ 3,455,827	1/12/2021
INDOT	1701372	R-39912	Res. 26-19	US 6	US 6, From 1.79 Miles West of SR 19 to SR 15	HMA Overlay, Preventative Maintenance	ST STBG	CN	\$ 2,748,662	\$ 687,165		\$ 3,435,827				\$ 3,455,827	1/12/2021
INDOT	1800039	R-41560	Res. 26-19	SR 15	SR 15, 1.03 Miles S. of US 20 (at CR 18)	Intersection Improvement with Added Turn Lanes	ST STBG	PE	\$ 144,000	\$ 36,000	\$ 180,000					\$ 1,423,325	1/19/2023
INDOT	1800039	R-41560	Res. 26-19	SR 15	SR 15, 1.03 Miles S. of US 20 (at CR 18)	Intersection Improvement with Added Turn Lanes	ST STBG	RW	\$ 40,000	\$ 10,000			\$ 50,000			\$ 1,423,325	1/19/2023
INDOT	1800039	R-41560	Res. 26-19	SR 15	SR 15, 1.03 Miles S. of US 20 (at CR 18)	Intersection Improvement with Added Turn Lanes	ST STBG	CN	\$ 954,660	\$ 238,665			\$ 15,000	\$ 1,178,325		\$ 1,423,325	1/19/2023
INDOT	1800057	B-41562	Res. 25-18	SR 19	SR 19, Over Christiana Creek, 2.42 Miles S of I-18/90	Replace Superstructure	NHPP	RW	\$ 20,000	\$ 5,000			\$ 25,000			\$ 3,955,316	12/7/2022
INDOT	1800057	B-41562	Res. 25-18	SR 19	SR 19, Over Christiana Creek, 2.42 Miles S of I-18/90	Replace Superstructure	NHPP	CN	\$ 3,144,253	\$ 786,063				\$ 3,930,316		\$ 3,955,316	12/7/2022
INDOT	1800090	R-41578	Res. 26-19	US 20	US 20, from SR 15 to 4.14 Miles E. of ST 15 (CR 35)	Added Travel Lanes	ST STBG	CN	\$ 13,788,558	\$ 3,447,139				\$ 17,235,697		\$ 17,235,697	7/13/2022
INDOT	1800045		Res. 35-20	SR 119	SR 119, 1.35 miles East of SR 19 (CR7)	Intersection Improvement	ST STBG	PE	\$ 336,000	\$ 84,000			\$ 420,000			\$ 2,910,803	2025
INDOT	1800045		Res. 35-20	SR 119	SR 119, 1.35 miles East of SR 19 (CR7)	Intersection Improvement	ST STBG	RW	\$ 80,000	\$ 20,000					\$ 100,000	\$ 2,910,803	2025
INDOT	1800549	R-41066	Res. 26-19	SR 19	SR 19, from 0.32 Miles N of US 20 to 2.61 Miles N of US 20 (Lusher Ave.)	Concrete Pavement Restoration	NHPP	CN	\$ 1,969,884	\$ 492,471		\$ 2,462,355				\$ 2,462,355	8/5/2020
INDOT	1802043		Res. 26-19	US 20	US 20, from SR 15 to 4.14 miles E of SR 15 (CR 35)	Demolition	NHPP	CN	\$ 564,054	\$ 141,013		\$ 705,067				\$ 705,067	2021
INDOT	1802045		Res. 26-19	US 20	US 20, from SR 15 to 4.14 miles E of SR 15 (CR 35)	Roadside Maintenance, Tree Removal/Trimming	NHPP	CN	\$ 98,906	\$ 24,727		\$ 123,633				\$ 123,633	2021
INDOT	1802787	R-41804	Res. 01-20	Var	Various Locations within the Elkhart and Fort Wayne Subdistricts	ADA Sidewalk Ram Construction	STBG	RW	\$ 20,000	\$ 50,000	\$ 25,000					\$ 444,289	4/1/2020
INDOT	1802787	R-41804	Res. 01-20	Var	Various Locations within the Elkhart and Fort Wayne Subdistricts	ADA Sidewalk Ram Construction	STBG	CN	\$ 335,431	\$ 83,858	\$ 419,289					\$ 444,289	4/1/2020
INDOT	1802788		Res. 01-20	Var	Various Locations within the Elkhart and Fort Wayne Subdistricts	ADA Sidewalk Ram Construction	STBG	RW	\$ 20,000	\$ 5,000		\$ 25,000				\$ 475,540	4/7/2021
INDOT	1802788		Res. 01-20	Var	Various Locations within the Elkhart and Fort Wayne Subdistricts	ADA Sidewalk Ram Construction	STBG	CN	\$ 360,432	\$ 90,108		\$ 450,540				\$ 475,540	4/7/2021
INDOT	1802804		Res. 26-19	SR 15	SR 15 and SR 120 intersection, East Jct.	Other Intersection Improvement	NHPP	CN	\$ 40,000	\$ 10,000	\$ 50,000					\$ 50,000	
INDOT	1802826		Res. 26-19		Statewide: Various Locations	Other Type Project (Miscellaneous)	ST STBG	PE	\$ 6,720,000	\$ 1,680,000	\$ 2,100,000	\$ 2,100,000	\$ 2,100,000	\$ 2,100,000		\$ 8,400,000	Various
INDOT	1900095	R-42379	Res. 33-19	US 20	US 20, from 2.13 miles E of SR 13 (CR 35) to SR 13	Added Travel Lanes	NHPP	PE	\$ 3,200,000	\$ 800,000	\$ 4,000,000					\$ 33,567,402	2024
INDOT	1900095	R-42379	Res. 02-20	US 20	US 20, from 2.13 miles E of SR 13 (CR 35) to SR 13	Added Travel Lanes	NHPP	RW	\$ 1,600,000	\$ 400,000			\$ 2,000,000			\$ 29,567,402	12/13/2023
INDOT	1900095	R-42379	Res. 02-20	US 20	US 20, from 2.13 miles E of SR 13 (CR 35) to SR 13	Added Travel Lanes	NHPP	CN	\$ 22,053,922	\$ 5,513,480				\$ 4,750,000	\$ 22,814,402	\$ 29,567,402	12/13/2023
INDOT	1900554		Res. 15-19		Statewide HELPERS Program	Other Type Project (Miscellaneous)	ST HSIP	PE	\$ 1,039,144	\$ 115,460	\$ 1,154,604					\$ 1,154,604	Various

Appendix I: Additional Information

Impact Summary Table

	US 20 Section 1		US 20 Section 2		Revised Total	
	Right of Way Impacts					
	US 20 Section 1 Right-of-Way		US 20 Section 2 Right-of-Way		Revised Total Right-of-Way	
Land use impacts	Perm. Acres	Temp. Acres	Perm. Acres	Temp. Acres	Perm. Acres	Temp. Acres
Residential	39.4	3.5	2.5	1.6	41.9	5.1
Commercial	7.5	0.2	3.8	2.1	11.3	2.3
Agricultural	29.9	0.1	0.9	1.8	30.8	1.9
Forest	5.5	0.0	0.9	0.5	6.4	0.5
Wetlands	5.1	<0.1	0.1*	0.0	5.2	<0.1
Other: Industrial	0.0	0.0	1.3	0.5	1.3	0.5
Other: Educational and Religious	1.8	0.2	2.2	0.8	4.0	1.0
Other: Utility	1.6	0.0	0.0	0.0	1.6	0.0
Other: Open Water	0.0	0.0	0.6	0.0	0.6	0.0
Total:	90.8	4.0	12.3	7.3	103.1	11.3
Other Surface Waters (Acres)						
Reservoirs	0.00		0.00		0.00	
Lakes	0.20		0.00		0.20	
Farm Ponds	0.28		0.00		0.28	
Detention Basins	0.00		0.00		0.00	
Storm Water Management Facilities	0.00		0.00		0.00	
Other: Pond	0.00		0.57		0.57	
Total:	0.48		0.57		1.05	
Wetland Impacts (Acres)						
Total:	5.065		0.050		5.115	
Terrestrial Habitat Impact (Acres)						
Tree Clearing	5.5		1.4		6.9	
Agricultural Land	30.0		2.7		32.7	
Wetland	5.1		0.1		5.2	
Mowed and Maintained	42.9		14.8		57.7	
Total:	83.5		19.0		102.5	
Relocation Impacts						
Residential	19		1		20	
Business	2		0		2	
Farms	4		0		4	
Other	0		0		0	
Total:	25		1		26	

*Wetland impacts rounded up to be consistent with other right-of-way measurements.



Engineer's Report – Final


US 20 From CR 35 to SR 13

INDOT Fort Wayne District
Elkhart County, IN
DES No: 1900095

March 24, 2020

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Figure 1: Project Location

Figure 2: Land Use Map

Appendix B – Utility Matrix

Appendix C – Drainage Analysis

Figure 1: Preliminary Subbasin and Outfall Map 1 of 2

Figure 2: Preliminary Subbasin and Outfall Map 2 of 2

Appendix D – Coordination Meeting Minutes

Appendix E – Minor Projects Programmatic Agreement (MPPA)

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Appendix G – Red Flag Investigation

Appendix H – Waters of the U.S. Report

Appendix I – Traffic Analysis

Appendix J – RoadHAT Analysis Outputs

Appendix K – Typical Sections and Plan and Profile Sheets for Alternatives

Appendix L – Preliminary Alternative Cost Estimate Worksheets

Appendix M – Heritage Drive

Appendix N – Trails of Middlebury

Appendix O – Miami Snowmobile Trail

Executive Summary

This report represents the results of evaluation and analysis by HNTB Corporation for US 20 from CR 35 to SR 13 in Elkhart County, IN. The purpose of the report is to examine and determine a recommended alternative from the addition of a Two Way Left Turn Lane (TWLTL) and added travel lanes. The report follows the guidelines set forth in the Indiana Department of Transportation (INDOT) Engineering Assessment Manual. There are several considerations for the evaluation of this segment of US 20 including, but not limited to, the following:

- Traffic Operations and Capacity
- Crash History
- Horizontal and Vertical Geometry
- Impacts to the Environment
- Impacts to the Right-of-Way

The results of this report show that there are multiple options when considering the addition of a TWLTL, while considering adding travel lanes. The recommended alternative in this report is **Alternative 2**.

Purpose of Report

This report covers the engineering assessment for improvements along US 20 from CR 35 to SR 13. The intent is to improve safety and reduce congestion. Included within this report are relevant background information, conclusions, and recommendations for improvements along US 20 from CR 35 to SR 13.

Project Location

The project is located Southwest of Middlebury in Elkhart County, Indiana along US 20 between CR 35 and SR 13. More specifically the project is in Sections 9, 14, 15, 16, 23 of Township 37 North, Range 7 East in Middlebury Township, from RP 103+11 to RP 105+64. The project location map is in **Appendix A, Figure 1**.

Project Purpose and Need

The purpose and need for US 20 improvements from CR 35 to SR 13 is to:

- Improve operational functionality.
- Improve geometric deficiencies.
- Improve superelevation deficiencies.
- Reduce number of crash incidents.
- Improve overall safety.

US 20 from CR 35 to SR 13 has a high rate of rear end collisions at 41% of all incidents reported during the evaluated sample. The rear end collisions are due to left turns from US 20 to driveways or uncontrolled intersections.

Along US 20 there is one existing horizontal curve located near CR 16 (Wayne Street) with a 40 MPH advisory speed, while the rest of the corridor is signed as 45 MPH. The horizontal curve has deficient superelevation for a 40 MPH design speed. Also noted is a deficient vertical grade less than 0.5%. Correcting these deficiencies will improve the geometrics and overall safety of the facility.

The purpose of the project is to increase the operational functionality and safety of the facility.

Project History

For the US 20 study area from CR 35 to SR 13, we are unaware of any recent projects or studies related to our limits. The original 1925 plans have been provided which depict a facility similar to US 20 from CR 35 to SR 13. Just to the west of our study limits US 20 will be upgraded in 2022 to 2023 from a 2-lane suburban to a 5-lane suburban section, which is a similar buildout to what is being examined for CR 35 to SR 13.

Existing Facility

US 20 from CR 35 to SR 13

US 20 is a 2-lane suburban minor arterial. This 2.2-mile segment has a posted speed of 45MPH. Most of the existing typical section of US 20 consists of 11-foot to 12-foot travel lanes with a varying shoulder and ditch.

There are 2 signalized intersections along this segment of US 20, one at US 20 and CR16 (Wayne Street) and one at US 20 and CR22 (Orpha Drive). All other intersections along the corridor are minor local roadways that are stop controlled on the minor approach.

The horizontal alignment along US 20 runs West to East and has multiple horizontal curves. The horizontal curve located at station 595+85 currently has a 40 MPH advisory speed and a radius of 573 feet; this radius does not meet horizontal stopping sight distance and does not meet the required superelevation rate of 7.6%. The vertical alignment grades are level, ranging from 0% to 2.5%. There are multiple areas where the vertical alignment does not meet the minimum grade requirements of 0.5%.

Land Use

Land use from the Elkhart County GIS database for US 20 from CR 35 to SR 13 is included in **Appendix A, Figure 2**. The land use in the immediate vicinity to US 20 is mainly commercial, residential, and industrial. There are five properties exempt from property tax in the immediate vicinity to US 20. A community of Amish lives in the area and buggy traffic is present on US 20.

Pavement Structure

The existing pavement structure consists of HMA over PCCP. Existing pavement cores will be completed after the submittal of the Engineer's Report.

Utilities

A matrix of existing utilities can be found in **Appendix B**.

Outfalls

The existing drainage outfalls are labeled in **Figures 1 and 2** in **Appendix C. Table 1** below lists the existing outfalls and the associated contributing drainage areas.

Table 1 – Existing Outfall Contributing Drainage Area

Outfall	Existing Contributing Watershed (acres)
1	4.9
2	4.8
3	6.4
4	29.4
5	11.2
6	3.5
7	3.6
8	0.6
9	51.4
10	13.4
11	3.7
12	4.2
13	5.0

There are multiple locations where flow leaves the project site and drains to an unnamed tributary (UNT) to Little Elkhart River. These locations are all named Outfall 9. At Outfall 9 H, there are three culverts that will be impacted by this project. Two 36-inch reinforced concrete pipe (RCP) culverts cross the Pumpkinvine Trail and will likely have to be relocated, along with the paved side ditches within INDOT right of way. Additionally, there is a 60-inch corrugated metal pipe (CMP) culvert crossing US 20 at that location. This culvert will likely need extended and rehabilitated or replaced.

Flow leaves the project site via Outfall 7 and then flows to a low-laying area. Flow leaves the project site at Outfall 8 and presumably enters a commercial storm sewer system offsite.

There are several watersheds with offsite flow that drain towards US 20. **Figures 1 and 2 in Appendix C** shows the watersheds that drain to the project area, but do not outlet within the project limits. The paragraphs below describe these sub-basins.

Sub-basins S-01A, S-01B, and S-01C all naturally drain to low points, or outfalls, within their respective watersheds. There is no evidence of cross culverts, so the flow presumably infiltrates into the ground at these locations. Additional storage would likely be required to account for additional runoff from the added travel lanes.

Sub-basin S-02 naturally drains to Outfall 2 to a storm inlet, but there is no evidence of a cross culvert or pipe. Storage would likely be required to account for additional runoff.

Sub-basin S-03 drains to Outfall 3 to a low area and flow does not leave the project site. The flow presumably infiltrates into the ground at this location. Storage would likely be required to account for additional runoff.

Sub-basins S-04A and S-04B drain to an existing wet pond (Outfall 4) and flow does not leave the project site. Additional storage would likely be required to account for additional runoff. Also, the existing privately-owned wet detention pond will likely be impacted by this project. Widening to the south will place fill in the existing detention pond. This pond can be extended east and west to account for this loss of storage and can be expanded further to meet detention requirements for the added impervious area that will result from the roadway widening. Coordination with the property owner will be required.

Sub-basin S-05 drains to an existing infiltration pond (Outfall 5) and flow does not leave the project site.

Sub-basin S-06 drains to an existing infiltration pond/low area (Outfall 6) and flow does not leave the project site.

Sub-basin S-10A drains to an existing wet pond (Outfall 10) and flow does not leave the project site. Additional storage would likely be required to account for additional runoff.

Sub-basin S-11A drains to a low point to Outfall 11. There is no evidence of a cross culvert, so the flow presumably infiltrates into the ground at this location. Storage would likely be required to account for additional runoff.

Sub-basin S-12 drains to an existing infiltration pond (Outfall 12) and flow does not leave the project site.

Sub-basins S-13A and S-13B drain to Outfall 13 to a low area and flow does not leave the project site. The flow at this location presumably infiltrates into the ground and/or overflows into the gas station storm sewer, eventually making its way into the infiltration pond behind the gas station.

Additional culverts will likely be required to reroute flows, as well as additional detention facilities to reduce peak flows in the sub-basins and outfalls. Small check ponds and in-line ditch detention will likely be required at several outfalls to mitigate peak flows as well.

Culverts

There are three existing culverts that cross US 20 within the project area, all on the eastern half of the project. There is a culvert crossing connecting sub-basin S-09F to S-09G for Outfall 9, which is a 12-inch diameter circular RCP. This culvert is silted in at the upstream end and the downstream end was not found.

There is a culvert crossing connecting sub-basin S-09I to S-09H for Outfall 9, which is a 60-inch diameter CMP (previously described as crossing US 20 at Pumpkinvine Trail). This culvert appears to be newer and in good condition.

Finally, there is a culvert crossing connecting sub-basin S-13A to S-13B that also has an inlet connected to it in the median. It is a 12-inch diameter circular CMP. This culvert is heavily silted in at the upstream and downstream ends.

Field Check

A field visit was performed on November 19, 2019. Individuals from INDOT, HNTB, VS Engineering, and AT&T Long Distance (JMC) were in attendance. See meeting minutes for detailed notes and a list of attendees, **Appendix D**.

Environmental Issues

A Red Flag Investigation and Wetland and Waterways Report have been prepared. A short summary of the findings can be found in each of the following sections below. The items of greatest concern are residential and commercial relocations, impacts to the Pumpkinvine Nature Trail, and improving pedestrian access to and from the school on the north side of US 20. Additional concerns include wetland and stream impacts and the possibility of petroleum contaminated sites along the project corridor.

Historic Properties

The requirement to not submit a Historic Properties Report is pending approval from INDOT. No archaeological sites potentially eligible for the National Register of Historic Places (NRHP) have been identified in the area. The Minor Projects Programmatic Agreement (MPPA) was submitted to INDOT for review on 12/17/2019; see **Appendix E**. A draft archeological report was submitted to INDOT for review on 1/27/2020; see **Appendix F**.

Red Flag Investigation

A draft Red Flag Investigation (RFI) has been submitted for approval and is included as **Appendix G**. The following Infrastructure concerns have been identified:

- Trails: One trail segment is located within the project area. Coordination with Elkhart County Parks and Recreation Department, and the Town of Middlebury will occur.
- Schools: One school is located adjacent to the project area. Coordination with Middlebury community Schools will occur.
- Pipelines: One pipeline crosses the project area. Coordination with Northern Indiana Public Service Company will occur.
- Recreational Facilities: One recreational facility is located adjacent to the project area. Coordination with Das Dutchman Essenhaus will occur.
- Managed Lands: One managed land is located within the project area. Coordination with Elkhart County Parks and Recreation Department will occur.

The presence of the following water resources within the project area will require the preparation of a Waters of the U.S. Report and coordination with INDOT ES Ecology and Waterway Permitting (EWPO).

WATER RESOURCES: The presence of the following water resources will require the preparation of a Waters of the U.S. Report and coordination with INDOT EWPO:

- One wetland is located adjacent to the project area.
- One lake is located adjacent to the project area.

The presence of the following hazardous material concerns will require coordination with IDEM prior to construction activities:

- Leaking Underground Storage (LUST) Sites: One 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, it is likely that petroleum contamination will be encountered. Proper handling, removal, and disposal of soil and/or groundwater may be necessary. Coordination will be conducted with IDEM before further site activities.
- National Pollutant Discharge Elimination System (NPDES) Facilities: Seven NPDES facilities are located within the 0.5-mile search radius. BP Gas Station and Convenience Store is adjacent to the southern portion of the project area. Coordination will occur with BP Gas Station and Convenience Store.

Coordination with U.S. Fish and Wildlife Service (USFWS) and Indiana Department of Natural Resources (IDNR) will occur. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to “Using the USFWS’s IPaC System for listed Bat Consultation for INDOT Projects.”

Wetland and Waterways

This project has features that are likely waters of the U.S. within the investigated area, including wetland, streams and open waters.

A total of one wetland and one stream were identified within the investigated area. The one wetland identified, Wetland A, was an emergent wetland, 0.05 acre in size. The one stream identified was an ephemeral stream 20 linear feet in length. This stream is likely isolated. Efforts should be taken to avoid impacts to the resources outlined in the Wetland and Waterways Report. If impacts occur, waterway permits will be required, and mitigation may be required. Impacts will be minimized before mitigation will be considered. INDOT’s EWPO staff will be contacted when impacts are assessed. The final determination of jurisdictional waters, however, will be ultimately made by the USACE.

See **Appendix H** for full detailed Waters of the U.S. Report.

Noise

This is a Type 1 project, and therefore a noise analysis will be warranted.

Traffic Forecast

Traffic forecast information was provided by INDOT for forecast years 2017, 2024, 2029, 2034 and 2041. This report is provided in **Appendix I**. HNTB made the following adjustments to the traffic forecast for traffic operation analysis.

- Segment AADT and peak hour turning movement traffic forecasts were developed for design year 2044 using the segment growth rates from the traffic forecast provided by INDOT.
- Since traffic forecast provided had a zero percent growth rate on all side streets, a growth rate of 0.5% per year was applied to side street traffic to account for the growth of traffic on those roadways.
- Traffic forecast provided for the intersection of US 20 & CR 22 (Orpha Drive), had a growth rate of 1.26% per year on the northeast leg and 1.29% on the northwest leg which are Orpha Drive and US 20 respectively. In order to be consistent with traffic forecast of the corridor and accurately predict traffic on US 20, a growth rate of 1.26% was applied to the forecast on the southeast leg (US 20), and the growth rate on the northeast leg (Orpha Drive) was reduced to 0.5% from 1.26%.
- Traffic forecast provided for intersection of US 20 & CR 16 (Wayne Street), had a growth rate of 1.29% on south leg and 1.25% per year on west leg which are Wayne Street and US 20 respectively. In order to be consistent with traffic forecast of the corridor and accurately predict traffic on US 20, a growth rate of 1.29% per year was applied to the traffic forecast on the east leg (US 20), and growth on the south leg (Wayne Street) was reduced to 0.5% from 1.29% per year.

See Table 2 for a summary of the AADT information for the segment with the maximum design year traffic.

Table 2 – AADT

Year	AADT
2017	15,900
2024^A	17,300
2029	18,300
2034	19,300
2041	20,700
2044^B	21,300

A Opening Year

B Design Year

Traffic Control Warrants

Intersection traffic control warrants were evaluated based on Indiana Manual of Uniform Traffic Control Device (IMUTCD). Based on design year volumes, traffic signals are not warranted at the unsignalized intersections.

Turn Lane Warrants

Intersection turn lane recommendations are based on design year capacity analysis and the warrants in Section 46-4.0 of the Indiana Design Manual. Right turn lanes on US 20 are not needed at any intersection with a 5-lane configuration. If US 20 has a 3-lane configuration, right turn lanes are recommended in both direction on US 20 at intersections with Heritage Drive and on eastbound US 20 at Spring Valley Drive intersection for the design year traffic volume.

A left turn lane is recommended for EB US 20 at Heritage Drive in the 5-Lane configuration alternative for intersection consistency. Exclusive left turn lanes are not proposed at any other unsignalized intersections, and the two-way left turn lane should be extended to these intersections. Minimum left turn storage length criteria were not exceeded at these locations. See a summary of the turn lane warrants in Table 3 and a summary of recommended queue storage in Table 9.

Table 3 – Turn Lane Warrant

Intersection	Turn Lane Warranted
Heritage Drive	EBL, NBR, SBR
Wayne Street	EBL, SBL
Orpha Drive	SBL, NBL

Crash Data Analysis

For this study, crashes recorded during a 3-year period from January 1, 2016 to December 31, 2018 within the project limits were analyzed. There were 146 crashes within the study area during this time.

The severity level of each crash is defined as Property Damage Only, Personal Injuries, or Fatalities (Table 4). Within the study area, 12% of the crashes resulted in personal injury, and no crashes resulted in fatalities.

Crashes are summarized by type of crash in Table 5. Through the analysis of the crash data a significant pattern of rear end collisions was found (41%). Existing conditions for RoadHAT analysis are provided in Table 6. RoadHAT analysis outputs are included in Appendix J.

Table 4 – Crashes by Crash Severity

	Property Damage Only	Personal Injuries	Fatalities	Total Study Area
US 20	59	14	0	73

Table 5 – Crashes by Type of Crash

	Backing Crash	Collision with Deer	Left Turn	Non-Collision	Opposite Direction Sideswipe	Other	Ran off Road	Rear End	Right Angle	Right Turn	Same Direction Sideswipe	Head on Between Two Motor Vehicles	Collision with Object In Road	Study Area Total
US 20	1	2	5	1	2	2	6	37	10	7	0	0	0	73

Table 6 – RoadHAT Existing Conditions

Existing Condition			
Intersection/Segment	Road Facility Type	Index of Crash Frequency*	Index of Crash Cost**
CR 35 to CR 16 (Wayne Street)	C	0.72	-0.04
CR 16 (Wayne Street)	B	0.16	-0.52
CR 16 (Wayne Street) to CR 22	C	0.09	-0.64
CR 22 (Orpha Drive)	B	-0.33	-0.46
CR 22 (Orpha Drive) to SR 13	C	1.02	0.39

A Unsignalized Urban State-Local Intersection

B Signalized Urban State-Local Intersection

C Urban Two-Lane Segment

* Standard deviations above (+) or below (-) expected crash frequency for a given facility type and length.

** Standard deviations above (+) or below (-) expected crash cost for a given facility type and length.

Discussion of Alternatives

Synchro 10 traffic analysis software was used for traffic operation modeling of the US 20 corridor. Signalized and unsignalized intersections were modeled in Synchro to evaluate the traffic operations and level of service (LOS) for existing conditions, opening year and design years. The following US 20 scenarios were modeled in Synchro:

- Existing Conditions
- Future No Build
- 3-Lane Configuration
- 5-Lane Configuration
- 5-Lane Configuration without CR 37 access

An additional 5-Lane configuration on US 20 was modeled with CR 37 access on US 20 being closed; the closure of CR 37 access from US 20 was considered due to the intersection’s proximity to the crest of a

vertical curve. All the traffic from CR 37 intersection was moved south to the Orpha Drive intersection. As seen in **Table 7** below, Orpha Drive can accommodate all the traffic from CR 37 without a decrease in LOS.

Level of service information for the intersections and arterial roads were reported from Synchro using the methods of the Transportation Research Board *Highway Capacity Manual, 6th Edition*. Analysis results are summarized in **Table 7** and **Table 8** below. Detailed Synchro reports for each modelled scenario can be found in **Appendix I**.

Table 7 – Intersection Level of Service

Intersection	Traffic Control	TOD	Existing	Future No Build	3-Lane		5-Lane		5-Lane without CR 37 Access	
			Existing	2044	2024	2044	2024	2044	2024	2044
Westlake Drive	Unsignalized	AM	C*	C*	C*	C*	B*	B*	B*	B*
Spring Valley Drive	Unsignalized	AM	C*	E*	C*	D*	B*	C*	B*	C*
Heritage Drive	Unsignalized	AM	E*	F*	F*	F*	D*	F*	D*	F*
Wayne Street	Signalized	AM	C	D	C	D	B	C	B	C
County Road 37	Unsignalized	AM	C*	D*	C*	C*	B*	C*	No Access	
Orpha Drive	Signalized	AM	A	A	A	A	A	A	A	A
Westlake Drive	Unsignalized	PM	C*	D*	C*	C*	B*	B*	B*	B*
Spring Valley Drive	Unsignalized	PM	E*	F*	C*	E*	C*	C*	C*	C*
Heritage Drive	Unsignalized	PM	F*	F*	F*	F*	E*	F*	E*	F*
Wayne Street	Signalized	PM	D	F	D	F	D	F	D	F
County Road 37	Unsignalized	PM	C*	E*	C*	C*	B*	C*	No Access	
Orpha Drive	Signalized	PM	A	B	A	B	A	A	A	A

* Overall LOS of a two-way stop-controlled intersection is not defined by the HCM, the worst stop-controlled approach LOS is reported

Table 8 – Arterial Level of Service

Roadway	Time of Day	Existing	Future No Build	3-Lane		5-Lane		5-Lane without CR 37 Access	
		Existing	2044	2024	2044	2024	2044	2024	2044
EB US 20	AM	A	A	A	A	A	A	A	A
WB US 20	AM	B	B	B	B	A	A	A	A
EB US 20	PM	A	A	A	A	A	A	A	A
WB US 20	PM	B	C	B	C	A	B	A	B

As part of this study, modifications were examined for US 20 from CR 35 to SR 13 in order to:

- Improve operational functionality
- Improve geometric deficiencies
- Improve superelevation deficiencies
- Reduce number of crash incidents
- Improve overall safety.

To achieve these goals, three alternatives were examined for the 5-lane configuration without CR 37 access. A 3-lane configuration was not examined due to the following:

- Lane continuity – US 20 Section 1 (US 20 from SR 15 to CR 35) will be constructed as a 5-lane configuration. Route continuity on Section 2 will make driving tasks simpler by reducing the need for drivers to change lanes. This also results in simpler signing and improved traffic operations.
- Access to businesses – this was not considered in the capacity analysis. The area between Wayne Street and Orpha Drive is industrial. The 5-lane configuration will provide easier access to the businesses. The 5-lane configuration will also provide operation and safety benefits at the commercial truck loading docks which are adjacent to US 20.

Each alternative was examined based on engineering, traffic, constructability, right-of-way acquisition, environmental factors, phased construction, and construction cost. Some additional items used in the screening process as identified in the field check include:

- Increase the curve radius at Wayne Street
- Avoid impacts to the Essenhaus parking lot
- Shift the road north in front of the trucking warehouse to avoid impacting existing loading docks
- Equal widening to the north and south at the Pumpkinvine Trail tunnel

All alternatives widen the 2-lane/3-lane section to a 5-lane section, and includes the addition of a two way left turn lane (TWLTL). The widening is not consistently equal on both sides, to the north, or to the south based on existing features along the corridor that should not be impacted as noted above.

In two of the three alternatives the horizontal geometric deficiencies would be examined and corrected. The first geometric correction required would be addressing a sight distance issue at station 595+85 near the intersection of US 20 and CR 16 (Wayne Street). This would involve verifying the design speed and flattening the curve, which shifts the alignment south. A lift station is present on the south side of the road and would be impacted in the two alternatives that correct the curve near CR 16. There is also substandard superelevation along this horizontal curve; the existing radius is 573 feet and with a design speed of 45 MPH a superelevation rate of 7.6% is required based on the 8% superelevation table¹. The existing superelevation rate is approximately 5.6%.

¹ Indiana Design Manual 2013, Chapter 43 Horizontal Alignment; Figure 43-3A(3)

In all three alternatives the vertical geometric deficiencies would be examined and corrected; there are multiple areas where the vertical alignment does not meet the minimum grade requirements of 0.5%.

See **Appendix K** for typical sections and plan and profile views for all three alternatives.

Alternative 1

The first alternative examined in this study was the widening of US 20 from a 2-lane/3-lane typical section to a 5-lane typical section with the corresponding right-of-way acquisition. The proposed modifications to the typical section would allow for left-turn vehicles to pull out of live traffic into a TWLTL. This modification would help to:

- Improve operational functionality.
- Improve geometric deficiencies.
- Improve superelevation deficiencies.
- Reduce number of crash incidents.
- Improve overall safety.

This alternative maintains a curve radius of US 20 at the Wayne Street intersection similar to existing conditions. Though it meets minimum radius requirement, this alternative would require a design exception for the Horizontal Stopping Sight Distance. Benefits of this curve radius include no impact to the Essenhaus parking lot, and minimal impact to the existing lift station.

Alternative 1 intends to minimize the impacts on the trucking warehouse driveways and parking lots between CR 16 (Wayne Street) and CR 22 (Orpha Drive) by shifting the roadway north. With the addition of a TWLTL, an additional lane in each direction, and an improved curve radius, we would see an improvement to operational functionality and an improved safety of the traveling public.

Alternative 2 (Recommended)

The second alternative examined in this study was the widening of US 20 from a 2-lane/3-lane typical section to a 5-lane typical section with the corresponding right-of-way acquisition. The proposed modifications to the typical section would allow for left-turn vehicles to pull out of live traffic into a TWLTL. This modification would help to:

- Improve operational functionality.
- Reduce number of crash incidents.
- Improve overall safety.

This alternative increases the curve radius of US 20 at the Wayne St intersection. An increased radius improves sight lines and driver comfort for the design speed. Increasing the curve radius while avoiding the Essenhaus parking lot will require relocating the existing lift station.

Alternative 2 intends to minimize the impacts on the trucking warehouse driveways and parking lots between CR 16 (Wayne Street) and CR 22 (Orpha Drive) by shifting the roadway north. With the addition

of a TWLTL, an additional lane in each direction, and an improved curve radius, we would see an improvement to operational functionality and an improved safety of the traveling public.

Alternative 3

The third alternative examined in this study was the widening of US 20 from a 2-lane/3-lane typical section to a 5-lane typical section with the corresponding right-of-way acquisition. The proposed modifications to the typical section would allow for left-turn vehicles to pull out of live traffic into a TWLTL. This modification would help to:

- Improve operational functionality.
- Reduce number of crash incidents.
- Improve overall safety.

This alternative also increases the curve radius of US 20 at the CR 16 intersection. An increased radius improves sight lines and driver comfort for the design speed.

Similar to Alternative 2, this alternative intends to minimize the impacts on the warehouse driveways and parking lots between CR 16 and CR 22. This alternative minimizes the impact by closely maintaining the EB travel lane edge to its existing condition and widening the roadway to the northeast. In order to maintain the travel lane edge, additional horizontal curves are required in the alignment compared to Alternative 2. Per AASHTO Green Book², excessive curves are not preferred as they can limit traffic capacity, increase travel time and operating costs, and detract from a pleasing appearance.

With the addition of a TWLTL, an additional lane in each direction, and an improved curve radius, we would see an improvement to operational functionality and an improved safety of the traveling public.

Turn Lane Storage Lengths

Turn lane storage lengths were determined based on design year traffic volume, queue lengths and warrants from the Indiana Design Manual. Synchro was used to determine 95th percentile queue length for signalized and unsignalized intersections. The queue lengths from Synchro were compared with minimum storage lengths criteria from Indiana Design Manual, and maximum storage was recommended for the approach at intersection based on peak hours are reported for 5-lane configuration on US 20. See **Table 9** for a summary of recommended queue storage; appropriate entrance taper and vehicle deceleration lengths should be added to this storage length.

² A Policy on Geometric Design of Highways and Streets, 6th Edition, Chapter 3 Elements of Design

Table 9 – Recommended Queue Storage

Intersection	Approach	Calculated Length (ft)	Design Length (ft)
Wayne Street (Signalized)	EBL	292	300
	WBL	0	50
	NBL	0	50
	SBL	44	50
Orpha Drive (Signalized)	EBL	0	50
	NBL	0	50
	SBL	35	50
	NBL	44	50
Heritage Drive (Unsignalized)	EBL	150	150
	WBL	16	50
	NBR	42	50
	SBR	33	50

Identification of Recommended Alternative

Based on evaluation of engineering, traffic, constructability, right-of-way acquisition, environmental factors, phased construction, and construction cost for the different alternatives, Alternative 2 is recommended as the recommended alternative. The major focus of the upgraded facility is to improve safety by reducing the number of crash incidents along this segment of US 20. **Table 10** provides a summary of impacts to major features for each alternative.

Table 10 – Alternative Impacts to Major Features

Alternative	Minimum Radius	Curve Length	Avoids Houses	Avoids Lift Station	Avoids Essenhaus Parking Lot	Avoids Warehouse Parking Lots	No Tapers	$M < M_{act}^1$
Alt 1	✓	X	X	✓	✓	✓	X	X
Alt 2	✓	✓	X	X	✓	✓	✓	✓
Alt 3	✓	✓	X	X	✓	✓	✓	✓

✓ Criteria Met

X Criteria Not Met

1 Minimum distance from the center of the inside travel lane to obstruction

Some of the main factors supporting this recommendation are maintenance of traffic, and forecasted traffic. Increasing to a 5-lane road allows for future traffic growth, phased construction and improved safety. Alternative 2 also provides the greatest amount of flexibility in work zone spacing during construction. This would allow for the contractor to maintain traffic in each direction during construction with minimal temporary widening. The main difference between Alternative 2 and

Alternative 3 is the roadway’s distance from the trucking warehouses. Alternative 2 provides a simpler alignment but would require more reconstruction of the existing driveways and parking lots to connect them with the proposed roadway. Alternative 3 has an alignment with more curves in order to better match the existing shoulder near the trucking warehouse, which minimizes the required driveway and parking lot reconstruction.

Both Alternative 2 and Alternative 3 create a safer facility and reduce the number of crash incidents while providing capacity for future needs. Preference for how US 20 reconstruction impacts the existing trucking warehouses will dictate whether Alternative 2 or Alternative 3 is ultimately selected.

Cost Estimate

A cost estimate was developed using OMAN bid pricing and the latest INDOT unit prices. The cost is summarized in **Table 11**. The utility coordination relocation cost are estimates and may vary. See **Appendix L** for the Preliminary Alternative Cost Estimate Worksheets. The estimates included in **Table 11** do not include the addition of a school crossing; this cost is included in **Table 12**.

Table 11 – Preliminary Alternative Cost Estimate

	Alternative 1	Alternative 2 (Recommended)	Alternative 3
Construction (CN)	\$15,780,000	\$15,380,000	\$15,470,000
Wetland Mitigation (in-lieu fee)	\$90,000	\$90,000	\$90,000
Right of Way (RW)	\$2,840,000	\$2,900,000	\$2,870,000
Utilities (UT)	\$2,200,000	\$2,700,000	\$2,700,000
Design Engineering (PE)	\$1,570,000	\$1,570,000	\$1,570,000
Subtotal (2020)			
	\$22,480,000	\$22,640,000	\$22,700,000
Total with 3% inflation (2024)			
	\$25,300,000	\$25,480,000	\$25,550,000

Additional Discussion

School Coordination

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, especially with the widened roadway cross section. Several options are available to provide a safer crossing, including:

- pedestrian overpass with switchback ramps near the existing detention pond
- pedestrian tunnel
- designated crossing with pedestrian hybrid beacon (HAWK Signal)

- fencing along the north side of US 20 to direct pedestrians to cross at the signalized intersection at US 20 and CR 16 (Wayne Street)
- designated crossing with flashing beacons and warning signs

A summary of the preliminary school crossing alternatives is provided in **Table 12**; each estimate includes an assumed 0.5-mile multi-use HMA trail.

Table 12 – Preliminary School Crossing Alternative Cost Estimate

Alternative	Cost
Pedestrian Overpass	\$2,800,000
Pedestrian Tunnel	\$1,180,000
Pedestrian Hybrid Beacon	\$405,000
Fence	\$360,000
Crossing with Flashing Beacons	\$305,000

Per IDM Figure 51-70, for a design speed greater than 45 mph for a roadway with more than 4 lanes and without a raised median, traffic signals (pedestrian hybrid beacon or crossing with flashing beacons) or a grade-separated crossing (pedestrian overpass or tunnel) are recommended treatments. Per IDM Section 51-7.09 a grade-separated crossing is suitable if a more economic solution has failed and the anticipated benefits outweigh the costs. Based on this information, the pedestrian hybrid beacon, crossing with flashing beacons, and providing a fence along US 20 to guide pedestrians to cross at Wayne Street will be investigated further. Additional information, including completing a gap study, and coordination with the school may be required.

Middlebury Community School is located on the north side of US 20 near the intersection of US 20 and CR 16. The school has expressed interest in establishing a school zone speed limit on US 20 in the vicinity of the school. Additional coordination will be required between INDOT and Middlebury Community School.

Middlebury Community School has also indicated that they will be constructing a parking lot along the south edge of the soccer fields located near the intersection of US 20 and CR 16 (Wayne Street) that is planned to stay within their existing right-of-way. The proposed alternatives are not expected to impact the proposed parking.

Heritage Drive

Southbound Heritage Drive is signed as right-turn only onto US 20, but traffic continues to make left turns onto US 20 from Heritage Drive. Alternatives to prevent this unsafe movement will be explored as the project progresses, including feasibility of removing access to US 20 or creating a pronounced splitter island to prevent vehicles from turning left. See **Appendix M** for site visit pictures of existing conditions.

Pumpkinvine Nature Trail

The Pumpkinvine Nature Trail will be closed in order to extend the tunnel for the roadway widening. Bicyclist traffic will be detoured to Orpha Drive and CR 13, and connect back to the Pumpkinvine Nature Trail using Sunrise Lane. The trail will be closed to pedestrians; if needed the duration of the closure can be limited to 90 days to reduce impacts. See **Appendix N** for a map identifying the trails in the Town of Middlebury.

Expanding US 20 to a 5-lane roadway will also impact the Ridge Run Trail. A portion of the proposed roadside ditch crosses the existing Ridge Run Trail. Impacts can be mitigated by realigning the trail outside of the proposed construction limits.

Snowmobile Trail

The Miami snowmobile trail runs along eastbound US 20 between CR 33 and CR 35 for approximately 1,700'. See **Appendix O** for a map of the Miami Snowmobile Trail. During a field visit it was determined that the snowmobile trail is west of the project limits and will not be impacted. Coordination with the Elkhart County Snowmobile Club and the Indiana DNR will occur as needed.

Survey Requirements

The planimetric and topographical survey along US 20 has been completed. The survey limits include 450' west of Westlake Drive to SR 13 with 130' to 200' north and south of US 20 centerline. At Orpha Drive survey was obtained approximately 500' north and south of the crossing facilities. At CR 16 (Wayne Street) survey was obtained approximately 600' north and south of the crossing facilities.

Right-of-Way Impact

Along US 20 the land usage is primarily agricultural and residential, with limited industrial and commercial development with five tax exempt properties. Summarized in **Table 13** are the anticipated right of way impacts by alternative.

Table 13 – Right-of-Way Impacts

	Alternative 1	Alternative 2	Alternative 3
No. of Relocations	8	8	8
Estimated Right-of-Way Acquisition	22 acres	24 acres	23 acres

Traffic Maintenance During Construction

One lane of traffic will be maintained in each direction at all times along US 20 by phased construction. Phase 1 will extend the culvert housing the Pumpkinvine Nature Trail to allow for the roadway expansion in subsequent phases. Utility relocations outside of the existing roadway will also occur during Phase 1. Existing traffic conditions will be maintained for this phase.

Phase 2 will reconstruct EB US 20 between CR 35 and Wayne Street, and will reconstruct WB US 20 between Wayne Street and CR 13. Traffic will be shifted to the north side of US 20 between CR 35 and Wayne Street. Near the Wayne Street intersection, traffic will be shifted to the south side of US 20.

Phase 3 will reconstruct EB US 20 between Wayne St and CR 13. US 20 Traffic between Wayne Street and CR 13 will be shifted to the north side of US 20

Phase 4 will reconstruct WB US 20 between CR 35 and Wayne Street as well as the Wayne Street intersection. Traffic will be shifted to the south side of US between CR 35 and Wayne Street with normal traffic conditions east of Wayne Street.

It is also anticipated that any new culverts would be installed across the existing roadway under nighttime closures unless alternative methods are utilized.

During all phases of construction, the following constraints will be maintained:

- Maintain one lane access in both directions
- Maintain buggy access along shoulder
- No consecutively closed intersections between CR 35 and SR 13.
- Maintain access to Middlebury Community School's Transportation Maintenance Garage

Related Projects, Consistency

The work to expand US 20 from a 2-lane suburban facility to a 5-lane suburban facility to the west of CR 35 will be completed in 2023. The modifications to US 20 between CR 35 and SR 13 will tie into these facility upgrades.

According to the Town of Middlebury there are no roadway projects planned near the study area but, the Town Council is looking to extend water and sewer west to the intersection of US 20 and CR 35 with the possibility of extending it north and south along CR 35, and west along US 20.

Coordination, Meetings, Concurrence

A field visit was held on November 19, 2019 on the project site. Individuals from INDOT, HNTB, VS Engineering, and AT&T were in attendance. A corridor utility meeting was held on November 19, 2019 at the Middlebury Town Hall. Individuals from INDOT, HNTB, VS Engineering, NIPSCO, and AT&T were in attendance. See coordination meeting minutes in **Appendix D**.

Other planned meetings include a Kick-off meeting with INDOT, a Public Hearing and Public Information Meeting, and a Stake Holders meeting. These meetings are to inform the surrounding communities, Amish communities, and stake holders of the proposed project and related impacts.

Continuing coordination with the Town of Middlebury will be required as they look to expand their water and sewer west to the intersection of US 20 and CR 35. Coordination will be key to ensure any

new water or sanitary facilities would not conflict with the upgraded roadway facilities of US 20. Additional coordination with the Town of Middlebury and the Middlebury Schools will be required to discuss the school crossing on US 20.

Changes to this Engineer's Report

Fort Wayne District Technical Services and capital Program Management shall be consulted if deviation from the proposal is determined to be necessary during a later phase of project development. The person initiating changes shall route a memo detailing the changes including justification for the change and the estimated cost difference to the Fort Wayne District System Asset Manager, Scoping Manager, and Project Manager for concurrence.

Report Distribution List

- A. Office of Environmental Services, Environmental Policy Leader;
- B. District Design Office Manager;
- C. Production Management Division, Office Manager – 4 copies;
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- G. Production Management Division, Office of Geotechnical Services Engineer;
- H. Federal Highway Administration, Indiana Division, field operations engineer
- I. Others as needed or requested, e.g. local officials, MPO, Office of Materials Management engineer, district traffic of construction engineers.



Traffic & Safety Analysis Revision – Memo

US 20 From CR 35 to SR 13

INDOT Fort Wayne District
Elkhart County, IN
DES No: 1900095

February 10, 2021

Prepared For
INDOT Fort Wayne District
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Approved: *Christopher J. Schultz* Date: February 10, 2021
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Approved: _____ Date: _____
Steve Seculoff
INDOT Ft. Wayne District Project Manager

Approved: _____ Date: _____
Susan Doell
INDOT Ft. Wayne District Scoping Manager



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- Appendix I – Traffic Analysis (Revised February 10, 2021)
- Appendix J – RoadHAT Analysis Outputs (Revised February 10, 2021)

Draft

Purpose of Memo

This memo provides revisions to the March 2020 Engineer's Report for Des. No. 1900095, US 20 from CR 35 to SR 13 in Elkhart County, Indiana. Crash analysis has been revised to correct prior inaccuracies in crash classifications and to provide additional information on the safety benefits of center two-way left turn lanes. Traffic analysis has been revised to correct the modeled configuration of the US 20/Wayne Street intersection, to reflect proposed closure of the north leg of the US 20/Heritage Drive intersection, and to update assumptions about traffic signal phasing with 5-lane build alternatives.

Project Location

The project is located along US 20 between CR 35 and SR 13, Southwest of Middlebury in Elkhart County, Indiana.

Justification for Revisions

Revisions are provided to the March 24, 2020 Engineer's Report for Des. No. 1900095 for the following reasons:

1. The original crash analysis did not separate intersection crashes from non-intersection crashes at all locations. The analysis also mislabeled some incapacitating injury crashes, effectively reducing their severity and yielding artificially low lcc and lcf results during RoadHAT analysis.
2. Additional information was provided on the safety benefits of adding a two-way left turn lane (TWLTL) to this segment of US 20 to address INDOT comments on the purpose and need for the project.
3. The lane configuration and approach volumes for southbound Wayne Street at US 20 had been incorrectly coded during the original traffic operations analysis, thus underestimating the operational benefits of the recommended alternative.
4. Middlebury Community Schools plans to close the north leg of Heritage Drive at US 20. Traffic routing and traffic analysis for all build alternatives has been revised to reflect this.
5. Traffic signal phasing at the US 20 intersections with Wayne Street and Orpha Drive has been updated to assume protected-only left turn phasing on the US 20 approaches in the 5-lane alternatives. This assumption has been made due to potential sight distance limitations with the wider road.

Crash Data Analysis Revisions

RoadHAT analysis was revised with improved accuracy in crash locations and severity. **Table 6** below replaces the original **Table 6** in the March 24, 2020 Engineer's Report. Revised RoadHAT analysis output is provided in the attached **Appendix J**, which replaces **Appendix J** of the original Engineer's Report.

Table 6 – RoadHAT Existing Conditions

Intersection/ Segment	Road Facility Type	Fatal/ Incap	Non- Incap	PDO	Total	Index of Crash Frequency*	Index of Crash Cost**
CR 35	B	1	1	5	7	-0.90	0.19
CR 35 to CR 16 (Wayne Street)	C	4	1	17	22	0.72	1.71
CR 16 (Wayne Street)	B	1	-	15	16	0.16	0.38
CR 16 (Wayne Street) to CR 22 (Orpha Drive)	C	1	1	10	12	-0.26	0.15
CR 22 (Orpha Drive)	B	1	1	12	14	0.30	0.59
CR 22 (Orpha Drive) to SR 13	C	-	-	9	9	1.02	-0.23
SR 13	B	-	1	15	16	0.72	-0.24

A Unsignalized Urban State-Local Intersection

B Signalized Urban State-Local Intersection

C Urban Two-Lane Segment

* Standard deviations above (+) or below (-) expected crash frequency for a given facility type and length.

** Standard deviations above (+) or below (-) expected crash cost for a given facility type and length.

Half of the crashes in the study area during the analyzed time period were rear end crashes. This type of crash is often related to congested conditions, lack of turn lanes, and/or closely spaced driveways along a corridor. Additional research has been conducted on the potential rear end crash reduction benefit of adding a TWLTL to this section of US 20. Research obtained through the US Department of Transportation’s Crash Modification Factor Clearinghouse shows that adding a TWLTL has been shown to reduce the instance of rear end crashes between major intersections by 39%¹. **Table 6a** provides a summary of the expected rear end crash reduction for the study corridor due to constructing a two-way left turn lane. This does not include the potential crash reduction benefits of other improvements, such as added travel lanes or intersection improvements.

¹ Crash Modification Factors Clearinghouse. Safety Evaluation of Installing Center Two-Way Left-Turn Lanes on Two-Lane Roads, Lyon et al., 2008. CMF ID 2351.

Table 6a - Rear End Crashes and Anticipated Crash Reduction Due to TWLTL

Intersection/Segment	Current Rear End Crashes	Anticipated Rear End Crash Reduction
CR 35	4	--
CR 35 to CR 16 (Wayne Street)	13	5
CR 16 (Wayne Street)	7	--
CR 16 (Wayne Street) to CR 22 (Orpha Drive)	9	3
CR 22 (Orpha Drive)	6	--
CR 22 (Orpha Drive) to SR 13	2	1
SR 13	7	--
Study Area Total	48	9

Traffic Operations Analysis Revisions

Intersection traffic operations analysis was revised to correct traffic volumes and lane configuration at the intersection of US 20 and Wayne Street, to assume protected-only left turn phasing on US 20 at the Wayne Street and Orpha Drive intersections with 5-lane alternatives, and to reflect the planned closure of the north leg of Heritage Drive at US 20 by Middlebury Community Schools with all build alternatives. With the closure of the north leg of Heritage Drive, it was assumed that all of the traffic using this intersection leg to or from US 20 to the east would divert to Wayne Street. It was assumed that thirty percent of the traffic using this intersection leg to or from US 20 to the west would also divert to Wayne Street, while the remaining seventy percent would divert to County Road 35.

The corrected analysis shows the 5-lane alternatives to have more operational benefits than originally estimated at both the Wayne Street and Heritage Drive intersections. Although the Design Year PM peak hour operation on the Heritage Drive approaches to US 20 remain LOS F, the queue lengths and delays are much shorter than previously estimated. The revised intersection Level of Service (LOS) results are shown in **Table 7** below, which replaces **Table 7** in the March 24, 2020 Engineer's Report. Revised traffic analysis output is provided in the attached **Appendix I**, which replaces **Appendix I** of the March 24, 2020 Engineer's Report.

Table 7 - Intersection Level of Service

Intersection	Traffic Control	TOD	Existing	Future No Build	3-Lane		5-Lane		5-Lane without CR 37 Access	
			Existing	2044	2024	2044	2024	2044	2024	2044
Westlake Drive	Unsignalized	AM	C*	C*	C*	C*	B*	B*	B*	B*
Spring Valley Drive	Unsignalized	AM	C*	E*	C*	C*	B*	C*	B*	C*
Heritage Drive	Unsignalized	AM	E*	F*	C*	C*	B*	C*	B*	B*
Wayne Street	Signalized	AM	B	B	B	C	B	B	B	B
County Road 37	Unsignalized	AM	C*	D*	C*	C*	B*	C*	No Access	
Orpha Drive	Signalized	AM	A	A	A	A	B	B	B	B
Westlake Drive	Unsignalized	PM	C*	D*	C*	C*	B*	B*	B*	B*
Spring Valley Drive	Unsignalized	PM	E*	F*	C*	D*	C*	C*	C*	C*
Heritage Drive	Unsignalized	PM	F*	F*	C*	D*	B*	C*	B*	C*
Wayne Street	Signalized	PM	B	E	B	C	B	C	B	C
County Road 37	Unsignalized	PM	C*	E*	C*	C*	B*	C*	No Access	
Orpha Drive	Signalized	PM	A	B	A	B	B	B	B	B

*Overall LOS of a two-way stop-controlled intersection is not defined by the HCM, the worst stop-controlled approach LOS is reported. Major street traffic has no delay.

Conclusion

The revised analysis presented in this memo corrects the previous analysis and provides more support for the need and benefits of the proposed project. The revised safety analysis shows higher existing Index of Crash Cost values through much of the project corridor, especially between SR 35 and Wayne Street. These corrected values better indicate existing safety needs for the proposed project. The additional analysis of the crash reduction potential for a two-way left turn lane also helps to better demonstrate project benefits.

The revised traffic operations analysis updates the existing and anticipated future levels of service at the US 20 intersections with Wayne Street, Heritage Drive, and Orpha Drive. These intersections are all expected to provide acceptable operation with the preferred alternative through the design year, even when more restrictive left turn phasing is implemented at signalized intersections for safety purposes. Drivers on Heritage Drive experience long delays while waiting to turn onto US 20 in the peak hours. Because this intersection is not expected to warrant a traffic signal through 2044, closing the north leg provides a good method of directing drivers to safer US 20 access points, such as at the signalized intersections of County Road 35 or Wayne Street.

Alternatives Comparison Table

	Alternative 2	Alternative 3
Natural Environment Impact Assessment		
Water Resources (Right-of-Way)		
Total Wetlands (acre)	0.05	0.05
Open Water Impacts (acre)	0.57	0.57
Vegetation/ Landcover (Right-of-Way)		
Forest Impacts	2.2	1.2
Human Environment Impact Assessment		
Property Impacts		
Approx. Property Impacts (acres)	23	13
Potential Relocations	8	1

Purpose: US 20 Section 2 (CR 35 to SR 13) PFC Meeting
Des No: 1900095
Date/Time: November 4, 2020 10:00 am – 12:00 pm (EST)
Location: Middlebury Town Hall; 418 N Main St, Middlebury, IN 46540

Attendees:

<i>Name</i>	<i>Company</i>	<i>Email</i>
Ben Bruss	VS Engineering	BBruss@vsengineering.com
Cesar Flores	NIPSCO	cesarflores@nisource.com
Chris Schultz	HNTB Corporation	cjschultz@hntb.com
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Mary Cripe	Town of Middlebury	townmanager@middleburyin.com
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Ronald Chupp	Middlebury Water	Water@middlebury@in.com
Steve Seculoff	INDOT	SSeculoff@indot.IN.gov
Teresa Cole	INDOT	tcollection@indot.IN.gov
Tom Enright	Middlebury Parks	parks@middleburyin.com
Travis Pickering	Earth Exploration	tpickering@earthengr-sb.com
Walter Evans	NIPSCO	wevans@nisource.com

The following is summary of the discussion, comments and action items from the meeting:

1. Sign-in and Introductions
2. Project Overview (Chris S)

Meeting Minutes (cont'd.)



Project: US 20 Section 2 (CR 35 to SR 13)

Meeting Location: Middlebury Town Hall

Meeting Date: 11/4/2020

- a. Project Limits and Overview
 - i. Added Travel Lanes from CR 35 to SR 13
 - ii. 5-lane Section with Curb and Gutter
 - iii. Extension to Pumpkinvine Pedestrian Tunnel
 - iv. Horizontal Curve Correction at Wayne St
 - v. New traffic signals at Wayne St, Orpha Dr, and School Crossing

- b. Project Schedule

Notice to Proceed	09/09/19
Topographical Survey	11/30/19
Preliminary Engineering Assessment	01/29/20
Stage 1 Plans/PFC Plans (25%)	06/12/20
Preliminary Field Check Meeting	11/04/20
Stage 2 Plans (55%)	02/17/21
Final Field Check Plans (80%)	01/15/23
Stage 3 Plans (95%)	05/30/23
Final Tracings (100%)	08/20/23
Ready for Contracts	09/20/23
Letting	12/13/23

3. Scope of Services
 - a. Roadway Design & Plan Development (Chris S)
 - o Added Sidewalk along US 20
 - i. The Town of Middlebury and School Corporation expressed interest in extending the sidewalk on the south side of US 20 from Spring Valley Drive to Wayne Street to serve the Middle School.
ACTION ITEM: HNTB and VS will discuss with INDOT and investigate extending the sidewalk with the Stage 2 plan development.
 - o School crossing & HAWK signal
 - i. The Town of Middlebury and School Corporation would like to remove the proposed refuge island to avoid pedestrians having to wait in the middle of the road with live traffic on each side.
ACTION ITEM: HNTB and VS will remove the refuge island with the Stage 2 plan development.

Meeting Minutes (cont'd.)



Project: US 20 Section 2 (CR 35 to SR 13)

Meeting Location: Middlebury Town Hall

Meeting Date: 11/4/2020

- ii. The Town of Middlebury and School Corporation would like to move the proposed pedestrian crossing and HAWK signal closer to Spring Valley Drive.
ACTION ITEM: HNTB and VS will move the crossing and HAWK signal to the west side of the intersection at Spring Valley Drive.
- o Update on access to Westlake Drive (south), and Heritage Drive (north)
 - i. The Town of Middlebury mentioned that access to Westlake Drive (South) should remain.
 - ii. The School Corporation would like to remove the Heritage Drive (North) access from US 20.
ACTION ITEM: The School Corporation will provide a letter or memo with direction to remove this access from US 20, and HNTB will incorporate this change in the Stage 2 plans.
- o Maintenance of traffic & roadway closures
 - i. INDOT would like to consider a three-lane MOT concept with a reduced shoulder width; 2-12 ft travel lanes and 1-12 ft center bidirectional lane for left turns or passing buggies & bicycles.
ACTION ITEM: HNTB and VS will investigate the three-lane MOT concept with the Stage 2 plan development.
- b. Geotech Services (Travis P)
 - i. Terracon/Earth Exploration mentioned that there are predominantly granular-type soils across the project area. The western and eastern thirds typically had near-surface sandy loam with isolated areas of sand, and the middle third near-surface soils were predominantly sand. Sand is anticipated as the foundation soil for the modular block wall and tunnel extension along Pumpkinvine Trail. Infiltration rates were generally good in the detention areas with typically lower rates in sandy loam and higher rates in sand/gravelly sand. In general, we anticipate good conditions regarding foundation soil preparation for the roadway improvements unless construction takes place during a wet period of the year which would result in difficulty preparing the sandy loam soils. Groundwater could potentially be encountered during storm sewer installation, particularly in the western-third of the project area.

Meeting Minutes (cont'd.)



Project: US 20 Section 2 (CR 35 to SR 13)

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c. Environmental Document (Rich C)

- i. Rich indicated that there are minimal impacts to the natural resources for this project.
- ii. There are no impacts to streams, impacts to one wetland, and impacts to one pond.
- iii. One property relocation is anticipated with the project and will be confirmed as design progresses.
- iv. An option for the Pumpkinvine Trail temporary detour was discussed using Orpha Drive and the private driveway to the north of US 20.
ACTION ITEM: HNTB and INDOT will begin coordination required with the landowner for the Pumpkinvine Trail temporary detour.

d. Pumpkinvine Tunnel Extension (Joe D)

- i. Joe give a brief description of the tunnel extension portion of the project, stating the tunnel was being extended 21 feet on the north side of US 20 and 26 feet on the south side of US 20. The trail on the south side of US 20 currently approaches the tunnel with an “S” curve, and the plan is to emulate that for the tunnel extension. The existing trail also utilizes modular block walls and railing where the trail crosses the existing ditch piping. The proposed plan is to also emulate this where the proposed trail crosses the proposed ditch piping, although if possible, the walls and railing may be eliminated depending on how final grades work with the proposed drainage.
- o Maintenance of Traffic & trail detour
 - i. Regarding MOT, the north tunnel extension and wingwalls will need to be complete prior to temporary pavement being installed.
 - ii. The Town of Middlebury would like to consider a temporary traffic signal for the Pumpkinvine Nature Trail detour route crossing US 20 at CR 37.
 - iii. The Town of Middlebury suggested that there is a possibility to detour the Pumpkinvine Nature Trail along Orpha Drive and through the private gravel driveway next to Monteith’s Best-One Tire & Services.
ACTION ITEM: HNTB and VS will investigate the possible Pumpkinvine Nature Trail detour route on the private drive compared to the cost of a temporary traffic signal with the Stage 2 plan development.

Meeting Minutes (cont'd.)



Project: US 20 Section 2 (CR 35 to SR 13)

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- Lighting
 - i. Currently, there is no lighting within the existing tunnel. Based on the length the tunnel will be after it is extended, lighting is necessary. The Town stated they preferred the tunnel was lighted. Two lights will likely be required approximately a quarter of the way into the tunnel at each end. Joe D. stated they make vandal-proof lights for these applications, but they are expensive.
ACTION ITEM: HNTB and VS will work with the Town and INDOT to determine the type of lighting. The Town also stated they may want to install security cameras in the tunnel as well.
- e. Traffic Design (Ben B)
 - There are traffic signals proposed at Wayne Street, Orpha Drive, and a HAWK signal for the pedestrian crossing at Northridge High School.
- f. Right-of-Way Design and Driveway Access (Chris S)
 - The proposed R/W offset in general is 60' left and 60' right of the centerline, for a total width of 120'. There are small variations to the proposed corridor R/W width, including a section that is 67' to the left of the centerline from the beginning of the project to Wayne Street.
 - The proposed R/W offset is 60' to the right of the centerline from the beginning of the project to the end.
- g. Utility Coordination (Ben B or Jeff L)
 - Preliminary analysis suggest pavement plus subgrade depth will be a total of 30" (12" pavement +18" subgrade).
ACTION ITEM: Utilities are advised to incorporate an allowance for this pavement depth into relocation planning.
 - The Pumpkinvine Trail Tunnel will be extended both north and south.
ACTION ITEM: Utilities should examine the plans for benching, final plan design, and any guardrail.
ACTION ITEM: Utilities should examine the plans for drainage and look at cross sections for grade changes and structures.

Meeting Minutes (cont'd.)



Project: US 20 Section 2 (CR 35 to SR 13)

Meeting Location: Middlebury Town Hall

Meeting Date: 11/4/2020

4. Utility Discussion (Ben B and Jeff L)
 - a. CenturyLink
 - i. CenturyLink is currently combined in the same duct run with AT&T.
 - ii. CenturyLink anticipates 6 months to relocate.
 - iii. Generally, the existing facilities are underground on the north side of US 20.
 - iv. There is a line under the Pumpkinvine Tunnel at the trail level, and it becomes shallower before and after the tunnel.
ACTION ITEM: CenturyLink to examine the trail extension plans for benching, construction, and any guardrail.
 - b. Middlebury Public Works Water
 - i. Any private water service lines, not already shown should be added to the plans.
ACTION ITEM: VS to work with Middlebury, HNTB, the Town, and INDOT to determine the locations of the water service lines to be added to the Plans.
 - ii. The Water Main generally is in the southern lane and shoulder throughout the project.
 1. There are the following US 20 water crossings:
 - o Sta 590+00 South of Heritage Drive
 - o Sta 595+00 southwest of Wayne Street
 - o Sta 602+20 northward to Essenhaus
 - o Sta 627+00 northward to Goshen Health Systems office
 - o Sta 653+00 across US 20 northwest to Orpha Drive, then across on the north side of Orpha Drive.
 - iii. There is a Water Main near Orpha Drive that is known to be shallow at approximately 16" deep.
 1. A 6" Water Main crosses US 20 on the west side, and crosses Orpha Drive on the north and south side.
 - c. Middlebury Public Works Sewer
 - i. The follow is a summary of the requests for Middlebury Public Sewer:
 1. **ACTION ITEM:** HNTB to add a note on the plans for the North Ridge Lift Station. VS will gather more information for the lines around the North Ridge Lift Station.
 2. **ACTION ITEM:** HNTB and VS to add the diameter and pipe type information to the plans.

Meeting Minutes (cont'd.)



Project: US 20 Section 2 (CR 35 to SR 13)

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3. **ACTION ITEM:** HNTB and VS to add Force Main notes to the plans near Wayne Street and eastward.
 4. **ACTION ITEM:** VS to work with Middlebury, HNTB, the Town, and INDOT to determine the locations of the sewer service lines to be added to the Plans.
- ii. The existing sewer locations are as follow from west to east:
1. South side of US 20 from the east edge of the High School at Sta 582+50 to west of Wayne Street to Essenhaus at Sta 635+10.
 2. East of Wayne Street Force Main crosses US 20 at the Essenhaus, then on the north Side of US 20 from the Essenhuas to Orpha Drive (Force Main).
 3. An abandoned Force Main is on the north side of US 20 near Sta. 625+00 to Sta 635+00.
 - a. The Spring Valley Lift station at southwest of Wayne St/CR16 will need to be relocated.
 - b. The Northridge High School lift station appears to not be in conflict, other than possible lateral pipes.
 - c. There are several missing lines on PFC prints.
ACTION ITEM: HNTB and VS will add these missing utilities to the Roadway plans and will issue a revised plan set.
 4. There are the following US 20 sewer crossings:
 - a. Sta 582+50 High School, east edge of property (Force Main)
 - b. Sta 587+50 Pathway Church Drive (Force Main)
 - c. Sta 595+00 Lift Station southwest of Wayne Street
 - d. Sta 615+25 Essenhaus – Ozinga Concrete
 - e. Sta 635+10 Essenhaus
 5. There are the following US 20 Gravity Sewer locations:
 - a. Along the south side of Pathway Church to the east. The ending of this pipe is not clear.
 - b. At the Wayne Street area and eastward, Gravity sewer line parallel to the Force Main is missing from plans.
ACTION ITEM: HNTB and VS will add these missing utilities to the Roadway plans and will issue a revised plan set.

Meeting Minutes (cont'd.)



Project: US 20 Section 2 (CR 35 to SR 13)

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- c. Along the south side of the Essenhaus to the east. The ending of this pipe is not clear.
 - iii. The Town of Middlebury provided markups with missing utility locations.
ACTION ITEM: HNTB and VS will add these missing utilities to the Roadway plans and will issue a revised plan set.
 - d. Middlebury School Corp.
 - e. New Paris Telephone DBA Community Fiber Network
 - i. A new fiber line from CR 16 south was recently installed and may not be on the initial survey.
 - ii. A fiber line exists on the north side of US 20 near the R/W at a depth of 4' with handholes and laterals.
ACTION ITEM: HNTB and VS will add these missing utilities to the Roadway plans and will issue a revised plan set.
 - f. NIPSCO Electric Distribution
 - g. NIPSCO Electric Transmission
 - i. There are poles along the north side of US 20 throughout the project with crossings at major intersections and some driveways.
 - ii. The existing pole line will need to be relocated from approximately Sta 609+00 to Sta 643+00, including the communication lines that are attached to the existing power poles.
 - iii. **ACTION ITEM:** NIPSCO Electric & OHD commons should pay attention to clearance requirements for the proposed signals at the following locations:
 - 1. School Crossing – low hanging cable
 - 2. Orpha Drive – overhead conflict with power
 - 3. Wayne Street – preliminary print indicates horizontal clearance is possible
 - h. NIPSCO Gas
 - i. There is an existing High-Pressure gas line at 250 PSI from the west to southeast.
 - 1. It is located from the Beginning Project at Sta 569+00 to the east of the schools near Spring Valley Drive at Sta 584+00.
 - a. There are 2 gas lines on the north side: 6" and 8" lines run parallel to US 20.

Meeting Minutes (cont'd.)



Project: US 20 Section 2 (CR 35 to SR 13)

Meeting Location: Middlebury Town Hall

Meeting Date: 11/4/2020

2. East of Spring Valley at Sta 584+00, through Wayne St/CR 16, past the Essenhaus and down to Pumpkinvine Trail at Sta 649+00.
 - a. There is Gas on North Side 8" line, South Side 4" line.
 - b. There is Gas on the North Side 3" and parallel to 8".
3. East of the Pumpkinvine Trail at Sta 649+00, past Orpha Drive to near Main St/SR13 and at the end of the project at Sta 682+00.
 - a. Gas on North Side 4" line, South Side 4" line.
- ii. Placement of relocated lines is preferred to be in the green space, and not under the sidewalk or trial.
- iii. The preliminary schedule is 3 months for preconstruction activities, and 6 months for construction activities.
- iv. No disconnections or taps are allowed after November each year, and then taps are allowed to resume in April-May of the following year.
- v. The typical depth expected is 36" inches, sometimes deeper for High Pressure.
- vi. No transmission work is allowed during the winter months from November to April of each year.
- vii. Some lines are missing on the PFC prints.

ACTION ITEM: HNTB and VS will add these missing utilities to the Roadway plans and will issue a revised plan set.
- i. RVP Fiber Co. (US Signal)
- j. AT&T Long Lines
 - i. Generally, AT&T is underground on the side of US 20.
 - ii. There is a line under the Pumpkinvine Trail Tunnel on the north side edge of the existing pavement, and is shallower to the east and west of the tunnel.
- b. Elkhart Fiber may have recently installed inside the project limits.

ACTION ITEM: HNTB and VS will follow up with Elkhart to request the fiber line location, and will add the missing utilities to the Roadway plans.

Attachments:

- Sign-in Sheet
- .kmz file of draft design (not for construction)

Purpose: Preliminary Field Check
 INDOT Des No. 1900095
 US 20 from CR 35 to SR 13
 Meeting Date: November 4, 2020

<u>Name</u>	<u>Representing</u>	<u>Email</u>	<u>Initials</u>
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Dana Plattner	INDOT	dplattner@indot.in.gov	DP
Dave Schaafsma	NIPSCO	dschaafsma@nisource.com	

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Doug Moser	INDOT	dmoser@indot.in.gov	DCM
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Jeremy Miller	Middlebury School Corp.	millerj@mcsin-k12.org	JM
Joe Druzak	VS Engineering, Inc.	jdruzak@vsengineering.com	JAD
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Karen Novak	INDOT	knovak@indot.in.gov	

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Randy Reese	Community Fiber Network	reese@nptel.com	RR
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Ryan Miedema	RVP Fiber Co. (US Signal)	rjmiedema@ussignal.com	
Steve Seculoff	INDOT	sseculoff@indot.in.gov	SS

<u>Name</u>	<u>Representing</u>	<u>Email</u>	<u>Initials</u>
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Tim Odell Robert Miller	Middlebury Public Works	publicworks@middleburyin.com	RM
Travis Pickering	Earth Exploration	tpickering@earthengr-sb.com	TJP
Ronald Chupp	Middlebury WATER	WATER@middleburyin.com	REC
Teresse Cole	INDOT	rcole@indot.in.gov	TC
Dave Huckfeldt	Lumen (formerly CenturyLink)	dave.huckfeldt@lumen.com	dh
Tom Enright	Middlebury Parks	parke@middleburyin.com	TE

Purpose: US 20 Section 2 (CR 35 to SR 13) Pumpkinvine trail meeting Summary
Des No: 1900095
Date/Time: November 4, 2020 1:00 pm – 2:30 pm (EST)
Location: Orpha Drive Pumpkinvine Trail Access
Attendees:

<i>Name</i>	<i>Company</i>	<i>Email</i>
Tom Enright	Middlebury Parks and Rec	parks@middleburyin.com
Chris Schultz	HNTB Corporation	cjschultz@hntb.com
Rich Connolly	HNTB Indiana, Inc.	rconnolly@HNTB.com

The following is summary of the discussion, comments and action items from the meeting:

1. Pumpkinvine Trail MOT Discussion

- a. Potential connection from private driveway to trail.
 - i. Tom and Rich walked to the potential tie in point from the private driveway to the trail. While on site the potential suitability of this option was discussed, and Rich took a few pictures and rough measurements of the site to document the current conditions. The current drive was compacted gravel and approx. 14 feet wide. There was a wood fence immediately next to the edge of the aggregate. The driveway was separated from the trail by a metal livestock gate. There would need to be some improvement made to the drive to be ADA compliant and there is a drop of approximately 4 feet over 66 feet between the curve in the driveway and the tie in point with the trail. This would require improvement to meet ADA criteria.
- b. Potential routing of MOT within INDOT ROW.
 - i. Tom and Rich evaluated the potential to construct a temporary trail within the existing ROW. While it would be possible it would require a lot of earthwork and grading and would keep pedestrians fairly close to potential active construction.
- c. Potential of routing a shared use MOT path between the Orpha Drive Trail head and the private driveway.
 - i. Tom and Rich evaluated potential constraints associated with routing the detour along Orpha drive. This discussion focused on the need to extend the shoulder to provide adequate separation between motorist and pedestrian traffic. It looked like widening the shoulder east of Orpha would be easier than widening west of Orpha.



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204

Eric Holcomb, Governor
Joe McGuinness, Commissioner

February 17, 2021

Mary Cripe
Town Manager
418 N. Main Street
Middlebury, Indiana 46540

INDOT District: Fort Wayne
County: Elkhart
Des. No.: 1900095
Highway: US 20
Pumpkinvine Nature Trail and Ridge Run Trail

SUBJECT: NOTIFICATION OF INTENT TO PURSUE SECTION 4(F) *DE MINIMIS AND ENHANCEMENT*

Dear Ms. Cripe:

The Indiana Department of Transportation (INDOT), in cooperation with the Federal Highway Administration (FHWA), proposes to widen US Highway 20 (US 20) to a 5-lane facility with two lanes in each direction and Two Way Left Turn Lane (TWLTL) in the center. This project will require the acquisition of additional right-of-way north and south of the roadway (see attached Project Plans).

As part of the environmental evaluation of the community and natural resource impacts of the proposed project, any potential recreation areas must be identified and evaluated for protection under Section 4(f) of the Department of Transportation Act of 1966, 49 USC 303(c). Section 4(f) protects publicly-owned parks, recreational areas (including trails), wildlife and waterfowl refuges, and public and private historic sites against direct or constructive use impacts from transportation projects. Section 4(f) requires coordination with the officials with jurisdiction over these historic and recreational resources regarding applicability of Section 4(f) and the impacts of the project on Section 4(f) resources. In the case of recreational properties, the officials with jurisdiction are the officials of the agency or agencies that own or administer the property in question and who are empowered to represent the agency on matters related to the property.

In accordance with 23 CRF 774.3(b), INDOT and FHWA are seeking concurrence from the officials with jurisdiction regarding the determination of significance and effect of the proposed project on the Pumpkinvine Nature Trail and Ridge Run Trail. INDOT and FHWA intend to pursue a Section 4(f) *de minimis* finding for the Pumpkinvine Nature Trail and a determination that the impacts to the Ridge Run Trail qualify as an enhancement and are therefore exempt from Section 4(f).

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 attached Conceptual Detour Route).

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 Officials with Jurisdiction (OWJs) for the Section 4(f) resource. The other agency will also be receiving notification.

Description of Proposed Work and Anticipated Impacts

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. The widened roadway will 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 of the proposed trail alignment to the south of US 20 (see attached Project Plans).

This 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 use 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 is anticipated to last 24 months.

Proposed Detour

During the environmental review process, a conceptual detour route was developed in coordination with the Middlebury Department of Parks and Recreation 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. Prior to closure of the trail, 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 attached Conceptual Detour Route). Coordination with the residential landowner on Orpha Drive has occurred. The landowner has agreed in principle to the viability of the conceptual detour route.

Further details associated with the conceptual 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.

Determination and Concurrence of Section 4(f) De Minimis

Under Section 4(f) of the U.S. Department of Transportation Act of 1966 (23 CFR 774), 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 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 official with jurisdiction. In accordance with 23 CFR 774.5(b)(2), a public notice and an opportunity for public review and comment concerning the effects on the protected activities, features, or attributes of the Section 4(f) property will be provided in conjunction with the public review and comment period of the NEPA document. You will be informed of all public comments received that pertain to the Section 4(f) impact determination, and if warranted, your concurrence can be reevaluated.

Additional information about Section 4(f) requirements can be found at the following web address or you may request additional information from INDOT:

[http://environment.fhwa.dot.gov/\(S\(1vyep545s3wmhuubnvexkmm2\)\)/4f/index.asp](http://environment.fhwa.dot.gov/(S(1vyep545s3wmhuubnvexkmm2))/4f/index.asp)

As the official with jurisdiction over the Pumpkinvine Nature Trail, your documented agreement that this project will not adversely affect the activities, features, or attributes qualifying the trail for protection under Section 4(f) is required in order for the trail closure and detour to be considered a *de minimis* impact under Section 4(f).

Ridge Run Trail (Section 4(f) Enhancement)

The Ridge Run Trail is a multi-use trail that connects the grounds of the Essenhaus 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 attached Ridge Run Trail Realignment).

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 Official with Jurisdiction (OWJ) for the Section 4(f) resource.

Description of Proposed Work and Anticipated Impacts

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, the project will have an effect on the trail; however, the project will preserve the recreational attributes of the trail by realigning to avoid permanent impacts. The project will also enhance the trail's physical condition through reconstruction of the pavement structure. No Section 4(f) use of the Ridge Run Trail will occur as a result of the project.

Determination and Concurrence of Section 4(f) Enhancement

Under Section 4(f) of the U.S. Department of Transportation Act of 1966 (23 CFR 774), this trail is considered a Section 4(f) resource as it is publicly-owned land that permits public access for primarily recreational purposes. An enhancement activity is one that is solely for the purpose of preserving or enhancing an activity, feature, or attribute that qualifies the property for Section 4(f) protection.

Additional information about Section 4(f) requirements can be found at the following web address or you may request additional information from INDOT:

[http://environment.fhwa.dot.gov/\(S\(1vyep545s3wmhuubnvexkmm2\)\)/4f/index.asp](http://environment.fhwa.dot.gov/(S(1vyep545s3wmhuubnvexkmm2))/4f/index.asp)

As the official with jurisdiction over the Ridge Run Trail, your documented agreement that this project will enhance an activity, feature, or attribute that qualifies the property for Section 4(f) protection is required in order for the trail realignment and reconstruction to qualify for the enhancement exemption under Section 4(f).

A response from you is requested within 30 days to determine the following:

If you agree with the statements below, please sign this letter and return it for inclusion in the environmental document for this project.

As the Official with Jurisdiction over the Pumpkinvine Nature Trail, I agree that the proposed project will not adversely affect the activities, features, or attributes qualifying the trail for protection under Section 4(f).

SIGNATURE: _____ DATE: _____

PRINTED NAME AND TITLE: _____

As the Official with Jurisdiction over the Ridge Run Trail, I agree that the proposed project will enhance an activity, feature, or attribute that qualifies the property for Section 4(f) protection. Therefore, the project will qualify for the enhancement exemption under Section 4(f) and no use as defined in 23 CFR 774.17 will occur.

SIGNATURE: _____ DATE: _____

PRINTED NAME AND TITLE: _____

Thank you for your assistance with the federal review process. If you need further information, please call me at 317-917-5333. Thank you for your assistance in the development of this project.

Sincerely,

A handwritten signature in blue ink that reads "Richard J. Connolly". The signature is fluid and cursive.

Richard J. Connolly
Science Project Manager
HNTB Corporation

Attachments – Project Plans, Conceptual Detour Route, Ridge Run Trail Realignment

DRAFT

647 Sec. 15, T-37-N, R-7-E
Middlebury Township
Elkhart County

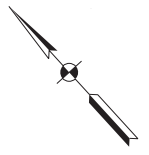
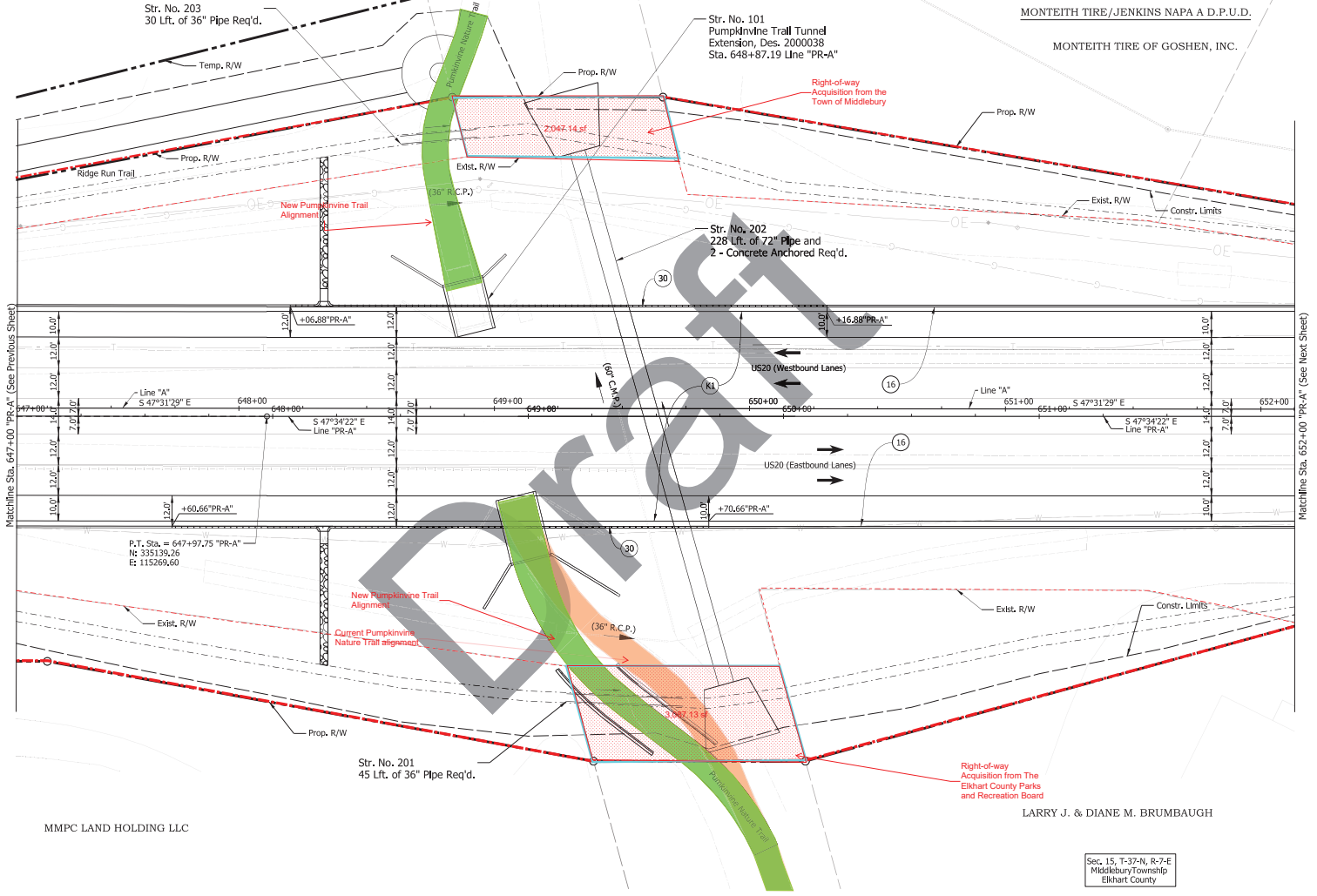
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Notes:
See Sheet No. CD-01 for the Construction Detail Legend.

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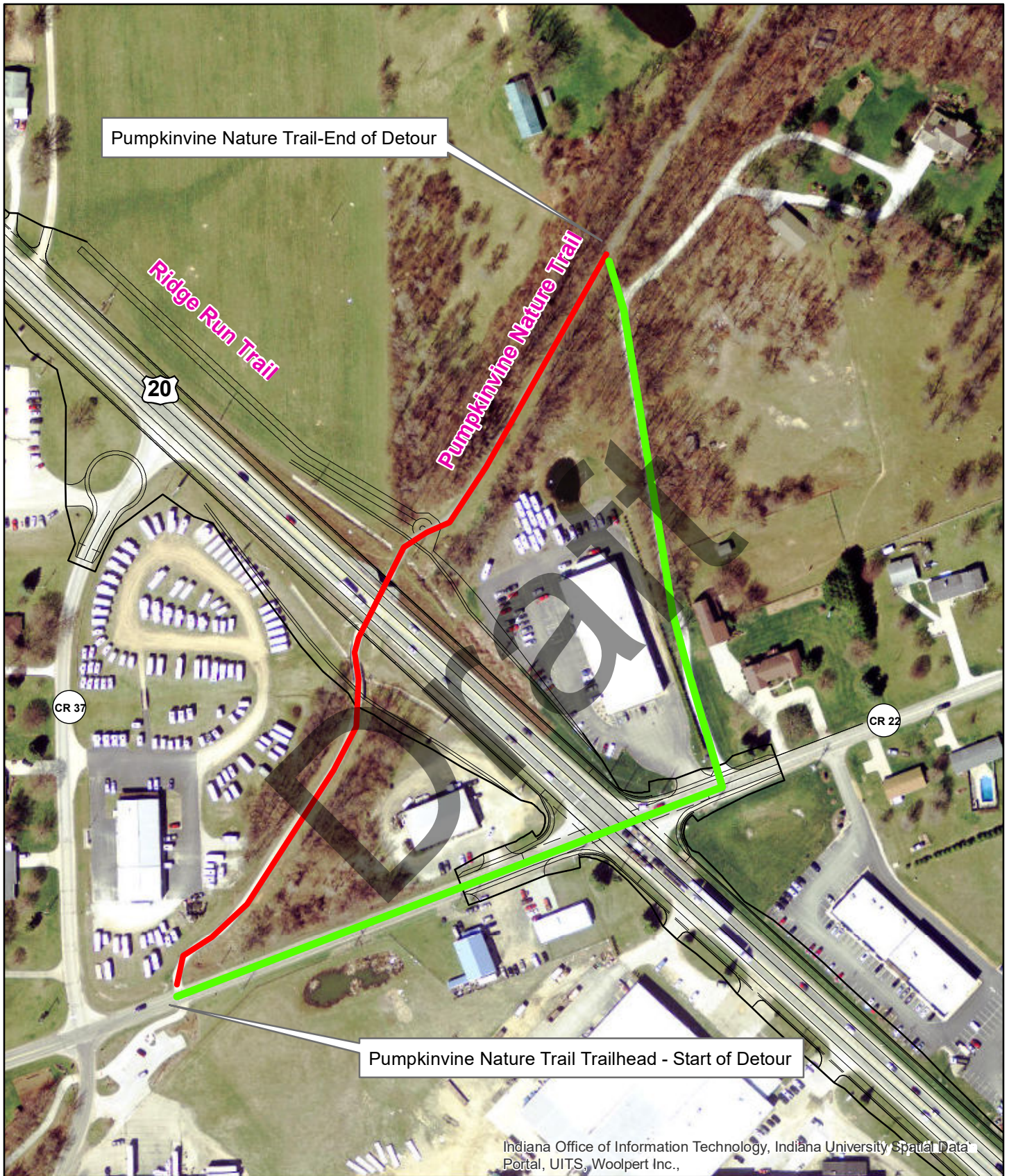
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
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CHECKED: NSX	CHECKED: NSX	

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

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VERTICAL SCALE	DESIGNATION
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SURVEY BOOK	SHEETS CD-16
ELECTRONIC	63 of 151
CONTRACT	PROJECT
R-42379	1900955

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 User: jbrumbaugh



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

Legend

- Conceptual Detour Route
- Temporary Closure

Conceptual Detour Route

U.S. 20 Section 2 CR 35 to SR 13
Elkhart County, Indiana



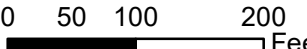

Des. No. 1900095

1 inch = 200 feet



Graphics created by HNTB Corporation (2021)



Legend  Realigned Ridge Run Trail	 	Ridge Run Trail Realignment U.S. 20 Section 2 CR 35 to SR 13 Elkhart County, Indiana	
		Des. No. 1900095 1 inch = 150 feet	 Graphics created by HNTB Corporation (2021)



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204

Eric Holcomb, Governor
Joe McGuinness, Commissioner

February 17, 2021

Larry Andrews
President Elkhart County Parks Board
211 W. Lincoln Avenue
Goshen, IN 46526

INDOT District: Fort Wayne
County: Elkhart
Des. No.: 1900095
Highway: US 20
Pumpkinvine Nature Trail

SUBJECT: NOTIFICATION OF INTENT TO PURSUE SECTION 4(F) *DE MINIMIS* FINDING

Dear Mr. Andrews:

The Indiana Department of Transportation (INDOT), in cooperation with the Federal Highway Administration (FHWA), proposes to widen US Highway 20 (US 20) to a 5-lane facility with two lanes in each direction and Two Way Left Turn Lane (TWLTL) in the center. This project will require the acquisition of additional right-of-way north and south of the roadway (see attached Project Plans).

As part of the environmental evaluation of the community and natural resource impacts of the proposed project, any potential recreation areas must be identified and evaluated for protection under Section 4(f) of the Department of Transportation Act of 1966, 49 USC 303(c). Section 4(f) protects publicly-owned parks, recreational areas (including trails), wildlife and waterfowl refuges, and public and private historic sites against direct or constructive use impacts from transportation projects. Section 4(f) requires coordination with the officials with jurisdiction over these historic and recreational resources regarding applicability of Section 4(f) and the impacts of the project on Section 4(f) resources. In the case of recreational properties, the officials with jurisdiction are the officials of the agency or agencies that own or administer the property in question and who are empowered to represent the agency on matters related to the property.

In accordance with 23 CRF 774.3(b), INDOT and FHWA are seeking concurrence from the officials with jurisdiction regarding the determination of significance and effect of the proposed project on the Pumpkinvine Nature Trail. INDOT and FHWA intend to pursue a Section 4(f) *de minimis* finding for the Pumpkinvine Nature 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 attached Conceptual Detour Route).

The Pumpkinvine Nature Trail is a former railroad that has been converted to a multi-use trail. This trail connects Goshen, Middlebury and Shippshewana. 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 Officials with Jurisdiction (OWJs) for the Section 4(f) resource. The other agency will also be receiving notification.

Description of Proposed Work and Anticipated Impacts

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. The widened roadway will 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 of the proposed trail alignment to the south of US 20 (see attached Project Plans).

This 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 use 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 is anticipated to last 24 months.

Proposed Detour

During the environmental review process, a conceptual detour route was developed in coordination with the Town of Middlebury 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. Prior to the closure of the trail, 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 attached Conceptual Detour Route). Coordination with the residential landowner on Orpha Drive has occurred. The landowner has agreed in principle to the viability of the conceptual detour route.

Further details associated with the conceptual 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.

Determination and Concurrence of Section 4(f) *De Minimis*

Under Section 4(f) of the U.S. Department of Transportation Act of 1966 (23 CFR 774), 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 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 official with jurisdiction. In accordance with 23 CFR 774.5(b)(2), a public notice and an opportunity for public review and comment concerning the effects on the protected activities, features, or attributes of the Section 4(f) property will be provided in conjunction with the public review and comment period of the NEPA document. You will be informed of all public comments received that pertain to the Section 4(f) impact determination, and if warranted, your concurrence can be reevaluated.

Additional information about Section 4(f) requirements can be found at the following web address or you may request additional information from INDOT:

[http://environment.fhwa.dot.gov/\(S\(1vyep545s3wmhuubnvexkmm2\)\)/4f/index.asp](http://environment.fhwa.dot.gov/(S(1vyep545s3wmhuubnvexkmm2))/4f/index.asp)

As the official with jurisdiction over the Pumpkinvine Nature Trail, your documented agreement that this project will not adversely affect the activities, features, or attributes qualifying the trail for protection under Section 4(f) is required in order for the trail closure and detour to be considered a *de minimis* impact under Section 4(f).

A response from you is requested within 30 days to determine the following:

If you agree with the statements below, please sign this letter and return it for inclusion in the environmental document for this project.

As the Official with Jurisdiction over the Pumpkinvine Nature Trail, I agree that the proposed project will not adversely affect the activities, features, or attributes qualifying the trail for protection under Section 4(f).

SIGNATURE: _____ DATE: _____

PRINTED NAME AND TITLE: _____

Thank you for your assistance with the federal review process. If you need further information, please call me at 317-917-5333. Thank you for your assistance in the development of this project.

Sincerely,



Richard J. Connolly
Science Project Manager
HNTB Corporation

Attachments –
Project Plans
Conceptual Detour Route

DRAFT

647 Sec. 15, T-37-N, R-7-E
Middlebury Township
Elkhart County

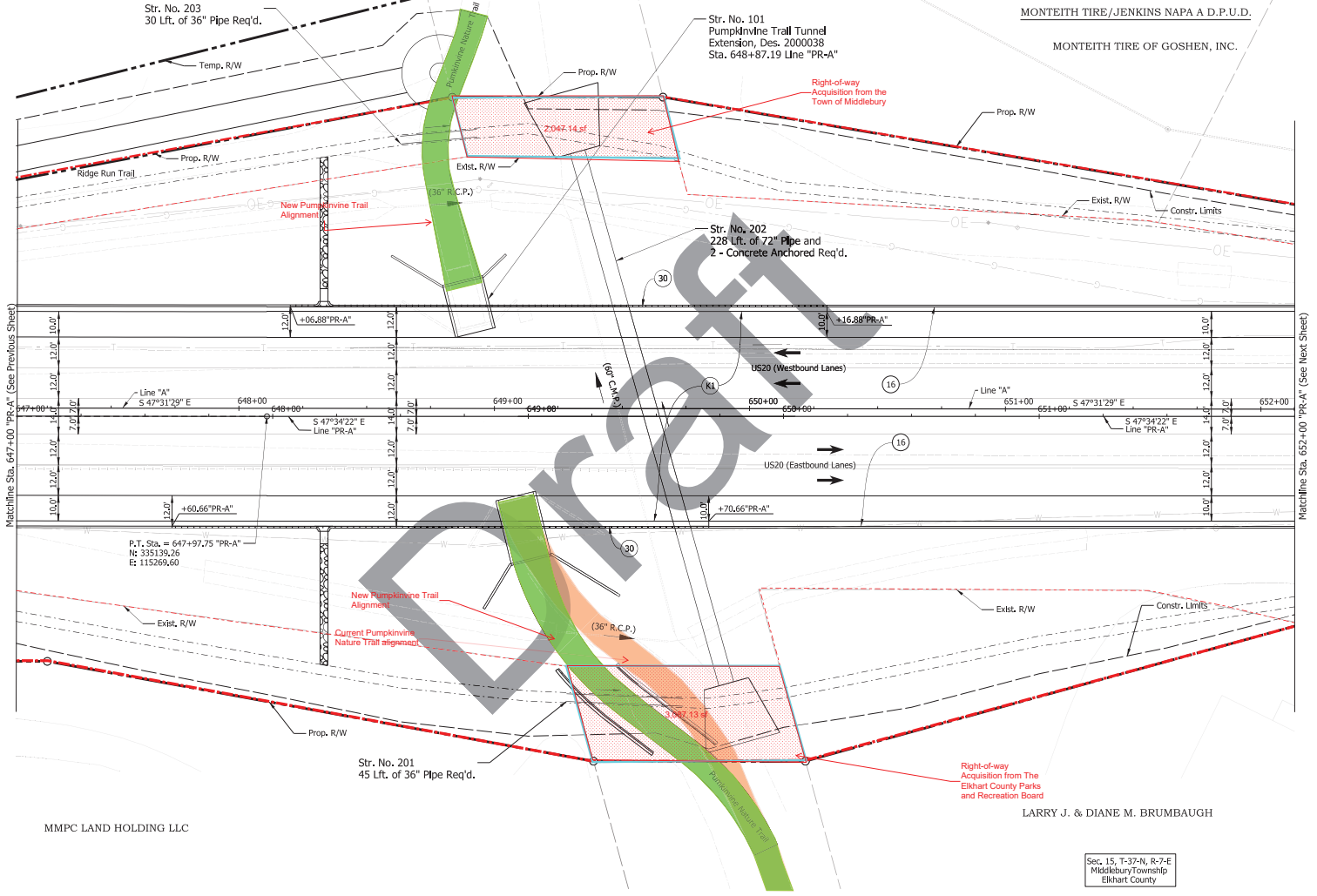
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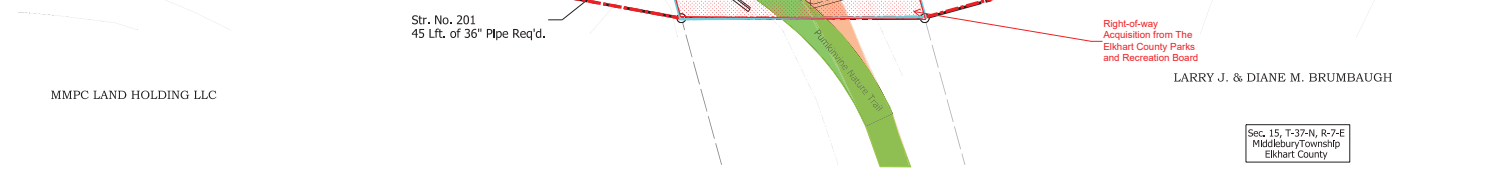
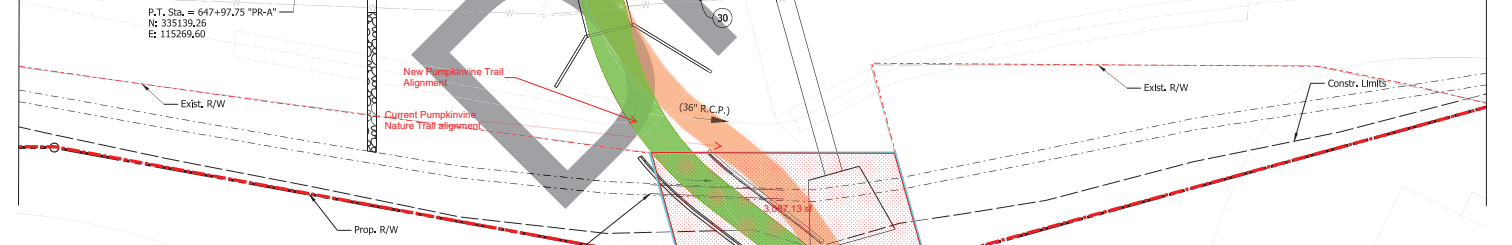
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Matchline Sta. 647+00 "PR-A" (See Previous Sheet)

Matchline Sta. 652+00 "PR-A" (See Next Sheet)



MMPC LAND HOLDING LLC

LARRY J. & DIANE M. BRUMBAUGH

Sec. 15, T-37-N, R-7-E
Middlebury Township
Elkhart County

Notes:
See Sheet No. CD-01 for the Construction Detail Legend.

DRAFT
NOT FOR CONSTRUCTION

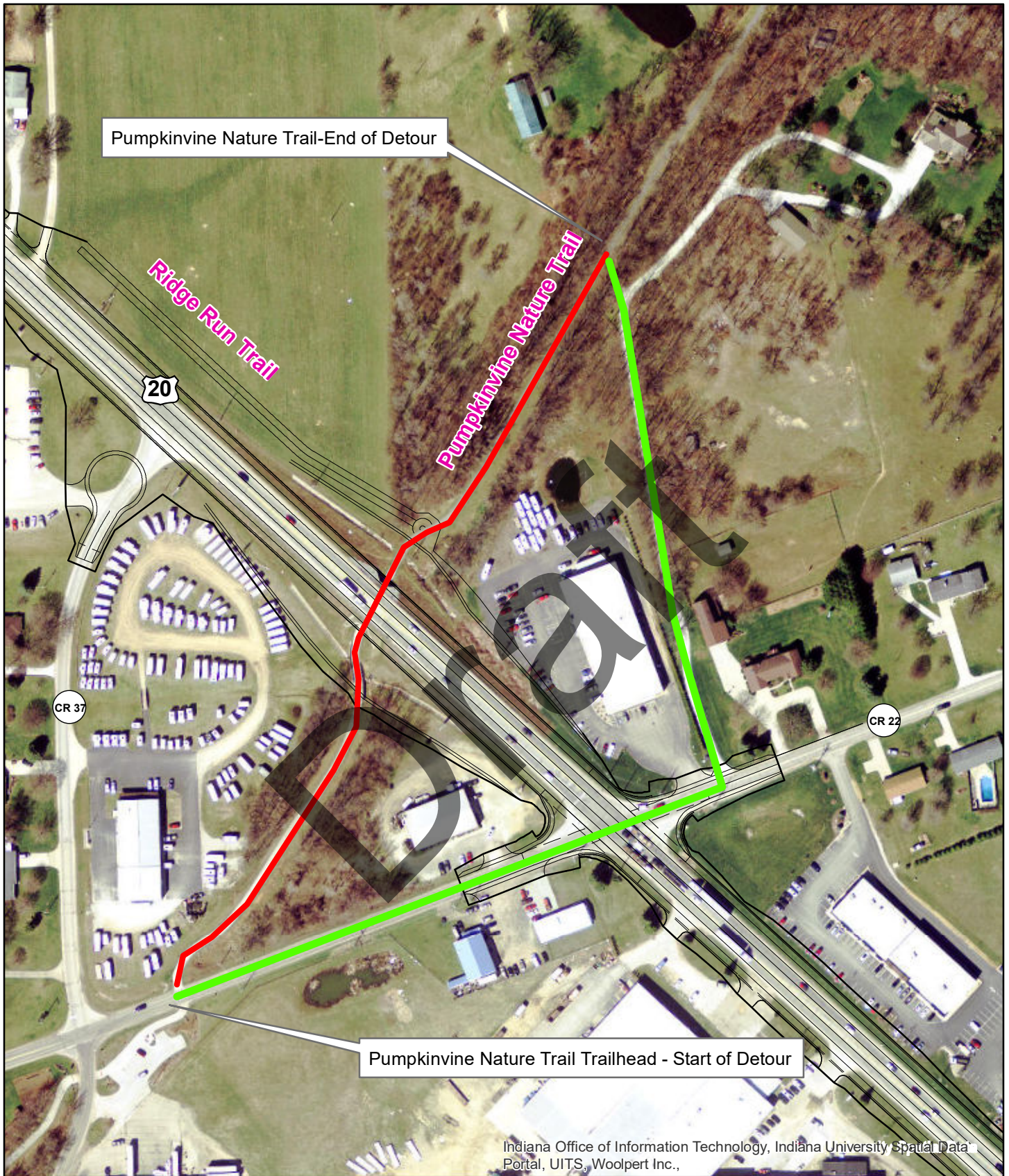
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: LMC	DRAWN: LMC	
CHECKED: NSX	CHECKED: NSX	

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE
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VERTICAL SCALE	DESIGNATION
N/A	1900955
SURVEY BOOK	SHEETS CD-15
ELECTRONIC	63 of 151
CONTRACT	PROJECT
R-42379	1900955

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 User: jbrumbaugh



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

Legend

- Conceptual Detour Route
- Temporary Closure

Conceptual Detour Route

U.S. 20 Section 2 CR 35 to SR 13
Elkhart County, Indiana

Des. No. 1900095

1 inch = 200 feet



Graphics created by HNTB Corporation (2021)

Richard Connolly

From: Jeff Palmer <palmerj@mcsin-k12.org>
Sent: Thursday, November 12, 2020 9:46 AM
To: Richard Connolly
Subject: Re: US 20 improvement Project Section 2

Mr. Connolly,

I have reviewed the plans provided and I agree. The areas in question are not areas of recreational use at Northridge High School. However, the areas near Heritage drive are used for soccer and soccer parking. I am not sure if we will need to address this area at some point or not. I am also concerned if the expansion of the right of way will be an issue with the Northridge High School digital display sign located near this area.

Please let me know if you need anything else. I will be your point of contact going forward.

Thank you and have a wonderful day.

Jeff Palmer
Middlebury Community Schools
Director of Buildings and Grounds

From: Richard Connolly <rconnolly@HNTB.com>
Sent: Monday, November 9, 2020 1:48 PM
To: Jeff Palmer <palmerj@mcsin-k12.org>
Subject: RE: US 20 improvement Project Section 2

Mr. Palmer,

I'm in the process of preparing the environmental study for Section 2 of the US 20 Improvement Project in Elkhart county.

This project will widen US 20 from CR 35 to SR 13 from a two lane highway to a 4 lane highway with a turn lane in the center. We anticipate that improvements made to US 20 intersection will require the acquisition of right-of-way from Northridge High School. The areas that are anticipated to be acquired are narrow strips of right-of-way at the south end of the property as shown in the attached graphic.

My question is whether or not this area is in a recreational use. Recreational uses would be athletic fields, or playgrounds etc. From the aerial and a site visit it clearly looks like it is not in a recreational use but I need concurrence of that in writing from the school. Is that something either you could provide? Based on similar correspondence for Section 1 of the project I believe you are the correct contact.

Feel free to call to discuss at the number below.

Thanks.

Land and Water Conservation Fund (LWCF) County Property List for Indiana (Last Updated July 2020)

ProjectNumber	SubProjectCode	County	Property
1800054	1800054	Elkhart	Oxbow County Park
1800064	1800064	Elkhart	Stauffer Park, Derksen Park & McCormicks Creek G.C.
1800074	1800074	Elkhart	Oxbow County Park
1800099	1800099	Elkhart	Stauffer Park, Derksen Park & McCormicks Creek G.C.
1800257	1800257A	Elkhart	Elliott Park
1800257	1800257B	Elkhart	Lundquist Bicentennial Park
1800257	1800257C	Elkhart	Pinewood Park
1800283	1800283	Elkhart	High Dive Park
1800310	1800310	Elkhart	McNaughton Park
1800337	1800337	Elkhart	Stauffer Park, Derksen Park & McCormicks Creek G.C.
1800339	1800339	Elkhart	Shoup-Parsons Woods Park
1800340	1800340	Elkhart	Reith Park
1800354	1800354	Elkhart	Pierre Moran Park
1800441	1800441	Elkhart	High Dive Park
1800450	1800450	Elkhart	Stauffer Park, Derksen Park & McCormicks Creek G.C.
1800470	1800470	Elkhart	Studebaker Park
1800542	1800542	Elkhart	Boot Lake Nature Preserve
1800554	1800554	Elkhart	Cobus Creek County Park
1800628	1800628	Elkhart	Corson Riverwoods County Park
1800631	1800631	Elkhart	South Park

*Park names may have changed. If acquisition of publically owned land or impacts to publically owned land is anticipated, coordination with IDNR, Division of Outdoor Recreation, should occur.

From: [Bales, Ronald](#)
To: [Seculoff, Steven](#)
Cc: [Miller, Brandon](#); [Novak, Karen](#); [Hinkle, Meghan](#); [Richard Connolly](#)
Subject: Des. No. 1900095, US 20 Section 2 CR 35 to SR 13, Elkhart County, Indiana (Traffic Noise Analysis)
Date: Thursday, February 4, 2021 9:06:09 AM

A traffic noise analysis report was completed by HNTB in January 2021 to evaluate potential traffic noise impacts for the proposed US 20 Section 2 project from CR 35 to SR 13 in Elkhart County, Indiana. Traffic noise was evaluated at all receptors within 500 feet of edge of pavement within the study area. Traffic noise levels were evaluated for the existing (2024) and projected (2044) traffic volumes for the build alternative.

This report evaluated potential noise impacts for the proposed improvements in compliance with the Federal Highway Administration's (FHWA) Procedures for Abatement of Highway Traffic Noise and Construction Noise as presented in the Code of Federal Regulations, Title 23 Part 772 (23 CFR 772) and the Indiana Department of Transportation (INDOT) *Traffic Noise Analysis Procedure* (2017).

Predicted design year (2044) noise levels would approach or exceed the Noise Abatement Criteria (NAC) at 15 (fifteen) receptors resulting in the need to evaluate noise abatement. Noise abatement was analyzed at three locations. None of the barriers met the feasibility and reasonableness criterion established by the INDOT *Traffic Noise Analysis Procedure* (2017).

Based on the studies thus far accomplished, the State of Indiana has not identified any locations where noise abatement is likely. A re-evaluation 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 process.

This email will serve as INDOT's approval of the traffic noise analysis report for the proposed US 20 Section 2 Project (Des 1900095).

Ron Bales

INDOT-Environmental Services Division

Office: (317) 515-7908

Email: rbales@indot.in.gov

TRAFFIC NOISE ANALYSIS

US 20 Improvement Project CR 35 to SR 13

Des. Number: 1900095

Elkhart County, Indiana

Prepared by:



111 Monument Circle, Suite 1200
Indianapolis, IN 46204

January 2021

EXECUTIVE SUMMARY

This report evaluates the potential noise impacts of the proposed improvements within the US 20 Improvement Project CR 35 to SR 13 (Des. 1900095) study area (study area) in conformance with corresponding Federal regulations and guidance, and the National Environmental Policy Act (NEPA). The noise analysis presents the existing and future acoustical environment along the project corridor.

Existing noise level measurements were conducted on November 19, 2019 at three representative sites in the project corridor. A 20-minute measurement was taken at each site. The measurements were made in accordance with FHWA and INDOT guidelines using an integrating sound level analyzer meeting American National Standard Institute (ANSI) and International Electrotechnical Commission (IEC) Type 1 specifications. Traffic counts were taken concurrently with the noise measurements.

The latest version of the FHWA's Traffic Noise Model, TNM[®]2.5 (TNM), was used to model existing (2024) and design year (2044) worst hourly traffic noise levels within the 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. Receivers consist of residences, religious facilities, athletic fields, recreational facilities, and commercial facilities.

Existing exterior noise levels range from 53.5 to 69.4 dB(A) $L_{eq}(1h)$. Predicted future exterior design year (2044) noise levels adjacent to the proposed project would approach or exceed the NAC at 18 noise sensitive receptors. Predicted future exterior design year noise levels would range from 55.3 to 70.6 dB(A) $L_{eq}(1h)$.

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.

Three noise barriers (Noise Barriers 1, 2 and 3) were modeled in the study area. While all noise barriers evaluated would be considered a feasible abatement measure, none meet the cost-reasonable criteria. The results of the noise barrier evaluation are summarized in Table 7.

Based on the studies thus far accomplished, the State of Indiana has not identified any locations where noise abatement is likely. Noise abatement at the location identified in Table 7 is based upon preliminary design costs and design criteria. 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 for all barriers. A reevaluation of the noise analysis will occur during final design. If during final design it is 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.

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Appendices

Appendix A – Modeling and Measurement Locations (Figure 2, pages 1-4)

Appendix B – Field Measurement Data Sheets

Appendix C – Certificates of Calibration

Appendix D – Noise Inputs

Appendix E – Barrier Descriptions

Appendix B, C D E and F have been removed to reduce the file size.
The full report can be found on the project website (<https://www.us20section2elkhartcounty.com/>).

Traffic Noise Analysis

1.0 INTRODUCTION

INDOT and FHWA propose to proceed with the US 20 Improvement Project (Des. Nos. 1900095) located west of the town of Middlebury in Elkhart County, Indiana from reference post (RP) 103+11 to 105+64, or approximately 565 feet east of the intersection of US 20 and CR 35 to the intersection of US 20 and SR 13. The project is located within Middlebury Township; Middlebury US Geological Survey (USGS) Quadrangles, Sections 9, 15, 16, and 22 of Township 37 North, Range 7 East.

The preferred alternative includes reconstruction of the existing two-lane US 20 to a 5-lane section, including a 14-foot two-way left turn lane, two 12-foot travel lanes in each direction, and two 10-foot paved shoulders.

The project area consists primarily of single- and multi-family residences (NAC Category B), as well as one church (NAC Category C), multi-use trails (NAC Category C), one school (NAC Category C/D), athletic fields (NAC Category C), restaurants (NAC Category E), non-sensitive commercial (NAC Category F), and non-sensitive agricultural (NAC Category G) land uses. The proposed project area is located within Elkhart County and incorporated Middlebury, Indiana. The project location is shown on Figure 1.

The latest version of the FHWA's Traffic Noise Model, TNM[®]2.5 (TNM), was used to model existing (2024) and design year (2044) worst hourly traffic noise levels within the study area. The effective date of the most recent FHWA-approved *INDOT Traffic Noise Analysis Procedure* is July 1, 2017. This policy is applicable to Type I federal-aid highway projects which involve the construction of a highway on a new location or the physical alteration of an existing highway that significantly changes either its horizontal or vertical alignment or increases the number of through traffic lanes. The structure of the policy focuses on the following principal elements:

- Identification of Noise-Sensitive Land Uses.
- Determination of Existing Noise Levels.
- Prediction of Future Noise Levels.
- Identification of Traffic Noise Impacts.
- Identification and Consideration of Abatement.
- Consideration of Construction Noise.
- Coordination with Local Government Officials.

The proposed widening of US 20 will include the addition of through-traffic lane(s) and, therefore, will be classified as a Type I project.

US 20 Improvement Project – CR 35 to SR 13
Des 1900095
Elkhart County, Indiana

Indiana Department of Transportation
Traffic Noise Analysis

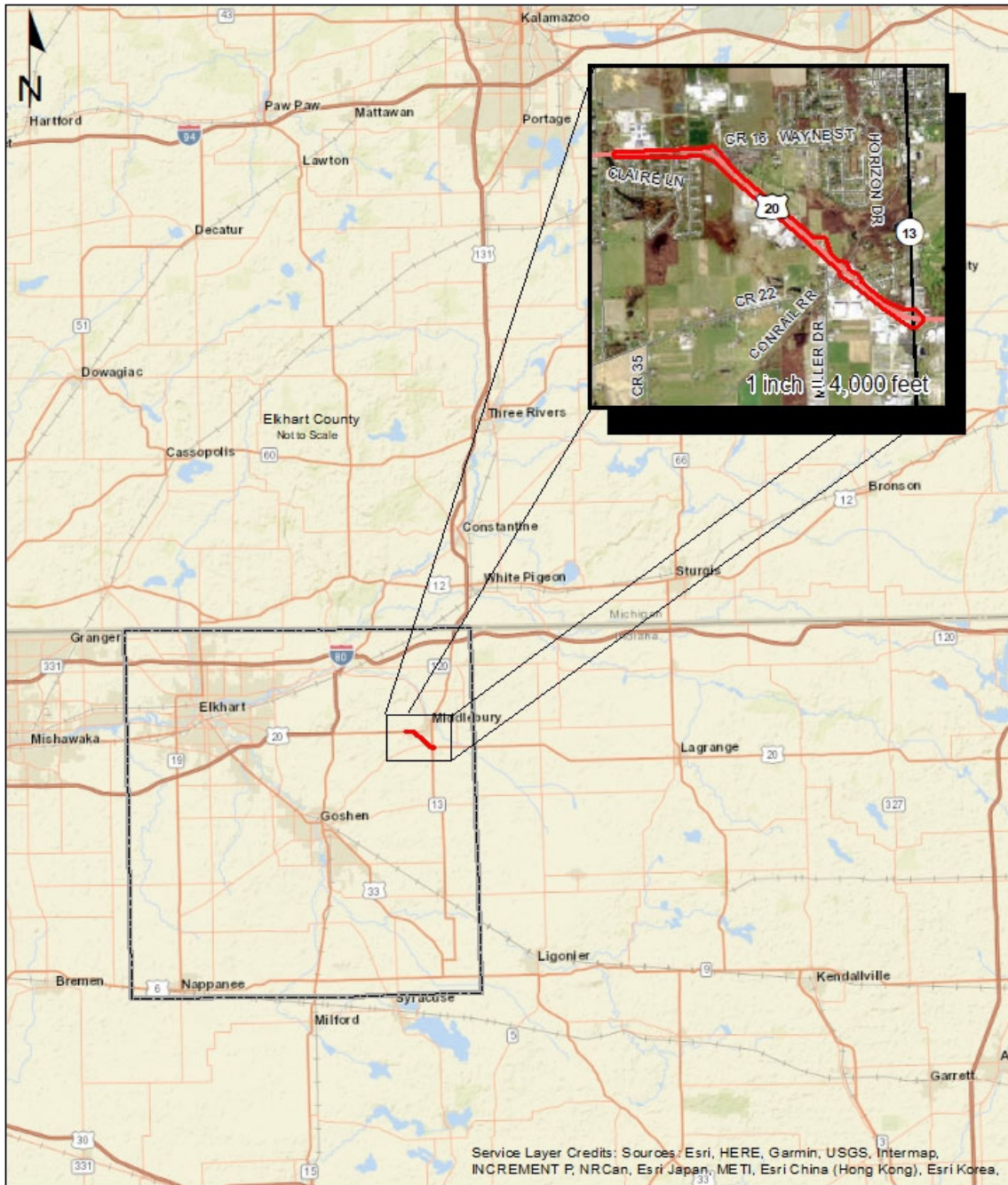


Figure 1. Project Location Map

2.0 NOISE ANALYSIS OVERVIEW

This report evaluates the potential noise impacts of the proposed improvements identified as part of the preferred alternative for the US 20 Improvement Project. The analysis documented within this report, including the determination of noise abatement measures and their potential locations, is in compliance with the Federal Highway Administration's (FHWA) *Procedures for Abatement of Highway Traffic Noise and Construction Noise (2010)*, as presented in the Title 23, Part 772 of the Code of Federal Regulations (23 CFR 772) and the *INDOT Traffic Noise Analysis Procedure (INDOT, 2017)*. The noise analysis presents the existing and future acoustical environment at various receptors located within the study area.

Basic Noise Information

Noise is generally defined as unwanted sound. Airborne sound occurs by a rapid fluctuation of air pressure above and below atmospheric pressure. Sound pressure levels are usually measured and expressed in decibels (dB). The decibel scale is logarithmic and expresses the ratio of the sound pressure unit being measured to a standard reference level.

Most sounds occurring in the environment do not consist of a single frequency, but rather a broad band of differing frequencies. Because the human ear does not respond to all frequencies equally, the method commonly used to quantify environmental noise is to apply an adjustment, or weighting, to define the relative loudness of different frequencies. The A-weighted scale is widely used because it best approximates the frequency response of the human ear. The A-weighted sound level in decibels is identified as dB(A).

Although the dB(A) may adequately indicate the level of environmental noise at any instant in time, community noise levels vary continuously. Most environmental noise includes a conglomeration of noise from distant sources, creating a relatively steady background noise in which no particular source is identifiable. To describe the time-varying character of traffic noise, a statistical noise descriptor called the equivalent hourly sound level, or $Leq(h)$, is commonly used. $Leq(h)$ describes a noise sensitive receptor's cumulative exposure from all noise-producing events over a one-hour period.

Because decibels are logarithmic units, sound levels cannot be added by ordinary arithmetic means. The following general relationships provide a basic understanding of sound generation and propagation:

- An increase, or decrease, of 10 dB will be perceived by the human ear to be a doubling, or halving (respectively), of the sound level.
- Doubling the traffic volumes, keeping vehicle mix and speeds the same, and not changing the distance between the source and a receiver will increase the traffic noise level by 3 dB, which will be perceived as a barely noticeable change in outdoor settings.

Noise Model and Analysis

According to 23 CFR 772 and the *INDOT Traffic Noise Analysis Procedure*, the process for performing a traffic noise analysis includes the following:

- Identify existing and proposed land uses in the study area;
- Determine existing noise levels through modeling, and collection of noise measurements with concurrent classification counts of vehicles passing the noise monitoring site;

- Validate predicted noise levels through comparison of measured and predicted levels;
- Model future design year traffic noise levels which will yield the worst hourly traffic noise on a regular basis (design hour noise levels);
- Identify locations that would be exposed to a noise impact based upon the Noise Abatement Criteria (NAC) as presented in Table 1; and
- Model noise abatement measures using FHWA's most recent version of TNM to mitigate the predicted design year traffic noise impacts.

In accordance with 23 CFR 772, all federal-aid highway projects must use the FHWA Traffic Noise Model (TNM) program for highway traffic noise prediction and analysis. The following parameters are used in TNM to calculate an hourly $L_{eq}(1h)$ at a specific receiver location:

- Distance between roadway and receiver;
- Relative elevations of roadway and receiver;
- Hourly traffic volume in light-duty (two axles, four tires), medium-duty (two axles, six tires), and heavy-duty (three or more axles) vehicles;
- Vehicle speed;
- Ground absorption; and
- Topographic features, including retaining walls and berms.

The US 20 Improvement Project study area consists of residential, institutional, commercial, recreational, and agricultural land uses. The criteria stated in Table 1 will help to determine if the proposed project will produce noise levels that approach or exceed the NAC throughout the corridor.

Traffic noise impacts occur if either of the following two conditions is met:

- The predicted traffic noise levels approach or exceed the NAC, as shown in Table 1. The *INDOT Traffic Noise Analysis Procedure* defines "approach or exceed" as meaning that future levels are higher than 1 dB(A) below the appropriate NAC activity category. For example, for a category B receptor, 66 dB(A) is approaching 67 dB(A) and would be considered an impact.
- The predicted traffic noise levels substantially exceed the existing noise level. The *INDOT Traffic Noise Analysis Procedure* defines "substantially exceed" as meaning when predicted traffic noise levels exceed existing noise levels by 15 dB(A) or more. For example, if a receptor's existing noise level is 50 dB(A), and if the future noise level is 65 dB(A), then it would be considered an impact.

**Table 1: FHWA Noise Abatement Criteria (NAC)
Hourly A-Weighted Sound Level-Decibels (dB(A))**

Activity Category	Activity Criteria $L_{eq}(1h)$	Evaluation Location	Activity Description
A	57	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67	Exterior	Residential
C	67	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, daycare centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52	Interior	Auditoriums, daycare centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F.
F	N/A	N/A	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	N/A	N/A	Undeveloped lands that are not permitted.

Source: Federal Highway Administration (23 CFR Part 772, Table 1).

3.0 NOISE MEASUREMENTS

Existing noise level measurements were conducted on November 19, 2019 at three representative sites in the project corridor. Sites were selected based on distribution throughout the project corridor, proximity to sensitive land uses, and avoidance of non-traffic caused noise that may skew the results. A 20-minute measurement was taken at each site. The measurements were made in accordance with FHWA and INDOT guidelines using a Larson Davis LXT integrating sound level analyzer meeting American National Standard Institute (ANSI) and International Electrotechnical Commission (IEC) Type 1 specifications. Traffic was counted and classified concurrently during the noise measurement by vehicle type, including cars, medium trucks, heavy trucks, and buses. The data collected at the three sites is presented in Table 2. The noise measurement sites, FM-1 through FM-3 are shown on Figure 2 in Appendix A. The field data sheets are presented in Appendix B and the sound level analyzer laboratory calibration certificates are presented in Appendix C of this report.

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Table 2: Measured Existing Noise Levels

Field Site #	Figure 2 page #	Site Description	Date	Start Time	Duration	Traffic						Noise Level, dB(A) L _{eq} (1h)	
						Roadway	A ^a	MT ^b	HT ^c	MC ^d	Buses ^e		Speed mph
FM-1	3	Approximately 75' north of US 20 on the Ridge Run Trail	11/19/2019	1:41 pm	20:00	US 20 EB	117	18	10	0	0	46	66.7
						US 20 WB	145	28	15	0	0	46	
FM-2	2	Along sidewalk and picnic table area in Essenhaus facility. Approximately 200' north of US 20.	11/19/2019	2:31 pm	20:00	US 20 EB	128	24	25	0	0	46	59.7
						US 20 WB	107	21	26	0	0	46	
FM-3	1	Approximately 20' east of Heritage Drive and 200' north of US 20. Adjacent to the Heritage Middle School athletic fields.	11/19/2019	3:25 pm	20:00	US 20 EB	175	23	27	0	0	46	58.4
						US 20 WB	192	32	30	0	0	46	

- 1) Vehicle counts classified as follows:
- a. Autos (A) defined as vehicles with 2 axles and 4 tires.
 - b. Medium trucks (MT) defined as vehicles with 2 axles and 6 tires.
 - c. Heavy trucks (HT) defined as vehicles with 3 or more axles.
 - d. Motorcycle (MC) defined as vehicles with 2 or 3 wheels.
 - e. Buses defined as vehicles carrying more than 9 passengers.

Source: HNTB Corporation, November 2019

Measured vs. Modeled

TNM was used to validate the predicted noise levels through comparison of the measured and predicted noise levels. During the field measurements the skies were overcast, the temperatures ranged from 46 to 48 degrees Fahrenheit and the winds were from the west at 1 to 2 mph. The traffic data from these three sites were used in the model. Results at all three field sites modeled were within 3 dB(A) of the measured levels. The model is considered to be validated since all of the field measurements were within 3 dB(A) of the predicted values.

Table 3: Comparison of Measured and Modeled Noise Levels

Field Site	Figure 2 page #	Noise Level, dB(A) $L_{eq}(1h)$		Difference in Noise Level, dB(A) $L_{eq}(1h)$ (Modeled Minus Measured)
		Measured	Modeled	
FM-1	3	66.7	65.6	1.1
FM-2	2	59.7	59.4	0.3
FM-3	1	58.4	60.7	2.3

Source: HNTB Corporation, November 2019

4.0 NOISE MODELING

The latest version of TNM was used to model existing (2024) and design year (2044) worst hourly traffic noise levels within the study area. Traffic data from the *Project Traffic Forecast Report* (INDOT, 2019) was used as input into TNM to model 2024 and 2044 noise levels throughout the study area.

Receptors are defined as discrete or representative locations in a noise sensitive area(s). Receivers are defined as points where the noise model calculates the noise level. A receiver in the noise model may represent multiple receptors.

Consistent with the *INDOT Traffic Noise Analysis Procedure*, ninety-eight (98) noise receivers representing the 168 receptors within 500 feet of the edge of the outside travel lane of the project, numbered R1 through R116 as shown in Appendix A, were modeled in the existing and future build conditions. The number of noise receivers modeled was less than the actual number of receptors identified in the noise study area. This is because the noise receivers modeled for multi-family residential units, Crystal Valley Missionary Church, Northridge High School, Northridge Middle School Athletic Fields, and the Pumpkinvine Nature Trail were representative of multiple receptors. Because no impacts were identified at the edge of the 500-foot buffer, the study area was not extended to the maximum of 800 feet. The results of the computer modeling are presented in Table 4.

Receptors for Non-Residential Land Uses

Non-residential land uses in the study area with noise sensitive land uses consist of churches, schools, athletic fields and a multi-use trail. Under most situations, a single structure is considered a single receptor. Structures that contain multiple residential units (e.g., hotels, apartments) are considered to have one receptor per residential unit. For

certain land uses (e.g., parks, trails, schools), a separate algorithm (shown below) is used to translate usage data into an appropriate number of receptors, based on converting total usage to equivalent residential units. To determine the number of receptors appropriate for the Crystal Valley Missionary Church, Northridge Middle School Athletic Fields, the Pumpkinvine Nature Trail, Ridge Run Trail and Northridge High School, a slightly modified version of the algorithm provided in the *INDOT Traffic Noise Analysis Procedure* was used. This algorithm converts total usage to equivalent receptors. Below is an explanation of how the number of receptors was determined for each property.

Crystal Valley Missionary Church

The Crystal Valley Missionary Church is located at 223 US 20, on the south side of US 20. This site is represented in the model by receivers R61, R62 and R63. Based on the size of the building, it was estimated that Crystal Valley Missionary Church has approximately 100 regular attendees on an average Sunday. Based on the occupation of this building approximately 6 hours per day and 2 days per week for 12 months of the year, a usage factor of 0.07 was calculated for this facility. Multiplying the usage factor (0.07) by the total assumed visitors (100) gives an average daily number of users of 7. The following algorithm was used to calculate the appropriate number of receptors per receiver.

$$(7 \text{ visitors per day} / 2.52 \text{ average people per household}) \times (100\% \text{ of the property within the study area}) = 3 \text{ receptors.}$$

These 3 receptors were divided between R60 and R61 in the model. It was assumed that the receiver representing the playground was used on a more regular basis than the volleyball court. Therefore, R60 was assigned one receptor and R61 was assigned two receptors.

Northridge Middle School Athletic Fields

The Northridge Middle School Athletic Fields is approximately 11 acres of soccer fields, football fields and track bordered by Raider Drive to the north, US 20 to the south, a bus parking facility to the east and Heritage Drive to the west. These fields host soccer and football games and practices, as well as track and field events affiliated with Northridge Middle School. These fields are represented in the model by receivers R85 and R86. Based on the number of fields and assumed number of users per field, the average daily number of users was estimated to be 20. Based on the usage of the fields for approximately 10 hours per day and 7 days per week for 9 months of the year, a usage factor of 0.31 was calculated for this facility. Multiplying the usage factor (0.31) by the estimated daily number of users (20) gives an average daily number of users of 7. The following algorithm was used to calculate the appropriate number of receptors per receiver.

$$(7 \text{ visitors per day} / 2.52 \text{ average people per household}) \times (70\% \text{ of the property within the study area}) = 1.9 \text{ receptors, which was rounded to two for this analysis.}$$

These 2 receptors were divided evenly between R85 and R86.

Pumpkinvine Nature Trail

The Pumpkinvine Nature Trail is a multi-use trail that runs roughly north/south through the study area. This trail is represented in the model by receivers R66, R67, R68 and R69. The receivers were placed at equal distances along the trail. Pedestrian and cyclist traffic data used to determine appropriate benefited dwelling units for this trail were generated by a traffic counter approximately 1.2 miles north of US 20 in Middlebury (Carrico, 2020). A second counter is located approximately 5.2 miles to the southwest of US 20. Using the traffic counts from the counter north of US 20 to represent this segment likely overestimates the actual usage of this trail segment as most of the traffic on the trail travels between Shipshewana and Middlebury. The total length of the trail segment for which counts were provided is approximately 6.4 miles (33,792 feet). Approximately 1,100 feet of the Pumpkinvine Nature is within a 500-foot buffer of the proposed edge of pavement of the US 20 Improvement Project. The average daily use of this trail segment, according to the traffic counter north of US 20, is 468 users per day. The following algorithm was used to calculate the appropriate number of receptors per receiver.

$$(468 \text{ users per day} / 2.52 \text{ average people per household}) \times (1,100 \text{ feet of trail within the study area} / 33,792 \text{ feet of trail within the segment}) = 6 \text{ receptors.}$$

The six receptors calculated above were divided between the four receiver locations (two receptors each for R67 and R68 and one receptor each for R66 and R69).

Ridge Run Trail

The Ridge Run Trail is a multi-use trail that runs roughly east/west through the study area. This trail is represented in the model by receivers R93 and R94. The receivers were placed at equal distances along the trail. The section of this trail within the study area is approximately 0.86 miles long and serves as a connection between the Essenhaus Inn and Conference Center and the Pumpkinvine Nature Trail. This section of the Ridge Run trail was constructed in 2018. It was assumed that the usage of the Ridge Run Trail, represented by R93 and R94 in the model, is a small fraction of the overall usage of the Pumpkinvine Nature Trail. Therefore, R93 and R94 were each assigned one receptor.

Essenhaus Inn and Conference Center Trail

There are several walking paths on the grounds of the Essenhaus Inn and Conference Center that are within the study area. These paths serve as amenities to the Inn and can be used by the public. This trail is represented in the model by receivers R95 and R96. The receivers were placed at equal distances along the trail. It was assumed that the usage of the this walking path is similar to the Ridge Run Trail, therefore, R95 and R96 were each assigned one receptor.

Essenhaus Inn and Conference Center

The Essenhaus Inn and Conference Center is a part of the Essenhaus Facility. The southern corner of the hotel building is within the study area. It was determined that this Inn and Conference Center has 96 rooms and has an average occupancy rate of 50

percent with double occupancy. The following algorithm was used to calculate the appropriate number of receptors per receiver.

$$(96 \text{ visitors per day} / 2.52 \text{ average people per household}) \times (10\% \text{ of the property within the study area}) = 4 \text{ receptors.}$$

The four receptors calculated above were assigned to receiver R97.

Northridge High School

Northridge High School is located north of US 20 at the west end of the study area. This site is represented in the model by receivers R80 and R81. It was determined that this school has a combined 1,600 staff and students on an average day. Based on the occupation of this building approximately 8 hours per day and 182 days of the year, a usage factor of 0.17 was calculated for this facility. Multiplying the usage factor (0.17) by the total faculty, staff and students (1,600) gives an average daily number of users of 266. The following algorithm was used to calculate the appropriate number of receptors per receiver.

$$(266 \text{ visitors per day} / 2.52 \text{ average people per household}) \times (50\% \text{ of the property within the study area}) = 53 \text{ receptors.}$$

To account for the usage of the parking lot as a marching band practice facility, 2 receptors were applied to R81 while the remaining 51 were applied to R80 in the model.

5.0 IMPACT ASSESSMENT

Existing exterior noise levels range from 55.7 to 69.4 dB(A) $L_{eq}(1h)$. Predicted future exterior design year noise levels would range from 57.0 to 70.6 dB(A) $L_{eq}(1h)$. Predicted future exterior design year noise levels would range from 57.0 to 70.6 dB(A) $L_{eq}(1h)$. The locations of the receivers are shown on the traffic analysis noise maps in Appendix A of this report. Existing and proposed predicted noise levels are presented in Table 4.

Predicted future noise levels change over existing noise levels range from -0.7 to 4.0 dB(A). Substantial noise level increases of 15.0 dB(A) or more are not expected to occur as a result of the proposed project. 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.

Predicted future design year (2044) noise levels adjacent to the proposed project would approach or exceed the Noise Abatement Criteria (NAC) at 15 receiver locations representing 18 receptors. The predicted future noise levels at these 18 receptors would range from 66.6 to 70.6 dB(A) $L_{eq}(h)$.

Table 4: Design Hour Noise Levels, dB(A) Leq(1h)

Receiver ID	Noise Abatement Criteria (NAC)			Receptors	Noise Level		Increase (Future - Existing)	Impact?
	Description	Category	Criteria, Leq(1h)		Existing Leq(1h)	Future Leq(1h)		
R1	Single Family Residential	B	66	1	61.1	63.3	2.2	No
R2	Single Family Residential	B	66	1	58.3	60.6	2.3	No
R3	Single Family Residential	B	66	1	56.7	59.4	2.7	No
R4	Single Family Residential	B	66	1	56.6	58.7	2.1	No
R5	Single Family Residential	B	66	1	66.0	67.9	1.9	Yes
R6	Single Family Residential	B	66	1	66.1	68.2	2.1	Yes
R7	Single Family Residential	B	66	1	60.4	62.1	1.7	No
R8	Single Family Residential	B	66	1	59.4	61.1	1.7	No
R9	Single Family Residential	B	66	1	59.5	61.2	1.7	No
R10	Single Family Residential	B	66	1	57.1	58.8	1.7	No
R11	Single Family Residential	B	66	1	67.7	69.8	2.1	Yes
R12	Single Family Residential	B	66	1	67.4	68.5	1.1	Yes
R13	Single Family Residential	B	66	1	69.1	70.4	1.3	Yes
R14	Single Family Residential	B	66	1	67.5	67.8	0.3	Yes
R15	Single Family Residential	B	66	1	62.2	63.1	0.9	No
R16	Single Family Residential	B	66	1	59.2	60.6	1.4	No
R17	Single Family Residential	B	66	1	57.7	59.0	1.3	No
R18	Single Family Residential	B	66	1	56.1	57.2	1.1	No
R19	Single Family Residential	B	66	1	59.8	61.2	1.4	No
R20	Single Family Residential	B	66	1	59.4	60.7	1.3	No

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Receiver ID	Noise Abatement Criteria (NAC)			Receptors	Noise Level		Increase (Future - Existing)	Impact?
	Description	Category	Criteria, $L_{eq}(1h)$		Existing $L_{eq}(1h)$	Future $L_{eq}(1h)$		
R21	Single Family Residential	B	66	1	58.0	59.4	1.4	No
R22	Single Family Residential	B	66	1	57.6	58.9	1.3	No
R23	Single Family Residential	B	66	1	55.7	57.0	1.3	No
R24	Single Family Residential	B	66	1	55.8	57.0	1.2	No
R25	Single Family Residential	B	66	1	56.2	57.4	1.2	No
R26	Single Family Residential	B	66	1	57.2	58.5	1.3	No
R27	Single Family Residential	B	66	1	58.8	60.3	1.5	No
R28	Single Family Residential	B	66	1	60.2	61.7	1.5	No
R29	Single Family Residential	B	66	1	62.6	63.5	0.9	No
R30	Single Family Residential	B	66	1	68.4	69.2	0.8	Yes
R31	Single Family Residential	B	66	1	69.4	70.6	1.2	Yes
R32	Single Family Residential	B	66	1	66.6	67.1	0.5	Yes
R33	Single Family Residential	B	66	1	61.7	62.8	1.1	No
R35	Single Family Residential	B	66	1	62.1	63.2	1.1	No
R36	Single Family Residential	B	66	1	62.0	63.2	1.2	No
R37	Office Building	E	71	1	63.8	64.7	0.9	No
R38	Office Building	E	71	1	63.0	63.9	0.9	No
R39	Single Family Residential	B	66	1	57.7	59.3	1.6	No
R40	Single Family Residential	B	66	1	57.6	59.3	1.7	No
R41	Single Family Residential	B	66	1	57.7	59.5	1.8	No
R42	Single Family Residential	B	66	1	57.7	59.3	1.6	No
R43	Single Family Residential	B	66	1	57.2	58.6	1.4	No

Receiver ID	Noise Abatement Criteria (NAC)			Receptors	Noise Level		Increase (Future - Existing)	Impact?
	Description	Category	Criteria, $L_{eq}(1h)$		Existing $L_{eq}(1h)$	Future $L_{eq}(1h)$		
R50	Subway Outdoor Seating	E	71	1	65.5	66.9	1.4	No
R51	Single Family Residential	B	66	1	57.5	59.1	1.6	No
R52	Single Family Residential	B	66	1	56.7	58.2	1.5	No
R53	Single Family Residential	B	66	1	56.3	57.8	1.5	No
R54	Single Family Residential	B	66	1	56.8	58.4	1.6	No
R55	Single Family Residential	B	66	1	57.8	59.7	1.9	No
R56	Single Family Residential	B	66	1	58.3	60.5	2.2	No
R57	Single Family Residential	B	66	1	58.3	60.3	2.0	No
R58	Single Family Residential	B	66	1	57.4	59.1	1.7	No
R59	Single Family Residential	B	66	1	56.7	58.3	1.6	No
R60	Crystal Valley Church - Volleyball	C	66	1	57.6	58.9	1.3	No
R61	Crystal Valley Church - Playground	C	66	2	61.5	62.9	1.4	No
R63	Office Building	E	71	1	67.1	67.8	0.7	No
R64	Single Family Residential	B	66	1	58.4	62.2	3.8	No
R65	Single Family Residential	B	66	1	55.7	59.0	3.3	No
R66	Pumkinvine Nature Trail	C	66	1	59.1	61.2	2.1	No
R67	Pumkinvine Nature Trail	C	66	2	65.2	67.5	2.3	Yes
R68	Pumkinvine Nature Trail	C	66	2	63.9	66.6	2.7	Yes
R69	Pumkinvine Nature Trail	C	66	1	58.1	60.9	2.8	No
R70	Office Building	E	71	1	58.0	58.4	0.4	No
R71	Office Building	E	71	1	67.3	68.9	1.6	No

Receiver ID	Noise Abatement Criteria (NAC)			Receptors	Noise Level		Increase (Future - Existing)	Impact?
	Description	Category	Criteria, $L_{eq}(1h)$		Existing $L_{eq}(1h)$	Future $L_{eq}(1h)$		
R80	Northridge High School Interior	D	51	51	42.2	41.5	-0.7	No
R81	Northridge High School Exterior	C	66	2	62.0	61.7	-0.3	No
R82	Single Family Residential	B	66	1	64.2	64.9	0.7	No
R83	Single Family Residential	B	66	1	64.5	65.6	1.1	No
R84	Single Family Residential	B	66	1	64.3	65.3	1.0	No
R85	Athletic Fields	C	66	1	57.9	58.4	0.5	No
R86	Athletic Fields	C	66	1	60.8	60.2	-0.6	No
R87	Essenhaus Restaurant	E	71	1	67.2	67.0	-0.2	No
R88	Essenhaus Exterior Use	E	71	1	62.5	63.5	1.0	No
R89	Essenhaus Shops	E	71	1	59.3	60.3	1.0	No
R90	Office Building	E	71	1	61.0	65.0	4.0	No
R91	Single Family Residential	B	66	1	64.9	68.5	3.6	Yes
R92	Single Family Residential	B	66	1	65.5	69.2	3.7	Yes
R93	Ridge Run Trail	C	66	1	65.8	68.8	3.0	Yes
R94	Ridge Run Trail	C	66	1	56.1	57.6	1.5	No
R95	Essenhaus Inn and Conference Center Trail	C	66	1	53.5	55.3	1.8	No
R96	Essenhaus Inn and Conference Center Trail	C	66	1	58.6	60.2	1.6	No
R97	Essenhaus Inn and Conference Center	E	72	4	57.5	57.6	0.1	No
R100	Single Family Residential	B	66	1	61.4	63.3	1.9	No
R101	Single Family Residential	B	66	1	58.0	59.9	1.9	No
R102	Single Family Residential	B	66	1	61.8	63.3	1.5	No
R103	Single Family Residential	B	66	1	59.8	61.3	1.5	No

Receiver ID	Noise Abatement Criteria (NAC)			Receptors	Noise Level		Increase (Future - Existing)	Impact?
	Description	Category	Criteria, $L_{eq}(1h)$		Existing $L_{eq}(1h)$	Future $L_{eq}(1h)$		
R104	Multi- Family Residential	B	66	2	58.2	59.4	1.2	No
R105	Multi- Family Residential	B	66	2	59.9	61.3	1.4	No
R106	Multi- Family Residential	B	66	2	62.2	63.6	1.4	No
R107	Multi- Family Residential	B	66	2	62.3	63.6	1.3	No
R108	Multi- Family Residential	B	66	2	61.8	63.1	1.3	No
R109	Multi- Family Residential	B	66	2	59.0	60.1	1.1	No
R110	Multi- Family Residential	B	66	2	57.7	58.8	1.1	No
R111	Multi- Family Residential	B	66	2	65.8	66.8	1.0	Yes
R112	Multi- Family Residential	B	66	2	58.0	59.0	1.0	No
R113	Multi- Family Residential	B	66	2	60.2	61.4	1.2	No
R114	Multi- Family Residential	B	66	2	61.1	62.1	1.0	No
R115	Multi- Family Residential	B	66	2	59.5	60.3	0.8	No
R116	Multi- Family Residential	B	66	2	57.4	58.1	0.7	No

The only apparent areas of frequent outdoor human use observed on the Northridge High School property within the study area was a tower used for marching band practice. In order to fully evaluate noise impacts to Northridge High School interior noise levels were modeled. To evaluate interior noise levels the exterior level was modeled, and a reduction factor was applied. A summary of the analysis results for this Category D land use is provided below in Table 5.

Table 5: Category D Noise Levels

Receiver ID	Category D Description	Exterior Noise Level (dBA)	Noise Reduction due to Structural Criteria (dBA) ¹	Interior Noise (dBA)	Interior Criteria (dBA)	Impact?
R80	Northridge High School Interior	61.5	20	41.5	51	No

¹ – U.S. Department of Transportation. (1995). *Highway Traffic Noise Analysis and Abatement Policy and Guidance*. Washington DC: Federal Highway Administration Office of Environmental Planning Noise and Air Quality Branch

6.0 NOISE ABATEMENT MEASURES

Based on the requirements of 23 CFR 772 and within the framework of the *INDOT Traffic Noise Analysis Procedure*, various methods were reviewed to mitigate the noise impact of the preferred alternative. Among those mitigation options considered were those listed below.

- Restricting truck traffic to specific times of the day.
- Prohibiting truck traffic.
- Altering horizontal and vertical alignments.
- Acquiring property for construction of noise barriers or berms.
- Acquiring property to create buffer zones to prevent development that could be adversely impacted.
- Constructing berms (linear earthen mounds).
- Installing noise barriers (a wall located between the highway and receptors).

Restricting or prohibiting trucks is beyond the scope of this project and would require changes in legislation. Design criteria and recommended termini for the proposed project do not allow for sufficient changes in alignment to provide a noticeable change in the traffic noise levels at the abutting properties. A 15-foot tall earthen noise berm would have a footprint ranging in width from 35 to 95 feet. Therefore, it is neither feasible nor reasonable to construct noise berms within the study area without acquiring substantial amounts of right-of-way. The construction of noise barriers appears to be the most feasible and reasonable method to mitigate noise impact for this project. Abatement is recommended for consideration where it is feasible and reasonable to construct a noise barrier.

A noise analysis identifies “where noise abatement is feasible and reasonable, and locations with impacts that have no feasible or reasonable noise abatement alternatives.” (INDOT, 2017). Factors to be considered in determining noise abatement feasibility, as defined by the *INDOT Traffic Noise Analysis Procedure*, are listed below:

- **Acoustic Feasibility:** INDOT requires that noise barriers achieve a 5dB(A) reduction at a majority (greater than 50%) of the impacted receptors. If a barrier cannot achieve this acoustic goal, abatement is considered to not be acoustically feasible.
- **Engineering Feasibility:** INDOT requires noise abatement measures to be based on sound engineering practices and standards and requires that any measures be evaluated at the optimum location. For instances in which the roadway is located on fill and is at a higher location than nearby receptors, a barrier will be evaluated near the shoulder. For instances in which the roadway is located below the nearby receptors, a barrier will be evaluated near the edge of the right-of-way near the receptors. In addition, noise barriers require long, uninterrupted segments of barrier to be feasible. As such, if there are existing access points and/or driveways, it is not feasible to construct effective noise barriers for the roadway.
- **Engineering feasibility** also takes into account topography, drainage, safety, barrier height, utilities, and access/maintenance needs (which may include right-of-way considerations). In situations where engineering considerations make noise barriers

not feasible, the noise analysis will explicitly state the reasons (topography, drainage, safety, etc.). To be feasible, a mitigation measure must be acoustically feasible and must meet engineering requirements for constructability.

Factors to be considered in determining reasonableness, as defined by the *INDOT Traffic Noise Analysis Procedure*, are listed below:

- **Cost-Effectiveness:** To determine cost effectiveness, the estimated cost of constructing a noise barrier (including installation and additional necessary construction such as foundations or guardrails) will be divided by the number of benefited receptors (those who would receive a reduction of at least 5 dB(A)). A base material and design cost of \$25,000 or less per benefited receiver is currently considered to be cost-effective. Development in which a majority (more than 50%) of the receptors was in place prior to the initial construction of the roadway in its current state (functional classification) will receive additional consideration for noise abatement. The cost-effectiveness criteria used for these cases will be 20% greater (currently \$30,000 per benefited receptor). The estimated construction costs of a noise barrier are based on a unit cost of \$30.00 per square foot.
- **Noise Reduction Design Goal:** INDOT’s goal for substantial noise reduction is to provide at least a 7.0 dB(A) reduction for benefited first row receptors in the design year. However, conflicts with adjacent lands may make it impossible to achieve substantial noise reduction at all impacted first row receptors. Therefore, the noise reduction design goal for Indiana is 7dB(A) for a majority (greater than 50%) of the impacted first row receptors.
- **Views of Residents and Property Owners:** A survey will be mailed to each benefited resident. If the property owner is different from the current resident, both the resident and the property owners are surveyed. The concerns and opinions of the property owner and the unit occupants will be balanced with other considerations in determining whether a barrier is appropriate for a given location.

Of the 15 receivers predicted to be impacted in the design year, four have driveways that directly access US 20. Because a noise barrier would inhibit ingress and egress to these properties, noise abatement was not considered feasible. Table 6 summarizes this feasibility analysis. See Appendix A for receiver locations.

Table 6: Noise Abatement Considerations

Receiver	Land Use	NAC Category	Noise Abatement Feasible?	Explanation
R91	Single-Family Residential	B	No	Direct driveway access
R92	Single-Family Residential	B	No	Direct driveway access
R93	Recreational (Ridge Run Trail)	C	No	Direct driveway access
R111	Single-Family Residential	B	No	Direct driveway access

Three noise barriers (Noise Barriers 1, 2, and 3) were modeled in the study area for the impacted receivers where a noise barrier could feasibly be constructed. See Table 7 for summary of results.

Noise Barrier 1 (NB-1) was evaluated in the vicinity of Westlake Drive to provide noise abatement for 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 of these iterations were found to be not reasonable. See Table 7.

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. See Table 7.

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. 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. See Table 7.

Table 7: Noise Barrier Summary

Noise Barrier	Impacted Receivers	Feasible?	Design Goal Met?	Benefited Receptors	Area (Sq. ft)	Est. Barrier Cost	Cost per Benefited Receptor	Reasonable?
NB-1 Combined	R5, R6, R11-14, R30-32	Yes	Yes	18	23,698	\$710,940	\$39,497	No
NB-1 E. of Westlake	R11-R32	Yes	Yes	10	15,308	\$459,240	\$45,924	No
NB-1 W. of Westlake	R5-R10	Yes	No	2	7,452	\$223,560	\$111,780	No
NB-2	R68	Yes	Yes	2	14,469	\$434,070	\$217,035	No
NB-3	R67	Yes	Yes	2	14,444	\$433,320	\$216,660	No

7.0 UNDEVELOPED LANDS

The distances to the 66 dB(A) $L_{eq}(1h)$ noise level contour, which vary along the study area, were developed to assist local planning authorities with jurisdiction over the remaining undeveloped lands within the study area to prevent development of incompatible land uses. More specifically, large undeveloped lands without permitted/anticipated future development along the project corridor were modeled at 50 feet (from the nearest edge of pavement), 100 feet, and then 100-foot intervals to 500 feet. Given the similarities in local topography and traffic volumes utilized in the analysis, two study area groups, Undeveloped Land Analysis Areas A and B, were identified and are considered representative of the project corridor. Undeveloped Land Analysis Areas A and B were evaluated on the north and south sides of US 20, respectively. The results of the analysis are included below in Table 8.

Table 8: Study Areas

Study Area	50 feet (dB(A))	100 feet (dB(A))	200 feet (dB(A))	300 feet (dB(A))	400 feet (dB(A))	500 feet (dB(A))
A	72.4	69.8	65.4	62.9	60.9	59.4
B	73.3	69.8	65.2	62.5	60.2	58.6

As shown in Table 8, the estimated distances to the 66 dB(A) $L_{eq}(1h)$ noise level contour are between 100 and 200 feet from the proposed edge of pavement. It is recommended that any future development proposed around the project be modeled with accurate survey data to avoid creating incompatible land uses adjacent to the project. Based on a phone conversation with the Middlebury Town Manager, there are no current building permits within the study area (M. Cripe, personal communication, November 5, 2020).

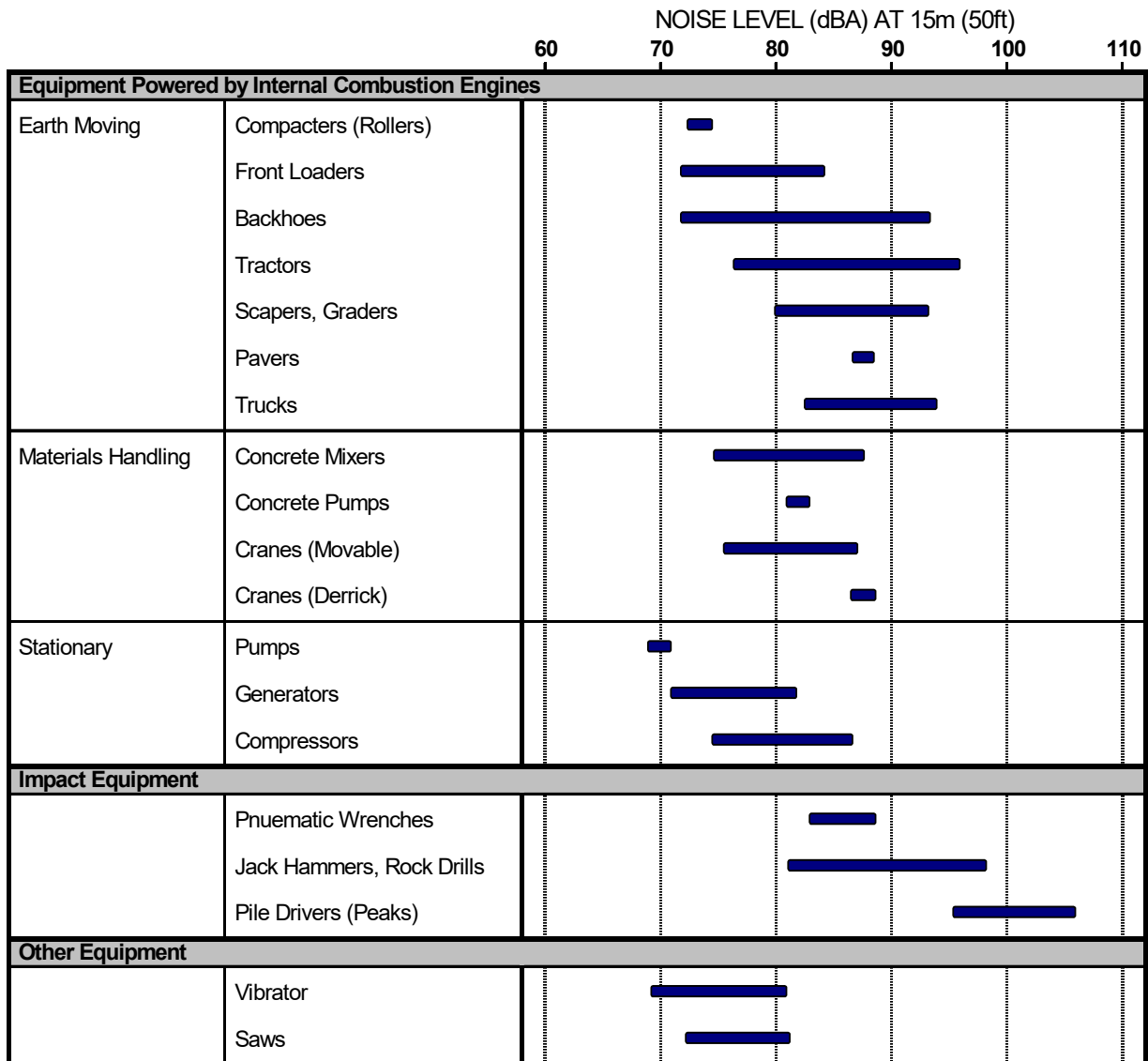
8.0 CONSTRUCTION NOISE

In addition to noise from traffic, construction activities themselves can produce increased noise of a temporary nature. INDOT will be sensitive to local needs and may make adjustments to work practices in order to reduce inconvenience to the public.

The major construction elements of this project are expected to be demolition, hauling, grading, paving, and bridge construction. Construction of the proposed improvements will result in a temporary increase in the ambient noise level within the study area. General construction noise impacts for passerby and those individuals living or working near the project can be expected particularly from demolition, earth moving, pile driving, and paving operations. Equipment associated with construction generally includes backhoes, graders, pavers, concrete trucks, compressors, and other miscellaneous heavy equipment.

Table 9 lists some typical peak operating noise levels at a distance of 15m (50 feet), grouping construction equipment according to mobility and operating characteristics. Considering the relatively short-term nature of construction noise, impacts are not expected to be substantial. The transmission loss characteristics of nearby structures are believed to be sufficient to moderate the effects of intrusive construction noise.

Table 9: Construction Equipment Sound Levels



SOURCE: U.S. Report to the President and Congress on Noise, February, 1972.

9.0 CONCLUSION

Based on the studies thus far accomplished, the State of Indiana has not identified any locations for the US 20 Improvement Project where noise abatement is likely. Noise abatement at the location identified in Table 7 is based upon preliminary design costs and design criteria. 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.

10.0 REFERENCES

23 CFR 772 (2010). "Procedures for the Abatement of Highway Traffic Noise and Construction Noise." Retrieved from <https://www.ecfr.gov/cgi-bin/text-idx?node=pt23.1.772&rgn=div5>

Anderson, G. S., C.S.Y. Lee, G.G. Fleming and C. Menge, "FHWA Traffic Noise Model®, Version 1.0 User's Guide", Federal Highway Administration, January 1998, p. 60.

Carrico, Robert, Michiana Council of Governments, email regarding "Re: Pumpkinvine Trail Usage Data", October 28, 2020

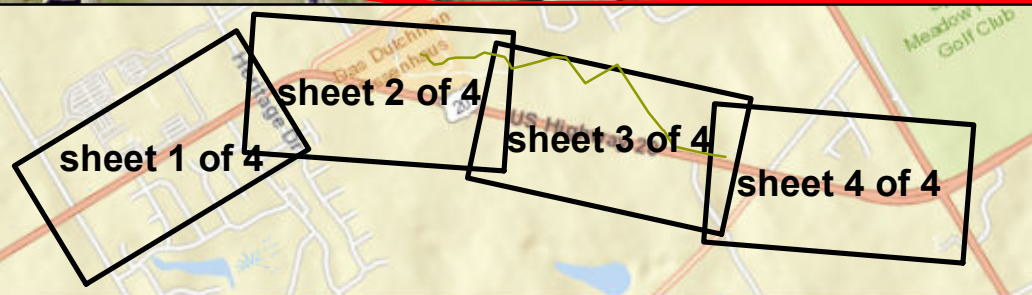
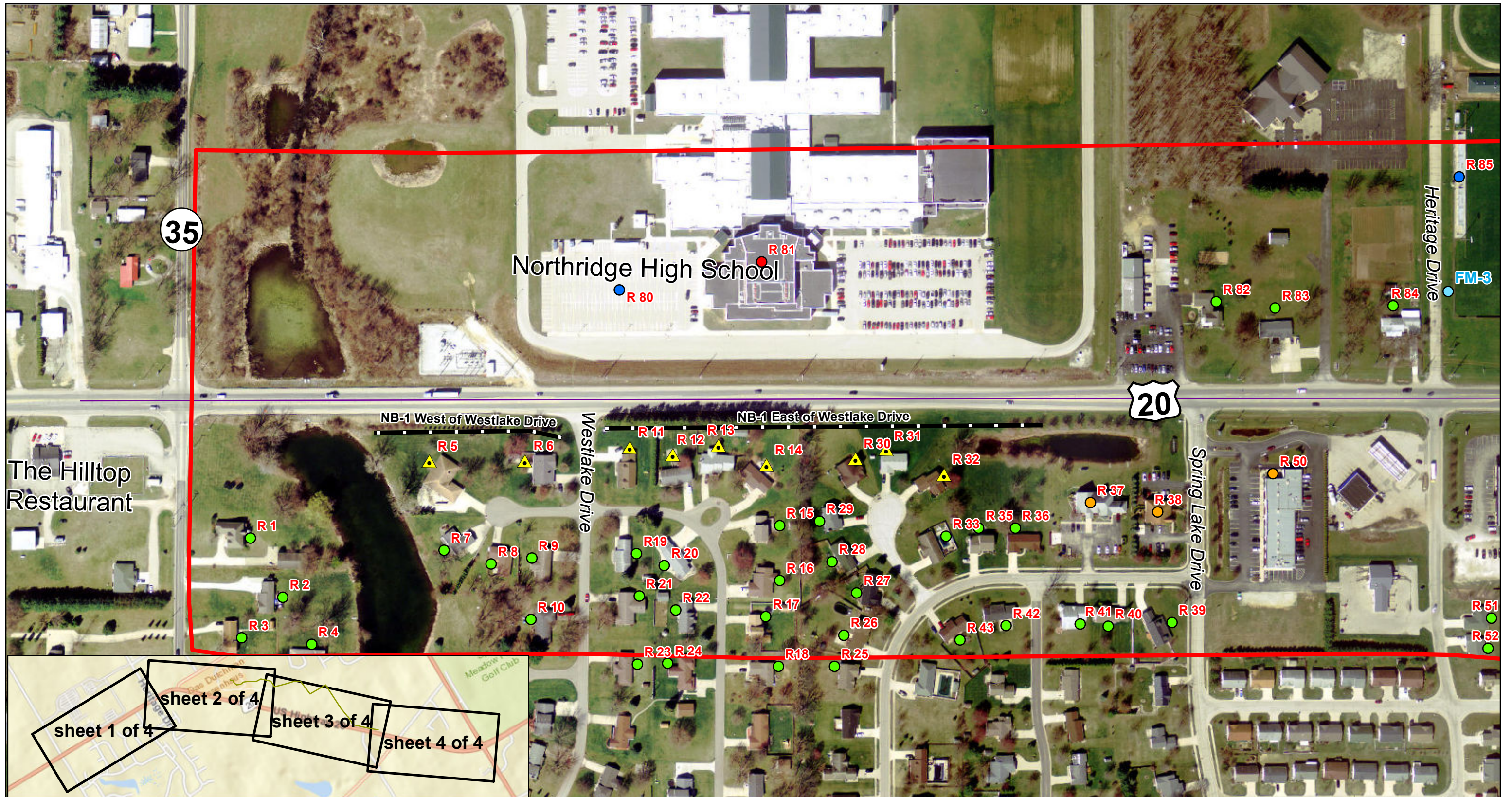
Indiana Department of Transportation, "Project Traffic Forecast Report US 20 from 2.13 miles W of SR 13 (CR 35) to SR 13", Office of Traffic Statistics, October 2019.

Lau, Michael C., Cynthia S. Y. Lee, Gregg G. Judith L. Rochat, Eric R. Boeker, and Gregg C. Fleming. "FHWA Traffic Noise Model® Users Guide (Version 2.5 Addendum)." Federal Highway Administration, April 2004.

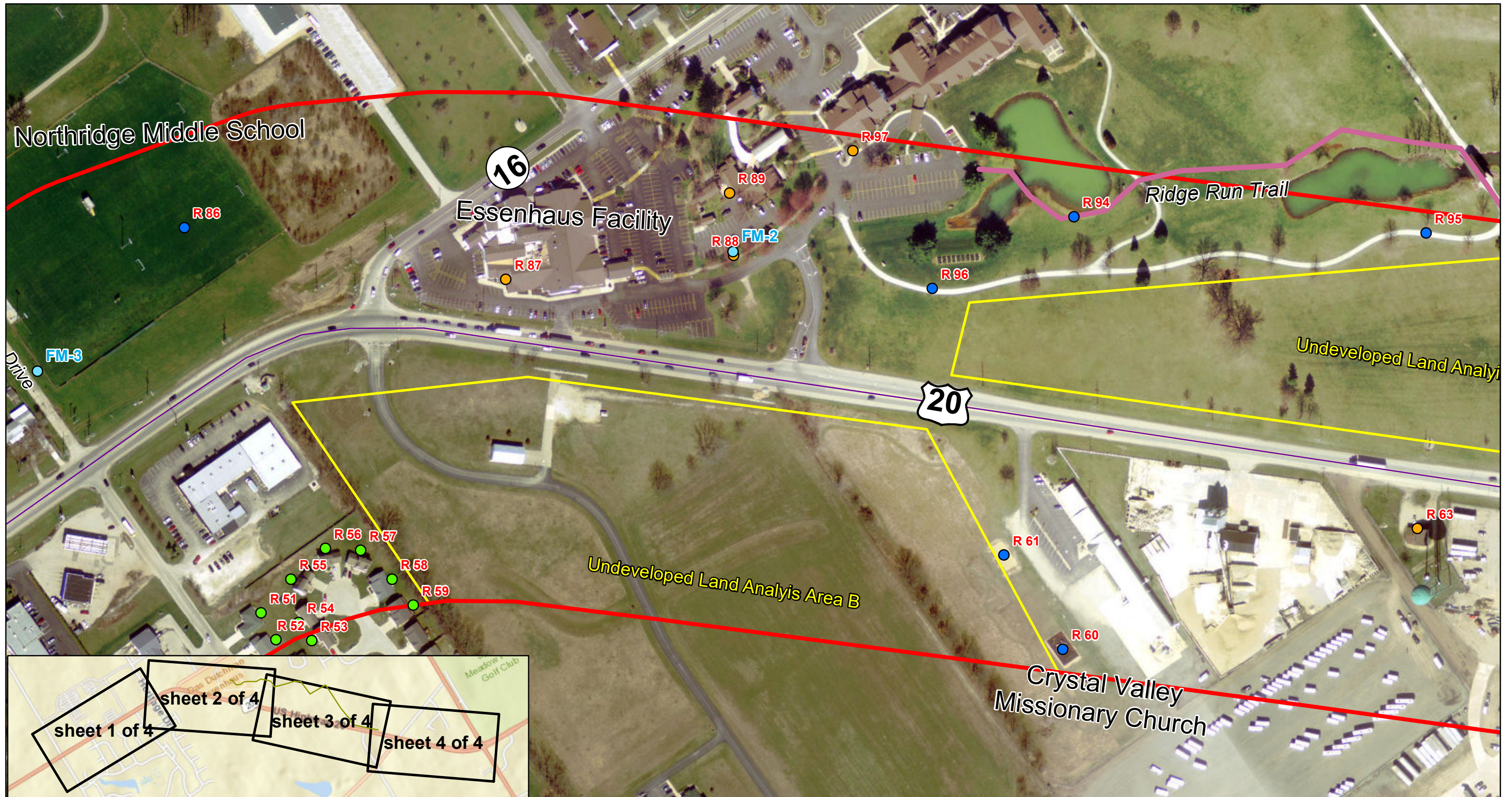
U.S. Environmental Protection Agency "Report to the President and Congress on Noise" February 1972. Retrieved from <https://nepis.epa.gov/>

"Traffic Noise Analysis Procedure", Indiana Department of Transportation, 2017.
Retrieved from <http://www.in.gov/indot/files/2017%20INDOT%20Noise%20Policy.pdf>

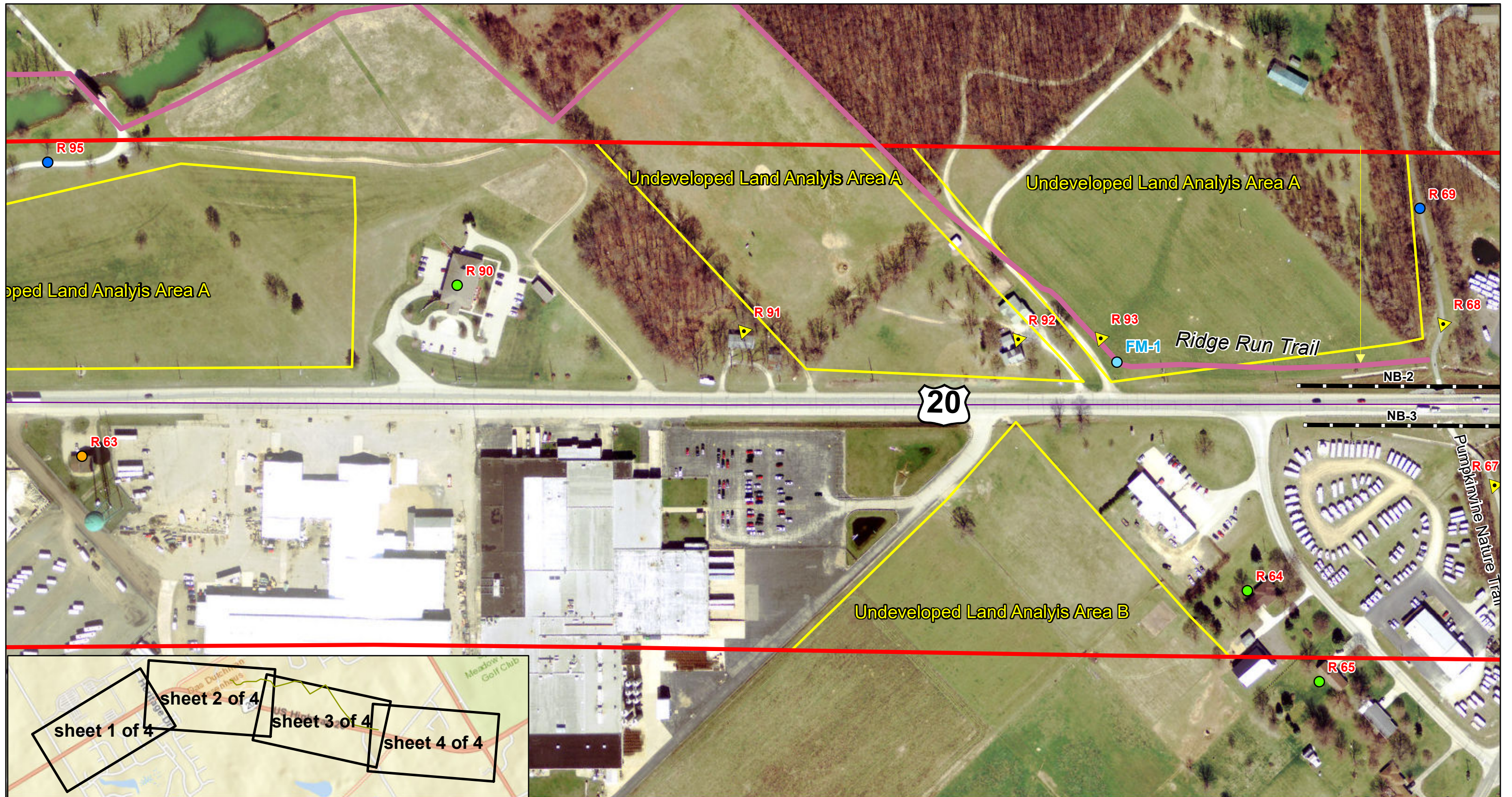
APPENDIX A
Modeling and Measurement Locations



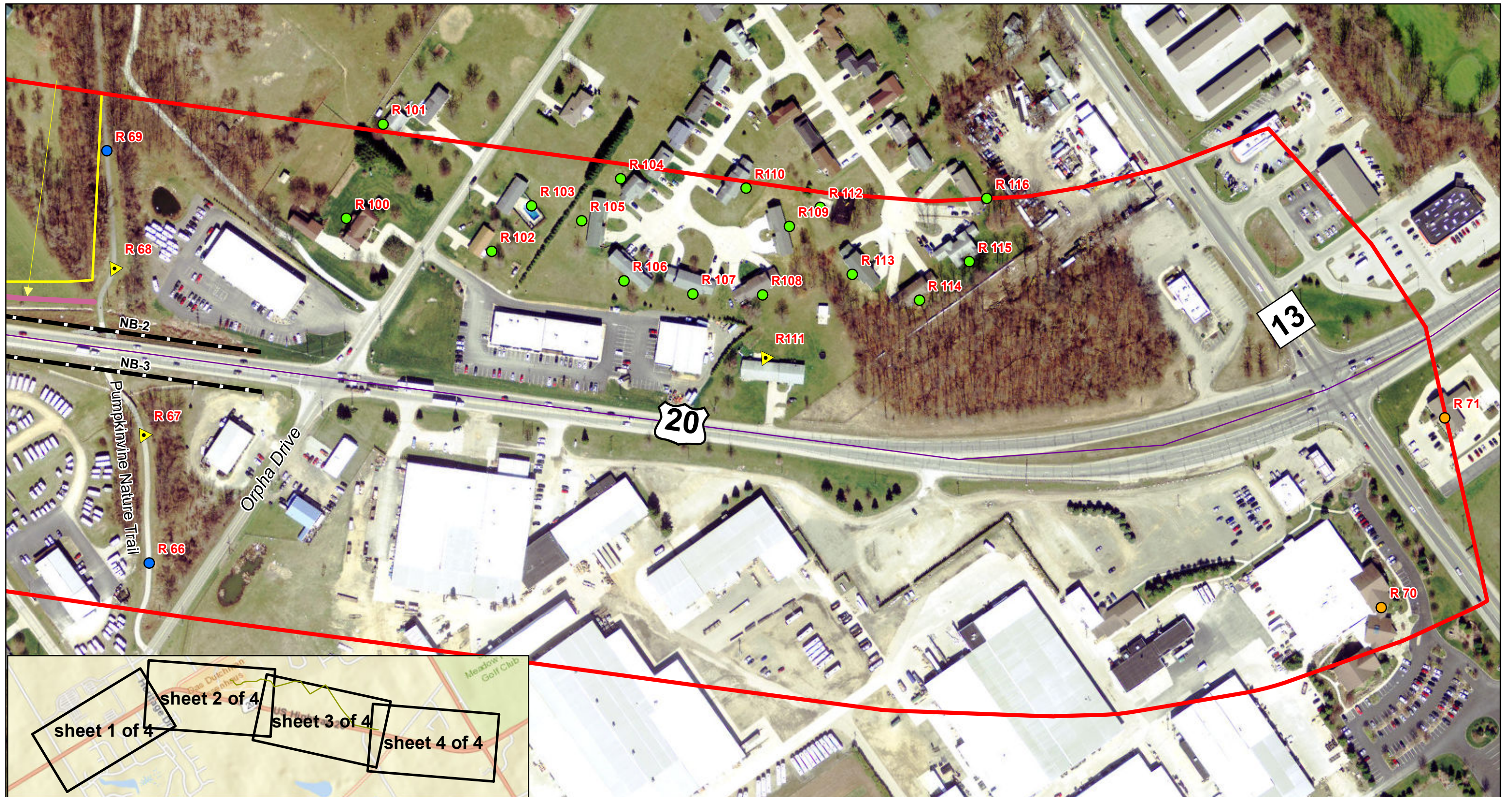
<ul style="list-style-type: none"> ● NAC Category B ● NAC Category C ● NAC Category D ● NAC Category E ▲ Impacted ● Field Measurement Barrier (Not Reasonable) Undeveloped Land Analysis Area Noise Analysis Area 	<p>Des. No. 1900095</p> <p>Page 1 of 4</p> <p>0 200 400</p> <p> Feet</p> <p>1 inch = 200 feet</p>	<p>Figure 2: Modeling and Measurement Locations</p> <p>U.S. 20 Improvement Project - CR 35 to SR 13</p> <p>Elkhart County, Indiana</p> <p><small>Graphics created by HNTB Corporation (2020)</small></p>
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<ul style="list-style-type: none"> ● NAC Category B ● NAC Category C ● NAC Category D 	<ul style="list-style-type: none"> ● NAC Category E ● Field Measurement 	<ul style="list-style-type: none"> Barrier (Not Reasonable) Undeveloped Land Analysis Area Noise Analysis Area 	<p>Des. No. 1900095</p> <p>Page 2 of 4</p> <p>0 200 400</p> <p> Feet</p> <p>1 inch = 200 feet</p>	<p>Figure 2: Modeling and Measurement Locations</p> <p>U.S. 20 Improvement Project - CR 35 to SR 13</p> <p>Elkhart County, Indiana</p> <p><small>Graphics created by HNTB Corporation (2020)</small></p>
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<ul style="list-style-type: none"> ● NAC Category B ● NAC Category C ● NAC Category D ● NAC Category E ▲ Impacted ● Field Measurement Barrier (Not Reasonable) Undeveloped Land Analysis Area Noise Analysis Area 	<p>Des. No. 1900095</p> <p>Page 3 of 4</p> <p>0 200 400 Feet</p> <p>1 inch = 200 feet</p>	<p>Figure 2: Modeling and Measurement Locations</p> <p>U.S. 20 Improvement Project - CR 35 to SR 13 Elkhart County, Indiana</p> <p><small>Graphics created by HNTB Corporation (2020)</small></p>
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<ul style="list-style-type: none"> ● NAC Category B ● NAC Category C ● NAC Category D 	<ul style="list-style-type: none"> ● NAC Category E ▲ Impacted ● Field Measurement 	<ul style="list-style-type: none"> Barrier (Not Reasonable) Undeveloped Land Analysis Area Noise Analysis Area 	<p>Des. No. 1900095</p> <p>Page 4 of 4</p> <p>0 200 400</p> <p>Feet</p> <p>1 inch = 200 feet</p>	<p>Figure 2: Modeling and Measurement Locations</p> <p>U.S. 20 Improvement Project - CR 35 to SR 13</p> <p>Elkhart County, Indiana</p> <p><small>Graphics created by HNTB Corporation (2020)</small></p>
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Census Tract Selection Map

Geographies:

Census Tract

Year:

2019



Select



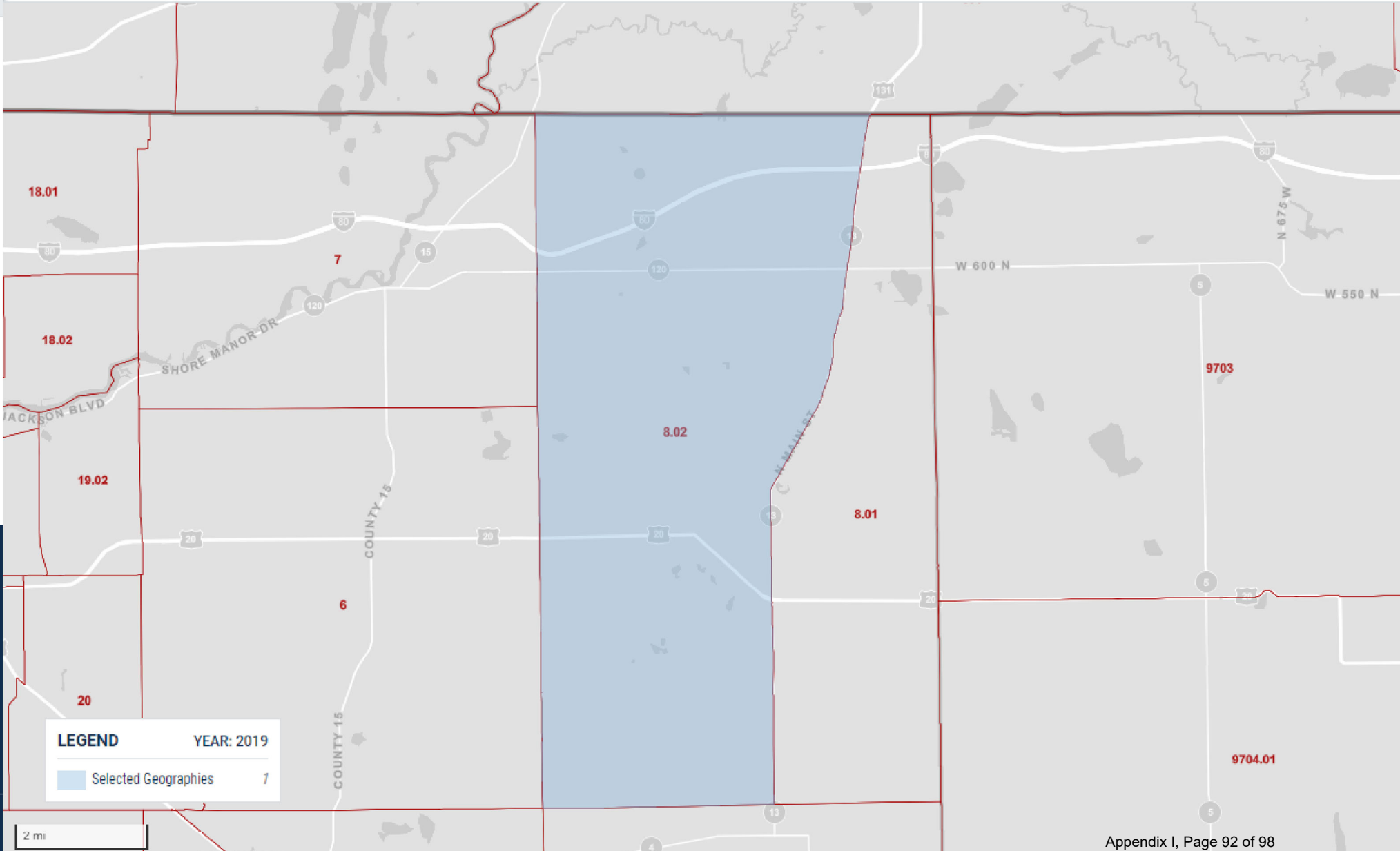
Clear Geos



Table



Notes



LEGEND YEAR: 2019

Selected Geographies 1

HISPANIC OR LATINO ORIGIN BY RACE

Note: This is a modified view of the original table produced by the U.S. Census Bureau. This download or printed version may have missing information from the original table.

Elkhart County, Indiana			Census Tract 8.02, Elkhart County, Indiana		
Label	Estimate	Margin of Error	Estimate	Margin of Error	
▼ Total:	203,604	*****	9,327	±256	
▼ Not Hispanic or Latino:	171,843	*****	8,859	±455	
White alone	152,835	±240	8,662	±450	
Black or African American alone	10,694	±685	129	±139	
American Indian and Alaska Native alone	265	±111	0	±16	
Asian alone	2,156	±187	10	±17	
Native Hawaiian and Other Pacific Islander alone	83	±39	0	±16	
Some other race alone	599	±241	0	±16	
▼ Two or more races:	5,211	±688	58	±69	
Two races including Some other race	104	±87	0	±16	
Two races excluding Some other race, and three or more races	5,107	±662	58	±69	
▼ Hispanic or Latino:	31,761	*****	468	±379	
White alone	25,187	±1,111	388	±377	
Black or African American alone	26	±23	0	±16	
American Indian and Alaska Native alone	175	±146	0	±16	
Asian alone	0	±27	0	±16	
Native Hawaiian and Other Pacific Islander alone	66	±57	0	±16	
Some other race alone	4,768	+974	28	+34	

Table Notes

HISPANIC OR LATINO ORIGIN BY RACE

Survey/Program:

American Community Survey

Universe:

Total population

Year:

2018

Estimates:

5-Year

Table ID:

B03002

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

Source: U.S. Census Bureau, 2014-2018 American Community Survey 5-Year Estimates

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see ACS Technical Documentation). The effect of nonsampling error is not represented in these tables.

While the 2014-2018 American Community Survey (ACS) data generally reflect the February 2013 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.

Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Explanation of Symbols:

An "**" entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.

An "-" entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution, or the margin of error associated with a median was larger than the median itself.

An "-" following a median estimate means the median falls in the lowest interval of an open-ended distribution.

An "+" following a median estimate means the median falls in the upper interval of an open-ended distribution.

An "***" entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.

An "*****" entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.

An "N" entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.

An "(X)" means that the estimate is not applicable or not available.

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

POVERTY STATUS IN THE PAST 12 MONTHS BY SEX BY AGE

Note: This is a modified view of the original table produced by the U.S. Census Bureau. This download or printed version may have missing information from the original table.

Elkhart County, Indiana			Census Tract 8.02, Elkhart County, Indiana		
Label	Estimate	Margin of Error	Estimate	Margin of Error	
▼ Total:	199,933	±414	9,327	±256	
▼ Income in the past 12 months below poverty level:	26,675	±2,122	234	±113	
▼ Male:	11,307	±1,124	179	±92	
Under 5 years	2,016	±399	0	±16	
5 years	192	±99	0	±16	
6 to 11 years	1,936	±415	0	±16	
12 to 14 years	614	±211	0	±16	
15 years	329	±171	0	±16	
16 and 17 years	337	±127	41	±40	
18 to 24 years	1,252	±337	38	±61	
25 to 34 years	727	±180	29	±35	
35 to 44 years	1,267	±288	16	±25	
45 to 54 years	1,258	±294	21	±31	
55 to 64 years	882	±211	16	±24	
65 to 74 years	238	±105	0	±16	
75 years and over	259	±98	18	±29	
▼ Female:	15,368	±1,226	55	±50	
Under 5 years	1,547	±302	0	±16	

Table Notes

POVERTY STATUS IN THE PAST 12 MONTHS BY SEX BY AGE

Survey/Program:

American Community Survey

Universe:

Population for whom poverty status is determined

Year:

2018

Estimates:

5-Year

Table ID:

B17001

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

Source: U.S. Census Bureau, 2014-2018 American Community Survey 5-Year Estimates

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see ACS Technical Documentation). The effect of nonsampling error is not represented in these tables.

While the 2014-2018 American Community Survey (ACS) data generally reflect the February 2013 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.

Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Explanation of Symbols:

An "**" entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.

An "-" entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution, or the margin of error associated with a median was larger than the median itself.

An "-" following a median estimate means the median falls in the lowest interval of an open-ended distribution.

An "+" following a median estimate means the median falls in the upper interval of an open-ended distribution.

An "***" entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.

An "*****" entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.

An "N" entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.

An "(X)" means that the estimate is not applicable or not available.

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Appendix J: US 20 Section 1 Documentation

Appendix A, B, D, E, F, G, H and portions of Appendix I were removed to minimize file size. This document can be reviewed in its entirety on the US 20 Project website (<https://www.us20section2elkhartcounty.com/>).

Indiana Department of Transportation

County Elkhart Route US 20 Des. No. 1600517

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

Road No./County:	US Highway 20 (US 20)/Elkhart County
Designation Number:	1600517 lead des, 1802043 building demolition, 1802045 tree clearing
Project Description/Termini:	US 20 Improvement Project – State Road 15 (SR 15) to County Road 35 (CR 35)

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):

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

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

Approval N/A Date 10-7-19
 ESM Signature _____ ES Signature _____

Joyce E. Newland Digitally signed by Joyce E. Newland
 Date: 2019.10.10 20:55:03 -04'00'

FHWA Signature Date _____

Release for Public Involvement

N/A Date _____ REB 5/31/19
 ESM Initials _____ ES Initials _____
 Date _____

Certification of Public Involvement Mary Wright 8/16/19
 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: 10/7/19

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

This is page 1 of 53 Project name: US 20 Improvement Project Date: May 31, 2019

Part I - PUBLIC INVOLVEMENT

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

Does the project have a historic bridge processed under the Historic Bridges PA*?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
If No, then: Opportunity for a Public Hearing Required?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

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

Remarks:

Notice of Entry for Survey or Investigation Letters

Notice of Entry for Survey or Investigation letters were mailed to potentially affected property owners on February 23, 2017 (Appendix G, pages 9 to 13).

Stakeholder Working Group (SWG) Meeting

A SWG meeting was held to gather feedback and concerns from local officials. Invitation letters were mailed out to SWG invitees on February 13, 2018 (Appendix G, page 14). The SWG invitee list included local, state and federal officials, emergency response facilities, and local education facilities. The SWG meeting was held on March 15, 2018 at 1 p.m. at Middlebury Town Hall. The project scope was discussed and an update on the current status of the project was provided. Questions and concerns included the consideration of through traffic through Middlebury and the impacts of additional water flow into legal drains. Meeting participants were then provided the opportunity to review Stage 1 design plans. Additional discussion between attendees and the project team continued after completion of the meeting (Appendix G, pages 15 and 16).

Public Information Meeting

A public information meeting was held for the general public. Invitation postcards were sent to adjacent property owners and SWG meeting invitees. This invitation was also posted on several media outlets, the local newspaper, *The Elkhart Truth*, and the local Amish newspaper, *Die Blatt*. This meeting consisted of an open house session where members of the project team could answer questions, and a formal presentation was offered, and concluded with another open house session. This meeting was held on June 21, 2018 at Northridge High School from 5:30 to 7 p.m. Questions and concerns from attendees generally pertained to right-of-way acquisition, the US 20/County Road (CR) 35 intersection, existing safety concerns, schedule, and emergency services (Appendix G, pages 20 to 62).

Section 106 Public Notice

To meet the public involvement requirements of Section 106, the Federal Highway Administration's (FHWA's) finding of "Adverse Effect" was advertised in *The Goshen News*, a widely circulated newspaper throughout the Town of Middlebury and northern Elkhart County, on November 1, 2018 offering the public an opportunity to submit comment pursuant to 36 CFR 800.2(d), 800.3(e), and 800.6(a)(4). The public comment period closed 30 days later on December 3, 2018. The text of the public notice and the affidavit of publication appear in Appendix D, page 64 No comments were received on the Section 106 public notice.

Public Hearing

The project will meet the minimum requirements described in the current INDOT Public Involvement Manual which requires the project sponsor to offer the public an opportunity to submit comment and/or request a public hearing. INDOT decided to forgo offering the public an

opportunity to request a hearing and held a public hearing to provide information to the public and gather public input.

A public hearing was held on July 18, 2019 at Northridge High School. A legal notice of public hearing was published in *The Goshen News* on July 3, 2019 and July 10, 2019 (Appendix G, page 84). The purpose of this hearing was to present the studied alternatives to community members and other interested stakeholders, as well as offer and in-person opportunity for them to discuss their opinions or concerns with project officials. The presentation is included in Appendix G, page 39. Approximately 150 members of the public and elected officials were in attendance (Appendix G, page 55).

A total of approximately 40 comments were received, including verbal, written, and e-mail comments. The public commented on a wide range of topics including but not limited to, broad support for the project, schedule, safety, logical termini, road design, and maintenance of traffic (MOT) concerns. All comments received during this period have been listed and individually addressed in the disposition of comments (Appendix G, pages 147-178).

Public Controversy on Environmental Grounds

Will the project involve substantial controversy concerning community and/or natural resource impacts?

Yes

No

Remarks:

At this time, there is no known public controversy over community and/or natural resource impacts regarding the project.

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

Sponsor of the Project: Indiana Department of Transportation INDOT District: Fort Wayne
 Local Name of the Facility: US 20

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

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

PURPOSE AND NEED:

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

Need: Improve Safety

INDOT generated accident data for this corridor which has been used in this evaluation. It examined a three-year period from October 4, 2013 to September 25, 2016. During this period, there were 200 accidents within the project area with a majority being rear end crashes. The severity level of each accident is defined as property damage only, personal injury, or fatality. Within the project area, 11% of the accidents resulted in personal injury with one accident resulting in a fatality. RoadHAT analysis shows the index of accident frequency is well above the expectations of the facility type and within the top 0.2% of highways in the state in terms of accident frequency.

US 20 Accident Quantity and Severity

	Property Damage Only	Personal Injuries	Fatalities	Total in the Project Area
US 20	143	18	1	162

Need: Reduce Congestion

The primary measure of 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 range from A (best) to F (worst). LOS of E and F are deemed unacceptable and in need of improvement.

Base year (2016), opening year (2021), and horizon year (2041) traffic projections were developed by INDOT and are summarized in the Average Annual Daily Traffic (AADT) and Design Hourly Volume (DHV) Table below. A 1.9 % per year growth rate was used in the development of this forecast.

The existing LOS for US 20 within the project area was analyzed and determined to be at LOS E which results in congestion and traffic delays. The horizon year 2041 would experience a LOS F. The desirable LOS for this improvement is B.

AADT DHV Table

Year	Growth Rate percent	AADT	DHV	LOS
2016	1.9	17,390	4,695	E
2021	1.9	19,040	5,141	E
2041	1.9	25,650	6,926	F

Need: Geometric Deficiencies

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

- A vertical alignment deficiency exists 1,900 feet east of the US 20/CR 15 intersection. Sight distance at this existing crest curve does not meet safe design requirements and could lead to rear end accidents.
- A vertical curve in US 20 that does not provide adequate visibility is located between CR 27 South of US 20 and CR 27 north of US 20. In this area, the leg of CR 27 south of US 20 is separated from the

- leg on CR 27 north of US 20 by approximately 0.5 mile (Appendix B, pages 7 and 8).
- A curve in US 20 without banking is located just west of CR 31. However, with a design speed of 55 miles per hour (MPH) a banking rate of 2.6 percent is required to meet safe design requirements.

Need: Local Community Needs and Interests

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. Currently, US 20 through the project area has approximately 6-foot shoulders, which do not provide adequate separation between motorized vehicles and horse drawn buggies increasing the potential of accidents between motorists and buggies.

Project Purpose

Alternative must:

- Improve the traffic conditions to a LOS of B in the horizon year 2041.
- Correct the undesirable vertical geometry and provide adequate sight distance throughout the corridor.
- Provide adequate separation between buggies and vehicles.

PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Elkhart Municipality: Town of Middlebury

Limits of Proposed Work: Beginning approximately 803 feet east of the intersection of SR 15 and US 20 and proceeding east on US 20 to approximately 1,051 feet east of the intersection of US 20 and CR 35.

Total Work Length: 4.4 Mile(s) Total Work Area: 130 Acre(s)

Is an Interchange Modification Study / Interchange Justification Study (IMS/IJS) required?

Yes ¹	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>
Date: <input style="width: 100px;" type="text"/>	

If yes, when did the FHWA grant a conditional approval for this project?

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

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

INDOT and FHWA propose to proceed with the US 20 Improvement Project (Des. Nos. 1600517) located west of the town of Middlebury in Elkhart County, Indiana from approximately 1,000 feet east of SR 15 to approximately 800 feet east of CR 35. More specifically the project is located within Jefferson and Middlebury Townships; Bristol and Middlebury US Geological Survey (USGS) Quadrangles, Sections 10, 11, 12, 13, 14, 15 of Township 37 North, Range 6 East and Sections 7, 8, 17, 18 of Township 37 North, Range 7 East (Appendix B, page 1 and 38).

Existing Conditions

US 20 is classified as a 2-lane rural minor arterial throughout the project area. This segment has a posted speed of 40 MPH starting at the US 20 and SR 15 intersection transitioning up to 55 MPH through the rural section of the project then transitioning down to 45 MPH before the intersection of US 20 and CR 35. A majority of the existing typical section of US 20 consists of two 12-foot travel lanes with 6-foot paved and 4-foot unpaved shoulders with a ditch of variable width. The apparent average right-of-way width through the corridor is 48 feet.

There are two signalized intersections along this segment of US 20, one at the west end of the project at US

20 and SR 15 and one at the east end of the project at US 20 and CR 35. The US 20 and SR 15 intersection consists of two through lanes in all directions with a single left turn lane for all approaches. One through lane ends approximately 0.5 mile east of the intersection. The US 20 and CR 35 intersection consists of a 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 along US 20 runs from west to east and contains curves without adequate banking.

US 20 frequently experiences elevated levels of congestion causing frequent delays resulting in unsafe driving conditions. Traffic through the corridor is projected to increase over the next 20 years resulting in worsened congestion levels. Within the project area, 11% of the accidents resulted in personal injury with one accident resulting in a fatality. This roadway is currently ranks in the top 0.2% of highways in the state for most accidents. These congestion and safety issues are exacerbated by the frequent use of the roadway, and roadway shoulders, by non-motorized vehicles including Amish buggies.

The project area includes several convenience store/gas stations, two religious facilities, a concrete plant, and several commercial properties at the east and west ends of the project area. Northridge High School is also located at the east end of the project. Land use within the remainder of the project area includes small to large family farms and agricultural land, residential properties and wetlands or natural areas. Local utilities including electric transmission lines, telephone, cable, and gas transmission lines are located on the north side of the roadway within the apparent existing right-of-way. One snow mobile trail also crosses US 20 approximately at mid-point of the project and extends along the north side of US 20 for approximately 0.75 mile.

Preferred Alternative (Alternative 3B-TWLTL)

The preferred alternative includes reconstruction of existing 2-lane US 20 to a 5-lane section including a 14-foot two way left turn lane, two 12-foot travel lanes in each direction, and two 10-foot paved shoulders. These 10-foot paved shoulders are wide enough to safely accommodate horse drawn buggy traffic and will be specifically designed to support long term buggy traffic without forming ruts. The widening will occur primarily to the south of the existing alignment. The preferred alternative will eliminate the vertical alignment deficiencies that exist 1,900 feet east of the US 20/CR 15 and between CR 27 south of US 20 and CR 27 north of US 20 by flattening the road grade through these areas. The preferred alternative also corrects the curve without banking on US 20 just west of CR 31 by increasing the horizontal curve radius to eliminate the need for super elevation.

The preferred alternative includes both in-ditch detention and retention basins. Efforts have been made to minimize impacts to wetlands where possible. Where necessary, ditch detention areas have been made wider to minimize impacts to other more sensitive areas. The preferred alternative includes only open channel drainage, no storm sewer lines are proposed. There are ten culverts to be modified across US 20 and the adjacent county roads (Appendix B, pages 51 through 60).

County road intersections with US 20 will be improved from the existing condition as necessary. The preferred alternative includes design exceptions for vertical sight distance requirements on CR 29 and CR 35. These design exemptions will avoid at least two residential relocations and minimize the overall project footprint. The preferred alternative also includes dedicated left turn lanes from CR 35 to US 20 in both directions and improved traffic signal timing.

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

US 20 and CR 27 - Roadway lanes will be widened from 10.5 feet to 12 feet in both directions along CR 27. Additionally, useable shoulder width will be widened from 1 foot (0 feet paved) to 8 feet (2 feet paved) in both directions. Approximately 290 linear feet and 630 linear feet of roadway and shoulder widening will occur along CR 27 north and south of US 20, respectively.

US 20 and CR 29 - Roadway lanes will be widened from 9 feet to 12 feet in both directions along CR 29. Additionally, useable shoulder width will be widened from 4 feet (0 feet paved) to 10 feet (2 feet paved) in both directions. Approximately 240 linear feet of roadway and shoulder widening will occur along CR 29 north and south of US 20.

US 20 and CR 31 - Roadway lanes will be widened from 10 feet to 12 feet in both directions along CR 31. Additionally, useable shoulder width will be widened from 0 feet to 10 feet (2 feet paved) in both directions. Approximately 190 linear feet and 230 linear feet of roadway and shoulder widening will occur along CR 31 north and south of US 20, respectively.

US 20 and CR 33 - Roadway lanes will be widened from 10.5 feet to 12 feet in both directions along CR 33. Additionally, useable shoulder width will be widened from 2.5 feet (0 feet paved) to 8 feet (2 feet paved) in both directions. Approximately 240 linear feet and 220 linear feet of roadway and shoulder widening will occur along CR 33 north and south of US 20, respectively.

US 20 and CR 35 - Roadway lanes will not be widened along CR 35. However, useable shoulder width will be widened from 10 feet (6 feet paved) to 11 feet (10 feet paved) in both directions. Approximately 320 linear feet and 285 linear feet of shoulder widening will occur along CR 35 north and south of US 20, respectively.

The proposed project will require approximately 90.8 acres of permanent right-of-way and 4.0 acre of temporary right-of way. A total of 19 residential relocations, and two business relocations will be required. The proposed project will result in acquisition of 5.1 acres of wetland, 30.0 acres of agricultural land, 5.5 acres of forest, and 7.7 acres of commercial property. A total of 1,665 linear feet of UNT North Fork Pine Creek and Indian Creek will be impacted by structure lengthening, riprap placement, and channel clearing. Cofferdams and temporary pumparounds are anticipated to be necessary to complete the project resulting in temporary stream impacts. The Elkhart County Snowmobile Trail is present within the project area; however, the project is not anticipated to result in a Section 4(f) use of this trail.

Logical Termini and Fulfillment of Purpose and Need

The project has independent utility and will provide a fully functional road segment without any additional transportation improvements beyond the project limits. The project's logical termini along US 20 extend from SR 15 on to CR 35. 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 deficiencies, and congestion.

The proposed project fulfills the purpose and need of the project by improving the LOS from E under the no-build alternative to LOS B in the horizon year, reducing congestion, improving functional safety, providing a safer facility for horse drawn buggies and eliminating the geometric deficiencies within the corridor.

Maintenance of Traffic (MOT)

MOT for the preferred alternative will be accomplished by constructing the entire southern portion of US 20 in Phase 1, while maintaining current traffic patterns on US 20. After completion of the southern portion of the project, traffic will be switched over to the newly constructed half, while the northern half of the project can be constructed. Note this method provides access to buggy traffic while not closing more than one consecutive county road. Additionally, this method increases worker safety by separating construction activities from travel lanes (Appendix B, pages 29-66).

Cost Estimate

The total estimated construction and engineering costs for the US 20 Improvement Project are \$17,453,050 and \$2,195,100 respectively. Construction is anticipated to start in 2022. The Michiana Area Council of Governments (MACOG), which functions as the Metropolitan Planning Organization (MPO) for Elkhart County initially included the project in the Fiscal Year (FY) 2018-2021 Transportation Improvement Program (TIP). This project is also included in the INDOT FY 2018-2021 Statewide Transportation Improvement Program (STIP) (Appendix H, pages 1 and 2). This project has been carried forward into the MACOG FY 2020-2024 TIP and INDOT 2020-2024 STIP.

OTHER ALTERNATIVES CONSIDERED:

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

Alternative 1 – 2-lane with Two Way Left Turn Lane (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 only improve operation of the facility to a LOS E in the design year thus not sufficiently reducing congestion. Alternative 1 would not meet the purpose and need and was eliminated from consideration.

Alternative 2 – 2-lane with TWLTL and Grading for Future 5 Lane Section:

Alternative 2 was considered to reduce the overall cost of the project. This alternative would construct a 3-lane facility and grade the corridor outside of the constructed road to accommodate a future 5-lane facility. 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 only improve operation of the facility to a LOS E in the design year thus not sufficiently reduce congestion. Alternative 2 would not meet the purpose and need and was eliminated from consideration.

Alternative 3A – 4-lane with TWLTL (Center):

Similar to the preferred alternative, this alternative would reconstruct US 20 to a 5-lane section carrying two lanes of traffic in each direction with a TWLTL in the center. Alternative 3A was developed to widen the road while splitting the additional environmental impacts evenly between the north and south sides of US 20. As both Alternative 3A and Alternative 3B (preferred alternative) meet the purpose and need of the project, an evaluation of impacts was conducted to quantify the impacts to assist in determining which alternative had the lowest overall environmental impacts. The results of this analysis are summarized in the Alternatives Comparison Table (Appendix I, page 1).

While Alternative 3A has fewer impacts to some resources, Alternative 3B had fewer overall impacts, thus Alternative 3A was eliminated from consideration.

Alternative 4 – 4-lane section with no TWLTL:

Upgrading the facility to a 4-lane section, two lanes in each direction without a TWLTL was considered and eliminated early in the alternative selection process. This alternative was dismissed since TWLTLs are the most effective way to remove left turning movements from through traffic. The 4-lane section with no TWLTL alternative does not address the congestion and safety concerns discussed in the Purpose and Need section above. If this alternative were selected, congestion would continue to increase throughout the corridor. This alternative does not meet the purpose and need of the project and was therefore dismissed from further consideration.

Alternative 5 – No Build Alternative:

This alternative would not involve roadway work along US 20. The No Build Alternative does not address the congestion and safety concerns discussed in the Purpose and Need section above. If this alternative were selected, congestion would continue to increase throughout the corridor. This alternative does not meet the purpose and need of the project and was therefore dismissed from further consideration.

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

It would not correct existing capacity deficiencies;

It would not correct existing safety hazards;



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

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

ROADWAY CHARACTER:

Functional Classification: US 20-Rural Minor Arterial
 Current ADT: 19,040 VPD (2021) Design Year ADT: 25,650 VPD (2041)
 Design Hour Volume (DHV): 8.15 Truck Percentage (%) 26.91
 Designed Speed (mph): 40/55 Legal Speed (mph): 55

	Existing		Proposed	
Number of Lanes:	2		5	
Type of Lanes:	12 ft. through lanes		12 ft. through lanes with a 14 ft. two-way left turn lane	
Pavement Width:	36	ft.	82	ft.
Shoulder Width:	10 (6 ft. paved)	ft.	11 (10 ft. paved)	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 27 - Local
 Current ADT: N/A VPD (2021) Design Year ADT: N/A VPD (2041)
 Design Hour Volume (DHV): N/A Truck Percentage (%) N/A
 Designed Speed (mph): 30 Legal Speed (mph): 30

	Existing		Proposed	
Number of Lanes:	2		2	
Type of Lanes:	10.5 ft. through lanes		12 ft. through lanes	
Pavement Width:	21	ft.	28	ft.
Shoulder Width:	1 (0 ft. paved)	ft.	8 (2 ft. paved)	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 29 - Local
 Current ADT: N/A VPD (2021) Design Year ADT: N/A VPD (2041)
 Design Hour Volume (DHV): N/A Truck Percentage (%) N/A
 Designed Speed (mph): 30 Legal Speed (mph): 30

	Existing		Proposed	
Number of Lanes:	2		2	
Type of Lanes:	9 ft. through lanes		12 ft. through lanes	
Pavement Width:	18	ft.	28	ft.
Shoulder Width:	4 (0 ft. paved)	ft.	10 (2 ft. paved)	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 31 - Local
 Current ADT: N/A VPD (2021) Design Year ADT: N/A VPD (2041)
 Design Hour Volume (DHV): N/A Truck Percentage (%) N/A
 Designed Speed (mph): 30 Legal Speed (mph): 30

	Existing		Proposed	
Number of Lanes:	2		2	
Type of Lanes:	10 ft. through lanes		12 ft. through lanes	
Pavement Width:	20	ft.	28	ft.
Shoulder Width:	0	ft.	12 (2 ft. paved)	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 33 - Local
 Current ADT: N/A VPD (2021) Design Year ADT: N/A VPD (2041)
 Design Hour Volume (DHV): N/A Truck Percentage (%) N/A
 Designed Speed (mph): 30 Legal Speed (mph): 30

	Existing		Proposed	
Number of Lanes:	2		2	
Type of Lanes:	10.5 ft. through lanes		12 ft. through lanes	
Pavement Width:	21	ft.	28	ft.
Shoulder Width:	2.5 (0 ft. paved)	ft.	8 (2 ft. paved)	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 35 - Rural Local Arterial
 Current ADT: 5,190 VPD (2021) Design Year ADT: 6,933 VPD (2041)
 Design Hour Volume (DHV): 403 Truck Percentage (%) 7.65
 Designed Speed (mph): 45 Legal Speed (mph): 45

	Existing		Proposed	
Number of Lanes:	2		2	
Type of Lanes:	12 ft. through lanes		12 ft. through lanes	
Pavement Width:	36	ft.	44	ft.
Shoulder Width:	10 (6 ft. paved)	ft.	11 (10 ft. paved)	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

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

DESIGN CRITERIA FOR BRIDGES:

Structure/NBI Number(s): CV 020-020-099.20

Sufficiency Rating:

6, Large Culvert Inspection Report, 7/31/2018

(Rating, Source of Information)

	Existing		Proposed	
Bridge Type:	12 ft. x 8 ft. Metal Arch		12 ft. x 8 ft. Metal Arch	
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:	N/A	ft.	N/A	ft.
Outside to Outside Width:	131	ft.	131	ft.
Shoulder Width:	16	ft.	16	ft.
Length of Channel Work:			1,530	ft.

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

Remarks:

Large culvert CV 020-020-099.20, carrying eastbound and westbound lanes of US 20 over Indian Creek is located approximately 960 feet east of the US 20 and SR 15 intersection. Per the May 21, 2013 INDOT Large Culvert Inspection Report, the existing structure was constructed in 1991 and was replaced in 2009 which included a 20-foot extension on the south end. No replacement or rehabilitation activities to this structure are anticipated as part of this project; however, approximately 1,530 linear feet of Indian Creek occurs within the proposed permanent right-of-way. Therefore, approximately 1,530 feet of impacts to Indian Creek are anticipated (Appendix B, page 27).

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.

Structure/NBI Number(s): Small Structure 17

Sufficiency Rating:

N/A

(Rating, Source of Information)

	Existing		Proposed	
Bridge Type:	1.5 ft. Reinforced Concrete Pipe		3 ft. Reinforced Concrete Pipe	
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:	N/A	ft.	N/A	ft.
Outside to Outside Width:	138	ft.	138	ft.
Shoulder Width:	10	ft.	11	ft.
Length of Channel Work:			0	ft.

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

Remarks:

The existing small structure identified as Structure Number 17 on the plan sheet conveys roadside drainage beneath eastbound and westbound lanes of US 20 from the south to the north where it outlets into Indian Creek approximately 49 feet north of the existing US 20 edge of pavement. The existing small structure is located approximately 1,340 feet west of the US 20 and CR 27 South intersection. Due to a pipe diameter of less than 48 inches, the existing structure does not have an assigned INDOT Structure Number or Structure Inspection Report. The existing 1.25-foot reinforced concrete pipe (RCP) will be replaced with a 3-foot RCP as part of this project. This small structure carries roadside drainage, thus, no impacts to a jurisdictional waterway will occur due to the structure replacement (Appendix B, page 51).

Yes
 No
 N/A

Will the structure be rehabilitated or replaced as part of the project?
 If the proposed action has multiple bridges or small structures, this section should be filled out for each structure.

Structure/NBI Number(s): Small Structure 19 Sufficiency Rating: N/A
 (Rating, Source of Information)

	Existing		Proposed	
Bridge Type:	2 ft. Reinforced Concrete Pipe		3 ft. Reinforced Concrete Pipe	
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:	N/A	ft.	N/A	ft.
Outside to Outside Width:	82	ft.	130	ft.
Shoulder Width:	16	ft.	21	ft.
Length of Channel Work:			0	ft.

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

Remarks:
 The existing small structure identified as Structure Number 19 on the plan sheet conveys roadside drainage beneath eastbound and westbound lanes of US 20 from the south to the north where it outlets into Indian Creek approximately 46 feet north of the existing US 20 edge of pavement. The existing small structure is located approximately 958 feet west of the US 20 and CR 27 South intersection. Due to a pipe diameter of less than 48 inches, the existing structure does not have an assigned INDOT Structure Number or Structure Inspection Report. The existing 2-foot RCP will be replaced with a 3-foot RCP as part of this project. This small structure carries roadside drainage, thus, no impacts to a jurisdictional waterway will occur due to the structure replacement (Appendix B, page 52).

Yes
 No
 N/A

Will the structure be rehabilitated or replaced as part of the project?
 If the proposed action has multiple bridges or small structures, this section should be filled out for each structure.

Structure/NBI Number(s): Small Structure 47 Sufficiency Rating: N/A
 (Rating, Source of Information)

	Existing		Proposed	
Bridge Type:	1.5 ft. Reinforced Concrete Pipe		3 ft. Reinforced Concrete Pipe	
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:	N/A	ft.	N/A	ft.
Outside to Outside Width:	89	ft.	135	ft.
Shoulder Width:	10	ft.	11	ft.
Length of Channel Work:			0	ft.

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

Remarks:
 The existing small structure identified as Structure Number 47 on the plan sheet conveys roadside drainage beneath eastbound and westbound lanes of US 20 from the south to the north where it outlets into Wetland 1 approximately 28 feet north of the existing US 20 edge of pavement. The existing small structure is located approximately 384 feet east of the US 20 and CR 29 intersection. Due to a pipe diameter of less than 48 inches, the existing structure does not have an assigned INDOT Structure Number or Structure Inspection Report. The existing 1.5-foot RCP will be replaced with a 3-foot RCP as part of this project. This small structure carries roadside drainage, thus, no impacts to a jurisdictional waterway will occur due to the structure replacement (Appendix B, page 53).

Yes
 No
 NA

Will the structure be rehabilitated or replaced as part of the project?
 If the proposed action has multiple bridges or small structures, this section should be filled out for each structure.

Structure/NBI Number(s): Small Structure 55 Sufficiency Rating: N/A
 (Rating, Source of Information)

	Existing		Proposed	
Bridge Type:	2 ft. Reinforced Concrete Pipe		11 ft. x 4 ft. Reinforced Concrete Box	
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:	N/A	ft.	N/A	ft.
Outside to Outside Width:	82	ft.	144	ft.
Shoulder Width:	10	ft.	11	ft.
Length of Channel Work:			135	ft.

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

Remarks:
 The existing small structure identified as Structure Number 55 on the plan sheet conveys unnamed tributary (UNT) 1 beneath eastbound and westbound lanes of US 20 from the north to the south where it outlets into a UNT approximately 760 feet south of the existing US 20 edge of pavement. The existing small structure is located approximately 1,797 feet east of the US 20 and CR 29 intersection. Due to a pipe diameter of less than 48 inches, the existing structure does not have an assigned INDOT Structure Number or Structure Inspection Report. The existing 2-foot RCP will be replaced with an 11-foot by 4-foot reinforced concrete box (RCB) as part of this project. This small structure carries roadside drainage, thus, no impacts to a jurisdictional waterway will occur due to the structure replacement (Appendix B, page 54).

Yes
 No
 NA

Will the structure be rehabilitated or replaced as part of the project?
 If the proposed action has multiple bridges or small structures, this section should be filled out for each structure.

Structure/NBI Number(s): Small Structure 22 Sufficiency Rating: N/A
 (Rating, Source of Information)

	Existing		Proposed	
Bridge Type:	N/A		3 ft. Reinforced Concrete 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.	100	ft.
Shoulder Width:	1	ft.	8	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 22 on the plan sheet conveys roadside drainage beneath northbound and southbound lanes of CR 27 South. Structure Number 22 carries roadside drainage west from a proposed detention pond east of CR 29 South to a proposed detention pond west of CR 29 South. An existing structure is not currently present at this location. The proposed small structure will be located approximately 49 feet south of the US 20 and CR 27 South intersection. The proposed structure will a 3-foot RCP. This small structure will carry roadside drainage, thus, no impacts to a jurisdictional waterway will occur due to the structure replacement (Appendix B, page 56).

Yes
 No
 N/A

Will the structure be rehabilitated or replaced as part of the project?
 If the proposed action has multiple bridges or small structures, this section should be filled out for each structure.

Structure/NBI Number(s): Small Structure 41 Sufficiency Rating: N/A
 (Rating, Source of Information)

	Existing		Proposed
Bridge Type:	N/A		3 ft. Reinforced Concrete Pipe
Number of Spans:	1		1
Weight Restrictions:	N/A	ton	N/A
Height Restrictions:	N/A	ft.	N/A
Curb to Curb Width:	N/A	ft.	N/A
Outside to Outside Width:	N/A	ft.	113
Shoulder Width:	4	ft.	10
Length of Channel Work:			0

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

Remarks:

The proposed small structure identified as Structure Number 41 on the plan sheet conveys roadside drainage beneath northbound and southbound lanes of CR 29 north of US 20. Structure Number 41 carries roadside drainage east from Wetland 2 to a proposed detention pond east of CR 29. An existing structure is not currently present at this location. The proposed small structure will be located approximately 32 feet north of the US 20 and CR 29 intersection. The proposed structure will a 3-foot RCP. This small structure will carry roadside drainage, thus, no impacts to a jurisdictional waterway will occur due to the structure replacement (Appendix B, page 57).

Yes
 No
 N/A

Will the structure be rehabilitated or replaced as part of the project?
 If the proposed action has multiple bridges or small structures, this section should be filled out for each structure.

Structure/NBI Number(s): Small Structure 59 Sufficiency Rating: N/A
 (Rating, Source of Information)

	Existing		Proposed
Bridge Type:	N/A		3 ft. Reinforced Concrete Pipe
Number of Spans:	1		1
Weight Restrictions:	N/A	ton	N/A
Height Restrictions:	N/A	ft.	N/A
Curb to Curb Width:	N/A	ft.	N/A
Outside to Outside Width:	N/A	ft.	118
Shoulder Width:	0	ft.	12
Length of Channel Work:			0

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

Remarks:

The proposed small structure identified as Structure Number 59 on the plan sheet conveys

roadside drainage beneath northbound and southbound lanes of CR 31 south of US 20. Structure Number 58 carries roadside drainage west from a proposed detention pond east of CR 31 to Wetland 15. An existing structure is not currently present at this location. The proposed small structure will be located approximately 31 feet south of the US 20 and CR 31 intersection. The proposed structure will a 3-foot RCP. This small structure will carry roadside drainage, thus, no impacts to a jurisdictional waterway will occur due to the structure replacement (Appendix B, page 58).

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.

Structure/NBI Number(s): Small Structure 60 Sufficiency Rating: N/A
(Rating, Source of Information)

Existing		Proposed	
Bridge Type:	N/A	3 ft. Reinforced Concrete Pipe	
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:	N/A ft.	N/A	ft.
Outside to Outside Width:	N/A ft.	118	ft.
Shoulder Width:	0 ft.	12	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 60 on the plan sheet conveys roadside drainage beneath northbound and southbound lanes of CR 31 north of US 20. Structure Number 60 carries roadside drainage west from a proposed detention pond east of CR 31 to a proposed detention pond west of CR 31. An existing structure is not currently present at this location. The proposed small structure will be located approximately 25 feet north of the US 20 and CR 31 intersection. The proposed structure will a 3-foot RCP. This small structure will carry roadside drainage, thus, no impacts to a jurisdictional waterway will occur due to the structure replacement (Appendix B, page 59).

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.

Structure/NBI Number(s): Small Structure 76 Sufficiency Rating: N/A
(Rating, Source of Information)

Existing		Proposed	
Bridge Type:	N/A	3 ft. Reinforced Concrete Pipe	
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:	N/A ft.	N/A	ft.
Outside to Outside Width:	N/A ft.	94	ft.
Shoulder Width:	0 ft.	8	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 76 on the plan sheet conveys roadside drainage beneath northbound and southbound lanes of CR 33 North. Structure Number 76 carries roadside drainage west from a proposed detention pond east of CR 33 North to a proposed detention pond west of CR 33 North. An existing structure is not

currently present at this location. The proposed small structure will be located approximately 25 feet north of the US 20 and CR 33 North intersection. The proposed structure will a 3-foot RCP. This small structure will carry roadside drainage, thus, no impacts to a jurisdictional waterway will occur due to the structure replacement (Appendix B, page 60).

Will the structure be rehabilitated or replaced as part of the project? Yes No NA
 If the proposed action has multiple bridges or small structures, this section should be filled out for each structure.

Structure/NBI Number(s): CV 020-020-103.34 (Str. No. 105) Sufficiency Rating: 8, Large Culvert Inspection Report, 8/3/2018
 (Rating, Source of Information)

	Existing		Proposed	
Bridge Type:	Twin 5 ft. Corrugated Metal Pipes		9 ft. x 5 ft. Reinforced Concrete Box	
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:	N/A	ft.	N/A	ft.
Outside to Outside Width:	90	ft.	128	ft.
Shoulder Width:	10	ft.	11	ft.
Length of Channel Work:			38	ft.

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

Remarks: Large culvert CV 020-020-103.34, Structure Number 105, serves as an equalization culvert for Pond 2 and Pond 3 beneath eastbound and westbound lanes of US 20 and is located approximately 270 feet east of the US 20 and CR 35 intersection. Pond 2 is located in the southeast quadrant of the US 20 and CR 35 intersection, approximately 145 feet east of CR 35 (Appendix B, page 41). Pond 3 is located in the northeast quadrant of the US 20 and CR 35 intersection, approximately 145 feet east of CR 35 (Appendix B, page 41). Per the May 21, 2013 INDOT Large Culvert Inspection Report, the existing structure was constructed in 1999. No records of rehabilitation activities to this structure were listed in the INDOT Large Culvert Inspection Report. The existing twin 5-foot corrugated metal pipe will be replaced with a 9-foot by 5-foot reinforced concrete box (RCB) as part of this project. Approximately 0.16 acre of Pond 2 and 0.04 acre of Pond 3 are within the proposed permanent right-of-way. Therefore, impacts to Pond 2 and Pond 3 are anticipated (Appendix B, page 55).

Will the structure be rehabilitated or replaced as part of the project? Yes No NA
 If the proposed action has multiple bridges or small structures, this section should be filled out for each structure.

MAINTENANCE OF TRAFFIC (MOT) DURING CONSTRUCTION:

	Yes	No
Is a temporary bridge proposed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is a temporary roadway proposed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will the project involve the use of a detour or require a ramp closure? (describe 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"/>

Remarks:

Two lanes of traffic, one in each direction, will be maintained during construction. MOT will be accomplished by constructing the entire southern portion of US 20 in Phase 1, while maintaining current traffic patterns on US 20. After completion of the southern portion of the project, traffic will be switched over to the newly constructed half, while the northern half of the project can be constructed. Note this method provides access for buggy traffic while not closing more than one consecutive county road. A separate travel lane will be maintained for buggies and other non-motorized traffic. 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 Elkhart County Snowmobile Trail will be provided. Additionally, this method increases worker safety by separating construction activities from travel lanes.

Early coordination letters were sent to the Elkhart County Surveyor, Elkhart County Sheriff, the Middlebury Town Manager, the Elkhart County Commissioners, Elkhart County Highway Department, Elkhart County Emergency Management, Northridge High School, Middlebury Town Council Members, and Middlebury Community Schools on February 1, 2018 and March 6, 2018 (Appendix C, pages 1 to 9). No responses pertaining to MOT were received from local officials.

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. Construction is anticipated to span two construction seasons. Potential temporary community and economic impacts during construction of the proposed project include increased travel time, increased emergency response time, and increased fuel consumption by commercial and individual motorists due to any temporary lane closures that may be required. The project sponsor will be responsible for contacting school districts, churches and emergency services at least two weeks prior to construction activity that would block or limit access. Delays may occur during construction but would cease with project completion.

ESTIMATED PROJECT COST AND SCHEDULE:

Engineering: \$ 2,195,100 (2018) Right-of-Way: \$ 2,100,000 (2020-21) Construction: \$ 15,353,050 (2020-21)*

Anticipated Start Date of Construction: Spring 2021

Date project incorporated into STIP July 2, 2019 (FY 20-24) (Appendix H, page 4)

Is the project in an MPO Area?

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

If yes,

Name of MPO MACOG

Location of Project in TIP MACOG TIP FY 20-24 (Appendix H, page 3)

Date of incorporation by reference into the STIP July 2, 2019 (FY 20-24)

RIGHT OF WAY:

Land Use Impacts	Amount (acres)	
	Permanent	Temporary
Residential	39.4	3.5
Commercial	7.5	0.2
Agricultural	29.9	0.1
Forest	5.5	N/A
Wetlands	5.1	<0.1
Other: Religious Facility	1.8	0.2
Other:	N/A	N/A
Other: Utility	1.6	N/A
TOTAL	90.8	4.0

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

Remarks:

INDOT does not have right-of-way outside of the edge of the existing pavement. Any work outside of the traveled way will necessitate re-acquiring the existing right-of-way. The width of the reacquired right-of-way will be approximately 22 feet north and south of the current US 20 centerline. New, permanent right-of-way widths range from 190 feet to 295 feet from the center line along US 20 and 90 feet to 142 feet from the center line along CR 27, CR 29, CR 31, CR 33, and CR 35.

The proposed project will require the reacquisition of 18.8 acre of right-of-way and acquisition of 90.8 acre of new, permanent right-of-way will be necessary. An additional 4.0 acres of temporary right-of-way will be necessary for construction access, staging activities, and temporary grading.

The current use of all reacquired right-of-way is existing pavement for US 20. The current use of the new, permanent right-of-way includes approximately 39.4 acre of residential property, 7.5 acre of commercial property, 29.9 acre of agricultural property, 5.1 acre of wetlands, 5.5 acres of forested property, 1.8 acre of religious facility property, and 1.6 acre of utility property. The current use of the temporary right-of-way includes approximately 3.5 acre of residential property, 0.2 acre of commercial property, 0.1 acre of agricultural property, <0.1 acre of wetlands, and 0.2 acre of religious facility property.

Farmland acquisition acreage provided by the US Department of Agriculture Natural Resources Conservation Service (USDA-NRCS) was calculated based on a preliminary right-of-way footprint reflective of the worst-case scenario. As the project development process has progressed, the right-of-way acquisition footprint has been refined and reduced where possible. The refined right-of-way was used to calculate land use impacts in this section of the document. As such, acreage of agricultural areas noted in the table above are less than the acreage noted in the Farmland Farmland Protection Policy Act (FPPA) coordination included in Appendix C.

As a result of design changes, including a need for increased water detention areas onsite and a need for over excavation to remove unsuitable peat soils, the estimated right-of-way increased from the 48 acres stated in the March 6, 2018 agency-re-coordination letter to the 90.8 acres documented in this CE. During the Public Information Meeting, held on June 21, 2018 and the Resource Agency Meeting, on July 12, 2018, an estimated right-of-way acreage of 91 acres was presented to the public and resource agencies. No concerns regarding the overall right-of-way acreage have been received from the public or resource agencies.

The use of reacquired right-of-way will continue to be existing pavement. The use of new, permanent right-of-way will be converted from agricultural, residential, wetland, forest, religious

facility, and utility 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, and religious facility property (Appendix B, pages 6 to 14).

INDOT has approved an early acquisition CE in accordance with the Moving Ahead for Progress in the 21st Century Act (MAP-21) on December 5, 2018 (Appendix I pages 62-77). The document covered parcels except for those that would be considered Section 4(f) properties. This document was prepared to afford affected property owners additional time to work through the relocation procedures and to begin the time-consuming process of right-of-way acquisition activities as soon as possible.

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

SECTION A – ECOLOGICAL RESOURCES

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

Remarks:

HNTB staff conducted a desktop review of the project area in October 2016 and October 2017, using current and historical aerial imagery, the 7.5 Minute USGS Topographic Quadrangle Map, and publicly available Geographic Information System (GIS) water resource layers. As part of the Red Flag Investigation (RFI), 26 river and stream segments were located within a 0.5-mile radius of the project area, three of which were within the project area (Appendix E, pages 3 and 10).

HNTB staff performed surveys of the investigated area on October 20 and 21, 2016 and October 17, 2017. A *Wetland and Waterways Delineation* report, dated October 18, 2018 was prepared for the project by HNTB Corporation to detail the water resources observed and potentially impacted within the project area. This report was approved by INDOT Environmental Services Division (ESD) on September 25, 2018 (Appendix F, page 45).

An initial version of the waters report, approved by INDOT ESD on March 27, 2017, was sent to the US Army Corps of Engineers (USACE) for a jurisdictional determination. After a field review by the USACE, coordination between USACE and HNTB, and the second field survey by HNTB Corporation on October 17, 2017 an amendment to the Waters Report was prepared. The findings of the amendment to the report have been incorporated into the project Waters report (Appendix F, pages 1 to 44). Two streams, Indian Creek and UNT North Fork Pine Creek were field verified within or adjacent to the project area. On April 3, 2018, the USACE signed the Preliminary Jurisdiction Determination (PJD) form (Appendix F, page 43). The streams and waterways reported below are considered jurisdictional waters of the US. These streams showed Ordinary High Water Mark (OHWM) characteristics and hydrologic connection to the Elkhart River.

The Indiana list of Outstanding Rivers and Streams, and State Natural, Scenic or Recreational lists was reviewed by HNTB staff. No streams within the project area are listed on the Indiana Register's list of Outstanding Rivers and Streams. None of the streams within the project area are listed as a Federal Wild and Scenic River; State Natural, Scenic or Recreational River.

The identified streams and estimated amount of resource within the proposed right-of-way are described in the table below:

Stream Name	Flow Regime	USGS Blue Line	Impact Description	Limits of Stream within Right of Way (ft.)	Limits of Stream within Right-of-way (ac.)
UNT North Fork Pine Creek (UNT 1)	Intermittent	N	Structure Lengthening, Riprap Placement Channel Clearing	135	<0.01
Indian Creek	Perennial	Y	Structure Lengthening, Riprap Placement Channel Clearing	1,530	0.35

The proposed project will result in approximately 1,665 linear feet (0.35 acre) of impacts to the two streams observed within the project area. Stream mitigation is anticipated since new impacts meet or exceed 300 linear feet and/or 0.1 acre below the OHWM.

Cofferdams and temporary pump-arounds are anticipated to be necessary to complete the project resulting in temporary stream impacts. Proper sediment and erosion control measures will be implemented for construction access areas and in-stream work. All disturbed areas will be restored per the current INDOT Standard Specifications.

Agency Coordination

Early coordination letters were sent to the US Fish and Wildlife Service (USFWS), the Indiana Department of Natural Resources Division of Fish and Wildlife (IDNR DFW), and the USACE on June 9, 2017 (Appendix C, pages 1 to 3).

In their early coordination response dated July 12, 2017 IDNR DFW provided comments to reduce potential effects to streams in the project area. (Appendix C, pages 12 to 13).

An automated response was obtained from the Indiana Department of Environmental Management (IDEM) on July 23, 2018 (Appendix C, pages 44 to 51). North Fork of Pine Creek and Indian Creek are IDEM 303D listed streams for *E. coli*. Workers who are working in or near water with *E. coli* should take care to wear appropriate PPE, observe proper hygiene procedures, including regular hand washing, and limit personal exposure. This has been added as a firm commitment.

In their early coordination response dated July 26, 2017, USACE recommended that INDOT and their consultants delineate wetlands (including streams) and that the resulting report be forwarded to them for their review (Appendix C, pages 22 to 25).

In their early coordination response dated July 7, 2017, USFWS noted the presence of several wetlands adjacent to US 20 in the western portion of the study area. The noted that mitigation for loss of wetlands will be required (Appendix C, pages 34 to 35).

Re-coordination letters were sent to the resource agencies on March 6, 2018 as an update to the project and a continuation of the coordination process (Appendix C, pages 7 to 9). This coordination letter documented the recommended preferred alternative would be a 5-lane facility with two travel lanes in each direction and a TWLTL in the center.

The IDNR DFW responded on April 4, 2018 indicating all the recommendations in their previous letter dated July 12, 2017 still apply (Appendix C, page 14). USFWS responded in an email dated March 20, 2018 stating that the original letter of July 7, 2017 continues to suffice and did not provide any additional comments regarding streams (Appendix C, page 36 to 37). No additional response was received from the USACE.

Representatives from the FHWA, USACE, IDEM, and IDNR DFW attended a resource agency meeting on July 12, 2018. The purpose of the meeting was to present the recommended preferred alternative to the resource agencies and identify any concerns they may have moving forward. Potential impacts to streams along with mitigation opportunities were discussed at the meeting (Appendix C, pages 52 to 72).

Recommendations provided by the agencies are included in Section J - Environmental Commitments section of this document.

Other Surface Waters

- Reservoirs
- Lakes
- Farm Ponds
- Detention Basins
- Storm Water Management Facilities

	<u>Presence</u>	<u>Impacts</u>	
		Yes	No
Reservoirs			
Lakes	X	X	
Farm Ponds	X	X	
Detention Basins			
Storm Water Management Facilities			

Other: _____



Remarks:

HNTB staff conducted a desktop review of the project area in October 2016, using current and historical aerial imagery, the 7.5 Minute USGS Topographic Quadrangle Map, and publicly available GIS water resource layers. As part of the RFI, 63 lakes were located within a 0.5-acre radius of the project area, 10 of which were mapped within the project area (Appendix E, page 1-14). The field investigations on October 20 and 21, 2016 and October 17, 2017, identified three open waters including one farm pond, and two other ponds present within the investigated area (Appendix B, pages 8, and 13-14). Descriptions of each of these ponds, including anticipated impacts are included below.

Pond 1 is located approximately 50 feet south of US 20 just west of CR 27. Pond 1 is an excavated farm pond approximately 0.84 acre in size, 0.28 acre of which is within the investigated area (Appendix B, page 8). Approximately 0.28 acre of Pond 1 occurs within the proposed permanent right-of-way. Therefore, impacts to Pond 1 are anticipated.

Pond 2 is located approximately 37 feet south of US 20 in the southeast quadrant of the intersection of US 20 and CR 35 (Appendix B, page 14). This pond is associated with Wetland 18. Pond 2 is a natural feature approximately 2.02 acre in size, 0.31 acre of which is within the investigated area. Approximately 0.16 acre of Pond 2 occurs within the proposed permanent right-of-way. Therefore, impacts to Pond 2 are anticipated.

Pond 3 is located approximately 43 feet north of US 20 in the northeast quadrant of the intersection of US 20 and CR 35 (Appendix B, page 14). This pond is associated with Wetland 19. Pond 3 is a natural feature approximately 1.06 acre in size, 0.33 acre of which is within the investigated area. Approximately 0.04 acre of Pond 3 occurs within the proposed permanent right-of-way. Therefore, impacts to Pond 3 are anticipated.

The proposed project will result in 0.48 acre of impacts to the three ponds observed within the project area. Mitigation for open water impacts is anticipated.

Agency Coordination

In their early coordination responses dated July 12, 2017, and April 4, 2018, IDNR DFW did not provide comments regarding potential effects to ponds in the project area. (Appendix C, pages 12 to 13).

An automated response was obtained from IDEM on July 23, 2018 (Appendix C, pages 44 to 51).

In their early coordination response dated July 21, 2017 and July 26, 2017, USACE recommended that INDOT and their consultants delineate wetlands (including open waters) and that the resulting report be forwarded to them for their review (Appendix C, pages 22).

In their early coordination responses dated July 7, 2017, and March 20, 2018, USFWS did not provide comments relating to other surface waters (Appendix C, pages 34 to 35). Re-coordination letters were sent to the resource agencies on March 6, 2018 as an update to the project and a continuation of the coordination process (Appendix C, pages 7 to 9). This coordination letter documented the recommended preferred alternative would be a 5-lane facility with two travel lanes in each direction and a TWLTL in the center.

IDNR DFW responded on April 4, 2018 indicating all of the recommendations in their previous letter dated July 12, 2017 still apply (Appendix C, page 14). USFWS responded in an email dated March 20, 2018 stating that the original letter of July 7, 2017 continues to suffice and did not provide any additional comments regarding ponds or other surface waters (Appendix C, page 36 to 37). No additional response was received from the USACE.

Representatives from the FHWA, USACE, IDEM, and IDNR DFW attended a resource agency meeting on July 12, 2018. The purpose of the meeting was to present the recommended preferred alternative to the resource agencies and identify any concerns they may have moving forward.

	Emergent (PEM1C)			existing fill slope. Wetland 5 is within the proposed right-of-way and will be partially impacted by roadway fill required to widen US 20 (Appendix B, page 7).
Wetland - 06	Palustrine Emergent (PEM1C)	0.21	0.023	Delineated wetland located immediately adjacent to the existing fill slope. Wetland 6 is within the proposed right-of-way and will be partially impacted by roadway fill required to widen US 20 (Appendix B, page 6).
Wetland - 07	Palustrine Emergent (PEM1B)	1.207	0.260	Delineated wetland located immediately adjacent to the existing fill slope. Wetland 7 is within the proposed right-of-way and will be partially impacted by roadway fill required to widen US 20. A portion of Wetland 7 is a current mitigation site. The current mitigation site will not be impacted by the project (Appendix B, page 6).
Wetland - 08	Palustrine Emergent (PEM1A)	0.05	0.050	Delineated wetland located immediately adjacent to the existing fill slope. Wetland 8 is within the proposed right-of-way and will be entirely impacted by roadway fill required to widen US 20. (Appendix B, page 6).
Wetland - 9	Palustrine Emergent (PEM1A)	0.033	0.022	Delineated wetland located immediately adjacent to the existing fill slope and Indian Creek. Wetland 9 will be partially impacted by roadway fill required to widen US 20 and the extension of the culvert carrying US 20 over Indian Creek (Appendix B, page 6).
Wetland - 10	Palustrine Emergent (PEM1C)	0.411	0.411	Delineated wetland located immediately adjacent to the existing fill slope. Wetland 10 is within the proposed right-of-way and will be entirely impacted by roadway fill required to widen US 20 (Appendix B, page 7).
Wetland - 11	Palustrine Emergent (PEM1B)	2.127	2.128	Delineated wetland located immediately adjacent to the existing fill slope. Wetland 11 is within the proposed right-of-way and will be entirely impacted by roadway fill required to widen US 20 (Appendix B, page 7).
Wetland - 12A	Palustrine Emergent (PEM1H)	0.063	0.063	Delineated wetland located immediately adjacent to the existing fill slope. Wetland 12A is within the proposed right-of-way and will be entirely impacted by roadway fill required to widen US 20 (Appendix B, page 8).
Wetland - 12B	Palustrine Scrub Shrub (PSS1B)	0.093	0.093	Delineated wetland located immediately adjacent to the existing fill slope. Wetland 12B is within the proposed right-of-way and will be entirely impacted by roadway fill required to widen US 20 (Appendix B, page 8).
Wetland - 12C	Palustrine Emergent (PEM1H)	0.133	0.133	Delineated wetland located immediately adjacent to the existing fill slope. Wetland 12C is within the proposed right-of-way and will be entirely impacted by roadway fill required to widen US 20 (Appendix B, page 8).
Wetland - 13	Palustrine Emergent (PEM1H)	0.009	0.009	Delineated wetland located immediately adjacent to the existing fill slope. Wetland 13 is within the proposed right-of-way and will be entirely impacted by roadway fill required to widen US 20 (Appendix B, page 8).
Wetland - 14	Palustrine Emergent (PEM1C)	0.124	0.124	Delineated wetland located immediately adjacent to the existing fill slope. Wetland 14 is within the proposed right-of-way and will be entirely impacted by roadway fill required to widen US 20 (Appendix B, page 9).
Wetland - 15	Palustrine Emergent (PEM1A)	0.067	0.059	Delineated wetland located immediately adjacent to the existing fill slope. Wetland 15 is within the proposed right-of-way and will be partially impacted by roadway fill required to widen US 20 (Appendix B, page 9).
Wetland - 18	Palustrine Emergent (PEM1C)	0.034	0.034	Delineated wetland located immediately adjacent to the existing fill slope. Wetland 18 is within the proposed right-of-way and will be entirely impacted by roadway fill required to widen US 20 (Appendix B, page 9).

Wetland - 19	Palustrine Emergent (PEM1C)	0.025	0.005	Delineated wetland located immediately adjacent to the existing fill slope. Wetland 19 is within the proposed right-of-way and will be partially impacted by roadway fill required to widen US 20 (Appendix B, page 9).
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Documentation

ES Approval Dates

Wetlands (Mark all that apply)

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

X
X
X

March 27, 2017
March 27, 2017
April 3, 2018
To be submitted with permit applications.

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

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

X
X

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

Remarks:

HNTB conducted a desktop review of the investigated area on October 2, 2016, using current and historical aerial imagery, the Bristol and Middlebury 7.5 Minute USGS Topographic Quadrangle Map, and the National Wetlands Inventory (NWI). 153 NWI mapped areas identified in the RFI included in Appendix E are classified as freshwater emergent wetlands (PEM1/UBF, PEM1B, PEM1C); freshwater forested/Shrub wetland (PFO1/SS1C, PFO1C, PSS1C); and freshwater pond (PBF and PUBGh). These areas are located north and south of US 20 along the length of the investigated area, as well as the extreme east end of the investigated area, just east of the intersection of US 20 and CR 35.

HNTB conducted a Waters of the United States determination on October 20 and 21, 2016 and October 17, 2017. Per the *Wetland and Waterways Delineation Report*, approved by INDOT ESD Ecology and Waterway Permitting (EWPO) on March 27, 2017, a total of seventeen wetlands totaling 10.822 acres were identified within the investigated area (Appendix F, pages 1 to 56). In order for an area to be considered a wetland the observed vegetation, soil properties and hydrologic regime must meet criteria set forth by the USACE. Of the wetlands delineated, fourteen were emergent (Wetlands 1, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, 18, and 19), one was an emergent - scrub/shrub - forested complex (Wetland 02), one was an emergent-forested complex (Wetland 3), and one was an emergent - scrub/shrub complex (Wetland 12). Wetlands 2, 3 and 12 contained distinct areas that would receive different classifications under the Cowardin classification system. Therefore, letters were added to differentiate the separate wetland types found within each wetland. All seventeen of these wetlands are jurisdictional. All wetlands were delineated near the project limits in accordance with the USACE Wetland Delineation Manual (Midwest Regional Supplement, 2010). Two areas initially identified as wetlands, Wetlands 16 and 17 did not meet the vegetation, soils or hydrology criteria on a subsequent site visit and were determined to not be wetlands. On April 3, 2018, the USACE signed the Preliminary Jurisdiction Determination (PJD) form (Appendix F, page 45).

Impacts to wetlands are anticipated. Wetland impacts will be limited to the existing and proposed right-of-way limits of the project. Approximately 5.07 acre of wetland may be impacted by the US 20 Improvement Project.

Wetlands impacted by the project are located in low lying areas immediately adjacent to the base of the existing roadway embankment. Shifting US 20 to avoid wetlands was considered and found infeasible as any modification to the alignment would result in greater wetland impact and utility

impacts. For this reason, an alternative that avoids wetland impacts was eliminated from consideration. The No-Build alternative would avoid wetland impacts but is not practicable as the No-Build alternative would not meet the purpose and need of the project. Of the two alternatives that met the purpose and need of the project, the preferred alternative had the lowest wetland impacts (Appendix I, page 1). Efforts to minimize wetland impacts will continue in the design phase of the project.

There is no practicable alternative to the proposed new construction in wetlands and the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use. FHWA approval of this document will constitute approval of the adverse impacts to wetlands.

Indirect impacts to portions of wetland that are not impacted by the construction limits of the project will be prevented by posting do not disturb signs and utilizing proper erosion control measures. This is a firm commitment and is included in the *Environmental Commitments* section below in this document.

Wetland mitigation is anticipated and will be determined during permitting.

Agency Coordination

In their early coordination response dated July 12, 2017, IDNR DFW provided recommendations to coordinate with IDEM and USACE and that impacts to wetlands should be mitigated according to the 1991 INDOT/IDNR/USFWS Memorandum of Understanding. (Appendix C, pages 12 to 13).

In their early coordination response dated July 26, 2017, USACE recommend that INDOT and their consultants delineate wetlands and that the resulting report be forwarded to them for their review (Appendix C, pages 22 to 23).

An automated response was obtained from the Indiana Department of Environmental Management (IDEM) on August 8, 2018 (Appendix C, pages 44 to 51).

In their early coordination response dated July 7, 2017, USFWS noted the presence of several wetlands adjacent to US 20 in the western portion of the study area. The letter also noted that mitigation for loss of wetlands will be required (Appendix C, pages 34 to 35).

Re-coordination letters were sent to the resource agencies on March 6, 2018 as an update to the project and a continuation of the coordination process (Appendix C, pages 7 to 9). This coordination letter documented the recommended preferred alternative would be a 5-lane facility with two travel lanes in each direction and a TWLTL in the center.

The IDNR DFW responded on April 4, 2018 indicating all the recommendations in their previous letter dated July 12, 2017 still apply (Appendix C, page 14). USFWS responded in an email dated March 20, 2018 stating that the original letter of July 7, 2017 continues to suffice and did not provide any additional comments regarding wetlands (Appendix C, page 36 to 37). No additional response was received from the USACE.

Representatives from the FHWA, USACE, IDEM, and IDNR DFW attended a resource agency meeting on July 12, 2018. The purpose of the meeting was to present the recommended preferred alternative to the resource agencies and identify any concerns they may have moving forward. A Google Earth tour of the project corridor was also completed. Potential impacts to wetlands along with mitigation opportunities were discussed at the meeting (Appendix C, pages 52 to 72).

Recommendations provided by the agencies are included in Section J - Environmental Commitments of this document.

Terrestrial Habitat
Unique or High Quality Habitat

Presence

X

Impacts

Yes	No
X	

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

Remarks:

A review of the USGS topographic map, aerial photograph, and site visits conducted by HNTB on October 20 and 21, 2016 and October 17, 2017, revealed that terrestrial habitat within the project area consists primarily of agricultural, residential, and commercial land use. Dominant vegetation observed within the project area consists of tall fescue (*Schedonorus arundinaceus*), Queen Anne's lace (*Daucus carota*), reed canary grass (*Phalaris arundinacea*), spicebush (*Lindera benzoin*), multiflora rose (*Rosa multiflora*), ash-leaf maple (*Acer negundo*), silver maple (*Acer saccharinum*), American elm (*Ulmus americana*), and green ash (*Fraxinus pennsylvanica*). One wetland (Wetland 2) containing high-quality habitats were observed during the field investigation. Signs of wildlife such as deer rubs, deer beds, beaver cut trees and evidence of numerous other small mammals were observed during the field investigation. It can be assumed that small animals such as squirrels, raccoons, birds, etc. likely inhabit the surrounding area.

Proposed right-of-way impacts for the terrestrial habitat include approximately 5.5 acres of tree clearing, 30.0 acres of agricultural land, 5.1 acres of wetland, and 42.9 acres of residential property. Vegetation removal from on commercial, religious, and utility corridor land uses total 11.3 acres. Tree clearing will be limited to areas within 300 feet of the edge of pavement of US 20 and connecting county roads. The remainder of the project area is largely existing pavement or maintained grasses associated with commercial properties and existing transportation facilities (Appendix B, pages 6 to 14 and 25 to 51). 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.

Tree clearing for the project will be accomplished under a separate tree clearing contract. This work is anticipated to be performed one year prior to the main construction contract. The designation number for this work will be 1802045.

Agency Coordination

In their early coordination response letter on July 7, 2017, USFWS stated that mitigation for the loss of wetlands will be required. USFWS also stated their concern over the loss of deciduous and evergreen trees which provide habitat for migratory birds and other wildlife and indicated that these trees will need to be replaced as close to the project area as possible (Appendix C, pages 34 to 35).

In their early coordination response letter dated July 12, 2017, IDNR DFW made recommendations to minimize any potential effects to terrestrial habitat (Appendix C, pages 12 to 13).

Re-coordination letters were sent to the resource agencies on March 6, 2018 as an update to the project and a continuation of the coordination process. This coordination letter documented that recommended preferred alternative would be a 5-lane facility with two travel lanes in each direction and a TWLTL in the center.

The IDNR DFW responded on April 4, 2018 indicating all the recommendations in their previous letter dated July 12, 2017 still apply and did not make any additional recommendations concerning terrestrial habitat species (Appendix C, page 14).

The USFWS responded in an e-mail received March 20, 2018 USFWS indicating that they would like to see mitigation for the loss of trees for migratory birds and other wildlife, since a large number of trees will be taken (Appendix C, page 36).

Representatives from the FHWA, USACE, IDEM, and IDNR DFW attended a resource agency meeting on July 12, 2018. No concerns regarding impacts to terrestrial habitat were discussed at

the meeting (Appendix C, pages 52 to 72).
 Recommendations provided by the agencies are included in Section J - Environmental Commitments of this document.

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

Karst

Is the proposed project located within or adjacent to the potential Karst Area of Indiana?
 Are karst features located within or adjacent to the footprint of the proposed project?

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

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

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

Remarks:

The project is located in Elkhart County, which is outside the designated karst area of the state, as identified in the October 13, 1993 Memorandum of Understanding (MOU) between INDOT, IDNR, IDEM and USFWS. No karst features are known to exist within or adjacent to the proposed project area. The 1993 Karst MOU is not applicable to this project, and a karst assessment is not required. No karst features were noted in the RFI (Appendix E, pages 3 and 10). Impacts to karst features are not expected.

The Indiana Geological Survey (IGS) did not provide responses regarding karst features in their initial coordination response, dated July 6, 2017 or their auto response generated on March 14, 2018 (Appendix C, pages 26 and 27). In their early coordination response, IGS included this project is located in a moderate liquification area. It is also included in a moderate potential for bedrock resources and a low potential for sand and gravel resources. There are also active industrial mineral sites.

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	
		Yes	No
Within the known range of any federal species	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Any critical habitat identified within project area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Federal species found in project area (based upon informal consultation)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State species found in project area (based upon consultation with IDNR)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

Remarks:

Based on a desktop review and the RFI (Appendix E, page 15), completed by HNTB on July 31, 2018, the IDNR Elkhart County Endangered, Threatened and Rare (ETR) Species List has been checked and is included in (Appendix E, page 12). The highlighted species on the list reflect the federal and state identified ETR species located within the county. In their early coordination response letter on July 12, 2017, a IDNR DFW review of the Natural Heritage Database identified one state endangered species Blanding's turtle (*Emydoidea blandingii*) documented within a half mile southeast of the project area (Appendix C, page 12). IDNR DFW recommended that to minimize impacts to this species during the nesting period construction should not taking place from April 1 through July 1. This has been added as a "For Consideration" commitment.

Early coordination was undertaken with the USFWS on June 9, 2017 (Appendix C, page 1-3). USFWS responded in a letter dated July 7, 2017 requesting information on the current and proposed right-of-way widths, stating that mitigation will be required for any wetland impacts, and any trees lost during the project will need to be replaced as close to the project area as possible

(Appendix C, page 34). USFWS also provided comments regarding endangered species. They stated that impacts to the Indiana bat and northern long-eared bat (NLEB) will be evaluated utilizing the Range-wide Programmatic Consultation Process and that there is no known habitat for the eastern massasauga within the proposed project area. They concluded that the project is not likely to adversely affect the eastern massasauga and that this letter precludes the need for further consultation on the eastern massasauga as required under Section 7 of the Endangered Species Act (Appendix C, page 35).

A response was provided to USFWS on March 6, 2018 via email by HNTB providing information on the current and proposed right-of-way. This e-mail also solicited comments on the identification of the proposed five lane section as the recommended alternative. This e-mail also stated that approximately 5.5 acres of tree clearing may be needed, a portion of which may be 100-300 feet from the edge of the existing pavement (Appendix C, page 36).

USFWS responded to this additional coordination in an e-mail dated March 20, 2018. In this e-mail USFWS had questions regarding the proposed road alignment, potential residential relocations, and the existing and proposed right-of-way widths. This e-mail went on to say that the USFWS would still like to see mitigation for the loss of trees for migratory birds and other wildlife and that the overall habitat is suitable for bats. This e-mail asked for a copy of the wetlands delineation report and the USACE jurisdictional determination. HNTB provided responses to the USFWS questions along with a copy of the wetland delineation report in an e-mail on May 30, 2018. USFWS confirmed receipt of this information on June 11, 2018 and did not include any additional comments (Appendix C, page 37).

Elkhart County is within range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (NLEB) (*Myotis septentrionalis*). 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 78 to 84). The official species list generated from IPaC indicated one other species present within the project area, the federally threatened eastern massasauga (*Sistrurus catenatus*). This project does not qualify for the USFWS Interim Policy. Qualified staff identified suitable summer habitat for the Indiana bat and NLEB within the investigated area during the field survey.

The project does not qualify for the *Range-wide Programmatic Informal Consultation for the Indiana bat and northern long-eared bat (NLEB)*, dated May 2016 (revised February 2018), between FHWA, Federal Railroad Administration, Federal Transit Administration and USFWS. The *Limited Formal Programmatic Consultation* for the Indiana bat and northern long-eared bat (NLEB) was completed for this project.

Project information was submitted through the USFWS's Information for Planning and Consultation (IPaC) portal on August 6, 2018. The USFWS IPaC Official Species List and USFWS IPaC Concurrence Verification Letter have been completed (Appendix C, page 101). Based on the results of the IPaC consultation process, this project determination is likely to adversely affect the Indiana bat and/or NLEB (Appendix C, page 101). As part of this finding, four Avoidance and Minimization Measures (AMMs) are required. The following AMMs are firm project commitments:

General AMM 1: Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs.

Tree Removal AMM 1: Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to the extent practicable to avoid tree removal in excess of what is required to implement the project safely.

Tree Removal AMM 3: Ensure tree removal is limited to that specified in project plans. Install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits. Ensure that contractors understand clearing limits and how they are marked in the field.

Lighting AMM 1: Direct temporary lighting away from suitable habitat during the active season.

Lighting AMM 2: Use downward-facing, full cut-off lens lights, and direct lighting away from suitable habitat when installing new or replacing existing permanent lights.

INDOT shall satisfy the compensatory mitigation requirements of the formal consultation with USFWS through one of the conservation options outlined on page 41 of the May 20, 2016 *Programmatic Biological Opinion for Transportation Projects in the Range of the Indiana bat and NLEB*. The amount to be paid to the Range-wide In-lieu Fee Program, to be administered by The Conservation Fund, shall be \$12,996.03. This amount was determined by the Habitat Block Method. The area of suitable habitat to be cleared, multiplied by the mitigation ratio for inactive season tree clearing for Elkhart, and the compensatory price per acre; 1.225 acre X 1.75 X \$10,609.

INDOT verified the effect finding and submitted to USFWS on August 6, 2018, (Appendix C, page 102). On August 16, 2018, USFWS concurred with the "Likely to Adversely Effect" finding (Appendix C, page 101). USFWS stated that this concurrence concludes the ESA Section 7 responsibilities relative to these species for this project. Additionally, a "Re-initiation Notice" is required if: more than 1.225 acre of suitable habitat is to be cleared; additional information about listed species is encountered; the project is modified in a manner that causes an effect to the listed species; or a new species or critical habitat is listed that the project may affect. These requirements, and the Avoidance and Minimizations Measures (AMMs) from the Project Submittal Form, are included as firm commitments for this project. Agency Coordination

Re-coordination letters were sent to the resource agencies on March 6, 2018 as an update to the project and a continuation of the coordination process (Appendix C, page 7 to 9). This coordination letter documented that recommended preferred alternative would be a 5-lane facility with two travel lanes in each direction and a TWLTL in the center.

The IDNR DFW responded on April 4, 2018 indicating all the recommendations in their previous letter dated July 12, 2017 still apply and did not make any additional recommendations concerning threatened or endangered species (Appendix C, page 14).

Recommendations provided by the agencies and AMMs are included in Section J - Environmental Commitments section of this document.

This precludes the need for further consultation on this project under Section 7 of the Endangered Species Act of 1973, as amended. Should additional information arise pertaining to project plans or a revised species list be published, it will be necessary for the Federal agency to reinitiate consultation.

SECTION B – OTHER RESOURCES

Drinking Water Resources

Wellhead Protection Area
Public Water System(s)
Residential Well(s)
Source Water Protection Area(s)
Sole Source Aquifer (SSA)

Presence

X
X

Impacts

Yes	No
X	
	X

If a SSA is present, answer the following:

Is the Project in the St. Joseph Aquifer System?
Is the FHWA/EPA SSA MOU Applicable?
Initial Groundwater Assessment Required?
Detailed Groundwater Assessment Required?

Yes	No
	X
	X
	X
	X

Remarks:

The proposed project is located in Elkhart County, and a portion of the project area is within approximately 125 feet of the delineated boundary of the St. Joseph Sole Source Aquifer, the only legally designated sole source aquifer in the state of Indiana (Appendix B, page 6).

Agency Coordination

An early coordination letter was sent to the US Environmental Protection Agency (EPA) Groundwater and Drinking Water Branch on February 1, 2018 (Appendix C, page 4). EPA responded electronically on February 1, 2018, 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, pages 29 to 31). After review of the project 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. This has been added as a "For Consideration" commitment.

Re-coordination letters were sent to the resource agencies on March 6, 2018, in order to document that the project team has determined that a five-lane section through the project area is warranted and solicit comments on the project. The EPA responded electronically on March 14, 2018, confirming that an EPA Sole Source Aquifer project review of this project is not required (Appendix C, page 31).

The IDEM Stormwater Permit Coordinator responded on April 4, 2018 indicating all the recommendations in their previous letter dated July 12, 2017 still apply and did not make any additional recommendations concerning threatened or endangered species (Appendix C, page 15).

Therefore, the FHWA/EPA Sole Source Aquifer Memorandum of Agreement (MOA) is not applicable to this project, and a detailed groundwater assessment is not required.

IDEM's Wellhead Proximity Determinator website (<https://www.in.gov/idem/cleanwater/pages/wellhead/>) was accessed on July 11, 2018, by HNTB. The required project location data was provided and it was determined that it is not located within a Wellhead Protection Area (WHPA).

A query of the IDNR Water Well Web Viewer (<https://www.in.gov/dnr/water/3595.htm>) conducted on July 11, 2018, by HNTB identified numerous private wells along the project corridor. There are three residential wells mapped within the right-of-way of the project and will likely be impacted. An additional eight residential wells are located adjacent to the right-of-way of the project. However, public water systems are not available to residences within the project area, and each residence and business located within the project area likely has its own water supply well. Therefore, there will likely be additional impacted private wells identified as the project advances to the right-of-way acquisition stage.

This project lies adjacent to the Elkhart, Goshen Urban Area Boundary (UAB). Post construction Storm Water Quality Best Management Practices (BMPs) will be considered during the final design of the project and incorporated into the project's Stormwater Pollution Prevention Plan (SWPPP).

The IDNR Division of Oil and Gas responded to early coordination on June 14, 2017 (Appendix C, pages 10 and 11). In their response, they indicated that some ground water withdrawal wells, owned by Elkhart County Gravel, Inc., are located at the east end of US 20. The identified ground water withdrawal well is 0.54 mile north of the right-of-way and will not be impacted by construction activities.

Flood Plains

Presence

Impacts

Yes

No

Longitudinal Encroachment
 Transverse Encroachment
 Project located within a regulated floodplain
 Homes located in floodplain within 1000' up/downstream from project

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

Remarks:

The project does not encroach upon a regulatory floodplain as determined from available Federal Emergency Management Agency (FEMA) floodplain maps (Appendix B, pages 2 and 3). 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.

In their early coordination response letters dated July 12, 2017 and March 6, 2018, IDNR DFW stated that the project will require a formal approval for construction in the Indian Creek floodway (Appendix C, page 12) unless the project qualifies for a bridge exemption or qualifies under the INDOT Maintenance Activity Exemption. It was determined by INDOT EWPO that a Construction in a Floodway (CIF) permit would not be needed for this project.

The Elkhart County Floodplain Administrator responded to coordination on March 19, 2019 (Appendix C, page 108). In their response, they requested to be provided the Waters Report. This was provided electronically on March 19, 2019. They had no other concerns with the project.

Farmland

Agricultural Lands
 Prime Farmland (per NRCS)

Presence

X
X

Impacts

Yes	No
X	
X	

Total Points (from Section VII of CPA-106/AD-1006* 157
 *if 160 or greater, see CE Manual for guidance.

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

Remarks:

As required by the Farmland Protection Policy Act (FPPA), coordination with the USDA-NRCS has been completed.

An early coordination letter was sent to the USDA-NRCS on July 2, 2018.

In their response dated July 26, 2018, the USDA-NRCS stated that the acquisition of right-of-way will cause the conversion of prime farmland per the FPPA (Appendix C, page 32). A copy of the Farmland Conversion Impact Rating for Corridor Type Projects (NRCS-CPA-106) form was included in the response. The NRCS-CPA-106 form included prime farmland impact ratings for Alternative 3A (Corridor 1) and Alternative 3B (Corridor 2). Only alternatives that were determined to meet the purpose and need were evaluated for prime farmland impacts.

Alternative 3A and Alternative 3B will both require the acquisition of approximately 91 acres of new, permanent right-of-way. Farmland acreage provided by the NRCS were calculated based on a preliminary right-of-way footprint, a more refined right-of-way footprint was used in the right-of-way section of this document. Alternative 3A and Alternative 3B received NRCS-CPA-106 Form scores of 155 and 157, respectively (Appendix C, page 33).

NRCS's threshold score for significant impacts to farmland that result in the consideration of alternatives is 160. Since this project score is less than the threshold, no significant loss of prime, unique, statewide, or local important farmland will result from this project. No alternatives other than those previously discussed in this document will be investigated without reevaluating impacts to prime farmland.

SECTION C – CULTURAL RESOURCES

Minor Projects PA Clearance

Category	Type
----------	------

INDOT Approval Dates

N/A
X

Results of Research Eligible and/or Listed Resource Present

Archaeology

X

 NRHP Buildings/Site(s)

--

 NRHP District(s)

--

 NRHP Bridge(s)

--

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 checked="" type="checkbox"/>	September 15, 2017	October 24, 2017
Archaeological Records Check/ Review	<input type="checkbox"/>		
Archaeological Phase Ia Survey Report	<input checked="" type="checkbox"/>	June 29, 2018	August 8, 2018
Archaeological Phase Ic Survey Report	<input type="checkbox"/>		
Archaeological Phase II Investigation Report	<input type="checkbox"/>		
Archaeological Phase III Data Recovery	<input type="checkbox"/>		
APE, Eligibility and Effect Determination	<input checked="" type="checkbox"/>	October 22, 2018	November 27, 2018
800.11 Documentation	<input checked="" type="checkbox"/>	October 22, 2018	November 27, 2018

MOA Signature Dates (List all signatories)

Memorandum of Agreement (MOA)

X

1/23/2019 FHWA
1/17/2019 IDNR DHPA-SHPO
12/13/2018 INDOT ES

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

Remarks:

Section 106 of the National Historic Preservation Act requires federal agencies to consider the effects of their undertakings on historic properties. In accordance with 36 CFR 800.2(c), consulting parties were invited to participate in efforts to identify historic properties potentially affected by the undertaking, assess its effects, and seek ways to avoid, minimize or mitigate any adverse effects on historic properties.

Area of Potential Effect (APE):

The Area of Potential Effects (APE) is “the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking”. [36 CFR § 800.16(d)]

The APE for this undertaking was drawn to extend 1,320 feet from the project termini and to encompass all properties lying adjacent to the undertaking (Appendix D, page 22). On October 24,

2017, the IDNR Division of Historic Preservation and Archaeology State Historic Preservation Officer (DHPA-SHPO) indicated the APE as proposed in the Historic Property Report (HPR) (Weintraut and Associates, May 2017) appears to be of appropriate size to encompass the geographic area of direct and indirect effects (Appendix D, page 34).

Coordination with Consulting Parties:

The following entities were invited to be consulting parties on September 21, 2017. INDOT, FHWA, and the DHPA-SHPO are automatically considered to be consulting parties. The potential consulting parties were asked to respond within 30 days. If no response was received, it was assumed the recipient did not wish to act as a consulting party. Those in bold type accepted the invitation to be a consulting party.

- Eastern Shaw nee Tribe of Oklahoma
- Forest County Potaw atomi Community
- Miami Tribe of Oklahoma
- Peoria tribe of Indians of Oklahoma
- Pokagon Band of Indians of Oklahoma
- Elkhart County Historian
- Elkhart County Genealogy Society
- Elkhart County Historical Museum
- Middlebury Community Historical Museum
- Goshen Historical Society and Museum
- Michiana Area Council of Governments
- Elkhart County Planning and Zoning
- Elkhart County Board of Commissioners
- Indiana Landmarks - Northern Regional Office
- State Historic Preservation Office.

Historic Properties:

An HPR was prepared by qualified professionals at Weintraut and Associates for the proposed action in May of 2017 (Appendix D, pages 9 to 10). Historians identified nine properties considered or rated Contributing, per the rating standards established for Indiana Historic Sites and Structures Inventory (IHSSI). Five properties within the project APE have been previously recorded in the IHSSI; only four remain extant. As part of the identification and evaluation efforts for the Section 106 study of this undertaking, historians are recommending no properties as eligible for listing in the NRHP. On October 24, 2017, DHPA-SHPO agreed none of the above-ground properties identified in the HPR appears to be eligible for inclusion in the NRHP (Appendix D, page 34).

Archaeology:

An archaeological records check and Phase Ia Field Reconnaissance Survey Report was prepared by qualified professionals at Weintraut and Associates for the proposed action in June of 2018 (Appendix D, pages 11-13). The report of these findings was approved by the INDOT Cultural Resources Office (CRO) on June 29, 2018. The archaeological records check was sent to the DHPA-SHPO on July 6, 2018 and provided to the Native American tribes for review via INDOT's IN SCOPE website on July 9, 2018 (Appendix D, page 40).

The DHPA-SHPO concurred with the findings of the report on August 8, 2018 (Appendix D, pages 41 to 42). In their letter, the DHPA-SHPO concurred that archaeological site 12-E-0487 appears potentially eligible for inclusion on the NRHP and must either be avoided or subjected to further archaeological investigations. The site must be clearly marked so that it is avoided by all project-related ground disturbing activities. If avoidance is not feasible, a plan for subsurface investigations must be submitted to the Division of Historic Preservation and Archaeology (DHPA)

for review and comment and such investigations must conform to the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation.

Additionally, DHPA-SHPO concurred with the opinion of the archaeologist, as expressed in the archaeological report, that the portions of sites 12-E-0482, 12-E-0483, 12-E-0484, 12-E-0486, 12-E-0489, 12-E-0490, and 12-E-0491 that lie within the proposed project area are unlikely to contain intact archaeological deposits; and that no further archaeological investigations of these portions of sites 12-E-0482, 12-E-0483, 12-E-0484, 12-E-0486, 12-E-0489, 12-E-0490, and 12-E-0491 appear necessary. The portions of sites 12-E-0482, 12-E-0483, 12-E-0484, 12-E-0486, 12-E-0489, 12-E-0490, and 12-E-0491 that lie outside the proposed project area should be clearly marked, and must be avoided by all ground-disturbing project activities. If avoidance is not feasible, then a plan for subsurface archaeological investigations must be submitted to the DHPA for review and comment. Any further archaeological investigations must be done in accordance with the "Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation" (48 F.R. 44716)". This is included in Section J- Environmental Commitments at the end of this document.

Documentation, Findings:

The Section 106 APE determination and "Adverse Effect" finding were approved by FHWA on October 22, 2018 (Appendix D, page 1). The Section 106 finding was submitted to the DHPA-SHPO and consulting parties for review on October 25, 2018. The DHPA-SHPO concurred with the finding on November 27, 2018 (Appendix D, page 43). No other comments were received.

Public Involvement:

In accordance with 36 CFR 800.4(a)(1), 800.4(c)(2), and 800.6(a)(4), a 30-day public notice and opportunity for the public to comment on the "Adverse Effect" finding was published on November 1, 2018 in the *Goshen News* (Appendix D, page 64). The 30-day comment period concluded on December 3, 2018. No comments were received.

Memorandum of Agreement (MOA):

Due to the potential for adverse effects to archaeological site 12-E-0487 that would occur under the Preferred Alternative, FHWA has determined that a finding of Adverse Effect under Section 106 is appropriate for this undertaking.

Commitments to mitigate adverse impacts to archaeological resources that are determined eligible for the NRHP as a result of the US 20 Improvement project have been developed through a MOA between INDOT, FHWA, DHPA-SHPO, and consulting parties.

The draft MOA includes stipulations in which the agency agrees to fund and conduct a Phase II investigation of the site to determine its data potential and eligibility for listing in the NRHP. The Effect Finding and draft MOA were submitted to DHPA-SHPO and other consulting parties on October 25, 2018 for their review and concurrence on the proposed measures to resolve or mitigate adverse effects. Comments were received from DHPA-SHPO on November 27, 2018. INDOT, the project applicant, signed the MOA as an invited signatory on December 13, 2018. The DHPA-SHPO signed the MOA on January 17, 2019. FHWA signed the MOA on January 23, 2019 (Appendix D, pages 58 to 60). All mitigation measures from the MOA have been incorporated into this document as firm commitments.

The Section 106 process has been completed and the responsibilities of the FHWA under Section 106 have been fulfilled.

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

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

Parks & Other Recreational Land

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

Presence

X

Use

<u>Yes</u>	<u>No</u>
	X

Evaluations Prepared

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

FHWA

Approval date

--

Wildlife & Waterfowl Refuges

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

Presence

Use

<u>Yes</u>	<u>No</u>

Evaluations Prepared

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

FHWA

Approval date

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Historic Properties

- Sites eligible and/or listed on the NRHP

Presence

--

Use

<u>Yes</u>	<u>No</u>

Evaluations Prepared

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

FHWA

Approval date

--

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

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

Remarks:

Section 4 (f) of the Department of Transportation Act of 1966, 49 USC 303(c) was established to protect publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historic sites against direct or constructive use impacts from transportation projects.

The RFI, prepared by HNTB on January 23, 2017, identified one trail, the Miami Snowmobile Trail, within the project area (Appendix E, pages 2 and 9). The Miami Snowmobile Trail crosses US 20 between CR 31 and CR 35 (Appendix B, page 11).

This trail is considered a Section 4(f) resource, as it is located within an existing public easement

on private land that permits public access for recreational purposes. The easement is owned by IDNR Division of Outdoor Recreation and managed by the Elkhart County Snowmobile Club. The Elkhart County Snowmobile Club is the Official with Jurisdiction (OWJ) over the resource. The trail is maintained during the snowmobile season from December 1 to March 31, and the location of the trail is marked by placement of flags in the ground to designate the path. Although it is a formally-designated trail, it is used only in the winter months and does not have a permanent, surfaced path that is visible during non-winter months. During the rest of the year, the land is used for agricultural crops.

In their early coordination response letter dated February 13, 2018, IDNR Division of Outdoor Recreation stated that initial analysis of the roadway expansion will not be a problem for the trail (Appendix C, page 15). In an additional early coordination response letter dated March 14, 2018, IDNR Division of Outdoor Recreation stated that coordination with the Elkhart County Snowmobile Club indicated the club does not anticipate the project affecting the trail outside of the December 1 to March 31 snowmobile season. IDNR Division of Outdoor Recreation requested that INDOT replace the existing snowmobile crossing signs at the crossing locations once construction is complete (Appendix C, page 16). This is a firm commitment included in Section J- Environmental Commitments at the end of this document.

The Elkhart County Snowmobile Club did not respond to the initial early coordination correspondence; however, phone conversations with the club president and lease coordinator occurred on February 1, 2018, and July 23, 2018 regarding details of the trail and concerns with the project (Appendix I, page 2). The club representatives noted that the trail is leased by IDNR from a local property owner, and the trail is installed and maintained each year by the Elkhart County Snowmobile Club. The lease held by the IDNR is for the use of the entire field. The location of the trail crossing is shown on the projects construction plans. It was also noted that the current US 20 crossing was chosen due to the lack of line-of-sight issues that are associated with elevated topography to the west. The club's concerns with the project include any proposed fencing, the additional safety concern with crossing a 5-lane facility, and a change in location of the trail's crossing of US 20 that may worsen line-of-sight issues for trail users. Access to the trail will be maintained during construction when there is snow on the ground and the trail is available for use. The line-of-sight for snowmobiles will be improved as a result of this project. This has been added as a firm commitment.

The widening of the right-of-way associated with this project will require the trail to be moved further north on the property from what is shown on the IDNR trail map, but within the existing public easement. This will not require a revision to the lease held by the IDNR Division of Outdoor Recreation, as the lease agreement is for the entire property and not a specific path on the property. The trail will continue to be open and available for public use in a different location within the public easement during construction. The existing location where the trail crosses US 20 will continue to be signed and will be maintained during construction.

According to the FHWA Section 4(f) Policy Paper, dated July 20, 2012, a temporary occupancy will not constitute a Section 4(f) use when all the conditions listed in 23 CFR 774.13(d) are satisfied:

- Duration will be temporary, i.e., less than the time needed for construction of the project, and there should be no change in ownership of the land;
- Scope of the work must be minor, i.e., both the nature and the magnitude of the changes to the Section 4(f) property are minimal;
- There are no anticipated permanent adverse physical impacts, nor will there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis;
- The land being used must be fully restored, i.e., the property must be returned to a condition which is at least as good as that which existed prior to the project; and
- There must be documented agreement of the OWJ over the Section 4(f) resource regarding the above conditions.

The Elkhart County Snowmobile Club, the OWJ for the Miami Snowmobile Trail, was notified of INDOT's intent to apply the Section 4(f) temporary occupancy criteria to this project on July 24, 2018, and concurrence that the project meets the above conditions was received on July 25, 2018 (Appendix I, pages 3 and 4). Therefore, the impacts to this trail constitute a temporary occupancy and are therefore not considered a Section 4(f) use.

The RFI also identified Northridge High School within the project area. 1.4 acres of strip right-of-way from the school will be necessary for the project. 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 5). Therefore, there will be no Section 4(f) use of this property.

FHWA Section 4(f) regulations exempt archeological sites from Section 4(f) protection if the archaeological resource "is important chiefly because of what can be learned by data recovery and has minimal value for preservation in place" per 23 CFR §774.13(b)(1). This exception from Section 4(f) is only effective if the "officials(s) with jurisdiction over the Section 4(f) resource have been consulted and have not objected" per 23 CFR §774.13(b)(2). Most archaeological resources qualify for this exception.

Archaeological site 12-E-0487 appears potentially eligible for inclusion on the NRHP and must either be avoided or subjected to further archaeological investigations. If avoidance is not feasible, a plan for subsurface investigations must be implemented for data recovery. As site 12-E-0487 does not require preservation in place this is not a Section 4(f) Resource.

In the event that an archeological site which warrants preservation in place is discovered during construction, the Section 4(f) process may be expedited and any required evaluation of feasible and prudent avoidance alternatives will take into account the level of investment already made. The review process, including the consultation with other agencies, will be shortened as appropriate.

No other potential Section 4(f) resources were identified within or adjacent to the project. No further Section 4(f) evaluation is required.

Section 6(f) Involvement

Presence

Use

No

Section 6(f) Property

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

Remarks:

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

A review of the project's RFI, aerial mapping, the LWCF National Park Service website (<https://www.nps.gov/subjects/lwcf/lwcf-in-your-neighborhood.htm/>), and site visit determined that 16 Section 6(f) resources are within Elkhart County. None of the identified Section 6(f) resources are located within or near the project area (Appendix I, page 61). The proposed project will not impact Section 6(f) resources.

SECTION E – Air Quality

Air Quality

Conformity Status of the Project

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

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

If YES, then:

Is the project in the most current MPO TIP?

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

Is the project exempt from conformity?

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

If the project is NOT exempt from conformity, then:

Is the project in the Transportation Plan (TP)?

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

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

Level of MSAT Analysis required?

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

Remarks:

Per the IDEM Office of Air Quality, Elkhart County is in attainment for all National Ambient Air Quality Standards criteria pollutants. Therefore, a carbon monoxide (CO) or particulate matter (PM) 2.5 hot spot analysis is not required.

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

Elkhart County is within the boundaries of the MACOG MPO. This project was programmed into the MACOG TIP for Elkhart County per resolution 28-17 on July 1, 2017 (Appendix H, page 1). This project was initially programmed into the INDOT STIP for Fiscal Year (FY) 2018-2021 on July 3, 2017 (Appendix H, page 2).

This project was carried forward into the MACOG TIP for FY 2020-2024 for Elkhart County on June 27, 2019 (Appendix H, page 3) and the INDOT STIP for FY 2020-2024 on July 2, 2019 (Appendix H, page 4).

The purpose of this project is to decrease 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. 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 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.

SECTION F - NOISE

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

	No	Yes/Date
ES Review of Noise Analysis		November 30, 2018

Remarks:

The addition of an added travel lane classifies the proposed project as a Type I project. Per the FHWA noise regulations (23 CFR 772) and the 2017 INDOT *Traffic Noise Procedure*, a Traffic Noise Analysis Report has been completed and approved by INDOT on November 30, 2018 (Appendix I, page 60).

The latest version of the FHWA's Traffic Noise Model, TNM[®]2.5, was used to model existing (2016) and design year (2041) worst hourly traffic noise levels within the US 20 Improvement Project study area. Eighty-two (82) noise receivers representing the 100 receptors were modeled in the Existing and No Build conditions. Receivers were placed within and immediately adjacent to a 500-foot buffer surrounding US 20 in areas consisting of residences, religious facilities, and commercial facilities. Due to anticipated relocations of Receivers 20, 39, 46, 47, 48, 49, 53, and 60, 74 receivers (91 receptors) were modeled in the Build condition.

Existing peak hour (2016) noise levels range from 54.8 to 70.4 dBA L_{eq}(1h). Residential noise levels ranged from 58.4 to 68.4 dBA L_{eq}(1h).

Predicted future design year (2041) noise levels adjacent to the proposed project would approach or exceed the noise abatement criteria (NAC) at 24 noise sensitive receptors. The noise levels would range from 57.6 to 69.9 dBA L_{eq}(1h) within the project area.

Predicted future noise levels change over existing noise levels range from -1.0 to 4.5 dBA. Therefore, none of the predicted future noise levels would substantially exceed existing noise levels.

One noise barrier (Noise Barrier 1) was modeled in the study area. While Noise Barrier 1 would be considered a feasible abatement measure, even at the maximum allowable height of 30 feet, Noise Barrier 1 would not achieve INDOT's design goal of 7.0 dB(A) reduction for any of the benefitted first row receivers nor meet the cost effective criterion of \$25,000 per benefitted receptor per the INDOT Traffic Noise Policy in accordance with 23 CFR 772. Noise Barrier 1 would be constrained by a pond to the west and Westlake Drive to the east, inhibiting its effectiveness. Noise Barrier 1 would be approximately 410 feet in length and would be 30 feet in height. The estimated cost of Noise Barrier 1 would be approximately \$368,615, or approximately \$184,308 per benefitted receptor.

Based on the studies thus far accomplished, the State of Indiana has not identified any locations where noise abatement is likely. Noise abatement at these locations is based upon preliminary design costs and design criteria. Noise abatement has been found to be feasible, but not reasonable as the barrier exceeded the cost effective criterion of \$25,000 per benefitted receptor. This barrier did not meet the INDOT design goal as a 7 dB(a) reduction could not be reached at any of the benefitted receptors. 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.

SECTION G – 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
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>

Remarks:

The proposed project will improve traffic flow and safety along the project corridor. The project is not anticipated to result in substantial impacts to community cohesion, as it will not divide existing neighborhoods, or change community access. The project is not expected to have adverse impact to the local tax base or property values. The safety improvements provided by the project are anticipated to be a benefit to the community.

Potential temporary community and economic impacts during construction of the proposed project include increased travel time, increased emergency response time, and increased fuel consumption by commercial and individual motorists due to any temporary lane closures that may be required. Local access surrounding the construction limits will be maintained during construction.

In their coordination response dated February 16, 2018, the Town of Middlebury recommended that INDOT construct this roadway to resemble the section of US 20 between SR 15 and CR 17 except with a wider shoulder to accommodate all modes of transportation, including horse and buggy and bicycle traffic. Middlebury Town Council also recommended that the intersection of US 20 and CR 35 be improved to allow for protected left turns along with having a through lane and a dedicated right turn lane on the north and south approaches to the intersection (Appendix C, pages 39 to 40). These recommendations have been added as for consideration commitments.

According to the Fairs and Festivals website (www.fairsandfestivals.net) and (<https://www.indianafestivals.org/>) accessed on July 26, 2018, by HNTB, there are three annual fairs and festivals located within 10 miles of the project: Middlebury Summer Festival (August), Middlebury Fall Festival (September) and Hometown Holidays Annual Festival (November). The proposed project will maintain at least one lane of traffic in each direction during construction. Although intersecting roads may be closed for a brief period, detours will be clearly marked and should not substantially impair travel routes to these fairs and festivals.

According to the MACOG website, Elkhart County has a completed Americans with Disabilities Act (ADA) Transition Plan, dated 2012 (http://www.macog.com/docs/transportation_active/ada/ElkhartCo.pdf). The project will comply with the ADA Transition Plan. There are no sidewalks within or adjacent to the construction limits. Therefore, there are no facilities in the construction limits that require ADA compliance.

Indirect and Cumulative Impacts

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

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

Remarks:

Indirect impacts are caused by an action (project) and are later in time or farther removed in distance, but are still reasonably foreseeable. Cumulative impacts are impacts on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.

This project is not of a type that is likely to cause substantial indirect or cumulative effects. This project is not expected to affect growth, changes in land use, or population density. The project will not add capacity to the existing roadway network or provide additional access to any currently undeveloped area. Therefore, the project is not expected to increase development in the area or result in substantial indirect or cumulative impacts.

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

Remarks:

Educational facilities, religious institutions, a private airport, a snowmobile trail, and public utilities are located within or near the project area. The proposed project will not result in substantial impacts to these facilities. In addition, due to the presence of the Amish community in the area, this roadway is known to be heavily travelled by bicycles and horse-drawn buggies.

Educational Facilities - Northridge High School is located adjacent to the project in the northeast quadrant of the US 20 and CR 35 intersection (Appendix B, page 14). Approximately 1.4 acres of right-of-way will be acquired from the school. This right-of-way will be acquired from the portion of the property immediately adjacent to US 20. This portion of the property is currently a mowed lawn. Early coordination letters were sent to Northridge High School and Middlebury Community Schools. No response was received. Additional coordination will occur prior to construction to notify them of the MOT plan and the potential impacts on bus routes in the area. Access to the schools will be maintained during construction.

Religious Facilities – The RFI identified Waypoint Community Church and Wat Lao Dharmajaro Buddhist Temple religious facilities adjacent to the project (Appendix E, pages 2 and 9). Although right-of-way will be acquired from both properties, the required right-of-way will be a narrow strip near the roadway and will not have a permanent negative impact on the use of the facilities. Early coordination letters were sent to both religious facilities. Waypoint Community Church responded to early coordination on February 14, 2018 (Appendix C, page 38). Although the church anticipates temporary congestion during construction, they support the project and stated that it will have long-term positive effects on safety in the area. They also noted concerns from people who use their facility regarding lack of safety of current conditions, the wetlands located on the church property, and the increase in Amish “carts” in the last year. Additional coordination with these facilities will occur prior to construction to notify them of the MOT plan and the potential impacts to access of these facilities.

Snowmobile Trail – As discussed in the Section 4(f) section of this document, there is one snowmobile trail located within the project area. The project is not anticipated to negatively impact the trail, as the trail can be easily moved within the existing easement. Access to the trail will be maintained during construction when there is snow on the ground and the trail is available for use.

Airport - The Hatfield Airport, a private airport, is located approximately 0.49 mile west of the project area. An early coordination letter was sent to the airport, but no response was received. No impact to this airport is anticipated. Early coordination was sent to INDOT Office of Aviation. Their response dated June 21, 2017, indicated that no public use airports are located within five nautical miles of the project (Appendix C, page 18).

Early coordination was sent to the INDOT Office of Aviation on June 9, 2017 (Appendix C,

pages 1-3). An updated early coordination letter was sent to the INDOT Office of Aviation on March 6, 2018 (Appendix C, pages 7 to 9). In their early coordination response letter dated June 21, 2017, the INDOT Office of Aviation stated that a tall structure permit would not be required unless the project involves the construction of a temporary or permanent structure that exceeds a height of 200 feet above ground level (Appendix C, page 18). No tall structure permit is anticipated for this project.

Utilities - Water, sanitary 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 March 27, 2018 (Appendix C, page 105 to 107).

Bicycles and horse-drawn buggies – Due to the prevalence of Amish residences and businesses within the project area and in the region, there are a large number of bicycles and horse-drawn buggies utilizing this highway for transportation. Accommodating the non-motorized traffic was taken into consideration when choosing an alternative and designing the proposed roadway. The preferred alternative includes 10-foot paved shoulders to accommodate the non-motorized traffic. Access for bicycles and horse-drawn buggies during construction was also considered when selecting the preferred alternative. The MOT plan for the preferred alternative will be accomplished by constructing the entire southern portion of US 20 in Phase 1, while maintaining current traffic patterns on US 20. After completion of the southern portion of the project, traffic will be switched over to the newly constructed half, while the northern half of the project can be constructed. This method allows the project to provide access to buggy traffic while not closing more than one consecutive county road. Additionally, this method increases worker safety by separating construction activities from travel lanes.

Property Maintenance- A comment was received from a member of the public concerning the current unsafe conditions experienced during mowing the roadside ditches in front of his property. The maximum grade of the proposed side ditches is 3:1. A 3:1 side slope can safely be mowed.

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. School districts, emergency services and churches will be notified at least two weeks prior to construction activity that would block or limit access. The MOT is not expected to substantially impact public facilities or services.

Environmental Justice (EJ) (Presidential EO 12898)

During the development of the project were EJ issues identified?

Does the project require an EJ analysis?

If YES, then:

Are any EJ populations located within the project area?

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

Yes	No
X	
X	
X	
	X

Remarks:

Under FHWA Order 6640.23A, FHWA and INDOT, 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 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. This project will require 90.8 acres of right-of-way. Approximately 19 residential relocations and two business relocations are anticipated. 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. Data from the 2010 Census (2012-2016 American Community Survey (ACS) 5-year Estimates) was obtained from the US Census Bureau Website on July 27, 2018, by HNTB. The data collected for minority and low-income populations

within the Affected Communities (ACs) was then utilized to determine their percentages relative to the Community of Comparison (COC). For this project, the COC is Elkhart County.

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. The AC contains two census tracts for low-income populations. AC1, Census Tract 6 has a percent low-income of 7.5%, which is below 50% and is below the 125% COC threshold of 18.6%. AC2, Census Tract 8.02 has a percent low-income of 7.2%, which is below 50% and is below the 125% COC threshold of 18.6%. Therefore, the AC does not contain low-income populations of EJ concern.

The AC contains two census tracts for minority population. AC1, Census Tract 6 has a percent minority of 6.2%, which is below 50% and is below the 125% COC threshold of 30.2%. AC2, Census Tract 8.02 has a percent minority of 8.3%, which is below 50% and is below the 125% COC threshold of 30.2%. Therefore, the AC does not contain minority populations of EJ concern.

Census Data

US 20 - SR 15 to CR 35 (Des. No. 1600517)	COC Elkhart County, Indiana	AC-1 Census Tract 6, Elkhart County	AC-2 Census Tract 8.02, Elkhart County
LOW-INCOME			
Total Population	197,671	9,946	9,161
Total Population Below Poverty Level	29,381	744	663
Percent Low-Income	14.9%	7.5%	7.2%
125 percent of COC	18.6%	AC < 125% COC	AC < 125% COC
EJ Population of Concern		No	No
MINORITY			
Total Population	201,640	9,946	9,175
Not Hispanic or Latino; White Alone	152,871	9,329	8,413
Percent Non-White (Minority)	24.2%	6.2%	8.3%
125 percent of COC	30.2%	AC < 125% COC	AC < 125% COC
EJ Population of Concern		No	No

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 an EJ population of concern. Amish populations were identified in the 2014 MACOG Environmental Justice report (http://www.macog.com/environmental_justice.html) 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 EJ concern.

The Amish community was taken into consideration during project development and public involvement activities. For public involvement activities, project information was distributed to residences via US mail to ensure that families that do not access the internet would be aware of the project and would be aware of the public information meeting that was held. Additionally, a

public notice of the public information meeting was included in the *Die Blatt*, an Amish news letter for northern Indiana. The public information meeting was held on June 21, 2018, at Northridge High School (Appendix G, page 20 to 62). It was well attended by the Amish community.

Additional correspondence with the Amish community has consisted of regular phone conversions between the project team and representatives of the Amish Safety Steering Committee (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. The project will be designed with wider shoulders and sinuous rumble strips to accommodate buggy traffic, and the project alternative was also selected based on how the MOT would impact the EJ community (see Public Facilities and Services section above). These conversations, along with a face to face meeting at the public information meeting helped to ensure that sufficient outreach was conducted with the Amish community.

Conclusion

The census data comparisons detailed in the table above indicate that the AC does not contain a higher concentration of low-income or minority populations when compared to the COC. However, because the Amish community has been identified as an EJ community of concern, additional analysis was performed to determine if there will be a disproportionately high and adverse effect on the Amish community. Although the project requires a relatively large amount of right-of-way and relocations, the right-of-way acquisition and relocations of Amish properties are not disproportionately high and adverse, when compared to non-Amish properties. The potential burden to the Amish community of having to cross US 20 after being widened as part of this project was discussed with the Safety Committee. The Safety Committee already encourages buggy traffic to avoid crossing US 20 or to cross at a traffic signal because of safety concerns. The proposed widened conditions on US 20 will not significantly change the recommendations that are already in place regarding US 20.

The project will not disrupt community cohesion or create a physical barrier within the community. In addition, the project will equally benefit both the Amish and non-Amish communities by providing a safer roadway with wider shoulders to accommodate non-motorized traffic. The project is not expected to have a disproportionately high and adverse environmental or health impact to low-income or minority populations of EJ concern when compared to non-EJ populations.

No further EJ analysis is required for this project. Should the scope of work change or the amount of right-of-way or relocations change, INDOT-ESD will be contacted to determine if the EJ analysis should be reinitiated.

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
X	
	X
	X
X	

Number of relocations: Residences: 19 Businesses: 2 Farms: 4 Other:

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

Remarks:

According to the INDOT CE Manual, a Conceptual Stage Relocation Study (CSRS) may be required if there are more than 10 relocations required for a project. There are 19 anticipated residential relocations associated with this project, four farm relocations and two business relocations. Therefore, INDOT was consulted on February 23, 2018, to determine if a CSRS would

be required. INDOT Real Estate Division determined that a CSRS would not be required for this project (Appendix C, page 20).

According to the INDOT CE Manual, a Business Information Survey (BIS) may be required if there are 10 or more business relocations associated with a project. Alternatively, if a community has fewer than 40 businesses, then a BIS may be required if 25% or more of the businesses will be relocated. Middlebury supports greater than 40 business. This project will require two business relocations, and therefore a BIS is not required. Anticipated relocations are shown in Appendix B, pages 6 to 14.

The two business relocations include the Middlebury Tool Repair and the Hilltop Restaurant. Several written public comments were received during the Public Information Meeting concerning the relocation of the Hilltop Restaurant.

Of the two alternatives that were considered to meet purpose and need, the preferred alternative had fewer relocations (see the alternatives analysis table in the "Other Alternatives Considered" section of this document).

The acquisition and relocation program will be conducted in accordance with 49 CFR 24 and 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 the project will be required to move from a displaced dwelling unless comparable replacement housing is available to that person.

The Town of Middlebury is considering the possibilities of extending sanitary sewer and water to the west to allow for future growth of the town. Town officials will be included in utility relocation discussion as design progresses.

Water, sanitary 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 March 27, 2018 (Appendix C, pages 105 to 107).

SECTION H – HAZARDOUS MATERIALS & REGULATED SUBSTANCES

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?

Documentation

X

	No	Yes/ Date
ES Review of Investigations		Yes/May 31, 2017

Include a summary of findings for each investigation.

Remarks:

The RFI, prepared by HNTB on January 23, 2017, identified five hazardous material items of concern within or adjacent to the project area (Appendix E, pages 1 to 11). A representative of the INDOT ESD Site Assessment and Management (SAM) Section concurred with the results of the RFI on May 31, 2017.

An addendum to the RFI was prepared on July 31, 2018 because the initial RFI was approved more than one year from incorporation into the CE document. The addendum was approved by a representative of INDOT ESD SAM on August 1, 2018 (Appendix E, pages 15 to 16).

The RFI and RFI addendum identified the following sites within or adjacent to the project area:

Leaking Underground Storage Tank (LUST): One LUST site, with records of 15 underground storage tanks (USTs), is located in the northwest quadrant of US 20 and CR 15 at the site of Speedway #6662 (18541 US 20 Middlebury, IN 46540; FID No. 16008) (Appendix B, page 6). Records show this has been an active gas/service station since 1940 with 15 underground storage tanks at this site. Of the 15 USTs at this site, seven have been removed, seven are active, and the status of one is unknown. This site has four spill incidents of which three have been issued No Further Action (NFA) Closure determinations and one of which has been discontinued. According to the NFA Determination Pursuant to Risk Integrated System of Closure (RISC) issued by IDEM on June 6, 2016, contamination remains in the area surrounding the site and exists in the right-of-way. The nearest proposed excavation for this project will be by approximately 920 feet east of the boundary of this site. Due to the distance between the boundary of the site and proposed excavation for this project, impact is expected.

Institutional Control Site: One Institutional Control site is within the project area. This site Speedway No. 6662, was issued a NFA Approval Determination Pursuant to IDEM Risk Integrated System of Closure (RISC) Guidance for Incident No. 200404502 on July 3, 2008 by IDEM (Appendix B, page 6). This is the same site as the LUST site described above. An additional NFA Approval Determination Pursuant to IDEM RISC Guidance for Incidents No. 199008603 and No. 200908504 were issued on June 6, 2016. Low levels of soil and ground water contamination remain on the site. An Environmental Restrictive Covenant (ERC) was placed on the property and recorded by the Elkhart County Office of the Recorder on February 5, 2016 pertaining to Incident No. 200404502. A Recorded Modification of ERC was added to the property on May 18, 2016 to include Incident No. 199008603 and Incident No. 200908504. The ERC imposes specific usage requirements on the site designed to limit or eliminate exposure to contamination remaining in soil and groundwater. In total, approximately 5,670.87 tons of soil; 24,734 gallons of groundwater, and seven USTs have been removed from this site. The nearest proposed excavation for this project will be by approximately 920 feet east of the boundary of this site. No impact is expected.

Underground Storage Tank: One UST site is within the project area; however, this site is not mapped within the INDOT RFI Database. IDEM conducted an Underground Storage Tank Inspection of this site, American Petroleum Inc. (18423 US 20 Goshen, IN 46528; FID No. 25362), on September 19, 2017, and the facility was found to be out of compliance with equipment, operating or maintenance requirements set forth in Indiana's UST Rule 329 IAC 9; however, documentation reviewed does not indicate that a release occurred. No impact is expected.

NPDES Facilities: Two (2) mapped NPDES facilities, Kuert Concrete Incorporated and Lippert Components Plant 67 Access Road, are mapped adjacent to the project area; however, further analysis of the most recent aerial imagery identifies both sites within the project area (Appendix B, pages 15 to 16). As recommended in the RFI, coordination with the IDEM Municipal Permitting Section was sent on July 18, 2018 (Appendix C, pages 4 to 6). No response was received. Additionally, coordination with the IDEM Storm Water Permitting Section was sent on July 18, 2018 (Appendix C, page 42). In their response, the IDEM Storm Water Permitting Coordinator responded stating that their only concern would be the construction limit overlap with the entrance to the NPDES Facilities affecting access (Appendix C, page 42). Per the INDOT Standard Specification 107.08, local access surrounding the construction limits will be maintained during construction. No impacts to NPDES Facility structures or outfalls were identified in the response.

Early coordination was sent to IDNR Division of Oil and Gas on June 9, 2017 (Appendix C, pages 1 to 3). An updated early coordination letter was sent to the IDNR Division of Oil and Gas on March 6, 2018 (Appendix C, pages 10 to 11). IDNR Division of Oil and Gas stated that their records indicate no oil or gas wells were drilled in the area of the project (Appendix C, page 11).

If a spill occurs or contaminated soils or water are encountered during construction, appropriate personal protective equipment (PPE) should be utilized. Contaminated materials will need to be properly handled by trained personnel and disposed in accordance with current regulations. IDEM should be notified through the spill line at (888) 233-7745 within 24 hours of discovery of a release from a UST system and within two hours of discovery of a spill. This is also listed in the

Environmental Commitments section at the end of this document.

North Fork of Pine Creek and Indian Creek lie within the project area and are impaired for *E. coli*. Workers who are working in or near water with *E. coli* should take care to wear appropriate PPE, observe proper hygiene procedures, including regular hand washing, and limit personal exposure (Appendix E, page 3).

SECTION I – PERMITS CHECKLIST

Permits (mark all that apply)

Likely Required

Army Corps of Engineers (404/Section10 Permit)

Individual Permit (IP)	X
Nationwide Permit (NWP)	
Regional General Permit (RGP)	
Pre-Construction Notification (PCN)	
Other	
Wetland Mitigation required	X
Stream Mitigation required	X

IDEM

Section 401 WQC	X
Isolated Wetlands determination	
Rule 5	X
Other	
Wetland Mitigation required	X
Stream Mitigation required	X

IDNR

Construction in a Floodway	
Navigable Waterway Permit	
Lake Preservation Permit	
Other	
Mitigation Required	

US Coast Guard Section 9 Bridge Permit

Others (Please discuss in the remarks box below)

X

Remarks:

Based on the preliminary permit determination from INDOT EWPO, received on March 5, 2018, a USACE 404/IDEM 401 Individual Permit (IP), Elkhart County Legal Drain Permit, and Rule 5 Permit will be necessary for the project (Appendix F, page 46).

Early coordination was sent to the INDOT Office of Aviation on June 9, 2017 (Appendix C, pages 1-3). An updated early coordination letter was sent to the INDOT Office of Aviation on March 6, 2018 (Appendix C, pages 7 to 9). In their early coordination response letter dated June 21, 2017, the INDOT Office of Aviation stated that a tall structure permit would not be required unless the project involves the construction of a temporary or permanent structure that exceeds a height of 200 feet above ground level (Appendix C, page 18). No tall structure permit is anticipated for this project.

In their early coordination response letters dated July 12, 2017 and March 6, 2018, IDNR DFW stated that the project will require a formal approval for construction in the Indian Creek floodway (Appendix C, page 12) unless the project qualifies for a bridge exemption or qualifies under the INDOT Maintenance Activity Exemption. It was determined by INDOT EWPO that a CIF permit would not be needed for this project.

It will be the responsibility of the designer to submit plans to ES to process permits.

SECTION J- ENVIRONMENTAL COMMITMENTS

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

Remarks:

Firm:

1. If the scope of work or permanent or temporary right-of-way amounts change, INDOT Environmental services will be contacted immediately (INDOT).
2. If any archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, federal law and regulations (16 USC 470, et seq.: 36 CFR 800.11 et. a1.) and State Law (IC 14-21) require that work must stop immediately and that the discovery must be reported to the Division of Historic Preservation and Archeology in the Indiana Department of Natural Resources within 2 business days. (IDNR, SHPO)
3. If a spill occurs or contaminated soils or water are encountered during construction, appropriate personal protective equipment (PPE) should be used. Contaminated materials will need to be properly handled by trained personnel and disposed in accordance with current regulations. IDEM should be notified through the spill line at (888) 233-7745 within 24 hours of discovery of a release from a UST system and within 2 (two) hours of discovery of a spill. (IDEM)
4. It is the responsibility of the project sponsor to notify school corporations, emergency services, and religious institutions at least two weeks prior to any construction that would block or limit access. (INDOT)
5. As local- or State- designated floodplains may be present in the project site, we recommend that you coordinate with local officials and with the Indiana Department of Natural Resources regarding the applicability of a floodplain permit prior to construction. (USACE)
6. Wastes and unused building materials shall be managed and disposed of in accordance with all applicable statutes and regulations. (IDEM)
7. Do not install right-of-way fencing at the US 20 and Miami Snowmobile Trail crossing.
8. Replace snowmobile crossing signage at the US 20 and Miami Snowmobile Trail crossing once construction is complete. (IDNR Division of Outdoor Recreation)
9. Access to the trail will be maintained during construction when there is snow on the ground and the trail is available for use (Elkhart County Snowmobile Club)
10. North Fork of Pine Creek and Indian Creek lie within the project area and are impaired for *E. coli*. Workers who are working in or near water with *E. coli* should take care to wear appropriate PPE, observe proper hygiene procedures, including regular hand washing, and limit personal exposure. (INDOT)
11. Indirect impacts to portions of wetland that are outside of the projects construction limits will be prevented by labeling the wetlands as "Do Not Disturb" on the plans, field delineating the wetland with "Do Not Disturb" signs and utilizing proper erosion control measures. (INDOT)
12. The proposed shoulder in the US 20 project between SR 15 and CR 35 needs to be constructed extra wide to allow for all modes of transportation, including the horse and buggy traffic and bicycle traffic. (Middlebury Town Council)
13. The intersection of US 20 and CR 35 needs to be improved to allow for protected left turns along with having a through lane and a dedicated right turn lane on the north and south approaches to the intersection. (Middlebury Town Council)
14. The Town of Middlebury is considering the possibilities of extending sanitary sewer and water to the west to allow for future growth of the town. Town officials will be included in utility relocation discussion as design progresses. (Middlebury Town Council)
15. General AMM 1: Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs. (USFWS)
16. Lighting AMM 1: Direct temporary lighting away from suitable habitat during the active season. (USFWS)
17. Lighting AMM 2: 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 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 and “backlight” as low as practicable. (USFWS)

18. Tree Removal AMM 1: Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to the extent practicable to avoid tree removal in excess of what is required to implement the project safely. (USFWS)
19. 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)
20. Contractors must take care when handling dead or injured bats (regardless of species), and any other federally listed species that are found at the Project site in order to preserve biological material and protect the handler from exposure to diseases, such as rabies. Project personnel are responsible for ensuring that any evidence about determining the cause of death or injury is not unnecessarily removed. Reporting the discovery of dead or injured listed species is required in all cases. Parties finding a dead, injured, or sick specimen of any bat (regardless of species), or other endangered or threatened species, must promptly notify the USFWS Bloomington Field Office, call (812) 334-4261. (USFWS)
21. A “Reinitiation Notice” is required if: more than (amount) acre of trees are to be cleared; the amount or extent of incidental take of Indiana bat is exceeded; new information about listed species is encountered; new species is listed or critical habitat designated that the project may affect; the project is modified in a manner that causes an effect to the listed species; or, new information reveals that the project may affect listed species or critical habitat in a manner not considered in the BO or the project information. (USFWS)
22. The INDOT Project Manager will assure that (amount) of Preliminary Engineering funds will be allocated to the Range-wide In-Lieu Fee Program, administered by The Conservation Fund, to resolve formal consultation under the Rangewide Programmatic ((amount) acre X (mitigation ratio) x \$10,609 = (amount)). Payment Shall be made at Ready for Contracts (RFC) date. (INDOT-ESD, USFWS)
23. USFWS would still like to see mitigation for the loss of trees for migratory birds and other wildlife, since a large number of trees will be taken. (USFWS)
24. The Phase Ia archaeological reconnaissance identified one site, 12E0487, recommended potentially eligible for inclusion in the NRHP. Before commencing construction activities within a segment of this undertaking that could affect site 12E0487, FHWA or its representatives shall submit a work plan authorization request for Phase II archaeological investigations for review and approval by the DHPA approval under IC-14-21-1-25 prior to the commencement of Phase II investigations. (DHPA)
25. After the approval of the Phase II work plan authorization request, FHWA or its representatives shall conduct Phase II testing to determine the eligibility of site 12E0487 for listing in the NRHP. (DHPA)
26. A report of Phase II archaeological investigations shall be provided to the DHPA prior to any proposal of Phase III investigations. (DHPA)
27. If site 12E0487 is determined eligible for inclusion in the NRHP, FHWA or its representatives shall submit a work plan authorization request for Phase III archaeological investigations for review and approval by the DHPA approval under IC- 14-21-1-25 prior to the commencement of Phase III investigations. (DHPA)
28. After the approval of the Phase III work plan authorization request, FHWA or its representatives shall conduct Phase III data recovery of site 12E0487 to mitigate for impacts to the site from this undertaking. (DHPA)
29. A report of all archaeological investigations shall be provided to the DHPA within one (1) year of the conclusion of fieldwork. (DHPA)
30. No less than 10 percent of the site within the project limits shall be tested during a Phase II investigation; Phase III data recovery, if required, shall excavate an additional 25 percent of

the site area within the project limits as mitigation. (DHPA)

31. FHWA or its representatives shall clearly mark and avoid all ground disturbing project activities within the portions of the archaeological sites 12E0482, 12E0483, 12E0484, 12E0486, 12E0489, 12E0490, and 12E0491 that lie outside the project area depicted in "Attachment A" and "Attachment B (1 and 2)"; or, if avoidance is not feasible, FHWA will submit a plan for subsurface archaeological investigations to determine eligibility for listing in the NRHP to the Indiana Division of Historic Preservation and Archaeology ("DHPA") for review and comment. (DHPA)

For Further Consideration:

32. We suggest 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. (USEPA)
33. Do not work in the waterway from April 1 through June 30 without the prior written approval of the Division of Fish and Wildlife. (IDNR DFW)
34. Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the stream or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized. (IDNR DFW)
35. Revegetate all bare and disturbed areas with a mixture of grasses (excluding all varieties of tall fescue), legumes, and native shrub and hardwood tree species as soon as possible upon completion. (IDNR DFW)
36. Do not cut any trees suitable for Indiana bat or Northern Long-eared bat roosting (greater than 3 inches dbh, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30. (IDNR DFW)
37. Seed and protect disturbed stream banks that are 3:1 or steeper with heavy-duty net-free biodegradable erosion control blankets to minimize the entrapment and snaring of small wildlife such as snakes and turtles (follow manufacturer's recommendation for installation); seed and apply mulch on all other disturbed areas. (IDNR DFW)
38. To minimize impacts to the Blanding's turtle during the nesting period, we recommend that construction not take place from April 1 through July 1. (IDNR DFW)
39. Due to the expansion of the road, it is likely the new roadside ditches will need to be relocated to allow for drainage along the sides of the roads. The newly constructed ditches should be constructed at a stable slope of at least 2:1, preferably 3:1. The sideslopes should be seeded with a native seed mixture that includes wildflowers to provide important pollinator habitat along the sides of the roads. (IDNR DFW)
40. The Environmental Unit recommends bridges rather than culverts and bottomless culverts rather than box or pipe culverts. Wide culverts are better than narrow culverts, and culverts with shorter through lengths are better than culverts with longer through lengths. If box or pipe culverts are used, the bottoms should be buried a minimum of 6" (or 20% of the culvert height/pipe diameter, whichever is greater up to a maximum of 2') below the stream bed elevation to allow a natural streambed to form within or under the crossing structure. Crossings should: span the entire channel width (a minimum of 1.2 times the bankful width); maintain the natural stream substrate within the structure; have a minimum openness ratio (height x width/ length) of 0.25; and have stream depth and water velocities during /low-flow conditions that are approximate to those in the natural stream channel. The new, replacement, or rehabbed structure, and any bank stabilization under the structure, should not create conditions that are less favorable for wildlife passage under the structure compared to the current conditions. (IDNR DFW)
41. Due to the presence or potential presence of wetlands on site, we recommend contacting and coordinating with the Indiana Department of Environmental Management (IDEM) 401 program and also the US Army Corps of Engineers (USACE) 404 program. Impacts to wetland habitat should be mitigated at the appropriate ratio according to the 1991 INDOT/IDNR/USFWS Memorandum of Understanding. (IDNR DFW)

42. We recommend a mitigation plan be developed (and submitted with the permit application, if required) if riparian habitat impacts will occur. (IDNR DFW)
43. Impacts to non-wetland forest under one (1) acre in an urban setting should be mitigated by planting five trees, at least 2 inches in diameter-at-breast height (dbh), for each tree which is removed that is 10" dbh or greater (5:1 mitigation based on the number of large trees). (IDNR DFW)
44. IDEM recommends that appropriate structures and techniques be utilized both during the construction phase, and after completion of the project, to minimize the impacts associated with storm water runoff. (IDEM)
45. Reasonable precautions must be taken to minimize fugitive dust emissions from construction and demolition activities. Dirt tracked onto paved roads from unpaved areas should be minimized. (IDEM)
46. Stabilize all disturbed areas upon completion of land disturbing activities. (IDEM)
47. Sediment-laden water which otherwise would flow from the project site shall be treated by erosion and sediment control measures appropriate to minimize sedimentation. (IDEM)
48. A stable construction site access shall be provided at all points of construction traffic ingress and egress to the project site. (IDEM)
49. Public or private roadways shall be kept cleared of accumulated sediment that is a result of run-off or tracking. (IDEM)
50. Install silt fence or other erosion control measures around the perimeter of any wetlands and/or other waterbodies to remain undisturbed at the project site. (IDEM)
51. The use of cutback asphalt, or asphalt emulsion containing more than seven percent oil distillate, is prohibited during the months of April through October. (IDEM)
52. In all cases where a demolition activity will occur (even if no asbestos is found), the owner or operator must still notify IDEM 10 working days prior to demolition. (IDEM)

SECTION K- EARLY COORDINATION

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

Remarks:

Early coordination was initiated on June 9, 2017 with federal, state, and local agencies (Appendix C, pages 1-3). Subsequent letters were also sent to additional agencies, members of the stakeholder working group and local agencies on January 26 and February 1, 2018.

Re-coordination letters were sent to the resource agencies on March 6, 2018 as an update to the project and a continuation of the coordination process (Appendix C, page 7). This coordination letter documented that recommended preferred alternative would be a 5-lane facility with two travel lanes in each direction and a TWLTL in the center. The resource agencies and dates of their responses are listed below.

Agency	Response Received	Appendix Location
IDNR- Division of Oil and Gas	June 14, 2017 and February 13, 2018	Appendix C, pages 10 to 11
IDNR – Division of Fish and Wildlife	July 12, 2017 and April 4, 2018	Appendix C, pages 12 to 14
IDNR – Division of Outdoor Recreation	February 13, 2018 and March 14, 2018	Appendix C, pages 15 to 16
Elkhart County Snow mobile Club via the IDNR – Division of Outdoor Recreation	February 13, 2018 and March 14, 2018	Appendix C, page 16
INDOT, Public Involvement Office	June 15, 2017	Appendix C, page 17
INDOT, Aviation Section	June 21, 2017	Appendix C, page 18
INDOT – Ft. Wayne District	February 6, 2018	Appendix C, page 19

USACE, Environmental Analysis Branch	July 21, 2017	Appendix C, pages 22 to 23
USACE, Engineering and Technical Services Branch	July 26, 2017	Appendix C, pages 24 to 25
Indiana Geological Survey (IGS)	July 6, 2017 and March 14, 2018	Appendix C, pages 26 to 28
USEPA, Ground Water and Drinking Water Branch	February 1, 2018 and March 14, 2018	Appendix C, pages 29 to 31
USDA-NRCS	July 26 2018	Appendix C, page 32 to 33
USFWS, Bloomington Field Office	July 7, 2017 and March 20, 2018	Appendix C, pages 34 to 37
Waypoint Community Church	February 14, 2018	Appendix C, page 38
Middlebury Town Council,	February 16, 2018	Appendix C, page 39 to 40
Middlebury Town Manager via the Middle Town Council Response	February 16, 2018	Appendix C, page 39 to 40
IDEM - Groundwater Section	March 12, 2018	Appendix C, page 41
IDEM Office of Water Quality Storm Water Permitting Coordinator	July 19, and July 24, 2018	Appendix C, pages 42
IDEM Auto Response	August 8, 2018	Appendix C, pages 44 to 49
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
Elkhart County Board of Commissioners	No response received	N/A
Middlebury Community Schools	No response received	N/A
Elkhart County Emergency Management	No response received	N/A
National Parks Service	No response received	N/A
US Coast Guard	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
Michiana Area Council of Governments (MACOG)	No response received	N/A
Northridge High School	No response received	N/A
Wat Lao Dharmajaro Buddhist Temple	No response received	N/A
Hatfield Airport	No response received	N/A

Representatives from the FHWA, USACE, IDEM, and IDNR DFW attended a resource agency meeting on July 12, 2018. The purpose of the meeting was to present the recommended preferred alternative to the resource agencies and identify any concerns they may have moving forward. Resource agency comments pertained to environmental impacts and mitigation requirements. (Appendix C, pages 52 to 72).