

Indiana Department of Transportation

County Marion Route US 31 and SR 135 Des. No. 1700182

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

Road No./County:	United States (US) 31 and State Road (SR) 135 / Marion County
Designation Number:	1700182
Project Description/Termini:	Intersection Improvement, US 31 approximately 0.1 mile south of SR 135/Thompson Road to approximately 0.4 mile north of SR 135/Thompson Road

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

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

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

Approval

_____	_____	_____	_____
ESM Signature	Date	ES Signature	Date

_____	_____
FHWA Signature	Date

Release for Public Involvement

<u>N/A</u>	_____	<u>BDM for REB</u>	<u>7/1/2020</u>
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: Susan Harrington, HNTB Indiana

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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	No
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If No, then:		
Opportunity for a Public Hearing Required?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

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

Remarks:

Notice of Entry letters were mailed to potentially affected property owners near the project area on June 6, 2019, notifying them about the project and that individuals responsible for land surveying and field activities may be seen in the area. A sample copy of the Notice of Entry letter is included in Appendix G, pages 1-2.

The project will meet the minimum requirements described in the current *Indiana Department of Transportation (INDOT) Public Involvement Manual* which require 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. Early coordination responses from IndyGo (Appendix C, pages 14-22) and Perry Township Schools (Appendix C, pages 35-39) indicated that they did not prefer the displaced turn lane alternative. However, the traffic analysis completed for this project indicates that the displaced left intersection is the alternative that provides the best level of service for the intersection (Appendix I, pages 10-78). Follow-up coordination with both IndyGo and Perry Township Schools conveyed this information, and coordination will be on-going.

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

Sponsor of the Project: INDOT INDOT District: Greenfield
Local Name of the Facility: US 31 and SR 135

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

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

PURPOSE AND NEED:

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

Need:

The intersection of US 31 and SR 135/Thompson Road receives high volumes of traffic, which results in substantial delays during the morning and evening peak traffic periods. Currently, this section of US 31 is a six-lane divided roadway running north/south, carrying approximately 56,350 vehicles per day. It parallels existing SR 37 that is being converted to a freeway as part of the I-69 project. SR 135/Thompson Road is an east/west road that carries approximately 14,200 vehicles per day. An interchange with I-465 is approximately 0.4 mile to the north of the intersection of US 31 with SR 135/Thompson Road. Traffic on US 31 has fluctuated from 50,000 to 60,000 vehicles per day since the year 2000. Traffic in this area is anticipated to grow by approximately 0.5% per year based on historic trends; however, there will be some decrease in traffic due to the completion of the I-69 project.

Level of service (LOS) is a common way of describing the degree of traffic congestion on roadways, using "grades" on a letter scale from LOS A (best) to LOS F (worst). LOS A represents near ideal traffic flow, while LOS F represents a breakdown of the traffic flow. In 2015 analysis was performed assuming a 0.5% per year growth rate. It was concluded that in the year 2035 the intersection would operate at LOS F during the AM peak and LOS E during the PM peak. Analysis performed in 2019 for the year 2045, assuming reduced traffic on US 31 due to the I-69 project, concluded some movements perform at LOS E or F, even though the overall intersection performs at LOS D or better (Appendix I, pages 75-78). This is because the heavy peak hour north-south traffic on US 31 is given priority, which affects the performance of turning movements and east-west traffic. Even with priority given to the northbound through movement, the US 31 and Thompson Road intersection performs at LOS E during the morning peak hour. The eastbound left turn and southbound left turn perform at LOS F, despite the overall intersection performing at LOS D. During the PM peak hour, the eastbound left turn movement operates at LOS F, even though the overall intersection performs at LOS C. These conditions are documented in the *Abbreviated Engineer's Assessment* dated September 17, 2019 and the *Engineering Assessment Report (Final)*, dated June 3, 2015 (Appendix I, pages 10-78).

Also, there are insufficient pedestrian facilities throughout the intersection. The intersection of US 31 and SR 135/Thompson Road currently only accommodates pedestrian crossing of US 31 on the north side of the intersection, with no pedestrian facilities connecting the intersection to the bus stops south of the intersection.

Purpose:

The purpose of the project is to improve traffic operations of the intersection to an LOS of D or higher (with all turning movements improved to LOS D or higher) and increase pedestrian accessibility.

PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Marion Municipality: Indianapolis

Limits of Proposed Work: Approximately 0.1 mile south of SR 135/Thompson Road to approximately 0.4 mile north of SR 135/Thompson Road, along US 31

Total Work Length: Approx. 0.5 on US 31, 0.1 on SR 35, 0.15 on I-465 Ramp Mile(s) Total Work Area: 6.8 Acre(s)

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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?	Yes ¹ <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Date: <input style="width: 80%;" type="text"/>		

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

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

INDOT and the Federal Highway Administration (FHWA) intend to proceed with an intersection improvement project at the intersection of US 31 and SR 135/Thompson Road.

Location:

This project is located on US 31 in an urban portion of Marion County (Appendix B, page 1). SR 135 terminates at the west leg of the intersection and Thompson Road on the east side of the intersection is a city street. More specifically, the project is located in Section 1, Township 14 North, Range 3 East and Section 36, Township 15 North, Range 3 East in Perry Township, as shown on the United States Geological Survey (USGS) 7.5 Minute Maywood, Indiana Topographic Quadrangle Map (Appendix B, page 3).

Existing Conditions:

US 31 is a six-lane divided suburban arterial running northbound/southbound. SR 135/Thompson Road is an east/west major collector. The intersection of US 31 and SR 135/Thompson Road is signalized and experiences delay and queueing during peak hours. The I-465 eastbound exit ramp to US 31 southbound currently joins US 31 at a high speed and free flow, which introduces weaving to east Thompson Road and a quick approach to the traffic signal at SR 135/Thompson Road.

Pavement for US 31 and SR 135/Thompson Road within the project area is in good condition. There are no sidewalks in the area but there is a marked pedestrian crossing across the north leg of the intersection. There is a worn footpath along the east side of northbound US 31. Drainage around the intersection consists of open and closed systems.

The primary surrounding land use is commercial development and residential. The area surrounding the intersection is constrained by development in all directions. Please refer to Appendix B, pages 8-11, for photographs of the project area.

Preferred Alternative:

The proposed construction activities will modify the existing signalized intersection to a partial displaced left turn intersection. A displaced left turn intersection, also called a continuous flow intersection, is an alternative design for an at-grade intersection. This configuration moves the left turn conflict out of the intersection and synchronizes it with the signal cycle of the intersecting road. In the same way as a regular intersection, all traffic flow is controlled by traffic signals. Vehicles attempting to turn left across the opposing direction of traffic cross prior to entering the intersection. The dedicated left turn signal in the intersection is not necessary. Instead, vehicles turning left can make their movement at the same time vehicles move north and south through the intersection.

This project will include displacing the left turns for both US 31 northbound and US 31 southbound. This requires traffic to turn left in advance of the main intersection at US 31 and SR 135/Thompson Road. US 31 northbound to westbound SR 135/Thompson Road would turn left 400 feet in advance of the main intersection, utilizing a new traffic signal. US 31 southbound to eastbound SR 135/Thompson Road would turn left at Elbert Street (600 feet north of the main intersection), also utilizing a new traffic signal. Reconstruction of the medians, relocations of the stop bars, and restriping of pavement will occur in order to allow for the displaced left turns. Additional right turn lanes will be constructed to accommodate traffic, including large trucks, turning right from SR 135/Thompson Road onto US 31.

Each new traffic signal will be coordinated with the main traffic signal to ensure there will be no conflicting movements. The signals will operate in three phases to improve traffic flow and prevent displacement of traffic queueing. This is an improvement over the existing intersection which has four phases. An overview of the intersection and details of the three signal phases are included in Appendix B, pages 4-7.

The I-465 eastbound to US 31 southbound exit ramp will be reconfigured from a free flow movement to a signalized intersection with US 31 southbound. The signal is required to meter the traffic and allow the ramp traffic time to enter the displaced left turn bay north of the main intersection. Potential traffic impacts to the I-465 interchange were analyzed and it was determined that no negative impacts to traffic are expected as a result of this project. Coordination is ongoing with

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INDOT's Corridor Development and District Traffic Office, and INDOT's Corridor Development and District Traffic confirmed that the design does not impact the I-465 westbound to US 31 southbound loop ramp.

Drainage and stormwater pipes will be replaced and/or extended throughout the project area.

Pedestrian crossings through the intersection will be provided north and south of SR 135/Thompson Road, and sidewalks will be constructed along US 31 on both sides of the street to connect the intersection to the bus stops located south of the intersection. Coordination with IndyGo has been ongoing regarding the proposed locations of the bus stops and the sidewalk access that will be provided. See the Public Facilities & Services section of this CE document for additional details.

One business relocation and no residential relocations will be required for the project. The Pancake House restaurant located at the southwest corner of US 31 and SR 135 will be relocated due to the construction of the additional turn lanes (Appendix B, page 35).

The project termini are considered logical because they allow for the length of roadway needed to construct the necessary turn lanes and ramp realignment. It has independent utility because it is a stand-alone project that provides an improvement in traffic operations, even if no other projects are completed. Design plans can be found in Appendix B, pages 12-58.

The maintenance of traffic (MOT) for the project will be contained within the existing roadway, reducing traffic to two lanes in each direction during construction. INDOT is coordinating all projects within the area to prevent multiple closures at the same time. Additional details of the MOT plan are included in the MOT section of this CE document.

The preferred alternative meets the purpose and need of the project by reconstructing the intersection with displaced left turn lanes and pedestrian crosswalks, as well as realignment of the I-465 eastbound ramp to southbound US 31 to improve traffic operations and pedestrian accessibility. The preferred alternative will have a LOS D or better for all turning movements (Appendix I, page 22).

OTHER ALTERNATIVES CONSIDERED:

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

"No-Build" Alternative:

The "No-Build" alternative would make no physical improvements to the intersection. This alternative would have no effect on environmental resources and would require no commercial relocations. This alternative would not address the operational deficiencies, congestion, or lack of pedestrian facilities described above. Without improvements, the operation of the intersection would continue to perform poorly. The "No-Build" alternative was not selected because it fails to meet the purpose and need of the project.

Conventional Intersection with Added Turn Lanes (Appendix I, pages 24-25):

This alternative would utilize conventional intersection improvements (e.g., added turn lanes and/or increased turn lane lengths) to improve traffic operations. The improvements for US 31 southbound would include adding a second left turn lane to eastbound Thompson Road and a dedicated right turn lane for traffic wishing to travel west/south on SR 135. Improvements to US 31 northbound would include providing an offset left turn for west/south SR 135. The westbound Thompson Road approach would require a second right-turn lane for US 31 northbound. There would be three full commercial relocations, which reflects impacts beyond what was known at the time the Abbreviated Engineer's Assessment was submitted in 2019.

The conventional intersection meets the target LOS. However, this intersection is constrained by development and is already quite large. There is high through traffic on US 31, and the capacity is constrained by the intersection traffic signal. To address this, more green time is given to the US 31 traffic by reducing time to other phases. Adding more turn lanes improves the situation, but removing signal phases entirely is a better strategy. Therefore, the displaced lefts (preferred alternative) better fit the future needs of the intersection. If the conventional intersection were the chosen alternative, the intersection would need to be widened more and more to accommodate traffic in the future. Although it would meet the purpose and need for the project, this alternative was eliminated from further consideration because it has the highest impacts and has comparable traffic performance to the preferred alternative.

US 31 Northbound Median U-Turn/US 31 Displaced Left (Appendix I, pages 28-29):

This alternative is a hybrid of two intersection improvement styles. The configuration would utilize a median U-turn and a displaced left intersection. US 31 southbound would utilize a displaced left configuration. This would require traffic to turn left in advance of the main intersection at US 31 and SR 135/Thompson Road. This turning movement would occur at a new signalized intersection at Elbert Street (600 feet north of the US 31 and SR 135/Thompson Road). Traffic would then travel

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south along US 31 to the signal at SR 135/Thompson Road. After passing through the main traffic signal, traffic would then be able to head east on Thompson Road. US 31 northbound traffic wanting to turn left onto west SR 135 would turn right at the US 31/SR 135 intersection and head east on SR 135/Thompson Road and navigate a U-turn approximately 600 feet east of the US 31 intersection. After the U-turn, traffic would then proceed through the signal at US 31 to continue west on SR 135. When this concept was originally developed in 2015, the property in the northeast quadrant of the intersection was a vacant lot; however, it is now a storage facility with a driveway on Thompson Road. When the concept was further investigated in 2019, it was found that access to the storage facility and access to the Travelodge hotel would conflict with the median U-turn on Thompson Road. There would only be right-in-right-out access for the storage facility. The location of the loon would impact the entrance to the Travelodge hotel and require relocation of the hotel (Appendix I, page 28). Placing the U-turn east of the Travelodge hotel was considered; however, it was found that the hotel access would have to be closed for safety reasons. These impacts reflect additional information beyond what was presented in the *Abbreviated Engineer's Assessment*. Although it would meet the purpose and need for the project, this alternative was eliminated from further consideration because it has higher impacts than the preferred alternative and has comparable traffic performance to the preferred alternative.

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

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

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

ROADWAY CHARACTER: U. S. 31

Functional Classification: Urban Principal Arterial
 Current ADT: 56,350 VPD (2019) Design Year ADT: 51,200 VPD (2045)
 Design Hour Volume (DHV): 4625 Truck Percentage (%) 2.7
 Designed Speed (mph): 45 Legal Speed (mph): 45

	Existing	Proposed
Number of Lanes:	8	10
Type of Lanes:	2-3 through lanes and 1 turn lane	3 through lanes and 1 turn lane in each direction
Pavement Width:	Varies 86 - 109 ft.	Varies 86 - 140 ft.
Shoulder Width:	Varies 2 - 10 ft.	Varies 2 - 10 ft.
Median Width:	Varies 4 - 16 ft.	Varies 4 - 16 ft.
Sidewalk Width:	N/A ft.	5 - 6 where provided ft.

Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

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

ROADWAY CHARACTER: SR 135/Thompson

Functional Classification: Minor Arterial
 Current ADT: 14,200 VPD (2019) Design Year ADT: 13,800 VPD (2045)
 Design Hour Volume (DHV): 1,125 Truck Percentage (%) 2.7
 Designed Speed (mph): 40 Legal Speed (mph): 40

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	Existing		Proposed	
Number of Lanes:	8		8	
Type of Lanes:	2 through lanes and 1 turn lane in each direction		2 through lanes in each direction and 1 turn lane in each direction	
Pavement Width:	Varies 70 - 76	ft.	Varies 70 - 86	ft.
Shoulder Width:	2	ft.	2	ft.
Median Width:	Varies 2 - 4	ft.	Varies 2 - 4	ft.
Sidewalk Width:	N/A	ft.	N/A	ft.

Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

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

ROADWAY CHARACTER: I-465 Exit Ramp to US 31 Southbound

Functional Classification: Freeway Ramp
 Current ADT: 10,750 VPD (2019) Design Year ADT: 11,400 VPD (2045)
 Design Hour Volume (DHV): 1,050 Truck Percentage (%) 4.3
 Designed Speed (mph): 55/40 Legal Speed (mph): 55

	Existing		Proposed	
Number of Lanes:	1		Varies 1 - 3	
Type of Lanes:	Highway exit ramp		Highway exit ramp	
Pavement Width:	30	ft.	Varies 30 - 50	ft.
Shoulder Width:	4 ft outside and 10 ft inside	ft.	4 ft outside and 10 ft inside	ft.
Median Width:	N/A	ft.	N/A	ft.
Sidewalk Width:	N/A	ft.	N/A	ft.

Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

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

DESIGN CRITERIA FOR BRIDGES: See Appendix B, pages 55-58 for pipe information.

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

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

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

Remarks:

There are approximately 80 pipes that will be replaced, added, or extended as part of the project (Appendix B, pages 55-58). The purpose of these pipes is conveyance of storm water, and none will carry jurisdictional waterways.

Will the structure be rehabilitated or replaced as part of the project?

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

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

DESIGN CRITERIA FOR BRIDGES: US 31 over I-465

Structure/NBI Number(s): 031-49-04448 B/National Bridge Inventory (NBI) 009440 Sufficiency Rating: 89.6/INDOT Bridge Inspection Report (July 25, 2018)
(Rating, Source of Information)

	Existing		Proposed
Bridge Type:	Steel Continuous		Steel Continuous
Number of Spans:	7		7
Weight Restrictions:	N/A	ton	N/A
Height Restrictions:	N/A	ft.	N/A
Curb to Curb Width:	78	ft.	78
Outside to Outside Width:	85	ft.	85
Shoulder Width:	N/A	ft.	N/A
Length of Channel Work:	N/A		N/A

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

Remarks:

The bridge carrying US 31 over I-465 (INDOT Structure # 031-49-04448 B) was built in 1962 and reconstructed in 2010. The only construction activities that will occur on the bridge is restriping of pavement.

Will the structure be rehabilitated or replaced as part of the project?

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

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

MAINTENANCE OF TRAFFIC (MOT) DURING CONSTRUCTION:

	Yes	No
Is a temporary bridge proposed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is a temporary roadway proposed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will the project involve the use of a detour or require a ramp closure? (describe in remarks)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Provisions will be made for access by local traffic and so posted.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Provisions will be made for through-traffic dependent businesses.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Provisions will be made to accommodate any local special events or festivals.	<input type="checkbox"/>	<input checked="" 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 will be accomplished using phased construction and will utilize lane closures. With the exception of very brief nighttime closures, no road closures are anticipated. Access for local traffic will be provided during construction per INDOT Standard Specification 107.08(e).

Phase 1: Construction will occur on the east and west side of US 31 by closing the outside lanes closest to the construction. This will reduce the through lanes on US 31 northbound and southbound down to two lanes. SR 135/Thompson Rd will have an outside lane closure and will maintain one lane in each direction. Traffic on the I-465 exit ramp onto US 31 will be shifted to the outside shoulder.

Phase 2: Construction will occur within the median of US 31 by closing the inside lanes, closest to the construction. This will reduce the through lanes on US 31 northbound and southbound down to two lanes. SR 135/Thompson Road will have inside lane closures and will maintain one lane in each direction. One full closure of US 31 northbound at night will occur for removing sign structures. Traffic on the I-465 exit ramp onto US 31 will be shifted north to temporary and proposed pavement that was constructed during Phase I.

Phase 3: One full closure of US 31 northbound at night will occur for installing sign structures. Construction will then complete the remainder of tasks with lane restrictions and will open traffic to the new configuration.

Service to the bus stops south of the intersection will be maintained during construction.

The lane 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 will occur during construction but will cease with project completion.

ESTIMATED PROJECT COST AND SCHEDULE:

Engineering: \$ 195,000 (2019) Right-of-Way: \$ 175,000 (2021) Construction: \$ 4,479,691 (2021)

Anticipated Start Date of Construction: Spring of 2021

Date project incorporated into STIP July 2, 2019

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

If yes,
Name of MPO Indianapolis MPO

Location of Project in TIP 2020-2023 Indianapolis Regional Transportation Improvement Program (Appendix H, page 2)

Date of incorporation by reference into the STIP July 2, 2019

RIGHT OF WAY:

Land Use Impacts	Amount (acres)*	
	Permanent	Temporary
Residential	0	0
Commercial	2.24	0.37
Agricultural	0	0
Forest	0	0
Wetlands	0	0
Other:	0	0
TOTAL	2.24	0.37

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

Remarks:

Through the project area, the existing right-of-way varies on the southwest side of the I-465 exit ramp from approximately 45 to 75 feet from the center of the existing roadway. Right-of-way to the northeast of the exit ramp extends through the north side of the interstate, which is outside of the project limits.

Through the project area, the existing right-of-way varies on the west side of the US 31 from approximately 65 to 155 feet from the center of the roadway. Right-of-way to the east side of US 31 varies from approximately 55 to 85 feet from the center of the roadway.

Through the project area, the existing right-of-way varies on the north side of the SR 135/Thompson Road from edge of pavement to approximately 60 feet from the center of the roadway. Right-of-way to the south of SR 135/Thompson Road varies from edge of pavement to approximately 130 feet from the center of the roadway.

This project requires approximately 2.24 acres of permanent right-of-way from commercial properties. The project requires approximately 0.37 mile of temporary right-of-way from commercial properties for driveway construction, grading, and building removal. None of the right-of-way acquisition is considered to be reacquisition.

The existing land use of the proposed new right-of-way is commercial property. The proposed right-of-way will extend a maximum of approximately 150 feet east of US 31 and 170 feet west of the center of the roadway. Proposed new right-of-way for SR 135/Thompson Road extends a maximum of 85 feet north of the center of the roadway (Appendix B, pages 22-23).

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

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, site visits on May 10, 2019, and July 15, 2019, by Cardno, 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 10), there are four streams located within the 0.5-mile search radius. There are two streams present within the project area.

A *Waters of the US Determination / Wetland Delineation Report* was approved by INDOT Ecology and Waterway Permitting Office (EWPO) on January 27, 2020. Please refer to Appendix F pages 1-30 for the *Waters of the US Determination / Wetland Delineation Report*. It was determined that two likely jurisdictional streams, Lick Creek and Unnamed Tributary (UNT) to Lick Creek, are located within the project area. The United States Army Corps of Engineers (USACE) makes all final determinations regarding jurisdiction.

No streams within the project area are listed as a Federal, Wild and Scenic River; a State Natural, Scenic and Recreational River; an Outstanding Rivers for Indiana; a navigable waterways; or a National Rivers Inventory waterway.

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Lick Creek
 Lick Creek is a perennial stream that flows west through the project area between the east and westbound lanes of I-465. It exhibited an ordinary high-water mark (OHWM) and a defined bed and bank during the site visits; therefore, it is likely considered a Water of the US. During the site investigation, this stream, at the OHWM, was 10 feet wide and 0.4 feet deep.

UNT to Lick Creek
 UNT to Lick Creek is an intermittent stream that flows northeast through the project area. It exhibited an OHWM and a defined bed and bank during the site visits; therefore, it is likely considered a Water of the US. During the site investigation, this stream, at the OHWM, was 3 feet wide and 0.8 feet deep.

Neither Lick Creek or UNT to Lick Creek are located within the construction limits. There are numerous pipes located within the construction limits, but none of them carry streams. Therefore, no direct or indirect impacts are expected to any streams.

Early Coordination
 Early coordination letters were sent to the United States Fish and Wildlife Service (USFWS), the Indiana Department of Natural Resources Division of Fish and Wildlife (IDNR-DFW), and USACE on November 14, 2019 (Appendix C, pages 1-4). An early coordination response was not received from USACE.

In their early coordination response dated December 13, 2019, IDNR-DFW included recommendations to minimize impacts to streams (Appendix C, pages 5-7). These recommendations included guidelines for dewatering, replanting of riparian habitat, the timing of work within the waterway, restriction of debris entering the waterway, and bank stabilization methods.

In their early coordination response dated November 19, 2019, the USFWS included standard recommendations to minimize impacts to streams (Appendix C, pages 9-10). These recommendations included erosion and sediment control methods, bank stabilization, restriction of below low-water work in streams, the restriction of channel work and vegetation clearing to the minimum necessary, and timing of work within the waterway.

On January 9, 2020, HNTB generated the Indiana Department of Environmental Management (IDEM) automated Proposed Roadway letter (Appendix C, pages 27-34), which included recommendations to minimize impacts to streams. These recommendations included implementation of storm water quality measures, permitting requirements, and restrictions regarding disturbance of stream and riparian vegetation.

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

Other Surface Waters

Reservoirs
 Lakes
 Farm Ponds

Detention Basins
 Storm Water Management Facilities

Other: _____

	<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, site visits on May 10, 2019, and July 15, 2019, by Cardno, the aerial map of the project area (Appendix B, page 2), and the water resources map in the RFI report (Appendix E, page 10), there are three lakes located within the 0.5 mile search radius. No other surface waters are present within the project area, therefore, no impacts are expected.

Early Coordination
 In their early coordination response dated December 13, 2019, IDNR-DFW did not include recommendations specific to lakes or ponds (Appendix C, pages 5-7).

In their early coordination response dated November 19, 2019, USFWS did not include recommendations specific to lakes or ponds (Appendix C, pages 9-10).

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On January 9, HNTB generated the IDEM automated Proposed Roadway letter (Appendix C, pages 27-34), which did not include recommendations specific to lakes or ponds.

Wetlands Presence Impacts

Total wetland area: 0.053 acre(s) Total wetland area impacted: 0.009 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 01	PEM1A	0.009	.009	Wetland 01 is located on the west side of US 31 in a drainage swale, just south of where the I-465 exit ramps joins with US 31. Impacts will result from sign removal and placement of a 30-inch drainage trunk line.
Wetland 02	PEM1A	0.002	0	Wetland 02 will not be impacted.
Wetland 03	PEM1A	0.042	0	Wetland 03 will not be impacted.

Wetlands (Mark all that apply)

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

Documentation

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

ES Approval Dates

January 27, 2020
January 27, 2020

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

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

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

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>) (Appendix F, page 12), the USGS topographic map (Appendix B, page 3), and the RFI report (Appendix E, page 10), there are eight wetlands located within the 0.5 mile search radius. Although there is only one wetland mapped adjacent to the project area, three wetlands were identified during the site visits on May 10, 2019, and July 15, 2019.

A *Waters of the US Determination / Wetland Delineation Report* was approved by INDOT Ecology and Waterway Permitting Office (EWPO) on January 27, 2020. Please refer to Appendix F pages 1-30 for the *Waters of the US Determination / Wetland Delineation Report*. During the site visits on May 10, 2019, and July 15, 2019, three wetlands were identified within the project area, and it was determined that they are likely jurisdictional. The USACE makes all final determinations regarding jurisdiction.

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Wetland 01
 Wetland 01 is a small, emergent wetland located within a drainage swale (Appendix F, page 15). Due to low species diversity, small size, and human disturbance, this wetland had a poor qualitative assessment. This wetland is located within a roadside ditch, which drains into Lick Creek. Sign removal and placement of a 30-inch drainage trunk line will require excavation of the wetland, resulting in approximately 0.009 acre of permanent impacts to Wetland 01. No temporary impacts are anticipated.

Wetland 02
 Wetland 02 is a very small emergent wetland located within a depression (Appendix F, page 15). Due to low species diversity, small size, and human disturbance, this wetland had a poor qualitative assessment. This wetland eventually drains to an unnamed tributary to Lick Creek. No permanent or temporary impacts to Wetland 02 will occur.

Wetland 03
 Wetland 03 is a small, emergent wetland located within a drainage swale (Appendix F, page 15). Due to low species diversity, small size, and human disturbance, this wetland had a poor qualitative assessment. This wetland was located within a roadside ditch, which drains into Lick Creek. No permanent or temporary impacts to Wetland 03 will occur.

Early Coordination
 In their early coordination response dated December 13, 2019, IDNR-DFW did not provide recommendations specific to wetlands (Appendix C, pages 5-7).
 In their early coordination response dated November 19, 2019, the USFWS did not provide recommendations specific to wetlands (Appendix C, pages 9-10).
 On January 9, 2020, HNTB generated the IDEM automated Proposed Roadway letter (Appendix C, pages 27-34), which included recommendations regarding permitting requirements.

Terrestrial Habitat

Unique or High Quality Habitat

<u>Presence</u>	<u>Impacts</u>	
	Yes	No
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<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, site visits on May 10, 2019, and July 15, 2019, by Cardno, and the aerial map of the project area (Appendix B, page 2), terrestrial habitats within the investigated area consist primarily of maintained right-of-way, and mowed and maintained commercial and residential lawn. Dominant vegetation within the investigated area includes Canada thistle (*Cirsium arvense*), cattail (*Typha latifolia*), Kentucky bluegrass (*Poa pratensis*), softstem bulrush (*Schoenoplectus tabernaemontani*) and red fescue (*Festuca rubra*).

Approximately 6.8 acres of disturbance will occur to terrestrial habitat. No tree clearing will occur. Due to the scope of the intersection improvement activities, including realigning I-465 interchange ramps and construction of additional turn lanes, it is not practical to avoid ground disturbance, and therefore disturbance to terrestrial habitat is unavoidable. Mitigation for terrestrial impacts is not expected. All disturbed areas will be restored according to current INDOT Standard Specifications.

Early Coordination
 In their early coordination response dated December 13, 2019, IDNR-DFW included recommendations to minimize impacts to terrestrial habitat and wildlife passage through the area (Appendix C, pages 5-7). These recommendations included post-construction revegetation measures regarding riparian habitat mitigation, placement of riprap and use of geotextiles, and erosion and sediment control measures.
 In their early coordination response dated November 19, 2019, USFWS included standard recommendations to minimize impacts to terrestrial habitat (Appendix C, pages 9-10). These recommendations included erosion and sediment control measures, tree and understory vegetation clearing, and evaluation of wildlife crossings.

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On January 9, 2020, HNTB generated the IDEM automated Proposed Roadway letter (Appendix C, pages 27-34), which included recommendations to minimize impacts to terrestrial habitat. These recommendations included permitting requirements and restrictions regarding disturbance of vegetation.

All applicable USFWS and IDNR-DFW 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 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 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"/>

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 10), and the Indiana Geological Survey (IGS) early coordination response, there are no karst features identified within 0.5 mile of the project area. In the early coordination response dated February 3, 2020, the IGS did not indicate that karst features exist in the project area (Appendix C, pages 24-26).

IGS also noted that the project location is in a floodway, has high liquefaction potential, moderate potential for bedrock resources, and low potential for sand and gravel resources. No active or abandoned mineral resources extraction sites are documented in the area. Response from IGS was communicated with the designer on February 25, 2020. No impacts are expected.

Threatened or Endangered Species

	<u>Presence</u>	<u>Impacts</u>	
		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?

Remarks:

Based on a desktop review and the RFI (Appendix E, pages 1-14), completed by HNTB on December 20, 2019, IDNR Marion County Endangered, Threatened and Rare (ETR) Species List has been checked and is included in Appendix E, pages 13-14. The highlighted species on the list reflect the federal and state identified ETR species located within the county. According to the IDNR-DFW early coordination response letter dated December 13, 2019, (Appendix C, pages 5-7), the Natural Heritage Program's Database has been checked and found that to date, no plant or animal species listed as state or federally threatened, endangered, or rare have been reported to occur in the project vicinity.

Project information was submitted through the USFWS's Information for Planning and Consultation (IPaC) portal, and an official species list was generated (Appendix C, pages 42-47). 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 the project area other than the Indiana bat and northern long-eared bat.

The project qualifies for the *Range-wide Programmatic Informal Consultation for the Indiana bat and northern long-eared bat (NLEB)*, dated May 2016 (revised February 2018), between FHWA, Federal Railroad Administration (FRA), Federal Transit Administration (FTA), and USFWS. An effect determination key was completed on October 8, 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 November 19, 2019, and requested USFWS's review of the finding (Appendix C, pages 48-57). No response

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was received from USFWS within the 14-day review period; therefore, it was concluded they concur with the finding. Avoidance and Minimization Measures (AMMs) are included as firm commitments in the *Environmental Commitments* section of this document.

The RFI report was approved on December 27, 2019 (Appendix E, pages 1-14). Project information was submitted through the USFWS's Information for Planning and Consultation (IPaC) portal, and an official species list was generated (Appendix C, pages 42-47). This project is located outside a High Potential Zone for the Rusty Patched Bumble Bee. Therefore, no impacts are expected.

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

If a SSA is present, answer the following:

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

Remarks:

Sole Source Aquifer

The project is located in Marion 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. The FHWA/EPA Sole Source Aquifer MOU is not applicable to this project. Therefore, a detailed groundwater assessment is not needed, and no impacts are expected.

Wellhead Protection Area

This project is not located within a Wellhead Protection Area or Source Water Area. In an early coordination letter dated October 23, 2019, IDEM stated that the project is not located within a wellhead area (Appendix C, page 40). No impacts are expected.

Water Wells

The IDNR Water Well Record Database website (<https://www.in.gov/dnr/water/3595.htm>) was accessed on January 16, 2020, by HNTB. Six water wells are mapped within or directly adjacent to the project area. The features will not be affected because they are not located within the construction limits. Therefore, no impacts are expected. Should it be determined during the right-of-way phase that these wells are affected, a cost to cure will likely be included in the appraisal to restore the wells.

Urban Area Boundary

Based on a desktop review of the INDOT Municipal Separate Storm Sewer System (MS4) website (<https://entapps.indot.in.gov/MS4/>) by HNTB on January 16, 2020, and the RFI report, this project is located in an Urban Area Boundary(UAB) location. An early coordination letter was sent on February 11, 2020. The MS4 coordinator did not respond within the 30-day time frame.

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Public Water System
 Based on a desktop review, a site visit on November 18, 2019, by HNTB, and the aerial map of the project area (Appendix B, page 2), this project is located where there is a public water system. The public water system may be affected. A utility coordination letter was sent on date November 19, 2019, to Citizens Energy Group. No response has been received; However, utility coordination will be ongoing.

Flood Plains

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

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

Remarks: Based on a desktop review of the IDNR Indiana Floodway Information Portal website (<http://dnrmaps.dnr.in.gov/appsphp/fdms/>) by HNTB on November 14, 2019, and the RFI report, this project is located in a regulatory floodplain as determined from approved IDNR floodplain maps (Appendix F, page 12). An early coordination letter was sent on November 14, 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: Although this project involves work within the horizontal limits of the 100-year floodplain, no work is being performed below the 100-year flood elevation and as a result this project does not encroach upon the base floodplain.

Farmland

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

Total Points (from Section VII of CPA-106/AD-1006* N/A
 *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 November 18, 2019, by HNTB, and 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 November 14, 2019, to Natural Resources Conservation Service (NRCS) (Appendix C, pages 1-4). Their response dated November 21, 2019, stated that the project will not cause a conversion of prime farmland (Appendix C, page 23).

SECTION C – CULTURAL RESOURCES

	<u>Category</u>	<u>Type</u>	<u>INDOT Approval Dates</u>	<u>N/A</u>
Minor Projects PA Clearance	B	2 & 3	September 27, 2019	<input type="checkbox"/>

**Eligible and/or Listed
Resource Present**

Results of Research

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

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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	9/27/19	NA
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 September 27, 2019, the INDOT Cultural Resource Office (CRO) determined that this project falls within the guidelines of Category B, Type 2 and Type 3 under the Minor Projects Programmatic Agreement (Appendix D, pages 1-4).

MPPA Category B-2 projects include the installation of new lighting, signals, signage and other traffic control devices under certain conditions. For this project, the following conditions were met: Condition A (ii.) "Work occurs in undisturbed soils and an archaeological investigation conducted by the applicant and reviewed by INDOT Cultural Resource Office determines that no National Register-listed or potentially National Register-eligible archaeological resources are present within the project area" and Condition B "Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource."

MPPA Category B-3 projects include construction of added travel, turning, or auxiliary lanes (e.g., bicycle, truck climbing, acceleration and deceleration lanes) and shoulder widening under certain conditions. For this project, the following conditions were met: Condition A (ii.) "Work occurs in undisturbed soils and an archaeological investigation conducted by the applicant and reviewed by INDOT Cultural Resource Office determines that no National Register-listed or potentially National Register-eligible archaeological resources are present within the project area" and Condition B "Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource."

An archaeologist from Cardno who meets the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61 conducted an archaeological records check and field reconnaissance for this project. No archaeological sites have been recorded within the survey area. The field reconnaissance consisted of 183 shovel test probes. No cultural materials were located, and no additional archaeological investigation was recommended (Appendix D, pages 5-8).

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

Based on a desktop review, a site visit on November 18, 2019, by HNTB, the aerial map of the project area (Appendix B, page 2), and the RFI report (Appendix E, page 9), there are two potential Section 4(f) resources

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located within the 0.5 mile search radius. There are no Section 4(f) resources within or adjacent to the project area. Therefore, no use is expected.

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

A review of 6(f) properties on the LWCF list maintained by IDNR Division of Outdoor Recreation and provided to INDOT ESD revealed a total of 30 properties in Marion County and four properties in various counties (Appendix I, page 9). 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 checked="" type="checkbox"/>	<input type="checkbox"/>
If YES, then:		
Is the project in the most current MPO TIP?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Is the project exempt from conformity?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If the project is NOT exempt from conformity, then:		
Is the project in the Transportation Plan (TP)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Is a hot spot analysis required (CO/PM)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Level of MSAT Analysis required?

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

Remarks: This project is included in the Fiscal Year (FY) 2020-2023 Indianapolis MPO Transportation Improvement Program (TIP) and the FY 2020-2024 Statewide Transportation Improvement Program (STIP) (Appendix H, page 1).

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

The purpose of the project is to improve traffic operations of the intersection to a LOS of D or higher. This project has been determined to generate minimal air quality impacts for Clean Air Act criteria pollutants and has not been linked with any special mobile source air toxic (MSAT) concerns. As such, this project will not result in changes in traffic volumes, vehicle mix, basic project location, or any other factor that would cause a meaningful increase in MSAT impacts of the project from that of the no-build alternative.

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

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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 in an urban portion of Marion County, Indiana and will require the acquisition of 2 acres of new permanent right-of-way. The right-of-way acquisition is not anticipated to have a significant impact on tax base or property values.

The MOT for this project will require lane closures. Community and economic impacts realized due to the project may include increased travel time, increased emergency response time, and increased fuel consumption by commercial and individual motorists. Impacts will be temporary in nature. Local access to properties surrounding the construction limits will be maintained during the roadway closure per INDOT Standard Specification 107.08(e).

Per the Fairs and Festivals website (www.fairsandfestivals.net) and the Indiana Festival website (www.indianafestivals.org), accessed on January 21, 2020, there are numerous regularly scheduled festivals and events in Indianapolis, Indiana. Festivals include the 500 Festival, Talbot Street Art Fair, Indian Market & Festival, Indianapolis Art Fair, and the Indiana State Fair. The MOT plan may cause minor delays or inconveniences to those travelling to these events. The selected contractor will implement the MOT in accordance with the current Indiana Design Manual (IDM) and INDOT Standard Specifications.

Early coordination letters were sent to local officials on November 14, 2019 (Appendix C, pages 1-4). The Marion County Surveyor responded on November 15, 2019, with information regarding surveying monuments and legal drains (Appendix C, pages 11-13). The response indicated that the responsibility of legal drains is now with the Indianapolis Department of Public Works. The Surveyor's Office has two monuments located in the right-of-way of the project area and some to the north and east that are just outside of the project limits. Any monuments that are disturbed will need to be replaced by INDOT under the supervision of the County Surveyor's Office per IC 8-23-9-24. This is a firm project commitment. HNTB responded on December 10, 2019 (Appendix C, pages 12-13).

The City of Indianapolis' most recent Americans with Disabilities Act (ADA) Implementation/Transition Plan was developed and considered effective in 2013. An annual report demonstrating continued implementation of accessibility enhancements was prepared by the City of Indianapolis on December 28, 2018. The project will be designed in accordance with the plan and all applicable ADA requirements.

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

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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. Traffic impacts to the intersection and the I-465 interchange were studied and no direct or indirect negative impacts are expected. 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
<input type="checkbox"/>	<input checked="" type="checkbox"/>

Remarks:

Based on a desktop review, a site visit on November 18, 2019, by HNTB, the aerial map of the project area (Appendix B, page 2), and the RFI report (Appendix E, page 9), there are six religious facilities, one cemetery, two schools, one recreational facility, one railroad, and one pipeline within the 0.5 mile search radius. The nearest religious facility, Bethany Lutheran Church, is located adjacent to the project area. An early coordination letter was sent to Bethany Lutheran Church on February 11, 2020. No response was received. No other public facilities are located within or adjacent to the project area. Access to all properties will be maintained during construction. Therefore, no impacts are expected.

IndyGo's response to early coordination dated December 16, 2019, included concerns regarding the ease of north/south mobility through the area on US 31, as well as access to the curb lanes south of Thompson Road in proximity to the IndyGo bus stops (Appendix C, pages 14-17). IndyGo indicated that they would not be in favor of Alternative #2, which is the proposed project utilizing displaced left turns on US 31. HNTB responded to IndyGo with on-going coordination that resulted in the project design changing to accommodate the IndyGo bus stops (Appendix C, pages 18-22). As part of the project, sidewalks will be provided along both sides of US 31 from the intersection south to the bus stops. The bus stop for US 31 southbound was modified from the original design to be closer to the existing location.

Perry Township Schools responded to early coordination on November 19, 2019 (Appendix C, pages 38-39). Their response indicated a preference for Alternative #1, based on a need for the least amount of delay to transport students to their schools. The response also posed questions regarding projected start date and duration for the project, access during construction, and timing of the construction with regards to school breaks and other large construction projects. HNTB responded on December 11, 2019, providing answers to the questions and again on April 13, 2020, providing additional information about the preferred alternative (Appendix C, pages 35-37).

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

Environmental Justice (EJ) (Presidential EO 12898)

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

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Remarks:

Under FHWA Order 6640.23A, FHWA and the project sponsor, as a recipient of funding from FHWA, are responsible to ensure that their programs, policies, and activities do not have a disproportionately high and adverse effect on minority or low-income populations. Per the current INDOT Categorical Exclusion Manual, an Environmental Justice (EJ) Analysis is required for any project that has two or more relocations or 0.5 acre of additional permanent right-of-way. The project will require 2.24 acres of additional permanent right-of-way and one relocation. Therefore, an EJ Analysis is required.

Potential EJ impacts are detected by locating minority and low-income populations relative to a reference population to determine if populations of EJ concern exist and whether there could be disproportionately high and adverse impacts to them. The reference population may be a county, city or town and is called the community of comparison (COC). In this project, the COC is Marion County. The community that overlaps the project limits is called the affected community (AC). In this project, the AC is Census Tracts 3806 and 3807. An AC has a population of concern for EJ if the population is more than 50% minority or low-income or if the low-income or minority population is 125% of the COC. Data from the 2013-2017 American Community Survey was obtained from the US Census Bureau Website <https://factfinder.census.gov/> on October 31, 2019, by HNTB (Appendix I, pages 1-7). The data collected for minority and low-income populations within the AC are summarized in the below table.

Table: Minority and Low-Income Data (American Community Survey five-year estimates data, 2013-2017)			
	COC – Marion County, Indiana	AC-1 – Census Tract 3806, Marion County, Indiana	AC-2 – Census Tract 3807, Marion County, Indiana
Percent Minority	43.31	30.82	52.20
125% of COC	54.13	AC < 125% COC	AC > 50% COC
EJ Population of Concern		No	Yes
Percent Low-Income	19.80	18.70	29.26
125% of COC	24.75	AC 1 < 125% COC	AC 2 > 125% COC
EJ Population of Concern		No	Yes

AC-1, Census Tract 3806, has a percent minority of 30.82% which is below 50% and is below the 125% COC threshold. Therefore, AC-1 does not contain minority populations of EJ concern.

AC-1, Census Tract 3806, has a percent low-income of 18.70% which is below 50% and is below the 125% COC threshold. Therefore, AC-1 does not contain low-income populations of EJ concern.

AC-2, Census Tract 3807, has a percent minority of 52.20%, which is above 50%. Therefore, AC-2 is a minority population of EJ concern.

AC-2, Census Tract 3807, has a percent low-income of 29.26%, which is below 50% and is above the 125% COC threshold. Therefore, AC-2 is a low-income population of EJ concern.

Conclusion

On December 9, 2019, INDOT ESD concurred with the EJ analysis, stating “The project would [require] right-of-way, may require one commercial relocation, would not disrupt community cohesion or create a physical barrier. The project would improve operation of the intersection and to provide improved safety for pedestrian movement at the intersection. Currently there are no pedestrian facilities within the vicinity of the project area but apparent foot traffic paths are visible to the east of the project area. With the information provided, INDOT-ESD would not consider the impacts associated with this project as causing a disproportionately high and adverse effect on minority and/or low incomes populations of EJ concern relative to non EJ populations in accordance with the provisions of Executive Order 12898 and FHWA Order 6640.23a. No further EJ Analysis is required” (Appendix I, page 8).

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The census data sheets, map, and calculations can be found in Appendix I, pages 1-7.

Relocation of People, Businesses or Farms

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

Yes	No
X	
	X
	X
X	

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

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

Remarks: The relocation of one restaurant on the southwest corner of US 31 and SR 135/Thompson Road is anticipated due to the addition of new turn lanes (Appendix B, page 35). The selection of the preferred alternative minimized the number of necessary relocations. The other two alternatives considered would have required 2-3 commercial relocations. No other alternatives meeting the purpose and need were evaluated that would have avoided the need for the relocation. The acquisition and relocation program will be conducted in accordance with 49 CFR 24 of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as amended. Relocation resources are available to all residential and business relocatees without discrimination. No person displaced by this project will be required to move from a displaced dwelling unless comparable replacement housing is available to that person.

Utility coordination has been initiated and is ongoing.

SECTION H – HAZARDOUS MATERIALS & REGULATED SUBSTANCES

Documentation

Hazardous Materials & Regulated Substances (Mark all that apply)

Red Flag Investigation

X

 Phase I Environmental Site Assessment (Phase I ESA)
 Phase II Environmental Site Assessment (Phase II ESA)
 Design/Specifications for Remediation required?

	No	Yes/ Date
ES Review of Investigations		December 27, 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 20, 2019, by HNTB (Appendix E, pages 1-14). Two State Cleanup sites, six Underground Storage Tank (UST) sites, two Voluntary Remediation Program (VRP) sites, 12 Leaking Underground Storage Tank (LUST) sites, three Institutional Control sites, and one National Pollutant Discharge Elimination System (NPDES) site are located within 0.5 mile of the project area. Three LUST sites, one State Cleanup site, one VRP site, and one Institutional Control site are located within or adjacent to the project area.

The following sites have the potential to impact the project:

- Johnson Oil Bigfoot #025, 505 E Thompson Road, AI 15900, is located at the southeast corner of Thompson Road and US 31 within the project area. The site is was formerly a gas station and is currently a CVS Pharmacy. IDEM issued a No Further Action Approval on January 3, 2002. Benzene, toluene, ethylbenzene and xylene (BTEX) was not detected at levels above the maximum contaminant level in any groundwater samples. Methyl tert-butyl ether (MTBE) was detected above IDEM closure objectives in soils borings located closest to Thompson Road. If excavation occurs in this area, contamination may be encountered and proper handling, removal, and disposal of soil and/or groundwater will be necessary.
- Shell Oil Indianapolis, 5250 South East Street, AI 18881, is located within the project area, near the southern terminus of the project. The site is currently redeveloped as a fast food restaurant. During a

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site investigation prior to the removal of a UST, petroleum hydrocarbons were noted in the soil and groundwater in the area of the former pump island at depths of approximately 6-8 feet. IDEM issued a No Further Action Approval for the site on November 22, 1999. Contamination noted on site did not extend to US 31. However, since the groundwater flow is to the northeast towards the roadway, migration of the contamination is possible. If excavation occurs in this area, contamination may be encountered and proper handling, removal, and disposal of soil and/or groundwater will be necessary.

- Shell Dealer Indianapolis, 514 East Thompson Road, AI 18880, is located at the northeast corner of Thompson Road and US 31 within the project area. The site operated as a gas station from 1968 to 2006, and the UST system was removed in May 2006. Contamination was found and additional excavation of impacted soils occurred in August 2007. Contaminant levels below closure levels for soils were noted on the site at depths greater than 9 feet. Groundwater was noted to flow southwest towards the intersection. IDEM issued a no Further Action letter on February 17, 2011. This site is currently being redeveloped. If excavation occurs in this area, contamination may be encountered and proper handling, removal, and disposal of soil and/or groundwater will be necessary.
- The Former Shoney's site, 5010 South East Street, AI 23155, is located south of Thompson Road on the west side of US 31 within the project area. This site was a participant in the State Cleanup and VRP and has a recorded Environmental Restrictive Covenant (ERC). A petroleum release was reported onsite on June 29, 2000, and an Initial Site Characterization Report was submitted to IDEM's State Cleanup Program on September 7, 2000. The site was accepted into IDEM's VRP in 2002. The Remediation Completion Report dated May 8, 2009, indicated that groundwater and soil impacts were below applicable closure levels. On January 5, 2011, this site was provided a Covenant Not to Sue by IDEM's VRP after completing the voluntary cleanup at the site. Low levels of contaminants were noted in the groundwater below 8 feet. An ERC was placed on the property on March 31, 2010. The ERC prohibits use of groundwater at the site, but allows excavation and construction activities, if excavated soils are disposed of pursuant to state and federal law. If excavation occurs in this area, contamination may be encountered and proper handling, removal, and disposal of soil and/or groundwater will be necessary. Because there is an ERC on the site, coordination will be conducted with IDEM before further site activities occur.

These recommendations are included as firm project commitments in the *Environmental Commitments* section of this document.

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)	X
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	X
Isolated Wetlands determination	<input type="checkbox"/>
Rule 5	X
Other	<input type="checkbox"/>
Wetland Mitigation required	<input type="checkbox"/>
Stream Mitigation required	<input type="checkbox"/>

IDNR

Construction in a Floodway	<input type="checkbox"/>
Navigable Waterway Permit	<input type="checkbox"/>
Lake Preservation Permit	<input type="checkbox"/>
Other	<input type="checkbox"/>
Mitigation Required	<input type="checkbox"/>

US Coast Guard Section 9 Bridge Permit

<input type="checkbox"/>

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Others (Please discuss in the remarks box below)

Remarks:

Based on a permit determination received from INDOT Ecology and Waterway Permitting Office on February 24, 2020, an IDEM Rule 5 permit will be required based on the project having greater than one acre of land disturbance. A USACE Section 404 permit and IDEM Section 401 Water Quality Certification will be required due to impacts to Wetland 01 (Appendix F, pages 31-33).

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

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

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 District Environmental Section will be contacted immediately. (INDOT)
2. It is the responsibility of the project sponsor to notify Bethany Lutheran Church, school corporations, and emergency services at least two weeks prior to any construction that would block or limit access. (INDOT)
3. General AMM 1: Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable Avoidance and Minimization Measures. (USFWS)
4. Lighting AMM 1: Direct temporary lighting away from suitable habitat during the active season. (USFWS)
5. Johnson Oil Bigfoot #025, 505 E Thompson Road, AI 15900, is located at the southeast corner of Thompson Road and US 31 within the project area. If excavation occurs in this area, contamination may be encountered and proper handling, removal, and disposal of soil and/or groundwater will be necessary. (INDOT)
6. Shell Oil Indianapolis, 5250 South East Street, AI 18881, is located within the project area, near the southern terminus of the project. If excavation occurs in this area, contamination may be encountered and proper handling, removal, and disposal of soil and/or groundwater will be necessary. (INDOT)
7. Shell Dealer Indianapolis, 514 East Thompson Road, AI 18880, is located at the northeast corner of Thompson Road and US 31 within the project area. If excavation occurs in this area, contamination may be encountered and proper handling, removal, and disposal of soil and/or groundwater will be necessary. (INDOT)
8. The Former Shoney's site, 5010 South East Street, AI 23155, is located south of Thompson Road on the west side of US 31 within the project area. The ERC prohibits use of groundwater at the site, but allows excavation and construction activities, if excavated soils are disposed of pursuant to state and federal law. If excavation occurs in this area, contamination may be encountered and proper handling, removal, and disposal of soil and/or groundwater will be necessary. Because there is an ERC on the site, coordination will be conducted with IDEM before further site activities occur. (INDOT)
9. The Marion County Surveyor's Office has two monuments located in the right-of-way of the project area and some to the north and east that are just outside of the project limits. Any monuments that are disturbed will need to be replaced by INDOT under the supervision of the Marion County Surveyor's Office per IC 8-23-9-24. (Marion County Surveyor's Office)

For Further Consideration:

10. Minimize the use of riprap and use other alternative erosion protection materials whenever possible. (IDNR-DFW)

This is page 25 of 26 Project name: US 31/SR 135 – Intersection Improvement Date: June 24, 2020

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11. While hard armoring alone (e.g. riprap or glacial stone) may be needed in certain instances, soft armoring and bioengineering techniques should be considered first. (IDNR-DFW)
12. Consider coordinating with the Division of Fish and Wildlife's CORRIDORS (Conservation On Rivers and Roadways Intended to Develop Opportunities for Resources and Species) Program. CORRIDORS helps to develop habitats for grassland-dependent species and foster improved pollinator habitat along roadways and waterways. Program partners include the Indiana Department of Transportation (INDOT), USDA Natural Resources Conservation Service (NRCS), Pheasants Forever and Quail Forever. (IDNR-DFW)

SECTION K- EARLY COORDINATION

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

Remarks:

Early coordination was initiated on November 14, 2019, with federal, state, and local agencies (Appendix C, pages 1-4). Comments from agencies who responded have been incorporated into this study, as appropriate. The resource agencies and dates of their responses are listed below.

Agency	Response Received
U.S. Fish and Wildlife Service	November 19, 2019
Indiana Department of Natural Resources, Division of Fish and Wildlife	December 13, 2019
Natural Resources Conservation Service	November 21, 2019
INDOT Public Involvement Office	November 15, 2019
Perry Township Schools	November 19, 2019
Marion County Surveyor	November 25, 2019
IndyGo	December 16, 2019
Marion County Emergency Management	No Response
Floodplain Administrator	No Response
Perry Township Trustee	No Response
Indianapolis Metropolitan Planning Organization	No Response
City of Indianapolis, Mayor	No Response
Indianapolis Fire Department	No Response
Indianapolis Department of Public Works	No Response
USACE Environmental Analysis Branch, Louisville District	No Response
Indianapolis Metropolitan Police Department	No Response
Marion County Board of Commissioners	No Response

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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.

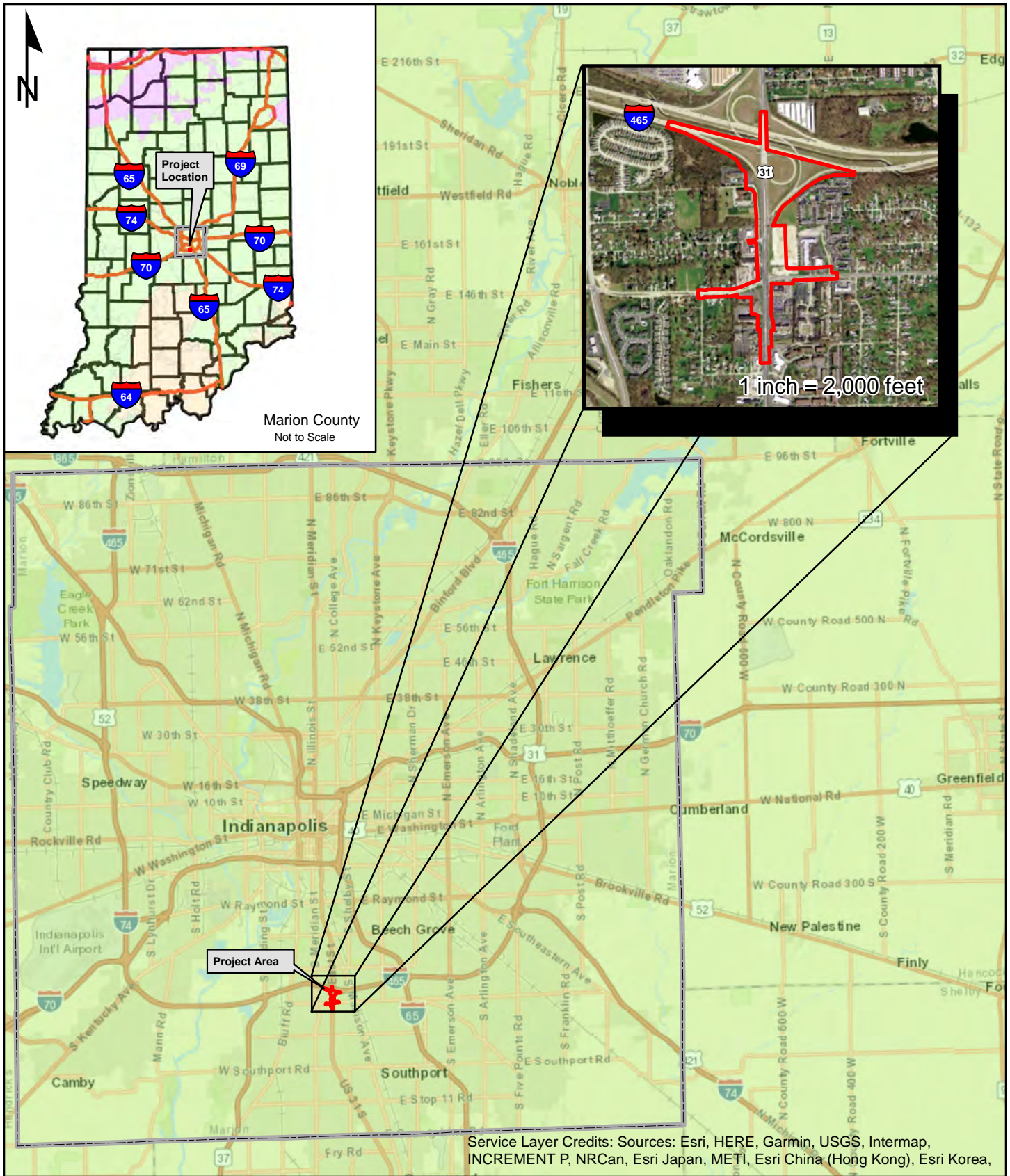
⁵AMMs determined by the IPAC decision key to be needed that are listed in the USFWS *User's Guide for the Range-wide Programmatic Consultation for Indiana bat and Northern long-eared bat* as "required for all projects".

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

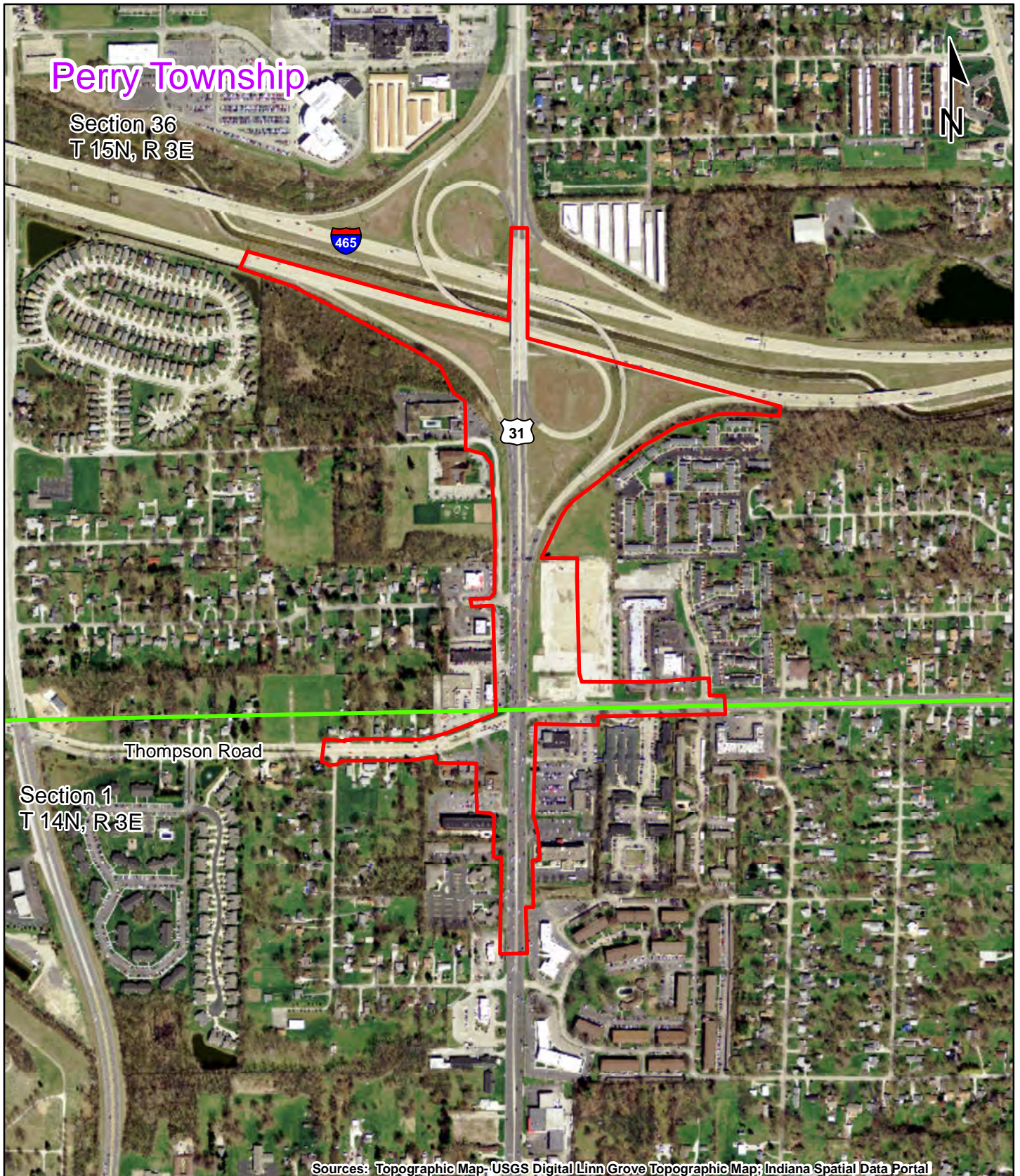





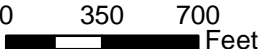
Marion County
Not to Scale

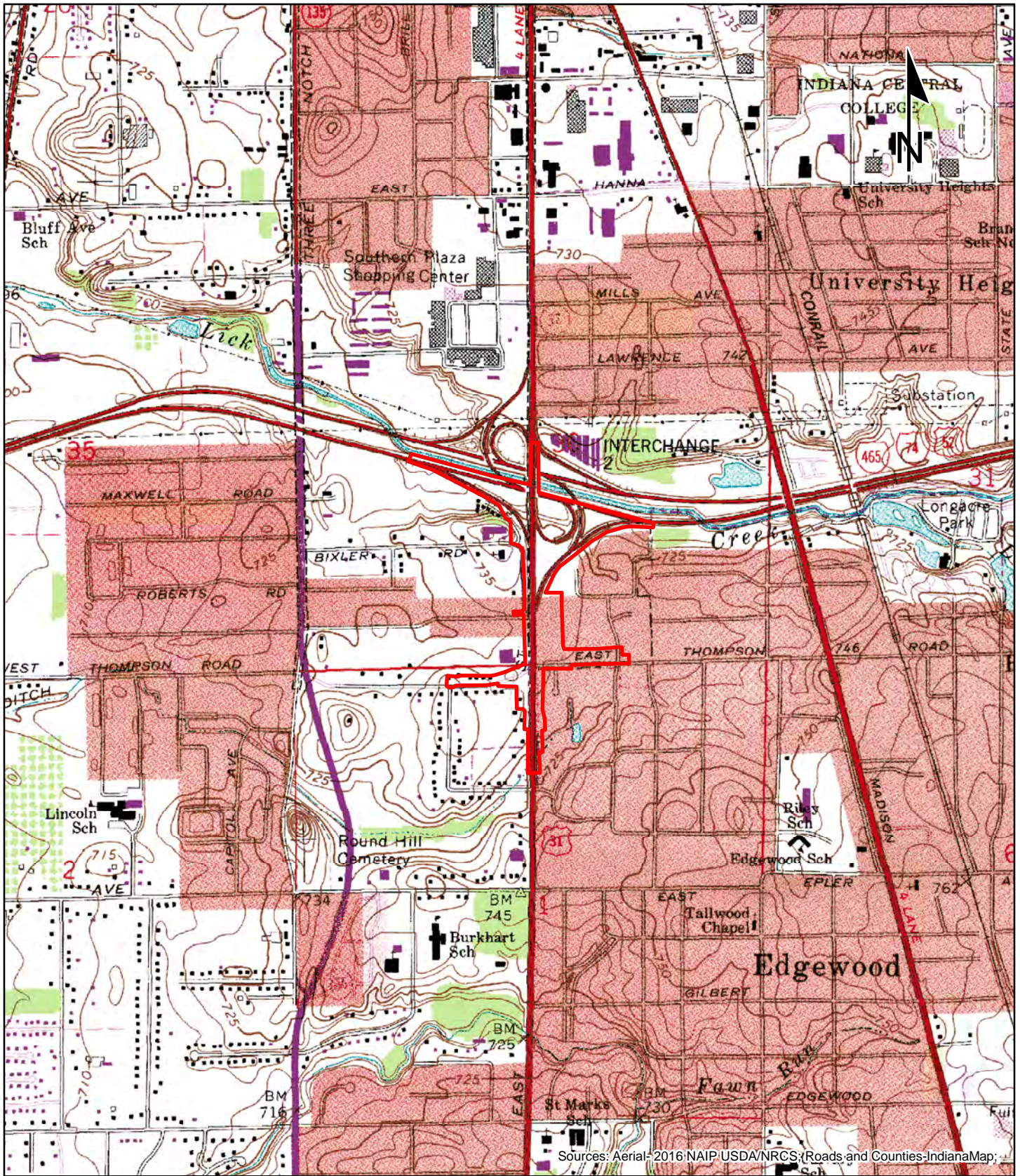
1 inch = 2,000 feet

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




Project Area Marion County	NRCS Land Resource Regions Northeast and Northcentral Midwest Eastern Mountains and Piedmont	Project Location Map US 31 and SR 135/Thompson Road Intersection Improvements Project Marion County, Indiana
0 1.5 3 Miles	Des. No. 1700182 1 inch = 3 miles	 Graphics created by HNTB Corporation (2019)

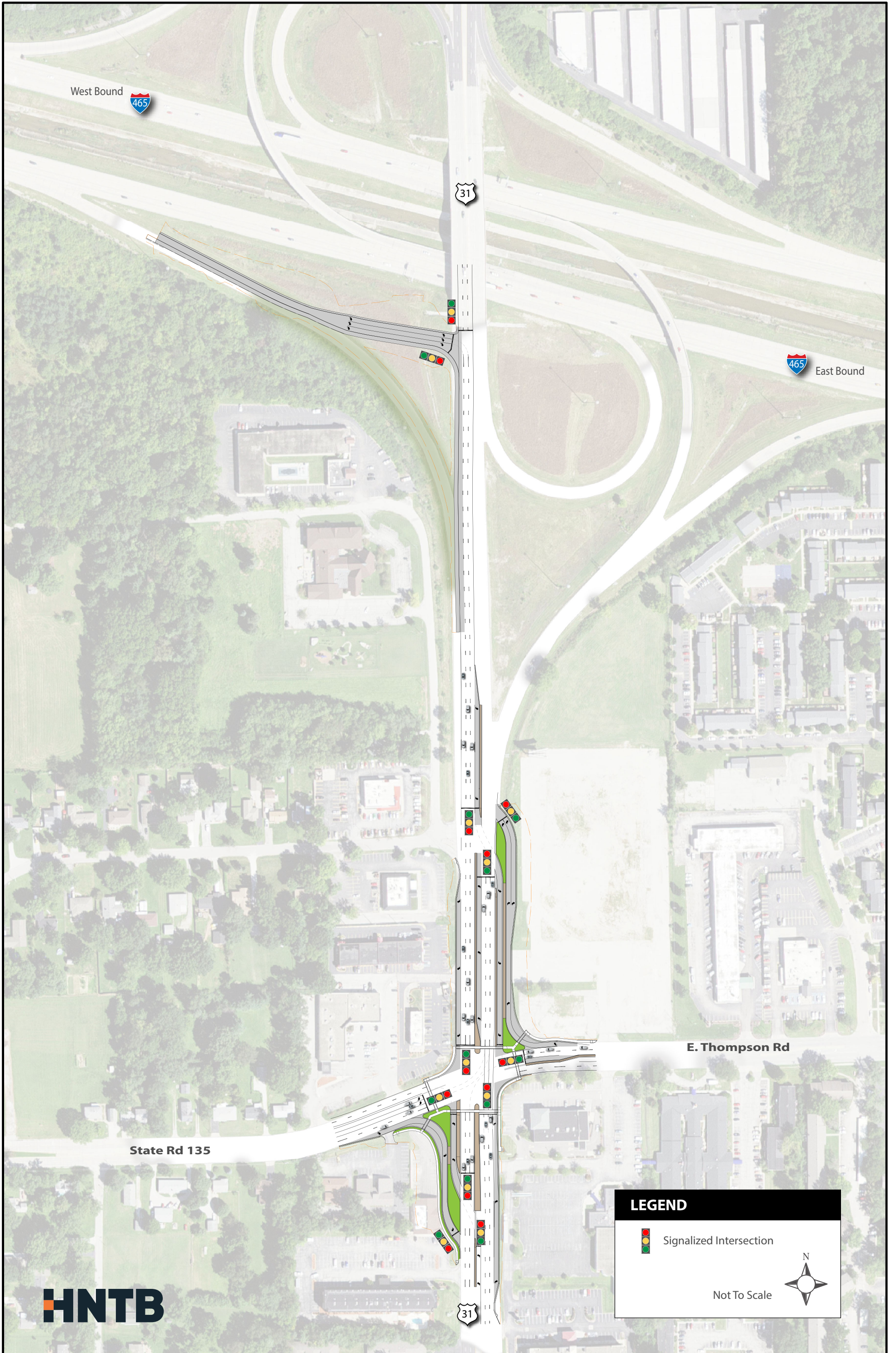


 Project Area  PLSS Landsurvey Sections	Project Area Aerial US 31 at Thompson Road Intersection Improvements Project Marion County, Indiana	
	Des. No. 1700182 1 inch = 700 feet	 Graphics created by HNTB Corporation (2019)
		



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

 Project Area	USGS 7.5 Minute Maywood Quadrangle Map US 31 and SR 135/Thompson Road Intersection Improvements Project Marion County, Indiana	
	Des. No. 1700182 R-40869	 Graphics created by HNTB Corporation (2019)
0 1,000 2,000  Feet		1 inch = 2,000 feet



How does a Continuous Flow Intersection Work?

The continuous flow intersection, also called a displaced left-turn intersection, is an alternative design for an at-grade intersection.

This configuration moves the left-turn conflict out of the intersection and synchronizes it with the signal cycle of the intersecting road. In the same way as a regular intersection, all traffic flow is controlled by traffic signals.

Vehicles attempting to turn left across the opposing direction of traffic cross prior to entering the intersection. The dedicated left turn signal in the intersection is not necessary. Instead, vehicles turning left can make their movement at the same time vehicles move north and south through the intersection.

All turning movements are designed to accommodate all vehicle types and the required design standards.

PHASE 1

East/west traffic on SR 135/E. Thompson Road has the green light to turn left onto US 31.

North/south traffic on US 31 has the green light to turn right onto SR 135/E. Thompson Rd.



How does a Continuous Flow Intersection Work?

The continuous flow intersection, also called a displaced left-turn intersection, is an alternative design for an at-grade intersection.

This configuration moves the left-turn conflict out of the intersection and synchronizes it with the signal cycle of the intersecting road. In the same way as a regular intersection, all traffic flow is controlled by traffic signals.

Vehicles attempting to turn left across the opposing direction of traffic cross prior to entering the intersection. The dedicated left turn signal in the intersection is not necessary. Instead, vehicles turning left can make their movement at the same time vehicles move north and south through the intersection.

All turning movements are designed to accommodate all vehicle types and the required design standards.

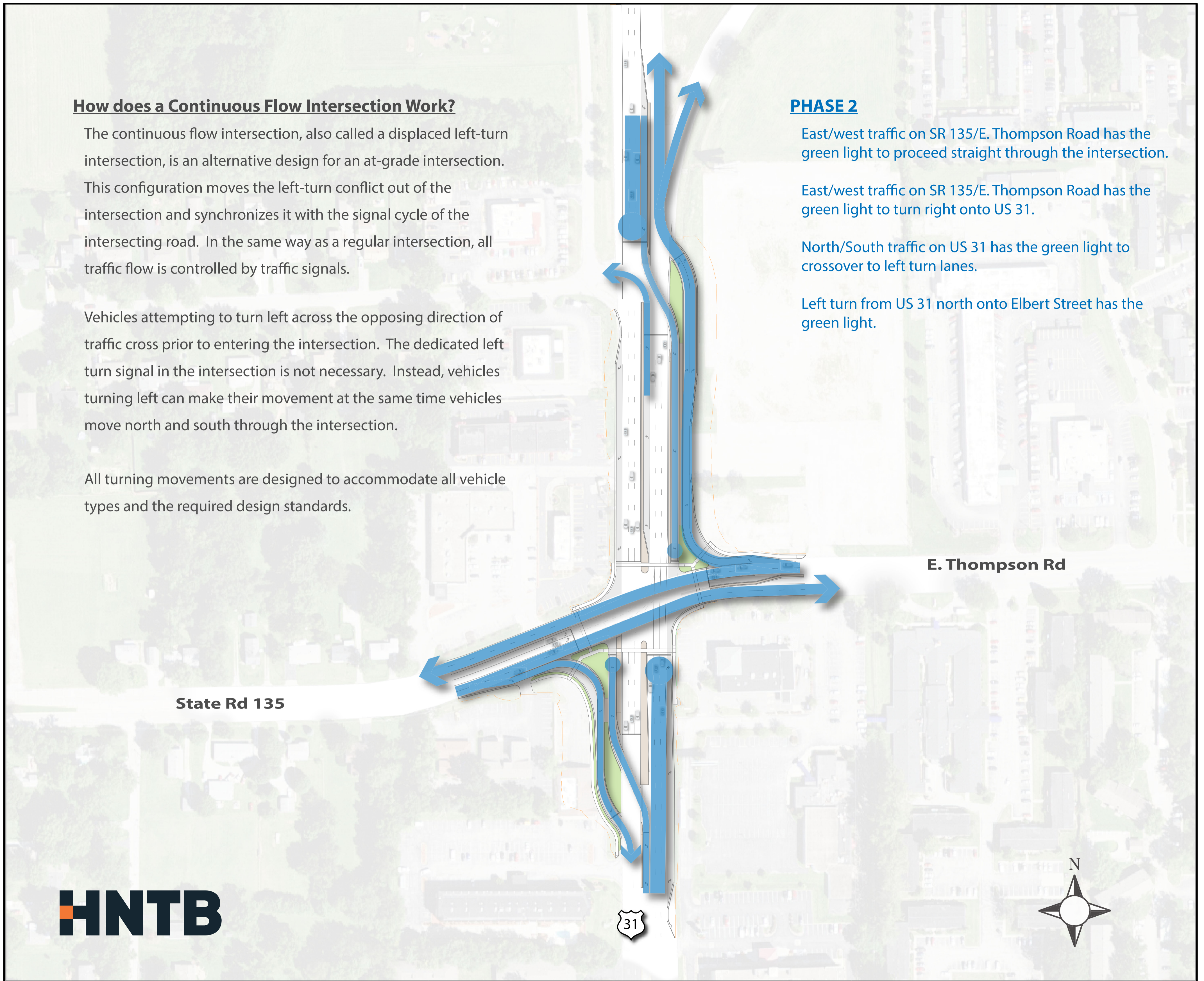
PHASE 2

East/west traffic on SR 135/E. Thompson Road has the green light to proceed straight through the intersection.

East/west traffic on SR 135/E. Thompson Road has the green light to turn right onto US 31.

North/South traffic on US 31 has the green light to crossover to left turn lanes.

Left turn from US 31 north onto Elbert Street has the green light.



How does a Continuous Flow Intersection Work?

The continuous flow intersection, also called a displaced left-turn intersection, is an alternative design for an at-grade intersection. This configuration moves the left-turn conflict out of the intersection and synchronizes it with the signal cycle of the intersecting road. In the same way as a regular intersection, all traffic flow is controlled by traffic signals.

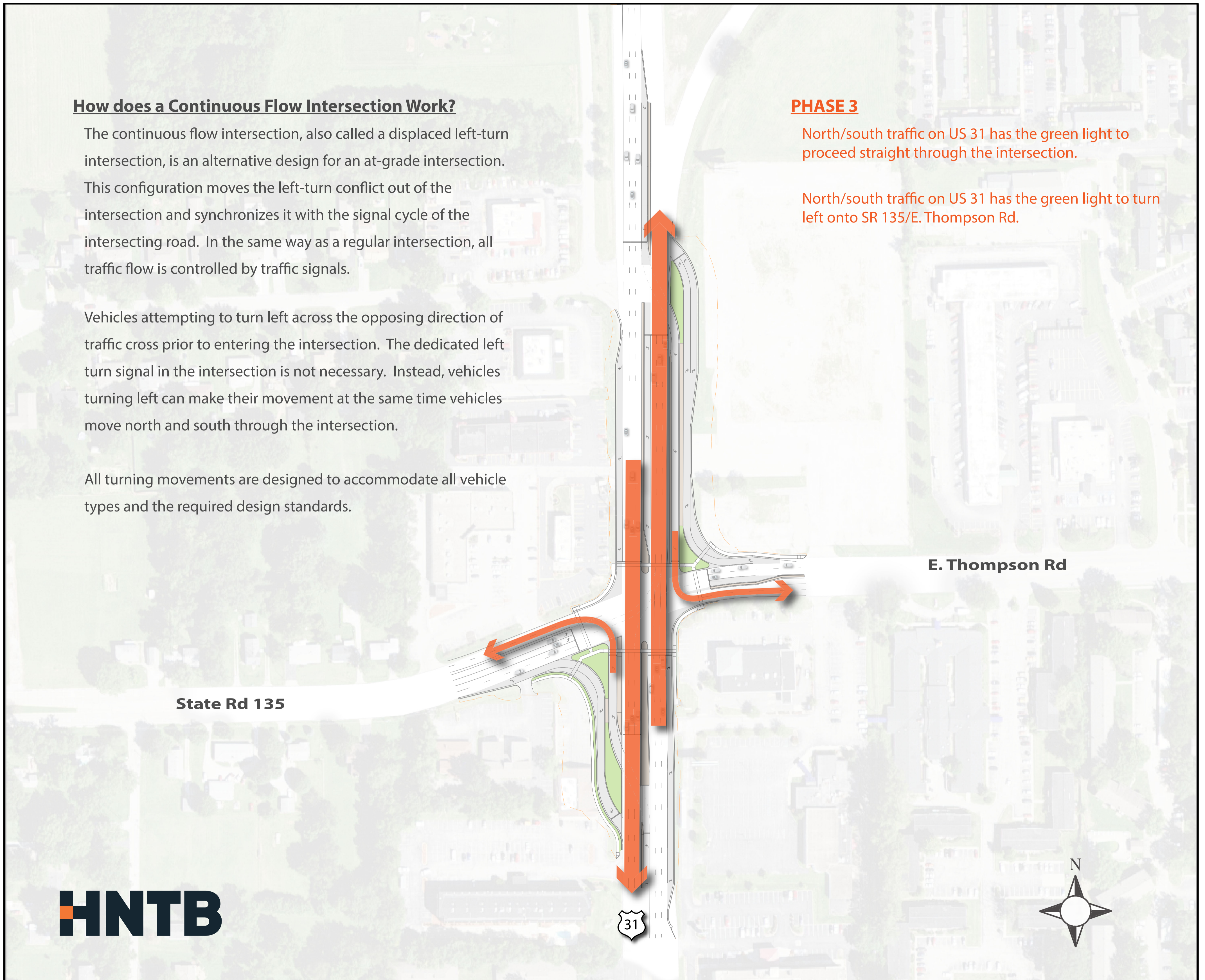
Vehicles attempting to turn left across the opposing direction of traffic cross prior to entering the intersection. The dedicated left turn signal in the intersection is not necessary. Instead, vehicles turning left can make their movement at the same time vehicles move north and south through the intersection.

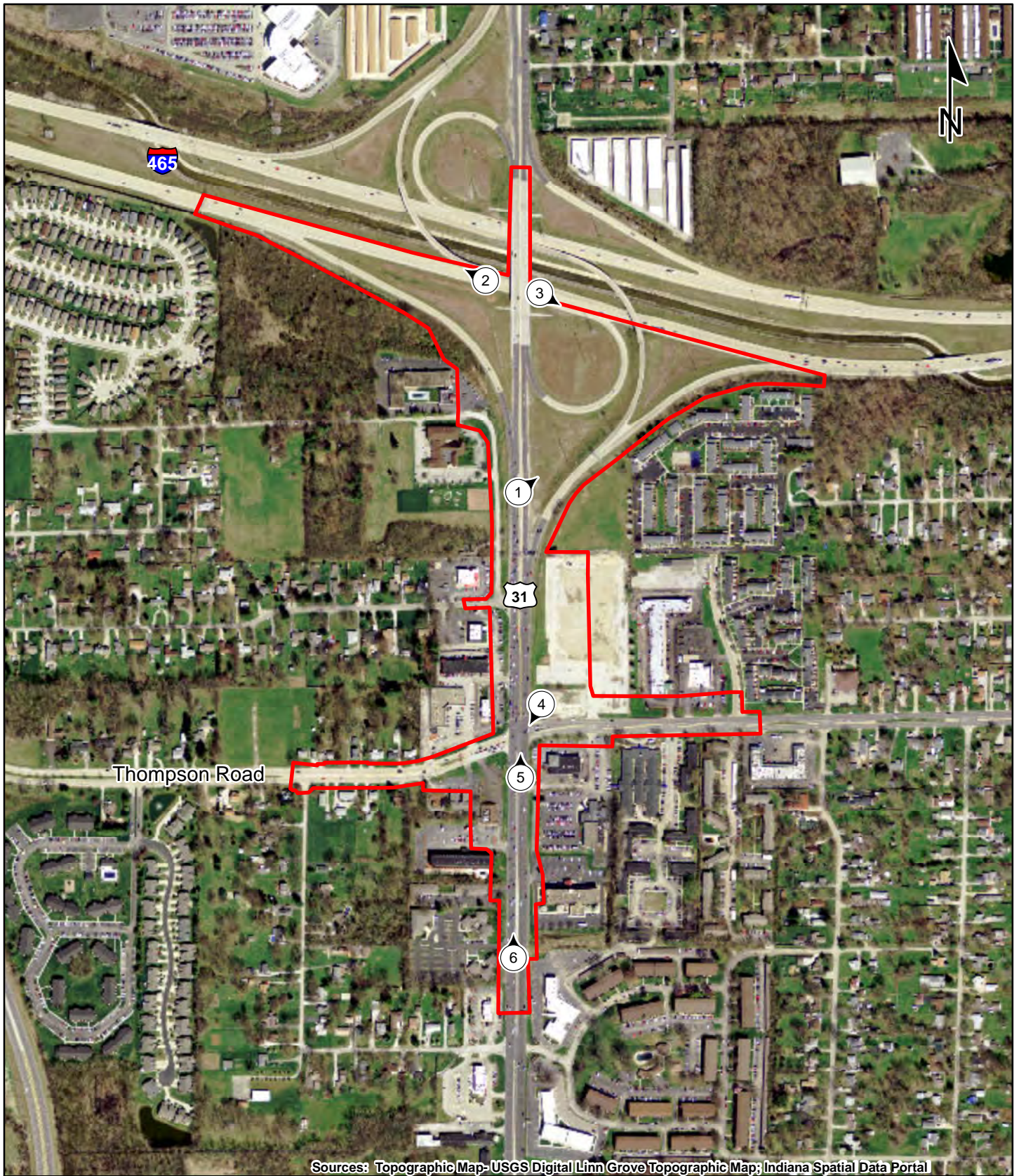
All turning movements are designed to accommodate all vehicle types and the required design standards.





PHASE 3

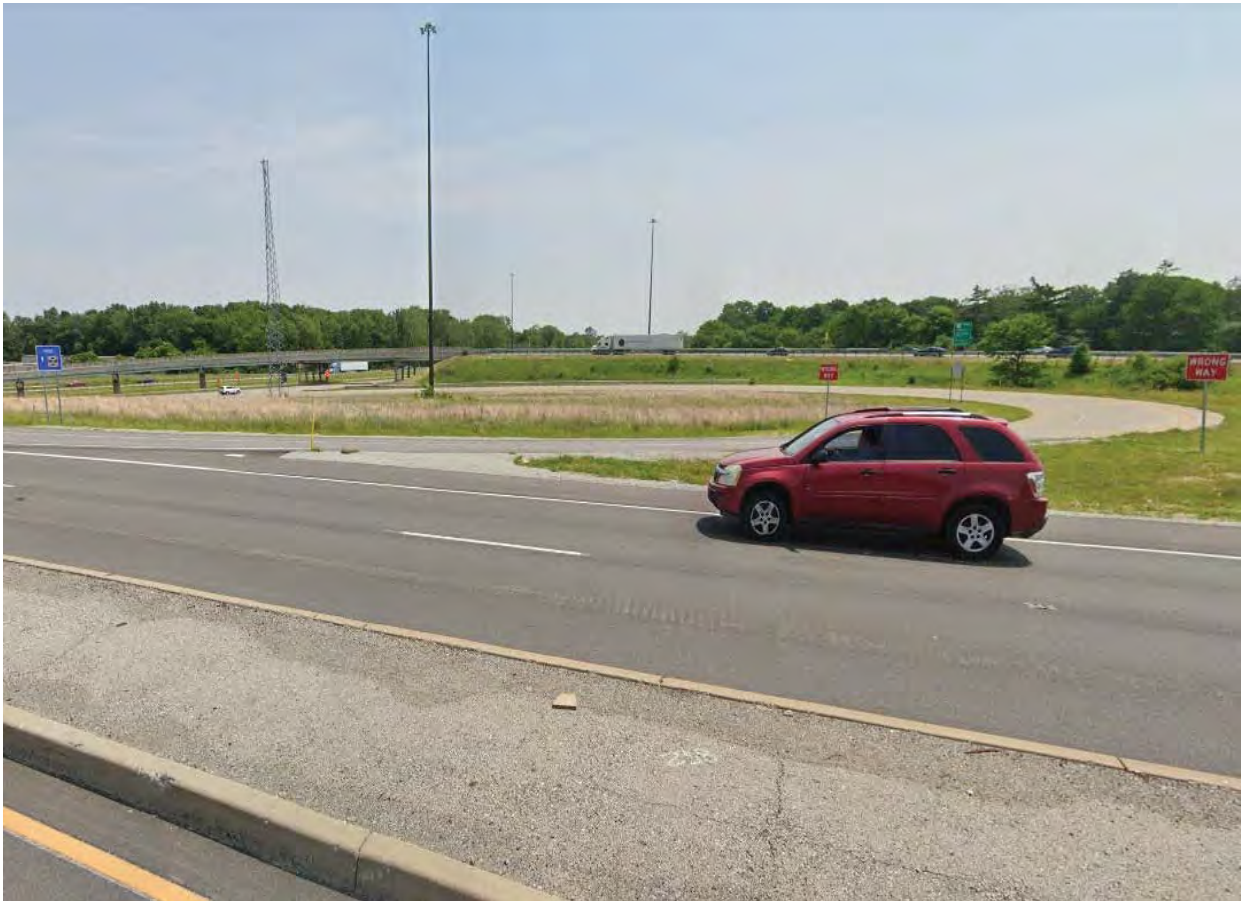
North/south traffic on US 31 has the green light to proceed straight through the intersection.

North/south traffic on US 31 has the green light to turn left onto SR 135/E. Thompson Rd.





 Project Area  Photo Location	Photo Location Map US 31 and SR 135/Thompson Road Intersection Improvements Project Marion County, Indiana	
	Des. No. 1700182 1 inch = 600 feet	 Graphics created by HNTB Corporation (2019)
0 300 600  Feet		



1. Looking northeast to interchange of US 31 and I-465



2. Looking northwest to I-465 from US 31



3. Looking southeast to I-465 from US 31



4. Looking southwest to intersection of Thompson Rd. and US 31



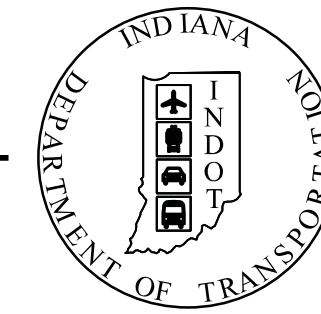
5. Looking north to US 31 to intersection with Thompson Rd.



6. Looking north along US 31 at the south end of the project area

PROJECT	DESIGNATION
1700182	1700182
CONTRACT	
R-40869	

INDIANA DEPARTMENT OF TRANSPORTATION



ROAD PLANS

U.S. 31 @ S.R. 135/THOMPSON ROAD INTERSECTION IMPROVEMENT

ROUTE: U.S. 31 @ RP 106+0.82

PROJECT NO. 1700182 P.E.

1700182 R/W

1700182 CONST.

PROJECT DESCRIPTION

INTERSECTION IMPROVEMENT AT U.S. 31 AND S.R. 135/ THOMPSON ROAD LOCATED IN SECTION 1, T-14-N, R-3-E AND SECTION 36, T-15-N, R-3-E PERRY TOWNSHIP, MARION COUNTY, INDIANA.

TRAFFIC DATA	U.S. 31	S.R. 135 / THOMPSON RD.	I-465 EXIT RAMP TO U.S. 31 SB
A.A.D.T. (2019)	56,350	14,200	10,750
A.A.D.T. (2045)	51,200	13,800	11,400
D.H.V. (2045)	4,625	1,125	1,050
DIRECTIONAL DISTRIBUTION	59%	54%	57%
TRUCKS (% AADT)	2.7%	2.7%	4.3%

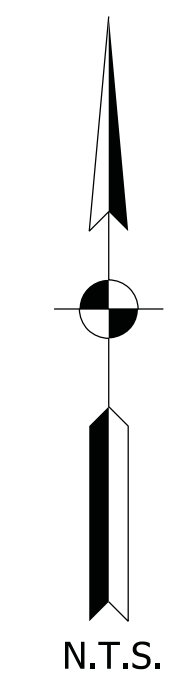
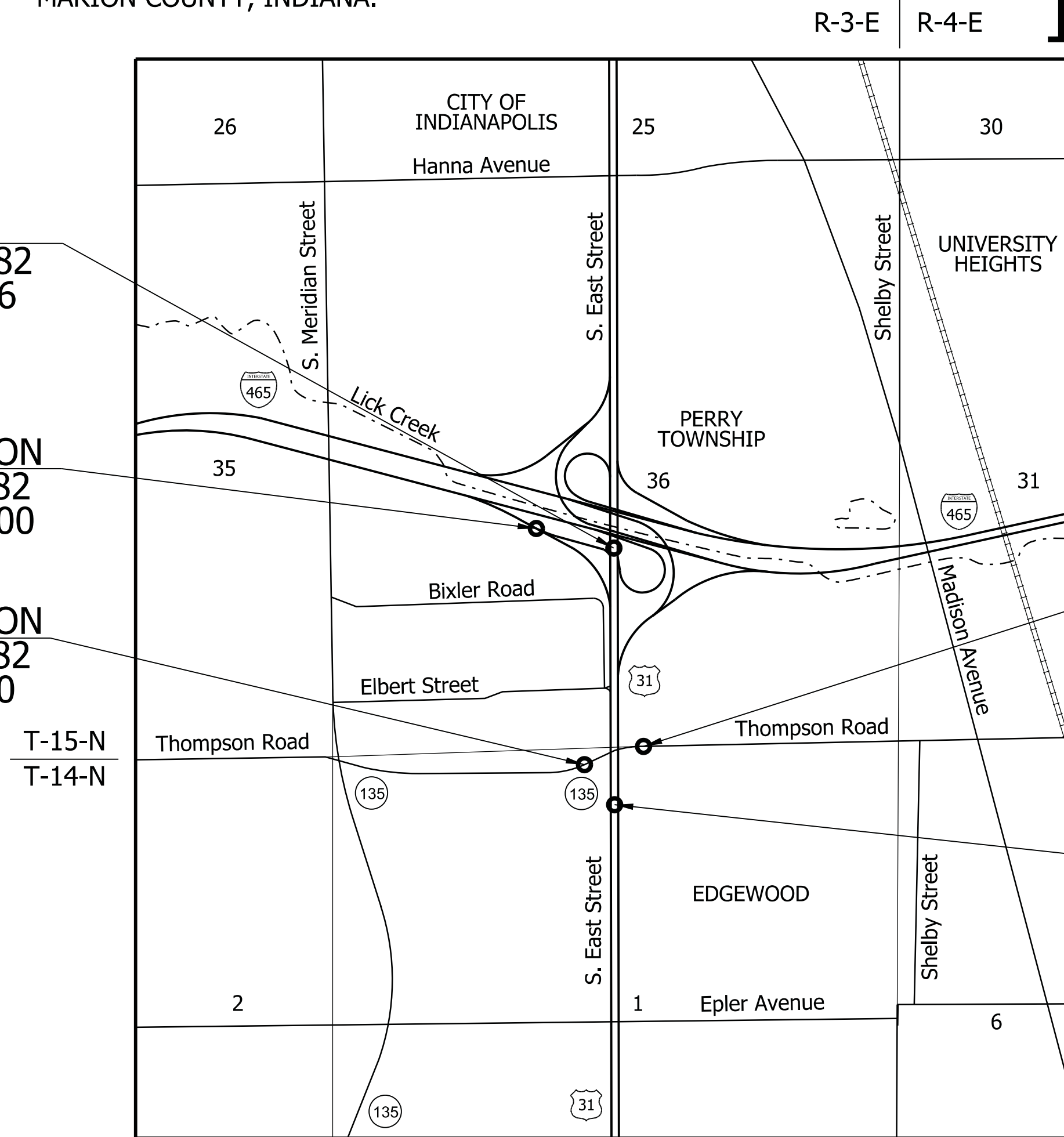
DESIGN DATA	U.S. 31	S.R. 135 / THOMPSON RD.	I-465 EXIT RAMP TO U.S. 31 SB
DESIGN SPEED (MPH)	45	40	55/40
PROJECT DESIGN CRITERIA	3R	3R	4R RECONSTRUCTION
FUNCTIONAL CLASSIFICATION	PRINCIPAL ARTERIAL	MINOR ARTERIAL	INTERSTATE
RURAL/URBAN	URBAN	URBAN	URBAN
TERRAIN	LEVEL	LEVEL	LEVEL
ACCESS CONTROL	PARTIAL	PARTIAL	FULL

STAGE 2 PLANS
FEBRUARY 7, 2020

BEGIN PROJECT
PROJECT NO. 1700182
P.O.T. STA. 26+54.96
LINE "D"

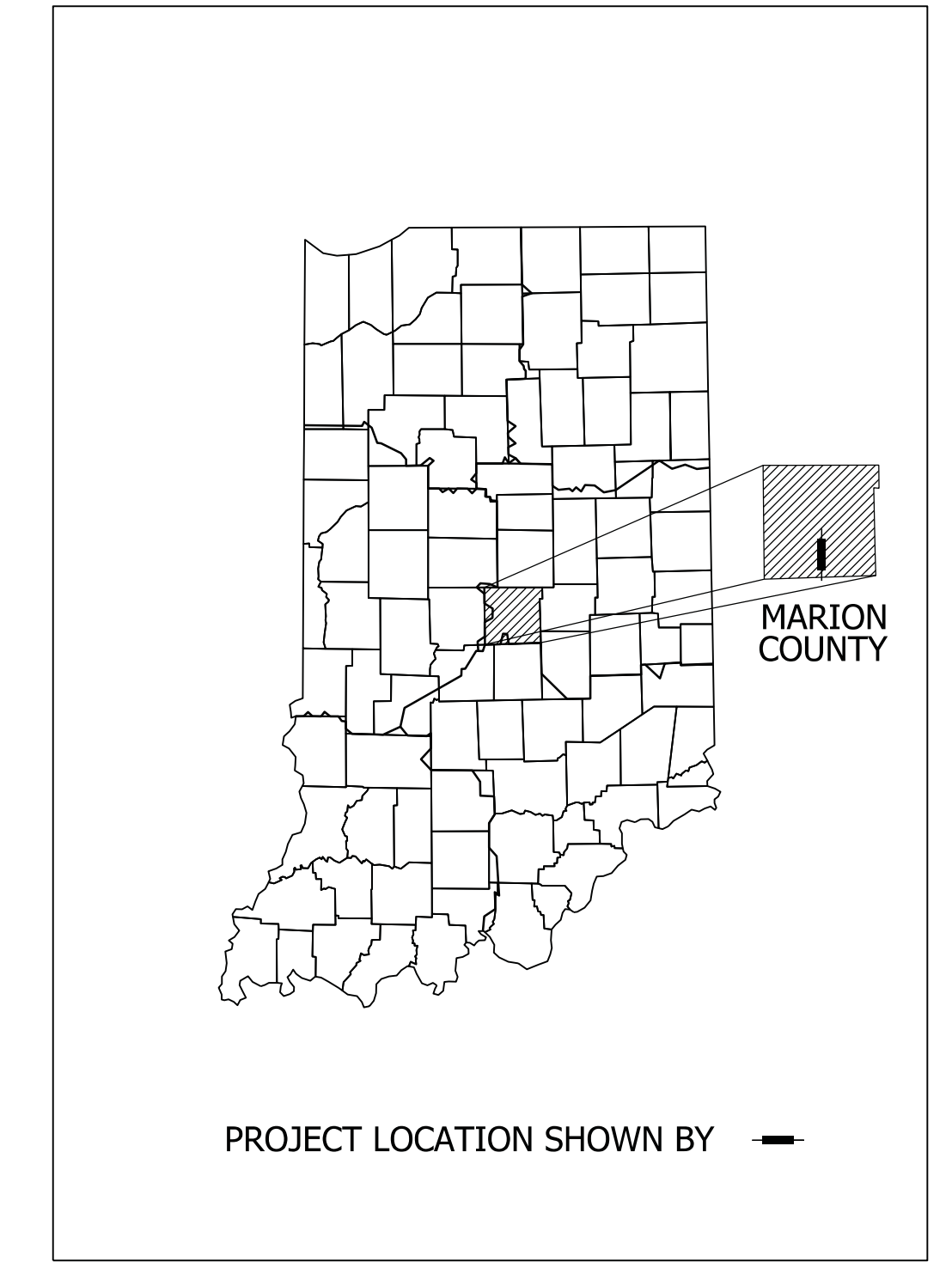
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PROJECT NO. 1700182
P.O.T. STA. 101+00.00
RAMP "PR-SWC"

BEGIN CONSTRUCTION
PROJECT NO. 1700182
P.O.C. STA. 46+00.00
LINE "A"



END CONSTRUCTION
PROJECT NO. 1700182
P.O.T. STA. 52+99.18
LINE "A"

END PROJECT
PROJECT NO. 1700182
P.O.T. STA. 51+47.47
LINE "D"



LATITUDE: 39°41'35.5"N LONGITUDE: 86°08'55.7"W

GROSS LENGTH: 0.46 MI.
NET LENGTH: 0.46 MI.
MAX. GRADE: 0.95%

HYDROLOGIC UNIT CODE: 05120201130060

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

LOCATION MAP
PERRY TOWNSHIP,
MARION COUNTY

HNTB
HNTB INDIANA, INC
THE HNTB COMPANIES
ENGINEERS ARCHITECTS PLANNERS
111 MONUMENT CIRCLE
SUITE 1200
INDIANAPOLIS, IN 46204

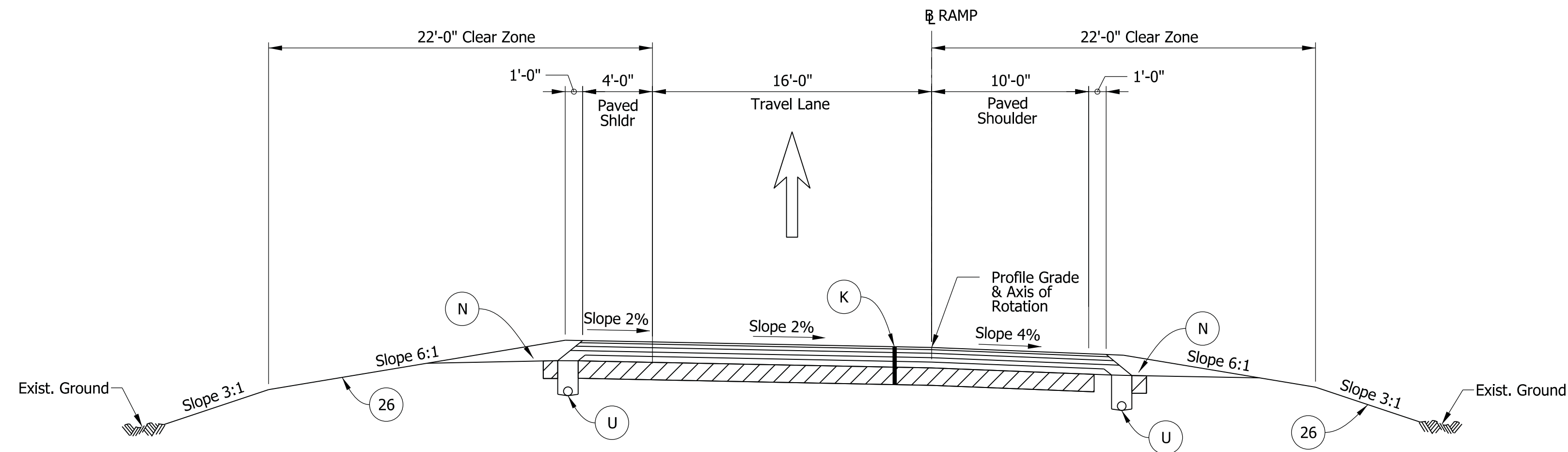
DRAFT
NOT FOR CONSTRUCTION

PLANS PREPARED BY: _____ PHONE NUMBER _____
CERTIFIED BY: _____ DATE _____
APPROVED FOR LETTING: _____ DATE _____
INDIANA DEPARTMENT OF TRANSPORTATION

DESIGNATION	1700182
SURVEY BOOK	N/A
SHEETS	1 of 119
CONTRACT	R-40869
PROJECT	1700182

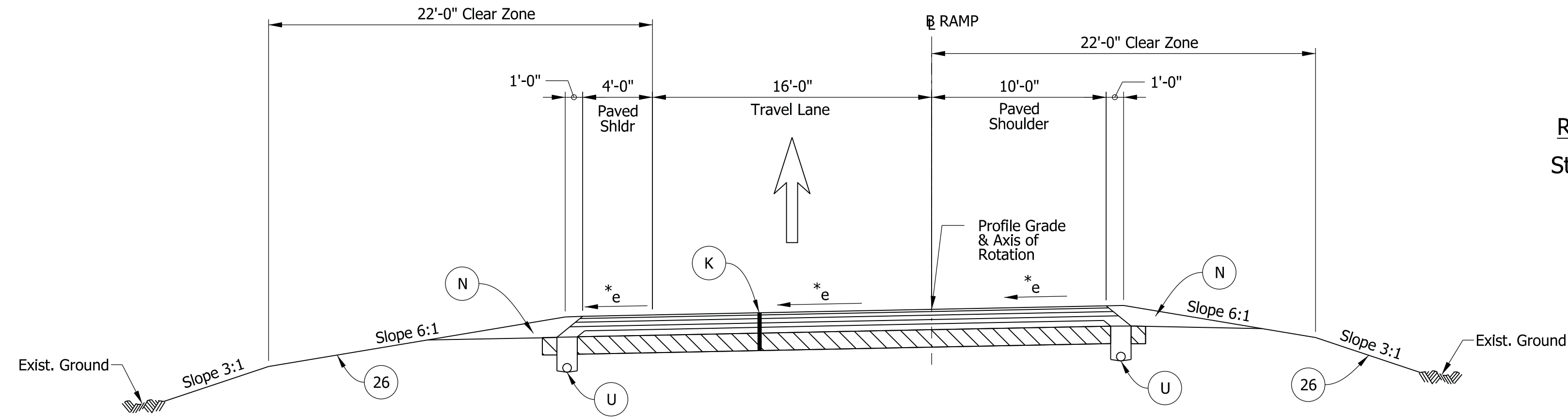
CONSTRUCTION LEGEND

- (F) 4 In. Concrete Sidewalk
- (F2) 4 In. Sidewalk, Concrete (Grooved) On
6 In. Compacted Aggregate, No. 53
- (K) Full Depth Pavement
- (N) 6 In. Compacted Aggregate, No. 53
- (U) 6 In. Underdrain
- (10) Retaining Wall
- (11) Railing, Concrete PF-1 and Railing, Steel PF-1
- (14) Concrete Curb (Vertical)
(See Std. Drwg. 605-CCS3-01)
- (15) Combined Concrete Curb and Gutter, (See Std. Drwg. 605-CCCG-01)
- (16) Concrete Curb, Type B (Sloping)
- (17) Concrete Center Curb, Type B, Modified
- (22) Concrete Center Curb, Type D, Modified
- (26) Seed Mixture, U
- (27) Sodding
- (30) Guardrail MGS W-Beam



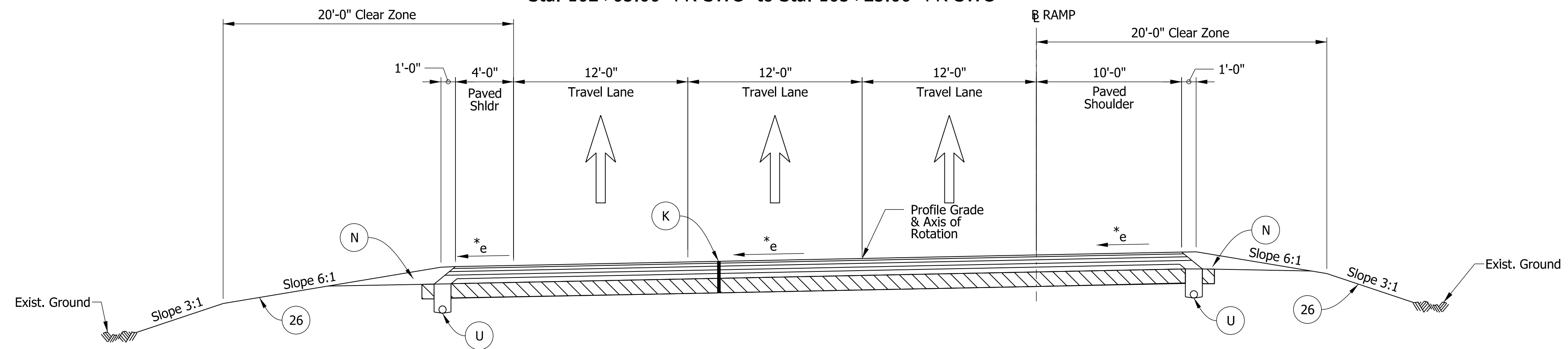
I-465 EB EXIT RAMP TYPICAL SECTION

Sta. 101+00.00 "PR-SWC" to Sta. 102+05.00 "PR-SWC"



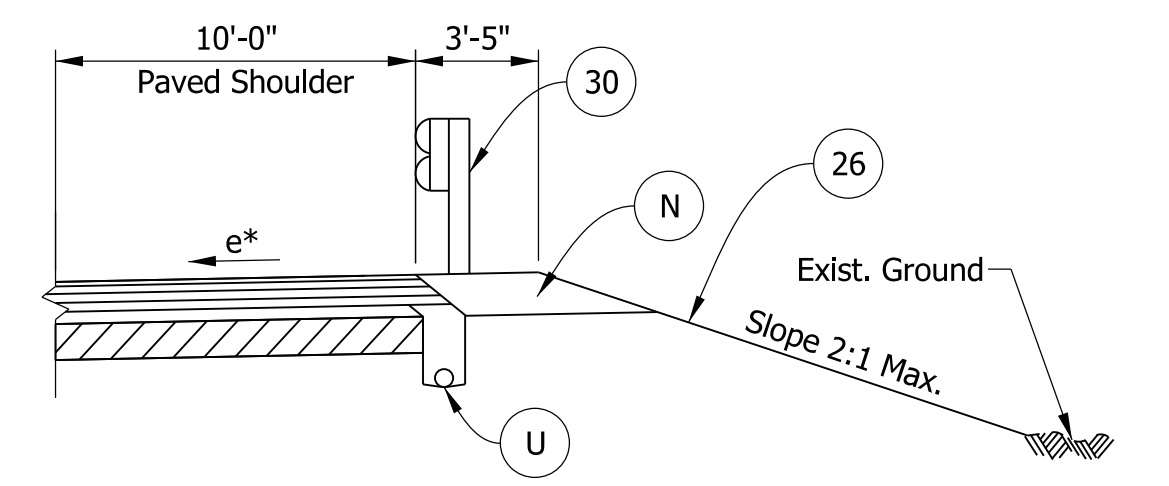
I-465 EB EXIT RAMP TYPICAL SECTION

Sta. 102+05.00 "PR-SWC" to Sta. 105+25.00 "PR-SWC"



I-465 EB EXIT RAMP TYPICAL SECTION

Sta. 105+25.00 "PR-SWC" to Sta. 109+06.78 "PR-SWC"



RIGHT GUARDRAIL AND OUTSIDE SHOULDER DETAIL

Sta. 100+75.00 "PR-SWC" to Sta. 106+21.40 "PR-SWC"

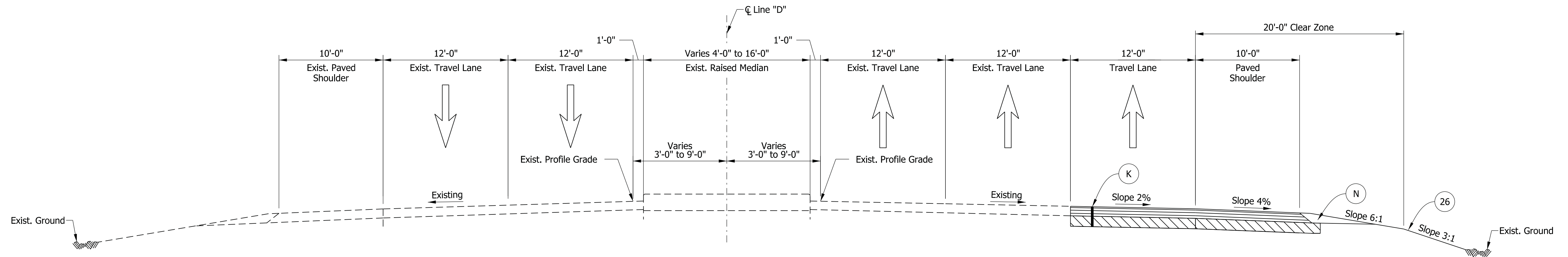
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NOT FOR CONSTRUCTION

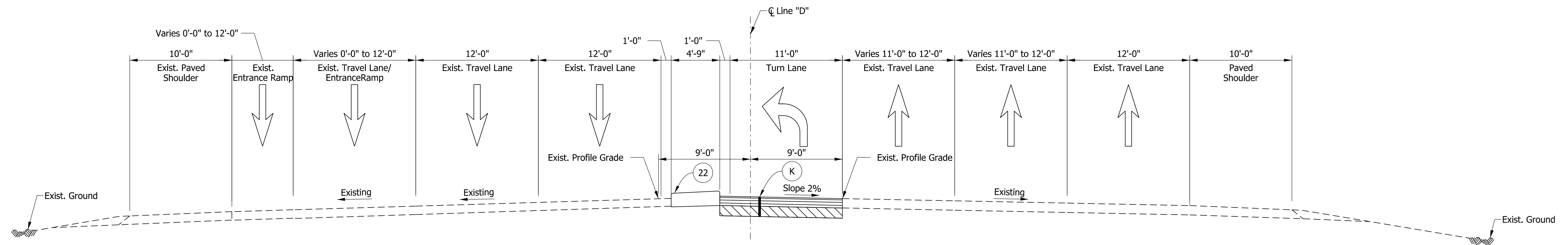
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DESIGNED: _____ HER _____	DRAWN: _____ CPH _____	
CHECKED: _____ JLC _____	CHECKED: _____ HER _____	

INDIANA DEPARTMENT OF TRANSPORTATION	
ROADWAY TYPICAL CROSS SECTIONS	

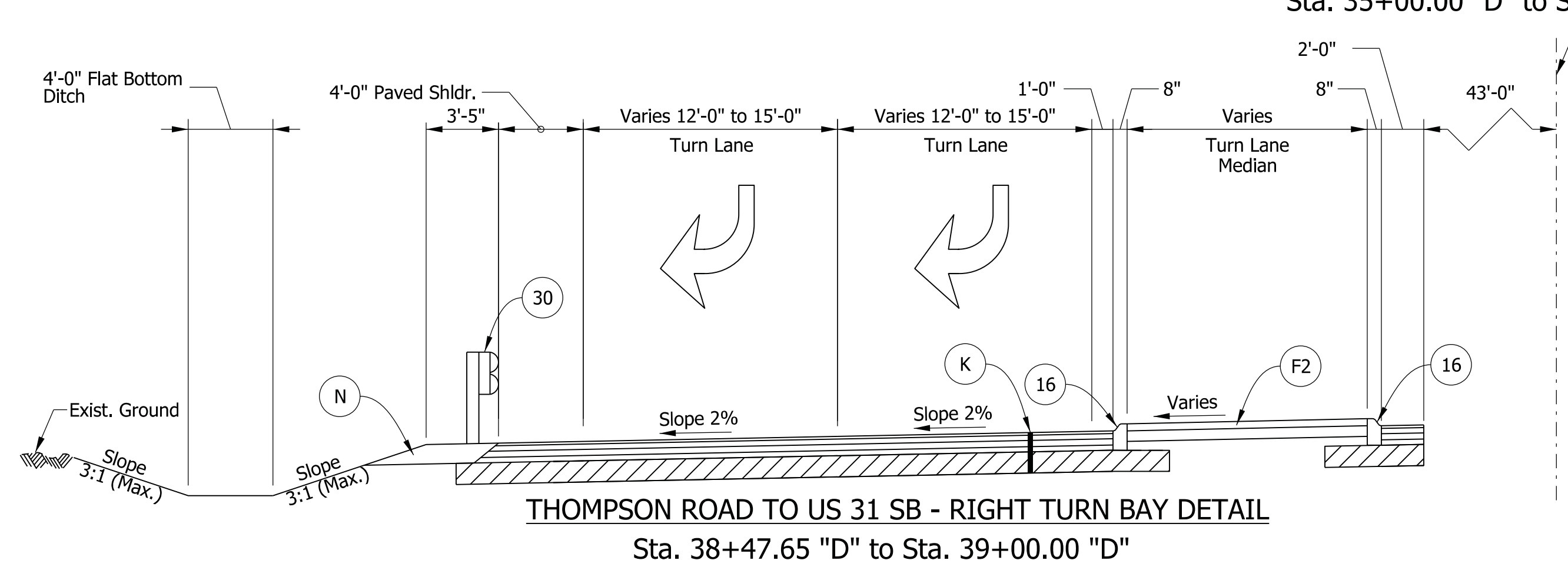
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VERTICAL SCALE	DESIGNATION
N/A	1700182
SURVEY BOOK	SHEETS TS-01
Electronic	3 of 119
CONTRACT	PROJECT
R-40869	1700182



US 31 TYPICAL SECTION
Sta. 26+54.96 "D" to Sta. 34+17.57 "D"



US 31 TYPICAL SECTION
Sta. 35+00.00 "D" to Sta. 39+00.00 "D"



THOMPSON ROAD TO US 31 SB - RIGHT TURN BAY DETAIL
Sta. 38+47.65 "D" to Sta. 39+00.00 "D"

Note: See TS-01 for Construction Materials Legend

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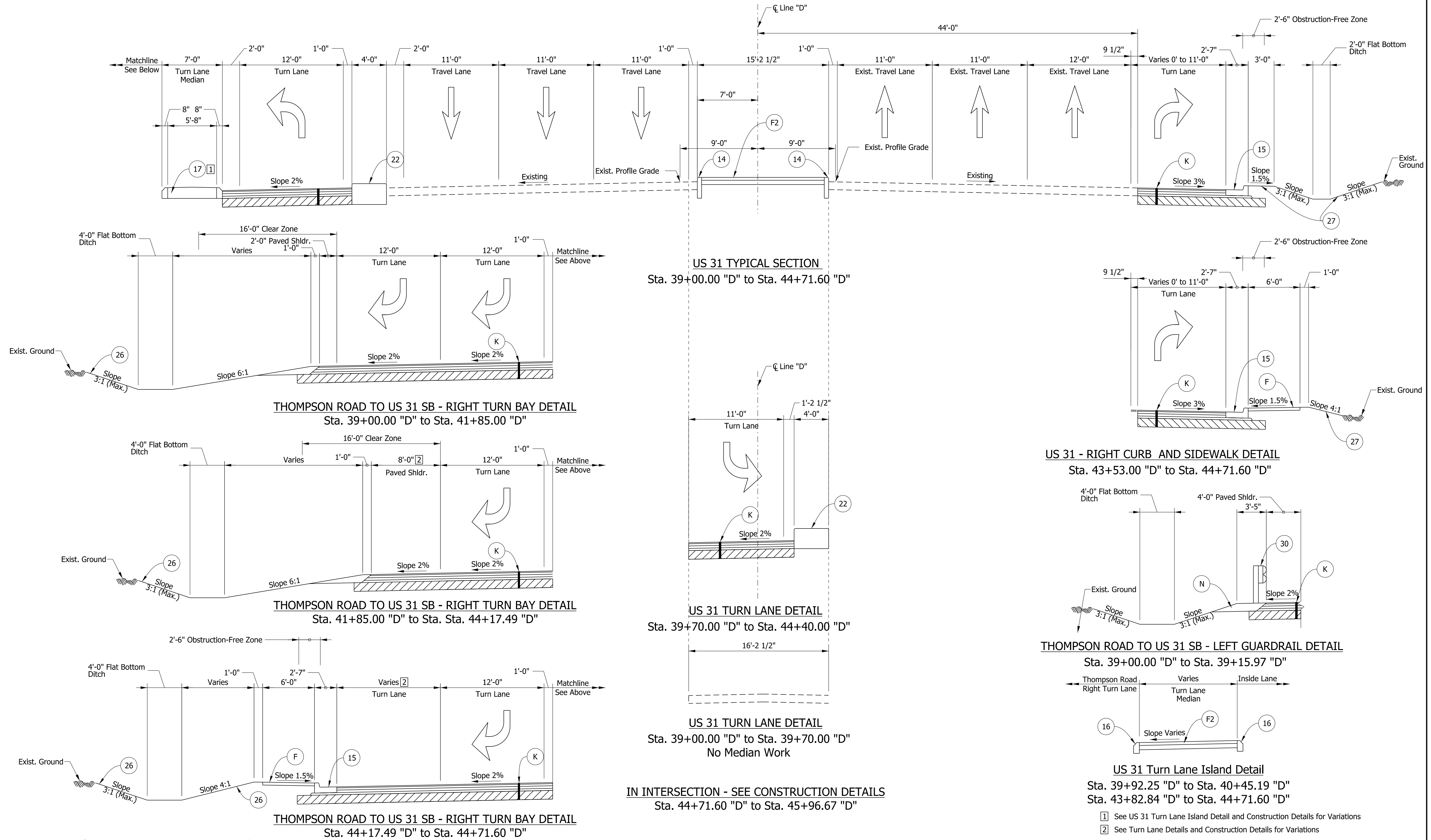
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RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: _____ HER _____	DRAWN: _____ CPH _____	
CHECKED: _____ JLC _____	CHECKED: _____ HER _____	

INDIANA
DEPARTMENT OF TRANSPORTATION

ROADWAY TYPICAL CROSS SECTIONS

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VERTICAL SCALE	DESIGNATION	
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SURVEY BOOK	SHEETS	TS-02
Electronic	4	of 119
CONTRACT	PROJECT	
R-40869	1700182	



Note: See TS-01 for Construction Materials Legend

- ① See US 31 Turn Lane Island Detail and Construction Details for Variations
- ② See Turn Lane Details and Construction Details for Variations

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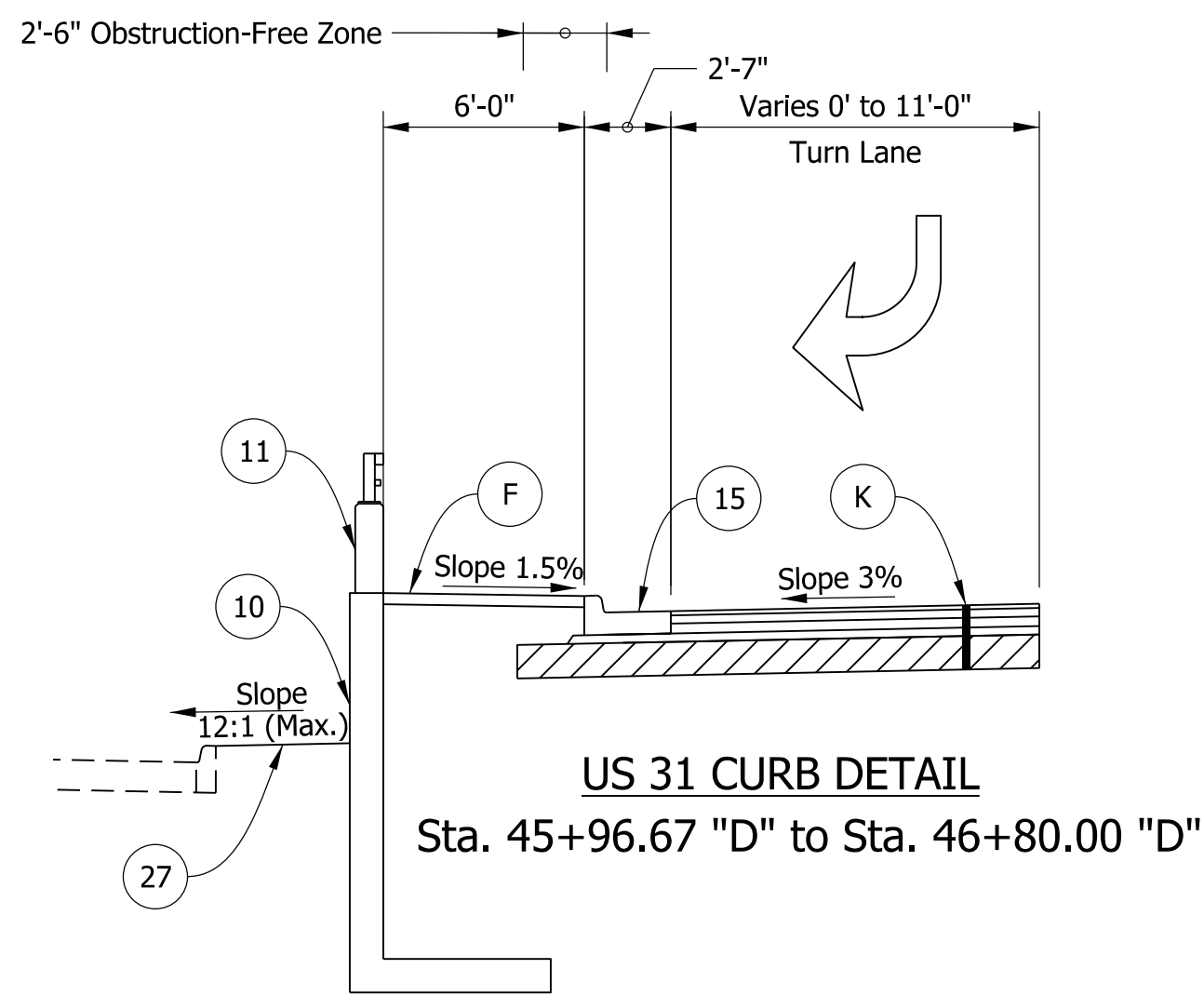
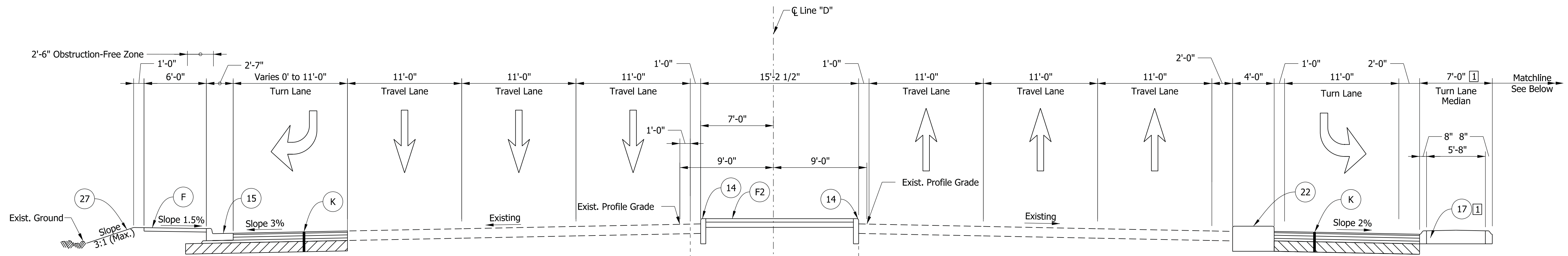
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RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
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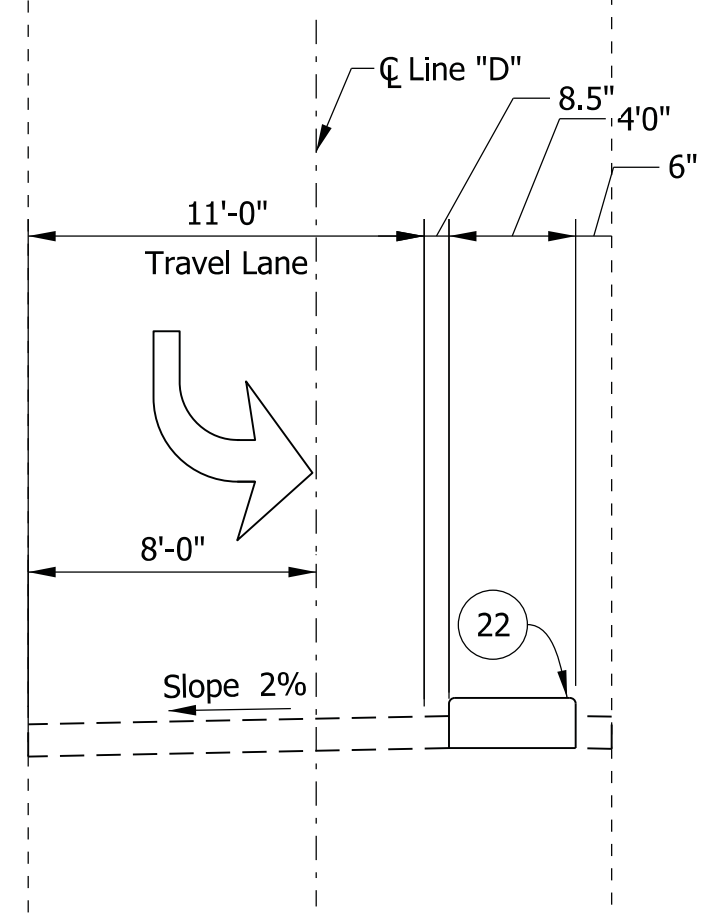
INDIANA
DEPARTMENT OF TRANSPORTATION

ROADWAY TYPICAL CROSS SECTIONS

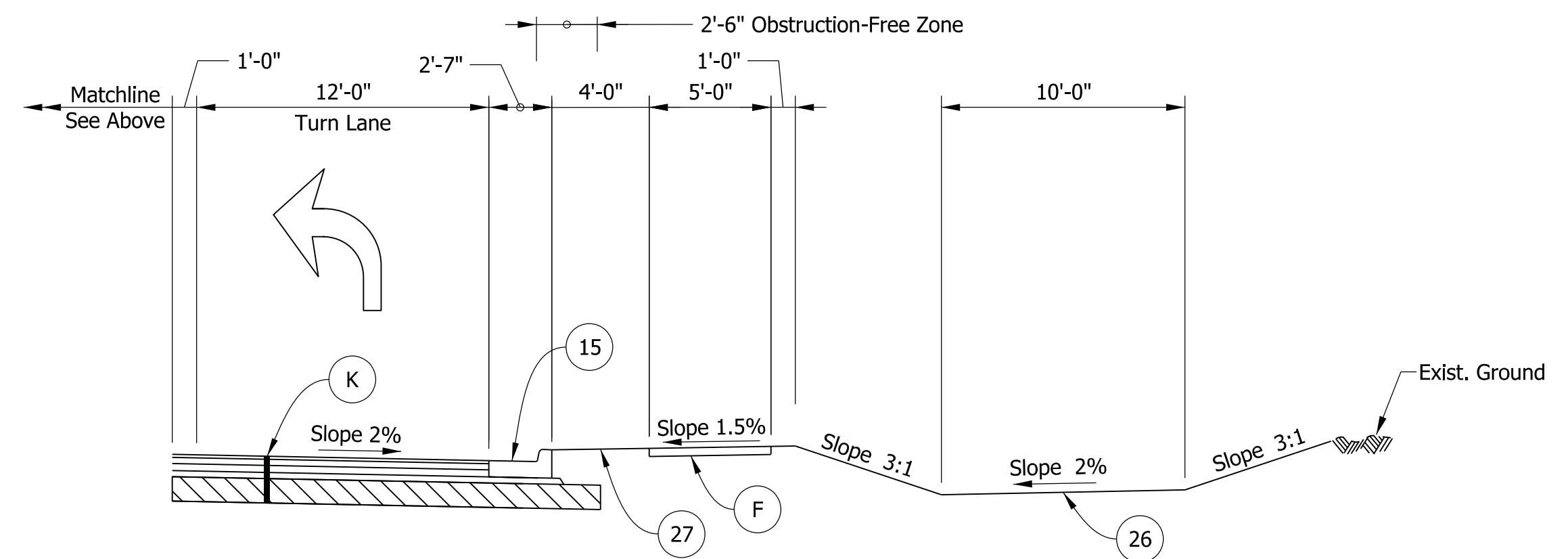
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Electronic	5	of 119
CONTRACT	PROJECT	
R-40869	1700182	



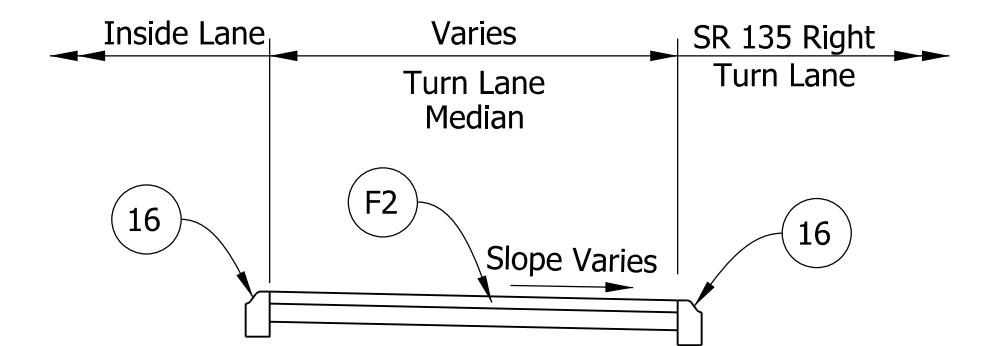
US 31 TYPICAL SECTION
Sta. 45+96.67 "D" to Sta. 49+71.06 "D"



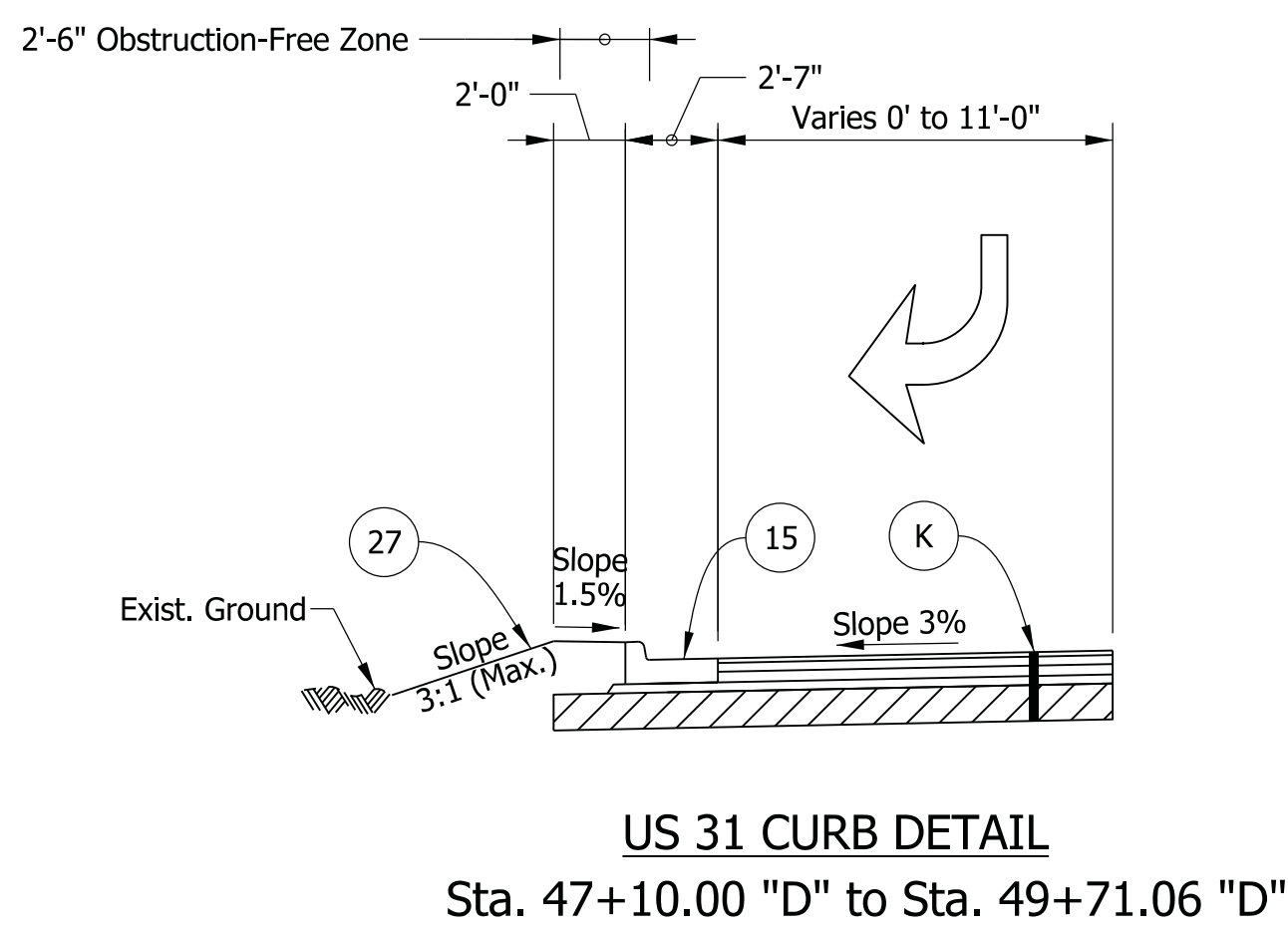
US 31 TURN LANE DETAIL
Sta. 49+32.48 "D" to Sta. 49+71.06 "D"



SR 135 TO US 31 NB - RIGHT TURN LANE WITH DITCH
Sta. 45+96.40 "D" to Sta. 49+27.75 "D"

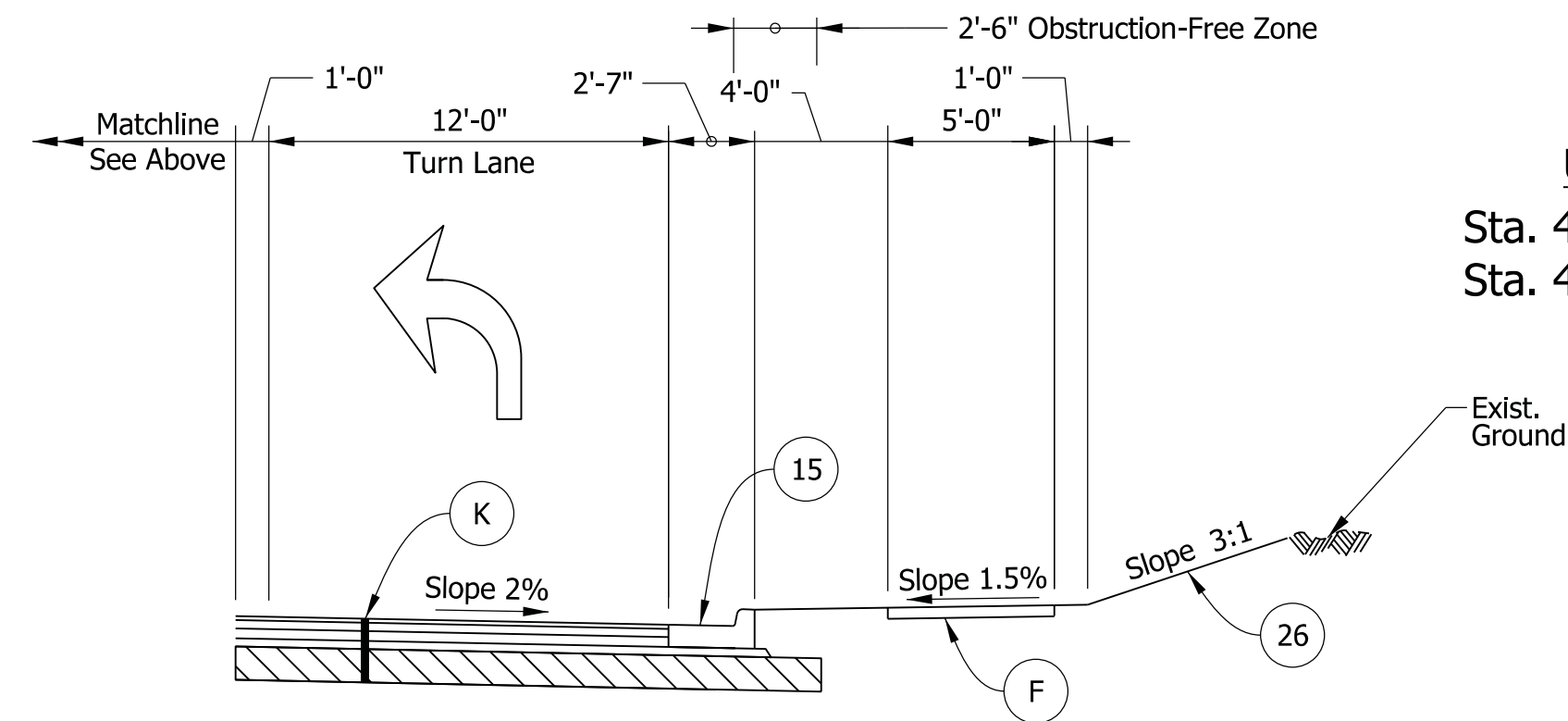


US 31 Turn Lane Island Detail
Sta. 45+96.67 "D" to Sta. 47+03.16 "D"
Sta. 47+03.16 "D" to Sta. 49+16.36 "D"



US 31 CURB DETAIL
Sta. 47+10.00 "D" to Sta. 49+71.06 "D"

US 31 TURN LANE DETAIL
Sta. 48+64.00 "D" to Sta. 49+32.48 "D"
No Median Work



SR 135 TO US 31 NB - RIGHT TURN LANE WITH CUT SLOPE
Sta. 49+27.75 "D" to Sta. 49+71.06 "D"

Note: See TS-01 for Construction Materials Legend

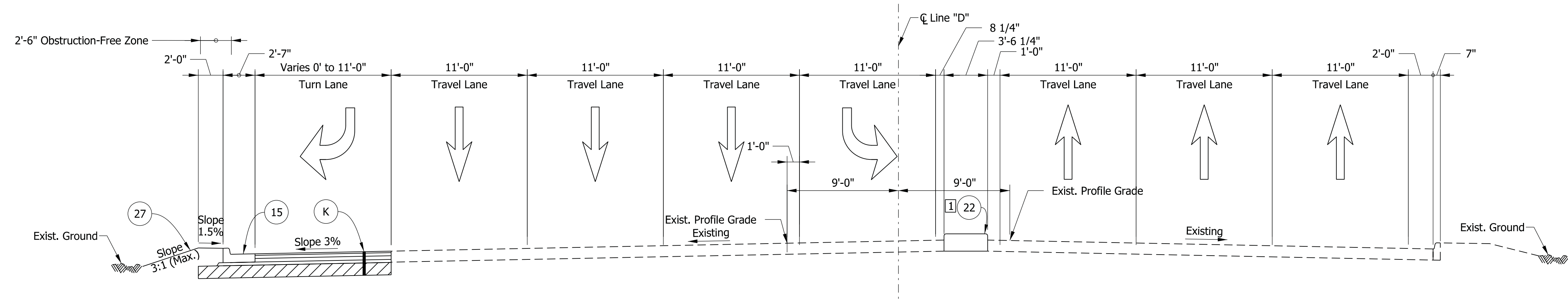
See US 31 Turn Lane Island Detail and Construction Details for Variations

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NOT FOR CONSTRUCTION

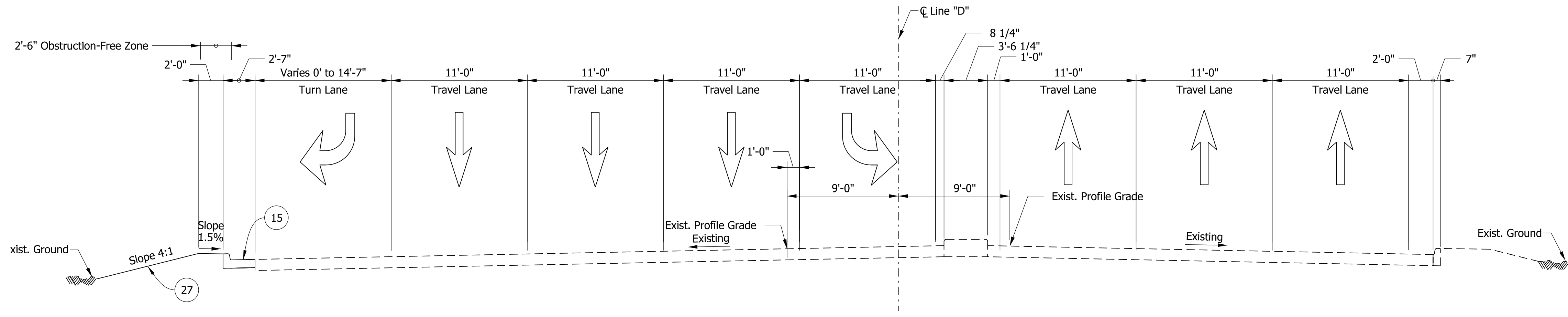
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DESIGNED: _____ HER _____	DRAWN: _____ CPH _____	
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INDIANA DEPARTMENT OF TRANSPORTATION	
ROADWAY TYPICAL CROSS SECTIONS	

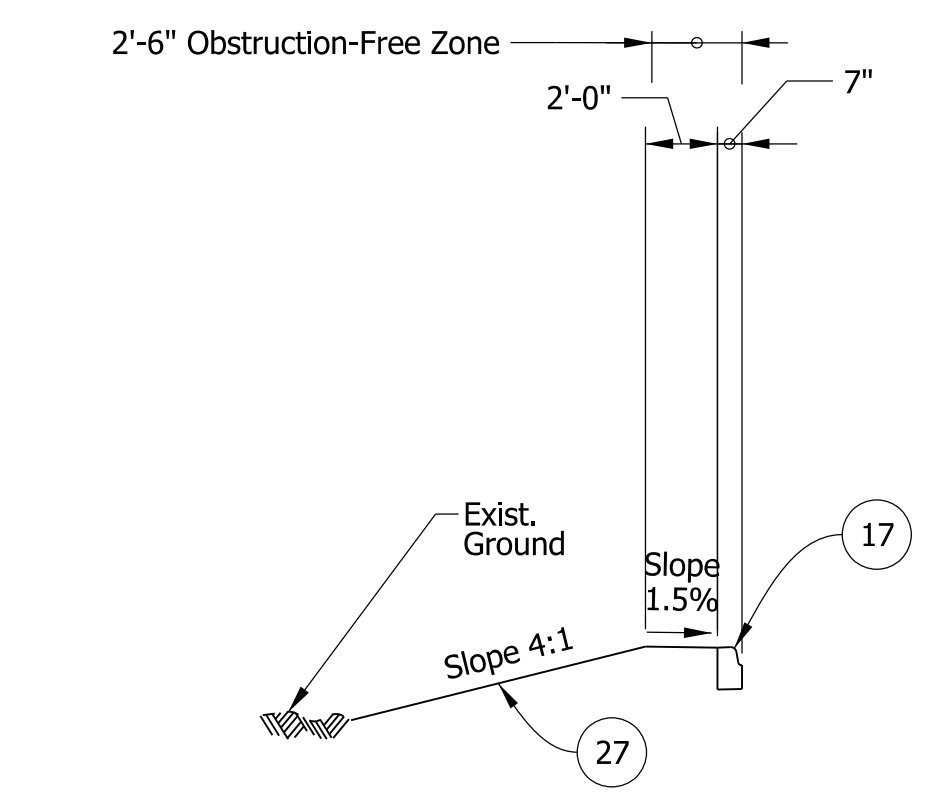
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VERTICAL SCALE	DESIGNATION
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SURVEY BOOK	SHEETS
Electronic	6 of 119
CONTRACT	PROJECT
R-40869	1700182



US 31 TYPICAL SECTION
Sta. 49+71.06 "D" to Sta. 51+10.71 "D"



US 31 TYPICAL SECTION
Sta. 51+10.71 "D" to Sta. 51+47.47 "D"



US 31 RIGHT TURN VERTICAL CURB DETAIL
Sta. 51+51+31.10 "D" to Sta. 51+47.47 "D"

1 No Curb Construction From Sta. 50+54.05 "D" to Sta. 51+47.47 "D"

Note: See TS-01 for Construction Materials Legend

hregan
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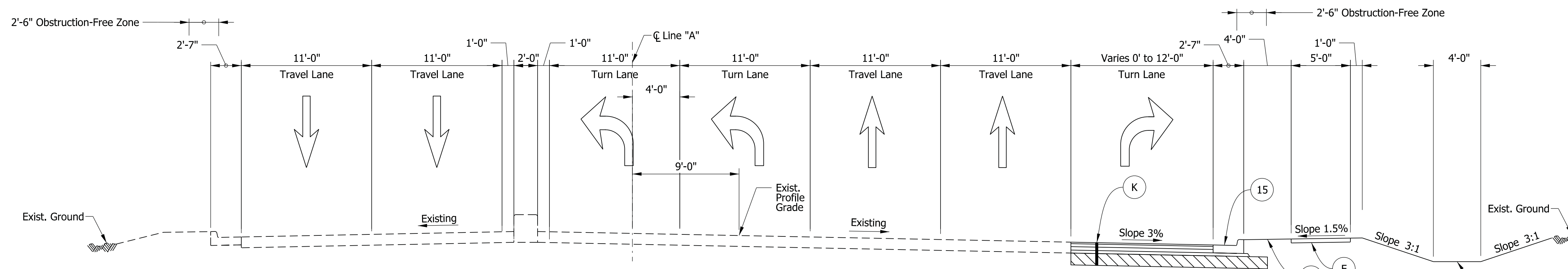
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NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: _____ HER _____	DRAWN: _____ CPH _____	
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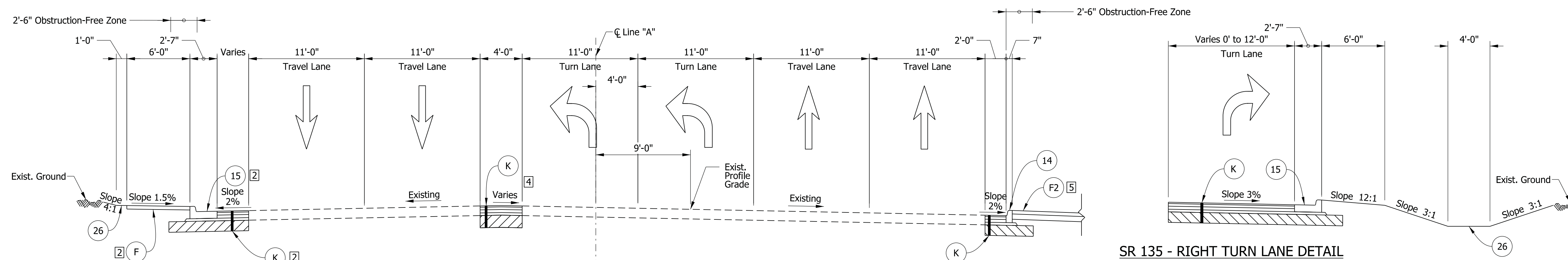
INDIANA
DEPARTMENT OF TRANSPORTATION

ROADWAY TYPICAL CROSS SECTIONS

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SURVEY BOOK	SHEETS	TS-05
Electronic	7 of	119
CONTRACT	PROJECT	
R-40869	1700182	



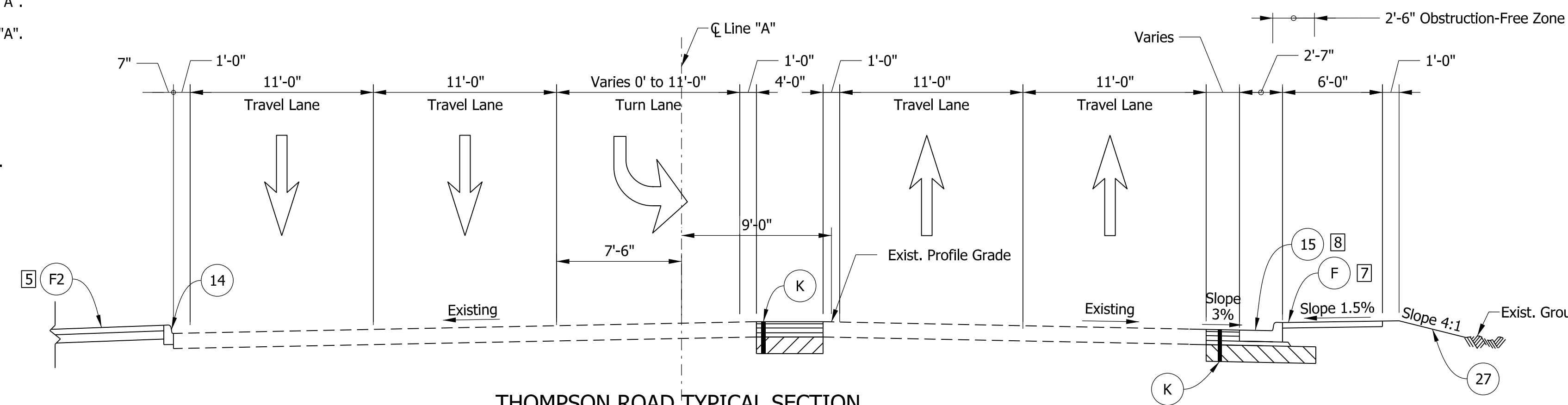
SR 135 TYPICAL SECTION
Sta. 46+00.00 "A" to Sta. 48+40.00 "A"



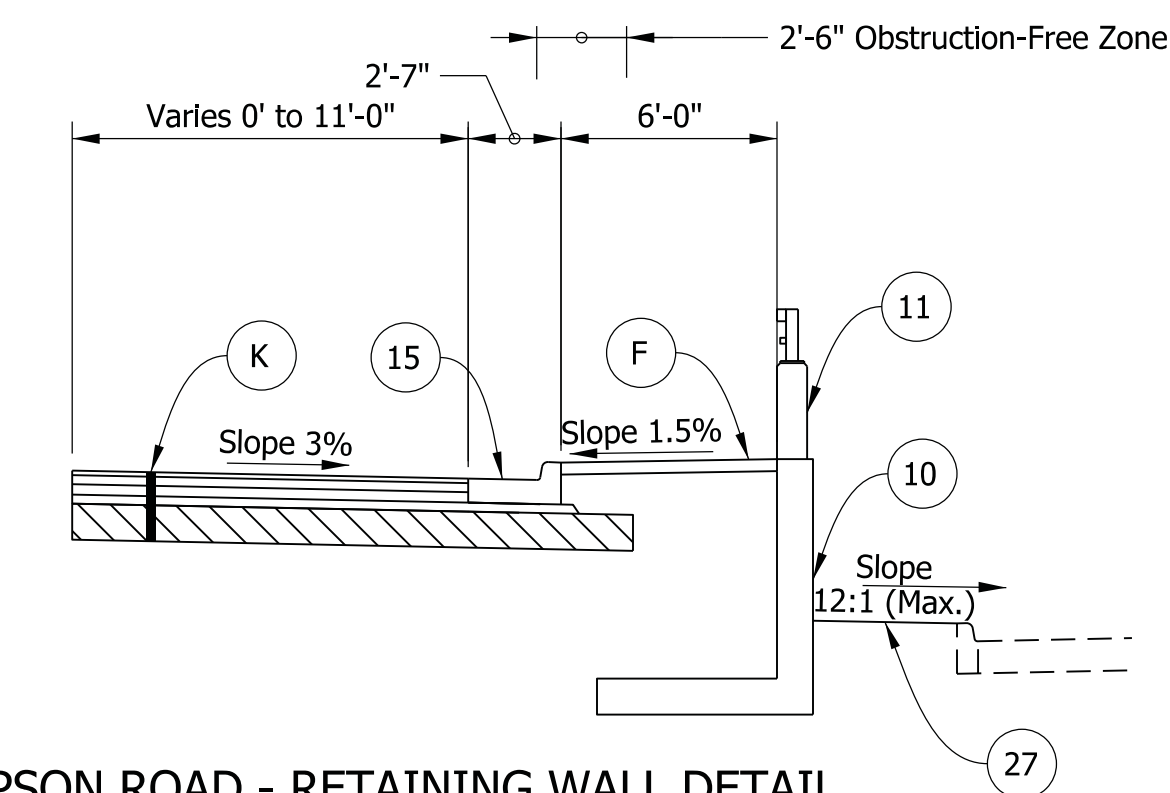
SR 135 TYPICAL SECTION
Sta. 48+40.00 "A" to Sta. 49+38.89 "A"

SR 135 - RIGHT TURN LANE DETAIL
Sta. 46+00.00 "A" to Sta. 47+34.34 "A"

IN INTERSECTION - SEE CONSTRUCTION DETAILS
Sta. 49+38.89 "A" to Sta. 50+39.49 "A"



THOMPSON ROAD TYPICAL SECTION
Sta. 50+39.49 "A" to Sta. 51+18.50 "A"



THOMPSON ROAD - RETAINING WALL DETAIL
Sta. 50+39.49 "A" to Sta. 50+43.33 "A"

- 1 Curb and Gutter Construction begins at Sta. 48+53.34 "A".
- 2 Curb and Gutter Construction begins at Sta. 48+53.34 "A".
- 3 Sidewalk Construction begins at Sta. 48+65.50 "A".
- 4 Median Curb Replacement ends at Sta. 49+03.00 "A".
- 5 See Construction Details for Turn Lane Islands
- 6 Median Curb Replacement Begins at Sta. 50+63.00 "A".
- 7 Sidewalk Construction ends at Sta. 50+99.56 "A".
- 8 See Curb Reconstruction Detail on Next Sheet.

Note: See TS-01 for Construction Materials Legend

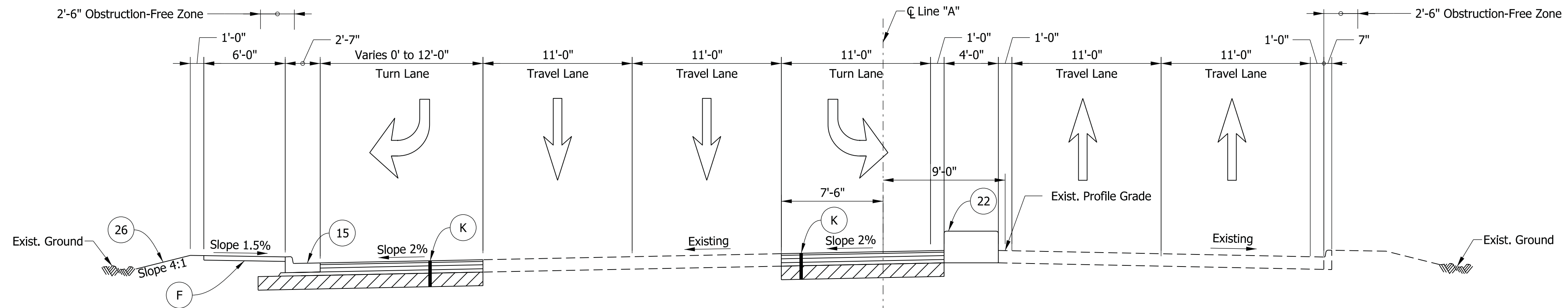
DRAFT
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: _____ HER _____	DRAWN: _____ CPH _____	
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INDIANA
DEPARTMENT OF TRANSPORTATION

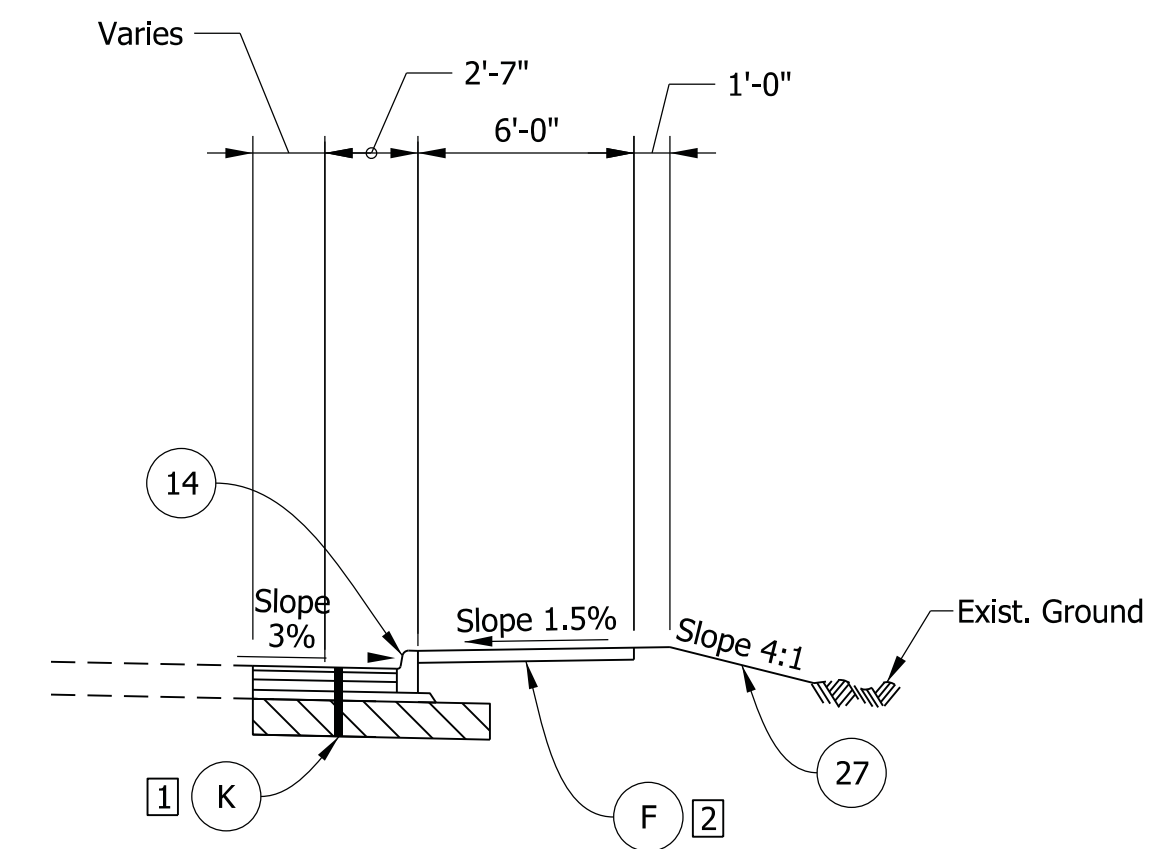
ROADWAY TYPICAL CROSS SECTIONS

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VERTICAL SCALE	DESIGNATION	
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SURVEY BOOK	SHEETS	TS-06
Electronic	8	of 119
CONTRACT	PROJECT	
R-40869	1700182	

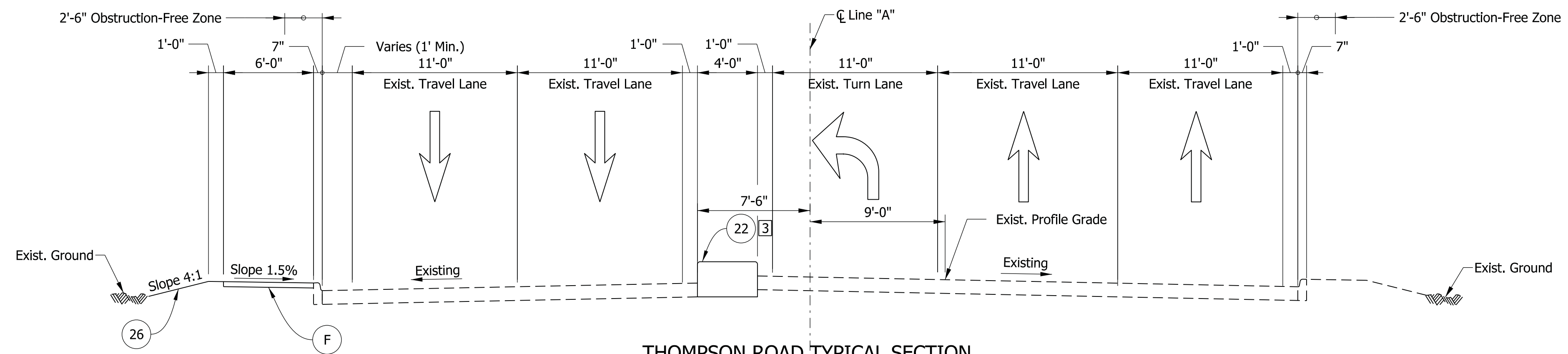


THOMPSON ROAD TYPICAL SECTION
Sta. 51+18.50 "A" to Sta. 52+53.50 "A"

- 1 Sidewalk Construction ends at Sta. 50+99.56 "A".
- 2 Sidewalk Construction ends at Sta. 50+99.56 "A".
- 3 Median Construction ends at Sta. 52+94.13 "A".



THOMPSON ROAD - CURB RECONSTRUCTION DETAIL
Sta. 50+85.66 "A" to Sta. 51+28.20 "A"



THOMPSON ROAD TYPICAL SECTION
Sta. 52+53.50 "A" to Sta. 52+99.18 "A"

Note: See TS-01 for Construction Materials Legend

DRAFT
NOT FOR CONSTRUCTION

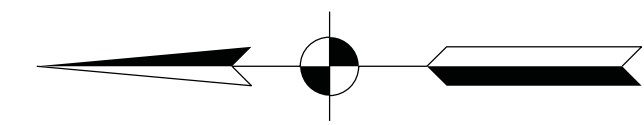
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DESIGNED: _____ HER _____	DRAWN: _____ CPH _____	
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INDIANA
DEPARTMENT OF TRANSPORTATION

ROADWAY TYPICAL CROSS SECTIONS

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VERTICAL SCALE	DESIGNATION	
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SURVEY BOOK	SHEETS	TS-07
Electronic	9 of	119
CONTRACT	PROJECT	
R-40869	1700182	

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E: 1388608.23

BEGIN PROJECT
PROJECT NO. 1700182
P.O.T. STA. 26+54.96
LINE "D"
N: 724463.99
E: 1388646.66

END CONSTRUCTION
PROJECT NO. 1700182
P.O.T. STA. 52+99.18
LINE "A"
N: 722637.67
E: 1388955.26

END PROJECT
PROJECT NO. 1700182
P.O.T. STA. 51+47.47
LINE "D"
N: 721971.55
E: 1388655.69

BEGIN CONSTRUCTION
PROJECT NO. 1700182
P.O.C. STA. 46+00.00
LINE "A"
N: 722449.77
E: 1388297.23

BEGIN CONSTRUCTION
PROJECT NO. 1700182
P.O.T. STA. 101+00.00
RAMP "PR-SWC"
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E: 1387853.97

BEGIN INCIDENTAL CONSTRUCTION
PROJECT NO. 1700182
P.O.T. STA. 100+75.00
RAMP "PR-SWC"
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E: 1387831.77

NOTE TO REVIEWER:
Project overview sheet included to show the project intent.
The project will realign the I-465 EB Exit ramp to US 31 SB
and construct a displaced left intersection at US 31 and
SR 135/Thompson Road.

DRAFT
NOT FOR CONSTRUCTION

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

INDIANA
DEPARTMENT OF TRANSPORTATION

PROJECT OVERVIEW

HORIZONTAL SCALE	BRIDGE FILE	
1"=100'	N/A	
VERTICAL SCALE	DESIGNATION	
N/A	1700182	
SURVEY BOOK	SHEETS	OV-01
Electronic	13 of	119
CONTRACT	PROJECT	
R-40869	1700182	

c:\userman\5/6/2020 8:59:38 am
 model-sheet1
 file: \\india\0289\projects\22904\indot\of on call\010 - us 31 intersection\caad\1\1\cads\72904-rd-s-ov-01.dgn

M.O.T. PHASE 1 CONSTRUCTION ACTIVITIES

- Traffic:**
- US 31 NB and SB
 - A. Maintain 2 thru lanes, 1 shared thru/right turn lane, and 1 left turn lane
 - SR 135 EB
 - A. Maintain a minimum of 1 shared thru/right turn lane, and 1 left turn lane at night
 - Thompson Road WB
 - A. Maintain a minimum of 1 shared thru/left turn lane, and 1 right turn lane at night
 - I-465 Exit Ramp onto US 31 SB
 - A. Shift traffic onto the outside of the ramp

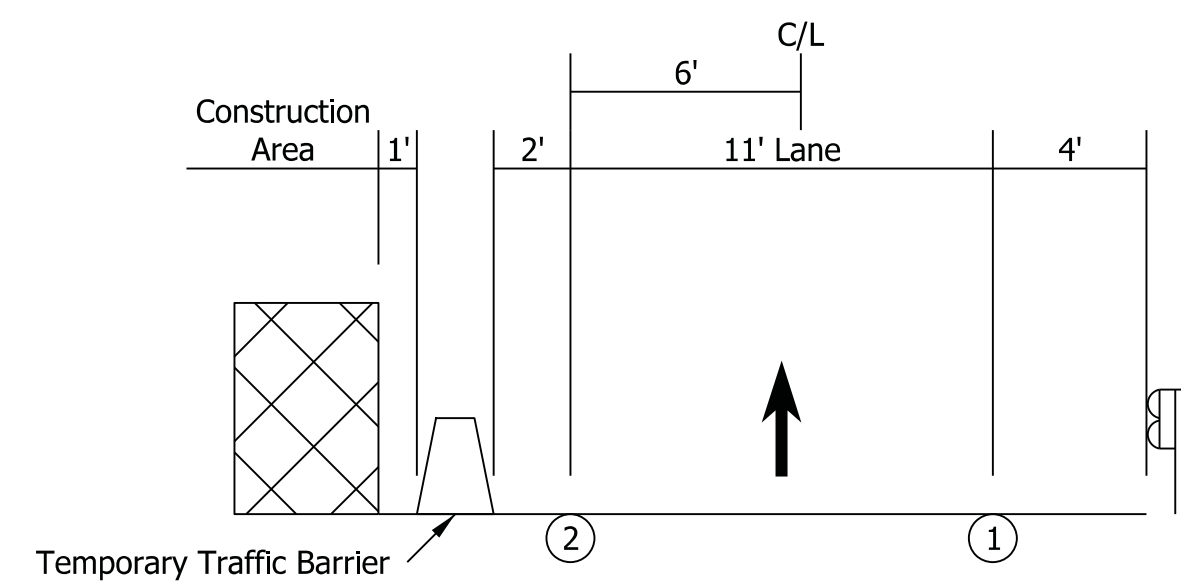
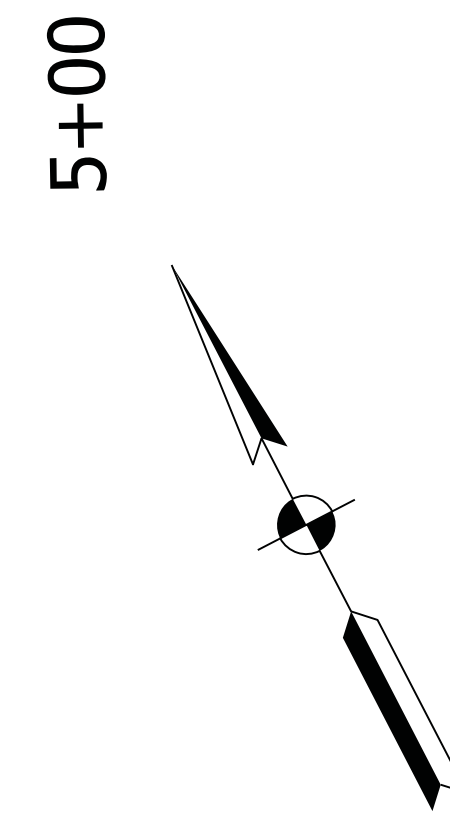
- Construction:**
- Remove existing pavement markings and install temporary markings as shown.
 - Construct SR 135 and Thompson Road medians
 - Construct proposed I-465 to US 31 SB exit ramp

- Note:**
- Existing pavement marking that conflict with M.O.T. layout to be removed
 - Maintain access to property owners at all times
 - Traffic drum spacing
 - 50' typical
 - 25' at tapers

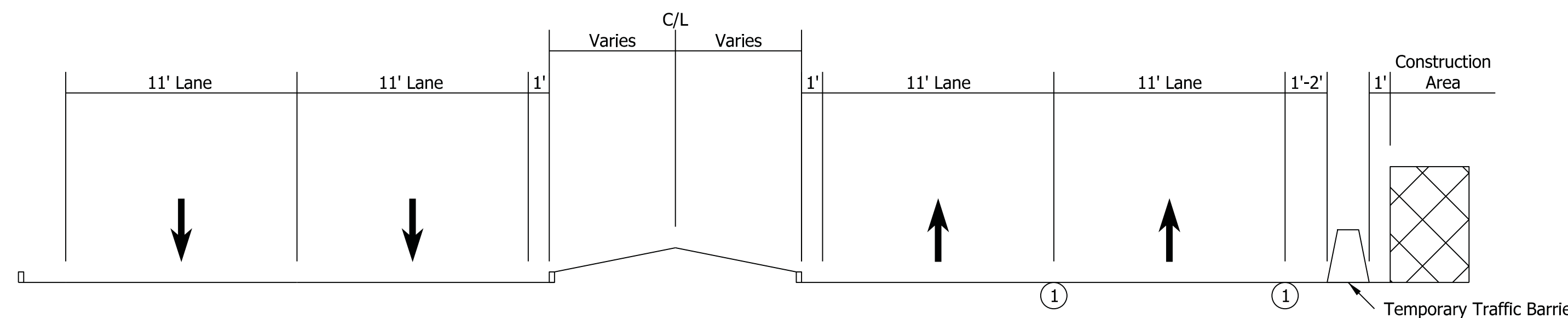
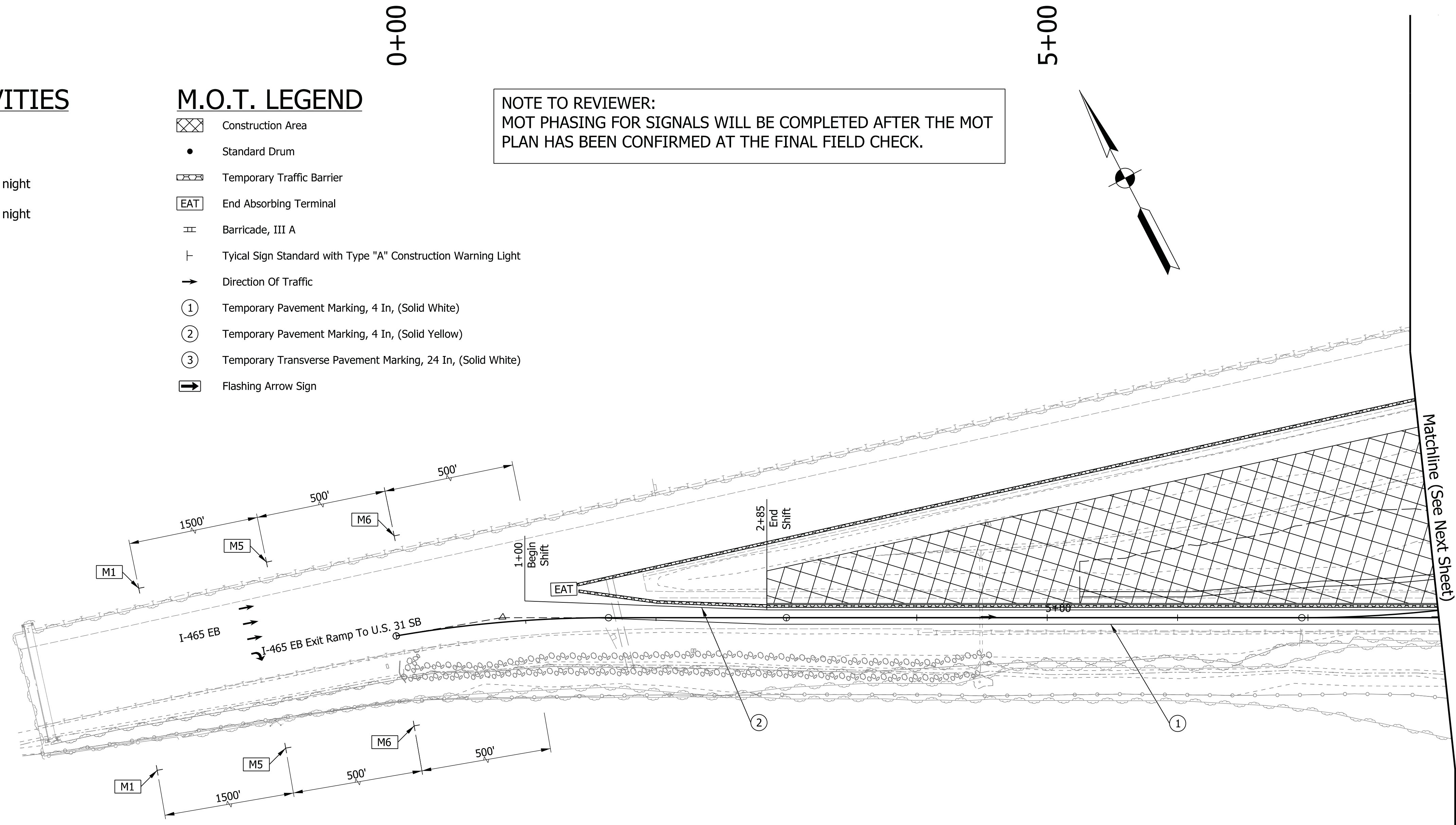
M.O.T. LEGEND

- Construction Area
- Standard Drum
- Temporary Traffic Barrier
- End Absorbing Terminal
- Barricade, III A
- Typical Sign Standard with Type "A" Construction Warning Light
- Direction Of Traffic
- Temporary Pavement Marking, 4 In, (Solid White)
- Temporary Pavement Marking, 4 In, (Solid Yellow)
- Temporary Transverse Pavement Marking, 24 In, (Solid White)
- Flashing Arrow Sign

NOTE TO REVIEWER:
MOT PHASING FOR SIGNALS WILL BE COMPLETED AFTER THE MOT PLAN HAS BEEN CONFIRMED AT THE FINAL FIELD CHECK.

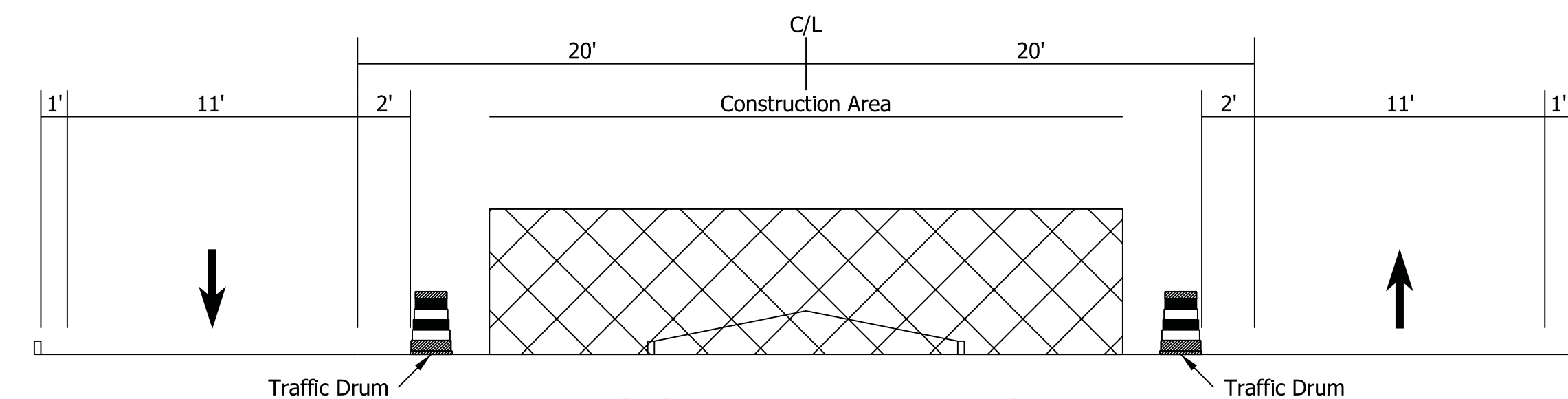


I-74 EB Exit Ramp To U.S. 31 SB Section
N.T.S.



U.S. 31 Section
N.T.S.

Note: See Plans for locations of 11' turn lanes.



S.R. 135/Thompson Road Section
N.T.S.

Note: See Plans for locations of 11' turn lanes.

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DRAFT
NOT FOR CONSTRUCTION

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

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC - PHASE I
LINE "PR-SWC"

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	N/A
VERTICAL SCALE	DESIGNATION
N/A	1700182
SURVEY BOOK	SHEETS
Electronic	15 of 119
CONTRACT	PROJECT
R-40869	1700182

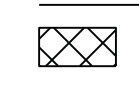



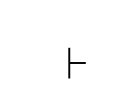

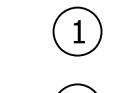

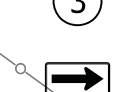
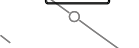
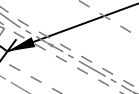
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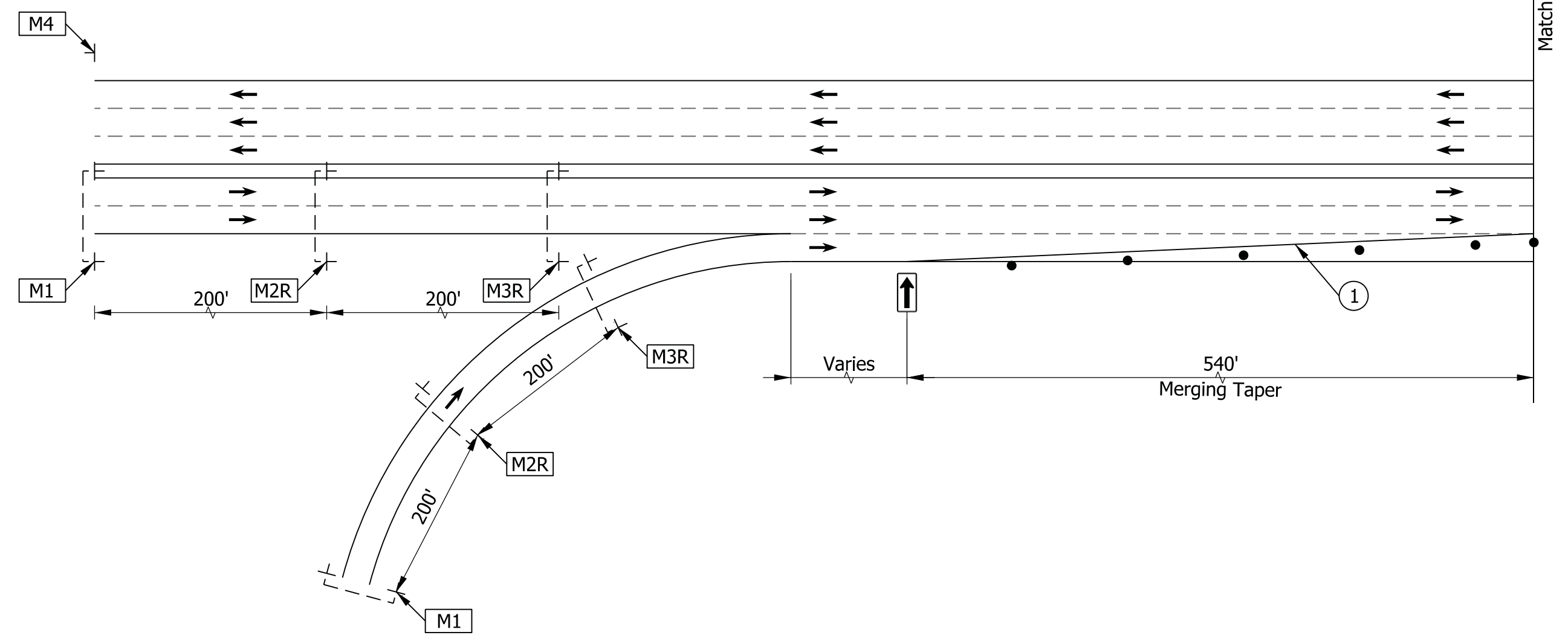
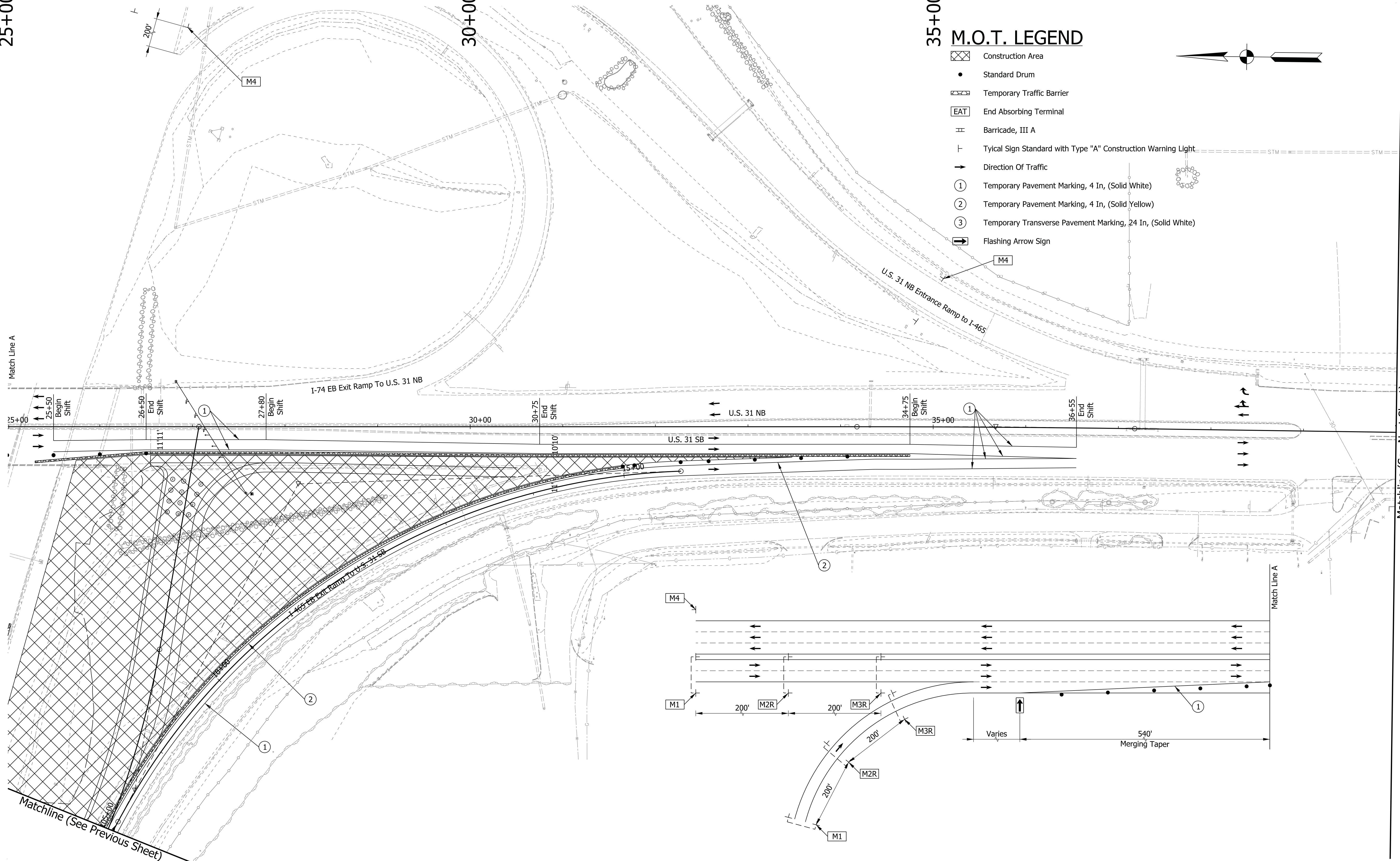
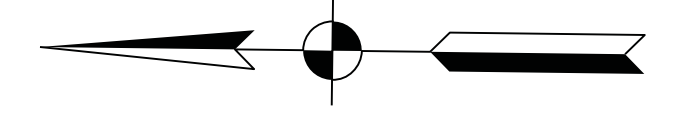
25+00

30+00

35+00

M.O.T. LEGEND

-  Construction Area
-  Standard Drum
-  Temporary Traffic Barrier
-  End Absorbing Terminal
-  Barricade, III A
-  Typical Sign Standard with Type "A" Construction Warning Light
-  Direction Of Traffic
-  Temporary Pavement Marking, 4 In, (Solid White)
-  Temporary Pavement Marking, 4 In, (Solid Yellow)
-  Temporary Transverse Pavement Marking, 24 In, (Solid White)
-  Flashing Arrow Sign



Matchline (See Next Sheet)

Matchline (See Previous Sheet)

DRAFT
NOT FOR CONSTRUCTION

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

INDIANA
 DEPARTMENT OF TRANSPORTATION
 MAINTENANCE OF TRAFFIC - PHASE I
 LINE "D"

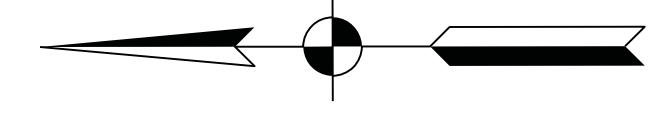
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1"=50'	N/A	
VERTICAL SCALE	DESIGNATION	
N/A	1700182	
SURVEY BOOK	SHEETS	MOT-03
Electronic	16 of	119
CONTRACT	PROJECT	
R-40869	1700182	

40+00

45+00

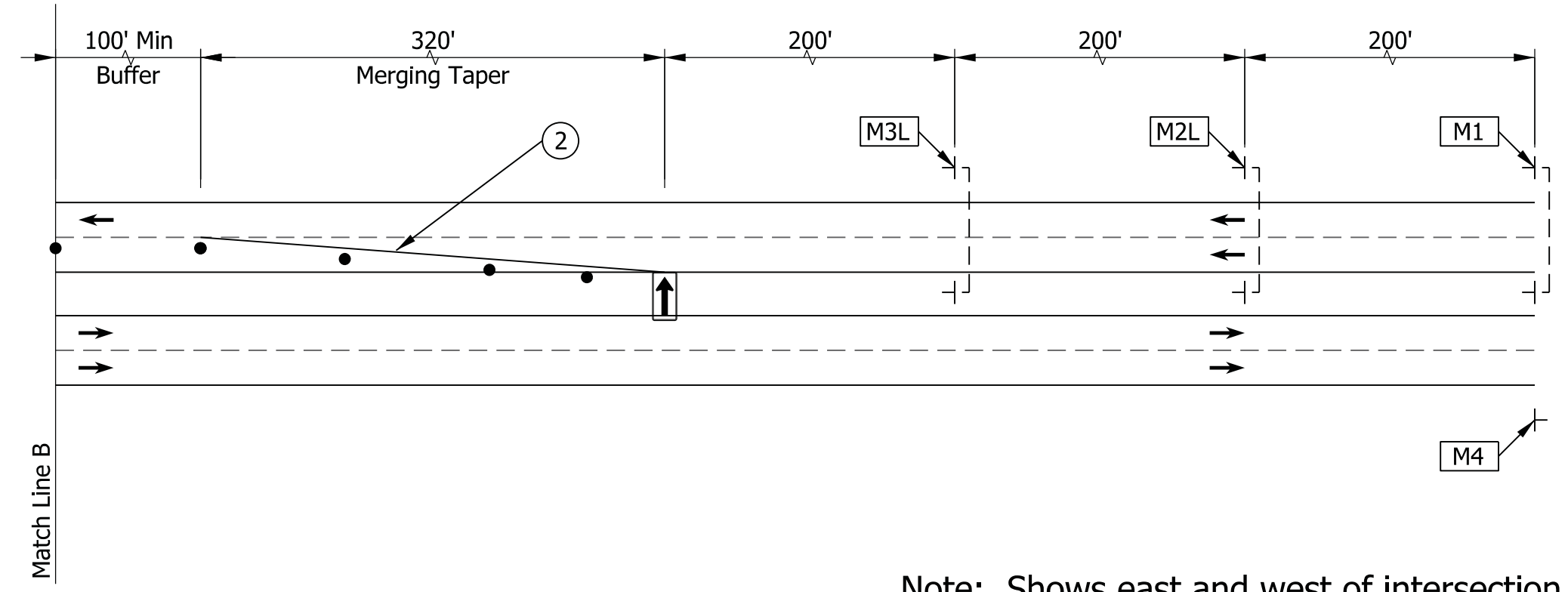
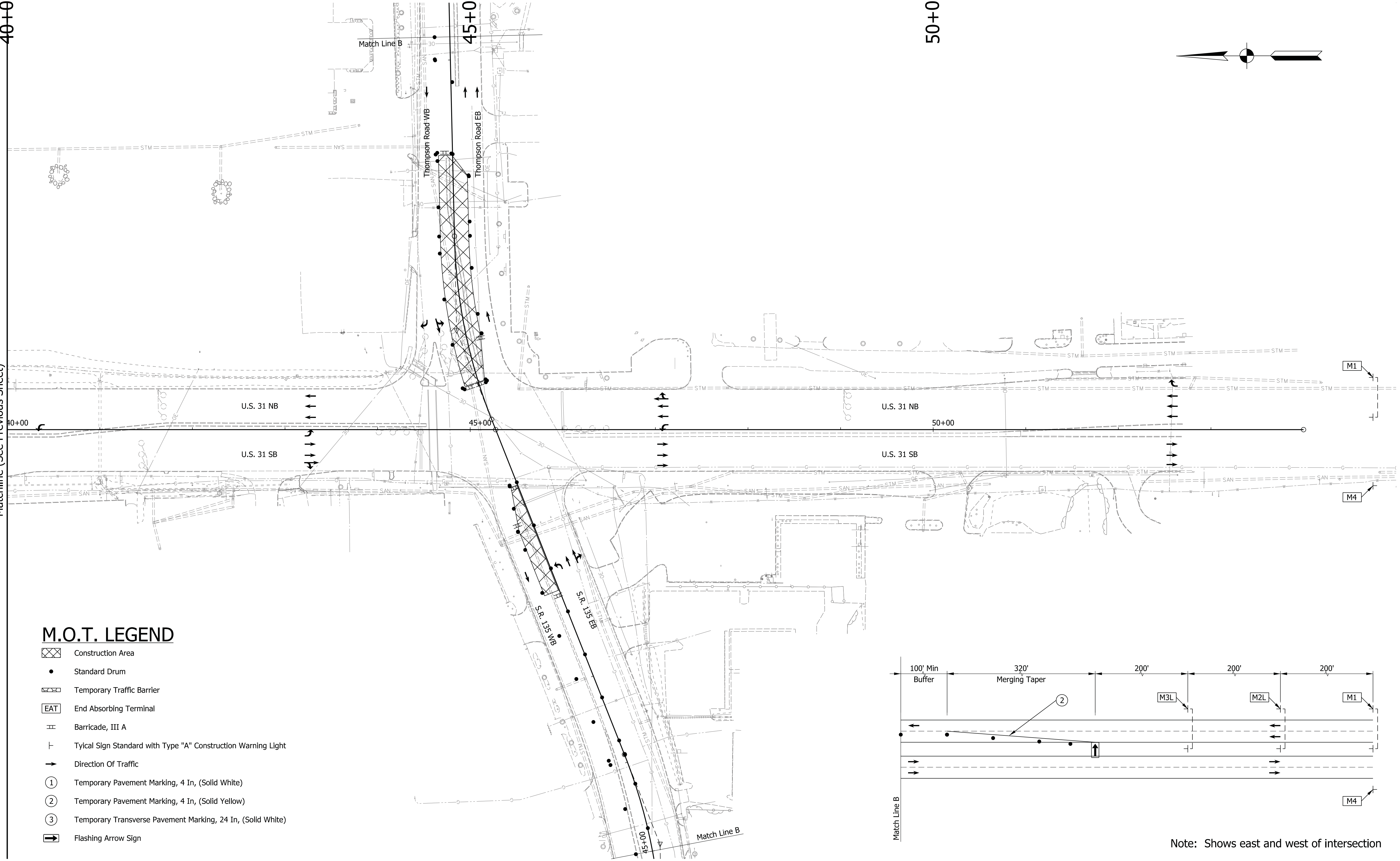
50+00

Matchline (See Previous Sheet)



M.O.T. LEGEND

- Construction Area
- Standard Drum
- Temporary Traffic Barrier
- End Absorbing Terminal
- Barricade, III A
- Typical Sign Standard with Type "A" Construction Warning Light
- Direction Of Traffic
- Temporary Pavement Marking, 4 In, (Solid White)
- Temporary Pavement Marking, 4 In, (Solid Yellow)
- Temporary Transverse Pavement Marking, 24 In, (Solid White)
- Flashing Arrow Sign



Note: Shows east and west of intersection

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DRAFT
NOT FOR CONSTRUCTION

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

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC - PHASE I
LINE "D"

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	N/A
VERTICAL SCALE	DESIGNATION
N/A	1700182
SURVEY BOOK	SHEETS MOT-04
Electronic	17 of 119
CONTRACT	PROJECT
R-40869	1700182

M.O.T. PHASE 2 CONSTRUCTION ACTIVITIES

- Traffic:**
- US 31 NB and SB
 - Maintain 1 thru lanes, 1 shared thru/right turn, and 1 left turn lane
 - Maintain a minimal of 1 shared thru/right turn, and 1 left turn lane for installing cross culvert pipe
 - Allow 1 full closure, at night, on US 31 NB for removing sign structure
 - SR 135 EB
 - Maintain 1 shared thru/right turn, and 2 left turn lanes
 - Thompson Road WB
 - Maintain 1 shared thru/right turn lane, and 1 left turn lane
 - I-465 Exit Ramp onto US 31 SB
 - Shift traffic north onto temporary and proposed pavement.
 - US 31 NB onto I-465
 - Maintain 1 exit lane.

- Construction:**
- Remove existing pavement markings and install temporary markings as shown.
 - Construct proposed US 31 and SR 135 intersection roadway
 - Construct proposed I-465 to US 31 SB exit ramp

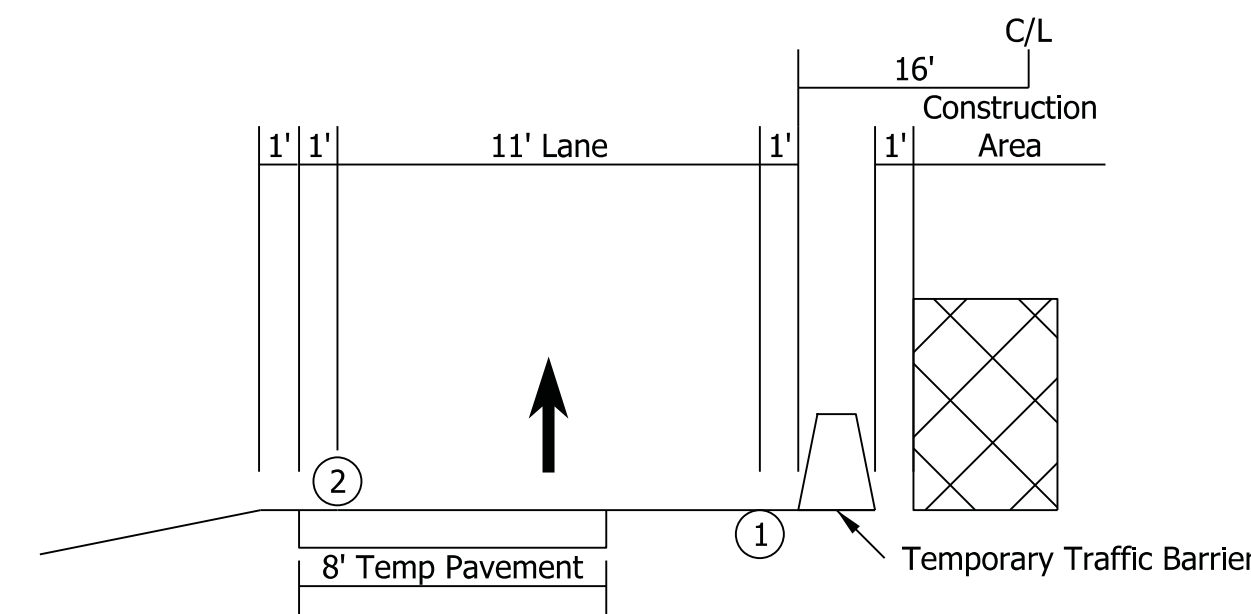
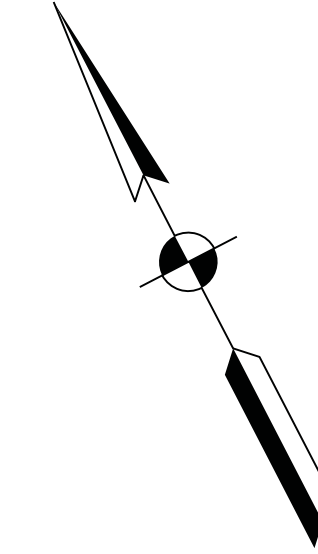
- Note:**
- Existing pavement marking that conflict with M.O.T. layout to be removed
 - Maintain access to property owners at all times
 - Traffic drum spacing
 - 50' typical
 - 25' at tapers

M.O.T. LEGEND

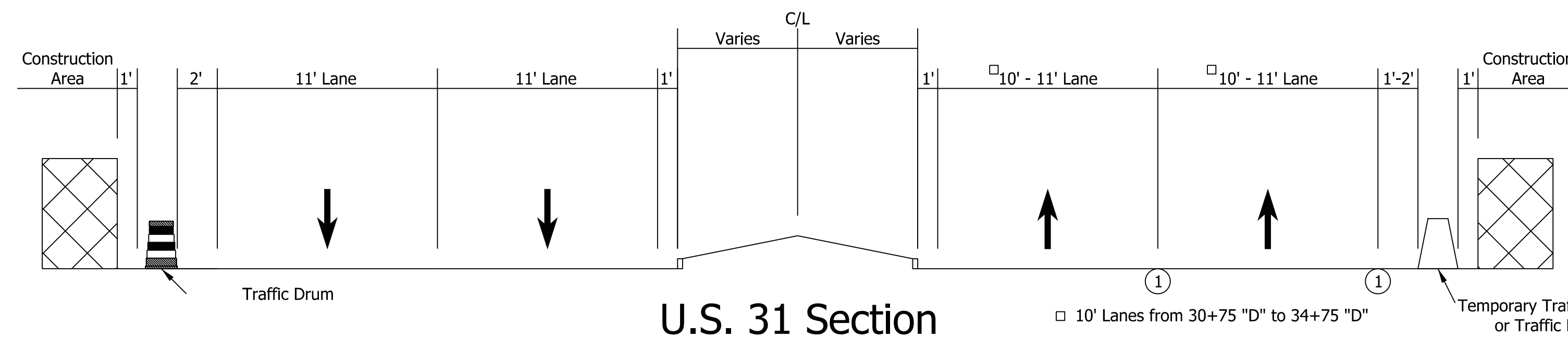
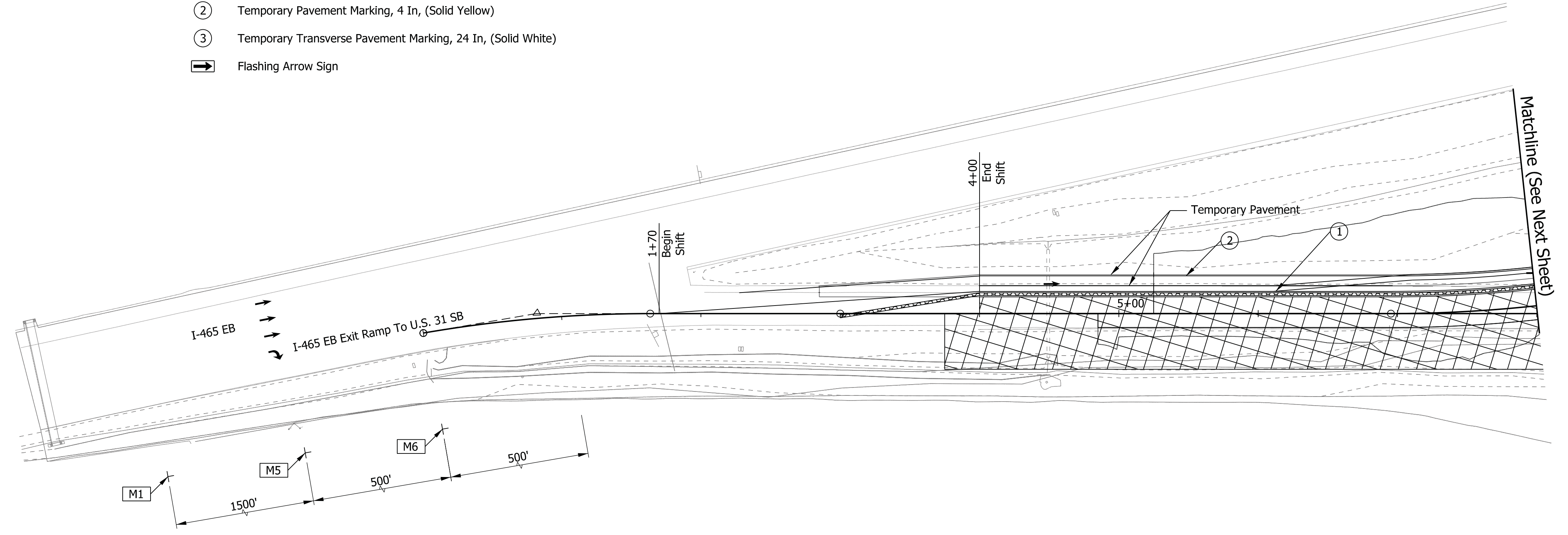
- Construction Area
- Standard Drum
- Temporary Traffic Barrier
- End Absorbing Terminal
- Barricade, III A
- Typical Sign Standard with Type "A" Construction Warning Light
- Direction Of Traffic
- Temporary Pavement Marking, 4 In, (Solid White)
- Temporary Pavement Marking, 4 In, (Solid Yellow)
- Temporary Transverse Pavement Marking, 24 In, (Solid White)
- Flashing Arrow Sign

0+00

5+00

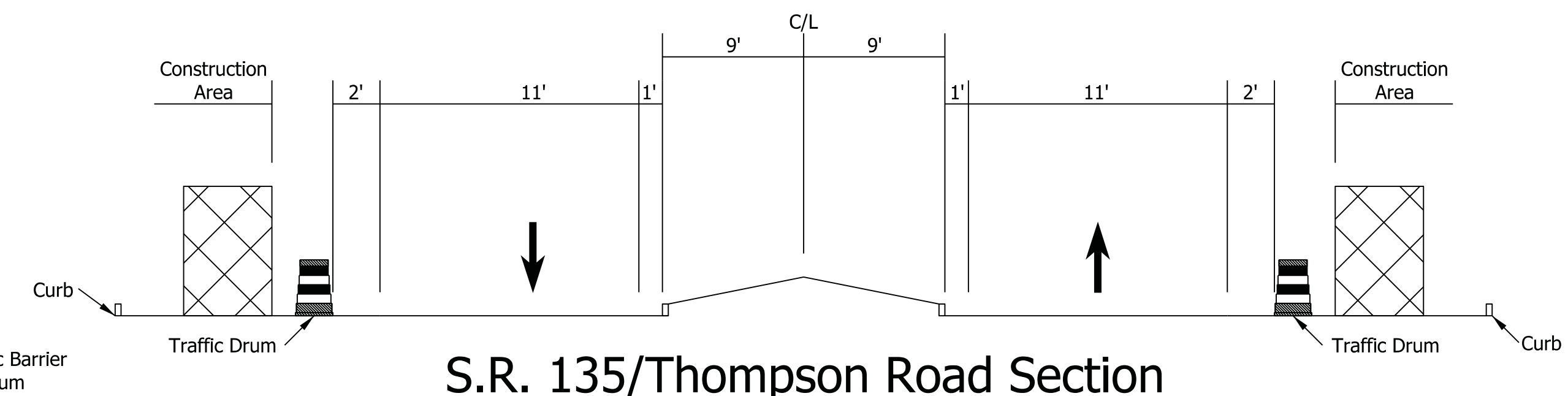


I-74 EB Exit Ramp To U.S. 31 SB Section
N.T.S.



U.S. 31 Section
N.T.S.

Note: See Plans for locations of 11' turn lanes.



S.R. 135/Thompson Road Section
N.T.S.

Note: See Plans for locations of 11' turn lanes.

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DRAFT
NOT FOR CONSTRUCTION

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

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC - PHASE II
LINE "PR-SWC"

HORIZONTAL SCALE	BRIDGE FILE	
1"=50'	N/A	
VERTICAL SCALE	DESIGNATION	
N/A	1700182	
SURVEY BOOK	SHEETS	MOT-05
Electronic	18	of 119
CONTRACT	PROJECT	
R-40869	1700182	

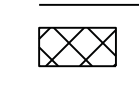



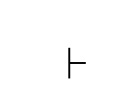

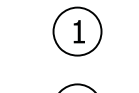
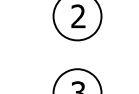
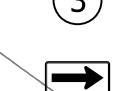
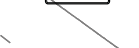
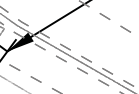
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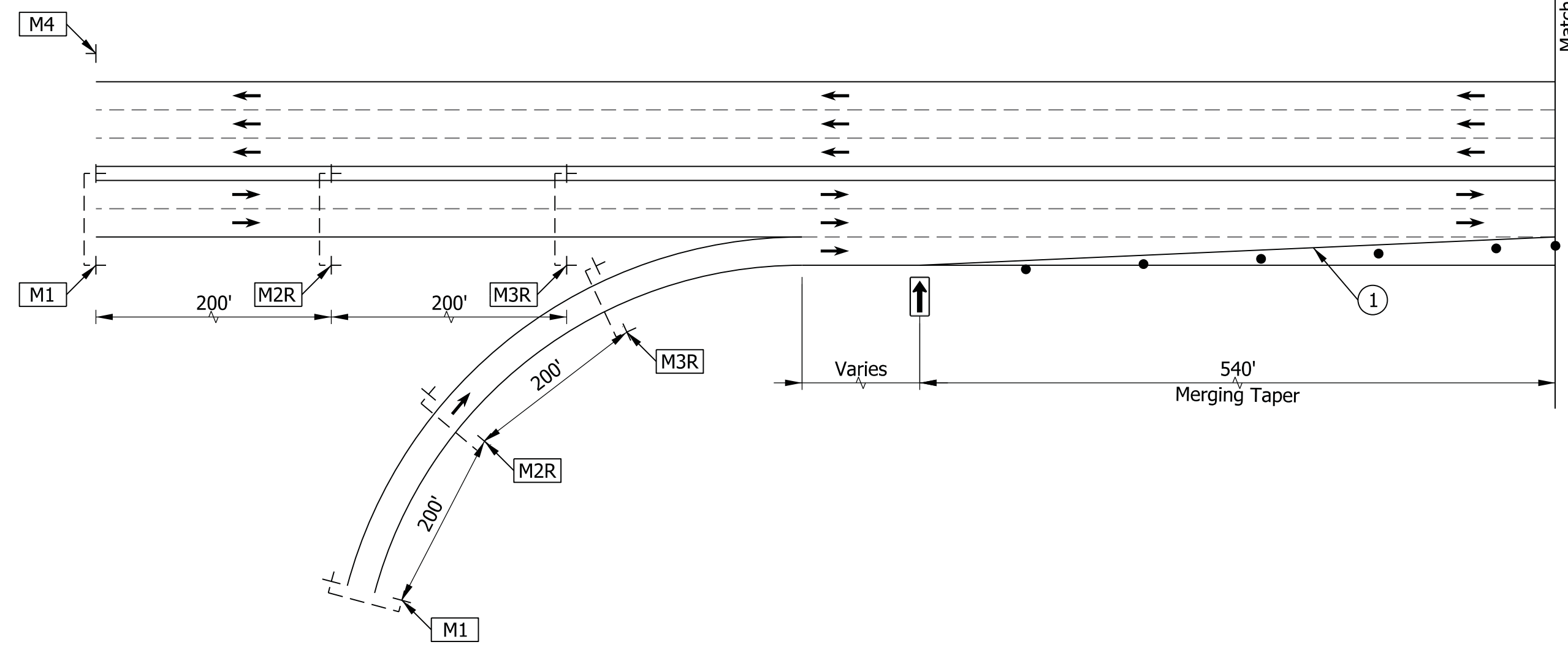
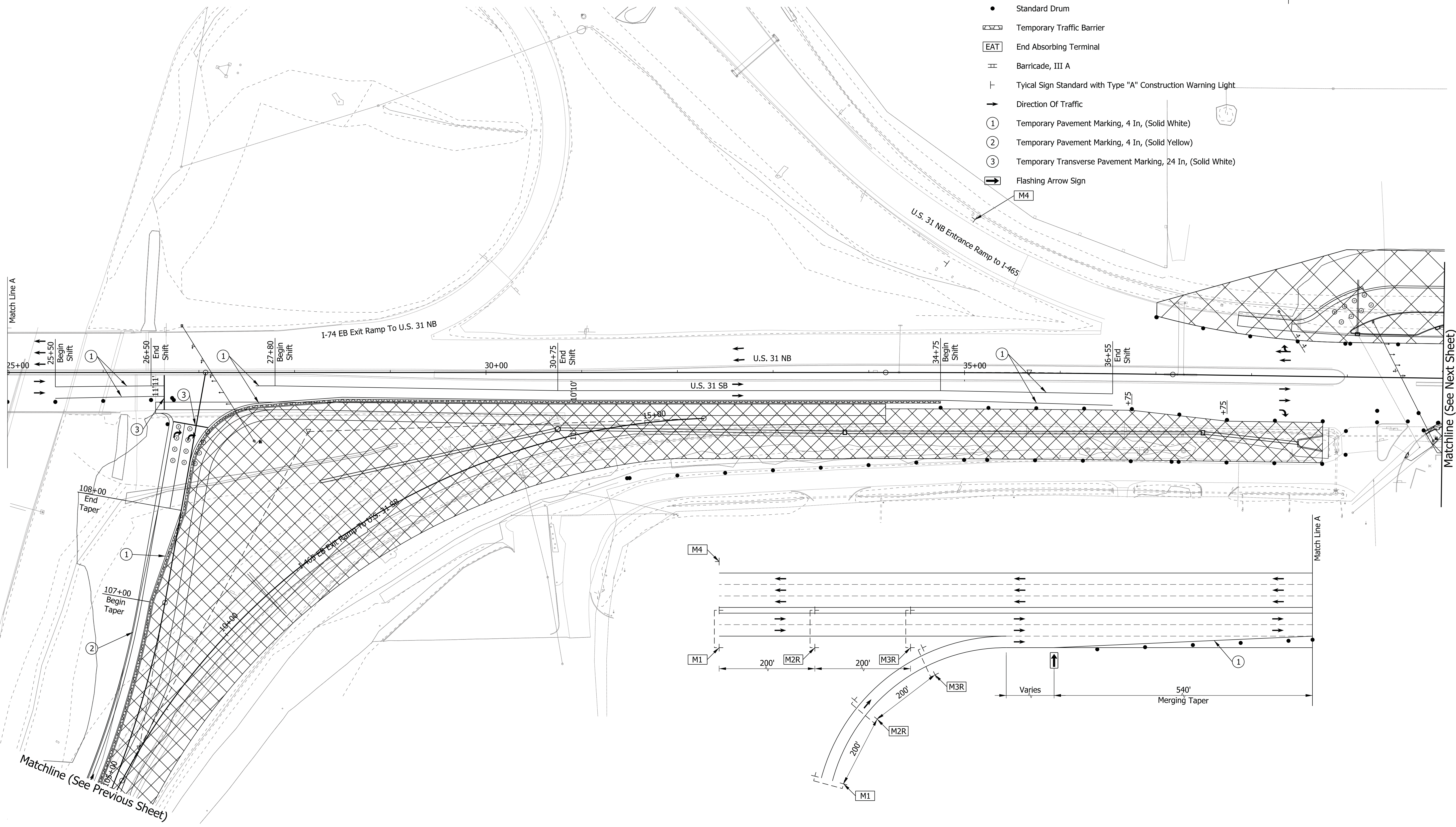
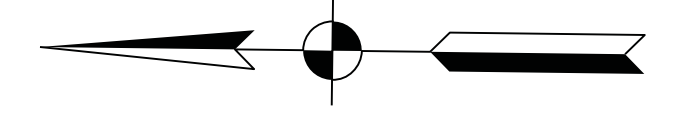
30+00

35+00

40+00

M.O.T. LEGEND

-  Construction Area
-  Standard Drum
-  Temporary Traffic Barrier
-  End Absorbing Terminal
-  Barricade, III A
-  Typical Sign Standard with Type "A" Construction Warning Light
-  Direction Of Traffic
-  Temporary Pavement Marking, 4 In, (Solid White)
-  Temporary Pavement Marking, 4 In, (Solid Yellow)
-  Temporary Transverse Pavement Marking, 24 In, (Solid White)
-  Flashing Arrow Sign



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DRAFT
 NOT FOR CONSTRUCTION

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

INDIANA
 DEPARTMENT OF TRANSPORTATION

 MAINTENANCE OF TRAFFIC - PHASE II
 LINE "D"

HORIZONTAL SCALE	BRIDGE FILE	
1"=50'	N/A	
VERTICAL SCALE	DESIGNATION	
N/A	1700182	
SURVEY BOOK	SHEETS	MOT-06
Electronic	19 of	119
CONTRACT	PROJECT	
R-40869	1700182	