

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

Road No./County:	US 36 (Rockville Road), Marion County
Designation Number(s):	1800035, 1800037, 1900340, 1900341, 2002284
Project Description/Termini:	Roadway and bridge improvements Raceway Road (RP 569+35) to I-465 southbound ramps (RP 68+41)

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

Approval

<p>N/A</p> <p>INDOT DE Signature and Date</p> <p>KARSTIN MARIE <small>Digitally signed by KARSTIN MARIE CARMANY-GEORGE Date: 2023.09.22 11:35:24 -04'00'</small></p> <p>CARMANY-GEORGE</p> <p>FHWA Signature and Date</p>	<p><i>Drew Pasmore</i></p> <p>INDOT ESD Signature and Date</p>	<p>September 6, 2023</p>
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Release for Public Involvement

<p>N/A</p> <p>INDOT DE Initials and Date</p>	<p><i>ADWP</i></p> <p>INDOT ESD Initials and Date</p>	<p>February 3, 2023</p>
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Certification of Public Involvement

<p><i>Karen Arnold</i></p> <p>INDOT Consultant Services Signature and Date</p>	<p>08/03/2023</p>
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INDOT DE/ESD Reviewer Signature and Date:

	<p><i>W. J. Fair</i> 9/6/23</p>
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Name and Organization of CE/EA Preparer:

	<p>Kirk Roth and Rachel Pluckebaum, Corradino, LLC</p>
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County: Marion County

Route: US 36

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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*?	<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.

Notice of Entry

Notice of Entry letters were mailed to potentially affected property owners near the project area on January 14, 2020, 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-2.

Public Involvement Plan

A Public Involvement Plan (PIP) was developed in February 2020 (Appendix G-3 to G-18).

Section 106

To meet the public involvement requirements of Section 106, a legal notice of the Federal Highway Administration's (FHWA) finding of *No Adverse Effect* was published in the *Indianapolis Star* on September 3, 2022 offering the public an opportunity to submit comment pursuant to 36 CFR 800.2(d), 800.2(c), 800.3(e), and 800.6(a)(4). The public comment period closed 30 days later on October 3, 2022. The text of the public notice and the affidavit of publication appear in Appendix D-94. No public comments were received.

Questionnaires

This project was presented to the public as Modern Rockville Road. This project has an online presence via social media pages (Facebook, Twitter, and YouTube) and a website (www.modernrockville.com). Through the end of February 2022, the project mailing list had grown to more than 2,100 email and text message subscribers and 730 social media followers on Facebook and Twitter. Questionnaires were made available to the public through the Modern Rockville Road website (<https://modernrockville.com/project-documents/>). Questionnaires were promoted through public information meetings, social media, news coverage and an e-mail and text message to Indiana Department of Transportation (INDOT) subscribers in Hendricks and Marion counties.

An Initial Issues Questionnaire was available online to the public from January 17 through March 31 in 2020 (Appendix G-19 to G-20). More than 1,900 people responded. These respondents identified congestion and motorist safety as the top issues (Appendix G-21 to G-22).

This was followed by a Solutions Questionnaire available online June 1 through June 30 in 2020 which had 410 respondents (G-23 to G-28). Nearly half of respondents (49%) identified adding lanes for through traffic as their top priority and 42% indicated that expanding the footprint of the road to keep paved shoulders was the preferred design approach (Appendix G-29 to G-30).

A Design Options Comment Form was available online in January and February 2021. The questions on the form were discussed during the virtual meetings. The form was used to collect public input on potential solutions to address congestion and increase safety along the corridor. See Appendix G-31 to G-35 for the Design Options Comment Form and response summary.

Public Information Meetings

Public information meetings were advertised via GovDelivery email and text message alerts, social media posts and a postcard to survey list addresses (Appendix G-36 to G-42). Two virtual public meetings were held on January 21, 2021 to present potential solutions and answer questions from the public, with a 30 day comment period. Presentation materials are in Appendix G-43 to G-65. Attendees were invited to submit questions during the presentations. For stakeholders who were unable to attend the virtual public meeting, a recording was posted to the project website and YouTube channel and promoted for viewing using email, text message and social media.

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Stakeholder meetings were held with the 40 West Business Association and the Rockville, High School, Girls School Neighborhood Association (RHGNA). Stakeholder meeting presentation materials are in Appendix G-43 to G-75. At the 40 West Business Association meeting on January 19, 2022, the Modern Rockville Road project was a major portion of the presentation about INDOT investments in state highways on the west side of Indianapolis and in neighboring counties. On February 21, 2021 and July 21, 2021, the project team met with the RHGNA. During the meetings, RHGNA representatives shared concerns about potential impacts that road improvements would have on the residential character of Rockville Road between Girls School Road and I-465, including vehicle speeds and turn movements for private driveways. Project team members answered questions and RHGNA representatives offered a variety of solutions including noise abatement and alternatives for major intersections such as dual left-turn lanes and roundabouts. The potential solutions were fully considered and weighed equally with other forms of public input in the refinement and selection of the preferred alternative. A meeting on the project occurred at the Governor's Office on May 4, 2023 with attendees being Governor's Legislative Director Tyler Ness, Senator J.D. Ford, Representative Renee Pack, INDOT Legislative Director Andrea Zimmerman, and RHGNA representative Karen Farmer.

Through the public involvement process and other communications with the public, concerns were brought to the attention of the project staff. The majority of comments received were from RHGNA representatives.

Impacts and concerns were addressed in the public information meetings (Appendix G-43 to G-55) and stakeholder meetings (Appendix G-56 to G-75). Concerns fell broadly into three categories: bringing infrastructure closer to properties, maintaining residential functions (e.g., access, mail service, etc.) for the local neighborhoods, and safety concerns to pedestrians, bicyclists, and vehicles. Concerned parties were able to engage with the project through public meetings, questionnaires, and through the project website (See Public Involvement section above).

New right-of-way (ROW) is minimized where possible by utilizing slightly narrower lane width (11' instead of 12') for left and center travel lanes and by converting the paved shoulder with open ditch drainage to a curb and gutter with a closed drainage system. These techniques keep the total roadway width to approximately 3' wider than the existing roadway width.

Improved traffic operations are expected to maintain adequate access to properties while reducing the need for US 36 traffic to utilize neighborhoods as shortcuts. The project solicited input from the public regarding where median gaps should be placed (Appendix G-30 to G-35; G-72; G-270). Sufficient access for properties and services are expected to continue after project completion.

The purpose of this project is to improve traffic operations and increase safety throughout the corridor. The presence of a median and streamlined traffic functions are anticipated to improve traffic safety along US 36. The Engineering Assessment Report contains safety analysis information (Appendix I-77 to I-79) and traffic summary (Appendix I-95 to I-101). A new sidewalk will be constructed on the south side of US 36 and a new multi-use path will be constructed on the north side, providing an improvement to community cohesion, safety, and mobility.

Project Does Meet

The project has met the minimum requirements described in the current *INDOT Project Development Public Involvement Procedures Manual* which required the project sponsor to offer the public an opportunity to submit comments and/or request a public hearing. Therefore, a legal notice appeared in a local publication, the *Indianapolis Star* and indystar.com, beginning February 22, 2023 (Appendix G-80). Notice of public hearing was accessible on the INDOT Greenfield District website and the project website beginning February 22, 2023 through March 8, 2023. Notice of public hearing was published in social media (e.g. Twitter, Facebook) beginning January 31, 2023. A public hearing occurred on March 8, 2023 at the Wayne Township Fire Department. A sign-in sheet was offered (Appendix G-82 to G-89), and the public was provided an informational handout upon signing in (Appendix G-109 to G-110). The project was introduced to the public, and the purpose and need, design plans, project schedule, maintenance of traffic (MOT), and environmental process was described during the presentation. Presentation materials are in Appendix G-102 to G-107. Oral comments were received and generally pertained to eliminating the median, current and future speeding issues, minimizing the usable shoulder, and current and future traffic flow (Appendix G-133 to G-187). Generally, written comments pertained to use of U-turns at intersections, minimizing the useable shoulder, current and future speeding issues, and safety issues (Appendix G-196 to G-216).

A 15-day comment period occurred after the public hearing. The comment period closed on March 22, 2023. Comments were received via virtual comment form and email (Appendix G-217 to G-236). Public comments included concerns to adding travel lanes, current and future speeding issues, proposed limited left turn lanes and U-turns, current and future safety concerns, current travel backup, and future added travel time. Comments were resolved by engineers reevaluating the proposed design. A dedicated eastbound US 36 left turn lane at Mission Drive is being included with the proposed improvements of the preferred alternative. No other changes occurred to the proposed design. Comments received during the comment period can be found in Appendix G-196 to G-236.

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A second public hearing was offered on July 6, 2023. Legal notice appeared in a local publication, the *Indianapolis Star* and indystar.com, beginning June 21, 2023. The notice of the public hearing was accessible on the INDOT Greenfield District website and the project website beginning June 21, 2023 through July 6, 2023. A notice was published in social media (e.g. Twitter, Facebook) beginning June 23, 2023. A public hearing occurred on July 6, 2023 at the Wayne Township Emergency Services Grand Hall at Westlake Gardens. A sign-in sheet was offered (Appendix G-244 to G-252), and the public was provided an informational handout upon signing in (Appendix G-273 to G-274). Material from the March 8, 2023 public hearing was presented as well as an additional slide regarding proposed modifications resulting from the March meeting, including a dedicated eastbound US 36 left turn lane at Mission Drive, U-turns added at Girls School Road, High School Road, and all traffic signals, and sidewalk on the east side of High School Road (Appendix G-270). Oral comments were received and generally pertained to eliminating the median, loss of left turns, minimizing the usable shoulder, current and future traffic flow (Appendix G-301 to G-333).

A 15-day comment period occurred after the public hearing. The comment period closed on July 21, 2023. Comments were received in writing at the hearing and via email (Appendix G-350 to G-358). Public comments included concerns regarding property value and access.

Summary of Comments

Responses to comments can be found in Appendix G-359 to G-370. Comments fell into four broad categories: Traffic, Safety, Environmental, and Design, with some miscellaneous comments that could not be categorized. Traffic-related comments regarded: comments and requests on the separate US 36 project in Hendricks County, traffic on US 36/Rockville Road and traffic on adjacent streets. Safety-related comments regarded: vehicle safety, emergency response, crash data, pedestrian safety, and safety during construction. Environmental-related comments regarded pedestrian access, the added multi-use path, property value, loss of yard property, residential property, business access, noise pollution, air quality, drainage, public notice, and availability of the environmental document. No additional project impacts or previously unidentified or unevaluated resources were revealed from public comments. Design-related comments regarded: lane configurations, traffic operation, access, alternatives and design suggestions, and survey. Miscellaneous comments regarded reference to previous comments at public information meetings, concern that previous comments were not adopted, the reason for the public hearing, and online survey results.

Public Controversy on Environmental Grounds

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

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

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

Sponsor of the Project: INDOT INDOT District: Greenfield

Local Name of the Facility: US 36 (Rockville Road)

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

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

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PURPOSE AND NEED:

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

Project Need

The need for this project is based on the following elements:

- Greater than expected crash history,
- Forecasted congestion and delay,
- Deteriorating condition of the Shiloh Creek culvert, and
- Lack of complete and ADA compliant pedestrian or bicycle facilities.

Regarding safety challenges, Automated Reporting Information Exchange System (ARIES) crash data was obtained for the 3-year period from 2016 to 2018. For the segment of US 36 from Raceway Road to the southbound I-465 ramps, a total of 699 crashes were reported consisting of 530 property damage only crashes, 156 non-incapacitating injury crashes, 12 incapacitating injury crashes, and 1 fatal crash. Approximately 46% of all crashes were rear-end crashes, and no other crash type accounted for more than 12% of the total. Rear-end crashes are common for corridors with a high level of congestion where vehicles are densely packed.

INDOT uses the Road Hazards Analysis Tool ROADHAT software, developed by the Purdue University Center for Road Safety, to analyze crash history and assess safety for many projects. ROADHAT produces an index of crash frequency (ICF) and an index of crash cost (ICC). ICF measures the difference between reported number of crashes and the expected number of crashes for a facility of similar type. The resulting measure is expressed as a standard deviation. For instance, if the ICF is 0 then the reported number of crashes matches the expected number of crashes. If the ICF is -1 then the reported number of crashes is less than expected by one standard deviation. If the ICF is 2 then the reported number of crashes exceeds the expected by two standard deviations. Per the bell curve from statistical analysis, one standard deviation represents approximately 68.2% of the total sample while two standard deviations represent approximately 95.4%. ICC is measured similarly to ICF; however, it captures crash severity by assigning higher costs to more severe crashes. ICF and ICC can be calculated for major intersections, as well as the roadway segments between the major intersections. The table below summarizes the portions of the corridor that have an ICF or ICC greater than 0 and demonstrates that more than 2.5 miles (approximately 85%) of the corridor is experiencing higher crash activity than expected for a facility of similar type. The Engineering Assessment Report (Appendix I-72 to I-101) contains additional safety analysis.

Location Along US 36	Type	ICF	ICC
Bridgeport Road	Intersection	0.47	1.07
Bridgeport Road to Country Club Road	Segment	0.34	-0.11
Country Club Road	Intersection	2.78	2.39
Country Club Road to Transfer Drive	Segment	1.36	1.18
Transfer Drive	Intersection	1.38	1.42
Transfer Drive to Girls School Road	Segment	0.52	0.92
Girls School Road	Intersection	4.06	3.60
Girls School Road to High School Road	Segment	0.74	0.54
High School Road	Intersection	2.75	2.71

Regarding traffic operations challenges, the corridor is experiencing congestion, especially at signalized intersections, which is anticipated to worsen over time. The traffic capacity of a roadway or intersection is commonly reported as a LOS from A to F, with LOS A being the best performing and considered "free-flow" and LOS F being the worst performing and considered "breakdown flow." LOS D is approaching unstable flow, where speeds will continue to decrease as the traffic volume increases and freedom to maneuver within the traffic stream becomes limited. LOS E is considered unstable flow that is irregular with very few gaps to maneuver within the traffic stream. For signalized intersections, the LOS is a function of the average vehicle delay per vehicle travelling through the intersection with LOS D at 35 to 55 seconds, LOS E at 55 to 80 seconds, and LOS F at greater than 80 seconds. Typically, a LOS D or worse is considered unacceptable and indicates a need to pursue a traffic operations improvement.

The table below summarizes the forecasted base year 2025 and design year 2045 AM and PM peak hour LOS results for the

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signalized intersections within the study area. These results represent the total intersection averages, with many of the individual approaches within each intersection, and many of the individual movements within each approach, performing at a worse LOS than the total intersection.

US 36 Intersection With	2025 AM		2025 PM		2045 AM		2045 PM	
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
Bridgeport Road	C	34.2	C	20.9	D	52.9	C	25.2
Country Club Road	B	16.7	D	52.8	B	17.3	D	43.7
Transfer Drive	A	3.5	A	6.6	A	5.7	A	9.3
Girls School Road	D	35.6	D	41.8	E	57.1	E	60.7
High School Road	C	32.9	E	57.5	D	41.7	E	64.9

The US 36 intersections with Country Club Road, Girls School Road, and High School Road are anticipated to operate at LOS D or worse by 2025, with performance decreasing even more by the 2045 design year. The US 36 intersection with Bridgeport Road is anticipated to operate at a LOS D by the 2045 design year. The LOS for the US 36 intersection with Raceway Road is anticipated to perform at an acceptable level and is not included in the table because its capacity is being improved via a separate project. Transfer Drive is anticipated to perform well at a LOS A, primarily because it is a "T" intersection that only serves the industrial users on the north side of US 36 with a physical barricade separating it from the residential area further to the north. The majority of the US 36 roadway between Raceway Road and I-465, including the westbound and eastbound bridges (036-49-03898 AEBL and 036-49-03898 AWBL) over the East Fork of White Lick Creek, has traffic operations challenges. The Engineering Assessment Report (Appendix I-72 to I-101) contains additional traffic operations analysis.

A project need results from the deteriorating condition of the Shiloh Creek culvert within the project area. The existing culvert crossing (CV 036-049-65.70) is rated at 4 (poor condition) on a scale from 0 (failed condition) to 9 (excellent condition) with large holes rusted through the floor near both ends and scattered areas of corrosion and thinned metal. All concrete anchors have very heavy deterioration. The culvert is 10.5 feet in circumference and 187 feet long. If the culvert deteriorates to failed condition, it could create a safety issue on US 36.

A project need also stems from the lack of complete and ADA compliant pedestrian and bicycle facilities within the subject corridor along an official IndyGo bus route. There is an existing 1,300-foot section of sidewalk along the north side of US 36 immediately east of Transfer Drive which lacks connection to other sidewalk along US 36. Any project which utilizes federal funding has a need for compliance with American Disability Act (ADA) nondiscrimination and accessibility requirements.

Project Purpose

The purpose of the project is to increase safety and improve traffic operations throughout the US 36 project corridor, while replacing deteriorated infrastructure and meeting ADA standards. Measurable criteria to accomplish this include:

- Improving overall corridor safety by making improvements within the corridor that will reduce the number of crashes, as supported by an industry-approved safety predictive model that is accepted by INDOT and FHWA.
- Achieving LOS C (stable flow at or near free flow) or better traffic operations,
- Improving the condition rating of the Shiloh Creek culvert to 7 (good condition) or better, and
- Accommodating pedestrians and bicyclists longitudinally along the corridor and at crosswalks along signalized intersections.

PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Marion

Municipality: City of Indianapolis

Limits of Proposed Work: US 36, from Raceway Road to the I-465 Southbound Ramps; 500 feet North along Country Club Road; 408 feet South along High School Road; 398 feet North along High School Road

Total Work Length: 3.0 Mile(s)

Total Work Area: 49.1 Acre(s)

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Is an Interstate Access Document (IAD)¹ required?
 If yes, when did the FHWA provide a Determination of Engineering and Operational Acceptability?

Yes ¹	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>
Date: 	

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

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

INDOT and the FHWA intend to proceed with this project to improve the roadway and bridge condition on US 36, known locally as Rockville Road,

Project Location: This project is within the City of Indianapolis in Wayne Township, Marion County. The project limits on US 36 extend from Raceway Road to the I-465 southbound ramps for a total of approximately 3 miles (Appendix B-2). The project is located on US 36 and includes a westbound and an eastbound bridge (036-49-03898 AEBL and 036-49-03898 AWBL) over East Fork of White Lick Creek. The project is located within Wayne Township, Marion County, in Sections 1, 2, 3, 4, 5, 8, 9, 10 11, and 12 of Township 15 North, Range 2 East. The project is located within the Clermont and Bridgeport U.S. Geological Survey (USGS) Quadrangles (Appendix B-4).

Existing Conditions: The functional class of US 36 is *Principal Arterial*. The existing US 36 roadway throughout the project corridor primarily consists of two 12-foot lanes and 10-foot paved outside shoulder in each direction, separated by a 16-foot wide continuous center two-way-left-turn-lane (TWLTL), resulting in an 83-foot wide paved cross section. The US 36 intersections at L.A. Fitness Drive, Richie Avenue/Bridgeport Road, Country Club Road, Transfer Drive, Girls School Road, and High School Road are signalized with designated left turn lanes in place of the TWLTL, from US 36 to the minor road. Some major intersections also have designated right turn lanes, in place of the 10 feet wide paved outside shoulder, from US 36 to the minor road. Many intersections currently experience large delays of 55 to 80 seconds per vehicle. Existing roadside drainage is conveyed by a combination of storm sewers, roadside ditches, and driveway culverts. Street lighting does not exist along the corridor. No sidewalks exist along the corridor except for a 1,300-foot section along the north side of US 36, immediately east of Transfer Drive. While this sidewalk is ADA compliant, it does not connect to other sidewalk along US 36 to the east or west.

The land use adjacent to US 36 varies throughout this corridor. A residential area is located on the north and south sides of US 36 between High School Road and Girls School Road and north of US 36 between Girls School Road and Rockleigh Avenue. The land use is industrial between Rockleigh Avenue and the CSX Railroad Overpass, commercial between the CSX Railroad Overpass and Country Club Road, residential between Country Club Road and Bridgeport Road/Richie Avenue, and commercial south of US 36 between Girls School Road and Rockleigh Avenue.

The only existing bridge structures (036-49-03898 AEBL and 036-49-03898 AWBL) on this project are the eastbound and westbound US 36 bridges over the East Fork White Lick Creek, located approximately 1 mile east of the western project terminus (Appendix I-102 to I-158). The twin bridges are three-span concrete continuous reinforced slabs. These structures abut with an approximate 1-inch separation. The combined structures provide approximately 86 feet of clear roadway width accommodating two 12-foot travel lanes and a 10-foot shoulder in each direction separated by an 18-foot TWLTL (Appendix B-211). They effectively serve as a single structure with the US 36 TWLTL straddling the 1-inch gap between structures. The substructures are bent caps and wall piers supported by piles. The slab surfaces have some transverse and longitudinal cracking. The slab undersides have spalling and efflorescence, and severe spalling on copings. The substructures have little deterioration except the pier stem walls have some minor vertical cracks. The approach slabs have some wide cracks and minor spalls.

The existing culvert crossing at Shiloh Creek (CV 036-049-65.70) is a 10.8-foot corrugated metal pipe that is 187 feet long. The culvert is rated at 4 (poor condition) on a scale from 0 (failed condition) to 9 (excellent condition) with large holes rusted through the floor near both ends and scattered areas of corrosion and thinned metal. All concrete anchors have very heavy deterioration.

Preferred Alternative: The preferred alternative will be an Added Travel Lanes (ATL) project which will be constructed without substantially widening the existing pavement (Appendix B-91 to B-122). Full-depth reconstruction of the existing outside shoulder will convert it to a third travel lane in each direction with adjacent new curb and gutter and a closed drainage system. The new total cross-section width from the back-of-curb to back-of-curb will be 74 feet, as compared to the existing total pavement width of 83 feet (Appendix B-10). The new US 36 pavement section will consist of two 11-foot inside lanes and a 12-foot outside lane with a 2-foot curb and gutter in each direction, separated by a 15-foot raised (curbed) center median. The center median will help control access

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along the corridor and will also be used to provide dedicated left turn lanes along US 36 at major intersections, as well as significant commercial developments and neighborhood entrances. As a result of the March 8, 2023 meeting, U-turns will be added at Girls School Road, High School Road, and at all traffic signals. As a result of the March 8, 2023 public hearing, a dedicated eastbound US 36 left turn lane at Mission Drive will be included with the proposed improvements of the preferred alternative. A 5-foot to 6-foot wide sidewalk separated by a variable 0-foot to 5-foot-wide buffer, adjacent with the new outside curb, will be constructed along the south side of US 36. A variable 7-10 feet wide multi-use path, separated by a variable 0- to 5-foot-wide buffer, will be constructed along the north side of US 36. There will be a 10-foot multi-use path separated from the back of curb with a 5-foot grass buffer on the north side of US 36 from the east side of Raceway Road to the entrance to Lifetime Fitness; there will be a 5-foot sidewalk separated from the back of curb with a 5-foot grass buffer on the south side of US 36 from the east side of Raceway Road to the start of the project (Sta. 569+35 "C"). As a result of the March 8, 2023 public hearing, sidewalk will be added on the east side of High School Road adjacent to the Bob Evans restaurant to connect to existing sidewalk. Curb ramps will be installed at Raceway Road on the east side to allow connectivity to sidewalk/path on the west side of Raceway Road. A new north-south pedestrian crossing will be added on the east side of Raceway Road. All pedestrian and non-motorized improvements will be ADA compliant.

Additional proposed intersection improvements include the following:

Intersection with US 36	Existing Type	Improvements
Richie Avenue/Bridgeport Road	Signalized with left turn lane	Eastbound US 36 to southbound Richie Avenue/Bridgeport Road right turn lane
Country Club Road	Signalized with left and right turn lanes	Second (dual) eastbound US 36 to northbound Country Club Road left turn lane.
		Westbound US 36 to northbound Country Club Road right turn lane.
		Southbound Country Club Road to westbound US 36 right turn lane.
Transfer Drive	Signalized with left and right turn lanes	Westbound US 36 to northbound Transfer Drive right turn lane.
Girls School Road	Signalized with left turn lane and right turn lanes	Eastbound and westbound US 36 to Girls School Road right turn lanes.
High School Road	Signalized with left and right turn lanes	Eastbound US 36 to southbound High School Road right turn lane.
		Full-depth widening and multi-use path on High School Road.

Roadway drainage will be conveyed by curb and gutter, storm sewer, and roadside ditches. Drainage inlets will be integrated into the proposed curb and gutter and the number of inlets will be increased. Ditches will be removed from a large portion of the project, with the remaining ditches primarily used as a means of detention. Driveways will be reconstructed as needed.

Bridges: The eastbound (036-49-03898 AEBL) and westbound (036-49-03898 AWBL) US 36 bridges over the East Fork of White Lick Creek will be widened to the outside to accommodate the third added travel lane in each direction and the pedestrian/non-motorized facilities (Appendix B-202 to B-211). The proposed rehabilitation would consist of bridge widening, replacing bridge railings and guardrail, deck patching, overlay, and placement of riprap for scour protection. The outer 2 feet of the north side copings and outer 2 feet 6 inches of the south side copings for each slab will be removed. Following the removal of the outer coping, the existing overlay will be removed through milling and unsound concrete will be removed using hydrodemolition and a new 2-foot 6-inch concrete overlay will be placed. Sidewalks and raised median curb will be installed on both structures. Existing wingwalls and approach slabs will be replaced. Revetment riprap will be installed at the widening portion of the end bent slope walls and Class I riprap at the entirety of the piers for scour projection. The existing end bent drainage slopes will be removed. Riprap drainage turnouts will be installed at all four quadrants. The bridges would then be widened along the exterior fascia and configured to add a third travel lane in each direction, a 6-foot 8-inch wide raised sidewalk on the south side and a 12-foot 8-inch wide raised multi-use path on the north side. The total out to out width of the structures would be 108 feet 4 inches. The existing bridge railings would be removed and replaced with concrete bridge railings. The substructures would be widened to accommodate the widened superstructures. Riprap would be installed around the piers, over the end bent spill slopes and spill cones. The approach slabs to the bridges would be replaced (Appendix B-110).

The Shiloh Creek culvert (CV 036-049-65.70) will be replaced as part of this project (Appendix B-94). The existing culvert crossing at Shiloh Creek is a 126-inch corrugated metal pipe that is 187 feet long. The proposed structure is a 12-foot wide by 9-foot tall and 192-foot long reinforced concrete box culvert sumped 12 inches. Class I riprap on geotextile will be placed at the inlet and outlet of the structure. Modified manholes will be installed on both ends of a culvert under US 36 120 feet west of Burke Avenue to enable a pipe connection into the side of the structure.

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Maintenance of Traffic (MOT): The MOT for the project will require phased construction (Appendix B-25 to B-90). Travel lanes will be reduced to 11 feet, the two-way-left-turn-lanes will be reduced to 12 feet wide, and traffic will utilize the middle while construction occurs on the outside lanes and drainage system. Traffic will be shifted north to construct the eastbound widening, then shifted south to construct the westbound widening. Traffic will be shifted to the outside lanes to construct the raised median. The entire project will be resurfaced under traffic. No detours will be used. No pedestrian facilities currently exist along this corridor, with the exception of a 1300-foot segment east of Transfer Drive on the north side of US 36. This segment does not connect to any other pedestrian facilities. Pedestrian MOT will not be provided. There are five bus stops along US 36 within the project area, at Richie Avenue, Country Club Road, Transfer Drive, Rockleigh Avenue, and Girls School Road. Bus stop access will be maintained throughout the project, in accordance with ADA guidance (Appendix B-191 to B-194).

Logical Termini/Independent Utility: This alternative meets the project's purpose and need to improve traffic operations and increase safety. The added travel lanes will significantly increase the capacity of the corridor, which will improve traffic operations (Appendix I-82 to I-85). The corridor has a high percentage of rear-end crashes that can be attributed to congestion and back of queue encounters. Improved capacity and reduced queuing should also reduce the amount of rear-end collisions. FHWA's Interactive Highway Safety Design Model (IHSDM) is a suite of software analysis tools used to predict the safety and operational effects of geometric design alternatives. For this project, IHSDM predicts the Preferred Alternative will reduce the total number of crashes, from the base year (2025) to the design year (2045), by 865 (38.1%) when compared to the Do Nothing Alternative. Appendix I-183 to I-231 contains the IHSDM reports. The replacement of the Shiloh Creek culvert will improve that structure to a rating of 7 (good condition) or better. Pedestrian and bicycle mobility and safety will be maintained or upgraded to ADA standards as is required by projects using federal funding.

The US 36 Modern Rockville Road project is comprised of five designation numbers. These include:

- Des. No. 1800035:* Roadway improvements from Raceway Road to Transfer Drive in Marion County
- Des. No. 1800037:* Roadway improvements from Transfer Drive east to I-465 southbound ramps in Marion County
- Des. No. 1900340:* Bridge widening on US 36 (Rockville Road) eastbound over East Fork of White Lick Creek
- Des. No. 1900341:* Bridge widening on US 36 (Rockville Road) westbound over East Fork of White Lick Creek
- Des. No. 2002284:* Shiloh Creek culvert replacement.

These five designation numbers exhibit shared utility because they occur within the same area of US 36 between Raceway Road and the I-465 southbound ramps, the completion of the individual projects may affect the progress of others, and they share the same purpose of improving traffic operations and increasing safety throughout the U.S. 36 corridor. Therefore, all of these designation numbers are included within this environmental document and included within the U.S. 36 Modern Rockville Road project.

This US 36 Modern Rockville Road project has logical termini consisting of an intersection with Raceway Road, functionally classified as a mirror arterial to the west, and an intersection with I-465, functionally classified as an interstate, to the east; both of which are major traffic generators within the project limits. These termini were chosen to encompass the portion of the corridor affected by both of these major traffic sources.

The western terminus at Raceway Road also serves as the eastern terminus for a separate US 36 roadway improvement project (lead Des. 1601072) that is currently being constructed and includes improvements at the U.S. 36 intersection with Raceway Road. Although these projects share a common terminus, each project satisfies its own purpose and need regardless of the completion of the other. Neither project addresses the traffic and safety deficiencies within the other project's corridor. Current construction of DES 1601072 does not predetermine the alternative analysis and selection of the preferred alternative for the subject project, nor predetermine the alternatives for other projects. This project can function properly and address the purpose and need without the need for other projects, based on the termini chosen. The subject project's preferred alternative was determined due to the predicted congestion benefit in the Engineering Assessment Report for this corridor (Appendix I-81) with input from public questionnaires specific to this portion of US 36 in Marion County (Appendix G-29). Design plans provide details regarding the proposed project improvements (Appendix B-8 to B-211).

OTHER ALTERNATIVES CONSIDERED:

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

Do Nothing: The do nothing alternative, which would involve no improvements to the existing roadway, was considered. This alternative would require no additional permanent or temporary right-of-way, has no costs and no environmental impacts. The do nothing alternative does not provide improvements to safety or traffic operation within the US 36 corridor. This alternative does not

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meet the purpose and need of the project and was therefore dismissed from further consideration (Appendix I-81 and I-90).

Displaced Left Intersections: This alternative would reconstruct US 36 (Rockville Road) with displaced left intersections. This alternative proposes that the existing pavement would remain in place and displaced left-turn intersections would be installed at the existing signalized intersections of US 36 with Country Club Road, Girls School Road, and the west side of High School Road. This alternative does not add travel lanes. The existing two-way-left-turn-lane (TWLTL) would be converted to a median separated from the mainline by a mountable curb. The existing shoulder would be removed, and a curb and gutter section would be added on both sides of US 36 to allow for the accumulation and transportation of stormwater runoff. Widening of the existing bridges over the East Fork of White Lick Creek would be required for this alternative. This alternative would meet the project purpose and need. The Preferred Alternative was favored over this alternative in public questionnaires (Appendix G-29). While this alternative is anticipated to improve traffic capacity and reduce congestion, as compared to the no-build alternative, it is not expected to provide as much congestion benefit as the preferred alternative (Appendix I-81). Similarly, while IHSDM analysis (Appendix I-197 and I-231) predicts this alternative will reduce total crashes when compared to the Do Nothing Alternative, it is predicted to not reduce total crashes as much as the Preferred Alternative. Therefore, this alternative was not selected. The Engineering Assessment Report contains safety and traffic capacity analysis information (Appendix I-72 to I-101).

No other alternatives were considered.

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

It would not correct existing capacity deficiencies;

It would not correct existing safety hazards;

It would not correct the existing roadway geometric deficiencies;

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

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

Other (Describe):

ROADWAY CHARACTER:

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

Name of Roadway US 36 (Rockville Road)
 Functional Classification: Principal Arterial
 Designed Speed (mph): 45 Legal Speed (mph): 45

	Raceway Road to Railroad	Railroad to Girls School Road	Girls School Road to High School Road
Current ADT (Vehicles Per Day - 2025)	38,128	42,156	40,820
Design Year ADT (Vehicles Per Day - 2045)	42,469	46,955	45,468
Design Hour Volume (Vehicles Per Hour - 2045)	3,581	3,887	3,797
Truck Percentage of Design Hour Volume	3.8%	4.7%	4.8%

	Existing		Proposed	
Number of Lanes:	5		6	
Type of Lanes:	Vehicular – 2 Eastbound, Vehicular – 2 Westbound, TWLTL - 1		Vehicular – 3 Eastbound Vehicular – 3 Westbound	
Pavement Width:	84	ft	52-64	ft
Shoulder Width:	10	ft	N/A	ft
Median Width:	N/A	ft	15	ft
Sidewalk Width:	5 (north of US 36 between Transfer Drive and Rockleigh Avenue)		7-10 multi-use (north of US 36) 5-6 (south of US 36)	

Setting: Urban
 Topography: Level

Suburban
 Rolling

Rural
 Hilly

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BRIDGES AND/OR SMALL STRUCTURE(S):

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

Structure/NBI Number(s): 036-49-03898 AEBL and 036-49-03898 AWBL Sufficiency Rating: 92.7, 3/3/22 Bridge Inspection Report
(Rating, Source of Information)

	Existing		Proposed	
Bridge/Structure Type:	Concrete Slab		Concrete Slab	
Number of Spans:	3		3	
Weight Restrictions:	N/A	ton	N/A	ton
Height Restrictions:	N/A	ft.	N/A	ft.
Curb to Curb Width:	83.5	ft.	74.0	ft.
Outside to Outside Width:	86.5	ft.	108.4	ft.
Shoulder Width:	10 (outside)	ft.	1 (median), 2 (outside)	ft.

Structure/NBI Number(s): CV 036-049-65.70 Sufficiency Rating: 4 (Poor Condition) 3/16/22 Culvert Inspection Report
(Rating, Source of Information)

	Existing		Proposed	
Bridge/Structure Type:	Corrugated Metal Pipe		Reinforced Concrete Box	
Number of Spans:	1		1	
Weight Restrictions:	N/A	ton	N/A	ton
Height Restrictions:	N/A	ft.	N/A	ft.
Curb to Curb Width:	86	ft.	88.0	ft.
Outside to Outside Width:	112	ft.	168	ft.
Shoulder Width:	10 (outside)	ft.	1 (median), 2 (outside)	ft.

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

The existing bridge structures on this project are the eastbound (036-49-03898 AEBL) and westbound (036-49-03898 AWBL) US 36 bridges over East Fork White Lick Creek, located approximately 1 mile east of the western project terminus. These three-span reinforced concrete slab structures abut with an approximate 1 inch separation. Each of the bridges consists of two 12-foot travel lanes, a 10-foot outside shoulder and a 16-foot TWLTL. The total out to out width of the structures is 86 feet 6 inches. The bridges were originally constructed in 1976 and were rehabilitated in 1991, including new concrete barrier rail, and slab milling and concrete overlay (Appendix I-102 to I-158).

The proposed rehabilitation would consist of bridge widening, replacing bridge railings and guardrail, deck patching and overlay (Appendix B-180 to B-189). The bridges will be widened along the exterior fascia and configured to add a third travel lane in each direction, a 6-foot 8-inch wide raised sidewalk on the southside and a 12-foot 8-inch wide raised multi-use path on the north side (Appendix I-189).

The existing culvert crossing at Shiloh Creek is an existing 126-inch corrugated metal pipe. The proposed structure is a 12-foot wide by 9-foot tall by 192-foot long reinforced concrete box culvert sumped 12 inches (Appendix B-126).

The only other culvert within the project limits is located approximately 120 feet west of Burke Avenue over an unnamed tributary (UNT2 to Shiloh Creek in the *Waters of the U.S. Report*), but it will not be replaced or rehabilitated as part of this project. Modified manholes will be installed on both ends of the culvert to enable a pipe connection into the side of the structure (Appendix B-126).

The latest Historic Bridge Inventory (<http://www.in.gov/indot/2531.htm>) did not identify any historic structures at or near the project area. No additional structures are located within the project area.

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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 below)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Provisions will be made for access by local traffic and so posted.	<input type="checkbox"/>	<input type="checkbox"/>
Provisions will be made for through-traffic dependent businesses.	<input type="checkbox"/>	<input type="checkbox"/>
Provisions will be made to accommodate any local special events or festivals.	<input type="checkbox"/>	<input type="checkbox"/>
Will the proposed MOT substantially change the environmental consequences of the action?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is there substantial controversy associated with the proposed method for MOT?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will the project require a sidewalk, curb ramp, and/or bicycle lane closure? (describe below)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Provisions will be made for access by pedestrians and/or bicyclist and so posted (describe below).	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

MOT will be completed through phased construction over two construction seasons (Appendix B-25 to B-90). During the first phase lasting approximately 30 days, shoulder and lane closures with median crossovers will occur and temporary traffic signals will be utilized. For approximately 200 days, the second through fourth phases will involve different configurations of lane relocations and closures, with temporary pavement placed at outside lanes and at inside lanes at the railroad bridge. Travel lanes will be reduced to 11 feet, the two-way-left-turn-lanes will be reduced to 12 feet wide, and traffic will utilize the middle while construction occurs on the outside lanes and drainage system. Traffic will be shifted north to construct the eastbound widening, then shifted south to construct the westbound widening. Traffic will be shifted to the outside lanes to construct the raised median. The entire project will be resurfaced under traffic. No detours will be used. The fifth phase will involve lane relocation to the permanent alignment and traffic signals for approximately 30 days. The sixth phase will last approximately 15 days; the entire project would be resurfaced under traffic with flagging operations and median construction will occur. The project will be divided into two segments for US 36 MOT, split approximately at Transfer Drive. MOT for median crossovers will be detailed in Stage 3 plans.

No pedestrian facilities currently exist along this corridor, with the exception of a 1300-foot segment east of Transfer Drive on the north side of US 36. This segment does not connect to any other pedestrian facilities. Pedestrian MOT will not be provided.

Access to all businesses and residential properties will be maintained during construction. There are five bus stops along the route. Bus stop access will be maintained throughout the project, in accordance with ADA guidance. The bus stop locations may shift slightly due to construction phasing, but each will be available continuously. Lane restrictions will pose a temporary inconvenience to traveling motorists (including school buses and emergency services); however, no significant delays are anticipated, and all inconveniences and delays will cease upon project completion.

ESTIMATED PROJECT COST AND SCHEDULE:

Engineering: \$ 4,500,000 (2024) Right-of-Way: \$ 380,000 (2024) Construction: \$ 34,000,000 (2024)

Anticipated Start Date of Construction: December 1, 2024

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RIGHT OF WAY:

Land Use Impacts	Amount (acres)	
	Permanent	Temporary
Residential (lawn and driveway)	0.0	0.146
Commercial	0.189	0.187
Agricultural	0.0	0.0
Wooded/Forest	0.018	0.033
Wetlands	0.0	0.0
Streams	0.0	0.0
TOTAL	0.207	0.366

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

The project requires approximately 0.207 acre of permanent ROW adjacent to US 36 from residential and commercial properties. The project also requires approximately 0.366 acre of temporary ROW adjacent to US 36 from residential and commercial properties. Approximately 0.174 acre of reacquired ROW is necessary from two parcels on High School Road south of US 36, comprised of paved areas. ROW acquisition is primarily for driveway reconstruction and occurs in two major areas – a section between Coronado Road and the East Fork of White Lick Creek and another section between Girls School Road and High School Road. See Appendix B-17 to B-24 for plat maps.

The existing ROW typically extends between 65 feet to 85 feet on either side of the centerline. The maximum width occurs at the bridge over the East Fork of White Lick Creek and is 100 feet north and 160 feet south of the centerline (Appendix B-187).

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

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

SECTION A - EARLY COORDINATION:

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

Early coordination letters were sent on December 30, 2020 unless otherwise indicated. Appendix C-2 to C-5. The 9/22/21 informal coordination letter to the U.S. Fish and Wildlife Service may be found in Appendix C-18 to C-46.

<u>Agency</u>	<u>Date Sent</u>	<u>Date Response Received</u>	<u>Appendix</u>
U.S. Fish and Wildlife Service (USFWS)	9/22/2021	12/20/2021	C-35 to C-41
USFWS Information for Planning and Consultation (IPaC) Species List	10/12/22	10/12/22	C-42 to C-57
Federal Highway Administration (FHWA)	12/30/2020	No response	N/A
Natural Resources Conservation Service (NRCS)	1/20/2021	1/28/2021	C-9
Indiana Geological and Water Survey (IGWS)	1/5/2021	1/5/2021	C-11 to C-13
Indiana Department of Natural Resources – Department of Fish and Wildlife (IDNR-DFW)	12/30/2020	1/29/2021	C-14 to C-17
U.S. Department of Housing and Urban Development (HUD)	12/30/2020	No response	N/A
National Park Service (NPS)-Midwest Regional Office	12/30/2020	No response	N/A
U.S. Army Corps of Engineers (USACE)	12/30/2020	No response	N/A
Marion County Surveyor	1/05/2021	1/11/2021	C-10
INDOT - Greenfield District	1/24/2021	No response	N/A

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INDOT-Utilities and Railroads	12/30/2020	No response	N/A
INDOT-Environmental Policy Manager	1/15/2021	2/7/2021	C-6 to C-7
INDOT-Aviation Section	12/30/2020	1/4/2021	C-8
IDNR-Oil and Gas	12/30/2020	No response	N/A
Westlake Church of God	1/05/2021	No response	N/A
Rockville Road Church of Christ	1/05/2021	No response	N/A
Indianapolis Parks & Recreation Department	1/05/2021	No response	N/A
Metropolitan School District (MSD) Wayne Township	1/05/2021	No response	N/A
Indianapolis Metropolitan Police Department (IMPD)	1/05/2021	No response	N/A
Wayne Township Fire Department	1/05/2021	No response	N/A
Indianapolis Emergency Medical Services (EMS)	1/05/2021	No response	N/A
U.S. Coast Guard, Eighth District	1/05/2021	No response	N/A
Director of Indianapolis Parks and Recreation	1/05/2021	No response	N/A
Marion County Commissioners	1/05/2021	No response	N/A
Indianapolis Metropolitan Planning Organization (MPO)	12/30/2020	No response	N/A
Indianapolis Public Transportation Corporation (IndyGo)	12/08/2022	12/19/2022	C-58
Indianapolis Department of Public Works (DPW)	1/21/2021	No response	N/A
INDOT DES 1600627 (Rick Phillibaum)	2/23/2022	No response	N/A
Furman Stout Neighborhood Drainage Improvements	2/23/2022	No response	N/A
Belle Tire	2/23/2022	No response	N/A
Tire Discounters Avon	2/23/2022	No response	N/A

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

SECTION B – ECOLOGICAL RESOURCES:

Streams, Rivers, Watercourses & Other Jurisdictional Features

- Federal Wild and Scenic Rivers
- State Natural, Scenic or Recreational Rivers
- Nationwide Rivers Inventory (NRI) listed
- Outstanding Rivers List for Indiana
- Navigable Waterways

Presence

X

Impacts

Yes	No
X	

Total stream(s) in project area: 646 Linear feet Total impacted stream(s): 393 Linear feet

Stream Name	Classification	Total Size in Project Area (linear feet)	Impacted linear feet	Comments (i.e. location, flow direction, likely Water of the US, appendix reference)
Shiloh Creek	Intermittent	240	230	0.34 mile east of Raceway Road, flowing southeast, likely Water of the U.S., Appendix F-7
UNT1 to Shiloh Creek	Ephemeral	14	11	40 feet north of the Shiloh Creek culvert, flowing northeast, likely Water of the U.S., Appendix F-7 to F-8
UNT2 to Shiloh Creek	Ephemeral	160	22	120 feet west of Burke Avenue, flowing south, likely Water of the U.S., Appendix F-8
East Fork White Lick Creek	Perennial	168	130	0.14 mile west of Country Club Road, flowing southeast, likely Water of the U.S., Appendix F-8 to F-9
UNT to East Fork White Lick Creek	Intermittent	64	0	185 feet west of Rockleigh Avenue, flowing north, likely Water of the U.S., Appendix F-9

Describe all streams, rivers, watercourses and other jurisdictional features adjacent or within the project area. Include whether or not impacts (both permanent and temporary) will occur to the features identified. Include if the streams or rivers are listed on any federal

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or state lists for Indiana. Include if features are likely subject to federal or state jurisdiction. Discuss measures to avoid, minimize, and mitigate if impacts will occur.

Based on the desktop review, the aerial map of the project area, and the RFI report (Appendix E-6) there are eleven streams, rivers, watercourses or other jurisdictional features within the 0.5 mile search radius. There are two streams, rivers, watercourses, or other jurisdictional features present within or adjacent to the project area. That number was updated to five by the site visits on September 17, 2020, September 18, 2020, and October 7, 2020.

A *Waters of the U.S. Determination Report* was completed for the project by Corradino, LLC on August 11, 2021 and approved by INDOT on August 23, 2021 (Appendix E-2). Please refer to Appendix F for the *Waters of the U.S. Determination Report*. It was determined that five streams located within the project area are apparent jurisdictional Waters of the U.S. traceable to the navigable White River (Appendix F-10). Note that at the time of report approval, ephemeral streams were considered not to meet the definition of Waters of the U.S. Since that time, USACE has considered ephemeral streams to be jurisdictional Waters of the U.S.

East Fork White Lick Creek is a perennial creek that flows southeast through the project bridge and has an ordinary high water mark (OHWM) of approximately 14.0 feet in width and 1.0 foot in depth. The upstream drainage area is 8.1 square miles at the project location. Up to 109 linear feet of permanent and 21 linear feet of temporary impacts to East Fork White Lick Creek are anticipated. East Fork White Lick Creek is a mapped USGS blue line perennial stream (Appendix F-8 to F-9).

UNT to East Fork White Lick Creek is an intermittent channel that flows north at a utility easement approximately 185 feet west of Rockleigh Avenue and has an OHWM of approximately 2.5 feet wide and 0.75 feet deep. No permanent or temporary impacts to UNT to East Fork White Lick Creek are anticipated. UNT to East Fork White Lick Creek is not a USGS Blue line stream and is listed as a canal/ditch in the USGS National Hydrography Dataset (Appendix F-9).

Shiloh Creek is an intermittent creek that flows southeast under US 36 through a corrugated metal pipe culvert approximately 0.34 mile east of Raceway Road and has an OHWM of approximately 9.0 feet in width and 0.75 foot in depth. The upstream drainage area is 0.8 square mile at the project location (Appendix F-5). Up to 220 linear feet of permanent and 10 linear feet of temporary impacts to Shiloh Creek are anticipated. Shiloh Creek is a mapped USGS blue line perennial stream (Appendix F-7).

UNT1 to Shiloh Creek is an ephemeral tributary that flows northeast to encounter Shiloh Creek approximately 40 feet north (upstream) of the Shiloh Creek Culvert. UNT1 to Shiloh Creek has an OHWM approximately 2.0 feet in width and 1.0 foot in depth. Up to 11 linear feet of temporary impacts to UNT1 to Shiloh Creek are anticipated. UNT1 to Shiloh Creek is not a mapped USGS blue line perennial stream and is not listed in the USGS National Hydrography Dataset (Appendix F-7 to F-8).

UNT2 to Shiloh Creek is an ephemeral channel approximately 120 feet west of Burke Avenue which flows under US 36 through a reinforced concrete pipe culvert. It flows south through the project area has an OHWM approximately 4.0 feet in width and 0.5 foot in depth. Up to 8 linear feet of permanent and 14 linear feet of temporary impacts to UNT2 to Shiloh Creek are anticipated. UNT2 to Shiloh Creek is not a mapped USGS blue line perennial stream and is listed as a pipeline in the USGS National Hydrography Dataset (Appendix F-8).

UNT to East Fork White Lick Creek and the portions of East Fork White Lick Creek, Shiloh Creek, UNT1 to Shiloh Creek, and UNT2 to Shiloh Creek that will not be impacted shall be labeled as "Do Not Disturb" on the plans. This is included as a firm commitment in the Environmental Commitments section of this CE document.

Eleven roadside ditches were identified within the project area (Appendix F-13 to F-15). These features do not have OHWMs and therefore do not meet the definition of a tributary, and therefore are not likely jurisdictional Waters of the U.S. One public comment contended that it was not correct that there were open ditches along the highway but also that the project claimed there was no existing drainage infrastructure (Appendix G-209). Roadside ditches were identified within the Waters of the U.S. Report (Appendix F-13 to F-16) and drainage detail plans are in Appendix B-123 to B-153.

There are no Federal, Wild and Scenic Rivers, State Natural, Scenic and Recreational Rivers, Outstanding Rivers for Indiana, navigable waterways or National Rivers Inventory waterways present within or adjacent to the project area. Therefore, no impacts to these resources are expected. A total of approximately 337 linear feet of permanent impacts and 56 linear feet of temporary impacts is anticipated. Mitigation is expected. Impacts to jurisdictional waterways have been reduced through project design to the extent practicable while still meeting the project purpose and need. A Section 404 Permit from USACE and a Section 401 Water Quality Certification from IDEM will be required for stream impacts. The U.S. Army Corps of Engineers (USACE) makes all final determinations regarding jurisdiction.

USFWS responded to coordination on December 20, 2021 (Appendix C-35 to C-41) and IDNR-DFW responded on January 29, 2021

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(Appendix C-14 to C-17). USFWS recommended restrictions to low-water work, utilization of natural substrate if possible, use best methods to contain soil and sediment runoff, evaluation of wildlife crossing, restriction of channel work to the minimum necessary, minimization to the extent of riprap, and avoidance of all work within the inundated part of the stream channel during the fish spawning season (April 1 through June 30). IDNR-DFW recommended measures to minimize impacts to fish, wildlife, and botanical resources or compensate for impacts, including: evaluation of wildlife crossing, mitigation of riparian habitat, avoidance or minimization of impacts due to temporary runarounds, access bridges, causeways, coffer dams, diversions or pumparounds, minimization of channel disturbance due to tree and brush removal, minimum of 6 inch riprap grade for aquatic organism habitat, avoidance of broken concrete used as riprap, minimization of resuspended sediment, avoidance of materials or debris in the waterway, sediment control at streams, and avoidance of all work within the inundated part of the stream channel during the fish spawning season (April 1 through June 30). All applicable recommendations are included in the *Environmental Commitments* section of this CE document.

Open Water Feature(s)	<u>Presence</u>	<u>Impacts</u>	
		Yes	No
Reservoirs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lakes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Farm Ponds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Retention/Detention Basin	<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"/>

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

Based on the desktop review, the aerial map of the project area, and the RFI report (Appendix E-6) there are seven open water features within the 0.5 mile search radius. There is one open water feature present within or adjacent to the project area. That number was updated to two by the site visits on September 17, 2020, September 18, 2020, and October 7, 2020 by Corradino, LLC.

A *Waters of the U.S. Determination Report* was completed for the project by Corradino, LLC on August 11, 2021. Please refer to Appendix F for the *Waters of the U.S. Determination Report*. It was determined that two open water features are adjacent to the project area. Open Water 1 is a small pond that occurs in the southwest quadrant of Bridgeport Road and US 36, approximately 275 feet south of US 36. Open Water 1 has a culvert which empties into Shiloh Creek and therefore is a likely Water of the U.S. due to this connectivity (Appendix F-12). Open Water 2 is a pond at the southwest quadrant of the I-465 interchange at US 36. According to the National Hydrography Dataset, Open Water 2 has a hydrologic connection with Lynn Creek, which flows into the navigable White River (Appendix F-13). Therefore, Open Water 2 is a likely Water of the U.S. The USACE makes all final determinations regarding jurisdiction.

Open Water 1 and Open Water 2 are both outside the project area and erosion control measures will be taken to avoid disturbing these ponds. Therefore, no impacts are expected.

USFWS responded to early coordination on December 20, 2021 (Appendix C-35 to C-41) and IDNR-DFW responded on January 29, 2021 (Appendix C-14 to C-17). Both agencies did not include recommendations regarding open water features. All applicable recommendations are included in the Environmental Commitments section of this CE document.

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

Total wetland area: 0.366 Acre(s) Total wetland area impacted: 0.007 Acre(s)

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

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Wetland No.	Classification	Total Size (Acres)	Impacted Acres	Comments (i.e. location, likely Water of the US, appendix reference)
Wetland 1	PEM	0.006	0.006	East of East Fork White Lick Creek; likely Water of the US; Appendix F-10
Wetland 2	PEM	0.2	N/A	Northwest of exit ramp from I-465 to US 36; likely Water of the US; Appendix F-11
Jurisdictional Aquatic Resource 1	PEM	0.16	0.001	Southeast quadrant of Girls School Road and US 36; likely Water of the US; Appendix F-11 to F-12

Documentation

ESD Approval Dates

Wetlands (Mark all that apply)

- Wetland Determination
- Wetland Delineation
- USACE Isolated Waters Determination

X
X

August 23, 2021
August 23, 2021

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

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

X

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

Based on the desktop review, the aerial map of the project area, and the RFI report (Appendix E-6), there are thirty-eight National Wetland Inventory (NWI) wetlands and seven NWI lines located within the 0.5 mile search radius of the project area. There are two wetlands within or adjacent to the project area. That number was updated to include two wetlands and a jurisdictional aquatic resource (JAR) by the site visits on September 17, 2020, September 18, 2020, and October 7, 2020, by Corradino, LLC.

A *Waters of the U.S. Determination Report* was completed for the project on August 11, 2021. Please refer to Appendix F for the *Waters of the U.S. Determination Report*. It was determined that two wetlands and one JAR are within the project area.

Wetland 1 is a palustrine emergent wetland in a depression that is east of East Fork White Lick Creek and north of US 36 in the project area. It was dominated by the facultative wetland green ash (*Fraxinus pennsylvanica*), fox sedge (*Carex vulpinoidea*), Pennsylvania smartweed (*Polygonum pennsylvanicum*), the facultative boxelder (*Acer negundo*), and the wetland obligate rice cutgrass (*Leersia oryzoides*). Wetland 1 exhibited hydric soil indicator F6 (Redox Dark Surface), and hydrology indicators including water-stained leaves, and the combination of secondary indicators: surface soil cracks, geomorphic position and FAC-neutral test. Wetland 1 is considered a poor quality wetland due to its small size, limited cover, and presence of invasive exotic vegetation. Approximately 0.006 acre of Wetland 1 may be impacted.

Wetland 2 is a palustrine emergent depression northwest of the exit ramp from I-465 to US 36. It was dominated by the facultative wetland silver maple (*Acer saccharinum*), the upland autumn olive (*Eleagnus umbellata*), and the wetland obligates black willow (*Salix nigra*) and hybrid cattail (*Typha x glauca*). Wetland 2 exhibited hydric soil indicators A10 – 2 cm Muck, F1 – Loamy Mucky Mineral, and F8 – Redox Depressions. Wetland hydrology indicators were present including saturation, sediment deposits, thin muck surface, and the combination of secondary indicators: saturation visible on aerial imagery, geomorphic position, and FAC-neutral test. Wetland 2 is considered a poor quality wetland due to limited cover and invasive vegetation. Impacts to Wetland 2 have been avoided during the design process and no impact is expected to Wetland 2.

JAR1 is a probable palustrine emergent wetland occurring over a concrete ditch east of Girls' School Road and south of US 36 in the project area. It was dominated by the wetland obligates common cattail (*Typha latifolia*), green bulrush (*Scirpus atrovirens*) and the facultative wetland devil's beggartick (*Bidens frondosa*) and Pennsylvania smartweed (*Polygonum pennsylvanicum*). JAR1 exhibited hydrology indicators including drift deposits, geomorphic position, and FAC-neutral test. Soil was unable to be sampled due to the concrete base of the ditch. If a wetland, JAR1 would be considered a poor quality due to the small size and unnatural conditions. Approximately 0.001 acre of JAR1 may be impacted.

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Wetland 2 and the portions of Wetland 1 and JAR1 that will not be impacted shall be labeled as "Do Not Disturb" on the plans.

Impacts to wetlands have been reduced to the extent practicable while still achieving the purpose and need of the project. New ROW is minimized where possible by utilizing slightly narrower lane width (11' instead of 12') for left and center travel lanes and by converting the paved shoulder with open ditch drainage to a curb and gutter with a closed drainage system. The USACE makes all final determinations regarding jurisdiction.

USFWS responded to early coordination on December 20, 2021 (Appendix C-35 to C-41) and IDNR-DFW responded on January 29, 2021 (Appendix C-14 to C-17). Neither agency included recommendations for wetlands. All applicable recommendations are included in the *Environmental Commitments* section of this CE document.

Terrestrial Habitat	<u>Presence</u>	<u>Impacts</u>	
	<input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	NO <input type="checkbox"/>

Total terrestrial habitat in project area: 11.443 Acre(s) Total tree clearing: 0.743 Acre(s)

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

Based on a desktop review, site visits on September 17, 2020, September 18, 2020, October 7, 2020, and June 8, 2021 by Corradino, LLC, and the aerial map of the project area (Appendix I-178 to I-182), there are woodlands within the project area. Dominant tree species within or adjacent to the project area primarily include boxelder (*Acer negundo*), red maple (*Acer rubrum*), silver maple (*Acer saccharinum*), common hackberry (*Celtis occidentalis*), black walnut (*Juglans nigra*), American sycamore (*Platanus occidentalis*), eastern cottonwood (*Populus deltoides*), callery pear (*Pyrus calleryana*), black locust (*Robinia pseudoacacia*), and other species. Approximately 0.743 acre of impacts, including tree clearing, are expected to this habitat. Disturbance to wooded areas have been reduced to the extent practicable and mitigation is not anticipated. There is also grassy roadside and lawn habitat within the project area. Dominant species include tall fescue (*Schedonorus arundinaceus*), Kentucky bluegrass (*Poa pratensis*), white clover (*Trifolium repens*), Japanese bristlegass (*Setaria faberi*) and common dandelion (*Taraxacum officinale*). Approximately 10.7 acres of impacts are expected to this habitat. Signs or presence of terrestrial animal species within the project area include big brown bat (*Eptesicus fuscus*), eastern cottontail (*Sylvilagus floridanus*), eastern fox squirrel (*Sciurus niger*), northern raccoon (*Procyon lotor*), mourning dove (*Zenaida macroura*), Cooper's hawk, (*Accipiter cooperii*), red-shouldered hawk (*Buteo lineatus*), red-headed woodpecker (*Melanerpes erythrocephalus*), willow flycatcher (*Empidonax traillii*), tufted titmouse (*Baeolophus bicolor*), barn swallow (*Hirundo rustica*), gray catbird (*Dumetella carolinensis*), northern mockingbird (*Mimus polyglottos*), American robin (*Turdus migratorius*), cedar waxwing (*Bombycilla cedrorum*), house sparrow (*Passer domesticus*), American goldfinch (*Spinus tristis*), song sparrow (*Melospiza melodia*), red-winged blackbird (*Agelaius phoeniceus*), yellow warbler (*Setophaga petechia*), and palm warbler (*Setophaga palmarum*). Approximately 30 acres of total soil disturbance is expected.

USFWS responded to early coordination on December 20, 2021 (Appendix C-35 to C-41) and did not give recommendations regarding terrestrial habitat. IDNR-DFW responded on January 29, 2021 (Appendix C-14 to C-17) with recommendations to mitigate for non-wetland forest impacts, minimization of tree and brush clearing, erosion control, and revegetation using native species. All applicable agency recommendations are included in the *Environmental Commitments* section of this CE document.

Protected Species
Federally Listed Bats

Information for Planning and Consultation (IPaC) determination key completed
 Section 7 informal consultation completed (IPaC cannot be completed)
 Section 7 formal consultation Biological Assessment (BA) required

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

Determination Received for Listed Bats from USFWS: NE NLAA LAA

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Other Species not included in IPaC

Additional federal species found in project area (based on IPaC species list)
 State species (not bird) found in project area (based upon consultation with IDNR)

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

Migratory Birds

Known usage or presence of birds (i.e. nests)
 State bird species based upon coordination with IDNR

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

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

Based on a desktop review and the RFI report (Appendix E), completed by Corradino, LLC on January 26, 2022, the IDNR Marion County Endangered, Threatened, and Rare (ETR) Species List has been checked. According to the IDNR-DFW early coordination response letter dated January 29, 2021, the Natural Heritage Program's Database has been checked and the state endangered Kirtland's Snake (*Clonophis kirtlandii*) has been documented at two locations within a half mile of the project area, but does not foresee any impacts to the Kirtland's Snake as a result of this project (Appendix C-14 to C-17). An INDOT 0.5-mile bat review occurred on February 5, 2021, and no ETR species were indicated within the 0.5 mile search radius (Appendix I-170).

Project information was submitted through the USFWS's IPaC portal, and an official species list was generated (Appendix C-42 to C-57). The project is within the range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (NLEB) (*Myotis septentrionalis*). The official species list generated from IPaC also indicated one other species present within the project area, the candidate species monarch butterfly (*Danaus plexippus*). Because the monarch butterfly does not have endangered or threatened status, it is not federally protected under the Endangered Species Act.

Based on bat use of the existing structure, this project does not qualify for the *Rangewide Programmatic Informal Consultation for the Indiana bat and northern long-eared bat (NLEB)*. Bridge inspections occurred on September 17 and October 7 in 2020 and January 28, May 20, June 8, and July 22 in 2021 and evidence of bat use was found, including visual and auditory confirmation of presence and extensive guano and staining. A standard coordination letter was prepared and submitted for INDOT review on September 22, 2021, (Appendix C-18 to C-46). INDOT reviewed the standard coordination letter and submitted to USFWS for review on October 19, 2021. On December 20, 2021, USFWS issued a concurrence letter with the *May Affect, Not Likely to Adversely Affect* (NLAA) finding (Appendix C-35 to C-41). Avoidance and Minimization Measures (AMMs) include the following:

- General AMM1 – Ensure all employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs.
- Lighting AMM1 – Direct temporary lighting away from suitable habitat during the active season.
- Tree Removal AMM1 – Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal
- Tree Removal AMM2 – Apply time of year restrictions (April 1 through September 30) for tree removal when bats are not likely to be present, or limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/rail surface and outside of documented roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed.
- Tree Removal AMM3 – Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits).
- Tree Removal AMM4 – Do not remove documented Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 miles of roosts, or documented foraging habitat any time of year.

USFWS also recommends bridge assessments and inspection before structure work, temporary filling of crevices if structure work cannot be completed before the summer roosting season (beginning April 1) and encourage work outside the bat roosting and maternity season. AMMs and recommendations are included as commitments in the *Environmental Commitments* section of this document.

On September 17, 2020, a bridge inspection occurred on structures 036-49-03898 AEBL and 036-49-03898 AWBL which found signs of bats including guano and staining (Appendix C-21). Guano was collected on October 7, 2020 and June 8, 2021 and sent to Northern Arizona University for analysis. Guano analysis results were received from Northern Arizona University on January 22, 2021 and July 22, 2021, respectively. Guano analysis only resulted in non-federally listed bat species using structures 036-49-03898 AEBL and 036-49-03898 AWBL. One sample from the initial collection in October 2020 contained genetic material from an unidentified *Myotis* species and suggests some occasional use of the bridge by this genus (Appendix C-22 and Appendix I-171 to I-177). No additional bat investigations are required at this time.

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To minimize bat disturbance, bridge work shall be completed after September 30 and before April 1. If the bridge work cannot be completed before April 1, the crevices shall temporarily be filled, for the entire length of the structure, with an expandable material. The structure shall also be inspected for bats prior to exclusion, or any construction activities. If signs of bats are documented during this inspection, the INDOT District Environmental Manager must be contacted immediately. Coordination has occurred on December 21, 2021, with the project designer about exclusionary measure needed for the project. Details of the required procedures are outlined in the "Bat Inspection and Coordination" Unique Special Provision (USP). A firm commitment is included in the *Environmental Commitments* of this document.

Bridge inspections occurred on September 17 and October 7 in 2020 and January 28, May 20, June 8, and July 22 in 2021 and evidence of bat use was found, including visual and auditory confirmation of presence and extensive guano and staining (Appendix C-21 to C-22; C-26 to C-34). USFWS Bridge/Structure Assessments are only valid for two years. If construction will begin after July 23, 2023, an inspection of the structure by a qualified individual must be performed. Inspection of the structure should check for presence of bats/bat indicators and/or presence of birds. The results of the inspection must indicate no signs of bats or birds. If signs of bats or birds are documented during this inspection, the INDOT District Environmental Manager must be contacted immediately. This firm commitment is included in the *Environmental Commitments* of this document.

Structures 036-49-03898 AEBL and 036-49-03898 AWBL have shown evidence of use (i.e. nests) by a bird species protected under the Migratory Bird Treaty Act (MBTA) during the inspections on September 17 and October 7 in 2020, and January 28, May 20, June 8, and July 22 in 2021. Avoidance and minimization measures must be implemented prior to the start of and during the nesting season. Nests without eggs or young should be removed prior to construction during the non-nesting season (September 8 – April 30) and during the nesting season if no eggs or young are present. Nests with eggs or young cannot be removed or disturbed during the nesting season (May 1 – September 7). Nests with eggs or young should be screened or buffered from active construction. Details of the required procedures are outlined in the "Potential Migratory Bird on Structure USP." This firm commitment is included in the *Environmental Commitments* of this document.

IDNR-DFW responded on January 29, 2021, with recommendations for choosing preferred types of light-emitting diode lighting systems (Appendix C-16). All applicable recommendations are included in the *Environmental Commitments* section of this CE document.

Geological and Mineral Resources

- Project located within the Indiana Karst Region
- Karst features identified within or adjacent to the project area
- Oil/gas or exploration/abandoned wells identified in the project area

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

Date Karst Evaluation reviewed by INDOT EWPO (if applicable): _____

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

Based on a desktop review and the Indiana Karst Region map, the project is located outside the designated Indiana Karst Region as outlined in the most current *Protection of Karst Features during Project Development and Construction*. According to the topographic map of the project area (Appendix B-4) and the RFI report (Appendix E-6) there are no karst features identified within or adjacent to the project area. In the early coordination response on January 5, 2021, IGWS did not indicate that karst features exist within the project area (Appendix C-11 to C-13). IGWS identified the project area as having moderate liquefaction potential, moderate potential as a bedrock resource, low potential as a sand and gravel resource, and having petroleum exploration wells nearby (Appendix C-11). The features will not be affected because the project does not have excavation deep enough to impact bedrock or liquefaction potential and is far enough from any mineral resources to not have an impact. Response from IGWS has been communicated to the designer on January 5, 2021. No impacts are expected.

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SECTION C – OTHER RESOURCES

Drinking Water Resources

- Wellhead Protection Area(s)
- Source Water Protection Area(s)
- Water Well(s)
- Urbanized Area Boundary
- Public Water System(s)

Presence

X
X
X

Impacts

Yes	No
	X
	X
	X

- Is the project located in the St. Joseph Sole Source Aquifer (SSA):
- If Yes, is the FHWA/EPA SSA MOU Applicable?
- If Yes, is a Groundwater Assessment Required?

Yes	No
	X

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

The project is located in 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. Therefore, the FHWA/U.S. Environmental Protection Agency (EPA)/INDOT Sole Source Aquifer Memorandum of Understanding (MOU) is not applicable to this project. Therefore, a detailed groundwater assessment is not needed, and no impacts are expected.

IDEM's Wellhead Protection Proximity Determinator website (<https://idemmaps.idem.in.gov/whpa2/>) was accessed on January 17, 2022 by Corradino, LLC. This project is not located within a Wellhead Protection Area or Source Water Area. No impacts are expected.

The Indiana Department of Natural Resources Water Well Record Database Website (<https://www.in.gov/dnr/water/3595.htm>) was accessed on January 17, 2022 by Corradino, LLC. There are 8 wells adjacent to the project area, including 3 which are mapped on roadway pavement. The features will not be affected because no wells are located within this project and water and soil impacts are to be contained within the project area. Therefore, no impacts are expected. Should it be determined during the ROW phase that these wells are affected, a cost to cure will likely be included in the appraisal to restore the wells.

Based on a desktop review an aerial map of the project area (Appendix B-3), the RFI report, and the INDOT Municipal Separate Storm Sewer Systems (MS4) website (<https://entapps.indot.in.gov/MS4/>) on January 5, 2021 by Corradino, LLC; this project is located in an Urban Area Boundary (UAB). An early coordination letter was sent on January 21, 2021 to the Indianapolis DPW. The MS4 coordinator did not respond within the 30-day time frame. Avoidance of stormwater systems is not practicable due to the proximity of storm sewer systems to the existing roadway and avoidance would prevent roadway improvements critical to the purpose and need of the project.

Based on a desktop review, a site visit on September 17, 2020 by Corradino, LLC, the aerial map of the project area (Appendix B-3), this project is located where there is a public water system. The public water system will be affected because there will be several water line relocations due to new storm sewer pipe outlets. Several pipe crossings will require lowering of the water line to avoid the storm sewer crossing. In some locations, a waterline relocation is warranted to alleviate conflict between a new turn lane and storm sewer inlets. Early coordination letters were sent on January 21, 2021 to the Indianapolis DPW which did not respond with recommendations. Avoidance of impacts is not practicable because turn lanes and shoulder reconstruction (including curbs) are necessary to meet the purpose of the project, and water line relocation is required to accommodate that construction. Coordination with the Indianapolis DPW will be completed in accordance with the utility coordination procedures outlined in Indiana Administrative Code 105 IAC 13-3.

Floodplains

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

Presence

X
X

Impacts

Yes	No
	X
	X

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If applicable, indicate the Floodplain Level?

Level 1 Level 2 Level 3 Level 4 Level 5

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

Based on a desktop review of The Indiana Department of Natural Resources Indiana Floodway Information Portal website ([Indiana Floodplain Information Portal 2.0 \(arcgis.com\)](https://www.in.gov/dnr/floodway)) on October 1, 2021 by Corradino, LLC and the RFI report, this project is located in a regulatory floodplain as determined from approved IDNR floodplain maps (Appendix F-161). An early coordination letter was sent on January 21, 2021 to the local Floodplain Administrator, the Indianapolis DPW. The floodplain administrator did not respond within the 30 day time frame. This project qualifies as a Category 3 project per the current INDOT CE manual, which states:

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

Farmland	Presence	Impacts	
		Yes	No
Agricultural Lands	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prime Farmland (per NRCS)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 Total Points (from Section VII of CPA-106/AD-1006*)	<u>N/A</u>		
<i>*If 160 or greater, see CE Manual for guidance.</i>			

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

Based on a desktop review, site visits on September 9 and 17, 2021 by Corradino, LLC, the aerial map of the project area (Appendix B-3), 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 January 21, 2021, to Natural Resources Conservation Service (NRCS). The NRCS response on January 28, 2021 indicated that no prime farmland will be converted by this project. No alternatives other than those previously discussed in this document will be investigated without reevaluating impacts to prime farmland.

SECTION D – CULTURAL RESOURCES

Minor Projects PA	Category(ies) and Type(s)	INDOT Approval Date(s)	N/A
	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>
Full 106 Effect Finding			
No Historic Properties Affected	<input type="checkbox"/>	No Adverse Effect	<input checked="" type="checkbox"/>
		Adverse Effect	<input type="checkbox"/>
Eligible and/or Listed Resources Present			
NRHP Building/Site/District(s)	<input checked="" type="checkbox"/>	Archaeology	<input type="checkbox"/>
		NRHP Bridge(s)	<input type="checkbox"/>

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Documentation Prepared (mark all that apply)

APE, Eligibility and Effect Determination
 800.11 Documentation
 Historic Properties Report or Short Report
 Archaeological Records Check and Assessment
 Archaeological Phase Ia Survey Report
 Archaeological Phase Ic Survey Report
 Other:

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

ESD Approval Date(s)

July 20, 2022
July 20, 2022
January 13, 2022
November 18, 2020

SHPO Approval Date(s)

February 17, 2022
N/A
February 17, 2022
February 17, 2022

MOA Signature Dates (List all signatories)

Memorandum of Agreement (MOA)

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

Because this is a federal aid highway project, a Section 106 evaluation is required as mandated by the National Historic Preservation Act of 1966, as amended (54 USC § 306108) and as governed by the process established by 36 CFR Part 800.

Area of Potential Effect (APE): The area of potential effects (APE) is the “geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The APE is influenced by the scale and nature of the undertaking...” (36 CFR 800.16[d]). The proposed APE includes one-parcel width to the north and south of US 36, as well as additional areas within the project viewshed, resulting in an irregularly shaped polygon. The proposed APE generally follows parcel lines, except where it was prudent to truncate or expand the survey area in consideration of potential visual impacts. It includes 462 acres (0.72 square miles) and is a mixture of residential, commercial, and industrial uses (Appendix D-8). See Appendix D-30 for a detailed map of the APE.

Coordination with Consulting Parties: A Section 106 early coordination letter was distributed on November 18, 2020 (Appendix D-26). Automated email responses were received from the Indianapolis Historic Preservation Commission (Appendix D-45) and the Office of the Indianapolis Mayor the same day (Appendix D-46). In an email dated November 20, 2020 the Indianapolis Preservation Coordinator for Indiana Landmarks accepted consulting party status (Appendix D-47). The Tribal Historic Preservation Officer for the Miami Tribe of Oklahoma accepted consulting party status in a letter dated December 15, 2020 (Appendix D-48). The Director of Historic Preservation for the Delaware Nation accepted consulting party status in a letter dated December 18, 2020 (Appendix D-49). The Rockville, High School, Girls School Road Neighborhood Association (RHGNA) accepted consulting party status in a letter dated May 2, 2022 (Appendix D-56). Chapel Rock Community Development Corporation did not respond.

A historian who meets the Secretary of the Interior’s Professional Qualification Standards identified and evaluated above-ground resources within the APE for potential eligibility for the NRHP. The results were shared in a Historic Property Report (HPR) distributed to consulting parties on January 13, 2022 (Appendix D-26). In a letter dated February 17, 2022, the Indiana State Historic Preservation Office (IN SHPO) responded in concurrence with the findings of the HPR recommending both the David Faucett House (IHSSI #097-117-56005) and the Fair Meadows Subdivision eligible for listing in the National Register of Historic Places (NRHP) (Appendix D-50 to D-53). In the same letter, the IN SHPO disagreed with the not eligible recommendation for the Ernie Pyle Highway Homes Subdivision and the Buisdale Subdivision.

For the Ernie Pyle Subdivision, the IN SHPO wrote, “We disagree with the Not Eligible determination. DHPA staff feel this is a good example of a Tract Development. Features present include a loop layout with one access point on Rockville Road with consistent, deep setbacks. 97% of the houses fall within the 1940-1973 timeframe and feature predominantly Ranch types exhibiting good integrity with few replacement materials. DHPA staff believe this subdivision is eligible under Criterion A for Community Planning and Development” (Appendix D-51).

For the Buisdale Subdivision, the IN SHPO wrote, “We disagree with the Not Eligible determination. DHPA staff feel this is a good example of a Tract Development featuring consistent, deep setbacks with all houses built within the 1940-1973 timeframe. The predominantly Ranch types exhibit good integrity with few replacement materials. DHPA staff believe this subdivision is eligible under Criterion A for Community Planning and Development” (Appendix D-51 to D-52).

INDOT-Cultural Resources Office (INDOT-CRO) disagreed with the rationale offered by IN SHPO for the eligibility of the Ernie Pyle

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and Buisdale subdivisions. While the IN SHPO listed some of the physical characteristics of the subdivisions, no justification for significance was provided in the letter, specifically under Criterion A, which they consider the applicable NRHP eligibility criterion. The physical traits described by the IN SHPO seem to be common and expected characteristics of the property type, and do not reflect significance as required by the Residential Planning and Design in Indiana 1940-1973 Multiple Property Documentation Form (MPDF). Nevertheless, in the interest of moving forward with the Section 106 process, INDOT-CRO, on behalf of FHWA, agreed to treat these subdivisions as eligible. In a letter dated April 27, 2022, the IN SHPO gave preliminary concurrence with the recommended overall project finding of No Adverse Effect (Appendix D-54).

On May 2, 2022, Karen Farmer, representing the Rockville, High School, Girls School Road Neighborhood Association, sent a letter responding to the Historic Property Report, although the letter went on to discuss potential impacts resulting from the project (Appendix D-56 to D-57). The letter concurred with the historic significance of two of the eligible historic districts and indicated that project activities would have an adverse effect upon the neighborhoods. Specifically, Ms. Farmer discussed the center turn lane, safety for pedestrians and residents, mail delivery, and potential for increased accidents. In an email dated May 19, 2022, project consultants from Michael Baker responded to the letter (Appendix D-58).

On January 10, 2023, INDOT-CRO concurred that a project description addition regarding a sidewalk segment near Raceway Road does not constitute a revision to the Section 106 process (Appendix D-95).

Archaeology: The entirety of the project area has been surveyed during previous phases of the US 36 Modern Rockville Road Project. In 2005, an INDOT Qualified Professional archaeologist from Archaeological Resources Management Services, Inc. conducted a Phase Ia reconnaissance survey of the project area. No archaeological sites were identified within the project area, and the study concluded that the soils were previously disturbed. The report recommended no further studies. A literature review conducted in 2008 by Pioneer Consulting Services reached the same conclusion that the project area “appears to have been previously disturbed by industrial, commercial, and residential development.” In consideration of these surveys, the current project has no potential to impact previously recorded or unrecorded sites within or adjacent to the project area. Since the proposed project occurs in previously disturbed soils, there are no archaeological concerns, and no further work is recommended (Appendix D-3).

In a letter dated December 15, 2020, the Miami Tribe of Oklahoma stated that if any human remains or Native American cultural items falling under the Native American Graves Protection and Repatriation Act (NAGPRA) or archaeological evidence is discovered during any phase of this project, the Miami Tribe requests immediate consultation with the entity of jurisdiction for the location of discovery (Appendix D-48). In a letter dated February 17, 2022, the Indiana SHPO stated that (Indiana Code 14-21-1-27 and -29) requires that if any prehistoric or historic archaeological artifacts or human remains are uncovered during construction, demolition, or earth moving activities, the discovery must be reported to the Department of Natural Resources within two (2) business days (Appendix D-52). In a letter dated April 27, 2022, the Indiana SHPO stated concurrence that no additional archaeological reconnaissance was necessary due to the disturbed nature of the project area (Appendix D-52).

Historic Properties: The APE was investigated for the existence of any historic properties and/or structures by a qualified professional from Michael Baker International on March 3, 2021 (Appendix D-14). Per the field visit and background document research, the historian recommended two properties as eligible for listing in the National Register for Historic Properties (NRHP). These properties are the David Faucett House (IHSSI #097-117-56005) and the Fair Meadows Subdivision.

The Historic Properties Report (HPR) describing these findings was approved by INDOT CRO on January 13, 2022. The HPR was sent to consulting parties, including the Indiana State Historic Preservation Officer (SHPO) on January 13, 2022 (Appendix D-50 to D-53). In a letter dated February 17, 2022, the Indiana State Historic Preservation Office (IN SHPO) responded in concurrence with the findings of the HPR recommending both the David Faucett House and the Fair Meadows Subdivision eligible for listing in the National Register of Historic Places (NRHP). In the same letter, the SHPO disagreed with the not eligible recommendation for the Ernie Pyle Highway Homes Subdivision and the Buisdale Subdivision. INDOT-CRO has agreed to treat these subdivisions as eligible (Appendix D-26 to D-27). In a letter dated April 27, 2022, the IN SHPO gave preliminary concurrence with the recommended overall project finding of *No Adverse Effect* (Appendix D-52).

Documentation Findings: The 800.11(e) documentation for a finding of *No Adverse Effect* was signed by INDOT CRO, on behalf of FHWA, on July 20, 2022 (Appendix D-12 to D-27). The US 36 Modern Rockville project results in a finding of *No Adverse Effect* for the David Faucett House, the Ernie Pyle Highway Homes Subdivision historic district, the Buisdale Subdivision historic district, and the Fair Meadows Subdivision historic district under the preferred alternative.

Project activities that could affect all the historic properties include the addition of travel lanes along US 36, the installation of new drainage structures, the relocation of utilities, and the addition of sidewalks. The Ernie Pyle Highway Homes Subdivision could be affected by the acquisition of temporary ROW. For each property, it was determined that the project undertaking would not damage, remove, change ownership, or alter the character of the historic property (Appendix D-19 to D-26), therefore *No Adverse Effect* was

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found for each. The 800.11(e) documentation was sent to consulting parties, including the Indiana SHPO on August 29, 2022 (Appendix D-2 to D-4). The Indiana SHPO did not provide a reply to the 800.11(e) documentation but did state concurrence with the *No Adverse Effect* finding on February 17, 2022 in the HPR (Appendix D-50 to D-53).

Public Involvement: A notice of FHWA's finding of No Adverse Effect was published in the *Indianapolis Star* on September 3, 2022. The public comment period closed after 30 days on October 3, 2022. No public comments were received. The text of the public notice and the affidavit of publication appear in Appendix D-94. The Section 106 process has been completed and the responsibilities of the FHWA under Section 106 have been fulfilled.

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

	<u>Presence</u>	<u>Use</u>	
		<u>Yes</u>	<u>No</u>
Parks and Other Recreational Land			
Publicly owned park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Publicly owned recreation area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (school, state/national forest, bikeway, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wildlife and Waterfowl Refuges			
National Wildlife Refuge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
National Natural Landmark	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State Wildlife Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State Nature Preserve	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Historic Properties			
Site eligible and/or listed on the NRHP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>Evaluations</u>			
<u>Prepared</u>			
Programmatic Section 4(f)	<input type="checkbox"/>		
"De minimis" Impact	<input type="checkbox"/>		
Individual Section 4(f)	<input type="checkbox"/>		
Any exception included in 23 CFR 774.13	<input checked="" type="checkbox"/>		

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

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

Based on a desktop review, the aerial map of the project area (Appendix B-3), and the RFI report (Appendix E-5), there are three potential 4(f) resources located within the 0.5-mile search radius. According to additional research, and by the site visits on September 9 and 17, 2021 by Corradino, LLC there are five 4(f) resources located adjacent to the project area:

Cloverleaf Conservation Area is adjacent to the project area southwest of the intersection of US 36 and Country Club Road. Cloverleaf Conservation Area is a publicly owned park managed by Indianapolis Parks and Recreation and therefore is eligible for 4(f) protection. Coordination was sent to Indianapolis Parks and Recreation on January 5, 2021, and no response was received. No ROW will be required from the property, so no direct or indirect impacts are expected. The project will not use this resource by taking permanent ROW and will not indirectly use the resource in such a way that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are substantially impaired. Access to the Cloverleaf Conservation Area is not from US 36 and will not be impacted. Therefore, no 4(f) use is expected.

David Faucett House (IHSSI Number 097-117-56005) is adjacent to the project area south of US 36 approximately 400 feet east of the west terminus of the project. The David Faucett House is eligible for listing in the NRHP under Criterion A for its association with the early settlement and development of Wayne Township, Marion County (Appendix D-8).

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Project activities that could affect the David Faucett House include the addition of travel lanes along US 36, the installation of new drainage structures, the relocation of utilities, and the addition of sidewalks. The proposed roadway widening for the added travel lanes has been minimized to the greatest extent possible to reduce impacts to adjacent private properties. The addition of travel lanes along US 36 will not likely result in a significant increase in noise over existing levels. Because of high levels of traffic already utilizing the roadway, noise and vibration impacts are not anticipated. The new drainage structures and the relocation of utilities will occur within the existing ROW. Proposed sidewalks in the vicinity of the David Faucett House include a 10-foot wide sidewalk with a 5-foot wide grass buffer between the curb and the sidewalk along the north side of the road and a 6-foot wide sidewalk with no grassy buffer along the south side of the road (closest to the David Faucett House). The sidewalks will be installed within the existing INDOT ROW and will not require any land from the historic property. The back edge of the proposed sidewalk will be approximately 14 feet away from the northern parcel boundary of the David Faucett House. The new sidewalk will be minimally visible from the David Faucett property; the house is setback from the road approximately 77 feet and is partially screened by mature trees along the front edge of the property. The project will require no permanent or temporary ROW from the historic property. Therefore, no 4(f) use is expected.

Fair Meadows Subdivision is adjacent to the project area north of US 36 beginning at Heather Drive and extending approximately 800 feet west. Fair Meadows is significant under Criterion A in the area of Community Planning and Development in consideration of its contribution to land use, growth, and development within the Multi-Property Documentation Form historic context related to housing and financing between 1955 and 1965 (Appendix D-9).

The Fair Meadows Subdivision has seven parcels in two sections bordering US 36—all situated to the west of Heather Drive. Project activities that could affect the Fair Meadows Subdivision include the addition of travel lanes along US 36, the installation of new drainage structures, the relocation of utilities, the addition of sidewalks, and the acquisition of temporary ROW. The proposed roadway widening for the added travel lanes has been minimized to the greatest extent possible to reduce impacts to adjacent private properties. The addition of travel lanes along US 36 will not likely result in a significant increase in noise over existing levels. Because of high levels of traffic already utilizing the roadway, noise and vibration impacts are not anticipated.

FHWA believes that the temporary occupancy will not constitute a Section 4(f) use because all of the conditions listed in 23 CFR 774.13(d) are satisfied (Appendix D-10 to D-11):

1. Duration must be temporary, i.e., less than the time needed for construction of the project, and there should be no change in ownership of the land;
2. Scope of the work must be minor, i.e., both the nature and the magnitude of the changes to the Section 4(f) property are minimal;
3. There are no anticipated permanent adverse physical impacts, nor will there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis;
4. The land being used must be fully restored, i.e., the property must be returned to a condition which is at least as good as that which existed prior to the project; and
5. There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.

FHWA believes that conditions 1-4 are satisfied as follows: Proposed sidewalks in the vicinity of the Fair Meadows Subdivision will occur within the existing ROW (conditions 2 and 3). Proposed sidewalks in the vicinity of the Fair Meadows Subdivision include a 10-foot-wide sidewalk which will be constructed along the north side of the road and a 5-foot-wide sidewalk will be constructed on the south side of the road. The sidewalks will be installed within the existing INDOT ROW and will not require any land from the NRHP-eligible historic district (conditions 2 and 3). The back edge of the proposed sidewalk will be approximately 16 feet away from the Fair Meadows Subdivision southern boundary (conditions 2 and 3). The new sidewalk will be minimally visible from the NRHP-eligible historic district (conditions 2 and 3). Finally, temporary ROW will be required in small segments around existing driveways which will be restored upon completion of the project (conditions 1, 3, and 4). The project will require no permanent ROW and 0.025 acre of temporary ROW from the historic property (conditions 1, 2, and 3). (Appendix D-18 to D-19). Condition 5 is satisfied with SHPO concurrence that the project does not adversely affect these historic properties (Appendix D-54).

The US 36 Added Travel Lanes Effects Report had a finding of *No Adverse Effect* to the Fair Meadows Subdivision (Appendix D-10 to D-11).

Ernie Pyle Highway Homes Subdivision is adjacent to the project north of US 36 between Burke Avenue and East Fork White Lick Creek. In a letter dated February 17, 2022, the Indiana SHPO determined that the Ernie Pyle Highway Homes Subdivision is eligible for listing in the NRHP under Criteria A in the area of Community Planning and Development as a good example of a tract development (Appendix D-8, D-18, and D-19).

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The Ernie Pyle Highway Homes Subdivision has 10 parcels in three sections fronting US 36—five on either side of Kirk Drive E. Project activities that could affect the Ernie Pyle Highway Homes Subdivision include the addition of travel lanes along US 36, the installation of new drainage structures, the relocation of utilities, the addition of sidewalks, and the acquisition of temporary ROW. The proposed roadway widening for the added travel lanes has been minimized to the greatest extent possible to reduce impacts to adjacent private properties. The addition of travel lanes along US 36 will not likely result in a significant increase in noise over existing levels. Because of high levels of traffic already utilizing the roadway, noise and vibration impacts are not anticipated. The new drainage structures and the relocation of utilities will occur within the existing ROW.

FHWA believes that the temporary occupancy will not constitute a Section 4(f) use because all of the conditions listed in 23 CFR 774.13(d) are satisfied (Appendix D-10):

1. Duration must be temporary, i.e., less than the time needed for construction of the project, and there should be no change in ownership of the land;
2. Scope of the work must be minor, i.e., both the nature and the magnitude of the changes to the Section 4(f) property are minimal;
3. There are no anticipated permanent adverse physical impacts, nor will there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis;
4. The land being used must be fully restored, i.e., the property must be returned to a condition which is at least as good as that which existed prior to the project; and
5. There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.

FHWA believes that conditions 1-4 are satisfied as follows: The new drainage structures and the relocation of utilities will occur within the existing ROW (conditions 2 and 3). Proposed sidewalks in the vicinity of the Ernie Pyle Highway Homes Subdivision include a 10-foot-wide sidewalk along the north side of the road and a 6-to-7-foot-wide sidewalk along the south side of the road. The sidewalks will be installed within the existing INDOT ROW and will not require any land from the NRHP-eligible historic district (conditions 2 and 3). The back edge of the proposed sidewalk will be approximately 11 feet away from the Ernie Pyle Highway Homes Subdivision southern boundary (conditions 2 and 3). The new sidewalk will be minimally visible from the NRHP-eligible historic district (conditions 2 and 3). Finally, temporary ROW will be required in small segments around existing driveways, which will be restored upon completion of the project (conditions 1, 3, and 4). The project will require no permanent ROW and 0.017 acre of temporary ROW from the historic property (conditions 1, 2, and 3). (Appendix D-17 to D-18). Condition 5 is satisfied with SHPO concurrence that the project does not adversely affect these historic properties (Appendix D-54).

The US 36 Added Travel Lanes Effects Report had a finding of *No Adverse Effect* to the Ernie Pyle Highway Homes Subdivision (Appendix D-10, D-17, and D-18).

Buisdale Subdivision is adjacent to the project north of US 36 at Buisdale Drive. In a letter dated February 17, 2022, the Indiana SHPO determined that the Buisdale Subdivision is eligible for listing in the NRHP under Criteria A in the area of Community Planning and Development as a good example of a tract development (Appendix D-9 and D-18).

The Buisdale Subdivision has two parcels bordering US 36—one on either side of Buisdale Drive. Project activities that could affect the Buisdale Subdivision include the addition of travel lanes along US 36, the installation of new drainage structures, the relocation of utilities, and the addition of sidewalks. The proposed roadway widening for the added travel lanes has been minimized to the greatest extent possible to reduce impacts to adjacent private properties. The addition of travel lanes along US 36 will not likely result in a significant increase in noise over existing levels. Because of high levels of traffic already utilizing the roadway, noise and vibration impacts are not anticipated. Proposed sidewalks in the vicinity of the Buisdale Subdivision will be a 10-foot wide sidewalk along the north side of the road and a 6-foot wide sidewalk along the south side of the road. The sidewalks will be installed within the existing INDOT ROW and will not require any land from the NRHP-eligible historic district. The back edge of the proposed sidewalk will be approximately 21 feet away from the southern boundary of the Buisdale Subdivision. The new sidewalk will be minimally visible from the NRHP-eligible historic district. The project will require no permanent or temporary ROW from the historic property. Therefore, no 4(f) use is expected.

The project requires no permanent or temporary ROW use for the David Faucett House and Buisdale Subdivision properties (Appendix D-9). Therefore, no Section 4(f) evaluation is required for these properties. The Fair Meadows Subdivision and Ernie Pyle Highway Homes Subdivision will require temporary ROW. FHWA believes that the temporary occupancy will not constitute a Section 4(f) use because all of the conditions listed in 23 CFR 774.13(d) are satisfied.

Impacts to Section 4(f) resources are not anticipated as a result of this project. All contributing items to the historic properties will be marked as “do not disturb” on the final design plans.

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Section 6(f) Involvement

Presence

Use

Section 6(f) Property

Yes

No

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

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

A review of 6(f) properties on the Land and Water Conservation Fund (LWCF) property list dated March 2022 revealed a total of twenty-nine properties in Marion County (Appendix I-71). 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 F – Air Quality

STIP/TIP and Conformity Status of the Project

- Is the project in the most current STIP/TIP?
- Is the project located in an MPO Area?
- Is the project in an air quality non-attainment or maintenance area?
- If Yes, then:
 - Is the project in the most current MPO TIP?
 - Is the project exempt from conformity?
- If No, then:
 - Is the project in the Transportation Plan (TP)?
 - Is a hot spot analysis required (CO/PM)?

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

Location in STIP: 2024-2028 STIP
 Name of MPO (if applicable): Indianapolis Metropolitan Planning Organization (IMPO)
 Location in TIP (if applicable): TIP Project List FY 2024 – FY 2028

Level of MSAT Analysis required?

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

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

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The project is included in the IMPO Transportation Improvement Program (TIP) which has been directly incorporated into the Fiscal Year (FY) 2024-2028 Statewide Transportation Improvement Program (STIP) (Appendix H-6).

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 IMPO Transportation Plan (TP) and the Transportation Improvement Program (TIP) and both conform to the State Implementation Plan (SIP). Therefore, the conformity procedures of 40 CFR Part 93 have been met.

The purpose of this project is to improve traffic operations and increase safety throughout the US 36 corridor while replacing deteriorated infrastructure and meeting ADA standards. 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.

SECTION G - NOISE

Noise

Yes No

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

Date Noise Analysis was approved/technically sufficient by INDOT ESD: July 30, 2021

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

This project is a Type I project. A Noise Technical Report was completed by Michael Baker International in July 2021 (Appendix I-11 to I-69). This report evaluated potential noise impacts for the proposed improvements in compliance with the FHWA Procedures for Abatement of Highway Traffic Noise and Construction Noise as presented in the Code of Federal Regulations, Title 23 Part 772 (23 CFR 772) and the INDOT *Traffic Noise Analysis Procedure* (2017). Existing modeled (2019) peak hour noise levels ranged from 48.1 to 72.4 A-weighted decibels (dBA). Predicted design year (2045) noise levels would approach or exceed the Noise Abatement Criteria (NAC) at 96 receptors. A majority of impacted receptors have direct access driveway access to US 36 and/or located on a corner of an intersecting road with US 36 and are not feasible for barrier placement. On roadways with direct access for driveways, noise walls are typically not feasible because they require long interrupted sections to be able to meet the minimum dBA reduction. A noise barrier was modeled at the Rockwood Apartments for the apartment building at the northwest corner of US 36 and Rockleigh Avenue with eight impacted units. The noise barrier was unable to meet acoustic feasibility (5.0 dBA reduction) for a majority of impacted receptors as established in the INDOT *Traffic Noise Analysis Procedure* (Appendix I-70).

Based on the studies thus far accomplished, no locations were identified where noise abatement is likely. This determination was upon preliminary design costs and design criteria. Noise abatement has not been found to be feasible based on the need for interrupted sections (due to driveways and intersections) which render noise barriers unable to meet the minimum 5.0 dBA reduction required (Appendix I-27 to I-29). A reevaluation of the noise analysis will occur during final design. If during final design it has been determined that conditions have changed such that noise abatement is feasible and reasonable, the abatement measures might be provided. The final decision on the installation of any abatement measure(s) will be made upon the completion of the project's final design and the public involvement processes (Appendix I-29).

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SECTION H – COMMUNITY IMPACTS

Regional, Community & Neighborhood Factors

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

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

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

MOT will be completed through phased construction. No detours will be used (Appendix B-25 to B-68).

There are five bus stops along US 36 within the project area, at Richie Avenue, Country Club Road, Transfer Drive, Rockleigh Avenue, and Girls School Road. Bus stop access will be maintained throughout the project, in accordance with ADA guidance. The bus stop locations may shift slightly due to construction phasing, but each will be available continuously. In an early coordination response letter dated December 19, 2022, IndyGo stated that the project would have effects to IndyGo Bus Route 10 and that further coordination with INDOT will occur (Appendix C-58). Traffic congestion may provide a temporary impact for motorists during construction such as added travel time, however no significant delays are anticipated, and all inconveniences such as travel delays will cease upon project completion. Disruptions to services such as school transport and emergency services may occur due to this project. It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction activity that would block or limit access.

The project occurs within the City of Indianapolis, and nearby the City of Avon, which may host various fairs, festivals, and events during the two-year course of the project. Any events are unlikely to be impacted by the project because event attendees may utilize US 36 during construction or utilize several alternative routes.

Marion County has an approved ADA Transition Plan, maintained by the Indianapolis Department of Public Works - City of Indianapolis Office of Disability Affairs. The most recent plan was implemented in September 2016. The Indianapolis Public Transit Corporation has an ADA Transition plan last updated in May 2021: <http://www.indygo.net/wp-content/uploads/2021/06/ADA-Transition-Plan-FINAL-May-2021-For-INDOT.pdf> The project will install ADA compliant facilities including a sidewalk and a multi-use path. The project is also consistent with the INDOT June 2021 ADA Transition Plan: <https://www.in.gov/indot/files/21-ADA-Transition-Plan.pdf>. This project complies with the state and local ADA transition plans.

The project will not conflict with the local and regional development patterns for the area. The project will result in improvements to pedestrian mobility, including new sidewalk and a multi-use path, with no loss of such facilities. The project is expected to result in positive community impacts by improving the deteriorated condition of the existing structure and thereby alleviating a potential drainage and safety issue. There will be no changes to property or community access. The proposed action is not expected to conflict with development patterns or have substantial impacts to property values. Therefore, the project will have minimal or no negative impacts to the region, community, and neighborhood.

Public Facilities and Services

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

Based on a desktop review, the aerial map of the project area (Appendix B-3), and the RFI report (Appendix E-5) there are nineteen public facilities within the 0.5-mile search radius. The RFI indicated nine religious facilities, two schools, three recreational facilities, two trail segments, and three managed lands within the 0.5-mile search radius. In addition, the RFI identified on public-use airport, the Indianapolis International Airport, within 3.8 miles (20,000 feet) of the project area. There are two religious facilities (Westlake Church of God and Rockville Road Church of Christ), one recreational facility (Cloverleaf Conservation Area, managed by the Indianapolis Parks and Recreation), and one managed land (Cloverleaf Conservation Area) within or adjacent to the project area.

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That number was updated to additionally include five bus stops based on site visits on September 17, 2020, September 18, 2020, and October 7, 2020, by Corradino, LLC. In an early coordination response letter dated December 19, 2022, IndyGo stated that the project would have effects to IndyGo Bus Route 10 but understood that bus stops will remain open and that further coordination with INDOT will occur (Appendix C-58). See Community Impacts section above for discussion regarding the continuation of bus stop services. The project does not require ROW from any public facility, so there will be no direct or indirect impacts to any public facility. Therefore, no impacts are expected. Access to all properties will be maintained during construction.

Westlake Church of God, Rockville Road Church of Christ, and Indianapolis Parks and Recreation did not respond to early coordination letters. INDOT Aviation responded on January 4, 2021, requesting further coordination will be required if any object, obstruction, or equipment will exceed 100 feet in height (Appendix C-8). The Marion County Surveyor's Office responded on January 11, 2021 and stated that it has 6 monuments in the project area. These monuments will need to be replaced by INDOT under the supervision of the Marion County Surveyor's Office per IC 8-23-9-24 if they are disturbed (Appendix C-10). All applicable recommendations are included in the Environmental Commitments section of this CE document.

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

Environmental Justice (EJ) (Presidential EO 12898)

During the development of the project were EJ issues identified?

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

Does the project require an EJ analysis?

If YES, then:

Are any EJ populations located within the project area?

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

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

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

Under FHWA Order 6640.23A, FHWA and the project sponsor, as a recipient of funding from FHWA, are responsible to ensure that their programs, policies, and activities do not have a disproportionately high and adverse effect on minority or low-income populations. Per the current INDOT Categorical Exclusion Manual, an Environmental Justice (EJ) Analysis is required for any project that has two or more relocations or 0.5 acre of additional permanent ROW. The project will require 0.71 acre of additional permanent ROW. Therefore, an EJ Analysis is required.

Potential EJ impacts are detected by locating minority and low-income populations relative to a reference population to determine if populations of EJ concern exists and whether there could be disproportionately high and adverse impacts to them. The reference population may be a county, city, or town and is called the community of comparison (COC). In this project, the COC is Wayne Township in Marion County. The community that overlaps the project area is called the affected community (AC). In this project, the AC is comprised of Census Tracts 3401.01, 3401.02, and 3419.02 (Appendix I-3). 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 U.S. Census Bureau 2011-2015 American Community Survey was obtained from the U.S. Census Bureau website (<https://data.census.gov/cedsci>) on November 16, 2021, by Corradino, LLC. The data collected for minority and low-income populations within the AC are summarized in the below table.

	COC – Wayne Township, Marion County	AC – Census Tract 3401.01	AC – Census Tract 3401.02	AC – Census Tract 3419.02
Percent Minority	57.01%	26.40%	54.08%	30.31%
125% of COC	71.26%	AC < 125% COC	AC < 125% COC	AC < 125% COC
EJ Population of Concern		No	Yes	No
Percent Low-Income	23.12%	9.93%	16.85%	4.55%
125% of COC	28.90%	AC < 125% COC	AC < 125% COC	AC < 125% COC
EJ Population of Concern		No	No	No

The AC Census Tract 3401.01 has a percent minority of 26.40% which is below 50% and is below the 125% COC threshold. The AC Census Tract 3419.02 has a percent minority of 30.31% which is below 50% and is below the 125% COC threshold. The AC Census

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Tract 3401.02 has a percent minority of 54.08% which is above 50%. Therefore, only AC Census Tract 3401.02 has a minority population of EJ concern.

The AC Census Tract 3401.01 has a percent low-income of 9.93% which is below 50% and is below the 125% COC threshold. The AC Census Tract 3401.02 has a percent low-income of 16.85% which is below 50% and is below the 125% COC threshold. The AC Census Tract 3419.02 has a percent low-income of 4.55% which is below 50% and is below the 125% COC threshold. Therefore, none of the three AC Census Tracts contain low income populations of EJ concern.

An EJ Analysis is documented in the Environmental Justice Memorandum dated January 20, 2022 (Appendix I-2 to I-9). Within the COC, the project requires no permanent ROW and temporary ROW for grading will be required from two commercial properties, comprising a total of 0.0057 acre. There are two residential properties within this section of the project: Rockwood Apartments and a house at 7505 Rockville Road. It is unknown whether minority populations reside at these properties; however, the project requires no right-of-way from either property. No relocations of people, businesses, or farms will take place as a result of this project. Bus stop access will be maintained throughout the project in accordance with ADA guidance. Traffic congestion may provide a temporary impact for motorists during construction such as added travel time; however, no significant delays are anticipated, and all inconveniences such as travel delays will cease upon project completion. As a result of this project, a new sidewalk will be constructed on the south side of US 36 and a new multi-use path will be constructed on the north side, providing an improvement to community cohesion, safety, and mobility. Indirect benefits may include reduced crash potential and air pollution.

INDOT Environmental Services Division (ESD) reviewed the EJ Analysis on January 20, 2022 (Appendix I-10). INDOT-ESD does not consider the impacts associated with this project as causing a disproportionately high and adverse effect on minority and/or low-income 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.

Relocation of People, Businesses or Farms

Will the proposed action result in the relocation of people, businesses or farms?
Is a BIS or CSRS required?

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

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

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

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

Utility coordination has been initiated for the project. Several utilities are present within the project area, including electric, water, gas, telephone, and cable. Some of these utilities may require relocation due to the project. Utility coordination is ongoing.

SECTION I – HAZARDOUS MATERIALS & REGULATED SUBSTANCES

Hazardous Materials & Regulated Substances (Mark all that apply)

- Red Flag Investigation (RFI)
- Phase I Environmental Site Assessment (Phase I ESA)
- Phase II Environmental Site Assessment (Phase II ESA)
- Design/Specifications for Remediation required?

Documentation

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

Date RFI concurrence by INDOT SAM (if applicable): February 3, 2022

Include a summary of the potential hazardous material concerns found during review. Discuss in depth sites found within, directly

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adjacent to, or ones that could impact the project area. Refer to current INDOT SAM guidance. If additional documentation (special provisions, pay quantities, etc.) will be needed, include in discussion. Include applicable commitments.

Based on a review of GIS and available public records, a RFI was completed on January 26, 2022 by Corradino LLC and INDOT SAM provided their concurrence on February 3, 2022 (Appendix E). Two Resource Conservation and Recovery Act (RCRA) Generators are within 0.5 mile of the project area. Five State Cleanup Sites are within 0.5 mile of the project area. Six Underground Storage Tank Sites (UST) are within 0.5 mile of the project area. One Voluntary Remediation Program (VRP)/Brownfield is within 0.5 mile of the project area. Ten Leaking Underground Storage Tank Sites (LUST) are within 0.5 mile of the project area. Seven Institutional Controls are within 0.5 mile of the project area. Eighteen National Pollutant Discharge Elimination System (NPDES) Facilities are within 0.5 mile of the project area. One NPDES Pipe Location is within 0.5 mile of the project area.

Voluntary Remediation Program (VRP)/Brownfields: Rexnord Industries LLC, 7601 Rockville Road Indianapolis, IN 46214 (AI #10845) – A Final Report Phase I Environmental Site Assessment (ESA) was submitted on March 29, 2018. The site is enrolled in two different VRPs. The site is enrolled in this program due to the presence of chlorinated solvents in the soil/groundwater on two acres of the site which exceeds the IDEM commercial/industrial concentrations vapor intrusion screening levels. An Environmental Restrictive Covenant (ERC) was recorded on September 22, 2020 to address potential future exposure pathways; however, groundwater contaminated with chlorinated solvents extends to the northern property boundary and may impact the project area. A Phase II Environmental Site Assessment is recommended to occur before the Ready for Contracts (RFC) date. Prior to any investigation activities, a scope of work plan will be prepared and submitted to INDOT SAM for review and approval.

Underground Storage Tank (UST) Sites: Rexnord Industries LLC, 7601 Rockville Road Indianapolis, IN 46214 (AI #10845) located 0.27 mile west of the intersection of US 36 and Girls School Road. Three USTs (two 1,000 gallon and one 10,000 gallon) were removed from the site in October of 1990. The site is undergoing additional investigation under the VRP program. See the VRP section for additional information.

Leaking Underground Storage Tank (LUST) Sites: Byrd-Jones Property, 8751 Rockville Road Indianapolis, IN 46234 (AI #20889) is located on the southeast corner of Bridgeport Road and US 36. The property owner oversaw the removal of two USTs (one 550-gallon and one 1,000 gallon UST) in November of 1989 and a release from the system was noted. Per IDEM request, sampling was later completed in December of 1989, in addition to the removal of approximately 600 gallons of petroleum impacted (sheen) water. The extent of contamination does not appear to have been delineated. If excavation occurs in this area, proper handling, removal, and disposal of soil and/or groundwater will be necessary. Refer to Appendix G of the SAM Manual for the recommended procedure to manage and report contamination.

Speedway LLC, 7169 Rockville Road Indianapolis, IN 46214 (AI #12417) is located on the southeast corner of Girls School Road and US 36. IDEM issued a No Further Action Determination Approval Pursuant to IDEM Risk Integrated System for Closure (RISC) Guidance letter, dated April 27, 2012, following the recording of an ERC on the deed of the property; however, residual soil and groundwater contamination remains along the northern property boundary and appears to extend beneath the US 36 right-of-way and roadway. If excavation occurs in this area, proper handling, removal, and disposal of soil and/or groundwater will be necessary. Refer to Appendix G of the SAM Manual for the recommended procedure to manage and report contamination.

Crystal Flash, 6380 West Rockville Road Indianapolis, IN (AI #21226) is located on the northeast corner of Merrimac Place and US 36. IDEM issued a No Further Action Pursuant to 1994 Underground Storage Tank Branch Guidance letter, dated October 26, 2012. Residual soil and groundwater impacts remain on-site and appear to have potential to extend beneath US 36. If excavation occurs in this area, proper handling, removal, and disposal of soil and/or groundwater may be necessary. Refer to Appendix G of the SAM Manual for the recommended procedure to manage and report contamination.

Speedway LLC, 5351 Rockville Road Indianapolis, IN 46214 (AI #12428) is located on the northwest corner of High School Road and US 36. IDEM issued a No Further Action Approval Pursuant to IDEM RISC Guidance letter, dated July 23, 2014, following the recording of an ERC on the deed of the property. Residual soil and groundwater contamination appears to remain on and off-site and extends beneath High School Road and has the potential to extend beneath US 36. If excavation occurs in this area, proper handling, removal, and disposal of soil/and or groundwater may be necessary. Refer to Appendix G of the SAM Manual for the recommended procedure to manage and report contamination.

Institutional Controls: Rexnord Industries LLC, 7601 Rockville Road Indianapolis, IN 46214 (AI #10845) located 0.27 mile west of the intersection of US 36 and Girls School Road. The ERC was recorded on September 22, 2020 by BBT Holdings 2 LLC. The ERC limits the use of the property to commercial/industrial purposes. Restrictions also include no residential or agricultural use of any kind, prohibition of extraction and use of groundwater for drinking water, and new construction limited to open air structures to prevent vapor exposure unless further study is conducted. Pump-off Control (POC) wells are being analyzed and tracked to make sure the plumes are not expanding. Coordination will be conducted with the IDEM Institutional Controls section (institutionalcontrols@idem.IN.gov) before RFC. Refer to Appendix G of the SAM Manual for the recommended procedure to

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manage and report contamination.

Speedway LLC, 5351 Rockville Road Indianapolis, IN 46214 (AI #12428) is located on the northwest corner of High School Road and US 36. An ERC was recorded on the deed of the property on June 24, 2014, as part of No Further Action activities. The ERC restricts the use of the property, including proper handling on impacted soil and groundwater. Coordination will be conducted with the IDEM Institutional Controls section (institutionalcontrols@idem.IN.gov) before RFC.

NPDES Facilities: Tire Discounters Avon, 9073 Rockville Road Indianapolis, IN 46214 (AI #124815) is located 0.16 mile east of the intersection of S Raceway Road and US 36. This active permit expires in July of 2024. Coordination with the permit holder will occur.

Coordination was sent to Tire Discounters Avon on February 23, 2022. No response was received.

Belle Tire, 8212 Country Village Dr., Indianapolis, IN 46234 (AI #121330) is located 0.12 mile east of the intersection of Country Club Road and US 36. This active permit expires in June of 2023. Coordination with the permit holder will occur.

Coordination was sent to Belle Tire on February 23, 2022. No response was received.

INDOT DES 1600627 Intersection Improvement US 36, Rockville Road & High School Rd., Indianapolis, IN 46214 (AI #126189) – This active permit expires in January of 2025. Coordination with the permit holder will occur.

Coordination was sent to INDOT on February 23, 2022. No response was received.

Furman Stout Neighborhood Drainage Improvements, S. Girls School Rd. & Rockville Rd., Indianapolis, IN 46214 (AI #124930) – This active permit expires in July of 2024. Coordination with the permit holder will occur.

Coordination was sent to Furman Stout Neighborhood Drainage Improvements on February 23, 2022. No response was received.

NPDES Pipe Locations: Rexnord Industries LLC, 7601 Rockville Road Indianapolis, IN 46214 (AI #10845) – A Final Report Phase I Environmental Site Assessment (ESA) was submitted on March 29, 2018 and August Mack Environmental, Inc. (August Mack) completed the Phase I ESA for the site. The report states that the west portion of the Site has been used for sanitary and industrial wastewater treatment from the late 1950s to 1991. The lagoons on the property were used for processing sludge and were decommissioned in 1992 and 1993. If excavation occurs on this site, proper handling, removal, and disposal of soil and/or groundwater may be necessary.

Part IV – Permits and Commitments

PERMITS CHECKLIST

Permits (mark all that apply)

Likely Required

Army Corps of Engineers (404/Section10 Permit)

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

IN Department of Environmental Management (401/Rule 5)

Nationwide Permit (NWP)	<input checked="" type="checkbox"/>
Regional General Permit (RGP)	<input type="checkbox"/>
Individual Permit (IP)	<input type="checkbox"/>
Isolated Wetlands	<input type="checkbox"/>
Rule 5	<input checked="" type="checkbox"/>
Other	<input type="checkbox"/>

IN Department of Natural Resources

Construction in a Floodway	<input checked="" type="checkbox"/>
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Permits (mark all that apply)

Likely Required

Navigable Waterway Permit	
Other	
Mitigation Required	
US Coast Guard Section 9 Bridge Permit	
Others (Please discuss in the discussion below)	X

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

Shiloh Creek, East Fork White Lick Creek, UNT to East Fork White Lick Creek, UNT1 to Shiloh Creek, UNT2 to Shiloh Creek, Open Water 1, Open Water 2, Wetland 1, Wetland 2, and JAR1 were identified as jurisdictional waterways in the *Waters of the U.S. Determination Report*. A Section 404 Permit from USACE and a Section 401 Water Quality Certification from IDEM will be required for approximately 393 linear feet of stream impact (337 linear feet permanent and 56 linear feet temporary) and 0.007 acre of wetland impact.

Total disturbed area of soil will be 30 acres, which is above the 1.0 acre threshold for an IDEM Construction Stormwater General Permit (CSGP), formerly Rule 5 Storm Water Runoff Permit.

Per the IDNR-DFW early coordination response letter dated January 29, 2021, the project will require formal approval for construction in a floodway, pursuant to the Flood Control Act (IC 14-28-01). Because East Fork White Lick Creek has a drainage area of 8.1 square miles, an IDNR Construction in a Floodway Permit will be required.

Per the INDOT Office of Aviation early coordination letter dated January 4, 2021, further coordination will be required if any object, obstruction, or equipment will exceed 100 feet in height. If a crane or other equipment will exceed this height, an Indiana Tall Structure Permit will likely be required.

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

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

ENVIRONMENTAL COMMITMENTS

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

Firm:

1. If the scope of work and/or permanent or temporary right-of-way amounts change, INDOT Environmental Services Division and the Greenfield District Design/Environmental Manager will be contacted immediately. (INDOT ESD and INDOT Greenfield District)
2. It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction activity that would block or limit access. (INDOT ESD)
3. Any work in a wetland area within right-of-way or in borrow/waste areas is prohibited unless specifically allowed in the U.S. Army Corps of Engineers permit. (INDOT ESD)
4. UNT to East Fork White Lick Creek and the portions of East Fork White Lick Creek, Shiloh Creek, UNT1 to Shiloh Creek, and UNT2 to Shiloh Creek that will not be impacted shall be labeled as "Do Not Disturb" on the plans. (INDOT ESD)
5. Wetland 2 and the portions of Wetland 1 and JAR1 that will not be impacted shall be labeled as "Do Not Disturb" on the plans. (INDOT ESD)
6. Use best methods to contain soil and sediment runoff during construction. Use silt curtains or other devices at the downstream end of the project to contain bottom sediment in the newly excavated channel and to prevent it from adding to the downstream sediment load. Maintain such devices by removal of accumulated sediment. Open Water 1 and Open Water 2 are both outside the project area and erosion control measures will be taken to avoid disturbing these ponds. (USFWS & INDOT ESD)

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7. Water and soil impacts are to be contained within the project area. (INDOT ESD)
8. Structures 036-49-03898 AEBL and 036-49-03898 AWBL have shown evidence of use (i.e. nests) by a bird species protected under the Migratory Bird Treaty Act (MBTA) during the inspections on September 17 and October 7 in 2020, and January 28, May 20, June 8, and July 22 in 2021. Avoidance and minimization measures must be implemented prior to the start of and during the nesting season. Nests without eggs or young should be removed prior to construction during the non-nesting season (September 8 – April 30) and during the nesting season if no eggs or young are present. Nests with eggs or young cannot be removed or disturbed during the nesting season (May 1 – September 7). Nests with eggs or young should be screened or buffered from active construction. Details of the required procedures are outlined in the “Potential Migratory Bird on Structure USP.” (INDOT ESD)
9. A reevaluation of the noise analysis will occur during final design. If during final design it has been determined that conditions have changed such that noise abatement is feasible and reasonable, the abatement measures might be provided. The final decision on the installation of any abatement measure(s) will be made upon the completion of the project’s final design and the public involvement processes. (INDOT ESD)
10. If any object, obstruction, or equipment will exceed 100 feet. in height, further coordination will be required with INDOT Aviation and the Federal Aviation Administration. This is due to the close proximity of Indianapolis International Airport and the need for any obstructions within 5 miles to meet a 100:1 glideslope to the nearest runway according to 14 CFR Part 77 standards. (INDOT Aviation)
11. USFWS Bridge/Structure Assessment shall take place no earlier than two (2) years prior to the start of construction. If construction will begin after July 23, 2023, an inspection of the structure by a qualified individual, must be performed. Inspection of the structure should check for presence of bats/bat indicators and/or presence of birds. The results of the inspection must indicate no signs of bats or birds. If signs of bats or birds are documented during this inspection, the INDOT District Environmental Manager must be contacted immediately (USFWS)
12. General AMM1 - Ensure all employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs. (USFWS)
13. Lighting AMM1 - Direct temporary lighting away from suitable habitat during the active season.
14. Tree Removal AMM1 - Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal. (USFWS)
15. Tree Removal AMM2 - Apply time of year restrictions (April 1 through September 30) for tree removal when bats are not likely to be present, or limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/rail surface and outside of documented roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed. (USFWS & DNR)
16. Tree Removal AMM3 - Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits). (USFWS)
17. Tree Removal AMM4 - Do not remove documented Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 miles of roosts, or documented foraging habitat any time of year. (USFWS)
18. To minimize bat disturbance, bridge work shall be completed after September 30 and before April 1. If the bridge work cannot be completed before April 1, the crevices shall temporarily be filled, for the entire length of the structure, with an expandable material. The structure shall also be inspected for bats prior to exclusion, or any construction activities. If signs of bats are documented during this inspection, the INDOT District Environmental Manager must be contacted immediately. Coordination has occurred on December 21, 2021, with the project designer about exclusionary measure needed for the project. Details of the required procedures are outlined in the “Bat Inspection and Coordination” Unique Special Provision (USP). (USFWS)
19. Rexnord Industries LLC, 7601 Rockville Road Indianapolis, IN 46214 (AI #10845) – A Final Report Phase I Environmental Site Assessment (ESA) was submitted on March 29, 2018. The site is enrolled in two different Voluntary Remediation Programs. The site is enrolled in this program due to the presence of chlorinated solvents in the soil/groundwater on two acres of the site which exceeds the IDEM commercial/industrial concentrations vapor intrusion screening levels. An Environmental Restrictive Covenant (ERC) was recorded on September 22, 2020 to address potential future exposure pathways; however, groundwater contaminated with chlorinated solvents extends to the northern property boundary and may impact the project area. A Phase II Environmental Site Assessment is recommended to occur before the Ready for Contracts (RFC) date. Prior to any investigation activities, a scope of work plan will be prepared and submitted to INDOT SAM for review and approval. (INDOT-SAM)
20. Rexnord Industries LLC, 7601 Rockville Road Indianapolis, IN 46214 (AI #10845) located 0.27 mile west of the intersection of US 36 and Girls School Road. The ERC was recorded on September 22, 2020 by BBT Holdings 2 LLC. The ERC limits the use of the property to commercial/industrial purposes. Restrictions also include no residential or agricultural use of any kind, prohibition of extraction and use of groundwater for drinking water, and new construction limited to open air structures to prevent vapor exposure unless further study is conducted. Pump-off Control (POC) wells are being analyzed and tracked to make sure the plumes are not expanding. Coordination will be conducted with the IDEM Institutional Controls section (institutionalcontrols@idem.IN.gov) before RFC. Refer to Appendix G of the SAM Manual for the recommended procedure

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- to manage and report contamination. (INDOT-SAM)
21. Rexnord Industries LLC, 7601 Rockville Road Indianapolis, IN 46214 (AI #10845) – A Final Report Phase I Environmental Site Assessment (ESA) was submitted on March 29, 2018 and August Mack Environmental, Inc. (August Mack) completed the Phase I ESA for the site. The report states that the west portion of the Site has been used for sanitary and industrial wastewater treatment from the late 1950s to 1991. The lagoons on the property were used for processing sludge and were decommissioned in 1992 and 1993. If excavation occurs on this Site, proper handling, removal, and disposal of soil and/or groundwater may be necessary. (INDOT SAM)
 22. Speedway LLC, 5351 Rockville Road Indianapolis, IN 46214 (AI #12428) is located on the northwest corner of High School Road and US 36. An ERC was recorded on the deed of the property on June 24, 2014, as part of No Further Action activities. The ERC restricts the use of the property, including proper handling on impacted soil and groundwater. Coordination will be conducted with the IDEM Institutional Controls section (institutionalcontrols@idem.IN.gov) before RFC. (INDOT-SAM)
 23. Byrd-Jones Property, 8751 Rockville Road Indianapolis, IN 46234 (AI #20889) is located on the southeast corner of Bridgeport Road and US 36. The property owner oversaw the removal of two USTs (one 550-gallon and one 1,000 gallon UST) in November of 1989 and a release from the system was noted. Per IDEM request, sampling was later completed in December of 1989, in addition to the removal of approximately 600 gallons of petroleum impacted (sheen) water. The extent of contamination does not appear to have been delineated. If excavation occurs in this area, proper handling, removal, and disposal of soil and/or groundwater will be necessary. Refer to Appendix G of the SAM Manual for the recommended procedure to manage and report contamination. (INDOT-SAM)
 24. Speedway LLC, 7169 Rockville Road Indianapolis, IN 46214 (AI #12417) is located on the southeast corner of Girls School Road and US 36. IDEM issued a No Further Action Determination Approval Pursuant to IDEM Risk Integrated System for Closure (RISC) Guidance letter, dated April 27, 2012, following the recording of an ERC on the deed of the property; however, residual soil and groundwater contamination remains along the northern property boundary and appears to extend beneath the US 36 right-of-way and roadway. If excavation occurs in this area, proper handling, removal, and disposal of soil and/or groundwater will be necessary. Refer to Appendix G of the SAM Manual for the recommended procedure to manage and report contamination. (INDOT-SAM)
 25. Crystal Flash, 6380 West Rockville Road Indianapolis, IN (AI #21226) is located on the northeast corner of Merrimac Place and US 36. IDEM issued a No Further Action Pursuant to 1994 Underground Storage Tank Branch Guidance letter, dated October 26, 2012. Residual soil and groundwater impacts remain on-site and appear to have potential to extend beneath US 36. If excavation occurs in this area, proper handling, removal, and disposal of soil and/or groundwater may be necessary. Refer to Appendix G of the SAM Manual for the recommended procedure to manage and report contamination. (INDOT-SAM)
 26. Speedway LLC, 5351 Rockville Road Indianapolis, IN 46214 (AI #12428) is located on the northwest corner of High School Road and US 36. IDEM issued a No Further Action Approval Pursuant to IDEM RISC Guidance letter, dated July 23, 2014, following the recording of an ERC on the deed of the property. Residual soil and groundwater contamination appears to remain on and off-site and extends beneath High School Road and has the potential to extend beneath US 36. If excavation occurs in this area, proper handling, removal, and disposal of soil/and or groundwater may be necessary. Refer to Appendix G of the SAM Manual for the recommended procedure to manage and report contamination. (INDOT-SAM)
 27. Coordination with the Indianapolis Department of Public Works will be completed in accordance with the utility coordination procedures outlined in Indiana Administrative Code 105 IAC 13-3. (Indianapolis DPW)
 28. Duration of occupancy at the Fair Meadows Subdivision and Ernie Pyle Highway Homes Subdivision must be temporary, i.e., less than the time needed for construction of the project, and there should be no change in ownership of the land. (INDOT)
 29. Scope of the work at the Fair Meadows Subdivision and Ernie Pyle Highway Homes Subdivision must be minor, i.e., both the nature and the magnitude of the changes to the Section 4(f) property are minimal. (INDOT)
 30. There must be no anticipated permanent adverse physical impacts, nor will there be interference with the protected activities, features, or attributes of the Fair Meadows Subdivision property and Ernie Pyle Highway Homes Subdivision, on either a temporary or permanent basis. (INDOT)
 31. The land being used for the Fair Meadows Subdivision and Ernie Pyle Highway Homes Subdivision must be fully restored, i.e., the property must be returned to a condition which is at least as good as that which existed prior to the project. (INDOT)
 32. All contributing items to the historic properties will be marked as “do not disturb” on the final design plans. (INDOT)
 33. The Marion County Surveyor’s Office has 6 monuments in the project area. These monuments will need to be replaced by INDOT under the supervision of the Marion County Surveyor’s Office per IC 8-23-9-24 if they are disturbed. (Marion County Surveyor’s Office)
 34. It is the responsibility of the project sponsor that coordination with IndyGo will occur prior to effects on IndyGo Bus Route 10. (IndyGo)

For Further Consideration:

35. Revegetate all disturbed soil areas immediately upon project completion, using native trees and shrubs in the riparian zone wherever feasible. We recommend reforestation occur along all impacted riparian areas, extending at least 50 feet

Indiana Department of Transportation

County: Marion County

Route: US 36

Des. No. 1800035, 1800037, 1900340, 1900341, 2002284

- (preferably 100) perpendicular from the streambank. (USFWS)
36. If riprap is utilized for bank stabilization, extend it below low-water elevation to provide aquatic habitat (if applicable). (USFWS)
 37. Restrict below low-water work in streams to placement of culverts, piers, pilings and/or footings, shaping of the spill slopes around the bridge abutments, and placement of riprap (USFWS)
 38. Minimize the extent of hard armor (riprap) in bank stabilization by using bioengineering techniques whenever possible. If riprap is utilized for bank stabilization, extend it below low-water elevation to provide aquatic habitat. (USFWS).
 39. Avoid all work within the inundated part of the stream channel (in perennial streams and larger intermittent streams) during the fish spawning season (April 1 through June 30), except for work within sealed structures such as caissons or cofferdams that were installed prior to the spawning season. No equipment shall be operated below the Ordinary High Water Mark during this time unless the machinery is within the caissons or on the cofferdams. (USFWS)
 40. Evaluate wildlife crossings under bridge/culverts projects in appropriate situations. Suitable crossings include flat areas below bridge abutments with suitable ground cover, high water shelves in culverts, amphibian tunnels and diversion fencing. (USFWS)
 41. We strongly encourage any work that may affect bats roosting in this structure to occur outside of the maternity season, and more importantly, outside of the period when bat pups are not yet volant (able to fly; May through July). (USFWS)
 42. The Division of Fish & Wildlife supports converting a portion of the existing center turn lanes into a raised and vegetated median both for improved safety and a reduction of impervious surfaces. We highly recommend including native plant species where appropriate within the median, within any roadside drainage ditches, and along any proposed pedestrian / multi-use trail facilities to benefit urban wildlife species. The Division of Fish & Wildlife may have cost share options for any native plantings included along the proposed corridor. (IDNR-DFW)
 43. The new, replacement, or rehabbed structure should not create conditions that are less favorable for wildlife passage under the structure compared to the current conditions. (IDNR-DFW)
 44. Impacts to non-wetland forest of one (1) acre or more should be mitigated at a minimum 2:1 ratio. If less than one acre of non-wetland forest is removed in a rural setting, replacement should be at a 1:1 ratio based on area. Impacts to non-wetland forest under one (1) acre in an urban setting should be mitigated by planting five trees, at least 2 inches in diameter-at-breast height (dbh), for each tree which is removed that is 10 inches dbh or greater (5:1 mitigation based on the number of large trees). (IDNR-DFW)
 45. The Division of Fish & Wildlife recommends considering a more sustainable approach to stormwater management than just adding curbs, gutters, and additional inlets to the existing infrastructure. A more sustainable approach aims to rebuild the natural water cycle by using storage techniques (retention basins, constructed wetlands, raingardens, etc.) and recharging groundwater using infiltration techniques (infiltration basins or trenches, pervious pavement, etc.).
 46. Use minimum average 6 inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids. (IDNR-DFW)
 47. Do not construct any temporary runarounds, access bridges, causeways, cofferdams, diversions, or pumparounds (IDNR-DFW).

Indiana Department of Transportation

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 - RHGNA Meeting Presentation (G-57 to G-65)
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APPENDIX A

INDOT Supporting Documentation

DES 1800035, 1800037, 1900340, 1900341, 2002284

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 Impacts³	No construction in waterways or water bodies	< 300 linear feet of stream impacts	≥ 300 linear feet of stream impacts	-	USACE Individual 404 Permit ⁴
Wetland Impacts³	No adverse impacts to wetlands	< 0.1 acre	-	< 1.0 acre	≥ 1.0 acre
Right-of-way⁵	Property acquisition for preservation only or none	< 0.5 acre	≥ 0.5 acre	-	-
Relocations⁶	None	-	-	< 5	≥ 5
Threatened/Endangered Species (Species Specific Programmatic for Indiana bat & northern long eared bat)*	"No Effect", "Not likely to Adversely Affect" (With select AMMs ⁷)	"Not likely to Adversely Affect" (With any AMMs or commitments)	-	"Likely to Adversely Affect"	Project does not fall under Species Specific Programmatic ⁸
Threatened/Endangered Species (Any other species)*	Falls within guidelines of USFWS 2013 Interim Policy or "No Effect"	"Not likely to Adversely Affect"	-	-	"Likely to Adversely Affect"
Environmental Justice	No disproportionately high and adverse impacts	-	-	-	Potential ⁹
Sole Source Aquifer	No Detailed Groundwater Assessment	-	-	-	Detailed Groundwater Assessment
Floodplain	No Substantial Impacts	-	-	-	Substantial Impacts
Section 4(f) Impacts	None	-	-	-	Any ¹⁰
Section 6(f) Impacts	None	-	-	-	Any
Permanent Traffic Alteration	None	-	-	-	Any
Noise Analysis Required	No	-	-	-	Yes
Air Quality Analysis Required	No	-	-	-	Yes ¹¹
Approval Level					
<ul style="list-style-type: none"> • District Env. (DE) • Env. Serv. Div. (ESD) • FHWA 	Concurrence by DE or ESD	DE or ESD	DE or ESD	DE and/or ESD	DE and/or ESD; and FHWA

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

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

³ Total permanent impacts to streams (linear feet) and wetlands (acres).

⁴ US Army Corps of Engineers Individual 404 Permit

⁵ Total permanent and temporary right-of-way. This does not include reacquisition of existing apparent right-of-way.

⁶ If any relocations are within an area with a known or suspected Environmental Justice (EJ) or disadvantaged population, or has greater than 5 relocations, a conversation with FHWA, through INDOT ESD, is needed to confirm NEPA classification and outreach plan for the project.

⁷ Avoidance and Mitigation Measures (AMMs) determined by the IPAC determination key to be required that are not tree AMMs, bridge AMMs, or structure AMMs.

⁸ Projects that do not fall under a Species Specific Programmatic and results in a "Likely to Adversely Affect". Other findings can be processed as a lower-level CE.

⁹ Potential for causing a disproportionately high and adverse impact.

¹⁰ Section 4(f) use resulting in an Individual, Programmatic, or *de minimis* evaluation. The only exception is a *de minimis* evaluation for historic properties (Effective January 2, 2020). If a historic property *de minimis* and no other use, mark the *None* column.

¹¹ Hot Spot Analysis and/or MSAT Quantitative Emission Analysis.

* Includes the threatened/endangered species critical habitat

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

APPENDIX B

Graphics

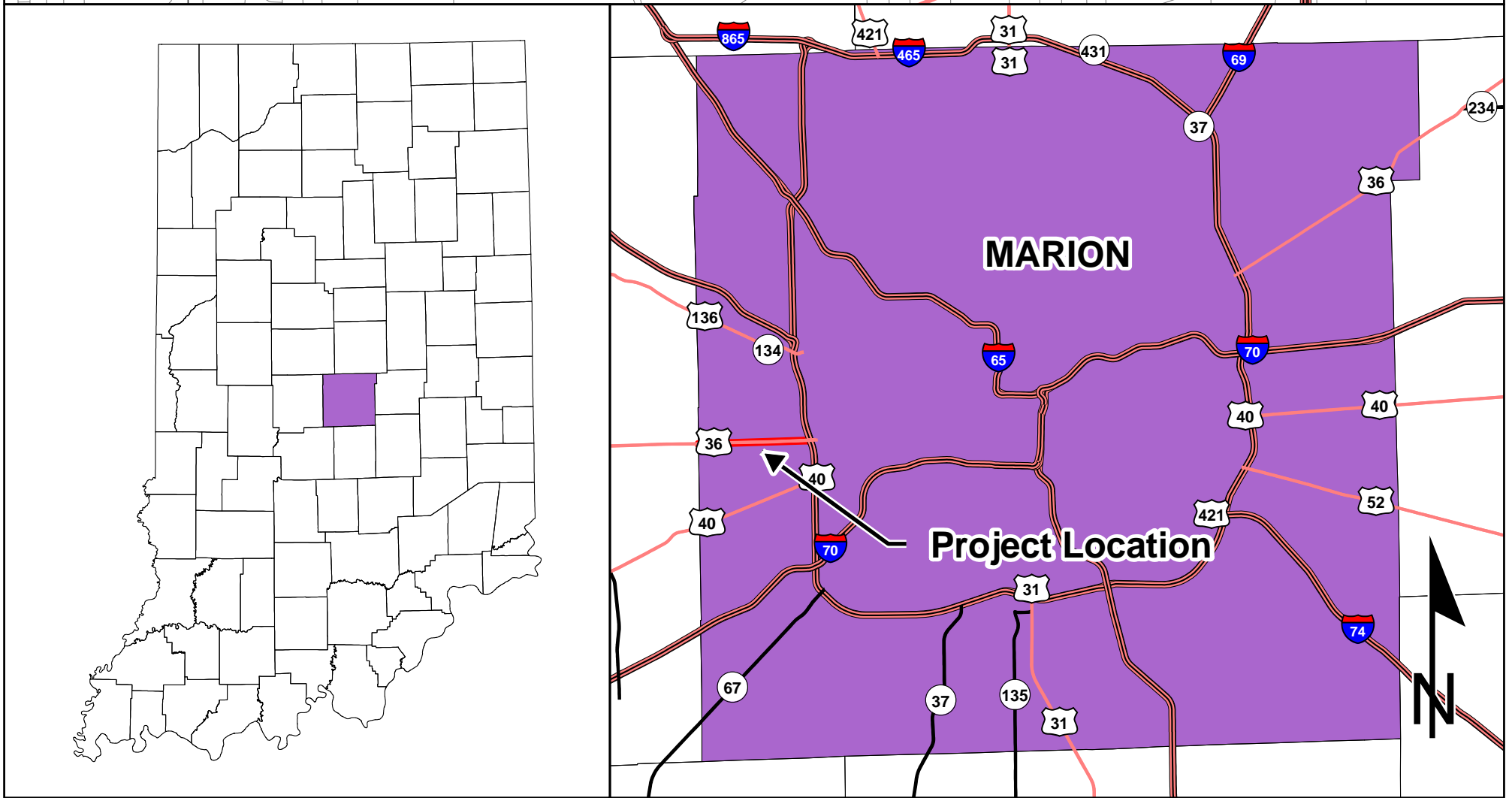
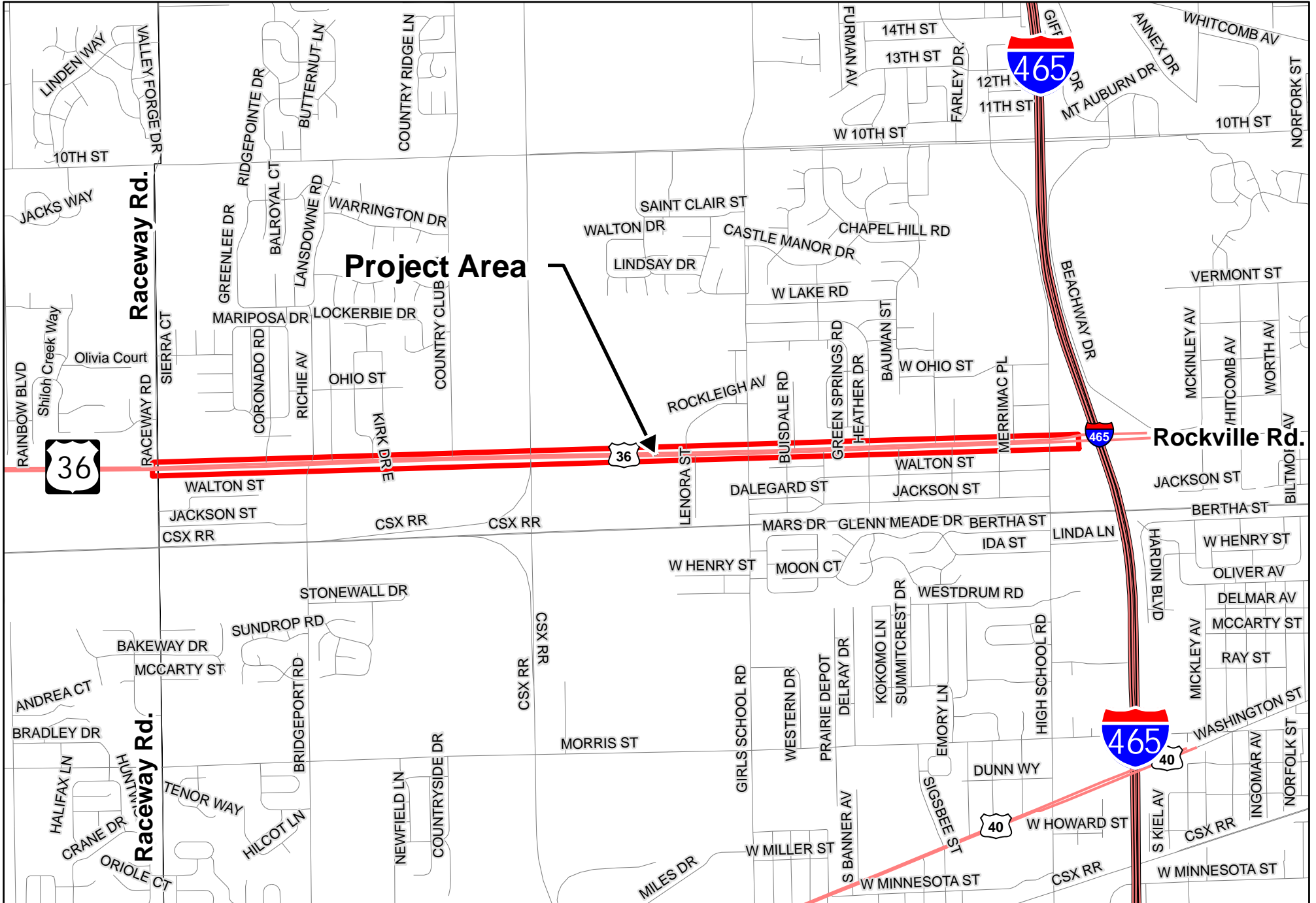
DES 1800035, 1800037, 1900340, 1900341, 2002284

Project Location Map

US 36, from Raceway Rd. to I-465

Des. No's. 1800035 & 1800037, Corridor Improvements

Marion County, Indiana



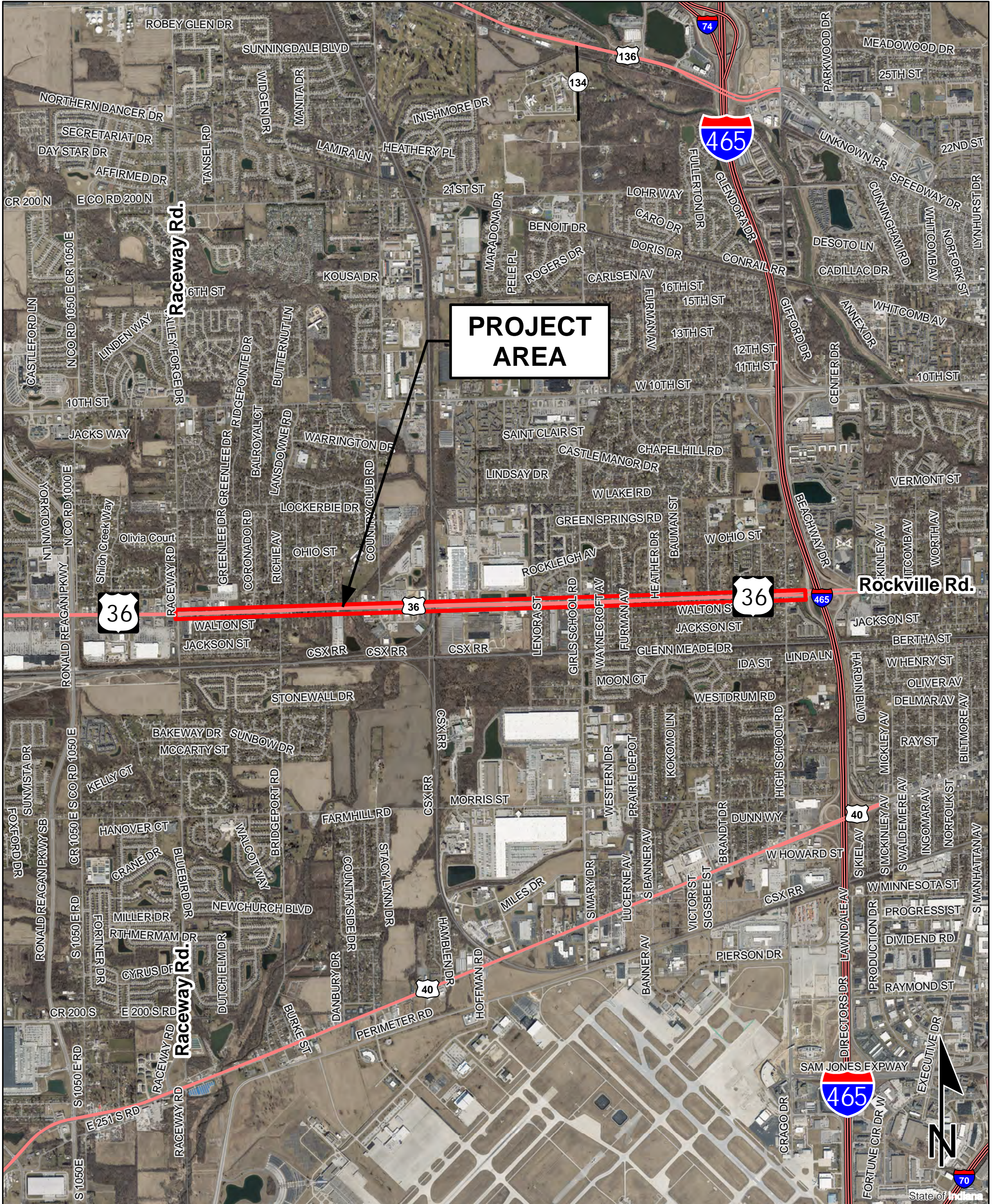
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Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

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

INDIANA
STATEWIDE
GIS DATA

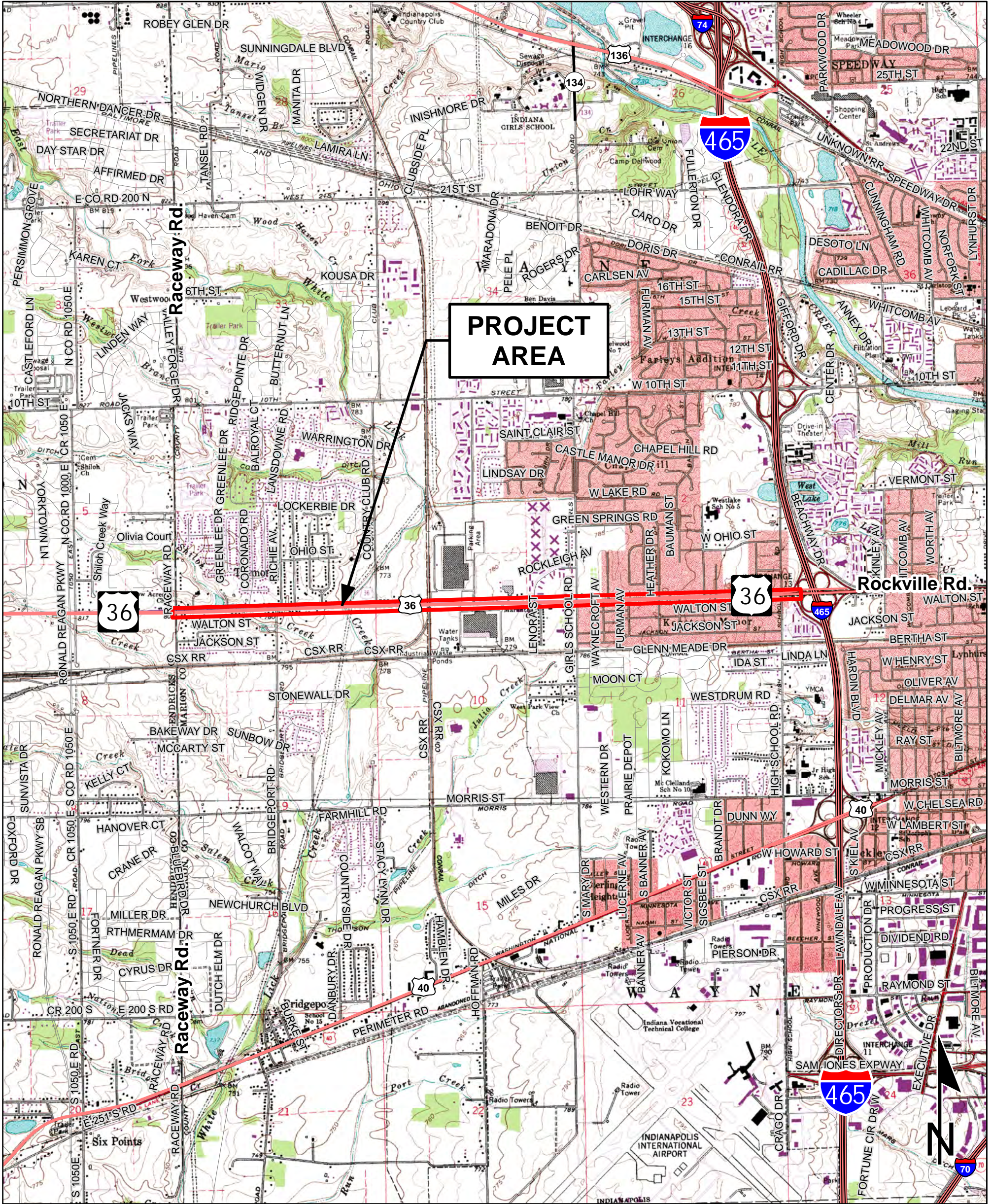
Aerial Map
 US 36, from Raceway Rd. to I-465
 Des. No's. 1800035 & 1800037, Corridor Improvements
 Marion County, Indiana



Sources: 0.55 0.275 0 0.55 Miles
Non Orthophotography
 Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
 Map Projection: UTM Zone 16 N Map Datum: NAD83
 This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

**INDIANA STATEWIDE
 AERIAL IMAGERY
 FLOWN 2016**

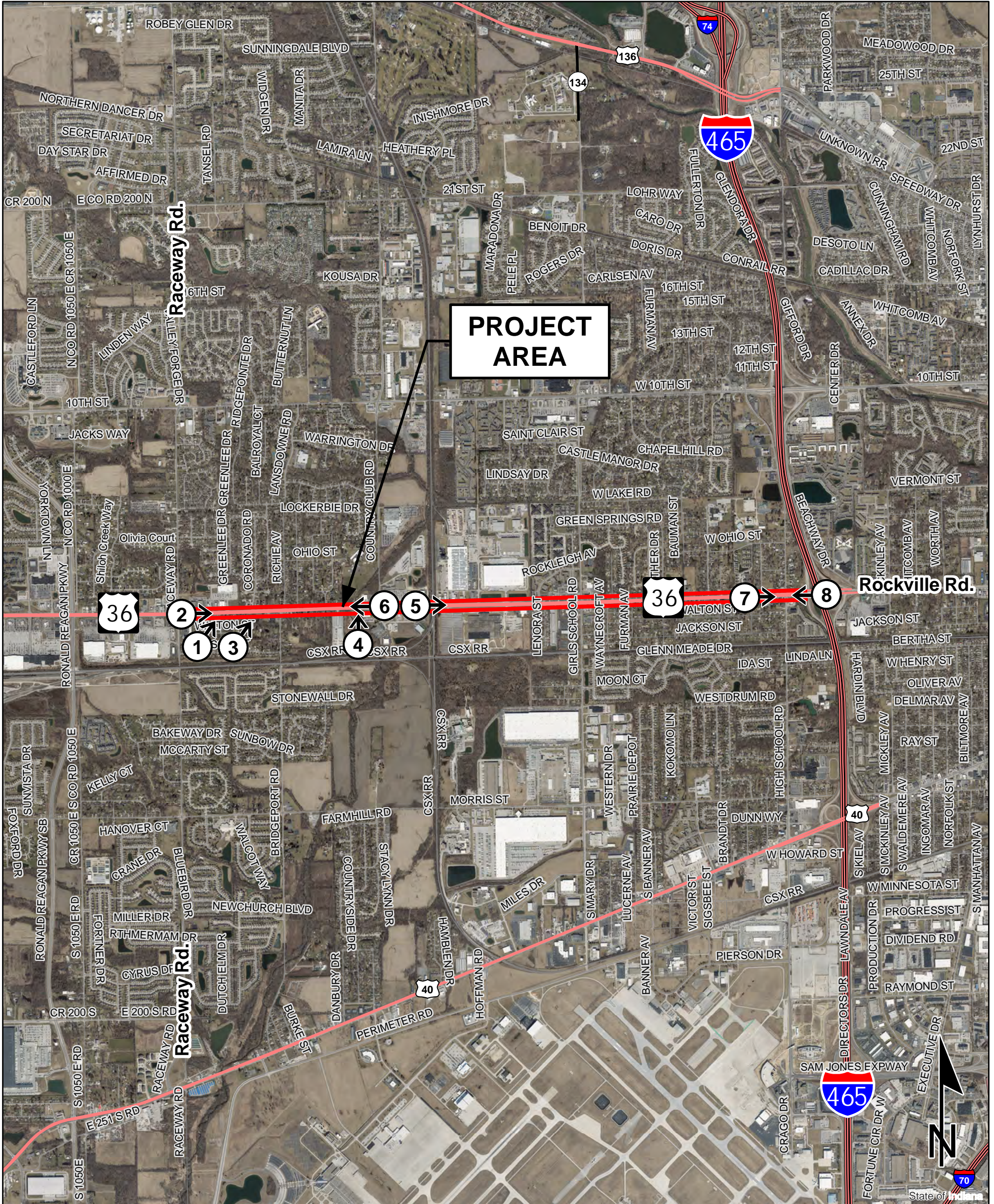
USGS Topographic Map
 US 36, from Raceway Rd. to I-465
 Des. No's. 1800035 & 1800037, Corridor Improvements
 Marion County, Indiana



Sources: 0.55 0.275 0 0.55 Miles
Non Orthophotography
 Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
 Map Projection: UTM Zone 16 N Map Datum: NAD83
 This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

**CLERMONT & BRIDGEPORT
 QUADRANGLES INDIANA
 7.5 MINUTE SERIES
 (TOPOGRAPHIC)**

Photo Key Map
 US 36, from Raceway Rd. to I-465
 Des. No's. 1800035 & 1800037, Corridor Improvements
 Marion County, Indiana



Sources: 0.55 0.275 0 0.55 Miles
Non Orthophotography
 Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
 Map Projection: UTM Zone 16 N Map Datum: NAD83

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

**INDIANA STATEWIDE
 AERIAL IMAGERY
 FLOWN 2016**



Picture 1—Project west end, northeast view; 17 SEP 2020.



Picture 2— Project west end; east view; 17 SEP 2020.



Picture 3—Shiloh Creek; northeast view; 17 SEP 2020.



Picture 4—East Fork White Lick Creek bridge north view; 17 SEP 2020.

See Appendix F-42 to F-144 for additional photos.



Picture 5—Project interior and railway crossing east view; 17 SEP 2020.



Picture 6—Project interior; west view; 17 SEP 2020.



Picture 7—Project east end; east view; 07 OCT 2020.

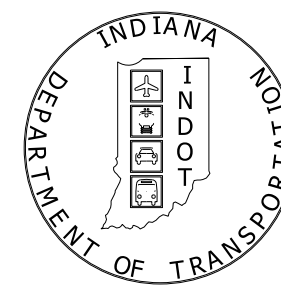


Picture 8—Project east end; west view; 07 OCT 2020.

See Appendix F-42 to F-144 for additional photos.

PROJECT	DESIGNATION
1800035	1800035/1800037
CONTRACT	BRIDGE FILE
R-41781	

INDIANA DEPARTMENT OF TRANSPORTATION



TRAFFIC DATA	Raceway Rd to Railroad	Railroad to Girls School Rd	Girls School Rd to High School Rd
A.A.D.T. (2025)	38,128 V.P.D.	42,156 V.P.D.	40,820 V.P.D.
A.A.D.T. (2045)	42,469 V.P.D.	46,955 V.P.D.	45,468 V.P.D.
D.H.V. (2045)	3,581 V.P.H.	3,887 V.P.H.	3,797 V.P.H.
DIRECTIONAL DISTRIBUTION	54.0 %	51.0 %	52.0 %
TRUCKS	3.8 % D.H.V. 3.9 % A.D.T	4.7 % D.H.V. 4.8 % A.D.T	4.8 % D.H.V. 4.7 % A.D.T
DESIGN DATA			
DESIGN SPEED	45 M.P.H.	45 M.P.H.	45 M.P.H.
PROJECT DESIGN CRITERIA	(4R) Reconstruction (Non-Freeway)	(4R) Reconstruction (Non-Freeway)	(4R) Reconstruction (Non-Freeway)
FUNCTIONAL CLASSIFICATION	Principal Arterial	Principal Arterial	Principal Arterial
RURAL/URBAN	URBAN (Intermediate)	URBAN (Intermediate)	URBAN (Intermediate)
TERRAIN	LEVEL	LEVEL	LEVEL
ACCESS CONTROL	NONE	NONE	NONE

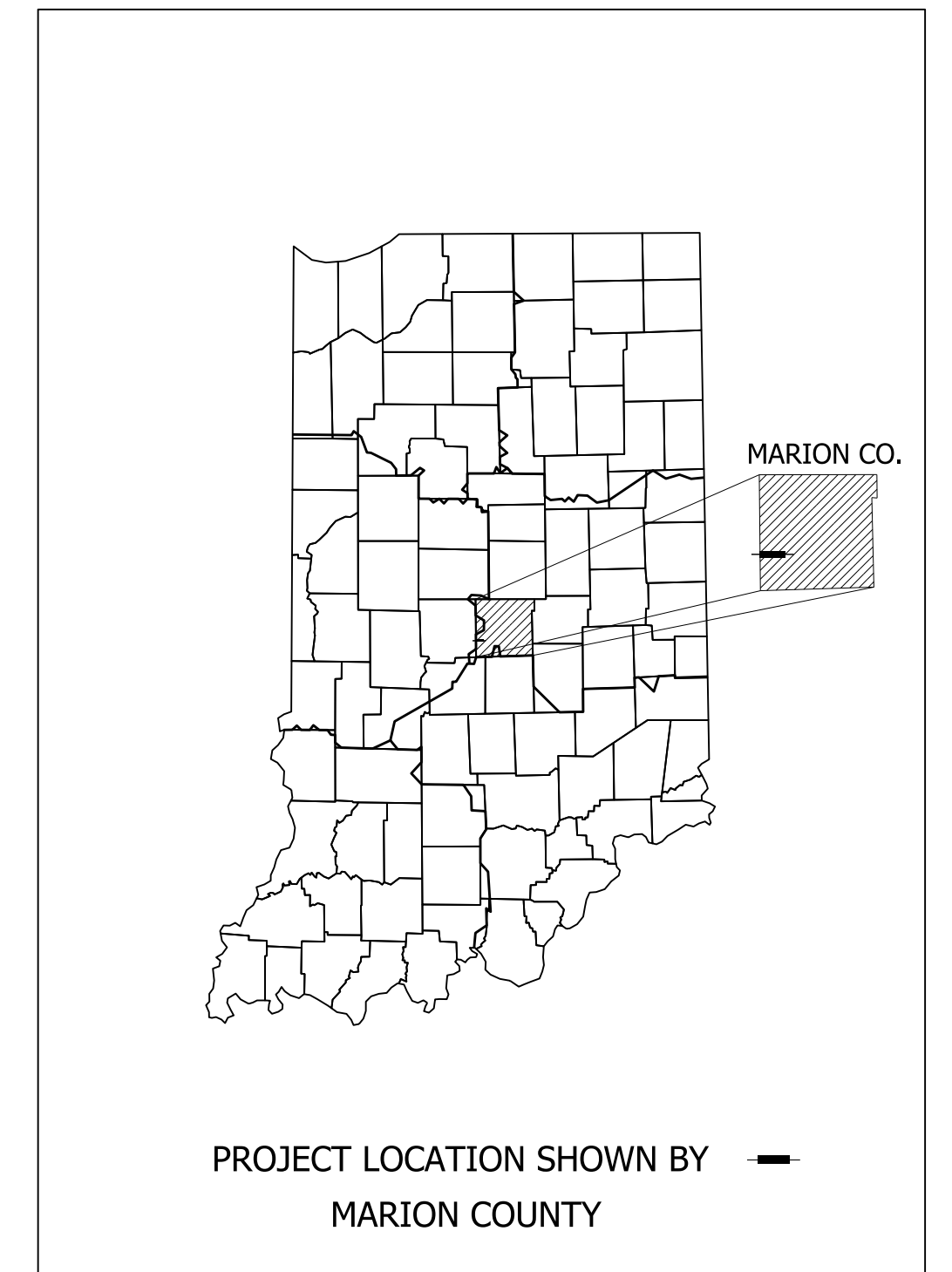
SEE NEXT SHEET FOR ADDITIONAL TRAFFIC DATA/DESIGN DATA

KIN PROJECT INFORMATION	
DESIGNATION	PROJECT DESCRIPTION
1900340	US 36 EB BRIDGE OVER LITTLE WHITE LICK CREEK
1900341	US 36 WB BRIDGE OVER LITTLE WHITE LICK CREEK
2002284	Small Str. Replacement at Shiloh Crk CV 036-049-65.70

ROAD PLANS

ROUTE: U.S. 36 FROM: RP 65+60 TO: RP 68+41
 PROJECT NO. 1800035 P.E.
 1800035 R/W
 1800035 CONST.

ADDED TRAVEL LANES AND OVERLAY LOCATED ALONG US 36 APPROXIMATELY 800 FT EAST OF RACEWAY RD TO I-465 SB RAMPS IN MARION COUNTY. THE PROJECT IS LOCATED IN SECTIONS 1, 2, 3, 4, 5, 8, 9, 10, 11 & 12 IN T 15N R2E, IN WAYNE TOWNSHIP, MARION COUNTY, INDIANA.



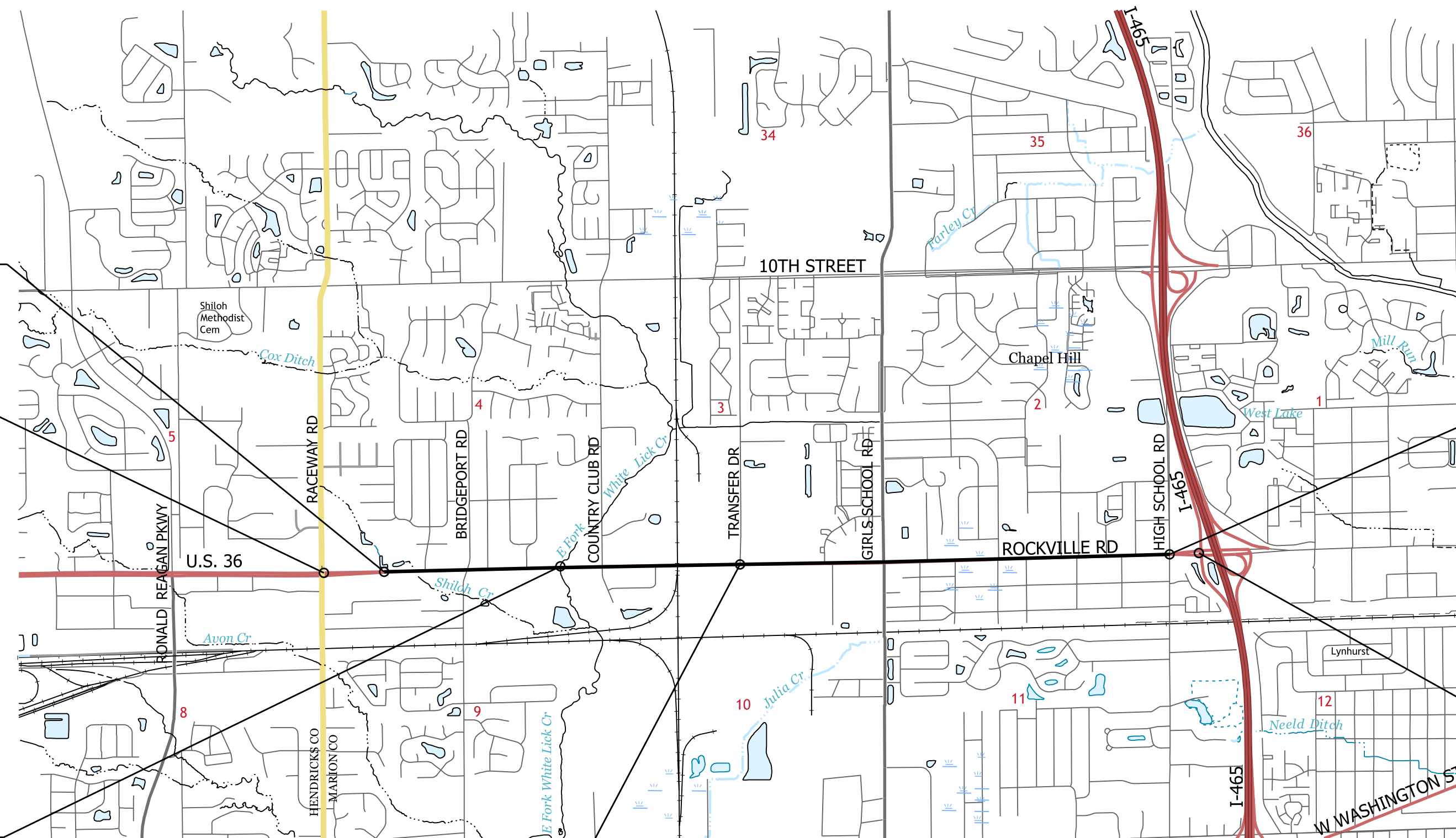
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BEGIN INCIDENTAL CONSTRUCTION
PROJECT NO. 1800035
STA. 558+01.67 "C"

PAVING EXCEPTION
1900340(EBL)
1900341(WBL)
STA. 601+85.75 "C" TO
STA. 603+48.25 "C"

END DES. NO. 1800035
BEGIN DES. NO. 1800037
STA. 636+50.00 "C"

LOCATION MAP
MARION COUNTY



SCALE: 1" = 2000'

END PROJECT NO. 1800035
STA. 717+85.00 "C"

END INCIDENTAL CONSTRUCTION
PROJECT NO. 1800035
STA. 721+05.00 "C"

DES. NO. 1800035	LATITUDE: 39° 45' 49" N	LONGITUDE: 86° 19' 20" W
DES. NO. 1800037	LATITUDE: 39° 45' 53" N	LONGITUDE: 86° 16' 11" W
BRIDGE LENGTH:	0.031	MI.
ROADWAY LENGTH:	2.782	MI.
TOTAL LENGTH:	2.813	MI.
MAX. GRADE:	1.0 % (EXIST.)	%

INDIANA DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS DATED 2022
TO BE USED WITH THESE PLANS.



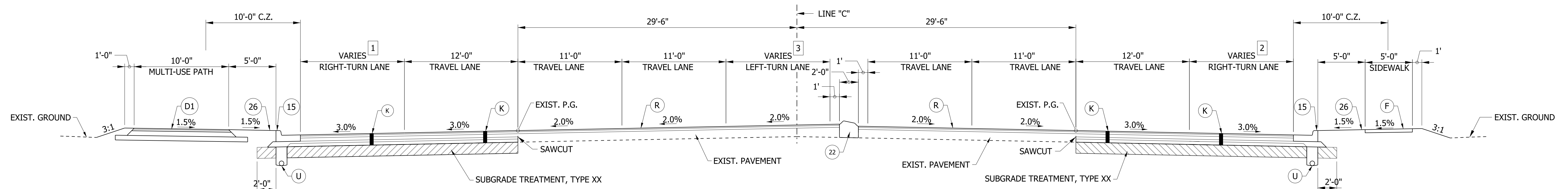
Michael Baker International, Inc.
3815 River Crossing Parkway, Suite 120
Indianapolis, IN 46240
Tel: 317-663-8430 Fax: 317-663-8410
www.mbakertnt.com

PLANS PREPARED BY: Michael Baker International, Inc.	317-663-8430 PHONE NUMBER
CERTIFIED BY: _____	DATE _____
RECOMMENDED FOR LETTING: _____	DATE _____
INDIANA DEPARTMENT OF TRANSPORTATION	

	BRIDGE FILE
	DESIGNATION
	1800035/1800037
SURVEY BOOK	SHEETS
	of
CONTRACT	PROJECT
R-41781	1800035

LEGEND

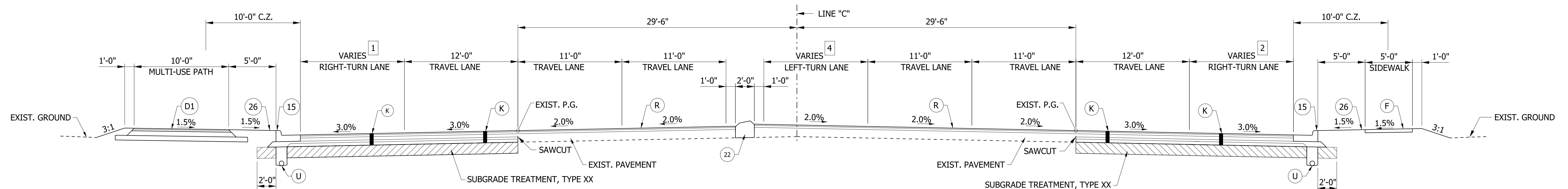
- (K) HMA, FULL DEPTH RECONSTRUCTION
- (R) 440 LB/SYD QC/QA HMA, SURFACE ON 4" MILLING, ASPHALT
- (D1) HMA MULTI-USE PATH
- (J) COMPACTED AGGREGATE, NO. 53
- (F) SIDEWALK, CONCRETE, 4"
- (U) UNDERDRAIN, TYPE 4, 6"
- (13) CONCRETE CURB, TYPE B
- (15) COMBINED CONCRETE CURB & GUTTER
- (22) CONCRETE CENTER CURB, TYPE D
- (26) SODDING, NURSERY



3 EQUALS 11'-0" FROM STA. 585+63.00 "C" TO STA. 586+70.00 "C"
 VARIES FROM 11'-0" @ STA. 586+70.00 "C" TO 0'-0" @ STA. 587+70.00 "C"
 EQUALS 11'-0" FROM STA. 611+20.00 "C" TO STA. 614+20.00 "C"
 VARIES FROM 11'-0" @ STA. 614+20.00 "C" TO 0'-0" @ STA. 615+20.00 "C"
 EQUALS 11'-0" FROM STA. 644+70.00 "C" TO STA. 645+70.00 "C"
 VARIES FROM 11'-0" @ STA. 645+70.00 "C" TO 0'-0" @ STA. 646+70.00 "C"
 EQUALS 11'-0" FROM STA. 654+50.00 "C" TO STA. 655+50.00 "C"
 VARIES FROM 11'-0" @ STA. 655+50.00 "C" TO 0'-0" @ STA. 656+50.00 "C"
 EQUALS 11'-0" FROM STA. 664+40.00 "C" TO STA. 667+50.00 "C"
 VARIES FROM 11'-0" @ STA. 667+50.00 "C" TO 0'-0" @ STA. 668+50.00 "C"

TYPICAL SECTION - W.B. LEFT-TURN LANE

STA. 585+63.00 "C" TO STA. 587+70.00 "C"
 STA. 611+20.00 "C" TO STA. 615+20.00 "C"
 STA. 644+70.00 "C" TO STA. 646+70.00 "C"
 STA. 654+50.00 "C" TO STA. 656+50.00 "C"
 STA. 664+40.00 "C" TO STA. 668+50.00 "C"



TYPICAL SECTION - E.B. LEFT-TURN LANE

STA. 574+80.00 "C" TO STA. 576+60.00 "C"
 STA. 582+50.00 "C" TO STA. 584+25.00 "C"
 STA. 593+70.00 "C" TO STA. 595+70.00 "C"
 STA. 632+25.00 "C" TO STA. 635+90.00 "C"
 STA. 649+80.00 "C" TO STA. 651+80.00 "C"
 STA. 658+55.00 "C" TO STA. 662+85.00 "C"
 STA. 669+90.00 "C" TO STA. 671+40.00 "C"
 STA. 682+80.00 "C" TO STA. 684+80.00 "C"

4 VARIES FROM 0'-0" @ STA. 574+80.00 "C" TO 11'-0" @ STA. 575+80.00 "C"
 EQUALS 11'-0" FROM STA. 575+80.00 "C" TO STA. 576+60.00 "C"
 VARIES FROM 0'-0" @ STA. 582+50.00 "C" TO 11'-0" @ STA. 583+50.00 "C"
 EQUALS 11'-0" FROM STA. 583+50.00 "C" TO STA. 584+25.00 "C"
 VARIES FROM 0'-0" @ STA. 593+70.00 "C" TO 11'-0" @ STA. 594+70.00 "C"
 EQUALS 11'-0" FROM STA. 594+70.00 "C" TO STA. 595+70.00 "C"
 VARIES FROM 0'-0" @ STA. 632+25.00 "C" TO 11'-0" @ STA. 633+25.00 "C"
 EQUALS 11'-0" FROM STA. 633+25.00 "C" TO STA. 635+90.00 "C"
 VARIES FROM 0'-0" @ STA. 649+80.00 "C" TO 11'-0" @ STA. 650+80.00 "C"
 EQUALS 11'-0" FROM STA. 650+80.00 "C" TO STA. 651+80.00 "C"
 VARIES FROM 0'-0" @ STA. 658+55.00 "C" TO 11'-0" @ STA. 659+55.00 "C"
 EQUALS 11'-0" FROM STA. 659+55.00 "C" TO STA. 662+85.00 "C"
 VARIES FROM 0'-0" @ STA. 669+90.00 "C" TO 11'-0" @ STA. 670+90.00 "C"
 EQUALS 11'-0" FROM STA. 670+90.00 "C" TO STA. 671+40.00 "C"
 VARIES FROM 0'-0" @ STA. 682+80.00 "C" TO 11'-0" @ STA. 683+80.00 "C"
 EQUALS 11'-0" FROM STA. 683+80.00 "C" TO STA. 684+80.00 "C"

* SEE MULTI-USE PATH AND SIDEWALK DETAILS FOR CHANGES IN GEOMETRY

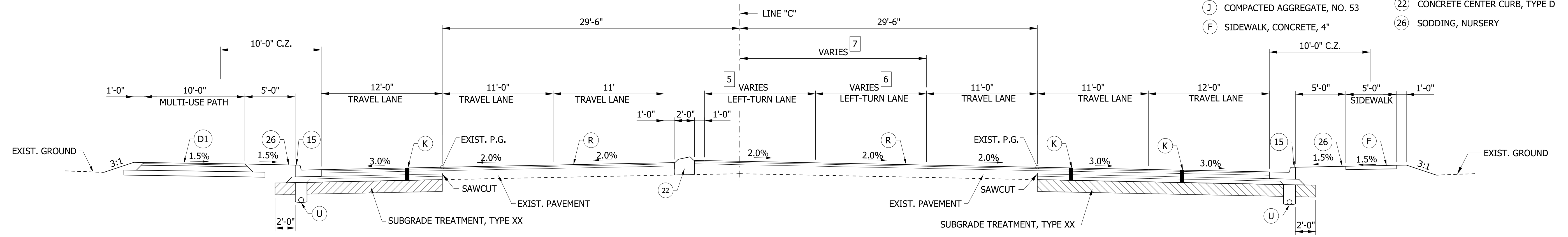
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: LDW	DRAWN: JWM	
CHECKED: WRC	CHECKED: LDW	

INDIANA DEPARTMENT OF TRANSPORTATION	
TYPICAL CROSS SECTIONS LINE "C"	

HORIZONTAL SCALE	BRIDGE FILE
3/16" = 1'-0"	
VERTICAL SCALE	DESIGNATION
3/16" = 1'-0"	1800035/1800037
SURVEY BOOK	SHEETS
	of
CONTRACT	PROJECT
R-41781	1800035

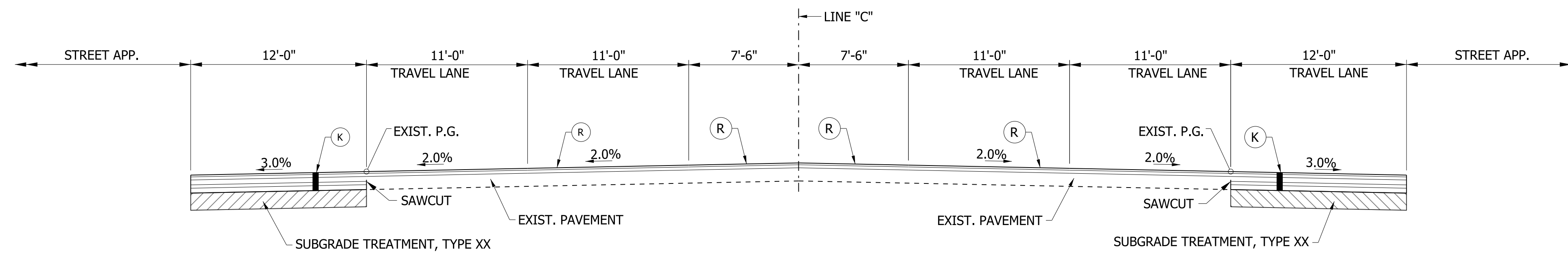
LEGEND

- (K) HMA, FULL DEPTH RECONSTRUCTION
- (R) 440 LB/SYD QC/QA HMA, SURFACE ON 4" MILLING, ASPHALT
- (D1) HMA MULTI-USE PATH
- (J) COMPACTED AGGREGATE, NO. 53
- (F) SIDEWALK, CONCRETE, 4"
- (U) UNDERDRAIN, TYPE 4, 6"
- (13) CONCRETE CURB, TYPE B
- (15) COMBINED CONCRETE CURB & GUTTER
- (22) CONCRETE CENTER CURB, TYPE D
- (26) SODDING, NURSERY



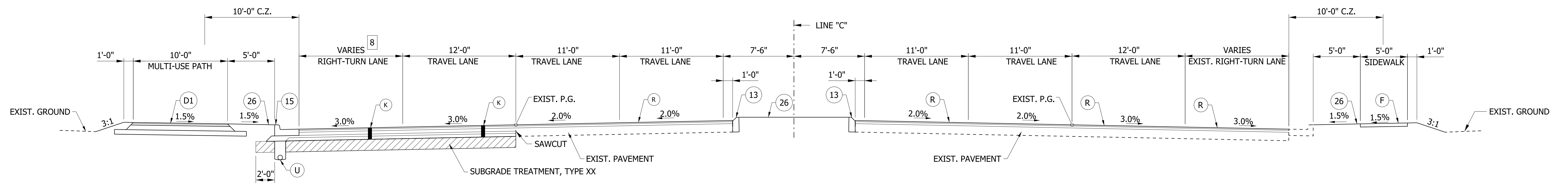
TYPICAL SECTION - E.B. DUAL LEFT-TURN LANE
STA. 605+90.00 "C" TO STA. 609+90.00 "C"

- 5 EQUALS 0'-0" FROM STA. 604+40.00 "C" TO STA. 605+90.00 "C"
VARIES FROM 0'-0" @ STA. 605+90.00 "C" TO 11'-0" @ STA. 606+90.00 "C"
EQUALS 11'-0" FROM STA. 606+90.00 "C" TO STA. 609+90.00 "C"
EQUALS 0'-0" FROM STA. 609+90.00 "C" TO STA. 614+00.00 "C"
- 6 VARIES FROM 0' @ STA. 604+40.00 "C" TO 11'-0" @ STA. 606+90.00 "C"
EQUALS 11'-0" FROM STA. 606+90.00 "C" TO STA. 611+50.00 "C"
VARIES FROM 11'-0" @ STA. 611+50.00 "C" TO 0' @ STA. 614+00.00 "C"
- 7 VARIES FROM 18'-6" @ STA. 604+40.00 "C" TO 29'-6" @ STA. 606+90.00 "C"
EQUALS 29'-6" FROM STA. 606+90.00 "C" TO STA. 611+50.00 "C"
VARIES FROM 29'-6" @ STA. 611+50.00 "C" TO 18'-6" @ STA. 614+00.00 "C"



TYPICAL SECTION - THRU INTERSECTION

- STA. 570+00.00 "C" TO STA. 571+00.00 "C"
- STA. 576+60.00 "C" TO STA. 577+70.00 "C"
- STA. 584+25.00 "C" TO STA. 585+63.00 "C"
- STA. 595+70.00 "C" TO STA. 596+90.00 "C"
- STA. 609+90.00 "C" TO STA. 611+20.00 "C"
- STA. 635+90.00 "C" TO STA. 637+25.00 "C"
- STA. 642+90.00 "C" TO STA. 644+70.00 "C"
- STA. 651+80.00 "C" TO STA. 653+15.00 "C"
- STA. 653+45.00 "C" TO STA. 654+50.00 "C"
- STA. 656+50.00 "C" TO STA. 658+55.00 "C"
- STA. 662+85.00 "C" TO STA. 664+40.00 "C"
- STA. 684+80.00 "C" TO STA. 685+95.00 "C"
- STA. 689+80.00 "C" TO STA. 691+15.00 "C"



TYPICAL SECTION

- STA. 692+65.00 "C" TO STA. 694+75.00 "C"
- STA. 697+60.00 "C" TO STA. 698+50.00 "C"
- STA. 701+10.00 "C" TO STA. 707+95.00 "C"
- STA. 711+10.00 "C" TO STA. 714+00.00 "C"

- 8 EQUALS 11'-0" FROM STA. 697+60.00 "C" TO STA. 698+10.00 "C"
VARIES FROM 11'-0" @ STA. 698+10.00 "C" TO 0'-0" @ STA. 699+20.00 "C"

* SEE MULTI-USE PATH AND SIDEWALK DETAILS FOR CHANGES IN GEOMETRY

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: LDW	DRAWN: JWM	
CHECKED: WRC	CHECKED: LDW	

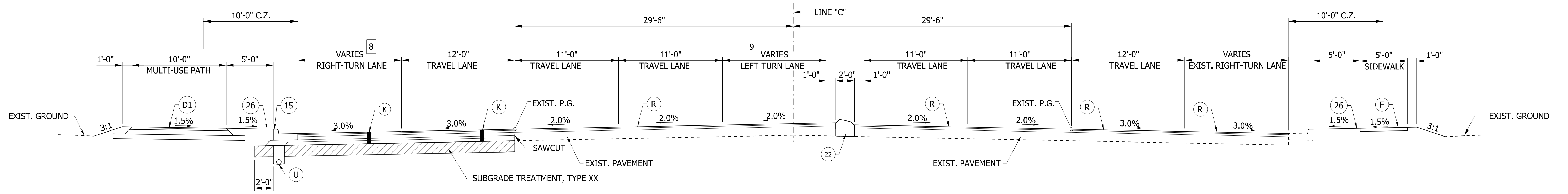
INDIANA
DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS
LINE "C"

HORIZONTAL SCALE	BRIDGE FILE
3/16" = 1'-0"	
VERTICAL SCALE	DESIGNATION
3/16" = 1'-0"	1800035/1800037
SURVEY BOOK	SHEETS
	of
CONTRACT	PROJECT
R-41781	1800035

LEGEND

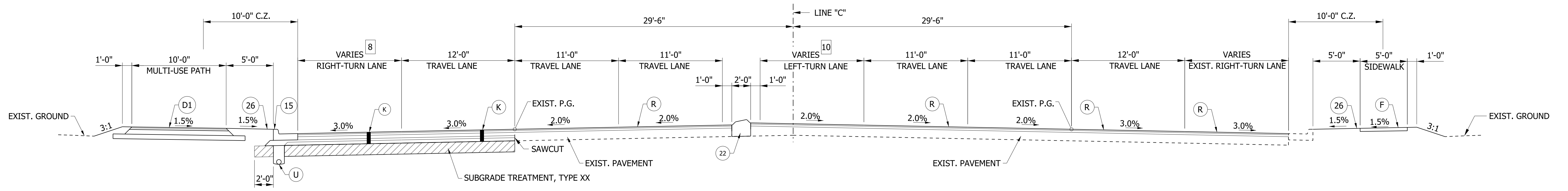
- (K) HMA, FULL DEPTH RECONSTRUCTION
- (R) 440 LB/SYD QC/QA HMA, SURFACE ON 4" MILLING, ASPHALT
- (D1) HMA MULTI-USE PATH
- (J) COMPACTED AGGREGATE, NO. 53
- (F) SIDEWALK, CONCRETE, 4"
- (U) UNDERDRAIN, TYPE 4, 6"
- (13) CONCRETE CURB, TYPE B
- (15) COMBINED CONCRETE CURB & GUTTER
- (22) CONCRETE CENTER CURB, TYPE D
- (26) SODDING, NURSERY



9 EQUALS 11'-0" FROM STA. 691+15.00 "C" TO STA. 691+65.00 "C"
 VARIES FROM 11'-0" @ STA. 691+65.00 "C" TO 0'-0" @ STA. 692+65.00 "C"
 EQUALS 11'-0" FROM STA. 709+10.00 "C" TO STA. 710+10.00 "C"
 VARIES FROM 11'-0" @ STA. 710+10.00 "C" TO 0'-0" @ STA. 711+10.00 "C"

TYPICAL SECTION - W.B. LEFT-TURN LANE

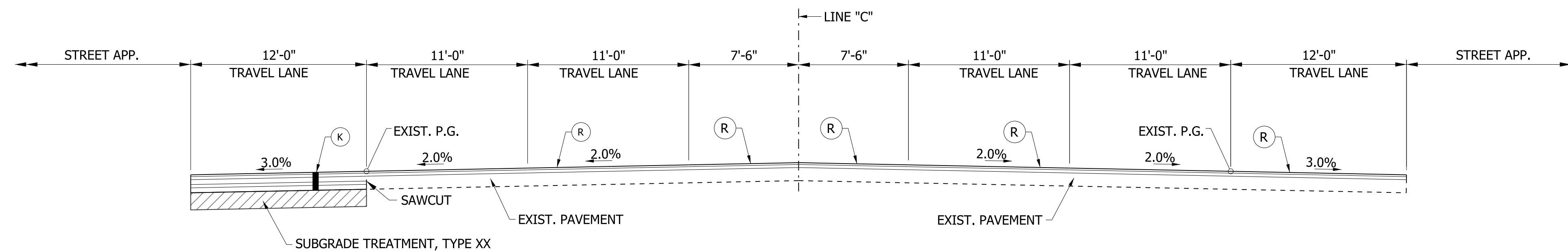
STA. 691+15.00 "C" TO STA. 692+65.00 "C"
 STA. 709+10.00 "C" TO STA. 711+10.00 "C"



10 VARIES FROM 0'-0" @ STA. 694+75.00 "C" TO 11'-0" @ STA. 695+75.00 "C"
 EQUALS 11'-0" FROM STA. 695+75.00 "C" TO STA. 696+75.00 "C"
 VARIES FROM 0'-0" @ STA. 698+50.00 "C" TO 11'-0" @ STA. 699+50.00 "C"
 EQUALS 11'-0" FROM STA. 699+50.00 "C" TO STA. 700+00.00 "C"
 VARIES FROM 0'-0" @ STA. 714+00.00 "C" TO 11'-0" @ STA. 715+00.00 "C"
 EQUALS 11'-0" FROM STA. 715+00.00 "C" TO STA. 717+00.00 "C"

TYPICAL SECTION - E.B. LEFT-TURN LANE

STA. 694+75.00 "C" TO STA. 696+75.00 "C"
 STA. 698+50.00 "C" TO STA. 700+00.00 "C"
 STA. 714+00.00 "C" TO STA. 717+00.00 "C"

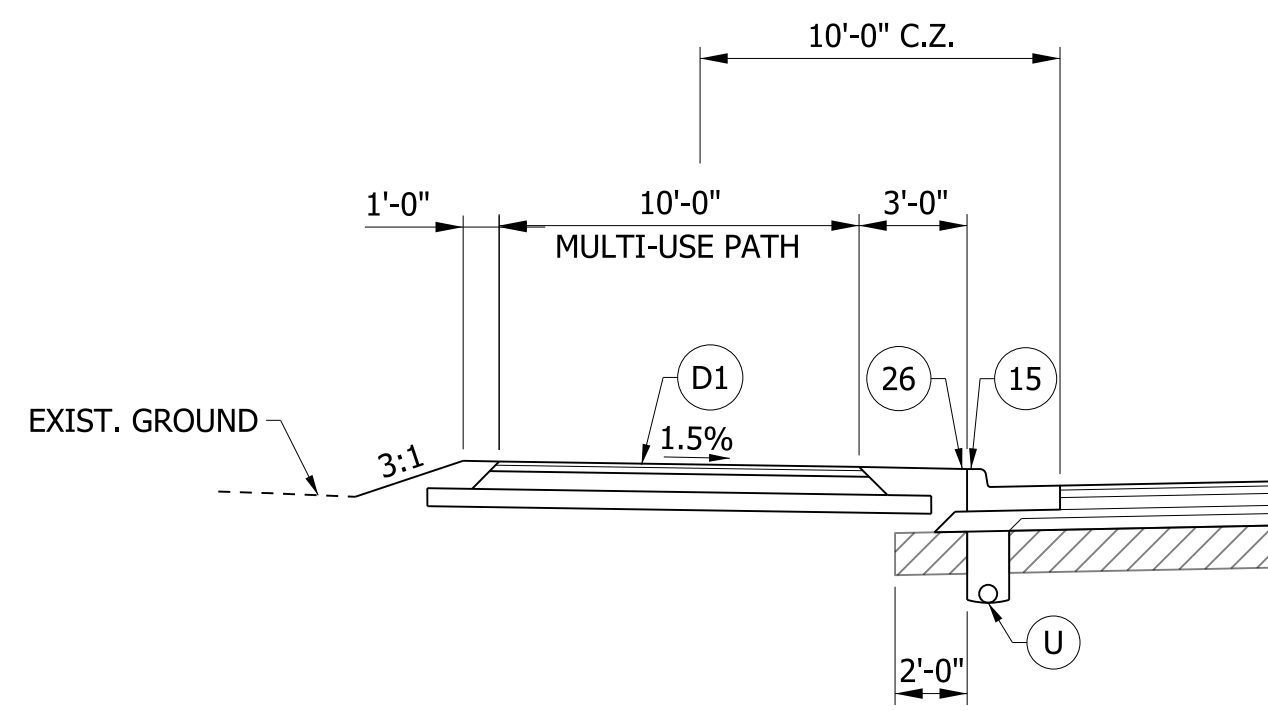


TYPICAL SECTION - THRU INTERSECTION

STA. 696+75.00 "C" TO STA. 697+60.00 "C"
 STA. 700+00.00 "C" TO STA. 701+10.00 "C"
 STA. 707+95.00 "C" TO STA. 709+10.00 "C"
 STA. 717+00.00 "C" TO STA. 717+85.00 "C"

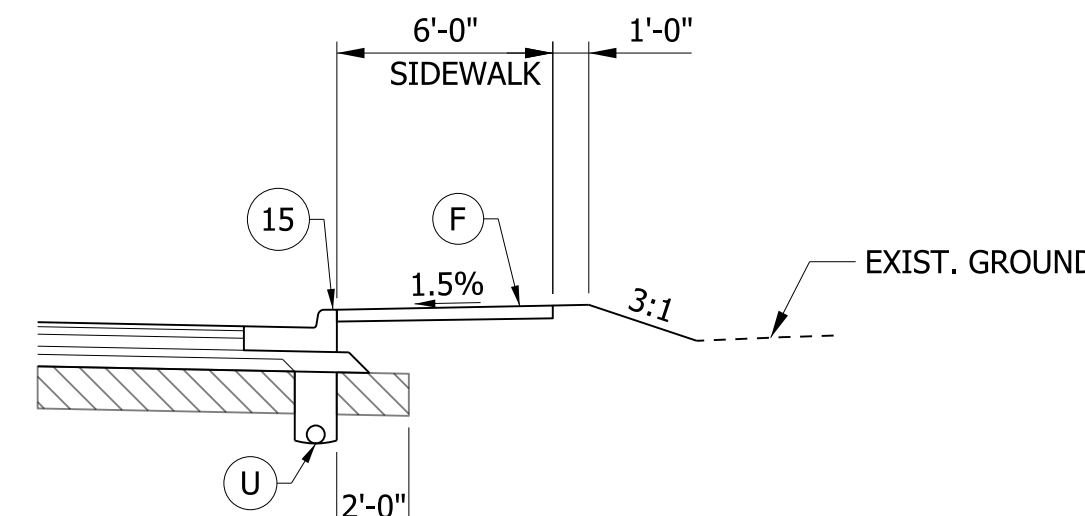
* SEE MULTI-USE PATH AND SIDEWALK DETAILS FOR CHANGES IN GEOMETRY

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE	BRIDGE FILE
		3/16" = 1'-0"	
DESIGNED: LDW DRAWN: JWM CHECKED: WRC CHECKED: LDW	TYPICAL CROSS SECTIONS LINE "C"	VERTICAL SCALE	DESIGNATION
		3/16" = 1'-0"	1800037
		SURVEY BOOK	SHEETS
			of
		CONTRACT	PROJECT
		R-41781	1800035



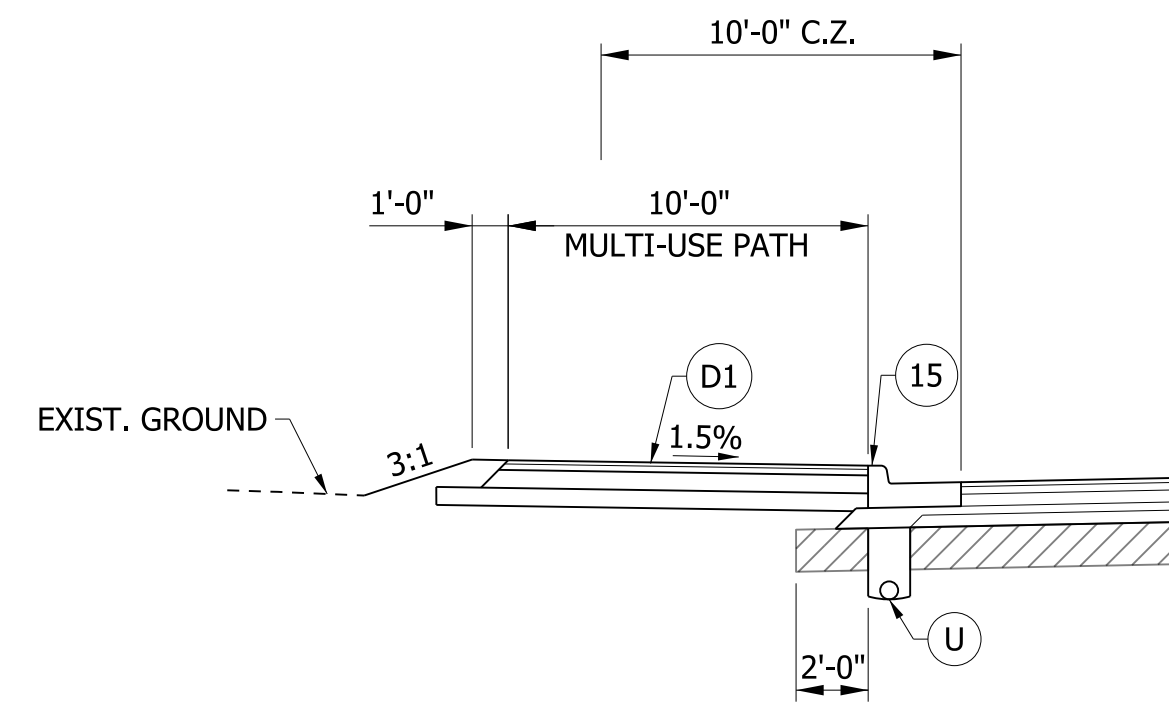
REDUCED BUFFER WIDTH

STA. 579+70.00 "C" TO STA. 584+65.44 "C" (EXIST. CURB & GUTTER)
 STA. 676+50.00 "C" TO STA. 679+50.00 "C"
 STA. 703+65.00 "C" TO STA. 710+90.00 "C"



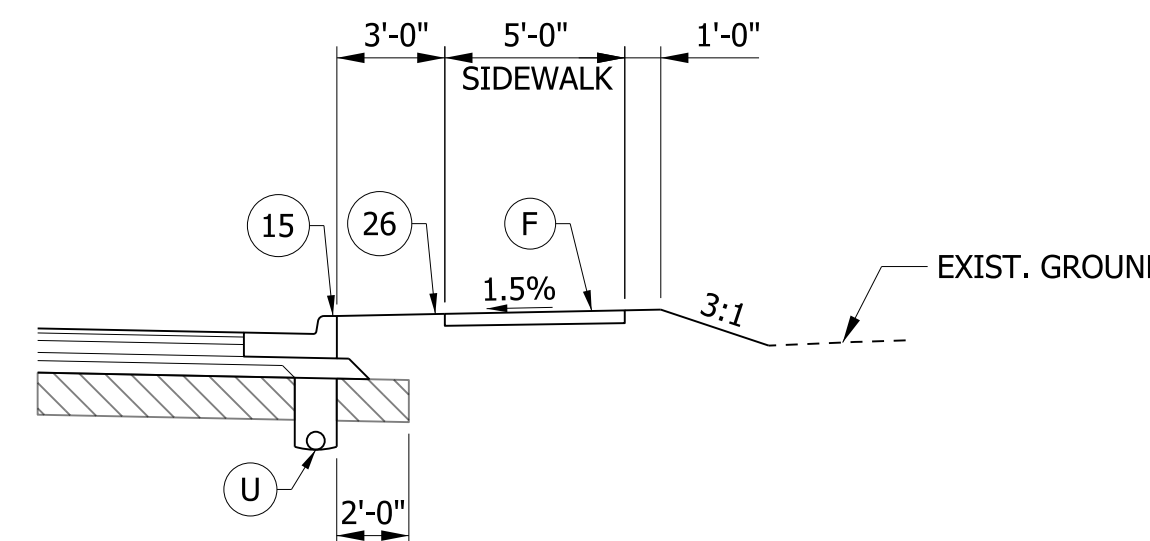
ELIMINATED BUFFER

STA. 569+50.00 "C" TO STA. 572+00.00 "C" (EXIST. CURB & GUTTER)
 STA. 581+40.00 "C" TO STA. 584+15.00 "C"
 STA. 596+60.00 "C" TO STA. 611+50.00 "C"
 STA. 624+50.00 "C" TO STA. 624+90.00 "C"
 STA. 668+00.00 "C" TO STA. 672+85.00 "C"
 STA. 690+93.00 "C" TO STA. 693+40.00 "C"
 STA. 708+88.00 "C" TO STA. 717+00.00 "C"



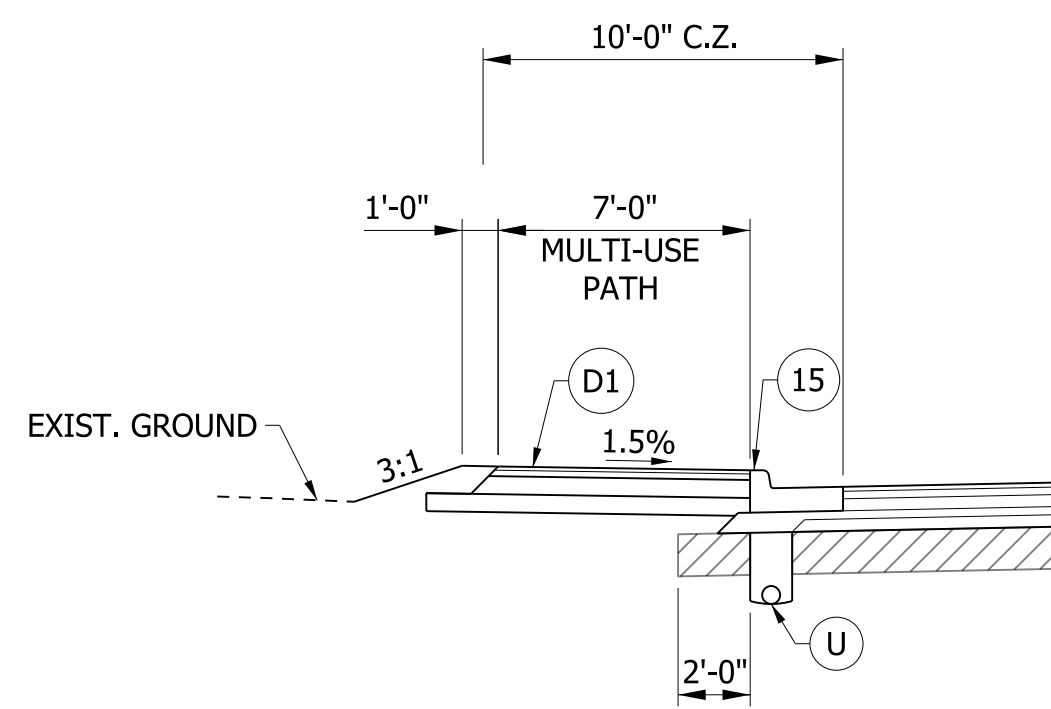
ELIMINATED BUFFER

STA. 558+01.67 "C" TO STA. 563+25.00 "C"
 STA. 577+60.00 "C" TO STA. 578+70.00 "C"
 STA. 591+57.00 "C" TO STA. 617+50.00 "C"
 STA. 666+23.00 "C" TO STA. 676+37.00 "C"
 STA. 679+73.00 "C" TO STA. 700+00.00 "C"
 STA. 711+58.00 "C" TO STA. 717+00.00 "C"



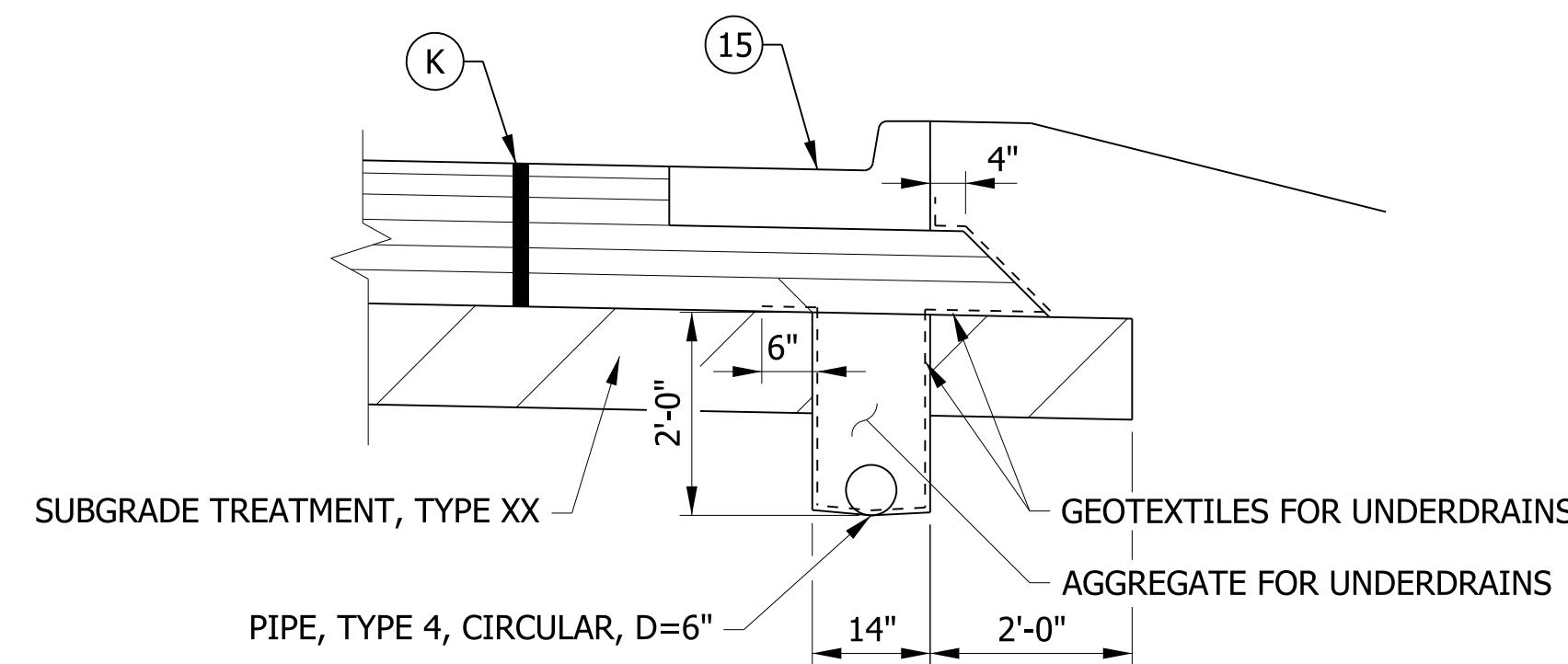
REDUCED BUFFER WIDTH

STA. 587+35.00 "C" TO STA. 589+83.00 "C"
 STA. 592+50.00 "C" TO STA. 595+62.00 "C"
 STA. 673+05.00 "C" TO STA. 673+79.00 "C"
 STA. 693+70.00 "C" TO STA. 694+82.00 "C"



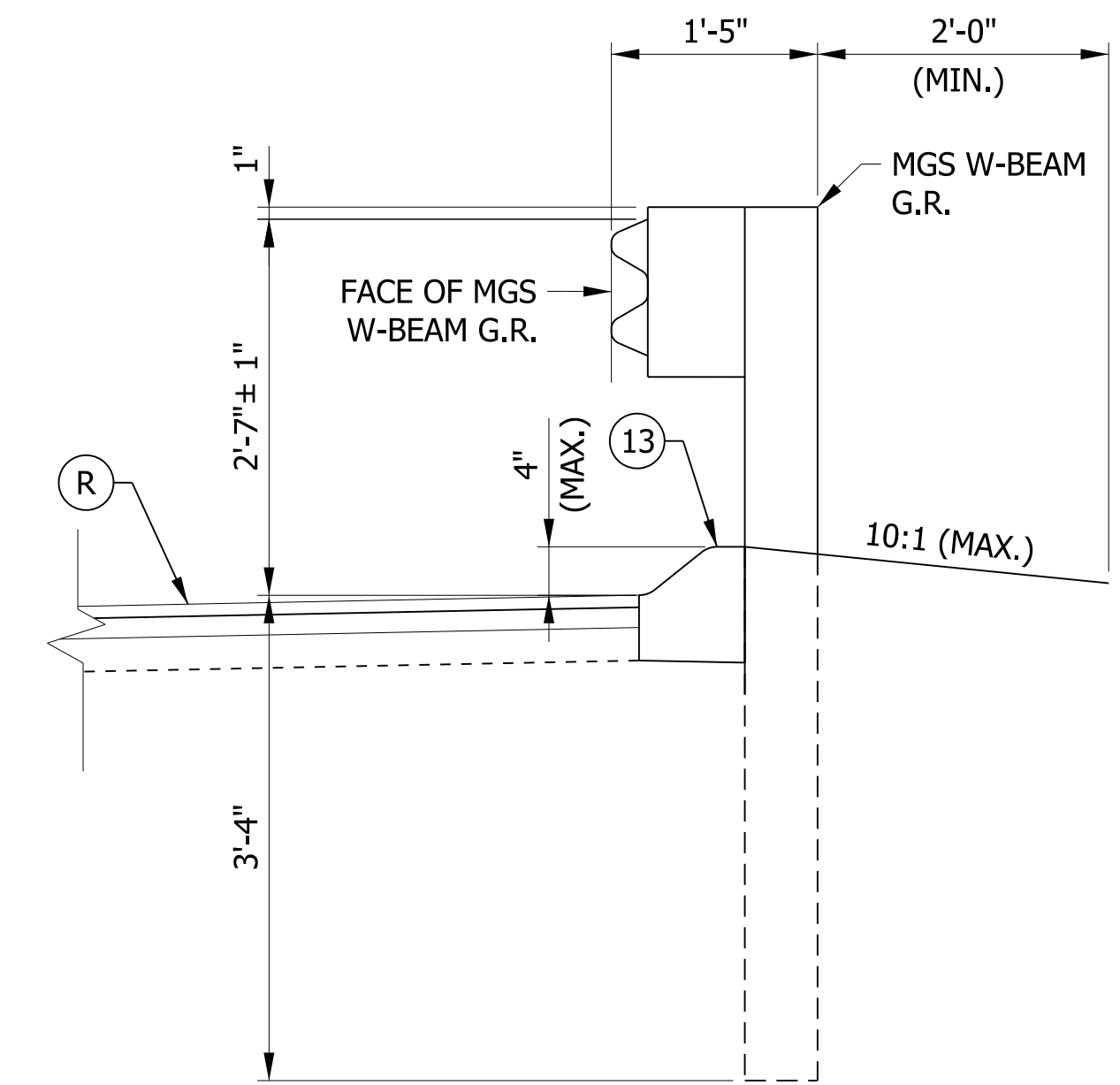
REDUCED PATH WIDTH

STA. 624+50.00 "C" TO STA. 625+16.67 "C"



UNDERDRAIN DETAIL FOR FULL DEPTH HMA PAVEMENT WITH CONCRETE CURB & GUTTER

SCALE N.T.S.



MGS GUARDRAIL DETAIL WITH CONCRETE CURB, TYPE B

SCALE: N.T.S.

LEGEND

- (K) HMA, FULL DEPTH RECONSTRUCTION
- (R) 440 LB/SYD QC/QA HMA, SURFACE ON 4" MILLING, ASPHALT
- (D1) HMA MULTI-USE PATH
- (J) COMPACTED AGGREGATE, NO. 53
- (F) SIDEWALK, CONCRETE, 4"
- (U) UNDERDRAIN, TYPE 4, 6"
- (13) CONCRETE CURB, TYPE B
- (15) COMBINED CONCRETE CURB & GUTTER
- (22) CONCRETE CENTER CURB, TYPE D
- (26) SODDING, NURSERY

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: LDW	DRAWN: JWM	
CHECKED: WRC	CHECKED: LDW	

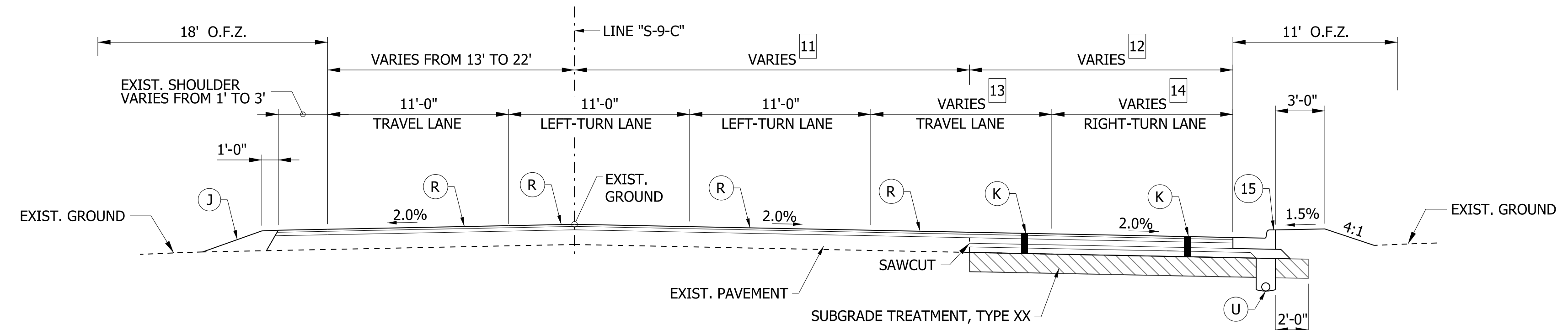
INDIANA DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS LINE "C"

HORIZONTAL SCALE	BRIDGE FILE
3/16" = 1'-0"	
VERTICAL SCALE	DESIGNATION
3/16" = 1'-0"	1800035/1800037
SURVEY BOOK	SHEETS
	of
CONTRACT	PROJECT
R-41781	1800035

LEGEND

- (K) HMA, FULL DEPTH RECONSTRUCTION
- (R) 440 LB/SYD QC/QA HMA, SURFACE ON 4" MILLING, ASPHALT
- (D1) HMA MULTI-USE PATH
- (J) COMPACTED AGGREGATE, NO. 53
- (F) SIDEWALK, CONCRETE, 4"
- (U) UNDERDRAIN, TYPE 4, 6"
- (13) CONCRETE CURB, TYPE B
- (15) COMBINED CONCRETE CURB & GUTTER
- (22) CONCRETE CENTER CURB, TYPE D
- (26) SODDING, NURSERY



TYPICAL SECTION - COUNTRY CLUB ROAD
 STA. 44+84.00 "S-9-C" TO STA. 49+00.00 "S-9-C"

- 11 VARIES FROM 10'-0" @ STA. 44+84.00 "S-9-C" TO 24'-0" @ STA. 46+30.00 "S-9-C" EQUALS 24'-0" FROM STA. 46+30.00 "S-9-C" TO STA. 49+00.00 "S-9-C"
- 12 VARIES FROM 2'-0" @ STA. 44+84.00 "S-9-C" TO 18'-0" @ STA. 46+30.00 "S-9-C" EQUALS 18'-0" FROM STA. 46+30.00 "S-9-C" TO STA. 49+00.00 "S-9-C"
- 13 VARIES FROM 0'-0" @ STA. 44+84.00 "S-9-C" TO 11'-0" @ STA. 46+30.00 "S-9-C" EQUALS 11'-0" FROM STA. 46+30.00 "S-9-C" TO STA. 49+00.00 "S-9-C"
- 14 VARIES FROM 0'-0" @ STA. 44+84.00 "S-9-C" TO 11'-0" @ STA. 46+30.00 "S-9-C" EQUALS 11'-0" FROM STA. 46+30.00 "S-9-C" TO STA. 49+00.00 "S-9-C"

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: LDW	DRAWN: JWM	
CHECKED: WRC	CHECKED: LDW	

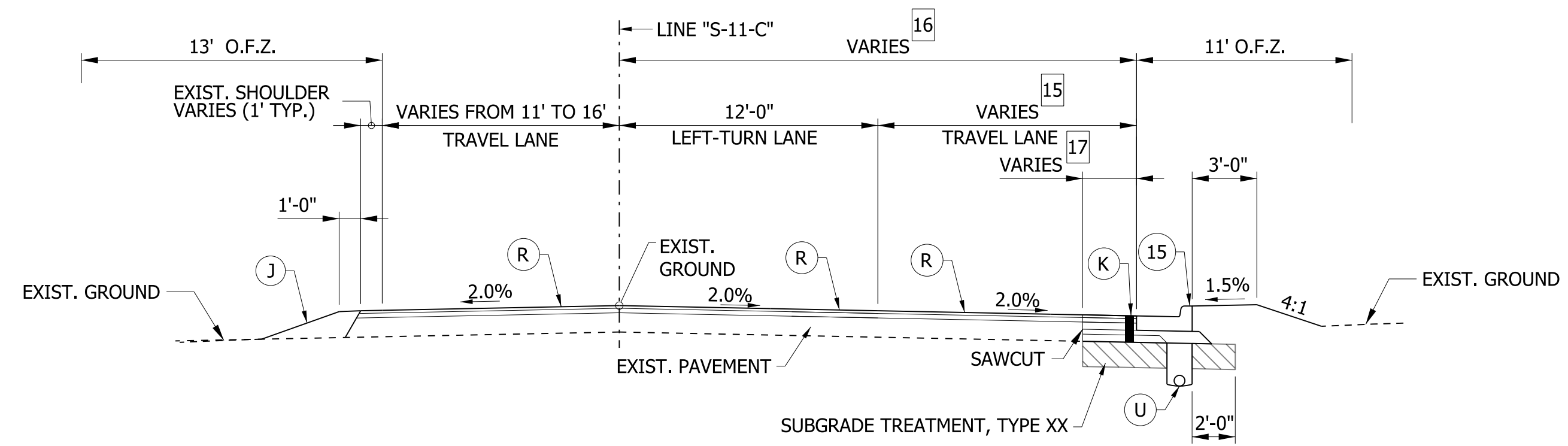
INDIANA
 DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS
 LINE "S-9-C"

HORIZONTAL SCALE 3/16" = 1'-0"	BRIDGE FILE
VERTICAL SCALE 3/16" = 1'-0"	DESIGNATION 1800035
SURVEY BOOK	SHEETS of
CONTRACT R-41781	PROJECT 1800035

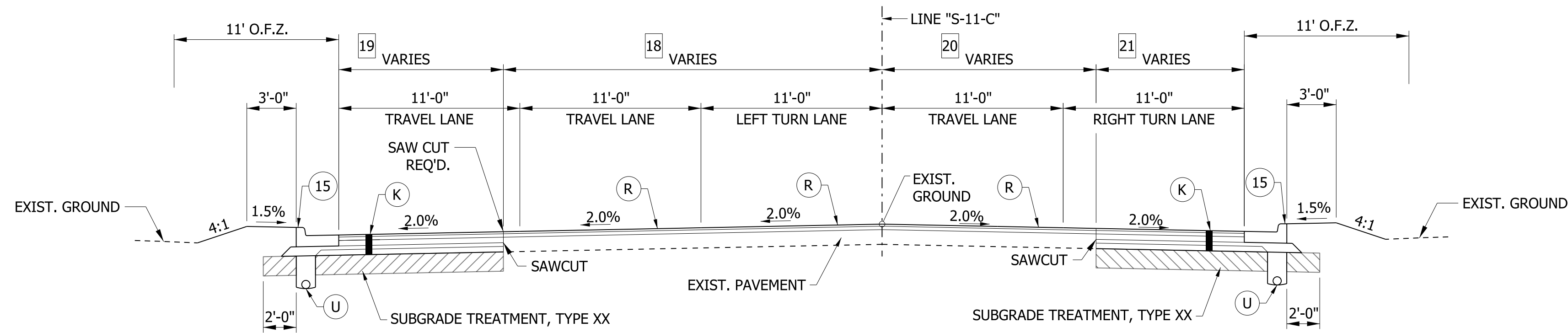
LEGEND

- (K) HMA, FULL DEPTH RECONSTRUCTION
- (R) 440 LB/SYD QC/QA HMA, SURFACE ON 4" MILLING, ASPHALT
- (D1) HMA MULTI-USE PATH
- (J) COMPACTED AGGREGATE, NO. 53
- (F) SIDEWALK, CONCRETE, 4"
- (U) UNDERDRAIN, TYPE 4, 6"
- (13) CONCRETE CURB, TYPE B
- (15) COMBINED CONCRETE CURB & GUTTER
- (22) CONCRETE CENTER CURB, TYPE D
- (26) SODDING, NURSERY



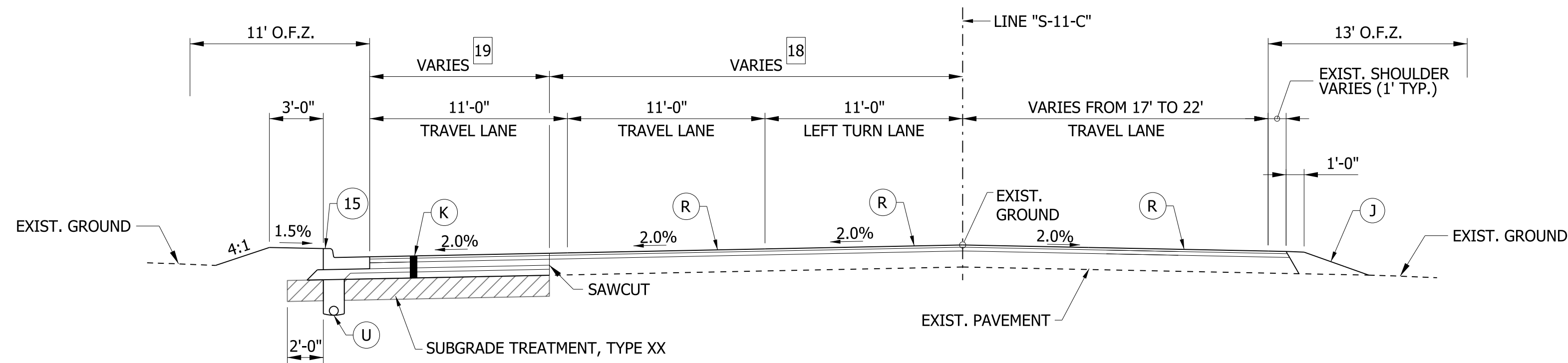
TYPICAL SECTION - HIGH SCHOOL ROAD
STA. 273+14.00 "S-11-C" TO STA. 276+21.08 "S-11-C"

- 15 VARIES FROM 0'-0" @ STA. 273+14.00 "S-11-C" TO 12'-0" @ STA. 274+14.00 "S-11-C" EQUALS 12'-0" FROM STA. 274+14.00 "S-11-C" TO STA. 276+20.00 "S-11-C"
- 16 EQUALS 10'-0" FROM STA. 273+14.00 "S-11-C" TO STA. 273+87.00 "S-11-C" VARIES FROM 10'-0" @ STA. 273+87.00 "S-11-C" TO 21'-6" @ STA. 274+80.00 "S-11-C" EQUALS 21'-6" FROM STA. 274+80.00 "S-11-C" TO STA. 276+21.08 "S-11-C"
- 17 VARIES FROM 2'-0" @ STA. 273+14.00 "S-11-C" TO 11'-3" @ STA. 274+14.00 "S-11-C" VARIES FROM 11'-3" @ STA. 274+14.00 "S-11-C" TO 6'-0" @ STA. 274+80.51 "S-11-C" EQUALS 6'-0" FROM STA. 274+80.51 "S-11-C" TO STA. 276+21.08 "S-11-C"



TYPICAL SECTION - HIGH SCHOOL ROAD
STA. 278+00.40 "S-11-C" TO STA. 279+00.00 "S-11-C"

- 18 EQUALS 23'-0" FROM STA. 278+00.00 "S-11-C" TO STA. 280+20.00 "S-11-C" VARIES FROM 23'-0" @ STA. 280+20.00 "S-11-C" TO 20'-0" @ STA. 281+20.00 "S-11-C"
- 19 EQUALS 10'-0" FROM STA. 278+00.00 "S-11-C" TO STA. 280+20.00 "S-11-C" VARIES FROM 10'-0" @ STA. 280+20.00 "S-11-C" TO 2'-0" @ STA. 281+20.00 "S-11-C"
- 20 EQUALS 13'-0" FROM STA. 278+00.40 "S-11-C" TO STA. 278+65.00 "S-11-C" VARIES FROM 13'-0" @ STA. 278+65.00 "S-11-C" TO 20'-0" @ STA. 279+00.00 "S-11-C"
- 21 EQUALS 9'-0" FROM STA. 278+00.40 "S-11-C" TO STA. 278+65.00 "S-11-C" VARIES FROM 9'-0" @ STA. 278+65.00 "S-11-C" TO 2'-0" @ STA. 279+00.00 "S-11-C"



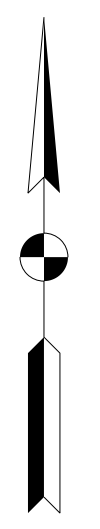
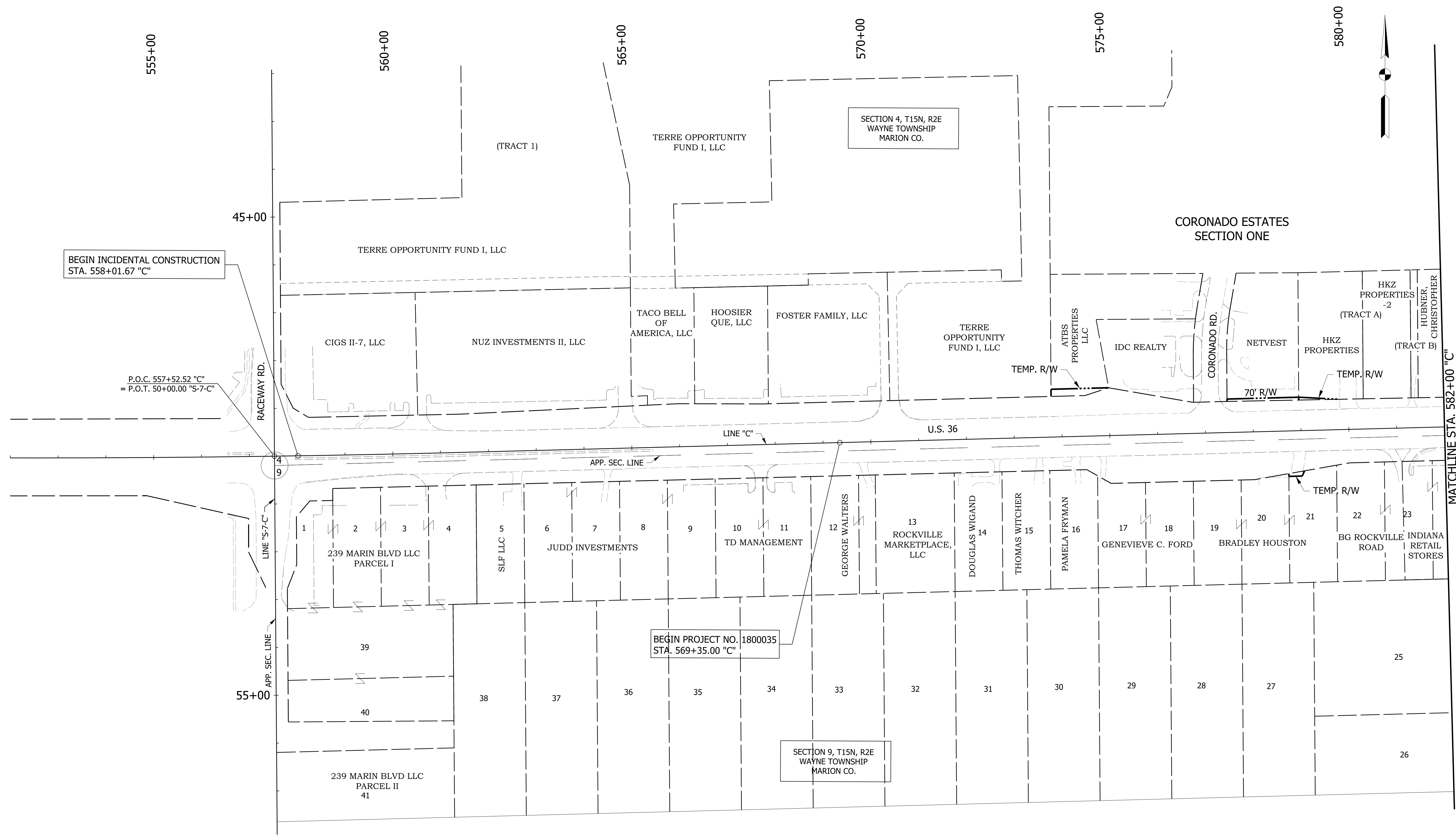
TYPICAL SECTION - HIGH SCHOOL ROAD
STA. 279+00.00 "S-11-C" TO STA. 281+20.00 "S-11-C"

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: LDW	DRAWN: JWM	
CHECKED: WRC	CHECKED: LDW	

INDIANA
DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS
LINE "S-11-C"

HORIZONTAL SCALE 3/16" = 1'-0"	BRIDGE FILE
VERTICAL SCALE 3/16" = 1'-0"	DESIGNATION 1800037
SURVEY BOOK	SHEETS of
CONTRACT R-41781	PROJECT 1800035

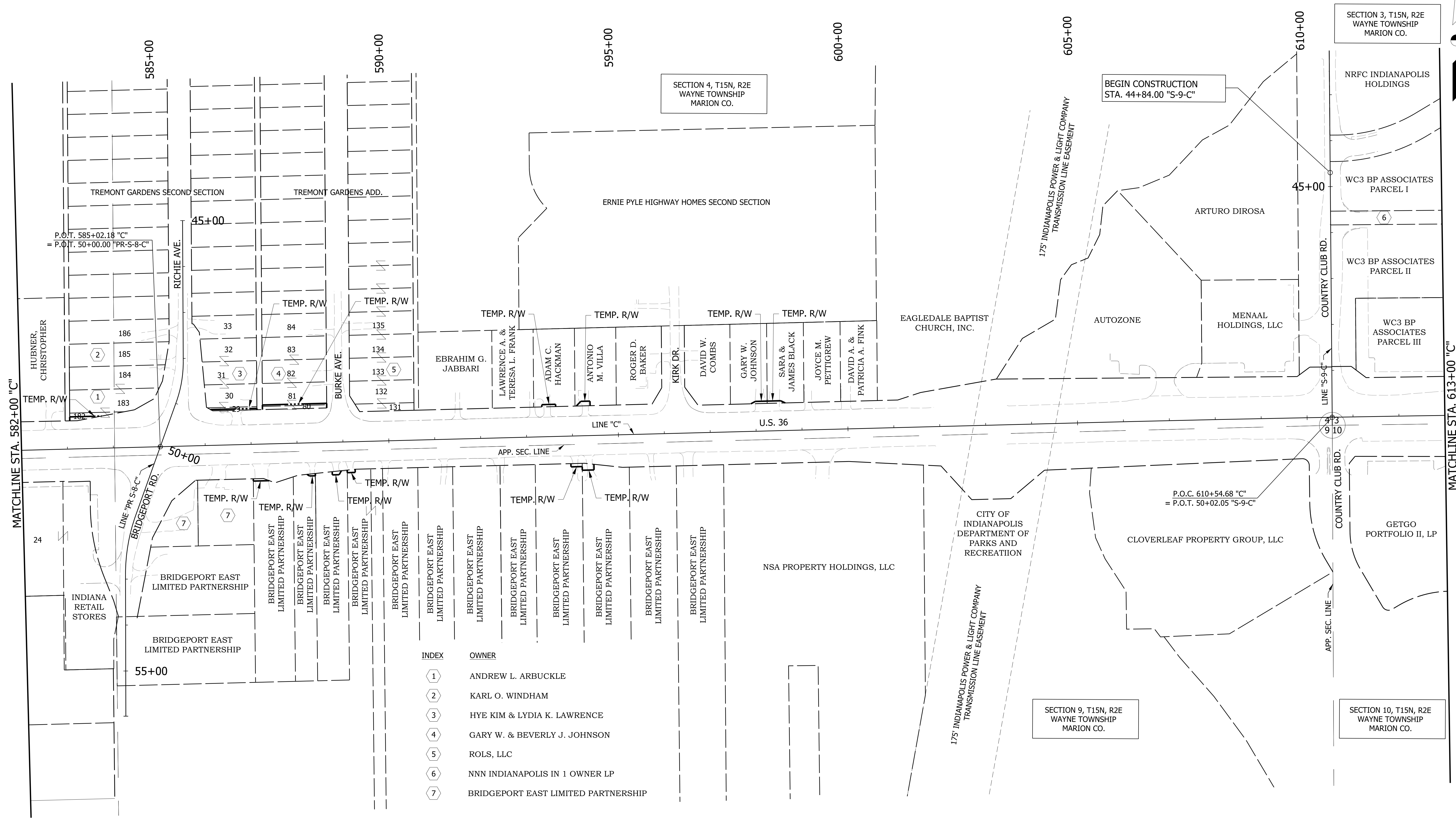


RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: LDW	DRAWN: JWM	
CHECKED: WRC	CHECKED: LDW	

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAT NO. 1

HORIZONTAL SCALE	BRIDGE FILE
1"=100'	
VERTICAL SCALE	DESIGNATION
N/A	1800035
SURVEY BOOK	SHEETS
	of
CONTRACT	PROJECT
R-41781	1800035



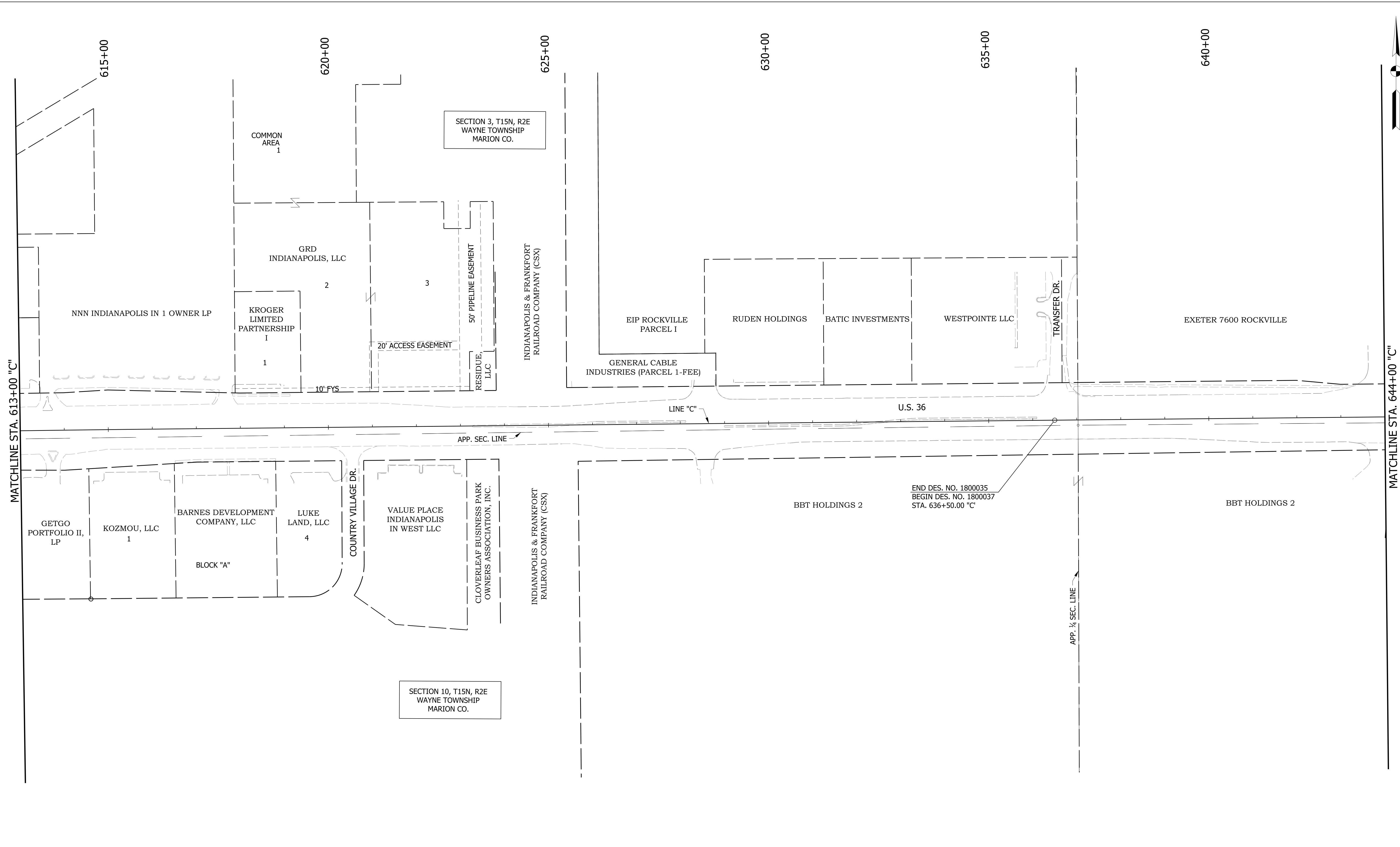
INDEX	OWNER
①	ANDREW L. ARBUCKLE
②	KARL O. WINDHAM
③	HYE KIM & LYDIA K. LAWRENCE
④	GARY W. & BEVERLY J. JOHNSON
⑤	ROLS, LLC
⑥	NNN INDIANAPOLIS IN 1 OWNER LP
⑦	BRIDGEPORT EAST LIMITED PARTNERSHIP

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: LDW	DRAWN: JWM	
CHECKED: WRC	CHECKED: LDW	

**INDIANA
DEPARTMENT OF TRANSPORTATION**

PLAT NO. 1

HORIZONTAL SCALE	BRIDGE FILE
1"=100'	
VERTICAL SCALE	DESIGNATION
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SURVEY BOOK	SHEETS
	of
CONTRACT	PROJECT
R-41781	1800035



MATCHLINE STA. 644+00 "C"

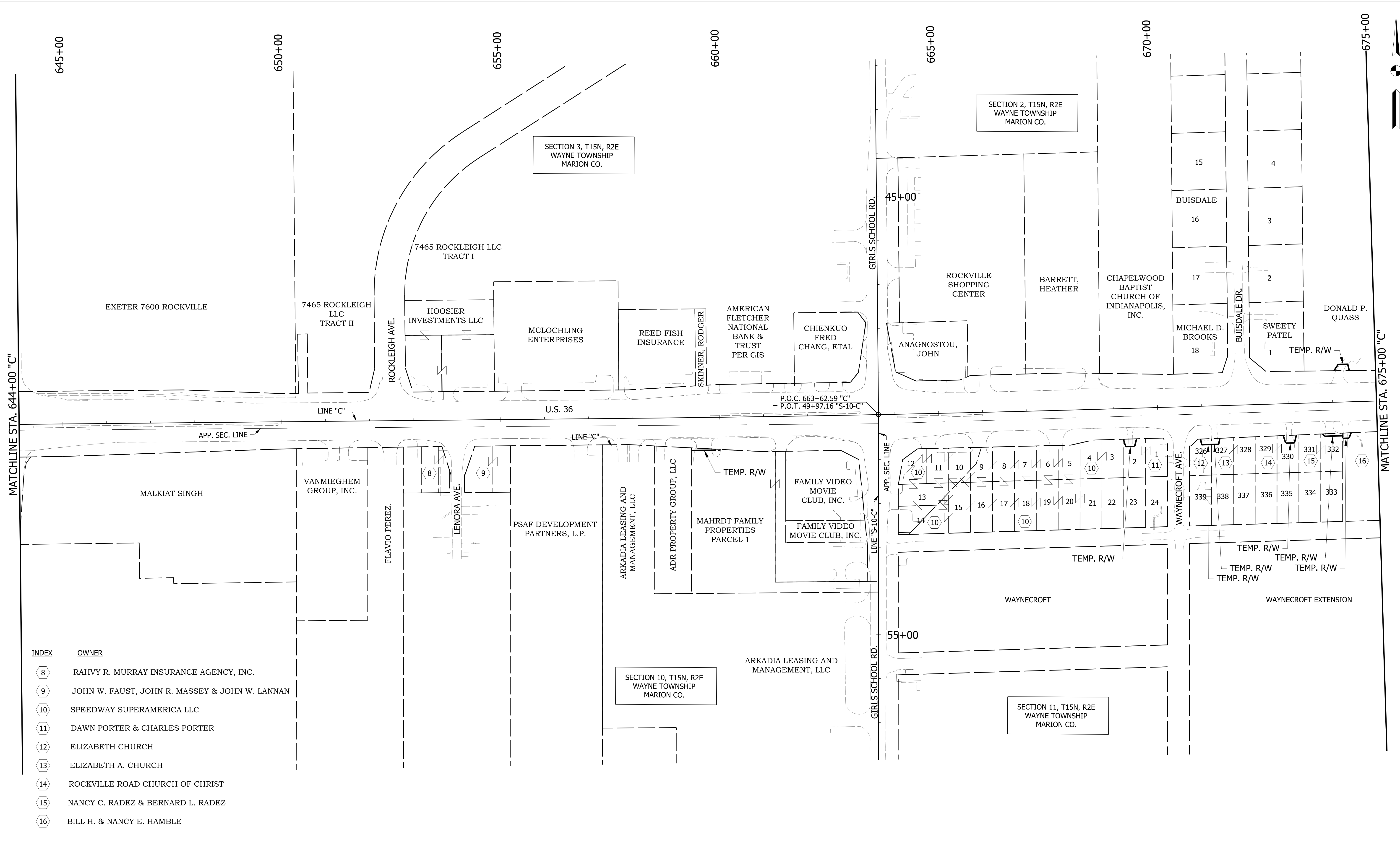
MATCHLINE STA. 613+00 "C"

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

PLAT NO. 1

HORIZONTAL SCALE 1"=100'	BRIDGE FILE
VERTICAL SCALE N/A	DESIGNATION 1800035/1800037
SURVEY BOOK R-41781	SHEETS of PROJECT 1800035



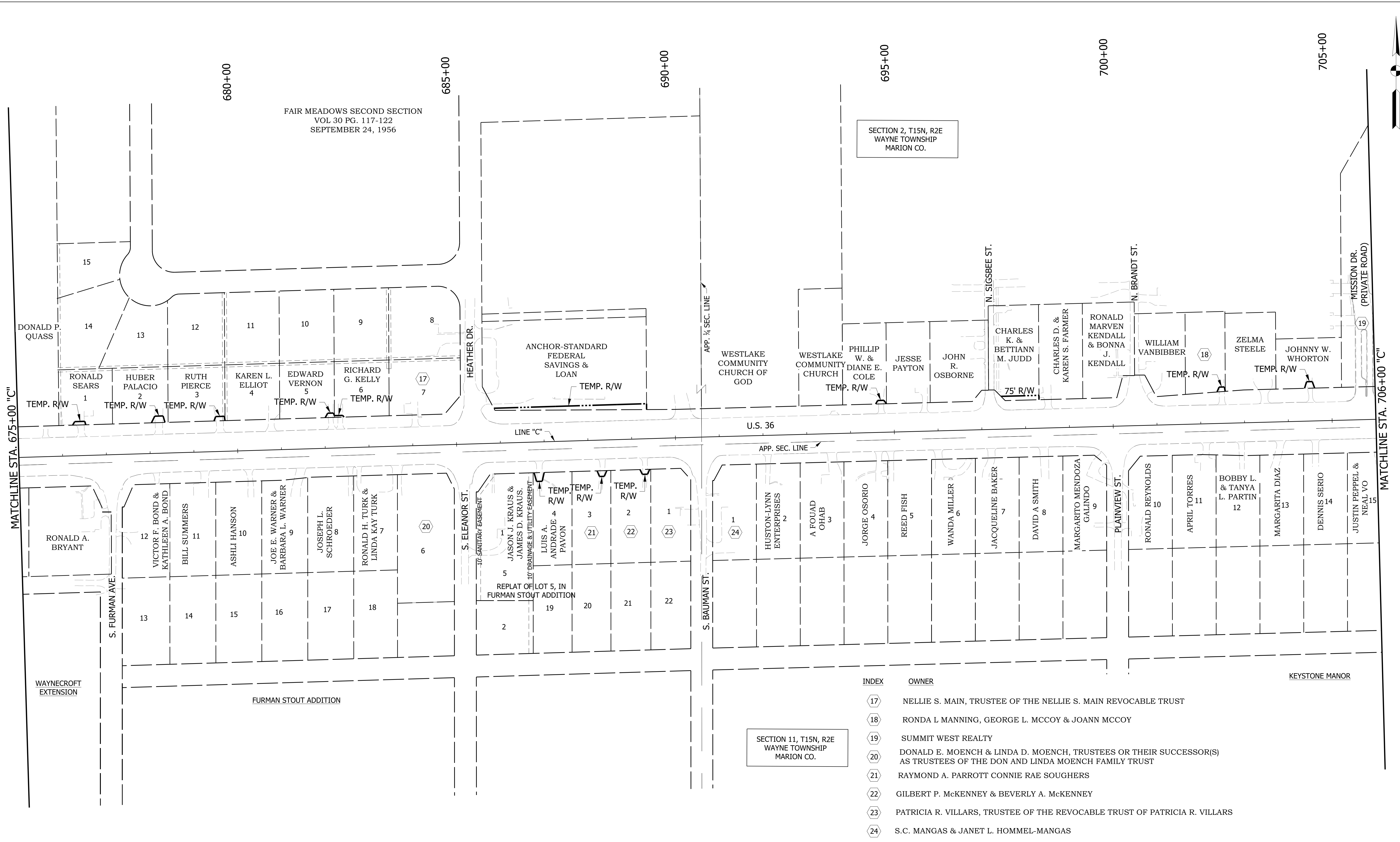
INDEX	OWNER
8	RAHVI R. MURRAY INSURANCE AGENCY, INC.
9	JOHN W. FAUST, JOHN R. MASSEY & JOHN W. LANNAN
10	SPEEDWAY SUPERAMERICA LLC
11	DAWN PORTER & CHARLES PORTER
12	ELIZABETH CHURCH
13	ELIZABETH A. CHURCH
14	ROCKVILLE ROAD CHURCH OF CHRIST
15	NANCY C. RADEZ & BERNARD L. RADEZ
16	BILL H. & NANCY E. HAMBLE

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: LDW	DRAWN: JWM	
CHECKED: WRC	CHECKED: LDW	

**INDIANA
DEPARTMENT OF TRANSPORTATION**

PLAT NO. 1

HORIZONTAL SCALE 1"=100'	BRIDGE FILE
VERTICAL SCALE N/A	DESIGNATION 1800037
SURVEY BOOK	SHEETS of
CONTRACT R-41781	PROJECT 1800035



SECTION 11, T15N, R2E
WAYNE TOWNSHIP
MARION CO.

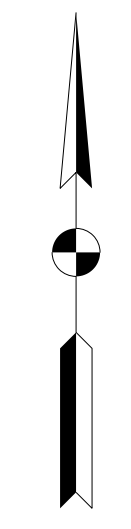
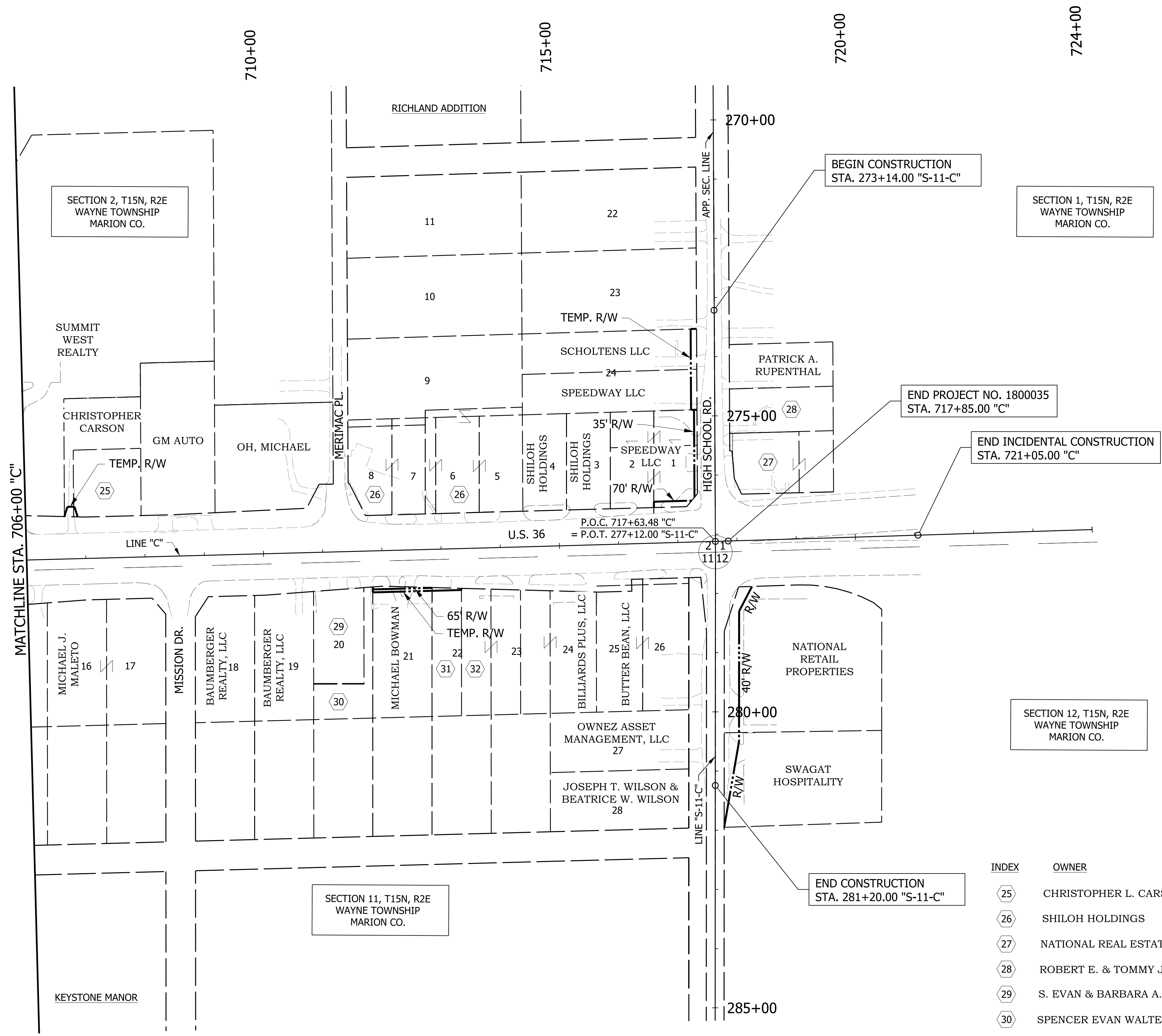
INDEX	OWNER
17	NELLIE S. MAIN, TRUSTEE OF THE NELLIE S. MAIN REVOCABLE TRUST
18	RONDA L MANNING, GEORGE L. MCCOY & JOANN MCCOY
19	SUMMIT WEST REALTY
20	DONALD E. MOENCH & LINDA D. MOENCH, TRUSTEES OR THEIR SUCCESSOR(S) AS TRUSTEES OF THE DON AND LINDA MOENCH FAMILY TRUST
21	RAYMOND A. PARROTT CONNIE RAE SOUGHERS
22	GILBERT P. MCKENNEY & BEVERLY A. MCKENNEY
23	PATRICIA R. VILLARS, TRUSTEE OF THE REVOCABLE TRUST OF PATRICIA R. VILLARS
24	S.C. MANGAS & JANET L. HOMMEL-MANGAS

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: LDW	DRAWN: JWM	
CHECKED: WRC	CHECKED: LDW	

**INDIANA
DEPARTMENT OF TRANSPORTATION**

PLAT NO. 1

HORIZONTAL SCALE 1"=100'	BRIDGE FILE
VERTICAL SCALE N/A	DESIGNATION 1800037
SURVEY BOOK	SHEETS of
CONTRACT R-41781	PROJECT 1800035



BEGIN CONSTRUCTION
STA. 273+14.00 "S-11-C"

SECTION 1, T15N, R2E
WAYNE TOWNSHIP
MARION CO.

END PROJECT NO. 1800035
STA. 717+85.00 "C"

END INCIDENTAL CONSTRUCTION
STA. 721+05.00 "C"

END CONSTRUCTION
STA. 281+20.00 "S-11-C"

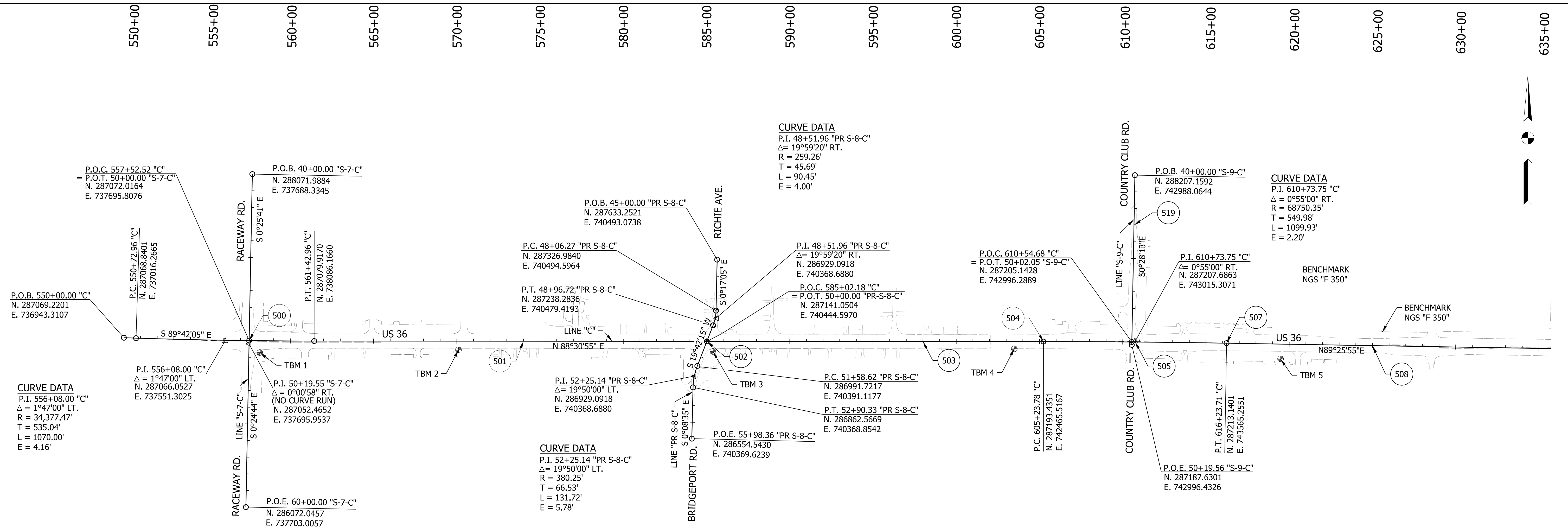
INDEX	OWNER
25	CHRISTOPHER L. CARSON
26	SHILOH HOLDINGS
27	NATIONAL REAL ESTATE INVESTORS, LLC
28	ROBERT E. & TOMMY J. MINGUS
29	S. EVAN & BARBARA A. WALTERS
30	SPENCER EVAN WALTERS
31	VENTURE INVESTMENTS, LLC
32	J & L ENTERPRISES, LLC

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: LDW	DRAWN: JWM	
CHECKED: WRC	CHECKED: LDW	

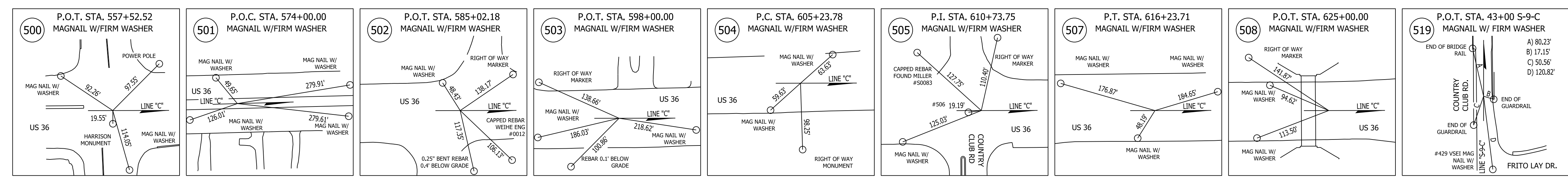
INDIANA
DEPARTMENT OF TRANSPORTATION

PLAT NO. 1

HORIZONTAL SCALE	BRIDGE FILE
1"=100'	
VERTICAL SCALE	DESIGNATION
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SURVEY BOOK	SHEETS
	of
CONTRACT	PROJECT
R-41781	1800035

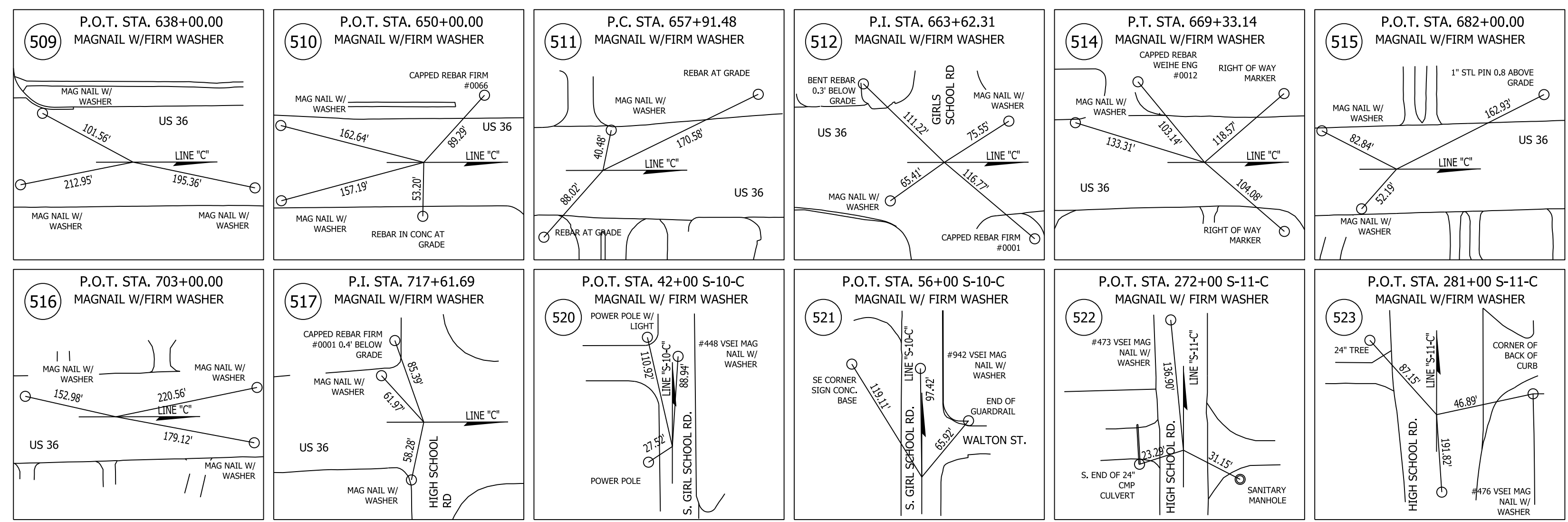
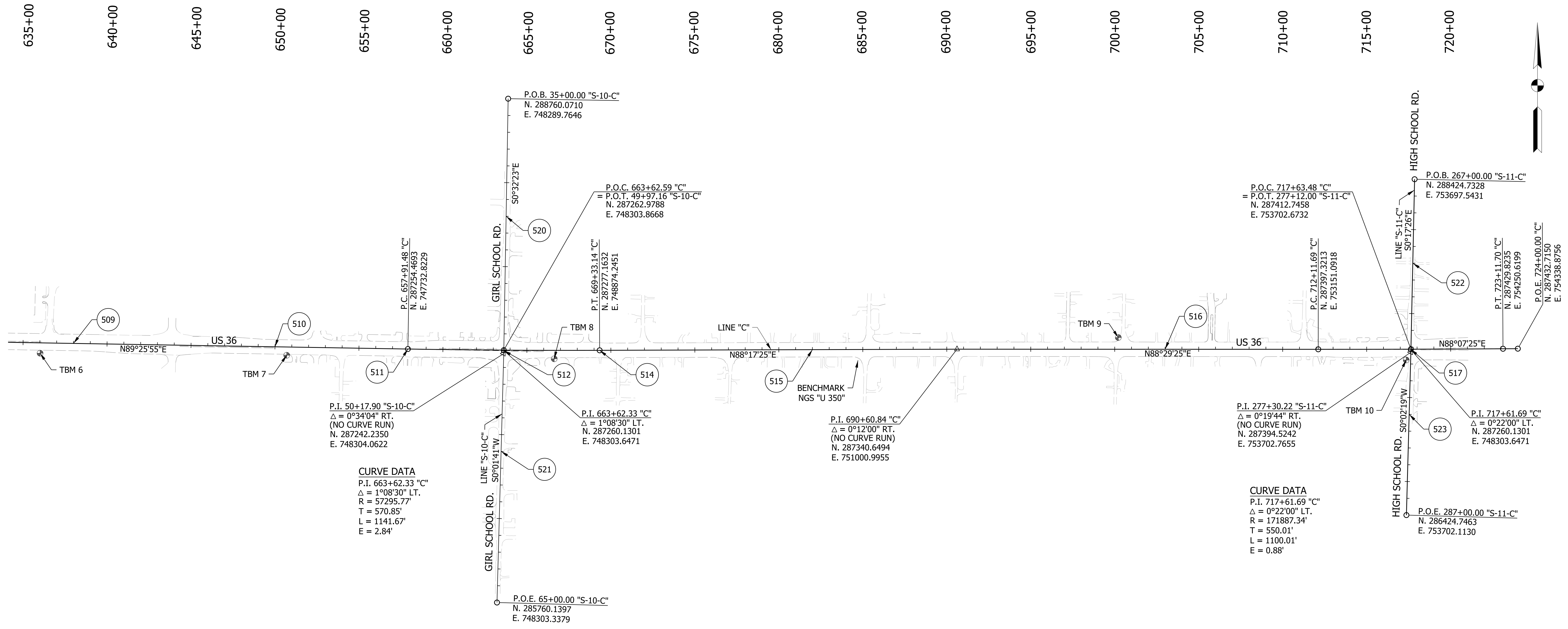


BENCHMARK TABLE						
BENCHMARK NO.	NORTHING	EASTING	ELEVATION (NAVD88)	STATION	OFFSET	DESCRIPTION
TBM 1	287,002.0210	737,761.6953	802.76	558+17.24 "C"	71.01 RT.	CUT "X" W. BOLT OF STRAIN POLE
TBM 2	287,050.1113	738,954.5522	794.03	570+10.28 "C"	52.30 RT.	CUT "X" N. BOLT OF STRAIN POLE
TBM 3	287,081.0082	740,482.5332	781.82	585+38.55 "C"	61.00 RT.	CUT "X" W. BOLT OF STRAIN POLE
TBM 4	287,145.7080	742,291.5603	774.82	603+48.64 "C"	43.20 RT.	CUT SQUARE E. END OF BRIDGE HANDRAIL, SHILOH CREEK
TBM 5	287,127.8606	743,892.1575	775.85	619+49.75 "C"	88.52 RT.	CUT SQUARE NE. CORNER CONC. SIGN BASE
BENCHMARK NGS "F 350"	287,303.9915	744,497.6441	781.49	625+56.95 "C"	81.60 LT.	NGS MONUMENT STAMPED "F 350 1985"



HORIZONTAL DATUM : INDIANA DEPARTMENT OF TRANSPORTATION - INDIANA GEOSPATIAL COORDINATE SYSTEM (InGCS) MARION COUNTY
 VERTICAL DATUM : NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

RECOMMENDED FOR APPROVAL _____ DESIGNED: LDW CHECKED: WRC	DESIGN ENGINEER _____ DATE _____ DRAWN: JWM CHECKED: LDW	INDIANA DEPARTMENT OF TRANSPORTATION SURVEY CONTROL	HORIZONTAL SCALE	BRIDGE FILE
			1"=300'	
			VERTICAL SCALE	DESIGNATION
			N/A	1800035
			SURVEY BOOK	SHEETS
				of
			CONTRACT	PROJECT
			R-41781	1800035



BENCHMARK TABLE						
BENCHMARK NO.	NORTHING	EASTING	ELEVATION (NAVD88)	STATION	OFFSET	DESCRIPTION
TBM 6	287,171.0142	745,544.3415	780.42	636+02.28 "C"	61.75 RT.	CUT "X" NE. BOLT OF STRAIN POLE
TBM 7	287,198.0800	747,012.4543	783.50	650+70.59 "C"	49.24 RT.	CUT "X" NW. BOLT OF STRAIN POLE
TBM 8	287,219.4358	748,605.1765	787.69	666+62.71 "C"	50.31 RT.	CUT "X" NW. BOLT OF TRAFFIC BOX TRUSS
BENCHMARK NGS "U 350"	287,258.4467	750,413.2930	797.37	684+70.95 "C"	64.63 RT.	NGS MONUMENT STAMPED "U 350 1985"
TBM 9	287,435.5916	751,959.2490	797.67	700+21.26 "C"	69.66 LT.	CUT SQUARE ON SW. CORNER OF SQUARE BEEHIVE INLET
TBM 10	287,347.7205	753,676.3568	800.69	717+35.27 "C"	64.22 RT.	CUT "X" N. BOLT OF STRAIN POLE

HORIZONTAL DATUM : INDIANA DEPARTMENT OF TRANSPORTATION - INDIANA GEOSPATIAL COORDINATE SYSTEM (InGCS) MARION COUNTY
 VERTICAL DATUM : NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____ DATE _____	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE	BRIDGE FILE
			1"=300'	
DESIGNED: LDW	DRAWN: JWM	SURVEY CONTROL	VERTICAL SCALE	DESIGNATION
			N/A	1800035/1800037
CHECKED: WRC	CHECKED: LDW		SURVEY BOOK	SHEETS
				of
			CONTRACT	PROJECT
			R-41781	1800035

GENERAL NOTES FOR TRAFFIC CONTROL

- The maintenance of traffic plans shall serve as a guide for the safe diversion of traffic during execution of this contract. The contractor may modify the maintenance of traffic plans to meet construction needs, but not at the expense of public safety or convenience. Any changes to the traffic control shall be submitted to the engineer for review and approval. The engineer shall be informed in writing a minimum of twenty-one (21) days in advance of any change to the maintenance of traffic plans.
- The contractor shall provide an approved work area access plan prior to the start of construction.
- Traffic control devices shall adhere to all requirements outlined in INDOT standard drawings for traffic control devices.
- Signs shall be placed as shown on the plans or as directed by the engineer.
- Existing signs which conflict with the mot phases shall be covered or removed.
- Portable changeable message signs shall be placed at each end of the project as directed by the engineer.
- Temporary traffic barrier shall be type 1 when separating traffic. Temporary traffic barrier shall be type 2 when separating traffic from construction.
- The worksite speed limit shall be 35 mph. The posted speed limit is 45 mph.
- The contractor shall be responsible for providing temporary measures to maintain the existing drainage system and positive drainage within the limits of construction.
- Note existing topography for maintenance of traffic plans is approximate and shall be verified by the contractor.
- Any barrier end within 12 feet of an edge line of a line carrying approaching traffic shall be equipped with an energy absorbing terminal, cz, as designated on the plans. Energy absorbing terminals shall be placed tangent with adjacent concrete barrier.
- The contractor shall remove all equipment out of the traveled way and clear zone prior to shifting traffic or opening lanes. Objects that cannot be moved from the clear zone shall be protected from the travelling public.
- All temporary concrete barriers shall be tapered at 10:1 and all exposed ends facing traffic shall be protected by an energy absorbing terminal, cz tl-2.
- All drums shall be placed at 20' c-c spacing in taper and curve sections and 50' c-c spacing in tangent sections, unless otherwise noted.
- Where required, traffic signs shall be relocated for each phase of construction.
- Existing overhead signs shall be relocated to temporary roadside supports.
- Contractor shall maintain access to all property at all times, see Special Provisions.
- Traffic signal heads shall be bagged and re-aligned for each phase of construction as noted on the plans and as directed by District Traffic Engineer.
- Open areas for snow removal shall be maintained from December 1 to March 31 of any year. Open areas shall be at a minimum equal to existing shoulder widths both inside and outside throughout the project. Barriers shall not impede snow removal operations. No lane restrictions or crossovers will be allowed during this time, unless directed by engineer. Barrier wall shall not be stored in the median during winter hours.

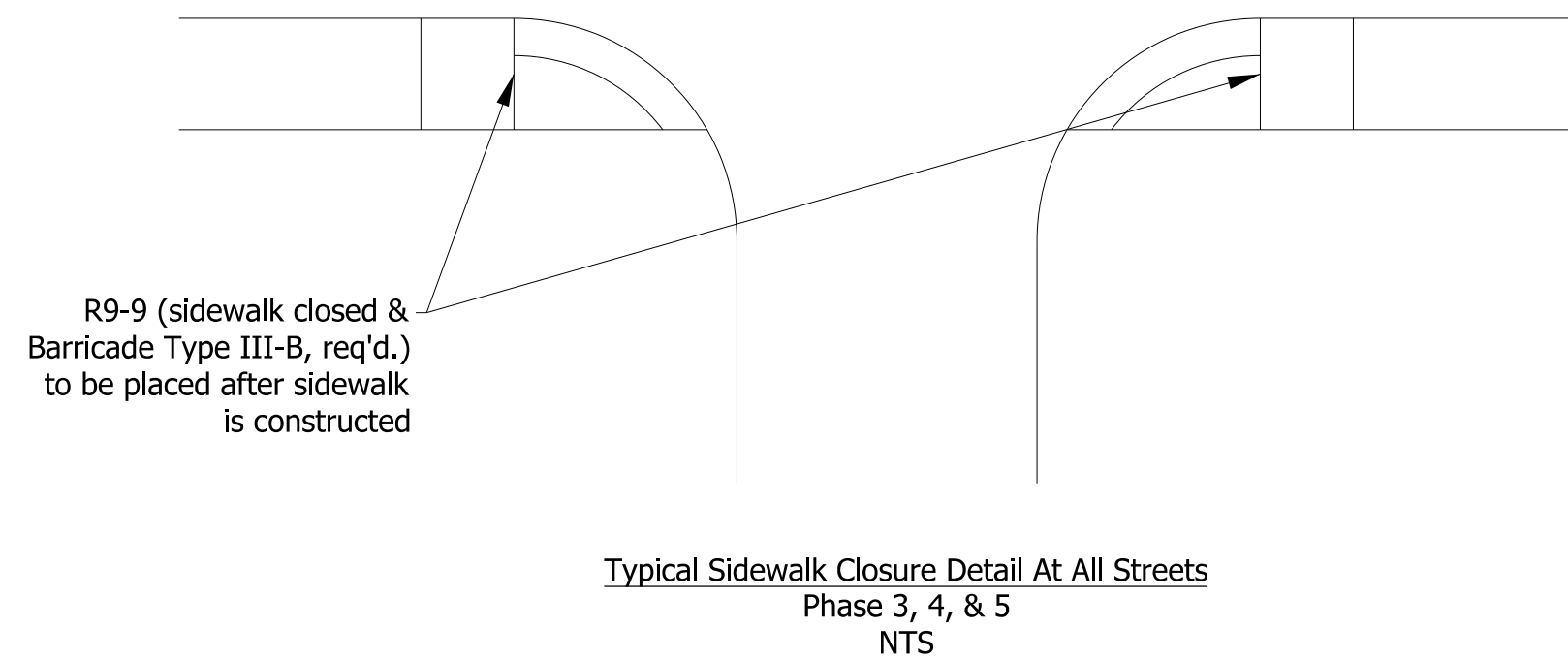
Item	Quantity for Maintenance of Traffic	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5A	Phase 5B	Quantity
Construction Sign, Type A								
Construction Sign, Type B								
Type III-B Barricade								
Temporary Pavement Marking, Removable, 4 in. (White)								
Temporary Pavement Marking, Removable, 4 in. (Yellow)								
Temporary Pavement Marking, Removable, 24 in. (White)								
Temporary Pavement Message Marking, Removable, Lane Indication Arrow								
Pavement Message Marking, Remove								
Transverse Marking, Remove								
Line, Remove								
220 lb/sys QC/QA HMA 3, 70 Surface 9.5 mm								
Pavement Wedge QC/QA HMA, 3, 70 Intermediate 19.0 mm								
165 lb/sys QC/QA HMA 3, 70 Intermediate 19.0 mm								
Milling, Asphalt 1.5 in.								
Milling, Asphalt 2 in.								
Liquid Asphalt Sealant								
Joint Adhesive, Surface								
Joint Adhesive, Intermediate								
HMA Patching Type C								
Asphalt for Tack Coat								
Subgrade Treatment Type IC								
HMA for Temporary Pavement, Type C								
Compacted Aggregate, No. 53								
Subgrade Treatment Type ID								
Excavation, Common								
Portable Changeable Message Sign								
Flashing Arrow Sign								
Next Level Signs (Construction Sign, Type C)								

Note to Reviewer:

Pedestrian MOT is not provided since pedestrian facilities are not currently provided.

Note to Reviewer:

This project requires a TMP & TOP, so the Maintenance of Traffic shown is a concept only. It will be further developed during the TMP/TOP process that is included in Phase 2 of this project. (Phase 1 did not include final design, only preliminary design to determine final project scope.)



Closure Type	Allowable Hours
Single Lane Closure	9pm Through 6am
Shoulder Closure Only	Anytime

APPLICABLE INDOT STANDARD DRAWING LIST

- 107-C-266 - Maintaining pedestrian access during construction
- 801-R-471 - Material used for temp. ingress/egress to properties
- 801-T-089 - Maintaining signal, moving heads, timing, etc.
- 801-R-542 - Worksite penalty added
- 801-R-672 - Law enforcement officer for work zone safety?
- Unique SP for additional lane closures (9 pm to 6 am)?
- Unique SP for installing new signals before Phase 2 MOT starts
- Unique SP for temporary traffic stoppages
- Unique SP for pavement edge dropoff?
- Unique SP - 2021-08-31 WZ Incident Management

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STAGE 2 SUBMITTAL	RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE	BRIDGE FILE
	DESIGNED: JAH DRAWN: KGR		VERTICAL SCALE	DESIGNATION 1800035
	CHECKED: RT CHECKED: RT		SURVEY BOOK	SHEETS of
MAINTENANCE OF TRAFFIC GENERAL NOTES		CONTRACT	PROJECT 1800035	

PRELIMINARY SEQUENCE OF CONSTRUCTION

DES 1800035

Phase 1

Traffic Control

1. Place advanced warning signs
2. Shoulder and lane closures as shown on plans

Construction Activities

1. Remove all existing traffic signals
2. Install new traffic signals and adjust signal heads as necessary
3. Time signals in coordination with District Traffic Engineer
4. Patch and strengthen the westbound shoulder as shown
5. Construct temporary pavement and crossovers
6. Mill or flush cut existing concrete median

Phase 2A

Traffic Control

1. Relocate traffic signal heads as shown
2. Place all temporary pavement markings, devices and signs as shown
3. Relocate traffic lanes as shown

Construction Activities

1. Construct full depth pavement to the top of the intermediate layer as shown on the typical
2. Mill existing pavement and place overlay to the top of the intermediate layer as shown
3. Construct all storm drainage structures in the eastbound lanes, construct cross pipes part-width as necessary
4. Construct temporary pavement as shown
5. Place any temporary pump arounds as necessary
6. Construct HMA wedge at any drop off as necessary

Phase 2B

Traffic Control

1. Lane closures as shown on the plans

Construction Activities

1. Mill existing pavement and place overlay to the top of the intermediate layer as shown

Phase 3

Traffic Control

1. Relocate traffic signal heads as shown
2. Place all temporary pavement markings, devices and signs as shown
3. Relocate traffic lanes as shown

Construction Activities

1. Mill existing pavement and place overlay to the top of the intermediate layer as shown
2. Construct cross pipes part-width as necessary
3. Place any temporary pump arounds as necessary
4. Construct HMA wedge at any drop off as necessary

Note to Reviewer:

Turn lanes at intersections will be determined during the TMP/TOP process and after traffic analysis.

Maintenance of traffic for the median crossovers will be detailed at Stage 3, once a final location is determined during the TMP Process.

Phase 4A

Traffic Control

1. Relocate traffic signal heads as shown
2. Place all temporary pavement markings, devices and signs as shown
3. Relocate traffic lanes as shown

Construction Activities

1. Construct full depth pavement to the top of the intermediate layer as shown on the typical
2. Mill existing pavement and place overlay to the top of the intermediate layer as shown
3. Finish cross pipes construction as necessary
4. Construct HMA wedge at any drop off as necessary

Phase 4B

Traffic Control

1. Lane closures as shown on the plans

Construction Activities

1. Mill existing pavement and place overlay to the top of the intermediate layer as shown

Phase 5A

Traffic Control

1. Place all temporary pavement markings, devices, and signs as shown
2. Relocate traffic lanes as shown

Construction Activities

1. Remove temporary pavement used in Phase 4 as shown
2. Complete full-depth construction up to intermediate layer in areas of temporary pavement removal
3. Construct the eastbound sidewalk on the bridge

Phase 5B

Traffic Control

1. Relocate traffic signal heads to final location as shown
2. Place all temporary pavement markings, devices and signs as shown

Construction Activities

1. Remove temporary pavement used in Phase 5A
2. Construct the median

Phase 6

Traffic Control

1. Final milling and overlay shall be constructed under a moving operation and utilize flaggers
2. Place all signing for flagging operations and adjust as necessary for each lane closure, see Std. Drawings 601-TCFO-01-06

Construction Activities

1. Final miscellaneous milling
2. Finish surface layer
3. Apply final pavement markings

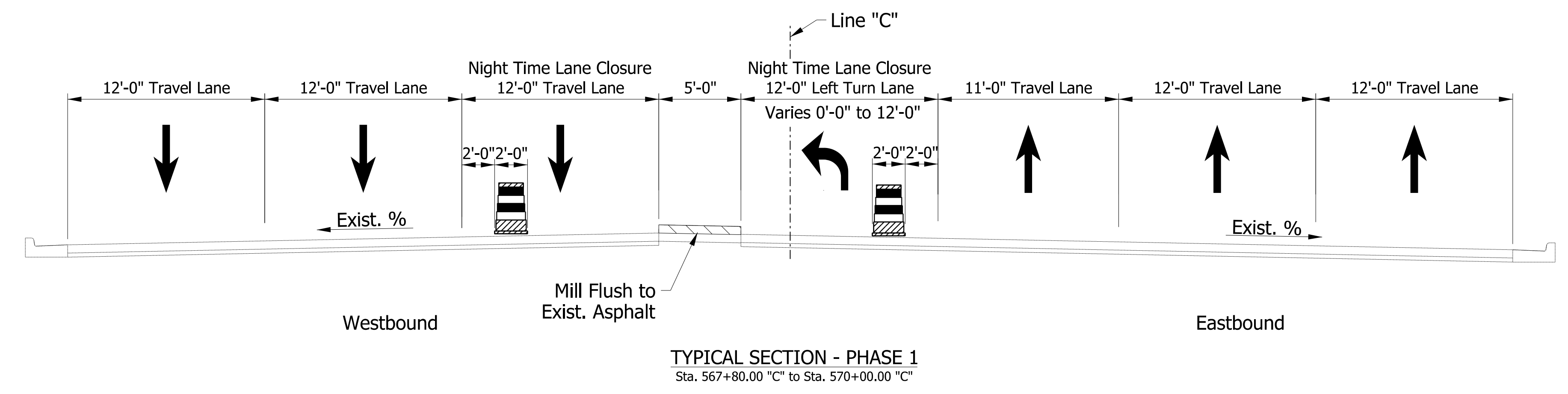
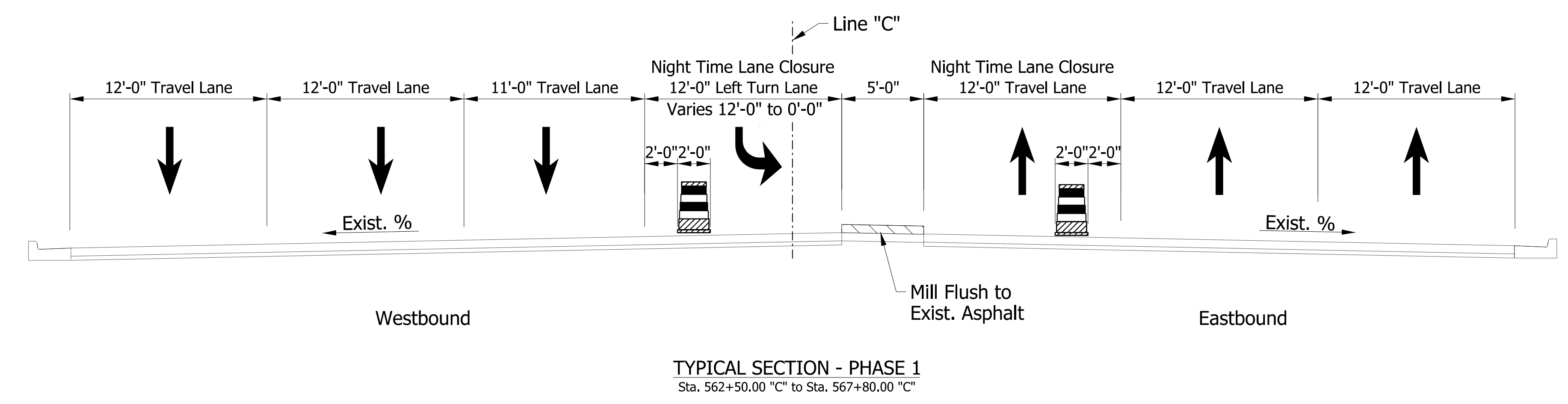
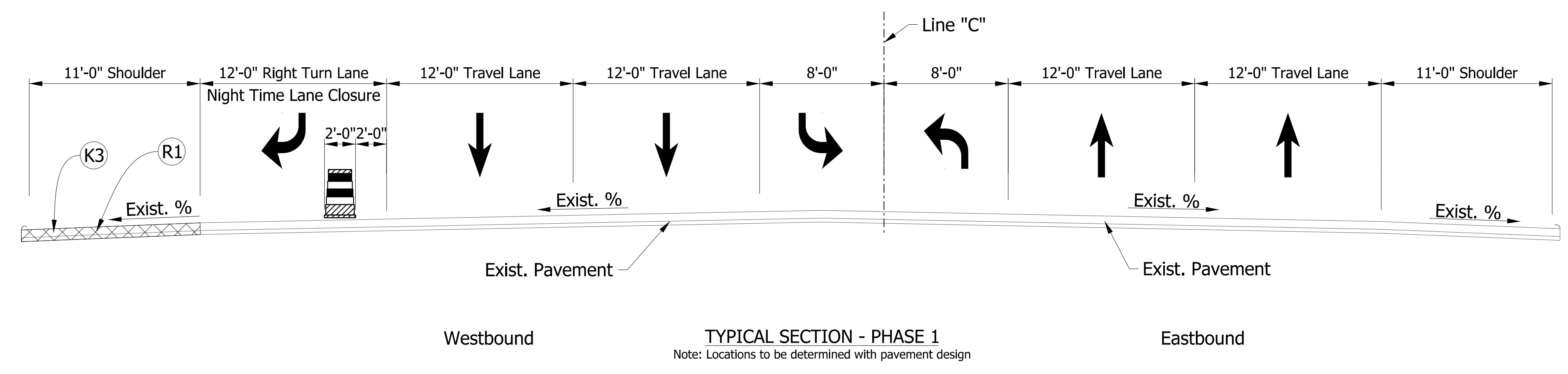
STAGE 2 SUBMITTAL	RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____ DATE _____	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE N/A	BRIDGE FILE
	DESIGNED: _____ JAH	DRAWN: _____ KGR	MAINTENANCE OF TRAFFIC PRELIMINARY SEQUENCE OF CONSTRUCTION	VERTICAL SCALE N/A	DESIGNATION 1800035
	CHECKED: _____ RT	CHECKED: _____ RT		SURVEY BOOK	SHEETS
				CONTRACT R-41781	PROJECT 1800035

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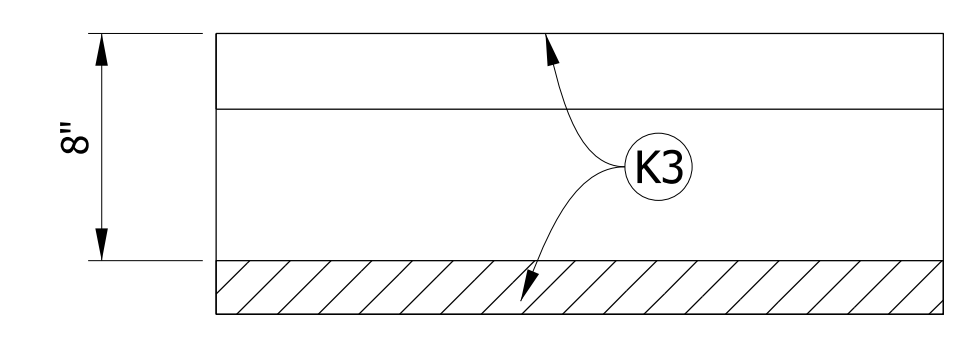
Note to Reviewer:
Patching and/or shoulder strengthening shall be determined during pavement design.

Note to Reviewer:
Center curb to be milled from Sta. 562+50.00 to Sta. 570+00.00 is currently under construction (Contract No. R-39814).

Note to Reviewer:
Maintenance of traffic for the median crossovers will be detailed at Stage 3, once final locations are determined during the TMP Process.



- Phase 1 Notes:
1. Drums to be placed on shoulders during the daytime and peak hours.
 2. Lanes may be closed at night and non peak hours to complete this work, see Unique Special Provision.



- AREA OF CONSTRUCTION
- SHOULDER STRENGTHENING & PATCHING
- CONSTRUCTION DRUM
- (K3)** HMA PATCHING
330 #/SYS HMA INTERMEDIATE, TYPE C ON
550 #/SYS HMA BASE, TYPE C ON
SUBGRADE TREATMENT, TYPE IC
- (R1)** SHOULDER STRENGTHENING
MILLING, ASPHALT 2 IN
220 #/SYS QC/QA HMA 3, 70, SURFACE 9.5 MM

- (T1)** Temp. Pavement Marking, Removable, 4 In. (White, Solid)
- (T2)** Temp. Pavement Marking, Removable, 4 In. (Yellow, Solid)
- (T3)** Temp. Pavement Marking, Removable, 4 In. (White, Dotted)
- (T4)** Temp. Pavement Marking, Removable, 4 In. (White, Broken)
- (T5)** Temp. Channelizing Pavement Marking, Removable, 8 In. (White, Solid)
- (T6)** Temp. Channelizing Pavement Marking, Removable, 8 In. (Yellow, Solid)
- (T7)** Temp. Transverse Pavement Marking, Removable, 24 In. (White)
- (XP)** Exist. Pavement Marking
- (XR)** Exist. Pavement Marking To Be Removed
- Temporary Traffic Barrier (TTB Type as Noted)
- (P1)** Temp. Pavement Marking, 4 In. (White, Solid)
- (P2)** Temp. Pavement Marking, 4 In. (Yellow, Solid)
- (P3)** Temp. Pavement Marking, 4 In. (White, Dotted)
- (P4)** Temp. Pavement Marking, 4 In. (White, Broken)

STAGE 2 SUBMITTAL

RECOMMENDED FOR APPROVAL _____ DATE _____
DESIGN ENGINEER

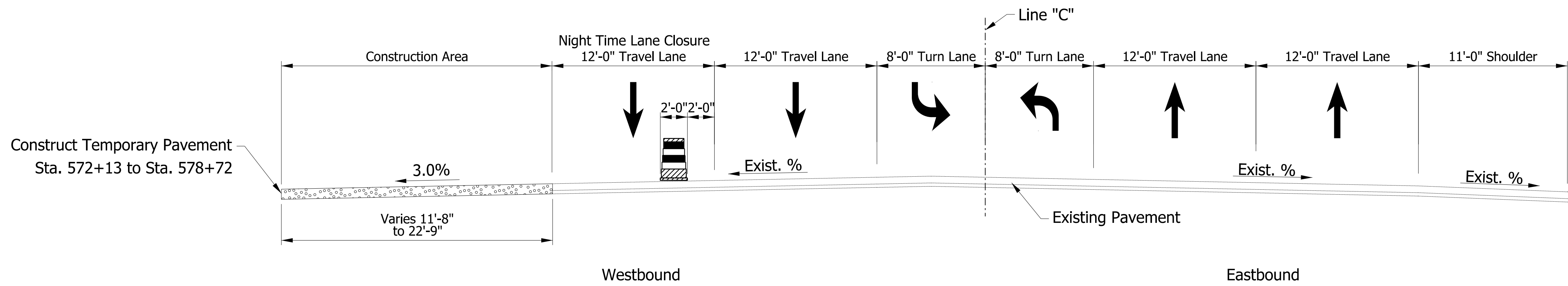
DESIGNED: JAH DRAWN: KGR
CHECKED: RT CHECKED: RT

INDIANA
DEPARTMENT OF TRANSPORTATION

PHASE 1 TYPICAL SECTIONS

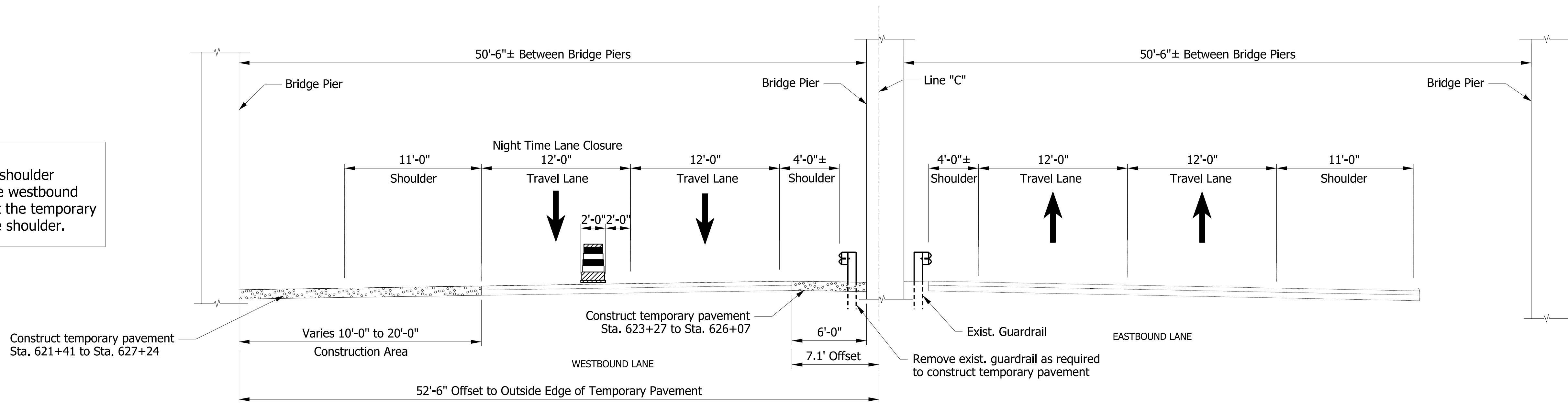
HORIZONTAL SCALE	BRIDGE FILE
3/16" = 1'-0"	
VERTICAL SCALE	DESIGNATION
3/16" = 1'-0"	1800035
SURVEY BOOK	SHEETS
	of
CONTRACT	PROJECT
R-41781	1800035

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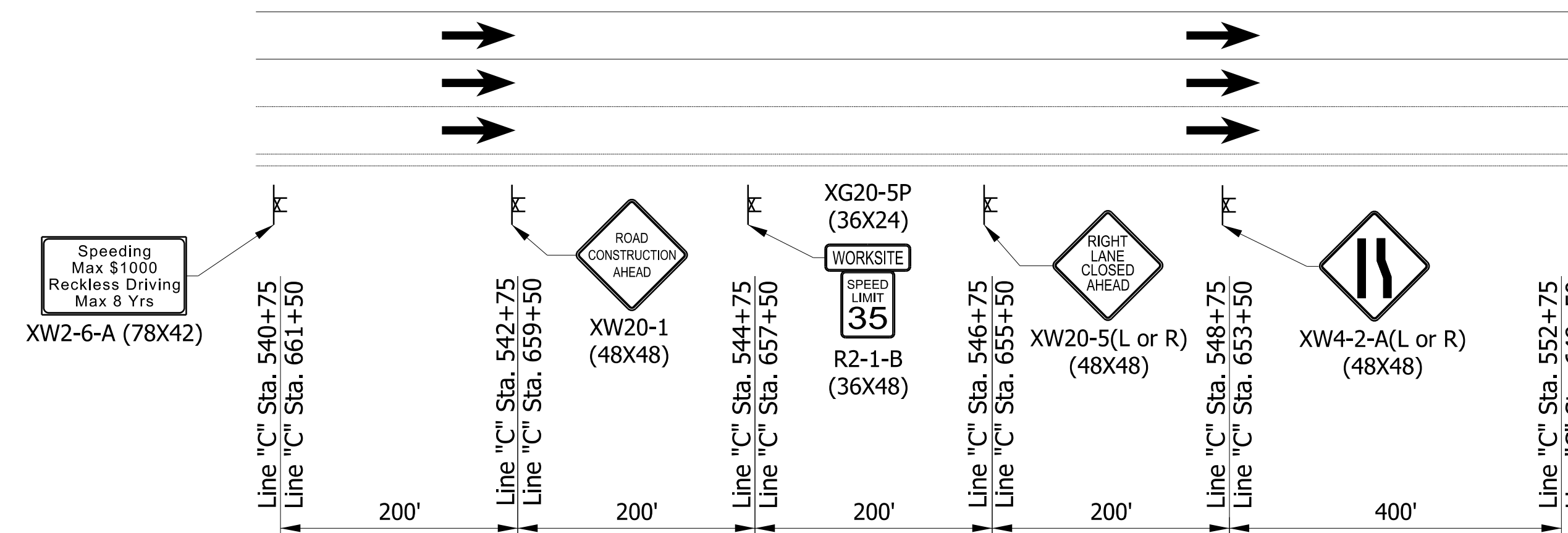


TYPICAL SECTION - PHASE 1
Sta. 572+13.00 "C" to Sta. 578+72.00 "C"

Note:
Lane closure shown for outside shoulder temporary pavement. The inside westbound lane shall be closed to construct the temporary pavement adjacent to the inside shoulder.



TYPICAL SECTION AT RAILROAD BRIDGE - PHASE 1
Sta. 621+41.00 "C" to Sta. 627+24.00 "C"



TYPICAL ADVANCED SIGNING

- AREA OF CONSTRUCTION
- SHOULDER STRENGTHENING & PATCHING
- CONSTRUCTION DRUM
- HMA PATCHING
330 #/SYS HMA INTERMEDIATE, TYPE C ON
550 #/SYS HMA BASE, TYPE C ON
SUBGRADE TREATMENT, TYPE 1C
- SHOULDER STRENGTHENING
MILLING, ASPHALT 2 IN
220 #/SYS QC/QA HMA 3, 70, SURFACE 9.5 MM

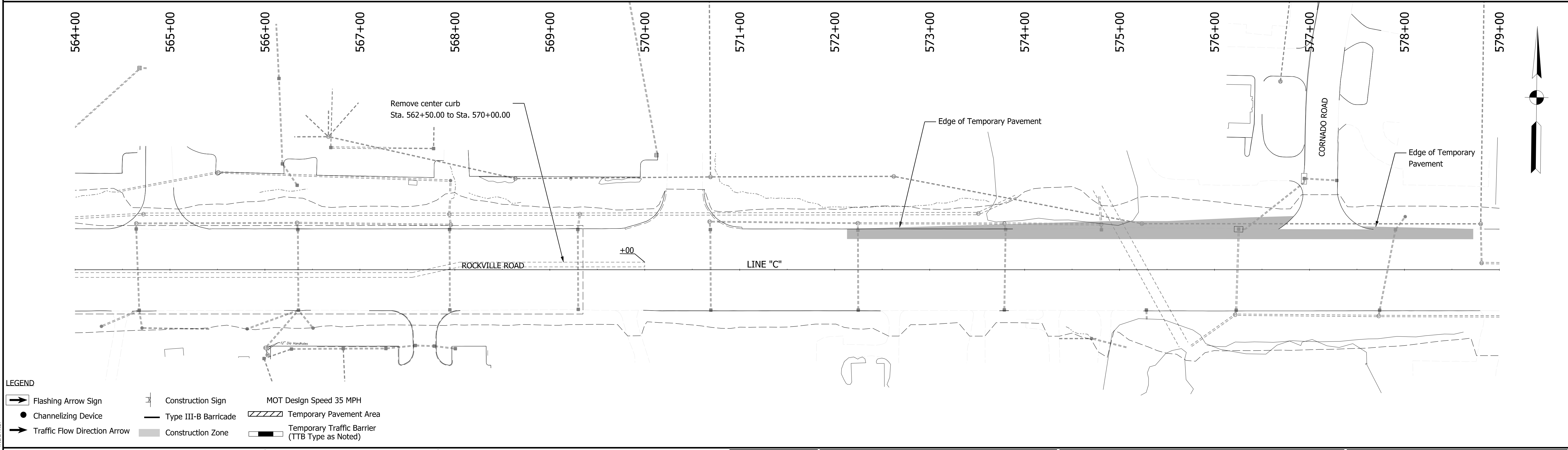
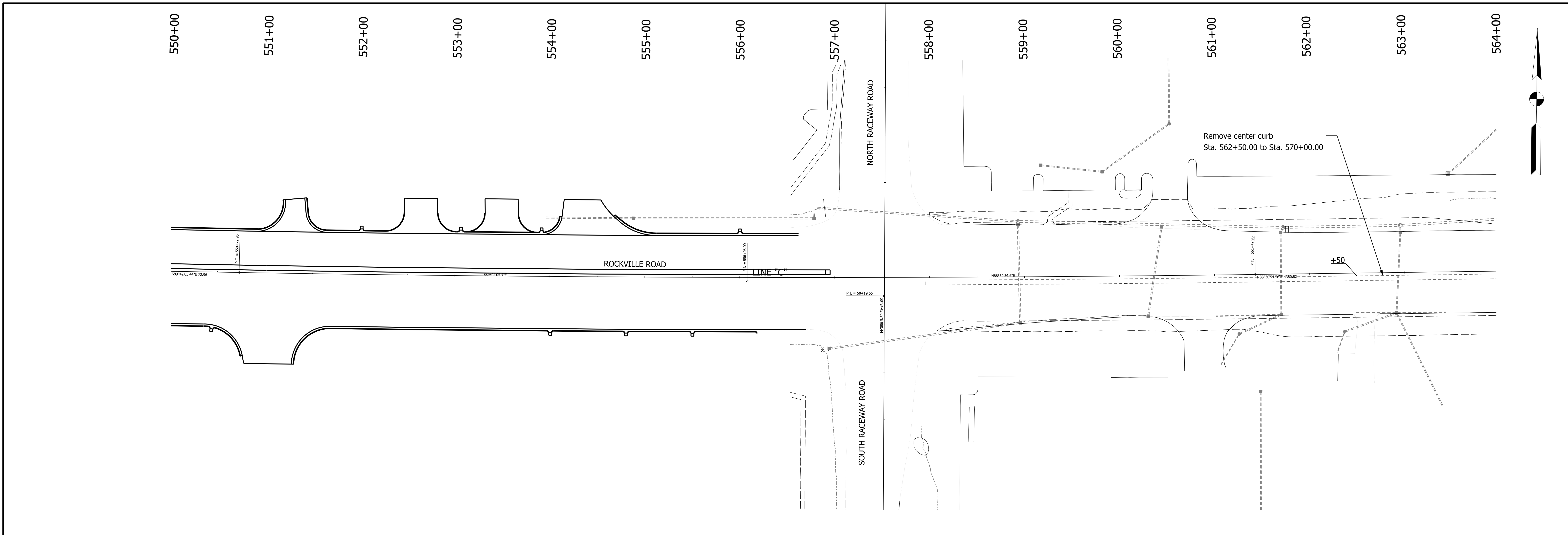
- Temp. Pavement Marking, Removable, 4 In. (White, Solid)
- Temp. Pavement Marking, Removable, 4 In. (Yellow, Solid)
- Temp. Pavement Marking, Removable, 4 In. (White, Dotted)
- Temp. Pavement Marking, Removable, 4 In. (White, Broken)
- Temp. Channelizing Pavement Marking, Removable, 8 In. (White, Solid)
- Temp. Channelizing Pavement Marking, Removable, 8 In. (Yellow, Solid)
- Temp. Transverse Pavement Marking, Removable, 24 In. (White)
- Exist. Pavement Marking
- Exist. Pavement Marking To Be Removed
- Temporary Traffic Barrier (TTB Type as Noted)
- Temp. Pavement Marking, 4 In. (White, Solid)
- Temp. Pavement Marking, 4 In. (Yellow, Solid)
- Temp. Pavement Marking, 4 In. (White, Dotted)
- Temp. Pavement Marking, 4 In. (White, Broken)

STAGE 2 SUBMITTAL	RECOMMENDED FOR APPROVAL		DESIGN ENGINEER		DATE
	DESIGNED: JAH	DRAWN: KGR			
	CHECKED: RT	CHECKED: RT			

INDIANA DEPARTMENT OF TRANSPORTATION	
PHASE 1 TYPICAL SECTIONS & ADVANCED SIGNING	

HORIZONTAL SCALE	BRIDGE FILE
3/16" = 1'-0"	
VERTICAL SCALE	DESIGNATION
3/16" = 1'-0"	1800035
SURVEY BOOK	SHEETS
	of
CONTRACT	PROJECT
R-41781	1800035

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- LEGEND**
- ➡ Flashing Arrow Sign
 - Channelizing Device
 - ➡ Traffic Flow Direction Arrow
 - ⚡ Construction Sign
 - Type III-B Barricade
 - Construction Zone
 - MOT Design Speed 35 MPH
 - ▨ Temporary Pavement Area
 - ▬ Temporary Traffic Barrier (TTB Type as Noted)

- | | | |
|---|--|--|
| (T1) Temp. Pavement Marking, Removable, 4 In., (White, Solid) | (T6) Temp. Channelizing Pavement Marking, Removable, 8 In., (Yellow) | (P1) Temp. Pavement Marking, 4 In., (White, Solid) |
| (T2) Temp. Pavement Marking, Removable, 4 In., (Yellow, Solid) | (T7) Temp. Transverse Pavement Marking, Removable, 24 In. (White) | (P2) Temp. Pavement Marking, 4 In. (Yellow, Solid) |
| (T3) Temp. Pavement Marking, Removable, 4 In., (White, Dotted) | (XP) Exist. Pavement Marking | (P3) Temp. Pavement Marking, 4 In. (White, Dotted) |
| (T4) Temp. Pavement Marking, Removable, 4 In., (White, Broken) | (XR) Exist. Pavement Marking To Be Removed | (P4) Temp. Pavement Marking, 4 In. (White, Broken) |
| (T5) Temp. Channelizing Pavement Marking, Removable, 8 In., (White) | | |

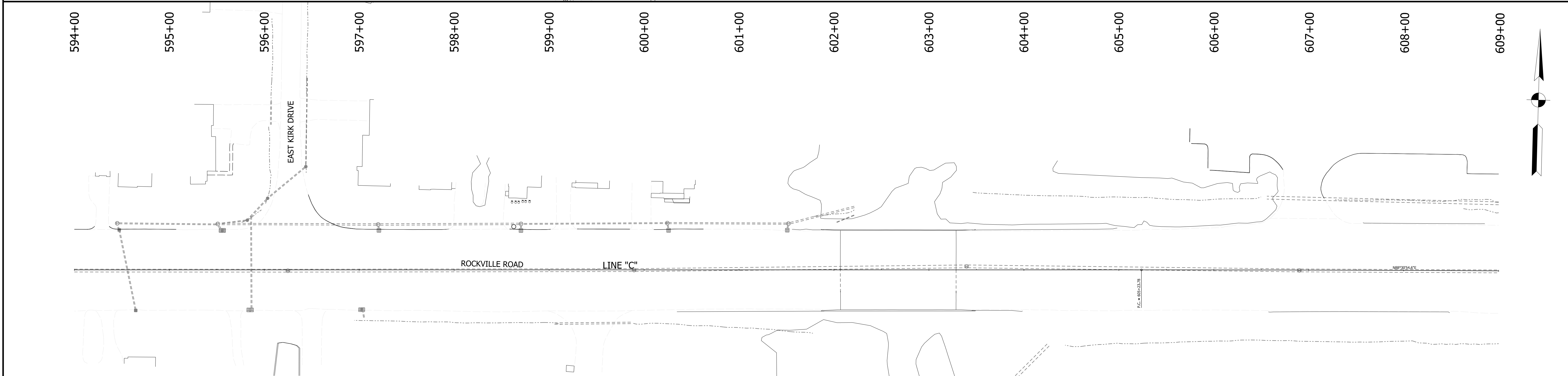
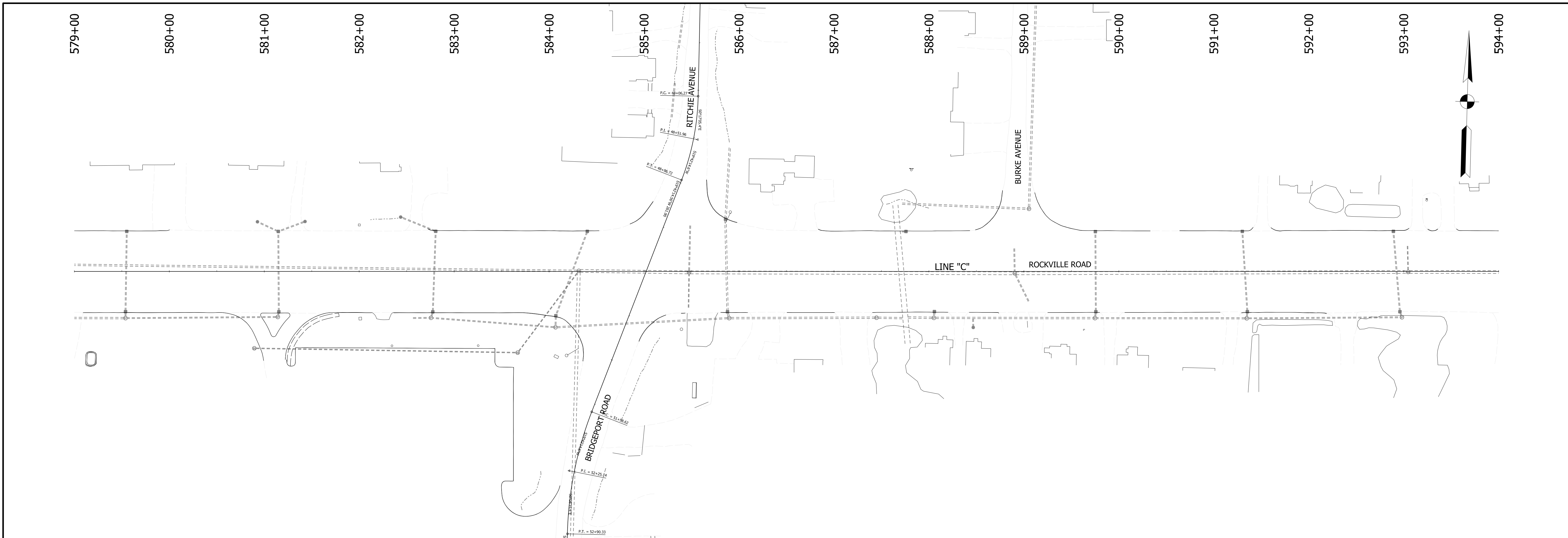
STAGE 2 SUBMITTAL	RECOMMENDED FOR APPROVAL	
	DESIGNED: JAH	DRAWN: KGR
	CHECKED: RT	CHECKED: RT
	DATE	DATE

**INDIANA
DEPARTMENT OF TRANSPORTATION**

**MAINTENANCE OF TRAFFIC - PHASE 1
STA. 550+00.00 - STA. 579+00.00 "C"**

HORIZONTAL SCALE	BRIDGE FILE
1" = 50'-0"	
VERTICAL SCALE	DESIGNATION
N/A	1800035
SURVEY BOOK	SHEETS
	of
CONTRACT	PROJECT
R-41781	1800035

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- LEGEND**
- ➡ Flashing Arrow Sign
 - Channelizing Device
 - ➡ Traffic Flow Direction Arrow
 - ⚡ Construction Sign
 - Type III-B Barricade
 - Construction Zone
 - MOT Design Speed 35 MPH
 - ▨ Temporary Pavement Area
 - ▬ Temporary Traffic Barrier (TTB Type as Noted)

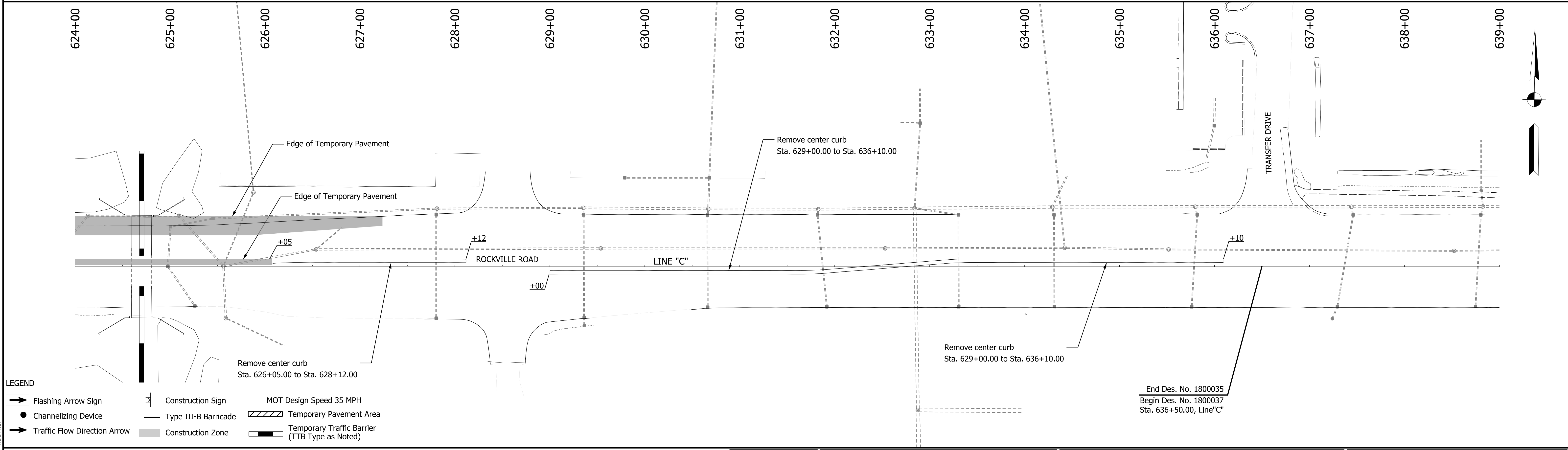
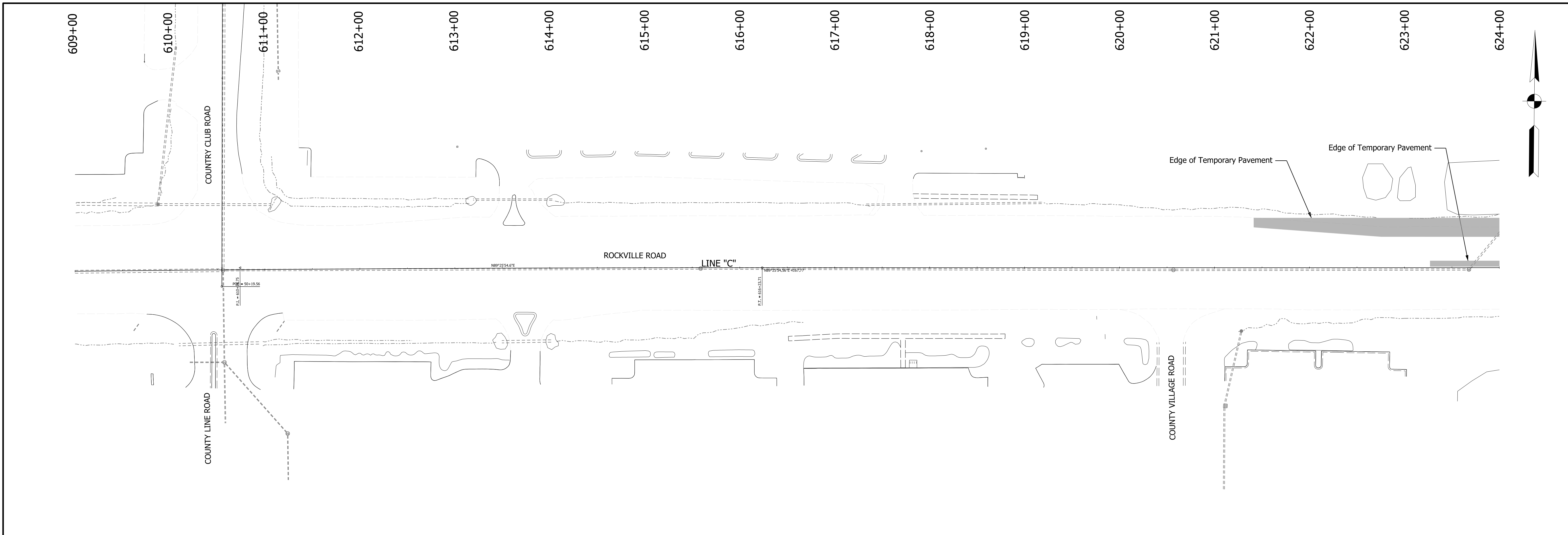
- | | | |
|---|--|--|
| (T1) Temp. Pavement Marking, Removable, 4 In., (White, Solid) | (T6) Temp. Channelizing Pavement Marking, Removable, 8 In., (Yellow) | (P1) Temp. Pavement Marking, 4 In., (White, Solid) |
| (T2) Temp. Pavement Marking, Removable, 4 In., (Yellow, Solid) | (T7) Temp. Transverse Pavement Marking, Removable, 24 In. (White) | (P2) Temp. Pavement Marking, 4 In. (Yellow, Solid) |
| (T3) Temp. Pavement Marking, Removable, 4 In., (White, Dotted) | (XP) Exist. Pavement Marking | (P3) Temp. Pavement Marking, 4 In. (White, Dotted) |
| (T4) Temp. Pavement Marking, Removable, 4 In., (White, Broken) | (XR) Exist. Pavement Marking To Be Removed | (P4) Temp. Pavement Marking, 4 In. (White, Broken) |
| (T5) Temp. Channelizing Pavement Marking, Removable, 8 In., (White) | | |

STAGE 2 SUBMITTAL	RECOMMENDED FOR APPROVAL	
	DESIGN ENGINEER	DATE
	DESIGNED: JAH	DRAWN: KGR
	CHECKED: RT	CHECKED: RT

INDIANA DEPARTMENT OF TRANSPORTATION
MAINTENANCE OF TRAFFIC - PHASE 1 STA. 579+00.00 - STA. 609+00.00 "C"

HORIZONTAL SCALE	BRIDGE FILE
1" = 50'-0"	
VERTICAL SCALE	DESIGNATION
N/A	1800035
SURVEY BOOK	SHEETS
	of
CONTRACT	PROJECT
R-41781	1800035

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LEGEND

Flashing Arrow Sign	Construction Sign	MOT Design Speed 35 MPH
Channelizing Device	Type III-B Barricade	Temporary Pavement Area
Traffic Flow Direction Arrow	Construction Zone	Temporary Traffic Barrier (TTB Type as Noted)

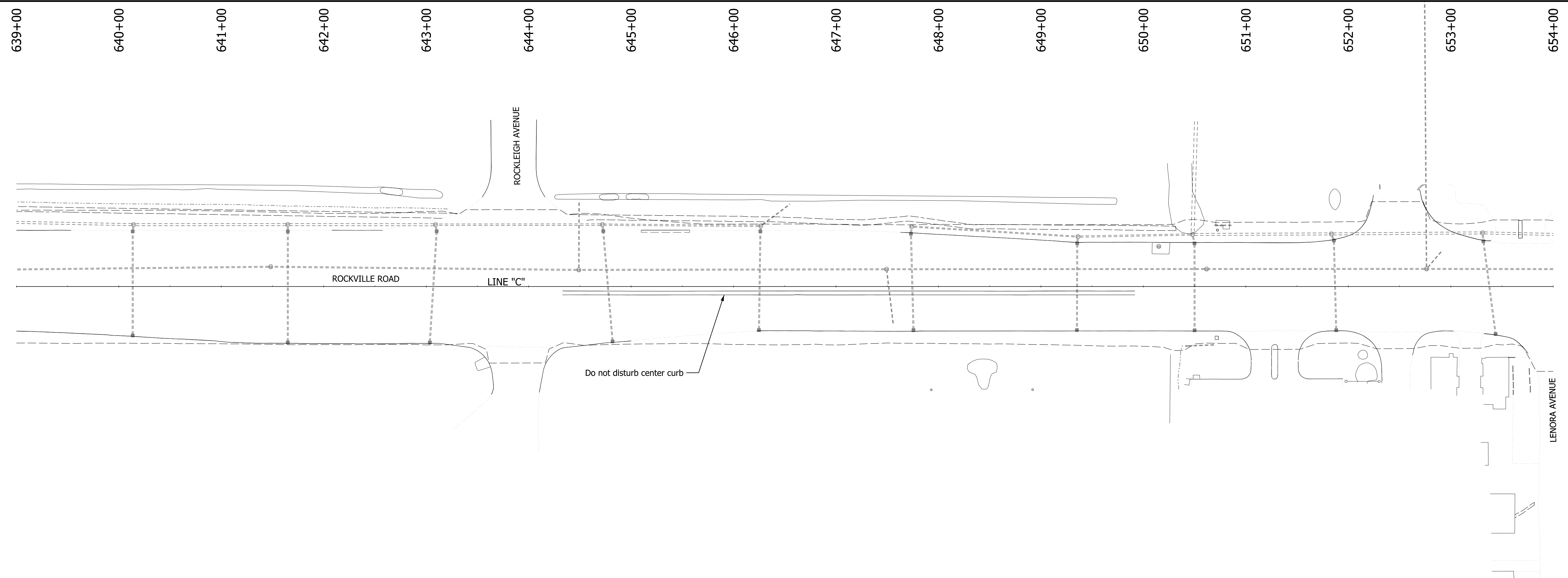
(T1) Temp. Pavement Marking, Removable, 4 In., (White, Solid)	(T6) Temp. Channelizing Pavement Marking, Removable, 8 In., (Yellow)	(P1) Temp. Pavement Marking, 4 In., (White, Solid)
(T2) Temp. Pavement Marking, Removable, 4 In., (Yellow, Solid)	(T7) Temp. Transverse Pavement Marking, Removable, 24 In. (White)	(P2) Temp. Pavement Marking, 4 In. (Yellow, Solid)
(T3) Temp. Pavement Marking, Removable, 4 In., (White, Dotted)	(XP) Exist. Pavement Marking	(P3) Temp. Pavement Marking, 4 In. (White, Dotted)
(T4) Temp. Pavement Marking, Removable, 4 In., (White, Broken)	(XR) Exist. Pavement Marking To Be Removed	(P4) Temp. Pavement Marking, 4 In. (White, Broken)
(T5) Temp. Channelizing Pavement Marking, Removable, 8 In., (White)		

STAGE 2 SUBMITTAL	RECOMMENDED FOR APPROVAL	
	DESIGNED: JAH	DRAWN: KGR
	CHECKED: RT	CHECKED: RT
	DESIGN ENGINEER DATE	

INDIANA DEPARTMENT OF TRANSPORTATION
MAINTENANCE OF TRAFFIC - PHASE 1 STA. 609+00.00 - STA. 639+00.00 "C"

HORIZONTAL SCALE 1" = 50'-0"	BRIDGE FILE
VERTICAL SCALE N/A	DESIGNATION 1800035
SURVEY BOOK	SHEETS of
CONTRACT R-41781	PROJECT 1800035

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 RGD:tlb



LEGEND

- Flashing Arrow Sign
- Channelizing Device
- Traffic Flow Direction Arrow
- Construction Sign
- Type III-B Barricade
- Construction Zone
- MOT Design Speed 35 MPH
- Temporary Pavement Area
- Temporary Traffic Barrier (TTB Type as Noted)

- T1 Temp. Pavement Marking, Removable, 4 In., (White, Solid)
- T2 Temp. Pavement Marking, Removable, 4 In., (Yellow, Solid)
- T3 Temp. Pavement Marking, Removable, 4 In., (White, Dotted)
- T4 Temp. Pavement Marking, Removable, 4 In., (White, Broken)
- T5 Temp. Channelizing Pavement Marking, Removable, 8 In., (White)
- T6 Temp. Channelizing Pavement Marking, Removable, 8 In., (Yellow)
- T7 Temp. Transverse Pavement Marking, Removable, 24 In. (White)
- XP Exist. Pavement Marking
- XR Exist. Pavement Marking To Be Removed
- P1 Temp. Pavement Marking, 4 In., (White, Solid)
- P2 Temp. Pavement Marking, 4 In. (Yellow, Solid)
- P3 Temp. Pavement Marking, 4 In. (White, Dotted)
- P4 Temp. Pavement Marking, 4 In. (White, Broken)

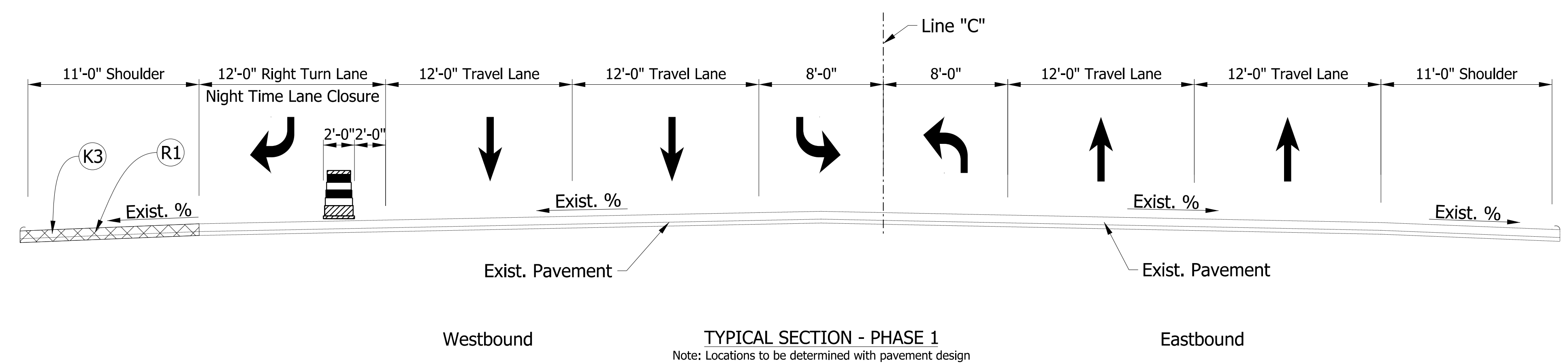
STAGE 2 SUBMITTAL	RECOMMENDED FOR APPROVAL	
	DESIGNED: JAH	DRAWN: KGR
	CHECKED: RT	CHECKED: RT
	DESIGN ENGINEER	DATE

INDIANA	
DEPARTMENT OF TRANSPORTATION	
MAINTENANCE OF TRAFFIC - PHASE 1	
STA. 639+00.00 - STA. 654+00.00 "C"	

HORIZONTAL SCALE	BRIDGE FILE
1" = 50'-0"	
VERTICAL SCALE	DESIGNATION
N/A	1800035
SURVEY BOOK	SHEETS
	of
CONTRACT	PROJECT
R-41781	1800035

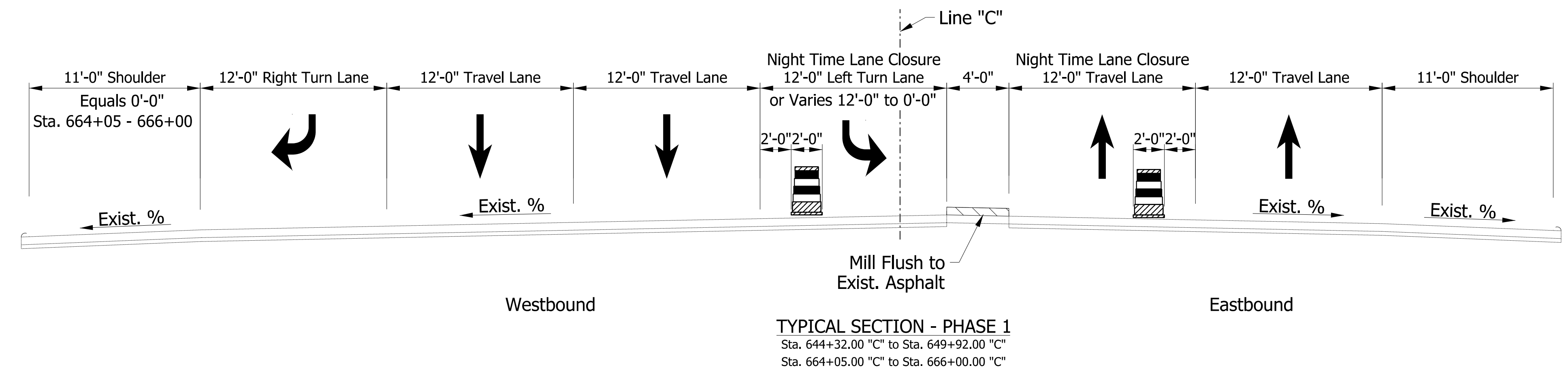
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Note to Reviewer:
Patching and/or shoulder strengthening shall be determined during pavement design.



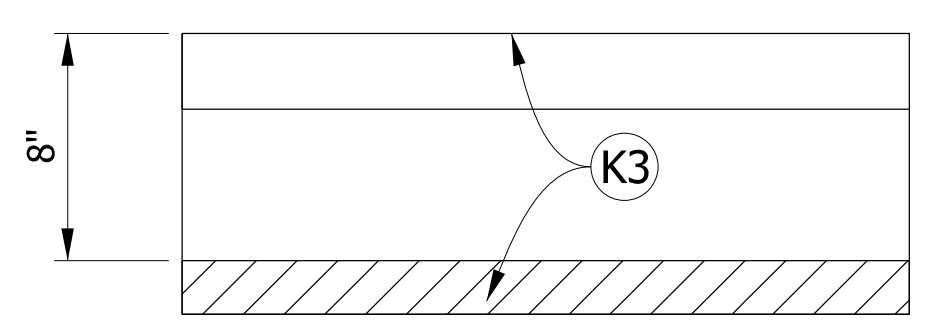
TYPICAL SECTION - PHASE 1
Note: Locations to be determined with pavement design

Note to Reviewer:
Maintenance of traffic for the median crossovers will be detailed at Stage 3, once final locations are determined during the TMP Process.

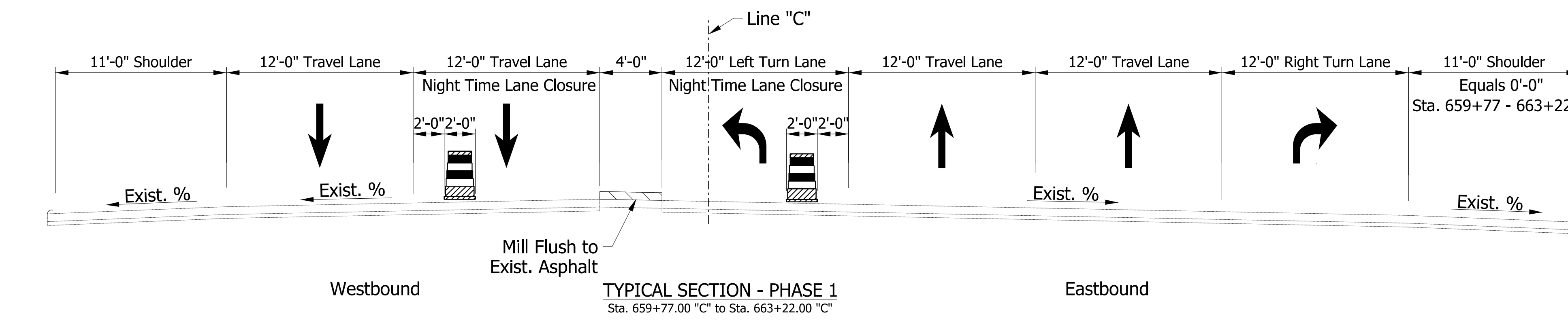


TYPICAL SECTION - PHASE 1
Sta. 644+32.00 "C" to Sta. 649+92.00 "C"
Sta. 664+05.00 "C" to Sta. 666+00.00 "C"

Phase 1 Notes:
1. Drums to be placed on shoulders during the daytime and peak hours.
2. Lanes may be closed at night and non peak hours to complete this work, see Unique Special Provision.



HMA Patching, Type C



TYPICAL SECTION - PHASE 1
Sta. 659+77.00 "C" to Sta. 663+22.00 "C"

- AREA OF CONSTRUCTION
- SHOULDER STRENGTHENING & PATCHING
- CONSTRUCTION DRUM
- HMA PATCHING
330 #/SYS HMA INTERMEDIATE, TYPE C ON
550 #/SYS HMA BASE, TYPE C ON
SUBGRADE TREATMENT, TYPE IC
- SHOULDER STRENGTHENING
MILLING, ASPHALT 2 IN
220 #/SYS QC/QA HMA 3, 70, SURFACE 9.5 MM

- Temp. Pavement Marking, Removable, 4 In. (White, Solid)
- Temp. Pavement Marking, Removable, 4 In. (Yellow, Solid)
- Temp. Pavement Marking, Removable, 4 In. (White, Dotted)
- Temp. Pavement Marking, Removable, 4 In. (White, Broken)
- Temp. Channelizing Pavement Marking, Removable, 8 In. (White, Solid)
- Temp. Channelizing Pavement Marking, Removable, 8 In. (Yellow, Solid)
- Temp. Transverse Pavement Marking, Removable, 24 In. (White)
- Exist. Pavement Marking
- Exist. Pavement Marking To Be Removed
- Temp. Pavement Marking, 4 In. (White, Solid)
- Temp. Pavement Marking, 4 In. (Yellow, Solid)
- Temp. Pavement Marking, 4 In. (White, Dotted)
- Temp. Pavement Marking, 4 In. (White, Broken)
- Temporary Traffic Barrier (TTB Type as Noted)

STAGE 2 SUBMITTAL

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____

DESIGNED: _____ JAH _____ DRAWN: _____ KGR _____

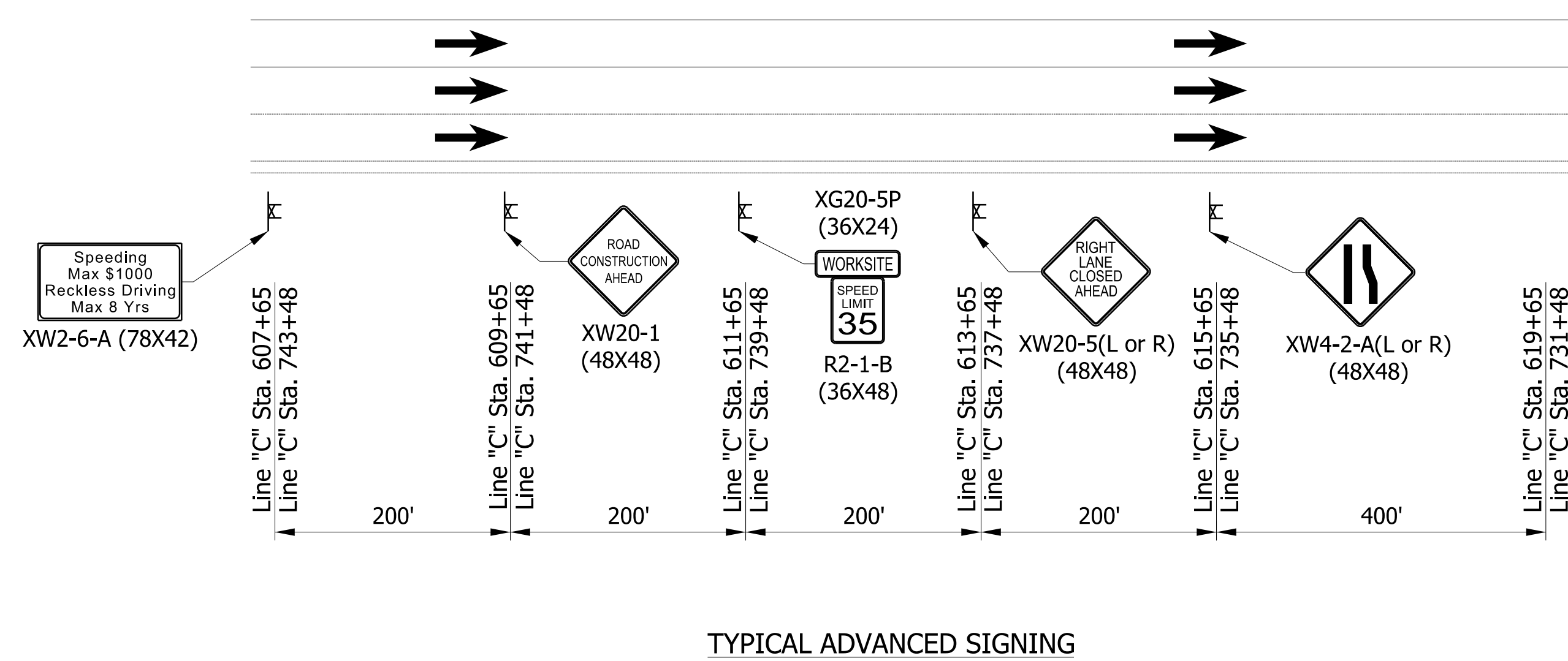
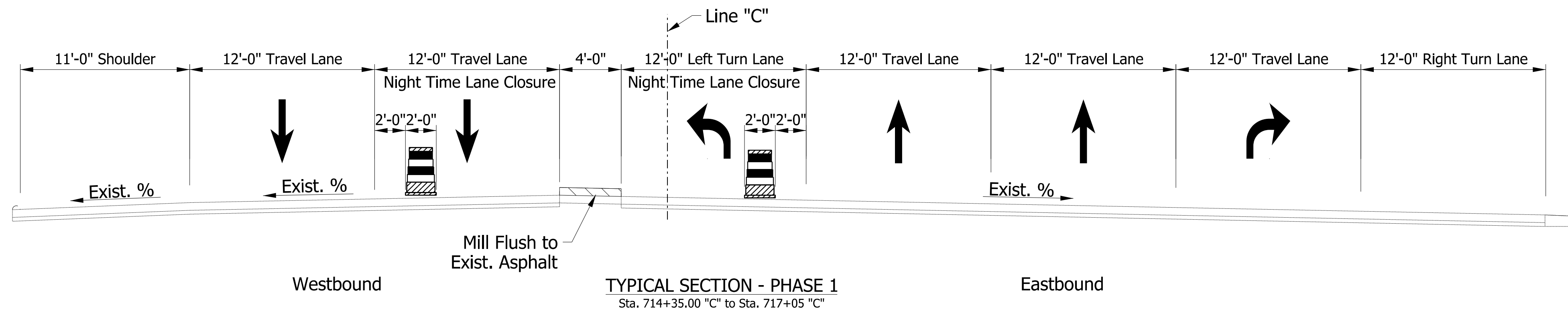
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INDIANA DEPARTMENT OF TRANSPORTATION

PHASE 1 TYPICAL SECTIONS

HORIZONTAL SCALE	BRIDGE FILE
3/16" = 1'-0"	
VERTICAL SCALE	DESIGNATION
3/16" = 1'-0"	1800037
SURVEY BOOK	SHEETS
	of
CONTRACT	PROJECT
R-41781	1800035

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- AREA OF CONSTRUCTION
- SHOULDER STRENGTHENING & PATCHING
- CONSTRUCTION DRUM
- HMA PATCHING
330 #/SYS HMA INTERMEDIATE, TYPE C ON
550 #/SYS HMA BASE, TYPE C ON
SUBGRADE TREATMENT, TYPE IC
- SHOULDER STRENGTHENING
MILLING, ASPHALT 2 IN
220 #/SYS QC/QA HMA 3, 70, SURFACE 9.5 MM

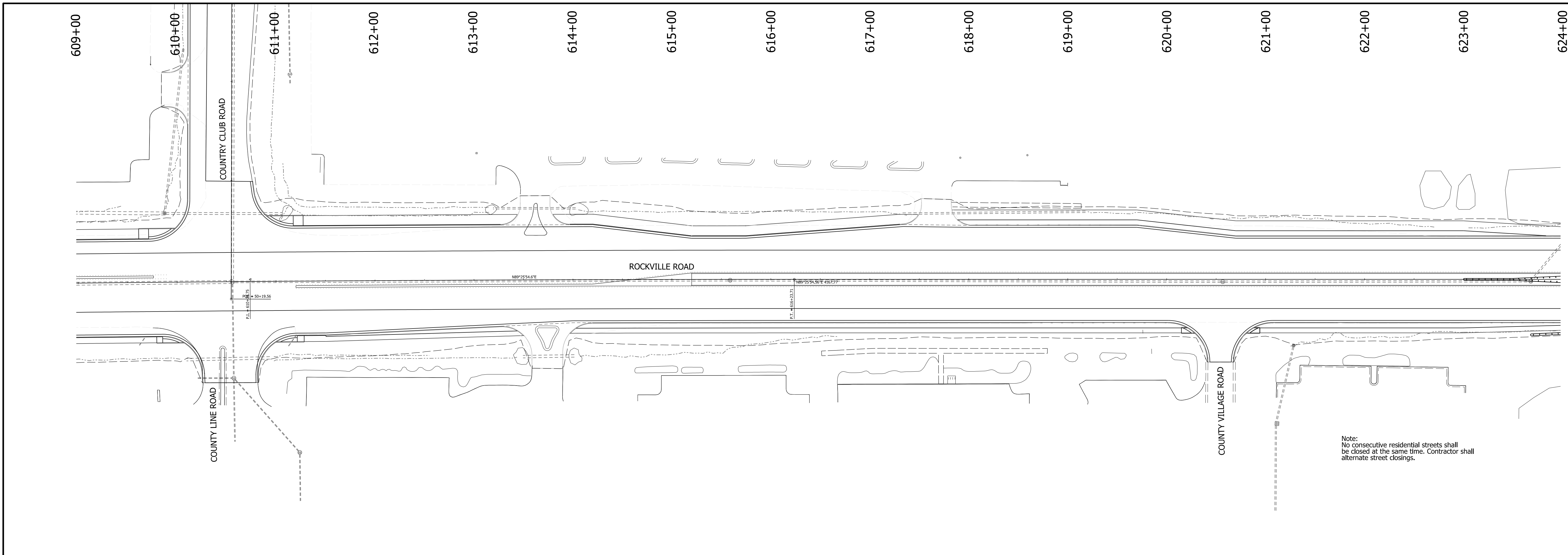
- (T1) Temp. Pavement Marking, Removable, 4 In. (White, Solid)
- (T6) Temp. Channelizing Pavement Marking, Removable, 8 In. (Yellow, Solid)
- (P1) Temp. Pavement Marking, 4 In. (White, Solid)
- (P2) Temp. Pavement Marking, 4 In. (Yellow, Solid)
- (T2) Temp. Pavement Marking, Removable, 4 In. (Yellow, Solid)
- (T7) Temp. Transverse Pavement Marking, Removable, 24 In. (White)
- (P3) Temp. Pavement Marking, 4 In. (White, Dotted)
- (P4) Temp. Pavement Marking, 4 In. (White, Broken)
- (T3) Temp. Pavement Marking, Removable, 4 In. (White, Dotted)
- (XP) Exist. Pavement Marking
- (XR) Exist. Pavement Marking To Be Removed
- (T4) Temp. Pavement Marking, Removable, 4 In. (White, Broken)
- (T5) Temp. Channelizing Pavement Marking, Removable, 8 In. (White, Solid)
- (T8) Temp. Channelizing Pavement Marking, Removable, 8 In. (White, Solid)
- (T9) Temp. Channelizing Pavement Marking, Removable, 8 In. (White, Solid)

STAGE 2 SUBMITTAL	RECOMMENDED FOR APPROVAL _____ DATE _____	
	DESIGN ENGINEER _____	
	DESIGNED: _____ JAH	DRAWN: _____ KGR
	CHECKED: _____ RT	CHECKED: _____ RT

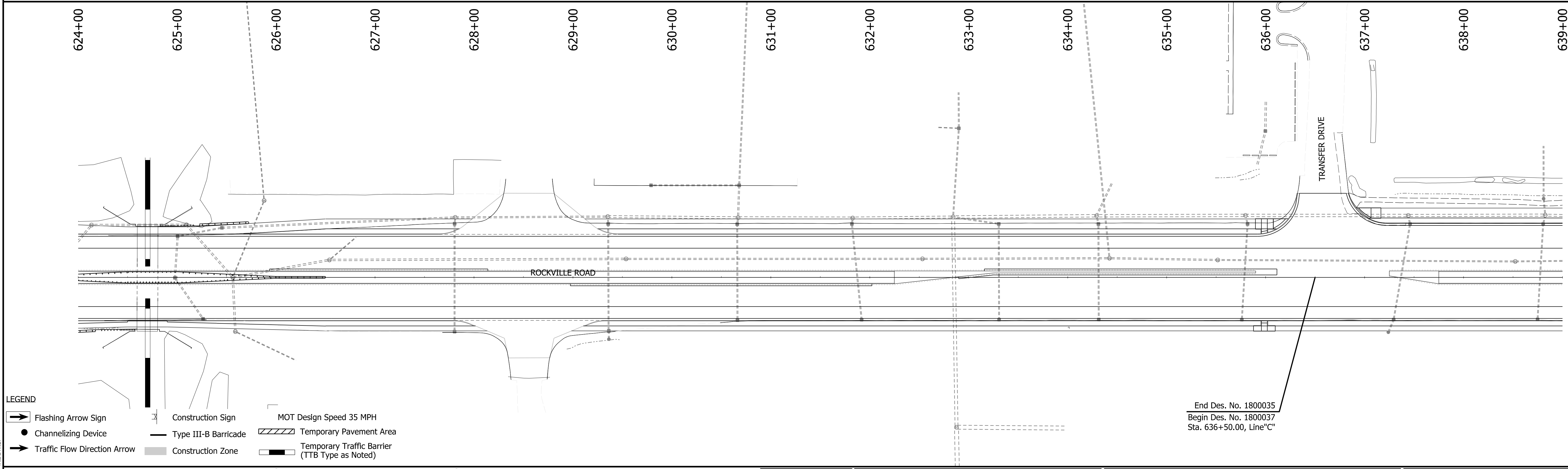
INDIANA	
DEPARTMENT OF TRANSPORTATION	
PHASE 1 TYPICAL SECTIONS	

HORIZONTAL SCALE	BRIDGE FILE
3/16" = 1'-0"	
VERTICAL SCALE	DESIGNATION
3/16" = 1'-0"	1800037
SURVEY BOOK	SHEETS
CONTRACT	PROJECT
R-41781	1800035

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Note:
No consecutive residential streets shall be closed at the same time. Contractor shall alternate street closings.



End Des. No. 1800035
Begin Des. No. 1800037
Sta. 636+50.00, Line "C"

LEGEND

Flashing Arrow Sign	Construction Sign	MOT Design Speed 35 MPH
Channelizing Device	Type III-B Barricade	Temporary Pavement Area
Traffic Flow Direction Arrow	Construction Zone	Temporary Traffic Barrier (TTB Type as Noted)

(T1) Temp. Pavement Marking, Removable, 4 In., (White, Solid)	(T6) Temp. Channelizing Pavement Marking, Removable, 8 In., (Yellow)	(P1) Temp. Pavement Marking, 4 In., (White, Solid)
(T2) Temp. Pavement Marking, Removable, 4 In., (Yellow, Solid)	(T7) Temp. Transverse Pavement Marking, Removable, 24 In. (White)	(P2) Temp. Pavement Marking, 4 In. (Yellow, Solid)
(T3) Temp. Pavement Marking, Removable, 4 In., (White, Dotted)	(XP) Exist. Pavement Marking	(P3) Temp. Pavement Marking, 4 In. (White, Dotted)
(T4) Temp. Pavement Marking, Removable, 4 In., (White, Broken)	(XR) Exist. Pavement Marking To Be Removed	(P4) Temp. Pavement Marking, 4 In. (White, Broken)
(T5) Temp. Channelizing Pavement Marking, Removable, 8 In., (White)		

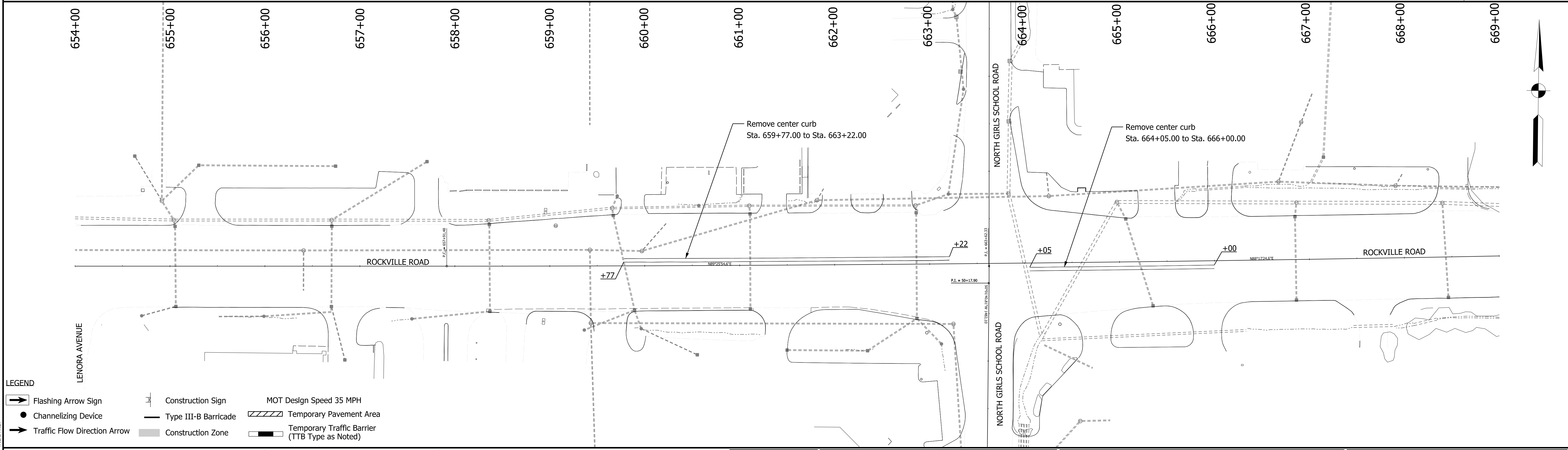
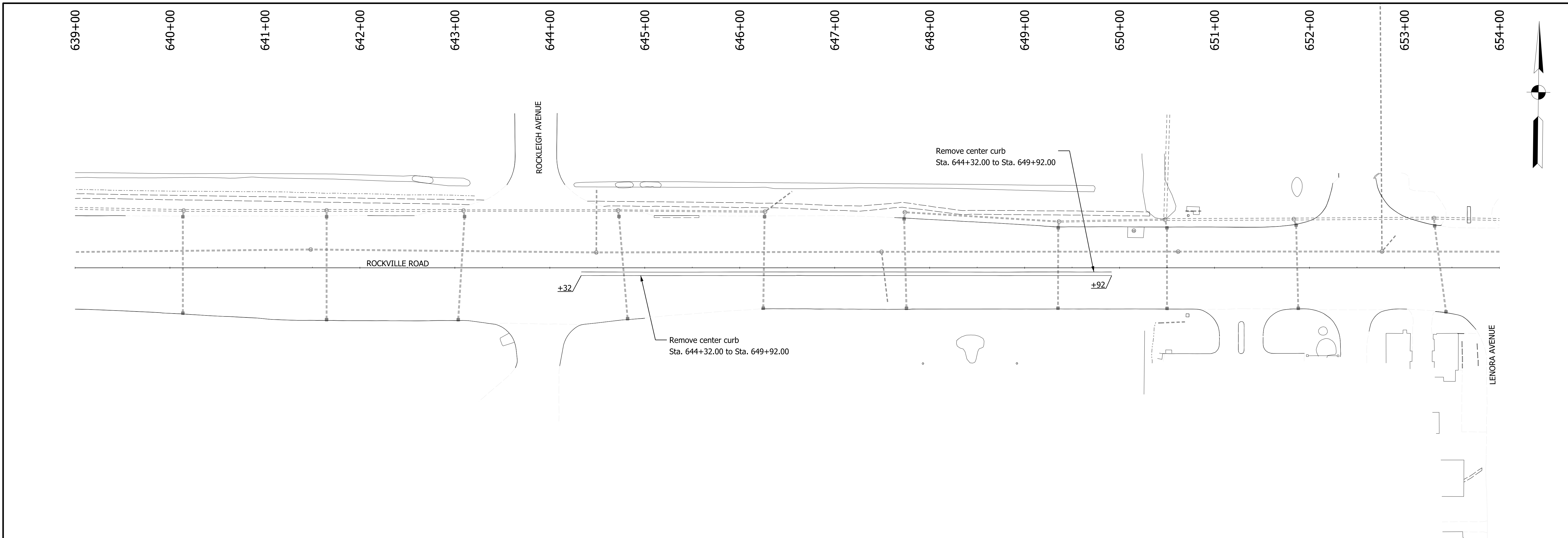
STAGE 2 SUBMITTAL	RECOMMENDED FOR APPROVAL	
	DESIGN ENGINEER	DATE
	DESIGNED: JAH	DRAWN: KGR
	CHECKED: RT	CHECKED: RT

INDIANA DEPARTMENT OF TRANSPORTATION
MAINTENANCE OF TRAFFIC - PHASE 1 STA. 609+00.00 - STA. 639+00.00 "C"

HORIZONTAL SCALE	BRIDGE FILE
1" = 50'-0"	
VERTICAL SCALE	DESIGNATION
N/A	1800037
SURVEY BOOK	SHEETS
	of
CONTRACT	PROJECT
R-41781	1800035

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 RGD:tbl



LEGEND

Flashing Arrow Sign	Construction Sign	MOT Design Speed 35 MPH
Channelizing Device	Type III-B Barricade	Temporary Pavement Area
Traffic Flow Direction Arrow	Construction Zone	Temporary Traffic Barrier (TTB Type as Noted)

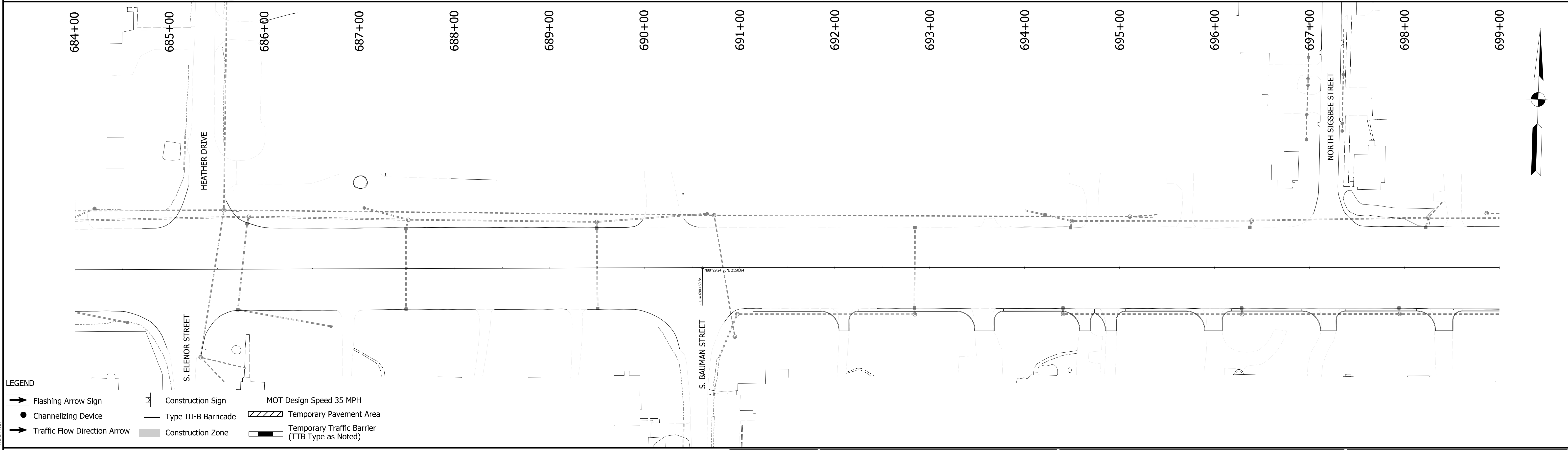
Temp. Pavement Marking, Removable, 4 In., (White, Solid)	Temp. Channelizing Pavement Marking, Removable, 8 In., (Yellow)	Temp. Pavement Marking, 4 In., (White, Solid)
Temp. Pavement Marking, Removable, 4 In., (Yellow, Solid)	Temp. Transverse Pavement Marking, Removable, 24 In. (White)	Temp. Pavement Marking, 4 In. (Yellow, Solid)
Temp. Pavement Marking, Removable, 4 In., (White, Dotted)	Exist. Pavement Marking	Temp. Pavement Marking, 4 In. (White, Dotted)
Temp. Pavement Marking, Removable, 4 In., (White, Broken)	Exist. Pavement Marking To Be Removed	Temp. Pavement Marking, 4 In. (White, Broken)
Temp. Channelizing Pavement Marking, Removable, 8 In., (White)		

STAGE 2 SUBMITTAL		RECOMMENDED FOR APPROVAL	
		DESIGNED: JAH	DRAWN: KGR
		CHECKED: RT	CHECKED: RT

INDIANA DEPARTMENT OF TRANSPORTATION MAINTENANCE OF TRAFFIC - PHASE 1 STA. 639+00.00 - STA. 669+00.00 "C"
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HORIZONTAL SCALE	BRIDGE FILE
1" = 50'-0"	DESIGNATION
VERTICAL SCALE	1800037
N/A	
SURVEY BOOK	SHEETS
	of
CONTRACT	PROJECT
R-41781	1800035

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LEGEND

Flashing Arrow Sign	Construction Sign	MOT Design Speed 35 MPH
Channelizing Device	Type III-B Barricade	Temporary Pavement Area
Traffic Flow Direction Arrow	Construction Zone	Temporary Traffic Barrier (TTB Type as Noted)

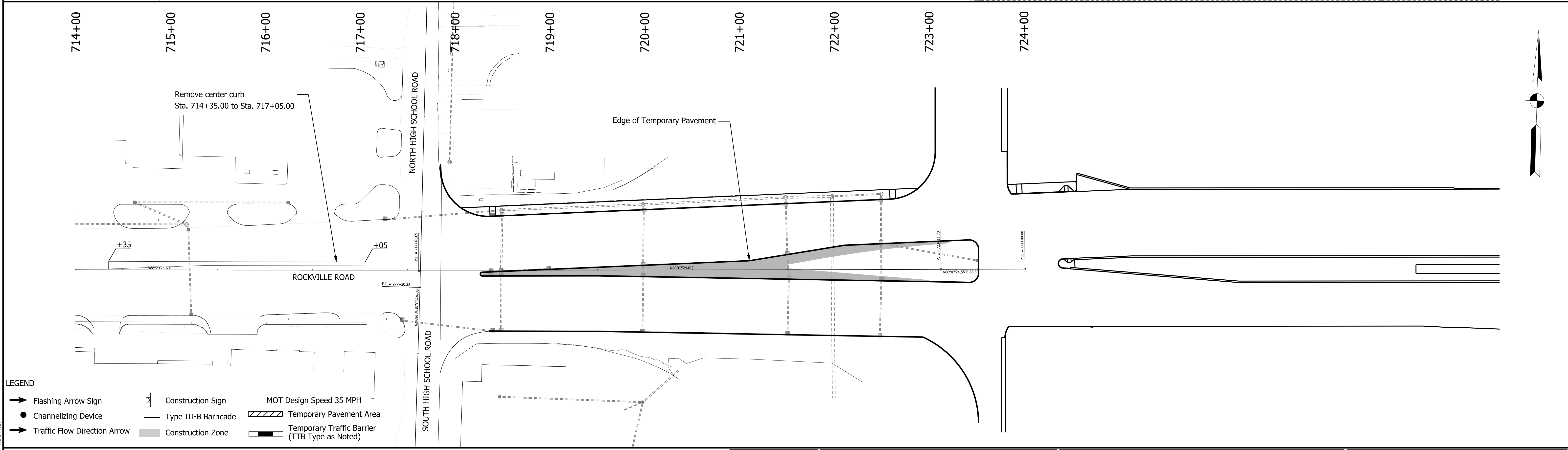
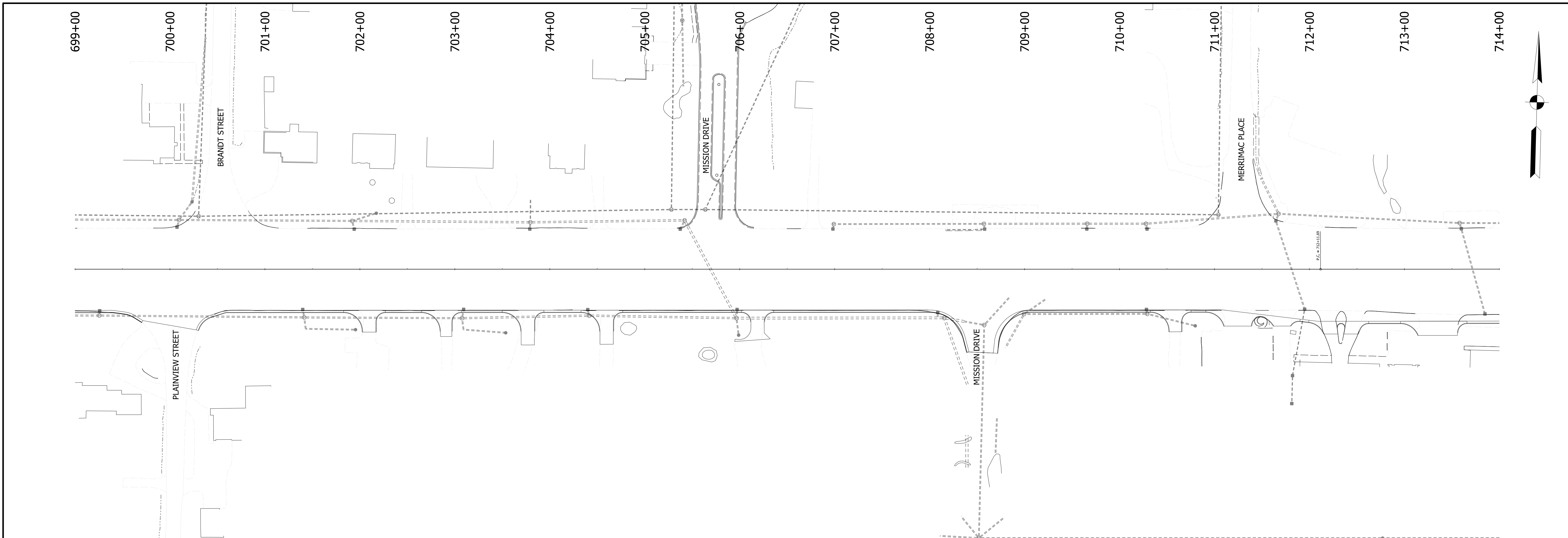
(T1) Temp. Pavement Marking, Removable, 4 In., (White, Solid)	(T6) Temp. Channelizing Pavement Marking, Removable, 8 In., (Yellow)	(P1) Temp. Pavement Marking, 4 In., (White, Solid)
(T2) Temp. Pavement Marking, Removable, 4 In., (Yellow, Solid)	(T7) Temp. Transverse Pavement Marking, Removable, 24 In. (White)	(P2) Temp. Pavement Marking, 4 In. (Yellow, Solid)
(T3) Temp. Pavement Marking, Removable, 4 In., (White, Dotted)	(XP) Exist. Pavement Marking	(P3) Temp. Pavement Marking, 4 In. (White, Dotted)
(T4) Temp. Pavement Marking, Removable, 4 In., (White, Broken)	(XR) Exist. Pavement Marking To Be Removed	(P4) Temp. Pavement Marking, 4 In. (White, Broken)
(T5) Temp. Channelizing Pavement Marking, Removable, 8 In., (White)		

STAGE 2 SUBMITTAL	RECOMMENDED FOR APPROVAL	
	DESIGNED: JAH	DRAWN: KGR
	CHECKED: RT	CHECKED: RT
	DESIGN ENGINEER	DATE

INDIANA DEPARTMENT OF TRANSPORTATION
MAINTENANCE OF TRAFFIC - PHASE 1 STA. 669+00.00 - STA. 699+00.00 "C"

HORIZONTAL SCALE 1" = 50'-0"	BRIDGE FILE
VERTICAL SCALE N/A	DESIGNATION 1800037
SURVEY BOOK	SHEETS of
CONTRACT R-41781	PROJECT 1800035

W:\Michael Baker Corp\2019-185 Michael Baker-- US36 Travel Lanes\Design\CAD\800037\SHR MOT 69900-72400 Ph 1.dgn
 11/11/2022
 REVISION 3.0
 PDP:ahdg
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 R020181



- LEGEND**
- Flashing Arrow Sign
 - Channelizing Device
 - Traffic Flow Direction Arrow
 - Construction Sign
 - Type III-B Barricade
 - Construction Zone
 - MOT Design Speed 35 MPH
 - Temporary Pavement Area
 - Temporary Traffic Barrier (TTB Type as Noted)

- | | | |
|---|--|--|
| (T1) Temp. Pavement Marking, Removable, 4 In., (White, Solid) | (T6) Temp. Channelizing Pavement Marking, Removable, 8 In., (Yellow) | (P1) Temp. Pavement Marking, 4 In., (White, Solid) |
| (T2) Temp. Pavement Marking, Removable, 4 In., (Yellow, Solid) | (T7) Temp. Transverse Pavement Marking, Removable, 24 In. (White) | (P2) Temp. Pavement Marking, 4 In. (Yellow, Solid) |
| (T3) Temp. Pavement Marking, Removable, 4 In., (White, Dotted) | (XP) Exist. Pavement Marking | (P3) Temp. Pavement Marking, 4 In. (White, Dotted) |
| (T4) Temp. Pavement Marking, Removable, 4 In., (White, Broken) | (XR) Exist. Pavement Marking To Be Removed | (P4) Temp. Pavement Marking, 4 In. (White, Broken) |
| (T5) Temp. Channelizing Pavement Marking, Removable, 8 In., (White) | | |

STAGE 2 SUBMITTAL	RECOMMENDED FOR APPROVAL	
	DESIGNED: JAH	DRAWN: KGR
	CHECKED: RT	CHECKED: RT
	DESIGN ENGINEER _____ DATE _____	

INDIANA DEPARTMENT OF TRANSPORTATION
MAINTENANCE OF TRAFFIC - PHASE 1 STA. 699+00.00 - STA. 724+00.00 "C"

HORIZONTAL SCALE	BRIDGE FILE
1" = 50'-0"	
VERTICAL SCALE	DESIGNATION
N/A	1800037
SURVEY BOOK	SHEETS
	of
CONTRACT	PROJECT
R-41781	1800035