

Indiana Department of Transportation

County Miami

Route US 24

Des. No. 1700089

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

Road No./County:	US 24 / Miami County
Designation Number:	Des. No. 1700089
Project Description/Termini:	Intersection Improvements / Approximately 2,000 feet East and 760 feet West of the US 24 and SR 19 Intersection.

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 checked="" 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

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 _____ REB 2-5-2020
 ESM Initials _____ Date _____ ES Initials _____ Date _____

Certification of Public Involvement _____
 Office of Public Involvement _____ Date _____

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

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

Name and Organization of CE/EA Preparer: Aaron Grisel, HNTB Indiana, Inc.

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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:

Construction activities associated with the project will occur within existing right-of-way. No permanent or temporary right-of-way acquisition will be required for this project. Therefore, Notice of Entry letters were not required for this project.

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. Therefore, a legal notice will appear in a local publication contingent upon the release of this document for public involvement. This document will be revised after the public involvement requirements are fulfilled.

Public Controversy on Environmental Grounds

Will the project involve substantial controversy concerning community and/or natural resource impacts? Yes No

Remarks:

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

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

Sponsor of the Project: INDOT INDOT District: Ft. Wayne
Local Name of the Facility: US 24, SR 19, and Lovers Lane Road

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

The need for this project is the safety issues that exist on the current facility. This safety concern is demonstrated through the baseline condition of high right-angle crash rates due to multiple conflict points associated with left-turn movements at the intersection of United States Highway (US) 24 and State Road (SR) 19, when compared to similar facilities in Indiana. According to available crash data, there were a total of 26 crashes, including two fatalities, from January 1, 2010 to February 23, 2019. Of the 26 crashes, approximately 81 percent were right-angle or turn crashes.

A Road Hazard Analysis was conducted to determine the Index of Crash Frequency (ICF) and Index of Crash Cost (ICC) at the existing facility. The ICF measures the difference between expected and reported number of crashes divided by the standard deviation of the difference in the estimate. A facility with an ICF value of 2 or greater is considered a high crash location. The output of the analysis returned an ICF value of -0.09 indicating the existing facility demonstrates a crash frequency slightly below what is expected. The ICC measures the difference between expected and reported crash costs. The output of the analysis returned an ICC value of 1.8 indicating the severity of crashes at the existing facility is much higher than normal. The results of the Road Hazard Analysis demonstrate the existing facility experiences a low frequency of crashes; however, due to an increased severity of crashes, design solutions should be evaluated to reduce the severity of future crashes.

Safety concerns at the US 24 and SR 19 intersection are documented in the INDOT Engineer's Report dated November 14, 2019 (Appendix I, pages 1-9).

Purpose

The purpose of the project is to reduce the severity of future crashes at the existing facility.

PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Miami Municipality: Peru

Limits of Proposed Work: Approximately 2,000 feet east and 760 feet west of the US 24 and SR 19 intersection

Total Work Length: 0.53 Mile(s) Total Work Area: 4.1 Acre(s)

Yes1 No

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

	X
Date: _____	

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.

Location:

INDOT and the Federal Highway Administration (FHWA) intend to proceed with an intersection improvement project at the intersection of US 24 and SR 19 in Miami County, Indiana. The project is in Sections 14-16, Township 27 North, and Range 4 East in Peru Township, as shown on the United States Geological Survey (USGS) 7.5 Minute Peru, Indiana Topographic Quadrangle Map (Appendix B, page 3). More specifically, the project is located 3.7 miles east of US 31.

Existing Conditions:

The existing US 24 and SR 19 intersection is a stop-controlled intersection controlled by an overhead flashing beacon. At the intersection, SR 19 northbound and southbound traffic is stopped, while eastbound and westbound US 24 traffic is unobstructed. The US 24 and Lovers Lane Road intersection is an unsignalized, stop-controlled divided highway crossing. Lovers Lane Road connects commercial facilities south of US 24 to SR 19 north of US 24. At the intersection, left hand and through traffic flow is accommodated by the median crossover.

The existing US 24 and SR 19 intersection deficiency is a result of multiple conflict points associated with left-turn movements, resulting in a high percentage of right-angle crashes.

Land cover within the project area is primarily maintained roadside (Appendix B, page 2).

The existing US 24 typical section consists of two 12-foot lanes in each direction, with four-foot inside shoulders and 12-foot outside shoulders (Appendix B, pages 37-39). Variable right and left-turn lanes on eastbound and westbound US 24 are 12 feet wide and begin approximately 685 feet from the intersection with SR 19. The posted speed limit on US 24 is 60 miles per hour (MPH) through the project area. US 24 is classified as a Principal Arterial.

Preferred Alternative:

The preferred alternative will reconfigure the intersection of US 24 and SR 19 by constructing a restricted crossing U-turn (RCUT) intersection with a median closure. The RCUT intersection is referred to as a “J-turn with Median Closure” in the INDOT Engineer’s Report dated November 14, 2019 (Appendix I, pages 1-9). The reconfigured intersection will direct through traffic on SR 19 to make a right onto US 24 and utilize a U-turn across the US 24 median before making a right-turn back onto SR 19. Median delineators will be constructed at the US 24 and SR 19 intersection to prevent traffic from cutting through the median. In addition, Lover’s Lane Road within the US 24 median and north of US 24 will be closed to prevent traffic from bypassing the median U-turns and moving the safety concern to the US 24 and Lovers Lane Road intersection. Therefore, the southern Lovers Lane Road access to US 24 will be converted to a “right-in, right-out” access point.

Construction activities will include the following:

- Removal of existing pavement for the closure of the US 24 median at the SR 19 and Lovers Lane Road intersections. The existing shoulder and pavement edges US 24 will be closed at the existing location of the intersection.
- Construction of 15-foot wide median U-turns with 4-foot wide outside shoulders and 10-foot wide inside shoulders within the US 24 median. Median U-turns will be constructed approximately 665 feet northeast and 702 feet southwest of the existing US 24 and SR 19 intersection.

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- Construction of concrete median delineators spaced 5 to 6 feet apart at the US 24 and SR 19 intersection.
- Reconstruction of the existing US 24 inside pavement edges to accommodate the left-turn lane.
- Removal of existing pavement for the closure of the northern portion of Lovers Lane Road between SR 19 and US 24. The existing shoulder and pavement edges of SR 19 and US 24 will be closed at the existing location of Lovers Lane Road.
- Addition of new roadway signage throughout the project area.

The logical termini are approximately 2,000 feet east and 760 feet west of the US 24 and SR 19 intersection. The logical termini are considered appropriate as they provide a sufficient area for median construction, closure of the northern Lovers Lane Road access point, and roadway grading. See Appendix B, pages 24-50, for preliminary roadway design plans.

The project will require temporary lane and shoulder closures through the construction site during phased construction. Details of the lane restrictions are included in the Maintenance of Traffic (MOT) During Construction section of this CE document and Appendix B, pages 28-36.

The proposed project will address the purpose and meet the need for the US 24 and SR 19 intersection improvement project by eliminating left-turn movements at the intersection. Elimination of the left-turn movements at this location will reduce the number of conflict points, thus improving safety. The work being completed for this project is a stand-alone project that is specific to safety improvements at the US 24 and SR 19 intersection; therefore, the project has independent utility.

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 – Roundabout:

INDOT considered reconstructing the existing US 24 and SR 19 intersection as a roundabout. Traffic on SR 19 is a small percentage of the intersection's total traffic therefore, the roundabout alternative will cause undue delays for those traveling on US 24. The roundabout alternative does meet the purpose and need; however, due to the potential for increased traffic delays this alternative has been eliminated from further consideration.

Alternative 2 - RCUT - Unsignalized:

INDOT considered reconstructing the existing US 24 and SR 19 intersection as an unsignalized RCUT intersection. The unsignalized RCUT alternative would only allow for left-turn movements from US 24 to SR 19 at the intersection. Traffic would no longer be able to make a left-turn movement from SR 19 to US 24. The unsignalized RCUT alternative improves overall traffic safety; therefore, this alternative meets the purpose and need. Although this alternative meets the purpose and need, the left-turns at the US 24 and SR 19 intersection still include potential conflict points that are not present with the preferred alternative. Therefore, this alternative has been eliminated from further consideration.

Alternative 3 - RCUT - Signalized:

INDOT considered reconstructing the existing US 24 and SR 19 intersection as a signalized RCUT intersection. The signalized RCUT alternative would only allow for left-turn movements from US 24 to SR 19 at the intersection. Traffic would no longer be able to make a left-turn movement from SR 19 to US 24. A Signal Warrant Analysis was performed to determine if the amount of traffic at the intersection would require a traffic signal. The eastern median U-turn was also considered for a traffic signal since traffic volumes are higher at this location in comparison to the western median U-turn. The results of the Signal Warrant Analysis determined that traffic volumes at both locations would not warrant the use of a traffic signal. In addition, a traffic signal on a high-speed divided highway would likely result in an increase of rear-end crashes. Due to the potential for increased rear-end crash rates, the signalized RCUT alternative does not meet the purpose and need; therefore, this alternative has been eliminated from further consideration.

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Alternative 4 – Signalized Intersection:

INDOT considered maintaining the existing intersection geometry with the addition of a permanent traffic signal. A Signal Warrant Analysis was performed to determine if the amount of traffic at the intersection would require a traffic signal. The results of the Signal Warrant Analysis determined that traffic volumes at the intersection would not warrant the use of a traffic signal. A traffic signal at a location that does not have the appropriate traffic volumes may cause additional safety concerns as vehicles on US 24 would need to stop from a speed limit of 60 mph. In addition, this area of US 24 has very few stops, so motorists would not be expecting to stop for a traffic signal. These factors may lead to an increase in rear end crashes or running red light crashes. Due to the potential for increased crash rates, the signalized intersection alternative does not meet the purpose and need; therefore, this alternative has been eliminated from further consideration.

Alternative 5 - No-Build:

The No-Build alternative would make no physical changes to the existing intersection. This alternative would have no effect on environmental resources. Without improvements, the intersection would maintain the “high crash” designation and the risk of injury or fatality at this intersection would remain. The No-Build alternative was not selected because it fails to meet the purpose and need of the project.

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)

X

ROADWAY CHARACTER:

Functional Classification: US 24 - Principal Arterial
 Current ADT: 12,689 VPD (2021) Design Year ADT: 16,589 VPD (2041)
 Design Hour Volume (DHV): 7.86 Truck Percentage (%): 20.46
 Designed Speed (mph): 60 Legal Speed (mph): 60

Existing

Proposed

Number of Lanes:	2-4	2-4
Type of Lanes:	Two, 12-foot through lanes with variable 12-foot right/left turn lanes	Two, 12-foot through lanes with 12-foot right turn lanes and 12-foot left turn/median U-turn lanes
Pavement Width:	40-64 ft.	40-64 ft.
Shoulder Width:	Inside: 4 ft. Outside: 12	Inside: 4 ft. Outside: 12
Median Width:	38 ft.	18-36 ft.
Sidewalk Width:	0 ft.	0 ft.

Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

Functional Classification: SR 19 – Minor Arterial/Principal Arterial
 Current ADT: N/A VPD Design Year ADT: N/A VPD

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Design Hour Volume (DHV): N/A Truck Percentage (%): N/A
 Designed Speed (mph): 45 Legal Speed (mph): 45

Existing **Proposed**

Number of Lanes:	2		N/A
Type of Lanes:	12-foot through lanes		N/A
Pavement Width:	48	ft.	N/A
Shoulder Width:	12	ft.	N/A
Median Width:	0	ft.	0
Sidewalk Width:	0	ft.	0

Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

Functional Classification: Lovers Lane Road - Local
 Current ADT: N/A VPD Design Year ADT: N/A VPD
 Design Hour Volume (DHV): N/A Truck Percentage (%): N/A
 Designed Speed (mph): N/A Legal Speed (mph): N/A

Existing **Proposed**

Number of Lanes:	2		N/A
Type of Lanes:	10-foot through lanes		N/A
Pavement Width:	20	ft.	N/A
Shoulder Width:	0	ft.	N/A
Median Width:	0	ft.	0
Sidewalk Width:	0	ft.	0

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): 024-52-07579 Sufficiency Rating: 96.5; November 14, 2019 INDOT Bridge Inspection Report
 (Rating, Source of Information)

Existing **Proposed**

Bridge Type:	8-foot, Triple-Barrel Corrugated Metal Pipe Culvert		N/A
Number of Spans:	3		N/A
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:	274	ft.	N/A
Shoulder Width:	Inside: 4 Outside: 12	ft.	N/A
Length of Channel Work:			N/A

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

Remarks:

The existing structure is a 274-foot long and 8-foot wide triple-barrel, corrugated metal pipe (CMP) culvert. This structure carries Prairie Ditch beneath US 24. The roadway fill slope above the existing structure will be re-graded as part of this project; however, the existing structure will not be replaced or rehabilitated.

Additional Small Structures:

Four additional small structures are located within the project area. None of the structures have been assigned an INDOT Structure Number. Proposed construction activities do not include replacement or rehabilitation of these structures. See the table below for details of each structure.

Station Number (Appendix B, pages 37-39)	Structure Type and Size	Roadway Crossing	Feature Carried	Replaced/ Rehabilitated?
249+50	48-inch Reinforced Concrete Pipe with 24-inch HDPE liner	US 24	Roadside Ditch	No
260+70	15-inch Corrugated Metal Pipe	Lovers Lane Road	UNT-1 to Prairie Ditch	No
261+30	18-inch Corrugated Metal Pipe	US 24	Roadside Ditch	No
525+55	18-inch Corrugated Metal Pipe	SR 19	Roadside Ditch	No

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.

MAINTENANCE OF TRAFFIC (MOT) DURING CONSTRUCTION:
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	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"/>

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Remarks:

The MOT for the project will allow US 24 to remain open during construction. Construction activities will be phased with temporary lane and shoulder closures (Appendix B, pages 28-36). During the phased construction, traffic will be maintained with construction signage, barricades, and drums. Temporary lane restrictions will be in place for nine months. Access for local traffic will be provided during construction per INDOT Standard Specification 107.08(e).

The phased construction with temporary lane and shoulder closures 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 may occur during construction but will cease with project completion.

ESTIMATED PROJECT COST AND SCHEDULE:

Engineering: \$ 200,000 (2020)* Right-of-Way: \$ 0 Construction: \$ 1,018,966 (2022)*

Anticipated Start Date of Construction: June 2020

Date project incorporated into STIP November 15, 2019

Is the project in an MPO Area? **Yes** **No**

If yes,

Name of MPO N/A

Location of Project in TIP N/A

Date of incorporation by reference into the STIP N/A

**Engineering and construction costs were programmed into the STIP for fiscal year 2020 and 2022, respectively. The project has been placed on an accelerated schedule with engineering beginning in 2019 and construction beginning in 2020. The Fiscal Year (FY) 2020-2024 STIP will be updated to include the up-to-date project costs and to appropriate engineering and construction costs to the correct fiscal year.*

RIGHT OF WAY:

Land Use Impacts	Amount (acres)	
	Permanent	Temporary
Residential	0	0
Commercial	0	0
Agricultural	0	0
Forest	0	0
Wetlands	0	0
Other:	0	0
Other:	0	0
TOTAL	0	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.

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Remarks:

Right-of-way plans and grants at the location of this project have been obtained. Apparent existing right-of-way widths extend approximately 104 feet to 122 feet south of the US 24 centerline. Apparent existing right-of-way widths extend approximately 88 feet to 314 feet north of US 24. The roadway plan set depicting the apparent existing right-of-way limits is in Appendix B, pages 37-39.

This project will occur within existing right-of-way. No permanent or temporary right-of-way will be required for this project.

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

SECTION A – ECOLOGICAL RESOURCES

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

Presence

Impacts

Yes

No

X

X

Remarks:

Based on a desktop review, a site visit on October 19, 2019 by HNTB, the aerial map of the project area (Appendix B, page 2), and the water resources map in the Red Flag Investigation (RFI) report (Appendix E, page 8), there are 10 streams located within the 0.5-mile search radius. There are two streams present within the project area.

A *Waters of the U.S. Determination / Wetland Delineation Report* was approved by the INDOT Ecology and Waterway Permitting Office (EWPO) on January 6, 2019 (Appendix F, pages 1-13). It was determined that two jurisdictional streams, Prairie Ditch and unnamed tributary (UNT) 1 to Prairie Ditch, are present within the investigated area. The United States Army Corps of Engineers (USACE) makes all final determinations regarding jurisdiction.

Prairie Ditch is mapped as a blue-line, perennial stream on the Peru, Indiana USGS Topographic Quadrangle Map (Appendix B, page 3). Prairie Ditch is carried beneath US 24 by three, 96-inch CMP structures (INDOT Structure No. 024-52-07579). Prairie Ditch exhibited a 36-foot wide by 0.75-foot deep ordinary high-water mark (OHWM) during the site visit. Per the USGS Streamstats Database (<https://water.usgs.gov/osw/streamstats/indiana.html>), accessed on December 4, 2019, the upstream drainage area of Prairie Ditch is 1.84 square mile. Prairie Ditch is not listed as a Federal Wild and Scenic River, a State Natural, Scenic and Recreational River, Indiana Register’s listing of Outstanding Rivers and Streams, navigable waterway, or a National Rivers Inventory waterway.

UNT-1 to Prairie Ditch is not mapped as a blue-line stream on the Peru, Indiana USGS Topographic Quadrangle Map (Appendix B, page 3). UNT-1 to Prairie Ditch exhibited a 10-foot wide by 0.33-foot deep ordinary high-water mark (OHWM) during the site visit. UNT-1 to Prairie Ditch is not noted within the USGS StreamStats website database; therefore, the drainage area of this stream is considered to be <0.01 square mile. UNT-1 to Prairie Ditch is not listed as a Federal Wild and Scenic River, a State Natural, Scenic and Recreational River, Indiana Register’s listing of Outstanding Rivers and Streams, navigable waterway, or a National Rivers Inventory waterway.

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Proposed construction activities will be confined to the roadway medians and will not result in permanent or temporary impacts to Prairie Ditch or UNT-1 to Prairie Ditch. No rehabilitation or replacement activities to INDOT Structure No. 024-52-07579 will occur.

Early coordination letters were sent to the United States Fish and Wildlife Service (USFWS), Indiana Department of Natural Resources Division of Fish and Wildlife (IDNR-DFW), and the USACE on October 28, 2019 (Appendix C, pages 1-3). No response was received from USACE.

USFWS responded on November 18, 2019, stating that a comment letter would not be provided due to minor impacts to natural resources and the absence of federally-endangered species (Appendix C, page 7). No recommendations pertaining streams were provided.

IDNR-DFW responded on December 13, 2019, but did not provide recommendations pertaining to in-stream impacts; however, if work will take place within a stream further coordination with IDNR-DFW will be necessary (Appendix C, pages 10-11). IDNR-DFW stated that formal approval by the agency under regulatory programs administered by the Division of Water may be required for this project.

An automated letter was generated from the Indiana Department of Environmental Management's (IDEM) website on December 17, 2019 recommending appropriate storm water quality measures to be implemented during construction and after project completion (Appendix C, pages 14-20).

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

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

Remarks:

Based on a desktop review, a site visit on October 19, 2019 by HNTB, the aerial map of the project area (Appendix B, page 2), and the water resources map in the RFI report (Appendix E, page 8), there is one lake within the 0.5-mile search radius. This lake is not located within or adjacent to the project area.

A *Waters of the U.S. Determination / Wetland Delineation Report* was approved by the INDOT EWPO on January 6, 2019 (Appendix F, pages 1-13). No other surface waters were identified. Therefore, no impacts are expected.

No early coordination response letters expressed concerns regarding lakes, ponds, or other surface waters.

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Presence **Impacts**

Yes No

Wetlands

Total wetland area: 0.007 acre(s) Total wetland area impacted: 0 acre(s)

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

Wetland No.	Classification	Total Size (Acres)	Impacted Acres	Comments
Wetland A	PEM1B	0.007	0	Wetland A is located approximately 62 feet north of the US 24 edge of pavement within the northeast quadrant of the US 24 and SR 19 intersection. No permanent or temporary impacts to Wetland A are anticipated.

	<u>Documentation</u>	<u>ES Approval Dates</u>
Wetlands (Mark all that apply)		
Wetland Determination	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Wetland Delineation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
USACE Isolated Waters Determination	<input type="checkbox"/>	<input type="checkbox"/>
Mitigation Plan	<input type="checkbox"/>	<input type="checkbox"/>

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

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

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

Remarks: Based on a review of the National Wetlands Inventory (NWI) online mapper (<https://www.fws.gov/wetlands/data/Mapper.html>), a site visit on October 19, 2019 by HNTB, the USGS topographic map (Appendix B page 2), and the RFI report (Appendix E, page 8) there are six wetlands located within the 0.5-mile search radius. There is one wetland present within or adjacent to the project area.

A *Waters of the U.S. Determination / Wetland Delineation Report* was approved by the INDOT EWPO on January 6, 2019. Please refer to Appendix F, pages 1-13 for the *Waters of the U.S. Determination / Wetland Delineation Report*. It was determined there is one wetland, Wetland A, within the investigated area. Wetland A is a roadside wetland with connectivity to a jurisdictional feature via overland flow and roadside drainage. Therefore, Wetland A is likely a jurisdictional Waters of the U.S. The USACE makes all final determinations regarding jurisdiction.

Wetland A is classified as a palustrine, emergent, persistent, saturated (PEM1B) wetland according the classifications defined by Cowardin et al. (1979). Wetland A measures 0.007 acre and has formed in the northeast quadrant of US 24 and SR 19 as a result of local drainage ponding within a depressional area (Appendix B, page 5). Based on a qualitative analysis, Wetland A is of poor quality based on the lack of vegetative species richness and presence of invasive species. Construction will occur within the US 24 median; therefore, Wetland A will not be permanently or temporarily impacted. Wetland A will be marked on the roadway plans as "Do Not Disturb" and protected with temporary wetland fencing and fiber roll during construction.

USFWS responded on November 18, 2019, but did not provide recommendations pertaining to wetlands

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(Appendix C, page 7).
 IDNR-DFW responded on December 13, 2019, but did not provide recommendations pertaining to wetlands (Appendix C, pages 10-11).
 An automated letter was generated from the IDEM website on December 17, 2019 recommending appropriate storm water quality measures to be implemented during construction and after project completion (Appendix C, pages 14-20).
 All applicable IDNR-DFW and IDEM recommendations are included in the Environmental Commitments section of this CE document.

	<u>Presence</u>	<u>Impacts</u>	
		Yes	No
Terrestrial Habitat	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Unique or High Quality Habitat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

Remarks:

Based on a desktop review, a site visit on October 19, 2019 by HNTB, and the aerial map of the project area (Appendix B, page 2), there are primarily maintained state highway right-of-way and successional riparian habitats within the project area. Vegetation within the project area consists primarily of *Schedonorus arundinaceus* (tall false rye grass), *Typha angustifolia* (narrowleaf cattail), *Dipsacus fullonum* (Fuller's teasel), *Lonicera japonica* (Japanese honeysuckle), and *Solidago altissima* (tall goldenrod). Construction activities will result in approximately 2.55 acre of terrestrial habitat impacts within maintained state highway right-of-way. Avoidance alternatives are not practicable as construction equipment access to state highway right-of-way outside of the US 24 edge of pavement is necessary to complete the closure of Lovers Lane Road and the construction of median U-turns. No tree clearing is anticipated; therefore, mitigation is not required.

USFWS responded on November 18, 2019, but did not provide recommendations pertaining to terrestrial habitat (Appendix C, page 7).

IDNR-DFW responded on December 13, 2019, providing recommendations to minimize potential effects to terrestrial habitat within the project area (Appendix C, pages 10-11). These recommendations include post-construction revegetation measures including terrestrial habitat mitigation, time of year restrictions for tree removal, and erosion and sediment control measures.

An automated letter was generated from the IDEM website on December 17, 2019 recommending appropriate storm water quality measures to be implemented during construction and after project completion (Appendix C, pages 14-20).

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

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

Karst	Yes	No
Is the proposed project located within or adjacent to the potential Karst Area of Indiana?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are karst features located within or adjacent to the footprint of the proposed project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If yes, will the project impact any of these karst features?	<input type="checkbox"/>	<input type="checkbox"/>

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

Remarks:

Based on a desktop review, the project is located outside 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 3), the RFI report (Appendix E, page 8), and the site visit on October 19, 2019 by HNTB, there are no karst features identified within or adjacent to the project area.

An automated letter was generated from the Indiana Geological Survey (IGS) website on December 16, 2019 indicating that there is a high liquefaction potential, presence of a floodway, high potential for bedrock resources, low potential for sand and gravel resources, and the potential for abandoned petroleum wells in the area (Appendix C, pages 12-13). Response from IGS has been communicated with the designer on December 16, 2019. No impacts are expected.

IDNR Division of Oil and Gas responded on November 26, 2019, stating that one well, IDNR Well Permit No. 5603, is within the project area (Appendix C, page 9). IDNR Division of Oil and Gas indicated that an 8-inch well casing associated with the identified well is present. The well has been filled with mud, which is not considered to be plugged well. IDNR Oil and Gas recommended that if this interferes with construction, IDNR Division of Oil and Gas should be contacted to create a plugging plan. This recommendation has been added as a firm commitment in the Environmental Commitments section of this CE document.

No early coordination response letters expressed concerns regarding karst resources.

	<u>Presence</u>	<u>Impacts</u>	
Threatened or Endangered Species		Yes	No
Within the known range of any federal species	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Is Section 7 formal consultation required for this action?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
--	-------------------------------------	---

Remarks:

Based on a desktop review and the RFI report (Appendix E, pages 1-12), completed by HNTB on December 5, 2019, the IDNR Miami 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. According to the IDNR-DFW early coordination response letter dated December 13, 2019, the Natural Heritage Program's Database has been checked and it was noted that no federally-endangered, threatened, or rare species have been reported within the project vicinity (Appendix C, page 10).

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 33-38). The project is within range of the federally-endangered Indiana bat (*Myotis sodalis*) and the federally-threatened northern long-eared bat (NLEB) (*Myotis septentrionalis*). No additional species were found within or adjacent to the project area other than the Indiana bat and NLEB.

The project qualifies for the *Range-wide Programmatic Informal Consultation for the Indiana bat and Northern Long-eared Bat (NLEB)*, dated May 2016 (revised February 2018), between FHWA, Federal Railroad Administration (FRA), and USFWS. An effect determination key was completed on December 6, 2019, 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 December 6, 2019 and requested USFWS's review of the finding (Appendix C, pages 39-49). No response was received.

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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 CE document.

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

SECTION B – OTHER RESOURCES

Drinking Water Resources

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

Presence

X

Impacts

Yes	No
	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

Remarks:

Sole Source Aquifer

The project is located in Miami County, which is not located within the area of the St. Joseph Sole Source Aquifer, the only legally designated sole source aquifer in the state of Indiana. Therefore, the FHWA/ Environmental Protection Agency (EPA) Sole Source Aquifer MOU is not applicable to this project. No impacts are expected.

Wellhead Protection Area

The Indiana Department of Environmental Management’s Wellhead Proximity Determinator website (<http://www.in.gov/idem/cleanwater/pages/wellhead/>) was accessed on October 23, 2019 by HNTB. This project is located within a Wellhead Protection Area.

An early coordination letter was sent on October 28, 2019, to the Peru Utilities Stormwater Coordinator. The Peru Utilities Stormwater Coordinator responded on December 31, 2019, stating that the standard spill prevention provisions in the IDEM Rule 5 will be sufficient (Appendix C, page 21). In addition, the Peru Utilities Stormwater Coordinator noted that any spills must be reported to Peru Utilities. This recommendation has been added as a firm commitment in the Environmental Commitments section of this CE document.

Water Wells

The IDNR Water Well Record Database website (<https://www.in.gov/dnr/water/3595.htm>) was accessed on October 23, 2019 by HNTB. No wells are located near this project. Therefore, no impacts are expected.

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Urban Area Boundary

Based on a desktop review of the INDOT MS4 website (<https://entapps.indot.in.gov/MS4/>) by HNTB on October 23, 2019 and the RFI report; this project is located in an Urban Area Boundary (UAB) location. An early coordination letter was sent on October 28, 2019, to the Peru, Indiana MS4 Coordinator. The MS4 Coordinator did not respond within the 30-day time frame.

Public Water System

Based on a desktop review on October 23, 2019, a site visit on October 19, 2019 by HNTB, the aerial map of the project area (Appendix B, page 2), and the IDEM Indiana Public Water Supply Database website (<https://myweb.in.gov/IDEM/DWW/>) this project is not located where there will be public water system impacts. Therefore, no impacts are expected.

Flood Plains

- Longitudinal Encroachment
- Transverse Encroachment
- Project located within a regulated floodplain
- Homes located in floodplain within 1000' up/downstream from project

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

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

Remarks:

Based on a desktop review of The Indiana Department of Natural Resources Indiana Floodway Information Portal website (<http://dnrmaps.dnr.in.gov/appsphp/fdms/>) by HNTB on December 5, 2019; this project is located in a regulatory floodplain as determined from the approved IDNR floodplain maps (Appendix B, page 6). An early coordination letter was sent on October 28, 2019, to the local Floodplain Administrator. The floodplain administrator did not respond within the 30-day time frame. This project qualifies as a Category 1 per the current INDOT CE Manual, which states:

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

Farmland

- Agricultural Lands
- Prime Farmland (per NRCS)

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

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

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

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

Remarks:

Based on a desktop review, a site visit on October 19, 2019, by HNTB, the aerial map of the project area (Appendix B, page 2), 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 FPPA do not apply to this project; therefore, no impacts are expected. An early coordination letter was sent on October 28, 2019, to Natural Resources Conservation Services (NRCS). The NRCS responded on November 21, 2019, stating that the project will not cause a conversion of prime farmland (Appendix C, page 8).

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SECTION C – CULTURAL RESOURCES

Minor Projects PA Clearance	Category	Type	INDOT Approval Dates	N/A
	A, B	A-2, B-3	December 30, 2019	

Eligible and/or Listed
Resource Present

Results of Research

Archaeology		
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			
Historic Property Report			
Archaeological Records Check/ Review			
Archaeological Phase Ia Survey Report			
Archaeological Phase Ic Survey Report			
Archaeological Phase II Investigation Report			
Archaeological Phase III Data Recovery			
APE, Eligibility and Effect Determination			
800.11 Documentation			

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

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

Remarks: On December 30, 2019 the INDOT Cultural Resource Office (CRO) determined that this project falls within the guidelines of Category A, Type 2 and Category B, Type 3 under the Minor Projects Programmatic Agreement (MPPA) (Appendix D, pages 1-3). Category A, Type 2 projects include all work within interchanges and within medians of divided highways in previously disturbed soils. Category B, Type 3 projects include construction of added travel lane, turning, or auxiliary lanes, and shoulder widening within previously disturbed soils. All construction activities will occur within existing right-of-way where soils have been previously disturbed. No further consultation is required. This completes the Section 106 process and the responsibilities of the FHWA under Section 106 have been fulfilled.

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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

Use

Yes	No

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

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

--

**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 US 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 National Register of Historic Places (NRHP) eligible or listed historic properties regardless of ownership. Lands subject to this law are considered Section 4(f) resources.

Based on a desktop review, a site visit on October 19, 2019 by HNTB, the aerial map of the project area (Appendix B, page 2), and the RFI report (Appendix E, page 2) there are no Section 4(f) resources within or

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adjacent to the project area. Therefore, no use is expected.

Section 6(f) Involvement	<u>Presence</u>	<u>Use</u>	
Section 6(f) Property	<input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>

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

Remarks: The US 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.lwcfcoalition.com/tools> revealed a total of three properties in Miami County (Appendix I, page 11). None of these properties are located within or adjacent to the project area. Therefore, there will be no impacts to 6(f) resources as a result of this project.

SECTION E – Air Quality

Air Quality

Conformity Status of the Project	Yes	No
Is the project in an air quality non-attainment or maintenance area?	<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)?	<input type="checkbox"/>	<input type="checkbox"/>
Level of MSAT Analysis required?		
Level 1a	<input checked="" type="checkbox"/>	Level 1b <input type="checkbox"/> Level 2 <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4 <input type="checkbox"/> Level 5 <input type="checkbox"/>

Remarks: This project is included in the INDOT FY 2020-2024 Statewide Transportation Improvement Program (STIP) (Appendix H, page 1).

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

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

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SECTION F - 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		

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

SECTION G – COMMUNITY IMPACTS

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

Remarks: The project is not anticipated to result in substantial impacts to community cohesion as it will not divide existing neighborhoods or change community access. No negative economic impacts to the community or impacts to the local tax base are anticipated.

Per the *2019 Indiana Festival Guide* (<https://issuu.com/propellermarketing/docs/in-festival-guide-w-index?e=14720671/65923919>) accessed on December 17, 2019, the following community events occur in Peru, Indiana:

- Second Saturdays (April – November)
- Peru/Miami County Community Garage Sale (May – September)
- Cole Porter Festival (June)
- Miami County 4-H Fair (June)
- July 4th Celebration and Firecracker Run (July)
- Circus City Festival (July)
- Hoosier Heritage Festival (July)
- Grissom Air Museum Warbird Cruise-In (August)
- Miami Days at the Pillars (August)
- Mississinewa Triathlon (September)
- McClure's Orchard and Winery Fall Festival (October)
- Quigley Jazz Jam Festival (November)
- Downtown Peru Christmas Open House (November)

The proposed project is not anticipated to adversely affect any of these community events. The MOT for the project will allow US 24 to remain open during construction. Construction activities will be phased with

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temporary lane and shoulder closures (Appendix B, pages 28-36). During the phased construction, traffic will be maintained with construction signage, barricades, and drums. The MOT plan may cause minor delays or inconveniences to those traveling to all of the community events. The selected contractor will implement the MOT in accordance with the current Indiana Design Manual (IDM) and INDOT Standard Specifications.

Miami County has an approved Americans with Disabilities Act (ADA) Transition Plan. However, the project is within a rural portion of Miami County and is not included in the ADA Transition Plan. There are no sidewalks or trails within or adjacent to the project area. Therefore, there are no facilities in the project area that require ADA compliance.

Indirect and Cumulative Impacts

Will the proposed action result in substantial indirect or cumulative impacts? Yes No

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

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: Based on a desktop review, a site visit on October 19, 2019 by HNTB, the aerial map of the project area (Appendix B, page 2), and the RFI report (Appendix E, page 2) there are no public facilities within or adjacent to the project area. Access to all properties will be maintained during construction. Therefore, no impacts are expected.

Early coordination letters were sent to the Miami County Surveyor, Miami County Sheriff, Miami County Highway Department, Miami County Commissioner's Office, Peru Mayor's Office, Peru Community Schools, Miami County Council, and the Miami County Emergency Management Department on October 28, 2019 (Appendix C, pages 1-3).

The Miami County Highway Engineer responded on November 18, 2019, stating recommendations to move the northeast median U-turn to a location approximately 650 feet northeast of Lovers Lane Road to include access for the commercial development east of US 24. It was noted that the recommended location of the median U-turn will eliminate the crossover at the intersection of the south leg of Lovers Lane Road and increase traffic safety at the two intersections. The recommended location of the northeast median U-turn was evaluated during design; however, due to a longer travel distance to the median U-turn and no known issue with access to the commercial development via Lovers Lane Road, this recommendation was not incorporated into the project design. No other responses were received from local officials.

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

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Environmental Justice (EJ) (Presidential EO 12898)

During the development of the project were EJ issues identified?

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

Remarks:

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

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

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

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

Remarks:

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

SECTION H – HAZARDOUS MATERIALS & 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
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

No Yes/ Date

ES Review of Investigations	December 5, 2019
------------------------------------	------------------

Include a summary of findings for each investigation.

Remarks:

Based on a review of GIS and available public records, an RFI was completed on December 5, 2019 by HNTB (Appendix E, pages 1-12). One National Pollution Discharge Elimination System (NPDES) Facility is located within 0.5 mile of the project area; however, no hazardous material sites were identified in or within 0.5 mile of the project area that will impact the project. The mapped NPDES Facility is 0.48 mile south of the project area. No impacts are expected because due to the distance of the facility from the project area. Further investigation for hazardous material concerns is not required at this time.

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SECTION I – PERMITS CHECKLIST

Permits (mark all that apply)

Likely Required

Army Corps of Engineers (404/Section10 Permit)

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

Remarks:

An IDEM Rule 5 permit is likely required due to the amount of ground disturbance necessary for the project.

An IDNR Construction in a Floodway (CIF) permit will likely be required for this project.

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

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

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, the INDOT Environmental Services Division (ESD) and the INDOT Fort Wayne 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 that would block or limit access. (INDOT)
3. One well, IDNR Well Permit No. 5603, is present within the project area. This well has an 8-inch casing and is not considered to be plugged well as it is filled with mud to 520 feet. If the remaining

Indiana Department of Transportation

County Miami Route US 24 Des. No. 1700089

well casing interferes with construction, IDNR Division of Oil and Gas will be contacted to create a plugging plan (IDNR Oil and Gas).

4. If a spill occurs during construction, Peru Utilities will be contacted immediately at 765-473-6681 (Peru Utilities).
5. 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)
6. Lighting AMM 1: Direct temporary lighting away from suitable habitat during the active season. (USFWS)
7. Lighting AMM 2: When installing 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 0 and “backlight” as low as practicable. (USFWS)

For Further Consideration:

8. 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). (IDNR-DFW)
9. Do not cut any trees suitable for Indiana bat or Northern Long-eared bat roosting (greater than 5 inches dbh, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30. (IDNR-DFW)

Indiana Department of Transportation

County Miami

Route US 24

Des. No. 1700089

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 October 28, 2019 with federal, state, and local resource agencies (Appendix C, pages 1-3).

Agency	Response Received
Indiana Department of Transportation – Ft. Wayne District	November 18, 2019
Miami County Highway Department	November 18, 2019
US Fish and Wildlife Service	November 18, 2019
USDA – Natural Resources Conservation Service	November 22, 2019
Indiana Department of Natural Resources, Division of Oil and Gas	November 26, 2019
Indiana Department of Natural Resources, Division of Fish and Wildlife	December 13, 2019
Indiana Geological Survey	December 16, 2019
Indiana Department of Environmental Management	December 17, 2019
Peru Utilities Stormwater Coordinator (MS4 and Wellhead Protection Area Coordinator)	December 31, 2019
Indiana Department of Transportation – Utilities and Railroads Division	-
United States Army Corps of Engineers – Louisville District	-
Indiana Department of Natural Resources, Division of Oil and Gas	-
Miami County Surveyor	-
Miami County Sheriff	-
Peru Community Schools	-
Miami County Commissioner’s Office	-
Miami County Council	-
Miami County Emergency Management	-
Miami County Planning Department (Floodplain Administrator)	-
Peru Mayor’s Office	-

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APPENDIX A: INDOT SUPPORTING DOCUMENTATION

Categorical Exclusion Level Thresholds

	PCE	Level 1	Level 2	Level 3	Level 4 ¹
Section 106	Falls within guidelines of Minor Projects PA	“No Historic Properties Affected”	“No Adverse Effect”	-	“Adverse Effect” Or Historic Bridge involvement ²
Stream Impacts	No construction in waterways or water bodies	< 300 linear feet of stream impacts	≥ 300 linear feet of stream impacts	-	Individual 404 Permit
Wetland Impacts	No adverse impacts to wetlands	< 0.1 acre	-	< 1 acre	≥ 1 acre
Right-of-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.

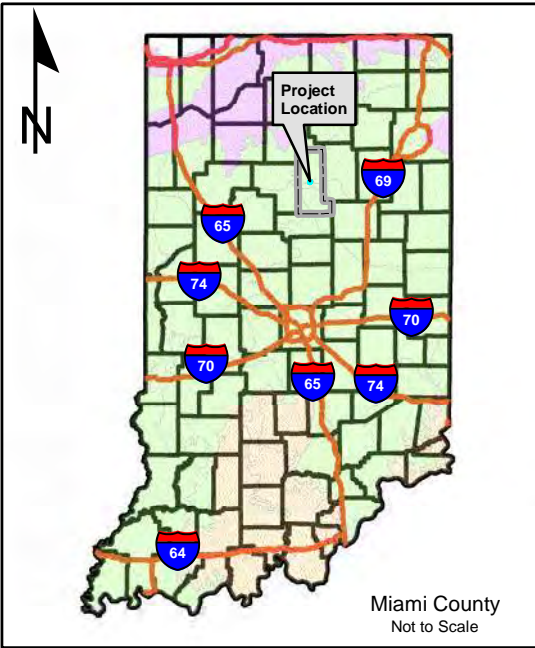
⁵AMMs determined by the IPAC decision key to be needed that are listed in the USFWS *User's Guide for the Range-wide Programmatic Consultation for Indiana bat and Northern long-eared bat* as “required for all projects”.

⁶Potential for causing a disproportionately high and adverse impact.

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

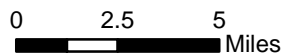
*Substantial public or agency controversy may require a higher-level NEPA document.

APPENDIX B: GRAPHICS



Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea,

- Investigated Area
- Miami County
- NRCS Land Resource Regions**
- Northeast and Northcentral
- Midwest
- Eastern Mountains and Piedmont



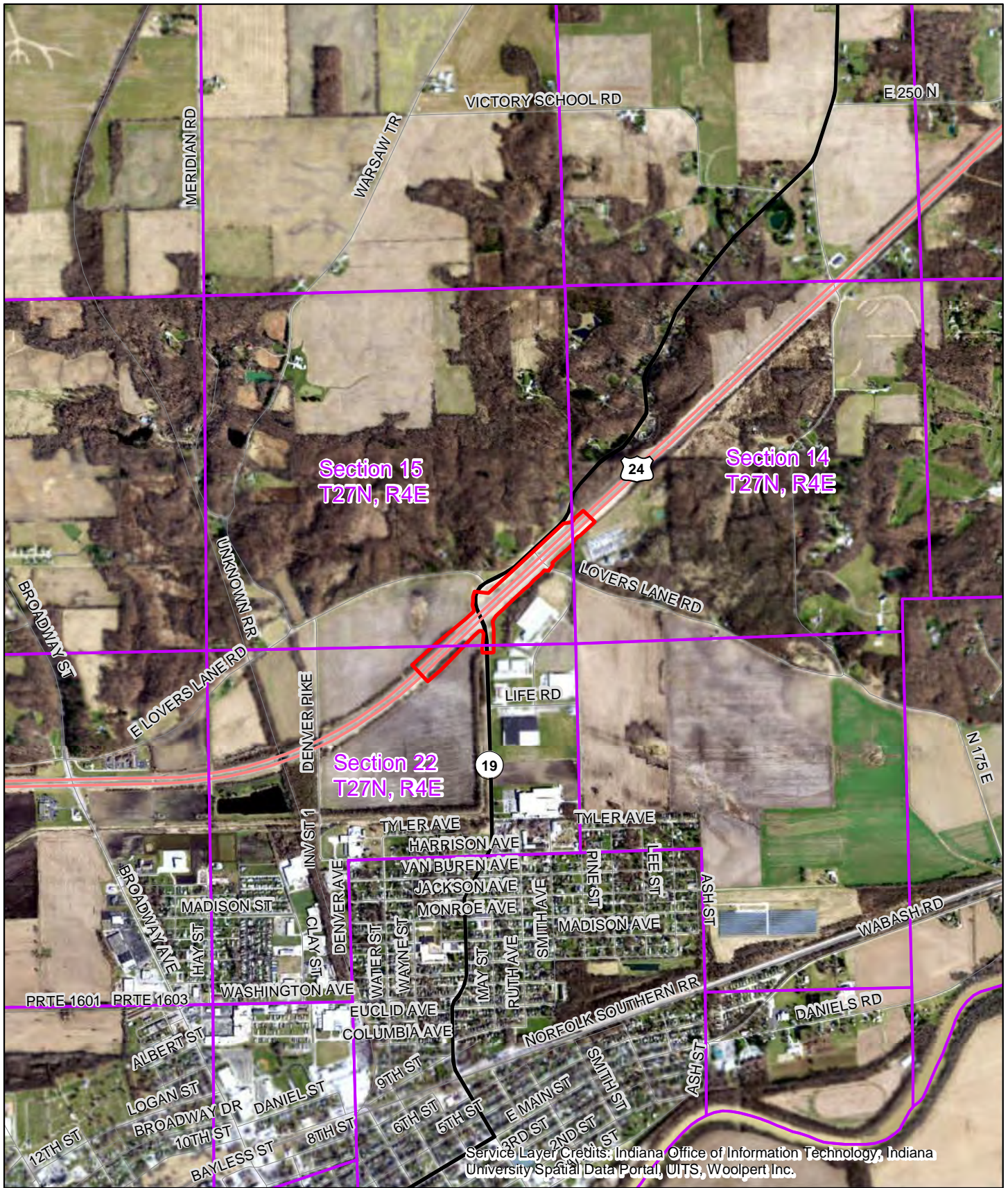
Project Location Map
U.S. 24 at SR 19
Intersection Improvements
Miami County, Indiana

Des. No. 1700089

1 inch = 5 miles

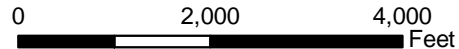


Graphics created by HNTB Corporation (2019)



Service Layer Credits: Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

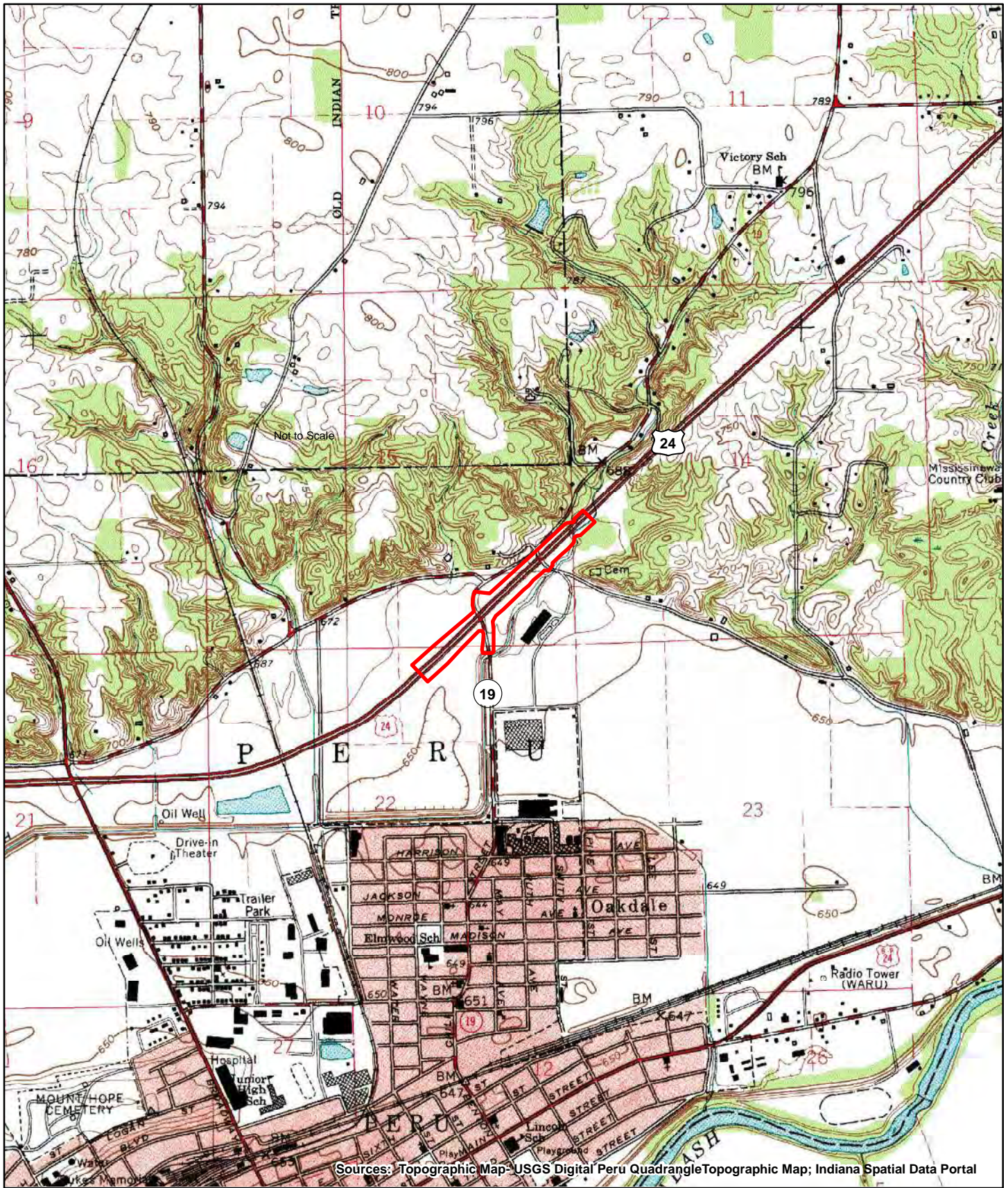
- Project Area
- PLSS Sections
- State Route
- Local Roads
- US Highway



Project Aerial Map
 U.S. 24 at SR 19
 Intersection Improvements
 Miami County, Indiana

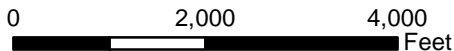
Des. No. 1700089
 1 inch = 2,000 feet

HNTB
 Graphics created by HNTB Corporation (2019)



Sources: Topographic Map-USGS Digital Peru Quadrangle Topographic Map; Indiana Spatial Data Portal

Investigated Area



USGS (1:24,000 scale) Topographic Map
 U.S. 24 at SR 19
 Intersection Improvements
 Miami County, Indiana

Des. No. 1700089
 1 inch = 2,000 feet



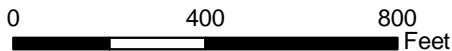
Graphics created by HNTB Corporation (2019)



Service Layer/Credits: Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

- Drainage Inlet
- Data Points
- Construction Limits

- Delineated Wetlands
- ▶▶▶ Delineated Streams
- ▶▶▶ Roadside Ditch
- National Hydrography Flowlines



Water Resources Map
 U.S. 24 at SR 19
 Intersection Improvements
 Miami County, Indiana

Des. No. 1700089
 1 inch = 400 feet



Graphics created by HNTB Corporation (2019)



November 26, 2019

Wetlands

- | | | |
|--------------------------------|-----------------------------------|----------|
| Estuarine and Marine Deepwater | Freshwater Emergent Wetland | Lake |
| Estuarine and Marine Wetland | Freshwater Forested/Shrub Wetland | Other |
| | Freshwater Pond | Riverine |

Des. No. 1700089

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper



Indiana Floodplain Information Portal Report

Point of Interest

Effective Flood Zone:

AE

Preliminary Flood Zone:

N/A

Best Available Flood Zone:

AE

Approximate Flood Elevation:

660.6ft NAVD88



Source:

Zone A Model Delineation












Nearest Stream:

Prairie Ditch

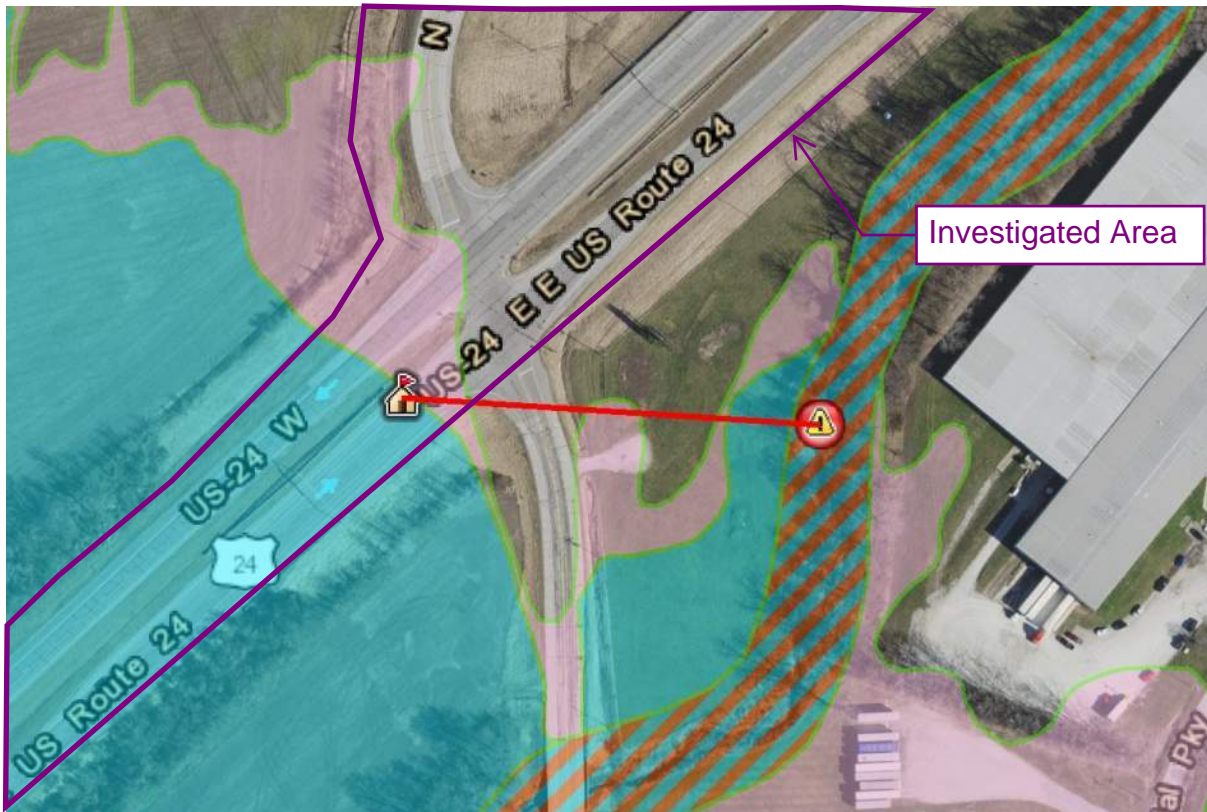
Map Legend

-  Point of Interest
-  Nearest Point on Stream

Best Available Flood Zone

-  FEMA Zone AE Floodway
-  DNR Detailed Floodway
-  DNR Approximate Floodway
-  FEMA Zone A
-  FEMA Zone AE
-  DNR Detailed Fringe
-  DNR Approximate Fringe
-  Additional Floodplain Area
-  FEMA Protected by Levee
-  FEMA Floodplain - Ponding (Depth)
-  FEMA Floodplain - Sheet Flow (Depth)

Site Map with Best Available Flood Zone



Approximate scale 1:3,600

Disclaimer

Generated on Tuesday December 17th 2019 at 10:26:22am

The data shown on this map represents FEMA floodplain data enhanced with additional studies that have been reviewed and approved by the Division of Water. While this data has not yet been submitted to FEMA for inclusion in the Flood Insurance Rate

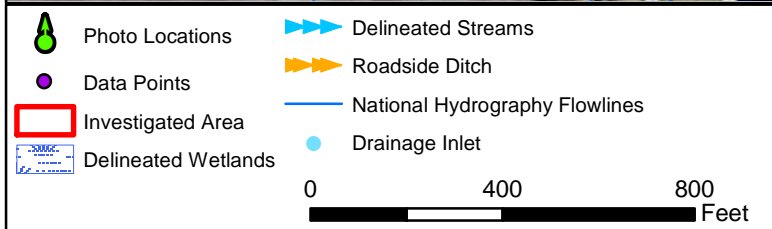
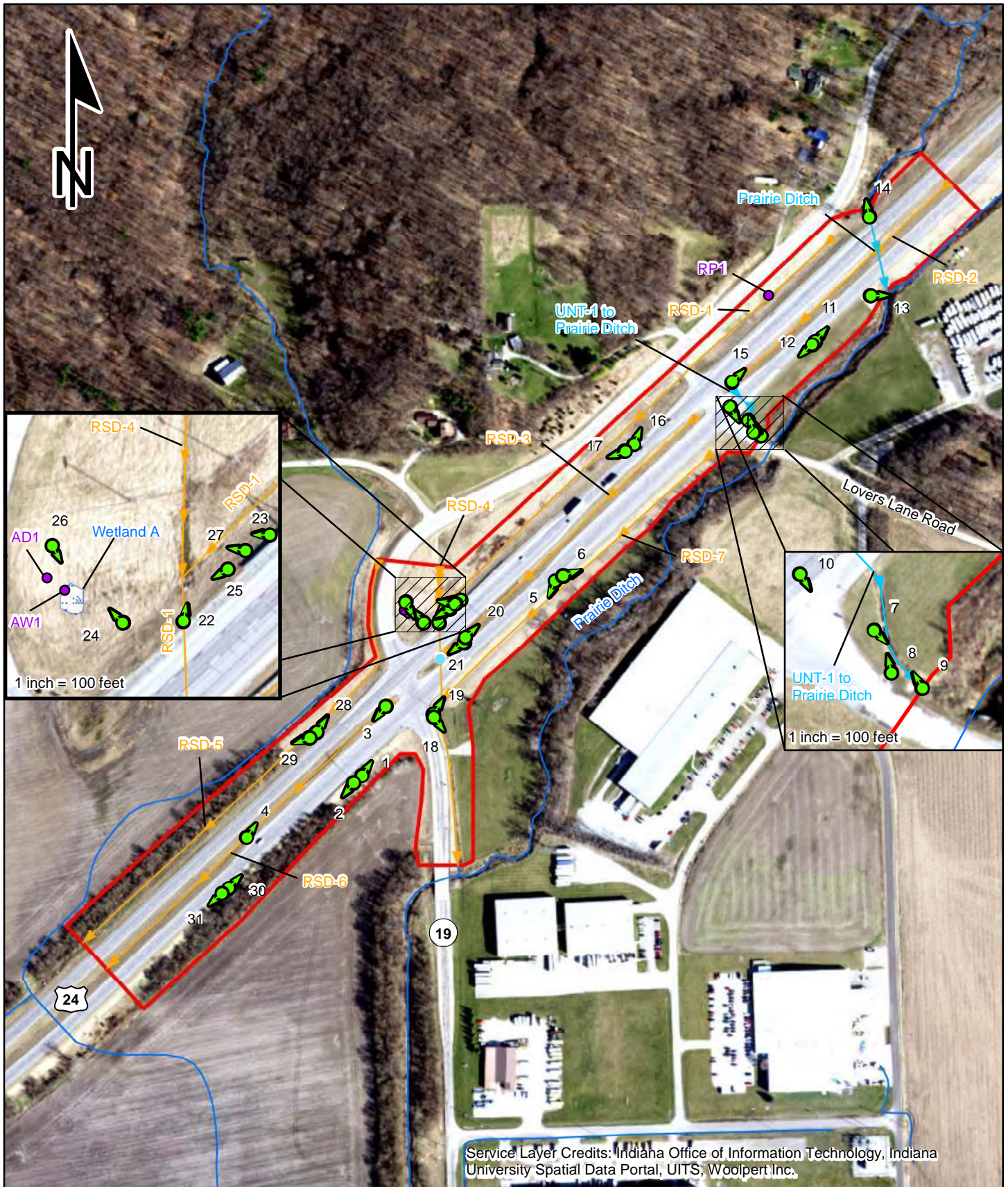


Photo Location Map U.S. 24 at SR 19 Intersection Improvements Miami County, Indiana	
Des. No. 1700089	 Graphics created by HNTB Corporation (2019)
1 inch = 400 feet	



Photo 1: Facing northeast—view of the southwest quadrant of US 24 and SR 19.



Photo 2: Facing southwest—view of the southwest quadrant of US 24 and SR 19.



Photo 3: Facing southwest—view of RSD-6 within the US 24 median.



Photo 4: Facing northeast—view of RSD-6 within the US 24 median.



Photo 5: Facing southwest—view of RSD-7.



Photo 6: Facing northeast—view of RSD-7.



Photo 7: Facing southeast—view of UNT-1 to Prairie Ditch.



Photo 8: Facing north—view of UNT-1 to Prairie Ditch.



Photo 9: Facing northwest —view of UNT-1 to Prairie Ditch.



Photo 10: Facing southeast—view of UNT-1 to Prairie Ditch.



Photo 11: Facing northeast—view of the northeast quadrant of US 24 and Lovers Lane Road.



Photo 12: Facing southwest—view of the northeast quadrant of US 24 and Lovers Lane Road.



Photo 13: Facing east—view of downstream end of structures carrying Prairie Ditch beneath US 24.



Photo 14: Facing northwest—view of upstream end of structures carrying Prairie Ditch beneath US 24.



Photo 15: Facing northeast—view of RSD-2 within the US 24 median.



Photo 16: Facing northeast—view of RSD-1.



Photo 17: Facing southwest—view of RSD-1.



Photo 18: Facing southeast—view of RSD-1.



Photo 19: Facing northeast—view of RSD-1.



Photo 20: Facing northeast—view of RSD-3 within US 24 median.



Photo 21: Facing southwest—view of RSD-3.



Photo 22: Facing north—view of RSD-1 and RSD-4



Photo 23: Facing west—view of RSD-1 and RSD-4.



Photo 24: Facing northwest—view of Wetland A.



Photo 25: Facing southwest—view of Wetland A and RSD-1.



Photo 26: Facing south—view of Wetland A.



Photo 27: Facing west—view of Wetland A, RSD-1, and RSD-4.



Photo 28: Facing northeast—view of RSD-5.



Photo 29: Facing southwest—view of RSD-5.



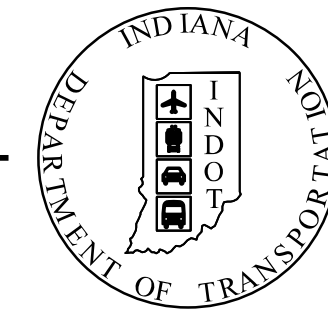
Photo 30: Facing northeast—view of the southwest quadrant of US 24 and SR 19.



Photo 31: Facing southwest—view of the southwest quadrant of US 24 and SR 19.

PROJECT	DESIGNATION
1700089	1700089
CONTRACT	
R-42406	

INDIANA DEPARTMENT OF TRANSPORTATION



ROAD PLANS U.S. 24 AT S.R. 19 INTERSECTION IMPROVEMENT

ROUTE: U.S. 24 FROM: RP 80+98 TO: RP 81+48

PROJECT NO.

P.E. 1700089

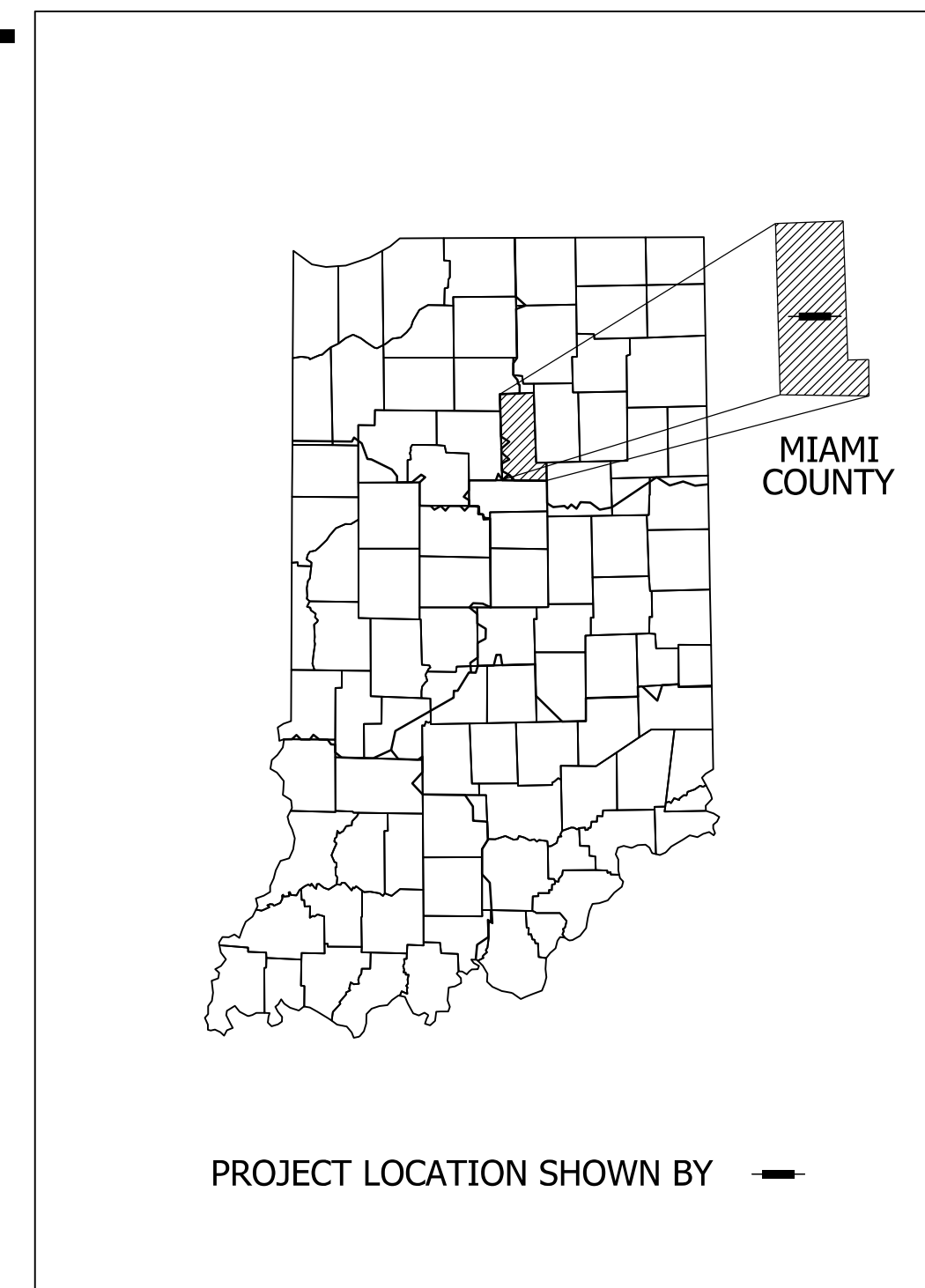
CONST. 1700089

PROJECT DESCRIPTION

INTERSECTION IMPROVEMENTS AND ROADWAY MODIFICATIONS ON U.S. 24 AT S.R. 19 LOCATED APPROXIMATELY 3.8 MILES EAST OF THE U.S. 24/U.S. 31 INTERCHANGE IN SECTIONS 14, 15 AND 22, T-27-N, R-4-E, PERU TOWNSHIP, MIAMI COUNTY, INDIANA.

A.A.D.T. (2021)	12,689 V.P.D.
A.A.D.T. (2041)	16,589 V.P.D.
D.H.V. (2041)	7.86%
DIRECTIONAL DISTRIBUTION	50.37%
TRUCKS	20.46% OF AADT 19.03% OF DHV

DESIGN SPEED	60 MPH
PROJECT DESIGN CRITERIA	3R NON-FREEWAY
FUNCTIONAL CLASSIFICATION	PRINCIPAL ARTERIAL
RURAL/URBAN	RURAL
TERRAIN	LEVEL
ACCESS CONTROL	PARTIAL



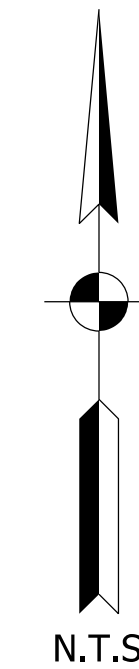
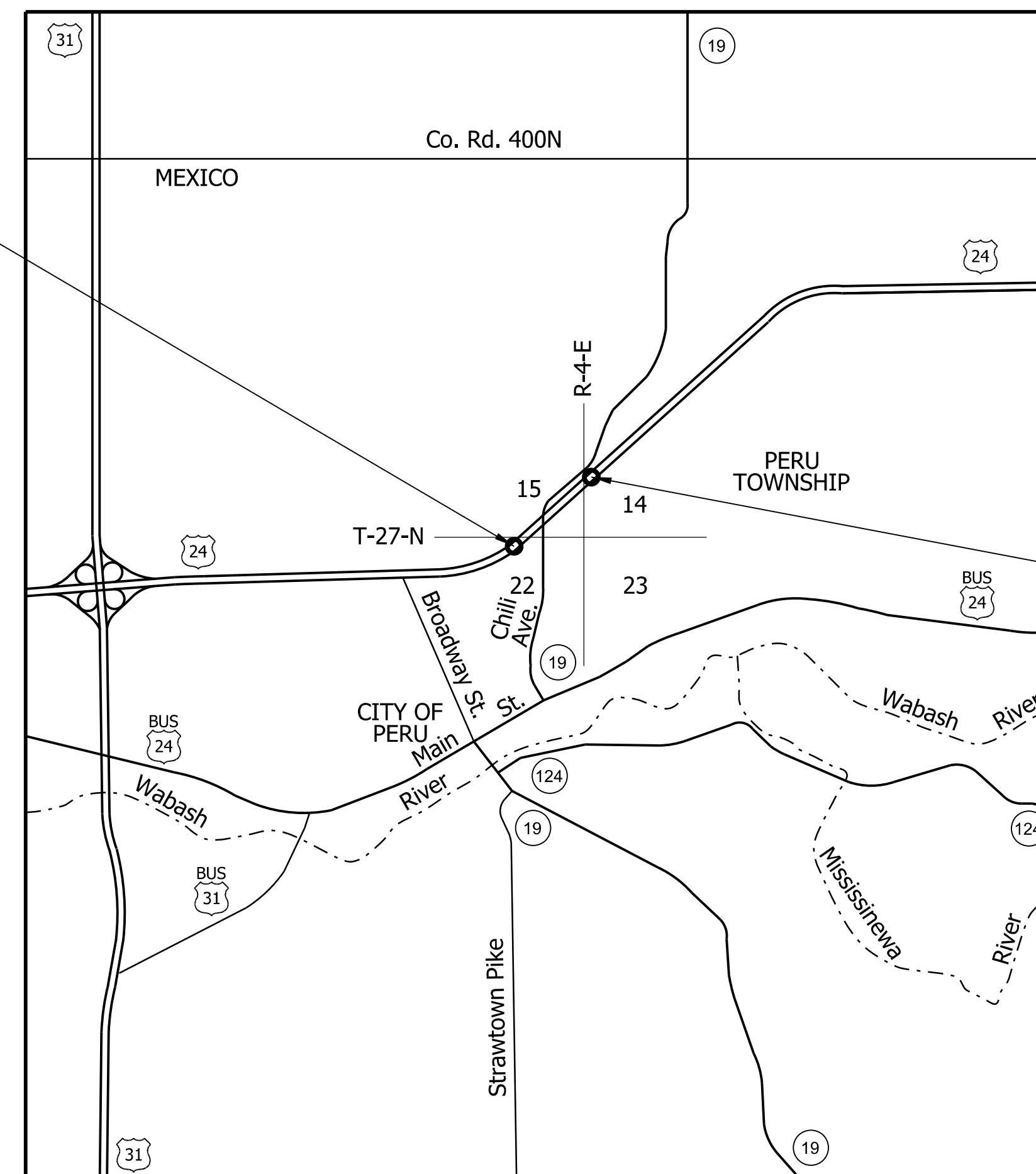
LATITUDE: 40°46'47"N LONGITUDE: 86°03'33"W

GROSS LENGTH:	0.59 MI.
NET LENGTH:	0.59 MI.
MAX. GRADE:	2.66%

HYDROLOGIC UNIT CODE: 05120101160030

**STAGE 3 PLANS
JANUARY 7, 2020**

BEGIN PROJECT
PROJECT NO. 1700089
P.O.T. STA. 240+82.00
LINE "A"



END PROJECT
PROJECT NO. 1700089
P.O.T. STA. 268+40.00
LINE "A"

LOCATION MAP
PERU TOWNSHIP,
MIAMI COUNTY

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



THE HNTB COMPANIES
INFRASTRUCTURE SOLUTIONS
111 MONUMENT CIRCLE
SUITE 1200
INDIANAPOLIS, IN 46204-5178

DRAFT
NOT FOR CONSTRUCTION

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

	DESIGNATION	
	1700089	
SURVEY BOOK	SHEETS	
ELECTRONIC	1 of 73	
CONTRACT	PROJECT	
R-42406	1700089	

UTILITIES

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Ds8383@att.com
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MIAMI CASS COUNTY REMC
JACK KELLEMS
STAKING TECHNICIAN
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PERU UTILITIES
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mwals@peruutilities.com
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DEAN GARRETT
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dagarrett@nisource.com
801 E. 86TH AVENUE
MERRILLVILLE, IN 46410
PETROLEUM
NUSTAR PIPELINE
THERESA LANDRY
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Theresa.landry@nustarenergy.com
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WICHITA, KS 67205
WATER/ SANITARY SEWER
PERU UTILITIES
MIKE WALSH
PLANNING ENGINEER
765-473-6681
mwals@peruutilities.com
P.O. BOX 67
PERU, IN 46970

GENERAL NOTES

The final cross sections of the grading contract will be the original cross sections of the paving contract. However, partial or complete cross sections shall be taken if necessary to determine the actual excavation quantities.
The paper relocation lines will be cross sectioned by the engineer before construction.
Existing asphalt pavement located outside the constuction limits shall be removed as directed.
Existing pccp sidewalks and curbs shall be removed from project right of way limits unless otherwise noted and shall be paid for under clearing right of way.
All earth shoulders, median areas, cut and fill slopes shall be plain or mulched seeded except where sodding is specified.
All existing storm drainage pipes, inlets, and manholes shall remain unless otherwise noted.
All limited access right of way is to be fenced with black vinyl coated chain link type fence (b.v.c.l.t.f.) unless otherwise noted.
All existing right of way fence shall be removed unless otherwise noted.
All disturbed areas shall be seeded with seed mixture "R" unless otherwise noted.
All slopes are to be repaired with a minimum amount of grading so as not to disturb existing vegetation more than necessary.
All pipes that are to be removed which connect to existing sewers that are to remain in operation shall be sealed water tight.
XX Denotes General Notes Required.

SHEET INDEX

Table with 2 columns: SHEET NO. and DESIGNATION. Rows include: 1 TITLE SHEET, 2 INDEX AND GENERAL NOTES, 3-5 ROADWAY TYPICAL CROSS SECTIONS, 6 MAINTENANCE OF TRAFFIC DETOUR ROUTE LOVERS LANE ROAD, 7-15 MAINTENANCE OF TRAFFIC, 16 MAINTENANCE OF TRAFFIC DETAILS, 17-19 ROADWAY PLAN LINE "A", 20-24 CONSTRUCTION DETAILS, 25 SPOT ELEVATION DETAILS, 26-30 EROSION CONTROL PLANS, 31-33 PAVEMENT MARKING DETAILS, 34-37 SIGNING PLAN, 38-41 SIGNING DETAILS, 42-44 CROSS SECTIONS GROUND MOUNTED SIGN PANELS, 45 APPROACH SUMMARY TABLE, 46 STRUCTURE DATA AND PIPE MATERIALS TABLE, 47-50 SHEET SIGN AND POST SUMMARY TABLE LINE "A", 51 SHEET SIGN AND POST SUMMARY TABLE LINE "B", 52 SIGN PANEL AND PAVEMENT MARKING SUMMARY TABLES, 53 TEMPORARY EROSION CONTROL TABLE, 54 UNDERDRAIN TABLE, 55-73 ROADWAY CROSS SECTIONS LINE "A".



REVISIONS

Table with 3 columns: SHEET NO., DATE, REVISED. Contains multiple empty rows for recording revisions.

challingsworth 1/7/2020 6:45:23 pm model:Sheet1 file: \\indw001\289\projects\2907-mdot-1 oncall 18111040 - us24 and sr19 \turn\cad\l1\csl172907-ds-md01.dgn

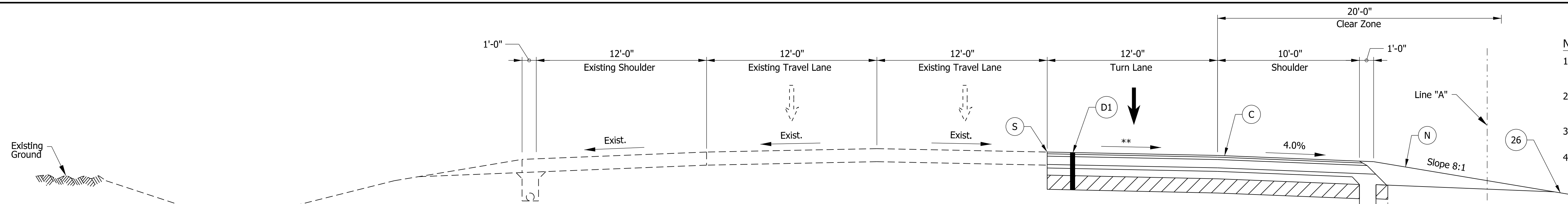
DRAFT NOT FOR CONSTRUCTION

Table for approval: RECOMMENDED FOR APPROVAL, DESIGN ENGINEER, DATE, DESIGNED: MKM, DRAWN: CPH, CHECKED: JLC, CHECKED: MKM

INDIANA DEPARTMENT OF TRANSPORTATION
INDEX AND GENERAL NOTES

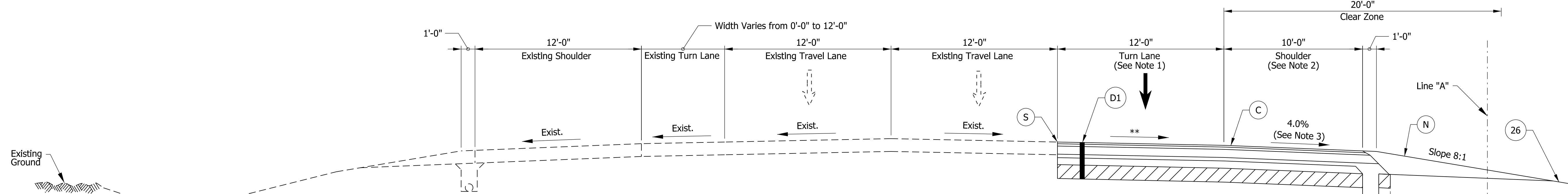
Table with 4 columns: HORIZONTAL SCALE, VERTICAL SCALE, SURVEY BOOK, ELECTRONIC, CONTRACT, R-42406; BRIDGE FILE, DESIGNATION, SHEETS, IN-01, PROJECT, 1700089

bsteinger
 1/7/2020 6:45:36 pm
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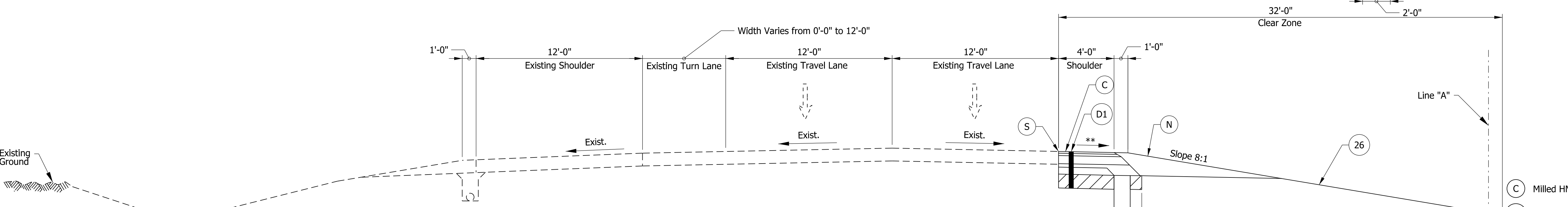


TYPICAL SECTION U.S. 24 WESTBOUND
 STA. 240+82.00 LT. "A" TO STA. 245+87.12 LT. "A"

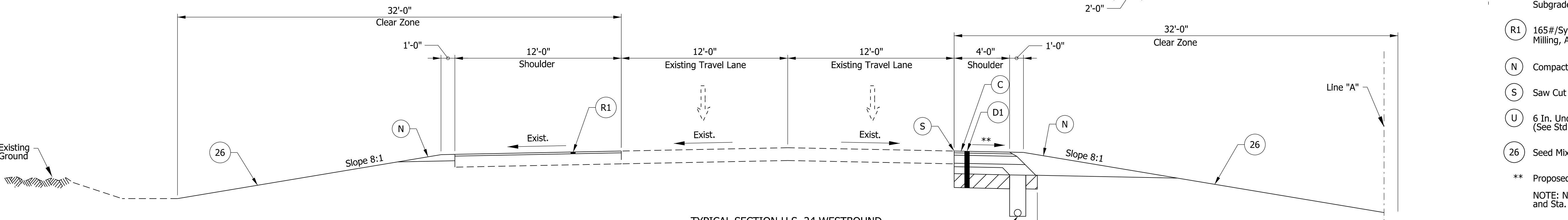
- Notes**
- 12'-0" from Sta. 245+87.12 to Sta. 249+92.00. Width Varies from 12'-0" at Sta. 249+92.00 to 0'-0" at Sta. 250+92.00.
 - 10'-0" from Sta. 245+87.12 to Sta. 249+92.00. Width Varies from 10'-0" at Sta. 249+92.00 to 4'-0" at Sta. 250+92.00.
 - Cross Slope Varies from 4.0% at Sta. 249+92.00 to 2.0% at Sta. 250+92.00.
 - Milled HMA Corrugations, Conventional shall be installed per Std. Dwg. E 606-SHCG-02.



TYPICAL SECTION U.S. 24 WESTBOUND
 STA. 245+87.12 LT. "A" TO STA. 250+92.00 LT. "A"



TYPICAL SECTION U.S. 24 WESTBOUND
 STA. 250+92.00 LT. "A" TO STA. 255+72.00 LT. "A"



TYPICAL SECTION U.S. 24 WESTBOUND
 STA. 258+62.00 LT. "A" TO STA. 268+40.00 LT. "A"

- Legend**
- (C) Milled HMA Corrugations, Conventional (See Note 4)
 - (D1) 165#/Syd. QC/QA-HMA, 4, 70, Surface, 9.5 mm on 275#/Syd. QC/QA-HMA, 4, 70, Intermediate, 19.0 mm on 770#/Syd. QC/QA-HMA, 4, 64, Base, 19.0 mm on 300#/Syd. QC/QA-HMA, 4, 76, Intermediate OG, 19.0 mm on 6 in of Compacted Aggregate, No. 53 on Subgrade Treatment Type IC
 - (R1) 165#/Syd. QC/QA-HMA, 2, 64, Surface, 9.5 mm on Milling, Asphalt, 1 1/2 in.
 - (N) Compacted Aggregate, No. 53
 - (S) Saw Cut (No Direct Pay)
 - (U) 6 In. Underdrain (See Std. Dwg. No. 718-UNDR-01)
 - (26) Seed Mixture, R
- ** Proposed Cross Slope to Match Existing Slope of Adjacent Lane.

Note to Reviewer: Safety edge detail to be provided in a future submittal.

Note to Reviewer: Pavement assumed to be asphalt. Final pavement design to be determined in a future submittal.

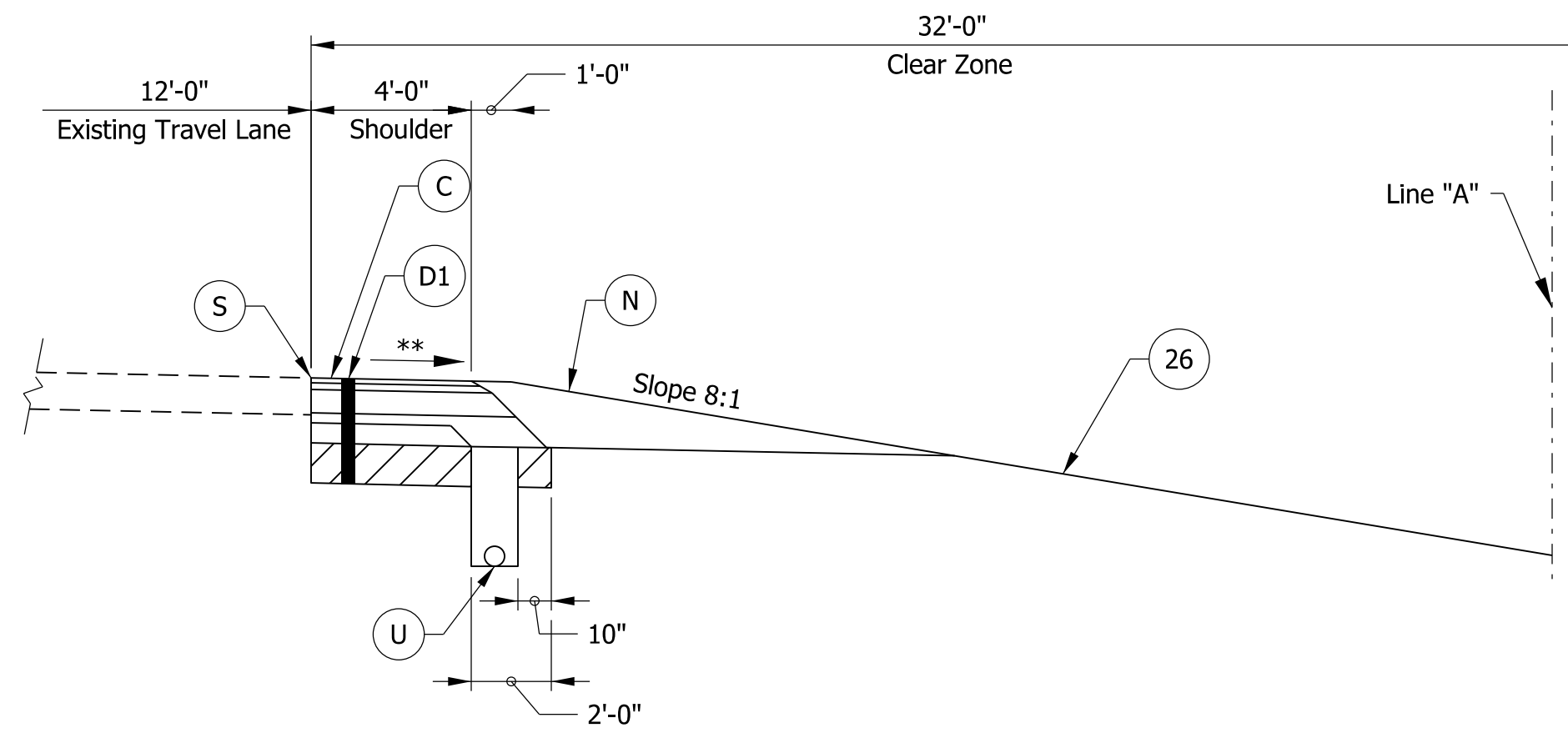
DRAFT
 NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: MKM	DRAWN: CPH	
CHECKED: JLC	CHECKED: MKM	

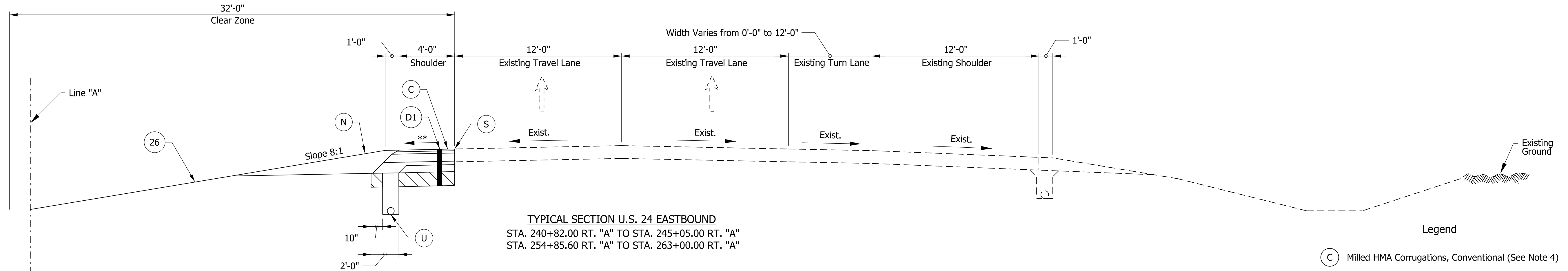
INDIANA
DEPARTMENT OF TRANSPORTATION

ROADWAY TYPICAL CROSS SECTIONS

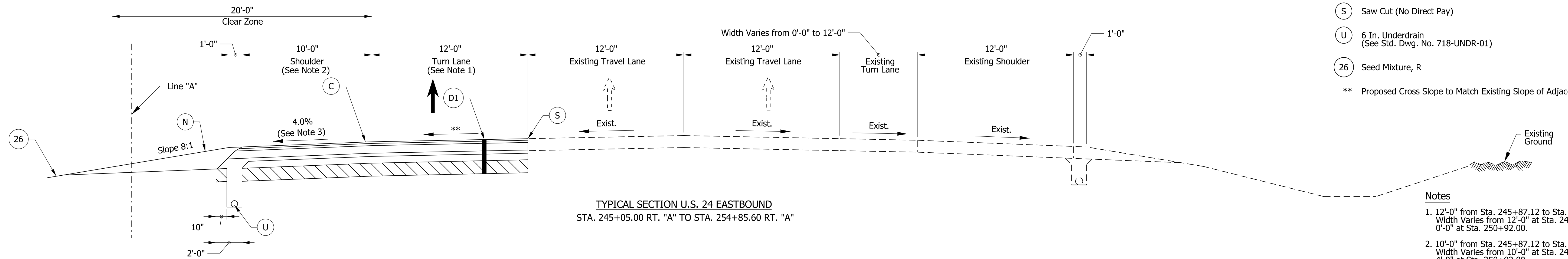
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VERTICAL SCALE	DESIGNATION
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SURVEY BOOK	SHEETS
ELECTRONIC	3 of 73
CONTRACT	PROJECT
R-42406	1700089



TYPICAL SECTION U.S. 24 WESTBOUND
STA. 240+82.00 LT. "A" TO STA. 241+11.40 LT. "A"



TYPICAL SECTION U.S. 24 EASTBOUND
STA. 240+82.00 RT. "A" TO STA. 245+05.00 RT. "A"
STA. 254+85.60 RT. "A" TO STA. 263+00.00 RT. "A"



TYPICAL SECTION U.S. 24 EASTBOUND
STA. 245+05.00 RT. "A" TO STA. 254+85.60 RT. "A"

- Legend**
- (C) Milled HMA Corrugations, Conventional (See Note 4)
 - (D1) 165#/Syd. QC/QA-HMA, 4, 70, Surface, 9.5 mm on 275#/Syd. QC/QA-HMA, 4, 70, Intermediate, 19.0 mm on 770#/Syd. QC/QA-HMA, 4, 64, Base, 19.0 mm on 300#/Syd. QC/QA-HMA, 4, 76, Intermediate OG, 19.0 mm on 6 in of Compacted Aggregate, No. 53 on Subgrade Treatment Type 1C
 - (N) Compacted Aggregate, No. 53
 - (S) Saw Cut (No Direct Pay)
 - (U) 6 In. Underdrain (See Std. Dwg. No. 718-UNDR-01)
 - (26) Seed Mixture, R
- ** Proposed Cross Slope to Match Existing Slope of Adjacent Lane.

- Notes**
1. 12'-0" from Sta. 245+87.12 to Sta. 249+92.00. Width Varies from 12'-0" at Sta. 249+92.00 to 0'-0" at Sta. 250+92.00.
 2. 10'-0" from Sta. 245+87.12 to Sta. 249+92.00. Width Varies from 10'-0" at Sta. 249+92.00 to 4'-0" at Sta. 250+92.00.
 3. Cross Slope Varies from 4.0% at Sta. 249+92.00 to 2.0% at Sta. 250+92.00.
 4. Milled HMA Corrugations, Conventional shall be installed per Std. Dwg. E 606-SHCG-02.

Note to Reviewer: Safety edge detail to be provided in a future submittal.

Note to Reviewer: Pavement assumed to be asphalt. Final pavement design to be determined in a future submittal.

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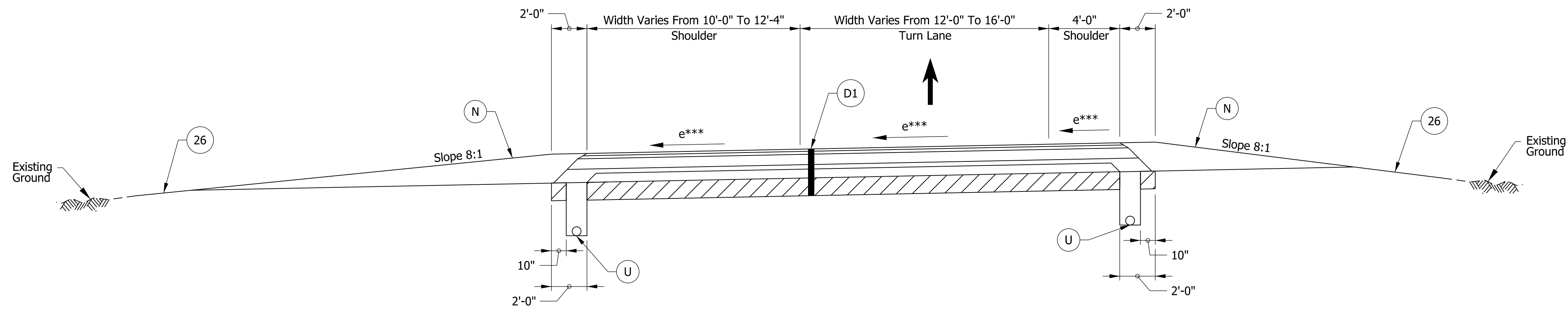
DRAFT
 NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: _____ MKM _____	DRAWN: _____ CPH _____	
CHECKED: _____ JLC _____	CHECKED: _____ MKM _____	

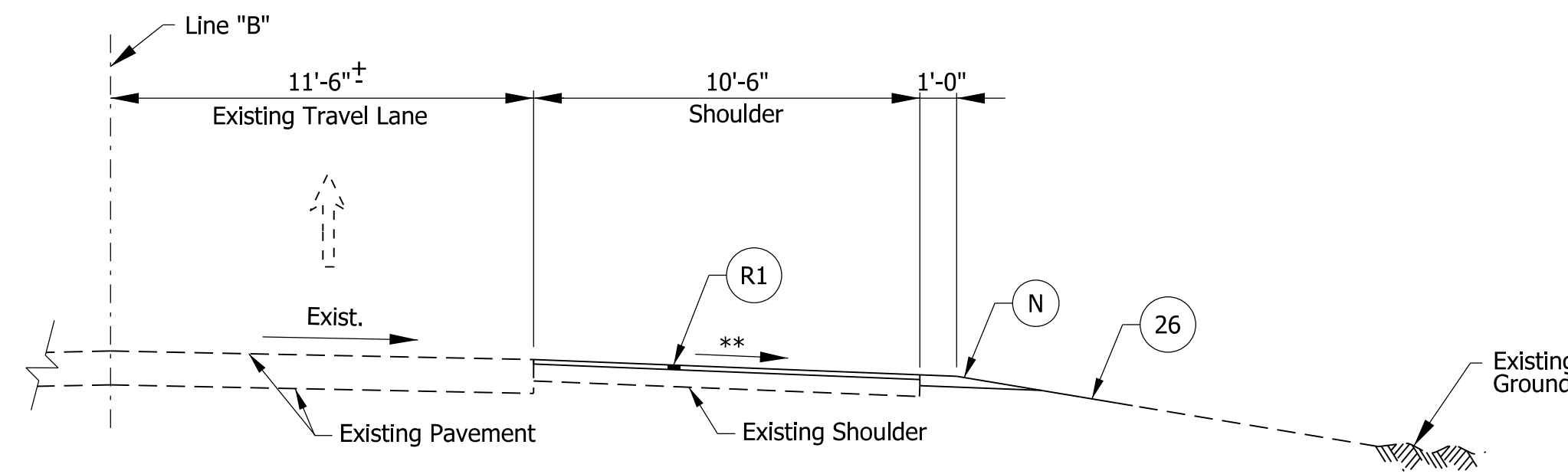
INDIANA
DEPARTMENT OF TRANSPORTATION

ROADWAY TYPICAL CROSS SECTIONS

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VERTICAL SCALE	DESIGNATION
N/A	1700089
SURVEY BOOK	SHEETS TS-02
ELECTRONIC	4 of 73
CONTRACT	PROJECT
R-42406	1700089



TYPICAL SECTION LEFT TURN LANE (THRU ROADWAY MEDIAN)
 WESTBOUND STA. 240+92.03 "A" TO STA. 241+50.51 "A"
 EASTBOUND STA. 254+46.49 "A" TO STA. 255+04.97 "A"



TYPICAL SECTION S.R. 19 NORTHBOUND
 STA. 521+75.00 RT. "B" TO STA. 522+77.00 RT. "B"

Legend

- D1 165#/Syd. QC/QA-HMA, 4, 70, Surface, 9.5 mm on 275#/Syd. QC/QA-HMA, 4, 70, Intermediate, 19.0 mm on 770#/Syd. QC/QA-HMA, 4, 64, Base, 19.0 mm on 300#/Syd. QC/QA-HMA, 4, 76, Intermediate OG, 19.0 mm on 6 in of Compacted Aggregate, No. 53 on Subgrade Treatment Type 1C
- R1 165#/Syd. QC/QA-HMA, 2, 64, Surface, 9.5 mm on Milling, Asphalt, 1½ in.
- N Compacted Aggregate, No. 53
- U 6 In. Underdrain (See Std. Dwg. No. 718-UNDR-01)
- 26 Seed Mixture, R
- ** Proposed Cross Slope to Match Existing Slope of Adjacent Lane.
- *** Cross Slope Varies. See Spot Elevation Details for Additional Information.

Note to Reviewer: Safety edge detail to be provided in a future submittal.

Note to Reviewer: Pavement assumed to be asphalt. Final pavement design to be determined in a future submittal.

DRAFT
 NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: _____ MKM _____	DRAWN: _____ CPH _____	
CHECKED: _____ JLC _____	CHECKED: _____ MKM _____	

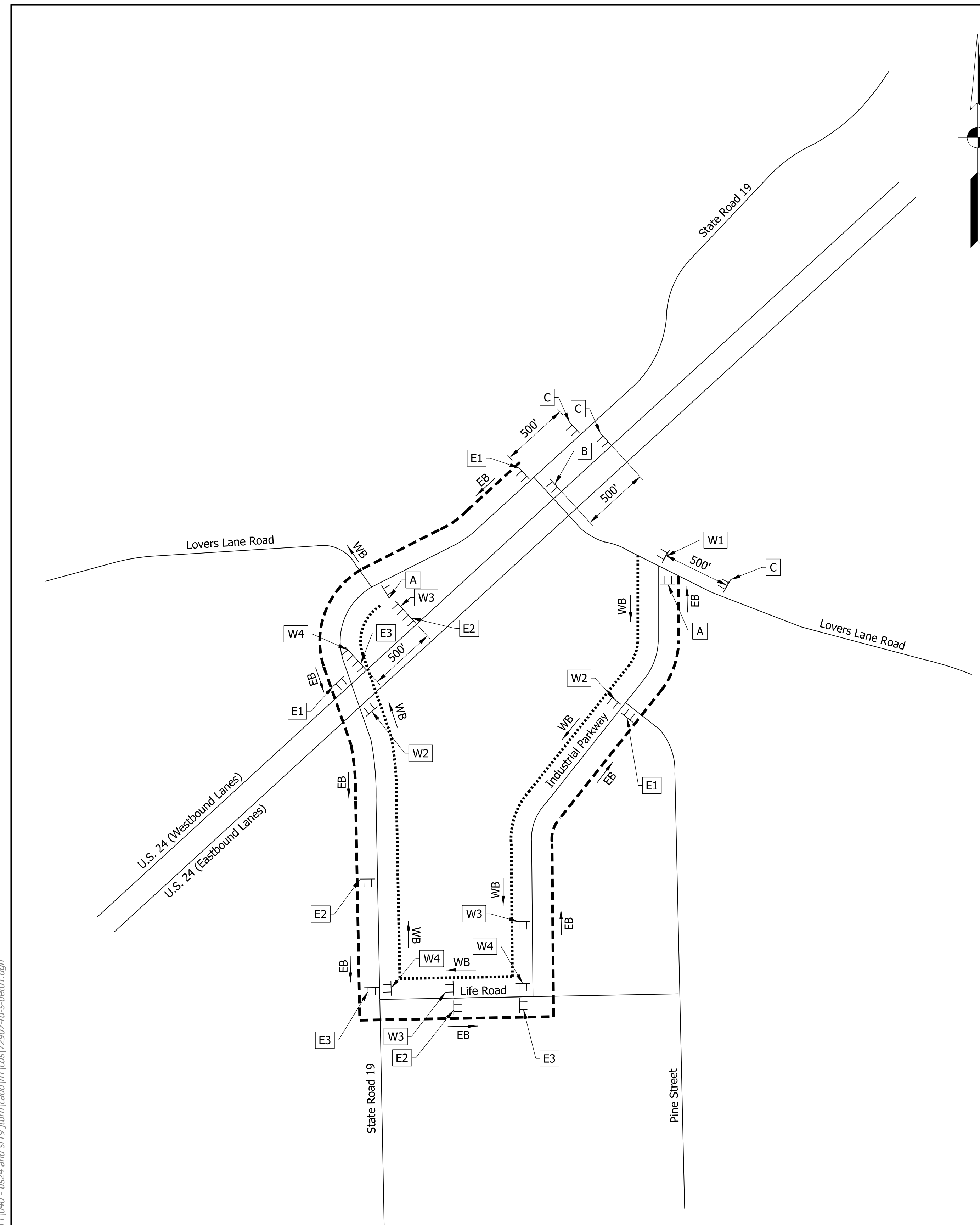
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 DEPARTMENT OF TRANSPORTATION

ROADWAY TYPICAL CROSS SECTIONS

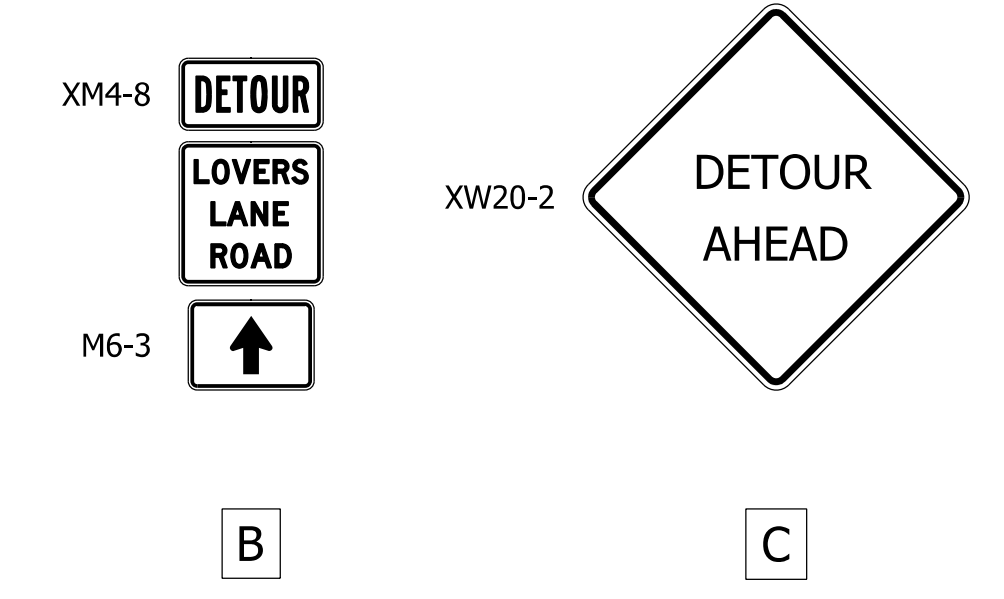
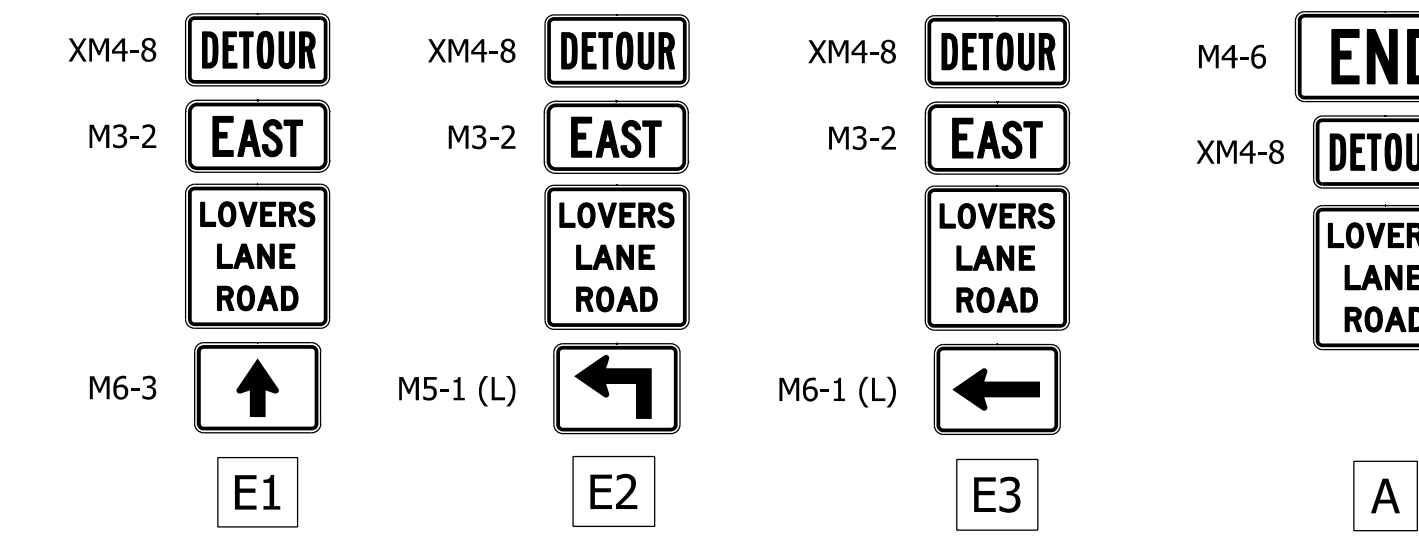
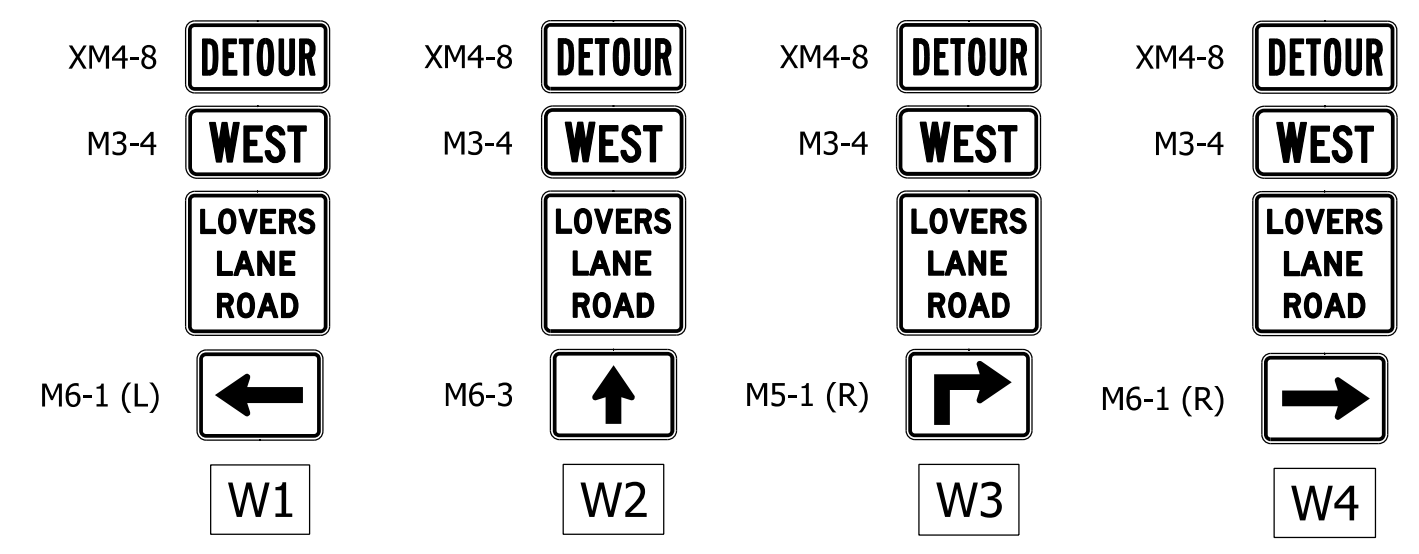
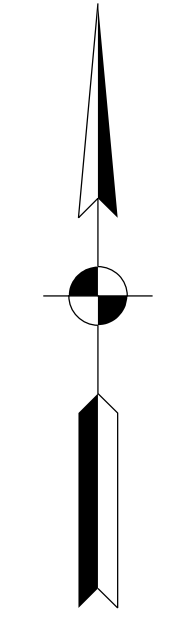
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VERTICAL SCALE	DESIGNATION
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SURVEY BOOK	SHEETS
ELECTRONIC	TS-03
CONTRACT	PROJECT
R-42406	1700089

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LOCATION MAP
N.T.S.



DETOUR ROUTE QUANTITY SUMMARY		
PAY ITEM	QUANTITY	UNIT
DETOUR ROUTE MARKER ASSEMBLY	21	EACH
CONSTRUCTION SIGN, A	3	EACH

LEGEND

- Westbound Lovers Lane Road Detour Route
- Eastbound Lovers Lane Road Detour Route
- Construction Sign and Supports

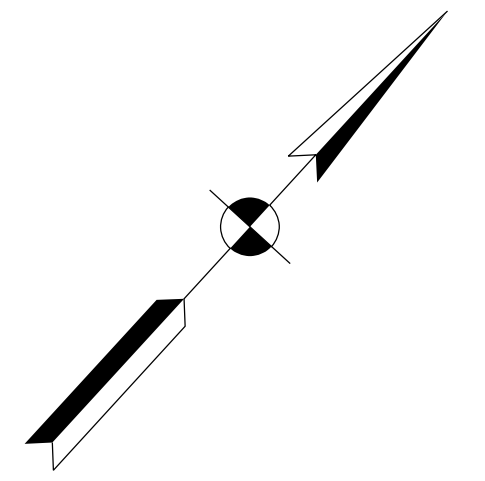
- Notes:**
- Signs Along EB Detour Route to be Installed Prior to MOT Phase 1.
 - Signs Along WB Detour Route to be Installed Prior to MOT Phase 3.

DRAFT
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: _____ MKM _____	DRAWN: _____ CPH _____	
CHECKED: _____ JLC _____	CHECKED: _____ MKM _____	

INDIANA
DEPARTMENT OF TRANSPORTATION
MAINTENANCE OF TRAFFIC DETOUR ROUTE
LOVERS LANE ROAD

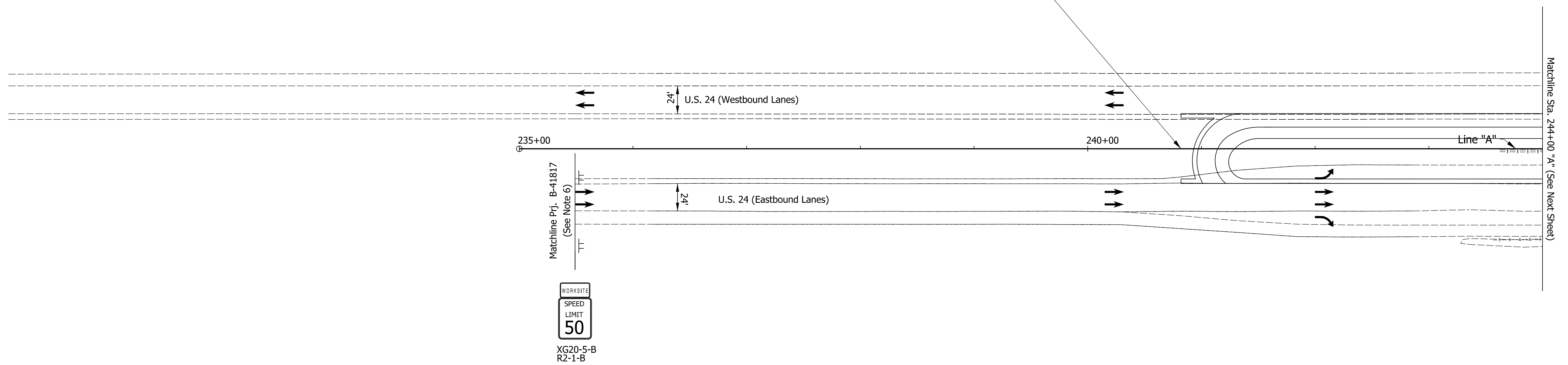
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SURVEY BOOK	SHEETS DET-01
ELECTRONIC	6 of 73
CONTRACT	PROJECT
R-42406	1700089



235+00

240+00

BEGIN PROJECT
PROJECT NO. 1700089
P.O.T. STA. 240+82.00
LINE "A"
N: 274234.80
E: 812022.84



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

- Notes:
1. All Sign Spacing Shall Be 500' Unless Otherwise Directed.
 2. Contractor Shall Maintain 2' Minimum Shoulders At All Times.
 3. Drum Spacing In Tapers Shall Be 50' Per Std. Dwg. E-801-TCLG-01.
 4. Drum Spacing In Tangents Shall Be 100' Per Std. Dwg. E-801-TCLG-01.
 5. All Stations Referenced From Line "A" Unless Otherwise Noted.
 6. Contractor Shall Coordinate Advance Warning Sign Placement with B-41817

Maintenance Of Traffic Legend

- ▨ Construction Area
- Standard Drum
- ➔ Direction Of Traffic
- Barricade, III-B (12 LFT)
- ⊥ Construction Sign, A

Temporary Pavement Marking, Removable, 4 In. Notes:

- ① Temporary Pavement Marking, 4 in. (White)
- ② Temporary Pavement Marking, 4in. (Yellow)

DRAFT
NOT FOR CONSTRUCTION

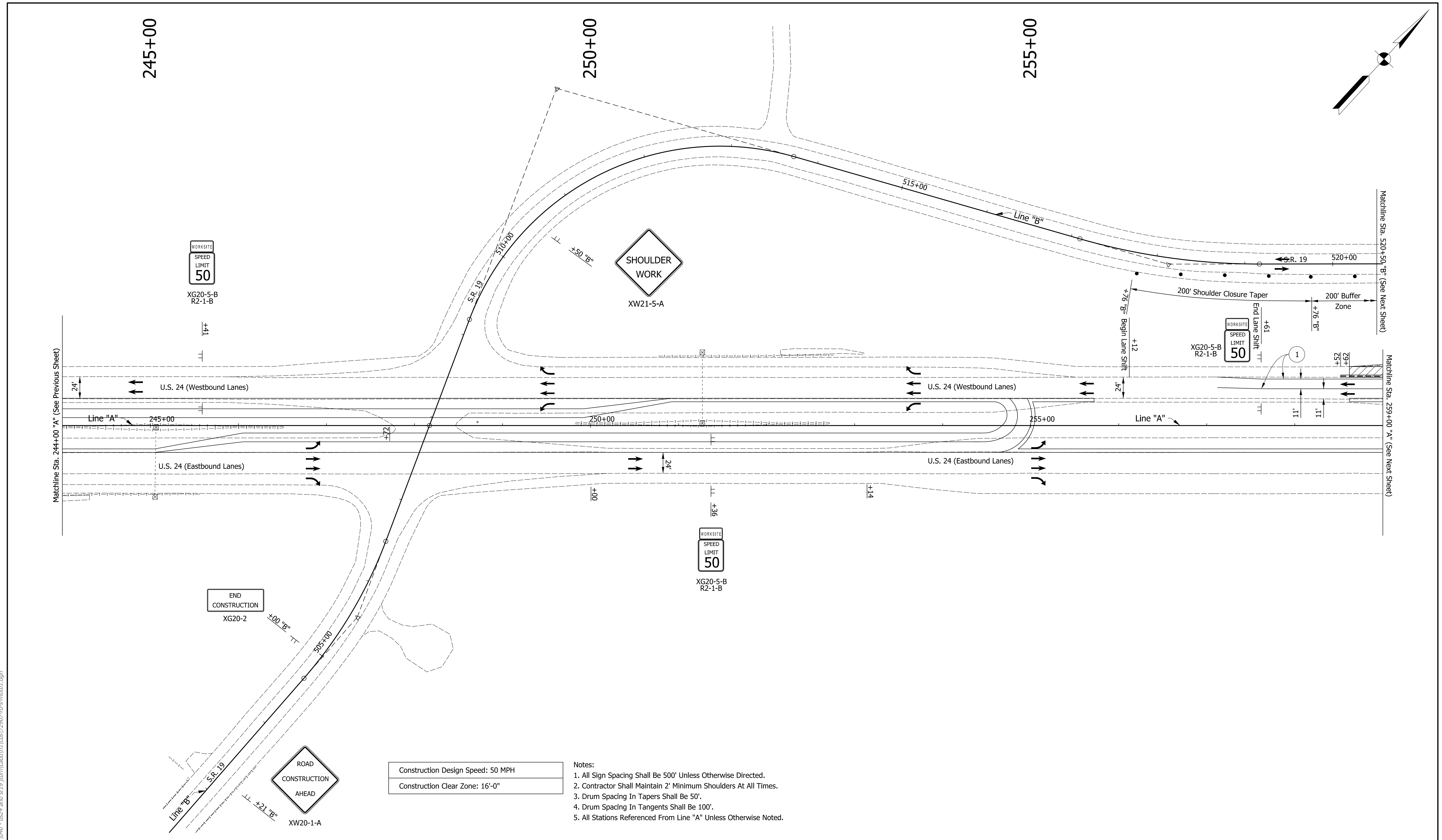
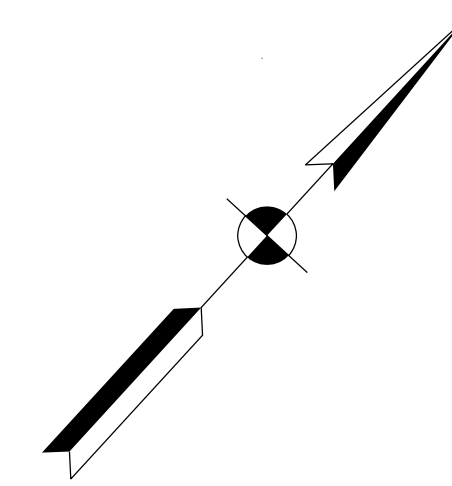
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DESIGNED: _____ JMT _____	DRAWN: _____ JMT _____	
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INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 1

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VERTICAL SCALE	DESIGNATION
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SURVEY BOOK	SHEETS MOT-01
ELECTRONIC	7 of 73
CONTRACT	PROJECT
R-42406	1700089

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Maintenance Of Traffic Legend

	Construction Area		Temporary Concrete Barrier
	Standard Drum		
	Direction Of Traffic		
	Barricade, III-B (12 LFT)		
	Construction Sign, A		

Temporary Pavement Marking, Removable, 4 In. Notes:

	Temporary Pavement Marking, 4 in. (White)
	Temporary Pavement Marking, 4in. (Yellow)

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

- Notes:**
1. All Sign Spacing Shall Be 500' Unless Otherwise Directed.
 2. Contractor Shall Maintain 2' 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 "A" Unless Otherwise Noted.

DRAFT
 NOT FOR CONSTRUCTION

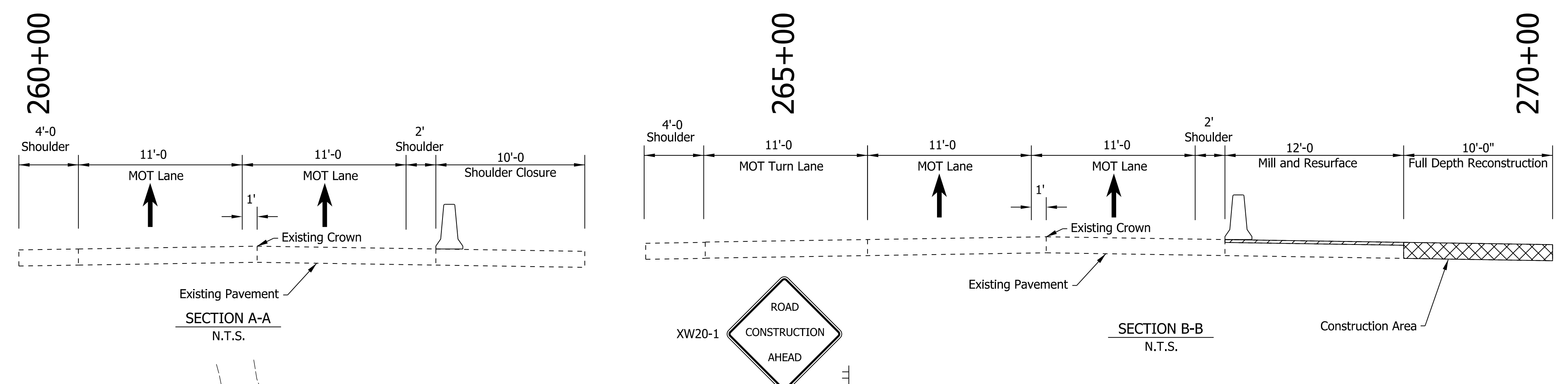
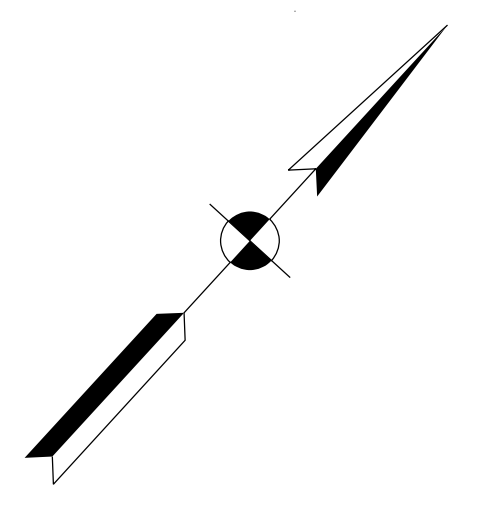
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DESIGNED: _____ JMT _____	DRAWN: _____ JMT _____	
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INDIANA DEPARTMENT OF TRANSPORTATION

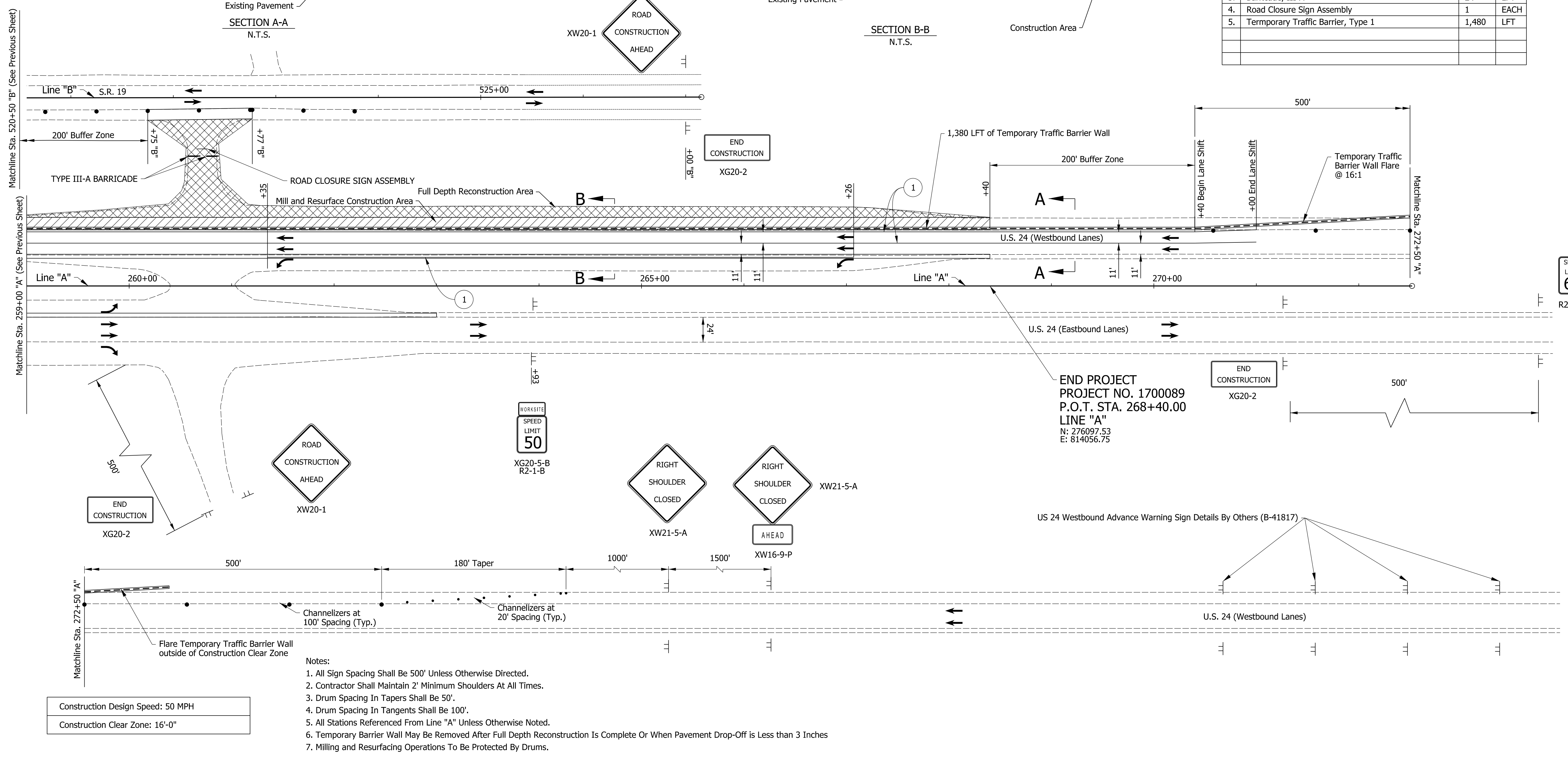
MAINTENANCE OF TRAFFIC PHASE 1

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VERTICAL SCALE	DESIGNATION
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SURVEY BOOK	SHEETS MOT-02
ELECTRONIC	8 of 73
CONTRACT	PROJECT
R-42406	1700089

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Maintenance Of Traffic Summary - Phase 1		
1.	Temporary Pavement Marking, Removable, 4 In	3,348 LFT
2.	Construction Sign, A	38 EACH
3.	Barricade, III-A	24 LFT
4.	Road Closure Sign Assembly	1 EACH
5.	Temporary Traffic Barrier, Type 1	1,480 LFT



SPEED LIMIT 60
R2-1-B

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

- Notes:
1. All Sign Spacing Shall Be 500' Unless Otherwise Directed.
 2. Contractor Shall Maintain 2' 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 "A" Unless Otherwise Noted.
 6. Temporary Barrier Wall May Be Removed After Full Depth Reconstruction Is Complete Or When Pavement Drop-Off Is Less Than 3 Inches
 7. Milling and Resurfacing Operations To Be Protected By Drums.

Maintenance Of Traffic Legend	
	Construction Area
	Temporary Concrete Barrier
	Standard Drum
	Full Depth Reconstruction Area
	Direction Of Traffic
	Barricade, III-B (12 LFT)
	Construction Sign, A

- Temporary Pavement Marking, Removable, 4 In. Notes:
- 1 Temporary Pavement Marking, 4 in. (White)
 - 2 Temporary Pavement Marking, 4in. (Yellow)

DRAFT
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: JMT	DRAWN: JMT	
CHECKED: MKM	CHECKED: MKM	

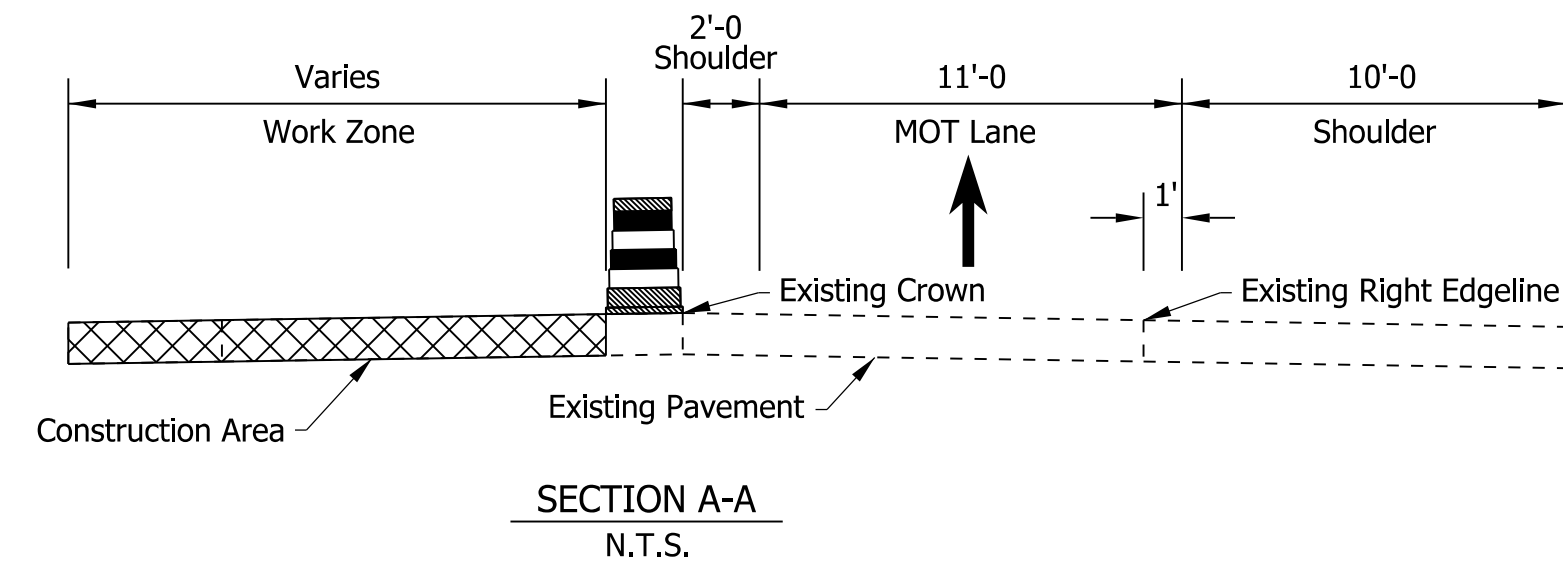
INDIANA DEPARTMENT OF TRANSPORTATION
MAINTENANCE OF TRAFFIC PHASE 1

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VERTICAL SCALE	DESIGNATION
N/A	1700089
SURVEY BOOK	SHEETS
ELECTRONIC	9 of 73
CONTRACT	PROJECT
R-42406	1700089

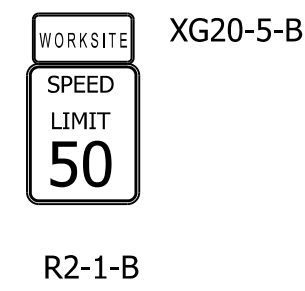
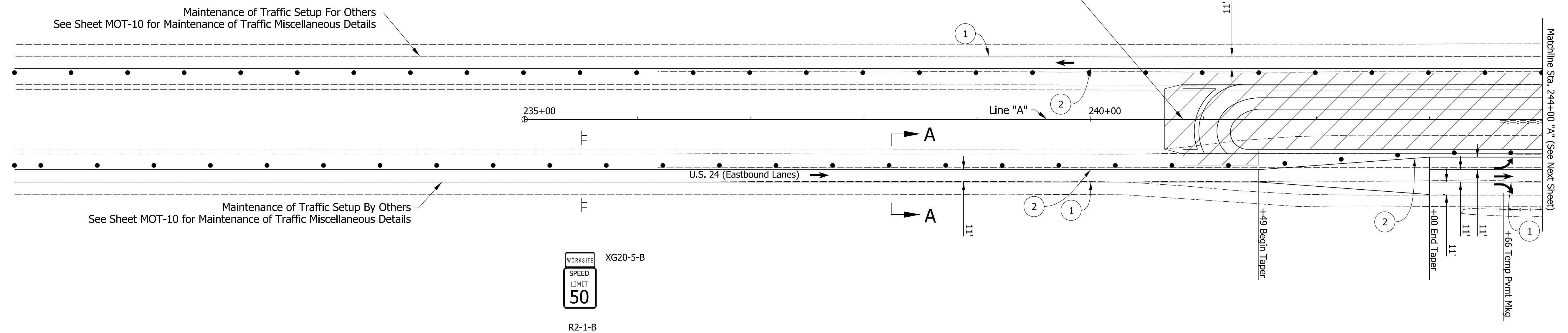
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235+00

240+00



BEGIN PROJECT
PROJECT NO. 1700089
P.O.T. STA. 240+82.00
LINE "A"
N: 274234.80
E: 812022.84



- Notes:
1. All Sign Spacing Shall Be 500' Unless Otherwise Directed.
 2. Contractor Shall Maintain 2' 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 "A" Unless Otherwise Noted.
 6. Contractor to install all permanent signage that does not conflict with current phase. Signs that conflict with current traffic plan shall remain covered until phase 3

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

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

- Temporary Pavement Marking, Removable, 4 In. Notes:
- 1 Temporary Pavement Marking, 4 in. (White)
 - 2 Temporary Pavement Marking, 4in. (Yellow)

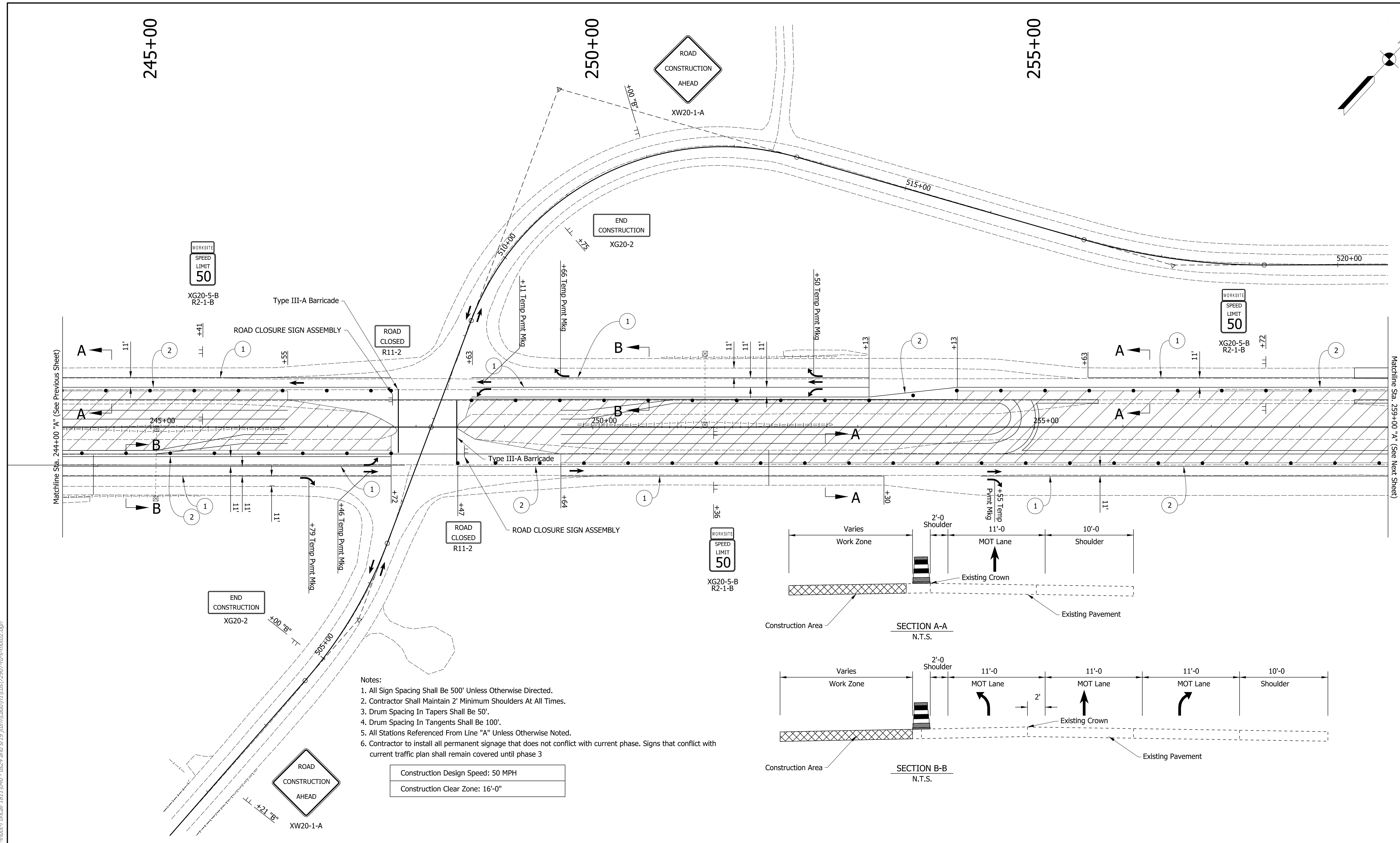
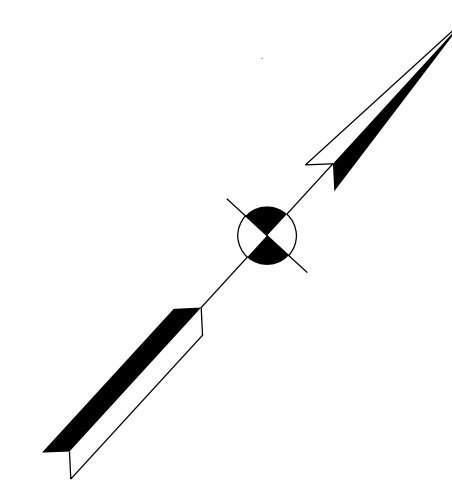
DRAFT
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: JMT	DRAWN: JMT	
CHECKED: MKM	CHECKED: MKM	

INDIANA
DEPARTMENT OF TRANSPORTATION
MAINTENANCE OF TRAFFIC
PHASE 2

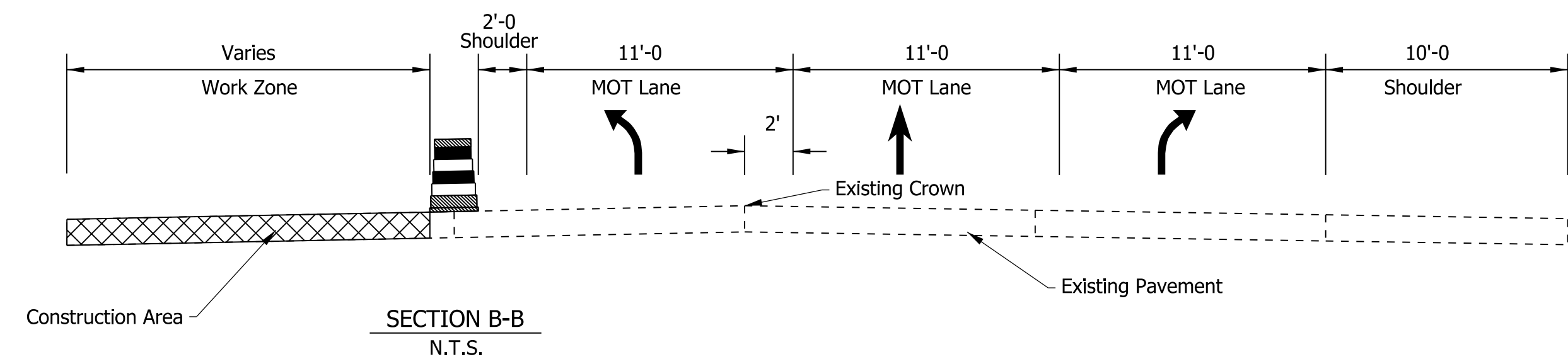
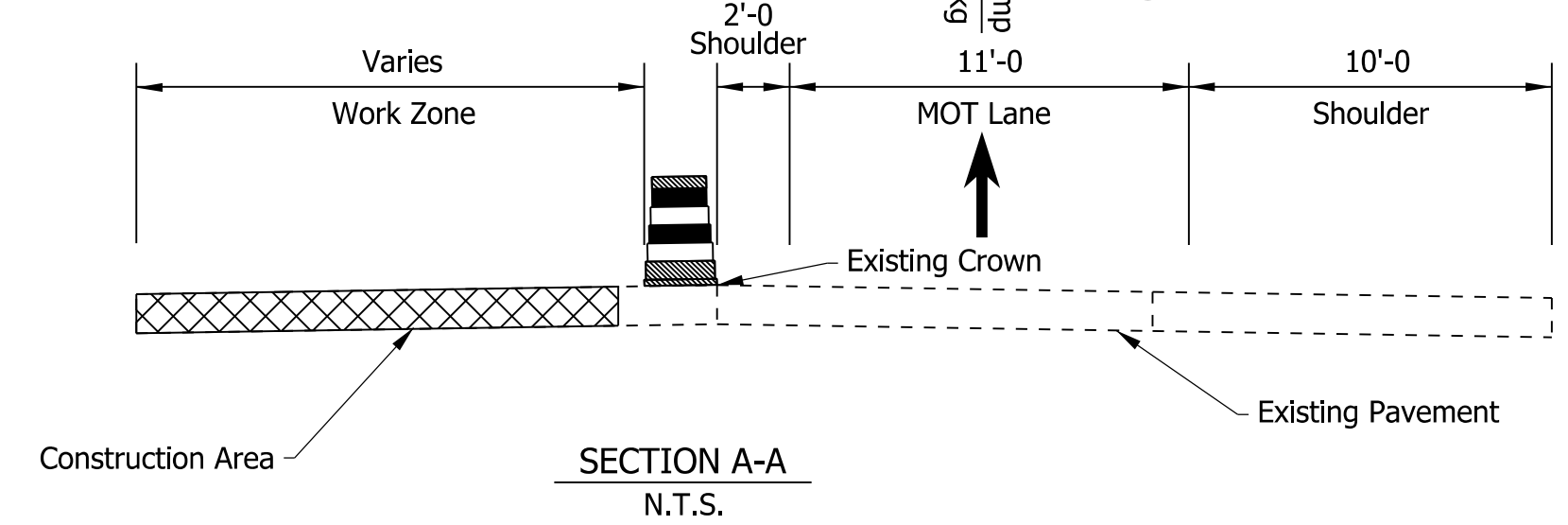
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VERTICAL SCALE	DESIGNATION
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SURVEY BOOK	SHEETS MOT-04
ELECTRONIC	10 of 73
CONTRACT	PROJECT
R-42406	1700089

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- Notes:
1. All Sign Spacing Shall Be 500' Unless Otherwise Directed.
 2. Contractor Shall Maintain 2' 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 "A" Unless Otherwise Noted.
 6. Contractor to install all permanent signage that does not conflict with current phase. Signs that conflict with current traffic plan shall remain covered until phase 3

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



- Maintenance Of Traffic Legend**
- Construction Area
 - Standard Drum
 - Direction Of Traffic
 - Barricade, III-B (12 LFT)
 - Construction Sign, A

- Temporary Pavement Marking, Removable, 4 In. Notes:**
- 1 Temporary Pavement Marking, 4 in. (White)
 - 2 Temporary Pavement Marking, 4in. (Yellow)

DRAFT
 NOT FOR CONSTRUCTION

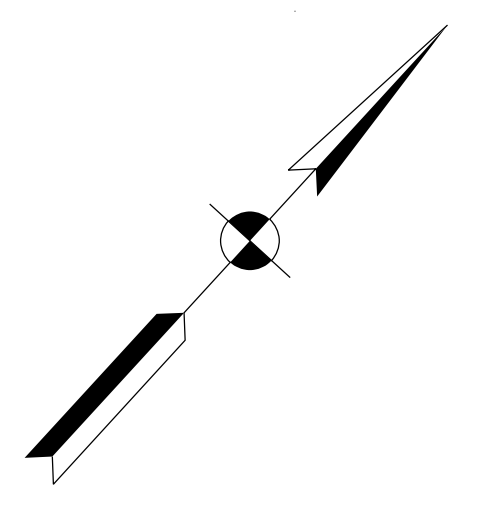
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DESIGNED: JMT	DRAWN: JMT	
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INDIANA
 DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
 PHASE 2

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	N/A
VERTICAL SCALE	DESIGNATION
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SURVEY BOOK	SHEETS MOT-05
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CONTRACT	PROJECT
R-42406	1700089

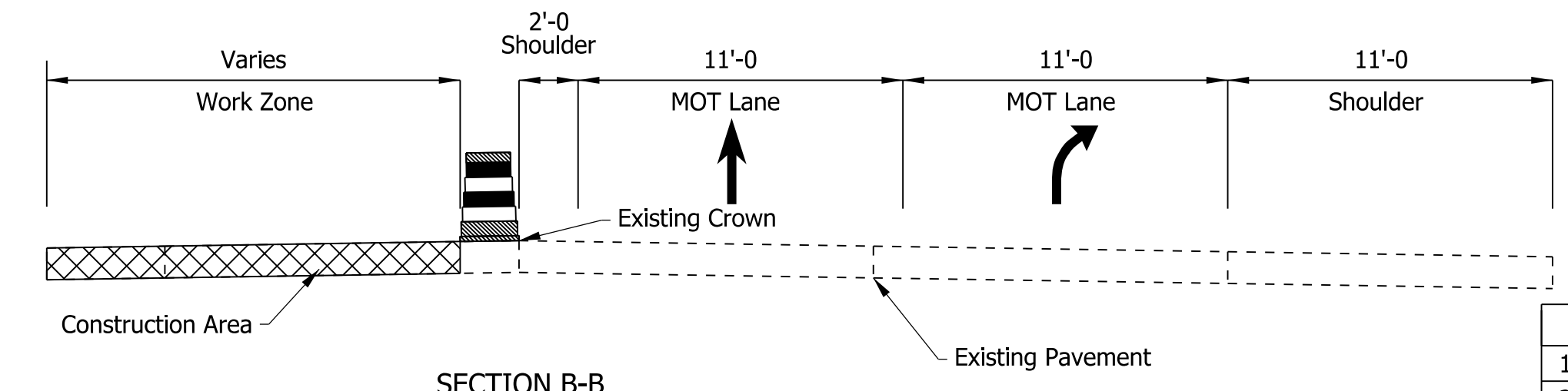
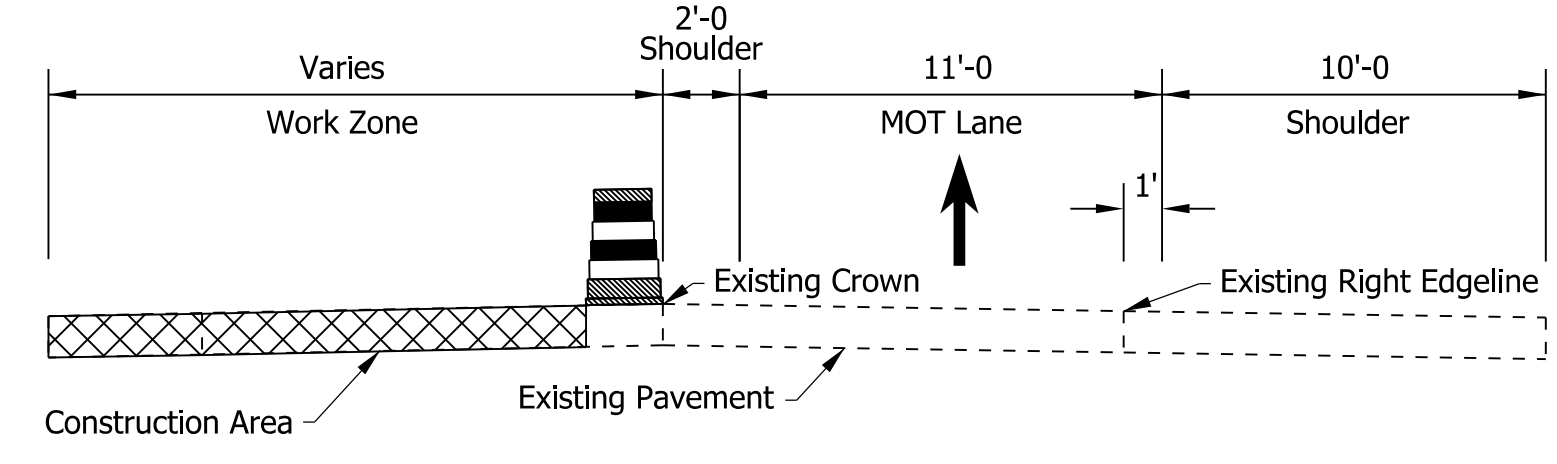
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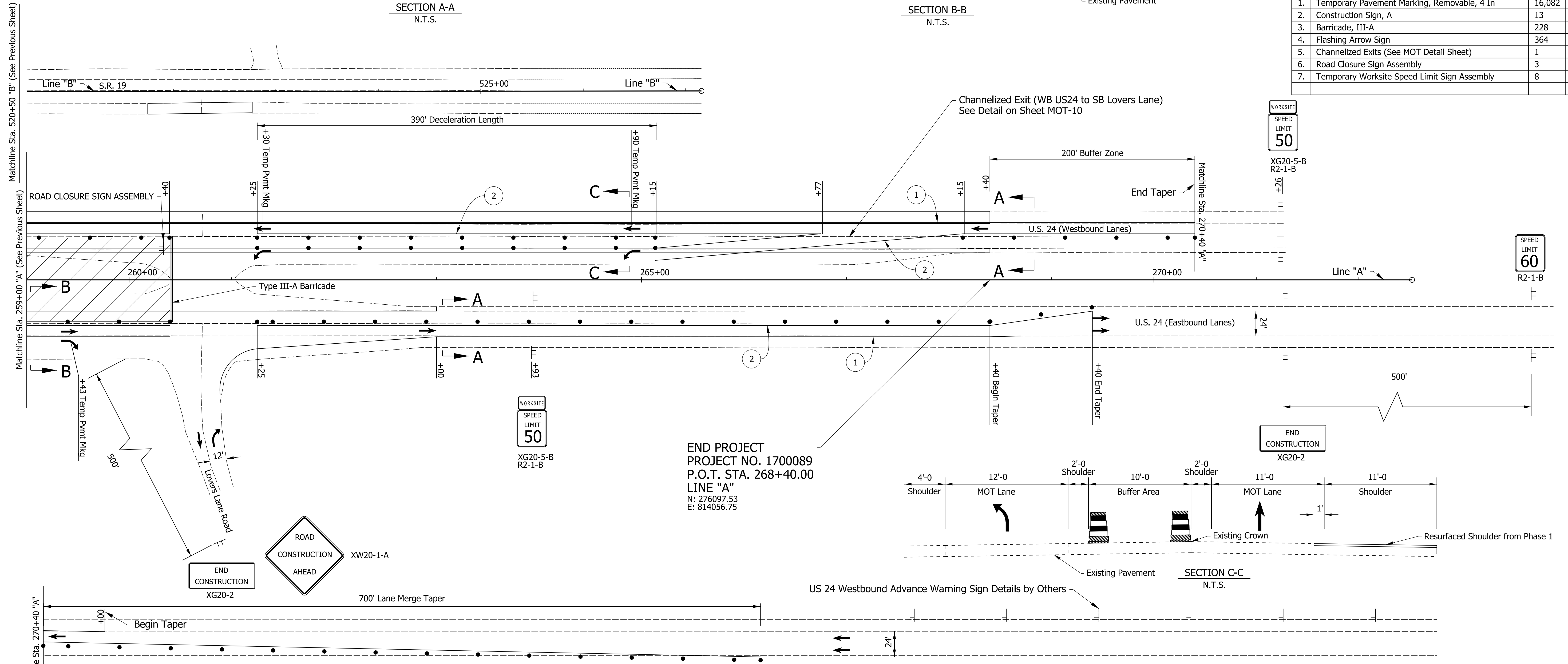
260+00

265+00

270+00



Maintenance Of Traffic Summary - Phase 2		
1.	Temporary Pavement Marking, Removable, 4 In	16,082 LFT
2.	Construction Sign, A	13 EACH
3.	Barricade, III-A	228 LFT
4.	Flashing Arrow Sign	364 DAY
5.	Channelized Exits (See MOT Detail Sheet)	1 EACH
6.	Road Closure Sign Assembly	3 EACH
7.	Temporary Worksite Speed Limit Sign Assembly	8 EACH



END PROJECT
PROJECT NO. 1700089
P.O.T. STA. 268+40.00
LINE "A"
N: 276097.53
E: 814056.75

- Notes:
- All Sign Spacing Shall Be 500' Unless Otherwise Directed.
 - Contractor Shall Maintain 2' Minimum Shoulders At All Times.
 - Drum Spacing In Tapers Shall Be 50'.
 - Drum Spacing In Tangents Shall Be 100'.
 - All Stations Referenced From Line "A" Unless Otherwise Noted.
 - Contractor to install all permanent signage that does not conflict with current phase. Signs that conflict with current traffic plan shall remain covered until phase 3

Maintenance Of Traffic Legend

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

- Temporary Pavement Marking, Removable, 4 In. Notes:**
- 1 Temporary Pavement Marking, 4 in. (White)
 - 2 Temporary Pavement Marking, 4in. (Yellow)

DRAFT
NOT FOR CONSTRUCTION

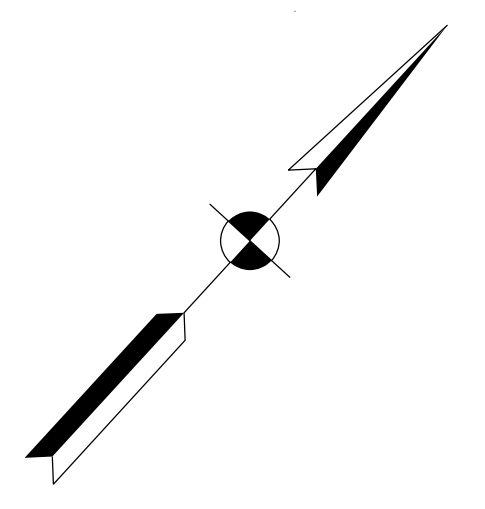
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DESIGNED: JMT	DRAWN: JMT	
CHECKED: MKM	CHECKED: MKM	

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 2

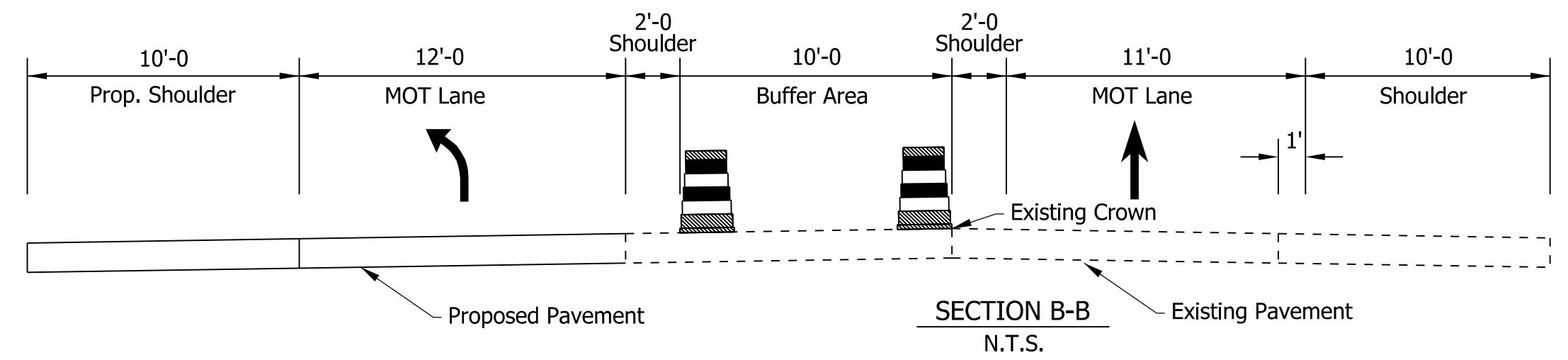
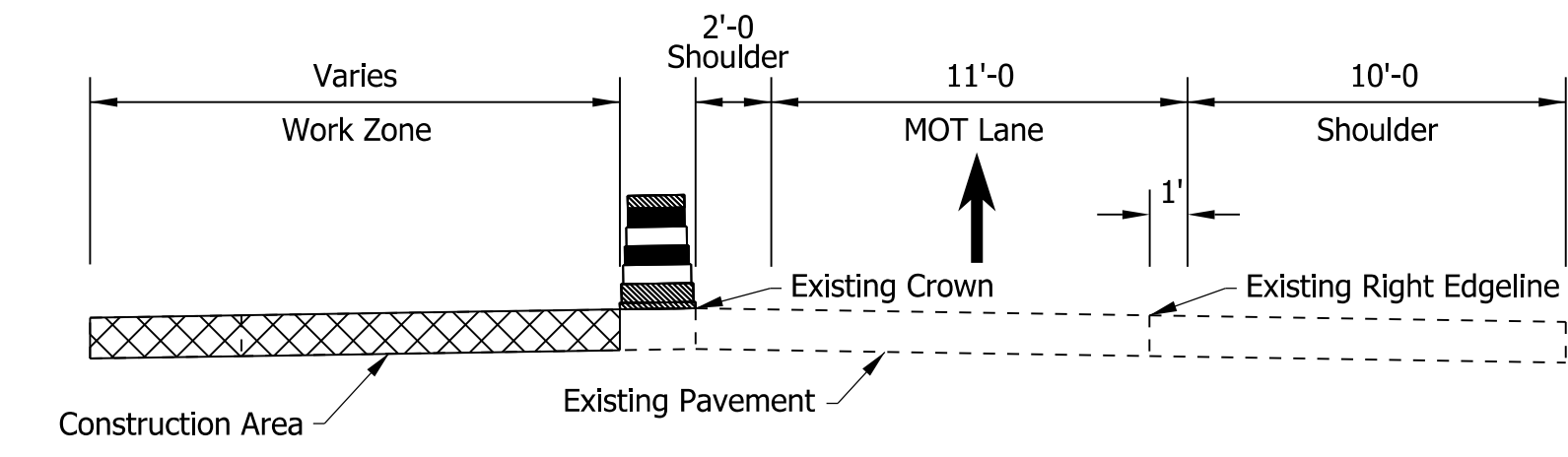
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1"=50'	N/A
VERTICAL SCALE	DESIGNATION
N/A	1700089
SURVEY BOOK	SHEETS MOT-06
ELECTRONIC	12 of 73
CONTRACT	PROJECT
R-42406	1700089

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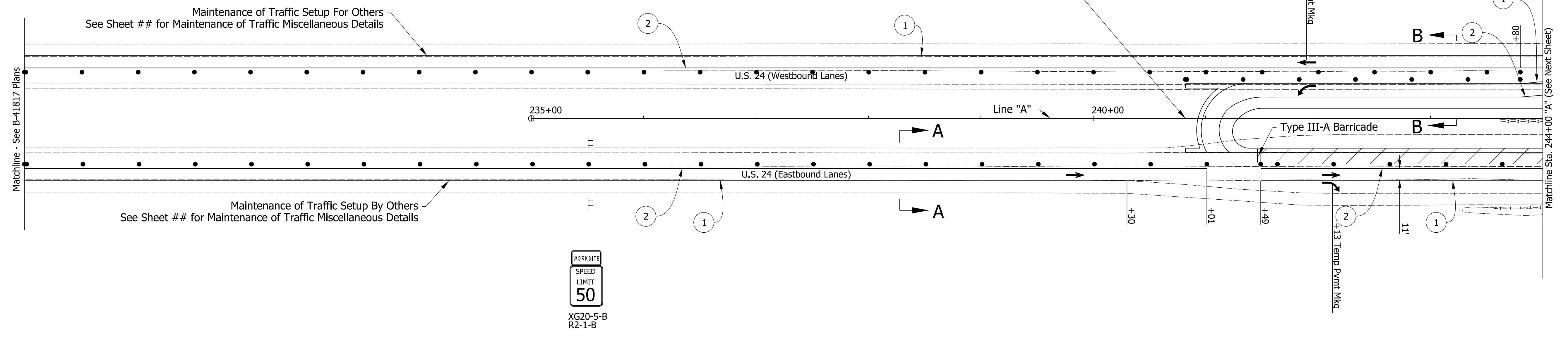


235+00

240+00



BEGIN PROJECT
PROJECT NO. 1700089
P.O.T. STA. 240+82.00
LINE "A"
N: 274234.80
E: 812022.84



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

- Notes:
1. All Sign Spacing Shall Be 500' Unless Otherwise Directed.
 2. Contractor Shall Maintain 2' 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 "A" Unless Otherwise Noted.

- Maintenance Of Traffic Legend**
- ▨ Construction Area
 - Standard Drum
 - Direction Of Traffic
 - Barricade, III-B (12 LFT)
 - ⊥ Construction Sign, A

- Temporary Pavement Marking, Removable, 4 In. Notes:**
- ① Temporary Pavement Marking, 4 in. (White)
 - ② Temporary Pavement Marking, 4in. (Yellow)

DRAFT
NOT FOR CONSTRUCTION

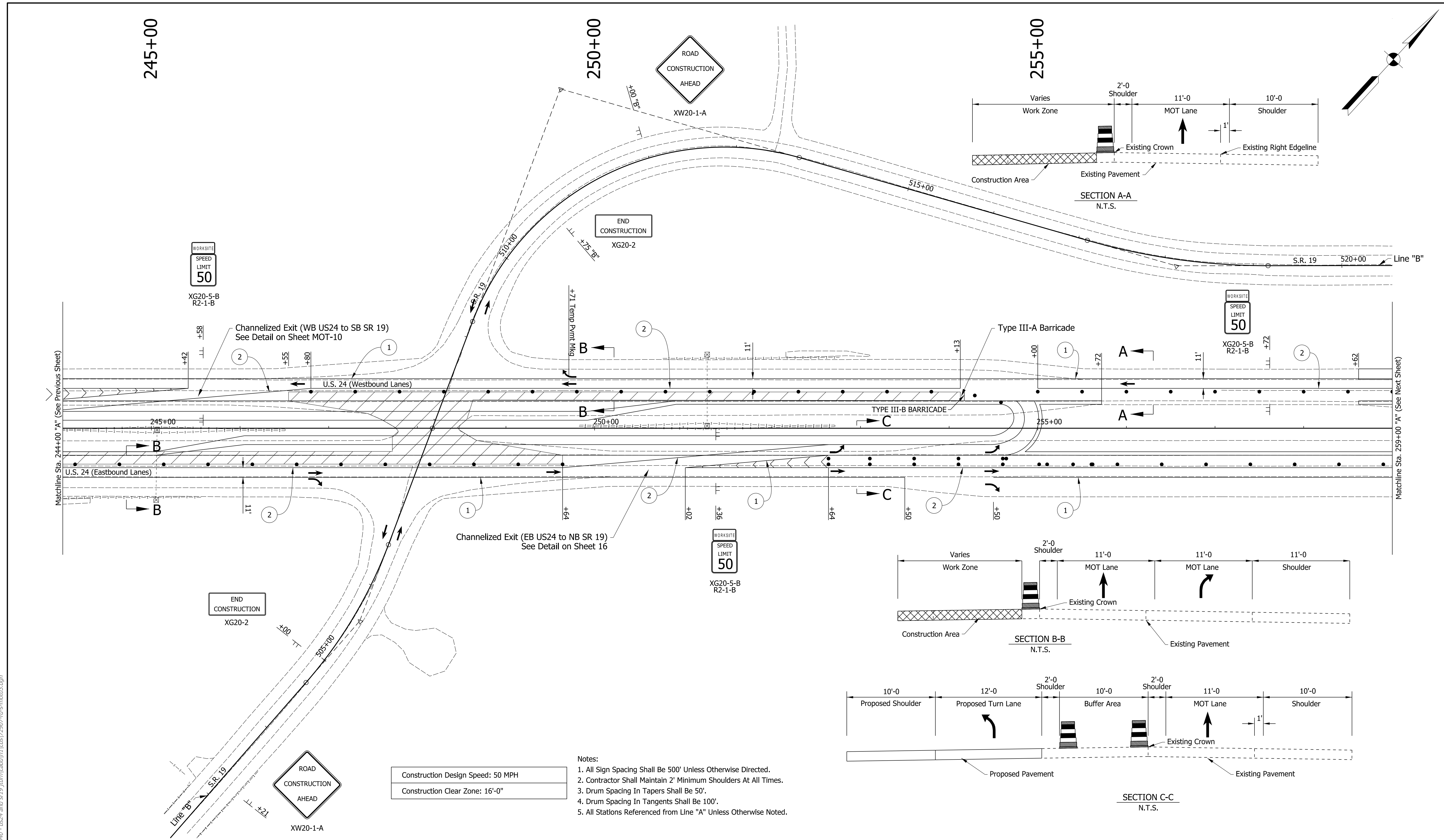
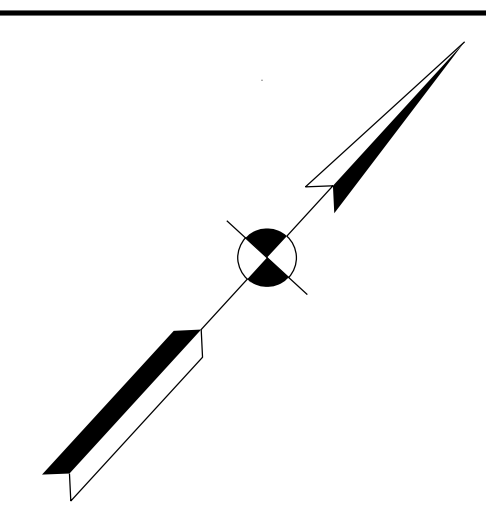
RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: _____ JMT _____	DRAWN: _____ JMT _____	
CHECKED: _____ MKM _____	CHECKED: _____ MKM _____	

INDIANA DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC PHASE 3

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	N/A
VERTICAL SCALE	DESIGNATION
N/A	1700089
SURVEY BOOK	SHEETS MOT-07
ELECTRONIC	13 of 73
CONTRACT	PROJECT
R-42406	1700089

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

- Notes:
1. All Sign Spacing Shall Be 500' Unless Otherwise Directed.
 2. Contractor Shall Maintain 2' 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 "A" Unless Otherwise Noted.

- Maintenance Of Traffic Legend**
- Construction Area
 - Standard Drum
 - Direction Of Traffic
 - Barricade, III-B (12 LFT)
 - Construction Sign, A

- Temporary Pavement Marking, Removable, 4 In. Notes:**
- 1 Temporary Pavement Marking, 4 in. (White)
 - 2 Temporary Pavement Marking, 4in. (Yellow)

DRAFT
 NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: JMT	DRAWN: JMT	
CHECKED: MKM	CHECKED: MKM	

INDIANA DEPARTMENT OF TRANSPORTATION
 MAINTENANCE OF TRAFFIC PHASE 3

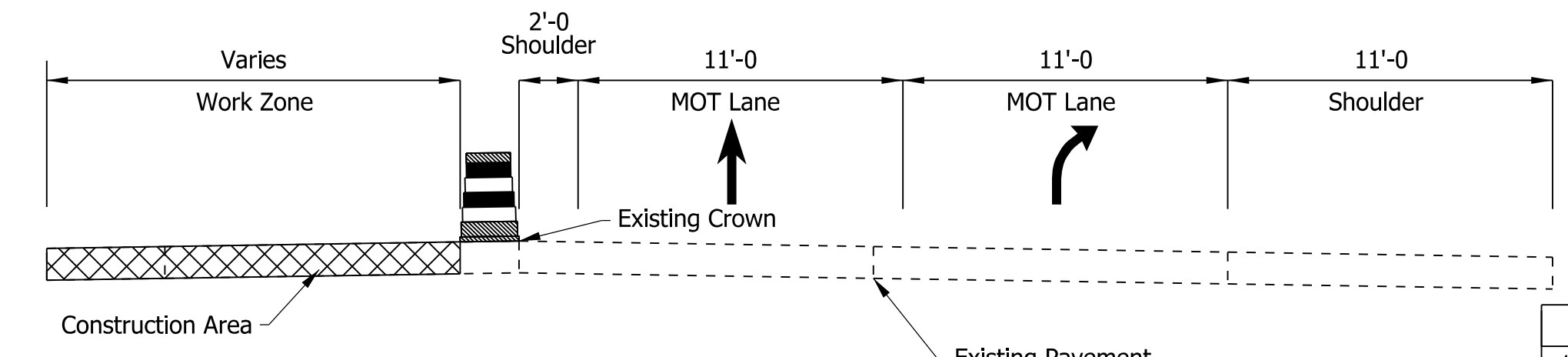
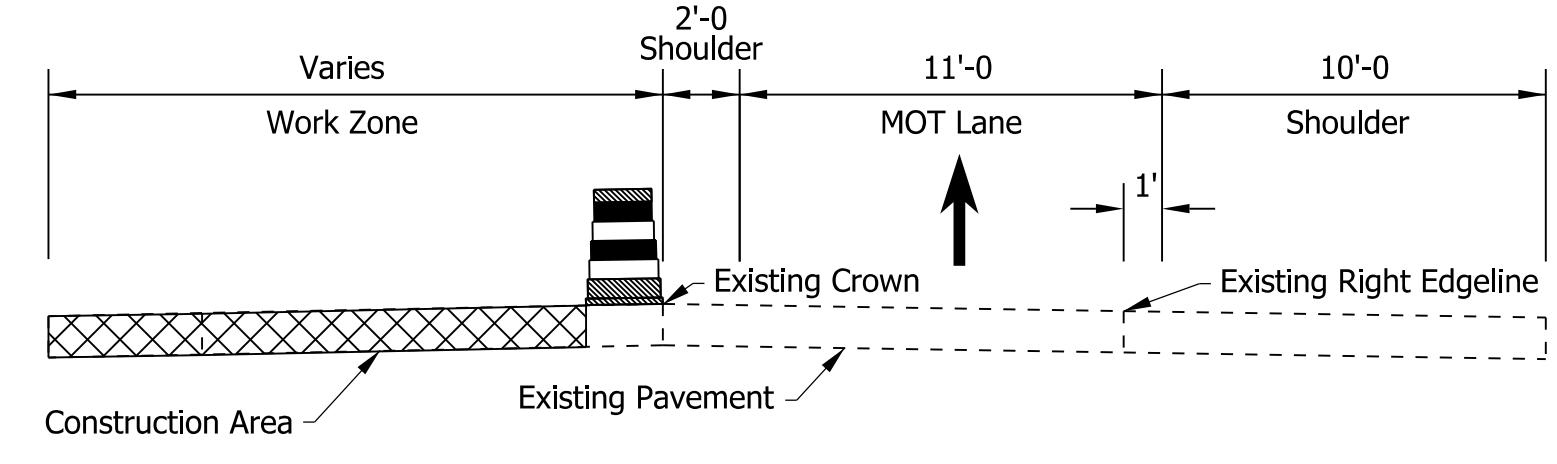
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1"=50'	N/A
VERTICAL SCALE	DESIGNATION
N/A	1700089
SURVEY BOOK	SHEETS
ELECTRONIC	14 of 73
CONTRACT	PROJECT
R-42406	1700089

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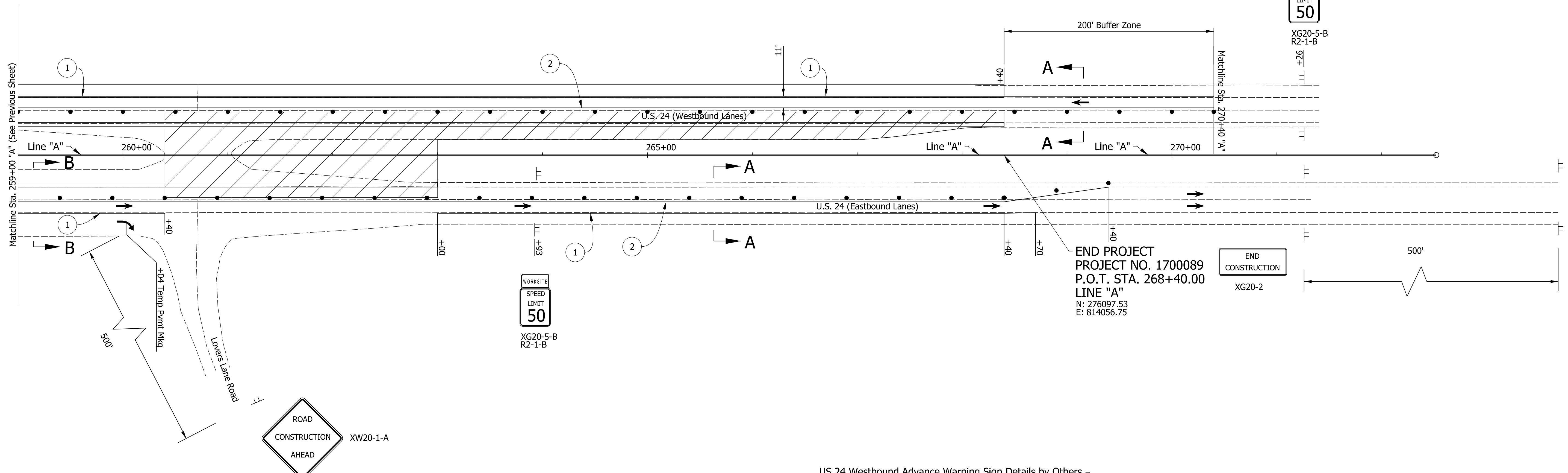
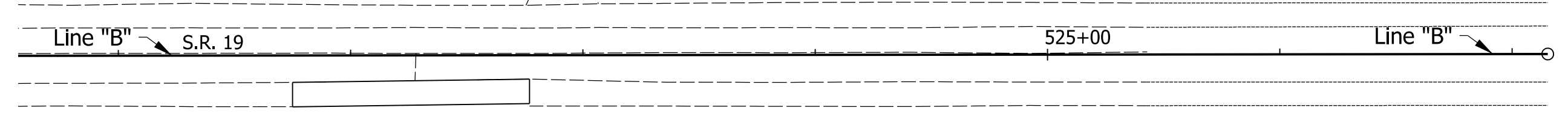
260+00

265+00

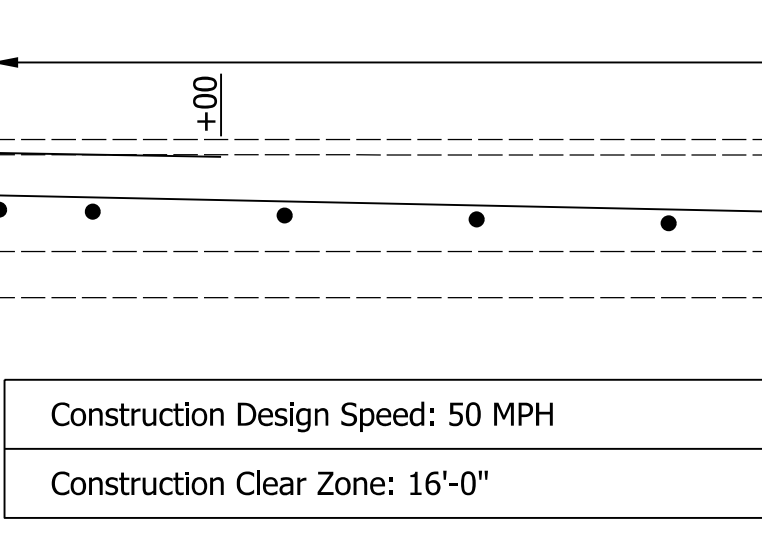
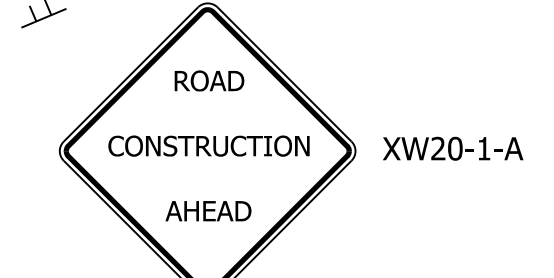
270+00



Maintenance Of Traffic Summary - Phase 3		
1. Temporary Pavement Marking, Removable, 4 In	15,626	LFT
2. Construction Sign, A	12	EACH
3. Barricade, III-A	24	LFT
4. Flashing Arrow Sign	364	DAY
5. Channelized Exits (See MOT Detail Sheet)	2	EACH



END PROJECT
 PROJECT NO. 1700089
 P.O.T. STA. 268+40.00
 LINE "A"
 N: 276097.53
 E: 814056.75



- Notes:
1. All Sign Spacing Shall be 500' Unless Otherwise Directed.
 2. Contractor Shall Maintain 2' 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 "A" Unless Otherwise Noted.

- Maintenance Of Traffic Legend**
- Construction Area
 - Standard Drum
 - Direction Of Traffic
 - Barricade, III-B (12 LFT)
 - Construction Sign, A

- Temporary Pavement Marking, Removable, 4 In. Notes:**
- 1 Temporary Pavement Marking, 4 in. (White)
 - 2 Temporary Pavement Marking, 4in. (Yellow)

DRAFT
 NOT FOR CONSTRUCTION

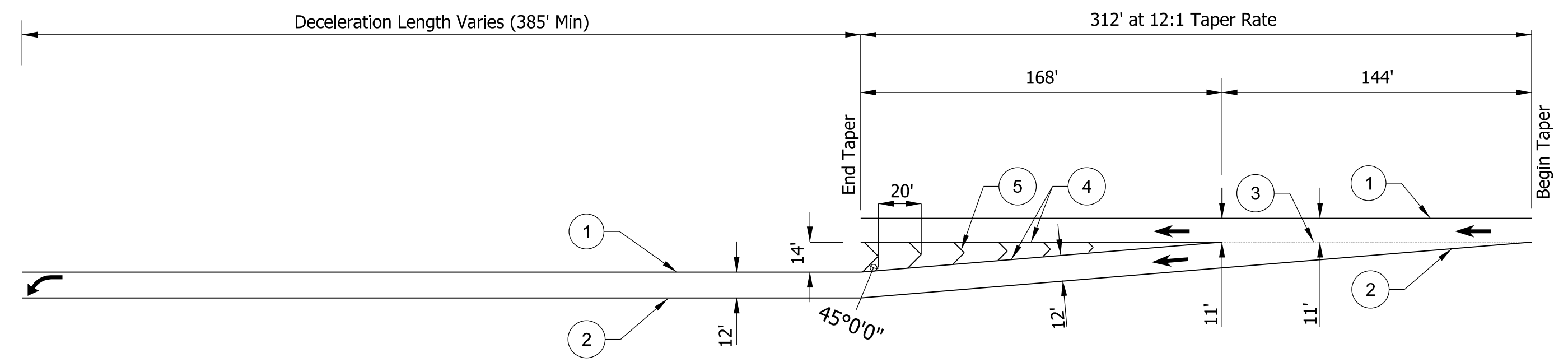
RECOMMENDED FOR APPROVAL _____ DATE _____
 DESIGN ENGINEER

DESIGNED: JMT DRAWN: JMT
 CHECKED: MKM CHECKED: MKM

INDIANA DEPARTMENT OF TRANSPORTATION
 MAINTENANCE OF TRAFFIC PHASE 3

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	N/A
VERTICAL SCALE	DESIGNATION
N/A	1700089
SURVEY BOOK	SHEETS MOT-09
ELECTRONIC	15 of 73
CONTRACT	PROJECT
R-42406	1700089

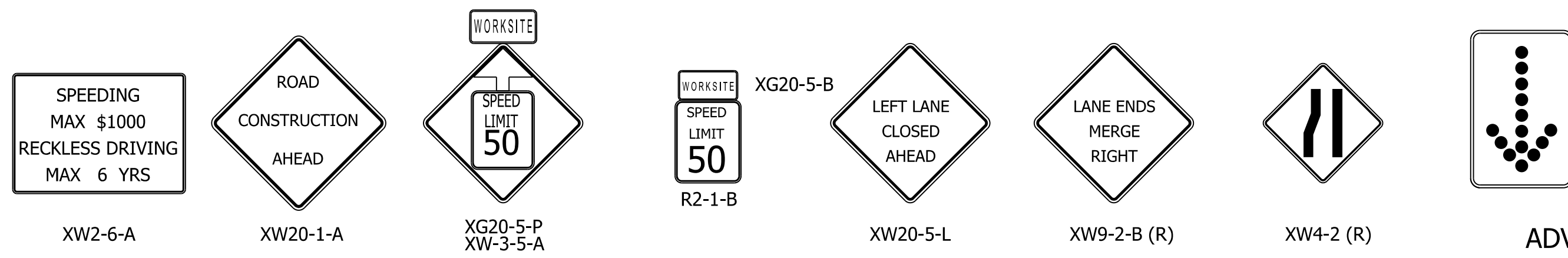
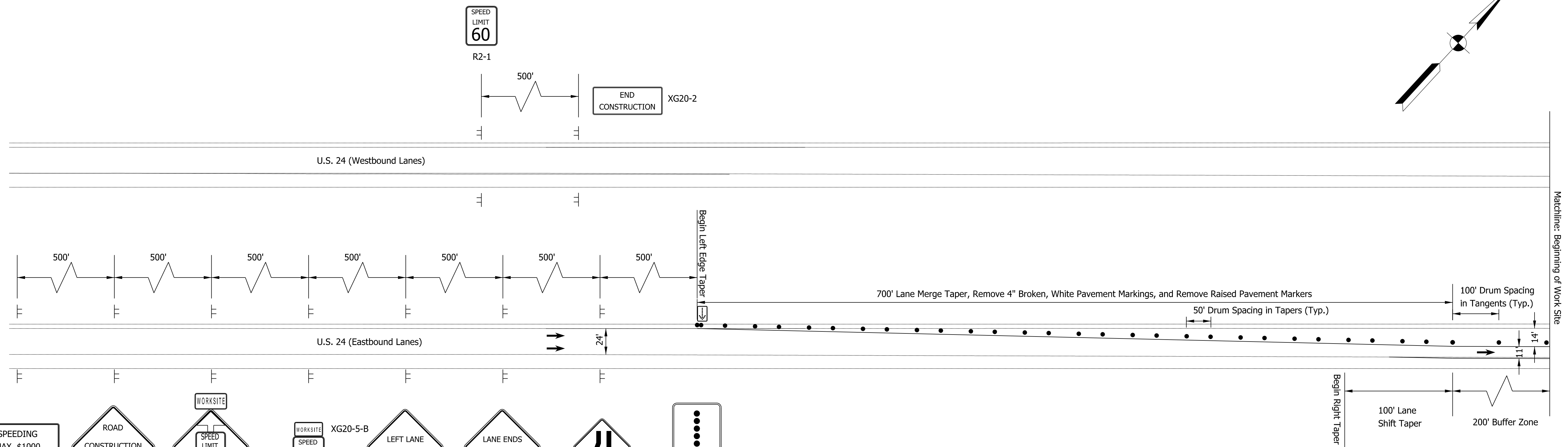
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Maintenance Of Traffic Detail Quantities Per Channelized Exit		
Temporary Pavement Marking, Removable, 4 In	625	LFT
Temporary Pavement Marking, Removable, 8 In	373	LFT
Temporary Pavement Marking, Removable, 24 In	80	LFT
Temporary Pavement Message Marking, Lane Indication Arrow	4	EACH

- ① Temporary Pavement Marking, Removable, 4 in. (Solid White)
- ② Temporary Pavement Marking, Removable, 4 in. (Solid Yellow)
- ③ Temporary Pavement Marking, Removable, 8 in. (Dashed White)
- ④ Temporary Pavement Marking, Removable, 8 in. (Solid White)
- ⑤ Temporary Pavement Marking, Removable, 24 in. (Solid White Chevrons)

CHANNELIZED EXIT DETAIL
Not to Scale



ADVANCE WARNING SIGN DETAIL
Not to Scale

Note:
Detail to be Utilized Only If Adjacent Work in Project B-41817 Is
Not Being Performed During This Project.

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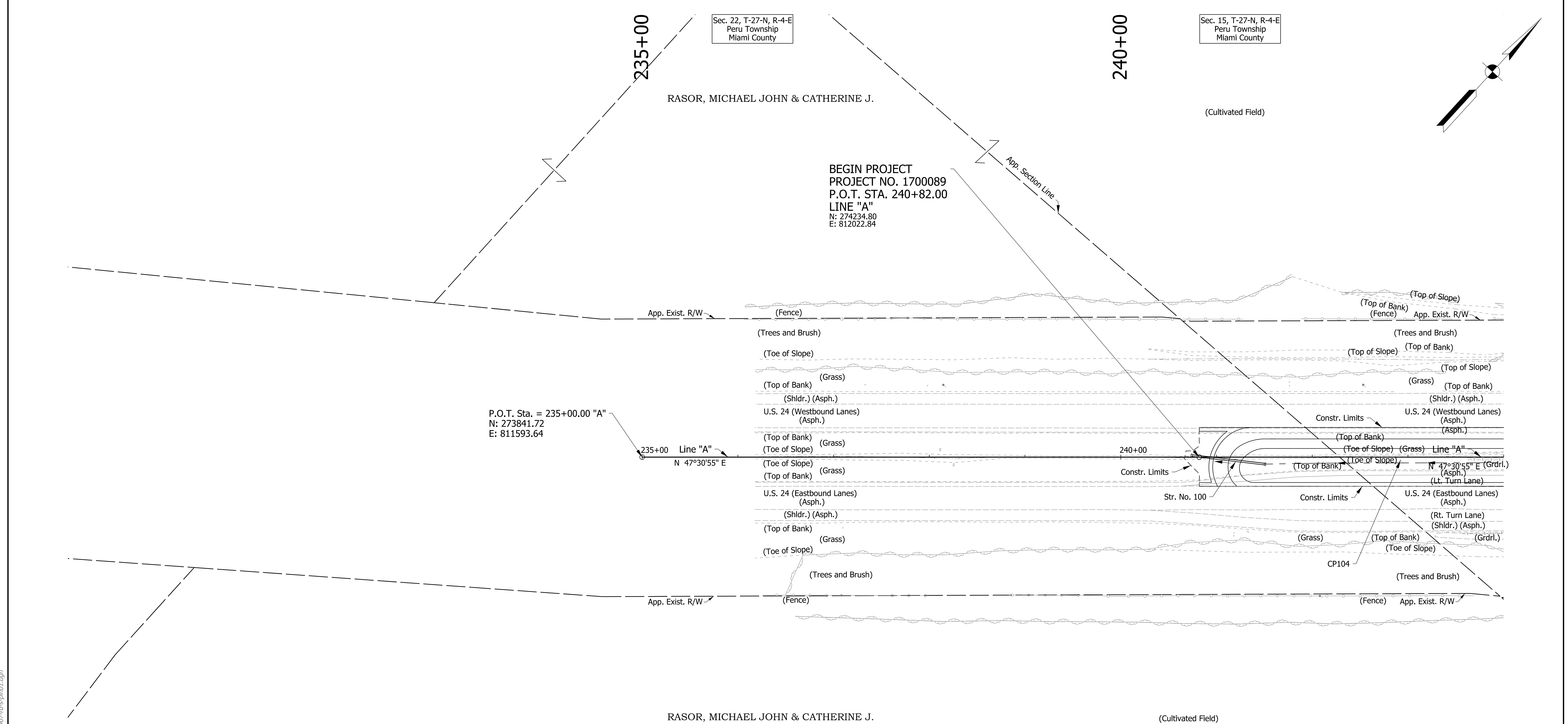
DRAFT
 NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: _____ JMT _____	DRAWN: _____ JMT _____	
CHECKED: _____ MKM _____	CHECKED: _____ MKM _____	

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC DETAILS

HORIZONTAL SCALE	BRIDGE FILE
N.T.S.	N/A
VERTICAL SCALE	DESIGNATION
N/A	1700089
SURVEY BOOK	SHEETS MOT-10
ELECTRONIC	16 of 73
CONTRACT	PROJECT
R-42406	1700089



P.O.T. Sta. = 235+00.00 "A"
 N: 273841.72
 E: 811593.64

CONTROL POINT SUMMARY				
Control Point	Northing	Easting	Elevation	Description
101	275879.6412	813835.3395	678.61	PRE5 - HNTB CAP
102	275371.6690	813249.5189	670.08	PRE5 - HNTB CAP
103	274832.3677	812687.9883	663.38	PRE5 - HNTB CAP
104	274374.2185	812180.1237	658.34	PRE5 - HNTB CAP

Note: All Stations Referenced from Line "A" Unless Otherwise Noted.

DRAFT
 NOT FOR CONSTRUCTION

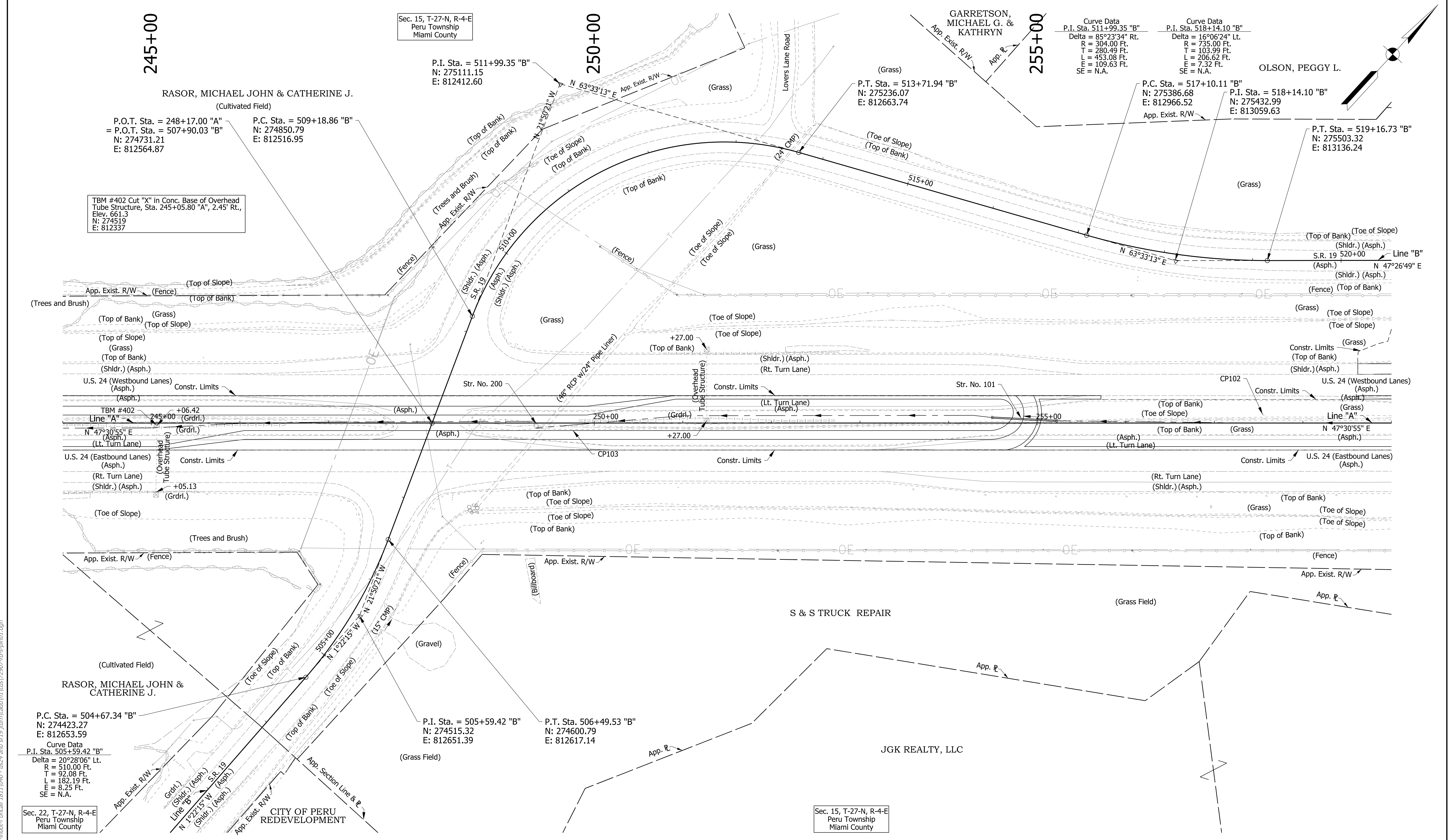
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DESIGNED: _____ MKM _____	DRAWN: _____ CPH _____	
CHECKED: _____ JLC _____	CHECKED: _____ MKM _____	

INDIANA
 DEPARTMENT OF TRANSPORTATION

ROADWAY PLAN
 LINE "A"

HORIZONTAL SCALE	BRIDGE FILE	
1"=50'	N/A	
VERTICAL SCALE	DESIGNATION	
N/A	1700089	
SURVEY BOOK	SHEETS	PLN-01
ELECTRONIC	17	of 73
CONTRACT	PROJECT	
R-42406	1700089	

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 model-sheet1
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Note: All Stations Referenced from Line "A" Unless Otherwise Noted.

DRAFT
NOT FOR CONSTRUCTION

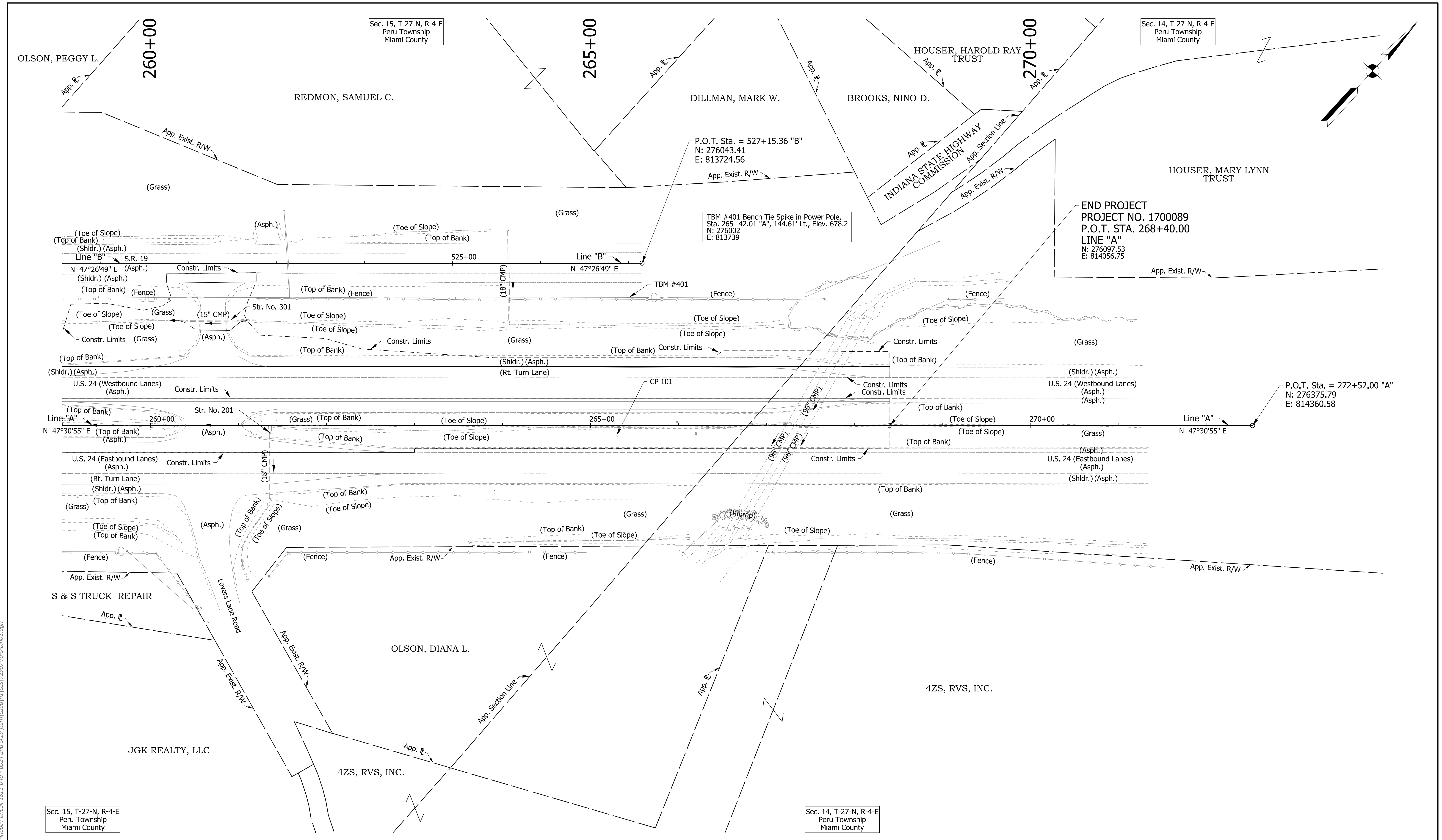
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: MKM	DRAWN: CPH	
CHECKED: JLC	CHECKED: MKM	

INDIANA
DEPARTMENT OF TRANSPORTATION

ROADWAY PLAN
LINE "A"

HORIZONTAL SCALE	BRIDGE FILE	
1"=50'	N/A	
VERTICAL SCALE	DESIGNATION	
N/A	1700089	
SURVEY BOOK	SHEETS	PLN-02
ELECTRONIC	18	of 73
CONTRACT	PROJECT	
R-42406	1700089	

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Sec. 15, T-27-N, R-4-E
Peru Township
Miami County

Sec. 14, T-27-N, R-4-E
Peru Township
Miami County

Note: All Stations Referenced from Line "A" Unless Otherwise Noted.

DRAFT
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: MKM	DRAWN: CPH	
CHECKED: JLC	CHECKED: MKM	

INDIANA
DEPARTMENT OF TRANSPORTATION

ROADWAY PLAN
LINE "A"

HORIZONTAL SCALE	BRIDGE FILE	
1"=50'	N/A	
VERTICAL SCALE	DESIGNATION	
N/A	1700089	
SURVEY BOOK	SHEETS	PLN-03
ELECTRONIC	19	of 73
CONTRACT	PROJECT	
R-42406	1700089	

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239

Sec. 22, T-27-N, R-4-E
Peru Township
Miami County

240

241

241+76.5, 75.5' Sol. Post Sign
+76.5, 76.6' Sgl. Post Sign

242

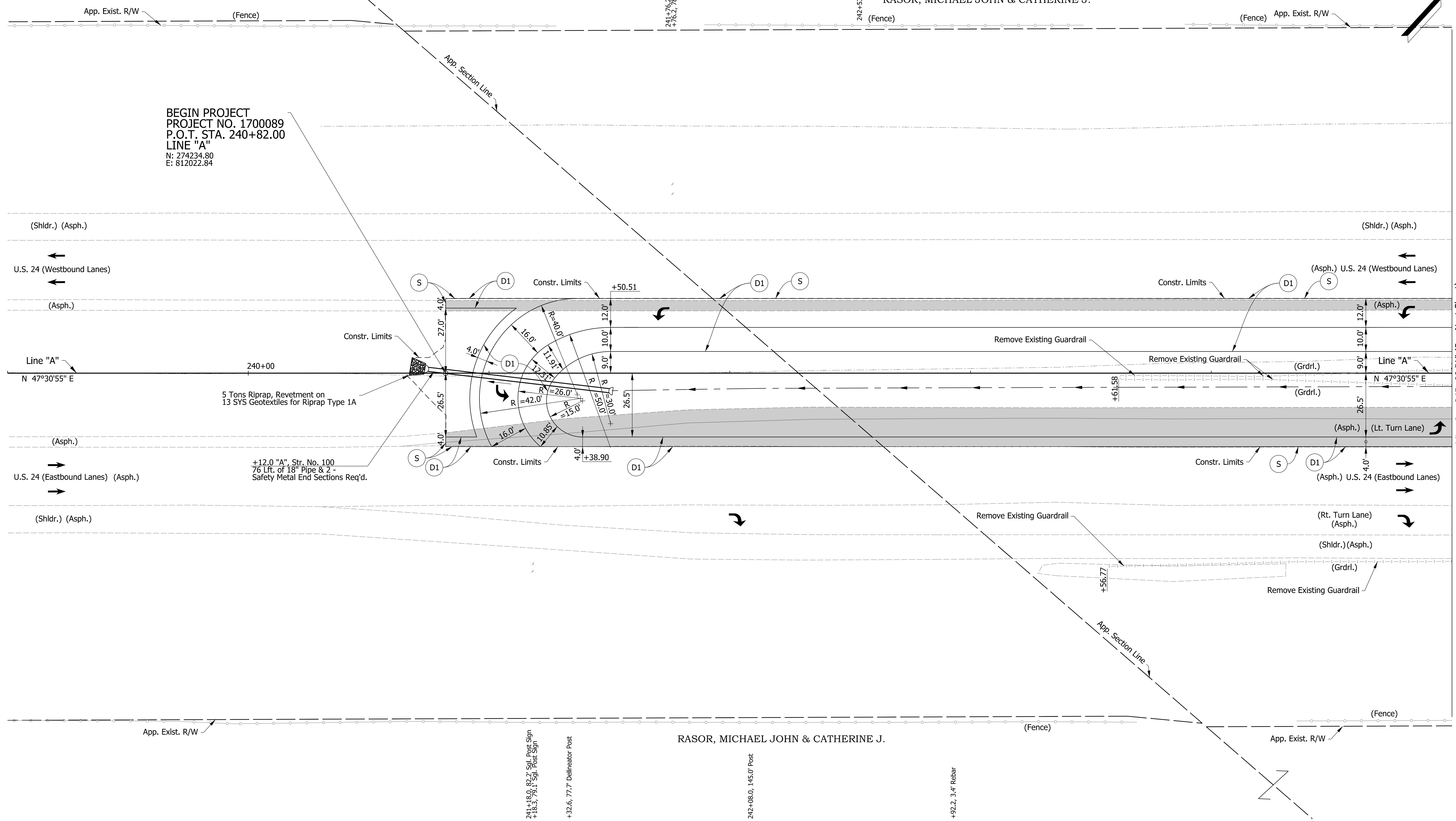
Sec. 15, T-27-N, R-4-E
Peru Township
Miami County

243

RASOR, MICHAEL JOHN & CATHERINE J.

244

245



BEGIN PROJECT
 PROJECT NO. 1700089
 P.O.T. STA. 240+82.00
 LINE "A"
 N: 274234.80
 E: 812022.84

5 Tons Riprap, Revetment on
 13 SYS Geotextiles for Riprap Type 1A

+12.0 "A" Str. No. 100
 76 Lft. of 18" Pipe & 2 -
 Safety Metal End Sections Req'd.

Legend

- (D1) 165#/Syd. QC/QA-HMA, 4, 70, Surface, 9.5 mm on 275#/Syd. QC/QA-HMA, 4, 70, Intermediate, 19.0 mm on 770#/Syd. QC/QA-HMA, 4, 64, Base, 19.0 mm on 300#/Syd. QC/QA-HMA, 4, 76, Intermediate OG, 19.0 mm on 6 in of Compacted Aggregate, No. 53 on Subgrade Treatment Type 1C
 - (S) Saw Cut (No Direct Pay)
 - Pavement Removal
 - Traffic Direction Arrow
- Note:
 Topo Notes for this Sheet are described from Line "A".

DRAFT
 NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: MKM	DRAWN: CPH	
CHECKED: JLC	CHECKED: MKM	

INDIANA
 DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE	
1"=20'	N/A	
VERTICAL SCALE	DESIGNATION	
N/A	1700089	
SURVEY BOOK	SHEETS	CD-01
ELECTRONIC	20	of 73
CONTRACT	PROJECT	
R-42406	1700089	

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245

246

247

248

249

250

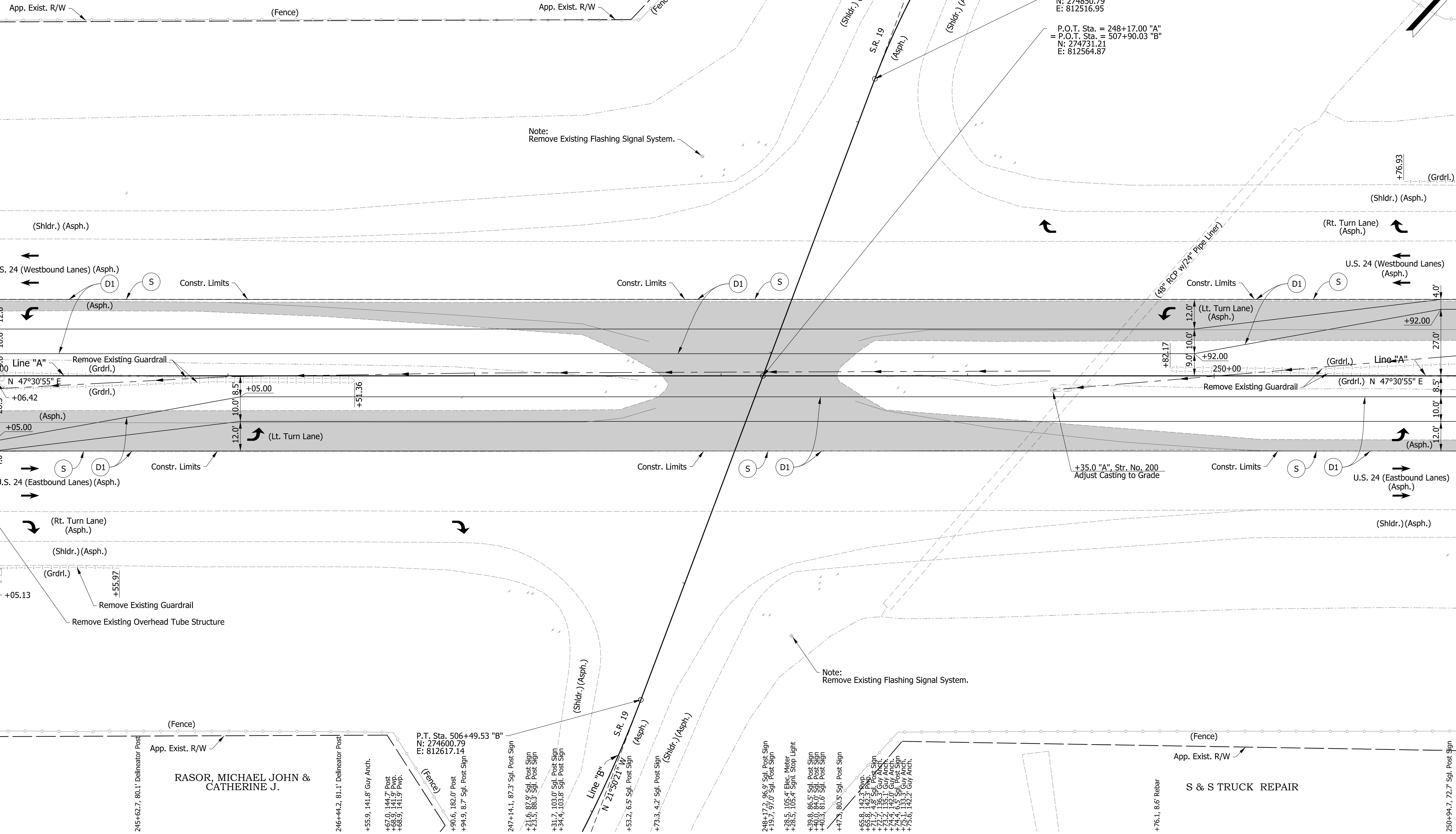
251

RASOR, MICHAEL JOHN & CATHERINE J.

Sec. 15, T-27-N, R-4-E
Peru Township
Miami County

RASOR, MICHAEL JOHN &
CATHERINE J.

S & S TRUCK REPAIR



Matchline Sta. 245+00 "A" (See Previous Sheet)

Matchline Sta. 251+00 "A" (See Next Sheet)

Legend

- (D1) 165#/Syd. OC/QA-HMA, 4, 70, Surface, 9.5 mm on 275#/Syd. OC/QA-HMA, 4, 70, Intermediate, 19.0 mm on 770#/Syd. OC/QA-HMA, 4, 64, Base, 19.0 mm on 300#/Syd. OC/QA-HMA, 4, 76, Intermediate OG, 19.0 mm on 6 in of Compacted Aggregate, No. 53 on Subgrade Treatment Type IC
- (S) Saw Cut (No Direct Pay)
- █ Pavement Removal
- Traffic Direction Arrow
- Note: Topo Notes for this Sheet are described from Line "A".

DRAFT
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: MKM	DRAWN: CPH	
CHECKED: JLC	CHECKED: MKM	

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE	
1"=20'	N/A	
VERTICAL SCALE	DESIGNATION	
N/A	1700089	
SURVEY BOOK	SHEETS	CD-02
ELECTRONIC	21	of 73
CONTRACT	PROJECT	
R-42406	1700089	

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251

252

253

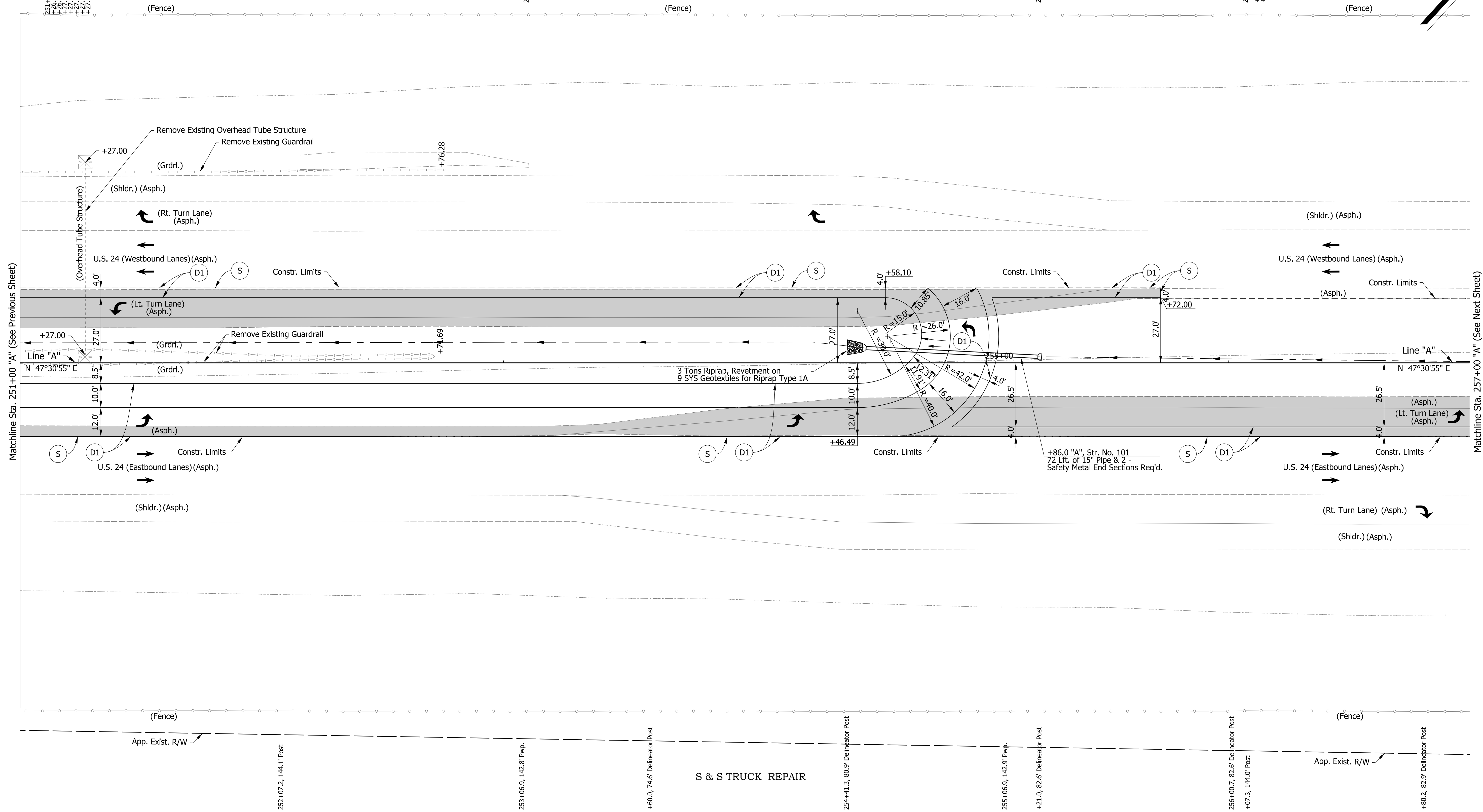
254

255

256

257

Sec. 15, T-27-N, R-4-E
Peru Township
Miami County



- Legend**
- (D1) 165#/Syd. QC/QA-HMA, 4, 70, Surface, 9.5 mm on 275#/Syd. QC/QA-HMA, 4, 70, Intermediate, 19.0 mm on 770#/Syd. QC/QA-HMA, 4, 64, Base, 19.0 mm on 300#/Syd. QC/QA-HMA, 4, 76, Intermediate OG, 19.0 mm on 6 in of Compacted Aggregate, No. 53 on Subgrade Treatment Type 1C
 - (S) Saw Cut (No Direct Pay)
 - █ Pavement Removal
 - Traffic Direction Arrow
- Note:
Topo Notes for this Sheet are described from Line "A".

DRAFT
NOT FOR CONSTRUCTION

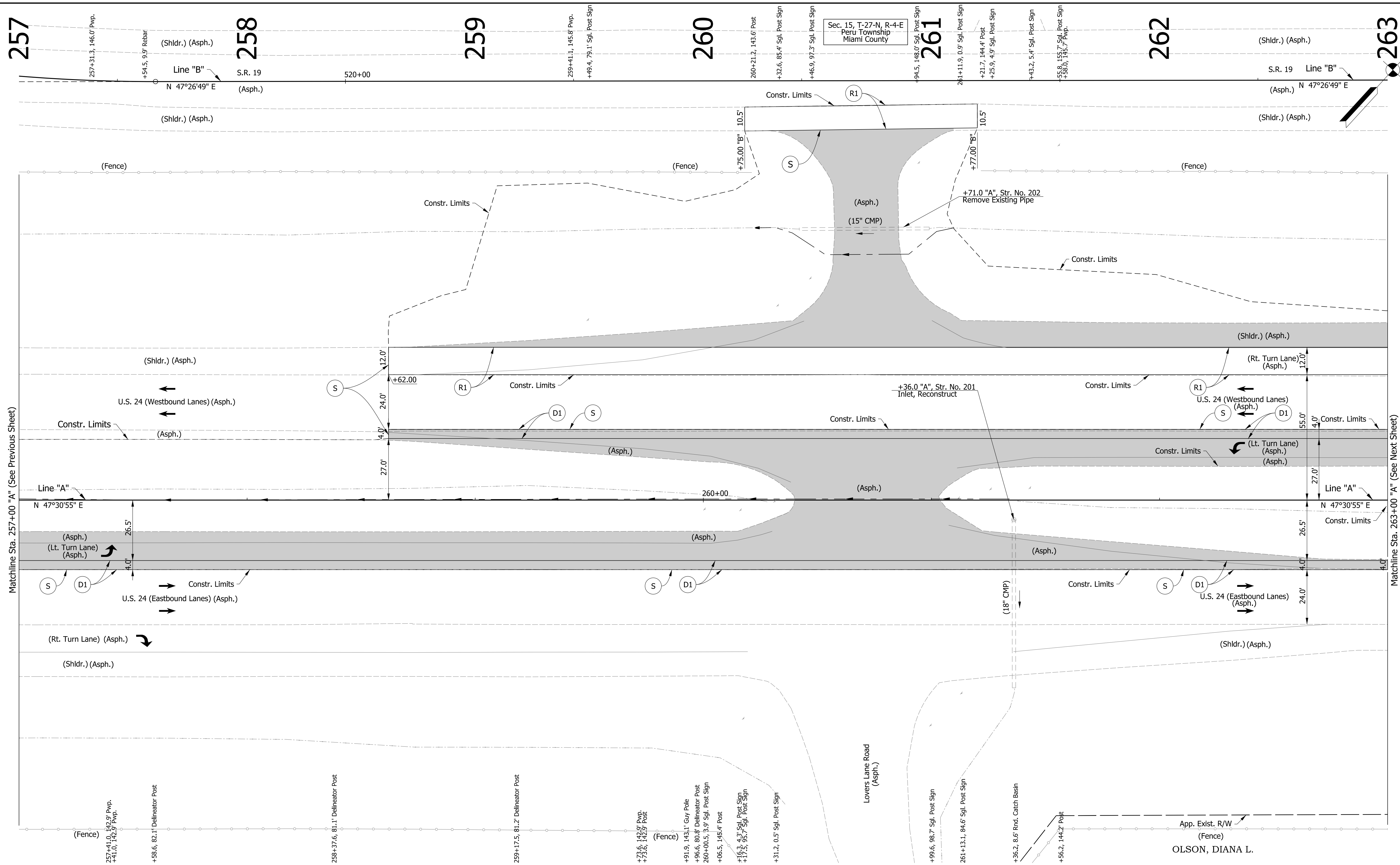
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: MKM	DRAWN: CPH	
CHECKED: JLC	CHECKED: MKM	

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE	
1"=20'	N/A	
VERTICAL SCALE	DESIGNATION	
N/A	1700089	
SURVEY BOOK	SHEETS	CD-03
ELECTRONIC	22	of 73
CONTRACT	PROJECT	
R-42406	1700089	

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- Legend**
- (D1) 165#/Syd. QC/QA-HMA, 4, 70, Surface, 9.5 mm on 275#/Syd. QC/QA-HMA, 4, 70, Intermediate, 19.0 mm on 770#/Syd. QC/QA-HMA, 4, 64, Base, 19.0 mm on 300#/Syd. QC/QA-HMA, 4, 76, Intermediate OG, 19.0 mm on 6 in of Compacted Aggregate, No. 53 on Subgrade Treatment Type IC
 - (R1) 165#/Syd. QC/QA-HMA, 2, 64, Surface, 9.5 mm on Milling, Asphalt, 1 1/2 in.
 - (S) Saw Cut (No Direct Pay)
 - Traffic Direction Arrow
 - [Shaded Area] Pavement Removal
- Note: Topo Notes for this Sheet are described from Line "A".

DRAFT
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: MKM	DRAWN: CPH	
CHECKED: JLC	CHECKED: MKM	

INDIANA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE	
1"=20'	N/A	
VERTICAL SCALE	DESIGNATION	
N/A	1700089	
SURVEY BOOK	SHEETS	CD-04
ELECTRONIC	23	of 73
CONTRACT	PROJECT	
R-42406	1700089	

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263

264

265

266

267

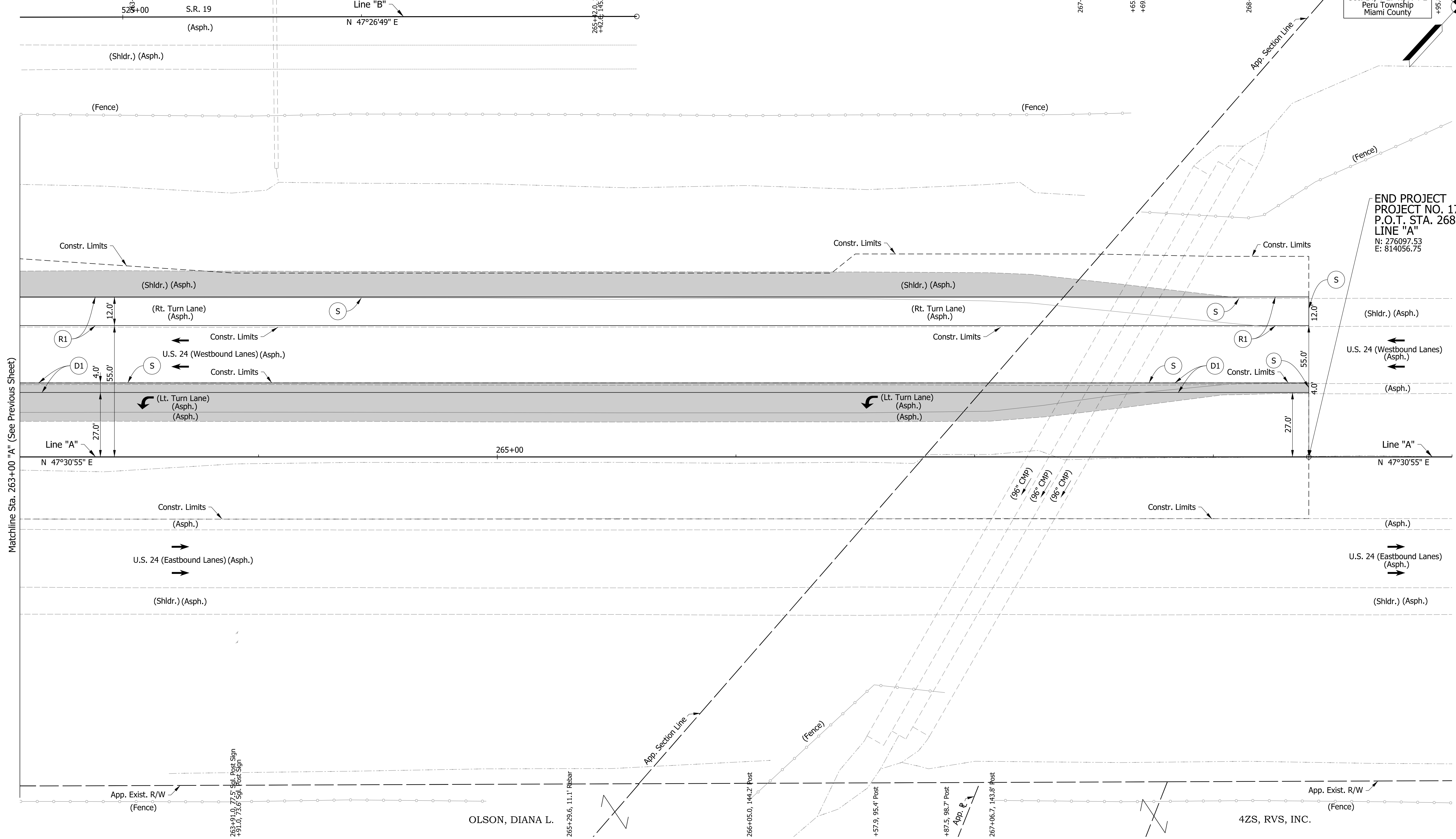
268

269

Sec. 15, T-27-N, R-4-E
Peru Township
Miami County

Sec. 14, T-27-N, R-4-E
Peru Township
Miami County

END PROJECT
PROJECT NO. 1700089
P.O.T. STA. 268+40.00
LINE "A"
N: 276097.53
E: 814056.75



Matchline Sta. 263+00 "A" (See Previous Sheet)

Legend

- (D1) 165#/Syd. QC/QA-HMA, 4, 70, Surface, 9.5 mm on 275#/Syd. QC/QA-HMA, 4, 70, Intermediate, 19.0 mm on 770#/Syd. QC/QA-HMA, 4, 64, Base, 19.0 mm on 300#/Syd. QC/QA-HMA, 4, 76, Intermediate OG, 19.0 mm on 6 in of Compacted Aggregate, No. 53 on Subgrade Treatment Type IC
 - (R1) 165#/Syd. QC/QA-HMA, 2, 64, Surface, 9.5 mm on Milling, Asphalt, 1 1/2 in.
 - (S) Saw Cut (No Direct Pay)
 - Traffic Direction Arrow
 - █ Pavement Removal
- Note:
Topo Notes for this Sheet are described from Line "A".

DRAFT
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: MKM	DRAWN: CPH	
CHECKED: JLC	CHECKED: MKM	

**INDIANA
DEPARTMENT OF TRANSPORTATION**

CONSTRUCTION DETAILS

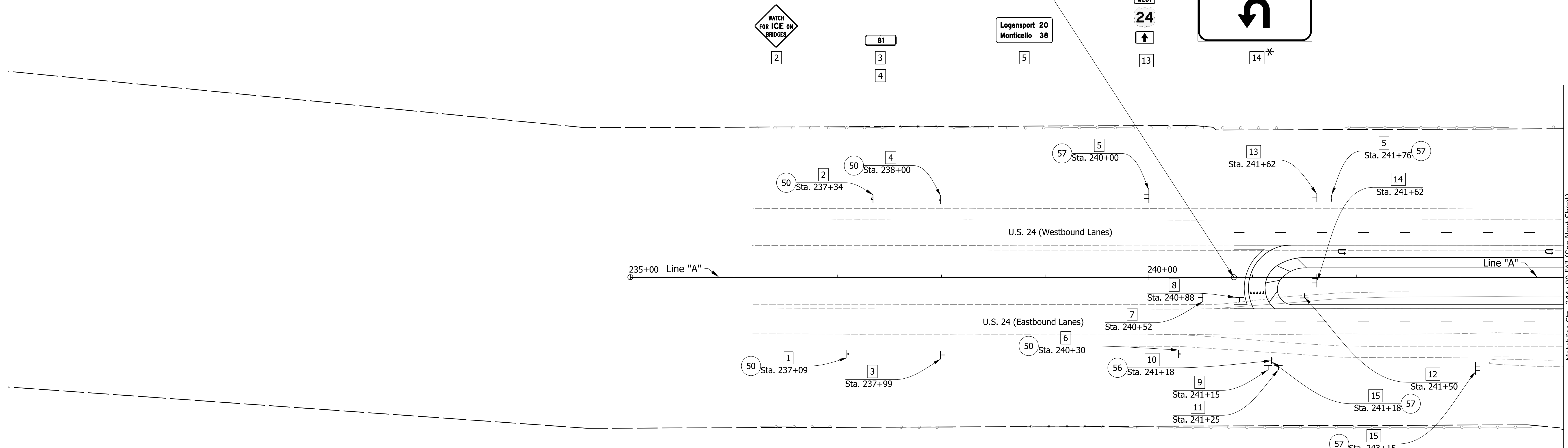
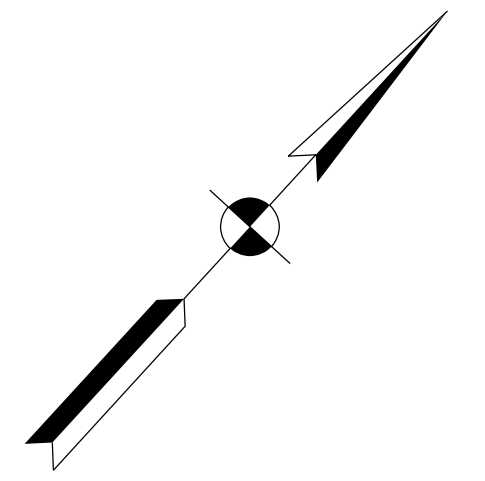
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1"=20'	N/A	
VERTICAL SCALE	DESIGNATION	
N/A	1700089	
SURVEY BOOK	SHEETS	CD-05
ELECTRONIC	24	of 73
CONTRACT	PROJECT	
R-42406	1700089	

challingsworth
1/7/2020 6:50:15 pm
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235+00

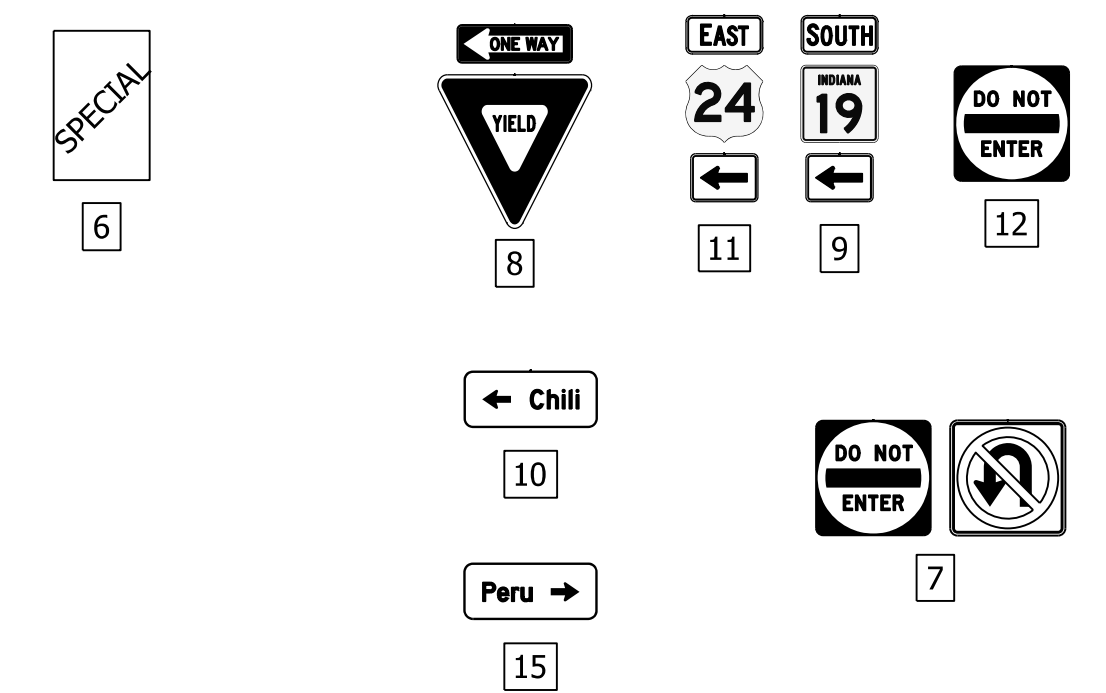
240+00

BEGIN PROJECT
PROJECT NO. 1700089
P.O.T. STA. 240+82.00
LINE "A"
N: 274234.80
E: 812022.84



LEGEND

- 50 No Change Required to Existing Sign and Supports Existing Sign and Single Post
- 56 Remove Existing Sheet Sign and Supports Existing Sign and Double Post
- 57 Relocate Existing Sheet Sign on New Supports Proposed Sign and Single Post
- * See Signing Details Proposed Sign and Double Post



DRAFT
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: MKM	DRAWN: CPH	
CHECKED: JLC	CHECKED: MKM	

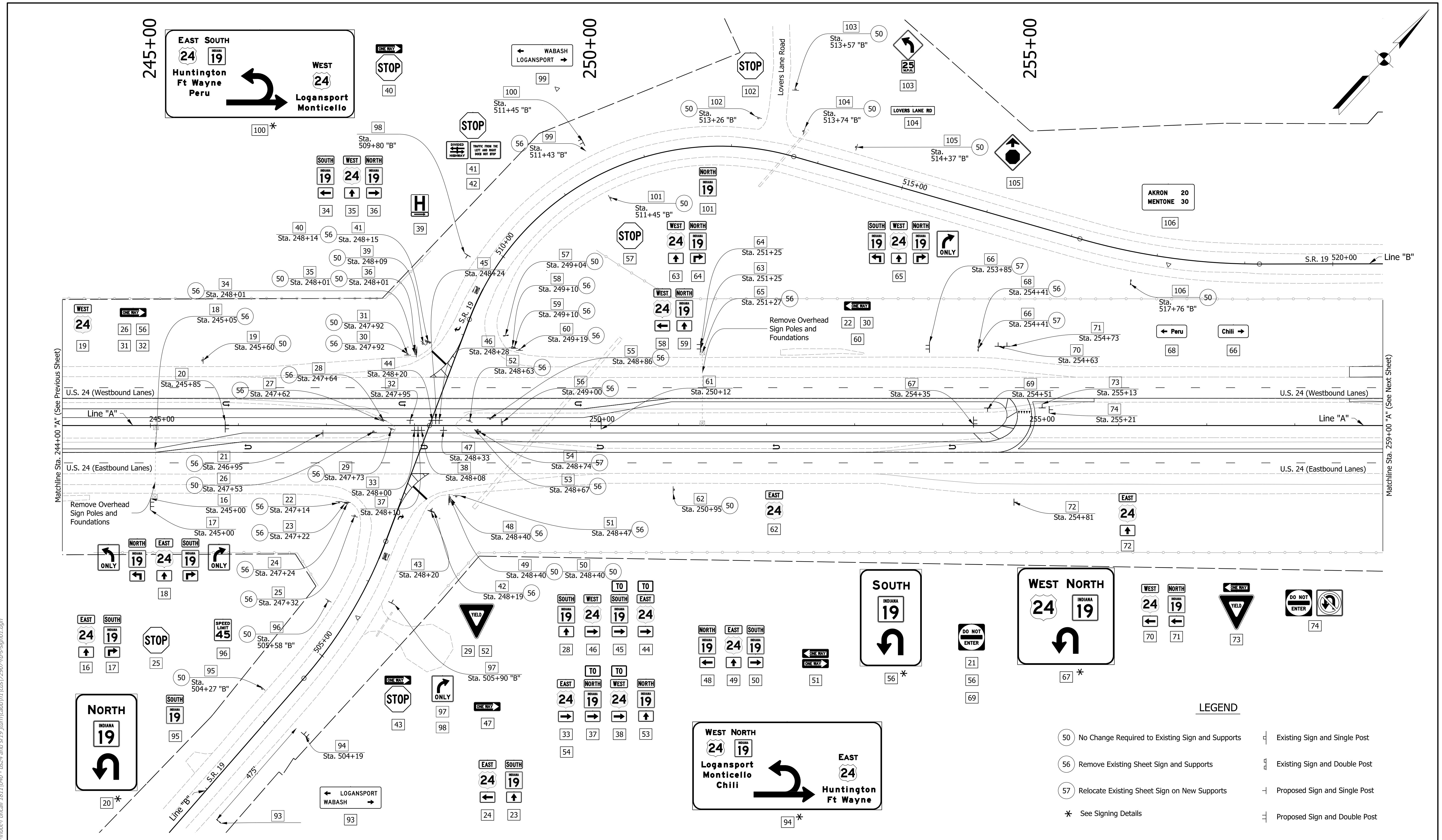
INDIANA DEPARTMENT OF TRANSPORTATION

SIGNING PLAN

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	N/A
VERTICAL SCALE	DESIGNATION
N/A	1700089
SURVEY BOOK	SHEETS
ELECTRONIC	34 of 73
CONTRACT	PROJECT
R-42406	1700089

challingsworth
1/7/2020 6:52:02 pm
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file: \\indw01\289\projects\2907\ndot-f oncall 1811\040 - us24 and sr19\turn\cadd\h1\cadd\2907-dfs-sign01.dgn

challingsworth
1/7/2020 6:52:38 pm
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file: \\indw001\289\projects\2907\ndot\oncall\1811\040 - us24 and sr19\turn\cadd\h\12207-dfs-sign01.dgn



- LEGEND**
- (50) No Change Required to Existing Sign and Supports
 - (56) Remove Existing Sheet Sign and Supports
 - (57) Relocate Existing Sheet Sign on New Supports
 - * See Signing Details
 - Existing Sign and Single Post
 - Existing Sign and Double Post
 - Proposed Sign and Single Post
 - Proposed Sign and Double Post

DRAFT
NOT FOR CONSTRUCTION

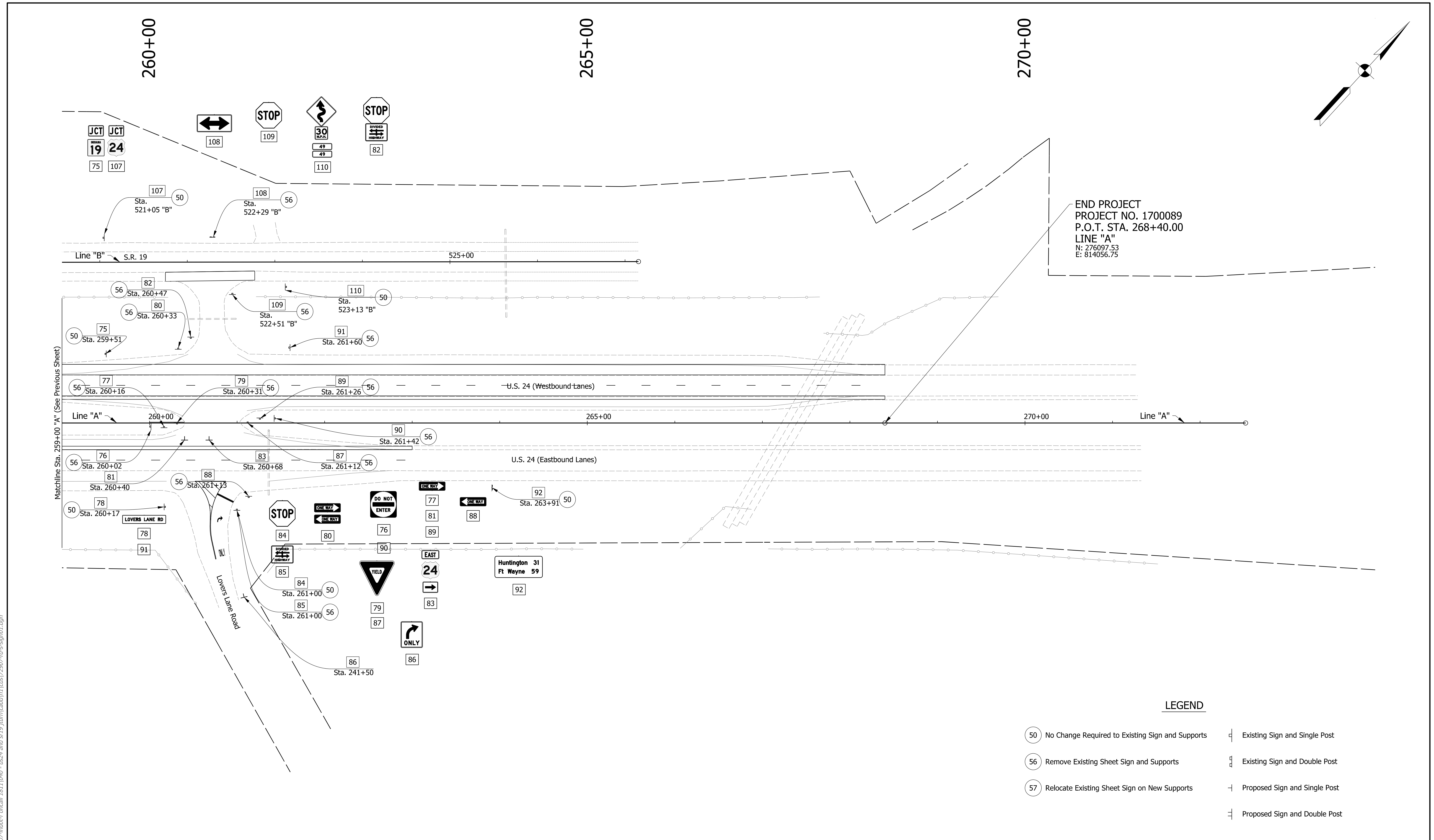
RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: MKM	DRAWN: CPH	
CHECKED: JLC	CHECKED: MKM	

INDIANA
DEPARTMENT OF TRANSPORTATION

SIGNING PLAN

HORIZONTAL SCALE 1"=50'	BRIDGE FILE N/A
VERTICAL SCALE N/A	DESIGNATION 1700089
SURVEY BOOK ELECTRONIC	SHEETS SGN-02 35 of 73
CONTRACT R-42406	PROJECT 1700089

chellingsworth
 1/7/2020 6:52:42 pm
 model-sheet3
 file: \\indw001\289\projects\2907\ndot-f oncall 1811\040 - us24 and sr19 turn\cadd\h1\cadd\2907-dfs-sign01.dgn



END PROJECT
 PROJECT NO. 1700089
 P.O.T. STA. 268+40.00
 LINE "A"
 N: 276097.53
 E: 814056.75

LEGEND

- 50 No Change Required to Existing Sign and Supports

 Existing Sign and Single Post
- 56 Remove Existing Sheet Sign and Supports

 Existing Sign and Double Post
- 57 Relocate Existing Sheet Sign on New Supports

 Proposed Sign and Single Post
 Proposed Sign and Double Post

DRAFT
 NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____ DATE _____
DESIGNED: _____ MKM _____	DRAWN: _____ CPH _____
CHECKED: _____ JLC _____	CHECKED: _____ MKM _____

INDIANA DEPARTMENT OF TRANSPORTATION

SIGNING PLAN

HORIZONTAL SCALE 1"=50'	BRIDGE FILE N/A
VERTICAL SCALE N/A	DESIGNATION 1700089
SURVEY BOOK ELECTRONIC	SHEETS SGN-03 36 of 73
CONTRACT R-42406	PROJECT 1700089