

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

Road No./County:	US 36 (State Road [SR] 9/SR 67), Madison County
Designation Number(s):	1702936 and 1802854 (State) and 2001127, 2300272, and 2300273 (Local Public Agency (LPA))
Project Description/Termini:	Combined State (US 36/SR 9 Added Travel Lanes) and LPA (Pedestrian Connectivity Project) Project along SR 9 corridor from 0.28 mile south of SR 38 to Huntsville Road

	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

INDOT DE Signature and Date

INDOT ESD Signature and Date

FHWA Signature and Date

Release for Public Involvement

N/A

INDOT DE Initials and Date

ADWP

November 19, 2024

INDOT ESD Initials and Date

Certification of Public Involvement

INDOT Consultant Services Signature and Date

INDOT DE/ESD Reviewer Signature and Date:

Name and Organization of CE/EA Preparer:

Jennifer Rhodes, ASC Group, Inc.

Indiana Department of Transportation

County Madison Route US 36 (SR 9/SR 67) Des. No. 1702936 and 1802854 (State)
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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.**

	Yes	No
Does the project have a historic bridge processed under the Historic Bridges PA*?	☐	☒
If No, then:		
Opportunity for a Public Hearing Required?	☒	☐

**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 letters were mailed to potentially affected property owners near the project area on June 9, 2020; March 23, 2022; and May 4, 2023, notifying them about the project and that individuals responsible for land surveying and field activities may be seen in the area. Sample copies of the Notice of Entry letters are included in Appendix G (Appendix G: G-2 to G-4).

Section 106

To meet the public involvement requirements of Section 106, a legal notice of the Federal Highway Administration's (FHWA's) finding of "No Adverse Effect" was published in the *Daily Reporter* on June 22, 2022, offering the public an opportunity to submit comment pursuant to 36 CFR 800.2(d), 800.3(e), and 800.6(a)(4). The public comment period closed 30 days later on July 25, 2022. The text of the public notice and the affidavit of publication appear in Appendix D (Appendix D: D-97 to D-100). On June 22, 2022, the Shawnee Tribe responded stating that they concur that no known historic properties will be negatively impacted and that they have no issues or concerns at this time. However, if archaeological materials are encountered during construction, use, or maintenance of this location, then they would like to be re-notified to resume immediate consultation (Appendix D: D-105 to D-106). On June 28, 2022, Miami Tribe of Oklahoma responded stating that they had no objection to the project and are not aware of any documentation linking the project area to a Miami site; however, if any human remains or Native American cultural material falling under Native American Graves Protection Act (NAGPRA) or archaeological evidence is found, then the Miami Tribe requests immediate consultation (Appendix D: D-107). On June 29, 2022, the State Historic Preservation Office (SHPO) responded stating that they concur with the "No Adverse Effect" finding (Appendix D: D-108 to D-109).

Due to combining the State Project (US 36/SR 9 Added Travel Lanes) and the LPA Project (Pedestrian Connectivity Project) into a single National Environmental Policy Act (NEPA) Categorical Exclusion (CE) document, the Indiana Department of Transportation (INDOT) reopened the Section 106 consultation. Portions of the LPA Project extended outside of the Area of Potential Effects (APE) for the State Project and additional Section 106 investigations were conducted. To meet the public involvement requirements of Section 106, a second legal notice of FHWA's finding of "No Adverse Effect" was published in *The Herald Bulletin* on March 5, 2024, offering the public an opportunity to submit comment pursuant to 36 CFR 800.2(d), 800.3(e), and 800.6(a)(4). The public comment period closed 30 days later on April 4, 2024. The text of the public notice and the affidavit of publication appear in Appendix D (Appendix D: D-155 to D-157). No comments were received by the public comment period deadline.

Public Meeting Information:

A public meeting was held on June 7, 2023. It consisted of a 30-minute presentation followed by an open house where the project team presented their findings in depth, answered one-on-one questions and received feedback from the public. A copy of the news release, slide show, map boards, roll plots, a handout available at the meeting, and sign in sheets can be found in Appendix G (Appendix G: G-5 to G-38). Several comments were received at and following the public meeting.

Roll Plot Sheet Comments:

A total of 14 comments were noted with post-it notes during the public meeting on the displayed roll plot sheets. These have been added to the roll plot sheets and can be found in Appendix G (Appendix G: G-30 to G-35). The comments ranged from adding crossing and turns lanes, checking turning options onto State Street/R&R, creating access to Central Way, extending current turn lanes, moving a ditch and creating a new catch basin with a headwall and tile for an underground spring, adding traffic control device

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or roundabout, redoing traffic analysis, adding signal preemptions for emergency vehicles at the railroad crossing, closing an access to the gas station at US 36 and State Street, and to reset school speed limit signs.

Meeting Comment Cards:

Several people left comment cards at the public meeting on June 7, 2023 (Appendix G: G-41 to G-49). Comments ranged from wanting a private drive added, adding a stop light/roundabout at the SR 67/Angle Road and SR 67/Water Street intersections, ability to turn left from Needler's rear exit and into the furthest east drive into Pendleton Heights High School (PHHS), concerns with the four-lane intersections with limited turning and potentially increased speeds, concerns about proposed stripping and U-turns limiting turning that would create reduced business for all businesses in the area, impacts to private property, and safety of elderly walkers along Water Street.

- Corresponding responses to those comments ranged from no driveways would be removed and any new drives would be the property owner's responsibility, a traffic light is not warranted and a roundabout is outside of the project's scope, all turns would be allowed at Needler's rear exit and at the east drive to PHHS, the four lanes would reduce the queuing length while adding turning opportunities and a small loon would help with the Water Street U-turns, stating project goals are to improve traffic flow and safety while eliminating most left turns to reduce conflict points, drainage would be improved while a detention basin would be constructed, and that the project is not expected to impact Hayden Way traffic or to increase Water Street traffic.

Comments Received Prior to/After the Public Meeting:

Several comments were received regarding the public meeting. Those comments include:

- A couple of commenters inquired about the ability to get a copy of the project plans.
- Numerous concerns were received that ranged from concern about adding traffic signals to the Water Street intersection and the suggestion of a roundabout addition. The median on SR 67 should be extended to Water Street to prevent turns across three traffic lanes. A small turn lane into CVS should be added onto SR 67. The southern SR 67 entrance to the GoGet gas station should be closed, while the northern entrance should be widened. A dedicated right turn lane should be added on SR 67 northbound (NB) onto US 36 east so that there is a dedicated turn lane and two through lanes. The eastbound (EB) right turn lane on SR 67 approaching State Street should be extended south by 100 feet (ft). On EB State Street before and at the SR 67 intersection there should be a dedicated turn lane from CVS to SR 67 in order to reduce backups and keep traffic moving. The median on State Street should be stopped at Central Way or realigned to permit left turns onto Central Way while preventing left turns onto State Street. The median length would remain the same but there would be a dedicated left turn lane on the left side of the median. The CVS entrance on SR 67 should be extended to O'Reilly's/State Street, while CVS' State Street entrance should be removed. The road would go behind O'Reilly's and meet up with the entrance road. A tunnel would be a better approach than the crossing signal system on SR 38 from the PHHS to Wendy's. Hayden Way should be extended behind the businesses on SR 67 for additional access. The project should realign US 36 and Central Way to be more perpendicular to SR 67 and State Street, respectively. The existing right turn lane on US 36 westbound (WB) at SR 67 should be extended 75 ft to keep turning cars separated.
- The Water Street intersection could be made safer with a traffic light if a roundabout cannot be added (even if realignment is not possible).
- There was a concern with the SR 67 at US 36 intersection regarding the addition of a detention basin and possible roundabout and the surrounding property at that corner.
- Another commenter also had numerous concerns. They were pleased with the introduction of pedestrian paths on US 36 and SR 38 and the effort to connect the school to the shopping center. However, they were concerned about crossing multiple traffic lanes and was opposed to the additional through and turn lanes which would make it harder to cross roadways. The Town has outgrown the automobile infrastructure and should look for ways to solve the traffic problem by possibly rerouting traffic around the Town to unite the community with links via a trail system. Surrounding towns are lowering main north-south roads to underneath east-west roads to better connect the communities. Indianapolis is considering lowering I-65 to allow pedestrian friendly roads over the interstate to better connect neighborhoods. The Town has said that it wants to remain a walkable town and widening roads increase speeds and reduces walkability. The commenter believes that only evening commutes are congestion for this corridor and wonders why motorists are not using I-69. The SR 67 corridor between SR 9 and the Fall Creek Bridge is a key area that needs slower/narrower lanes with more pedestrian friendly roundabouts or lowered roads to make the Town feel connected. The commenter believes that this project should be included in the planning process for the Madison County transportation master plan that is underway.

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- The commenter appreciated the detailed response and is sorry that more cannot be completed to address the Town's division by the major roadway. They prefer that things are done once even if more costly if it saves money in the future; however, they understand that this is not always feasible. Are there images of planned improvements that are accessible to the public?
- Several additional concerns were sent. Was a pedestrian survey completed? The project should prioritize pedestrian traffic crossing the SR 38/SR 67 intersection due to the primary pedestrian crossing being from the PHHS to the Town on the south side of SR 38. The designed median does not appear large enough to hold cross country teams (who cross at O'Reilly's Auto with no crosswalk) or large numbers of students and a grassy median would feel safer. There could be a pedestrian only crossing cycle, which is where pedestrians can cross all four ways at once. While the crosswalk crossing at the SR 38 and SR 67 intersection looks better for pedestrians, there is no reason for pedestrians to go this way and it would encourage pedestrian traffic crossing all of the business vehicle entrances. The project should consider connecting the site hawk crossing with the pedestrian trail behind the businesses, which would ultimately connect to the new crossing at the US 36/SR 67 intersection. The commenter is very happy with the connecting trail to the library next to Pizza Hut and the proposed safer crossing of SR 67 to get to the grocery store/businesses. This crossing should be continued to Dairy Queen as the sidewalk already exists from the access drive to County Road (CR) 300 West (W). A crosswalk should not be added as it is not safe to walk on the north side of US 36 and there would be no pedestrian access to any of the businesses in the shopping center with Papa Johns. A new traffic signal would be added at US 36 and CR 300 W, while a roundabout is preferred instead. The residential housing on US 36 to Needler's Plaza and the schools on the north side of US 36 is a significant pedestrian route that has not been addressed. The project is enticing people to cross at a larger intersection instead of where there is much less traffic and that does not make sense. Additionally, this would allow a future pedestrian access to Dollar General from the new trail system using CR 300 W instead of SR 67. What would happen at the SR 67 and Angle Road intersection. Currently, the railroad crossing is closed to traffic, but this is not shown on the plans. Ideally, a roundabout in this location would allow better traffic flow and slower traffic on SR 67 heading into the busy intersection. Adding medians here would divert pedestrians and allow for the crossing of SR 67 into the residential part of the Town across the railroad tracks.
- The commenter really appreciates the patient responses, but is not convinced that pedestrians would be safer. What transportation tools would be used to increase pedestrian safety at the crossing SR 67 at the SR 38/SR 67 intersection from R&R Market to CVS?
- The commenter feels better regarding the specific improvements to the SR 38/SR 67 crossing and appreciates the detail. While rerouting truck traffic was not part of this project, there should be a long term plan to abandon SR 67 as a truck traffic route, similar to Fortville, McCordsville, and Ingalls. It would be in the State's interest to prioritize the growth of these communities as they are slated to increase in population and have a quality of life that draws out-of-state remote workers to the state. Increasing the quality of the community's life by making pedestrian friendly areas where there is growth should be a priority for the State. Communities should not have to advocate for themselves for this as it should be a given. The commenter appreciates INDOT following federal and state standards; however, pedestrian deaths have increased to such an alarming level in the U.S. A better standard/measure is a "best practices to protect pedestrians" and INDOT should find creative solutions to separate high-speed or high-weight vehicular traffic from areas where pedestrians walk. A part of the reason this project has frustrated her was due to reading: <https://www.ghsa.org/resources/Pedestrians23>.
- The fire department always uses the viaduct for calls in their south and east district. During peak traffic times, there are issues clearing the EB traffic due to oncoming traffic turning south to west. If there is a divider, then the fire department would not be able to travel in the WB lanes. If all three proposed EB travel lanes are filled due to a signal traffic, then the fire department would not be able to proceed due to unmovable stopped traffic. Traffic would be increased on CR 300 W based on the increase of medians and alternate traffic flow. Many parents/students use CR 300 W during school hours to get to and from the middle school and to gain access to the PHHS parking lot. If there is a barrier on State Street, east of the SR 67 interchange, then more traffic would be forced onto CR 300 W, which is not wide enough for a lot of traffic. The commenter believes that Needler's entrance, on the back side of Speedway and Hardees, is a private drive. If there are medians on SR 67 north and south of US 36/SR 38, then there would be delayed access into businesses on the west side of SR 67 due to needing to use the nearest U-turn. If there is a fire in the area that needs the use of a fire hydrant, then the fire department would have to shut down the roadway and drag hoses by hand over the median wall to the other side of the roadway. Currently, when there is an accident on the interstate that shuts it down for a while, semi traffic backs up to

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Huntsville. If there are barriers, then it would be harder for emergency vehicles to maneuver around the semis. The Water Street corridor is not wide enough for sustainable traffic flow. The areas near the pool and nursing homes have reduced speed limits and with the traffic restrictions nearby, these areas would be used more than they are designed for. U-turns would not be an option for fire trucks. The commenter does not like this design and is sure that there are other options than raised medians.

- A meeting was requested to discuss the commenters questions on this project. They are interested in building a Culver's in this area and wants to know if it would be impacted. Where the median would be added, what land would be acquired, and what the project timing would be?

Responses to those comments include:

- The information from the meeting would be posted on the [http://on.in.gov/US36ATL website](http://on.in.gov/US36ATL).
- The project's primary purpose and is to address the corridor's capacity issues and add pedestrian connectivity and amenities, while improving safety is a project goal due to significant crash history. A roundabout is outside of the project scope and if it was determined necessary would be completed as a separate project with its own funding. The painted medians would only allow emergency vehicles to cross, which was a safety concern of the Pendleton Fire Department. Extending the physical median would require additional funding. SR 67 would be two through lanes throughout the corridor which would allow other vehicles to go around turning vehicles. Gas stations provide separate entrances to allow for fuel truck access and due to the medians, all drives will be right-in/right-out only. Fuel trucks are not allowed to use State Street due to trucks not being allowed through the town center. A dedicated right turn lane is not warranted on SR 67 NB at US 36. The right turn lane on SR 67 NB at State Street will remain the same length due to queueing not being an issue as cars can turn right on red. The Level of Service (LOS) analysis determined that all future movements at the SR 67 NB at US 36 intersection, SR 67 NB at State Street, and the shared right turn/through lane on State Street would all be within an acceptable range. A revised median would shorten the left turn lanes onto SR 67 and could lead to driver confusion due to the closeness of the main turn lanes. An extension of the CVS entrance and Hayden Way is beyond the project's scope. A pedestrian tunnel across SR 67 was considered and was estimated to cost \$1–2 million. Central Way would be changed to a right-in/right-out configuration and realigning it would have minimal benefit. The current design would extend the existing right turn lane on US 36 at Sr 67 by 500 ft.
- Based on the analysis to date, a signal is not warranted at the Water Street intersection. However, a small loon will be added to help with the Water Street U-turns.
- The northeast corner of SR 9/US 36 would involve some land takes as a detention basin would be added in the open area as well as some land along SR 9. No land takes were planned on the west side of SR 9 and no roundabouts are planned. Plan sheets were sent to the commenter.
- The benefit of a Pedestrian Hybrid Beacon (PHB), also known as a Hawk Signal, is that it uses a red signal light that can be enforced by police and is more easily understood by the traveling public. Safety would be improved by providing a raised median with a refuge which would reduce the number lanes crossed and would make the roadway seem narrower than it is which would cause drivers to subconsciously feel the need to drive slower than normal. The project would also add lighting for the crossing which would make the pedestrians using the crossing more visible when there are low light conditions such as nighttime, early morning, or during inclement weather. Improving pedestrian infrastructure is a major goal of this project, while vehicular mobility is of great importance to INDOT and is the primary goal of this project. While there are other methods that could be used, many of those referenced have a significantly higher cost and would be beyond the scope of budget for this project. The additional lane width would be accounted for by improving crosswalks and providing median refuges where possible. This location has more crashes than should be expected and while speed is one factor, another factor is the lack of traffic control and channelization. The proposed medians should help address both factors. Many vehicles use this corridor instead of I-69 because SR 67/SR 9 connects to different locations than I-69. There are many trucks because this route is on the national truck network and provides connectivity more from the south than I-69 which connects from the west and the lanes need to be kept at a reasonable width to accommodate the trucks that use this corridor. INDOT has worked very closely with the Town on this project and while it cannot meet all of their objectives in this project, it does not preclude any of their future plans and is incorporating some of their pedestrian improvement plans with this project.
 - A link to the information regarding the public meeting was sent: <http://on.in.gov/US36ATL>.
 - No pedestrian studies were completed; however, the Town started a project to improve connectivity since there are currently gaps. Improving pedestrian infrastructure is a major goal of this project; however, this route is on the national truck network and is a major vehicular junction between multiple state roads so vehicular mobility is of

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great importance to INDOT and is the primary goal of this project. The project would provide a median refuge, which should help but it could not be made any larger. Due to the amount of vehicular traffic, it would not be possible to have a pedestrian only crossing cycle without creating traffic issues. The larger crossing at the SR 38 and SR 67 intersection would be for the shared-use path that connects PHHS to other parts of the Town to the northwest. The pedestrian signal location was decided based on where PHHS students typically cross SR 38, which is at Needler's Plaza's west entrance. INDOT is glad that you are happy with the library connecting trail addition. The crosswalk has been added to provide a safe pedestrian crossing across US 36, while the sidewalk is expected to be eventually extended. The signal at US 36 and CR 300 W would only be a temporary signal during construction due to an expected increase in traffic going through this intersection and the intersection would return to a four-way stop once construction is complete. There are minimal proposed changes at the Angle Road intersection. The US 36/SR 67 roadway would be increased to two through lanes in each direction where one of which would be terminated in a left turn into PHHS. A roundabout is outside of the scope of this project and would need to be addressed in a separate project. INDOT recommends reaching out to the following organizations and committees that could determine if a project is needed and could acquire the necessary funding: INDOT, Madison County Council of Governments (MCCOG), Town, and South Madison Community School Corporation School Board.

- There is a website with project information: <https://on.in.gov/US36ATL>. The layout of SR 67 crossing is shown in our visualization in the roll plots: https://www.in.gov/indot/files/PublicMeetingRollPlots_SR38.pdf. The crossing's South Leg (US 36/SR 67) would have a refuge in the median, which would be designed for slower moving pedestrians that may have difficulty completing the crossing in the signal time provided. The sidewalk and shared-use path near the SR 38/SR 67 intersection would be pulled back from the curb and a grassy area would be added between the sidewalk and the roadway. The corners with the gas station and CVS would have a 6-ft wide sidewalk with a 6-ft wide grassy area, while the Star Financial Bank and R&R Market corners would have a 10-ft wide shared-use path with a 2-ft wide grassy area. This would be much safer and more comfortable for pedestrians than the current sidewalk. The project would be adding in the missing crosswalks on US 36 where it splits off to the east and North Legs (US 36/SR 67). The crossing of the North Leg (US 36/SR 67) would have a similar median refuge as the South Leg (US 36/SR 67). All of the crossings would have accessible pedestrian signal (APS) push buttons along with Americans with Disabilities Act (ADA) compliant curb ramps. Crosswalk pavement markings would follow the Indiana Manual on Uniform Traffic Control Devices (MUTCD) requirements using a "piano key" configuration to make the crosswalk more visible to drivers. While this crossing is not a primary focus of this project, INDOT does take the design of these crossings very seriously and ensures that it would meet all federal and state requirements. Additionally, a shared-use path would be included in this project. It would run on the east side of US 36/SR 67 that crosses SR 38 at the State Street/US 36/SR 9/SR 67 Junction and then crosses US 36/SR 67 just south of the US 36/SR 9/SR 67 Junction (where US 36 splits off to the east). The shared-use path crossings would be wider and would have a higher capacity than the other crossings.
- A discussion was had regarding the Hughes property and its detention basin. The property owner is looking to sell or develop the land. A link to the website was given in order for the commenter to review the project plans.
- There are many stakeholders for this project with competing interests that the Town is trying to balance. Two of the most important factors, capacity and safety, are being addressed, which is why the added travel lanes and raised medians have been proposed; however, the Town also wants to address and find solutions to your concerns where possible while still meeting the project's goals. The planned divider only extends to just west of Central Way, so if there is a traffic backup in all three EB lanes, then it should be noticeable while approaching and the WB lanes could still be used if needed. The project could also investigate the use of emergency vehicle preemption. (Note: An emergency vehicle preemption is designed to give emergency response vehicles a green light on their approach to a signalized intersection, while providing a red light to conflicting approaches.) Left turns would be restricted at the median east of the SR 67 intersection into Needler's west entrance and at PHHS's west entrance; however, the east entrances would still be open for left turns. CR 300 W is approximately 20-ft wide and is wide enough for passenger car traffic and should not be that restrictive to traffic. The designers understand that this is a private drive and that is why it is not shown as an alternate through route for traffic during the planned movement restrictions. However, it is shown as an alternate way to get to those destinations. The curbs would only be 6–8-inches high, so emergency vehicles should be able to traverse over them directly if needed in an emergency. A median wall is not proposed due to this project utilizing grassy medians or concrete center curb depending on the location. These would only be a maximum of 8-inches high, so these can be traversed by foot and trucks if needed in an emergency. If hydrant usage is a serious concern, then you should request that the Town water utility add a fire hydrant on the opposite

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side where there is not one currently prior to the road being reconstructed. In addition, this project is adding travel lanes, so any increase in diverted I-69 traffic should create less congestion on SR 67. The restrictions in movement would be limited and would not be expecting a substantial amount of traffic to divert to Water Street. The Water Street corridor is somewhat narrow with a total pavement width of 18–20 ft, but that is wide enough for passenger car traffic and should not be that restrictive to traffic. There would only be painted medians north of the US 36/SR 9/SR 67 Junction (where US 36 splits off to the east), which could also be used for a multi-point turn around. Additionally, at the US 36/SR 9/SR 67 Junction (where US 36 splits off to the east), there is just enough room for a fire truck to make a U-turn maneuver within the intersection footprint.

- Medians would be added on US 36/SR 67 from Angle Road to State Street/SR 38, on State Street from Central Way to US 36/SR 67, on SR 38 from US 36/SR 67 to the east PHHS/east Needler's entrances, on US 36/SR 67 from Angle Road to State Street/SR 38, on US 36/SR 67 from State Street/SR 38 to US 36 where it splits off to the east, on US 36 where it splits off to the east from SR 67 to Needler's east entrance, and on SR 67/SR 9 from US 36 where it splits off to the east to the entrance into Jimmie's Dairy Bar. A total of 5.12 (now 5.122) acres of permanent right-of-way (ROW) would be acquired and 0.74 (now 0.736) acre of temporary ROW would be needed for construction. If the commenter is interested in a particular parcel, then more information could be provided as needed. Currently, the project letting is planned for Summer 2024 and construction is expected to be completed by the end of the 2025 construction season.

The project will meet the minimum requirements described in the current *Indiana Department of Transportation (INDOT) Project Development Public Involvement Procedures Manual* which requires the project sponsor to offer the public an opportunity to submit comments and/or request a public hearing. Therefore, a legal notice will appear in a local publication contingent upon the release of this document for public involvement. This document will be revised after the public involvement requirements are fulfilled.

Public Controversy on Environmental Grounds

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 and the Town of Pendleton (Town) INDOT District: Greenfield

Local Name of the Facility: US 36 (SR 9/SR 67)

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

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

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.

Need

The need for this combined project is due to congestion issues that currently exist along the US 36 (SR 9/SR 67) corridor. The US 36 (SR 9/SR 67) corridor becomes congested during the peak morning and evening traffic hours, due to the time it takes for turning vehicles to clear the intersection during light changes. Currently, this corridor has insufficient room to facilitate flow of peak traffic volumes with the existing intersection infrastructure. The traffic volumes are anticipated to increase by the design year. This increase would have a significant impact on the LOS of the roadway. LOS analyzes roadways and intersections by categorizing traffic flow and assigning quality levels (A to F, with A being the best and F being the worst) of traffic based on performance measures like

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vehicle speed, density, congestion, etc. LOS A represents free flow of traffic; LOS C represents stable flow; and LOS F represents a breakdown in flow or gridlock. There are poor to failed LOSs in portions of every intersection in the project area as shown in the following table. This indicates that there are breakdowns in traffic flow and/or gridlock present during peak travel times, which causes travel delays along the US 36 (SR 9/SR 67) corridor.

All LOS data for this project can be found in the Mini Scope located in Appendix I (Appendix I: I-94 to I-168).

Intersection LOS Rating	Existing (2017) AM Peak	Existing (2017) PM Peak	Proposed (2043) AM Peak	Proposed (2043) PM Peak
Pendleton Pike and Madison Avenue/Lick Creek Pike	East: F West: - North: A South: A	East: F West: F North: A South: A	East: F West: F North: A South: A	East: F West: F North: A South: A
Pendleton Pike and SR 38	East: E West: E North: D South: D	East: F West: F North: F South: D	East: D West: D North: C South: C	East: D West: C North: D South: C
Pendleton Pike and US 36	West: E North: B South: B	West: E North: B South: B	West: D North: B South: A	West: D North: B South: A
Pendleton Pike and Water Street	East: E West: C North: A South: A	East: F West: D North: A South: A	East: E West: B North: B South: A	East: F West: C North: A South: A

Another need for this project is the lack of pedestrian infrastructure and a lack of ADA-compliant sidewalks and/or curb ramps with access to PHHS and businesses in the area between PHHS and Water Street, where the Town's recreational facilities exist. There is no pedestrian connection between various points of recreation between PHHS and Water Street, which requires pedestrians to use shoulders and travel lanes.

Another need for this project is due to the high frequency and severity of crashes within the US 36 (SR 9/SR 67) corridor. A traffic study from 2017 to 2019 showed that there were a total of 166 crashes, which were mostly rear end and right-angle crashes. The crashes did not occur in the intersections along the corridor and were most likely caused by following too closely (n=42) and failure to yield the ROW (n=83). An Index of Crash Frequency (ICF) of 0 indicates that the road is performing as expected, and an ICF of 2 or higher indicates a high crash location with the location being two standard deviations away from expected. The US 36 (SR 9 SR 67) corridor has an ICF of 6.02 and an Index of Crash Cost (ICC) of 4.58, which indicates that the entire corridor is a high frequency and severity corridor for crashes. The US 36/SR 9/SR 67 Junction (where US 36 splits off to the east) has an ICF of 1.52 and an ICC of 1.44, which indicates that while the intersection is not performing exactly as expected, it is not the most likely location for crashes, nor high severity crashes, on the corridor. These conditions can be found in the Abbreviated Engineer's Report (Appendix I: I-68 to I-70).

Purpose

The purpose for the combined project is to reduce travel delay along the US 36 (SR 9/SR 67) corridor, to improve the flow of traffic through the intersection along the US 36 (SR 9/SR 67) corridor, to LOS E or better at the intersections for Pendleton Pike and SR 38, and Pendleton Pike and US 36. Other purposes of the project are to improve pedestrian and bicycle accessibility, to reduce conflict points between pedestrian and vehicular traffic, and to reduce the frequency and severity of crashes within the US 36 (SR 9/SR 67) corridor.

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County Madison Route US 36 (SR 9/SR 67) Des. No. 1702936 and 1802854 (State)
and 2001127, 2300272, and
2300273 (LPA)

PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Madison Municipality: Town of Pendleton (Town)

Limits of Proposed Work: SR 9 corridor from 0.28 mile south of SR 38 to Huntsville Road

Total Work Length: 0.90 Mile(s) Total Work Area: 19.00 Acre(s)

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
☐	☒
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, Town, and FHWA intend to proceed with a combined State (INDOT Des. Nos. 1702936 and 1802854) and LPA (INDOT Des. Nos. 2001127, 2300272, and 2300273) Project.

This project is located along the US 36/SR 9/SR 67 corridor in the Town, Madison County. There is a significant overlap between the footprints of both the State and LPA portions, as well as areas specific to both portions. In addition to a shared footprint, there are elements of both portions that rely on the other's completion in order for each to fulfill their respected purposes. Therefore, the State and LPA portions are being evaluated together for the purpose of NEPA analysis while maintaining distinctions between the project areas when appropriate. These will be discussed as one project in this CE document. Mentioned roadways that serve as project area limits throughout this document have multiple names and have been reduced, as appropriate, for clarity.

Location

This project is located along US 36 and SR 9 to the north, locally known as Pendleton Pike, from 0.28 mile south of SR 38 to Huntsville Road, with construction on State Street, SR 38, and US 36 east of the SR 9 junction included, in Sections 15, 16, 21, and 22, Township 18 North, Range 7 East, Fall Creek Township, Pendleton and Huntsville, Madison County. The project extends along US 36/SR 9 from Huntsville Road south to 456 ft south of the Madison Ave/Angle Road intersection and along SR 38/East Street from the railroad overpass to 1,251 ft east of US 36/SR 9 and 1,081 ft along US 36 east of US 36/SR 9. Additionally, the project extends 425 ft northwest from the US 36/SR 9 intersection through a grassy area to Hayden Way and then 533 ft north along Hayden Way to Water Street at a location 823 ft west of the Water Street and US 36/SR 9 intersection (Appendix B: B-2 to B-4).

Existing Conditions (Appendix B: B-4 and B-18 to B-177)

- This section of US 36 is a two lane Urban – Minor Arterial and Urban – Other Principal Arterial roadway that consists of two 12-ft wide travel lanes bordered by variable width shoulders (0–11 ft). There are 12-ft wide turn lanes present in numerous locations in this section of US 36, while a raised median is present in some sections.
- This section of SR 9/SR 67 is a two lane Urban – Other Principal Arterial roadway that consists of two 12-ft wide travel lanes bordered by variable width shoulders (0–13 ft). Varied width turn lanes are present in numerous locations within this section of SR 9. A bridge (Structure No. (9)67-48-06938 A) carries SR 9 over Fall Creek within the project area. This bridge has component condition rating that range from satisfactory to excellent (6 to 9 out of 9)..
- This section of SR 38 is a two lane Urban – Minor Arterial roadway that consists of two 12-ft wide travel lanes bordered by variable width shoulders (0–2 ft). There are 12-ft wide turn lanes present within sections of SR 38 along the eastern end of the project. A pedestrian sidewalk (the early coordination letter mistakenly refers to this as a pedestrian bridge) over a drainage pipe with riprap for erosion control is present along the southern side of SR 38. This area will not be impacted by this project.
- This section of State Street is a two lane Urban – Minor Arterial roadway that consists of two 12-ft wide travel lanes bordered by an approximate 4-ft wide shoulder on the south side and curb and gutter on the north side with variation existing from

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Des. No. 2300273 (LPA)

Central Way to the intersection with US 36, where there is only curb and gutter. A 12-ft wide left turn lane is present toward the western end of the project area on State Street.

- This section of Hayden Way is a two-way local roadway that has a 14-ft wide traveled way.
- This section of Water Street is a two-lane Urban – Major Collector roadway that consists of two 11-ft wide travel lanes. The north side of Water Street has a sidewalk across from Hayden Way.

The project will be let in three phases with two additional Des. Nos., both of which will be let at a different time than the main project. Des. No. 2300272 will fund Phase 2 and will involve the area that is located 0.02 mile south of Madison Avenue/Angle Road (Lick Creek Pike) to SR 38/State Street. Des. No. 2300273 will fund Phase 3 and will involve the area that is located 0.01 mile south of the US 36/SR 9/SR 67 Junction (where US 36 splits off to the east) to 0.17 mile west of SR 9/SR 67 at Water Street. The phases are related to contract separation due to funding availability and Phases 2 and 3 are funded by the MPO/Town.

Land use in the vicinity of the project is urban, primarily including commercial properties with residences and agricultural fields nearby. PHHS is located adjacent to the southeastern end of the project area, and a railroad crosses the project area at Madison Avenue and State Street. Falls Park, a managed land, is located to the northwest of the project area. Fall Creek and 14 wetlands are located within the project area.

Preferred Alternative

The preferred alternative will add additional travel lanes and pedestrian infrastructure. Plans can be found in Appendix B (Appendix B: B-18 to B-177).

The roadway work will add additional travel lanes by constructing two additional through lanes (one in each direction) on US 36/SR 9/SR 67 from Madison Avenue/Angle Road to the bridge over Fall Creek (four lanes already exist between the bridge and CR 500 S/Huntsville Road), with an additional center lane from the State Street/US 36/SR 9/SR 67 Junction north to Mercer Lane. The left and right turn lanes on SR 9/SR 67/US 36 at the State Street/US 36/SR 9/SR 67 Junction to Mercer Lane will be retained with widening as needed. At the State Street/US 36/SR 9/SR 67 Junction, dual left turns on EB State Street and dual left turns on WB SR 38 will be constructed. The WB right turn lane on SR 38 and the WB through lane on State Street will be retained in their current locations with the needed widening occurring to the south. At the US 36/SR 9/SR 67 Junction (where US 36 splits off to the east), the WB US 36 right turn lane storage will be extended to the first commercial drive with widening to the north. Curb and gutter will be modified with a closed drainage system and curb turnouts, while open ditches will be retained to reduce the additional ROW needed for shoulders and still providing surface drainage. The project will grade and adjust the roadsides where the pedestrian work will occur. At the northern termini, the project narrows down to the pavement edges starting at the bridge over Fall Creek and continuing to its end. North of the bridge, pavement markings will be restriped and the guardrail that is attached to the bridge will be replaced.

The existing stormwater system is being modified, where needed, to convert the open drainage to closed drainage in areas with open ditches. Additional inlets are also being added to the existing closed system to limit spread. The storm sewer main is being replaced where needed for capacity and an additional storm sewer main is being added to carry the drainage to Fall Creek.

A new detention basin will be added in the northeast quadrant of the northern US 36/SR 9 split. It will be approximately 318 ft by 103 ft with an approximate depth of 4 ft. It is being constructed for storm events and to reduce flooding chances.

The pedestrian connectivity work will add pedestrian infrastructure, which will include raised landscaped medians on US 36 and SR 38, pedestrian connectivity (sidewalks and shared-use paths), ADA compliance for all pedestrian elements and curb ramps, drainage improvements (i.e., ditch grading and storm sewer infrastructure), pedestrian lighting, signage, and other amenities, as well as a pedestrian refuge island, accessible pedestrian signal (APS), pedestrian and bicycle counter, and benches. A shared-use path will be installed on the east side of US 36 from Angle Road to the SR 9 junction. A shared-use path will also be installed on the west side of SR 9, from the US 36 junction to the west through an open area and then along Hayden Way to Water Street. Sidewalk will be installed on the north and south sides of State Street and SR 38, on the south side of the US 36/SR 9/SR 67 Junction (where US 36 splits off to the east), and the west side of US 36 between State Street and the US 36/SR 9/SR 67 Junction (where US 36 splits off to the east). Only existing sidewalks that will be impacted by the road widening will be replaced. Curb ramps will be placed at the intersections of US 36/State Street and US 36/SR 9, and at the termini of the paths at Angle Road and Water Street.

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Raised landscaped medians will be constructed on US 36, from just north of the US 36/SR 9/SR 67 Junction (where US 36 splits off to the east) to the southern terminus of the project and along US 36 where it splits off to the east, and on SR 38, east of SR 9/SR 67. There will be drainage improvements (i.e., ditch grading and storm sewer infrastructure) along the entire project area. Pedestrian lighting will be installed along the new shared-use path and sidewalks. Roadway signage will be removed, added, and/or updated as needed within the project limits. A pedestrian refuge island will be constructed in northeast quadrant of the SR 9/SR 67 and US 36/SR 9/SR 67 Junction (where US 36 splits off to the east) intersection. APS and crosswalks will be installed at all roadway intersections. A Pedestrian Hybrid Beacon (PHB) will be installed on SR 38 near the PHHS parking lot. A pedestrian counter will be installed between US 36 where it splits off to the east and SR 38 along the east side of SR 9/SR 67 and a pedestrian and bicycle counter will be installed on the north side of State Street near the western terminus of the project area. Benches will be added along the new shared-use path and sidewalks. Guardrail along SR 9 near Huntsville Road will be removed and replaced in-kind.

There is one bridge (Structure No. (9)67-48-06938 A) present within the project area. This structure carries SR 9 over Fall Creek. Work at the structure will be limited to removing the existing striping and painting new stripes. No work will be performed in the waterway or on the bridge piers. There is one culvert (Structure No. CV 036-048-89.07) present within the project area. This structure is located at the US 36/SR 9 split. This structure will be removed and its function will be incorporated into the enclosed drainage system as a part of this project. There are several small structures within the project area and some of them will be removed and/or replaced as a part of this project. The function of these structures will be replaced by a storm sewer system; however, not all structures will be replaced in the exact location where they currently exist.

The preferred alternative will require impacts to resources. These anticipated impacts include ROW take, wetland impacts, due to the placement of clean fill from the added travel lanes and widening of pavement through the corridor, and terrestrial habitat impacts, due to soil excavation and tree removal. Detailed information regarding these anticipated impacts can be found in the Identification and Evaluation of Impacts portion of this document. Measures have been incorporated at various stages of this project to avoid, minimize, or mitigate impacts to resources. These include measures to minimize the impact to wetlands to the extent possible; to protect terrestrial habitat from soil impacts due to pavement widening, slope grading, and drainage work; and to protect trees that may provide suitable habitat to protected bat species.

The project will meet the purpose and need by reducing congestion, improving traffic flow, improving pedestrian connectivity, and reducing the frequency and severity of crashes within the US 36 (SR 9/SR 67) corridor. The project will improve the LOS to C's and D's at peak AM and PM travel time for the Pendleton Pike and SR 38 and Pendleton Pike and US 36 intersections. The project will connect PHHS to the sidewalk and path system that serves the majority of the Town as well as to the library and pool on Water Street. While the project is not reducing conflict points for pedestrians, it is adding pedestrian facilities so people can safely traverse the corridor on ADA-compliant infrastructure. Due to adding medians, left turns are no longer allowed into every driveway, which will reduce crash rates by reducing the number of points that traffic can make a left turn maneuver through between the junctions.

The logical termini were developed to be centered on US 36 (SR 9/SR 67) corridor and will be limited to only what is required for construction and to satisfy the purpose and need of the project. The project has logical termini that add additional capacity from Madison Avenue/Angle Road to CR 500 S/Huntsville Road to help alleviate heavy queueing within the project corridor. The pedestrian work is divided into three phases, which each have logical termini, that will construct pedestrian connections from Madison Avenue/Angle Road to Water Street, essentially connecting PHHS to the Town's recreation facilities on Water Street. Phase 1 will construct the pedestrian facilities between the State Street/US 36/SR 9/SR 67 Junction and the US 36/SR 9/SR 67 Junction (where US 36 splits off to the east) and the access control median along US 36 from the start of the project to the US 36/SR 9/SR 67 Junction (where US 36 splits off to the east). It will connect the existing sidewalks on State Street, SR 38, including the high school, and US 36 and will extend pedestrian access along US 36 in front of the existing businesses. Phase 2 will construct the pedestrian facilities between Madison Avenue/Angle Road and the State Street/US 36/SR 9/SR 67 Junction along US 36 in front of PHHS, it will extend the shared-use path that will be constructed in Phase 1 to the south. Future connections along Angle Road are planned by the Town as part of a different project. Phase 3 will construct the pedestrian facilities between the US 36/SR 9/SR 67 Junction (where US 36 splits off to the east) and Water Street off of the roadway corridor along an existing grassy area and Hayden Way, it will extend the shared-use path that will be constructed in Phase 1 to the north. It will connect the existing sidewalk on Water Street to the existing Town facilities (pool, library) along Water Street. This project has independent utility because it will not rely on any other projects for completion.

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The maintenance of traffic (MOT) for the project will require phased construction to maintain traffic with one lane in each direction. Full details of the MOT can be found in the MOT During Construction section of this document and in Appendix B (Appendix B: B-26 to B-90).

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.

Alternative 1: No Build

This alternative would have required no work along US 36 and SR 9. While this alternative would have no direct impacts and no cost, it would not have reduced the congestion or improved pedestrian connectivity in the area and would not have met the purpose and need. Therefore, this alternative has been dismissed from further consideration.

Alternative 2: Construct Four-Lane Cross Section with Dual Left Turns EB at SR 38

This alternative would have extended the four-lane cross section from CR 500 S/Huntsville Road to Madison Avenue/Angle Road. The existing left turn and two-way left turn (TWLT) lanes would have been perpetuated. Curb and gutter with curb turnouts would have been used to avoid the need for additional ROW takes for shoulders while still maintaining surface drainage. The WB right turn storage would have been extended back approximately 30 ft to the first commercial drive on US 36 east of the US 36/SR 9/SR 67 Junction (where US 36 splits off to the east) and would have allowed right turning vehicles to bypass the heavy WB left turning traffic. The EB approach at State Street would have added approximately 3,500 square ft of pavement to the south side of the road to accommodate dual left turns. The NB approach at SR 38 would have added pavement to maintain the dedicated right turn lane distinct from the two through lanes. There would have been islands for right-in-right-out movements and private drives at various locations within the project limits. The existing traffic signals at the US 36/SR 9/SR 67 Junction (where US 36 splits off to the east) and State Street/US 36/SR 9/SR 67 Junction would have been modified and adjusted to fit the added travel lanes. Lighting would have been added at the intersections. This alternative would have met the purpose and need by reducing congestion. However, this alternative would not have met the purpose and need by improving pedestrian connectivity. Therefore, this alternative has been dismissed from further consideration.

Alternative 3: Restrict Movements for EB Dual Lefts at SR 38 and Added Storage for WB Right at US 36

This alternative would have involved implementing minor improvements at the SR 38 and US 36 intersections to resolve foreseeable issues. The AM peak was analyzed and there were issues with queuing in the corridor and at the intersections that were not being addressed in both delay and microsimulation. Heavy weave/merge movements were noticed due to a lane drop at the NB right movement at the US 36/SR 9/SR 67 Junction (where US 36 splits off to the east). This alternative would have partially met the purpose and need by reducing congestion. However, this alternative would not have met the purpose and need by improving pedestrian connectivity. Therefore, this alternative has been dismissed from further consideration.

Alternative 4: Alternative 2 Plus WB Dual Lefts at State Street/US 36/SR 9/SR 67 Junction, SB Right Turn Lane at State Street/US 36/SR 9/SR 67 Junction, and 5-Lane Cross Section Between State Street/US 36/SR 9/SR 67 Junction and Mercer Lane

This alternative would have included all of the Alternative 2 aspects. It would have also included WB dual lefts at the State Street/US 36/SR 9/SR 67 Junction which would have improved the LOS for the approach from an E (66.4 seconds per vehicle (sec/veh) delay) in the AM peak for Alternate 2 to a D (41.8 sec/veh delay). The storage length would not have been changed appreciably, but the addition of the second lane would have caused the EB through lane to line up with the receiving lane and would have increased the throughput for the limited left turn phase. The SB right turn lane at the State Street/US 36/SR 9/SR 67 Junction would have been improved from an E (56.7 sec/veh) to a D (36.8 sec/veh) for that movement in the PM peak. Operationally, if this lane would not have been included, it would have increased the likelihood of drivers cutting through the gas station lot on the corner. However, there would have been a risk that the ROW take would have adversely affected the access to that parcel by tanker trucks or customers at the pump. Further analysis would have been needed for this design. The addition of the 5-lane section between the State Street/US 36/SR 9/SR 67 Junction and Mercer Lane would have allowed for left turn lanes from the mainline to Water Street as well as flexibility for future TWLT lanes as needed in the future. The take for this addition would have been entirely to the west but it could have been redistributed as necessary in the detailed design phase considering the availability and cost of ROW and drainage design. Also as in Alternate 2, the existing traffic signals at the US 36/SR 9/SR 67 Junction (where US 36 splits off to the east) and State Street/US

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36/SR 9/SR 67 Junction would have been modified and adjusted to fit the added travel lanes. Lighting would have also been added at the intersections. This alternative would have partially met the purpose and need by reducing congestion. However, this alternative would not have met the purpose and need by improving pedestrian connectivity. Therefore, this alternative has been dismissed from further consideration.

Additional details regarding these alternatives can be found in the Abbreviated Engineering Report located in Appendix I (Appendix I: I-70 to I-71).

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):

X
X

ROADWAY CHARACTER:

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

Name of Roadway	<u>US 36 – North-South portion and East-West portion</u>			
Functional Classification:	<u>Urban – Minor Arterial and Urban – Other Principal Arterial</u>			
	<u>16,525 (South of US 36/SR 9/SR 67 Junction (where US 36 splits off to the east) [South])</u>			
Current ADT:	<u>7,380 (East of US 36/SR 9/SR 67 Junction (where US 36 splits off to the east) [East])</u>	<u>VPD (2023)</u>	Design Year ADT:	<u>17,573 (South) VPD (2043)</u>
Design Hour Volume (DHV):	<u>1,650 (South)</u>			<u>7.83 (South)</u>
	<u>N/A (East)</u>	Truck Percentage (%)		<u>4 (East)</u>
	<u>40 (South)</u>			<u>40 (South)</u>
Designed Speed (mph):	<u>45 (East)</u>	Legal Speed (mph):		<u>45 (East)</u>

	Existing		Proposed	
Number of Lanes:	2+		4+ (North-South portion) 2+ (East-West portion)	
Type of Lanes:	2 through lanes and turn lanes (in sections)		4 through lanes (2 per direction) and right/left turn lanes at SR 38 intersection (North-South portion) 2 through lanes (1 per direction) and right/left turn lanes (East-West portion)	
Pavement Width:	24–35+	ft.	54–80 (North-South portion) 56–70 (East-West portion)	ft.
Shoulder Width:	0–11	ft.	0–10 (North-South portion) 0 (East-West portion)	ft.
Median Width:	Varies	ft.	6–17 (North-South portion) 4–13 (East-West portion)	ft.
Sidewalk Width:	N/A	ft.	5–10 (North-South portion) 5 (East-West portion)	ft.

Setting: ☒ Urban
Topography: ☒ Level

☐ Suburban
☐ Rolling

☐ Rural
☐ Hilly

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ROADWAY CHARACTER:

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

Name of Roadway SR 9
Functional Classification: Urban – Other Principal Arterial
Current ADT: 15,167 VPD (2023) Design Year ADT: 16,020 VPD (2043)
Design Hour Volume (DHV): 1,410 Truck Percentage (%) 15.75
Designed Speed (mph): 40 Legal Speed (mph): 40

	Existing		Proposed	
Number of Lanes:	2+		4+	
Type of Lanes:	2 through lanes and turn lanes (in sections)		4 through lanes (2 per direction) and left turn lanes	
Pavement Width:	24–36+	ft.	46–57	ft.
Shoulder Width:	0–16	ft.	4–22	ft.
Median Width:	N/A	ft.	0–23.25	ft.
Sidewalk Width:	N/A	ft.	N/A	ft.

Setting: ☒ Urban ☐ Suburban ☐ Rural
Topography: ☒ Level ☐ Rolling ☐ Hilly

ROADWAY CHARACTER:

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

Name of Roadway State Street
Functional Classification: Urban – Minor Arterial
Current ADT: 11,358 VPD (2023) Design Year ADT: 11,883 VPD (2043)
Design Hour Volume (DHV): N/A Truck Percentage (%) 2
Designed Speed (mph): 35 Legal Speed (mph): 35

	Existing		Proposed	
Number of Lanes:	2–3		2+	
Type of Lanes:	2 through lanes and one turn lane (at western end)		2 through lanes (1 per direction) and double left turn and single right turn lanes	
Pavement Width:	24–36	ft.	27–52	ft.
Shoulder Width:	4	ft.	0	ft.
Median Width:	N/A	ft.	4	ft.
Sidewalk Width:	N/A	ft.	5	ft.

Setting: ☒ Urban ☐ Suburban ☐ Rural
Topography: ☒ Level ☐ Rolling ☐ Hilly

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ROADWAY CHARACTER:

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

Name of Roadway	<u>SR 38</u>			
Functional Classification:	<u>Urban – Minor Arterial</u>			
Current ADT:	<u>8,872</u>	<u>VPD (2023)</u>	Design Year ADT:	<u>9,589</u> <u>VPD (2043)</u>
Design Hour Volume (DHV):	<u>N/A</u>	Truck Percentage (%)	<u>4</u>	
Designed Speed (mph):	<u>35</u>	Legal Speed (mph):	<u>35</u>	

	Existing		Proposed	
Number of Lanes:	2+		2+	
Type of Lanes:	2 through lanes and turn lanes (in sections)		2 through lanes (1 per direction) and double left turn and single right turn lanes	
Pavement Width:	24–38+	ft.	58–75	ft.
Shoulder Width:	0–2	ft.	0	ft.
Median Width:	N/A	ft.	4–20	ft.
Sidewalk Width:	N/A	ft.	5–6	ft.

Setting:	☒	Urban	☐	Suburban	☐	Rural
Topography:	☒	Level	☐	Rolling	☐	Hilly

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):	<u>(9)67-48-06938 A</u>	Sufficiency Rating:	<u>98.1 (2022 INDOT Bridge Inspection Report)</u>
			(Rating, Source of Information)

	Existing		Proposed	
Bridge/Structure Type:	Continuous concrete cast-in-place slab bridge		Continuous concrete cast-in-place slab bridge	
Number of Spans:	5		5	
Weight Restrictions:	N/A	ton	N/A	ton
Height Restrictions:	N/A	ft.	N/A	ft.
Curb to Curb Width:	69.3	ft.	69.3	ft.
Outside to Outside Width:	72.3	ft.	72.3	ft.
Shoulder Width:	10.66	ft.	10.66	ft.

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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): CV 036-048-89.07 Sufficiency Rating: N/A
(Rating, Source of Information)

	Existing	Proposed
Bridge/Structure Type:	Reinforced concrete box culvert	Incorporated into enclosed drainage system
Number of Spans:	N/A	
Weight Restrictions:	N/A ton	N/A ton
Height Restrictions:	N/A ft.	N/A ft.
Curb to Curb Width:	N/A ft.	N/A ft.
Outside to Outside Width:	N/A ft.	N/A ft.
Shoulder Width:	N/A ft.	N/A ft.

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.

There is one bridge, a 165-ft long by 72.3-ft wide 5-span continuous concrete cast-in-place slab structure (Structure No. (9)67-48-06938 A), present within the project area. This structure carries SR 9 over Fall Creek and is rated in satisfactory to excellent condition (6 to 9 out of 9). Work at the structure will be limited to removing the existing striping and painting new stripes. No work will be performed in the waterway or on the bridge piers. Additional information regarding this structure can be found in the INDOT Bridge Inspection Report (Appendix I: I-3 to I-12).

There is one culvert, a 200-ft long by 4-ft wide with a 2-ft vertical opening reinforced concrete box structure (Structure No. CV 036-048-89.07), present within the project area. This structure is located at the US 36/SR 9 split and is rated in good condition (7 out of 9). This structure will be removed and incorporated into the enclosed drainage system as a part of this project. Additional information regarding this structure can be found in the INDOT Culvert Inspection Report (Appendix I: I-13 to I-18).

A pedestrian sidewalk over a drainage pipe along SR 38 was mistakenly called a pedestrian bridge on the early coordination letter. This area will not be impacted by this project.

There are several small structures within the project area. The small structures are labeled on the plans as Structure Nos. 100–114, 200–225, 226E–230E, 300–324, 325E, 326–336, 337E, 338–344, 345E, 346, 347E, 348, 349E, 350, 351E, 352, 353, 354E, 355, 356E, 357E, 358, 359E, 360, 361E, 362, 363E, 364, 365E, 366, 367E, 368, 369E, and 370–477 (Appendix B: B-113 to B-125). These range in size from 4 to 248-ft long and 15-inch to 48-inch wide. Some of these structures will be removed and/or replaced as a part of this project. The function of these structures will be replaced by a storm sewer system; however, not all structures will be replaced in the exact location where they currently exist.

No other bridges or small structures are located within the project area.

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MAINTENANCE OF TRAFFIC (MOT) DURING CONSTRUCTION:

	Yes	No
Is a temporary bridge proposed?		X
Is a temporary roadway proposed?		X
Will the project involve the use of a detour or require a ramp closure? (describe below)		X
Provisions will be made for access by local traffic and so posted.	X	
Provisions will be made for through-traffic dependent businesses.	X	
Provisions will be made to accommodate any local special events or festivals.	X	
Will the proposed MOT substantially change the environmental consequences of the action?		X
Is there substantial controversy associated with the proposed method for MOT?		X
Will the project require a sidewalk, curb ramp, and/or bicycle lane closure? (describe below)	X	
Provisions will be made for access by pedestrians and/or bicyclist and so posted (describe below).	X	

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.

The MOT for the project will require phased construction to maintain traffic with one lane in each direction.

- Phase 0: The shoulders will be strengthened with temporary pavement on US 36 and SR 9 for future phases. Each segment of shoulder strengthening will be completed separately to minimize impacts to traffic. The existing median on the US 36 where it splits off to the east will be removed and replaced with temporary hot mix asphalt (HMA) pavement. Signals will be constructed at the US 36/SR 38 intersection and at the US 36/SR 9 intersection. At least one lane of traffic in each direction and some turn lanes at intersections will be maintained. At the US 36/SR 9/SR 67 Junction (where US 36 splits off to the east), the southbound (SB) left turn lane will be closed. No pedestrian MOT will be needed for this phase.
- Phase I: On US 36 and SR 9 to the west side, the roadway will be widened, pedestrian facilities will be constructed, and lighting will be installed. On State Street, SR 38, and US 36 where it splits off to the east to the south side, the roadway will be widened, pedestrian facilities will be constructed, and lighting will be installed. At least one lane of traffic in each direction and some turn lanes at intersections will be maintained. During this phase, the following turn lanes will be closed: the Angle Road NB right and at the State Street/US 36/SR 9/SR 67 Junction, the NB right, EB left, and WB right turn lanes.
- Phase II: This phase will work on the opposite half of each road from Phase I. The roadway will be widened, pedestrian facilities will be constructed, and lighting will be installed. On State Street, the center curb will be constructed. At least one lane of traffic in each direction and some turn lanes at intersections will be maintained. During this phase, the following turn lanes will be closed: the State Street/US 36/SR 9/SR 67 Junction NB right and EB left turn lanes. The following turn lanes will remain open at the State Street/US 36/SR 9/SR 67 Junction: NB left, SB left and right, and WB left and right; at the US 36/SR 9/SR 67 Junction (where US 36 splits off to the east): NB right, SB left; and at Mercer Lane: NB and SB left. All other intersections and movements in Phase II will not have dedicated turn lanes.
- Phase IIIa: The median construction will be completed on US 36/SR 9 south of the State Street intersection and on SR 38. At least one lane of traffic in each direction and some turn lanes at intersections will be maintained. During this phase, the following turn lanes will be closed: the Angle Road NB right and at the US 36/SR 9/SR 67 Junction (where US 36 splits off to the east), the NB right turn lanes.
- Phase IIIb: The same pavement markings from Phase IIIa will be maintained and median construction will be completed on US 36/SR 9 east of the State Street intersection and on US 36 where it splits off to the east. At least one lane of traffic in each direction and some turn lanes at intersections will be maintained. During this phase, the following turn lanes will be closed: the Angle Road NB right and at the US 36/SR 9/SR 67 Junction (where US 36 splits off to the east), the NB right turn lanes.

There will also be a phased pedestrian MOT that will coincide with the roadway MOT.

- Phase I: Access to the existing State Street sidewalk and US 36/SR 9 crossing pedestrian push button pedestals will be maintained until the new sidewalk is constructed. During this phase, a new sidewalk will be constructed while pedestrians use the existing sidewalk. Temporary sidewalk runarounds will be constructed at locations where the new sidewalk ties into

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the existing. Pedestrians will be shifted to the new sidewalk before the existing sidewalk, which is impacted by the widening, is removed.

- Phase II: Access to the newly constructed State Street sidewalk and US 36/SR 9 crossing, and the new shared-use path next to the SB US 36/SR 9, including the State Street crossing, will be maintained. During this phase, a new sidewalk will be constructed while pedestrians use the existing sidewalk. Temporary sidewalk runarounds will be constructed at locations where the new sidewalk ties into the existing. Pedestrians will be shifted to the new sidewalk before the existing sidewalk is removed. Pedestrians will be shifted to a temporary sidewalk on WB State Street. A pedestrian barrier will be used to separate pedestrians from the new sidewalk construction.
- Phase IIIa: The pedestrian crossing south of the US 36/SR 9 and State Street intersection will be closed due to the median construction. The pedestrian crossing east of the US 36 and US 36/SR 9 junction will be closed until the completion of Phase IIIb. During this phase, the US 36/SR 9 medians will be completed on the south and east sides of the State Street intersection. The medians will be completed in separate sequences so that pedestrians can have at least one east-west crossing open at the US 36/SR 9 intersection.
- Phase IIIb: The pedestrian crossing north of the US 36/SR 9 and State Street intersection will be closed due to the median construction. The pedestrian crossing east of the US 36 and US 36/SR 9 junction will be closed until the completion of this phase. During this phase, the US 36/SR 9 medians will be completed on the north and west sides of the State Street intersection.

The MOT will be in place for a total of 7–12 months (Phases I and II will last for 3–5 months, while Phase III will last for 1–2 months). The MOT plan can be found in Appendix B (Appendix B: B-26 to B-90).

The 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:

	220,000	(2022		450,000	(2022*		4,910,284	(2023*
							-2,323,000	2025
Engineering:	\$ 215,274	2024)	Right-of-Way:	\$ 35,000	2025)	Construction:	\$ 3,930,002	2026)

Anticipated Start Date of Construction: Fall 2025

*Note: An amendment to adjust the Fiscal Year (FY) costs into current FYs was submitted in June 2024 and is awaiting approval.

A table with the breakdown of the FY costs can be found in Appendix H (Appendix H: H-7).

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RIGHT OF WAY:

Land Use Impacts	Amount (acres)	
	Permanent	Temporary
Residential	0.614	0.146
Commercial	2.844	0.58
Agricultural	N/A	N/A
Forest	N/A	N/A
Wetlands	0.065	N/A
Other: Railroad Utility	0.005	N/A
Other: School	1.594	0.01
Other: Reacquisition - Residential	0.302	N/A
Other: Reacquisition - Commercial	3.508	N/A
Other: Reacquisition - Other: School	1.934	N/A
TOTAL	5.122	0.736

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 approximate existing ROW on each side of the centerline varies between 20–43 ft on US 36, 20–32.5 ft on SR 9, 20 ft on SR 38 and State Street, 20–43 ft on US 36, 20–32.5 ft on SR 9, 20 ft on SR 38 and State Street, 25 ft on Hayden Way, and 0–25 ft on Water Street. The existing ROW contains a variety of land uses including residential, commercial, and agricultural areas. The project will require the acquisition of a total of 5.122 acres of permanent ROW and 0.736 acre of temporary ROW from residential, commercial, wetland, utility, and school properties. The approximate permanent ROW widths from centerline throughout the project area will vary between 58–180 ft along US 36 and SR 9, 40–80 ft along SR 38 and State Street, and 50–185 ft along US 36 where it splits off to the east. The approximate temporary ROW widths from centerline throughout the project area will vary between 58–95 ft along US 36 and SR 9, and 65–75 ft along SR 38 and State Street. No temporary ROW will be acquired along US 36 where it splits off to the east. The project will require the reacquisition of a total of 5.744 acres of reacquisition ROW from residential, commercial, and school properties. Below is a breakdown of how each Des. No. is taking the ROW.

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 June 7, 2021; and March 31, 2023 (Appendix C: C-2 to C-6 and C-13 to C-18). Additional coordination letters were sent on March 25, 2022; April 5, 2023; and April 7, 2023.

The 2021 early coordination letter only included the State portion and included the acquisition of 3 acres of permanent ROW and approximately 0.3 acre of temporary ROW. The March 31, 2023, early coordination letter combined the State and LPA Projects and included updates to the State portion along with updated ROW amounts (5.12 acres of permanent ROW and 0.74 acre of temporary ROW).

Due to the revised ROW amounts (5.122 acres permanent ROW, 0.736 acre temporary ROW, and 5.744 acres reacquisition ROW), addition of work for Structure No. CV 036-048-89.07, and addition of the known impacts; additional coordination was needed. A 2nd re-coordination letter was sent on January 29, 2024, and February 2, 2024 (Appendix C: C-65 to C-71).

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Agency	Date Sent	Date Response Received	Appendix
FHWA	June 7, 2021, March 31, 2023, and January 29, 2024	No response received	N/A
Indiana Geological and Water Survey (IGWS) (Completed online via the website)	April 4, 2023	April 4, 2023	Appendix C: C-21 to C-23
Indiana Department of Natural Resources-Division of Fish and Wildlife (IDNR-DFW)	June 7, 2021, March 31, 2023, and January 29, 2024	July 7, 2021, April 28, 2023, and February 28, 2024	Appendix C: C-11 to C-12, C-32 to C-34, and C-80 to C-82
Indiana Department of Environmental Management (IDEM) – Groundwater Section – Wellhead	June 7, 2021, March 31, 2023, and January 29, 2024	April 6, 2023 and January 31, 2024	Appendix C: C-24 to C-26 and C-76 to C-78
IDEM – Wetlands and Stormwater Programs	March 31, 2023 and January 29, 2024	No response received	N/A
U.S. Department of Housing and Urban Development	June 7, 2021, March 31, 2023, and January 29, 2024	No response received	N/A
INDOT – Greenfield District – Environmental Section Manager	June 7, 2021, March 31, 2023, and January 29, 2024	No response received	N/A
INDOT – Central Office – Environmental Policy Manager	March 31, 2023 and January 29, 2024	No response received	N/A
INDOT – Greenfield District – Project Manager	June 7, 2021, March 31, 2023, and January 29, 2024	No response received	N/A
Natural Resources Conservation Service (NRCS)	June 7, 2021, March 31, 2023, and January 29, 2024	April 26, 2023 and February 13 (signed 15), 2024	Appendix C: C-31 and C-79
INDOT – Office of Aviation	June 7, 2021, March 31, 2023, and January 29, 2024	June 7, 2021, April 3, 2023, and January 29, 2024	Appendix C: C-7, C-19, and C-72
Madison County Council of Governments (MCCOG)	June 7, 2021, March 31, 2023, and January 29, 2024	No response received	N/A
Madison County Council	June 7, 2021, March 31, 2023, and January 29, 2024	No response received	N/A
Madison County Commissioner’s Office – Middle District Commissioner	June 7, 2021, March 31, 2023, and January 29, 2024	No response received	N/A
Madison County Engineer’s Office	June 7, 2021, March 31, 2023, and January 29, 2024	No response received	N/A
Madison County Highway Department	June 7, 2021, March 31, 2023, and January 29, 2024	No response received	N/A
Madison County Surveyor	June 7, 2021, March 31, 2023, and January 29, 2024	No response received	N/A

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Madison County Drainage Board	June 7, 2021, March 31/April 5, 2023, and January 29, 2024	No response received	N/A
Madison County Government – Planning Division	June 7, 2021, March 31, 2023, and January 29, 2024	No response received	N/A
South Madison Community School Corporation	June 7, 2021, March 31, 2023, and January 29, 2024	No response received	N/A
Pendleton Heights High School (PHHS) RE: Red Flag Investigation (RFI) - School, Recreational Facility, and National Pollutant Discharge Elimination System (NPDES) Facility	June 7, 2021, March 31, 2023, and January 29, 2024	No response received	N/A
Madison County Sheriff's Department	June 7, 2021, March 31, 2023, and January 29, 2024	No response received	N/A
Madison County Emergency Management	June 7, 2021, March 31, 2023, and January 29, 2024	No response received	N/A
Pendleton Police Department	June 7, 2021, March 31, 2023, and January 29, 2024	No response received	N/A
Pendleton Fire Department - Fire Chief	June 7, 2021, March 31, 2023, and January 29, 2024	No response received	N/A
St. Vincent Anderson Hospital	June 7, 2021, March 31, 2023, and January 29, 2024	No response received	N/A
Pendleton Utility Office	June 7, 2021, March 31, 2023, and January 29, 2024	No response received	N/A
Pendleton Town Manager and MS4 Coordinator - Scott Reske	June 7, 2021, March 31, 2023, and January 29, 2024	No response received	N/A
INDOT Utilities and Railroads	June 7, 2021, March 31, 2023, and January 29, 2024	No response received	N/A
The City of Anderson - MS4 Coordinators	June 7, 2021, March 31, 2023, and January 29, 2024	No response received	N/A
IDNR - Indianapolis Central Office Division of Oil and Gas RE: RFI - Petroleum Wells	June 7, 2021, March 31, 2023, and January 29, 2024	June 29, 2021 and March 5, 2024	Appendix C: C-10 and C-83
IDEM Office of Land Quality – Underground Storage Tanks (USTs) Branch – Loic Maniet	June 7, 2021, March 31, 2023, and January 29, 2024	June 8, 2021, April 4, 2023, and January 30, 2024	Appendix C: C-8 to C-9, C-20, and C-73
IDEM Office of Land Quality – UST Compliance USTs – Brandon Davis	June 7, 2021, March 31, 2023, and January 29, 2024	No response received	N/A

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IDEM – Chief, Groundwater Section	March 25, 2022	No response received	N/A
Town of Pendleton Water Works	March 25, 2022, March 31, 2023, and January 29, 2024	No response received	N/A
IDEM – Lynette Schrowe RE: RFI – Leaking Underground Storage Tank (LUST) Speedway #7155	June 7, 2021, March 31, 2023, and January 29, 2024	No response received	N/A
Indiana Gas Company dba. Vectren Corporation RE: RFI - Natural gas pipeline	June 7, 2021, March 31, 2023, and January 29, 2024	No response received	N/A
CSX Railroad – Corporate Headquarters RE: RFI - CSX Railroad	June 7, 2021, March 31, 2023, and January 29, 2024	April 11, 2023 ASC Response: April 18, 2023	Appendix C: C-28 to C-30
CSX Transportation RE: RFI - CSX Railroad	June 7, 2021, March 31, 2023, and January 29, 2024	No response received	N/A
IDEM Institutional Controls Section RE: RFI - Speedway #7155	June 7, 2021, March 31, 2023, and January 29, 2024	January 30, 2024	Appendix C: C-75
Citizens Water – Indianapolis (Citizens Energy Group) RE: Source Water Assessment Area	June 7, 2021, March 31, 2023, and January 29, 2024	April 10, 2023 and January 30, 2024	Appendix C: C-27 and C-74
Pendleton Water Company RE: Wellhead Protection Area	June 7, 2021, March 31, 2023, and January 29, 2024	No response received	N/A
IDNR Division of Reclamation – Orphan Well Manager	N/A - No early coordination letter was sent to this division by ASC Group, Inc.	May 5, 2023	Appendix C: C-35
Regency MHP – Regency Estates, LLC Wellhead Protection Area RE: Wellhead Protection Area	February 2, 2024	No response received	N/A

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

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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: 202 Linear feet Total impacted stream(s): 0 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)
Fall Creek	Perennial	202	0	Located in the northern portion of the project area, flows west, Likely a Waters of the U.S. (Appendix F: F-39 and F-93)

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 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 (Appendix B: B-4), and the RFI reports (Appendix E: E-2 to E-27), there are 18 National Wetland Inventory (NWI) lines, 3 IDEM 303d listed streams (impaired) segments, and 9 rivers and stream segments mapped within the 0.5 mile search radius. There are 2 NWI lines, 1 IDEM 303d listed stream (impaired) segment, and 1 river and stream segment (all of which are Fall Creek) mapped within or adjacent to the project area. That number was confirmed by the site visits on September 30, 2020; October 30, 2020; May 28, 2021; June 13, 2022; June 29, 2022; September 18, 2022; May 15, 2023; and July 7, 2023; by ASC Group, Inc. No Federal, Wild and Scenic Rivers; State Natural, Scenic, and Recreational Rivers; Outstanding Rivers for Indiana; navigable waterways; or National Rivers Inventory waterways are present in the project area. No work will be performed in the waterway or on the bridge piers. Therefore, no impacts are expected.

A *Waters of the U.S. Determination / Wetland Delineation Report* was approved by INDOT Ecology and Waterway Permitting Office on July 14, 2021, for the State portion. Please refer to Appendix F (Appendix F: F-2 to F-39) for the *Waters of the U.S. Determination / Wetland Delineation Report*. It was determined that one perennial stream, Fall Creek, is within the project area. Fall Creek is an average quality, perennial stream that flows to the west and has an ordinary high water mark (OHWM) of 59.5-ft wide and 1-ft deep. Riffles/pools were present within the stream. The substrate consisted of silt, sand, and gravel. The stream is likely a Waters of U.S. There were six roadside ditches (RSDs 1–6) within the project area. The roadside ditches did not display a clearly-defined OHWM or streambed and are not considered streams. The roadside ditches are considered non-jurisdictional features.

An *Addendum Waters of the U.S. Determination / Wetland Delineation Report* was approved by INDOT Ecology and Waterway Permitting Office on September 7, 2023, for the combined State and LPA Project. Please refer to Appendix F (Appendix F: F-40 to F-94) for the *Addendum Waters of the U.S. Determination / Wetland Delineation Report*. It was determined that one perennial stream, Fall Creek, is within the State portion. Fall Creek is an average quality, perennial stream that flows to the west. Two OHWMs were taken on October 3, 2022, and were 57.25-ft wide and 1.67-ft deep (OHWM 1) and 42-ft wide and 2-ft deep (OHWM 2). Riffles/pools were present within the stream. The substrate consisted of silt, sand, and gravel. The stream is likely a Waters of U.S. There were six roadside ditches (RSDs 1–6) within the State portion. The roadside ditches did not display a clearly-defined OHWM or streambed and are not considered streams. The roadside ditches are considered non-jurisdictional features. No streams or RSDs were present in the LPA portion. The U.S. Army Corps of Engineers (USACE) makes all final determinations regarding jurisdiction.

No permanent or temporary impacts to Fall Creek are anticipated, and plan sheets show this stream marked as “Do Not Disturb” (Appendix B: B-95). This is included as a firm commitment in the Commitments section of this CE document.

IDNR-DFW responded with a signed letter on July 7, 2021, with recommendations to not excavate in the waterway and to use appropriately designed erosion/sediment control measures to prevent sediment from entering the stream (Appendix C: C-11 to C-12).

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The State and LPA Projects were combined and an updated scope required re-coordination letters to be sent. IDNR-DFW responded with a signed letter on April 28, 2023, stating that their original response remains valid and that where possible road runoff should be directed to riprap turnouts and sediment filtration prior to entering a stream to reduce impacts to aquatic species (Appendix C: C-32 to C-34). Due to the revised ROW amounts, addition of work for Structure No. CV 036-048-89.07, and addition of the known impacts; additional coordination was needed. IDNR-DFW responded with a signed letter on February 28, 2024, with recommendations to not excavate in the waterway and to use appropriately designed erosion/sediment control measures to prevent sediment from entering the stream. IDNR-DFW also recommended that best management practices be placed in order to reduce the migration of polycyclic aromatic hydrocarbons (PAHs) into the local waterways (Appendix C: C-80 to C-82).

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

Open Water Feature(s)	Presence	Impacts	
		Yes	No
Reservoirs	☐	☐	☐
Lakes	☐	☐	☐
Farm Ponds	☐	☐	☐
Retention/Detention Basin	☐	☐	☐
Storm Water Management Facilities	☐	☐	☐
Other: _____	☐	☐	☐

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 (Appendix B: B-4), and the RFI reports (Appendix E: E-2 to E-27), there are 15 lakes mapped within the 0.5 mile search radius. There are three lakes mapped within the project area; however, there are no bodies of water at these locations, which was confirmed by the site visits on September 30, 2020; October 30, 2020; May 28, 2021; June 13, 2022; June 29, 2022; September 18, 2022; May 15, 2023; and July 7, 2023; by ASC Group, Inc. Therefore, no impacts are expected.

A *Waters of the U.S. Determination / Wetland Delineation Report* was approved by INDOT Ecology and Waterway Permitting Office on July 14, 2021, for the State portion. Please refer to Appendix F (Appendix F: F-2 to F-39) for the *Waters of the U.S. Determination / Wetland Delineation Report*. It was determined that no open water features are within or adjacent to the project area.

An *Addendum Waters of the U.S. Determination / Wetland Delineation Report* was approved by INDOT Ecology and Waterway Permitting Office on September 7, 2023, for the combined State and LPA Project. Please refer to Appendix F (Appendix F: F-40 to F-94) for the *Addendum Waters of the U.S. Determination / Wetland Delineation Report*. It was determined that no open water features are within or adjacent to the combined project areas. The USACE makes all final determinations regarding jurisdiction.

Stormwater Work: The existing stormwater system is being modified, where needed, to convert the open drainage to closed drainage in areas with open ditches. Additional inlets are also being added to the existing closed system to limit spread. The storm sewer main is being replaced where needed for capacity and an additional storm sewer main is being added to reroute the storm water to Fall Creek.

Detention Basin Work: A new detention basin will be added in the northeast quadrant of the US 36/SR 9 split. It will be approximately 318 ft by 103 ft with an approximate depth of 4 ft. It is being constructed for storm events and to reduce flooding chances.

IDNR-DFW responded with a signed letter on July 7, 2021, with recommendations to avoid and minimize impacts to fish, wildlife, and botanical resources to the greatest extent possible and to compensate for impacts (Appendix C: C-11 to C-12). The State and LPA Projects were combined and an updated scope required re-coordination letters to be sent. IDNR-DFW responded with a signed letter on April 28, 2023, stating that they recommend considering a more sustainable approach to stormwater management and that a 15-ft wide buffer is maintained around the detention basin after construction, which should be marked do not mow or spray (Appendix C: C-32 to C-34). Due to the revised ROW amounts, addition of work for Structure No. CV 036-048-89.07, and addition of the known

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impacts; additional coordination was needed. IDNR-DFW responded with a signed letter on February 28, 2024, stating that they recommend considering a more sustainable approach to stormwater management and that a 15-ft wide buffer strip is maintained around the detention basin after construction, which should be marked do not mow, cut, or spray (Appendix C: C-80 to C-82).

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

	Presence	Impacts
	Yes	No
Wetlands	X	X

Total wetland area: 0.285 Acre(s) Total wetland area impacted: 0.094 jurisdictional (0.201 total impact) Acre(s)

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

Wetland No.	Classification	Total Size (Acres)	Impacted Acres	Comments (i.e., location, likely Water of the US, appendix reference)
1	PEM1A	0.011	0.011	Located 200 ft southeast of the US 36 and SR 38 intersection within both portions, Likely a Waters of the U.S. (Appendix F: F-29 to 30 and F-77 to F-79)
2 (original 3)	PEM1A	0.012	0.006	Located 0.14 mile northwest of the US 36 and SR 38 intersection within both portions, Likely a Waters of the U.S. (Appendix F: F-29 and F-78)
3 (original 2)	PEM1A	0.121	0.048*	Located on the south side of the US 36 and SR 9 intersection within both portions, Likely a Waters of the U.S. (Appendix F: F-31, F-80, and F-82)
4	PEM1A	0.022	0.000	Located 0.06 mile east of the US 36 and SR 9 intersection within both portions, Likely a Waters of the U.S. (Appendix F: F-31, F-80, and F-82)
5	PEM1A	0.059	0.000	Located 0.07 mile east of the US 36 and SR 9 intersection within both portions, Likely a Waters of the U.S. (Appendix F: F-31, F-80, and F-82)
6	PEM1A	0.019	0.000	Located 0.013 mile east of the US 36 and SR 9 intersection within both portions, Likely a Waters of the U.S. (Appendix F: F-31 and F-82)
7 (original 8)	PFO1A	0.005	0.000	Located in the southeastern quadrant of the Fall Creek and SR 9 intersection within the State portion, Likely a Waters of the U.S. (Appendix F: F-33 and F-84)
8 (original 9)	PEM1A	0.009	0.000	Located in the northeastern quadrant of the Fall Creek and SR 9 intersection within the State portion, Likely a Waters of the U.S. (Appendix F: F-33 and F-84)
9 (original 7)	PFO1A	0.027	0.027*	Located in the southwestern quadrant of the Fall Creek and SR 9 intersection within the State portion, Likely a Waters of the U.S. (Appendix F: F-33 and F-82)
10	PEM1A	0.010	0.000	Located in a linear swale between two commercial properties and is west of the US 36/SR 9 split in the LPA portion, Likely a Waters of the U.S. (Appendix F: F-80 to F-81)
11	PFO1A	0.031	0.010*	Located between two commercial properties and west of the US 36/SR 9 split in the LPA portion, Likely a Waters of the U.S. (Appendix F: F-80 to F-81)
12	PEM1A	0.001	0.000	Located between two commercial properties and west of the US 36/SR 9 split in the LPA portion, Likely a Waters of the U.S. (Appendix F: F-80 to F-81)
13	PEM1A	0.054	0.000	Located southeast of the US 36/CR 300 West intersection in the LPA portion, Likely a Waters of the U.S. (Appendix F: F-82)
14	PEM1A	0.099	0.099	Located east of the US 36/SR 9/SR 67 intersection in both portions, Likely a Waters of the U.S. (Appendix F: F-80 to F-82)

* A USACE Approved Jurisdictional Determination determined that Wetlands 3, 9, and 11 are the only jurisdictional wetlands for the project.

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Wetlands (Mark all that apply)

Wetland Determination

X

Wetland Delineation

X

USACE Isolated Waters Determination

Documentation

ESD Approval Dates

July 14, 2021;
September 7, 2023

July 14, 2021;
September 7, 2023

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 (Appendix B: B-4), and the RFI reports (Appendix E: E-2 to E-27), there are 24 wetlands mapped within the 0.5 mile search radius. There is one wetland mapped adjacent to the project area. That number was updated to 14 wetlands present within the project area by the site visits on September 30, 2020; October 30, 2020; May 28, 2021; June 13, 2022; June 29, 2022; September 18, 2022; May 15, 2023; and July 7, 2023; by ASC Group, Inc. There is no practicable alternative to the proposed new construction in wetlands and the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use. FHWA approval of this document will constitute approval of the adverse impacts to wetlands.

A *Waters of the U.S. Determination / Wetland Delineation Report* was approved by INDOT Ecology and Waterway Permitting Office on July 14, 2021, for the State portion. Please refer to Appendix F (Appendix F: F-2 to F-39) for the *Waters of the U.S. Determination / Wetland Delineation Report*. It was determined that nine poor quality wetlands (Wetlands 1–9) are present within the project area.

- Wetland 1 is a 0.011 acre wetland located 200 ft southeast of the US 36 and SR 38 intersection. The wetland is provisionally considered a Waters of the State. Dominant species in Wetland 1 include Pennsylvania smartweed (*Persicaria pensylvanica*), marsh seedbox (*Ludwigia palustris*), and celery-leaved buttercup (*Ranunculus sceleratus*).
- Wetland 2 is a 0.121 acre wetland located on the south side of the US 36 and SR 9 intersection. The wetland is provisionally considered a Waters of the State. Dominant species in Wetland 2 include cockspur grass (*Echinochloa crus-galli*) and narrow-leaf cattail (*Typha angustifolia*).
- Wetland 3 is a 0.012 acre wetland located 0.14 mile northwest of the US 36 and SR 38 intersection. The wetland is provisionally considered a Waters of the State. Dominant species in Wetland 3 include red elm (*Ulmus rubra*), narrow-leaf cattail (*Typha angustifolia*), reed canary grass (*Phalaris arundinacea*), and Japanese stilt grass (*Microstegium vimineum*).
- Wetland 4 is a 0.022 acre wetland located 0.06 mile east of the US 36 and SR 9 intersection. The wetland is provisionally considered a Waters of the State. Dominant species in Wetland 4 include rice cut-grass (*Leersia oryzoides*), marsh seedbox (*Ludwigia palustris*), and green bullrush (*Schoenoplectus tabernaemontani*).
- Wetland 5 is a 0.059 acre wetland located 0.07 mile east of the US 36 and SR 9 intersection. The wetland is provisionally considered a Waters of the State. Dominant species in Wetland 5 include reed canary grass (*Phalaris arundinacea*) and marsh seedbox (*Ludwigia palustris*).
- Wetland 6 is a 0.019 acre wetland located 0.013 mile east of the US 36 and SR 9 intersection. The wetland is provisionally considered a Waters of the State. Dominant species in Wetland 6 include yellow bristle grass (*Setaria pumila*), green bullrush (*Schoenoplectus tabernaemontani*), and narrow-leaf cattail (*Typha angustifolia*).
- Wetland 7 is a 0.027 acre wetland located in the southwestern quadrant of the Fall Creek and SR 9 intersection. The wetland is likely a Waters of U.S. Dominant species in Wetland 7 include Siberian elm (*Ulmus pumila*), boxelder (*Acer negundo*), white ash (*Fraxinus americana*), reed canary grass (*Phalaris arundinacea*), and dotted smartweed (*Persicaria punctata*).

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- Wetland 8 is a 0.005 acre wetland located in the southeastern quadrant of the Fall Creek and SR 9 intersection. The wetland is likely a Waters of U.S. Dominant species in Wetland 8 include boxelder (*Acer negundo*), reed canary grass (*Phalaris arundinacea*), and climbing buckwheat (*Fallopia scandens*).
- Wetland 9 is a 0.009 acre wetland located in the northeastern quadrant of the Fall Creek and SR 9 intersection. The wetland is likely a Waters of U.S. Dominant species in Wetland 9 include Kentucky blue grass (*Poa pratensis*) and water smartweed (*Persicaria amphibia*).

An *Addendum Waters of the U.S. Determination / Wetland Delineation Report* was approved by INDOT Ecology and Waterway Permitting Office on September 7, 2023, for the combined State and LPA Project. Please refer to Appendix F (Appendix F: F-40 to F-94) for the *Addendum Waters of the U.S. Determination / Wetland Delineation Report*. It was determined that 14 wetlands (Wetlands 1–14) were present in the combined project areas. Wetlands 1–9 are the same from the above list; however, Wetlands 2 and 3 were switched to Wetlands 3 and 2 respectively and Wetlands 8 and 9 became Wetlands 7 and 8, while Wetland 7 became Wetland 9 in the Addendum report. The Addendum report also revised the original wetlands to all being likely Waters of the U.S.

- Wetland 10 is a 0.010 acre wetland located in a linear swale between two commercial properties and is west of the US 36/SR 9 split in the LPA portion. The wetland is likely a Waters of U.S. Dominant species in Wetland 10 include American sycamore (*Plantanus occidentalis*), silver maple (*Acer saccharinum*), spotted lady's-thumb (*Persicaria maculosa*), and dotted smartweed (*Persicaria punctata*).
- Wetland 11 is a 0.031 acre wetland located between two commercial properties and is west of the US 36/SR 9 split in the LPA portion. The wetland is likely a Waters of U.S. Dominant species in Wetland 11 include American sycamore (*Plantanus occidentalis*), silver maple (*Acer saccharinum*), Morrow's honeysuckle (*Lonicera morrowii*), eastern poison ivy (*Toxicodendron radicans*), and river grape (*Vitis riparia*).
- Wetland 12 is a 0.001 acre wetland located between two commercial properties and is west of the US 36/SR 9 split in the LPA portion. The wetland is likely a Waters of U.S. Dominant species in Wetland 12 include great ragweed (*Ambrosia trifida*), curly dock (*Rumex crispus*), and reed canary grass (*Phalaris arundinacea*).
- Wetland 13 is a 0.054 acre wetland located southeast of the US 36/CR 300 West intersection in the LPA portion. The wetland is likely a Waters of U.S. Dominant species in Wetland 13 include yellow bristle grass (*Setaria pumila*), green bullrush (*Schoenoplectus tabernaemontani*), and narrow-leaf cattail (*Typha angustifolia*).
- Wetland 14 is a 0.099 acre wetland located east of the US 36/SR 9/SR 67 intersection in the both portions. The wetland is likely a Waters of U.S. Dominant species in Wetland 14 include creeping-Jenny (*Lysimachia nummularia*) and common spike-rush (*Eleocharis palustris*).

Wetlands 1–6, 8, 10, and 12–14 are palustrine emergent (PEM1A) wetlands, while Wetlands 7, 9, and 11 are palustrine forested (PFO1A) wetlands. The USACE makes all final determinations regarding jurisdiction.

Approximately 0.094 acre of permanent impacts to jurisdictional wetlands (Wetland 3 = 0.048, Wetland 9 = 0.027, and Wetland 11 = 0.010) are expected to the wetlands, while there will be a total of 0.201 acre of total impacts (Wetland 1 = 0.011, Wetland 2 = 0.006, Wetland 3 = 0.048, Wetland 9 = 0.027, Wetland 11 = 0.010, and Wetland 14 = 0.099). No temporary impacts are expected to the wetlands. These impacts are unavoidable because this work is required to construct the roadway widening, pedestrian infrastructure, and drainage structures. A USACE Approved Jurisdictional Determination determined that Wetlands 1, 2, 4–6, 13, and 14 are considered to be isolated, non-jurisdictional waters. IDEM has determined that these isolated wetlands are to be exempt from permitting requirements under IC 13-18-22-1(7). The total permanent impacts to the jurisdictional wetlands (Wetlands 3, 9, and 11) will be 0.094 acre due to the placement of clean fill from the added travel lanes and widening of pavement through the corridor. No permanent or temporary impacts to Wetlands 4–8, 10, 12, and 13 are anticipated, and plan sheets show these wetlands marked as “Do Not Disturb” (Appendix B: B-93 to B-100). This is included as a firm commitment in the Commitments section of this CE document. Mitigation will be determined during permitting, but is not anticipated at this time due to the 0.10 acre threshold not being met. IDEM 401/USACE 404 Clean Water Act permits will likely be required.

IDNR-DFW responded with a signed letter on July 7, 2021, with recommendations to avoid and minimize impacts to fish, wildlife, and botanical resources to the greatest extent possible and to compensate for impacts (Appendix C: C-11 to C-12). The State and LPA Projects were combined and an updated scope required re-coordination letters to be sent. IDNR-DFW responded with a signed letter on April 28, 2023, stating that their original response remains valid (Appendix C: C-32 to C-34). Due to the revised ROW amounts, addition of work for Structure No. CV 036-048-89.07, and addition of the known impacts; additional coordination was needed. IDNR-

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DFW responded with a signed letter on February 28, 2024, stating due to the presence or potential presence of wetland habitat, IDNR-DFW recommends coordinating with IDEM 401 program and USACE 404 program (Appendix C: C-80 to C-82).

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

	<u>Presence</u>	<u>Impacts</u>	
		<u>Yes</u>	<u>No</u>
Terrestrial Habitat	X	X	

Total terrestrial habitat in project area: 23.31 Acre(s) Total tree clearing: 0.787 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 30, 2020; October 30, 2020; May 28, 2021; June 13, 2022; June 29, 2022; September 18, 2022; May 15, 2023; and July 7, 2023; by ASC Group, Inc., and the aerial map of the project area (Appendix B: B-4), there is primarily commercial properties, residences, maintained lawns, wooded areas, and agricultural fields nearby. The dominant species observed within the project area include Pennsylvania smartweed (*Persicaria pensylvanica*), marsh seedbox (*Ludwigia palustris*), celery-leaved buttercup (*Ranunculus sceleratus*), cockspur grass (*Echinochloa crus-galli*), narrow-leaf cattail (*Typha angustifolia*), red elm (*Ulmus rubra*), reed canary grass (*Phalaris arundinacea*), Japanese stilt grass (*Microstegium vimineum*), rice cut-grass (*Leersia oryzoides*), green bullrush (*Schoenoplectus tabernaemontani*), yellow bristle grass (*Setaria pumila*), Siberian elm (*Ulmus pumila*), boxelder (*Acer negundo*), white ash (*Fraxinus americana*), dotted smartweed (*Persicaria punctata*), climbing buckwheat (*Fallopia scandens*), Kentucky blue grass (*Poa pratensis*), water smartweed (*Persicaria amphibia*), American sycamore (*Plantanus occidentalis*), silver maple (*Acer saccharinum*), spotted lady's-thumb (*Persicaria maculosa*), Morrow's honeysuckle (*Lonicera morrowii*), eastern poison ivy (*Toxicodendron radicans*), river grape (*Vitis riparia*), great ragweed (*Ambrosia trifida*), curly dock (*Rumex crispus*), creeping-Jenny (*Lysimachia nummularia*), and common spike-rush (*Eleocharis palustris*).

The nesting and foraging opportunities for terrestrial wildlife adjacent to the proposed project area are minimal due to the project area being mostly developed urban land. The project will require the acquisition of a total of 5.122 acres of permanent ROW and 0.736 acre of temporary ROW from residential, commercial, wetland, railroad utility, and school properties. No temporary ROW will be acquired along US 36 where it splits off to the east. The combined State and LPA Project will require the reacquisition of a total of 5.744 acres of reacquisition ROW from residential, commercial, and school properties. Approximately 0.787 acre of tree trimming or removal will occur. These impacts are unavoidable because this work is necessary for pavement widening and the resulting slope grading and drainage ditches. Approximately 14.22 acres of total soil disturbance is expected within the project area for pavement widening, slope grading, drainage work, and sidewalk and pedestrian infrastructure construction. A Construction Stormwater General Permit, formerly known as the Rule 5 permit, will be required because the soil disturbance will be greater than the 1-acre threshold.

IDNR-DFW responded with a signed letter on July 7, 2021, with recommendations to avoid and minimize impacts to fish, wildlife, and botanical resources to the greatest extent possible and to compensate for impacts. IDNR-DFW also recommend avoiding the removal of urban trees to the greatest extent possible and replacing them when removal is needed as the trees are important resources to fish and wildlife in urban areas. Trees removed 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) or by using the 1:1 replacement ratio based on area depending on the type of habitat impacted (individual canopy tree removal in an urban streetscape or park-like environment versus removal of habitat supporting a tree canopy, woody understory, and herbaceous layer). Impacts under 0.10 acre may still involve the replacement of large diameter trees but typically do not require any additional mitigation or additional plantings beyond seeding and stabilizing disturbed areas. There are exceptions for high quality habitat sites however. IDNR-DFW also recommend not cutting any trees suitable for Indiana bat or northern long-eared bat roosting (greater than 5 inches dbh, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30 (Appendix C: C-11 to C-12). The State and LPA Projects were combined and an updated scope required re-coordination letters to be sent. IDNR-DFW responded with a signed letter on April 28, 2023, stating that their original response remains valid and to consider using native plants for any proposed on-site landscaping and revegetation. IDNR-DFW also stated that there is a trend toward LED lighting and gave several recommendations on types to use (Appendix C: C-32 to C-34). Due to the revised ROW

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amounts, addition of work for Structure No. CV 036-048-89.07, and addition of the known impacts; additional coordination was needed. IDNR-DFW responded with a signed letter on February 28, 2024, recommending the use of native plants for any on-site landscaping and revegetation and recommending avoiding the removal of urban trees to the greatest extent possible and replacing trees that must be removed (Appendix C: C-80 to C-82).

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

Protected Species

Federally Listed Bats

	Yes	No
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	☐	☒
Determination Received for Listed Bats from USFWS:		
NE ☐	NLAA ☒	LAA ☐

Other Species not included in IPaC

	Yes	No
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)	☐	☒

Migratory Birds

	Yes	No
Known usage or presence of birds (i.e., nests)	☐	☒
State bird species based upon coordination with IDNR	☐	☒

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 reports (Appendix E: E-2 to E-27), completed by ASC Group, Inc. on May 5, 2021, and December 3, 2021, the IDNR Madison County Endangered, Threatened and Rare (ETR) Species List has been checked. According to the IDNR-DFW early coordination response letter signed on July 7, 2021, and April 28, 2023 (Appendix C: C-11 to C-12 and C-32 to C-34), the Natural Heritage Program's Database has been checked and the American badger (*Taxidea taxus*), a State species of special concern, has been documented within the project area (2021) and within 0.5 mile of the project area (2023). Impacts to the American badger or its preferred habitat are unlikely as a result of this project. According to the IDNR-DFW early coordination response letter signed on February 28, 2024 (Appendix C: C-80 to C-82), the Natural Heritage Program's Database has been checked and to date, no plant or animal species listed as state or federally threatened, endangered, or rare have been reported to occur in the project vicinity (2024). An INDOT 0.5-mile bat review occurred on June 16, 2023, and there are no documented sites within a 0.5 mile the project area.

Indiana Bat and Northern Long-Eared Bat

Project information was submitted through the US Fish and Wildlife Service's (USFWS's) Information for Planning and Consultation (IPaC) portal, and an official species list was generated (Appendix C: C-36 to C-48). The project is within range of the federally endangered Indiana bat (*Myotis sodalis*) and northern long-eared bat (NLEB) (*Myotis septentrionalis*). One other species was generated in the IPaC species list along with the Indiana bat and NLEB. Refer to paragraph below.

The project qualifies for the *Range-wide Programmatic Informal Consultation for the Indiana bat and northern long-eared bat (NLEB)*, dated May 2016 (revised February 2018), between FHWA, Federal Railroad Administration (FRA), Federal Transit Administration (FTA), and USFWS. A culvert inspection occurred on June 9, 2023, and no evidence was found of birds/bats using the structure (Appendix C: C-64). An effect determination key was completed on June 19, 2023, and based on the responses provided, the project was found to "may affect, but is not likely to adversely affect" the Indiana bat and/or the NLEB (Appendix C: C-49 to C-63). INDOT reviewed and verified the effect finding on June 26, 2023, and requested USFWS's review of the finding. No response was received from USFWS within the 14-day review period; therefore, it was concluded they concur with the finding. Avoidance and Minimization Measures (AMMs) for this project include: General AMM 1, Lighting AMMs 1 and 2, and Tree Removal AMMs 1-4. AMMs are included as firm commitments in the Environmental Commitments section of this document.

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A culvert inspection occurred on June 9, 2023, and no evidence was found of birds/bats using the structure (Appendix C: C-64). USFWS Bridge/Structure Assessment are only valid for two years. If construction will begin after June 9, 2025, 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.

The official species list generated from IPaC indicated three other species, tricolored bat (*Perimyotis subflavus*), whooping crane (*Grus americana*), and monarch butterfly (*Danaus plexippus*), present within the project area. The tricolored bat is listed as a proposed endangered species. The whooping crane is listed as an experimental population, non-essential species. The monarch butterfly is listed as a candidate species for inclusion as a federally listed endangered species. No impacts are expected to these species or their habitats as a result of this project. Therefore, no further coordination with USFWS is required for any of these species at this time.

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

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
☐	☒
☐	☒
☒	☐

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 topo map of the project area (Appendix B: B-3) and the RFI reports (Appendix E: E-2 to E-27), there are no karst features identified within or adjacent to the project area. The RFI report documented 14 petroleum wells within 0.5 mile of the project area with 2 of those wells being adjacent to the project area. IDNR Division of Oil and Gas responded to the early coordination letter on June 29, 2021, stating that there are two old Trenton gas wells (IGS # 142510 and 142512) within or at the edge of the project area. The wells are said to have been drilled around 1900; however, IDNR Division of Oil and Gas stated that there is no record of the wells having been plugged and the wells do not appear to exist at the surface in present day. If these wells are encountered, then the wells will need to be cleaned out and properly plugged. These wells should be noted on the plans and workers should keep an eye out for any casing or pipe during excavations (Appendix C: C-10).

The State and LPA Projects were combined and an updated scope required re-coordination letters to be sent. IDNR Division of Reclamation responded on May 5, 2023, stating that the two wells are presumed plugged and are probably not close enough to the existing roadway to affect the project. However, if the wells are encountered, then they will need to be investigated and possibly more properly plugged using today's standard. If a steel casing or void hole is encountered in either location, then IDNR Division of Reclamation needs to be contacted to investigate and provide guidance on how it needs to be dealt with (Appendix C: C-35). This has been added as a firm commitment and is included in the Environmental Commitments of this document.

IDNR Division of Oil and Gas responded on March 5, 2024, stating that there were two wells (Permit # 142510 and 142512) that fell within the project footprint. Both wells have been plugged and abandoned and since there is no longer any associated well casing left (still in ground) for either well, the wells should not affect this project (Appendix C: C-83).

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These wells are marked on the plans to be monitored during construction (Appendix B: B-95 to B-96). This is included as a firm commitment in the Commitments section of this CE document.

In the early coordination response dated April 4, 2023, the IGWS did not indicate that karst features exist in the project area (Appendix C: C-21 to C-23). IGWS stated that there is a high liquefaction potential and that the project is in a floodway. There is a high potential for bedrock resources and sand and gravel resources, with petroleum exploration wells within a 0.5-mile radius of the project area. Response from IGWS has been communicated with the designer on September 21, 2023. No impacts are expected.

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
X
X

Impacts

Yes	No
	X
	X
	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.

Sole Source Aquifer

The project is located in Madison County, which is not located within the area of the St. Joseph Sole Source Aquifer, the only legally designated sole source aquifer in the State of Indiana. Therefore, the FHWA/Environmental Protection Agency (EPA)/INDOT Sole Source Aquifer Memorandum of Understanding (MOU) is not applicable to this project, a detailed groundwater assessment is not needed, and no impacts are expected.

Wellhead Protection Area and Source Water

The IDEM's Wellhead Proximity Determinator website (<http://www.in.gov/idem/cleanwater/pages/wellhead/>) was accessed on April 4, 2023, by ASC Group, Inc. This project is located within a Wellhead Protection Area and Source Water Area. In an early coordination letter/email dated April 6, 2023, IDEM stated the project is located within a Pendleton's Water Company's Wellhead Protection Area and Citizens Water – Indianapolis' Source Water Assessment Area (Appendix C: C-24 to C-26). The features will not be affected because no work will be performed in the waterway or on the bridge piers. Citizens Energy Group responded on April 10, 2023, stating that due to no waterway work and limited stripping at the Fall Creek Bridge that they do not have any concerns or questions (Appendix C: C-27). Citizens Energy Group responded to the re-coordination letter on January 30, 2024, stating that they do not have any comments regarding this project (Appendix C: C-74). In re-coordination letter/email dated January 31, 2024, IDEM stated the project is located within Citizens Water – Indianapolis' Source Water Assessment Area, Pendleton's Water Company's Wellhead Protection Area, and within 1,800 ft of Regency MHP - Regency Estates, LLC Wellhead Protection Area (Appendix C: C-76 to C-78).

Water Wells

The IDNR Water Well Record Database website (<https://www.in.gov/dnr/water/3595.htm>) was accessed on April 4, 2023, by ASC Group, Inc. There are several wells within and adjacent to the project area. The features will not be affected because they have been marked as "Do Not Disturb" on the plans (Appendix B: B-92 to B-93). This is included as a firm commitment in the Commitments section of this CE document. Therefore, no impacts are expected. Should it be determined during the ROW phase that these wells will be affected, a cost to cure will likely be included in the appraisal to restore the wells.

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Urban Area Boundary (UAB)

Based on a desktop review of the INDOT MS4 website (<https://entapps.indot.in.gov/MS4/>) by ASC Group, Inc. on March 31, 2023, this project is located in two UABs. Early coordination letters were sent on June 7, 2021, March 31, 2023, and January 29, 2024, to Pendleton's Town Manager and MS4 Coordinator and The City of Anderson MS4 Coordinators for Madison County. The MS4 coordinators did not respond within the 30-day time frame. No impacts are expected.

Public Water System

Based on a desktop review, site visits on September 30, 2020; October 30, 2020; May 28, 2021; June 13, 2022; June 29, 2022; September 18, 2022; May 15, 2023; and July 7, 2023; by ASC Group, Inc., and the aerial map of the project area (Appendix B: B-4), this project is located where there is a public water system. The public water system will be affected because of the project's construction. There are water mains crossing underneath the curb and gutter mainly on US 36 near AutoZone, Pizza Hut, and Hayden Way path and the southwest corner of Water Street and US 36. Per the designer, actual conflicts and relocations are being determined during the project's design and coordination is ongoing. Early coordination letters were sent on March 25, 2022, March 31, 2023, and January 29, 2024, to the Town of Pendleton Water Works. The Town of Pendleton Water Works did not respond within the 30-day time frame.

Floodplains

Project located within a regulated floodplain
Longitudinal encroachment
Transverse encroachment
Homes located in floodplain within 1,000' up/downstream from project

Presence

X

Impacts

Yes	No
	X

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 IDNR Indiana Floodway Information Portal website (<https://indnr.maps.arcgis.com/apps/webappviewer/index.html?id=05026dabc2e8461983e196d56a213c1e>) by ASC Group, Inc. on May 26, 2023, and the RFI reports (Appendix E: E-2 to E-27), this project is located in a regulatory floodplain as determined from approved IDNR floodplain maps (Appendix F: F-95). Early coordination letters were sent on June 7, 2021, March 31, 2023, and January 29, 2024, to the local Floodplain Administrator, Madison County Government – Planning Division. The floodplain administrator did not respond within the 30-day time frame.

Per the designer, the modifications to the existing ditch to add a drainage pipe and riprap apron will result in insubstantial change to flood heights and flood limits. This project qualifies as a Category 3 as 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.

Due to work in Wetland 9 falling within IDNR's regulatory floodway for Fall Creek, an IDNR Construction in a Floodway (CIF) permit will be required.

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Farmland Agricultural Lands Prime Farmland (per NRCS) Total Points (from Section VII of CPA-106/AD-1006*) <i>*If 160 or greater, see CE Manual for guidance.</i>	Presence X	Impacts <table border="0" style="margin: auto;"> <tr> <td style="width: 50%; text-align: center;">Yes</td> <td style="width: 50%; text-align: center;">No</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;"> X </td> </tr> </table>	Yes	No		X
Yes	No					
	X					
N/A						

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 30, 2020; October 30, 2020; May 28, 2021; June 13, 2022; June 29, 2022; September 18, 2022; May 15, 2023; and July 7, 2023; by ASC Group, Inc., and the aerial map of the project area (Appendix B: B-4), there is farmland as defined by the Farmland Protection Policy Act within and adjacent to the project. The project will not convert any farmland as no ROW take will be from agricultural land. Early coordination letters were sent on June 7, 2021, March 31, 2023, and January 29, 2024, to NRCS. NRCS responded on April 26, 2023, stating that the project will not cause a conversion of prime farmland (Appendix C: C-31). NRCS responded with a signed letter on February 15, 2024, stating that the project will not cause a conversion of prime farmland (Appendix C: C-79). 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 X																												
Full 106 Effect Finding No Historic Properties Affected ☐ No Adverse Effect ☒ Adverse Effect ☐																															
Eligible and/or Listed Resources Present NRHP Building/Site/District(s) ☒ Archaeology ☐ NRHP Bridge(s) ☐																															
Documentation Prepared (mark all that apply) <table border="0" style="width: 100%; margin-top: 5px;"> <tr> <td style="width: 45%;">APE, Eligibility and Effect Determination</td> <td style="width: 10%; text-align: center;">X</td> <td style="width: 20%; text-align: center;"> ESD Approval Date(s) June 20, 2022; December 14, 2023 </td> <td style="width: 25%; text-align: center;"> SHPO Approval Date(s) June 29, 2022; January 18, 2024 </td> </tr> <tr> <td>800.11 Documentation</td> <td style="text-align: center;">X</td> <td style="text-align: center;"> June 20, 2022; December 14, 2023 </td> <td style="text-align: center;"> June 29, 2022; January 18, 2024 </td> </tr> <tr> <td>Historic Properties Report or Short Report</td> <td style="text-align: center;">X</td> <td style="text-align: center;">March 22, 2022</td> <td style="text-align: center;">April 5, 2022</td> </tr> <tr> <td>Archaeological Records Check and Assessment</td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> </tr> <tr> <td>Archaeological Phase Ia Survey Report</td> <td style="text-align: center;">X</td> <td style="text-align: center;">September 10, 2021; August 9, 2022; July 20, 2023</td> <td style="text-align: center;">September 24, 2021; January 18, 2024</td> </tr> <tr> <td>Archaeological Phase Ic Survey Report</td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> </tr> <tr> <td>Other:</td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> </tr> </table>				APE, Eligibility and Effect Determination	X	ESD Approval Date(s) June 20, 2022; December 14, 2023	SHPO Approval Date(s) June 29, 2022; January 18, 2024	800.11 Documentation	X	June 20, 2022; December 14, 2023	June 29, 2022; January 18, 2024	Historic Properties Report or Short Report	X	March 22, 2022	April 5, 2022	Archaeological Records Check and Assessment				Archaeological Phase Ia Survey Report	X	September 10, 2021; August 9, 2022; July 20, 2023	September 24, 2021; January 18, 2024	Archaeological Phase Ic Survey Report				Other:			
APE, Eligibility and Effect Determination	X	ESD Approval Date(s) June 20, 2022; December 14, 2023	SHPO Approval Date(s) June 29, 2022; January 18, 2024																												
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Archaeological Phase Ic Survey Report																															
Other:																															
Memorandum of Agreement (MOA) <table border="0" style="width: 100%; margin-top: 5px;"> <tr> <td style="width: 45%; vertical-align: top;"> ☐ </td> <td style="width: 55%; vertical-align: top;"> MOA Signature Dates (List all signatories) </td> </tr> </table>				☐	MOA Signature Dates (List all signatories) 																										
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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.

Full Section 106

The project area is located in an urban area and consists largely of commercial properties with residences and agricultural fields nearby. The APE is the area in which the proposed project may cause alterations in the character or use of historic resources. The APE contains no resources listed in the National Register of Historic Places (NRHP). Within the APE, there is one resource that has been determined eligible for listing in the NRHP: 3021 SR 38. The project area is in proximity to the NRHP-listed Pendleton Historic District (NR-0988); however, the district is not included within the APE due to sight lines and distance from the project area. The extant above-ground structures within the APE were built between the mid-nineteenth century and present day. Due to these resources, a full Section 106 was required for the combined project. Section 106 of the National Historic Preservation Act requires FHWA to evaluate proposed actions for impacts to properties listed on or eligible for listing in the NRHP.

Area of Potential Effect (APE):

The APE typically is one parcel deep on either side of the project area and was determined by sight lines to and from the project. The archaeology APE is defined as the Initial Study Area and consists of the existing and proposed ROW for the project that was investigated for the presence of archaeological deposits.

Coordination with Consulting Parties:

On August 2 and 3, 2021; September 10, 2021 (tribes only); and March 22, 2022 (Appendix D: D-29 to D-38; D-42 to D-47; and D-52 to D-58), the following parties were invited to be Section 106 consulting parties to aid in the identification of historic properties. INDOT is acting on behalf of FHWA and SHPO is an automatic consulting party. Parties listed in **bold** have agreed to be Consulting Parties.

Contact	Response Date	Appendix
Deputy State Historic Preservation Officer, Indiana Department of Natural Resources-Division of Historic Preservation and Archaeology, SHPO	August 12, 2021; September 24, 2021; April 5, 2022; June 29, 2022; January 18, 2024	Appendix D: D-40 to D-41; D-49 to D-50; D-61 o D-62; D-108 to D-109; D-152 to D-153
Madison County Commissioners	No response received	N/A
Madison County Council of Governments	No response received	N/A
Madison County Highway Department	No response received	N/A
Madison County Historian	No response received	N/A
Madison County Historical Society	No response received	N/A
Indiana Landmarks, Eastern Regional Office	No response received	N/A
Pendleton Town Council President	No response received	N/A
Pendleton Town Manager	No response received	N/A
Pendleton Planning Department	No response received	N/A
Pendleton Department of Public Works	No response received	N/A
Pendleton Historical Museum	No response received	N/A
Main Street Pendleton	August 11, 2021	Appendix D: D-39
Eastern Shawnee Tribe of Oklahoma	October 28, 2021; March 28, 2022; June 22, 2022; August 22, 2022; February 21, 2024	Appendix D: D-51; D-60; D-105 to D-106; D-110; D-154
Miami Tribe of Oklahoma	June 28, 2022	Appendix D: D-107
Peoria Tribe of Indians of Oklahoma	September 10, 2021; March 22, 2022	Appendix D: D-48; D-59
Pokagon Band of Potawatomi Indians	No response received	N/A

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Absentee Shawnee Tribe of Oklahoma	No response received	N/A
Delaware Nation of Oklahoma	No response received	N/A
Delaware Tribe of Indians, Oklahoma	No response received	N/A
Historic Fall Creek, Pendleton Settlement, Inc.	No response received	N/A
Richard and Shirley Richwine (owners, Jimmie's Dairy Bar)	No response received	N/A

A Section 106 early coordination letter was distributed on August 2 and 3, 2021 (Appendix D: D-29 to D-38). Main Street Pendleton responded by email dated August 11, 2021, requesting consulting party status (Appendix D: D-39). SHPO responded to the early coordination letter on August 12, 2021, and suggested inviting Historic Fall Creek, Pendleton Settlement, Inc., to participate in the Section 106 consultation, and provided contact information. SHPO also suggested including owners of any potentially historic properties from which ROW is likely to be taken should also be invited to participate in the Section 106 consultation for this project (Appendix D: D-40 to D-41).

No other consulting party responses were received.

Archaeology:

The Phase Ia archaeological records check and reconnaissance survey resulted in the documentation of one new site: 12-M-0813, a nineteenth to early twentieth century mill site. The site is located near the north bank of Fall Creek, east of SR 9. The Phase Ia archaeological report documented the site as potentially eligible under Criterion D. The current design of the project avoids the site area and the project is recommended to proceed as planned, but if alterations to the layout of the project expands the project limits, then further archaeological investigations may be warranted. The cover page, summary, and recommendations from the Phase Ia archaeological report can be found in Appendix D (Appendix D: D-66 to D-70).

A letter distributed on September 10, 2021, notified consulting parties (tribes only) that an archaeology report was available for review and comment (Appendix D: D-42 to D-47). By letter dated September 10, 2021, the Peoria Tribe of Indians of Oklahoma responded that it had no objection to the proposed project, but that if items are discovered that fall under the protection of the NAGPRA, "the Peoria Tribe requests immediate notification and consultation" (Appendix D: D-48).

By letter dated September 24, 2021, SHPO concurred with the recommendation of the archaeology report that "there is insufficient information to determine whether archaeology site, 12-M-0813, is eligible for inclusion" in the NRHP (Appendix D: D-49 to D-50).

The Eastern Shawnee Tribe of Oklahoma responded by letter dated October 28, 2021, stating that "the project proposes No Adverse Effect or endangerment to known sites of interest to the Eastern Shawnee Tribe" (Appendix D: D-51).

By letter dated April 5, 2022, SHPO provided comments regarding the archaeological resources (Appendix D: D-61 to D-62), SHPO restated that there is "insufficient information to determine whether archaeological site 12-M-0813 is eligible for inclusion in the NRHP. We understand that the project has been redesigned to avoid site 12-M-0813. Site 12-M-0813 should be clearly marked and must be avoided by all ground-disturbing project activities."

Site 12-M-0813 will be marked for avoidance on the plans AND in the field. This is included as a firm commitment in the Commitments section of this CE document.

No other consulting party responses were received in regard to the archaeology report.

Addendum Report: The Addendum Phase Ia archaeological records check and reconnaissance survey was prepared to incorporate the Hayden Way link between Water Street and SR 9, which was developed after the 2021 archaeology report had been prepared. It resulted no new sites and no further work was recommended. The cover page, summary, and recommendations from the Addendum Phase Ia archaeological short report can be found in Appendix D (Appendix D: D-141 to D-143). The Addendum Phase Ia archaeological report was distributed to the SHPO and Tribes concurrent with the Addendum 800.11 documentation.

Second Addendum Report: The Second Addendum Phase Ia archaeological records check and reconnaissance survey was prepared to incorporate a detention basin and drive access to a commercial property that fell outside of the previous archaeological surveys. It

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resulted no new sites and no further work was recommended. The cover page, summary, and recommendations from the Second Addendum Phase Ia archaeological short report can be found in Appendix D (Appendix D: D-144 to D-146). The Second Addendum Phase Ia archaeological report was distributed to the SHPO and Tribes concurrent with the Addendum 800.11 documentation.

Historic Properties:

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. No resources within the APE are listed in the NRHP. One resource within the APE was determined eligible for listing in the NRHP: 3021 SR 38 (ASC# AL011). 3021 SR 38 is a two-story house with Italianate-stylistic features. The cover page, summary, and recommendations from the HPR can be found in Appendix D (Appendix D: D-64 to D-65).

Consulting parties were notified by letter dated March 22, 2022, that a historic property report (HPR) was available for review and comment (Appendix D: D-52 to D-58). By letter dated March 22, 2022, the Peoria Tribe of Indians of Oklahoma reiterated that it had no objection to the proposed project, with the request that they be notified immediately if any items that fall under NAGPRA are identified (Appendix D: D-59). The Eastern Shawnee Tribe of Oklahoma responded by letter dated March 28, 2022, restating that "the project proposes No Adverse Effect or endangerment to known sites of interest to the Eastern Shawnee Tribe" (Appendix D: D-60).

By letter dated April 5, 2022, SHPO provided comments regarding the HPR (Appendix D: D-61 to D-62). SHPO concurred that the APE proposed in the HPR appears to be of "adequate size to encompass the geographic area in which direct and indirect effects of a project of this nature could occur." SHPO noted that the Pendleton Historic District (NR-0988) lies just outside of the APE boundary to the west. SHPO went on to state its agreement with the conclusions of the HPR that the only historic property located within the project's APE that is eligible for inclusion in the NRHP is the house at 3021 SR 38. The letter noted that this house had previously been found to be eligible under INDOT Des. No. 0170879 in 2008 and INDOT Des. No. 1297161 in 2014. In conclusion, the letter stated: "... we agree that the house appears to remain eligible under Criterion C. Furthermore, we agree that there are no other historic properties listed in or eligible for inclusion in the NRHP within the project's APE."

No other consulting party responses were received in regard to the HPR.

Documentation Finding:

INDOT, acting on FHWA's behalf, determined a "No Adverse Effect" finding for this undertaking. The 800.11 finding was signed by INDOT on June 20, 2022, and the 800.11 documentation can be found in Appendix D (Appendix D: D-5 to D-96). SHPO responded by letter on June 29, 2022, and concurred with these findings (Appendix D: D-108 to D-109).

On June 20, 2022, the 800.11 documentation was distributed to consulting parties (Appendix D: D-101 to D-102).

The Peoria Tribe of Indians of Oklahoma sent another copy of their March 22, 2022, letter, originally submitted to comment on the HPR and archaeology report, on June 21, 2022, stating that they are unaware of a direct link to the project location and that they have no objection to the proposed project (Appendix D: D-103 to D-104).

The Shawnee Tribe concurred that no known historic properties will be negatively impacted by this project on June 22, 2022 (Appendix D: D-105 to D-106).

The Miami Tribe of Oklahoma responded on June 28, 2022, stating that they offer no objection to the project, as they are not aware of existing documentation directly linking a specific Miami cultural or historic site to the project site (Appendix D: D-107).

The SHPO concurred with this finding on June 29, 2022 (Appendix D: D-108 to D-109).

The Eastern Shawnee Tribe of Oklahoma responded on August 22, 2022, stating that it concurred that the project proposes No Adverse Effect or endangerment to known sites of interest to the Eastern Shawnee Tribe (Appendix D: D-110).

No other comments on the finding of effect were received.

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The LPA portion was to be cleared through Section 106 under Categories B-1 and B-8 of the MPPA prior to the combination of the projects under NEPA. However, the MPPA cannot be used to clear only part of an undertaking. When the projects were combined, a regular Section 106 clearance became necessary. Since the LPA portion largely overlaps the same areas as the State portion, the two are being combined into one updated Section 106 finding. In addition, refinement of the design of the project resulted in the need for additional archaeological survey of two areas for a detention basin and drive access. Site 12-M-0813 is not adjacent to the LPA portion. This updated Section 106 finding also incorporates this additional survey. The APE was also expanded to include the additional areas. Additional above-ground investigations identified no additional resources in the expanded APE that warrant a Contributing rating or higher per the IHSSI in addition to those identified in the HPR for the State portion.

Addendum 800.11: INDOT, acting on FHWA's behalf, determined a "No Adverse Effect" finding for this undertaking. The Addendum 800.11 finding was signed by INDOT on December 14, 2023, and the Addendum 800.11 documentation can be found in Appendix D (Appendix D: D-114 to D-146). SHPO responded by letter on January 18, 2024, and concurred with these findings (Appendix D: D-152 to D-153).

On December 28, 2023, and January 2, 2024; the Addendum 800.11 documentation was distributed to consulting parties (Appendix D: D-147 to D-150).

On January 4, 2024, the Shawnee Tribe's Tribal Historic Preservation Department concurred that no historic properties will be negatively impacted by this project. They also stated that there is still the potential for the discovery of unknown resources and that they have no issues or concerns at this time. However, if archaeological materials are encountered during construction, use, or maintenance of this location, then they would like to be re-notified to resume immediate consultation (Appendix D: D-151).

The SHPO concurred with this finding on January 18, 2024 (Appendix D: D-152 to D-153).

On February 21, 2024, the Eastern Shawnee Tribe stated that while this area was occupied by their people, the project proposes "NO Adverse Effect" or endangerment to known sites of interest to the Eastern Shawnee Tribe. However, if an archaeological site or object(s) is discovered, then they request that they are immediately contacted along with appropriate state agencies (within 24 hours) and that all ground disturbing activities stop until consultation. Any future project changes will also require additional consultation (Appendix D: D-154).

Public Involvement:

To meet the public involvement requirements of Section 106, a legal notice of FHWA's finding of "No Adverse Effect" was published in the *Daily Reporter* on June 22, 2022, offering the public an opportunity to submit comment pursuant to 36 CFR 800.2(d), 800.3(e), and 800.6(a)(4). The public comment period closed 30 days later on July 22, 2022. The text of the public notice and the affidavit of publication appear in Appendix D (Appendix D: D-97 to D-100). On June 22, 2022, Shawnee Tribe responded stating that they concur that no known historic properties will be negatively impacted and that they have no issues or concerns at this time. However, if archaeological materials are encountered during construction, use, or maintenance of this location, then they would like to be re-notified to resume immediate consultation (Appendix D: D-105 to D-106). On June 28, 2022, Miami Tribe of Oklahoma responded stating that they had no objection to the project and are not aware of any documentation linking the project area to a Miami site; however, if any human remains or Native American cultural material falling under NAGPRA or archaeological evidence is found, then the Miami Tribe requests immediate consultation (Appendix D: D-107). On June 29, 2022, SHPO responded stating that they concur with the "No Adverse Effect" finding (Appendix D: D-108 to D-109).

Addendum 800.11: Due to combining the State (US 36/SR 9 Added Travel Lanes) and LPA (Pedestrian Connectivity Project) Project into a single NEPA CE document, INDOT reopened the Section 106 consultation. Additional Section 106 investigations were conducted. To meet the public involvement requirements of Section 106, a second legal notice of FHWA's finding of "No Adverse Effect" was published in *The Herald Bulletin* on March 5, 2024, offering the public an opportunity to submit comment pursuant to 36 CFR 800.2(d), 800.3(e), and 800.6(a)(4). The public comment period closed 30 days later on April 4, 2024. The text of the public notice and the affidavit of publication appear in Appendix D (Appendix D: D-155 to D-157).

This completes the Section 106 process and the responsibilities of the FHWA under Section 106 have been fulfilled.

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

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

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: B-4), and the RFI reports (Appendix E: E-2 to E-27), there are five schools, seven recreational facilities, two trails, one managed land, one determined eligible for the NRHP historic resource, and one potentially eligible for the NRHP archaeological resource for a total of 17 potential 4(f) resources located within the 0.5-mile search radius. According to additional research and by the site visits on September 30, 2020; October 30, 2020; May 28, 2021; June 13, 2022; June 29, 2022; September 18, 2022; May 15, 2023; and July 7, 2023; by ASC Group, Inc., there is one school, one recreational facility, and one potentially eligible for the NRHP archaeological resource for a total of three 4(f) resources located adjacent to the project area. The school and recreational facility are both PHHS, which is located adjacent to the east side of the project area, on the southeast corner of US 36 and SR 38.

PHHS is a public high school and is part of the South Madison Community School Corporation. The athletic fields at PHHS, which are located adjacent to and outside of the project area, is considered a Section 4(f) resource. PHHS and its recreational facilities, which includes the athletic fields, are open to the public. While this project will require 1.594 acre of permanent ROW, 0.01 acre of temporary ROW, and 1.934 acre of re-acquired ROW from the school property, the ROW takes will not impact the recreational facilities for the school. Access will be maintained throughout construction. Therefore, the project 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. Therefore, no 4(f) use is expected.

Additional information regarding the potentially eligible for the NRHP archaeological site can be found in the Section D – Cultural Resources of this CE document. Site 12-M-0813 will be marked for avoidance on the plans AND in the field. This is included as a

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firm commitment in the Commitments section of this CE document. The project 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. Therefore, no 4(f) use is expected.

Section 6(f) Involvement

Section 6(f) Property

Presence

☐

Use

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 INDOT ESD website revealed a total of 19 properties in Madison County (Appendix I: I-2). None of these properties are located within or adjacent to the project area. Therefore, there will be no impacts to 6(f) resources.

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

☐

☐

☐

☐

☐

☒

☐

☐

☒

Location in STIP:

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Name of MPO (if applicable):

MCCOG

Location in TIP (if applicable):

Appendix H: H-3 to H-6

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.

STIP/TIP

This project is included in the Fiscal Year (FY) 2022–2026 MCCOG Metropolitan Planning Organization Transportation Improvement Program (MPO TIP), which has been directly incorporated into the FY 2024–2028 Statewide Transportation Improvement Program (STIP) (Appendix H: H-2 to H-11). The FY 2024–2028 STIP is listed based on the lead DES number in the contract. The lead DES numbers for this contract are 1702936, 1802854, and 2001127. The project will be let in three phases with two additional Des. Nos., both of which will be let at a different time than the main project. Des. No. 2300272 will fund Phase 2 and will involve the area that is located 0.02 mile south of Madison Avenue/Angle Road (Lick Creek Pike) to SR 38/State Street. Des. No. 2300273 will fund Phase 3 and will involve the area that is located 0.01 mile south of the US 36/SR 9/SR 67 Junction (where US

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36 splits off to the east) to 0.17 mile west of SR 9/SR 67 at Water Street. The entirety of the federal undertaking was covered under the NEPA/Section 106 documentation found in this CE document (i.e., termini, construction limits, APE).

Attainment Status

Ozone: This project is located in Madison County, which is currently a nonattainment area for Ozone, for the 1997 Ozone 8-hour standard. Reversing U.S. EPA policy, on February 16, 2018, the D.C. Circuit Court found that U.S. EPA cannot waive the requirement for an update to the maintenance plan even though the 1997 8-hour ozone standard has been revoked. Full maintenance plan update was approved on December 13, 2019. The project's design concept and scope are accurately reflected in both the MCCOG Transportation Plan (TP) and the TIP and both conform to the State Implementation Plan (SIP). Therefore, the conformity requirements of 40 CFR 93 have been met.

Madison County is considered attainment or unclassifiable for all criteria pollutants other than ozone. As a former ozone nonattainment area, Madison County is now considered in maintenance status. Highway projects located within maintenance areas must meet the conformity requirements of 40 CFR 93 just as nonattainment areas do. For this project, conformity regulations apply for ozone. The project is not exempt from conformity analysis under 40 CFR 93.126 or 93.128, but it is included in long-range planning documents prepared by MCCOG, which is the metropolitan planning organization for Madison County.

The project should have minimal, if any, effect on carbon monoxide (CO) concentrations and will not cause or contribute to CO levels that exceed the national ambient air quality standards (NAAQS). Greenhouse gases (GHGs) include carbon dioxide (CO₂), methane, and other chemicals that behave in the atmosphere as ways to promote climate change through the retention of heat in the atmosphere. The additional lanes proposed in this project are expected to improve safety and traffic flow, not to increase traffic volumes, which are expected to be determined by population growth and other factors. When a highway is widened, the localized level of mobile source air toxic (MSAT) emissions for the Build Alternative could be higher relative to the No-Build Alternative, but this could be offset due to increases in speeds and reductions in congestion (which are associated with lower MSAT emissions). Also, MSAT will be lower in other locations when traffic shifts away from them. However, on a regional basis, Environmental Protection Agency's (EPA's) vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause region-wide MSAT levels to be significantly lower than today. Because traffic volumes will be the same whether or not the project is built, GHG emissions will not increase due to the project. Future reductions in GHG emissions may occur in the project area due to regional or national trends in fuel efficiency and the use of electric vehicles, but these are not easily quantifiable. GHG emissions during construction will be small and temporary relative to on-going emissions. For that reason, construction emissions are not considered significant.

Therefore, this project is not expected to cause or contribute to ozone levels that exceed the NAAQS and no further analysis is required. The project should have minimal, if any, effect on PM₁₀ or PM_{2.5} concentrations and will not cause or contribute to PM₁₀ or PM_{2.5} levels that exceed the NAAQS. In conclusion, this project meets the conformity requirements of 40 CFR Part 93 for ozone and no air quality impacts are anticipated for other criteria pollutants.

MSAT

The purpose of this project is to reduce travel delay along the US 36 (SR 9/SR 67) corridor, to address pedestrian and bicycle accessibility by increasing pedestrian and bicycle connectivity, and to improve vehicular safety by reducing conflict points through the implementation of access management methods along a high-traffic corridor by constructing additional travel lanes and pedestrian infrastructure. 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 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, 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 MOVES3 model forecasts a combined reduction of over 76 percent in the total annual emissions rate for the priority MSAT from 2020 to 2060 while vehicle-miles of travel are projected to increase by 31 percent (Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents, Federal Highway Administration, January 18, 2023). This will both reduce the background level of MSAT as well as the possibility of even minor MSAT emissions from this project.

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ASC Group, Inc. completed an Air Quality Analysis report on February 9, 2024, which was approved by INDOT on March 6, 2024 (Appendix I: I-79 to I-93). Construction Year (2023; however, due to project changes, the date has been revised to 2025) and Design Year (2043) traffic data for US 36 were provided by INDOT (2020) based on projections from traffic counts taken in 2016 and 2018. The data show the following:

- Total traffic volumes and heavy truck fractions in the Design Year are projected to be about the same whether the project is built or not.
- The highest total traffic volumes occur on US 36 south of the US 36/SR 9 junction, with a Design Year AADT of about 17,000 vehicles per day.
- The highest heavy truck traffic volumes occur on SR 9 north of the US 36/SR 9 junction, with a Design Year AADT of about 2,500 trucks per day.

When a highway is widened, the localized level of MSAT emissions for the Build Alternative could be higher relative to the No-Build Alternative, but this could be offset due to increases in speeds and reductions in congestion (which are associated with lower MSAT emissions). Also, MSAT will be lower in other locations when traffic shifts away from them. However, on a regional basis, EPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause region-wide MSAT levels to be significantly lower than today. In conclusion, the concentrations of MSATs in the region are expected to decrease from present levels regardless of whether the project is built or not. Therefore, the project will not impact air quality.

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:

November 21, 2022

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.

ASC Group, Inc. completed a Noise Analysis report on November 10, 2022 (Appendix I: I-26 to I-60). It evaluated potential traffic noise impacts for the proposed US 36 and SR 9 project in Pendleton, Indiana. The analysis evaluated the project's noise sensitive areas (NSAs), which are areas where the noise environment is expected to be reasonably consistent and land uses are similar. For this project, 10 NSAs were identified that included 56 receptors (1–56) and 10 undeveloped land receptors (U01–U10). Traffic noise was evaluated at all receptors within 500 ft of the edge of pavement within the study area. Traffic noise levels were evaluated for the existing (2020) and projected (2043) traffic volumes for the build alternative.

This report evaluated the potential noise impacts for the project in compliance with the FHWA's *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 INDOT's *Traffic Noise Analysis Procedure* (2022). Predicted noise levels for Category D receptors were reduced by 20 A-weighted decibel (dBA) to represent the effect of a typical structure with closed windows. The reduced levels were then compared with the lower Noise Abatement Criteria (NAC) value for Category D. Predicted design year (2043) noise levels would approach or exceed the NAC at three receptors resulting in the need to evaluate noise abatement. Noise levels at receptors 52, 53, and 55 in NSA 10 exceed the impact criterion of 66 dBA in all three modeled scenarios. Receptor 52's levels were 66.2 (existing) and 66.5 (No-Build and Build). Receptor 53's levels were 67.5 (existing) and 67.8 (No-Build and Build). Receptor 55's levels were 68.4 (existing) and 68.7 (No-Build and Build). No other predicted noise levels approach or exceed the NAC and No-Build noise levels exceed existing levels by 15 dBA or more. Noise abatement was analyzed at the impacted locations. The considered noise abatement measures include traffic management measures, noise insulation, alteration of alignment, acquisition of real property, and noise barrier construction. Traffic management measures such as reducing speed limits may reduce noise levels at the impacted receptors, but may also impact traffic flow and increase congestion. Noise insulation is only available for impacted non-profit and public buildings, not residences. Alignment alterations are not feasible at this location because there are impacted residences on both sides of the highway. INDOT's

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ability to acquire property for mitigation or to mitigate sites off of state ROW is limited and would not be effective in this case. Noise barriers would not be technically feasible for these receptors without eliminating driveway access to the properties. No barriers met the feasibility and reasonableness criterion established by INDOT's *Traffic Noise Analysis Procedure* (2022). None of the available abatement measures are considered feasible or reasonable.

Based on the studies thus far accomplished, the State of Indiana has not identified any locations where noise abatement is likely. A re-evaluation of the noise analysis will occur during the final design. If during the final design, it has been determined that the conditions have changed such that noise abatement is feasible and reasonable, the abatement measures might be provided. The final decision on the installation of any abatement measure(s) will be made upon the completion of the project's final design and the public involvement process. This has been added as a firm commitment and is included in the Environmental Commitments of this document.

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
☒	☐
☐	☒
☐	☒
☒	☐
☒	☐
☐	☐
☒	☐

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.

There will be temporary traffic impacts associated with construction activities. The MOT will require phased construction that will maintain traffic with one lane in each direction in the project area. Access to all properties will be maintained during construction. Full details of the MOT can be found in the MOT section in this CE document.

ASC Group, Inc. researched any possible fairs or festivals that may be in the area that could be impacted by construction activities. Numerous websites were accessed on June 7, 2023, to confirm if any fairs or festivals would be affected, including the Indiana State Festivals website (<http://www.indianafestivals.org>) and The Fairs and Festivals website (<https://www.fairsandfestivals.net/>). There are at least three festivals or fairs currently planned within a 5-mile radius that may be impacted by travel delays due to the construction/lane restrictions. All three festivals are west of the project and will not be directly impacted by the project.

Madison County has an ADA transition plan. The project is planning to add pedestrian infrastructure, which will include raised landscape medians on US 36 and SR 38, pedestrian connectivity (sidewalks and shared-use paths), ADA compliance for all pedestrian elements and curb ramps, a drainage, pedestrian lighting, signage, and other amenities, as well as pedestrian refuge islands, APS, pedestrian and bicycle counter, and benches. A shared-use path will be installed on the east side of US 36 from Angle Road to the SR 9 junction. A shared-use path will also be installed on the west side of SR 9, from the US 36 junction to the west through an open area and then along Hayden Way to Water Street. Sidewalk will be installed on the north and south sides of State Street and SR 38, on the south side of the US 36 East at the US 36/SR 9/SR 67 Junction (where US 36 splits off to the east), and the west side of US 36 between State Street and the US 36/SR 9/SR 67 Junction (where US 36 splits off to the east). Curb ramps will be placed at the intersections of US 36/State Street and US 36/SR 9, and at the termini of the paths at Angle Road and Water Street. The project will comply with current ADA standards.

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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: B-4), and the RFI reports (Appendix E: E-2 to E-27), there are seven religious facilities, five schools, seven recreational facilities, two trails, and one managed land located within the 0.5 mile of the project. There is one school and one recreational facility, both PHHS, for a total of two mapped public facilities within or adjacent to the project area. That number was confirmed by the site visits on September 30, 2020; October 30, 2020; May 28, 2021; June 13, 2022; June 29, 2022; September 18, 2022; May 15, 2023; and July 7, 2023; by ASC Group, Inc. The project will take ROW from PHHS; however, it will not impact the school building or its recreational facilities. There will be an increase pedestrian connectivity between PHHS and other areas of the Town. Additional information about PHHS can be found in the Section 4(f) section in this CE document. Therefore, no impacts are expected. Access to all properties will be maintained during construction.

INDOT Aviation responded on June 7, 2021, stating that there are no issues with any surrounding airspace or public-use airports due to the project meeting the required glideslope criteria from the nearest public-use facility. If any object will exceed 200 ft in height regardless of location, the object will need to be airspaced with the Federal Aviation Administration (FAA) 45 days prior to construction (Appendix C: C-7). INDOT Aviation responded to re-coordination on April 3, 2023, stating that no tall structure permit is required for the project if all equipment being used is under 200 ft in height (Appendix C: C-19). INDOT Aviation responded to further re-coordination on January 29, 2024, stating that no tall structure permit is required for the project if all equipment being used is under 200 ft in height (Appendix C: C-72). Per the designer, there are no structures that would require a large crane; therefore, no equipment will be over 200 ft in height.

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?

Does the project require an EJ analysis?

If YES, then:

Are any EJ populations located within the project area?

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

Yes	No
☐	☒
☒	☐
☐	☒
☐	☒

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 no relocations; however, it will require 5.122 acres of 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 Madison County, Indiana. The community that overlaps the project area is called the affected community (AC). In this project, the AC is Census Tracts 115.01, 115.02, and 117. An AC has a population of concern for EJ if the population is more than 50 percent minority or low-income or if the low-income or minority population is 125 percent of the COC. Data from the 2019 ACS 5-Year Estimates was obtained from the U.S. Census Bureau (<https://data.census.gov/>) on April 4, 2023, by ASC Group, Inc. The data collected for minority and low-income populations within the AC are summarized in the below table.

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Table: Minority and Low-Income Data (United States Census Bureau 2019 ACS 5-Year Estimates)

	COC – Madison County, Indiana	AC-1 – Census Tract 115.01, Madison County, Indiana	AC-2 – Census Tract 115.02, Madison County, Indiana	AC-3 – Census Tract 117, Madison County, Indiana
Percent Minority	15.15%	5.36%	7.24%	3.60%
125% of COC	18.94%	AC < 125% COC	AC < 125% COC	AC < 125% COC
EJ Population of Concern		No	No	No
Percent Low-Income	16.53%	5.95%	6.04%	1.56%
125% of COC	20.67%	AC < 125% COC	AC < 125% COC	AC < 125% COC
EJ Population of Concern		No	No	No

AC-1, Census Tract 115.01 has a percent minority of 5.36 percent, which is below 50 percent and is below the 125 percent COC threshold. AC-2, Census Tract 115.02 has a percent minority of 7.24 percent, which is below 50 percent and is below the 125 percent COC threshold. AC-3, Census Tract 117 has a percent minority of 3.60 percent, which is below 50 percent and is below the 125 percent COC threshold. Therefore, all three AC's do not contain minority populations of EJ concern.

AC-1, Census Tract 115.01 has a percent low-income of 5.95 percent, which is below 50 percent and is below the 125 percent COC threshold. AC-2, Census Tract 115.02 has a percent low-income of 6.04 percent, which is below 50 percent and is below the 125 percent COC threshold. AC-3, Census Tract 117 has a percent low-income of 1.56 percent, which is below 50 percent and is below the 125 percent COC threshold. Therefore, all three AC's do not contain low-income populations of EJ concern.

Conclusion

The census data sheets, map, and calculations can be found in Appendix I (Appendix I-19 to I-25). All three AC's percent minority and percent low-income are below 50 percent and below 125 percent of the COC threshold and are not populations for EJ concern. No further EJ Analysis is warranted.

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
☐	☒
☐	☒

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.

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SECTION I – HAZARDOUS MATERIALS & REGULATED SUBSTANCES

Documentation

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?

X

Date RFI concurrence by INDOT SAM (if applicable): May 6, 2021 (State) and December 3, 2021 (LPA)
Rechecked March 31, 2022 and May 24, 2023

Include a summary of the potential hazardous material concerns found during review. Discuss in depth sites found within, directly 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, the RFIs were completed on May 5, 2021, and December 3, 2021, and INDOT SAM provided their concurrence on May 6, 2021, and December 3, 2021 (Appendix E: E-2 to E-27). One Resource Conservation and Recovery Act (RCRA) Generator/Treatment, storage, and disposal (TSD), two State Cleanup Sites, two underground storage tank (UST) Sites, three leaking underground storage tank (LUST) Sites, one Open Dump Waste Site, one Brownfield, three Institutional Controls, and ten National Pollutant Discharge Elimination System (NPDES) Facilities are located within 0.5 mile of the project area. One UST Site, two LUST Sites, one NPDES Facility, and one Institutional Control could affect the project area.

- UST Site: One (1) UST Site is located adjacent to the State portion of the project area. The former Swifty Service Station #240, 6933 South SR 67, Pendleton, Indiana 46064 (Agency Interest ID: 10998), is located on the western side of SR 67 between East Water Street and West Mercer Lane. A No Further Action (NFA) Determination Pursuant to Risk Integrated System of Closure (RISC) was issued by IDEM on March 29, 2016 and contamination remains in the area surrounding the site, but are below residential levels. If excavation occurs in this area, proper handling, removal, and disposal of soil and/or groundwater will be necessary.
- LUST Sites: Two (2) sites are within the project area.
 - Former Marathon Unit #1636, 7175 South SR 67, Pendleton, Indiana 46064 (Regulatory Program ID: 5379), is located adjacent to the project area, at the northern corner of the intersection of SR 38 and SR 67. IDEM issued a No Further Action (NFA) Approval Determination Pursuant to Remediation Closure Guide on April 3, 2002. Low levels of soil and groundwater contamination remain on the site. If excavation occurs in this area, it is likely that petroleum contamination will be encountered. Proper handling, removal, and disposal of soil and/or groundwater may be necessary.
 - Speedway #7155, 7167 South SR 67, Pendleton, Indiana 46064 (Agency Interest ID: 11131), is located adjacent to the project area, southwest of the intersection of West US 30 and South SR 67. IDEM issued a NFA Approval Determination Pursuant to Remediation Closure Guide on November, 17, 2015. Low levels of soil contamination remain on the site, though groundwater monitoring and sampling results indicate this residual soil contamination is not leaching into the groundwater. An Environmental Restrictive Covenant (ERC) was placed on the property on October 28, 2015. If excavation occurs in this area, it is likely that petroleum contamination will be encountered. Proper handling, removal, and disposal of soil and/or groundwater may be necessary. Early coordination letters were sent on March 25, 2022, and April 5, 2023, to IDEM, Lynette Schrowe (LSchrowe1@idem.in.gov), before further site activities occur. No response has been received.
- NPDES Facilities: PHHS Parking and Activity Center Addition, 1 Arabian Drive (Permit Number: INRA01662), is located south of the intersection of US 36 and SR 38. The permit expires on June 3, 2023. Early coordination letters were sent on June 7, 2021, and April 5, 2023, to PHHS. No response has been received.
- Institutional Controls: One (1) institutional control is located adjacent to the project area. The Speedway #7155, 7167 South SR 67, Pendleton, Indiana 46064 (Agency Interest ID: 11131), is located adjacent to the project area. An ERC was placed on the property on October 28, 2015. The ERC specifically prohibits the use for residential purposes, groundwater shall not be used or extracted for any purpose and the removal, excavation, or disturbance of soil will be conducted under the requirements of Indiana Occupational Safety and Health Administration/Occupational Safety and Health Administration (IOSHA/OSHA). Removed soil will be managed and disposed of under all applicable federal and state regulations. If

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excavation occurs in this area, it is likely that petroleum contamination will be encountered. Proper handling, removal, and disposal of soil and/or groundwater may be necessary. An early coordination letter was sent on April 5, 2023, to the IDEM Institutional Controls section (institutionalcontrols@idem.IN.gov). No response has been received. Refer to Appendix G of the SAM Manual for the recommended procedure to manage and report contamination.

IDEM Office of Land Quality responded on June 8, 2021, stating that after reviewing the files for service stations, there are two active stations, one former station, and a State Cleanup Site (CVS) within the area of the project (Appendix C: C-8 to C-9).

IDEM Office of Land Quality responded on April 4, 2023, stating that there are a few service stations in the area:

- Ricker/BP: 7175 South SR 67 (Northwest corner of E State Road and US 67) – No active LUST – Facility ID 5379 - Active,
- Speedway 7155: 7167 South SR 67 (along SR 67, north of E State Street) – No active LUST – Facility ID 3497 - Active, and
- Former Swiftly: 6933 S SR 67 (along 67, north of Water Street) – No active LUST – Facility ID 5239 – All USTs removed - Inactive.

Additional information regarding each of those facilities is in our Virtual File Cabinet (Appendix C: C-20).

IDEM Office of Land Quality responded on January 29, 2024, stating that there are a few UST sites in the area:

- Facility ID 5379 – 7175 S SR 67 – Site is in compliance (UST) – LUST Incident #199611501 (NFA April 3, 2022)
- Facility ID 3497 – 7167 S SR 67 – Site is in compliance (UST) – Multiple LUST Incidents but all were issued NFA letters

Both are located along SR 67. No other UST sites were found in the areas marked on the site plan (Appendix C: C-73).

IDEM Institutional Controls Group responded on January 30, 2024, stating that they do not have any concerns with the proposed work as it pertains to the ERC on the 7167 South SR 67 property, provided that proper handling, removal, and disposal of soil and/or groundwater is conducted in accordance with applicable laws, when and where appropriate (Appendix C: C-75).

Due to project design updates, the RFI layers were rechecked on March 30, 2022, by ASC Group, Inc. The recheck showed that no new features are within or adjacent to the project area; therefore, no additional impacts are expected. INDOT SAM concurred on March 31, 2022, that a RFI Addendum is not warranted for the updated project extent or scope (Appendix E: E-28).

Due to the State and LPA projects being combined, the RFI layers were rechecked on May 9, 2023, by ASC Group, Inc. The recheck showed that no new features are within or adjacent to the project area; therefore, no additional impacts are expected. INDOT SAM concurred on May 24, 2023, that a RFI Addendum is not warranted and that the changes can be noted in the CE (Appendix E: E-29 to E-30). INDOT SAM stated that “should additional changes to the project scope or extent occur, re-coordination with INDOT SAM will be necessary.”

The addition of the work for Structure No. CV 036-048-89.07, a box culvert at the US 36/SR 9 split, caused ASC Group, Inc. to recheck the impacts on October 18, 2023. The culvert will be removed and replaced as a part of this project. There will be excavation for this work to a depth of 11 ft below the ground surface, which is deeper than what was originally in the RFI report (2–3 ft for the road work only in this location). The culvert work is adjacent to Speedway #7155, 7167 South SR 67, Pendleton, Indiana 46064 (Agency Interest ID: 11131). INDOT SAM stated on October 23, 2023, that ASC Group, Inc. can just note the updated structure number in the CE since the project area remains the same and no additional impacting features were identified (Appendix E: E-31 to E-32).

On June 28, 2024, ASC Group, Inc. noticed that two hazmat resources (UST Site and Institutional Control) were not added to the recommendation and sent an email to INDOT SAM regarding these two findings. INDOT SAM responded on June 28, 2024, stating that the Institutional Control is also a LUST Site, which was included in the recommendations. INDOT SAM reviewed Virtual File Cabinet (VFC) documentation for the UST Site and does not believe that a recommendation is warranted. The March 29, 2016 NFA Approval from IDEM gave unconditional closure to the site for soil, groundwater, and vapor. There was also a Phase I ESA Report from December 6, 2018, which concluded that no further environmental investigation was warranted for the UST Site. INDOT SAM did not see a need to complete an Addendum since the Swiftly site was not included in the recommendations and explained that the changes could be noted in the CE (Appendix E: E-33).

Indiana Department of Transportation

County Madison

Route US 36 (SR 9/SR 67)

1702936 and 1802854 (State)
and 2001127, 2300272, and
Des. No. 2300273 (LPA)

Part IV – Permits and Commitments

PERMITS CHECKLIST

Permits (mark all that apply)

Army Corps of Engineers (404/Section 10 Permit)

Nationwide Permit (NWP)

Regional General Permit (RGP)

Individual Permit (IP)

Other

Likely Required

☒

☐

☐

☐

IN Department of Environmental Management (401/Rule 5)

Nationwide Permit (NWP)

Regional General Permit (RGP)

Individual Permit (IP)

Isolated Wetlands

Construction Stormwater General Permit, formerly
known as the Rule 5

Other

☒

☐

☐

☐

☒

☐

IN Department of Natural Resources

Construction in a Floodway

Navigable Waterway Permit

Other

☒

☐

☐

Mitigation Required

US Coast Guard Section 9 Bridge Permit

Others (Please discuss in the discussion below)

☐

☐

☐

☐

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

A Construction Stormwater General Permit, formerly known as the Rule 5 permit will be required because approximately 14.22 acres of soil disturbance is expected for this project, which is greater than the 1-acre threshold.

IDEM 401/USACE 404 Clean Water Act permits will likely be required due to impacting Wetlands 1–3, 9, 11, and 14. A USACE Approved Jurisdictional Determination determined that Wetlands 1, 2, 4–6, 13, and 14 are considered to be isolated, non-jurisdictional waters. IDEM has determined that these isolated wetlands are to be exempt from permitting requirements under IC 13-18-22-1(7). The total permanent impacts to the jurisdictional wetlands (Wetlands 3, 9, and 11) will be 0.094 acre due to the placement of clean fill from the added travel lanes and widening of pavement through the corridor. Mitigation will be determined during permitting, but is not anticipated at this time based on the 0.10 acre threshold not being met.

Due to work in Wetland 9 falling within IDNR's regulatory floodway for Fall Creek, an IDNR CIF permit will 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.

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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 or permanent or temporary right-of-way amounts change, the INDOT Environmental Services Division (ESD) and the INDOT District Environmental Section will be contacted immediately. (INDOT 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 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) Fall Creek will be included on all plans and labeled as "Do Not Disturb". This stream will not be disturbed by any construction activities. (INDOT ESD)
- 5) Wetlands 4-8, 10, 12, and 13 will be included on all plans and labeled as "Do Not Disturb". These wetlands will not be disturbed by any construction activities. (INDOT ESD)
- 6) Two old Trenton gas wells (IGS # 142510 and 142512) were drilled around 1900 and are presumed plugged. The wells are probably not close enough to the existing roadway to affect the project. However, if the wells are encountered, then they will need to be investigated and possibly more properly plugged using today's standard. If a steel casing or void hole is encountered in either location, then the Orphan Well Manager, Brian Royer, needs to be contacted (317-417-6556 or broyer@dnr.IN.gov) to investigate and provide guidance on how it needs to be dealt with. (IDNR Division of Reclamation)
- 7) There are several water wells within and adjacent to the project area. The water wells have been marked as "Do Not Disturb" on the plans. (INDOT ESD)
- 8) LUST Site: Former Marathon Unit #1636, 7175 South SR 67, Pendleton, Indiana 46064 (Regulatory Program ID: 5379), is located adjacent to the project area, at the northern corner of the intersection of SR 38 and SR 67. IDEM issued a NFA Approval Determination Pursuant to Remediation Closure Guide on April 3, 2002. Low levels of soil and groundwater contamination remain on the site. If excavation occurs in this area, it is likely that petroleum contamination will be encountered. Proper handling, removal, and disposal of soil and/or groundwater may be necessary. (INDOT SAM)
- 9) LUST Site: Speedway #7155, 7167 South SR 67, Pendleton, Indiana 46064 (Agency Interest ID: 11131), is located adjacent to the project area, southwest of the intersection of West US 30 and South SR 67. IDEM issued a NFA Approval Determination Pursuant to Remediation Closure Guide on November 17, 2015. Low levels of soil contamination remain on the site, though groundwater monitoring and sampling results indicate this residual soil contamination is not leaching into the groundwater. An Environmental Restrictive Covenant (ERC) was placed on the property on October 28, 2015. If excavation occurs in this area, it is likely that petroleum contamination will be encountered. Proper handling, removal, and disposal of soil and/or groundwater may be necessary. Coordination will occur prior to RFC. (INDOT SAM)
- 10) NPDES Facility: Pendleton Heights High School Parking and Activity Center Addition, 1 Arabian Drive (Permit Number: INRA01662), is located south of the intersection of US 36 and SR 38. The permit expires on June 3, 2023. Coordination will occur prior to RFC. (INDOT SAM)
- 11) Institutional Control: The Speedway #7155, 7167 South SR 67, Pendleton, Indiana 46064 (Agency Interest ID: 11131), is located adjacent to the project area. An ERC was placed on the property on October 28, 2015. The ERC specifically prohibits the use for residential purposes, groundwater shall not be used or extracted for any purpose and the removal, excavation, or disturbance of soil will be conducted under the requirements of Indiana Occupational Safety and Health Administration/Occupational Safety and Health Administration (IOSHA/OSHA). Removed soil will be managed and disposed of under all applicable federal and state regulations. If excavation occurs in this area, it is likely that petroleum contamination will be encountered. Proper handling, removal, and disposal of soil and/or groundwater may be necessary. Coordination will occur prior to RFC. Refer to Appendix G of the SAM Manual for the recommended procedure to manage and report contamination. (INDOT SAM)
- 12) If additional changes to the project scope or extent occur, re-coordination with INDOT SAM will be necessary. (INDOT SAM)
- 13) GENERAL AMM 1: Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs. (USFWS)

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- 14) TREE REMOVAL AMM 1: Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal. (USFWS)
- 15) TREE REMOVAL AMM 2: Apply time of year restrictions for tree removal when bats are not likely to be present, or limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/rail surface and outside of documented roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed. (USFWS, IDNR-DFW)
- 16) TREE REMOVAL AMM 3: Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits). (USFWS)
- 17) TREE REMOVAL AMM 4: Do not remove documented Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 miles of roosts, or documented foraging habitat any time of year. (USFWS)
- 18) LIGHTING AMM 1: Direct temporary lighting away from suitable habitat during the active season. (USFWS)
- 19) LIGHTING AMM 2: When installing new or replacing existing permanent lights, use downward-facing, full cut-off lens lights (with same intensity or less for replacement lighting); or for those transportation agencies using the BUG system developed by the Illuminating Engineering Society, be as close to 0 for all three ratings with a priority of "uplight" of 0 and "backlight" as low as practicable. (USFWS)
- 20) A re-evaluation of the noise analysis will occur during the final design. If during the final design, it has been determined that the conditions have changed such that noise abatement is feasible and reasonable, the abatement measures might be provided. The final decision on the installation of any abatement measure(s) will be made upon the completion of the project's final design and the public involvement process. (INDOT ESD)
- 21) Upon completion of the environmental document phase, the noise study will be provided directly to the county's planning unit by the environmental preparer and/or member of the project team. If the project is in a municipality that has a planning unit, a noise study will also be provided to the municipality's planning unit. INDOT Environmental Services Division shall be copied on this correspondence. (INDOT ESD)
- 22) USFWS Bridge/Structure Assessment are only valid for two years. If construction will begin after June 9, 2025, 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. (INDOT ESD)
- 23) Site 12-M-0813 will be marked for avoidance on the plans AND in the field. (Indiana SHPO)

For Further Consideration:

- 1) The Division of Fish and Wildlife recommends avoiding removing urban trees to the greatest extent possible and replacing trees that must be removed. (IDNR-DFW)
- 2) Plant five trees, 1 inch to 2 inches in diameter-at-breast height, for each tree which is removed that is 10 inches or greater in diameter-at-breast height. (IDNR-DFW)
- 3) Pavement rehabilitation projects typically do not have a significant impact on fish, wildlife, and botanical resources as long as best management practices (BMPs) are in place to limit the migration of Polycyclic aromatic hydrocarbons (PAHs) into local waterways. PAHs are a byproduct of asphalt and coal tar based sealants and negatively impact aquatic systems. The use of sealants that are free of petroleum and coal tar based products is encouraged whenever possible. Contaminated road runoff can significantly impact the aquatic environment through increased turbidity and release of sediment into the stream which can be harmful to fish and other aquatic organisms, their eggs, and their food supply. Where possible, road runoff should be directed to riprap turnouts and sediment filtration prior to entering a stream to reduce impacts to aquatic species. IDNR recommends the use of pollutant trapping technology such as storm drain inserts to reduce the runoff of roadside pollutants. (IDNR-DFW)
- 4) The Division of Fish and Wildlife recommends considering a more sustainable approach to stormwater management. The traditional model of stormwater management aims to drain runoff as quickly as possible with the help of channels and pipes, which increases peak flows and costs of stormwater management. This type of solution only transfers drainage problems from one section of a basin to another. A more sustainable approach should aim 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.). The following links give a good overview of traditional and sustainable stormwater management systems and their pros and cons for consideration during the design of the proposed

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project: <https://www.epa.gov/greeningepa/epa-facility-stormwater-management> and <https://www.epa.gov/greeningepa/stormwater-management-practices-epa-facilities>. (IDNR-DFW)

- 5) Consider maintaining a minimum 15-ft wide buffer strip around the detention basin from the top of the bank landward after construction using a mixture of grasses, sedges, and wildflowers native to Central Indiana to help mitigate for potential nuisance Canada goose conflicts. Do not mow, cut, or spray the area. Post "Do Not Mow or Spray" signs along the buffer strip. (IDNR-DFW)
- 6) Consider using native plants for any proposed on-site landscaping and revegetation. The following is a link to information on landscaping with native plants on the Indiana Native Plant Society (INPS) website: <https://indiananativeplants.org/landscaping/>. (IDNR-DFW)
- 7) Most transportation corridor designers and municipalities are trending toward LED lighting. Certain types of LED lighting can have negative impacts on both human and wildlife health and safety. Scientific evidence suggests that artificial light at night has negative and deadly effects on many organisms including amphibians, birds, mammals, insects and plants (<https://www.darksky.org/light-pollution/wildlife/>). A June 2016 American Medical Association (AMA) report, "Human and Environmental Effects of Light Emitting Diode Community Lighting," concluded that "white LED street lighting patterns may contribute to the risk of chronic disease in the populations of cities in which they have been installed." The International Dark-Sky Association has developed recommendations (<https://www.darksky.org/ourwork/lighting/lighting-for-citizens/led-guide/>) for communities choosing LED lighting systems that will aid in the selection of lighting that is energy and cost efficient, yet ensures safety and security, protects wildlife, and promotes the goal of reducing light pollution:
 - a) Always choose fully shielded fixtures that emit no light upward.
 - b) Use "warm-white" or filtered LEDs (CCT < 3,000 K; S/P ratio < 1.2) to minimize harmful blue light emission.
 - c) Look for products with adaptive controls like dimmers, timers, and motion sensors.
 - d) Consider dimming or turning off lights during non-peak overnight hours.
 - e) Avoid the temptation to over-light because of the higher luminous efficiency of LEDs.
 - f) Only light the exact space and in the amount required for particular tasks. (IDNR-DFW)

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APPENDIX A: INDOT SUPPORTING DOCUMENTATION

Threshold Chart

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	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: PROJECT AREA AND PLAN SHEET

Figure 1 – Project Vicinity

Figure 2 – Topographic Maps Showing the Project Area

Figure 3 – Aerial Photograph Showing the Project Area
Photographs

Project Plan Set

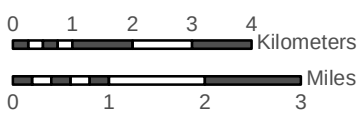
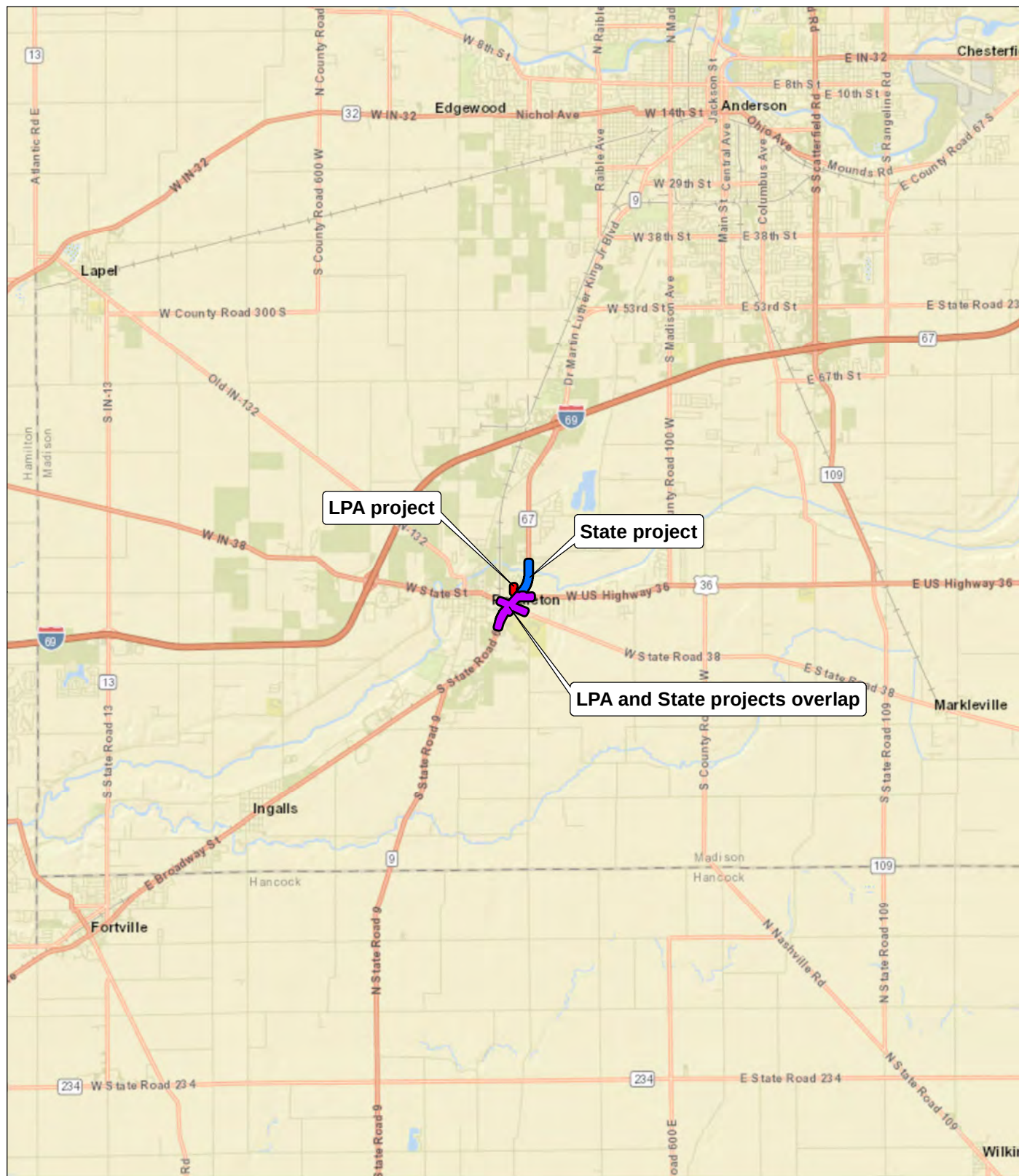
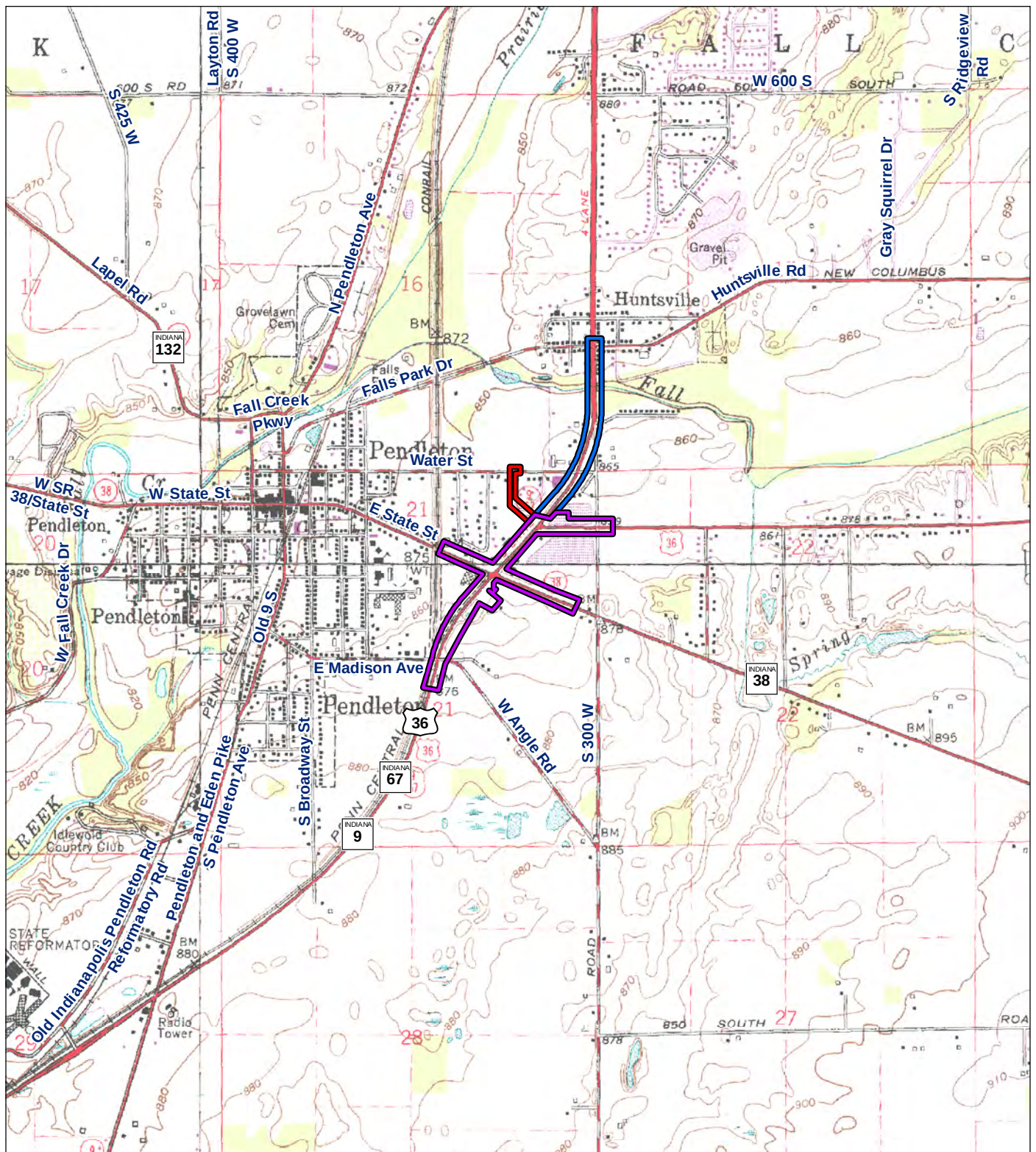


Figure 1

Portion of the ESRI World Street Map showing the project areas for the US 36/SR 9 Road Project (Des. Nos. 1702936 and 1802854) and the US 36 Pedestrian Connectivity Project (Des. No. 2001127) in Madison County, Indiana.

Base: ESRI World Street Map



- LPA project
- State project
- LPA and State projects overlap

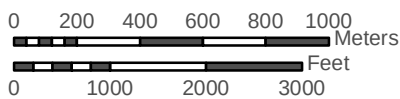
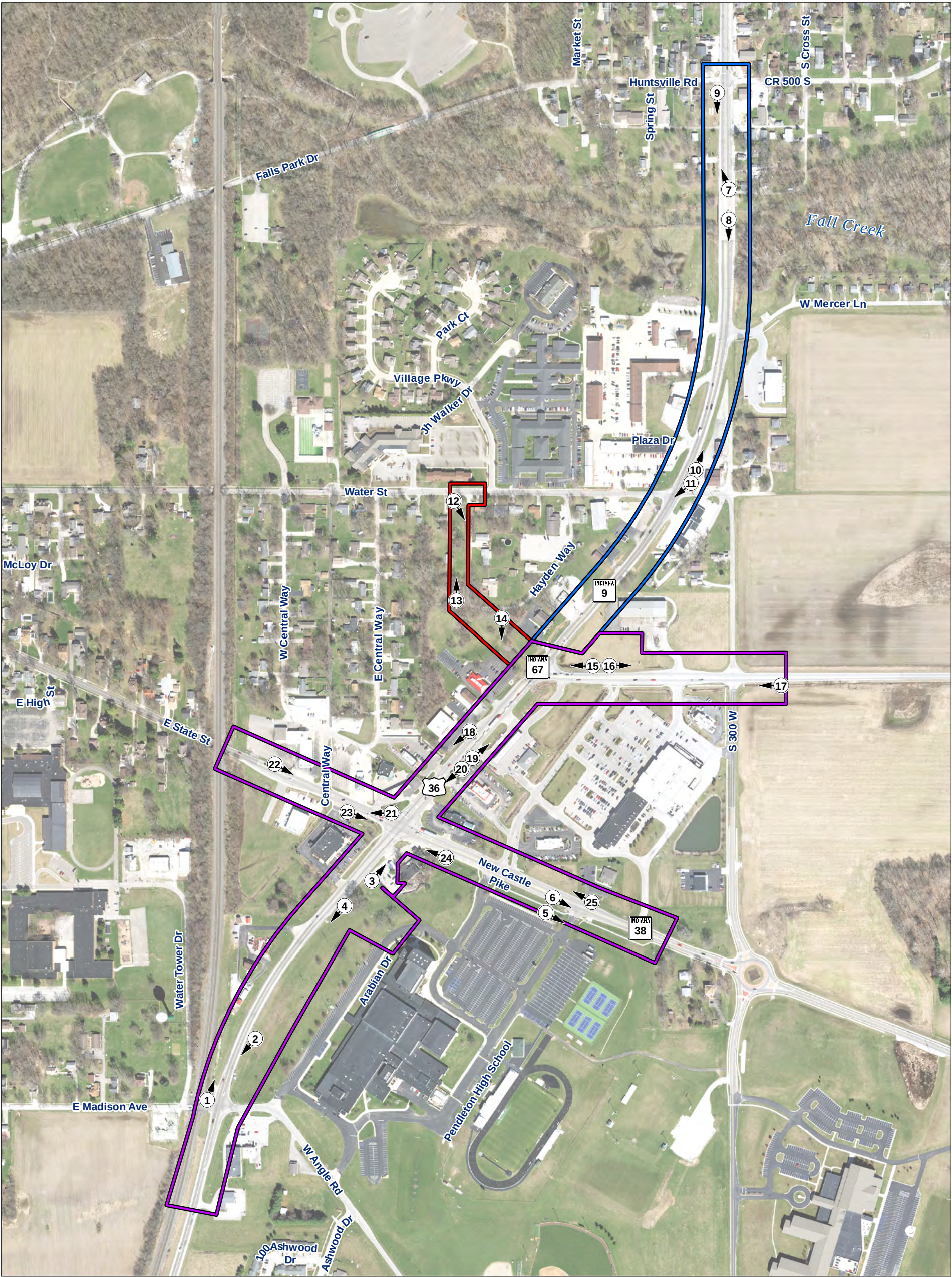


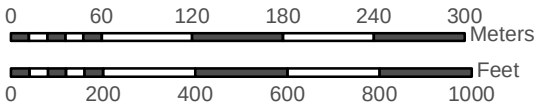
Figure 2

Portions of the Anderson South, Ingalls, Lapel, and Pendleton, Indiana quadrangles (USGS 7.5' topographic maps) showing the project areas for the US 36/SR 9 Road Project (Des. Nos. 1702936 and 1802854) and the US 36 Pedestrian Connectivity Project (Des. No. 2001127) in Madison County, Indiana.

Base: USGS Anderson South, Ingalls, Lapel, and Pendleton, Indiana, 7.5' series quadrangles



- LPA project
- State project
- LPA and State projects overlap
- Photograph location



Base: Aerial photograph
2017



Figure 3
Aerial photograph showing the project areas for the US 36/SR 9 Road Project (Des. Nos. 1702936 and 1802854) and the US 36 Pedestrian Connectivity Project (Des. No. 2001127) in Madison County, Indiana.



Photograph 1. Western side of SR 9, overview of the southern project terminus, facing north-northeast.



Photograph 2. View of the east side of SR 9 in the southern project terminus, facing southwest.

Photographs taken on September 30, 2020, June 13, 2022, and September 18, 2022



Photograph 3. View of the SR 9 and SR 38 intersection, facing northeast.



Photograph 4. View of the east side of SR 9 in the southern project terminus, facing southwest.



Photograph 5. View of the drainage on the eastern project boundary, south of SR 38, facing southeast.



Photograph 6. View of the pedestrian bridge on the eastern project boundary, south of SR 38, facing southeast.

Photographs taken on September 30, 2020, June 13, 2022, and September 18, 2022



Photograph 7. View of SR 9 on the bridge over Fall Creek, facing north-northwest.



Photograph 8. View of SR 9 from the bridge over Fall Creek, facing south.

Photographs taken on September 30, 2020, June 13, 2022, and September 18, 2022



Photograph 9. View along the northwest project area boundary, west of SR 9, facing south.



Photograph 10. View along the east project area boundary, east of SR 9, facing north-northeast.

Des. Nos. 1702936 and 1802854 – US 36 and SR 9 Road and Des. No. 2001127 US Pedestrian Connectivity Project
Madison County, Indiana

Photographs taken on September 30, 2020, June 13, 2022, and September 18, 2022



Photograph 11. View north of Water Street and east of SR 9, facing southwest.



Photograph 12. View of a residential area, west of Hayden Way, facing southeast (taken on June 13, 2022).



Photograph 13. View of a forested area, dividing a commercial property from a residential area, facing north (taken on June 13, 2022).



Photograph 14. View of a vegetated terrace between two commercial properties, west of the US 36/SR 9 split, facing south (taken on June 13, 2022).



Photograph 15. View north of US 36, towards the SR 9 split, facing west.



Photograph 16. View north of US 36, east of the SR 9 split, facing east.

Photographs taken on September 30, 2020, June 13, 2022, and September 18, 2022



Photograph 17. View from the eastern terminus along US 36, facing west.



Photograph 18. View along the west project area boundary, west of SR 9, facing southwest.

Des. Nos. 1702936 and 1802854 – US 36 and SR 9 Road and Des. No. 2001127 US Pedestrian Connectivity Project
Madison County, Indiana
Photographs taken on September 30, 2020, June 13, 2022, and September 18, 2022



Photograph 19. View along the east project area boundary, east of US 36, facing northeast.



Photograph 20. View of a catch basin along the east project area boundary, east of US 36, facing southwest.

Des. Nos. 1702936 and 1802854 – US 36 and SR 9 Road and Des. No. 2001127 US Pedestrian Connectivity Project
Madison County, Indiana

Photographs taken on September 30, 2020, June 13, 2022, and September 18, 2022



Photograph 21. View north of SR 38, from the US 36 intersection, facing west.



Photograph 22. View along the southwest project area boundary, north of SR 38, facing southeast.



Photograph 23. View along the southwest project area boundary, south of SR 38 towards the US 36 intersection, facing east-southeast.



Photograph 24. View of riprap, south of SR 38, facing northwest (taken on September 18, 2022).

Des. Nos. 1702936 and 1802854 – US 36 and SR 9 Road and Des. No. 2001127 US Pedestrian Connectivity Project
Madison County, Indiana
Photographs taken on September 30, 2020, June 13, 2022, and September 18, 2022



Photograph 25. View of a commercial driveway along the southeast project area boundary, north of SR 38, facing northwest.

PROJECT	DESIGNATION
1702936, 1802854, 2001127	1702936, 1802854, 2001127
CONTRACT	
R-41837	

INDIANA DEPARTMENT OF TRANSPORTATION



ROAD PLANS

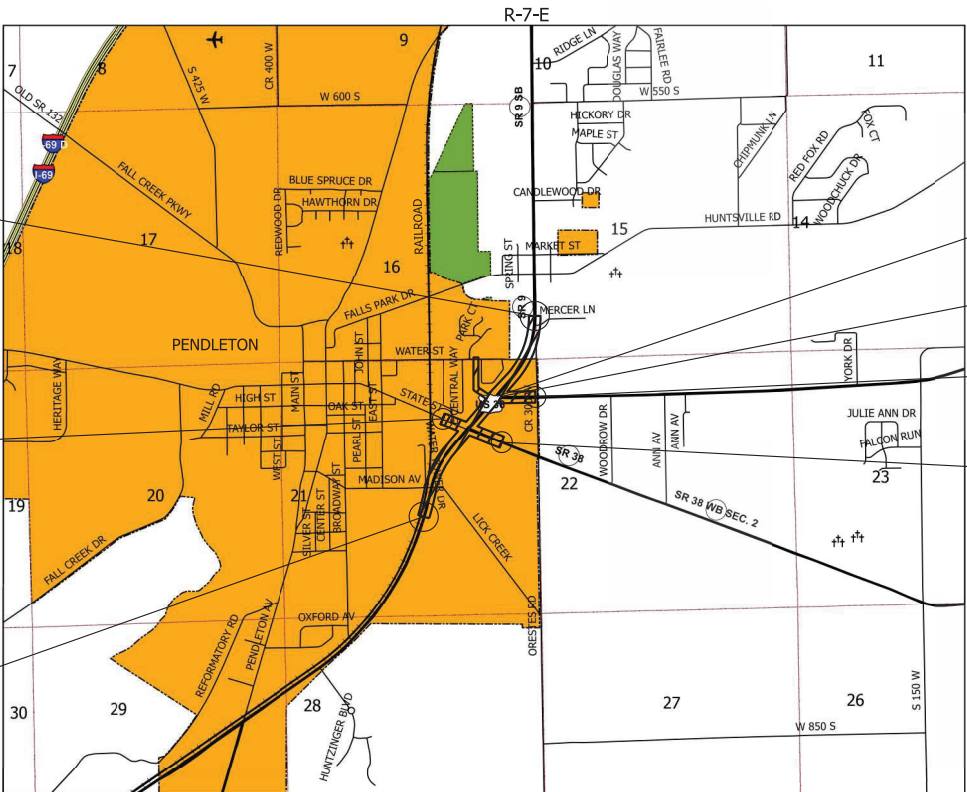
ROUTE: US 36/SR 9FROM: RP 88+0.6 (US 36) TO: RP62+0.3 (SR 9)
PROJECT NO. 1702936, 1802854, 2001127 P.E.
1702936, 1802854, 2001127 R/W
1702936, 1802854, 2001127 CONST.

ADDED TRAVEL LANES, ACCESS CONTROL, AND PEDESTRIAN
IMPROVEMENTS ALONG US 36 FROM 0.28 MILE SOUTH OF SR 38 TO
HUNTSVILLE ROAD, IN SECTIONS 15, 16, 21 AND 28, T-18-N, R-7-E, FALL
CREEK TOWNSHIP, MADISON COUNTY, INDIANA.

END PROJECT
DES. 1802854
STA. 438+37.35 "A"

Begin Construction
Sta. 95+25.00 "S-1-A"

BEGIN PROJECT
DES. 1702936/2001127
STA. 390+88.00 "A"



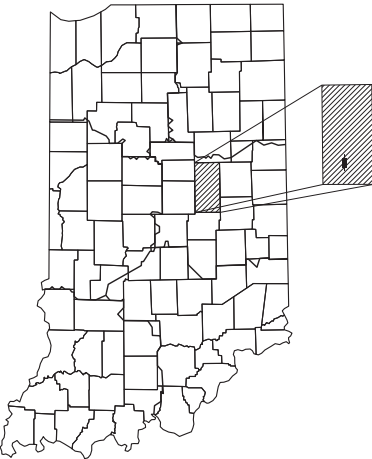
R-7-E
Madison County
SCALE: 1" = 2,000'

End Construction Sta. 417+50.00 "A"
(Des. No. 1702936/2001127)
Begin Construction Sta. 417+50.00 "A"
(Des. No. 1802854)

Begin Construction
Sta. 50+35.68 "S-2-A"

End Construction
Sta. 56+00.00 "S-2-A"

End Construction
Sta. 111+11.00 "S-1-A"



PROJECT LOCATION SHOWN BY
MADISON COUNTY

LATITUDE:	39° 59' 47.3" N
LONGITUDE:	85° 44' 16.5" W
GROSS LENGTH:	0.90 MI
NET LENGTH:	0.90 MI
MAX. GRADE:	3.17%

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

TRAFFIC DATA	US 36 South of North Jct RP 88+62 to 89+5	US 36 East of North Jct	SR 9 North of North Jct RP 62+10 to 62+33
A.A.D.T. (2023)	16,525 V.P.D.	7,380 V.P.D.	15,167 V.P.D.
A.A.D.T. (2043)	17,573 V.P.D.	N/A V.P.D.	16,020 V.P.D.
D.H.V (2043)	1,650 V.P.H.	N/A V.P.H.	1,410 V.P.H.
DIRECTIONAL DISTRIBUTION	51.71 %	65 %	49.37 %
TRUCKS	7.83 % A.A.D.T. 6.06 % D.H.V.	4 % A.A.D.T. N/A % D.H.V.	15.75 % A.A.D.T. 14.07 % D.H.V.

DESIGN DATA			
DESIGN SPEED	40 M.P.H.	45 M.P.H.	40 M.P.H.
PROJECT DESIGN CRITERIA	4R (NON-FREEWAY)	4R (NON-FREEWAY)	4R (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION	OTHER PRINCIPAL ARTERIAL	MINOR ARTERIAL	OTHER PRINCIPAL ARTERIAL
RURAL/URBAN	URBAN (INTERMEDIATE)	URBAN (INTERMEDIATE)	URBAN (INTERMEDIATE)
TERRAIN	LEVEL	LEVEL	LEVEL
ACCESS CONTROL	NONE	LIMITED ACCESS	NONE

TRAFFIC DATA	STATE STREET	SR 38
A.A.D.T. (2023)	11,358 V.P.D.	8,872 V.P.D.
A.A.D.T. (2043)	11,883 V.P.D.	9,589 V.P.D.
D.H.V (2043)	N/A V.P.H.	N/A V.P.H.
DIRECTIONAL DISTRIBUTION	63 %	62 %
TRUCKS	2 % A.A.D.T. N/A % D.H.V.	4 % A.A.D.T. N/A % D.H.V.

DESIGN DATA		
DESIGN SPEED	35 M.P.H.	35 M.P.H.
PROJECT DESIGN CRITERIA	4R (NON-FREEWAY)	4R (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION	MINOR ARTERIAL	MINOR ARTERIAL
RURAL/URBAN	URBAN (INTERMEDIATE)	URBAN (INTERMEDIATE)
TERRAIN	LEVEL	LEVEL
ACCESS CONTROL	NONE	NONE

CDM
Smith

211 North Pennsylvania Street, Suite 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

PLANS
PREPARED BY: CDM SMITH (317) 829-9600
PHONE NUMBER

CERTIFIED BY: DATE

APPROVED FOR LETTING: INDIANA DEPARTMENT OF TRANSPORTATION DATE

SURVEY BOOK	SHEETS
ELECTRONIC	1 of 243
CONTRACT	PROJECT
R-41837	1702936, 1802854, 2001127

TYPICAL SECTIONS LEGEND

- K

Full Depth HMA Pavement
165 lb/sys QC/QA HMA, 3, 70, Surface 9.5 mm, on
275 lb/sys QC/QA HMA, 3, 70, Intermediate 19.0 mm, on
880 lb/sys QC/QA HMA, 3, 70, Base 25.00 mm, on
Subgrade Treatment, Type IC
- L

165 lb/sys QC/QA HMA, 3, 70, Surface 9.5 mm, on
Widening with HMA, Type C consisting of
275 lb/sys HMA Intermediate, Type C, on
880 lb/sys HMA Base, Type C, on
Subgrade Treatment, Type IC
- M

165 lb/sys QC/QA HMA, 3, 70, Surface 9.5mm, on
HMA Patching, Full-depth, Type C consisting of
275 lb/sys HMA Intermediate, Type C, on
880 lb/sys HMA Base, Type C, on
Subgrade Treatment, Type IC
- R

165 lb/sys QC/QA HMA, 3, 70, Surface 9.5 mm, on
Milling, Asphalt, 1.5 in.
- F

Concrete Sidewalk
- P

HMA Shared-Use Path
110 lb/sys QC/QA HMA, 3, 70, Surface 9.5 mm, on
220 lb/sys QC/QA HMA, 3, 70, Intermediate 19.0 mm, on
Subgrade Treatment, Type II
- 13

Curb, Concrete
- 13A

Curb, Concrete, Modified
- 15

Curb and Gutter, Concrete
- 15A

Curb and Gutter, Concrete, Modified
- 22

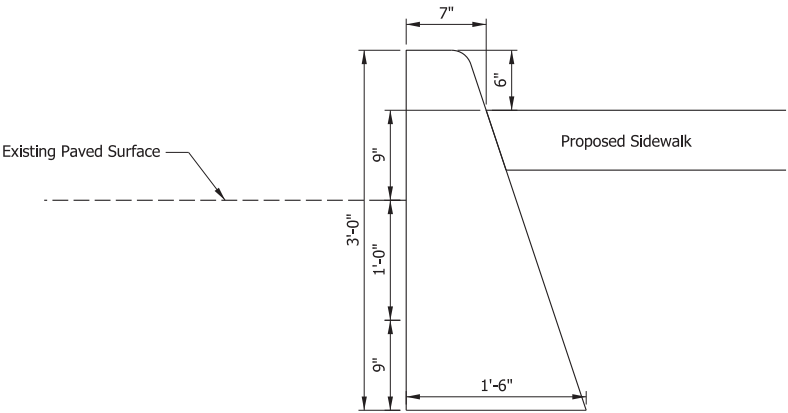
Center Curb, D Concrete
- 26

Sodding, Nursery
- 29

Seed Mixture, U with
Fertilizer,
Mulching Material, and
Water

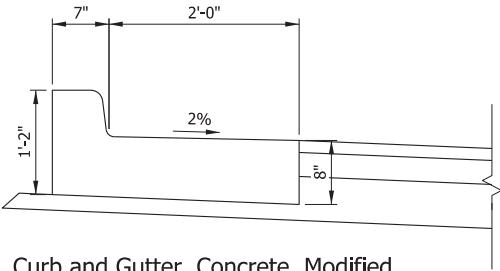
EXISTING APPROXIMATE SUPERELEVATIONS AND
APPROXIMATE STATION RANGES

CURVE	P.I. STA.	DEFLECTION	APPROX. MAX. %	BEGIN TRANSITION ENTRANCE STA.	END TRANSITION EXIT STA.
1	388+60.46 "A"	Left	2.4%	N/A	390+95 "A"
2	398+26.41 "A"	Right	5%	392+19 "A"	404+16 "A"
3	429+83.81 "A"	Left	4%	421+18 "A"	437+83 "A"



Curb, Concrete, Modified

Not to Scale

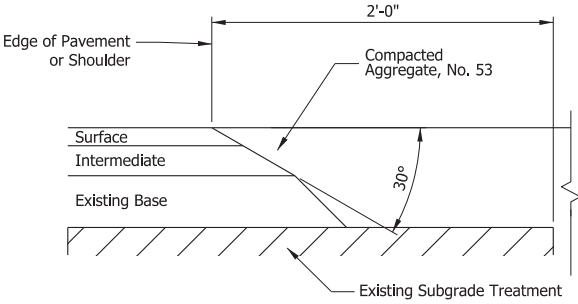


Curb and Gutter, Concrete, Modified

Not to Scale

Sta. 393+77.19 to 403+10.00
Transition from standard gutter cross slope for 25' starting Sta. 393+77.19
Transition to standard gutter cross slope for 25' ending Sta. 403+10.00

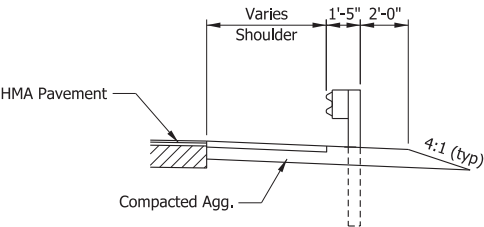
Sta. 421+15.00 to 433+68.74
Transition from standard gutter cross slope for 25' starting Sta. 421+15.00
Transition to standard gutter cross slope for 25' ending Sta. 433+68.74



SAFETY EDGE ON HMA PAVEMENT

Not to Scale

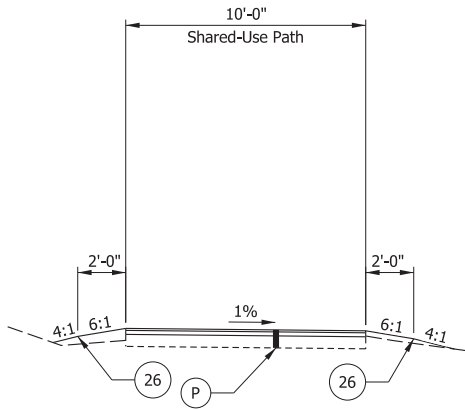
Note: Safety edge applies only to road
edges without curb or curb and gutter.



TYPICAL SECTION WITH GUARD RAIL

Not to Scale

Sta. 437+74.48 "A" to Sta. 438+57.82 "A", Req'd LT. & RT.
Sta. 440+26.10 "A" to Sta. 441+16.73 "A", Req'd LT.



PROPOSED TYPICAL SECTION - SHARED USE PATH

From US 36 along Hayden Way to Water Street
Sta. 0+00.00 to Sta. 9+36.10 Line "PATH-N"

CDM
Smith

211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED
FOR APPROVAL _____
DESIGN ENGINEER _____ DATE _____

DESIGNED: HMH _____ DRAWN: BDM _____
CHECKED: SMS _____ CHECKED: MJV _____

INDIANA
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS
LEGEND & DETAILS

SCALE BRIDGE FILE

1/4" = 1'-0"

DESIGNATION

1702936, 1802854, 2001127

SURVEY BOOK SHEETS

ELECTRONIC 3 of 243

CONTRACT PROJECT

R-41837 1702936, 1802854, 2001127



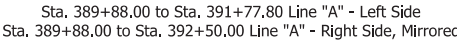
Approx. Location of High School Property Line

2'-0" 10'-0" 2'-0"

Shared-Use Path

4:1 6:1 1% 6:1 4:1

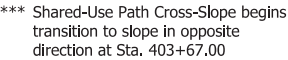
26 P 26



J	Left Side 8'-9" to 2'-7" from Sta. 389+88.00 to Sta. 391+77.80
J	Right Side 10'-0" from Sta. 389+88.00 to Sta. 391+50.00 10'-0" to 3'-8" from Sta. 391+50.00 to Sta. 391+95.59 3'-8" to 2'-7" from Sta. 391+95.59 to Sta. 392+50.00



** L where width is less than 8 ft.
K where width is 8 ft. or greater.



** L where width is less than 8 ft.
K where width is 8 ft. or greater.

* Superelevation (e) of widening areas shall match existing superelevation.
See Page 3 for Superelevation Table

See Page 3 for Superelevation Table

See Page 3 for Typical Sections Legend & Details.

211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED FOR APPROVAL		DESIGN ENGINEER	DATE
DESIGNED: <u>HMH</u>		DRAWN: <u>BDM</u>	
CHECKED: <u>SMS</u>		CHECKED: <u>MJV</u>	

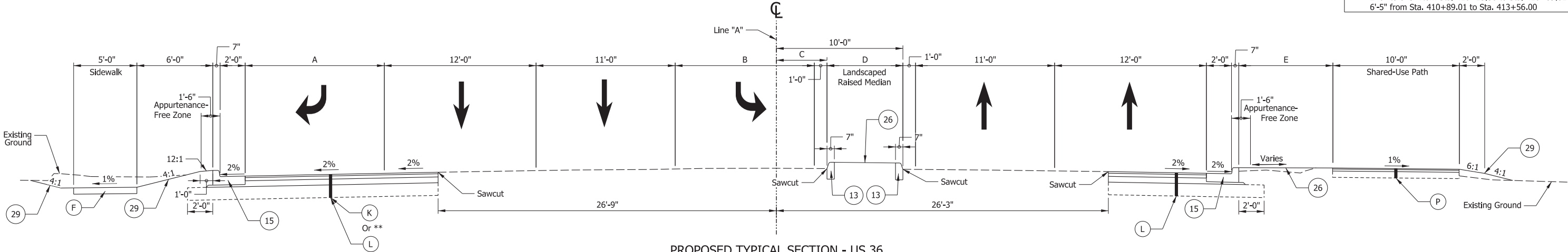
INDIANA
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS US 36 - LINE "A"

SCALE	BRIDGE FILE		
1/4" = 1'-0"			
	DESIGNATION		
	1702936, 1802854, 2001127		
SURVEY BOOK	SHEETS		
ELECTRONIC	4	of	243
CONTRACT	PROJECT		
R-41837	1702936, 1802854, 2001127		

A	11'-0" from Sta. 409+31.00 to Sta. 411+31.00
	11'-0" to 0'-0" from Sta. 411+31.00 to Sta. 412+31.00
B	11'-0" from Sta. 409+31.00 to Sta. 412+56.00
	11'-0" to 0'-0" from Sta. 412+56.00 to Sta. 413+56.00

C	4'-0" from Sta. 409+10.83 to Sta. 412+56.05
	4'-0" to -7'-0" from Sta. 412+56.05 to Sta. 413+56.00
D	6'-0" from Sta. 409+10.83 to Sta. 412+56.05
	6'-0" to 17'-0" from Sta. 412+56.05 to Sta. 413+56.00
E	2'-0" from Sta. 408+97.10 to Sta. 410+15.36
	2'-0" to 6'-5" from Sta. 410+15.36 to Sta. 410+89.01
	6'-5" from Sta. 410+89.01 to Sta. 413+56.00

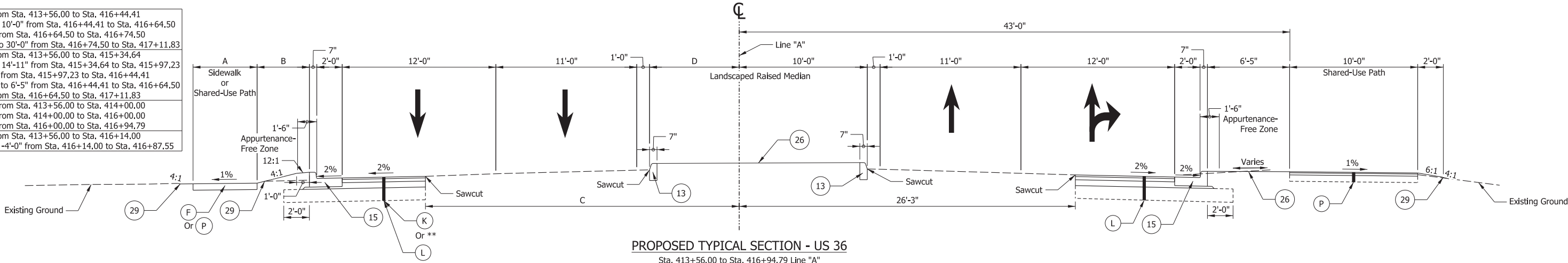


PROPOSED TYPICAL SECTION - US 36

Sta. 408+33.20 to Sta. 413+56.00 Line "A"
(Normal Crown)

** L where width is less than 8 ft.
K where width is 8 ft. or greater.

A	5'-0" from Sta. 413+56.00 to Sta. 416+44.41
	5'-0" to 10'-0" from Sta. 416+44.41 to Sta. 416+64.50
	10'-0" from Sta. 416+64.50 to Sta. 416+74.50
	10'-0" to 30'-0" from Sta. 416+74.50 to Sta. 417+11.83
B	6'-0" from Sta. 413+56.00 to Sta. 415+34.64
	6'-0" to 14'-11" from Sta. 415+34.64 to Sta. 415+97.23
	14'-11" from Sta. 415+97.23 to Sta. 416+44.41
	14'-11" to 6'-5" from Sta. 416+44.41 to Sta. 416+64.50
C	26'-9" from Sta. 413+56.00 to Sta. 414+00.00
	23'-3" from Sta. 414+00.00 to Sta. 416+00.00
	17'-9" from Sta. 416+00.00 to Sta. 416+94.79
	7'-0" from Sta. 413+56.00 to Sta. 416+14.00
D	7'-0" to -4'-0" from Sta. 416+14.00 to Sta. 416+87.55



PROPOSED TYPICAL SECTION - US 36

Sta. 413+56.00 to Sta. 416+94.79 Line "A"
(Normal Crown)

** L where width is less than 8 ft.
K where width is 8 ft. or greater.

See Page 3 for Typical Sections Legend & Details.

**CDM
Smith**

211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED
FOR APPROVAL

DESIGN ENGINEER

DATE

DESIGNED: HMH

DRAWN: BDM

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS
US 36 / SR 9 - LINE "A"

SCALE

1/4" = 1'-0"

BRIDGE FILE

DESIGNATION

1702936, 1802854, 2001127

SURVEY BOOK

SHEETS

ELECTRONIC

5

of

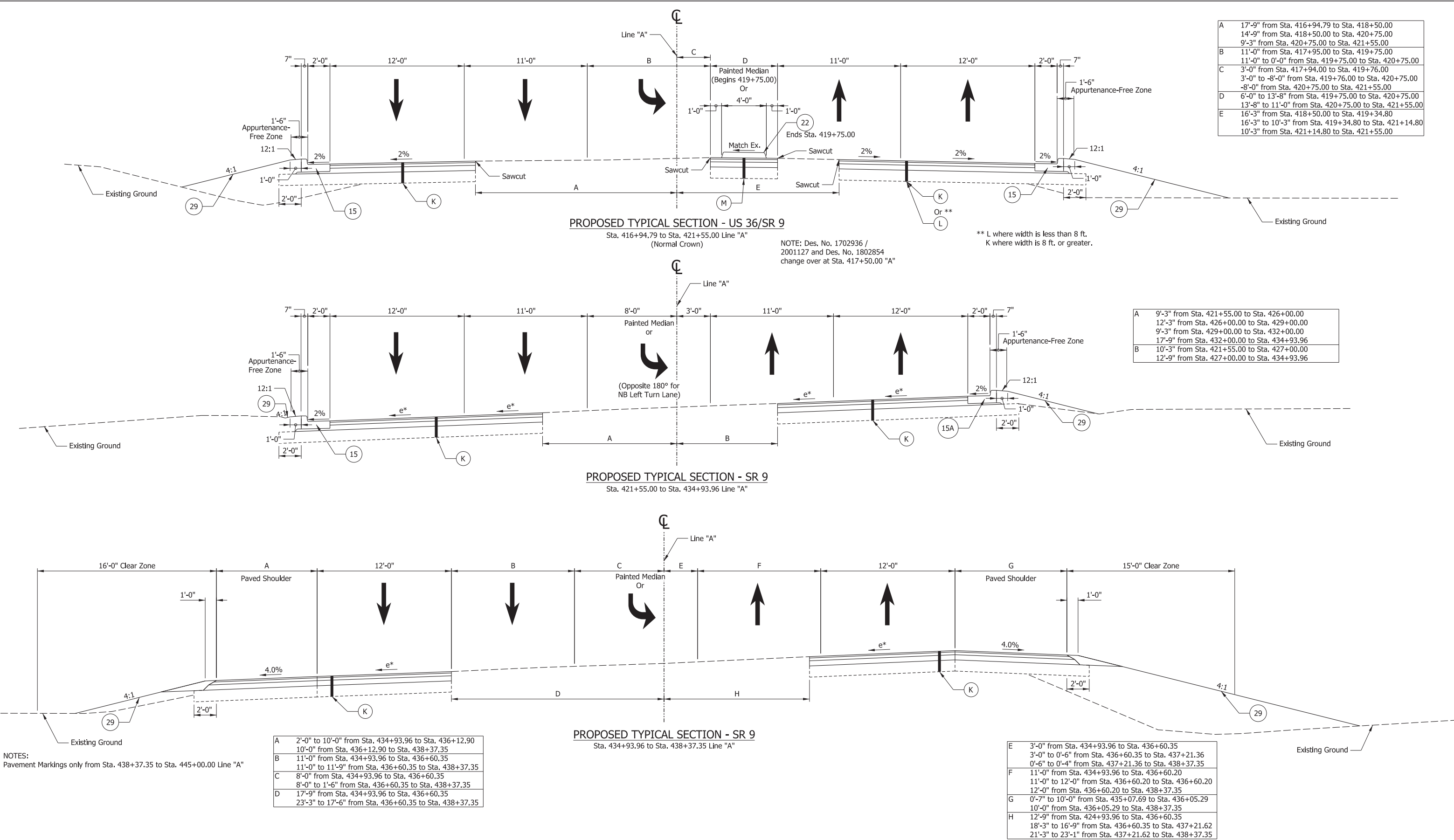
243

CONTRACT

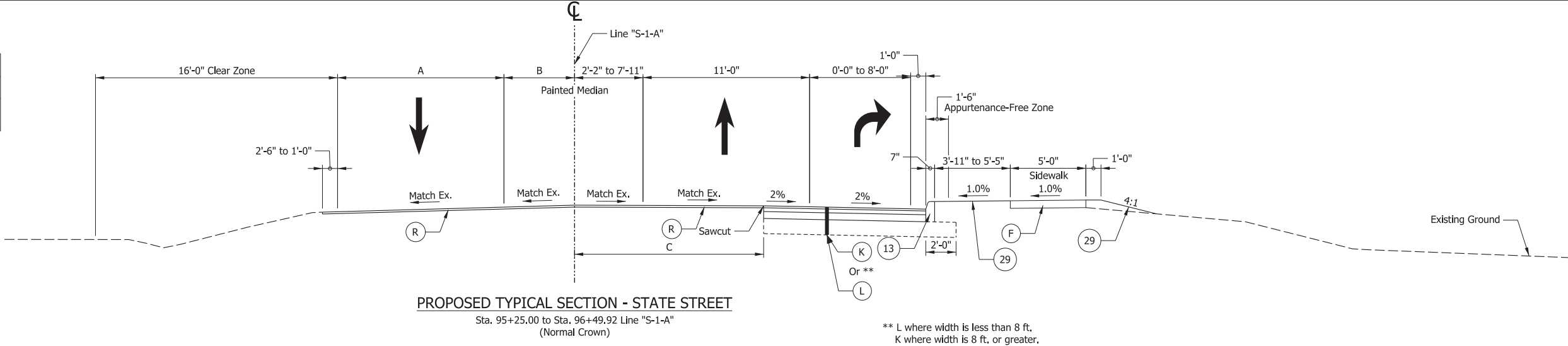
PROJECT

R-41837

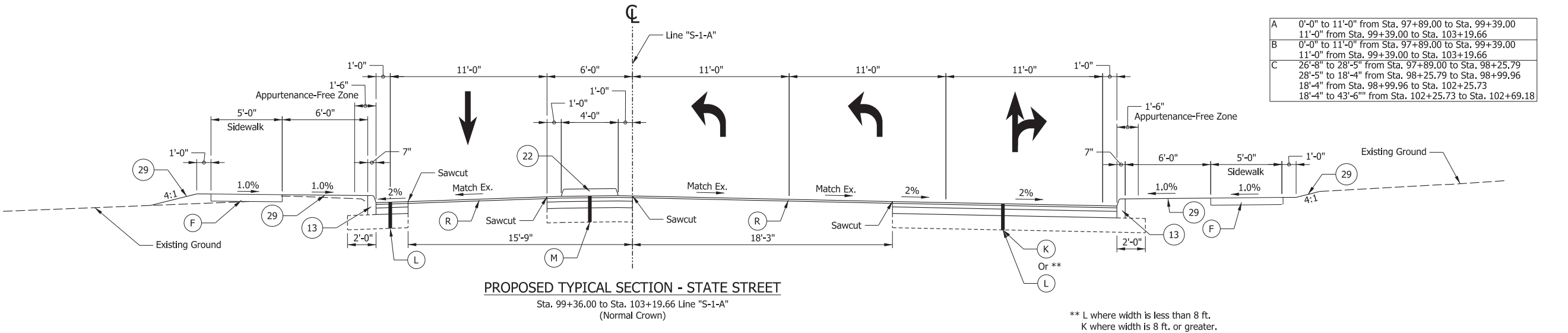
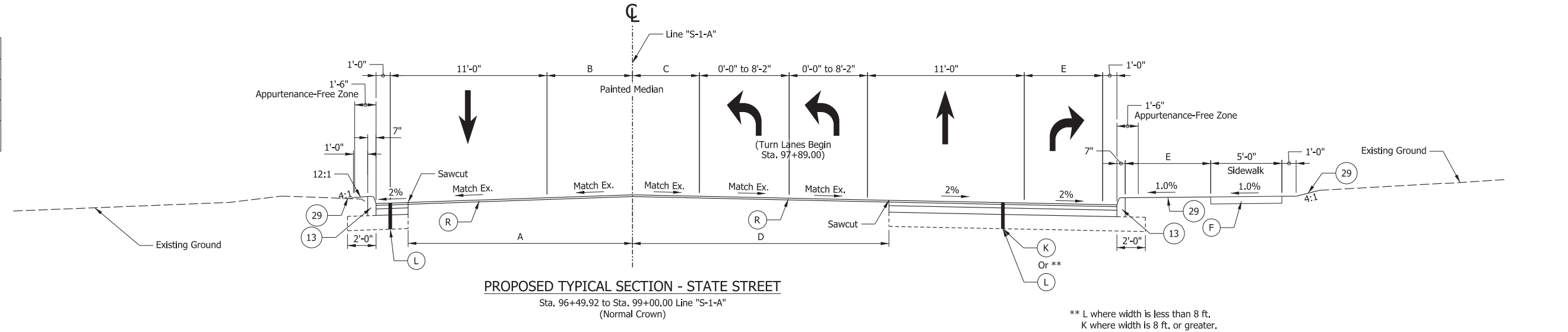
1702936, 1802854, 2001127



A	10'-4" to 11'-0" from Sta. 95+25.00 to Sta. 95+86.01 11'-0" from Sta. 95+86.01 to Sta. 96+49.92
B	0'-4" to 1'-8" from Sta. 95+25.00 to Sta. 95+86.30 1'-8" to 3'-4" from Sta. 95+86.30 to Sta. 96+49.92
C	8'-9" to 12'-5" from Sta. 95+25.00 to Sta. 96+00.00 14'-11" to 16'-1" from Sta. 96+00.00 to Sta. 96+25.00 18'-4" to 19'-10" from Sta. 96+25.00 to Sta. 96+49.92



A	13'-2" to 15'-9" from Sta. 96+49.92 to Sta. 97+50.04 15'-9" Sta. 97+50.04 to Sta. 99+00.00
B	3'-4" to 6'-0" from Sta. 96+49.92 to Sta. 97+50.16 6'-0" from Sta. 97+50.16 to Sta. 99+00.00
C	7'-11" to 14'-4" from Sta. 96+49.92 to Sta. 97+89.00 14'-4" to 3'-9" from Sta. 97+89.00 to Sta. 99+00.00
D	19'-10" to 28'-5" from Sta. 96+49.92 to Sta. 98+25.79 28'-5" to 18'-3" from Sta. 98+25.79 to Sta. 99+00.00
E	8'-0" to 11'-0" from Sta. 96+49.92 to Sta. 96+96.43 11'-0" from Sta. 96+96.43 to Sta. 97+46.37 11'-0" to 2'-0" from Sta. 97+46.37 to Sta. 99+00.00



A	0'-0" to 11'-0" from Sta. 97+89.00 to Sta. 99+39.00 11'-0" from Sta. 99+39.00 to Sta. 103+19.66
B	0'-0" to 11'-0" from Sta. 97+89.00 to Sta. 99+39.00 11'-0" from Sta. 99+39.00 to Sta. 103+19.66
C	26'-8" to 28'-5" from Sta. 97+89.00 to Sta. 98+25.79 28'-5" to 18'-4" from Sta. 98+25.79 to Sta. 98+99.96 18'-4" from Sta. 98+99.96 to Sta. 102+25.73 18'-4" to 43'-6" from Sta. 102+25.73 to Sta. 102+69.18

See Page 3 for Typical Sections Legend & Details.

**CDM
Smith**

211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED
FOR APPROVAL

DESIGN ENGINEER

DATE

DESIGNED: HMH

DRAWN: BDM

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS
STATE ST - LINE "S-1-A"

SCALE

1/4" = 1'-0"

BRIDGE FILE

DESIGNATION

1702936, 1802854, 2001127

SURVEY BOOK

ELECTRONIC

CONTRACT

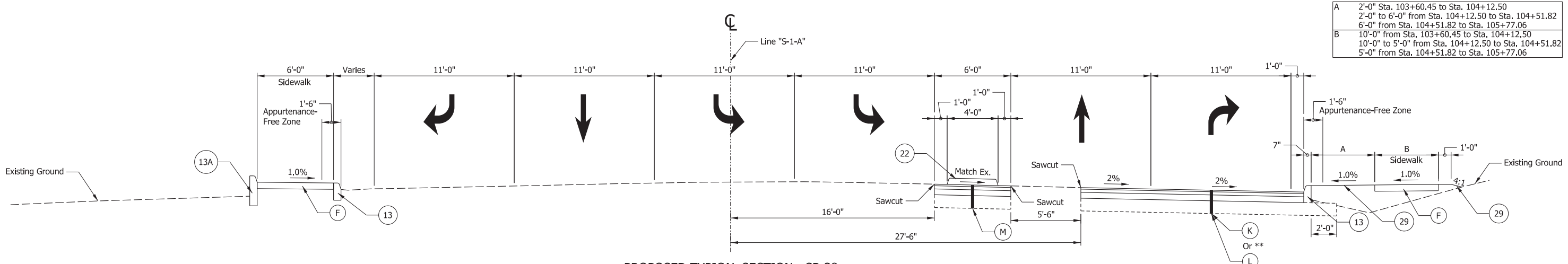
R-41837

SHEETS

7 of 243

PROJECT

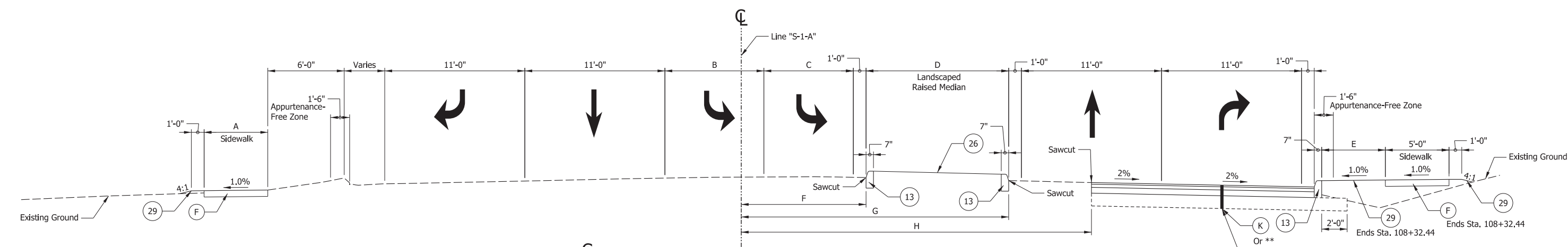
1702936, 1802854, 2001127



PROPOSED TYPICAL SECTION - SR 38
Sta. 103+19.66 to Sta. 105+77.06 Line "S-1-A"
(Normal Crown)

** L where width is less than 8 ft.
K where width is 8 ft. or greater.

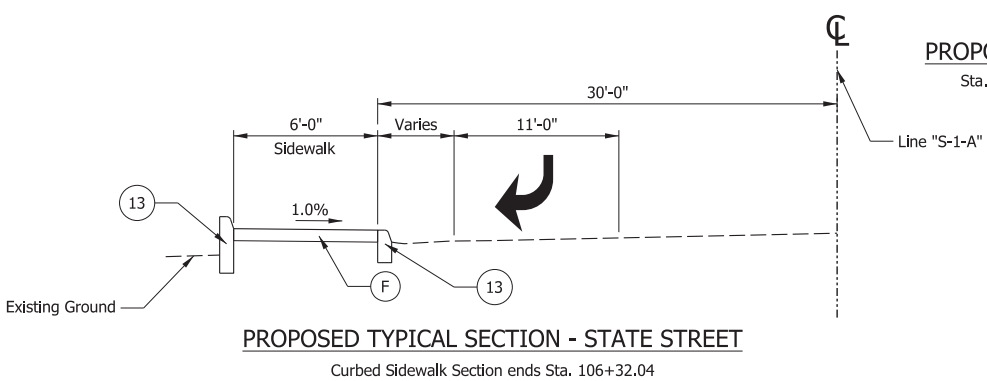
A	2'-0" Sta. 103+60.45 to Sta. 104+12.50
	2'-0" to 6'-0" from Sta. 104+12.50 to Sta. 104+51.82
	6'-0" from Sta. 104+51.82 to Sta. 105+77.06
B	10'-0" from Sta. 103+60.45 to Sta. 104+12.50
	10'-0" to 5'-0" from Sta. 104+12.50 to Sta. 104+51.82
	5'-0" from Sta. 104+51.82 to Sta. 105+77.06



PROPOSED TYPICAL SECTION - SR 38
Sta. 105+77.06 to Sta. 111+11.00 Line "S-1-A"
(Normal Crown)

** L where width is less than 8 ft.
K where width is 8 ft. or greater.

A	6'-0" from Sta. 105+77.06 to Sta. 106+32.04
	6'-0" to 5'-0" from Sta. 106+32.04 to Sta. 107+55.11
	5'-0" from Sta. 107+55.11 to Sta. 111+11.00
B	11'-0" to 8'-4" from Sta. 105+77.06 to Sta. 106+28.06
	8'-4" to 0'-0" from Sta. 106+28.06 to Sta. 107+27.00
	11'-0" to 0'-0" from Sta. 105+77.06 to Sta. 107+27.00
C	4'-0" to 15'-5" from Sta. 105+77.06 to Sta. 106+68.12
	15'-5" to 19'-10" from Sta. 106+68.12 to Sta. 107+27.05
	19'-10" to 13'-2" from Sta. 107+27.05 to Sta. 108+08.12
	13'-2" to 11'-0" from Sta. 108+08.12 to Sta. 108+74.61
	11'-0" from Sta. 108+74.61 to Sta. 111+11.00
D	6'-0" from Sta. 105+77.06 to Sta. 107+10.59
	6'-0" to 13'-0" from Sta. 107+10.59 to Sta. 108+08.44
	13'-0" from Sta. 108+08.44 to Sta. 108+32.44
E	17'-0" to -1'-9" from Sta. 105+77.06 to Sta. 107+27.05
	-1'-9" to 3'-0" from Sta. 107+27.05 to Sta. 108+74.61
	3'-0" from Sta. 108+74.61 to Sta. 111+11.00
F	21'-0" from Sta. 105+77.06 to Sta. 106+68.12
	21'-0" to 14'-0" from Sta. 106+68.12 to Sta. 108+08.12
	14'-0" from Sta. 108+08.12 to Sta. 111+11.00
G	27'-6" from Sta. 105+77.06 to Sta. 107+50.00
	33'-3" from Sta. 107+50.00 to Sta. 108+35.92



PROPOSED TYPICAL SECTION - STATE STREET
Curbed Sidewalk Section ends Sta. 106+32.04

NOTES:
Pavement Markings only from Sta. 111+11.00 to Sta. 116+49.01 Line "S-1-A"

See Page 3 for Typical Sections Legend & Details.

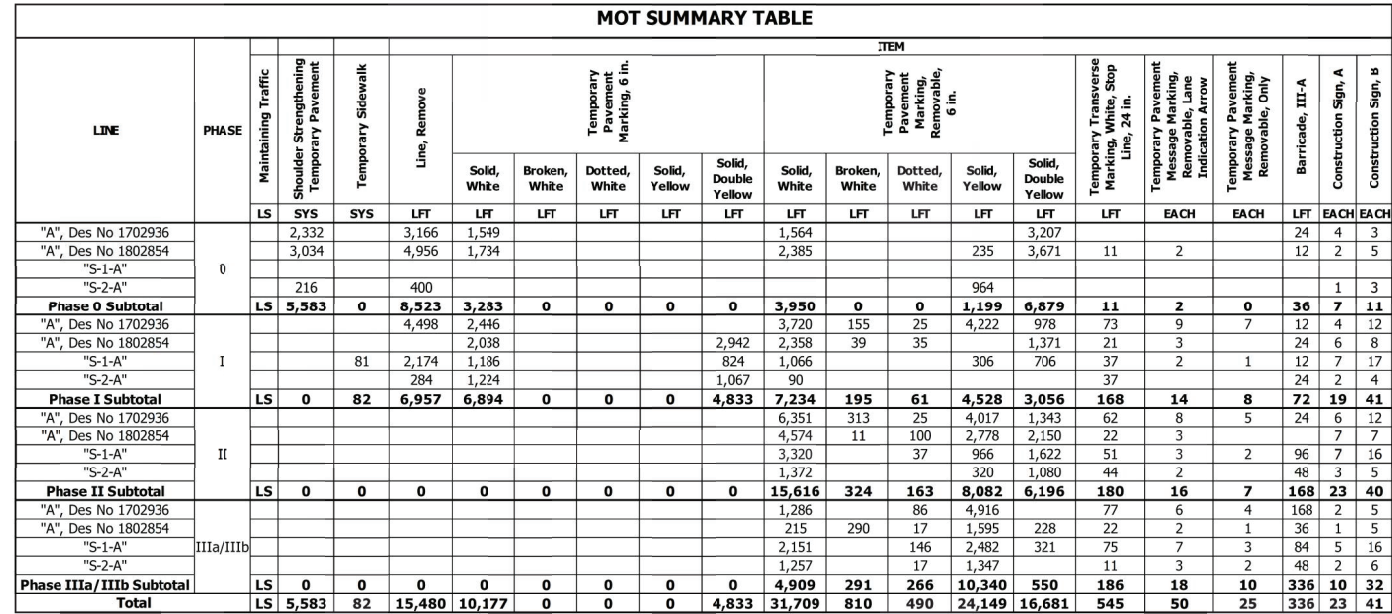
CDM
Smith

211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED FOR APPROVAL _____	
DESIGNED: HMM	DRAWN: BDM
CHECKED: SMS	CHECKED: MJV

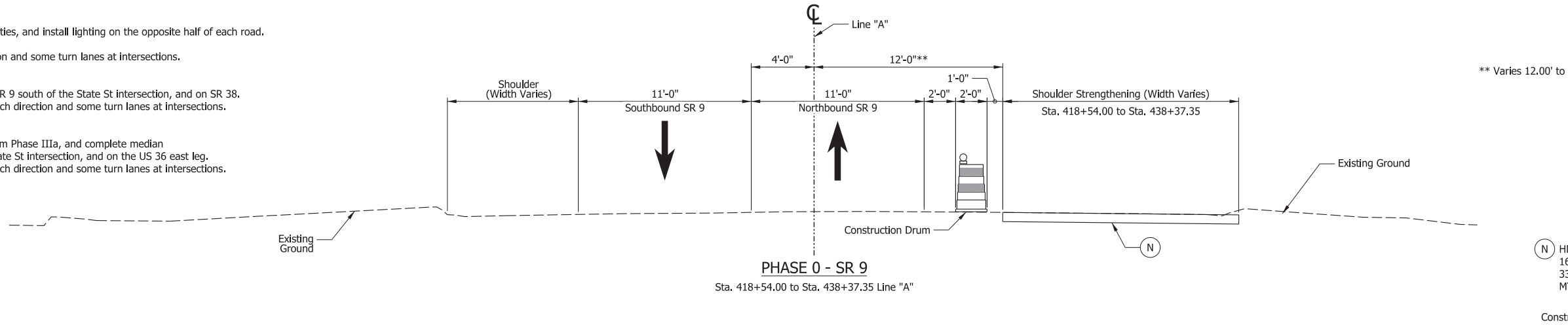
INDIANA DEPARTMENT OF TRANSPORTATION	SCALE 1/4" = 1'-0"	BRIDGE FILE
	DESIGNATION 1702936, 1802854, 2001127	
	TYPICAL SECTIONS SR 38 - LINE "S-1-A"	
SURVEY BOOK ELECTRONIC CONTRACT R-41837	SHEETS 8 of 243 PROJECT 1702936, 1802854, 2001127	

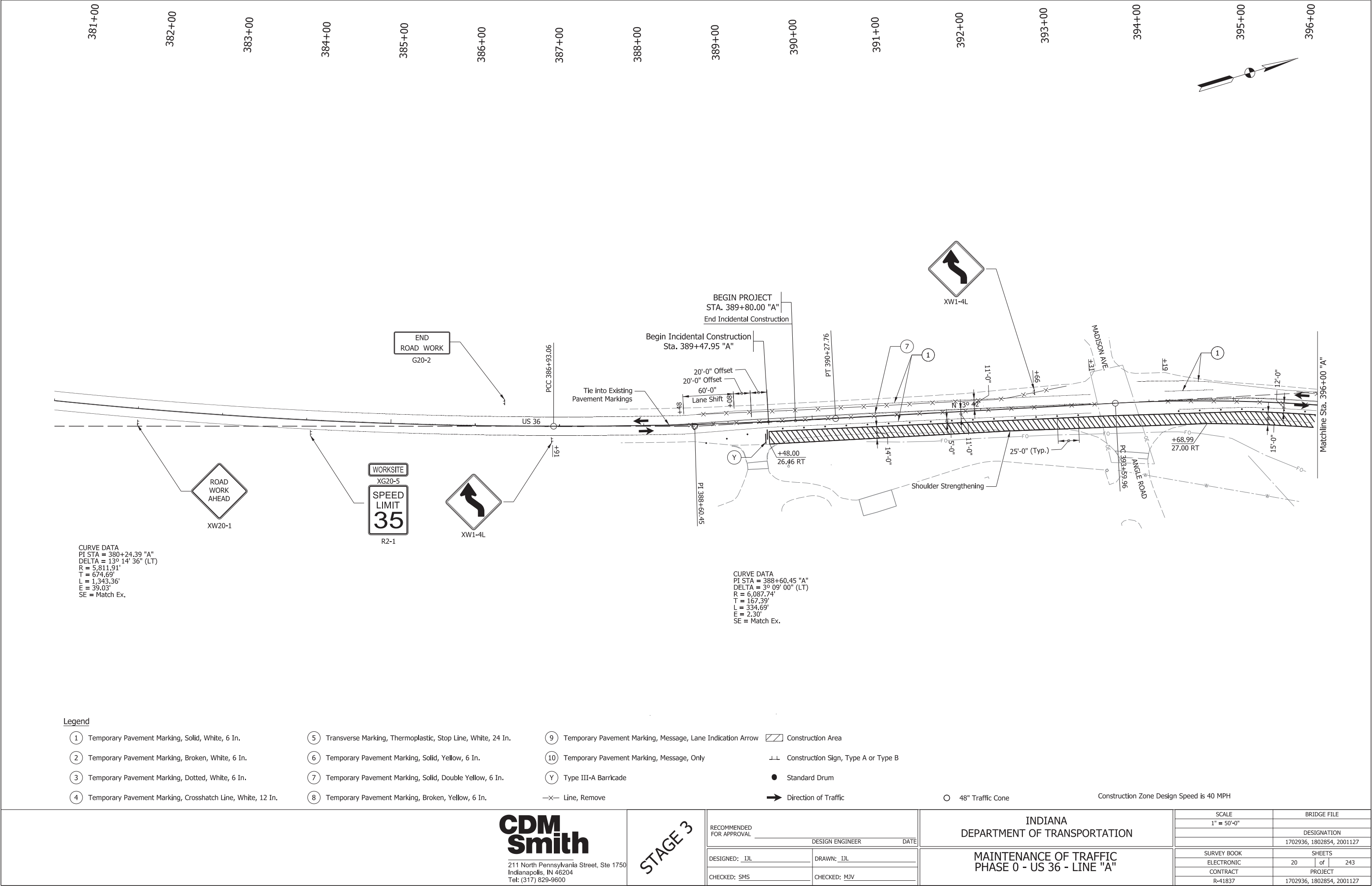


Phase 0:
Strengthen shoulders with temporary pavement on US 36 and SR 9 for future phases.
Remove existing median on US 36 east leg and replace with temporary HMA pavement.
Construct signals at the US 36/SR 38 intersection, and at the US 36/SR 9 intersection.
Complete each segment of shoulder strengthening separately to minimize impacts to traffic.
Maintain at least one lane of traffic in each direction and some turn lanes at intersections.

Phase II:
Widen roadway, construct pedestrian facilities, and install lighting on the opposite half of each road.
Construct Center Curb on State St.
Maintain one lane of traffic in each direction and some turn lanes at intersections.

Phase IIIb:
Maintain the same pavement markings from Phase IIIa, and complete median construction on US 36/SR 9 East of the State St intersection, and on the US 36 east leg. Maintain one lane of traffic minimum in each direction and some turn lanes at intersections.





Legend

- | | | | |
|--|---|--|--|
| ① Temporary Pavement Marking, Solid, White, 6 In. | ⑤ Transverse Marking, Thermoplastic, Stop Line, White, 24 In. | ⑨ Temporary Pavement Marking, Message, Lane Indication Arrow | ▨ Construction Area |
| ② Temporary Pavement Marking, Broken, White, 6 In. | ⑥ Temporary Pavement Marking, Solid, Yellow, 6 In. | ⑩ Temporary Pavement Marking, Message, Only | ⊥ Construction Sign, Type A or Type B |
| ③ Temporary Pavement Marking, Dotted, White, 6 In. | ⑦ Temporary Pavement Marking, Solid, Double Yellow, 6 In. | Y Type III-A Barricade | ● Standard Drum |
| ④ Temporary Pavement Marking, Crosshatch Line, White, 12 In. | ⑧ Temporary Pavement Marking, Broken, Yellow, 6 In. | —X— Line, Remove | ➡ Direction of Traffic |
| | | | ○ 48" Traffic Cone |
| | | | Construction Zone Design Speed is 40 MPH |

**CDM
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211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

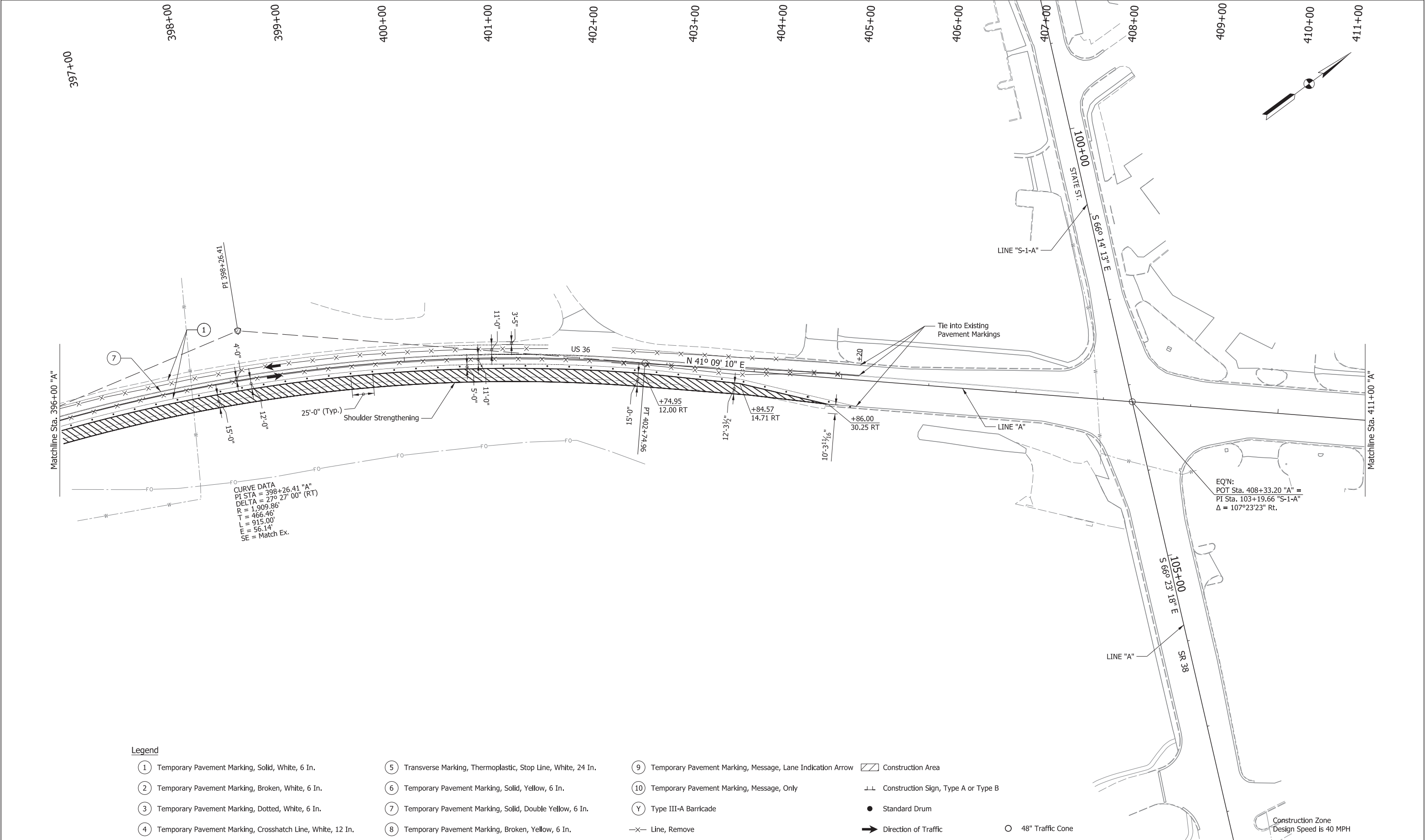
STAGE 3

RECOMMENDED FOR APPROVAL _____	
DESIGNED: <u>IJL</u>	DRAWN: <u>IJL</u>
CHECKED: <u>SMS</u>	CHECKED: <u>MJV</u>

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 0 - US 36 - LINE "A"

SCALE 1" = 50'-0"		BRIDGE FILE	
		DESIGNATION	
		1702936, 1802854, 2001127	
SURVEY BOOK		SHEETS	
ELECTRONIC		20	of 243
CONTRACT		PROJECT	
R-41837		1702936, 1802854, 2001127	



Legend

- ① Temporary Pavement Marking, Solid, White, 6 In.

② Temporary Pavement Marking, Broken, White, 6 In.

③ Temporary Pavement Marking, Dotted, White, 6 In.

④ Temporary Pavement Marking, Crosshatch Line, White, 12 In.

⑤ Transverse Marking, Thermoplastic, Stop Line, White, 24 In.

⑥ Temporary Pavement Marking, Solid, Yellow, 6 In.

⑦ Temporary Pavement Marking, Solid, Double Yellow, 6 In.

⑧ Temporary Pavement Marking, Broken, Yellow, 6 In.

⑨ Temporary Pavement Marking, Message, Lane Indication Arrow

⑩ Temporary Pavement Marking, Message, Only

Y Type III-A Barricade

—X— Line, Remove
- Construction Area

Construction Sign, Type A or Type B

Standard Drum

48" Traffic Cone

Direction of Traffic

CDM
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Indianapolis, IN 46204
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STAGE 3

RECOMMENDED FOR APPROVAL

DESIGNED: IJL

CHECKED: SMS

DESIGN ENGINEER

DRAWN: IJL

CHECKED: MJV

DATE

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 0 - US 36 - LINE "A"

SCALE
1" = 50'-0"

BRIDGE FILE

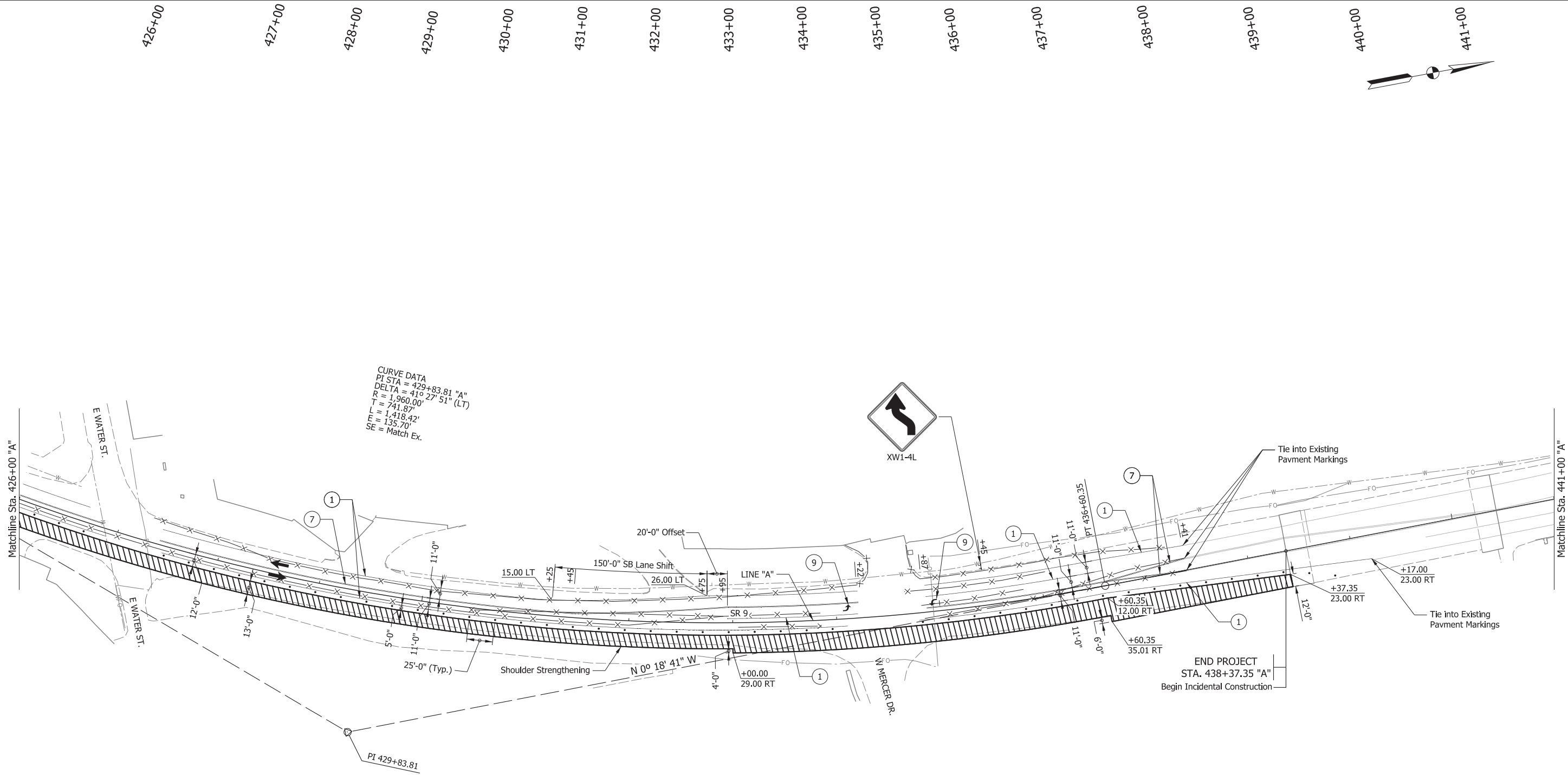
DESIGNATION
1702936, 1802854, 2001127

SURVEY BOOK
ELECTRONIC
CONTRACT
R-41837

SHEETS
21 of 243
PROJECT
1702936, 1802854, 2001127

pw:\\cdmsmith-az02-pw.bentley.com:pw_pt1\Documents\118931\249691\10 Transportation\02 Engineering Services NM_30pct\01 Roadway Design\10 CADD\02 Details\Sht MOT_Ph0_A_50_02.dgn

B-29



Legend

- ① Temporary Pavement Marking, Solid, White, 6 In.
② Temporary Pavement Marking, Broken, White, 6 In.
③ Temporary Pavement Marking, Dotted, White, 6 In.
④ Temporary Pavement Marking, Crosshatch Line, White, 12 In.

- ⑤ Transverse Marking, Thermoplastic, Stop Line, White, 24 In.
⑥ Temporary Pavement Marking, Solid, Yellow, 6 In.
⑦ Temporary Pavement Marking, Solid, Double Yellow, 6 In.
⑧ Temporary Pavement Marking, Broken, Yellow, 6 In.

- ⑨ Temporary Pavement Marking, Message, Lane Indication Arrow
⑩ Temporary Pavement Marking, Message, Only
Y Type III-A Barricade
-X- Line, Remove

- Construction Area
Construction Sign, Type A or Type B
Standard Drum
Direction of Traffic

48" Traffic Cone

Construction Zone Design Speed is 40 MPH

**CDM
Smith**

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STAGE 3

RECOMMENDED
FOR APPROVAL

DESIGN ENGINEER DATE

DESIGNED: IJL

DRAWN: IJL

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 0 - SR 9 - LINE "A"

SCALE

1" = 50'-0"

BRIDGE FILE

DESIGNATION

1702936, 1802854, 2001127

SURVEY BOOK

SHEETS

ELECTRONIC

23

of

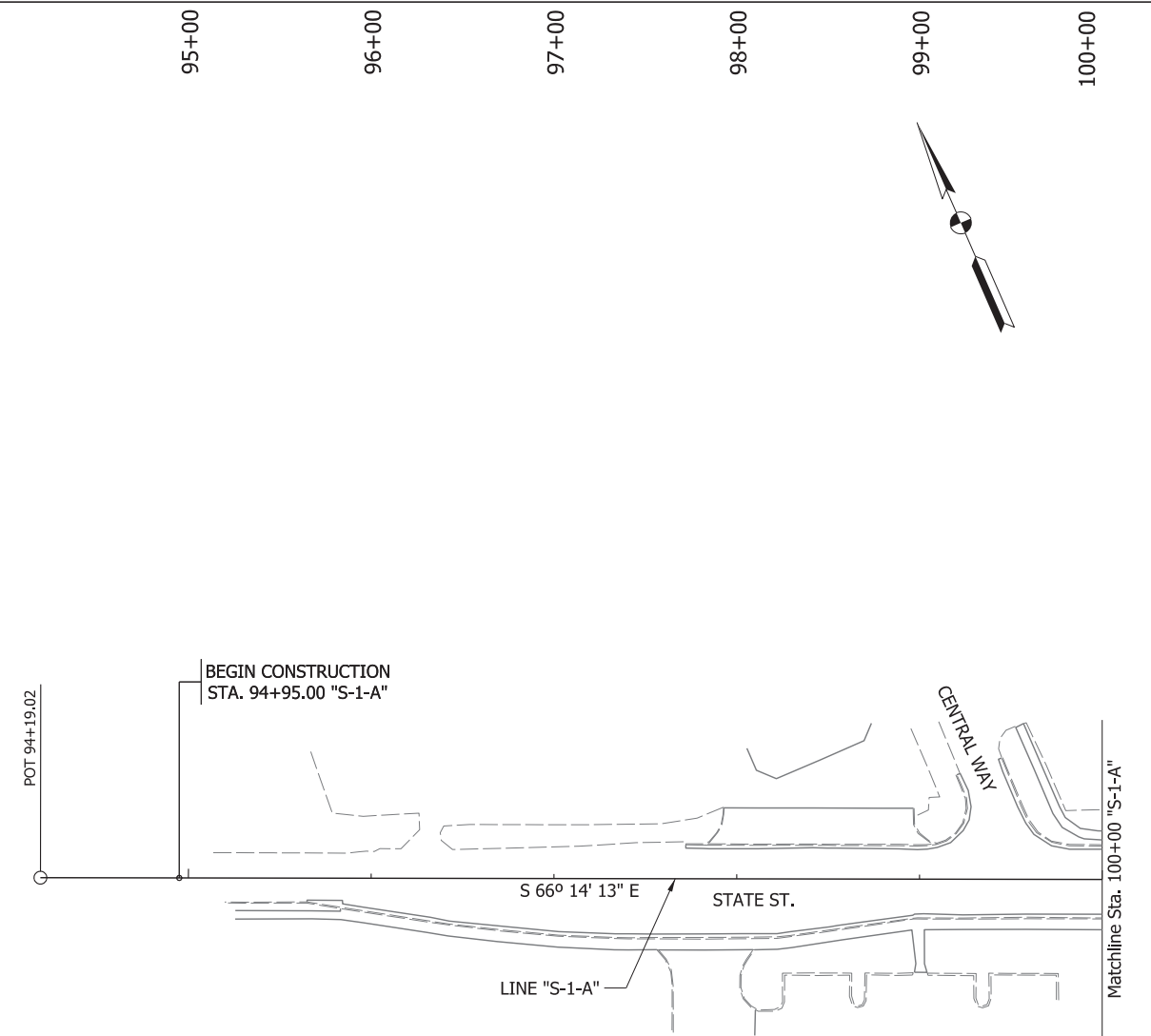
243

CONTRACT

PROJECT

R-41837

1702936, 1802854, 2001127



Legend

- | | | | |
|--|---|--|---|
| ① Temporary Pavement Marking, Solid, White, 6 In. | ⑤ Transverse Marking, Thermoplastic, Stop Line, White, 24 In. | ⑨ Temporary Pavement Marking, Message, Lane Indication Arrow |  Construction Area |
| ② Temporary Pavement Marking, Broken, White, 6 In. | ⑥ Temporary Pavement Marking, Solid, Yellow, 6 In. | ⑩ Temporary Pavement Marking, Message, Only |  Construction Sign, Type A or Type B |
| ③ Temporary Pavement Marking, Dotted, White, 6 In. | ⑦ Temporary Pavement Marking, Solid, Double Yellow, 6 In. | Y Type III-A Barricade | ● Standard Drum |
| ④ Temporary Pavement Marking, Crosshatch Line, White, 12 In. | ⑧ Temporary Pavement Marking, Broken, Yellow, 6 In. | —X— Line, Remove |  Direction of Traffic |
| | | | ○ 48" Traffic Cone |

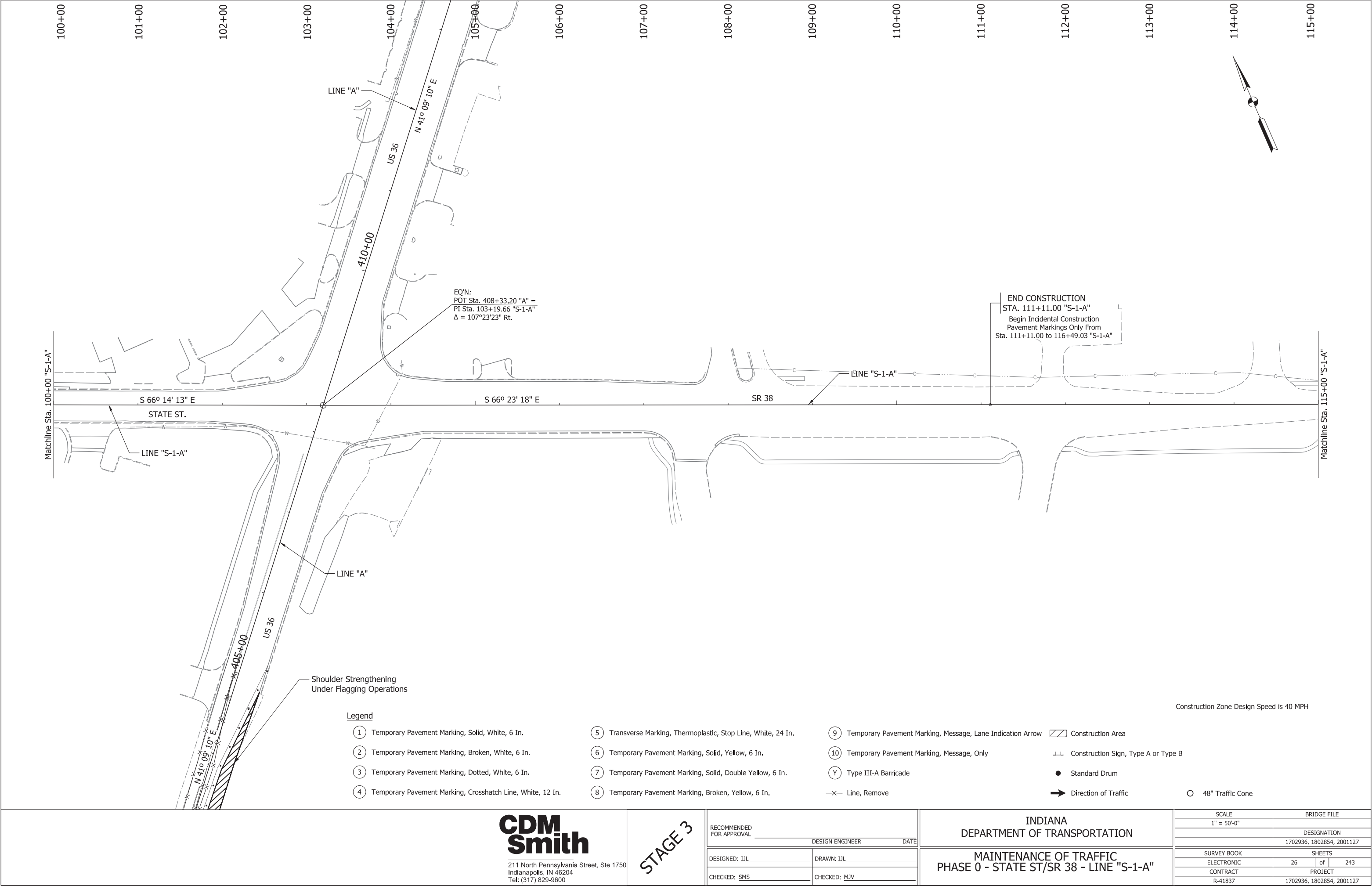
Construction Zone Design Speed is 40 MPH

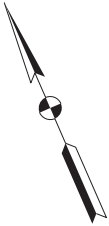
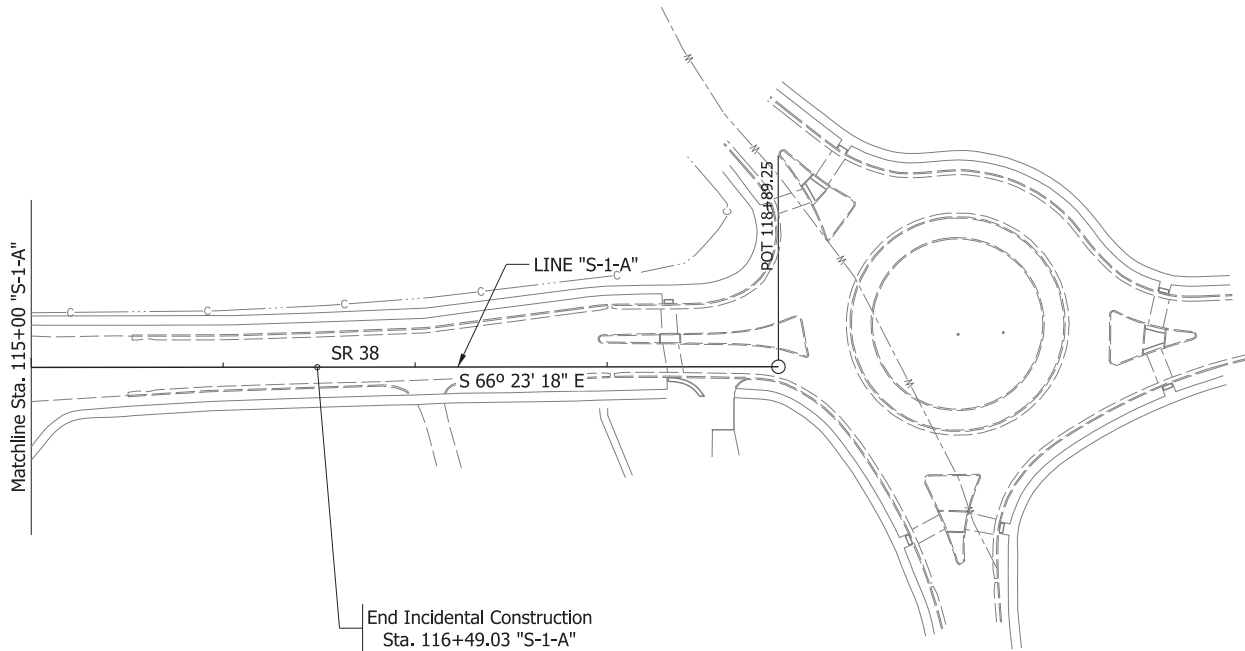
**CDM
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Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE	INDIANA DEPARTMENT OF TRANSPORTATION	SCALE		BRIDGE FILE	
				1" = 50'-0"			
						DESIGNATION	
			MAINTENANCE OF TRAFFIC PHASE 0 - STATE ST - LINE "S-1-A"			1702936, 1802854, 2001127	
DESIGNED: JJJ	DRAWN: JJJ			SHEETS			
		ELECTRONIC		25	of	243	
CHECKED: SMS	CHECKED: MJV	CONTRACT		PROJECT			
		R-41837		1702936, 1802854, 2001127			





Legend

- ① Temporary Pavement Marking, Solid, White, 6 In.
- ② Temporary Pavement Marking, Broken, White, 6 In.
- ③ Temporary Pavement Marking, Dotted, White, 6 In.
- ④ Temporary Pavement Marking, Crosshatch Line, White, 12 In.

- ⑤ Transverse Marking, Thermoplastic, Stop Line, White, 24 In.
- ⑥ Temporary Pavement Marking, Solid, Yellow, 6 In.
- ⑦ Temporary Pavement Marking, Solid, Double Yellow, 6 In.
- ⑧ Temporary Pavement Marking, Broken, Yellow, 6 In.

- ⑨ Temporary Pavement Marking, Message, Lane Indication Arrow
- ⑩ Temporary Pavement Marking, Message, Only
- Y Type III-A Barricade
- X— Line, Remove

- Construction Area
- Construction Sign, Type A or Type B
- Standard Drum
- Direction of Traffic
- 48" Traffic Cone

Construction Zone Design Speed is 40 MPH



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Tel: (317) 829-9600

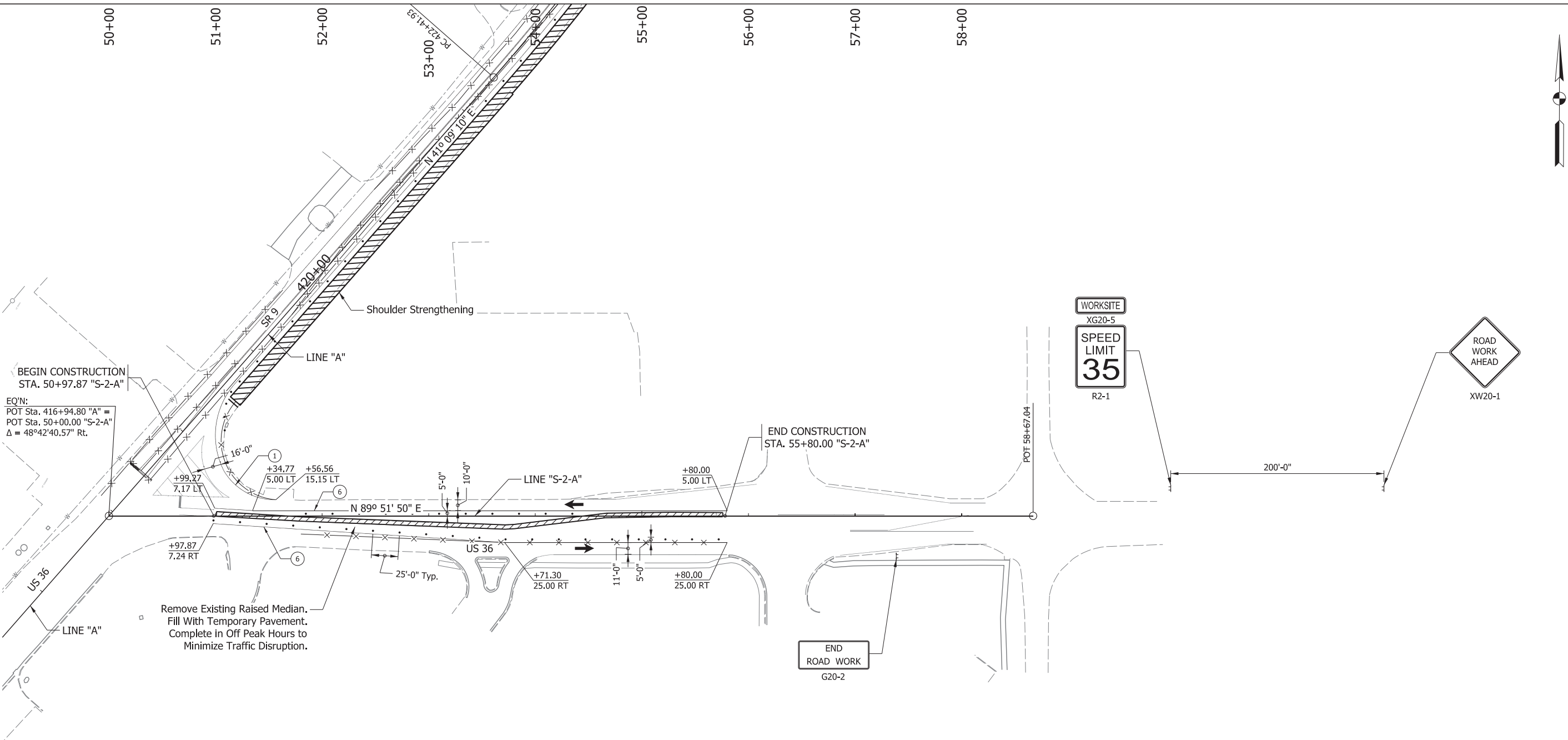
STAGE 3

RECOMMENDED FOR APPROVAL _____	
DESIGNED: IJL _____	DRAWN: IJL _____
CHECKED: SMS _____	CHECKED: MJV _____
DESIGN ENGINEER _____ DATE _____	

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 0 - SR 38 - LINE "S-1-A"

SCALE 1" = 50'-0"		BRIDGE FILE	
		DESIGNATION	
		1702936, 1802854, 2001127	
SURVEY BOOK		SHEETS	
ELECTRONIC		27	of 243
CONTRACT		PROJECT	
R-41837		1702936, 1802854, 2001127	



BEGIN CONSTRUCTION
STA. 50+97.87 "S-2-A"

EQ'N:
POT Sta. 416+94.80 "A" =
POT Sta. 50+00.00 "S-2-A"
 $\Delta = 48^\circ 42' 40.57''$ Rt.

Remove Existing Raised Median.
Fill With Temporary Pavement.
Complete in Off Peak Hours to
Minimize Traffic Disruption.

END CONSTRUCTION
STA. 55+80.00 "S-2-A"

WORKSITE
XG20-5
SPEED
LIMIT
35
R2-1

ROAD
WORK
AHEAD
XW20-1

END
ROAD WORK
G20-2

Legend

- | | | | |
|--|---|--|---------------------------------------|
| ① Temporary Pavement Marking, Solid, White, 6 In. | ⑤ Transverse Marking, Thermoplastic, Stop Line, White, 24 In. | ⑨ Temporary Pavement Marking, Message, Lane Indication Arrow | ▨ Construction Area |
| ② Temporary Pavement Marking, Broken, White, 6 In. | ⑥ Temporary Pavement Marking, Solid, Yellow, 6 In. | ⑩ Temporary Pavement Marking, Message, Only | ⊥ Construction Sign, Type A or Type B |
| ③ Temporary Pavement Marking, Dotted, White, 6 In. | ⑦ Temporary Pavement Marking, Solid, Double Yellow, 6 In. | Y Type III-A Barricade | ● Standard Drum |
| ④ Temporary Pavement Marking, Crosshatch Line, White, 12 In. | ⑧ Temporary Pavement Marking, Broken, Yellow, 6 In. | —x— Line, Remove | ○ 48" Traffic Cone |
- Direction of Traffic

Construction Zone Design Speed is 40 MPH

**CDM
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Indianapolis, IN 46204
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STAGE 3

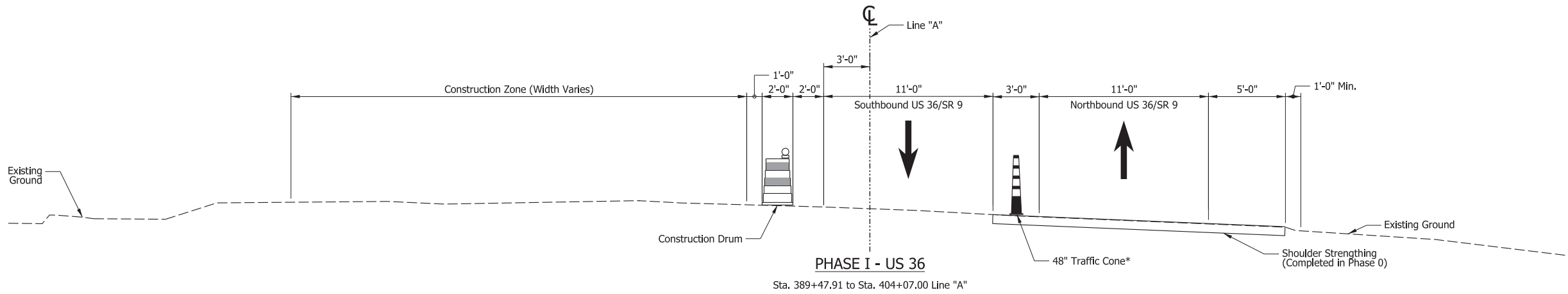
RECOMMENDED FOR APPROVAL _____	
DESIGNED: IJL	DRAWN: IJL
CHECKED: SMS	CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 0 - US 36 - LINE "S-2-A"

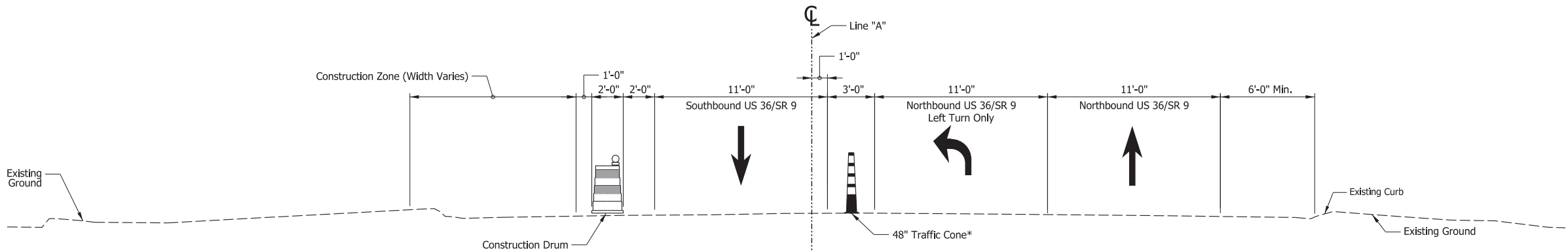
SCALE 1" = 50'-0"	BRIDGE FILE	
	DESIGNATION	
	1702936, 1802854, 2001127	
SURVEY BOOK	SHEETS	
ELECTRONIC	28	of 243
CONTRACT	PROJECT	
R-41837	1702936, 1802854, 2001127	

*48" Traffic Cones present from Sta. 391+18.00 to Sta. 393+30.00
Sta. 394+00.00 to Sta. 407+32.00
and Sta. 409+10.00 to Sta. 416+54.00



PHASE I - US 36

Sta. 389+47.91 to Sta. 404+07.00 Line "A"



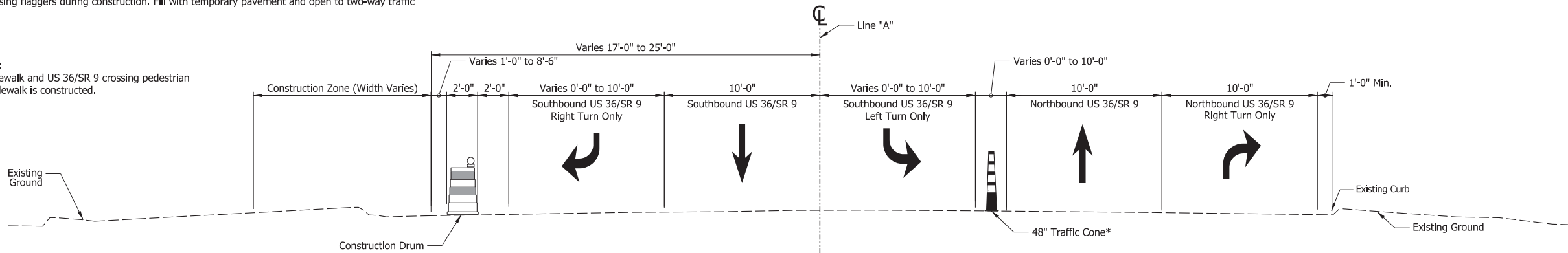
PHASE I - US 36

Sta. 404+07.00 to Sta. 408+33.20 Line "A"

Phase I:
Widen roadway, construct pedestrian facilities, and install lighting on US 36 and SR 9 to the west side.
Widen roadway, construct pedestrian facilities, and install lighting on State Street, SR 38, and US 36 east leg to the south side.
Maintain at least one lane of traffic in each direction and some turn lanes at intersections.

Phase 1a:
Construct Phase 1A after completion of Phase 1, to minimize disruptions to two way traffic on State St.
Maintain one lane two way operation using flaggers during construction. Fill with temporary pavement and open to two-way traffic during non-work hours.

Phase I Pedestrian MOT (See Page 72):
Maintain access to existing State St sidewalk and US 36/SR 9 crossing pedestrian push button pedestals until the new sidewalk is constructed.



PHASE I - US 36

Sta. 408+33.20 to Sta. 416+94.79 Line "A"

Construction Zone Design Speed is 40 mph

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Indianapolis, IN 46204
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STAGE 3

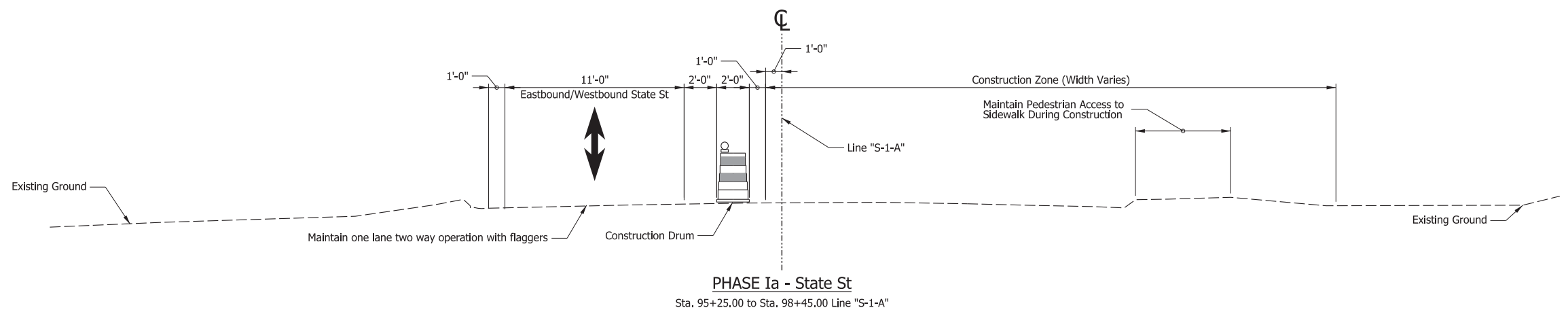
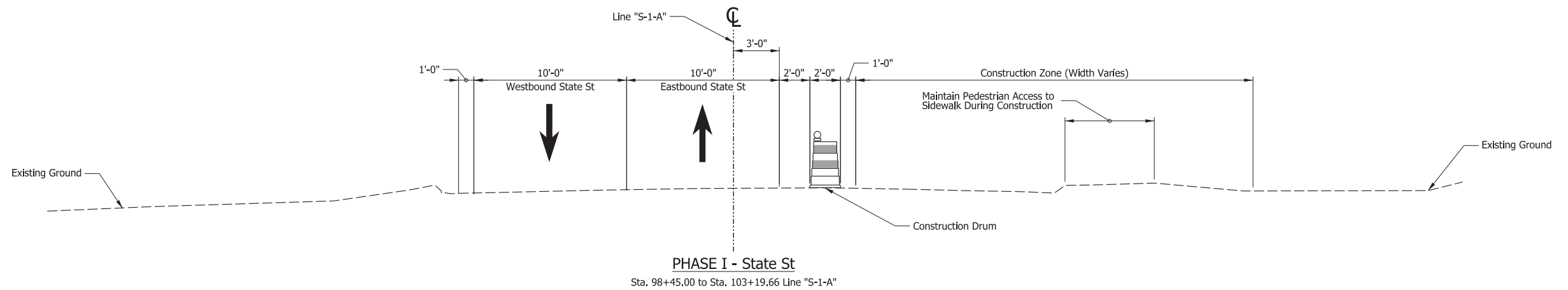
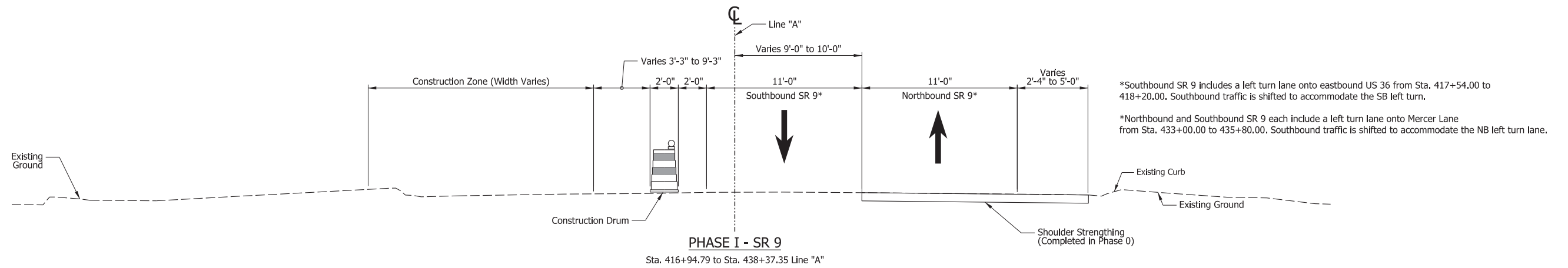
RECOMMENDED FOR APPROVAL _____
DESIGN ENGINEER DATE

DESIGNED: DJL DRAWN: DJL
CHECKED: SMS CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

MOT TYPICAL SECTIONS
PHASE I

SCALE	BRIDGE FILE
1/4" = 1'-0"	
	DESIGNATION
	1702936, 1802854, 2001127
SURVEY BOOK	SHEETS
ELECTRONIC	29 of 243
CONTRACT	PROJECT
R-41837	1702936, 1802854, 2001127



Construction Zone Design Speed is 40 mph

**CDM
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Indianapolis, IN 46204
Tel: (317) 829-9600

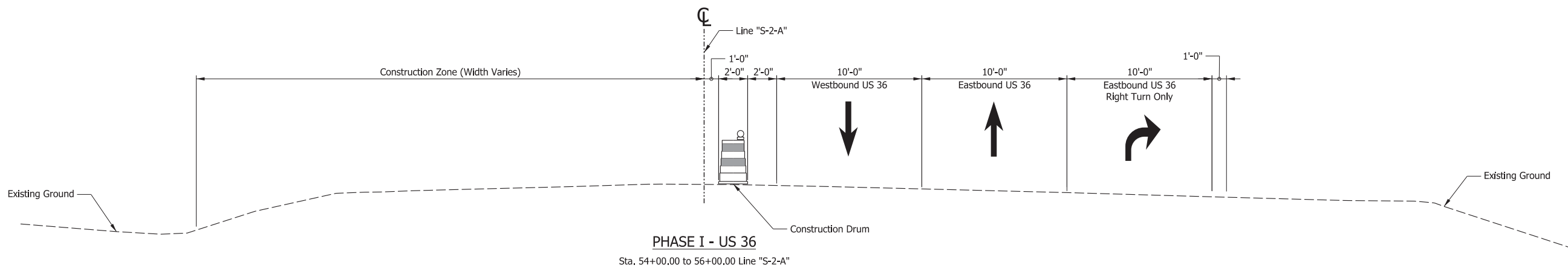
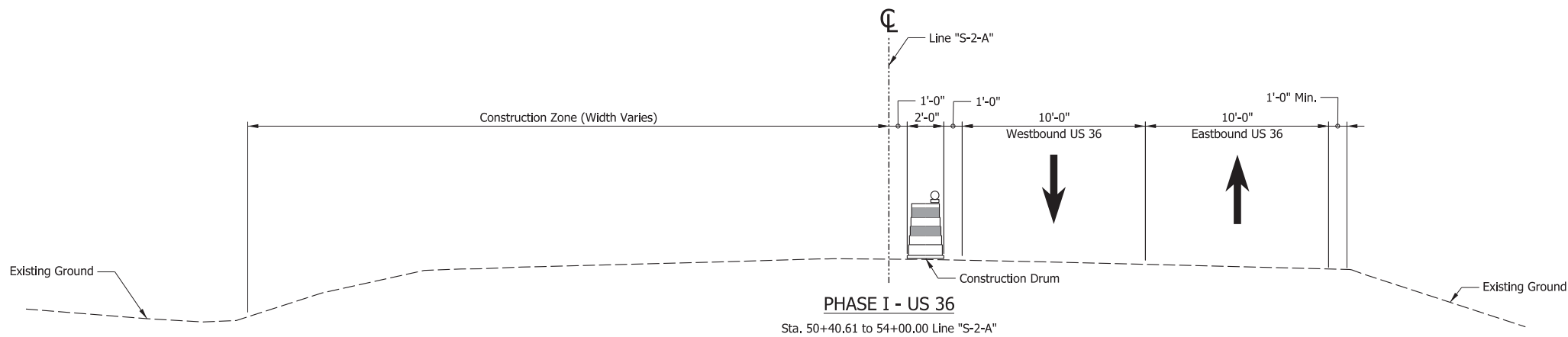
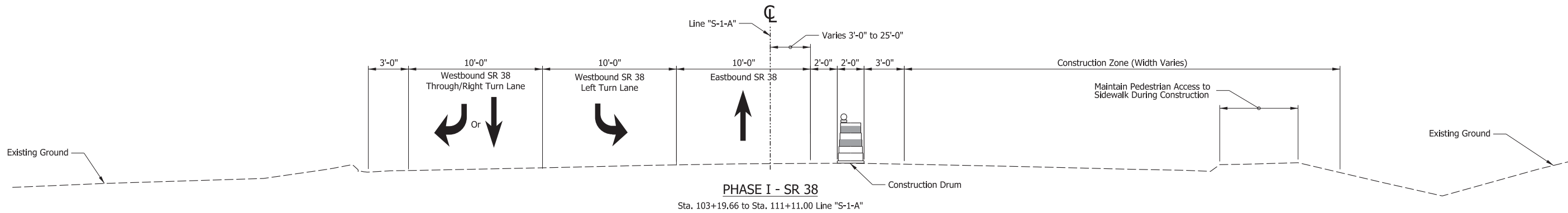
STAGE 3

RECOMMENDED FOR APPROVAL _____	
DESIGNED: <u>IDL</u>	DRAWN: <u>IDL</u>
CHECKED: <u>SMS</u>	CHECKED: <u>MJV</u>

INDIANA
DEPARTMENT OF TRANSPORTATION

MOT TYPICAL SECTIONS
PHASE I

SCALE 1/4" = 1'-0"	BRIDGE FILE
	DESIGNATION 1702936, 1802854, 2001127
SURVEY BOOK	SHEETS
ELECTRONIC	30 of 243
CONTRACT	PROJECT
R-41837	1702936, 1802854, 2001127



Construction Zone Design Speed is 40 mph

**CDM
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Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED
FOR APPROVAL

DESIGN ENGINEER

DATE

DESIGNED: DJL

DRAWN: DJL

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

MOT TYPICAL SECTIONS
PHASE I

SCALE

1/4" = 1'-0"

BRIDGE FILE

DESIGNATION

1702936, 1802854, 2001127

SURVEY BOOK

SHEETS

ELECTRONIC

31

of

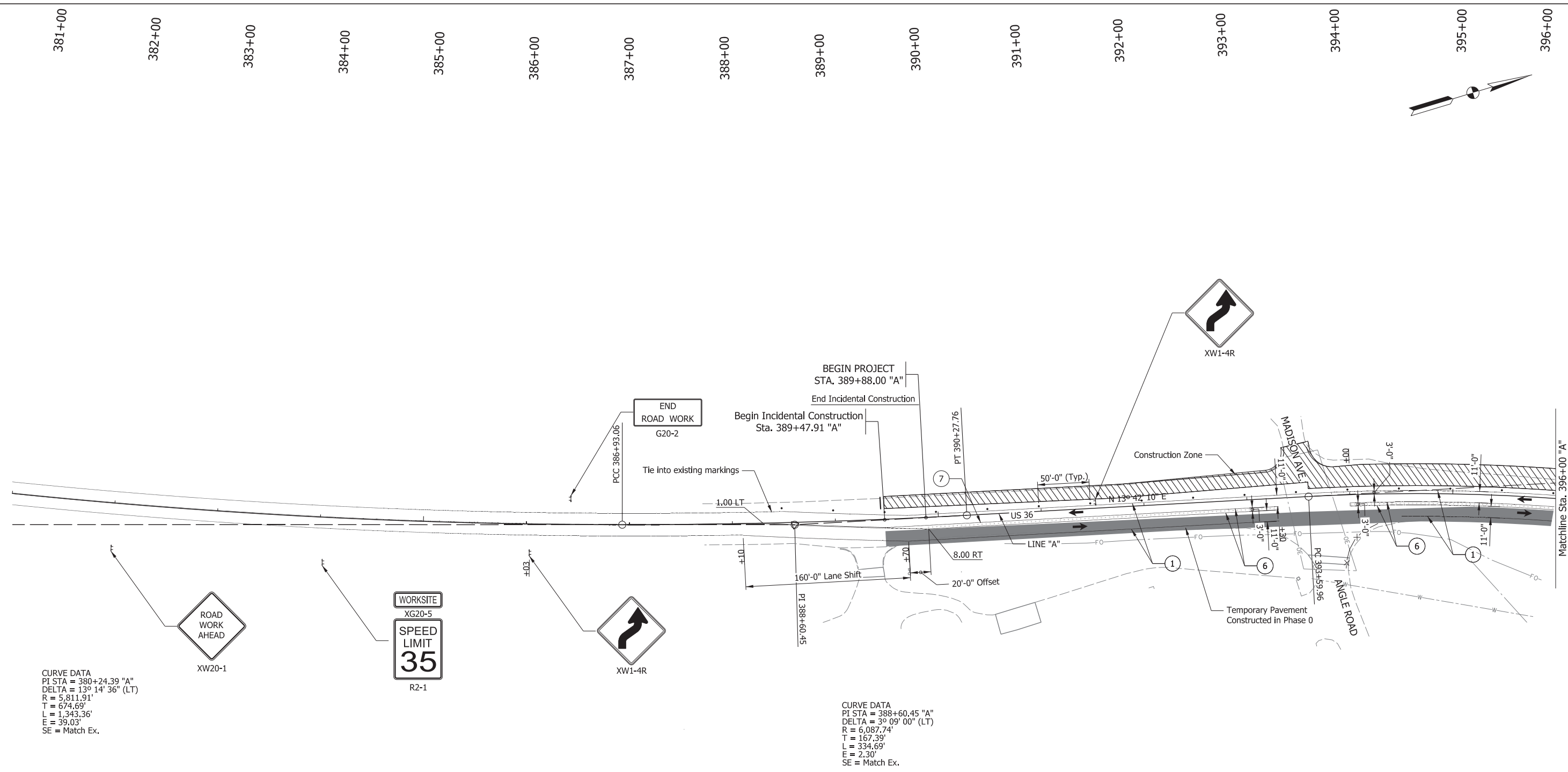
243

CONTRACT

PROJECT

R-41837

1702936, 1802854, 2001127



Legend

- | | | | |
|--|---|--|---------------------------------------|
| ① Temporary Pavement Marking, Solid, White, 6 In. | ⑤ Transverse Marking, Thermoplastic, Stop Line, White, 24 In. | ⑨ Temporary Pavement Marking, Message, Lane Indication Arrow | ▨ Construction Area |
| ② Temporary Pavement Marking, Broken, White, 6 In. | ⑥ Temporary Pavement Marking, Solid, Yellow, 6 In. | ⑩ Temporary Pavement Marking, Message, Only | ⊥ Construction Sign, Type A or Type B |
| ③ Temporary Pavement Marking, Dotted, White, 6 In. | ⑦ Temporary Pavement Marking, Solid, Double Yellow, 6 In. | Y Type III-A Barricade | ● Standard Drum |
| ④ Temporary Pavement Marking, Crosshatch Line, White, 12 In. | ⑧ Temporary Pavement Marking, Broken, Yellow, 6 In. | —X— Line, Remove | ➔ Direction of Traffic |
| | | | ○ 48" Traffic Cone |

Construction Zone Design Speed is 40 MPH

**CDM
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Indianapolis, IN 46204
Tel: (317) 829-9600

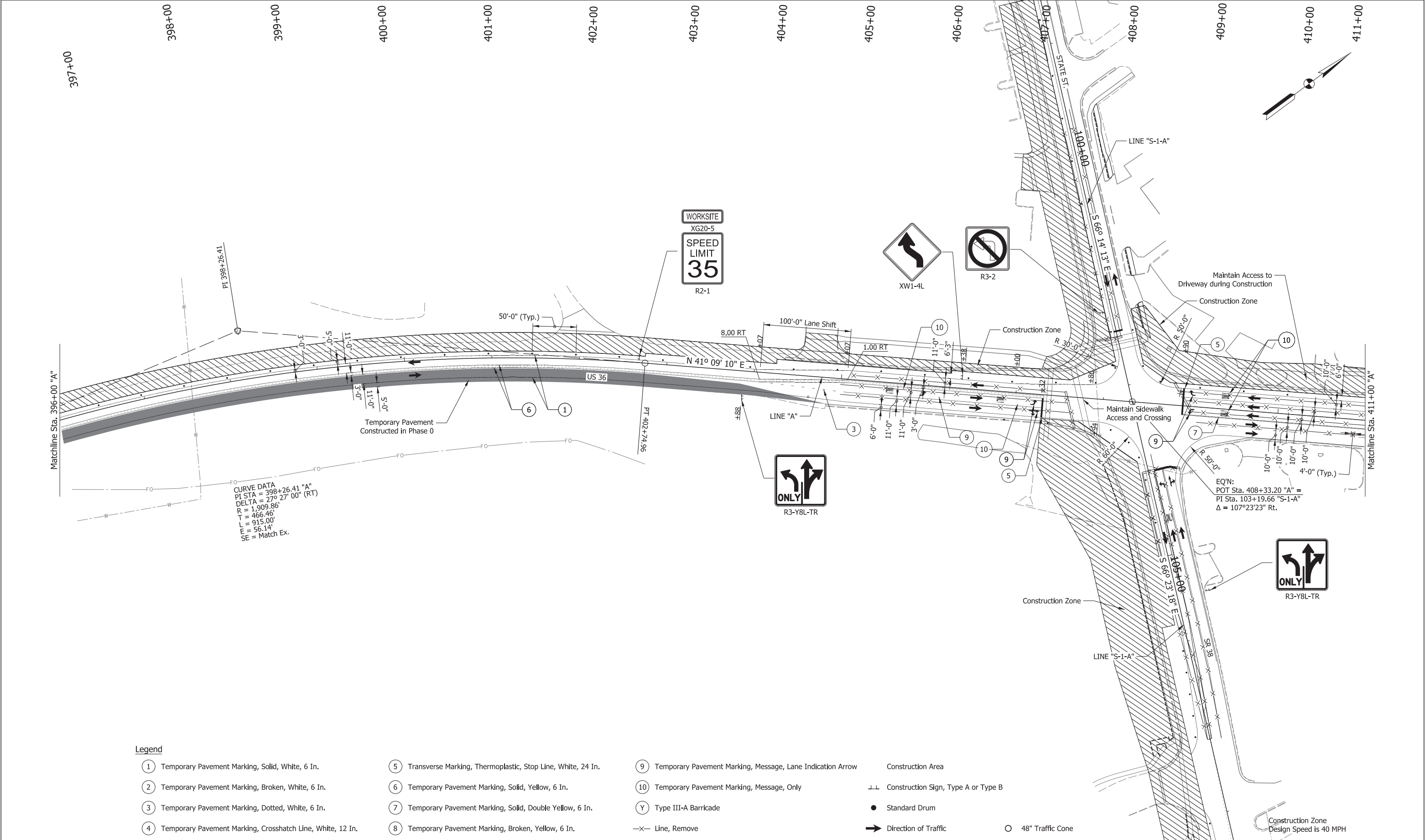
STAGE 3

RECOMMENDED FOR APPROVAL _____	
DESIGNED: DJL	DRAWN: DJL
CHECKED: SMS	CHECKED: MJV

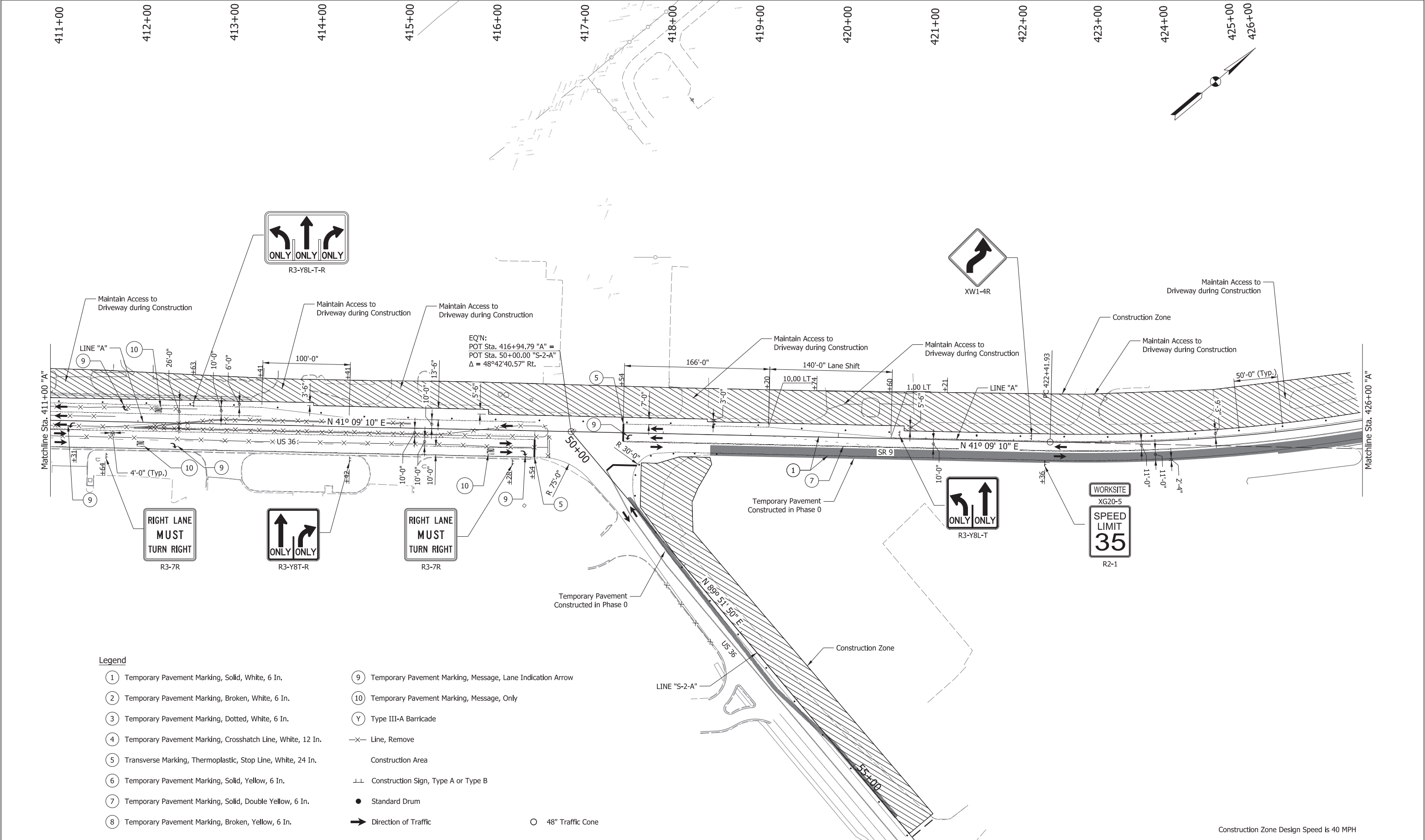
INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE I - US 36 - LINE "A"

SCALE 1" = 50'-0"		BRIDGE FILE	
		DESIGNATION	
		1702936, 1802854, 2001127	
SURVEY BOOK		SHEETS	
ELECTRONIC		32	of 243
CONTRACT		PROJECT	
R-41837		1702936, 1802854, 2001127	



CDM Smith 211 North Pennsylvania Street, Ste 1750 Indianapolis, IN 46204 Tel: (317) 829-9600	STAGE 3	RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____		INDIANA DEPARTMENT OF TRANSPORTATION		SCALE 1" = 50'-0"	BRIDGE FILE
		DESIGNED: DJL DRAWN: DJL		MAINTENANCE OF TRAFFIC PHASE I - US 36 - LINE "A"		DESIGNATION 1702936, 1802854, 2001127	
		CHECKED: SMS CHECKED: MJV				SURVEY BOOK ELECTRONIC	SHEETS 33 of 243
						CONTRACT R-41837	PROJECT 1702936, 1802854, 2001127



Legend

- ① Temporary Pavement Marking, Solid, White, 6 In.

② Temporary Pavement Marking, Broken, White, 6 In.

③ Temporary Pavement Marking, Dotted, White, 6 In.

④ Temporary Pavement Marking, Crosshatch Line, White, 12 In.

⑤ Transverse Marking, Thermoplastic, Stop Line, White, 24 In.

⑥ Temporary Pavement Marking, Solid, Yellow, 6 In.

⑦ Temporary Pavement Marking, Solid, Double Yellow, 6 In.

⑧ Temporary Pavement Marking, Broken, Yellow, 6 In.
- ⑨ Temporary Pavement Marking, Message, Lane Indication Arrow

⑩ Temporary Pavement Marking, Message, Only

Y Type III-A Barricade

—X— Line, Remove

Construction Area

⊥ Construction Sign, Type A or Type B

● Standard Drum

➔ Direction of Traffic

○ 48" Traffic Cone

Construction Zone Design Speed is 40 MPH



211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED FOR APPROVAL _____

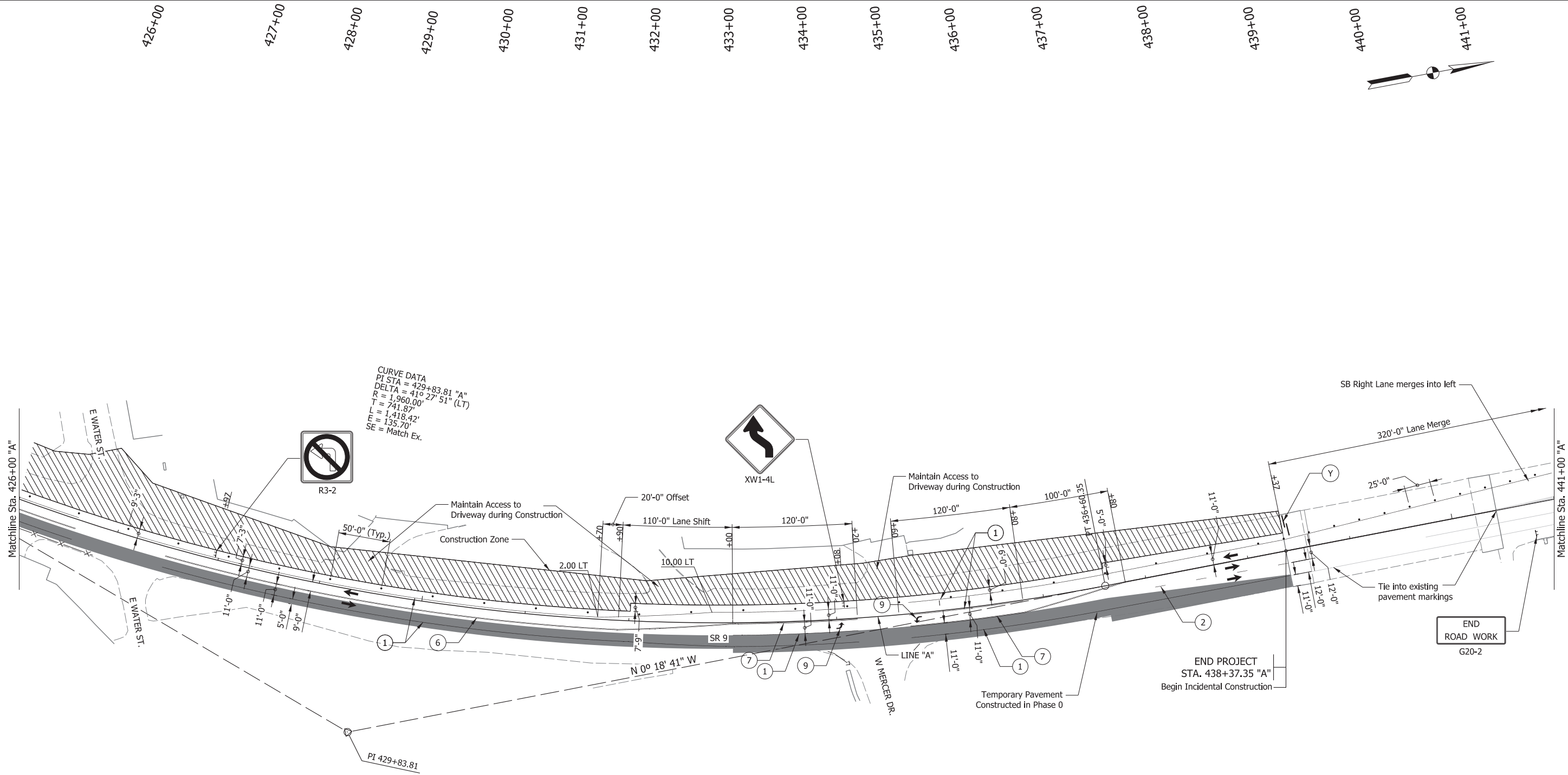
DESIGNED: IJL DRAWN: IJL

CHECKED: SMS CHECKED: MJV

INDIANA DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC PHASE I - US 36/SR 9 - LINE "A"

SCALE	BRIDGE FILE
1" = 50'-0"	
DESIGNATION	
1702936, 1802854, 2001127	
SURVEY BOOK	SHEETS
ELECTRONIC	34 of 243
CONTRACT	PROJECT
R-41837	1702936, 1802854, 2001127



CURVE DATA
PI STA = 429+83.81 "A"
DELTA = 41° 27' 51" (LT)
R = 1,960.00'
T = 741.87'
L = 1,418.42'
E = 135.70'
SE = Match Ex.

Legend

- | | | | |
|--|---|--|---------------------------------------|
| ① Temporary Pavement Marking, Solid, White, 6 In. | ⑤ Transverse Marking, Thermoplastic, Stop Line, White, 24 In. | ⑨ Temporary Pavement Marking, Message, Lane Indication Arrow | Construction Area |
| ② Temporary Pavement Marking, Broken, White, 6 In. | ⑥ Temporary Pavement Marking, Solid, Yellow, 6 In. | ⑩ Temporary Pavement Marking, Message, Only | ⊥ Construction Sign, Type A or Type B |
| ③ Temporary Pavement Marking, Dotted, White, 6 In. | ⑦ Temporary Pavement Marking, Solid, Double Yellow, 6 In. | Y Type III-A Barricade | ● Standard Drum |
| ④ Temporary Pavement Marking, Crosshatch Line, White, 12 In. | ⑧ Temporary Pavement Marking, Broken, Yellow, 6 In. | —X— Line, Remove | ➔ Direction of Traffic |
| | | | ○ 48" Traffic Cone |
- Construction Zone Design Speed is 40 MPH

**CDM
Smith**

211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

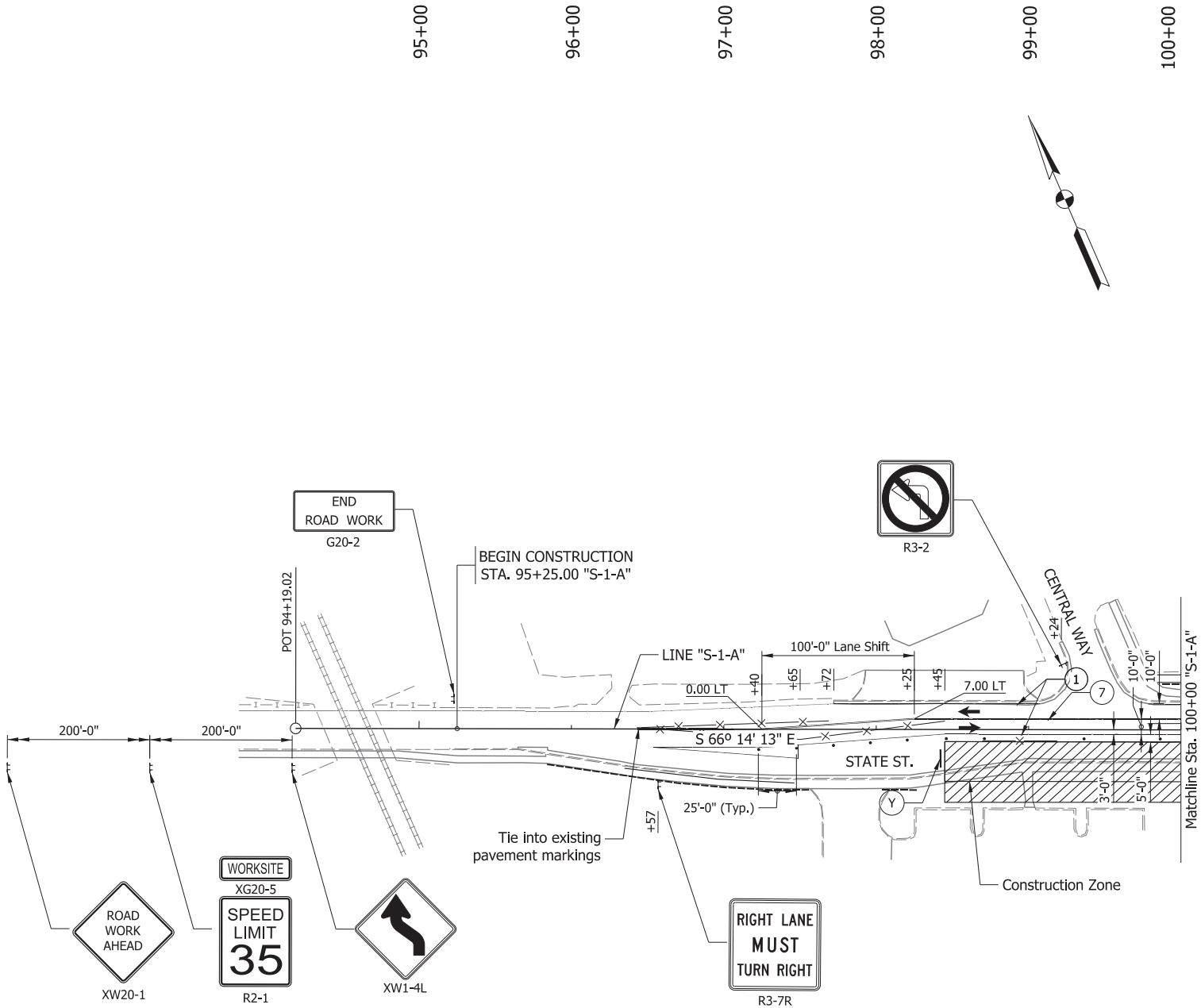
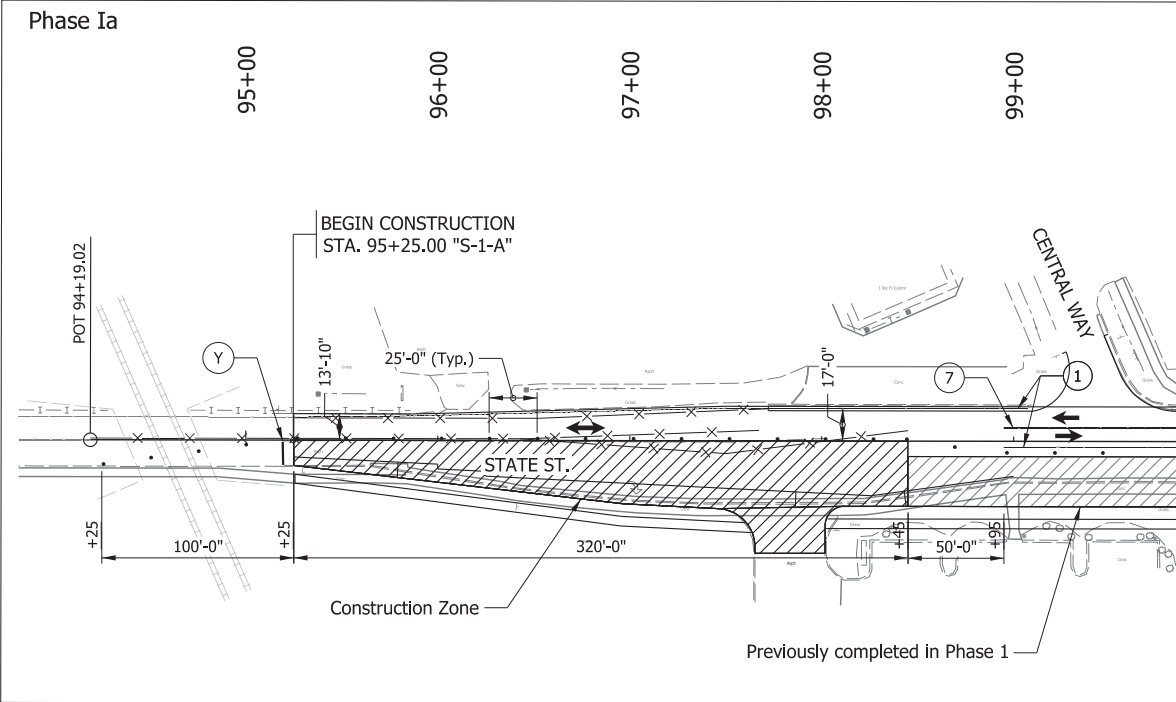
RECOMMENDED FOR APPROVAL _____	
DESIGNED: DJL	DRAWN: DJL
CHECKED: SMS	CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE I - SR 9 - LINE "A"

SCALE 1" = 50'-0"	BRIDGE FILE	
	DESIGNATION	
	1702936, 1802854, 2001127	
SURVEY BOOK	SHEETS	
ELECTRONIC	35	of 243
CONTRACT	PROJECT	
R-41837	1702936, 1802854, 2001127	

Sequence of Operations:
Construct Phase 1A after completion of Phase 1, to minimize disruptions to two way traffic on State St.
Maintain one lane two way operation using flaggers during construction. Fill with temporary pavement,
aggregate, or as approved by the engineer and open to two-way traffic during non-work hours.



Legend

- | | | | |
|--|---|--|---------------------------------------|
| ① Temporary Pavement Marking, Solid, White, 6 In. | ⑤ Transverse Marking, Thermoplastic, Stop Line, White, 24 In. | ⑨ Temporary Pavement Marking, Message, Lane Indication Arrow | ▨ Construction Area |
| ② Temporary Pavement Marking, Broken, White, 6 In. | ⑥ Temporary Pavement Marking, Solid, Yellow, 6 In. | ⑩ Temporary Pavement Marking, Message, Only | ⊥ Construction Sign, Type A or Type B |
| ③ Temporary Pavement Marking, Dotted, White, 6 In. | ⑦ Temporary Pavement Marking, Solid, Double Yellow, 6 In. | Y Type III-A Barricade | ● Standard Drum |
| ④ Temporary Pavement Marking, Crosshatch Line, White, 12 In. | ⑧ Temporary Pavement Marking, Broken, Yellow, 6 In. | —X— Line, Remove | ➔ Direction of Traffic |
| | | | ○ 48" Traffic Cone |
- Construction Zone Design Speed is 40 MPH

**CDM
Smith**

211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED
FOR APPROVAL

DESIGN ENGINEER DATE

DESIGNED: IJL

DRAWN: IJL

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE I - STATE ST - LINE "S-1-A"

SCALE

1" = 50'-0"

BRIDGE FILE

DESIGNATION

1702936, 1802854, 2001127

SURVEY BOOK

SHEETS

ELECTRONIC

37

of

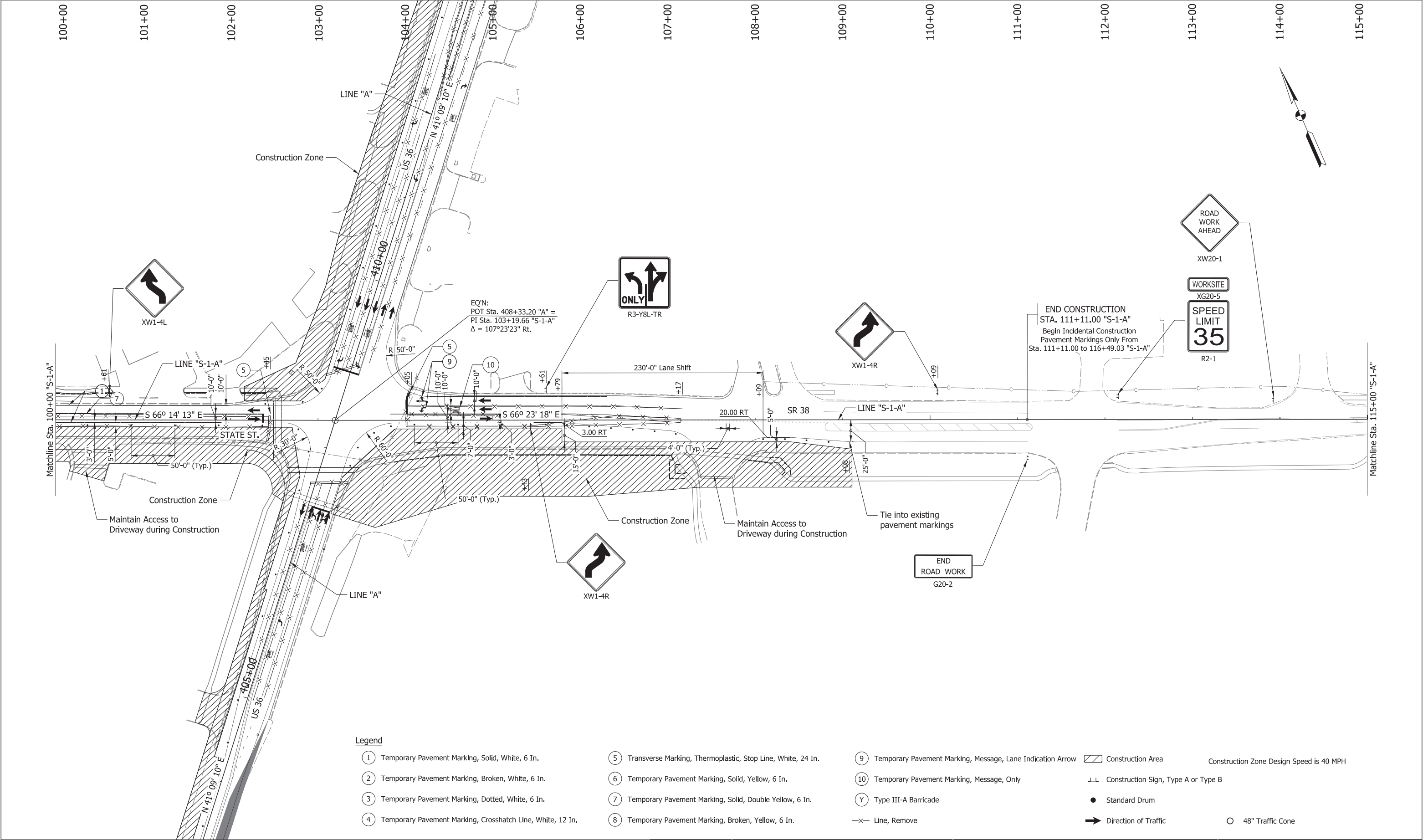
243

CONTRACT

PROJECT

R-41837

1702936, 1802854, 2001127



Legend

- ① Temporary Pavement Marking, Solid, White, 6 In.

② Temporary Pavement Marking, Broken, White, 6 In.

③ Temporary Pavement Marking, Dotted, White, 6 In.

④ Temporary Pavement Marking, Crosshatch Line, White, 12 In.

⑤ Transverse Marking, Thermoplastic, Stop Line, White, 24 In.

⑥ Temporary Pavement Marking, Solid, Yellow, 6 In.

⑦ Temporary Pavement Marking, Solid, Double Yellow, 6 In.

⑧ Temporary Pavement Marking, Broken, Yellow, 6 In.

⑨ Temporary Pavement Marking, Message, Lane Indication Arrow

⑩ Temporary Pavement Marking, Message, Only

Y Type III-A Barricade

—X— Line, Remove
- Construction Area

Construction Sign, Type A or Type B

Standard Drum

Direction of Traffic

48" Traffic Cone
- Construction Zone Design Speed is 40 MPH

CDM
Smith

211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED FOR APPROVAL

DESIGNED: DJL

CHECKED: SMS

DESIGN ENGINEER

DRAWN: DJL

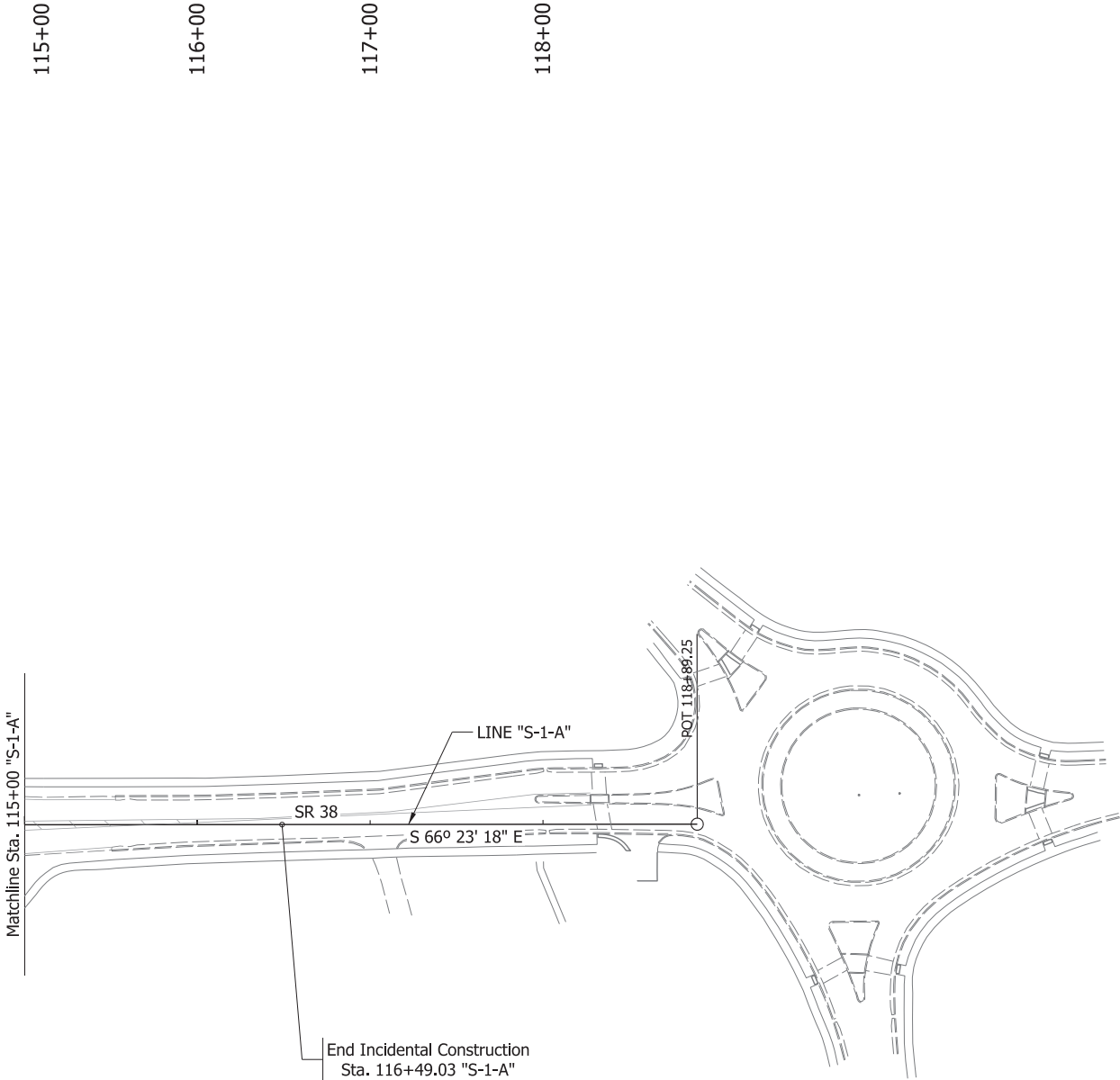
CHECKED: MJV

DATE

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE I - STATE ST/SR 38 - LINE "S-1-A"

SCALE	BRIDGE FILE
1" = 50'-0"	
DESIGNATION	
1702936, 1802854, 2001127	
SURVEY BOOK	SHEETS
ELECTRONIC	38 of 243
CONTRACT	PROJECT
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Legend

- ① Temporary Pavement Marking, Solid, White, 6 In.

② Temporary Pavement Marking, Broken, White, 6 In.

③ Temporary Pavement Marking, Dotted, White, 6 In.

④ Temporary Pavement Marking, Crosshatch Line, White, 12 In.
- ⑤ Transverse Marking, Thermoplastic, Stop Line, White, 24 In.

⑥ Temporary Pavement Marking, Solid, Yellow, 6 In.

⑦ Temporary Pavement Marking, Solid, Double Yellow, 6 In.

⑧ Temporary Pavement Marking, Broken, Yellow, 6 In.
- ⑨ Temporary Pavement Marking, Message, Lane Indication Arrow

⑩ Temporary Pavement Marking, Message, Only

Y Type III-A Barricade

—X— Line, Remove
- ▨ Construction Area

⊥⊥ Construction Sign, Type A or Type B

● Standard Drum

➔ Direction of Traffic

○ 48" Traffic Cone
- Construction Zone Design Speed is 40 MPH

CDM
Smith

211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED
FOR APPROVAL

DESIGN ENGINEER

DATE

DESIGNED: DJL

DRAWN: DJL

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE I - SR 38 - LINE "S-1-A"

SCALE

1" = 50'-0"

BRIDGE FILE

DESIGNATION

1702936, 1802854, 2001127

SURVEY BOOK

ELECTRONIC

CONTRACT

R-41837

SHEETS

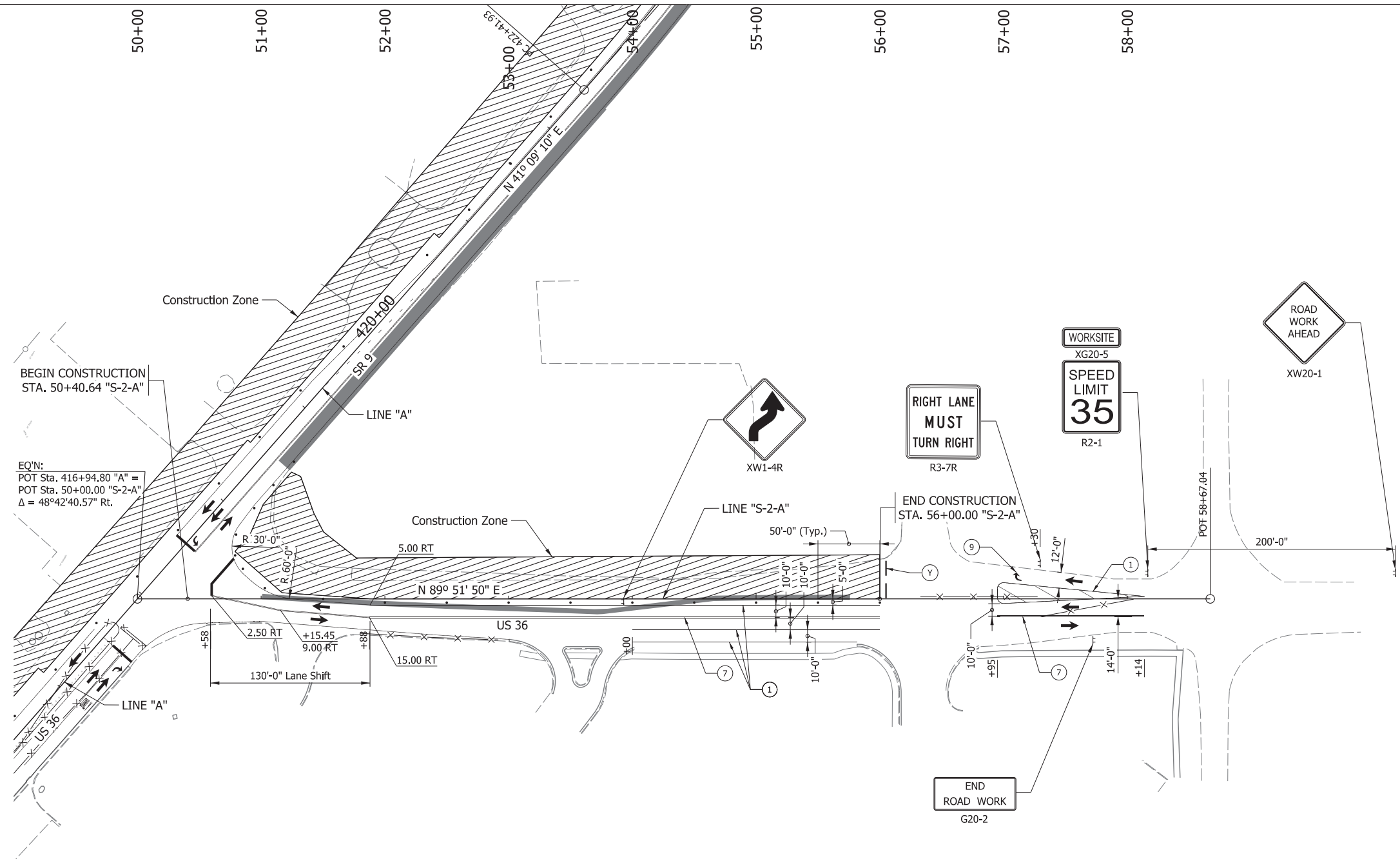
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243

PROJECT

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BEGIN CONSTRUCTION
STA. 50+40.64 "S-2-A"

EQ'N:
POT Sta. 416+94.80 "A" =
POT Sta. 50+00.00 "S-2-A"
Δ = 48°42'40.57" Rt.

Legend

- | | | | |
|--|---|--|---------------------------------------|
| ① Temporary Pavement Marking, Solid, White, 6 In. | ⑤ Transverse Marking, Thermoplastic, Stop Line, White, 24 In. | ⑨ Temporary Pavement Marking, Message, Lane Indication Arrow | ▨ Construction Area |
| ② Temporary Pavement Marking, Broken, White, 6 In. | ⑥ Temporary Pavement Marking, Solid, Yellow, 6 In. | ⑩ Temporary Pavement Marking, Message, Only | ⊥ Construction Sign, Type A or Type B |
| ③ Temporary Pavement Marking, Dotted, White, 6 In. | ⑦ Temporary Pavement Marking, Solid, Double Yellow, 6 In. | Y Type III-A Barricade | ● Standard Drum |
| ④ Temporary Pavement Marking, Crosshatch Line, White, 12 In. | ⑧ Temporary Pavement Marking, Broken, Yellow, 6 In. | —X— Line, Remove | ➔ Direction of Traffic |
| | | | ○ 48" Traffic Cone |

Construction Zone Design Speed is 40 MPH



211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

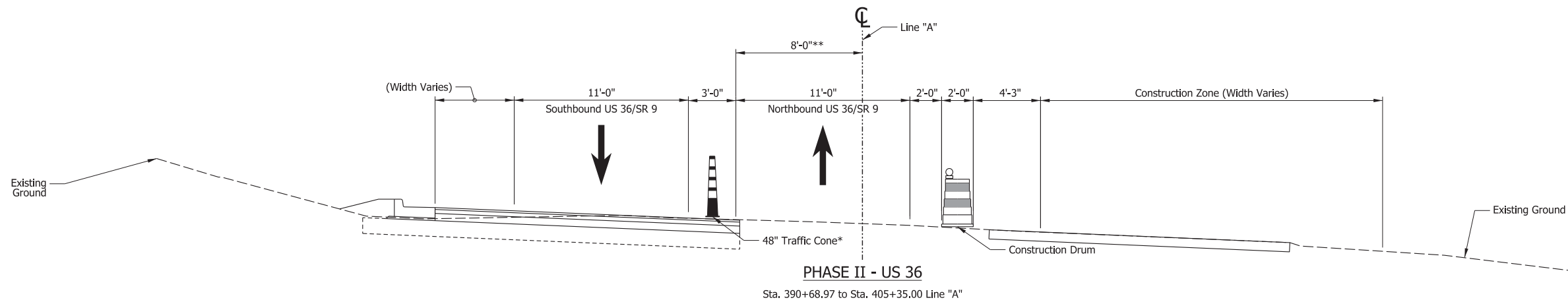
RECOMMENDED FOR APPROVAL _____
DESIGN ENGINEER DATE

DESIGNED: DJL	DRAWN: DJL
CHECKED: SMS	CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

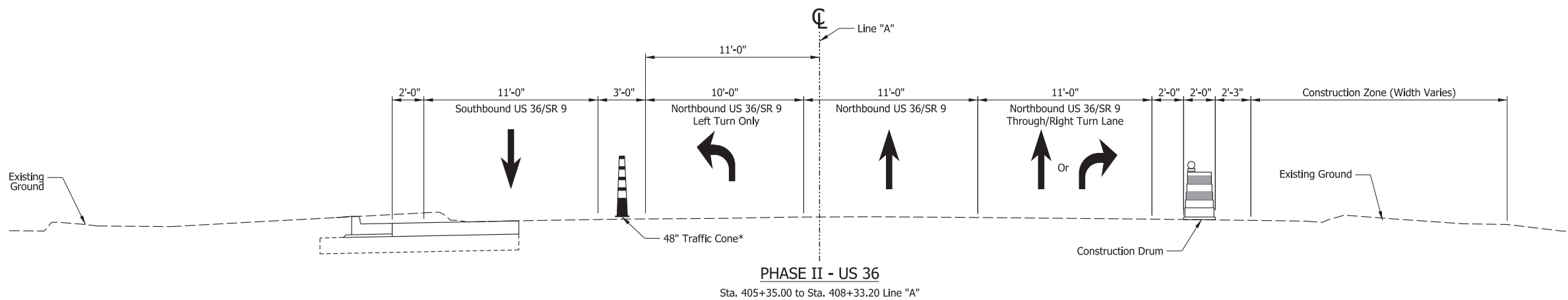
MAINTENANCE OF TRAFFIC
PHASE I - US 36 - LINE "S-2-A"

SCALE 1" = 50'-0"	BRIDGE FILE
	DESIGNATION 1702936, 1802854, 2001127
SURVEY BOOK	SHEETS
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CONTRACT	PROJECT
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*48" Traffic Cones present from Sta. 394+00.00 to Sta. 398+64.00
Sta. 403+10.00 to Sta. 407+50.00
Sta. 408+75.00 to Sta. 417+30.00

**8'-0" from Sta. 394+00.00 to Sta. 399+64.00
15'-0" from Sta. 399+64.00 to Sta. 405+35.00

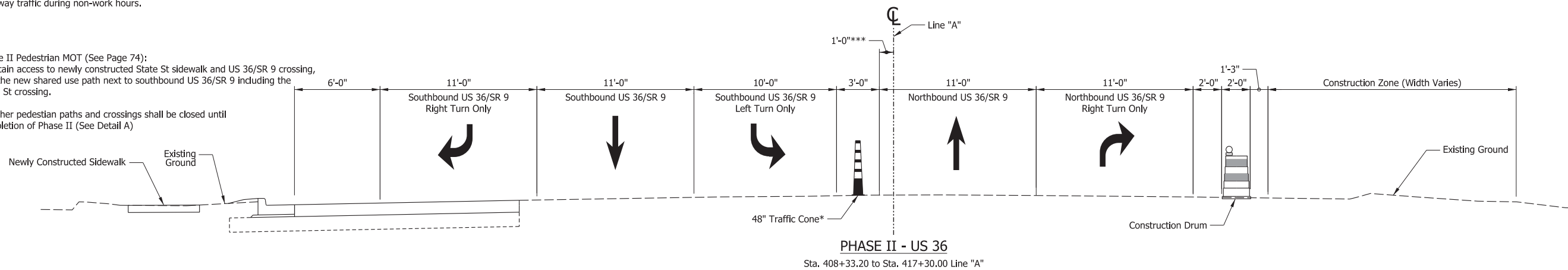


Phase II:
Widen roadway, construct pedestrian facilities, and install lighting on the opposite half of each road.
Construct Center Curb on State St.
Maintain one lane of traffic in each direction and some turn lanes at intersections.

Phase IIa:
Construct Phase IIa after completion of Phase II, to minimize disruptions to two way traffic on State St.
Maintain one lane two way operation using flaggers during construction. Fill with temporary pavement and open to two-way traffic during non-work hours.

Phase II Pedestrian MOT (See Page 74):
Maintain access to newly constructed State St sidewalk and US 36/SR 9 crossing, and the new shared use path next to southbound US 36/SR 9 including the State St crossing.

All other pedestian paths and crossings shall be closed until completion of Phase II (See Detail A)



***1'-0" from Sta. 408+33.20 to Sta. 412+31.00
4'-0" from Sta. 412+31.00 to Sta. 417+30.00

Construction Zone Design Speed is 40 mph

**CDM
Smith**

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Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED
FOR APPROVAL

DESIGN ENGINEER DATE

DESIGNED: DJL

DRAWN: DJL

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

MOT TYPICAL SECTIONS
PHASE II

SCALE

1/4" = 1'-0"

BRIDGE FILE

DESIGNATION

1702936, 1802854, 2001127

SURVEY BOOK

SHEETS

ELECTRONIC

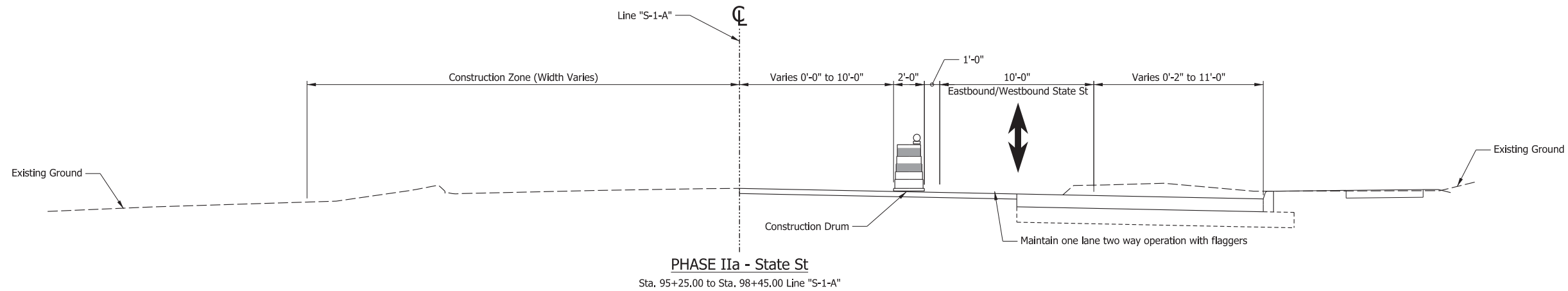
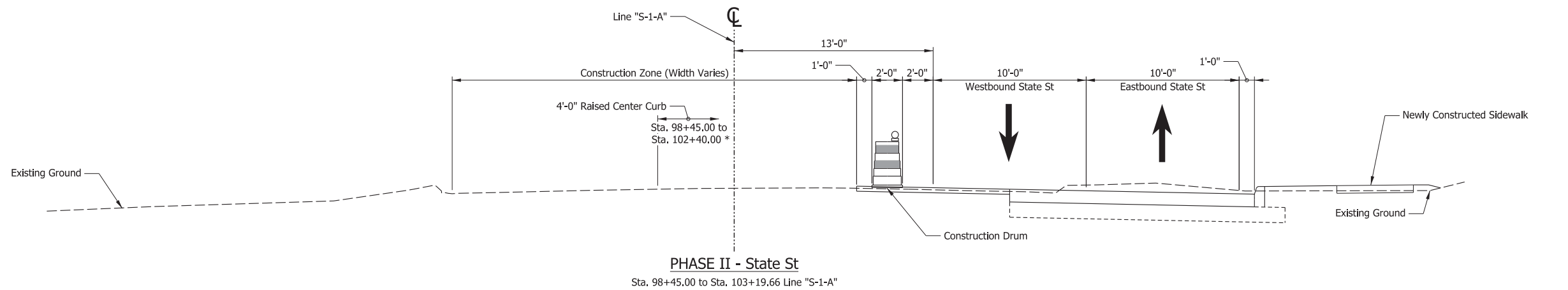
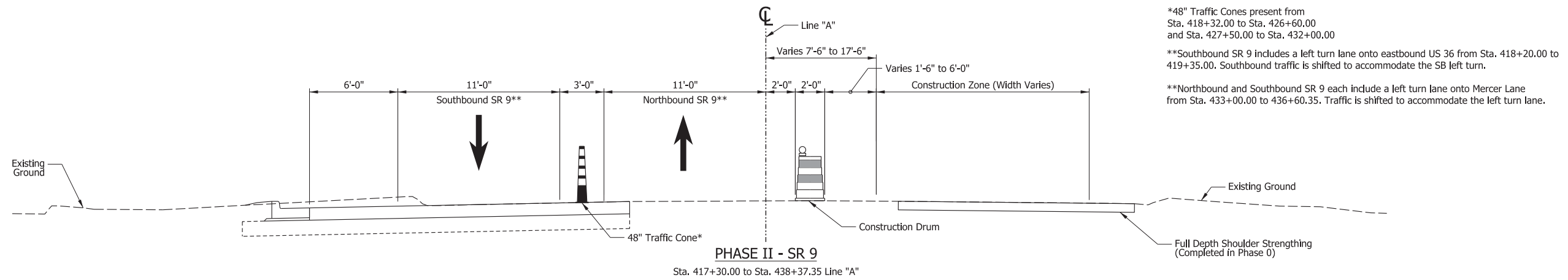
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CONTRACT

PROJECT

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Construction Zone Design Speed is 40 mph

**CDM
Smith**

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Tel: (317) 829-9600

STAGE 3

RECOMMENDED
FOR APPROVAL

DESIGN ENGINEER

DATE

DESIGNED: DJL

DRAWN: DJL

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

MOT TYPICAL SECTIONS
PHASE II

SCALE

1/4" = 1'-0"

BRIDGE FILE

DESIGNATION

1702936, 1802854, 2001127

SURVEY BOOK

SHEETS

ELECTRONIC

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of

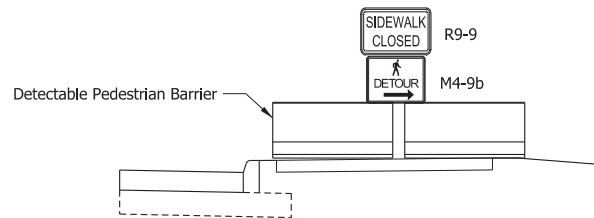
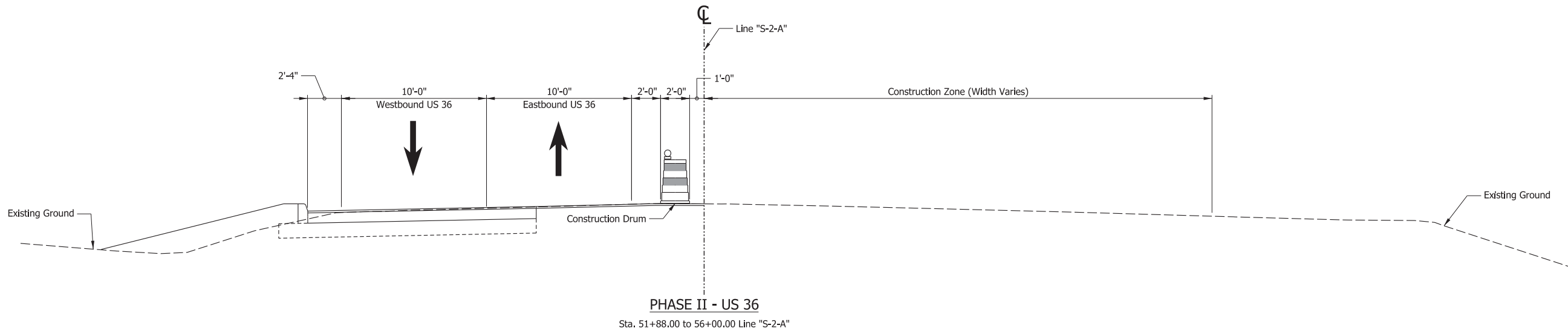
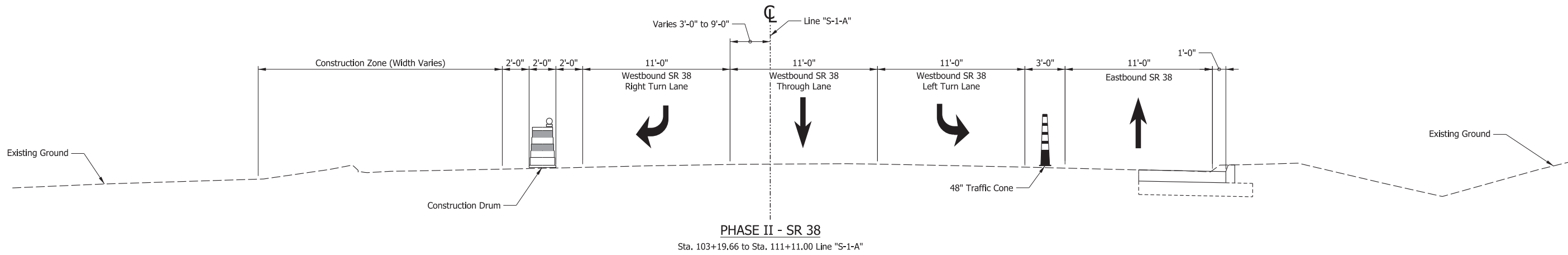
243

CONTRACT

PROJECT

R-41837

1702936, 1802854, 2001127



DETAIL A - SIDEWALK CLOSURE

Construction Zone Design Speed is 40 mph

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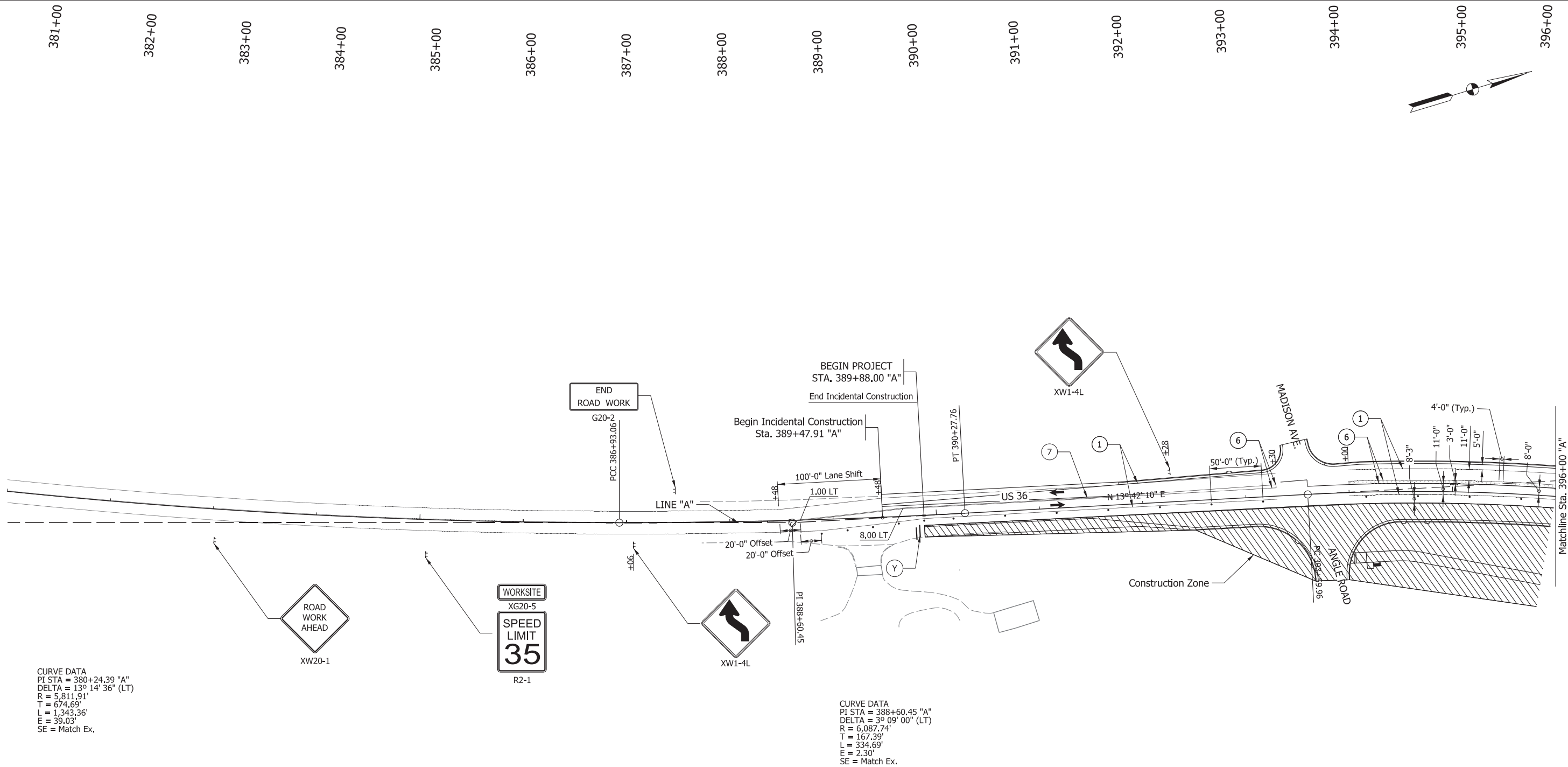
STAGE 3

RECOMMENDED FOR APPROVAL _____	
DESIGNED: DJL	DRAWN: DJL
CHECKED: SMS	CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

MOT TYPICAL SECTIONS
PHASE II

SCALE 1/4" = 1'-0"		BRIDGE FILE	
		DESIGNATION	
		1702936, 1802854, 2001127	
SURVEY BOOK		SHEETS	
ELECTRONIC		43	of 243
CONTRACT		PROJECT	
R-41837		1702936, 1802854, 2001127	



Legend

- ① Temporary Pavement Marking, Solid, White, 6 In.

② Temporary Pavement Marking, Broken, White, 6 In.

③ Temporary Pavement Marking, Dotted, White, 6 In.

④ Temporary Pavement Marking, Crosshatch Line, White, 12 In.

⑤ Transverse Marking, Thermoplastic, Stop Line, White, 24 In.

⑥ Temporary Pavement Marking, Solid, Yellow, 6 In.

⑦ Temporary Pavement Marking, Solid, Double Yellow, 6 In.

⑧ Temporary Pavement Marking, Broken, Yellow, 6 In.

⑨ Temporary Pavement Marking, Message, Lane Indication Arrow

⑩ Temporary Pavement Marking, Message, Only

Y Type III-A Barricade

—X— Line, Remove
- Construction Area

Construction Sign, Type A or Type B

Standard Drum

Direction of Traffic

48" Traffic Cone

Construction Zone Design Speed is 40 MPH

CDM
Smith

211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

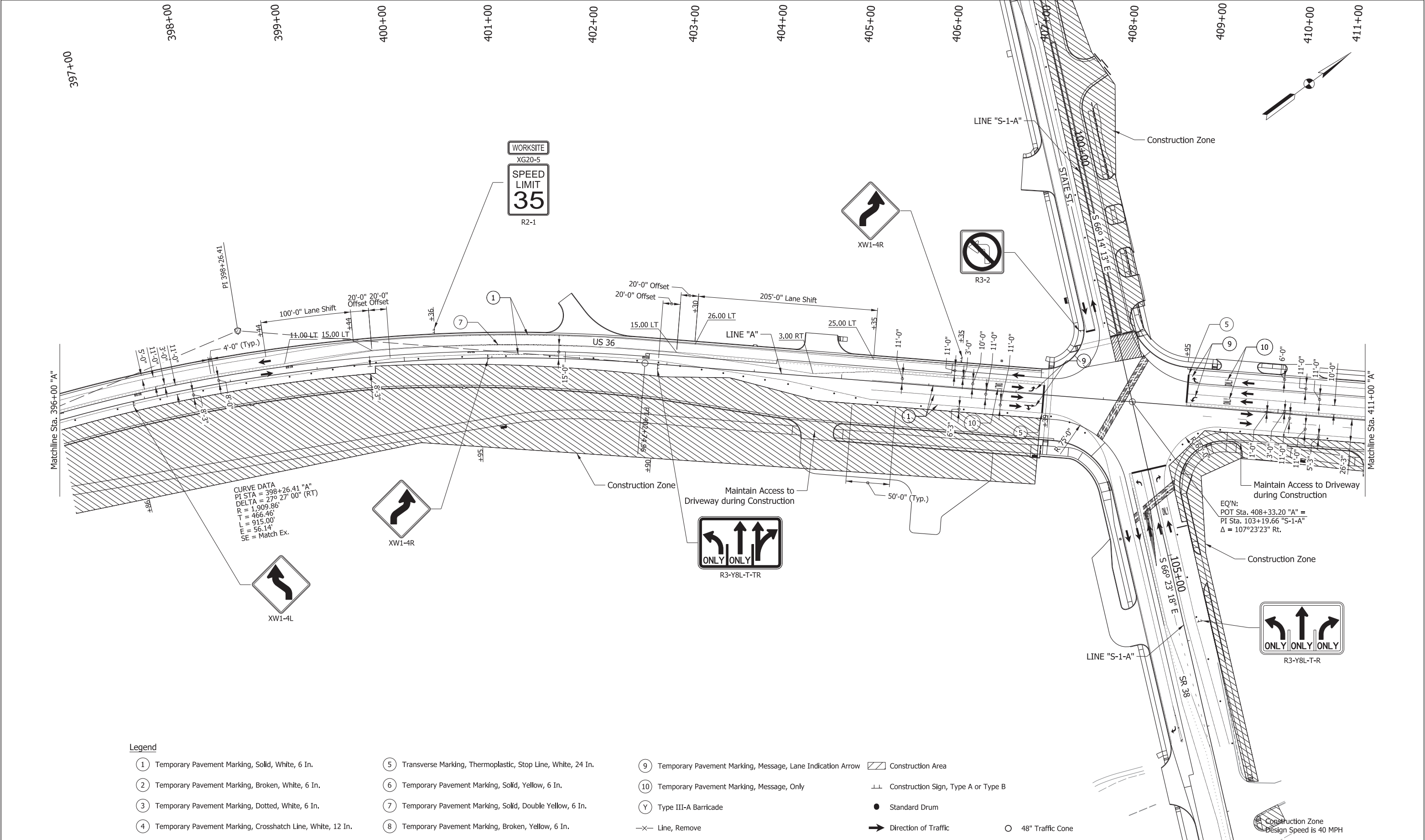
STAGE 3

RECOMMENDED FOR APPROVAL _____	
DESIGNED: IJL	DRAWN: IJL
CHECKED: SMS	CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE II - US 36 - LINE "A"

SCALE 1" = 50'-0"	BRIDGE FILE	
	DESIGNATION	
	1702936, 1802854, 2001127	
SURVEY BOOK	SHEETS	
ELECTRONIC	44	of 243
CONTRACT	PROJECT	
R-41837	1702936, 1802854, 2001127	



Legend

- | | | |
|--|---|--|
| ① Temporary Pavement Marking, Solid, White, 6 In. | ⑤ Transverse Marking, Thermoplastic, Stop Line, White, 24 In. | ⑨ Temporary Pavement Marking, Message, Lane Indication Arrow |
| ② Temporary Pavement Marking, Broken, White, 6 In. | ⑥ Temporary Pavement Marking, Solid, Yellow, 6 In. | ⑩ Temporary Pavement Marking, Message, Only |
| ③ Temporary Pavement Marking, Dotted, White, 6 In. | ⑦ Temporary Pavement Marking, Solid, Double Yellow, 6 In. | Y Type III-A Barricade |
| ④ Temporary Pavement Marking, Crosshatch Line, White, 12 In. | ⑧ Temporary Pavement Marking, Broken, Yellow, 6 In. | —X— Line, Remove |
- | |
|-------------------------------------|
| Construction Area |
| Construction Sign, Type A or Type B |
| Standard Drum |
| Direction of Traffic |

○ 48" Traffic Cone

**CDM
Smith**

211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED
FOR APPROVAL

DESIGN ENGINEER DATE

DESIGNED: IJL

DRAWN: IJL

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE II - US 36 - LINE "A"

SCALE

1" = 50'-0"

BRIDGE FILE

DESIGNATION

1702936, 1802854, 2001127

SURVEY BOOK

SHEETS

ELECTRONIC

45

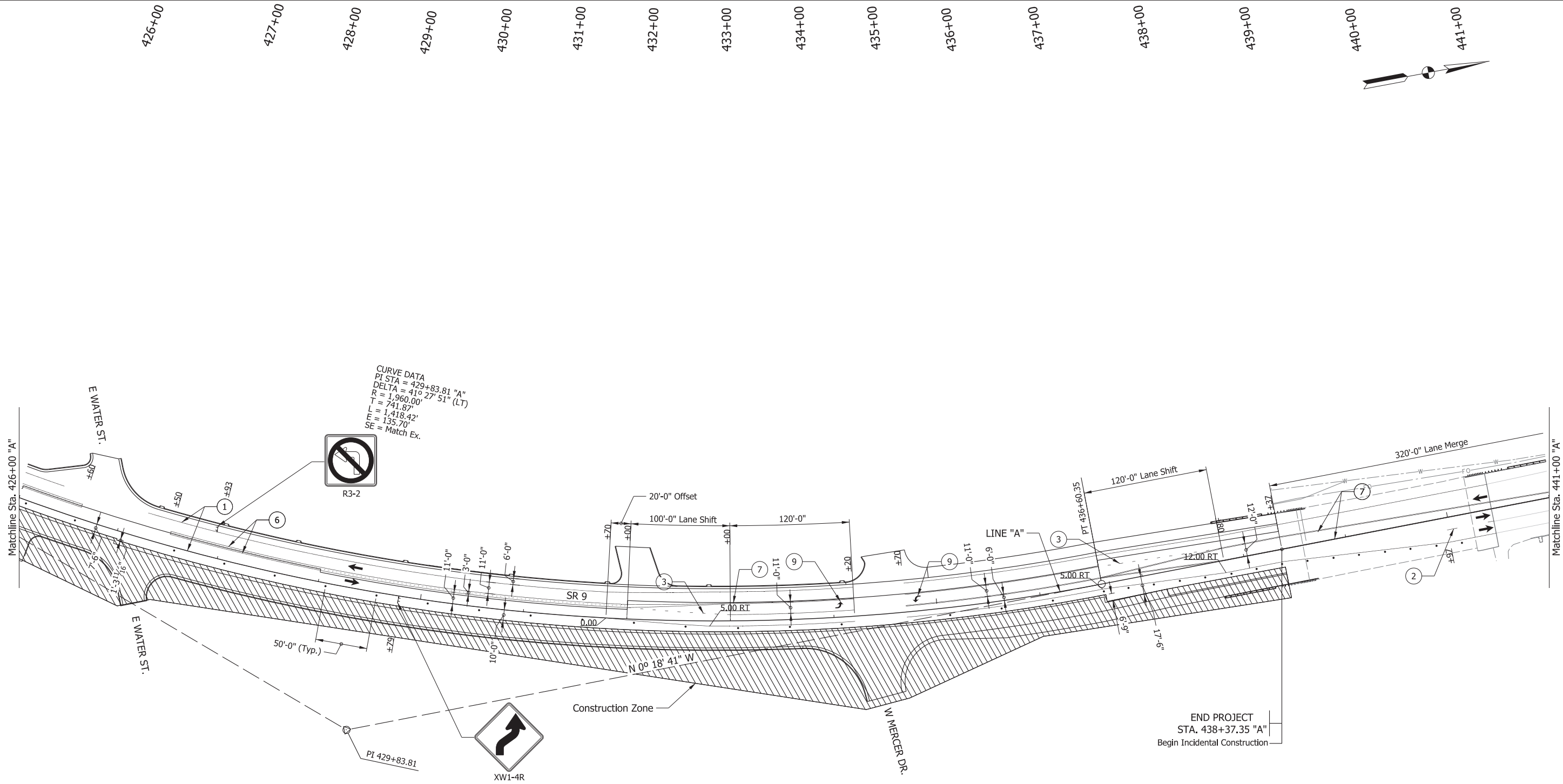
of 243

CONTRACT

PROJECT

R-41837

1702936, 1802854, 2001127



Legend

- 1 Temporary Pavement Marking, Solid, White, 6 In.

2 Temporary Pavement Marking, Broken, White, 6 In.

3 Temporary Pavement Marking, Dotted, White, 6 In.

4 Temporary Pavement Marking, Crosshatch Line, White, 12 In.

5 Transverse Marking, Thermoplastic, Stop Line, White, 24 In.

6 Temporary Pavement Marking, Solid, Yellow, 6 In.

7 Temporary Pavement Marking, Solid, Double Yellow, 6 In.

8 Temporary Pavement Marking, Broken, Yellow, 6 In.

9 Temporary Pavement Marking, Message, Lane Indication Arrow

10 Temporary Pavement Marking, Message, Only

Y Type III-A Barricade

—X— Line, Remove
- Construction Area

Construction Sign, Type A or Type B

Standard Drum

Direction of Traffic

48" Traffic Cone

Construction Zone Design Speed is 40 MPH

**CDM
Smith**
211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

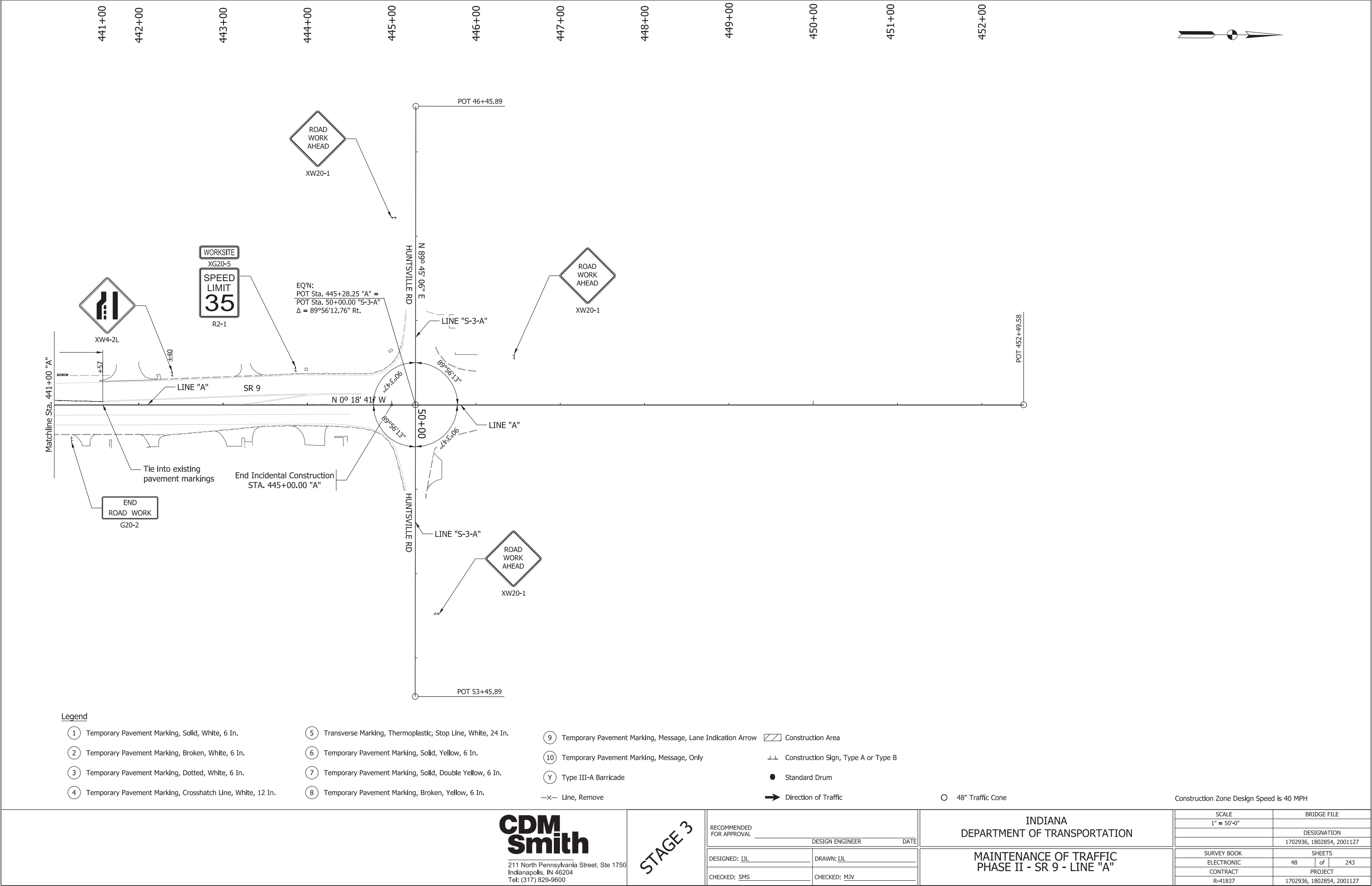
STAGE 3

RECOMMENDED FOR APPROVAL _____	
DESIGNED: IJL	DRAWN: IJL
CHECKED: SMS	CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE II - SR 9 - LINE "A"

SCALE 1" = 50'-0"	BRIDGE FILE	
	DESIGNATION	
	1702936, 1802854, 2001127	
SURVEY BOOK	SHEETS	
ELECTRONIC	47	of 243
CONTRACT	PROJECT	
R-41837	1702936, 1802854, 2001127	



Phase IIa

95+00 96+00 97+00 98+00 99+00

POT 94+19.02

100'-0"

320'-0"

BEGIN CONSTRUCTION STA. 95+25.00 "S-1-A"

Construction Zone

STATE ST.

Construct Center Curb

13'-2"

50'-0"

9'-0"

5'-0"

10'-0"

10'-0"

7

1

Constructed in Phase II

CENTRAL WAY



- ① Temporary Pavement Marking, Solid, White, 6 In.
- ② Temporary Pavement Marking, Broken, White, 6 In.
- ③ Temporary Pavement Marking, Dotted, White, 6 In.
- ④ Temporary Pavement Marking, Crosshatch Line, White, 12 In.

- ⑤ Transverse Marking, Thermoplastic, Stop Line, White, 24 In.
- ⑥ Temporary Pavement Marking, Solid, Yellow, 6 In.
- ⑦ Temporary Pavement Marking, Solid, Double Yellow, 6 In.
- ⑧ Temporary Pavement Marking, Broken, Yellow, 6 In.

-  Construction Area
-  Construction Sign, Type A or Type B
-  Standard Drum
-  Direction of Traffic

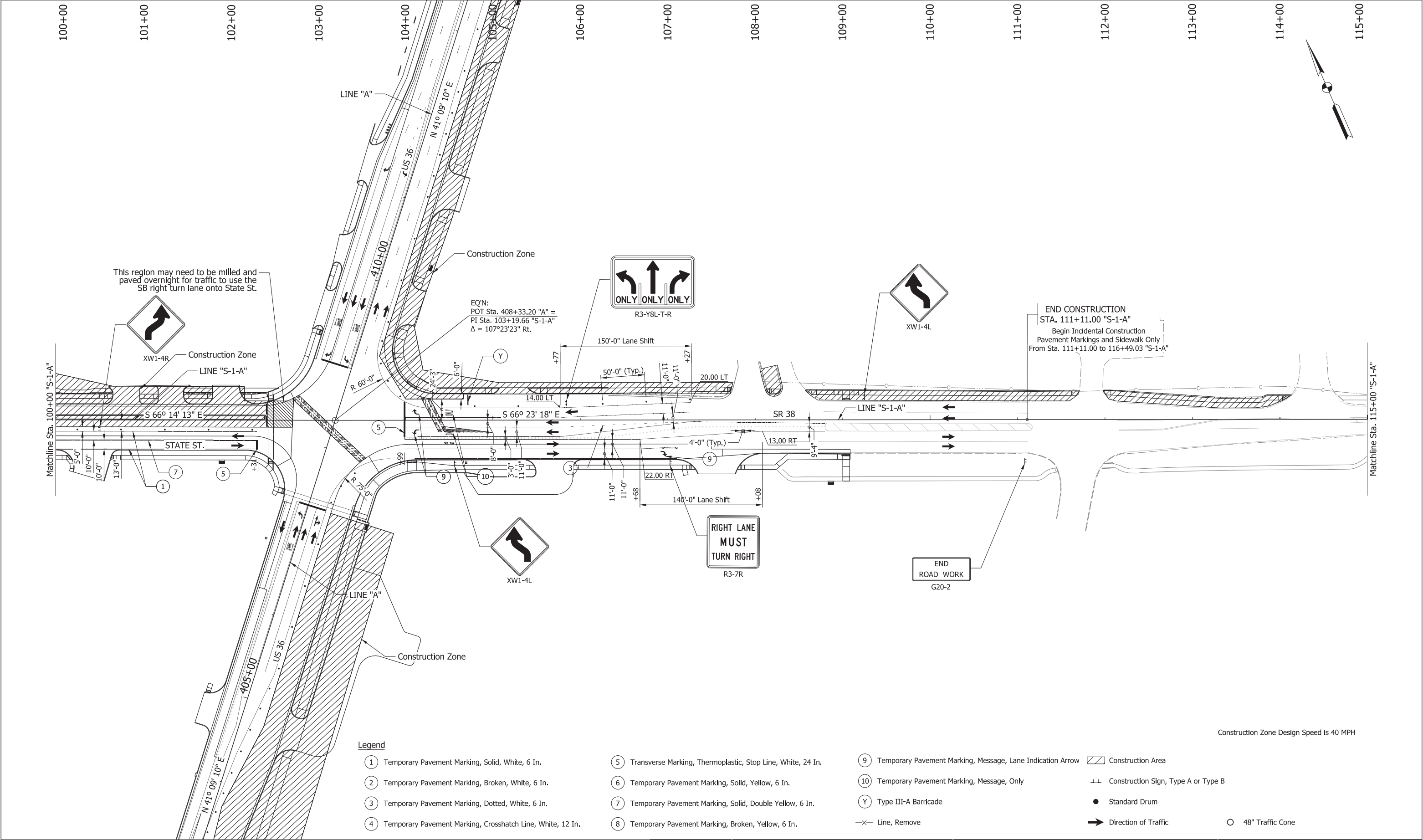
➔ Direction of Traffic ○ 48" Traffic Cone



STAGE 3

INDIANA
DEPARTMENT OF TRANSPORTATION

SCALE	BRIDGE FILE		
1" = 50'-0"			
	DESIGNATION		
	1702936, 1802854, 2001127		
SURVEY BOOK	SHEETS		
ELECTRONIC	49	of	243
CONTRACT	PROJECT		
R-41837	1702936, 1802854, 2001127		



Legend

- ① Temporary Pavement Marking, Solid, White, 6 In.
- ② Temporary Pavement Marking, Broken, White, 6 In.
- ③ Temporary Pavement Marking, Dotted, White, 6 In.
- ④ Temporary Pavement Marking, Crosshatch Line, White, 12 In.

- ⑤ Transverse Marking, Thermoplastic, Stop Line, White, 24 In.
- ⑥ Temporary Pavement Marking, Solid, Yellow, 6 In.
- ⑦ Temporary Pavement Marking, Solid, Double Yellow, 6 In.
- ⑧ Temporary Pavement Marking, Broken, Yellow, 6 In.

- ⑨ Temporary Pavement Marking, Message, Lane Indication Arrow
- ⑩ Temporary Pavement Marking, Message, Only
- Y Type III-A Barricade
- X— Line, Remove

Construction Area

Construction Sign, Type A or Type B

Standard Drum

Direction of Traffic

48" Traffic Cone

Construction Zone Design Speed is 40 MPH

**CDM
Smith**

211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED
FOR APPROVAL

DESIGN ENGINEER DATE

DESIGNED: DJL

DRAWN: DJL

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE II - STATE ST/SR 38 - LINE "S-1-A"

SCALE

1" = 50'-0"

BRIDGE FILE

DESIGNATION

1702936, 1802854, 2001127

SURVEY BOOK

SHEETS

ELECTRONIC

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of

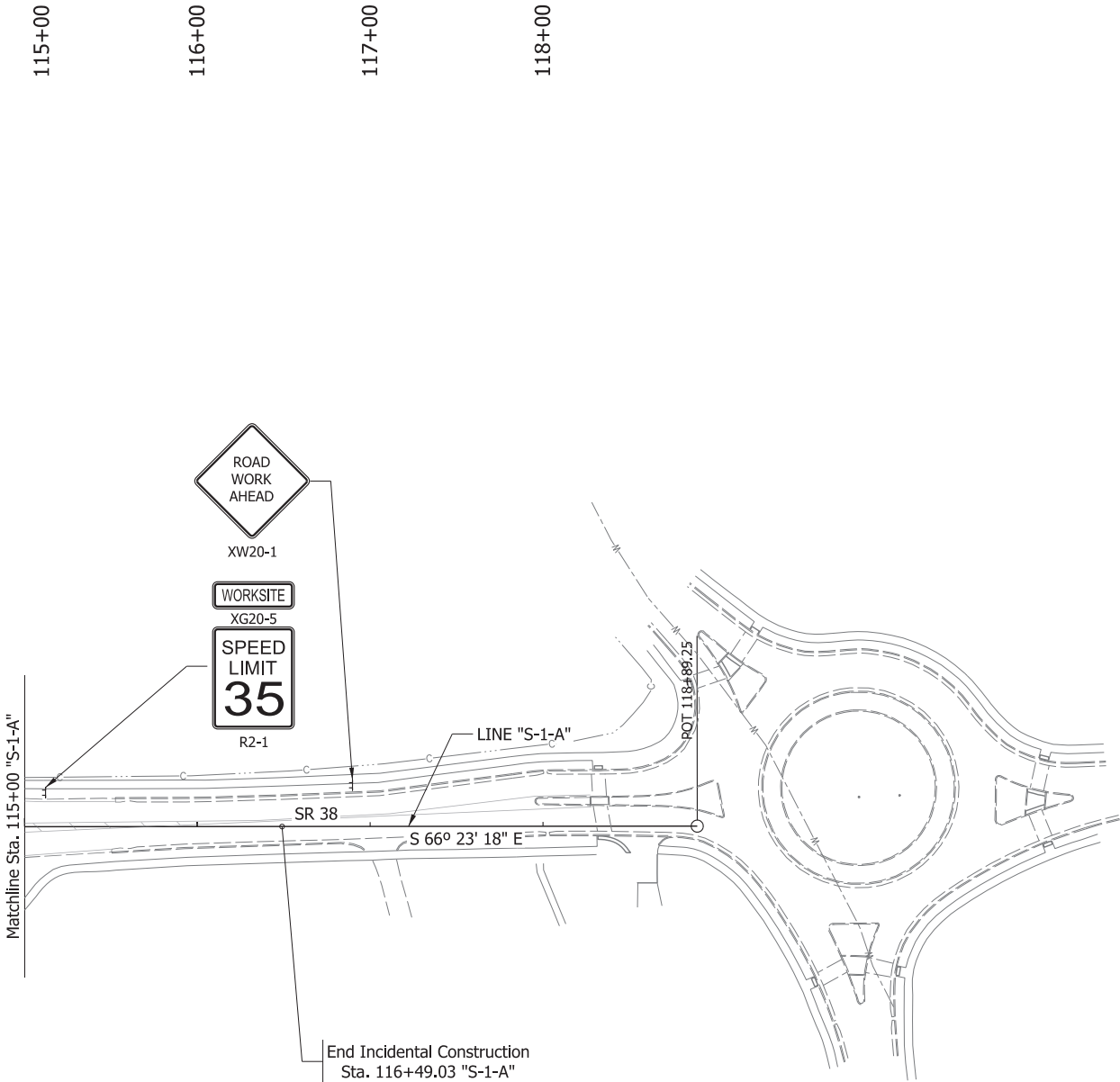
243

CONTRACT

PROJECT

R-41837

1702936, 1802854, 2001127



Legend

- ① Temporary Pavement Marking, Solid, White, 6 In.

② Temporary Pavement Marking, Broken, White, 6 In.

③ Temporary Pavement Marking, Dotted, White, 6 In.

④ Temporary Pavement Marking, Crosshatch Line, White, 12 In.

⑤ Transverse Marking, Thermoplastic, Stop Line, White, 24 In.

⑥ Temporary Pavement Marking, Solid, Yellow, 6 In.

⑦ Temporary Pavement Marking, Solid, Double Yellow, 6 In.

⑧ Temporary Pavement Marking, Broken, Yellow, 6 In.

⑨ Temporary Pavement Marking, Message, Lane Indication Arrow

⑩ Temporary Pavement Marking, Message, Only

Y Type III-A Barricade

—X— Line, Remove
- Construction Area

Construction Sign, Type A or Type B

Standard Drum

Direction of Traffic

48" Traffic Cone

Construction Zone Design Speed is 40 MPH

CDM
Smith

211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED
FOR APPROVAL

DESIGN ENGINEER

DATE

DESIGNED: IJL

DRAWN: IJL

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE II - SR 38 - LINE "S-1-A"

SCALE

1" = 50'-0"

BRIDGE FILE

DESIGNATION

1702936, 1802854, 2001127

SURVEY BOOK

SHEETS

ELECTRONIC

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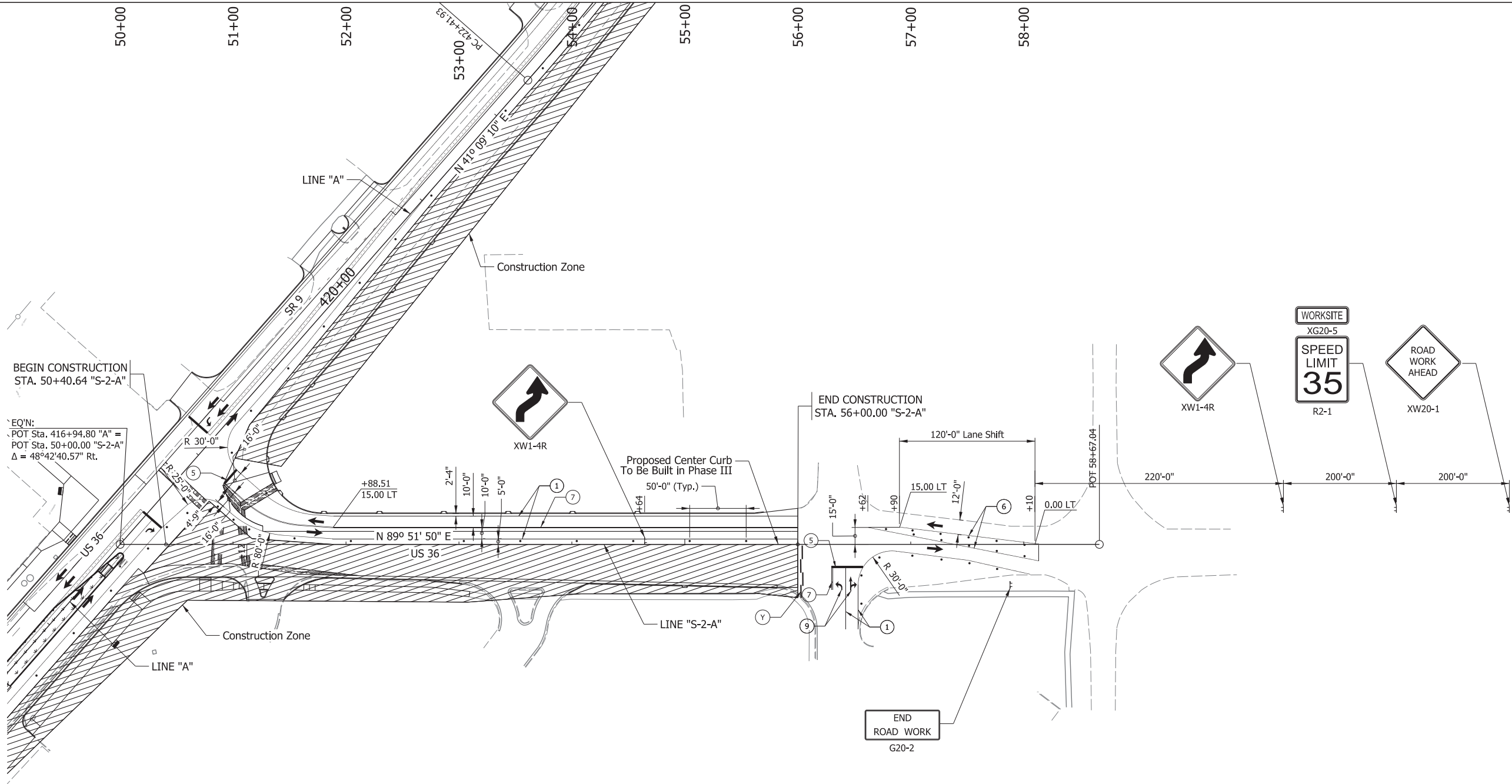
243

CONTRACT

PROJECT

R-41837

1702936, 1802854, 2001127



BEGIN CONSTRUCTION
STA. 50+40.64 "S-2-A"

EQ'N:
POT Sta. 416+94.80 "A" =
POT Sta. 50+00.00 "S-2-A"
Δ = 48°42'40.57" Rt.

END CONSTRUCTION
STA. 56+00.00 "S-2-A"

END
ROAD WORK
G20-2

WORKSITE
XG20-5
SPEED
LIMIT
35
R2-1

ROAD
WORK
AHEAD
XW20-1

XW1-4R

Legend

- | | | | |
|--|---|--|---------------------------------------|
| ① Temporary Pavement Marking, Solid, White, 6 In. | ⑤ Transverse Marking, Thermoplastic, Stop Line, White, 24 In. | ⑨ Temporary Pavement Marking, Message, Lane Indication Arrow | ▨ Construction Area |
| ② Temporary Pavement Marking, Broken, White, 6 In. | ⑥ Temporary Pavement Marking, Solid, Yellow, 6 In. | ⑩ Temporary Pavement Marking, Message, Only | ⊥ Construction Sign, Type A or Type B |
| ③ Temporary Pavement Marking, Dotted, White, 6 In. | ⑦ Temporary Pavement Marking, Solid, Double Yellow, 6 In. | Y Type III-A Barricade | ● Standard Drum |
| ④ Temporary Pavement Marking, Crosshatch Line, White, 12 In. | ⑧ Temporary Pavement Marking, Broken, Yellow, 6 In. | —X— Line, Remove | ○ 48" Traffic Cone |

Construction Zone Design Speed is 40 MPH

**CDM
Smith**

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Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

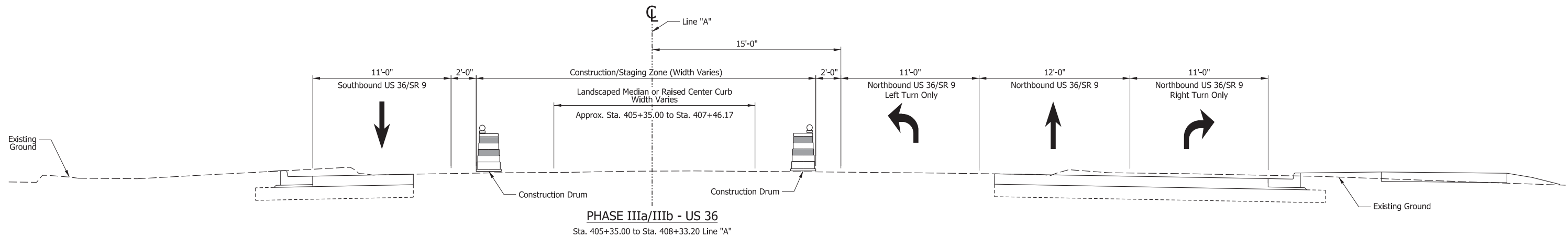
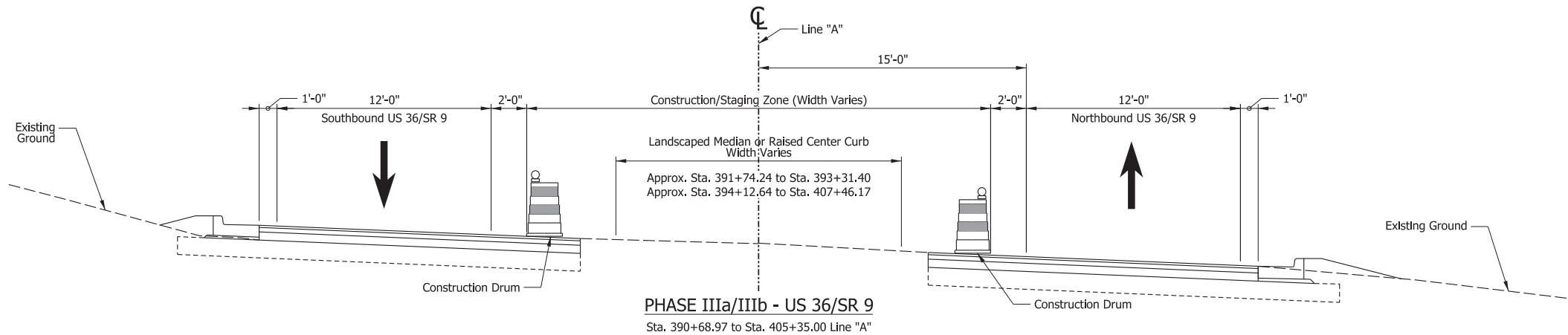
RECOMMENDED
FOR APPROVAL _____
DESIGN ENGINEER DATE

DESIGNED: IJL DRAWN: IJL
CHECKED: SMS CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE II - US 36 - LINE "S-2-A"

SCALE 1" = 50'-0"	BRIDGE FILE
	DESIGNATION 1702936, 1802854, 2001127
SURVEY BOOK	SHEETS
ELECTRONIC	52 of 243
CONTRACT	PROJECT
R-41837	1702936, 1802854, 2001127

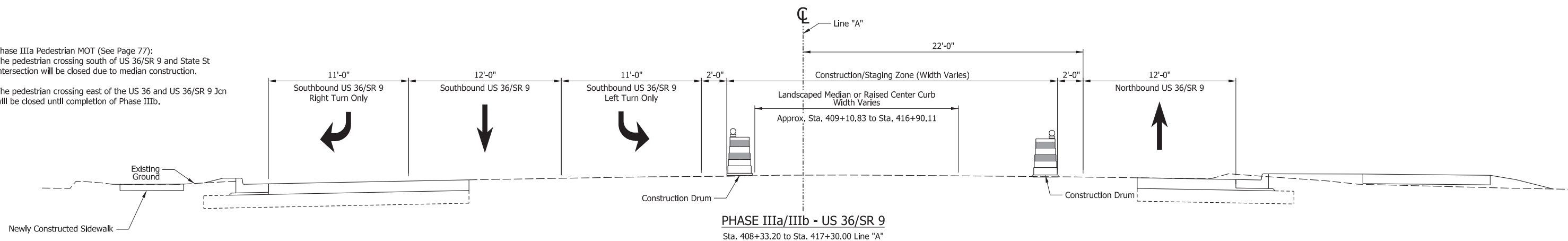


Phase IIIa:
Construct Medians on US 36/SR 9 south of the State St Intersection, and the State St Median east of the US 36/SR 9 intersection.

Maintain one lane of traffic minimum in each direction and some turn lanes at intersections.

Phase IIIa Pedestrian MOT (See Page 77):
The pedestrian crossing south of US 36/SR 9 and State St intersection will be closed due to median construction.

The pedestrian crossing east of the US 36 and US 36/SR 9 Jcn will be closed until completion of Phase IIIb.



Construction Zone Design Speed is 40 mph

**CDM
Smith**

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Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED
FOR APPROVAL

DESIGN ENGINEER

DATE

DESIGNED: IJL

DRAWN: IJL

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

MOT TYPICAL SECTIONS
PHASE IIIa/IIIb

SCALE

1/4" = 1'-0"

BRIDGE FILE

DESIGNATION

1702936, 1802854, 2001127

SURVEY BOOK

SHEETS

ELECTRONIC

53

of

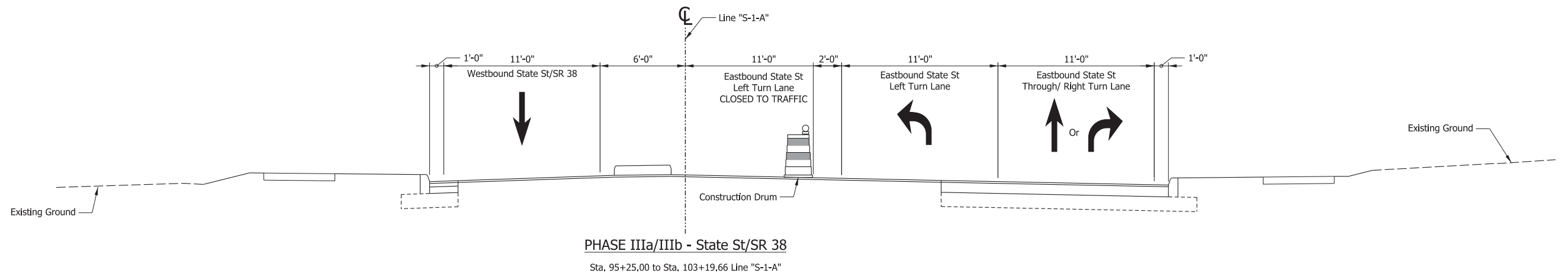
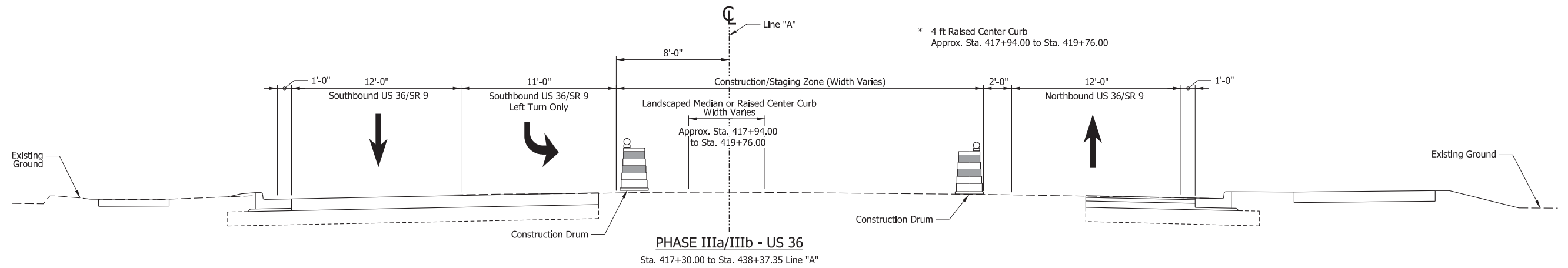
243

CONTRACT

PROJECT

R-41837

1702936, 1802854, 2001127



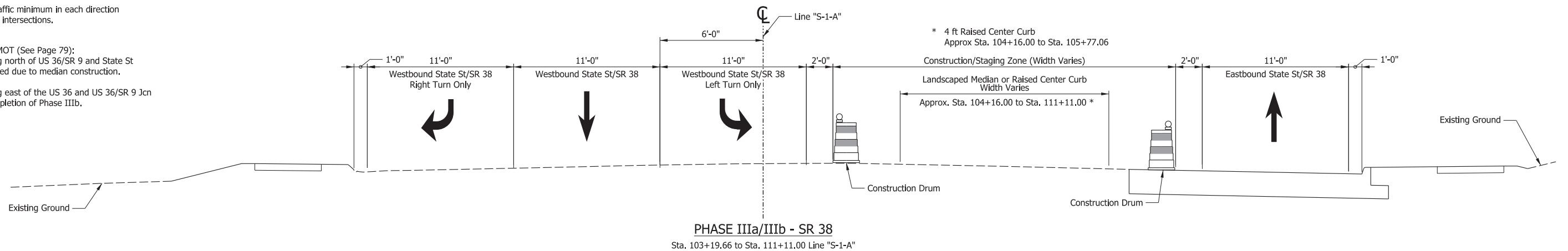
Phase IIIb:
Maintain the same pavement markings from Phase IIIa, and complete median construction on US 36/SR 9 East of the State St intersection, and on the US 36 east leg.

Left turns on westbound US 36 to south US 36/SR 9 will be maintained by constructing the crosswalk island and landscaped median in sequence.

Maintain one lane of traffic minimum in each direction and some turn lanes at intersections.

Phase IIIb Pedestrian MOT (See Page 79):
The pedestrian crossing north of US 36/SR 9 and State St intersection will be closed due to median construction.

The pedestrian crossing east of the US 36 and US 36/SR 9 Jcn will be closed until completion of Phase IIIb.



Construction Zone Design Speed is 40 mph

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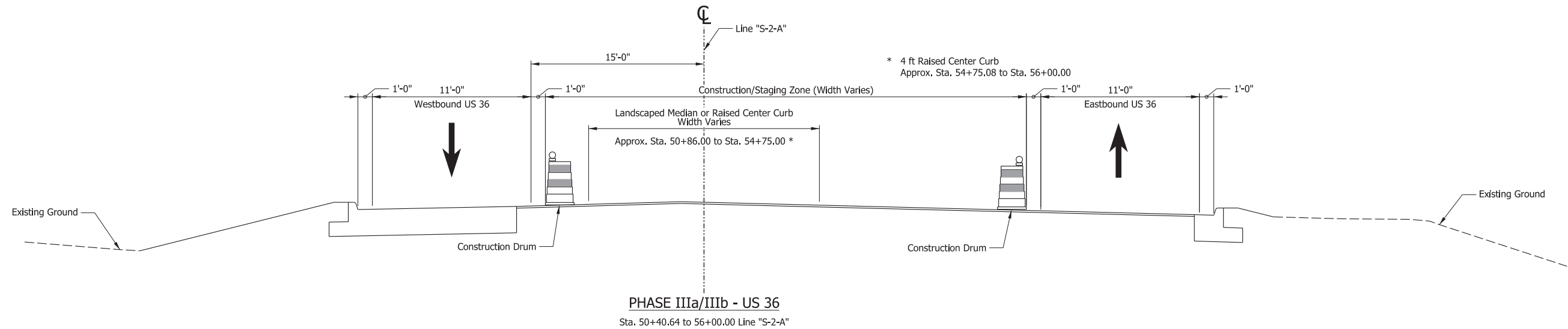
STAGE 3

RECOMMENDED FOR APPROVAL _____	
DESIGNED: DJL	DRAWN: DJL
CHECKED: SMS	CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

MOT TYPICAL SECTIONS
PHASE IIIa/IIIb

SCALE 1/4" = 1'-0"		BRIDGE FILE	
		DESIGNATION 1702936, 1802854, 2001127	
SURVEY BOOK		SHEETS	
ELECTRONIC		54	of 243
CONTRACT		PROJECT	
R-41837		1702936, 1802854, 2001127	



Construction Zone Design Speed is 40 mph

**CDM
Smith**

211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED
FOR APPROVAL

DESIGN ENGINEER

DATE

DESIGNED: IJL

DRAWN: IJL

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

MOT TYPICAL SECTIONS
PHASE IIIa/IIIb

SCALE

1/4" = 1'-0"

BRIDGE FILE

DESIGNATION

1702936, 1802854, 2001127

SURVEY BOOK

SHEETS

ELECTRONIC

55

of

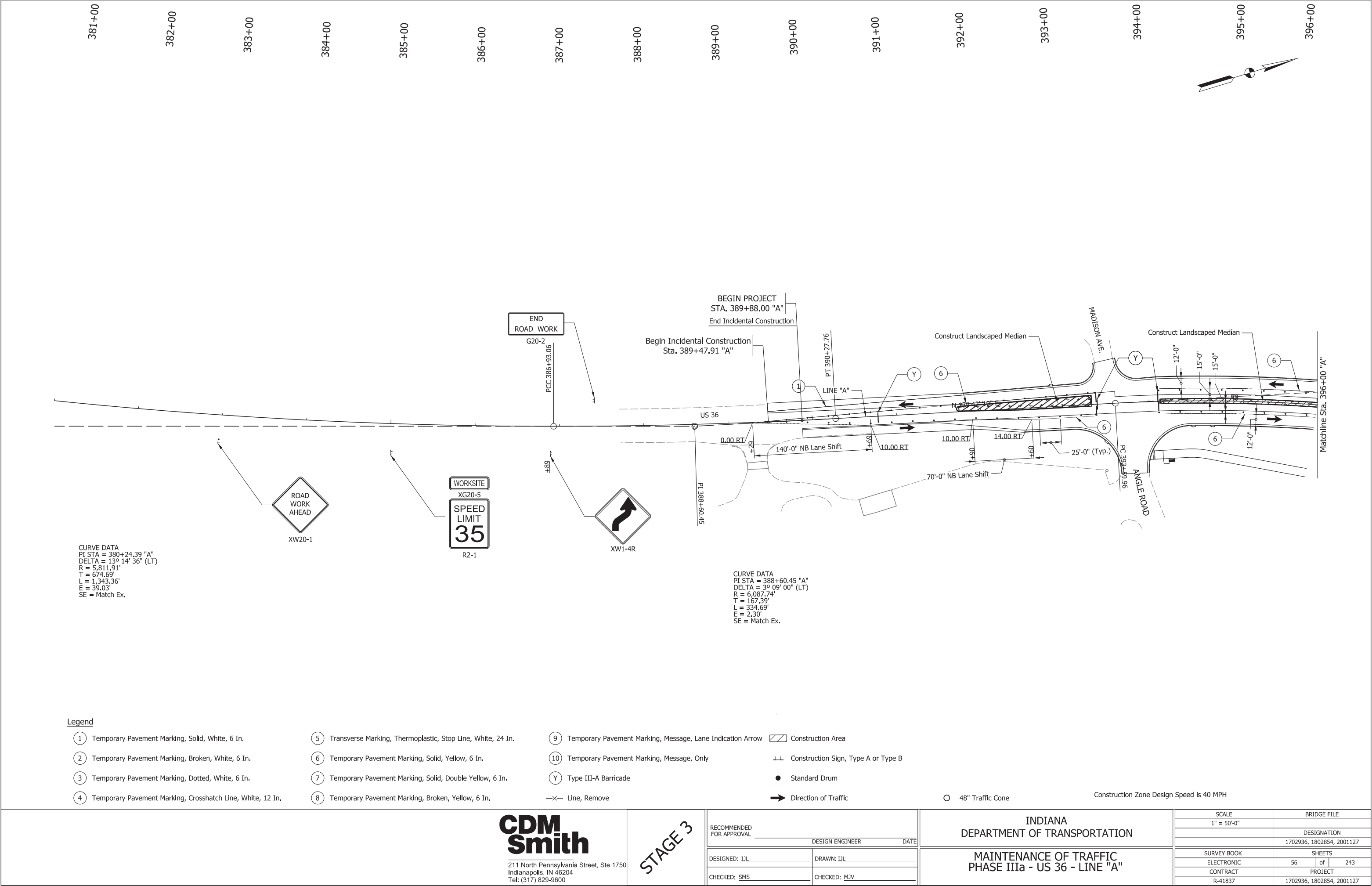
243

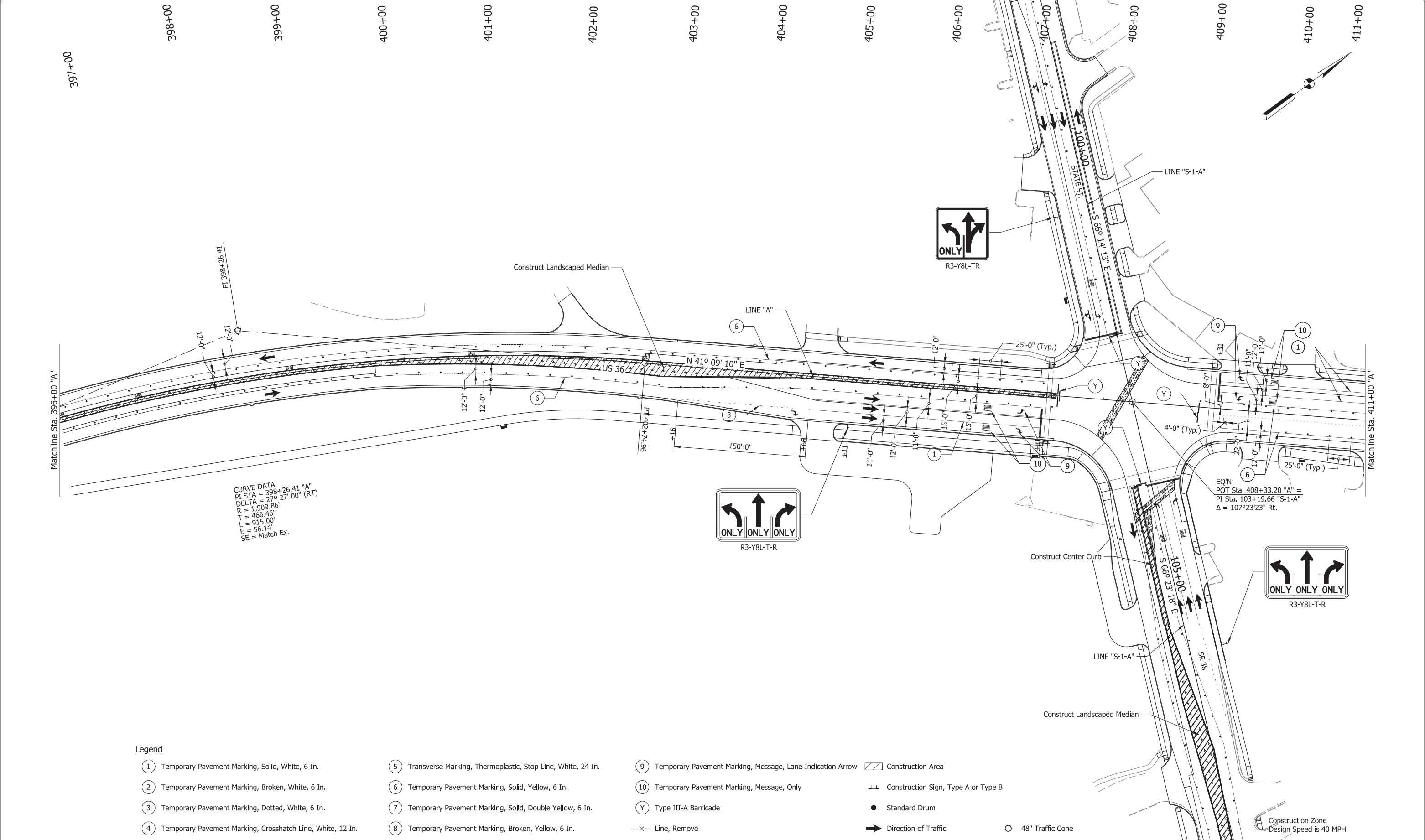
CONTRACT

PROJECT

R-41837

1702936, 1802854, 2001127





Legend

- 1 Temporary Pavement Marking, Solid, White, 6 In.
- 2 Temporary Pavement Marking, Broken, White, 6 In.
- 3 Temporary Pavement Marking, Dotted, White, 6 In.
- 4 Temporary Pavement Marking, Crosshatch Line, White, 12 In.

- 5 Transverse Marking, Thermoplastic, Stop Line, White, 24 In.
- 6 Temporary Pavement Marking, Solid, Yellow, 6 In.
- 7 Temporary Pavement Marking, Solid, Double Yellow, 6 In.
- 8 Temporary Pavement Marking, Broken, Yellow, 6 In.

- 9 Temporary Pavement Marking, Message, Lane Indication Arrow
- 10 Temporary Pavement Marking, Message, Only
- Y Type III-A Barricade
- X— Line, Remove

- Construction Area
- Construction Sign, Type A or Type B
- Standard Drum
- Direction of Traffic
- 48" Traffic Cone

Construction Zone
Design Speed is 40 MPH

**CDM
Smith**

211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED
FOR APPROVAL

DESIGN ENGINEER DATE

DESIGNED: IJL

DRAWN: IJL

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE IIIa - US 36 - LINE "A"

SCALE

1" = 50'-0"

BRIDGE FILE

DESIGNATION

1702936, 1802854, 2001127

SURVEY BOOK

SHEETS

ELECTRONIC

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of

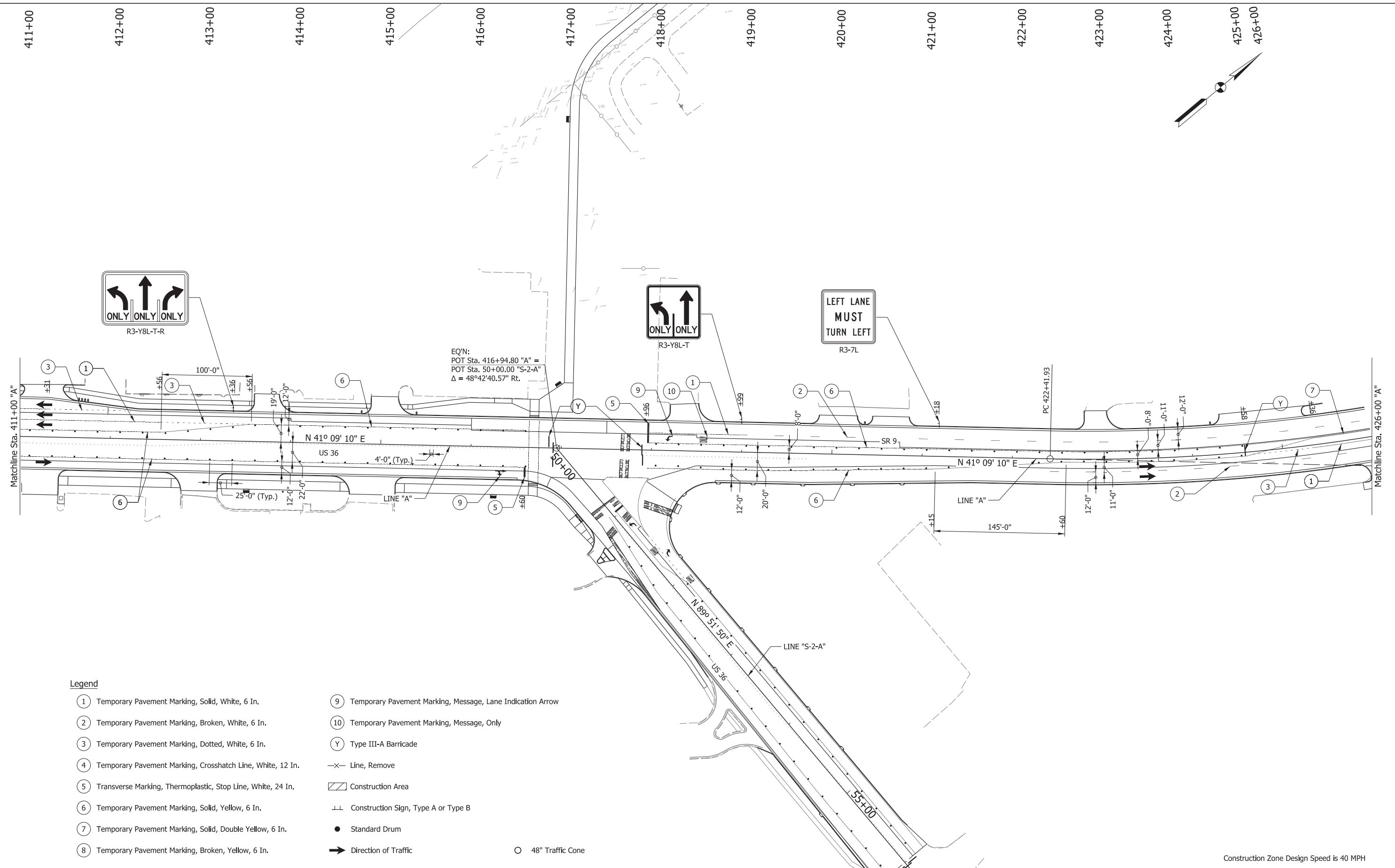
243

CONTRACT

PROJECT

R-41837

1702936, 1802854, 2001127



Construction Zone Design Speed is 40 MPH

SCALE	BRIDGE FILE		
1" = 50'-0"			
	DESIGNATION		
	1702936, 1802854, 2001127		
SURVEY BOOK	SHEETS		
ELECTRONIC	58	of	243
CONTRACT	PROJECT		
R-41837	1702936, 1802854, 2001127		

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE IIIa - US 36/SR 9 - LINE "A"

RECOMMENDED
FOR APPROVAL _____
DESIGN ENGINEER DATE

DESIGNED: <u>IJL</u>	DRAWN: <u>IJL</u>
CHECKED: <u>SMS</u>	CHECKED: <u>MJV</u>

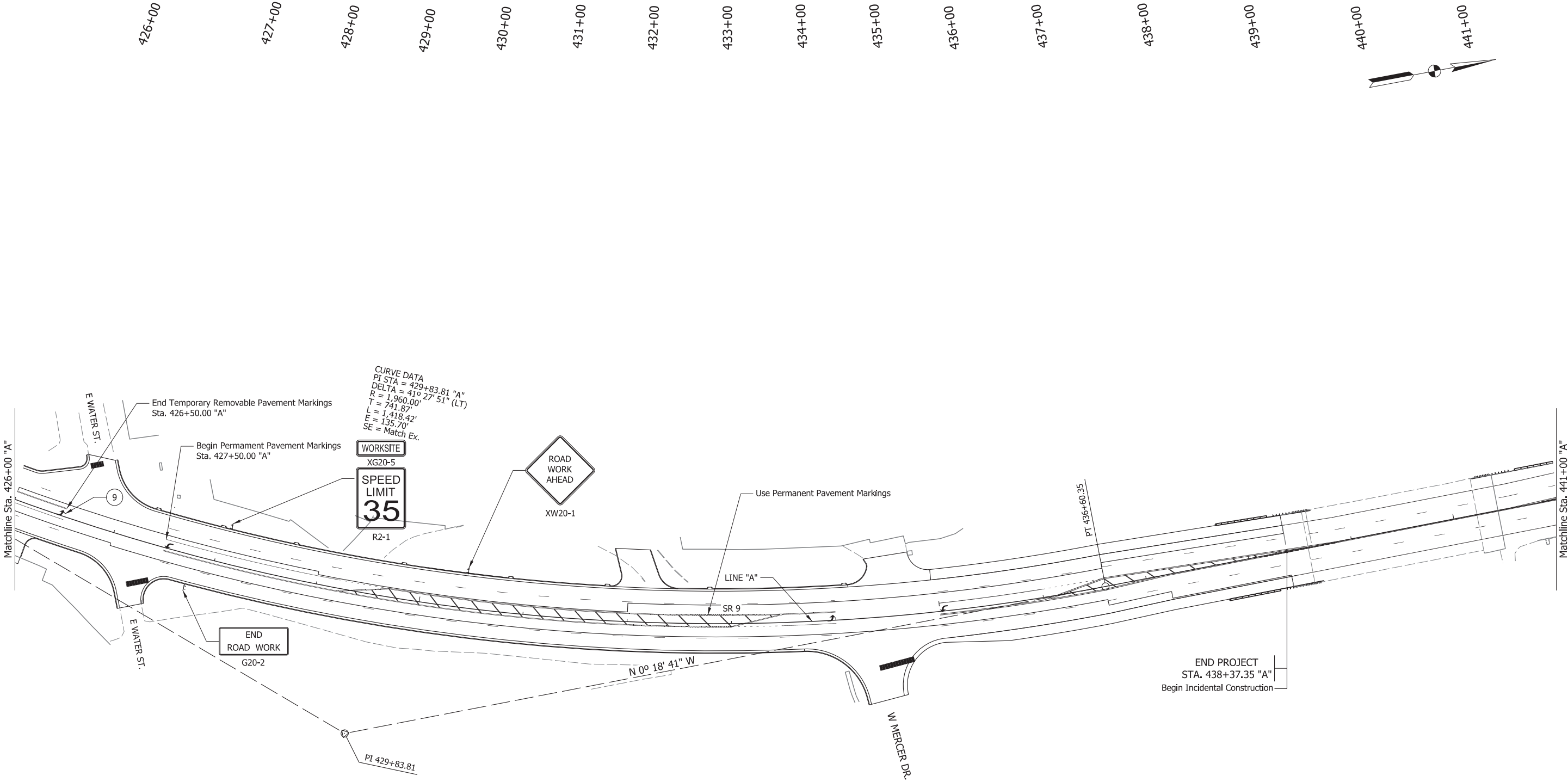
STAGE 3

**CDM
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Indianapolis, IN 46204
Tel: (317) 829-9600

pw:\cdmsmlth-az02-pw.bentley.com:pw_pl1\Documents\118931\249691\10 Transportation\02 Engineering Services NM_30pct\01 Roadway Design\10 CADD\02 Details\Sht MOT_PhIIa_A_50_03.dgn

B-66



CURVE DATA
PI STA = 429+83.81 "A"
DELTA = 41° 27' 51" (LT)
R = 1,960.00'
T = 741.87'
L = 1,418.42'
E = 135.70'
SE = Match Ex.

WORKSITE
XG20-5
SPEED
LIMIT
35
R2-1

ROAD
WORK
AHEAD
XW20-1

END
ROAD WORK
G20-2

END PROJECT
STA. 438+37.35 "A"
Begin Incidental Construction

Legend

- ① Temporary Pavement Marking, Solid, White, 6 In.
- ② Temporary Pavement Marking, Broken, White, 6 In.
- ③ Temporary Pavement Marking, Dotted, White, 6 In.
- ④ Temporary Pavement Marking, Crosshatch Line, White, 12 In.

- ⑤ Transverse Marking, Thermoplastic, Stop Line, White, 24 In.
- ⑥ Temporary Pavement Marking, Solid, Yellow, 6 In.
- ⑦ Temporary Pavement Marking, Solid, Double Yellow, 6 In.
- ⑧ Temporary Pavement Marking, Broken, Yellow, 6 In.

- ⑨ Temporary Pavement Marking, Message, Lane Indication Arrow
- ⑩ Temporary Pavement Marking, Message, Only
- Y Type III-A Barricade
- X— Line, Remove

- ▨ Construction Area
- ⊥⊥ Construction Sign, Type A or Type B
- Standard Drum
- ➔ Direction of Traffic

○ 48" Traffic Cone

Construction Zone Design Speed is 40 MPH

**CDM
Smith**

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Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED
FOR APPROVAL

DESIGN ENGINEER

DATE

DESIGNED: IJL

DRAWN: IJL

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE IIIa - SR 9 - LINE "A"

SCALE

1" = 50'-0"

BRIDGE FILE

DESIGNATION

1702936, 1802854, 2001127

SURVEY BOOK

SHEETS

ELECTRONIC

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of

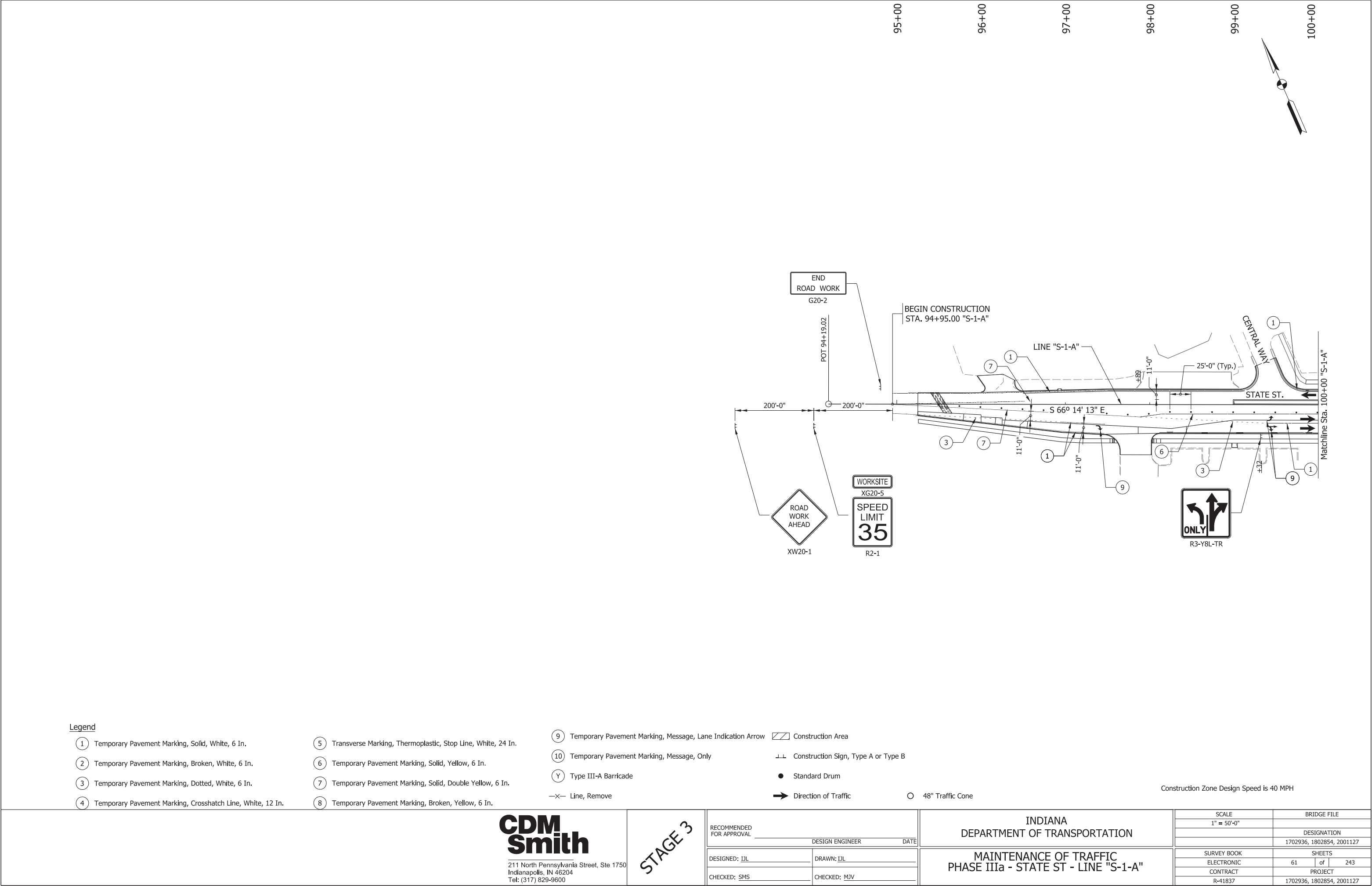
243

CONTRACT

PROJECT

R-41837

1702936, 1802854, 2001127



Legend

- 1 Temporary Pavement Marking, Solid, White, 6 In.

2 Temporary Pavement Marking, Broken, White, 6 In.

3 Temporary Pavement Marking, Dotted, White, 6 In.

4 Temporary Pavement Marking, Crosshatch Line, White, 12 In.

5 Transverse Marking, Thermoplastic, Stop Line, White, 24 In.

6 Temporary Pavement Marking, Solid, Yellow, 6 In.

7 Temporary Pavement Marking, Solid, Double Yellow, 6 In.

8 Temporary Pavement Marking, Broken, Yellow, 6 In.

9 Temporary Pavement Marking, Message, Lane Indication Arrow

10 Temporary Pavement Marking, Message, Only

Y Type III-A Barricade

—X— Line, Remove
- Construction Area

Construction Sign, Type A or Type B

Standard Drum

Direction of Traffic

Construction Zone Design Speed is 40 MPH

CDM
Smith

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Indianapolis, IN 46204
Tel: (317) 829-9600

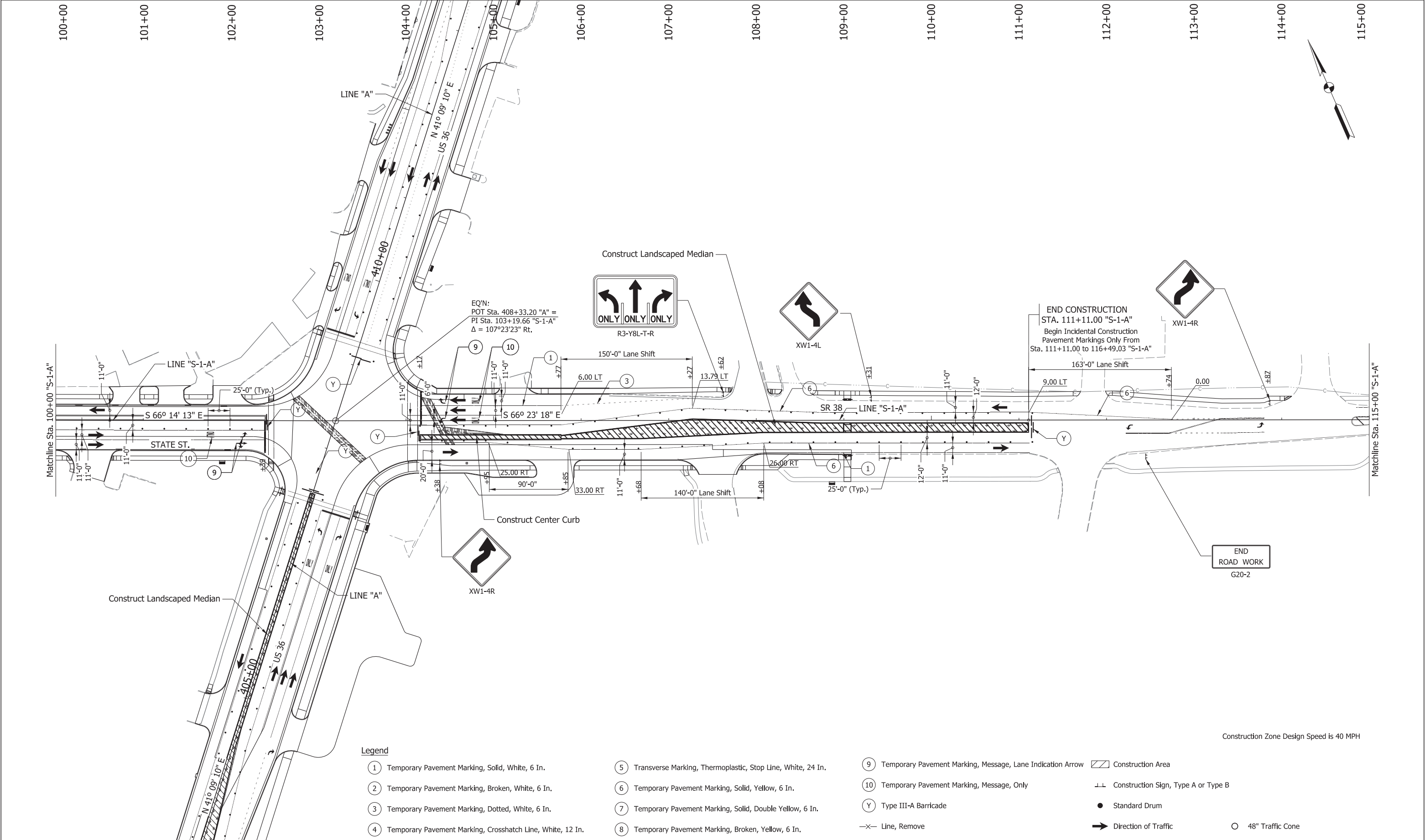
STAGE 3

RECOMMENDED FOR APPROVAL _____	
DESIGNED: DJL	DRAWN: DJL
CHECKED: SMS	CHECKED: MJV
DESIGN ENGINEER _____ DATE _____	

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE IIIa - STATE ST - LINE "S-1-A"

SCALE 1" = 50'-0"		BRIDGE FILE	
		DESIGNATION	
		1702936, 1802854, 2001127	
SURVEY BOOK		SHEETS	
ELECTRONIC	61	of	243
CONTRACT		PROJECT	
R-41837		1702936, 1802854, 2001127	





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Indianapolis, IN 46204
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STAGE 3

RECOMMENDED FOR APPROVAL
DESIGNED: DJL
CHECKED: SMS

DESIGN ENGINEER
DRAWN: DJL
CHECKED: MJV

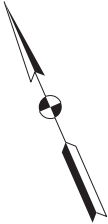
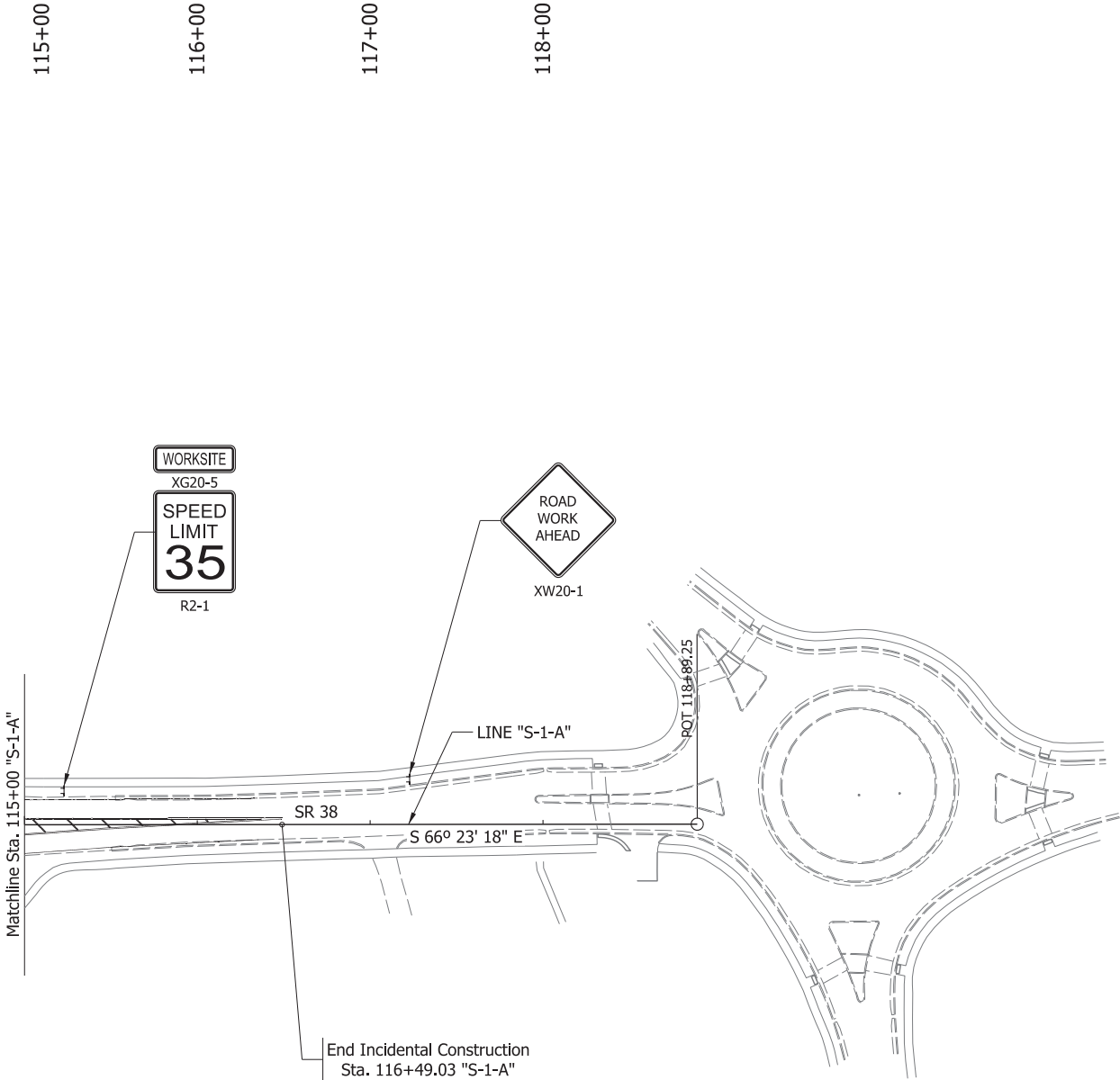
INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE IIIa - STATE ST/SR 38 - LINE "S-1-A"

SCALE 1" = 50'-0"	BRIDGE FILE
DESIGNATION 1702936, 1802854, 2001127	
SURVEY BOOK	SHEETS
ELECTRONIC	62 of 243
CONTRACT	PROJECT
R-41837	1702936, 1802854, 2001127

pw:\\cdmsmith-az02-pw.bentley.com:pw_p01\\Documents\\118931\\249691\\10 Transportation\\02 Engineering Services NM_30pct\\01 Roadway Design\\10 CADD\\02 Details\\Sht MOT_PhIIa_S1A_50_02.dgn

B-70



Legend

- | | | | |
|--|---|--|-------------------------------------|
| ① Temporary Pavement Marking, Solid, White, 6 In. | ⑤ Transverse Marking, Thermoplastic, Stop Line, White, 24 In. | ⑨ Temporary Pavement Marking, Message, Lane Indication Arrow | Construction Area |
| ② Temporary Pavement Marking, Broken, White, 6 In. | ⑥ Temporary Pavement Marking, Solid, Yellow, 6 In. | ⑩ Temporary Pavement Marking, Message, Only | Construction Sign, Type A or Type B |
| ③ Temporary Pavement Marking, Dotted, White, 6 In. | ⑦ Temporary Pavement Marking, Solid, Double Yellow, 6 In. | Y Type III-A Barricade | ● Standard Drum |
| ④ Temporary Pavement Marking, Crosshatch Line, White, 12 In. | ⑧ Temporary Pavement Marking, Broken, Yellow, 6 In. | —X— Line, Remove | ➔ Direction of Traffic |
| | | | ○ 48" Traffic Cone |

Construction Zone Design Speed is 40 MPH

**CDM
Smith**

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Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED
FOR APPROVAL

DESIGN ENGINEER

DATE

DESIGNED: DJL

DRAWN: DJL

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE IIIa - SR 38 - LINE "S-1-A"

SCALE

1" = 50'-0"

BRIDGE FILE

DESIGNATION

1702936, 1802854, 2001127

SURVEY BOOK

SHEETS

ELECTRONIC

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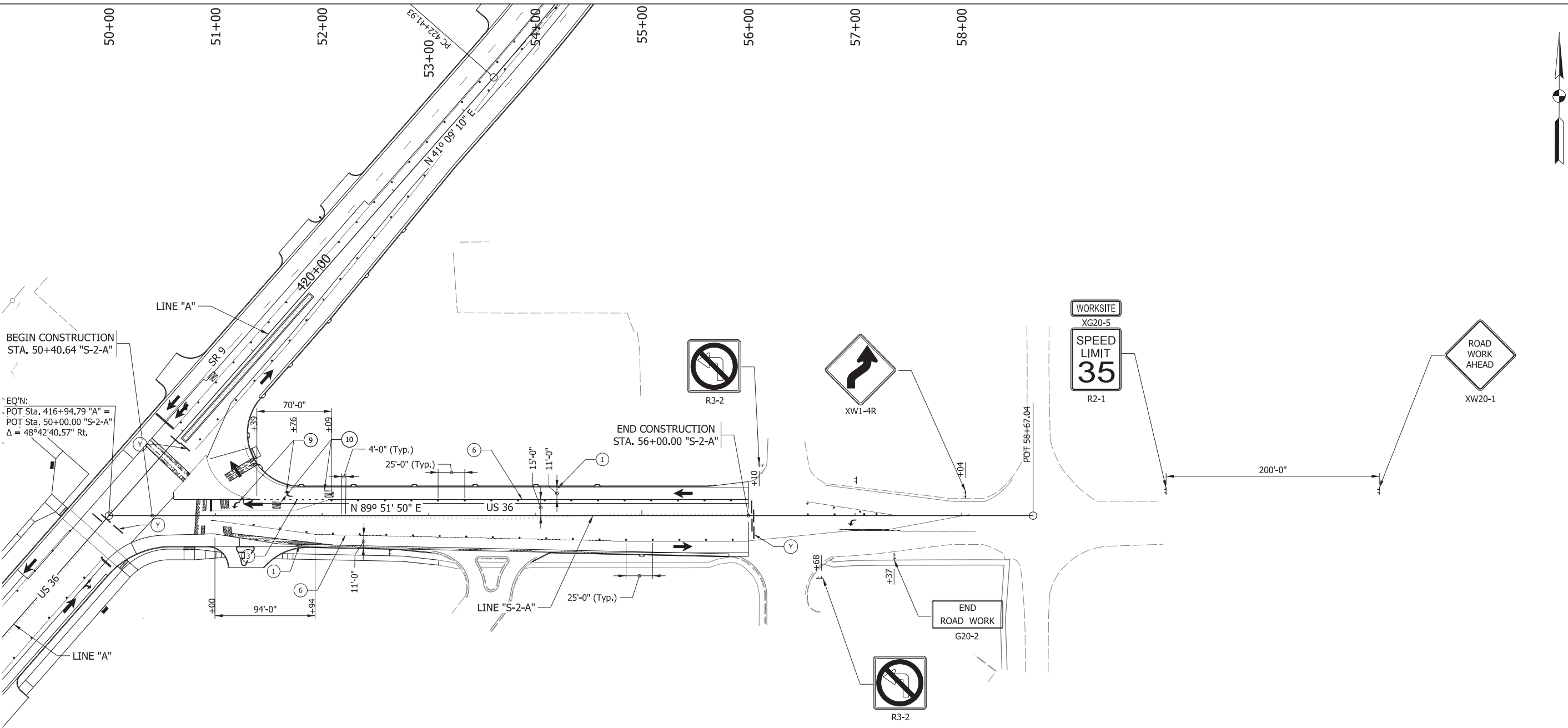
243

CONTRACT

PROJECT

R-41837

1702936, 1802854, 2001127



- Legend**

① Temporary Pavement Marking, Solid, White, 6 In.

② Temporary Pavement Marking, Broken, White, 6 In.

③ Temporary Pavement Marking, Dotted, White, 6 In.

④ Temporary Pavement Marking, Crosshatch Line, White, 12 In.

⑤ Transverse Marking, Thermoplastic, Stop Line, White, 24 In.

⑥ Temporary Pavement Marking, Solid, Yellow, 6 In.

⑦ Temporary Pavement Marking, Solid, Double Yellow, 6 In.

⑧ Temporary Pavement Marking, Broken, Yellow, 6 In.

⑨ Temporary Pavement Marking, Message, Lane Indication Arrow

⑩ Temporary Pavement Marking, Message, Only

Y Type III-A Barricade

—X— Line, Remove

Construction Area

Construction Sign, Type A or Type B

Standard Drum

Direction of Traffic

48" Traffic Cone

Construction Zone Design Speed is 40 MPH

**CDM
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Indianapolis, IN 46204
Tel: (317) 829-9600

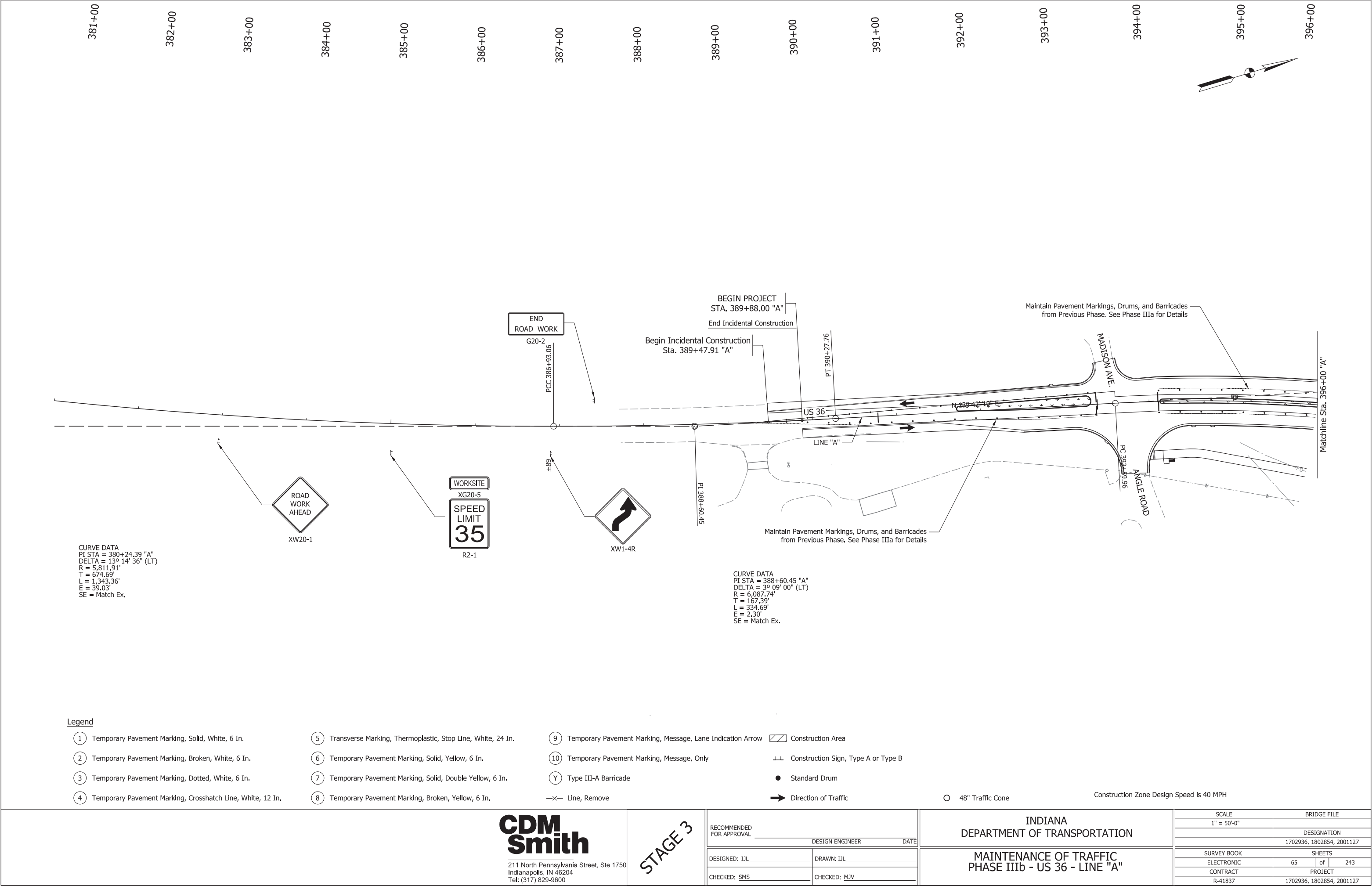
STAGE 3

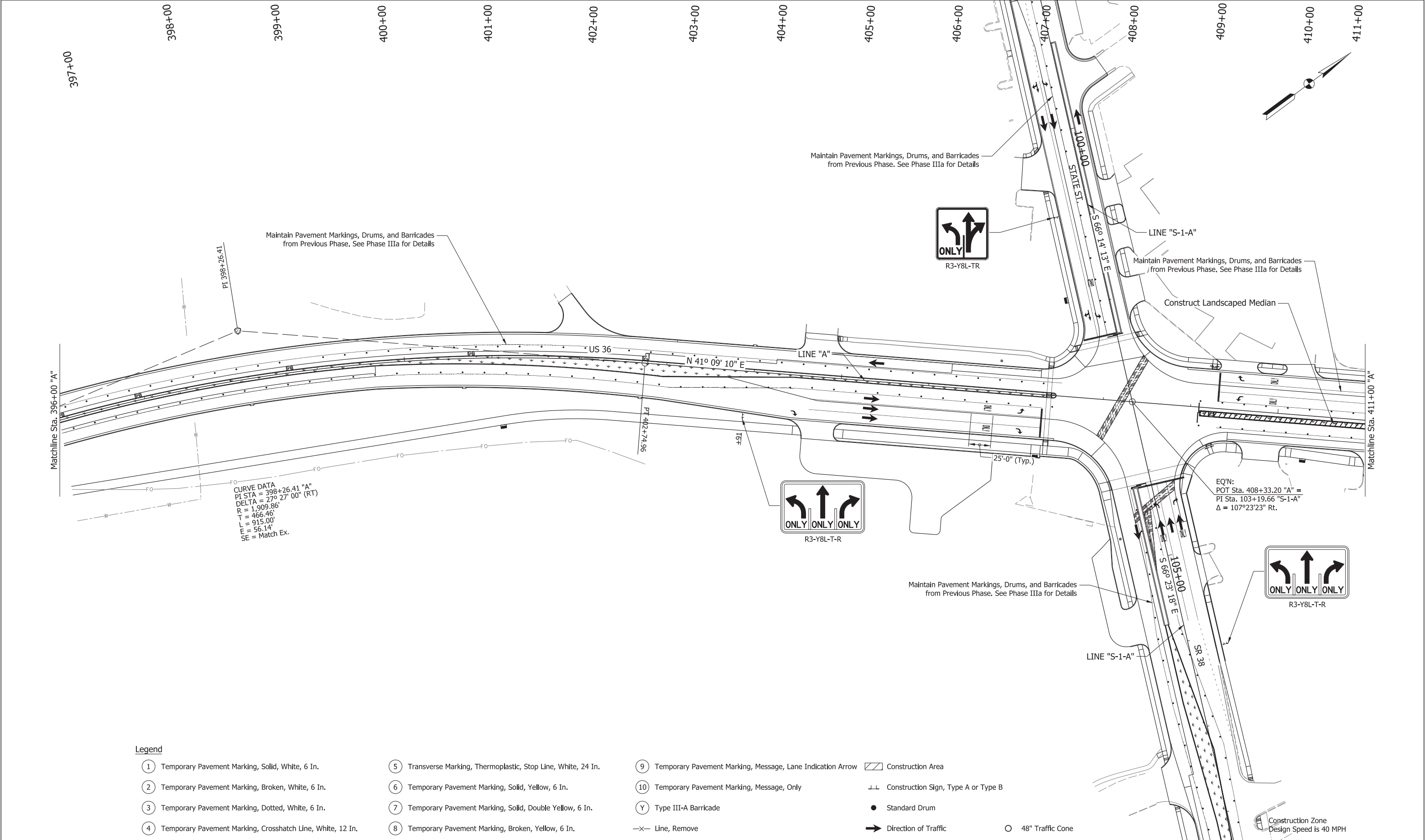
RECOMMENDED FOR APPROVAL _____	
DESIGNED: IJL	DRAWN: IJL
CHECKED: SMS	CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE IIIa - US 36 - LINE "S-2-A"

SCALE 1" = 50'-0"	BRIDGE FILE	
	DESIGNATION	
	1702936, 1802854, 2001127	
SURVEY BOOK	SHEETS	
ELECTRONIC	64	of 243
CONTRACT	PROJECT	
R-41837	1702936, 1802854, 2001127	





Legend

- ① Temporary Pavement Marking, Solid, White, 6 In.
- ② Temporary Pavement Marking, Broken, White, 6 In.
- ③ Temporary Pavement Marking, Dotted, White, 6 In.
- ④ Temporary Pavement Marking, Crosshatch Line, White, 12 In.

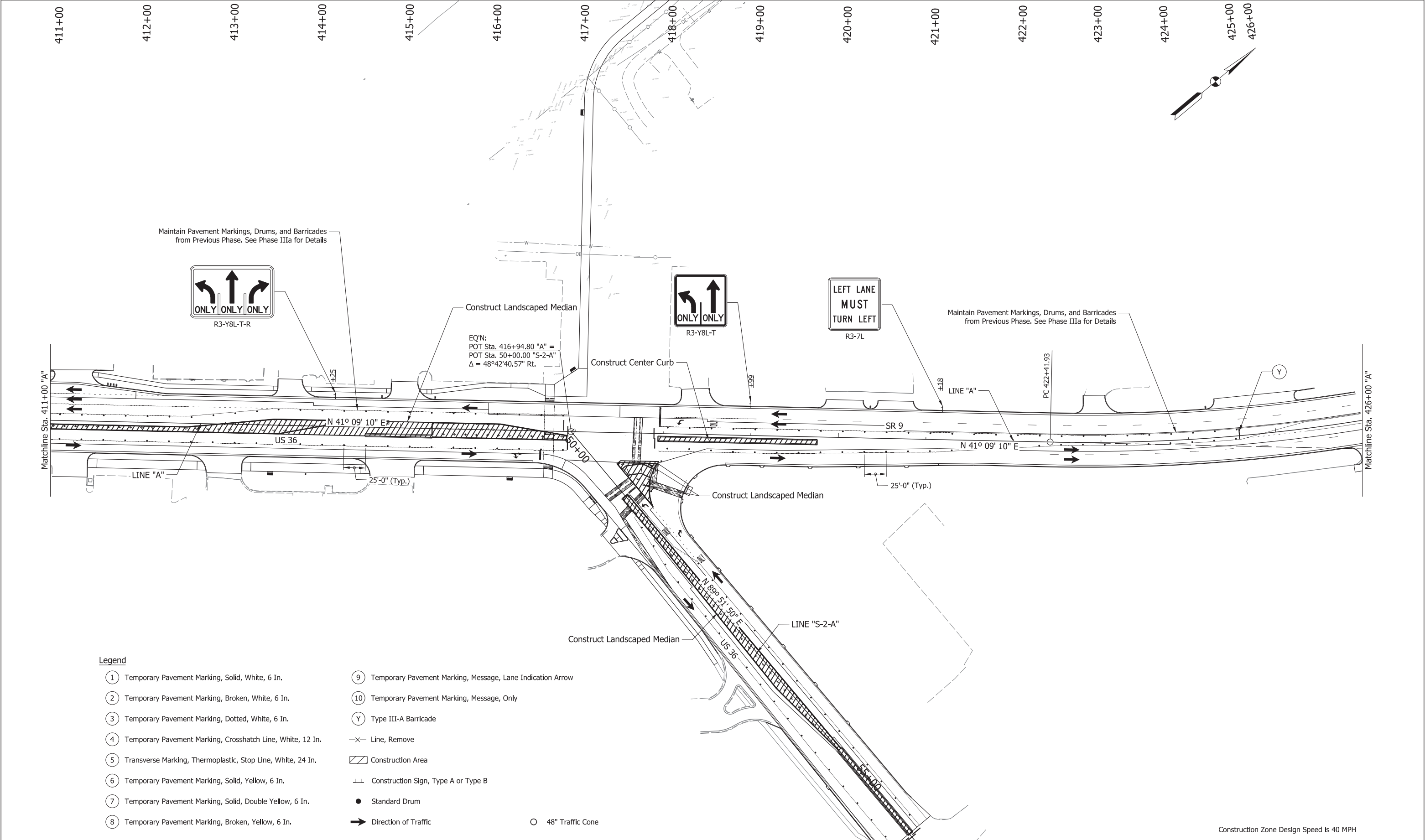
- ⑤ Transverse Marking, Thermoplastic, Stop Line, White, 24 In.
- ⑥ Temporary Pavement Marking, Solid, Yellow, 6 In.
- ⑦ Temporary Pavement Marking, Solid, Double Yellow, 6 In.
- ⑧ Temporary Pavement Marking, Broken, Yellow, 6 In.

- ⑨ Temporary Pavement Marking, Message, Lane Indication Arrow
- ⑩ Temporary Pavement Marking, Message, Only
- Y Type III-A Barricade
- X— Line, Remove

- Construction Area
- Construction Sign, Type A or Type B
- Standard Drum
- Direction of Traffic
- 48" Traffic Cone

Construction Zone
Design Speed is 40 MPH

CDM Smith 211 North Pennsylvania Street, Ste 1750 Indianapolis, IN 46204 Tel: (317) 829-9600	STAGE 3	RECOMMENDED FOR APPROVAL _____		INDIANA DEPARTMENT OF TRANSPORTATION		SCALE 1" = 50'-0"		BRIDGE FILE	
		DESIGNED: IJL		MAINTENANCE OF TRAFFIC PHASE IIIb - US 36 - LINE "A"		DESIGNATION		SHEETS	
		CHECKED: SMS				CONTRACT		PROJECT	
						R-41837		1702936, 1802854, 2001127	
								66 of 243	



Legend

- 1

Temporary Pavement Marking, Solid, White, 6 In.
- 2

Temporary Pavement Marking, Broken, White, 6 In.
- 3

Temporary Pavement Marking, Dotted, White, 6 In.
- 4

Temporary Pavement Marking, Crosshatch Line, White, 12 In.
- 5

Transverse Marking, Thermoplastic, Stop Line, White, 24 In.
- 6

Temporary Pavement Marking, Solid, Yellow, 6 In.
- 7

Temporary Pavement Marking, Solid, Double Yellow, 6 In.
- 8

Temporary Pavement Marking, Broken, Yellow, 6 In.
- 9

Temporary Pavement Marking, Message, Lane Indication Arrow
- 10

Temporary Pavement Marking, Message, Only
- Y

Type III-A Barricade
- X—

Line, Remove
- Construction Area
- Construction Sign, Type A or Type B
- Standard Drum
- Direction of Traffic
- 48" Traffic Cone

Construction Zone Design Speed is 40 MPH

211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

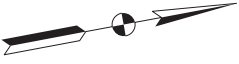
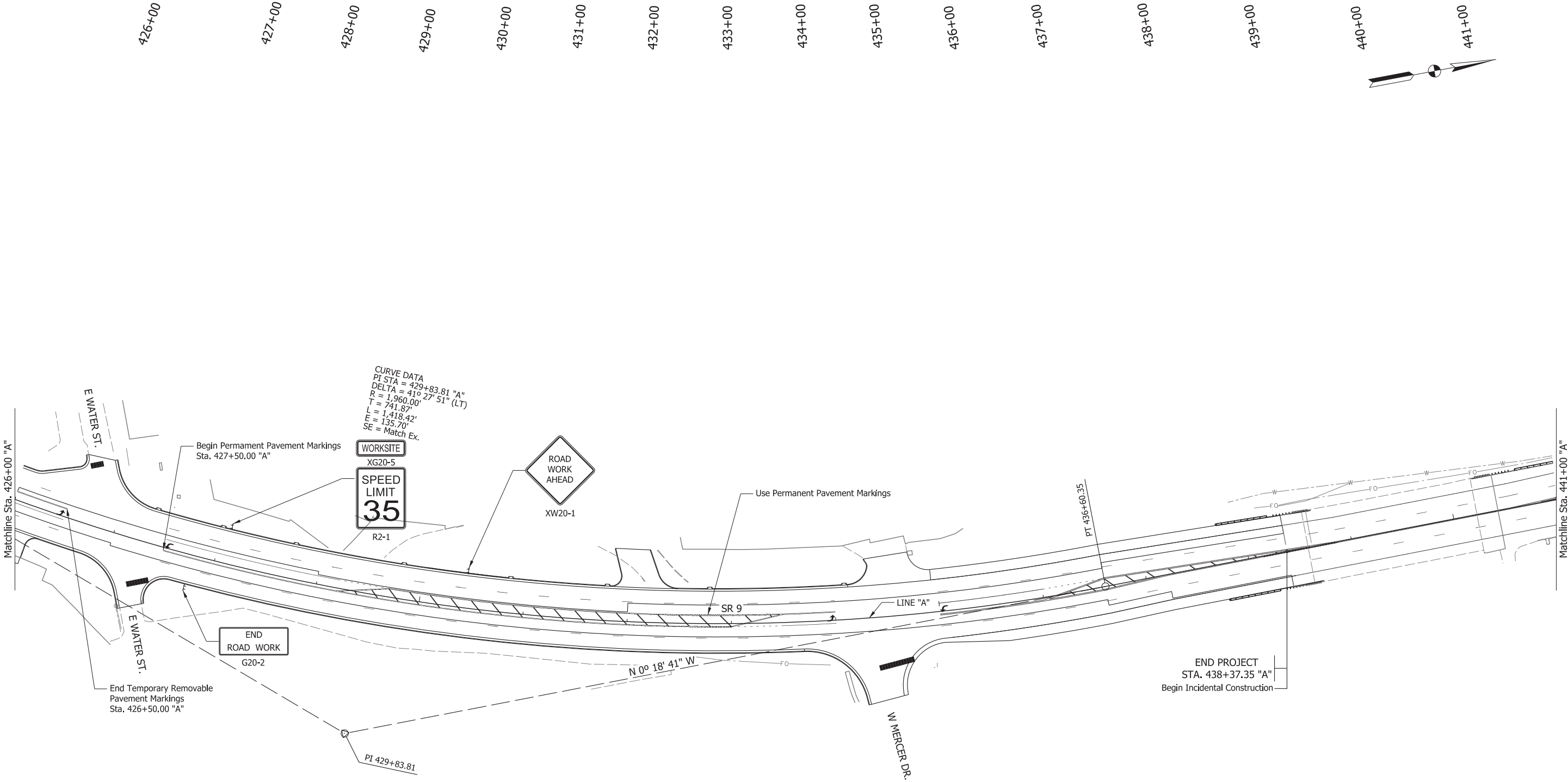
STAGE 3

RECOMMENDED FOR APPROVAL _____	
DESIGNED: IJL	DRAWN: IJL
CHECKED: SMS	CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE IIIb - US 36/SR 9 - LINE "A"

SCALE 1" = 50'-0"	BRIDGE FILE
	DESIGNATION 1702936, 1802854, 2001127
SURVEY BOOK	SHEETS
ELECTRONIC	67 of 243
CONTRACT	PROJECT
R-41837	1702936, 1802854, 2001127



Legend

- ① Temporary Pavement Marking, Solid, White, 6 In.

② Temporary Pavement Marking, Broken, White, 6 In.

③ Temporary Pavement Marking, Dotted, White, 6 In.

④ Temporary Pavement Marking, Crosshatch Line, White, 12 In.
- ⑤ Transverse Marking, Thermoplastic, Stop Line, White, 24 In.

⑥ Temporary Pavement Marking, Solid, Yellow, 6 In.

⑦ Temporary Pavement Marking, Solid, Double Yellow, 6 In.

⑧ Temporary Pavement Marking, Broken, Yellow, 6 In.
- ⑨ Temporary Pavement Marking, Message, Lane Indication Arrow

⑩ Temporary Pavement Marking, Message, Only

Y Type III-A Barricade

—X— Line, Remove
- Construction Area

Construction Sign, Type A or Type B

Standard Drum

Direction of Traffic

48" Traffic Cone
- Construction Zone Design Speed is 40 MPH

CDM
Smith

211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED
FOR APPROVAL

DESIGN ENGINEER

DATE

DESIGNED: IJL

DRAWN: IJL

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE IIb - SR 9 - LINE "A"

SCALE

1" = 50'-0"

BRIDGE FILE

DESIGNATION

1702936, 1802854, 2001127

SURVEY BOOK

SHEETS

ELECTRONIC

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of

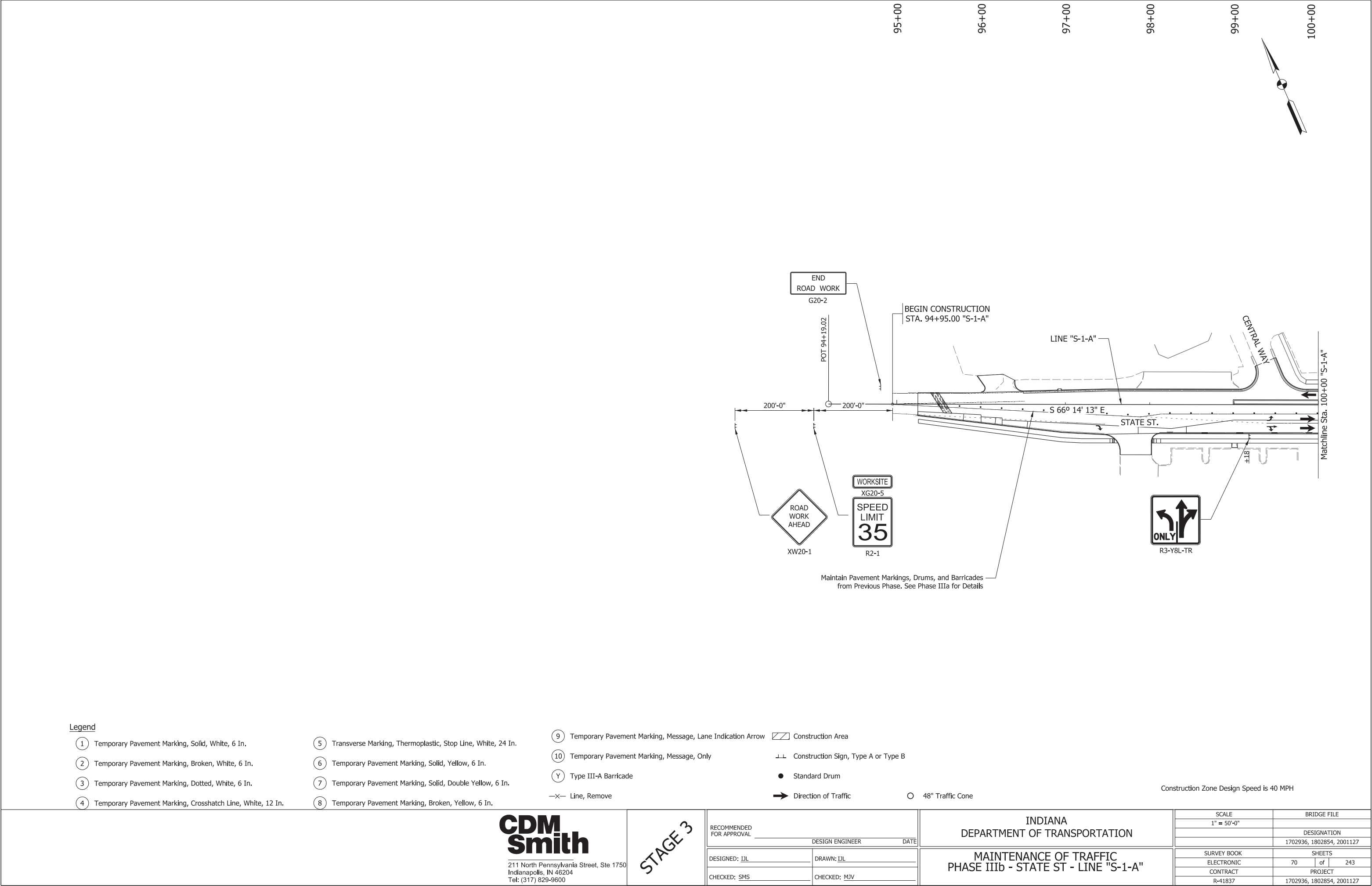
243

CONTRACT

PROJECT

R-41837

1702936, 1802854, 2001127



Legend

- 1

Temporary Pavement Marking, Solid, White, 6 In.
- 2

Temporary Pavement Marking, Broken, White, 6 In.
- 3

Temporary Pavement Marking, Dotted, White, 6 In.
- 4

Temporary Pavement Marking, Crosshatch Line, White, 12 In.
- 5

Transverse Marking, Thermoplastic, Stop Line, White, 24 In.
- 6

Temporary Pavement Marking, Solid, Yellow, 6 In.
- 7

Temporary Pavement Marking, Solid, Double Yellow, 6 In.
- 8

Temporary Pavement Marking, Broken, Yellow, 6 In.
- 9

Temporary Pavement Marking, Message, Lane Indication Arrow
- 10

Temporary Pavement Marking, Message, Only
- Y

Type III-A Barricade
- X—

Line, Remove
- Construction Area
- Construction Sign, Type A or Type B
- Standard Drum
- Direction of Traffic
- 48" Traffic Cone

Construction Zone Design Speed is 40 MPH

CDM
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211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

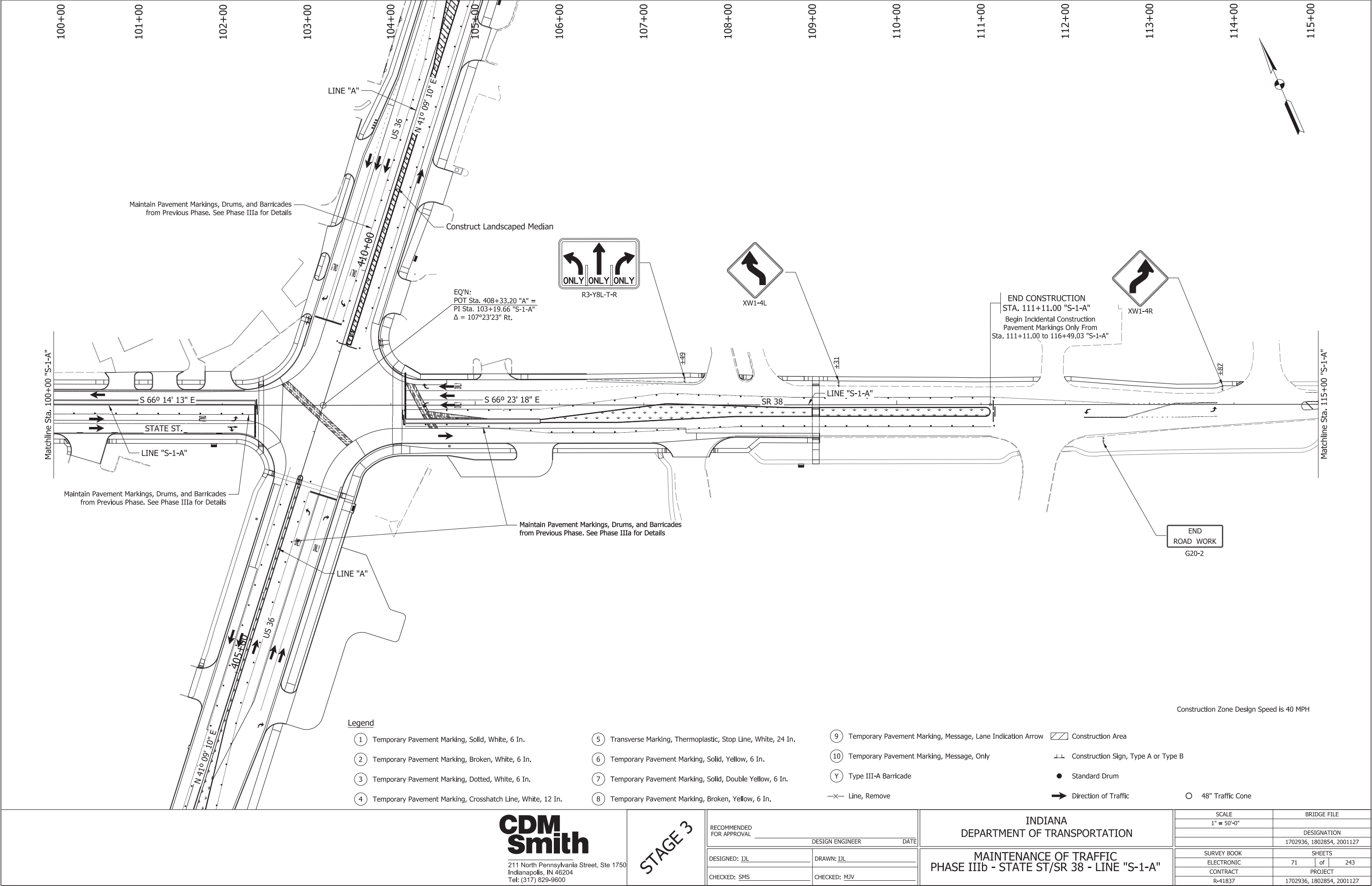
STAGE 3

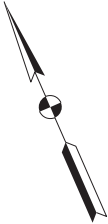
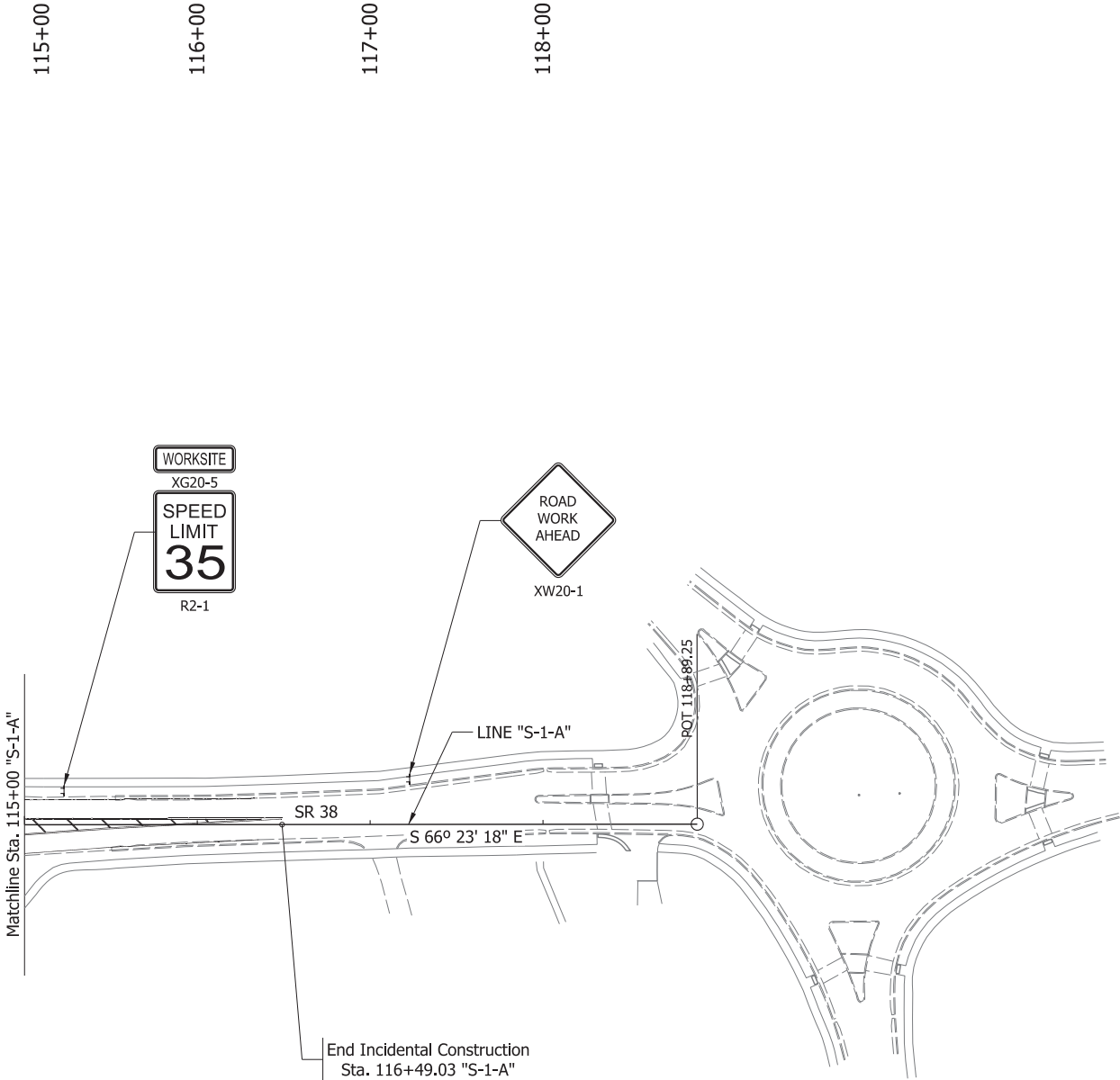
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DESIGNED: DJL	DRAWN: DJL
CHECKED: SMS	CHECKED: MJV
DESIGN ENGINEER _____ DATE _____	

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE IIIb - STATE ST - LINE "S-1-A"

SCALE 1" = 50'-0"		BRIDGE FILE	
		DESIGNATION	
		1702936, 1802854, 2001127	
SURVEY BOOK		SHEETS	
ELECTRONIC		70	of 243
CONTRACT		PROJECT	
R-41837		1702936, 1802854, 2001127	





Legend

- | | | | |
|--|---|--|-------------------------------------|
| ① Temporary Pavement Marking, Solid, White, 6 In. | ⑤ Transverse Marking, Thermoplastic, Stop Line, White, 24 In. | ⑨ Temporary Pavement Marking, Message, Lane Indication Arrow | Construction Area |
| ② Temporary Pavement Marking, Broken, White, 6 In. | ⑥ Temporary Pavement Marking, Solid, Yellow, 6 In. | ⑩ Temporary Pavement Marking, Message, Only | Construction Sign, Type A or Type B |
| ③ Temporary Pavement Marking, Dotted, White, 6 In. | ⑦ Temporary Pavement Marking, Solid, Double Yellow, 6 In. | Y Type III-A Barricade | ● Standard Drum |
| ④ Temporary Pavement Marking, Crosshatch Line, White, 12 In. | ⑧ Temporary Pavement Marking, Broken, Yellow, 6 In. | —X— Line, Remove | ➔ Direction of Traffic |
| | | | ○ 48" Traffic Cone |

Construction Zone Design Speed is 40 MPH

**CDM
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STAGE 3

RECOMMENDED
FOR APPROVAL

DESIGN ENGINEER

DATE

DESIGNED: IJL

DRAWN: IJL

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE IIIb - SR 38 - LINE "S-1-A"

SCALE

1" = 50'-0"

BRIDGE FILE

DESIGNATION

1702936, 1802854, 2001127

SURVEY BOOK

SHEETS

ELECTRONIC

72

of

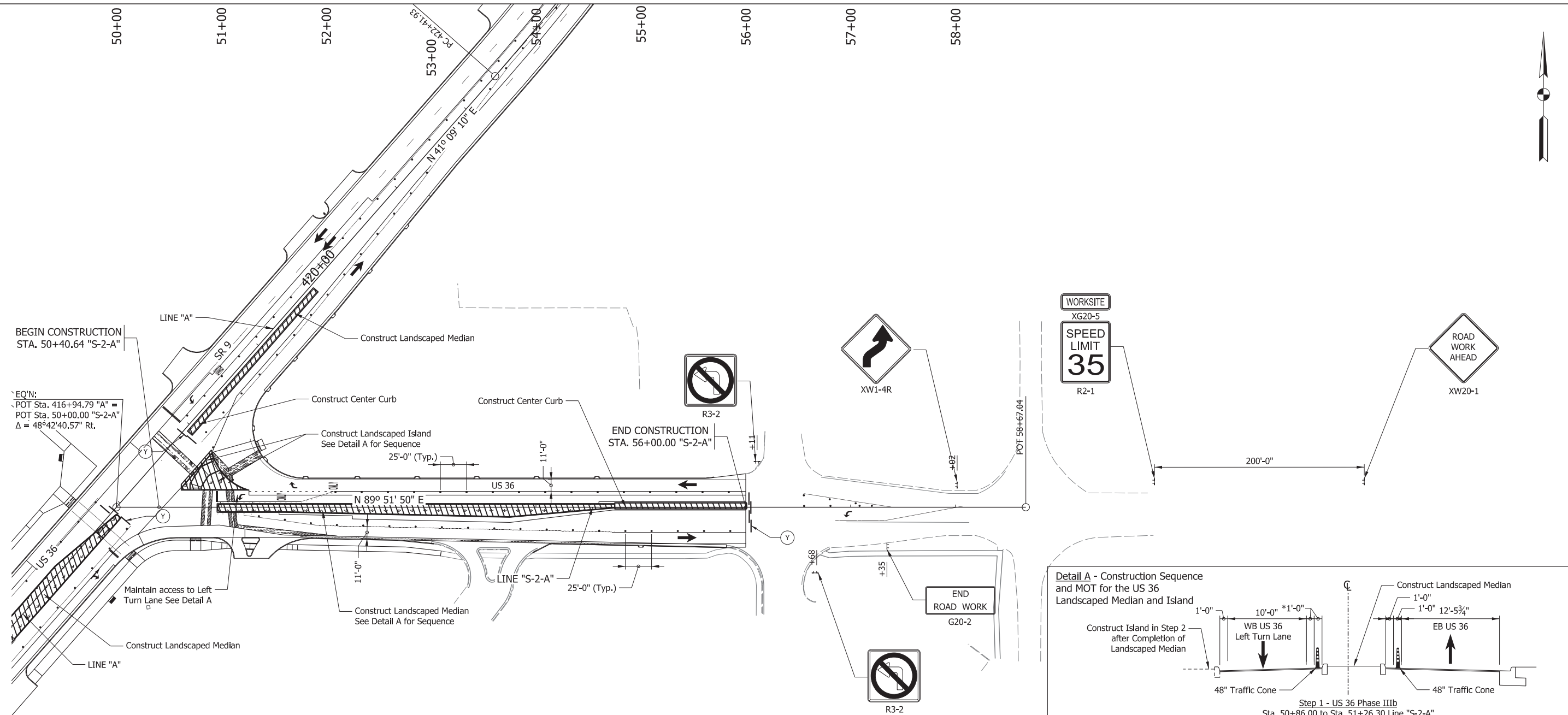
243

CONTRACT

PROJECT

R-41837

1702936, 1802854, 2001127



Legend

- | | | | |
|--|---|--|---|
| ① Temporary Pavement Marking, Solid, White, 6 In. | ⑤ Transverse Marking, Thermoplastic, Stop Line, White, 24 In. | ⑨ Temporary Pavement Marking, Message, Lane Indication Arrow |  Construction Area |
| ② Temporary Pavement Marking, Broken, White, 6 In. | ⑥ Temporary Pavement Marking, Solid, Yellow, 6 In. | ⑩ Temporary Pavement Marking, Message, Only |  Construction Sign, Type A or Type B |
| ③ Temporary Pavement Marking, Dotted, White, 6 In. | ⑦ Temporary Pavement Marking, Solid, Double Yellow, 6 In. | Y Type III-A Barricade | ● Standard Drum |
| ④ Temporary Pavement Marking, Crosshatch Line, White, 12 In. | ⑧ Temporary Pavement Marking, Broken, Yellow, 6 In. | —X— Line, Remove |  Direction of Traffic |

Construction Zone Design Speed is 40 MPH

**CDM
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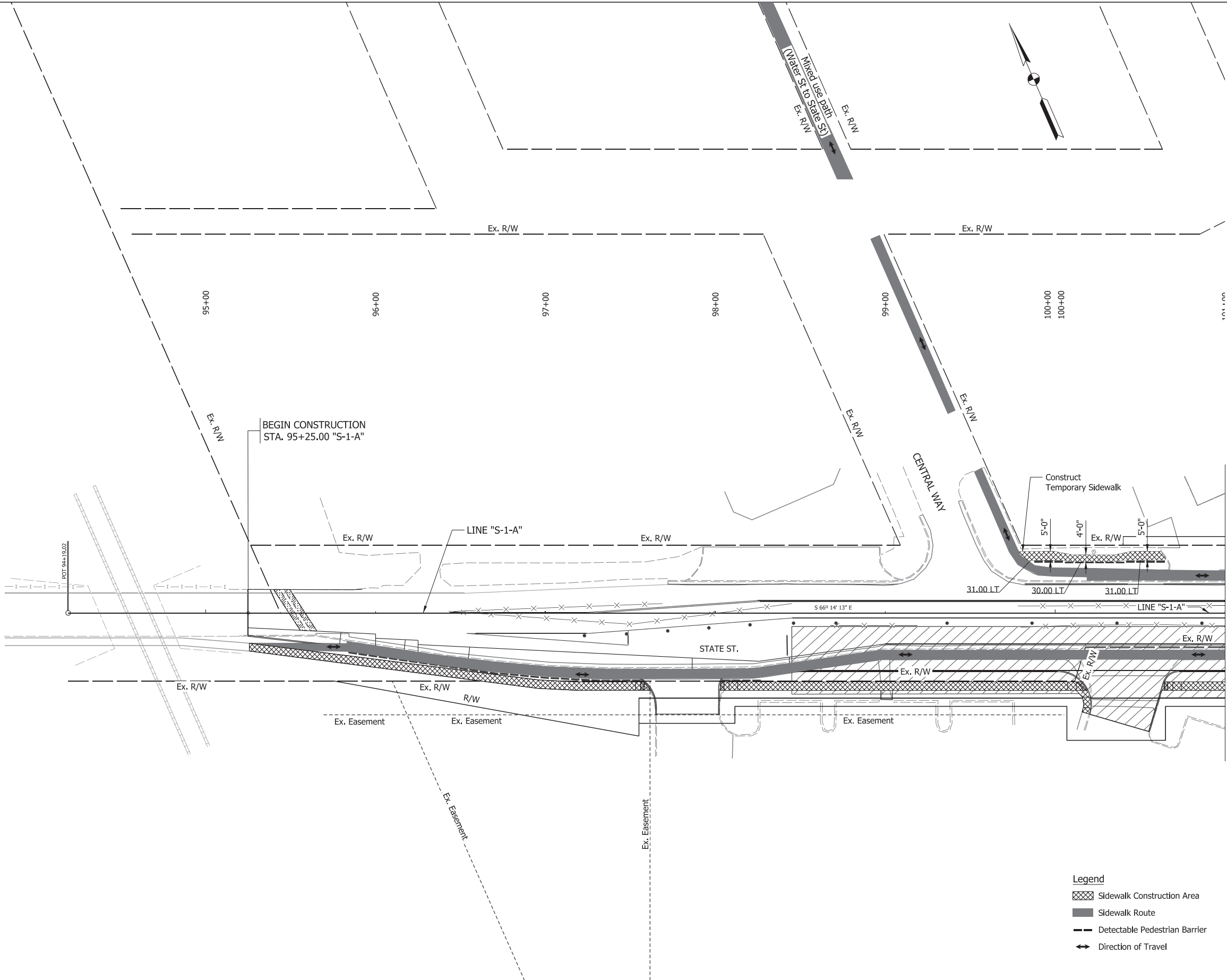
211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE	INDIANA DEPARTMENT OF TRANSPORTATION	SCALE		BRIDGE FILE	
				1" = 50'-0"			
						DESIGNATION	
				1702936, 1802854, 2001127			
DESIGNED: IJL	DRAWN: IJL		MAINTENANCE OF TRAFFIC PHASE IIb - US 36 - LINE "S-2-A"	SURVEY BOOK		SHEETS	
				ELECTRONIC		73	of 243
CHECKED: SMS	CHECKED: MJV			CONTRACT		PROJECT	
				R-41837		1702936, 1802854, 2001127	

Phase I Sequence of Operations:

Construct new sidewalk while pedestrians use existing sidewalk.
Construct temporary sidewalk runarounds at locations where new sidewalk ties into existing.
Shift pedestrians to new sidewalk before removing existing sidewalk.



- Legend
- Sidewalk Construction Area
 - Sidewalk Route
 - Detectable Pedestrian Barrier
 - Direction of Travel



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STAGE 3

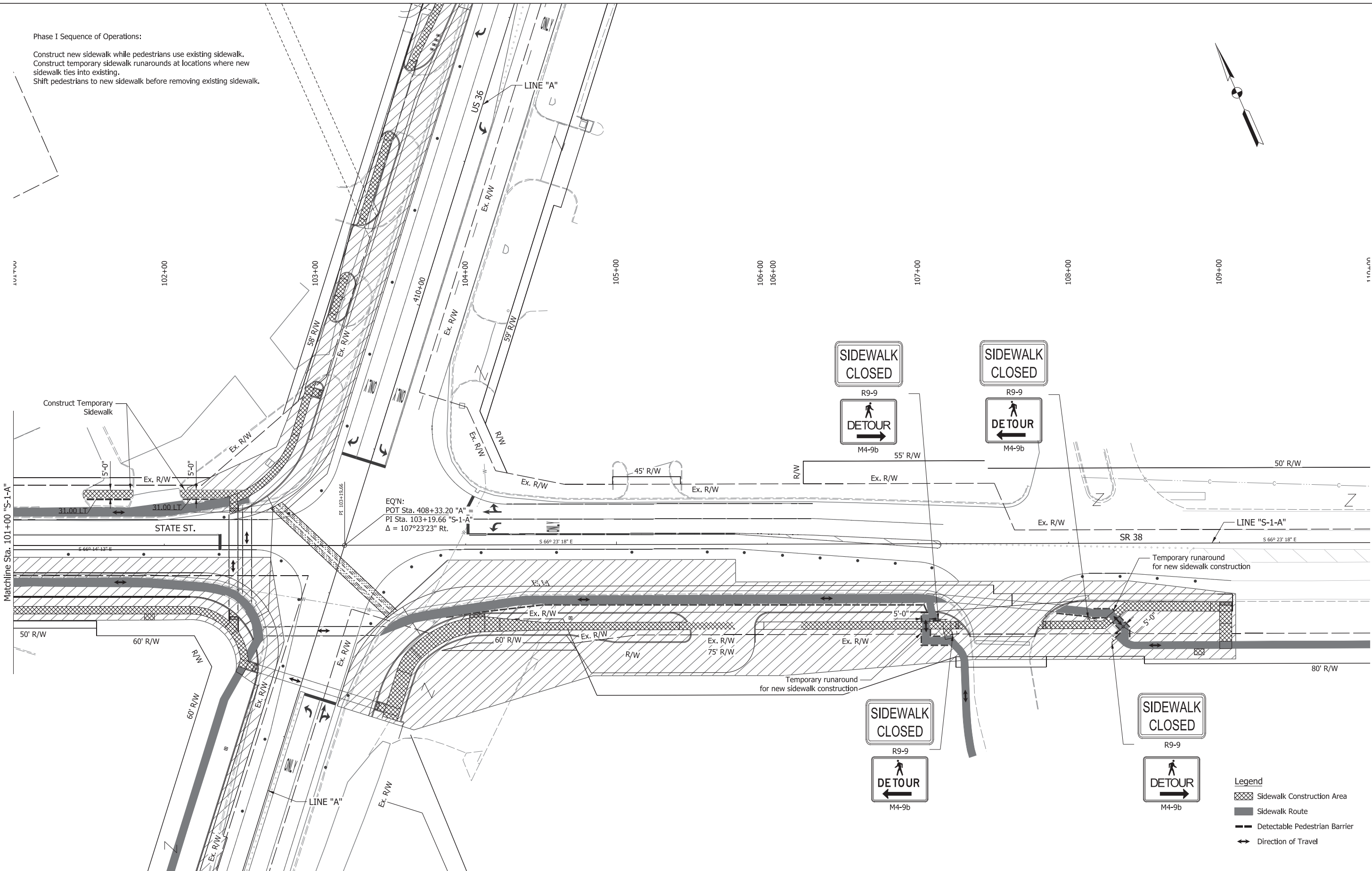
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DESIGNED: DJL	DRAWN: DJL
CHECKED: SMS	CHECKED: MJV

INDIANA DEPARTMENT OF TRANSPORTATION	MAINTENANCE OF TRAFFIC PHASE I - PEDESTRIAN MOT - LINE "S-1-A"	

SCALE 1" = 30'-0"	BRIDGE FILE	
	DESIGNATION	
	1702936, 1802854, 2001127	
SURVEY BOOK	SHEETS	
ELECTRONIC	74	of 243
CONTRACT	PROJECT	
R-41837	1702936, 1802854, 2001127	

Phase I Sequence of Operations:

Construct new sidewalk while pedestrians use existing sidewalk.
Construct temporary sidewalk runarounds at locations where new sidewalk ties into existing.
Shift pedestrians to new sidewalk before removing existing sidewalk.



- Legend
- Sidewalk Construction Area
 - Sidewalk Route
 - Detectable Pedestrian Barrier
 - Direction of Travel

**CDM
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Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: <u>IDL</u>	DRAWN: <u>IDL</u>	
CHECKED: <u>SMS</u>	CHECKED: <u>MJV</u>	

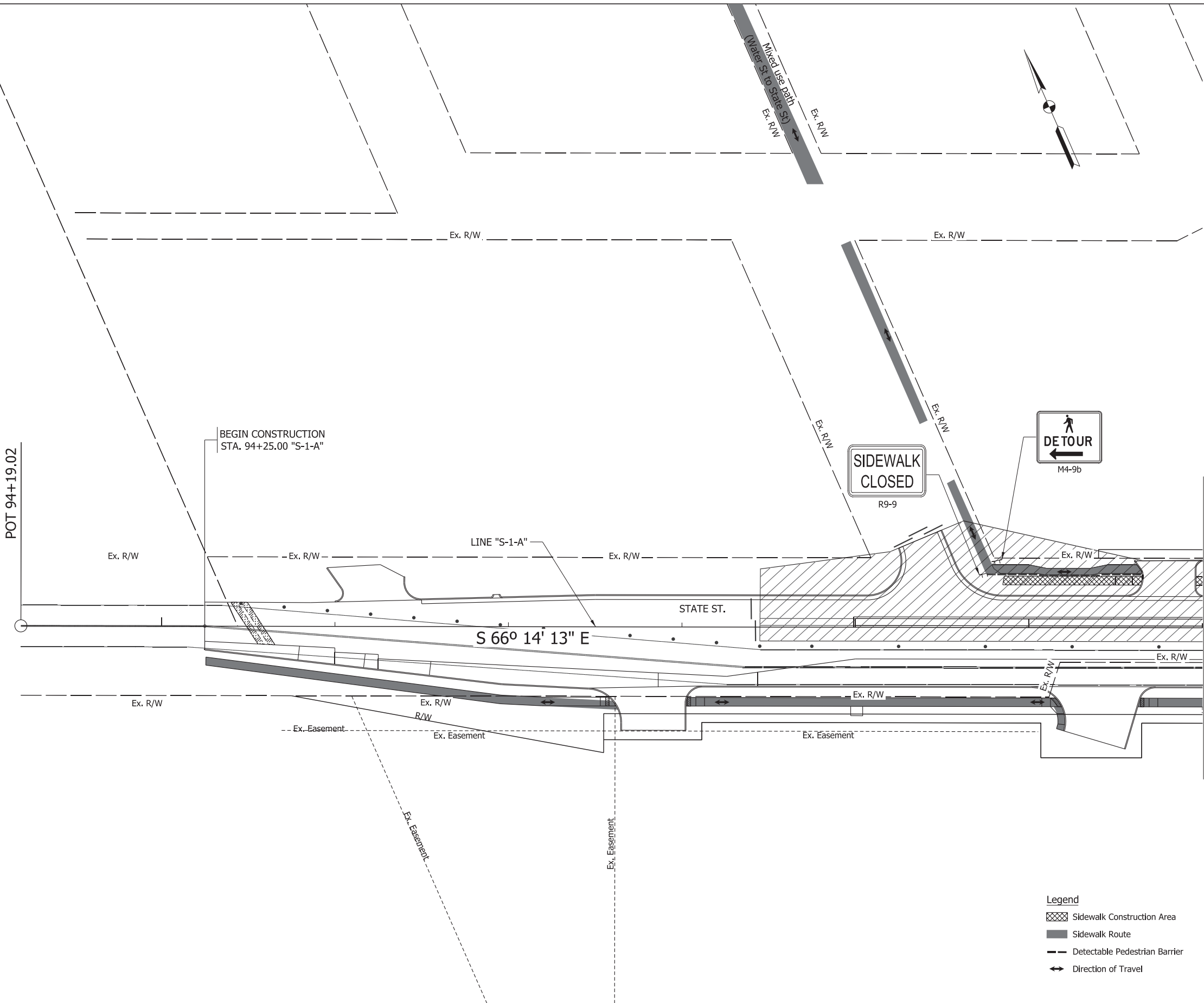
INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE I - PEDESTRIAN MOT - LINE "S-1-A"

SCALE 1" = 30'-0"	BRIDGE FILE
	DESIGNATION 1702936, 1802854, 2001127
SURVEY BOOK	SHEETS
ELECTRONIC	75 of 243
CONTRACT	PROJECT
R-41837	1702936, 1802854, 2001127

Phase II Sequence of Operations:

Construct new sidewalk while pedestrians use existing sidewalk.
Construct temporary sidewalk runarounds at locations where new sidewalk ties into existing.
Shift pedestrians to new sidewalk before removing existing sidewalk.



Legend

- Sidewalk Construction Area
- Sidewalk Route
- Detectable Pedestrian Barrier
- Direction of Travel



211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED FOR APPROVAL _____	
DESIGNED: <u>IDL</u>	DRAWN: <u>IDL</u>
CHECKED: <u>SMS</u>	CHECKED: <u>MJV</u>

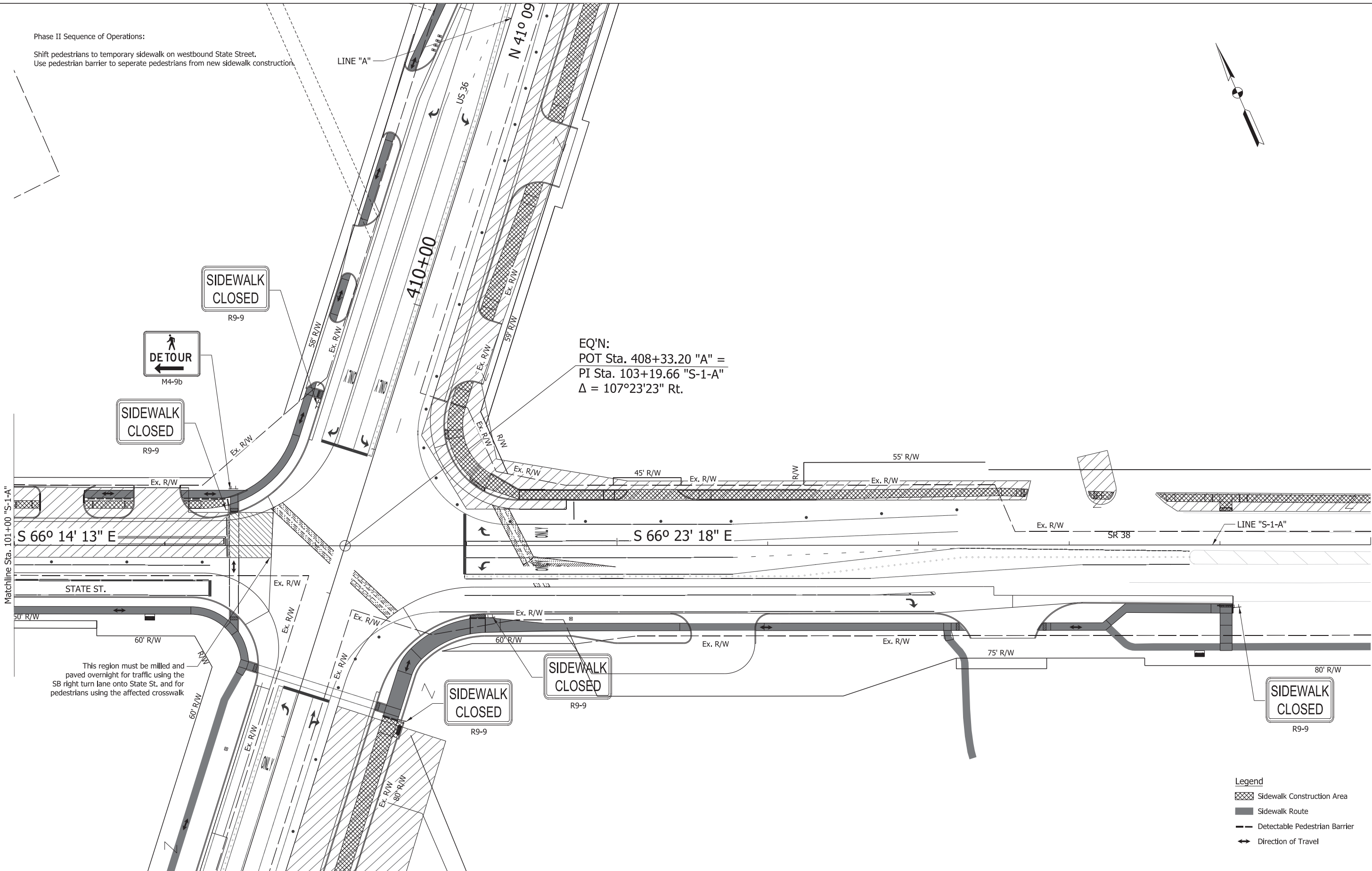
INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE II - PEDESTRIAN MOT - LINE "S-1-A"

SCALE 1" = 30'-0"	BRIDGE FILE	
	DESIGNATION	
	1702936, 1802854, 2001127	
SURVEY BOOK	SHEETS	
ELECTRONIC	76	of 243
CONTRACT	PROJECT	
R-41837	1702936, 1802854, 2001127	

Phase II Sequence of Operations:

Shift pedestrians to temporary sidewalk on westbound State Street.
Use pedestrian barrier to separate pedestrians from new sidewalk construction.



EQ'N:
POT Sta. 408+33.20 "A" =
PI Sta. 103+19.66 "S-1-A"
 $\Delta = 107^{\circ}23'23''$ Rt.

- Legend
- Sidewalk Construction Area
 - Sidewalk Route
 - Detectable Pedestrian Barrier
 - Direction of Travel

**CDM
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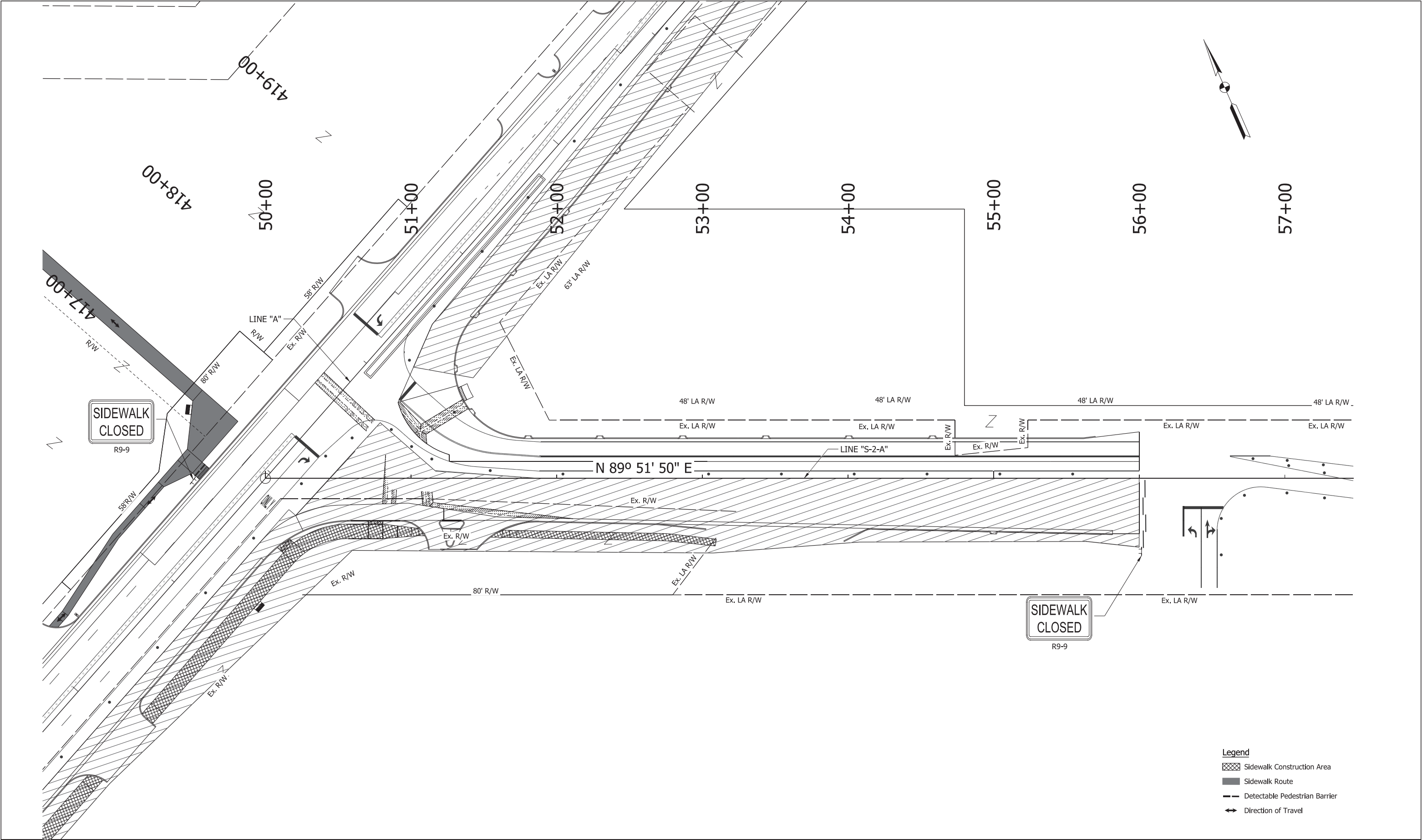
211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED FOR APPROVAL _____	
DESIGNED: DJL	DRAWN: DJL
CHECKED: SMS	CHECKED: MJV

INDIANA DEPARTMENT OF TRANSPORTATION	MAINTENANCE OF TRAFFIC PHASE II - PEDESTRIAN MOT - LINE "S-1-A"	

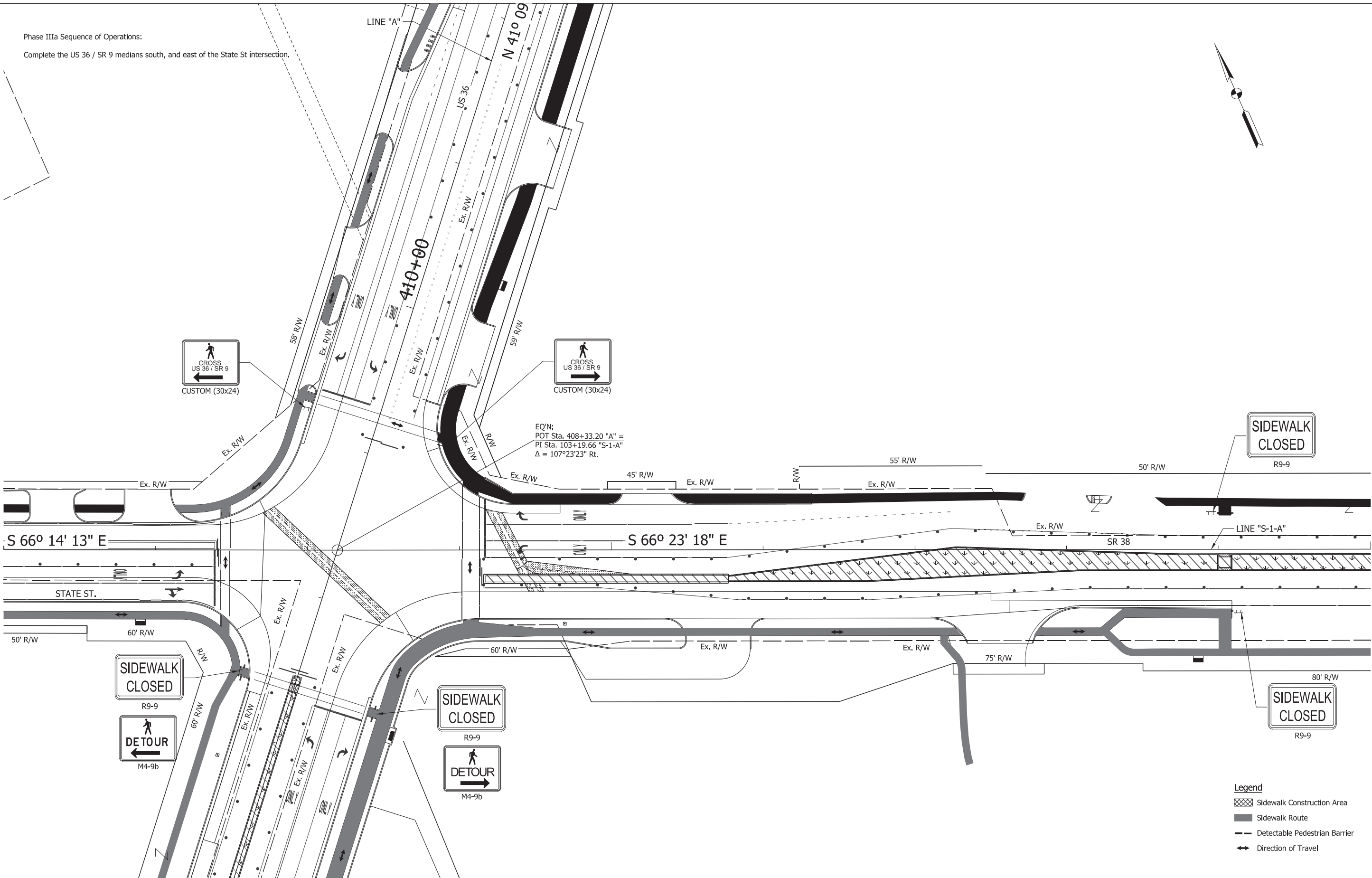
SCALE 1" = 30'-0"	BRIDGE FILE	
	DESIGNATION	
	1702936, 1802854, 2001127	
SURVEY BOOK	SHEETS	
ELECTRONIC	77	of 243
CONTRACT	PROJECT	
R-41837	1702936, 1802854, 2001127	



- Legend**
- Sidewalk Construction Area
 - Sidewalk Route
 - Detectable Pedestrian Barrier
 - Direction of Travel

 211 North Pennsylvania Street, Ste 1750 Indianapolis, IN 46204 Tel: (317) 829-9600	STAGE 3	RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____ DESIGNED: <u>IDL</u> DRAWN: <u>IDL</u> CHECKED: <u>SMS</u> CHECKED: <u>MJV</u>	INDIANA DEPARTMENT OF TRANSPORTATION MAINTENANCE OF TRAFFIC PHASE II - PEDESTRIAN MOT - LINE "S-2-A"	SCALE 1" = 30'-0"	BRIDGE FILE
					DESIGNATION 1702936, 1802854, 2001127
				SURVEY BOOK	SHEETS
				ELECTRONIC CONTRACT R-41837	78 of 243 PROJECT 1702936, 1802854, 2001127

Phase IIIa Sequence of Operations:
Complete the US 36 / SR 9 medians south, and east of the State St intersection.



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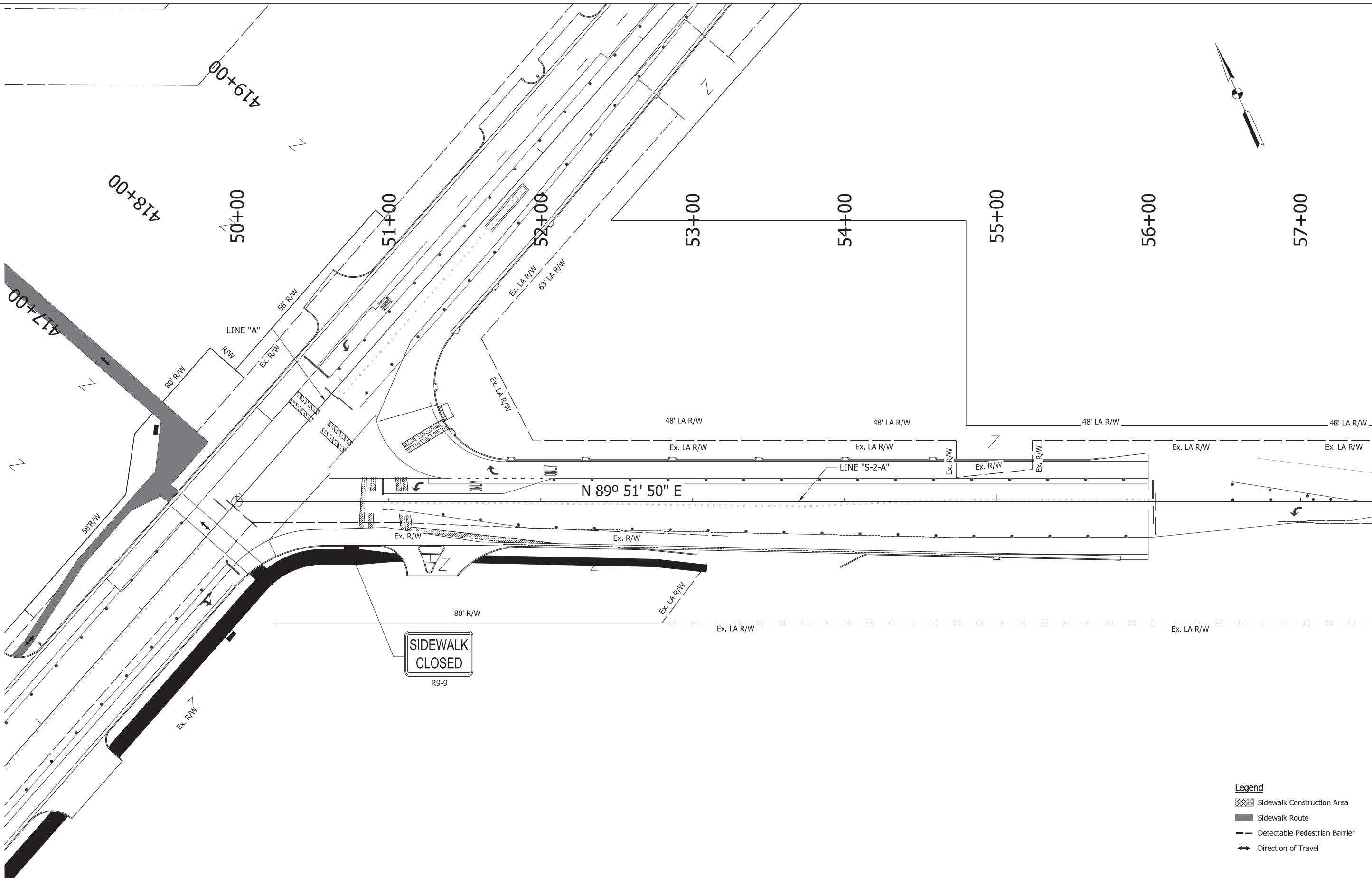
STAGE 3

RECOMMENDED FOR APPROVAL _____	
DESIGN ENGINEER	DATE
DESIGNED: <u>IDL</u>	DRAWN: <u>IDL</u>
CHECKED: <u>SMS</u>	CHECKED: <u>MJV</u>

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE IIIa - PEDESTRIAN MOT - LINE "S-1-A"

SCALE 1" = 30'-0"	BRIDGE FILE	
	DESIGNATION 1702936, 1802854, 2001127	
SURVEY BOOK	SHEETS	
ELECTRONIC	79	of 243
CONTRACT	PROJECT	
R-41837	1702936, 1802854, 2001127	



- Legend**
- Sidewalk Construction Area
 - Sidewalk Route
 - Detectable Pedestrian Barrier
 - Direction of Travel

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STAGE 3

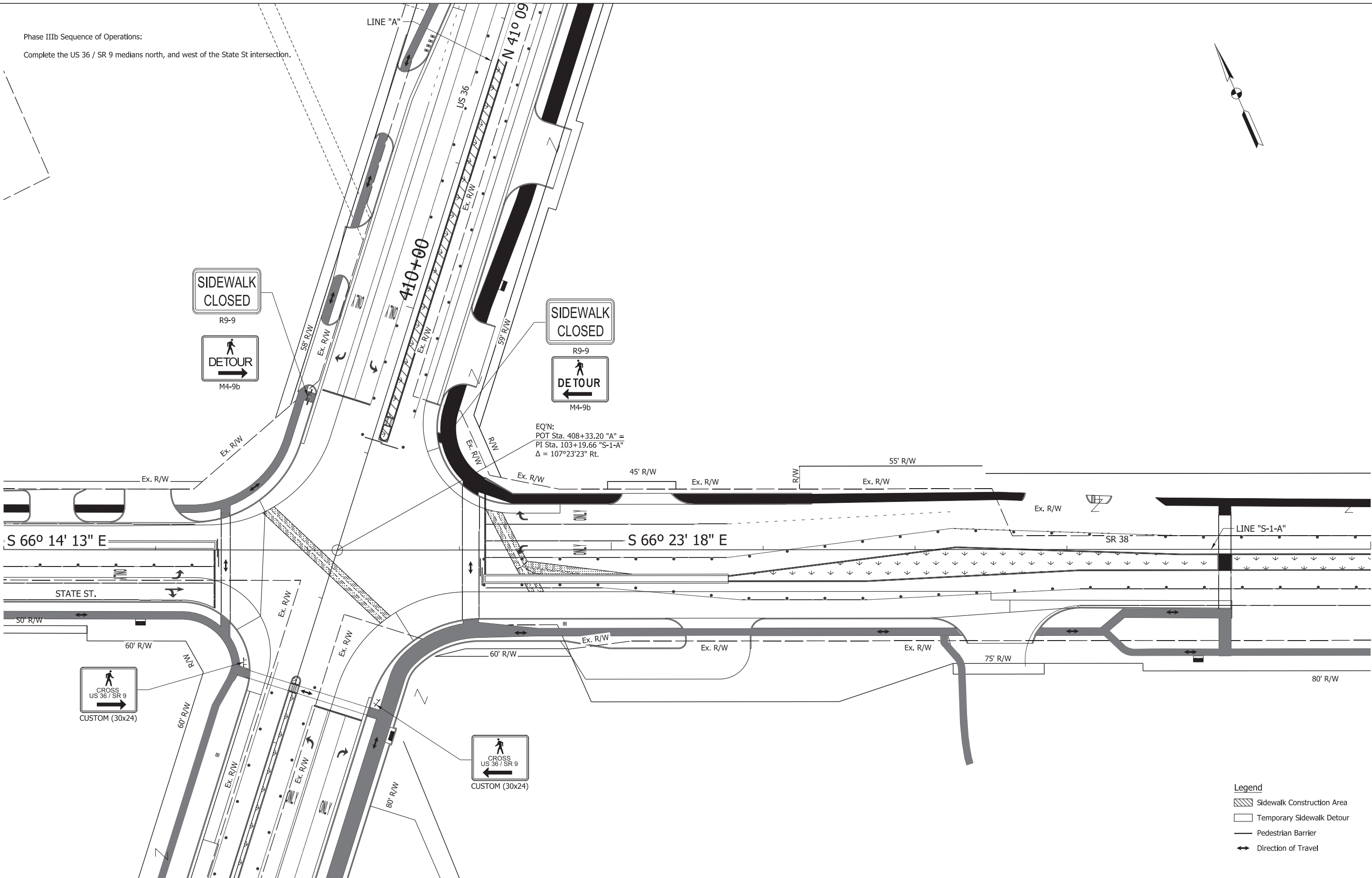
RECOMMENDED FOR APPROVAL _____		
DESIGN ENGINEER		DATE
DESIGNED: DJL	DRAWN: DJL	
CHECKED: SMS	CHECKED: MJV	

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE IIIa - PEDESTRIAN MOT - LINE "S-2-A"

SCALE 1" = 30'-0"	BRIDGE FILE	
	DESIGNATION	
	1702936, 1802854, 2001127	
SURVEY BOOK	SHEETS	
ELECTRONIC	80	of 243
CONTRACT	PROJECT	
R-41837	1702936, 1802854, 2001127	

Phase IIIb Sequence of Operations:
Complete the US 36 / SR 9 medians north, and west of the State St intersection.



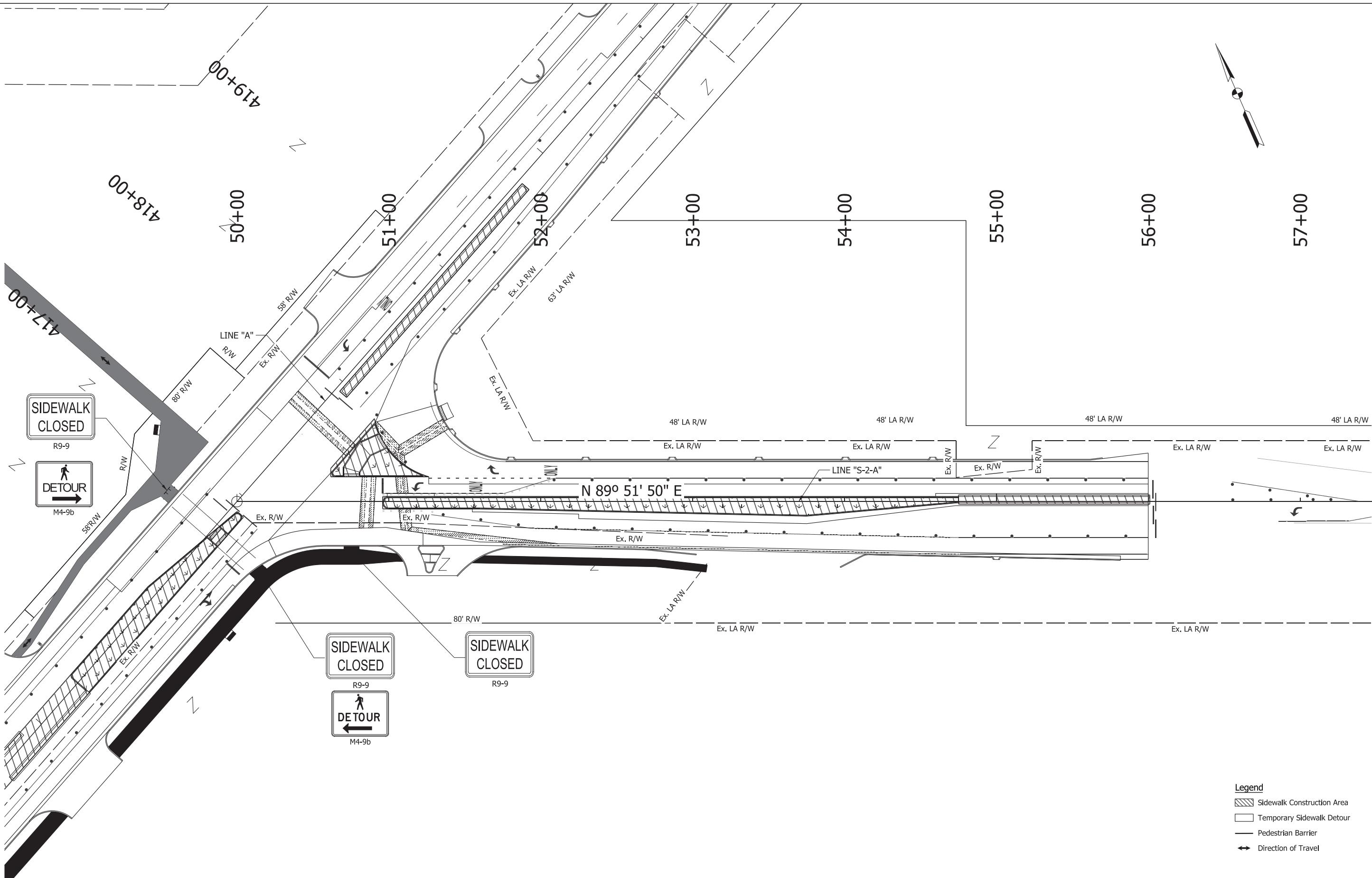
- Legend**
- Sidewalk Construction Area
 - Temporary Sidewalk Detour
 - Pedestrian Barrier
 - Direction of Travel

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211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED FOR APPROVAL _____	
DESIGNED: <u>IDL</u>	DRAWN: <u>IDL</u>
CHECKED: <u>SMS</u>	CHECKED: <u>MJV</u>

INDIANA DEPARTMENT OF TRANSPORTATION	SCALE 1" = 30'-0"	
	BRIDGE FILE	
MAINTENANCE OF TRAFFIC PHASE IIIb - PEDESTRIAN MOT - LINE "S-1-A"	DESIGNATION 1702936, 1802854, 2001127	
	SHEETS 81 of 243	
CONTRACT R-41837		PROJECT 1702936, 1802854, 2001127



- Legend**
- Sidewalk Construction Area
 - Temporary Sidewalk Detour
 - Pedestrian Barrier
 - Direction of Travel

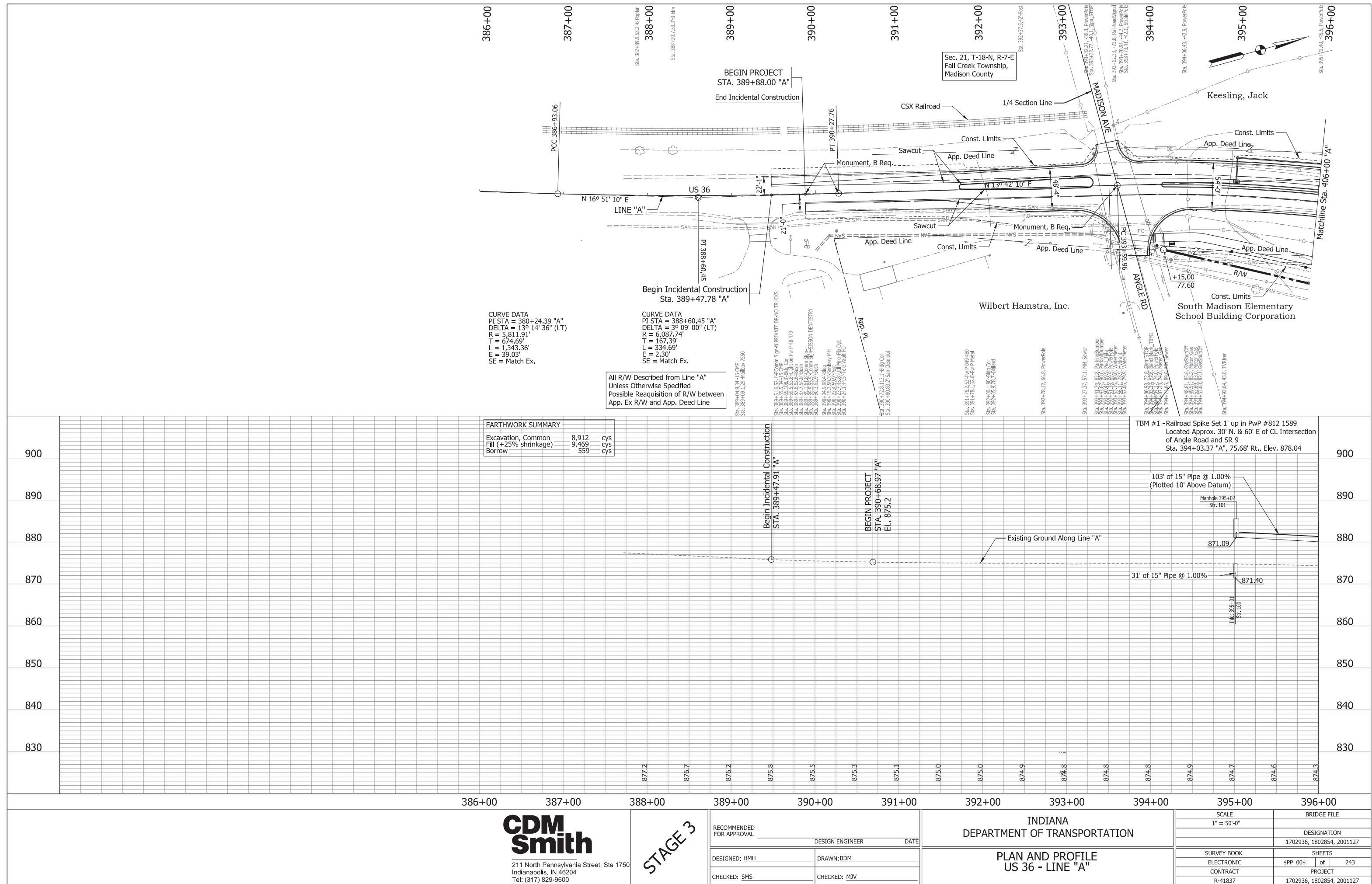


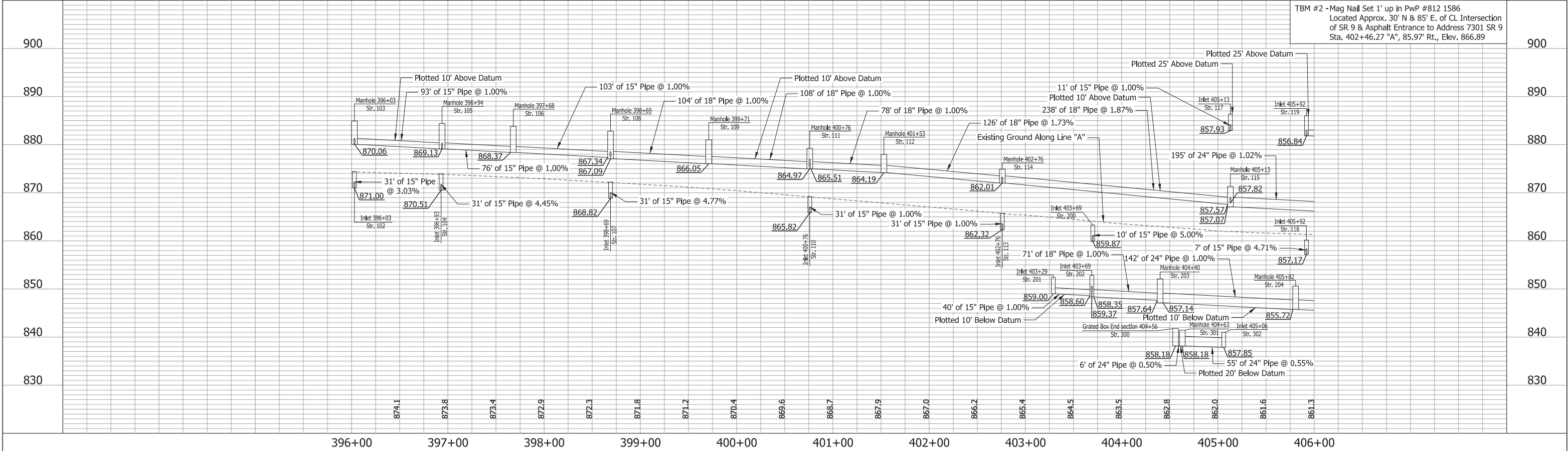
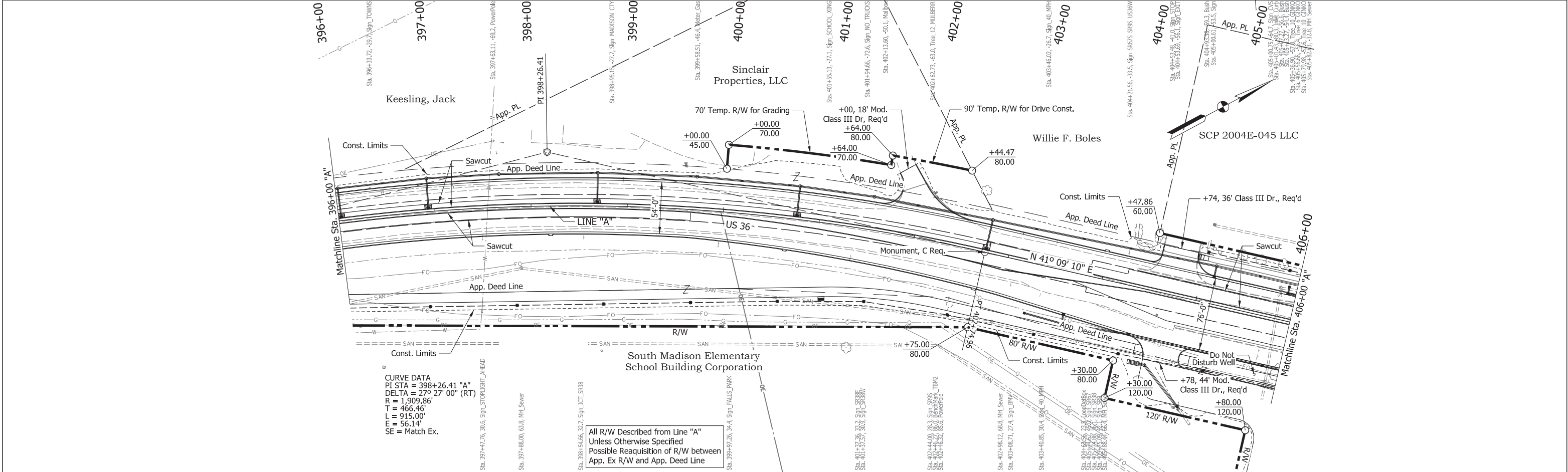
211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

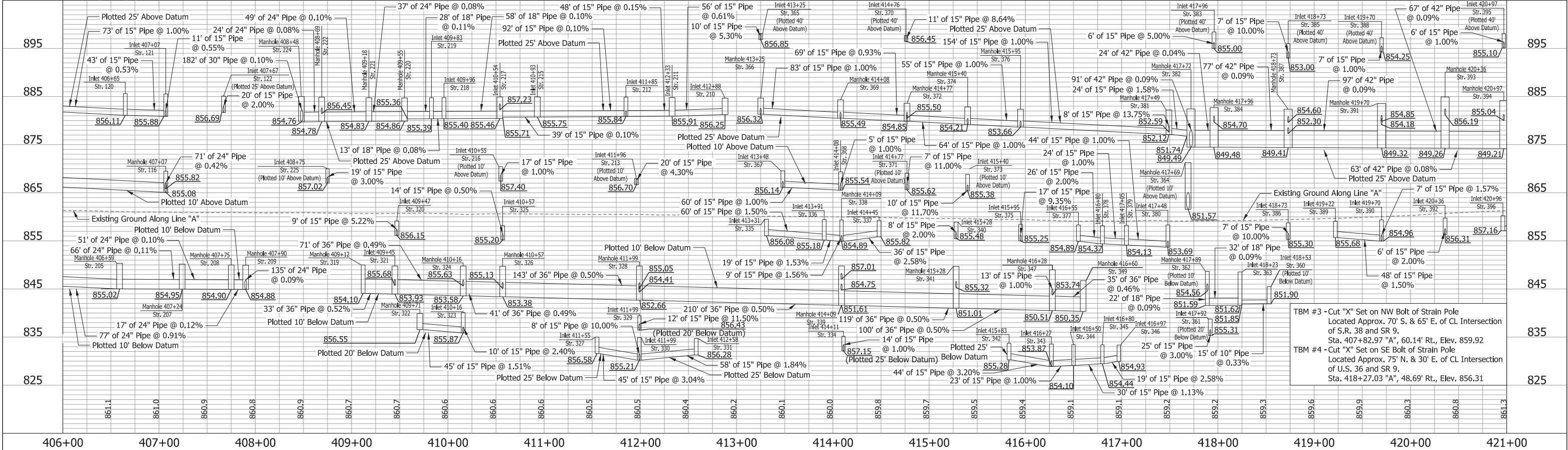
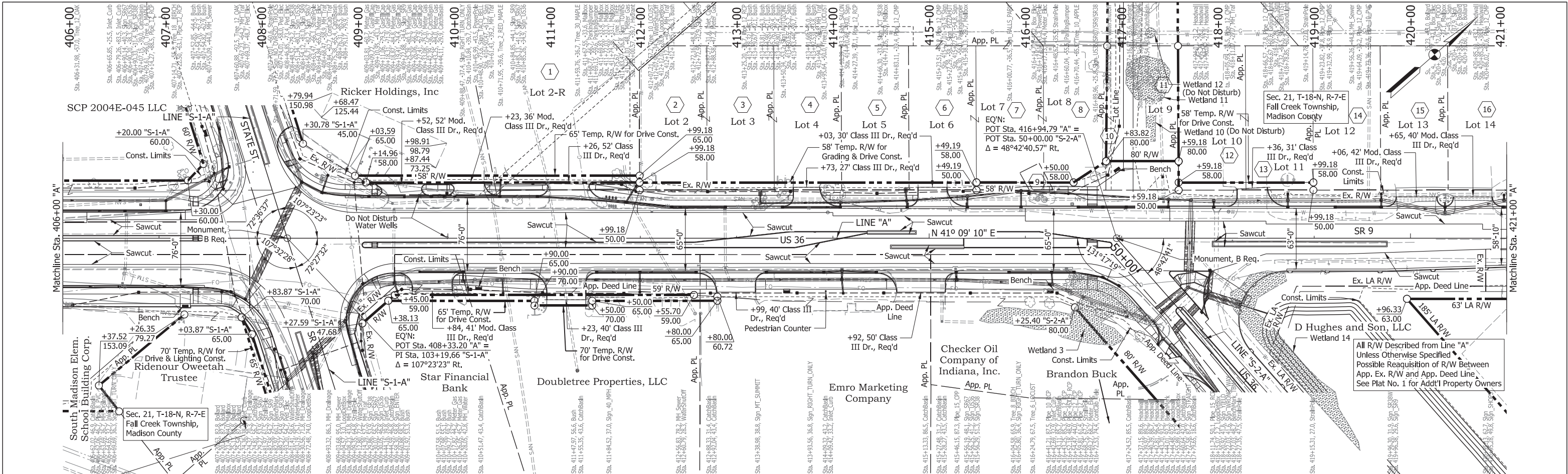
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DESIGNED: <u>IDL</u>	DRAWN: <u>IDL</u>
CHECKED: <u>SMS</u>	CHECKED: <u>MJV</u>

INDIANA DEPARTMENT OF TRANSPORTATION	SCALE 1" = 30'-0"	
	DESIGNATION 1702936, 1802854, 2001127	
MAINTENANCE OF TRAFFIC PHASE IIIb - PEDESTRIAN MOT - LINE "S-2-A"	SURVEY BOOK	SHEETS
	ELECTRONIC	82 of 243
	CONTRACT	PROJECT
	R-41837	1702936, 1802854, 2001127





CDM Smith 211 North Pennsylvania Street, Ste 1750 Indianapolis, IN 46204 Tel: (317) 829-9600	STAGE 3	RECOMMENDED FOR APPROVAL _____		INDIANA DEPARTMENT OF TRANSPORTATION		SCALE 1" = 50'-0"		BRIDGE FILE			
		DESIGN ENGINEER _____		DATE _____				DESIGNATION			
								1702936, 1802854, 2001127			
		DESIGNED: <u>HMH</u>		DRAWN: <u>BDM</u>		PLAN AND PROFILE US 36 - LINE "A"		SURVEY BOOK		SHEETS	
		CHECKED: <u>SMS</u>		CHECKED: <u>MJV</u>				ELECTRONIC		83 of 243	
						CONTRACT		PROJECT			
						R-41837		1702936, 1802854, 2001127			



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STAGE 3

RECOMMENDED
FOR APPROVAL

DESIGNED: HMH

CHECKED: SMS

DESIGN ENGINEER

DRAWN: BDM

CHECKED: MJV

DATE

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
US 36 / SR 9 - LINE "A"

SCALE
1" = 50'-0"

BRIDGE FILE

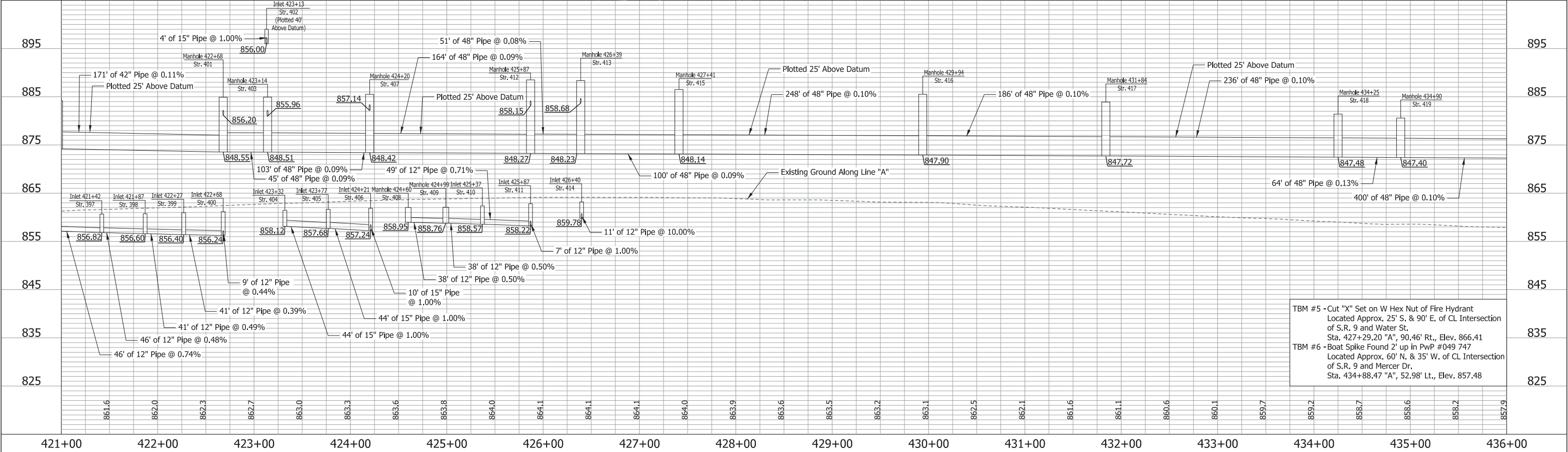
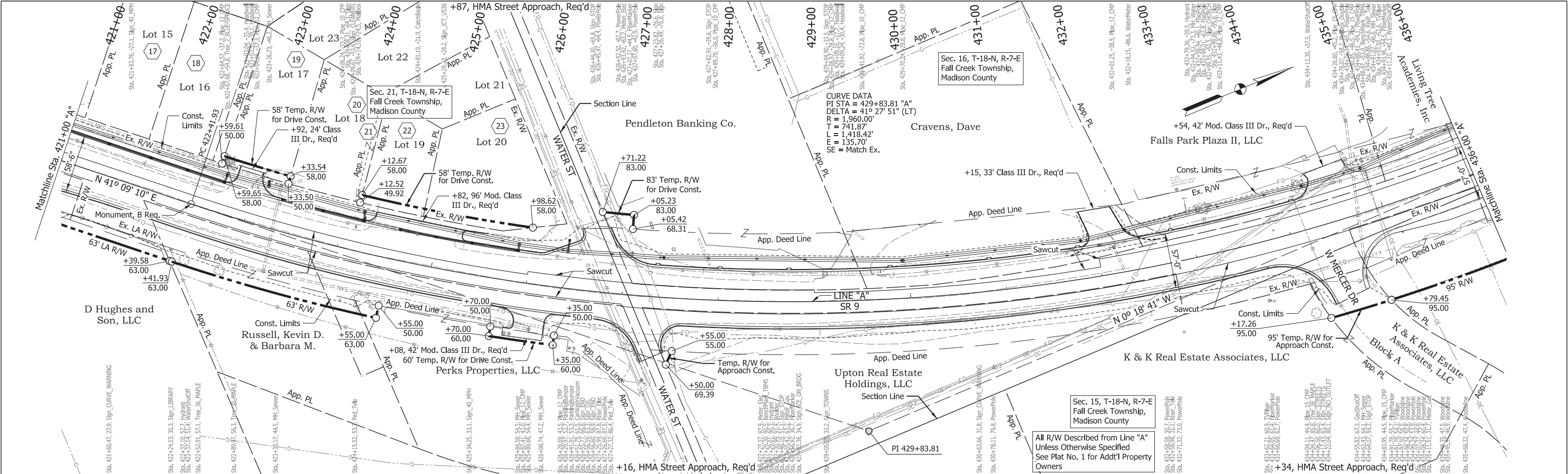
DESIGNATION
1702936, 1802854, 2001127

SURVEY BOOK
ELECTRONIC
CONTRACT
R-41837

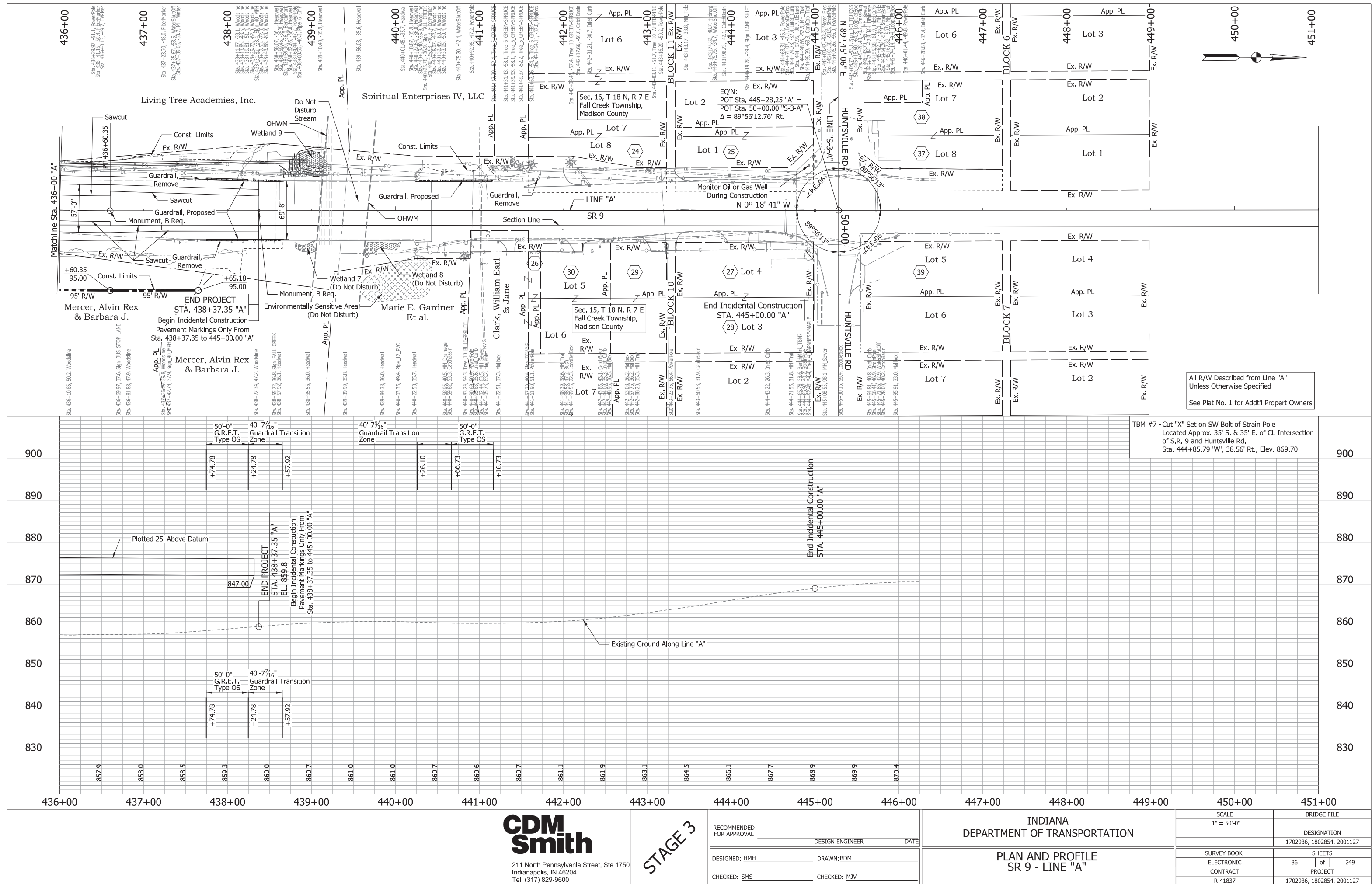
SHEETS
84 of 243
PROJECT
1702936, 1802854, 2001127

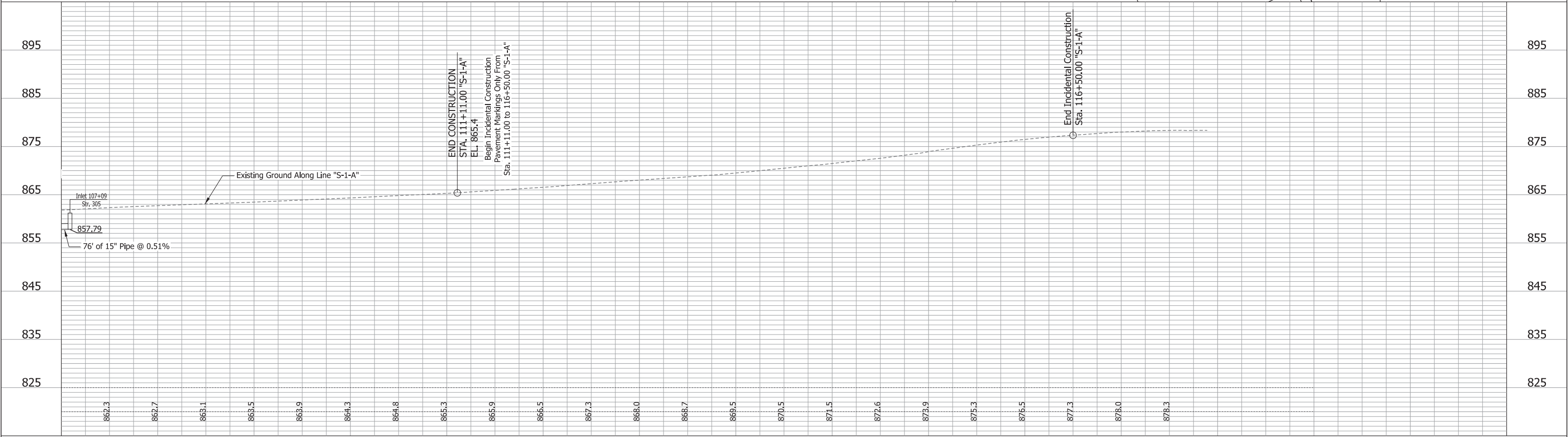
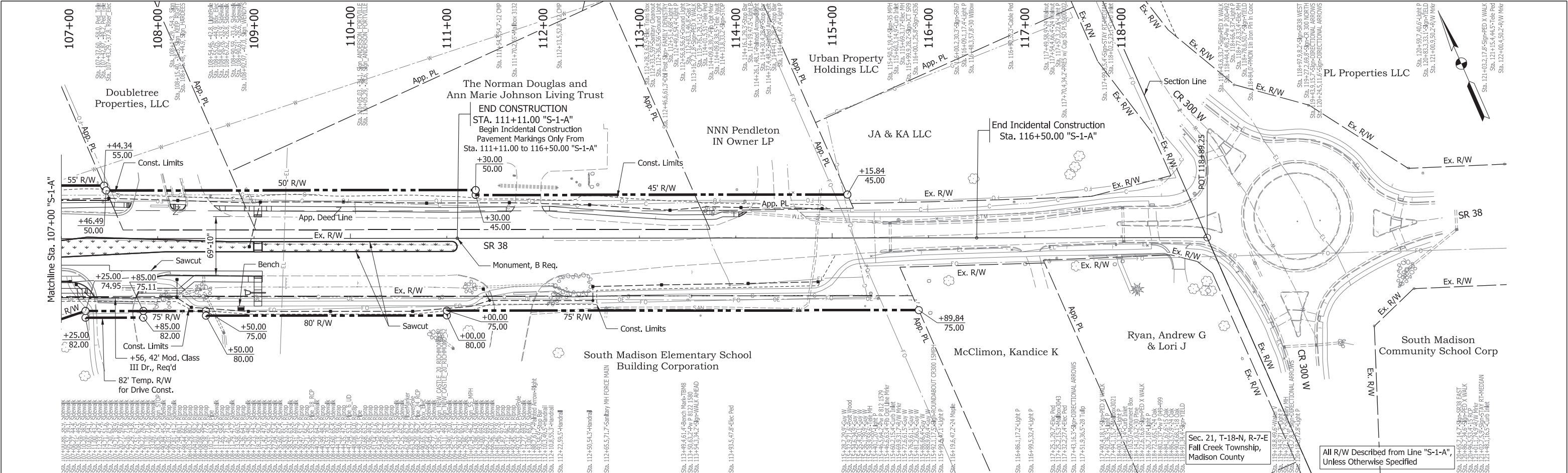
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B-93



 211 North Pennsylvania Street, Ste 1750 Indianapolis, IN 46204 Tel: (317) 829-9600	STAGE 3	RECOMMENDED FOR APPROVAL _____ DESIGNED: HMH CHECKED: SMS	DESIGN ENGINEER _____ DRAWN: BDM CHECKED: MJV	DATE _____	INDIANA DEPARTMENT OF TRANSPORTATION PLAN AND PROFILE SR 9 - LINE "A"	SCALE 1" = 50'-0"		BRIDGE FILE	
						DESIGNATION 1702936, 1802854, 2001127		SHEETS 85 of 243	
						SURVEY BOOK ELECTRONIC CONTRACT R-41837		PROJECT 1702936, 1802854, 2001127	





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Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED FOR APPROVAL

DESIGNED: HMH

CHECKED: SMS

DESIGN ENGINEER

DRAWN: BDM

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
SR 38 / STATE STREET- LINE "S-1-A"

HORIZONTAL SCALE
1" = 50'-0"

VERTICAL SCALE
1" = 10'-0"

SURVEY BOOK
ELECTRONIC
CONTRACT
R-41837

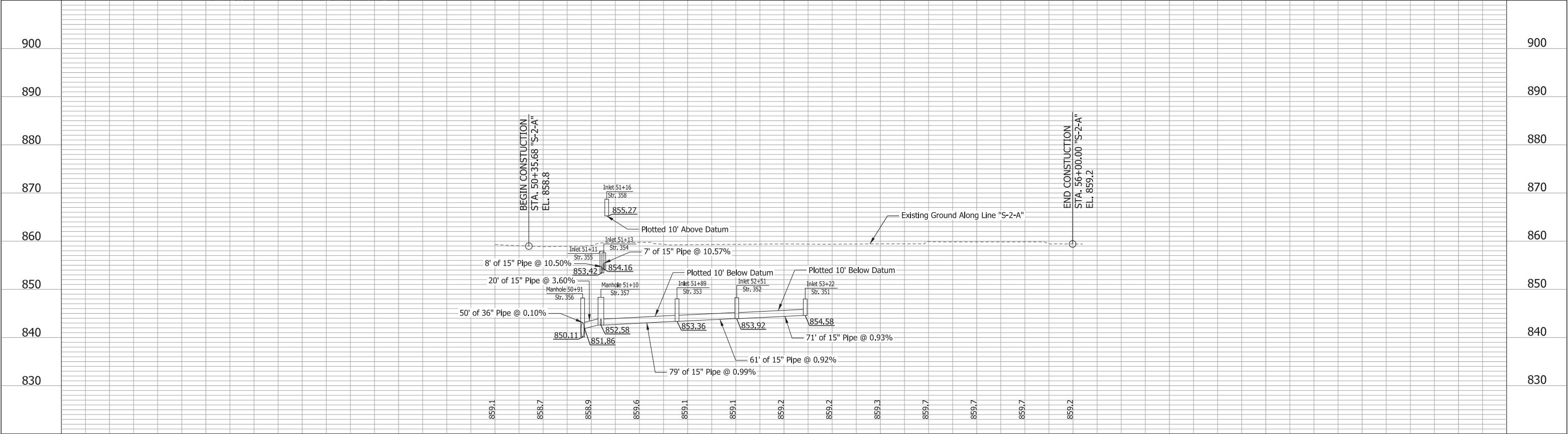
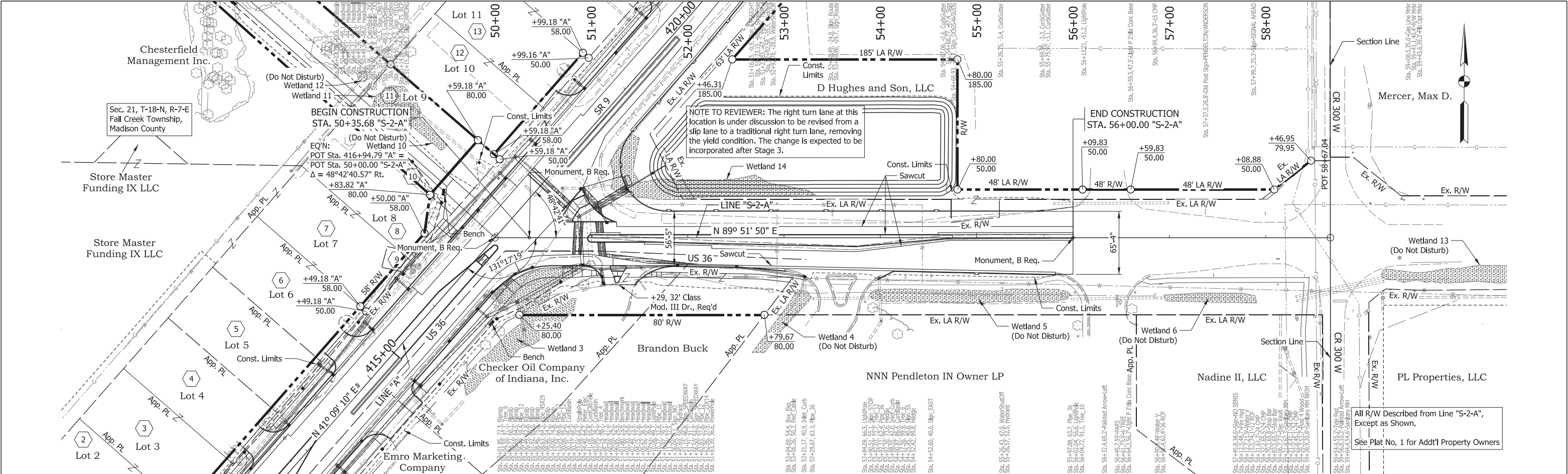
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DESIGNATION
1702936, 1802854, 2001127

SHEETS
88 of 243
PROJECT
1702936, 1802854, 2001127

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B-97



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Smith

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Indianapolis, IN 46204
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STAGE 3

RECOMMENDED FOR APPROVAL

DESIGNED: HMH

CHECKED: SMS

DESIGN ENGINEER

DRAWN: BDM

CHECKED: MJV

DATE

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
US 36 - LINE "S-2-A"

HORIZONTAL SCALE
1" = 50'-0"

VERTICAL SCALE
1" = 10'-0"

SURVEY BOOK
ELECTRONIC
CONTRACT
R-41837

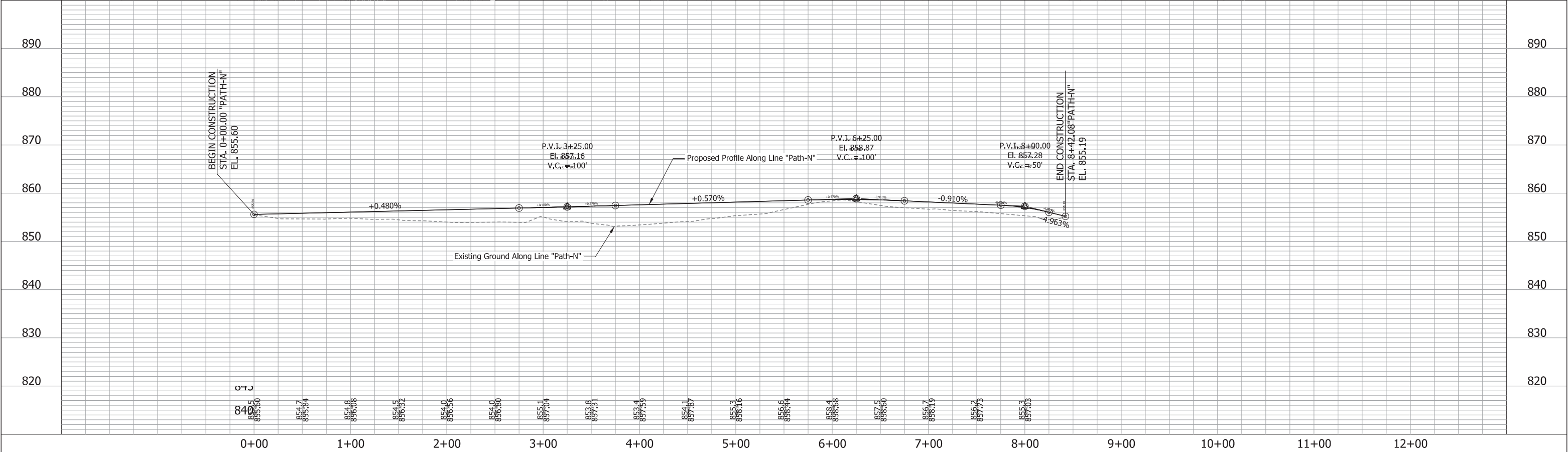
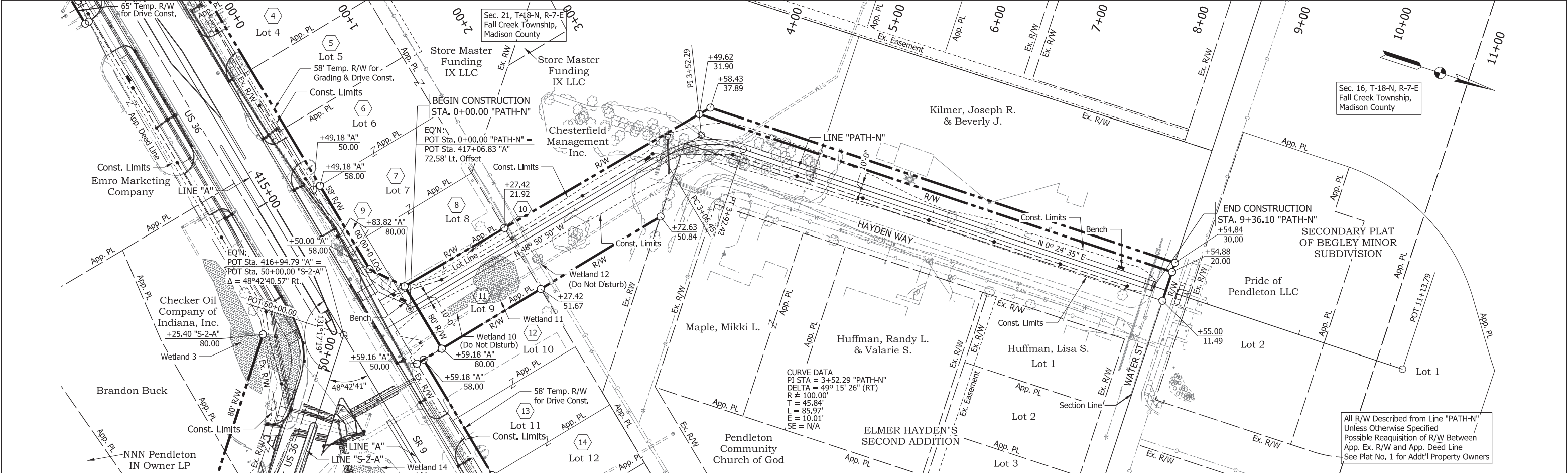
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DESIGNATION
1702936, 1802854, 2001127

SHEETS
89 of 243
PROJECT
1702936, 1802854, 2001127

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B-98



CDM
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Indianapolis, IN 46204
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STAGE 3

RECOMMENDED FOR APPROVAL

DESIGNED: HMM

CHECKED: SMS

DESIGN ENGINEER

DRAWN: BDM

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
SHARED-USE PATH - LINE "PATH-N"

SCALE
1" = 50'-0"

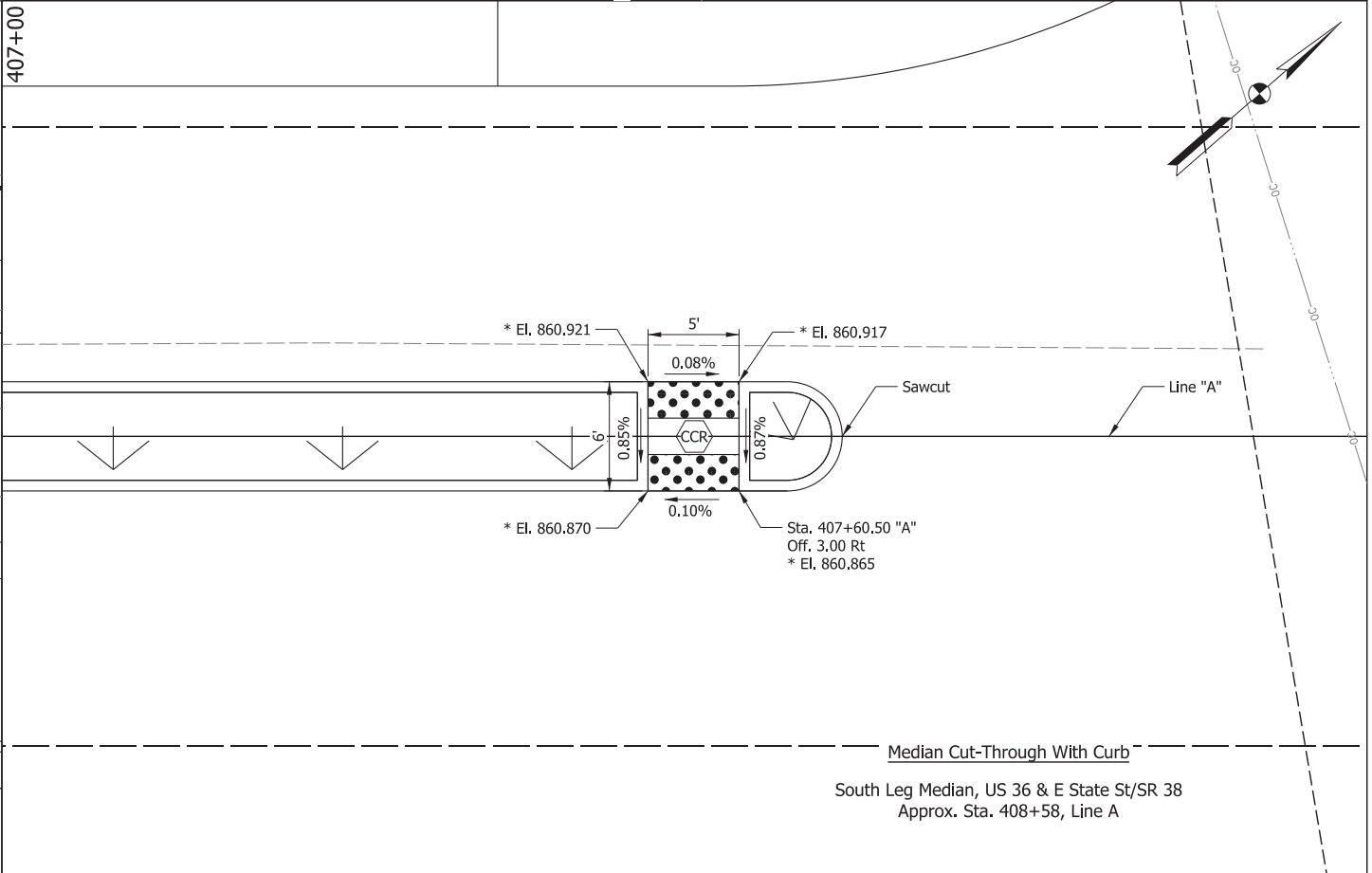
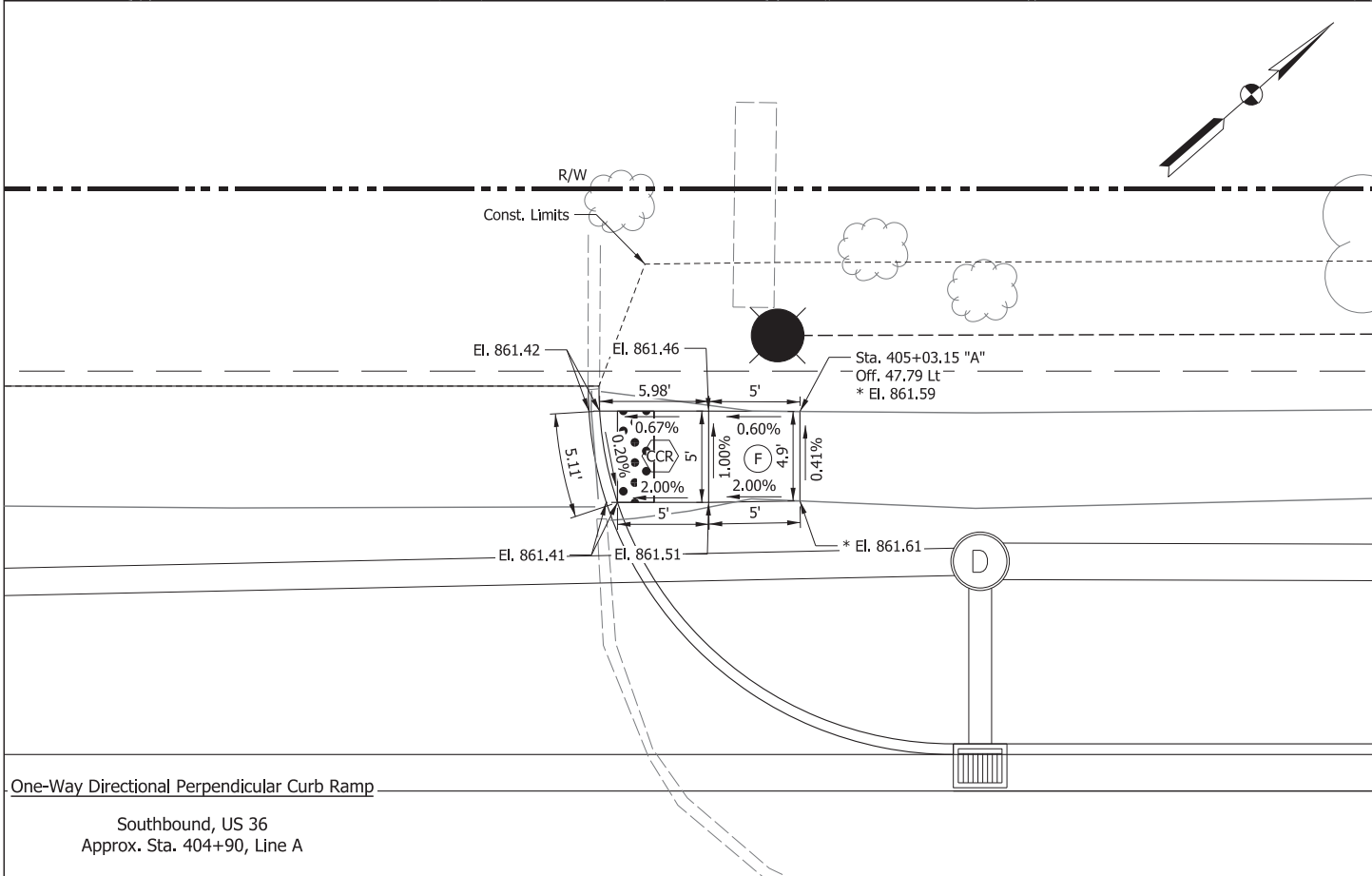
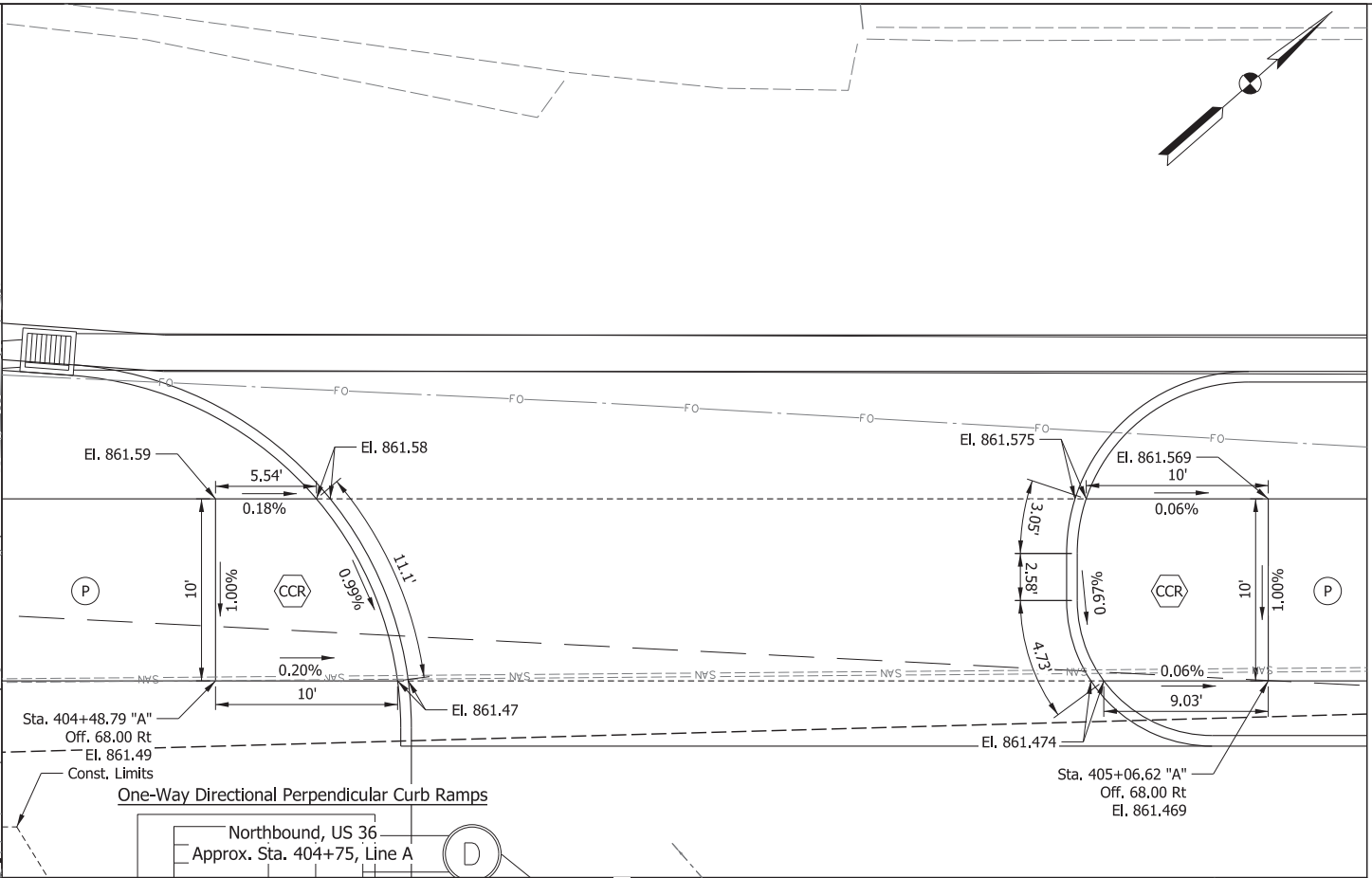
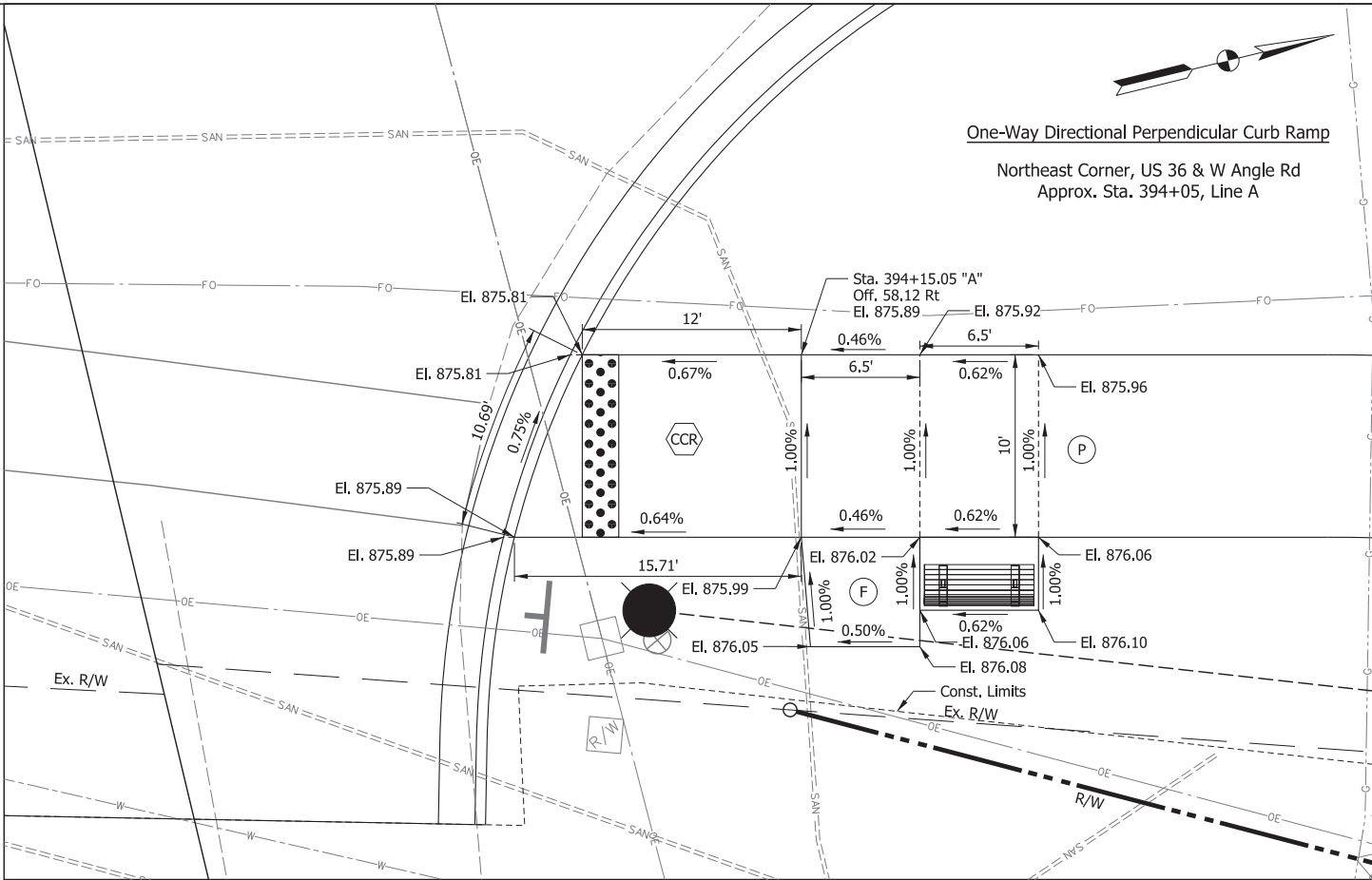
SURVEY BOOK
ELECTRONIC
CONTRACT
R-41837

BRIDGE FILE
DESIGNATION
1702936, 1802854, 2001127

SHEETS
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PROJECT
1702936, 1802854, 2001127

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B-100



LEGEND

(P) Multi-Use Path

(F) Sidewalk, Concrete

TS Turning Space

CCR Concrete Curb Ramp

* Match Existing Elevation

Detectable Warning Surfaces

Sidewalk Concrete, Remove

CDM Smith

211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED FOR APPROVAL _____

DESIGN ENGINEER _____ DATE _____

DESIGNED: HMM _____ DRAWN: BDM _____

CHECKED: SMS _____ CHECKED: MJV _____

INDIANA
DEPARTMENT OF TRANSPORTATION

CURB RAMP DETAILS
US 36 / SR 9 - Line "A"

SCALE
1" = 5'-0"

BRIDGE FILE

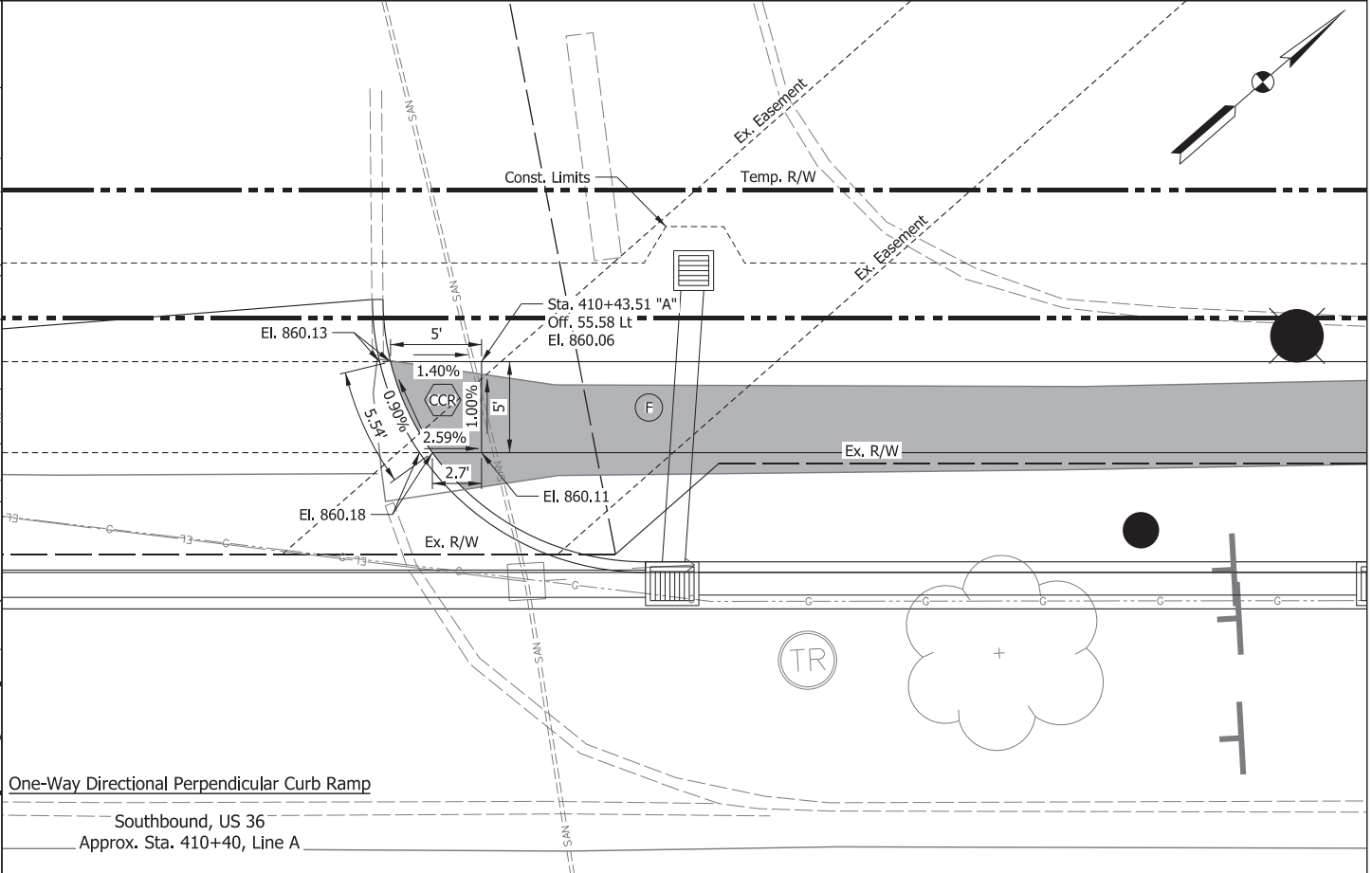
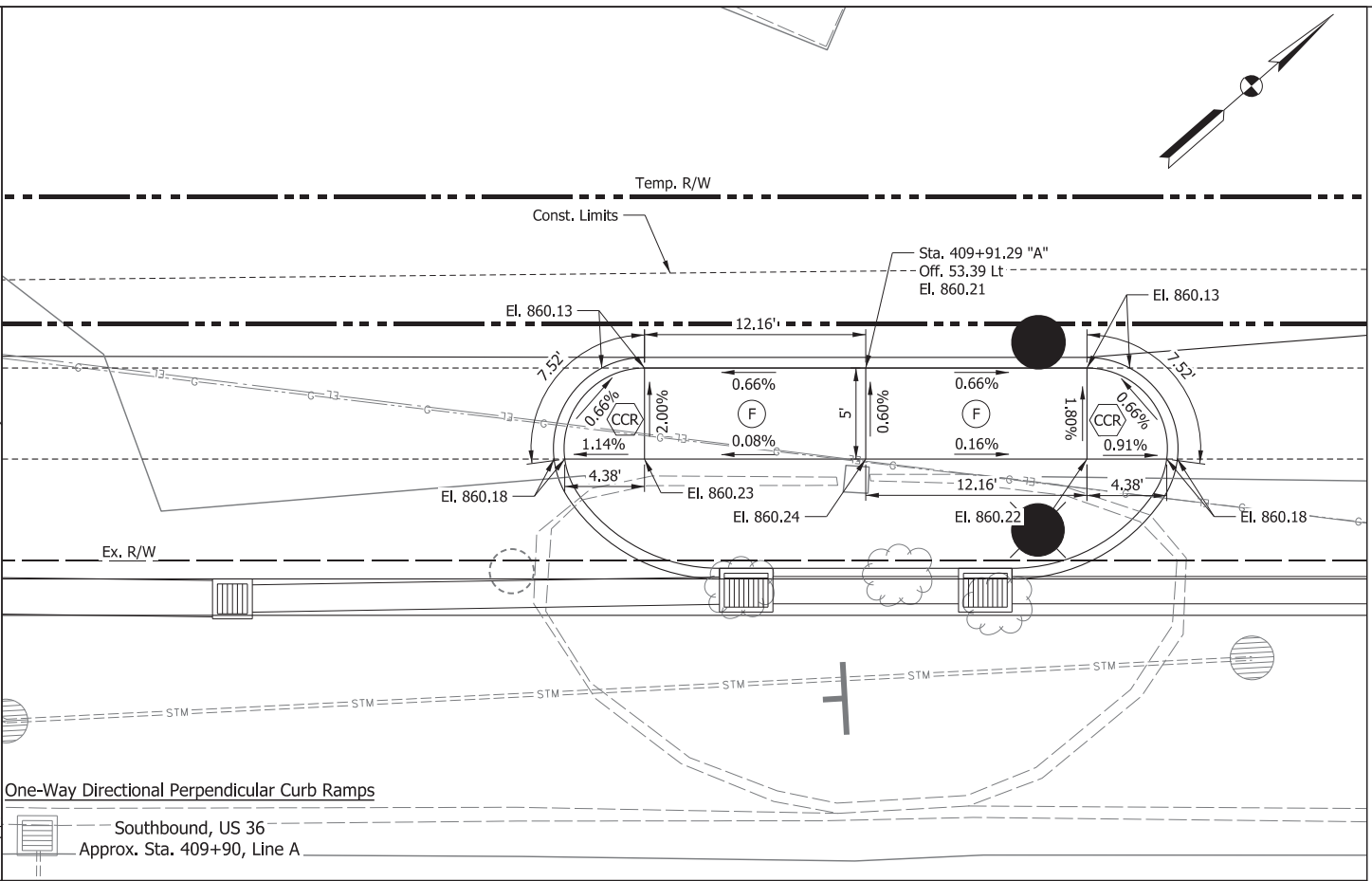
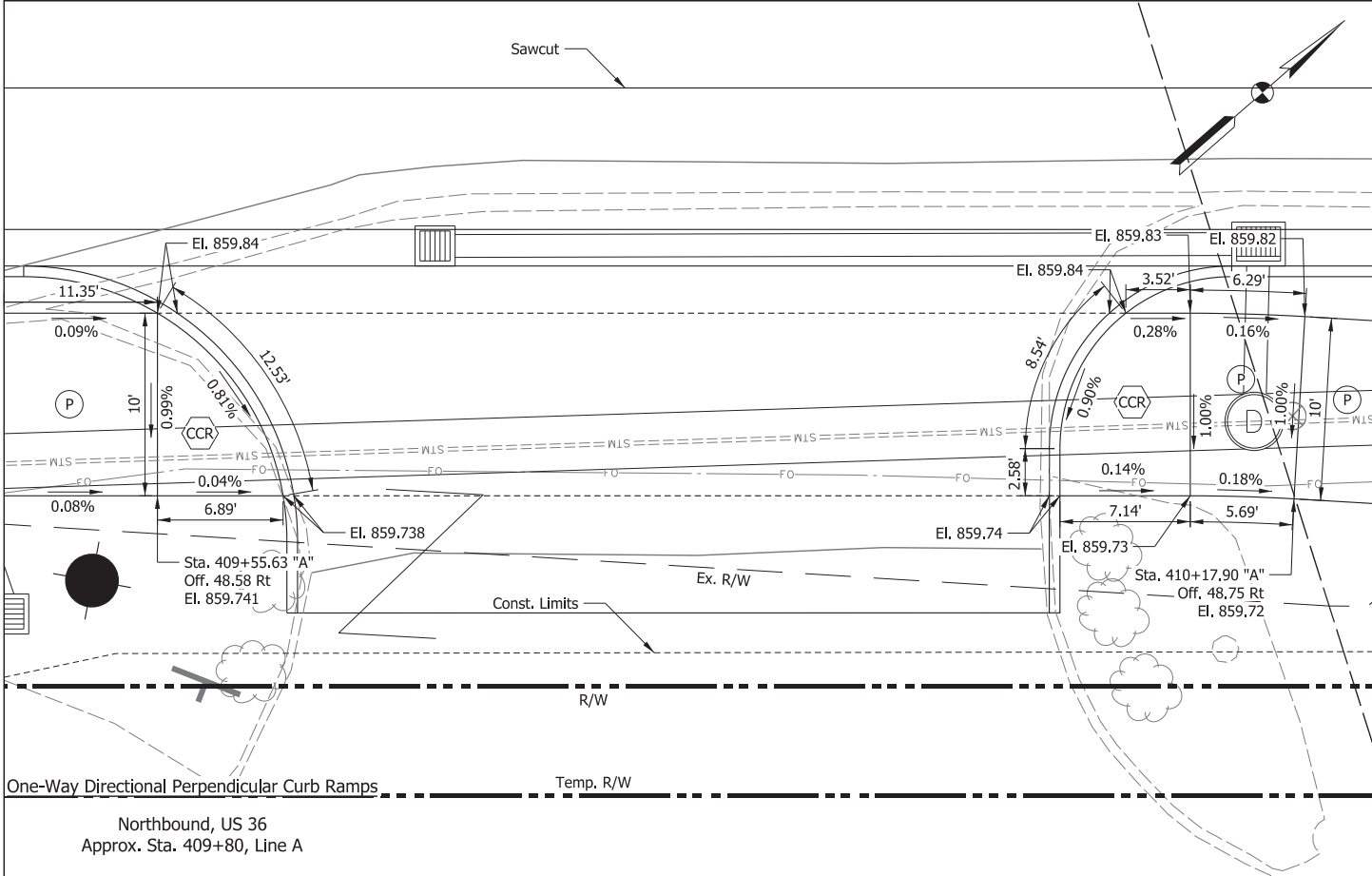
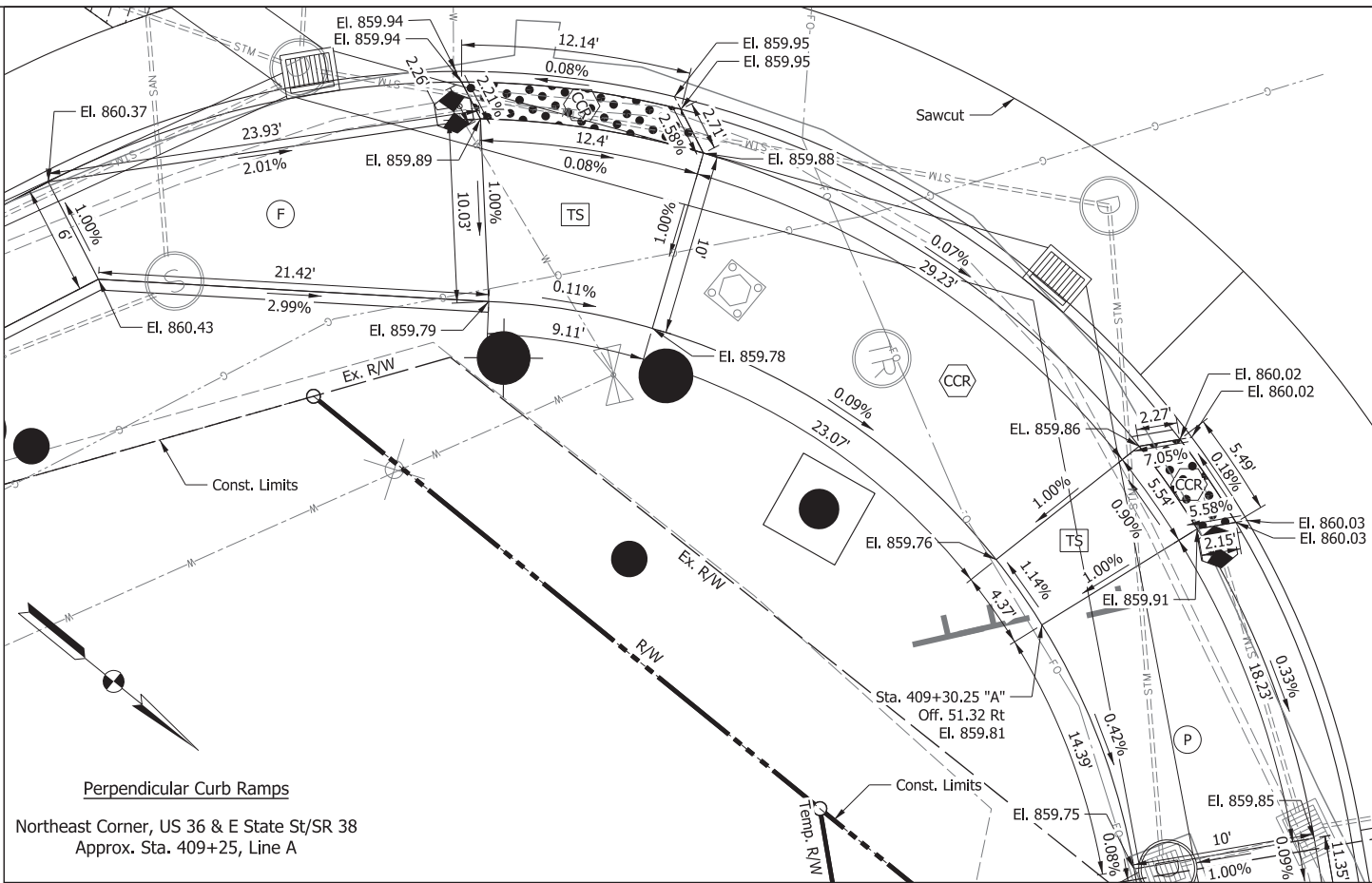
DESIGNATION
1702936, 1802854, 2001127

SURVEY BOOK
ELECTRONIC
CONTRACT
R-41837

SHEETS
119 of 243
PROJECT
1702936, 1802854, 2001127

pw:\\cdmsmith-az02-pw.bentley.com:pw_pt1\Documents\118931\249691\10 Transportation\02 Engineering Services NM_30pct\01 Roadway Design\10 CADD\02 Details\Sht Curb_Ramps_A_01.dgn

B-101



LEGEND

P

Multi-Use Path

F

Sidewalk, Concrete

TS

Turning Space

CCR

Concrete Curb Ramp

*

Match Existing Elevation

Detectable Warning Surfaces

Sidewalk Concrete, Remove

CDM
Smith

211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED
FOR APPROVAL

DESIGN ENGINEER

DATE

DESIGNED: HMH

DRAWN: BDM

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

CURB RAMP DETAILS
US 36 / SR 9 - Line "A"

SCALE
1" = 5'-0"

BRIDGE FILE

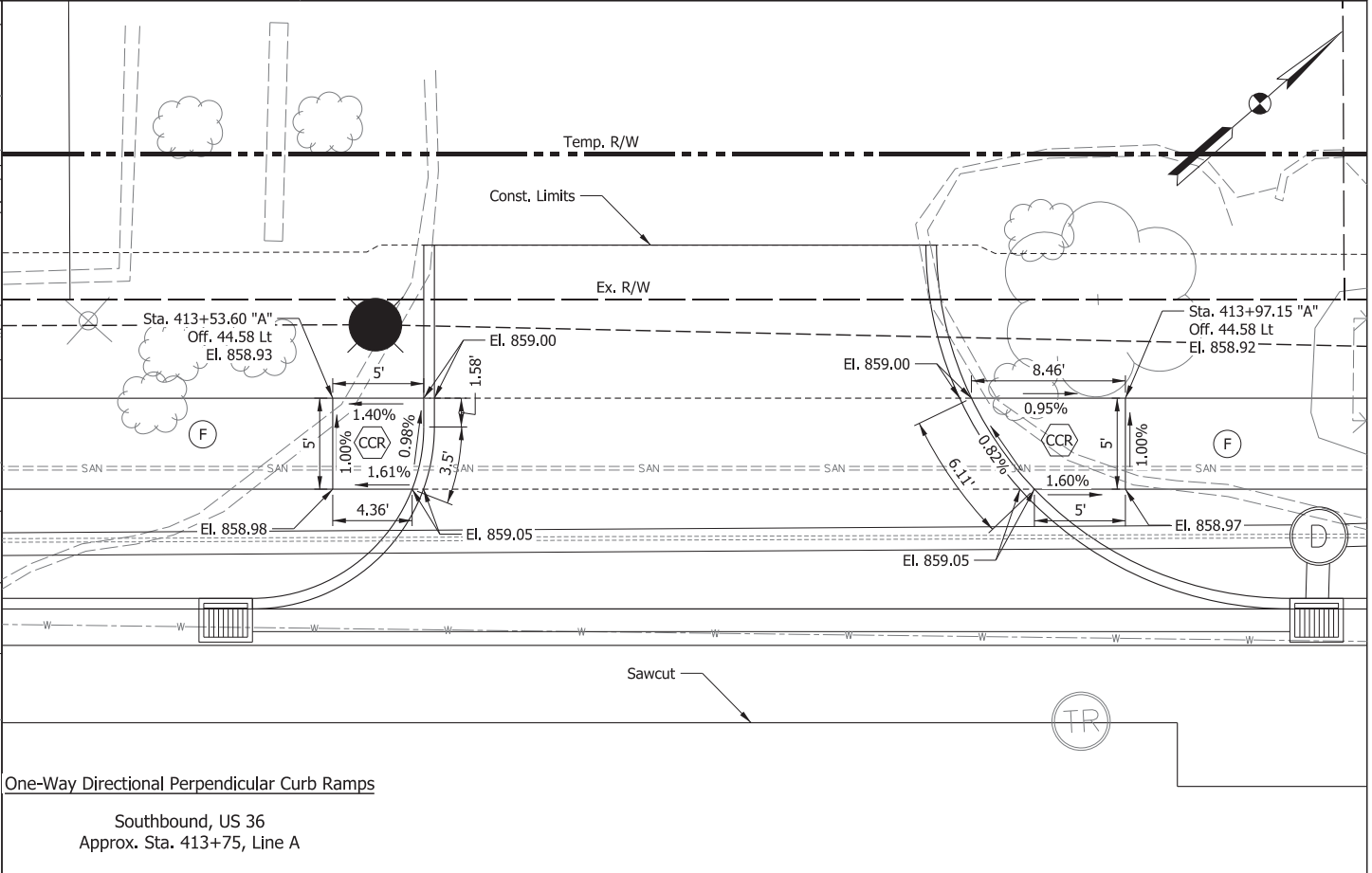
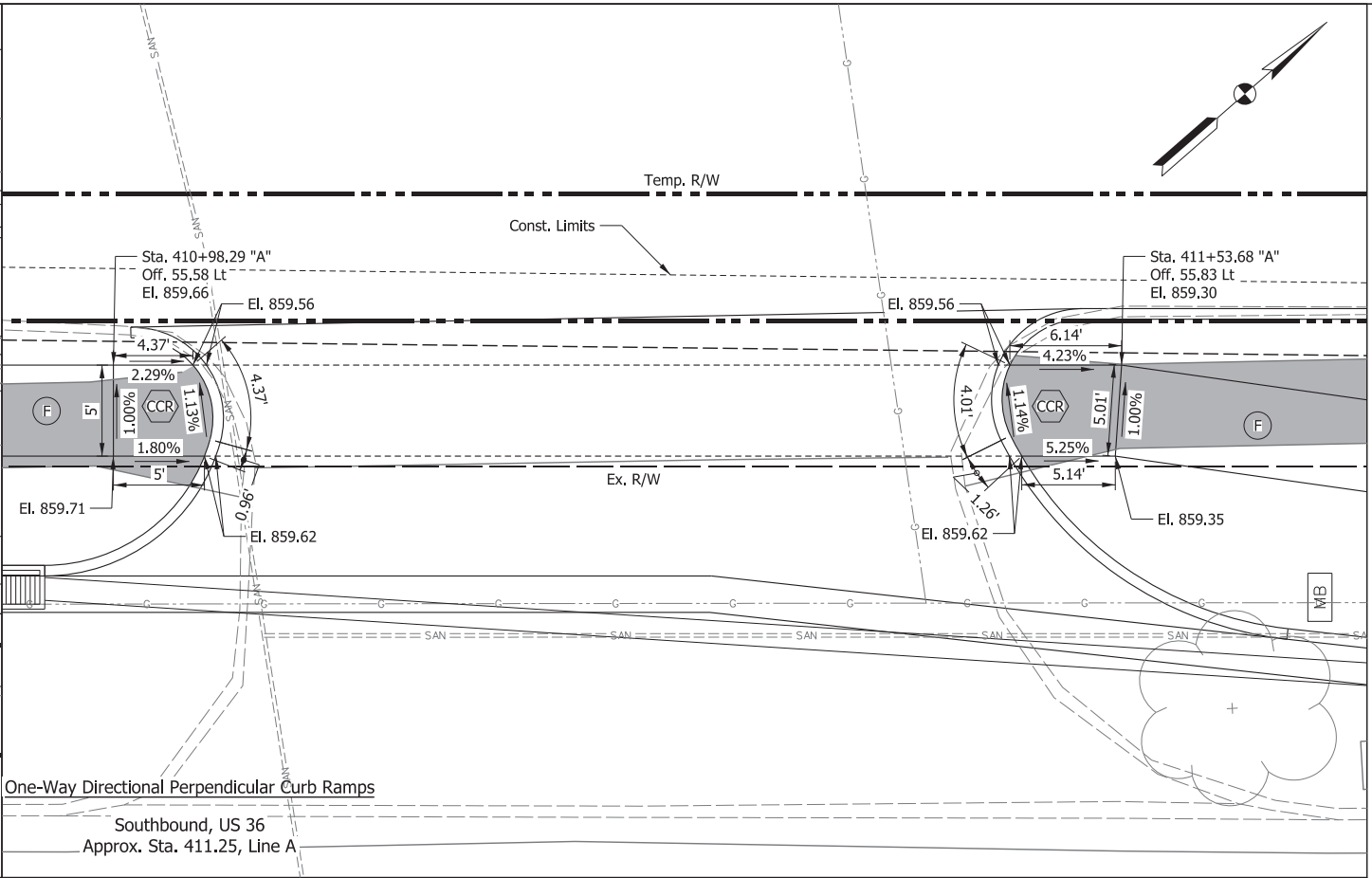
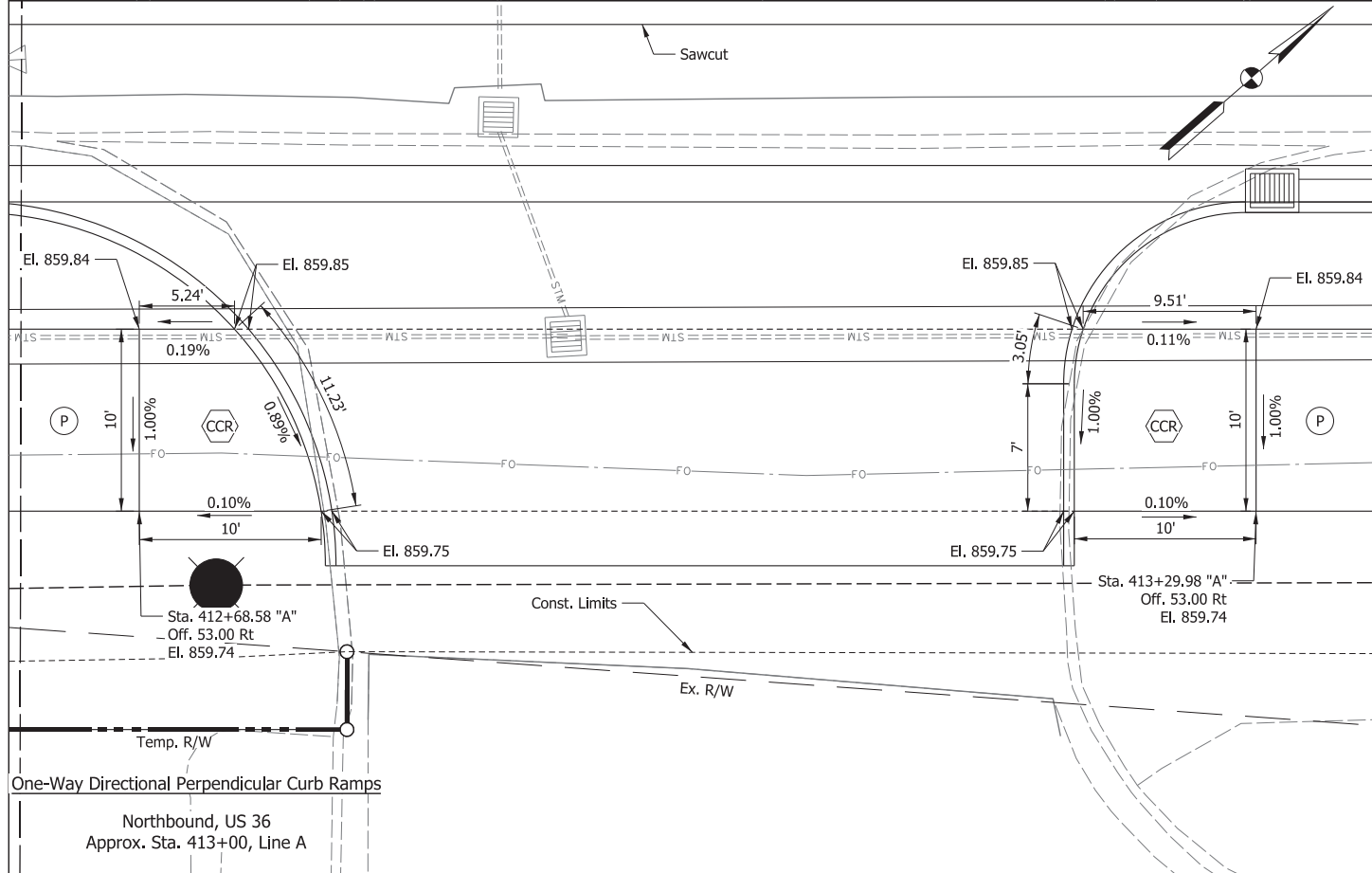
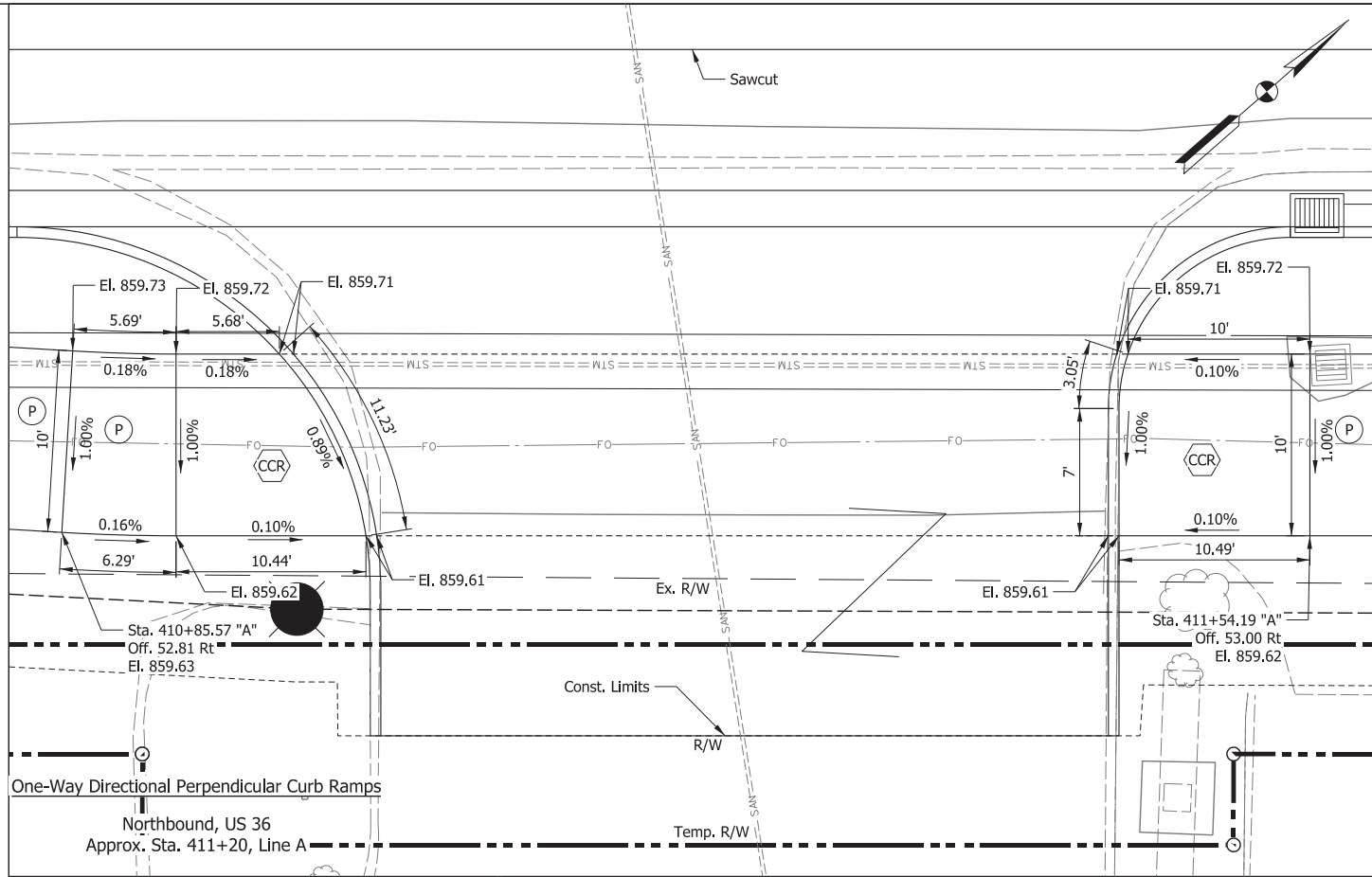
DESIGNATION
1702936, 1802854, 2001127

SURVEY BOOK
ELECTRONIC
CONTRACT
R-41837

SHEETS
121 of 243
PROJECT
1702936, 1802854, 2001127

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B-103



LEGEND	
(P)	Multi-Use Path
(F)	Sidewalk, Concrete
(TS)	Turning Space
(CCR)	Concrete Curb Ramp
*	Match Existing Elevation
(DWS)	Detectable Warning Surfaces
(SCR)	Sidewalk Concrete, Remove

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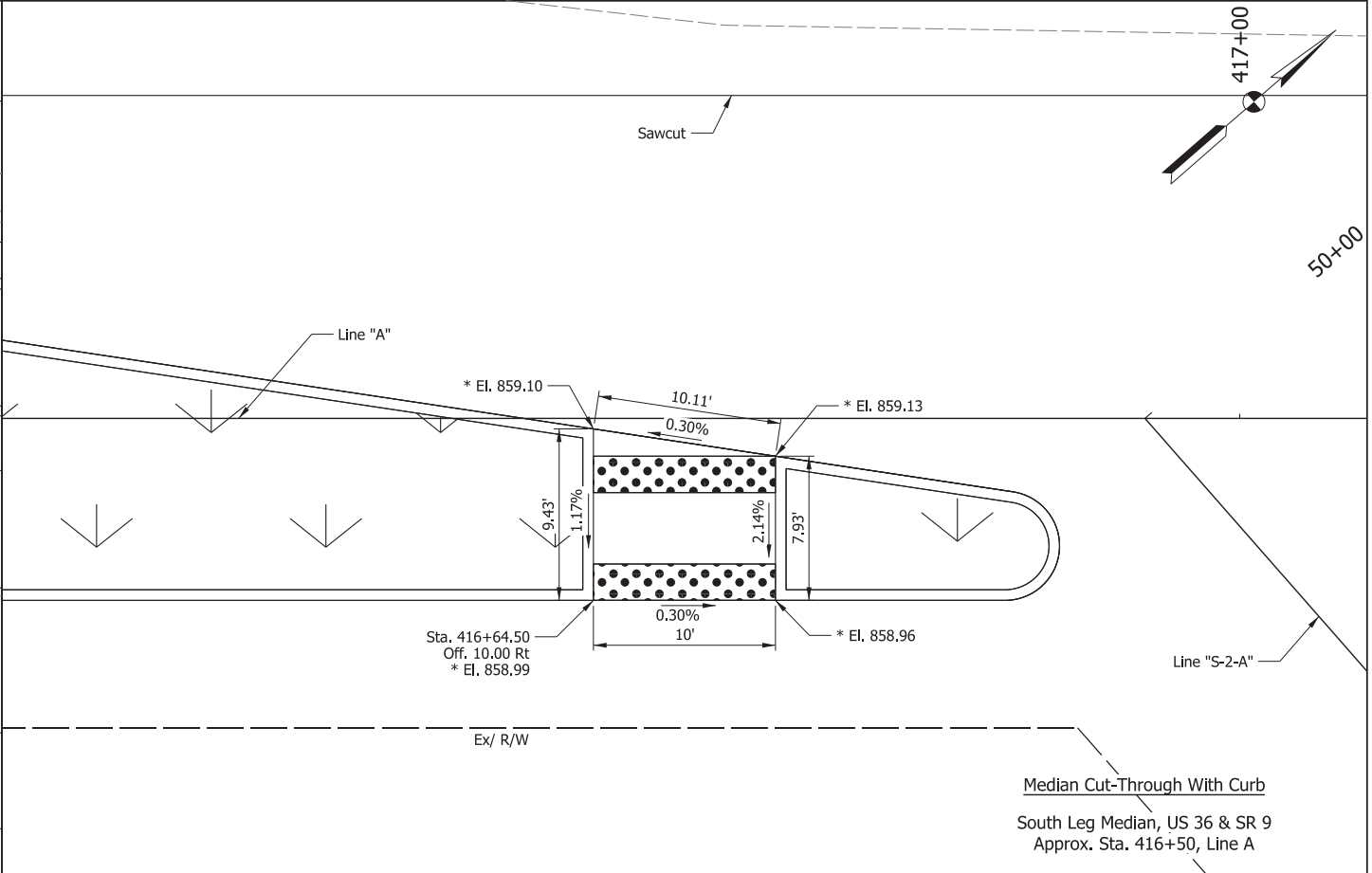
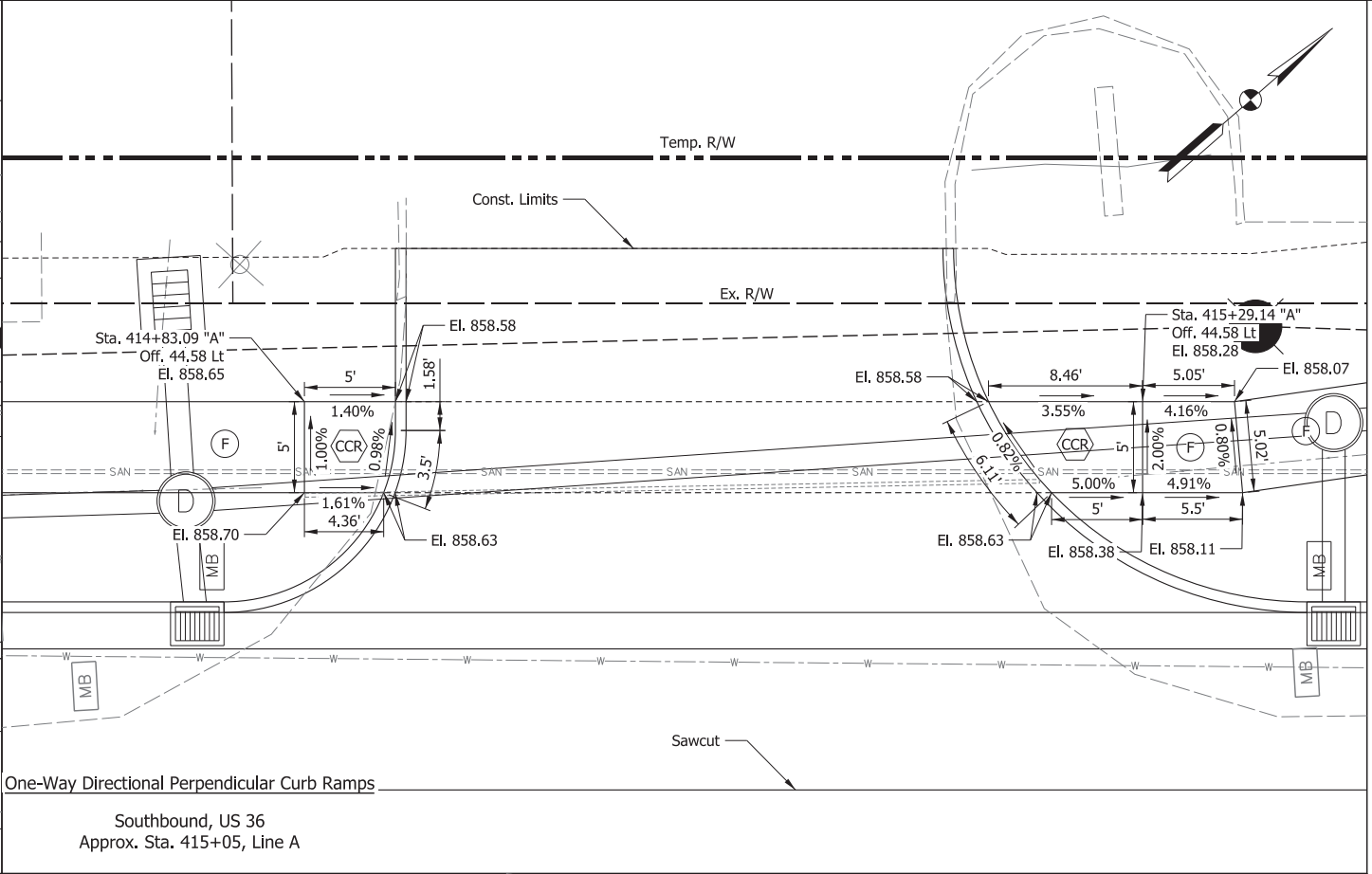
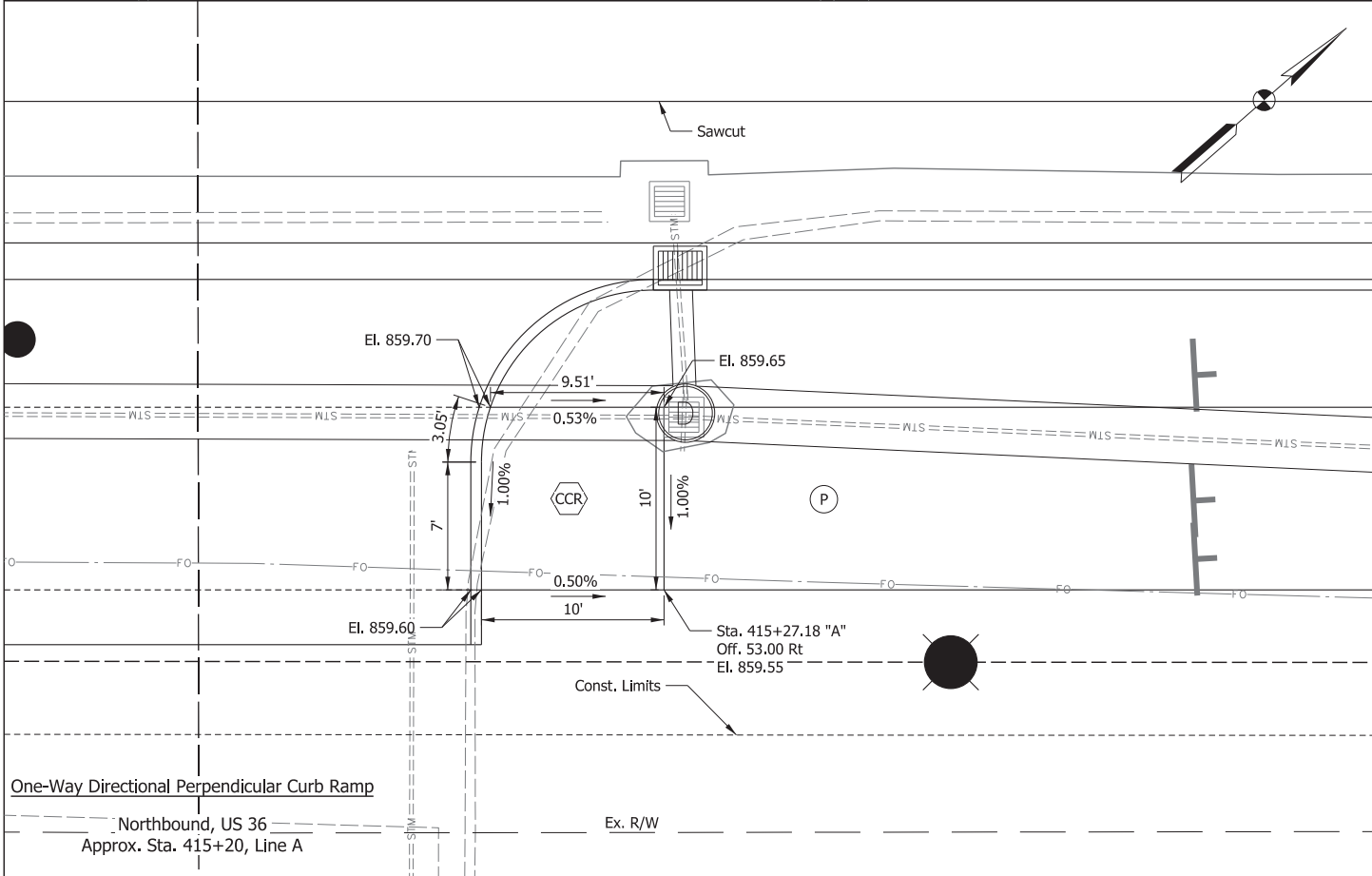
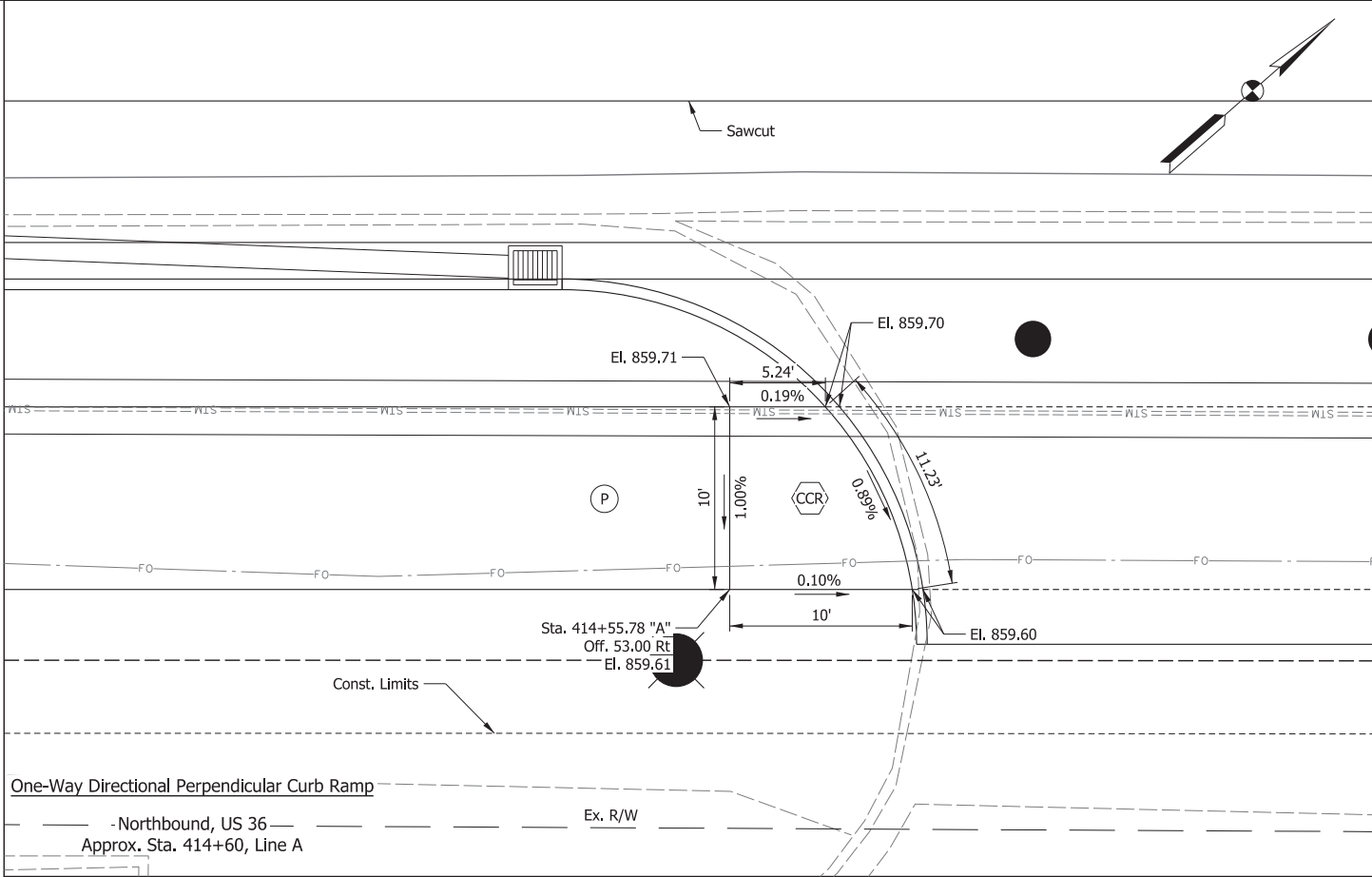
STAGE 3

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: HMM	DRAWN: BDM	
CHECKED: SMS	CHECKED: MJV	

INDIANA
DEPARTMENT OF TRANSPORTATION

CURB RAMP DETAILS
US 36 / SR 9 - Line "A"

SCALE		BRIDGE FILE	
		DESIGNATION	
		1702936, 1802854, 2001127	
SURVEY BOOK		SHEETS	
ELECTRONIC		122	of 243
CONTRACT		PROJECT	
R-41837		1702936, 1802854, 2001127	



LEGEND	
(P)	Multi-Use Path
(F)	Sidewalk, Concrete
(TS)	Turning Space
CCR	Concrete Curb Ramp
*	Match Existing Elevation
◼	Detectable Warning Surfaces
◼	Sidewalk Concrete, Remove

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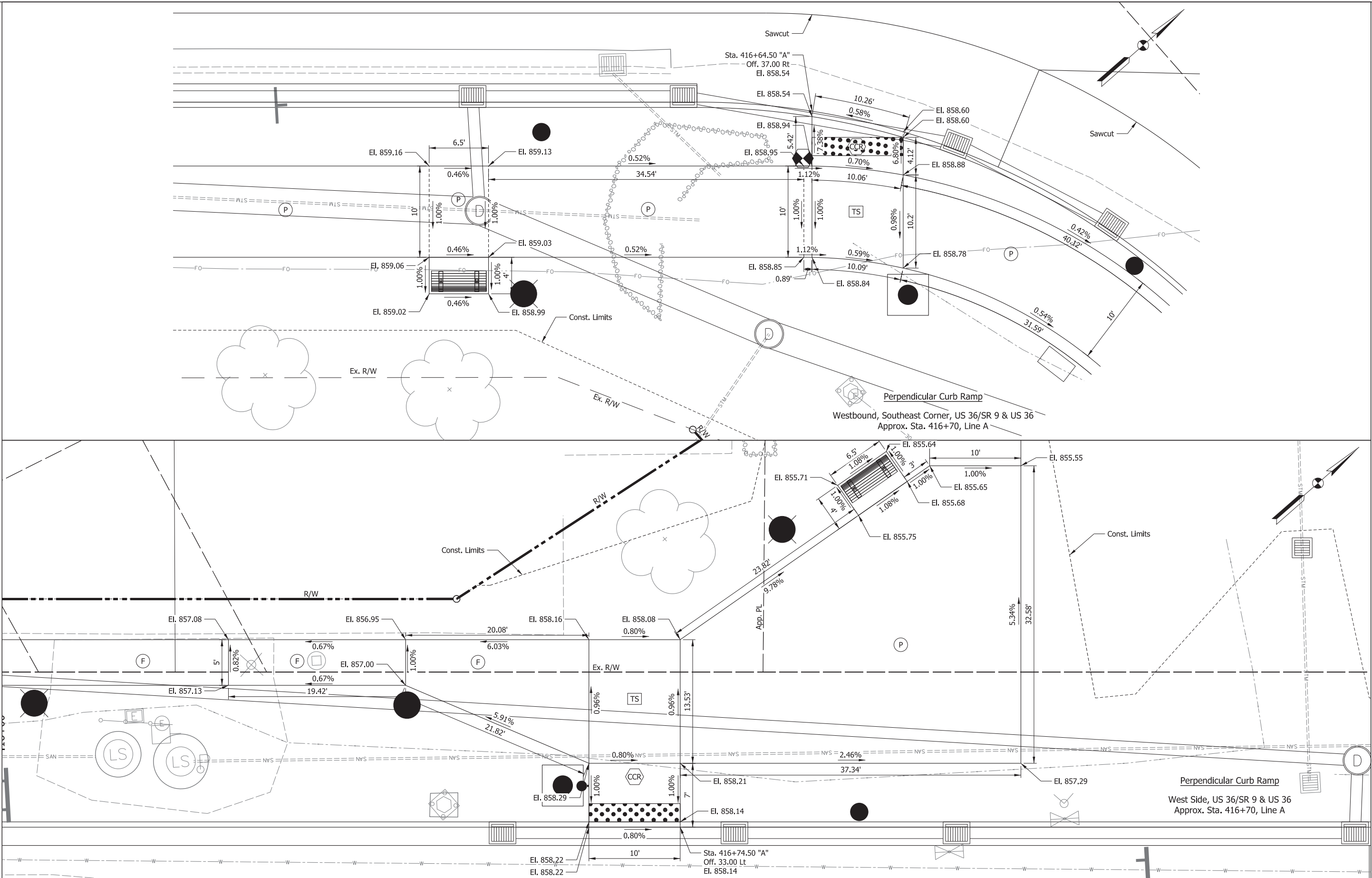
STAGE 3

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: HMH	DRAWN: BDM	
CHECKED: SMS	CHECKED: MJV	

INDIANA
DEPARTMENT OF TRANSPORTATION

CURB RAMP DETAILS
US 36/SR 9 - Line "A"

SCALE		BRIDGE FILE	
1" = 5'-0"		DESIGNATION	
		1702936, 1802854, 2001127	
SURVEY BOOK		SHEETS	
ELECTRONIC		123	of 243
CONTRACT		PROJECT	
R-41837		1702936, 1802854, 2001127	



LEGEND

- (P) Multi-Use Path
- (F) Sidewalk, Concrete
- (TS) Turning Space
- CCR Concrete Curb Ramp
- * Match Existing Elevation
- ◼ Detectable Warning Surfaces
- ◼ Sidewalk Concrete, Remove

CDM Smith

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Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED FOR APPROVAL _____

DESIGN ENGINEER _____ DATE _____

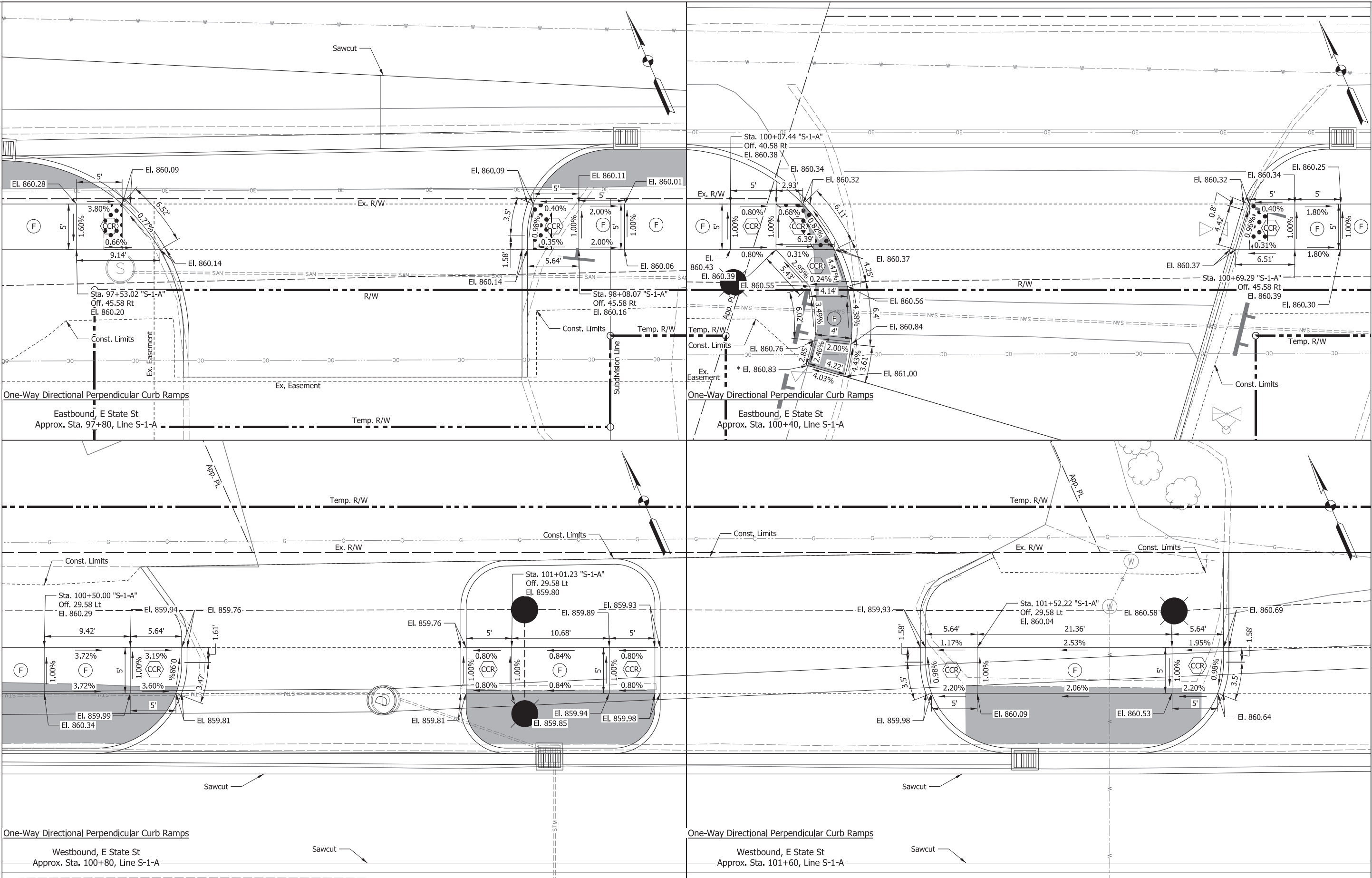
DESIGNED: HMM DRAWN: BDM

CHECKED: SMS CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

**CURB RAMP DETAILS
US 36/SR 9 - Line "A"**

SCALE 1" = 5'-0"	BRIDGE FILE
	DESIGNATION 1702936, 1802854, 2001127
SURVEY BOOK	SHEETS
ELECTRONIC	124 of 243
CONTRACT R-41837	PROJECT 1702936, 1802854, 2001127



LEGEND	
	Multi-Use Path
	Sidewalk, Concrete
	Turning Space
	Concrete Curb Ramp
	Match Existing Elevation
	Detectable Warning Surfaces
	Sidewalk Concrete, Remove

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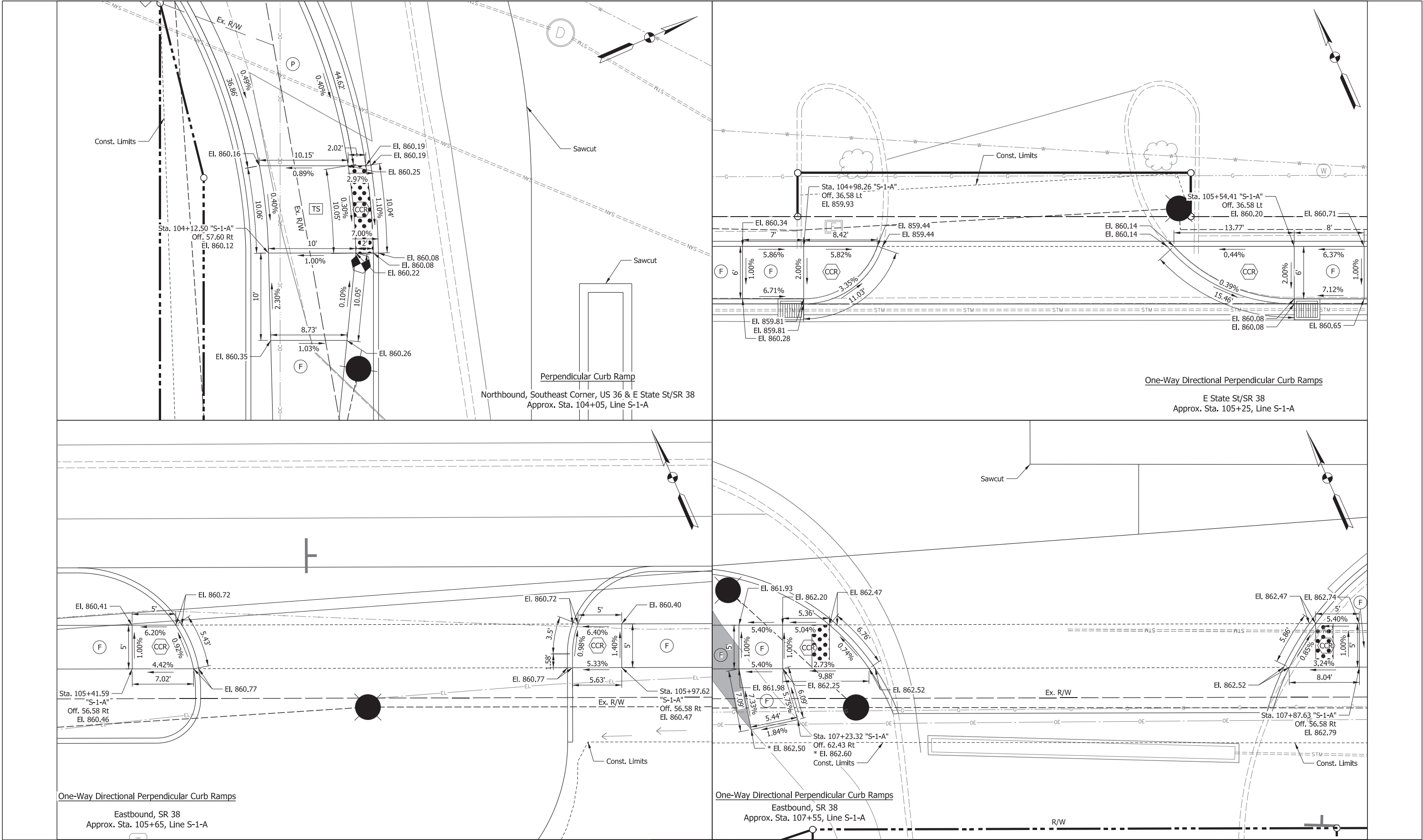
STAGE 3

RECOMMENDED FOR APPROVAL	
DESIGN ENGINEER	DATE
DESIGNED: HMH	DRAWN: BDM
CHECKED: SMS	CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

CURB RAMP DETAILS
E STATE ST - Line "S-1-A"

SCALE		BRIDGE FILE	
1" = 5'-0"		DESIGNATION	
		1702936, 1802854, 2001127	
SURVEY BOOK		SHEETS	
ELECTRONIC		125	of 243
CONTRACT		PROJECT	
R-41837		1702936, 1802854, 2001127	



LEGEND

- (P) Multi-Use Path
- (F) Sidewalk, Concrete
- TS Turning Space
- CCR Concrete Curb Ramp
- * Match Existing Elevation
- ◼ Detectable Warning Surfaces
- ◼ Sidewalk Concrete, Remove

CDM Smith

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Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED FOR APPROVAL _____

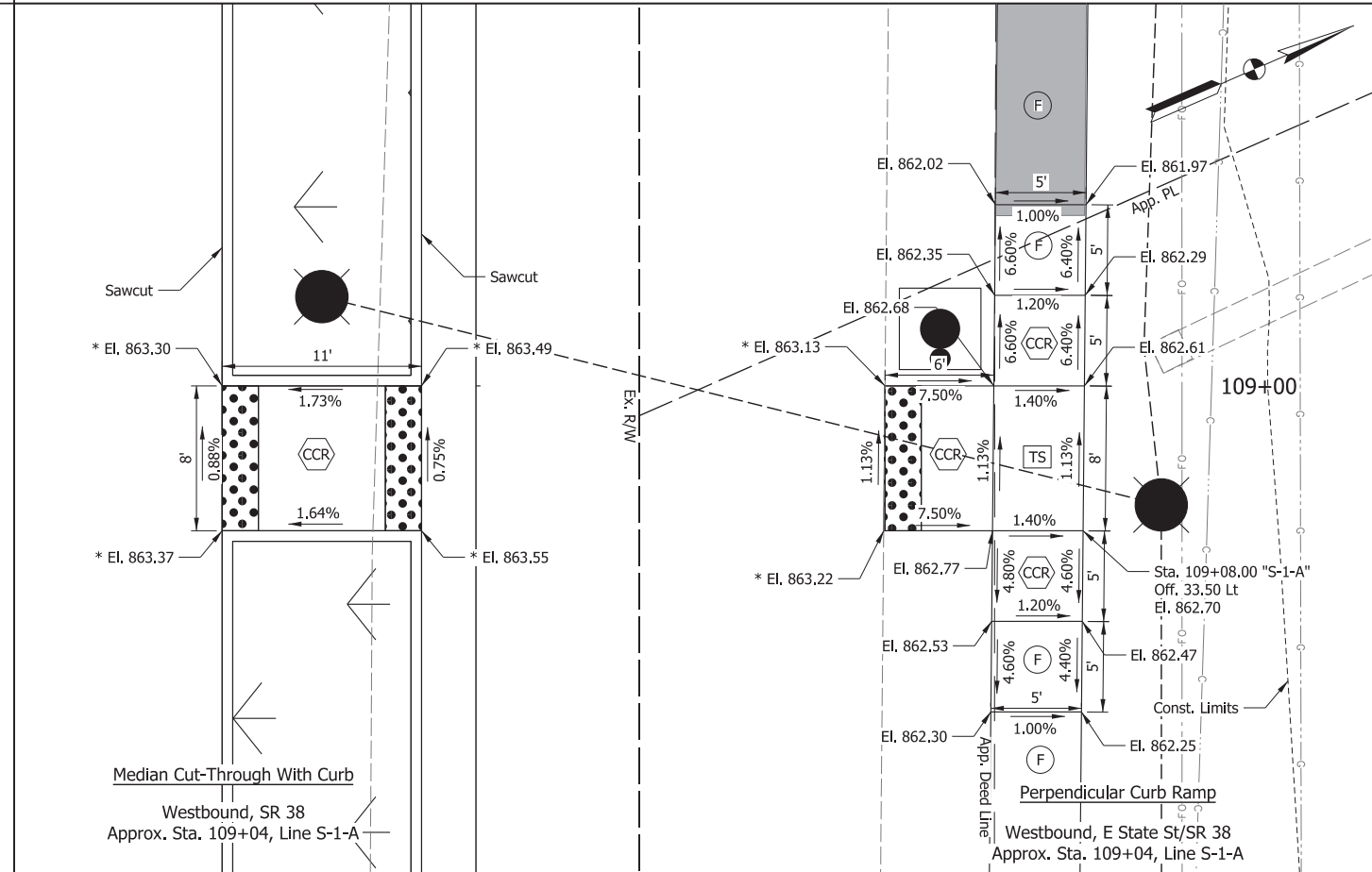
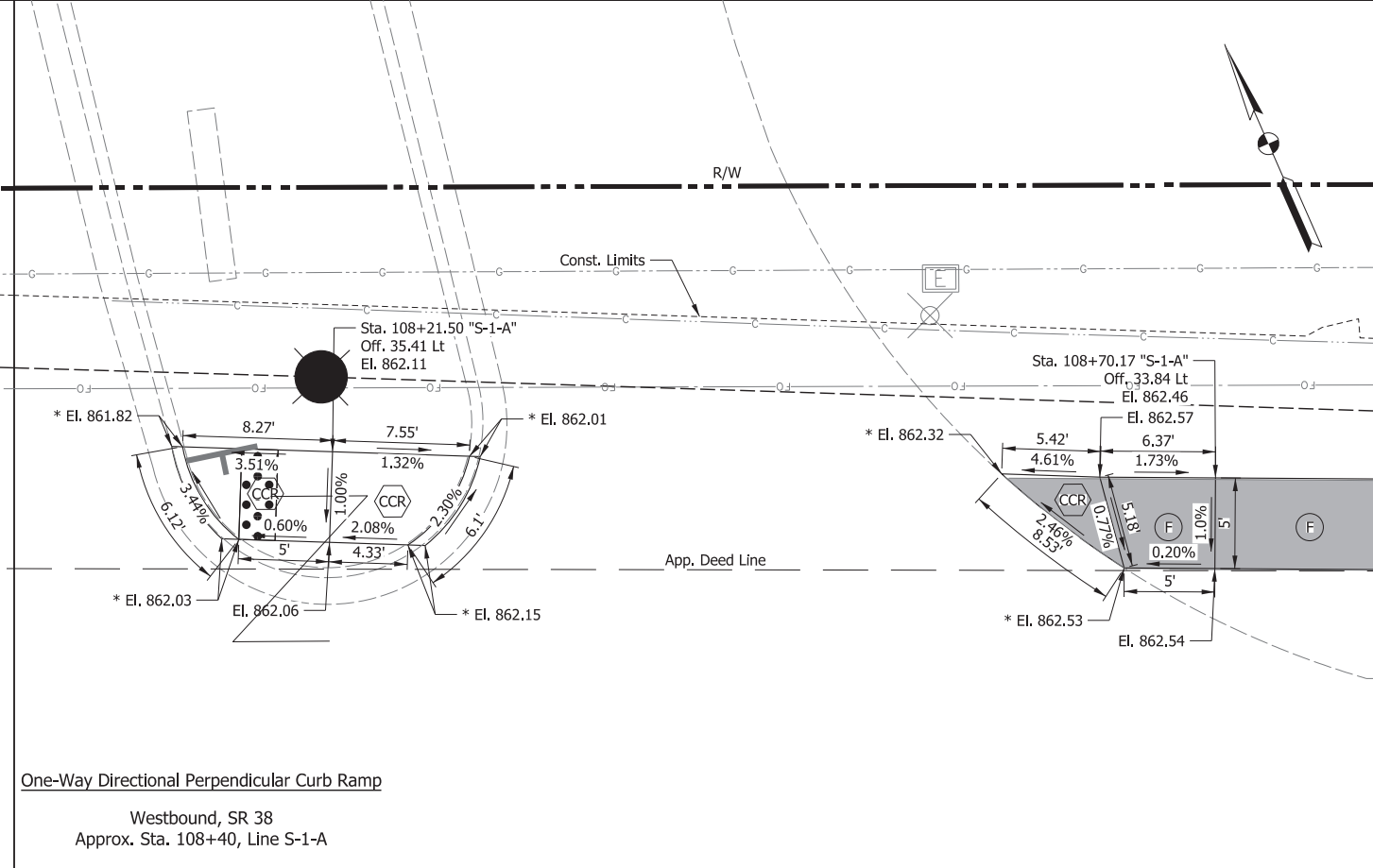
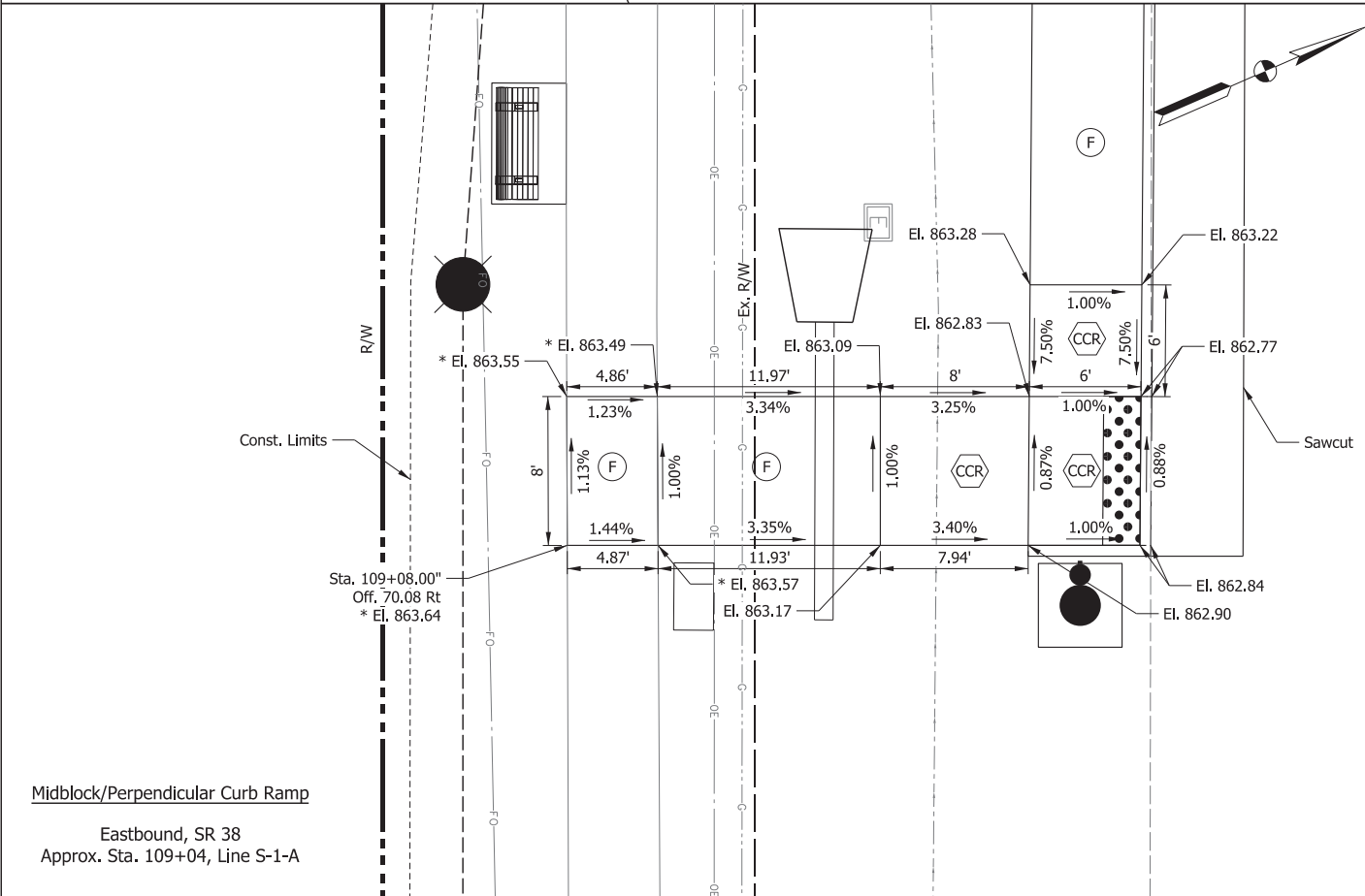
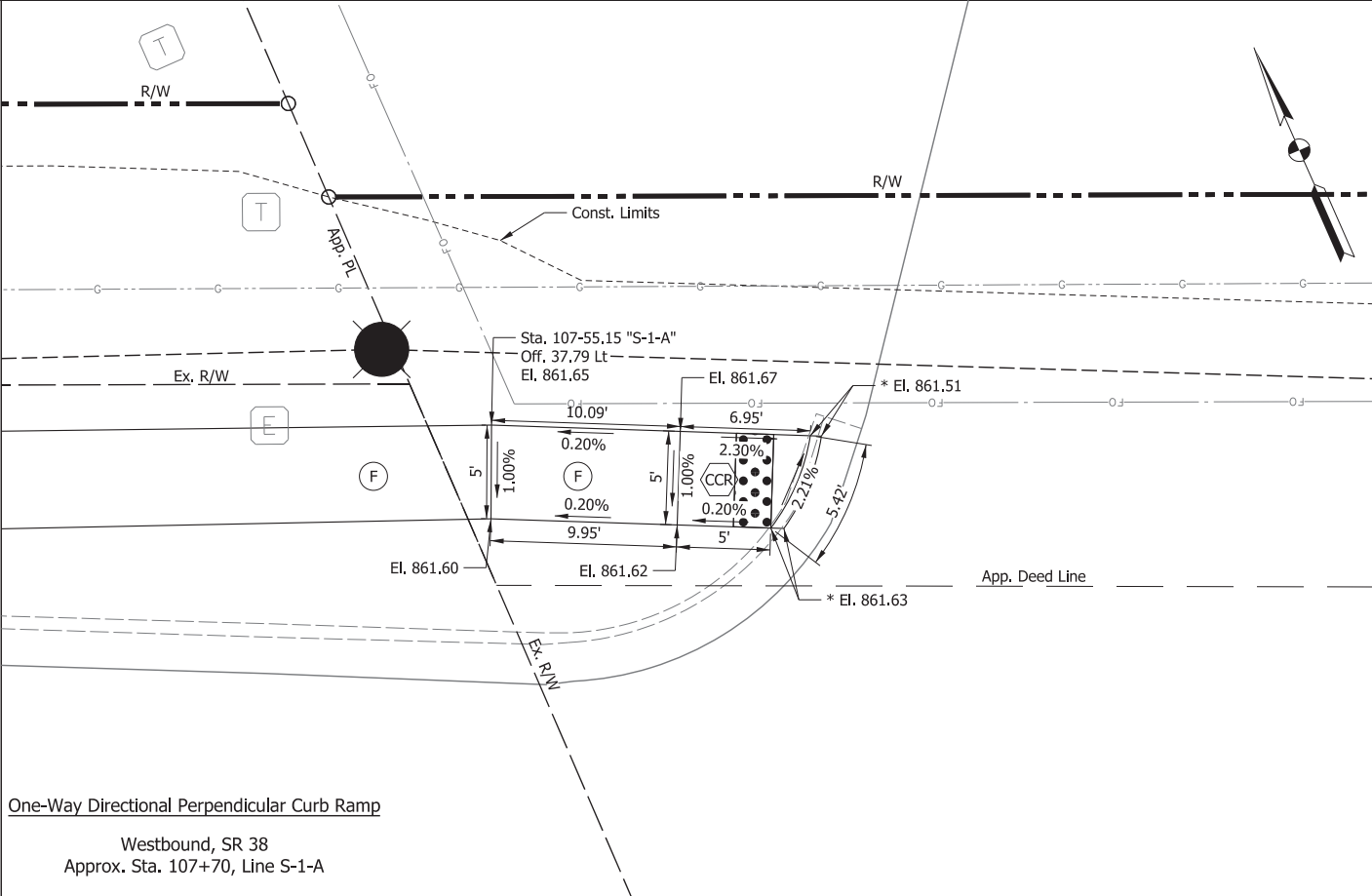
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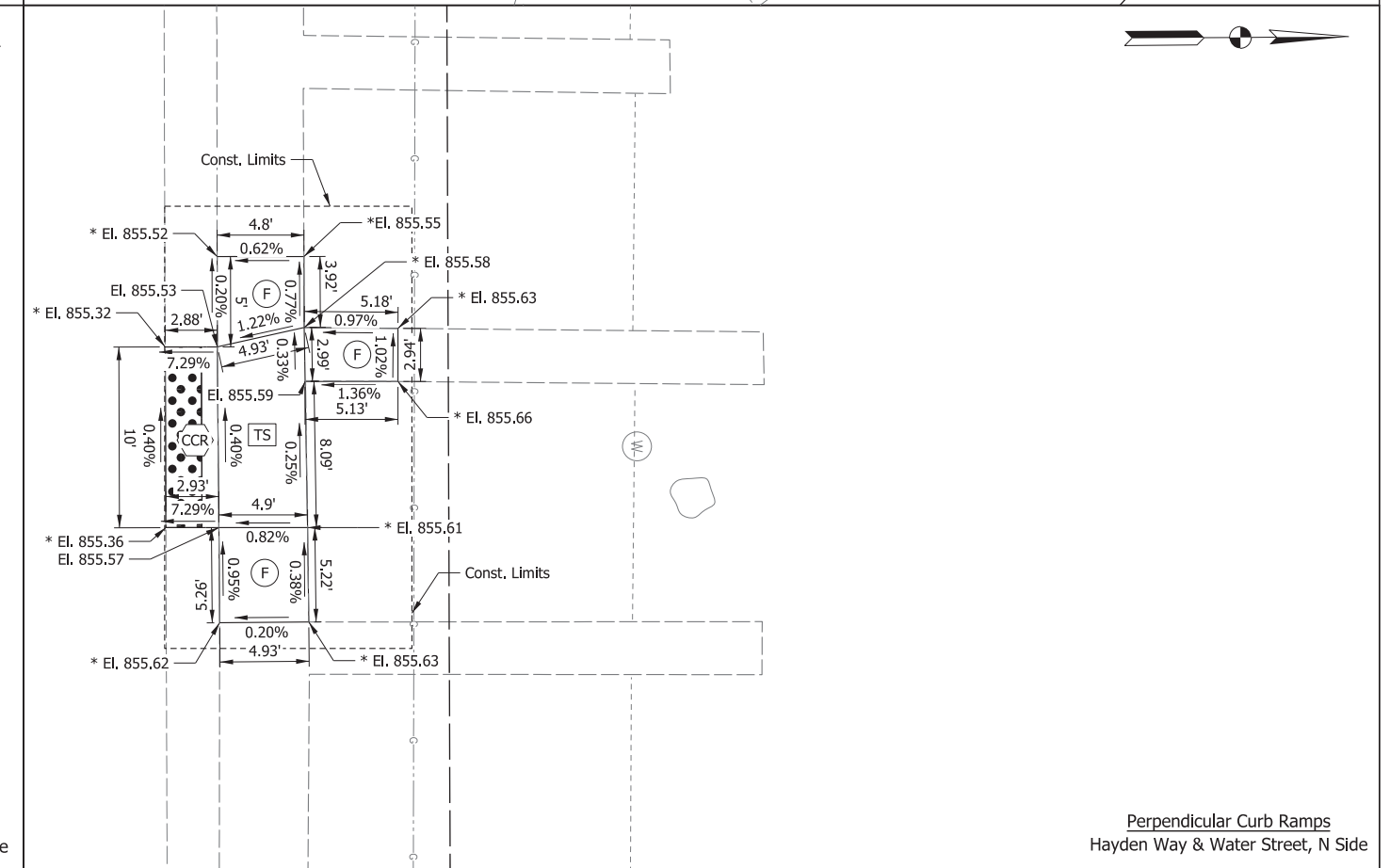
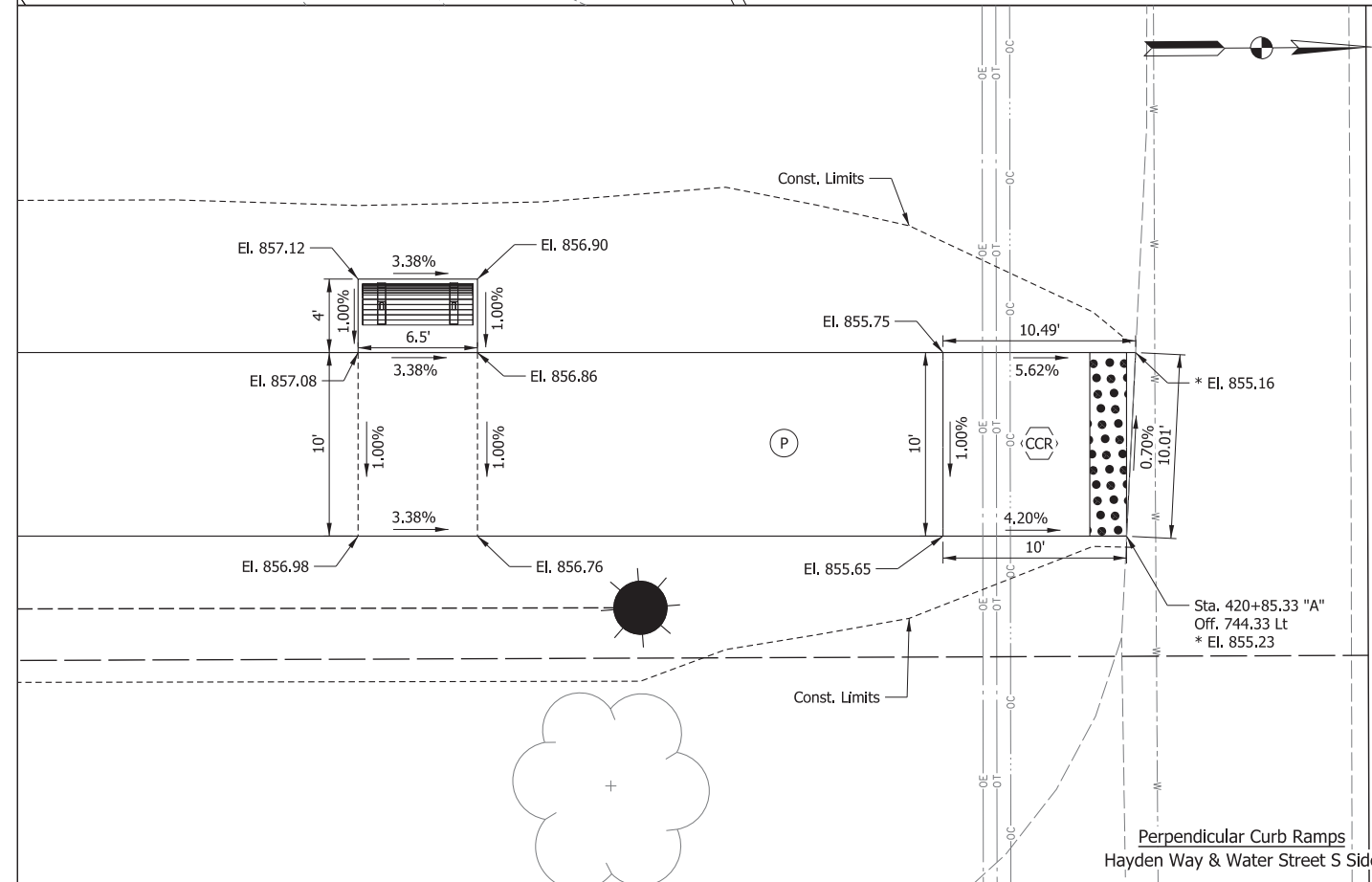
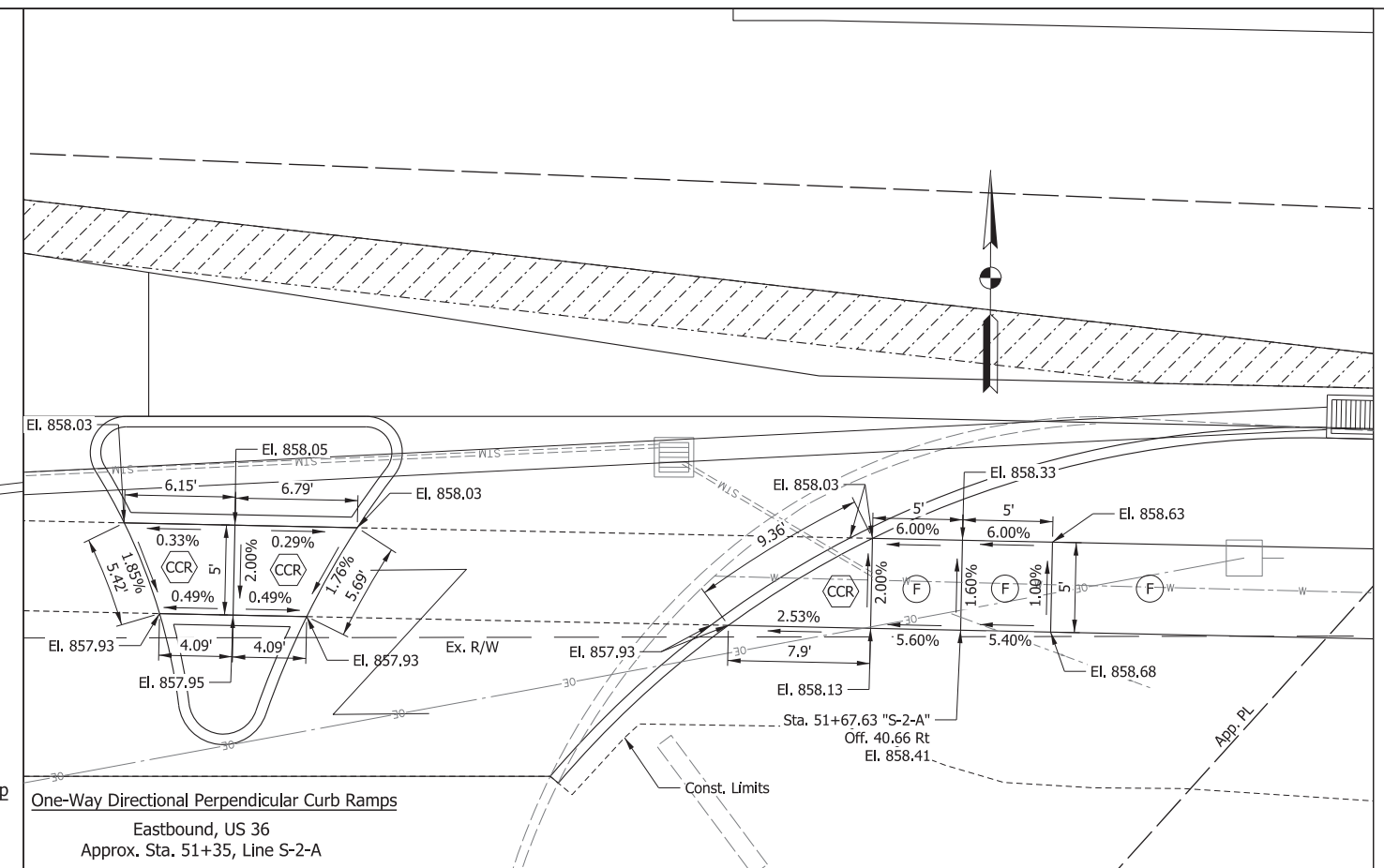
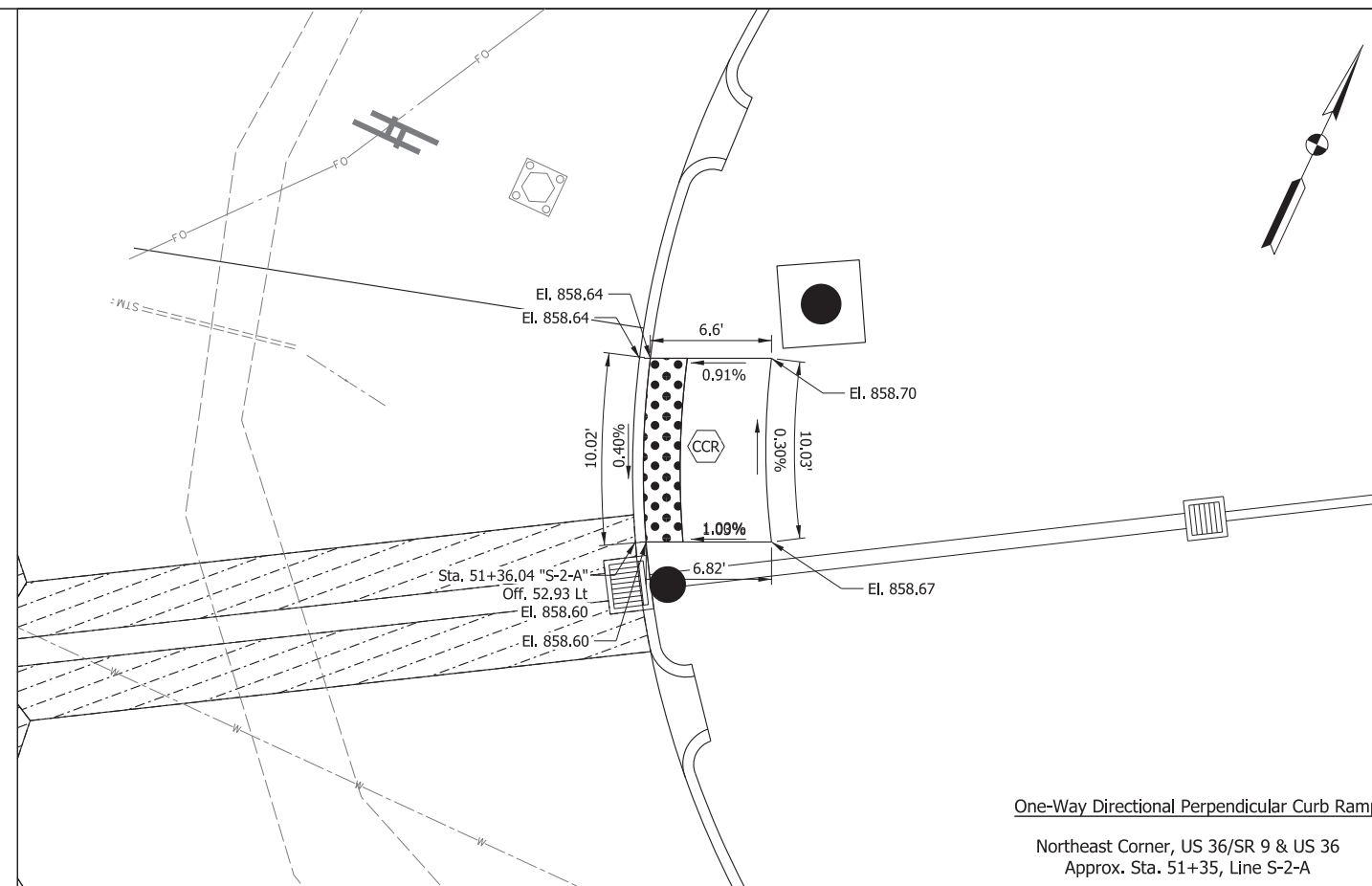
INDIANA
DEPARTMENT OF TRANSPORTATION

**CURB RAMP DETAILS
E STATE ST/SR 38 - Line "S-1-A"**

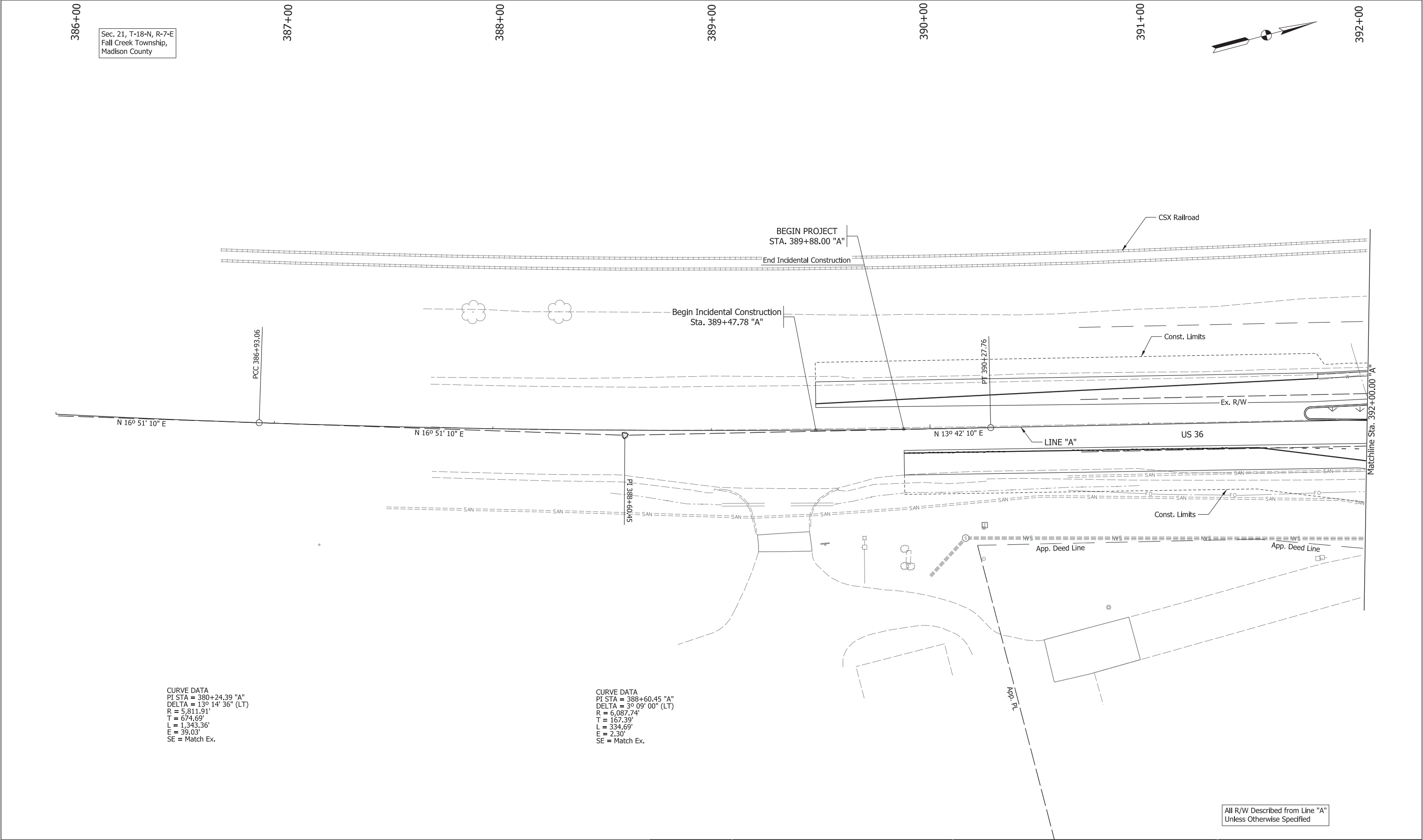
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	DESIGNATION 1702936, 1802854, 2001127
SURVEY BOOK	SHEETS
ELECTRONIC	126 of 243
CONTRACT R-41837	PROJECT 1702936, 1802854, 2001127



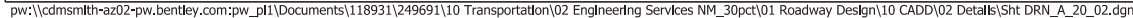
LEGEND		CDM Smith		STAGE 3		INDIANA		SCALE		BRIDGE FILE	
(P)	Multi-Use Path	(CCR)	Concrete Curb Ramp			DEPARTMENT OF TRANSPORTATION		1" = 5'-0"		DESIGNATION	
(F)	Sidewalk, Concrete	*	Match Existing Elevation			CURB RAMP DETAILS E STATE ST/SR 38 - Line "S-1-A"				1702936, 1802854, 2001127	
(TS)	Turning Space	(DWS)	Detectable Warning Surfaces							SHEETS	
		(SC)	Sidewalk Concrete, Remove							127 of 243	
										PROJECT	
										R-41837	
										1702936, 1802854, 2001127	

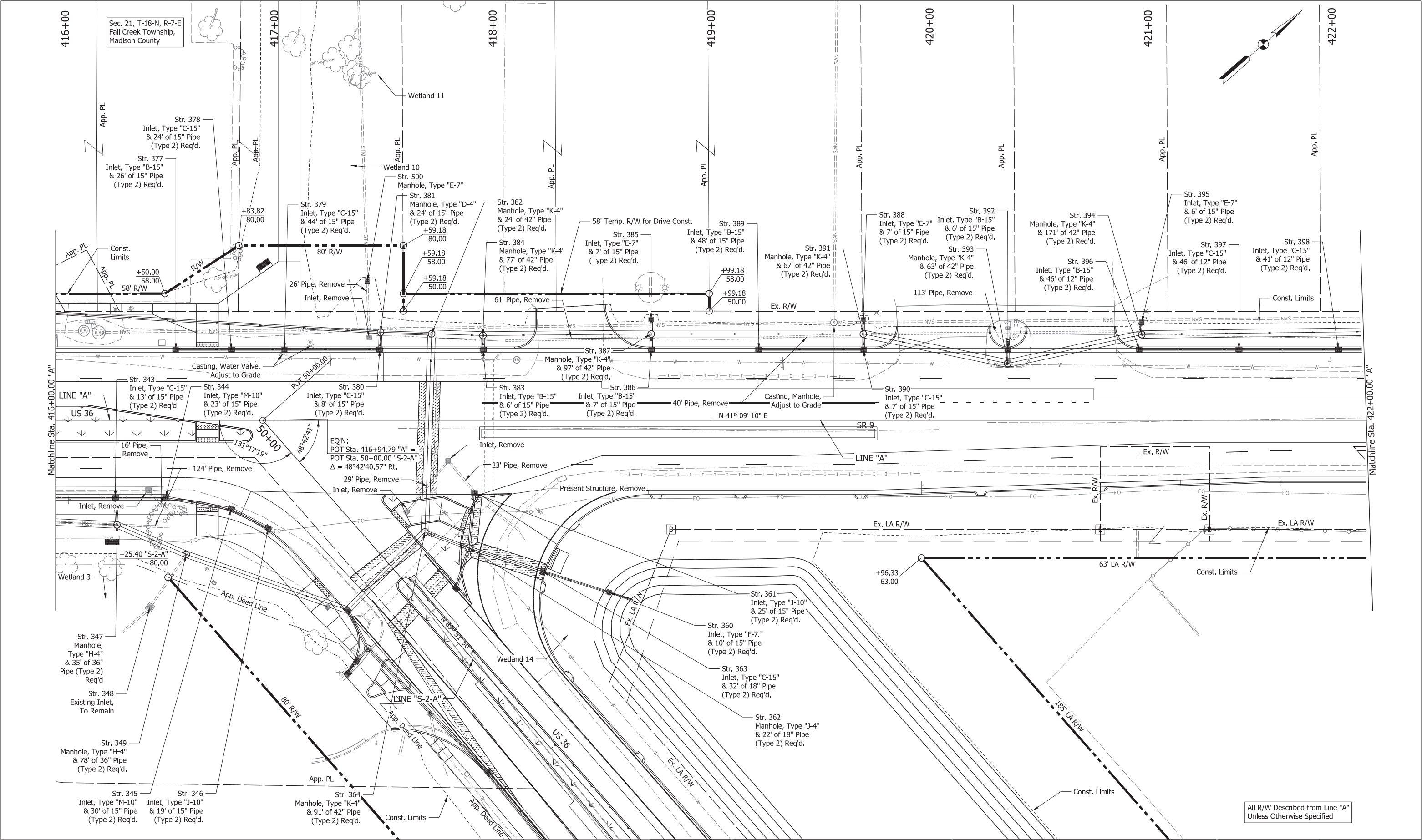


LEGEND  Concrete Curb Ramp  Multi-Use Path  Sidewalk, Concrete  Turning Space  Match Existing Elevation  Detectable Warning Surfaces  Sidewalk Concrete, Remove		 211 North Pennsylvania Street, Ste 1750 Indianapolis, IN 46204 Tel: (317) 829-9600 STAGE 3	RECOMMENDED FOR APPROVAL DESIGN ENGINEER DATE DESIGNED: <u>HMH</u> DRAWN: <u>BDM</u> CHECKED: <u>SMS</u> CHECKED: <u>MJV</u>	INDIANA DEPARTMENT OF TRANSPORTATION CURB RAMP DETAILS US 36 - Line "S-2-A" HAYDEN WAY PATH - Line "Path-N"	SCALE 1" = 5'-0" BRIDGE FILE DESIGNATION 1702936, 1802854, 2001127	SURVEY BOOK ELECTRONIC CONTRACT R-41837 SHEETS 129 of 243 PROJECT 1702936, 1802854, 2001127
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 211 North Pennsylvania Street, Ste 1750 Indianapolis, IN 46204 Tel: (317) 829-9600	STAGE 3	RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____		INDIANA DEPARTMENT OF TRANSPORTATION		SCALE 1" = 20'-0"	BRIDGE FILE
		DESIGNED: HMM CHECKED: SMS		DRAWN: BDM CHECKED: MJV			DESIGNATION 1702936, 1802854, 2001127
				DRAINAGE DETAILS US 36 - LINE "A"		SURVEY BOOK ELECTRONIC CONTRACT R-41837	SHEETS 139 of 243 PROJECT 1702936, 1802854, 2001127





All R/W Described from Line "A"
Unless Otherwise Specified

**CDM
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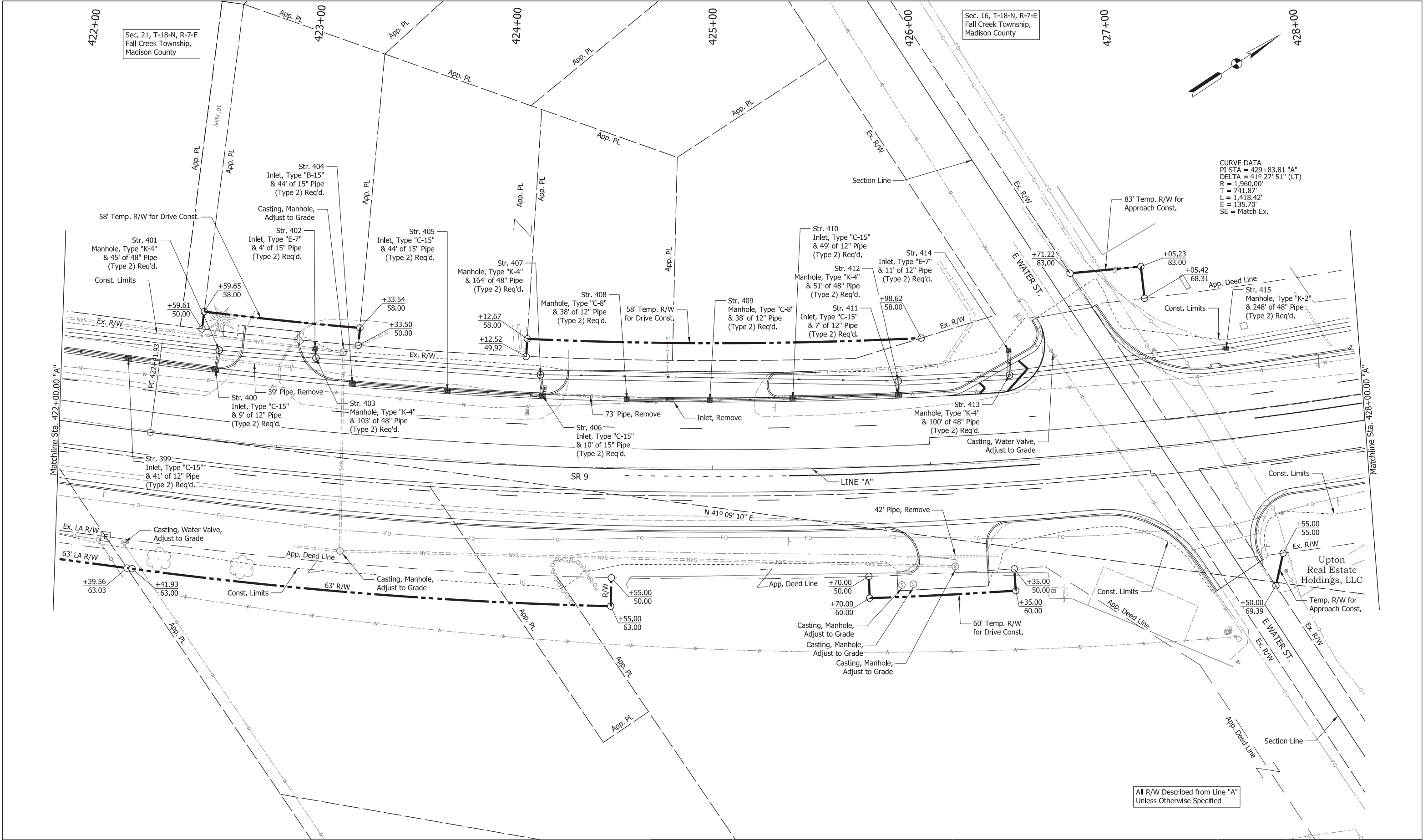
STAGE 3

RECOMMENDED FOR APPROVAL _____		DESIGN ENGINEER _____	DATE _____
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CHECKED: SMS		CHECKED: MJV	

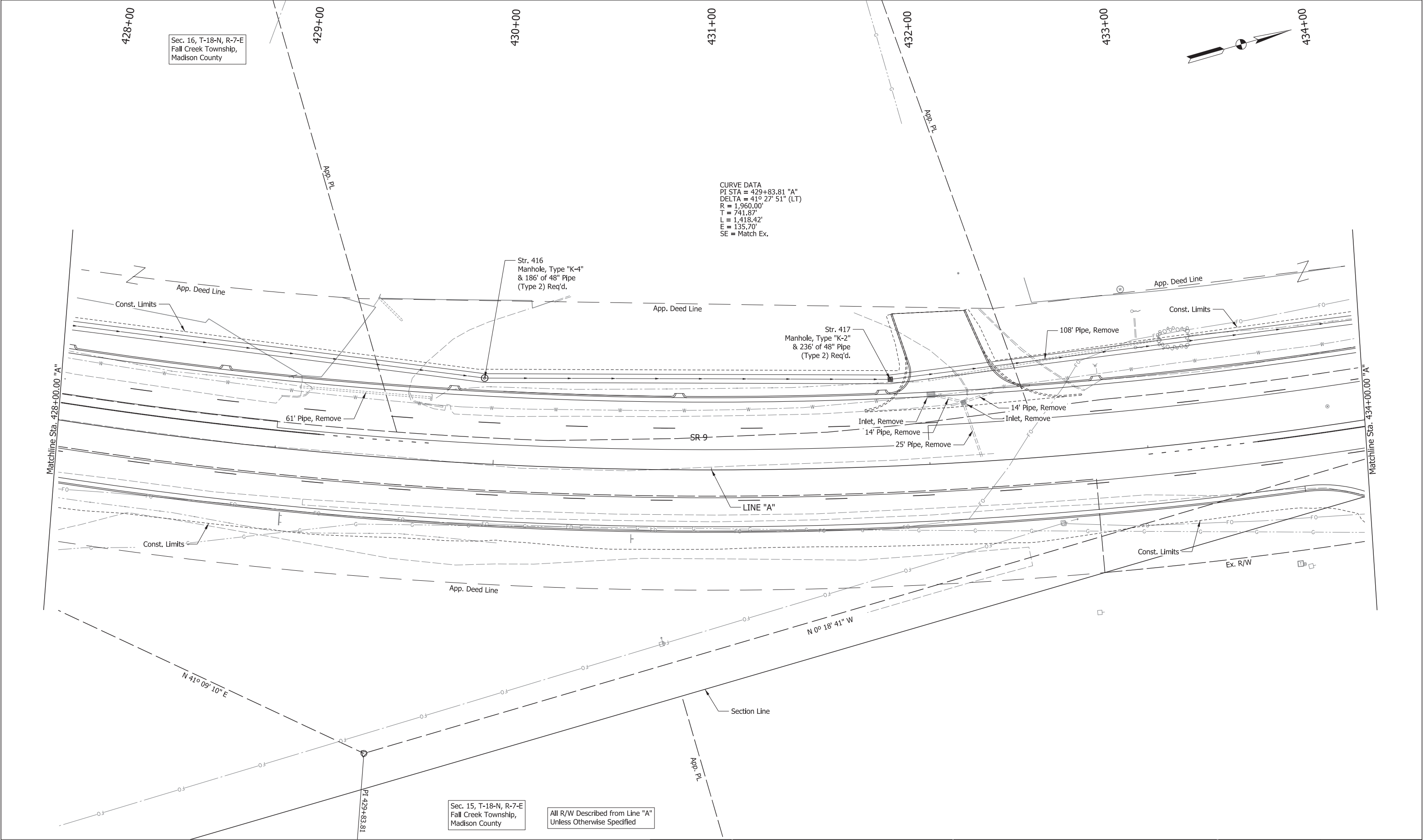
INDIANA
DEPARTMENT OF TRANSPORTATION

DRAINAGE DETAILS
US 36 / SR 9 - LINE "A"

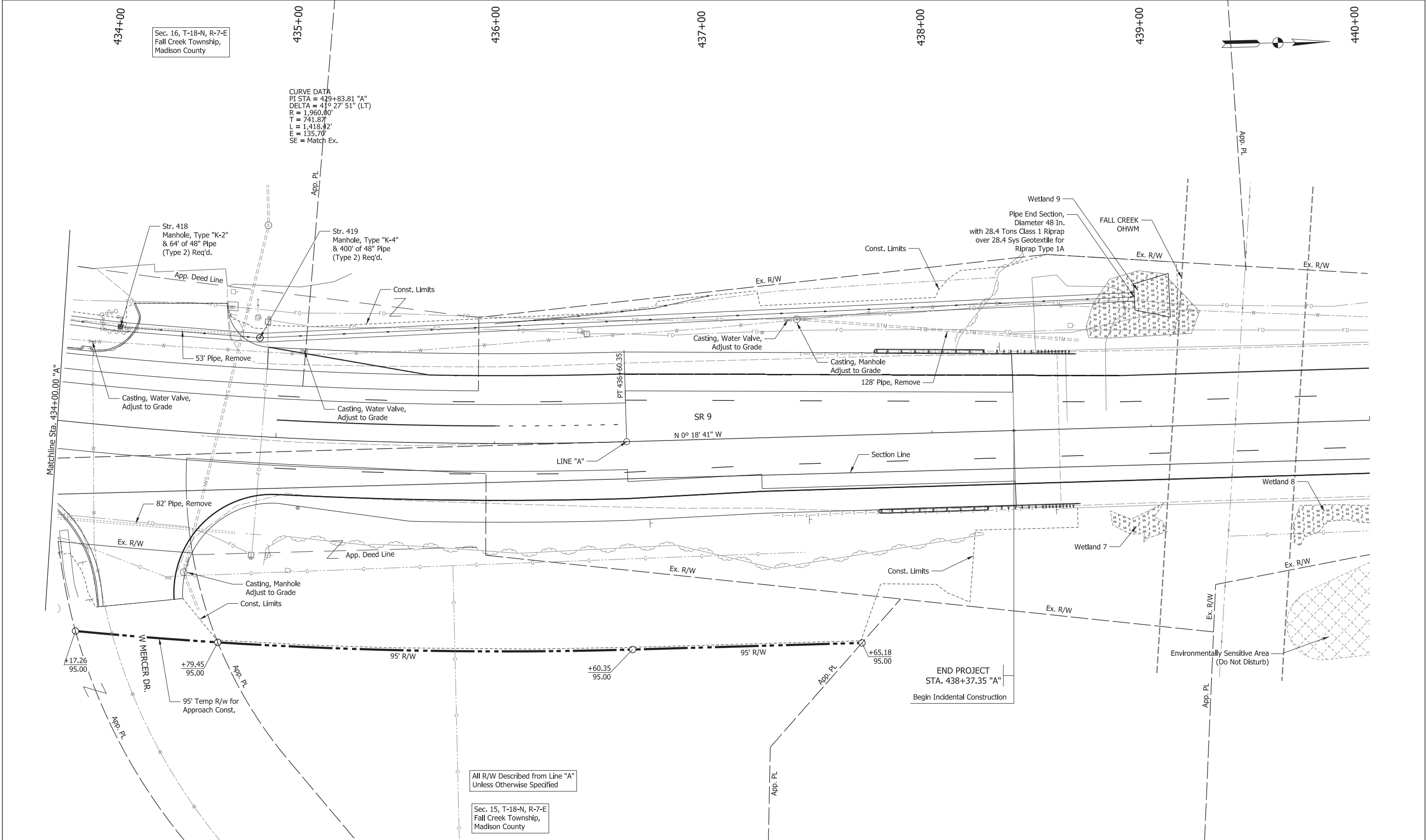
SCALE 1" = 20'-0"	BRIDGE FILE	
	DESIGNATION 1702936, 1802854, 2001127	
SURVEY BOOK	SHEETS	
ELECTRONIC	144	of 243
CONTRACT	PROJECT	
R-41837	1702936, 1802854, 2001127	



CDM Smith 211 North Pennsylvania Street, Ste 1750 Indianapolis, IN 46204 Tel: (317) 829-9600	STAGE 3	RECOMMENDED FOR APPROVAL _____		INDIANA DEPARTMENT OF TRANSPORTATION		SCALE 1" = 20'-0"		BRIDGE FILE	
		DESIGNED: HMH		DRAWN: BDM		DESIGNATION		SHEETS	
		CHECKED: SMS		CHECKED: MJV		SURVEY BOOK		145 of 243	
						ELECTRONIC		PROJECT	
						CONTRACT R-41837		1702936, 1802854, 2001127	
				DRAINAGE DETAILS SR 9 - LINE "A"					



CDM Smith 211 North Pennsylvania Street, Ste 1750 Indianapolis, IN 46204 Tel: (317) 829-9600	STAGE 3	RECOMMENDED FOR APPROVAL DESIGN ENGINEER DATE DESIGNED: HMH CHECKED: SMS DRAWN: BDM CHECKED: MJV	INDIANA DEPARTMENT OF TRANSPORTATION DRAINAGE DETAILS SR 9 - LINE "A"	SCALE 1" = 20'-0"	BRIDGE FILE
					DESIGNATION 1702936, 1802854, 2001127
				SURVEY BOOK	SHEETS 146 of 243
				ELECTRONIC CONTRACT R-41837	PROJECT 1702936, 1802854, 2001127



211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

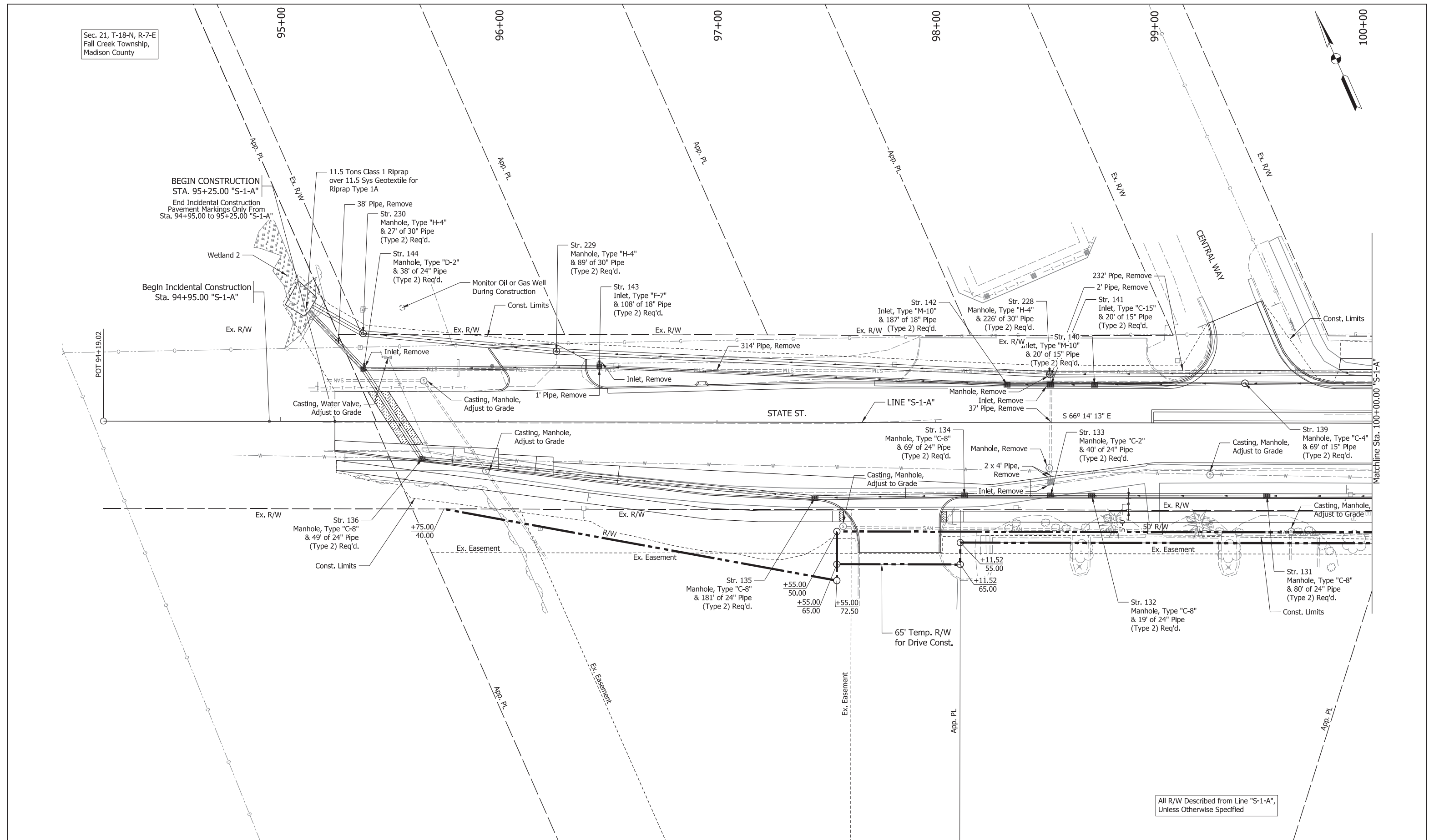
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CHECKED: SMS

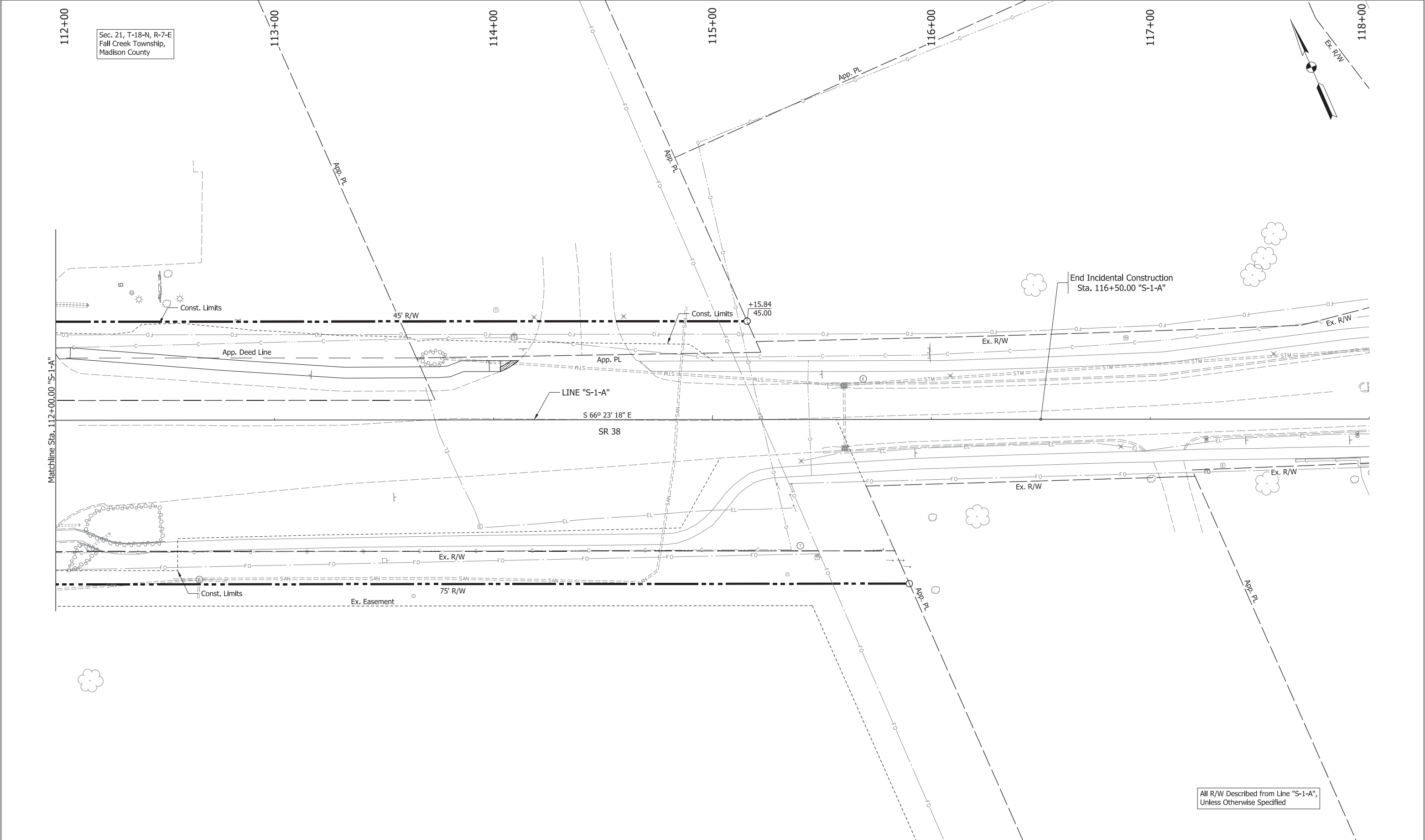
DESIGN ENGINEER _____
DRAWN: BDM
CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

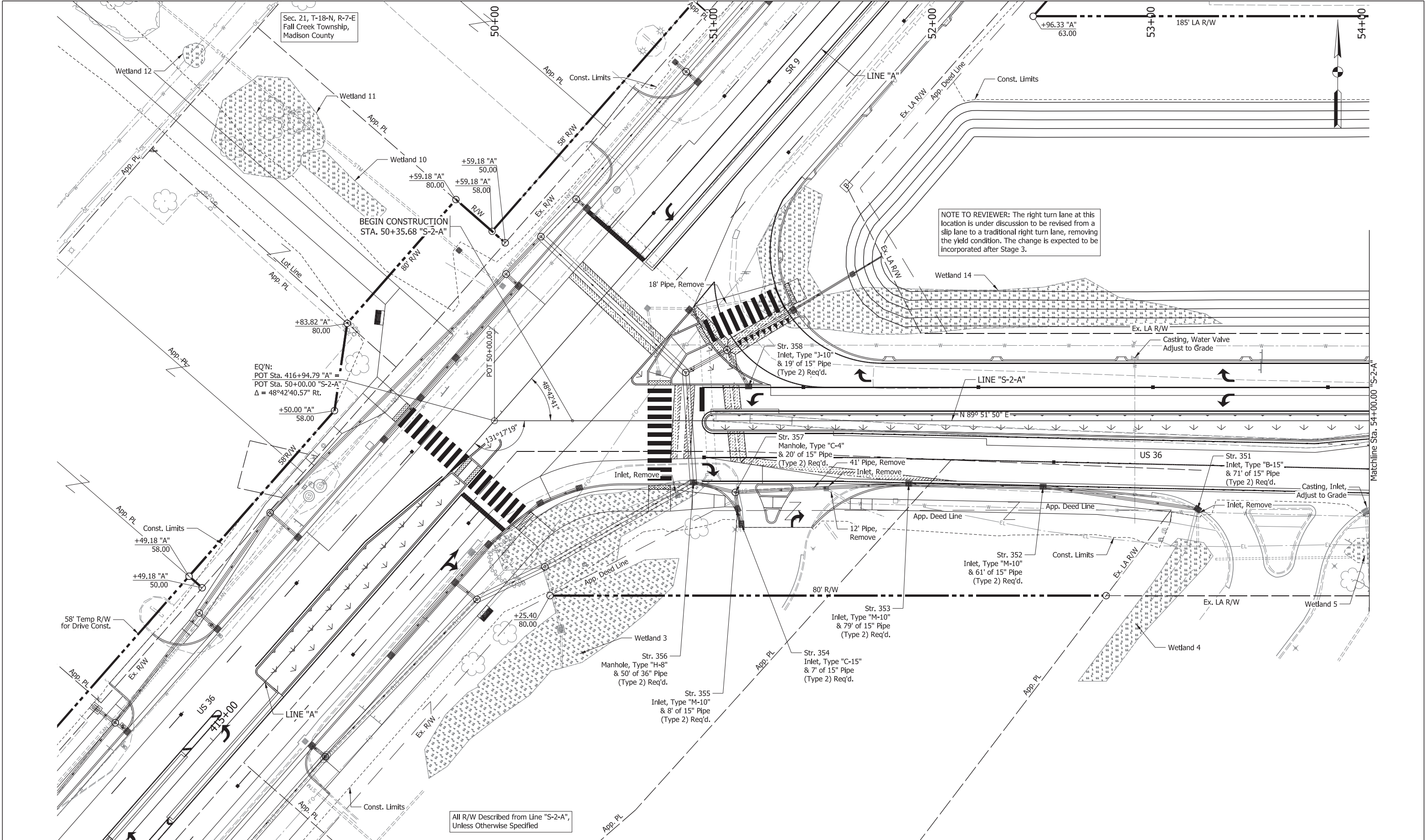
DRAINAGE DETAILS
SR 9 - LINE "A"

SCALE 1" = 20'-0"	BRIDGE FILE
	DESIGNATION 1702936, 1802854, 2001127
SURVEY BOOK	SHEETS
ELECTRONIC	147 of 249
CONTRACT	PROJECT
R-41837	1702936, 1802854, 2001127

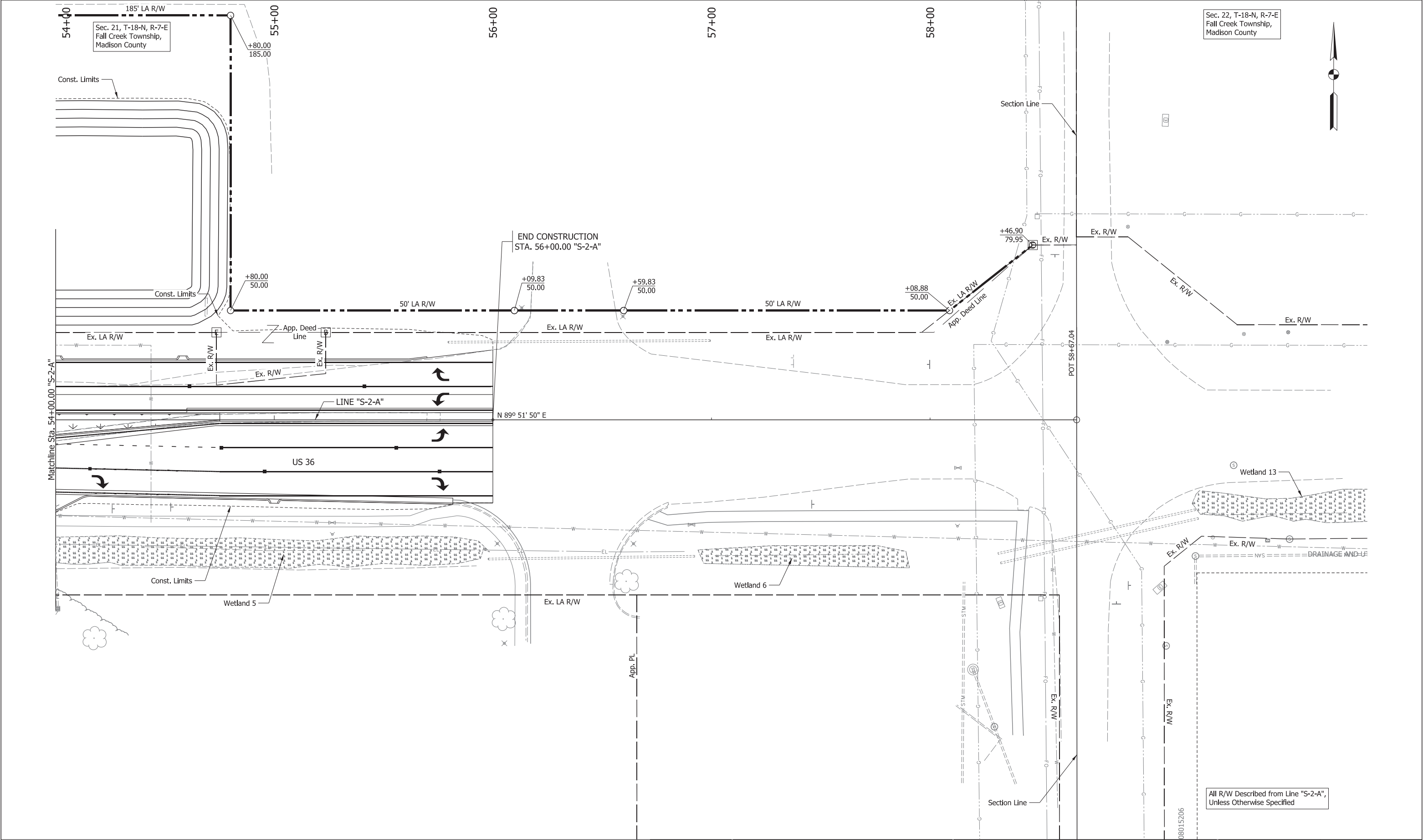




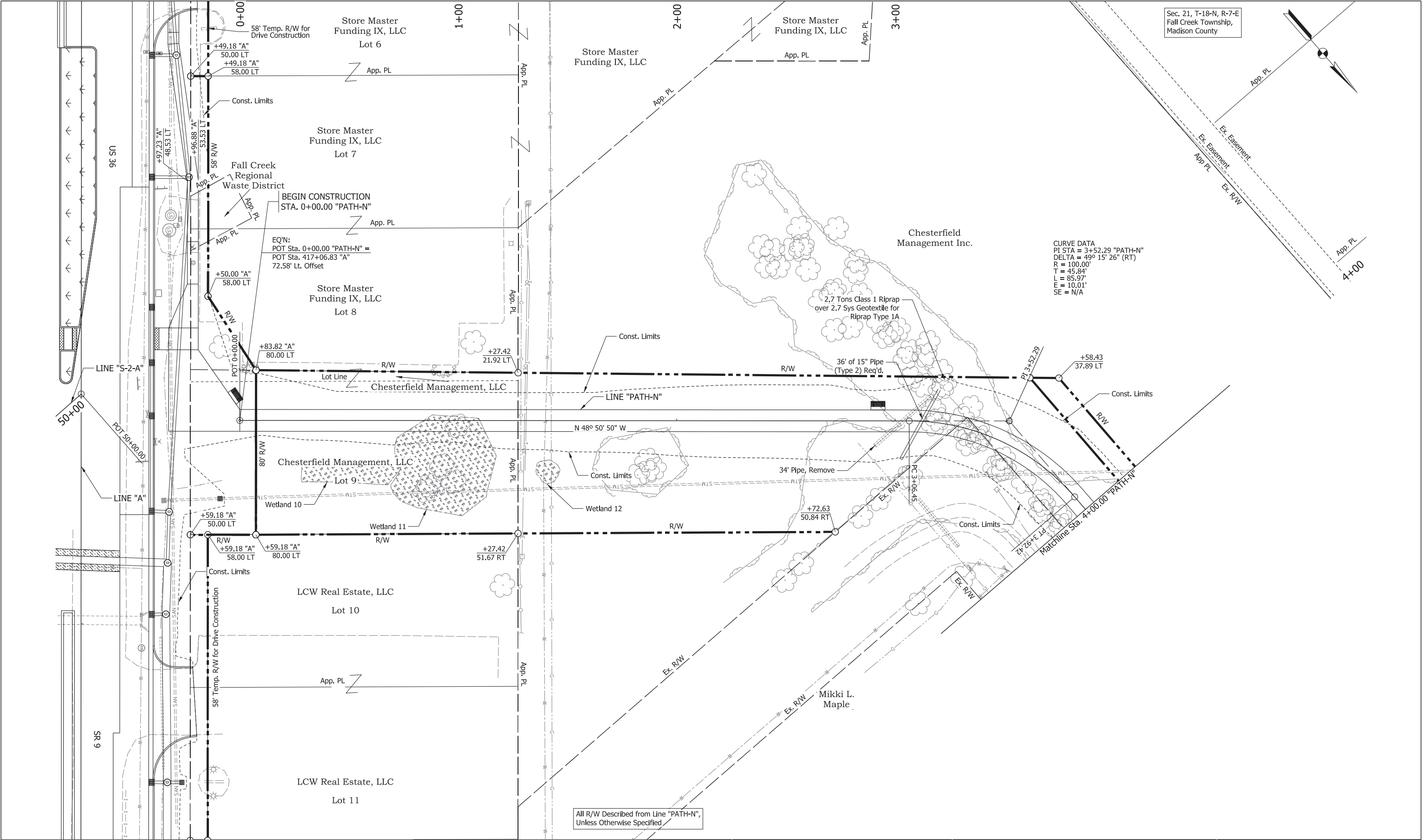
CDM Smith 211 North Pennsylvania Street, Ste 1750 Indianapolis, IN 46204 Tel: (317) 829-9600	STAGE 3	RECOMMENDED FOR APPROVAL _____		INDIANA DEPARTMENT OF TRANSPORTATION		SCALE 1" = 20'-0"		BRIDGE FILE	
		DESIGNED: HMH		DESIGN ENGINEER _____		DATE _____		DESIGNATION	
		CHECKED: SMS		DRAWN: BDM		PROJECT		SHEETS	
		DRAINAGE DETAILS SR 38 - LINE "S-1-A"		CONTRACT		R-41837		151 of 243	



CDM Smith 211 North Pennsylvania Street, Ste 1750 Indianapolis, IN 46204 Tel: (317) 829-9600	STAGE 3	RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____ DESIGNED: HMM _____ DRAWN: BDM _____ CHECKED: SMS _____ CHECKED: MJV _____	INDIANA DEPARTMENT OF TRANSPORTATION DRAINAGE DETAILS US 36 - LINE "S-2-A"	SCALE 1" = 20'-0"	BRIDGE FILE
					DESIGNATION 1702936, 1802854, 2001127
				SURVEY BOOK ELECTRONIC	SHEETS 152 of 243
				CONTRACT R-41837	PROJECT 1702936, 1802854, 2001127



CDM Smith 211 North Pennsylvania Street, Ste 1750 Indianapolis, IN 46204 Tel: (317) 829-9600	STAGE 3	RECOMMENDED FOR APPROVAL _____		INDIANA DEPARTMENT OF TRANSPORTATION		SCALE 1" = 20'-0"		BRIDGE FILE	
		DESIGNED: HMH		DRAWN: BDM		DESIGNATION		SHEETS	
		CHECKED: SMS		CHECKED: MJV		PROJECT		153 of 243	
						R-41837		1702936, 1802854, 2001127	



See Page 93 for Construction Details Legend.

**CDM
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Indianapolis, IN 46204
Tel: (317) 829-9600

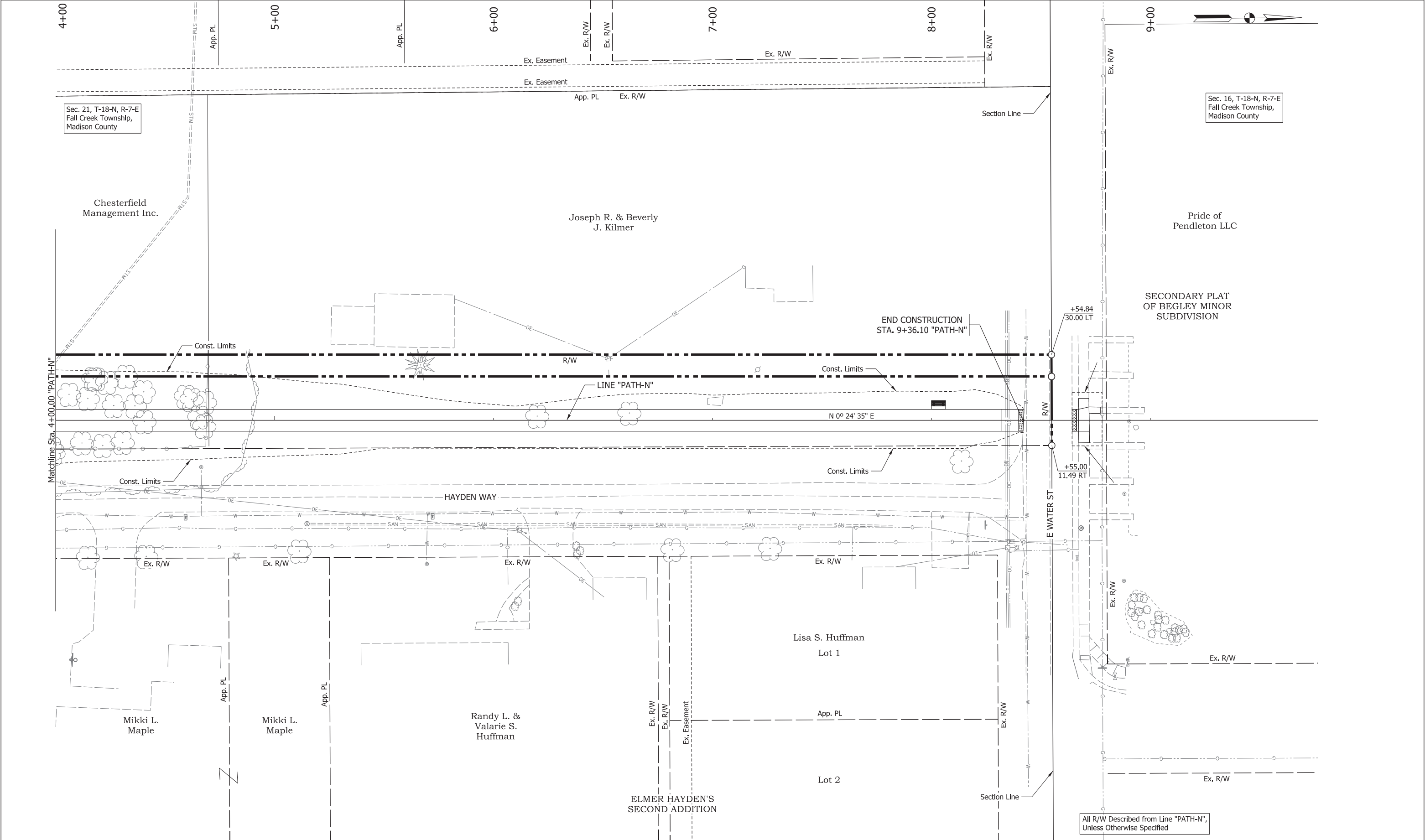
STAGE 3

RECOMMENDED FOR APPROVAL _____	
DESIGNED: HMM	DRAWN: BDM
CHECKED: SMS	CHECKED: MJV

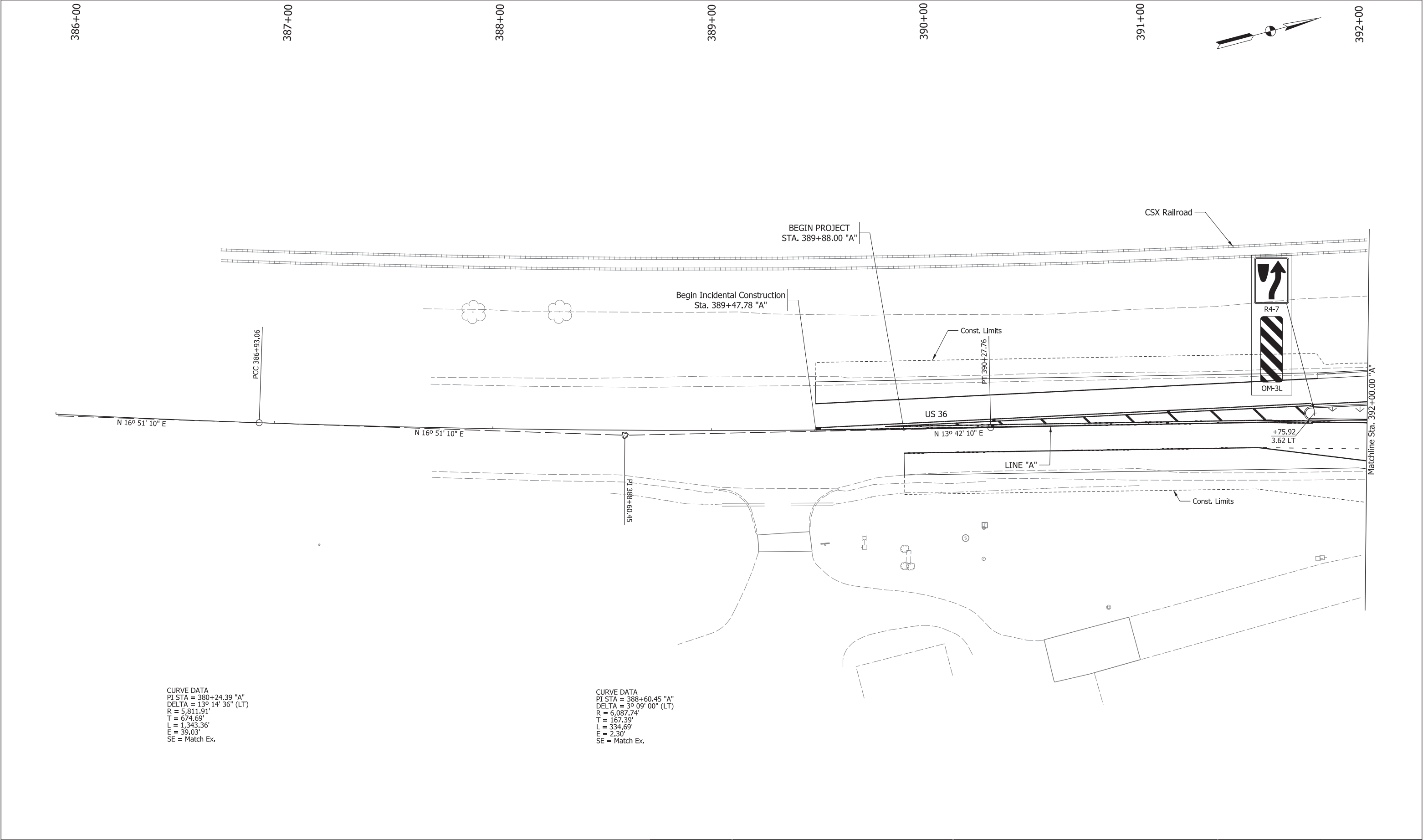
INDIANA
DEPARTMENT OF TRANSPORTATION

DRAINAGE DETAILS
SHARED-USE PATH - LINE "PATH-N"

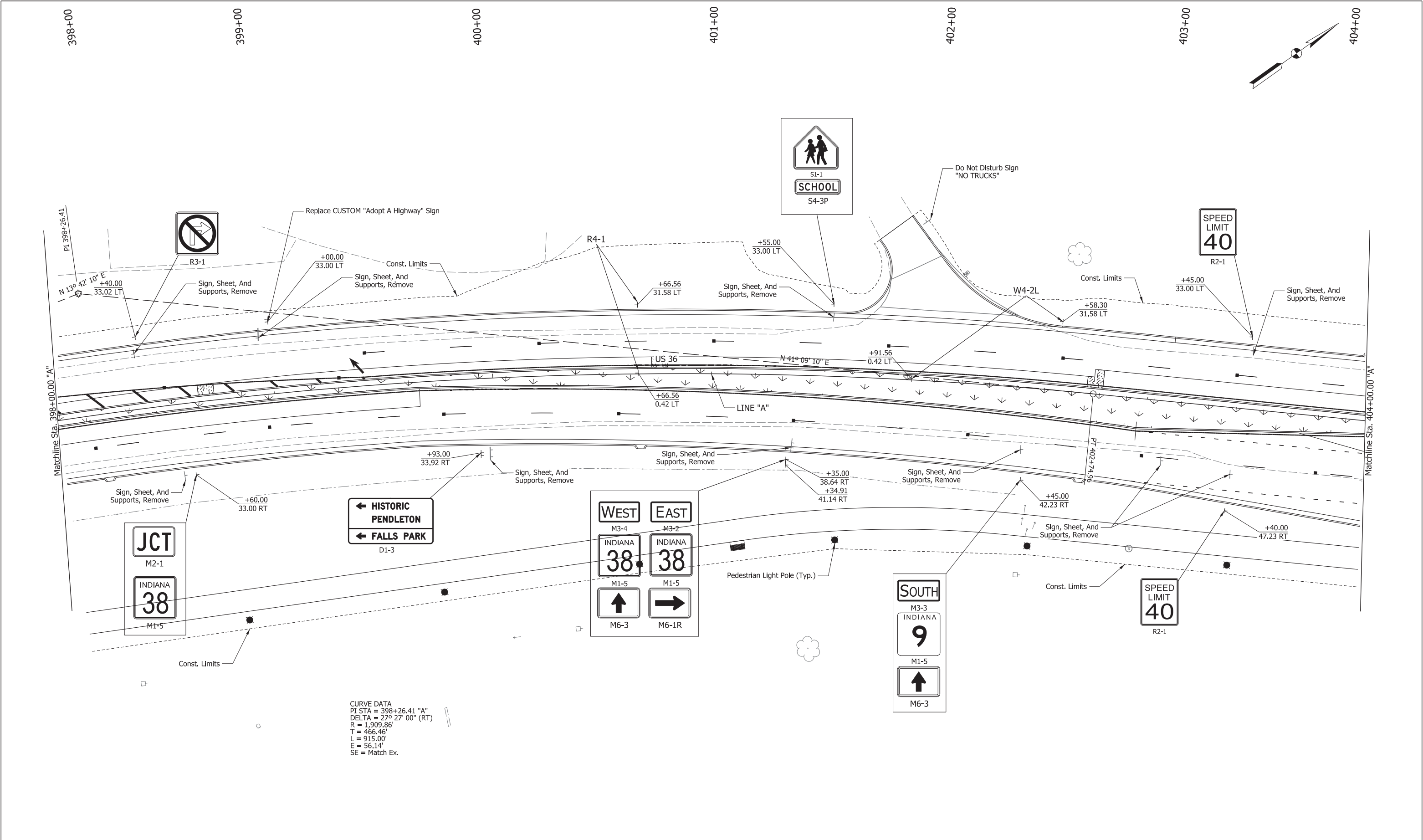
SCALE 1" = 20'-0"	BRIDGE FILE	
	DESIGNATION 1702936, 1802854, 2001127	
SURVEY BOOK	SHEETS	
ELECTRONIC	154	of 243
CONTRACT	PROJECT	
R-41837	1702936, 1802854, 2001127	



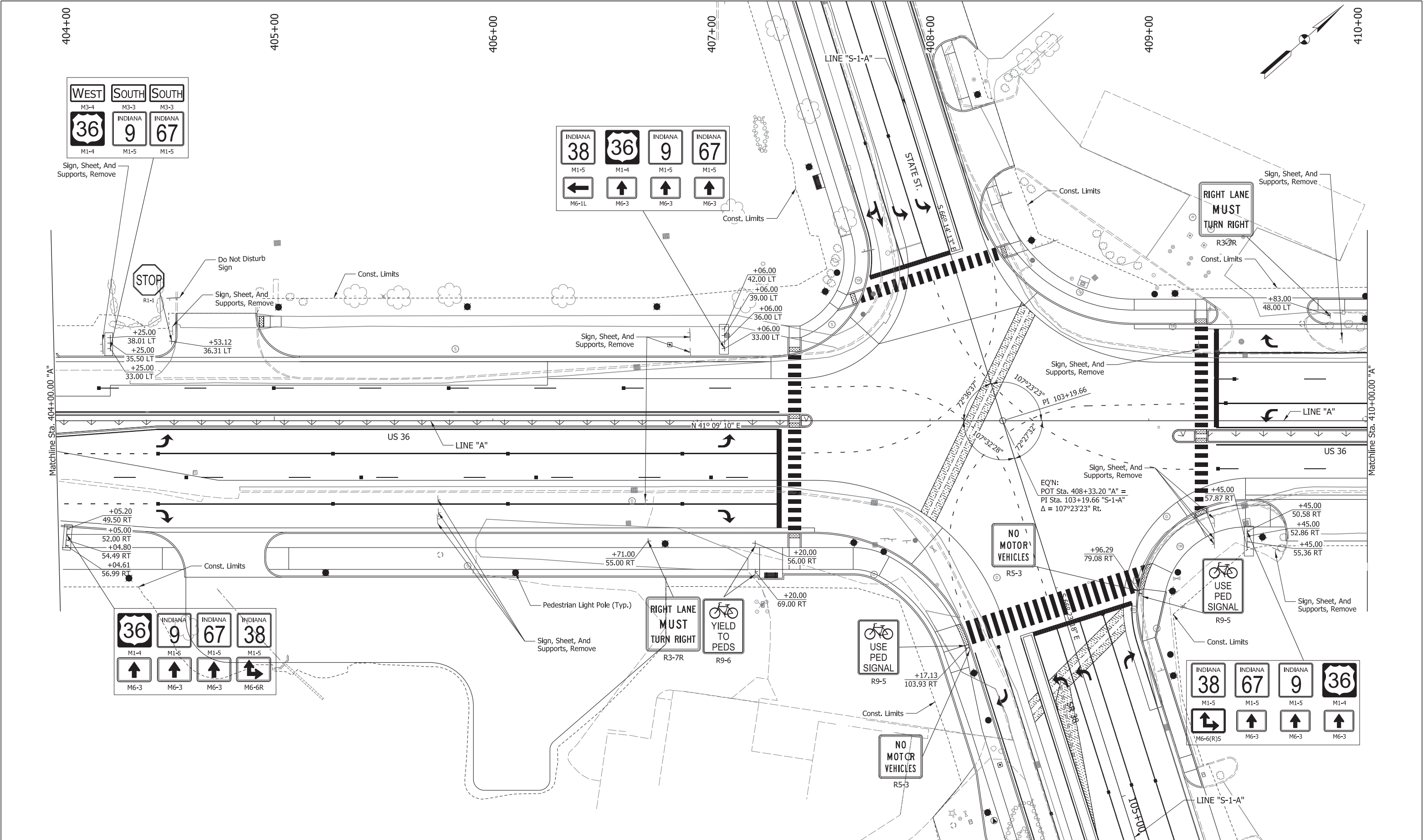
See Page 93 for Construction Details Legend.	CDM Smith 211 North Pennsylvania Street, Ste 1750 Indianapolis, IN 46204 Tel: (317) 829-9600	STAGE 3	RECOMMENDED FOR APPROVAL _____		INDIANA DEPARTMENT OF TRANSPORTATION	SCALE		BRIDGE FILE			
			DESIGN ENGINEER _____ DATE _____			1" = 20'-0"					
								DESIGNATION			
								1702936, 1802854, 2001127			
			DESIGNED: <u>HMH</u>	DRAWN: <u>BDM</u>	DRAINAGE DETAILS SHARED-USE PATH - LINE "PATH-N"			SURVEY BOOK		SHEETS	
			CHECKED: <u>SMS</u>	CHECKED: <u>MJV</u>				ELECTRONIC		155	of
								CONTRACT		PROJECT	
								R-41837		1702936, 1802854, 2001127	



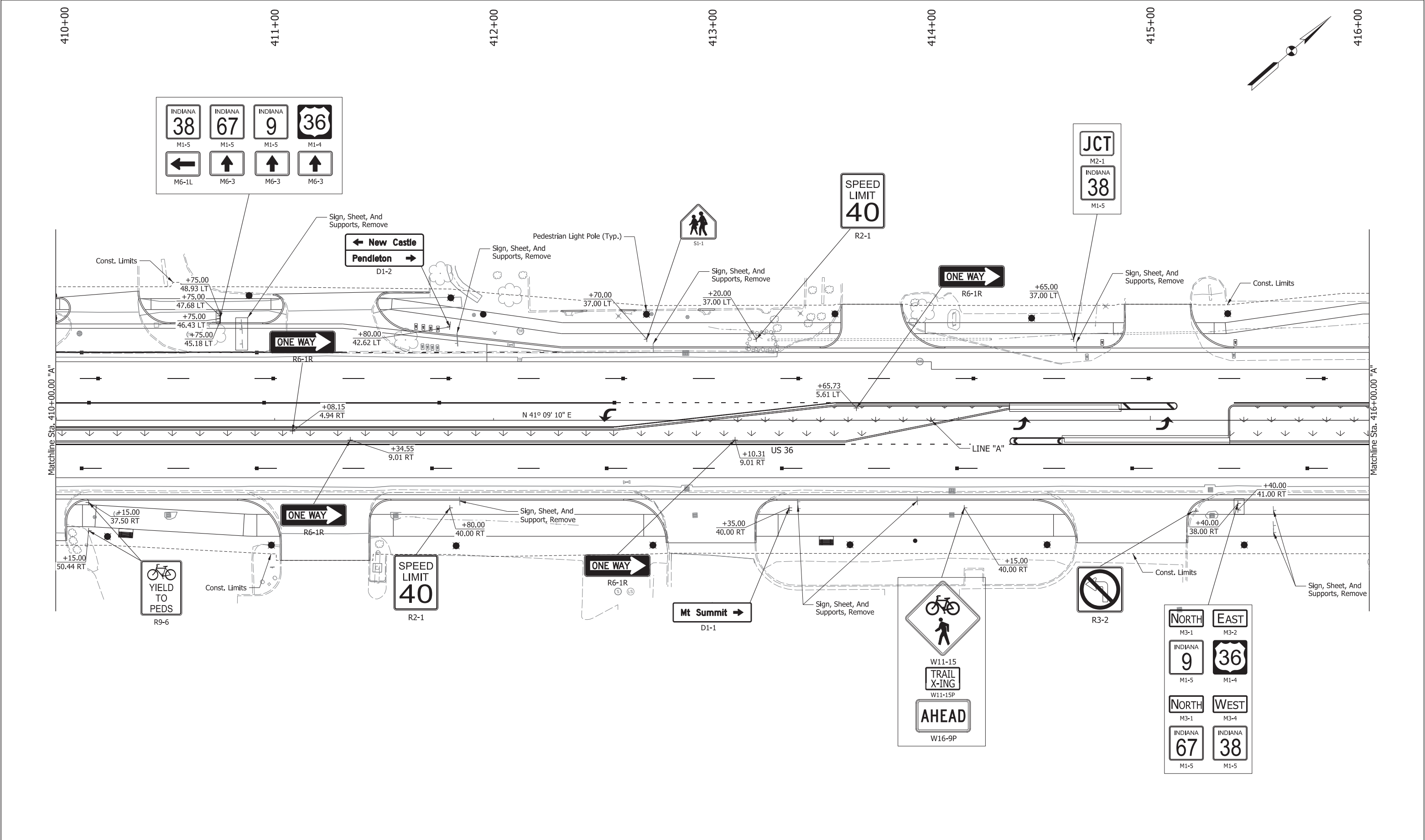
CDMSmith 211 North Pennsylvania Street, Ste 1750 Indianapolis, IN 46204 Tel: (317) 829-9600	STAGE 3	RECOMMENDED FOR APPROVAL _____		INDIANA DEPARTMENT OF TRANSPORTATION		SCALE 1" = 20'-0"		BRIDGE FILE		
		DESIGN ENGINEER _____		DATE _____				DESIGNATION		
								1702936, 1802854, 2001127		
		DESIGNED: HMM		DRAWN: BDM		SIGNING DETAILS US 36 - LINE "A"				
		CHECKED: SMS		CHECKED: MJV						
						SURVEY BOOK		SHEETS		
						ELECTRONIC		177	of	243
						CONTRACT		PROJECT		
						R-41837		1702936, 1802854, 2001127		



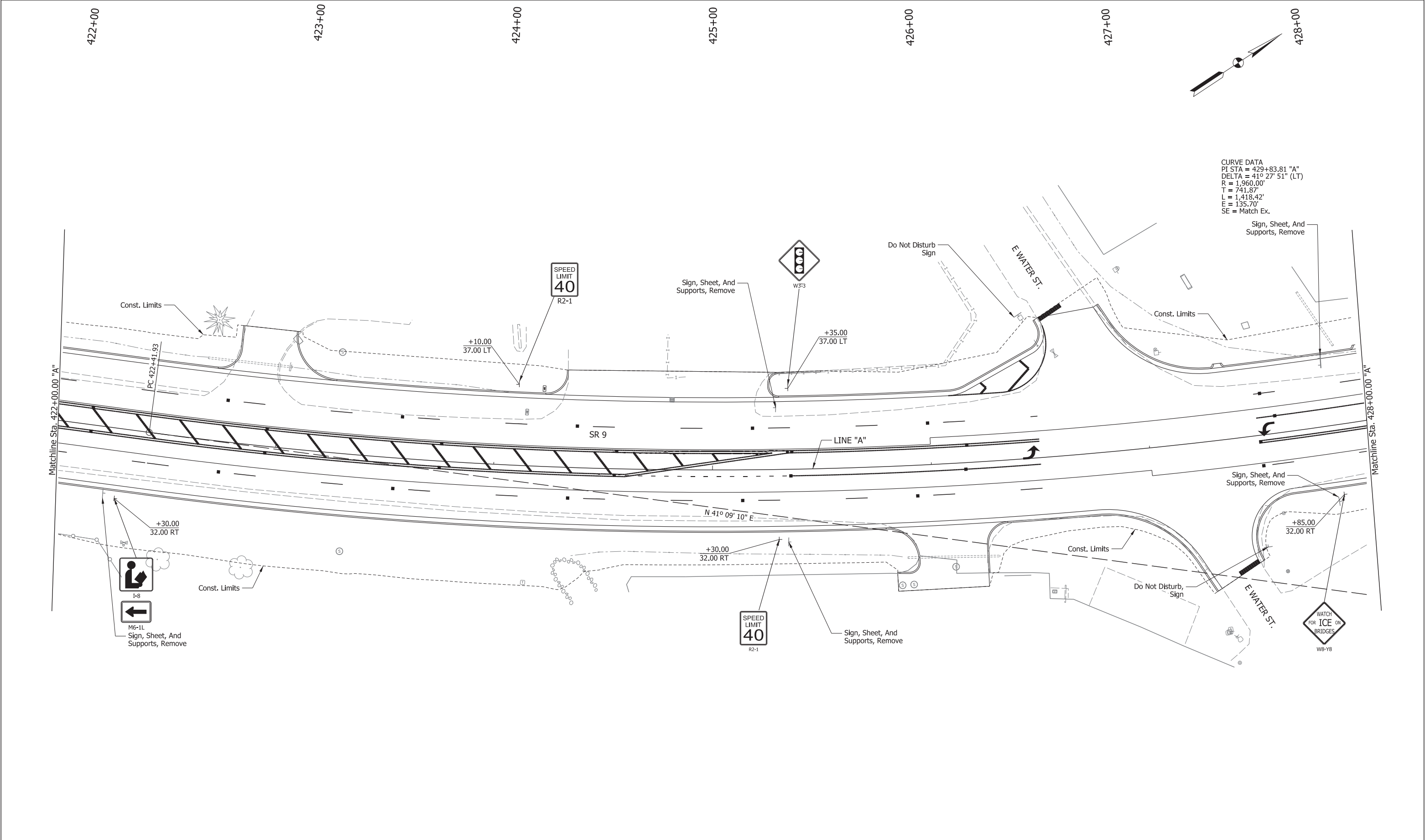
CDM Smith 211 North Pennsylvania Street, Ste 1750 Indianapolis, IN 46204 Tel: (317) 829-9600	STAGE 3	RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____ DESIGNED: HMM _____ DRAWN: BDM _____ CHECKED: SMS _____ CHECKED: MJV _____	INDIANA DEPARTMENT OF TRANSPORTATION SIGNING DETAILS US 36 - LINE "A"	SCALE 1" = 20'-0"	BRIDGE FILE
					DESIGNATION
				SURVEY BOOK	SHEETS
				ELECTRONIC CONTRACT R-41837	179 of 243 PROJECT 1702936, 1802854, 2001127



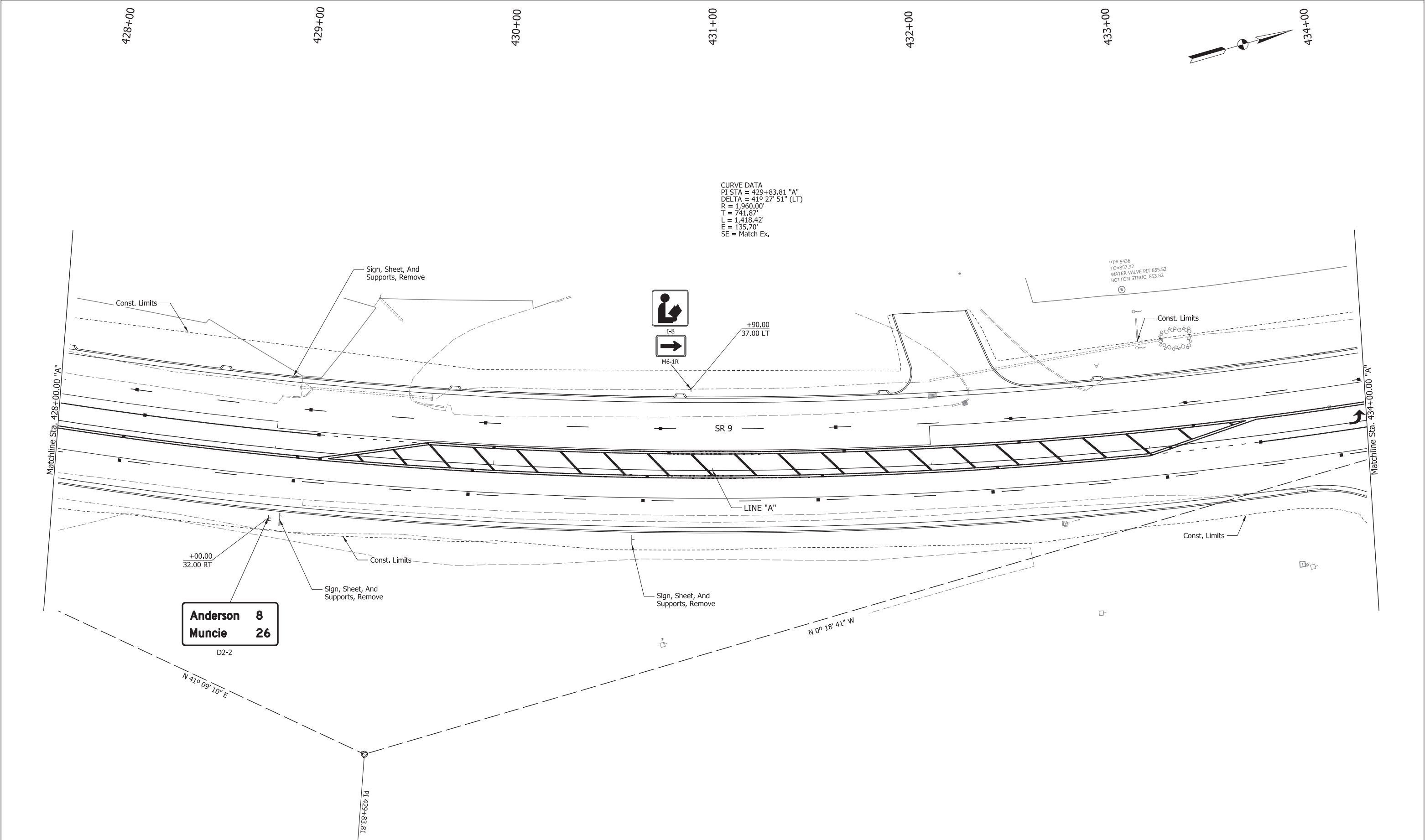
CDM Smith 211 North Pennsylvania Street, Ste 1750 Indianapolis, IN 46204 Tel: (317) 829-9600	STAGE 3	RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____		INDIANA DEPARTMENT OF TRANSPORTATION		SCALE 1" = 20'-0"	BRIDGE FILE
		DESIGNED: HMM DRAWN: BDM		SIGNING DETAILS US 36 - LINE "A"		SURVEY BOOK	SHEETS
		CHECKED: SMS CHECKED: MJV				ELECTRONIC	180 of 243
						CONTRACT R-41837	PROJECT 1702936, 1802854, 2001127



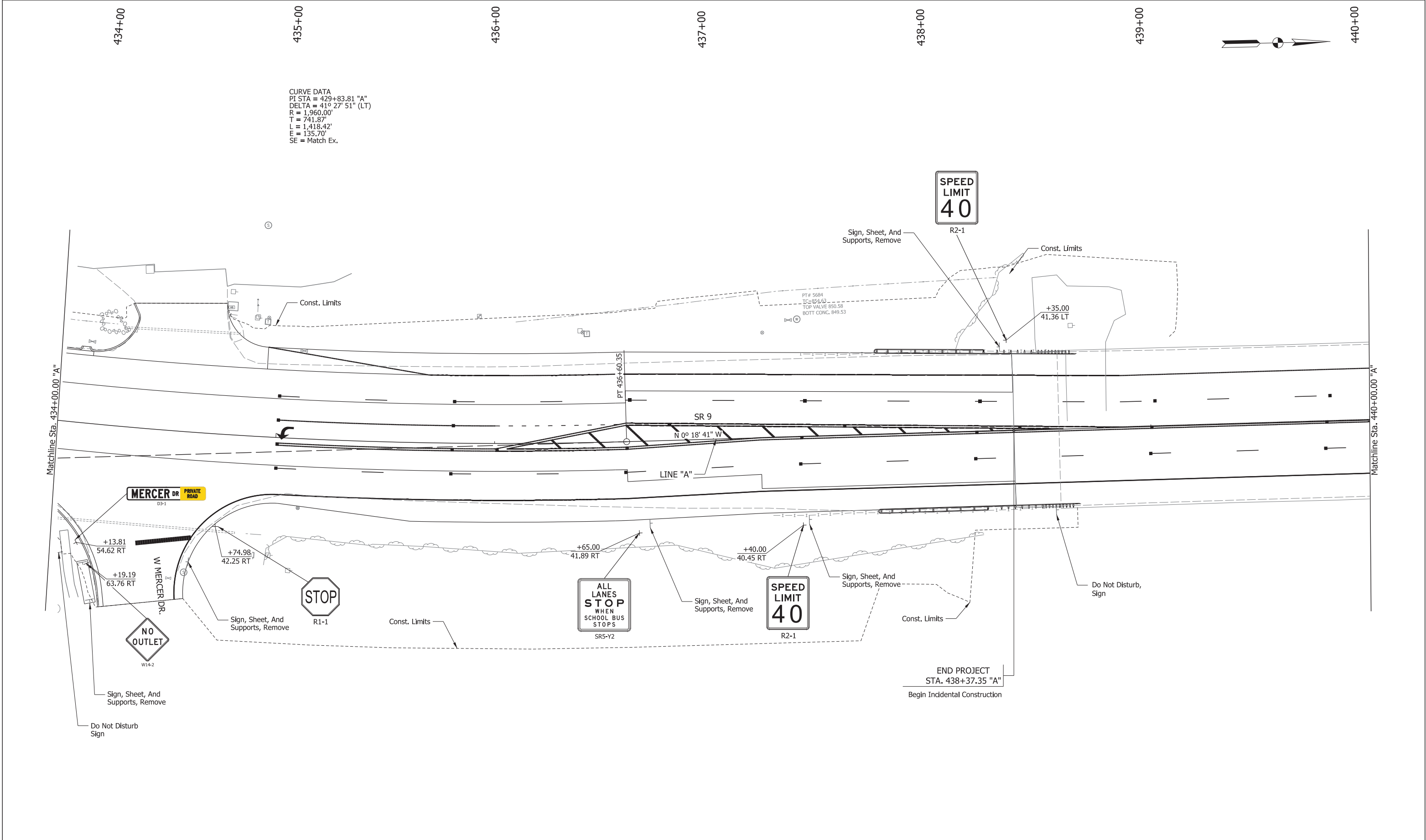
CDM Smith 211 North Pennsylvania Street, Ste 1750 Indianapolis, IN 46204 Tel: (317) 829-9600	STAGE 3	RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____ DESIGNED: HMM _____ DRAWN: BDM _____ CHECKED: SMS _____ CHECKED: MJV _____	INDIANA DEPARTMENT OF TRANSPORTATION SIGNING DETAILS US 36 - LINE "A"	SCALE	BRIDGE FILE
				1" = 20'-0"	DESIGNATION
					1702936, 1802854, 2001127
				SURVEY BOOK	SHEETS
				ELECTRONIC	181 of 243
				CONTRACT	PROJECT
				R-41837	1702936, 1802854, 2001127



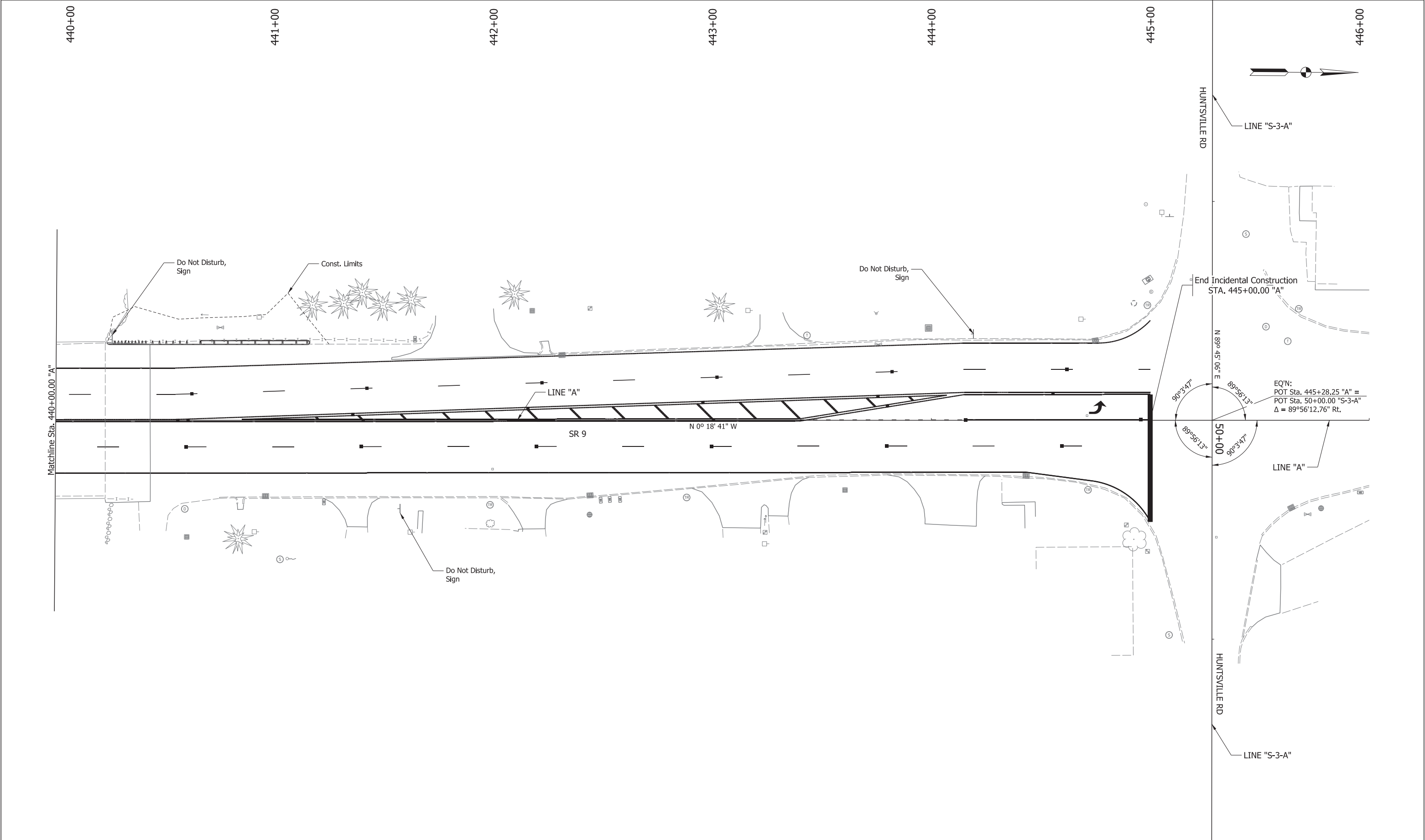
CDM Smith 211 North Pennsylvania Street, Ste 1750 Indianapolis, IN 46204 Tel: (317) 829-9600	STAGE 3	RECOMMENDED FOR APPROVAL _____		INDIANA DEPARTMENT OF TRANSPORTATION		SCALE	BRIDGE FILE
		DESIGNED: HMH		SIGNING DETAILS SR 9 - LINE "A"		1" = 20'-0"	
		CHECKED: SMS					



CDM Smith 211 North Pennsylvania Street, Ste 1750 Indianapolis, IN 46204 Tel: (317) 829-9600 STAGE 3	RECOMMENDED FOR APPROVAL _____		INDIANA DEPARTMENT OF TRANSPORTATION		SCALE 1" = 20'-0"		BRIDGE FILE	
	DESIGN ENGINEER _____		DATE _____				DESIGNATION 1702936, 1802854, 2001127	
	DESIGNED: <u>HMH</u>		DRAWN: <u>BDM</u>		SIGNING DETAILS SR 9 - LINE "A"		SHEETS	
	CHECKED: <u>SMS</u>		CHECKED: <u>MJV</u>				184 of 243	
							PROJECT 1702936, 1802854, 2001127	



CDM Smith 211 North Pennsylvania Street, Ste 1750 Indianapolis, IN 46204 Tel: (317) 829-9600	STAGE 3	RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____ DESIGNED: HMM _____ DRAWN: BDM _____ CHECKED: SMS _____ CHECKED: MJV _____	INDIANA DEPARTMENT OF TRANSPORTATION SIGNING DETAILS SR 9 - LINE "A"	SCALE 1" = 20'-0"	BRIDGE FILE
					DESIGNATION
					1702936, 1802854, 2001127
				SURVEY BOOK	SHEETS
				ELECTRONIC	185 of 243
				CONTRACT	PROJECT
				R-41837	1702936, 1802854, 2001127





211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED FOR APPROVAL _____	
DESIGNED: HMH	DRAWN: BDM
CHECKED: SMS	CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

SIGNING DETAILS
SR 9 - LINE "A"

SCALE 1" = 20'-0"	BRIDGE FILE	
	DESIGNATION	
	1702936, 1802854, 2001127	
SURVEY BOOK	SHEETS	
ELECTRONIC	186	of 243
CONTRACT	PROJECT	
R-41837	1702936, 1802854, 2001127	

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B-138

95+00

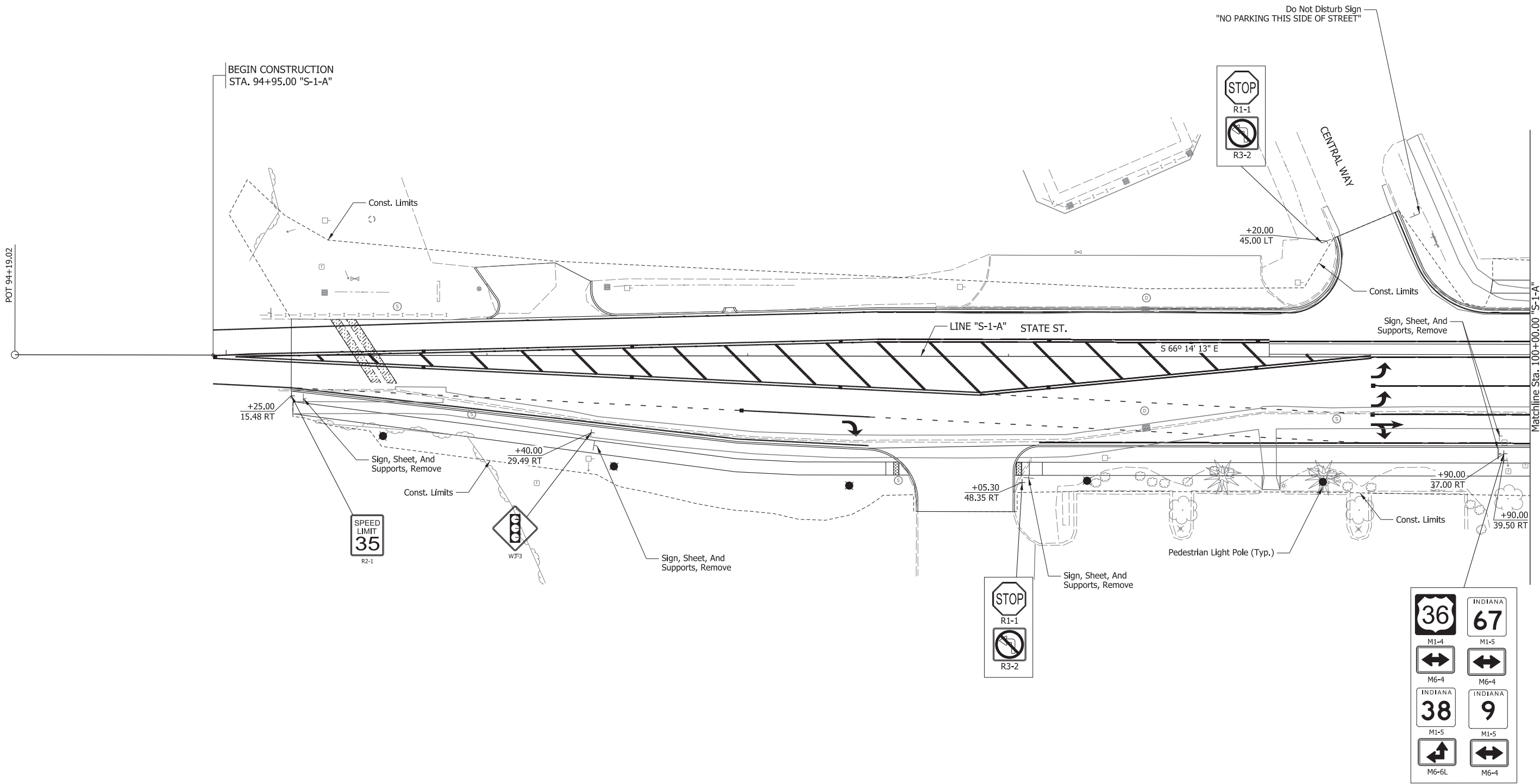
96+00

97+00

98+00

99+00

100+00



**CDM
Smith**

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Indianapolis, IN 46204
Tel: (317) 829-9600

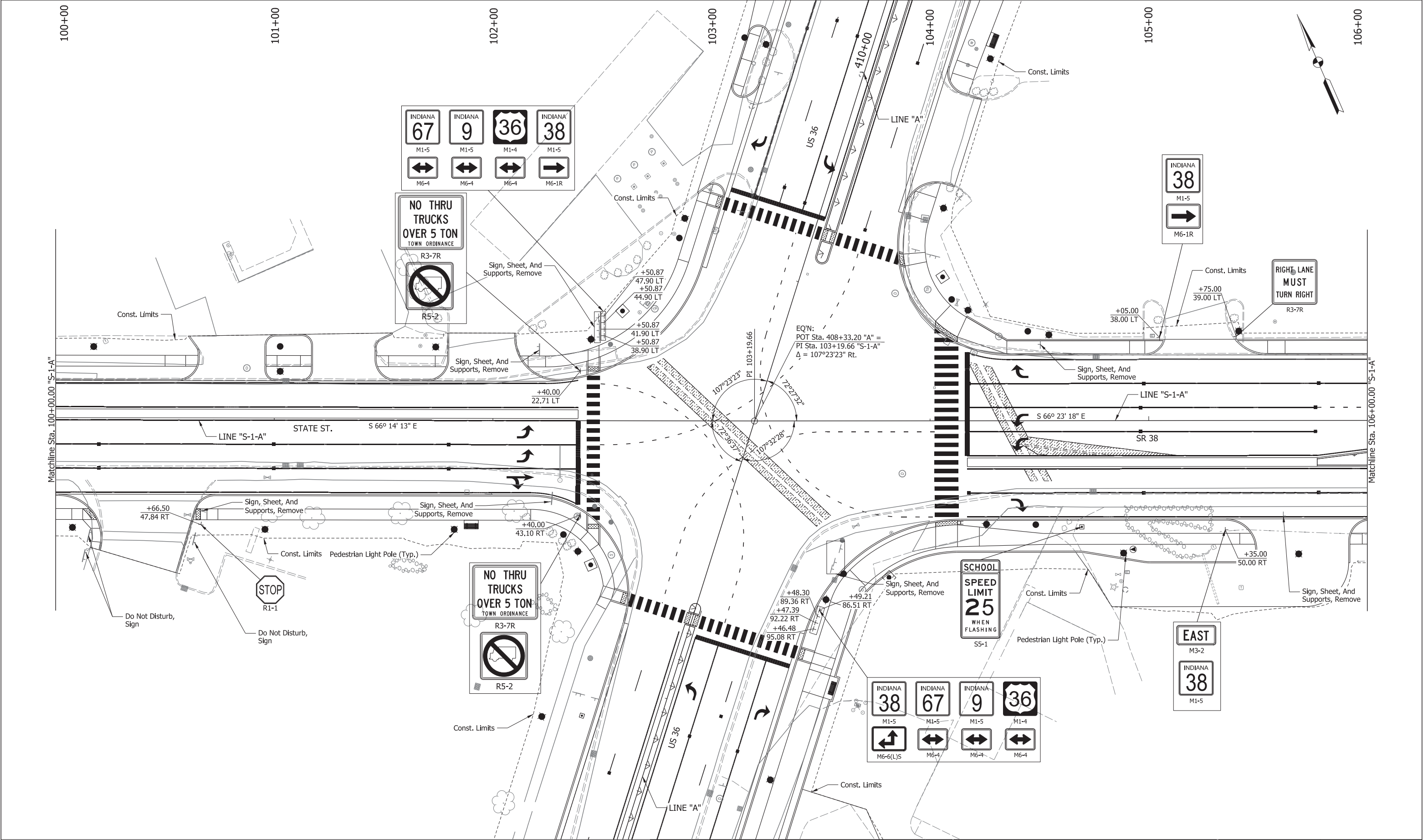
STAGE 3

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: HMM	DRAWN: BDM	
CHECKED: SMS	CHECKED: MJV	

INDIANA
DEPARTMENT OF TRANSPORTATION

SIGNING DETAILS
STATE ST - LINE "S-1-A"

SCALE 1" = 20'-0"	BRIDGE FILE	
	DESIGNATION	
	1702936, 1802854, 2001127	
SURVEY BOOK	SHEETS	
ELECTRONIC	187	of 243
CONTRACT	PROJECT	
R-41837	1702936, 1802854, 2001127	





211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

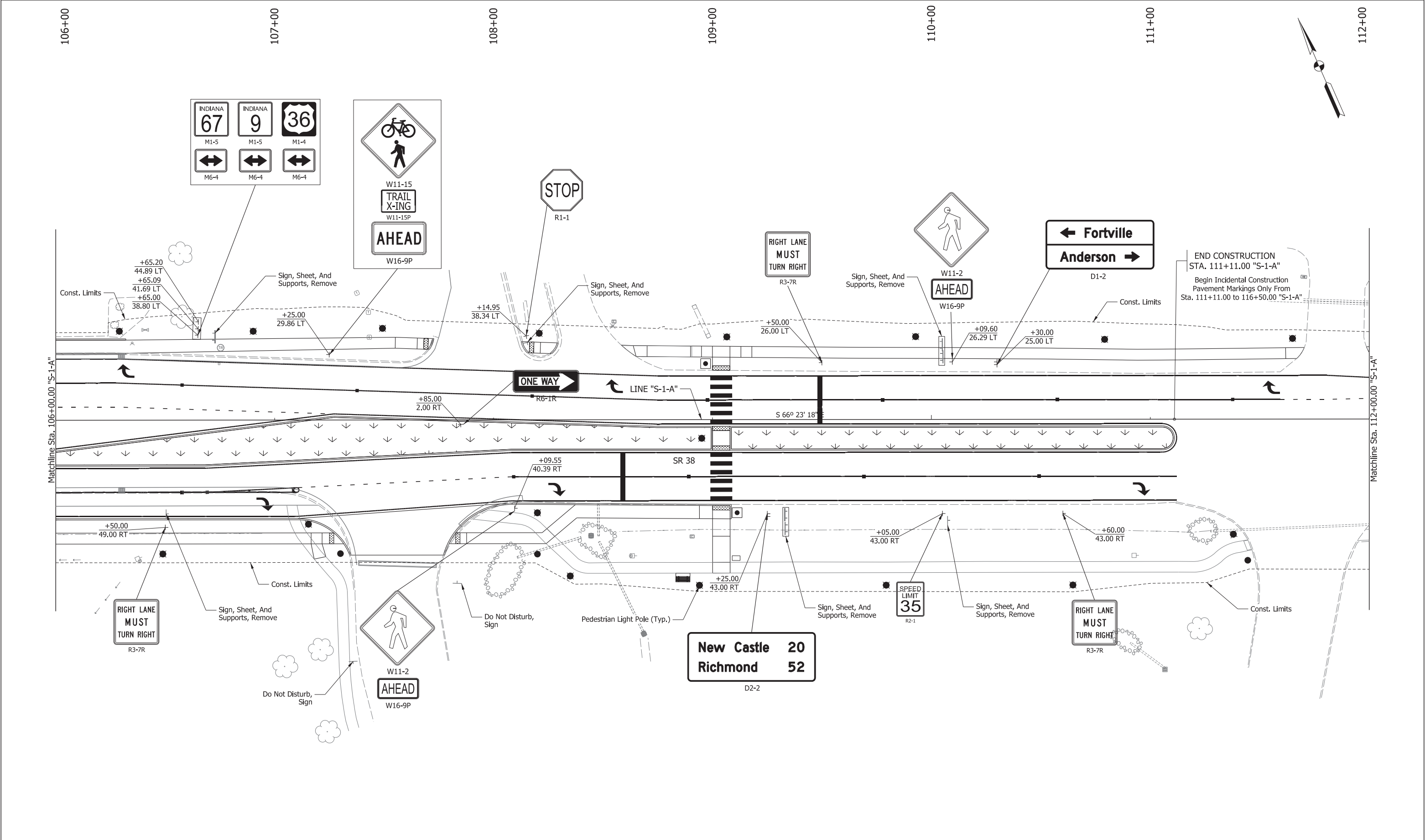
STAGE 3

RECOMMENDED FOR APPROVAL _____	
DESIGNED: HMM	DRAWN: BDM
CHECKED: SMS	CHECKED: MJV

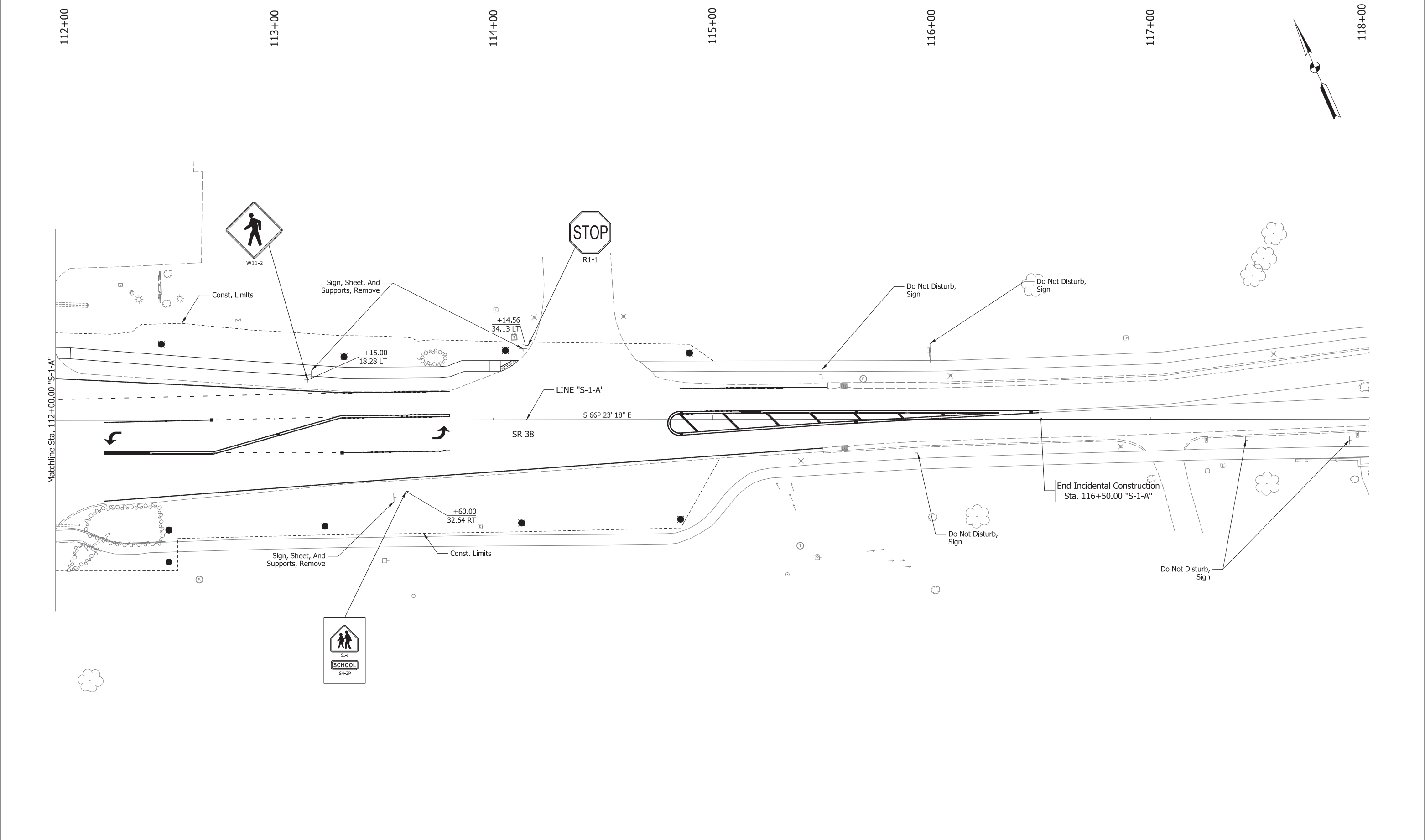
INDIANA
DEPARTMENT OF TRANSPORTATION

SIGNING DETAILS
STATE ST / SR 38 - LINE "S-1-A"

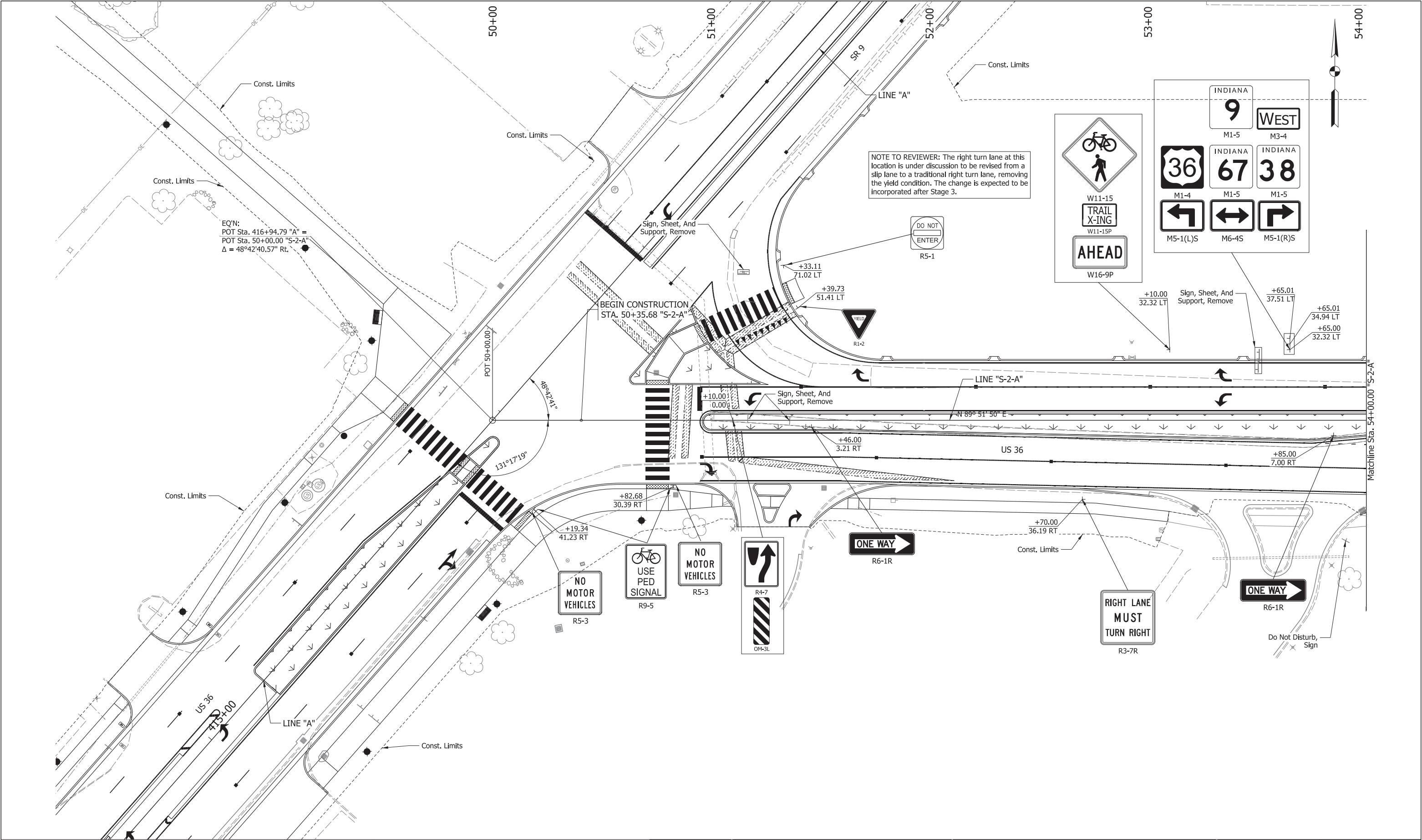
SCALE 1" = 20'-0"	BRIDGE FILE
	DESIGNATION 1702936, 1802854, 2001127
SURVEY BOOK	SHEETS
ELECTRONIC	188 of 243
CONTRACT	PROJECT
R-41837	1702936, 1802854, 2001127



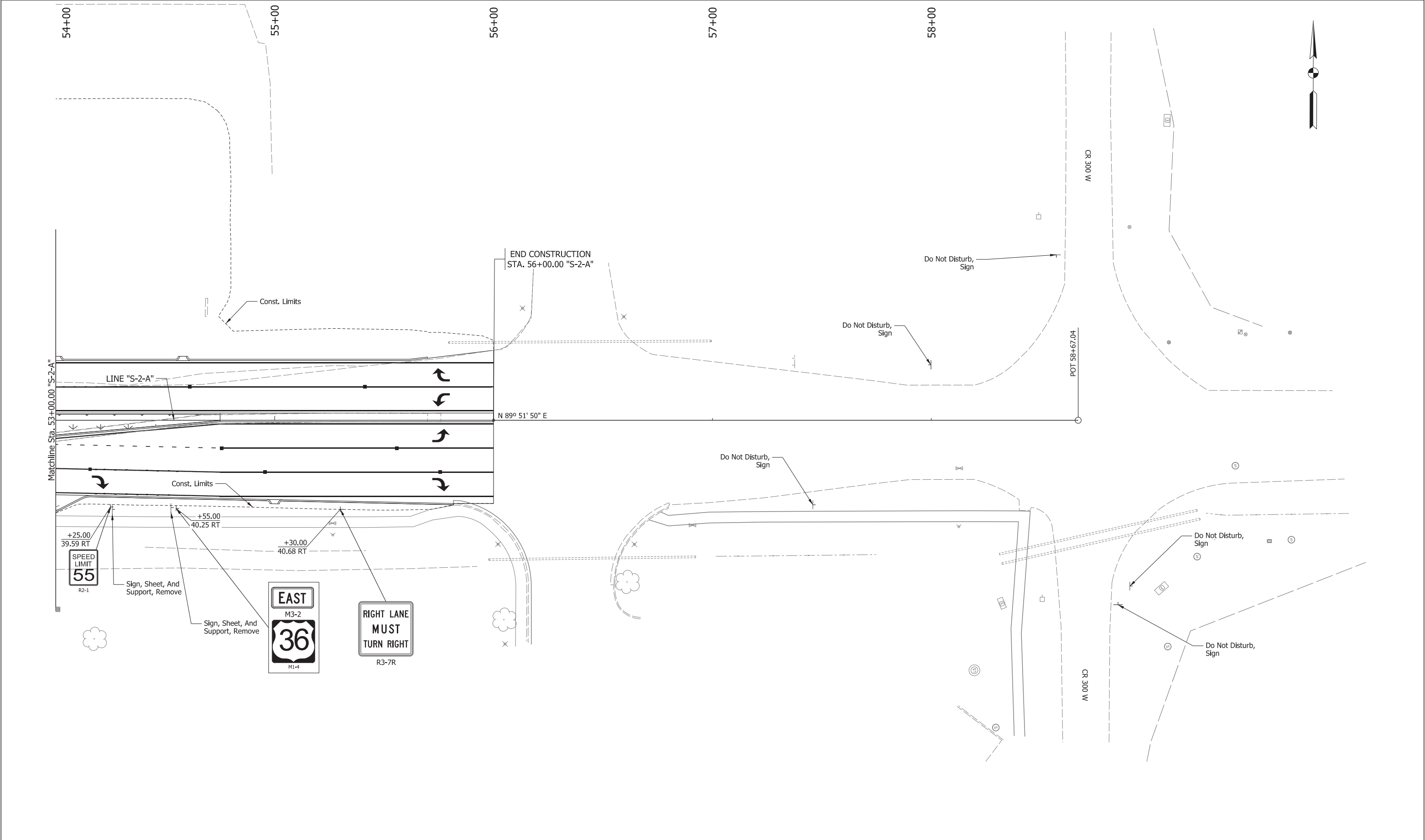
CDM Smith 211 North Pennsylvania Street, Ste 1750 Indianapolis, IN 46204 Tel: (317) 829-9600	STAGE 3	RECOMMENDED FOR APPROVAL DESIGN ENGINEER DATE DESIGNED: HMM DRAWN: BDM CHECKED: SMS CHECKED: MJV	INDIANA DEPARTMENT OF TRANSPORTATION SIGNING DETAILS SR 38 - LINE "S-1-A"	SCALE 1" = 20'-0"	BRIDGE FILE
					DESIGNATION 1702936, 1802854, 2001127
				SURVEY BOOK ELECTRONIC CONTRACT R-41837	SHEETS 189 of 243 PROJECT 1702936, 1802854, 2001127



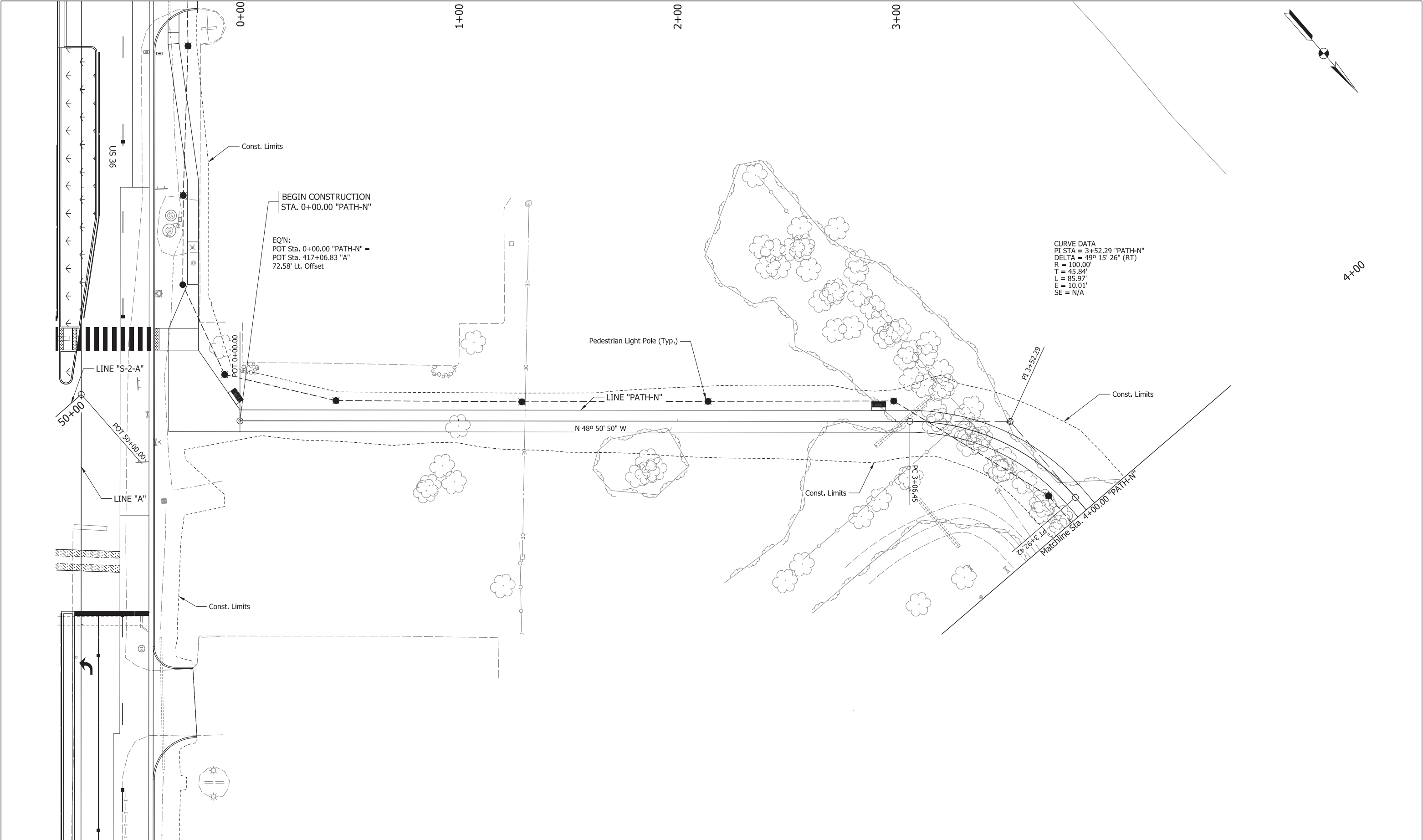
CDM Smith 211 North Pennsylvania Street, Ste 1750 Indianapolis, IN 46204 Tel: (317) 829-9600	STAGE 3	RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE DESIGNED: HMH DRAWN: BDM CHECKED: SMS CHECKED: MJV	INDIANA DEPARTMENT OF TRANSPORTATION SIGNING DETAILS SR 38 - LINE "S-1-A"	SCALE 1" = 20'-0"	BRIDGE FILE
					DESIGNATION 1702936, 1802854, 2001127
				SURVEY BOOK ELECTRONIC CONTRACT R-41837	SHEETS 190 of 243 PROJECT 1702936, 1802854, 2001127



CDMSmith 211 North Pennsylvania Street, Ste 1750 Indianapolis, IN 46204 Tel: (317) 829-9600	STAGE 3	RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____		INDIANA DEPARTMENT OF TRANSPORTATION		SCALE 1" = 20'-0"	BRIDGE FILE
		DESIGNED: HMM CHECKED: SMS		DRAWN: BDM CHECKED: MJV			DESIGNATION 1702936, 1802854, 2001127
				SIGNING DETAILS US 36 - LINE "S-2-A"		SURVEY BOOK ELECTRONIC CONTRACT R-41837	SHEETS 191 of 243 PROJECT 1702936, 1802854, 2001127



CDMSmith 211 North Pennsylvania Street, Ste 1750 Indianapolis, IN 46204 Tel: (317) 829-9600	STAGE 3	RECOMMENDED FOR APPROVAL _____		INDIANA DEPARTMENT OF TRANSPORTATION		SCALE 1" = 20'-0"		BRIDGE FILE		
		DESIGN ENGINEER _____ DATE _____						DESIGNATION 1702936, 1802854, 2001127		
		DESIGNED: <u>HMH</u>	DRAWN: <u>BDM</u>	SIGNING DETAILS US 36 - LINE "S-2-A"		SURVEY BOOK		SHEETS		
						ELECTRONIC		192	of	243
		CHECKED: <u>SMS</u>	CHECKED: <u>MJV</u>			CONTRACT		PROJECT		
					R-41837	1702936, 1802854, 2001127				



See Page 93 for Construction Details Legend.



211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

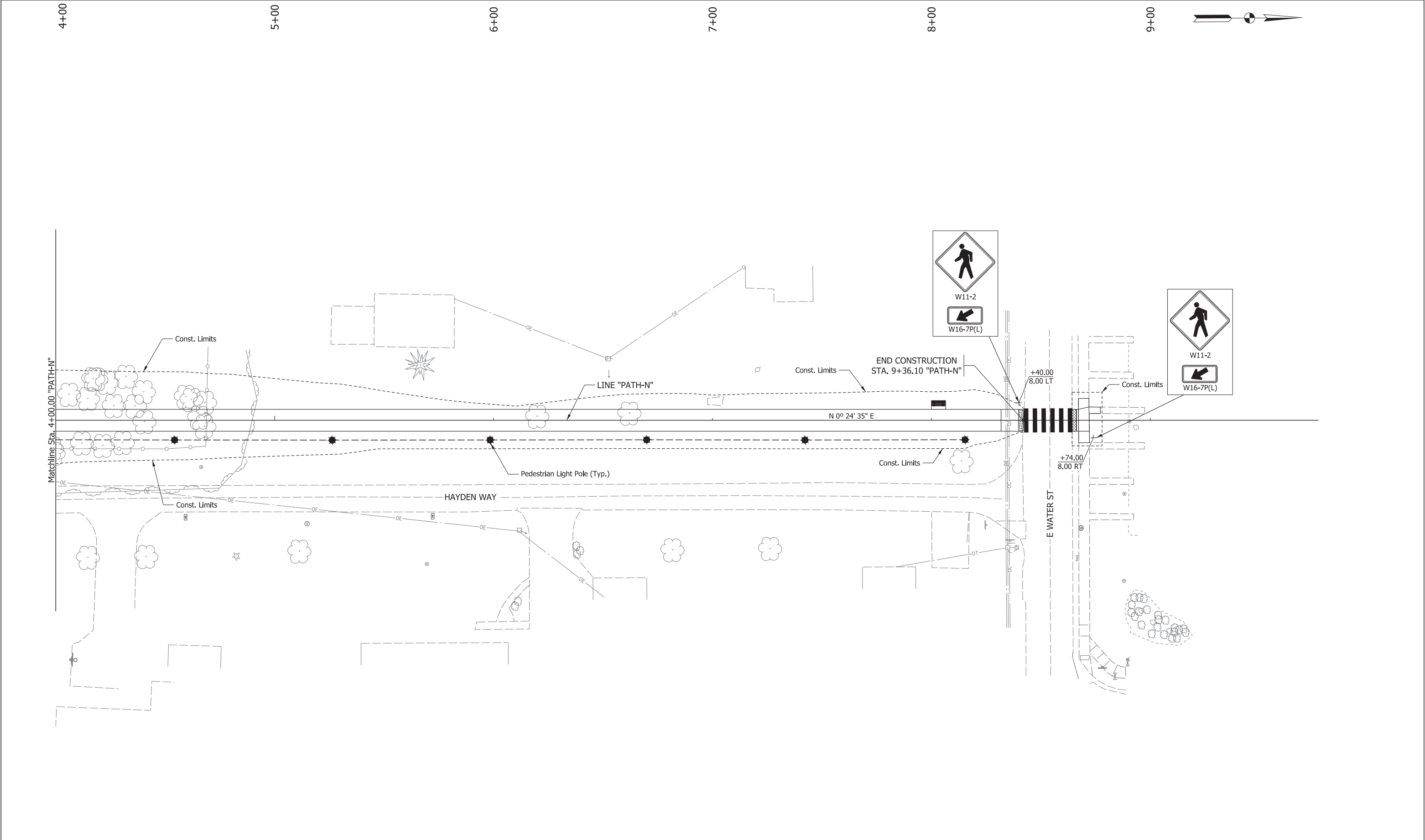
STAGE 3

RECOMMENDED FOR APPROVAL _____	
DESIGNED: HMM	DRAWN: BDM
CHECKED: SMS	CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

SIGNING DETAILS
SHARED-USE PATH - LINE "PATH-N"

SCALE 1" = 20'-0"	BRIDGE FILE	
	DESIGNATION	
	1702936, 1802854, 2001127	
SURVEY BOOK	SHEETS	
ELECTRONIC	193	of 243
CONTRACT	PROJECT	
R-41837	1702936, 1802854, 2001127	



See Page 93 for Construction Details Legend.



211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED
FOR APPROVAL

DESIGN ENGINEER

DATE

DESIGNED: HMM

DRAWN: BDM

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

SIGNING DETAILS
SHARED-USE PATH - LINE "PATH-N"

SCALE

1" = 20'-0"

BRIDGE FILE

DESIGNATION

1702936, 1802854, 2001127

SURVEY BOOK

SHEETS

ELECTRONIC

194

of

243

CONTRACT

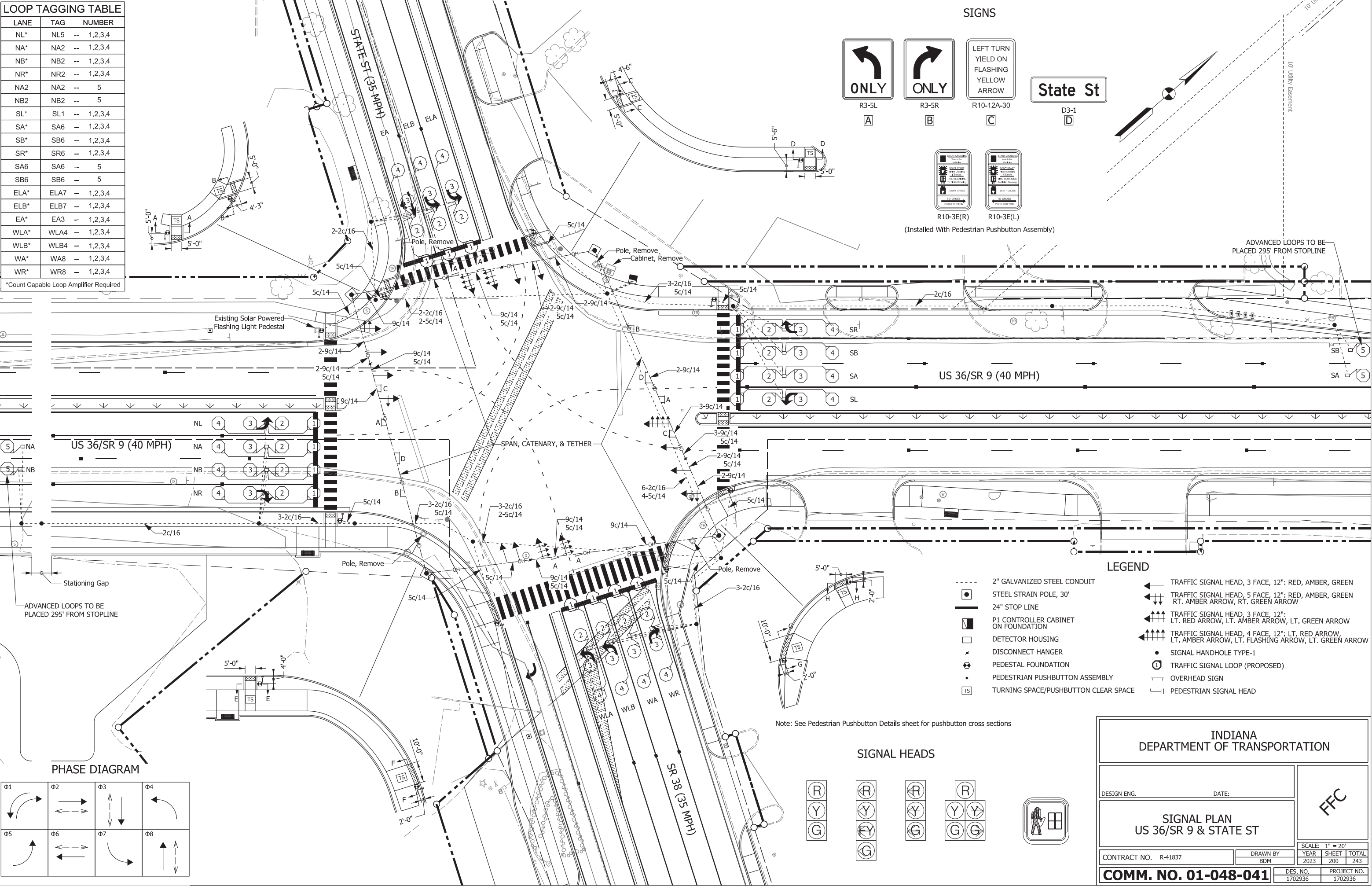
PROJECT

R-41837

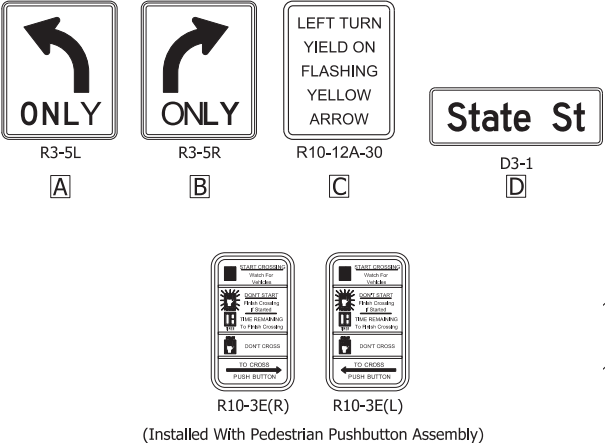
1702936, 1802854, 2001127

LOOP TAGGING TABLE		
LANE	TAG	NUMBER
NL*	NL5 --	1,2,3,4
NA*	NA2 --	1,2,3,4
NB*	NB2 --	1,2,3,4
NR*	NR2 --	1,2,3,4
NA2	NA2 --	5
NB2	NB2 --	5
SL*	SL1 --	1,2,3,4
SA*	SA6 -	1,2,3,4
SB*	SB6 -	1,2,3,4
SR*	SR6 -	1,2,3,4
SA6	SA6 --	5
SB6	SB6 -	5
ELA*	ELA7 -	1,2,3,4
ELB*	ELB7 -	1,2,3,4
EA*	EA3 -	1,2,3,4
WLA*	WLA4 -	1,2,3,4
WLB*	WLB4 -	1,2,3,4
WA*	WA8 -	1,2,3,4
WR*	WR8 -	1,2,3,4

*Count Capable Loop Amplifier Required



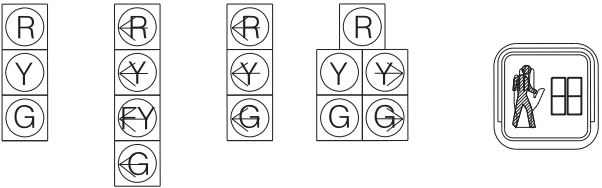
SIGNS



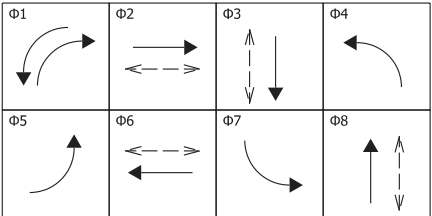
LEGEND

- 2" GALVANIZED STEEL CONDUIT
- STEEL STRAIN POLE, 30'
- 24" STOP LINE
- P1 CONTROLLER CABINET ON FOUNDATION
- DETECTOR HOUSING
- DISCONNECT HANGER
- PEDESTAL FOUNDATION
- PEDESTRIAN PUSHBUTTON ASSEMBLY
- TURNING SPACE/PUSHBUTTON CLEAR SPACE
- TRAFFIC SIGNAL HEAD, 3 FACE, 12": RED, AMBER, GREEN
- TRAFFIC SIGNAL HEAD, 5 FACE, 12": RED, AMBER, GREEN RT. AMBER ARROW, RT. GREEN ARROW
- TRAFFIC SIGNAL HEAD, 3 FACE, 12": LT. RED ARROW, LT. AMBER ARROW, LT. GREEN ARROW
- TRAFFIC SIGNAL HEAD, 4 FACE, 12": LT. RED ARROW, LT. AMBER ARROW, LT. FLASHING ARROW, LT. GREEN ARROW
- SIGNAL HANDHOLE TYPE-1
- TRAFFIC SIGNAL LOOP (PROPOSED)
- OVERHEAD SIGN
- PEDESTRIAN SIGNAL HEAD

SIGNAL HEADS



PHASE DIAGRAM



INDIANA
DEPARTMENT OF TRANSPORTATION

DESIGN ENG.

DATE:

SIGNAL PLAN
US 36/SR 9 & STATE ST

CONTRACT NO. R-41837

DRAWN BY
BDM

SCALE: 1" = 20'
YEAR SHEET TOTAL
2023 200 243

COMM. NO. 01-048-041

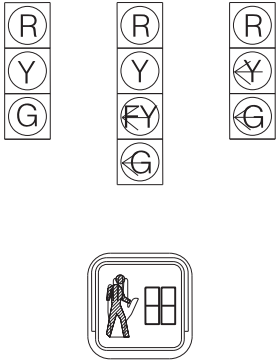
DES. NO. 1702936
PROJECT NO. 1702936

LOOP TAGGING TABLE

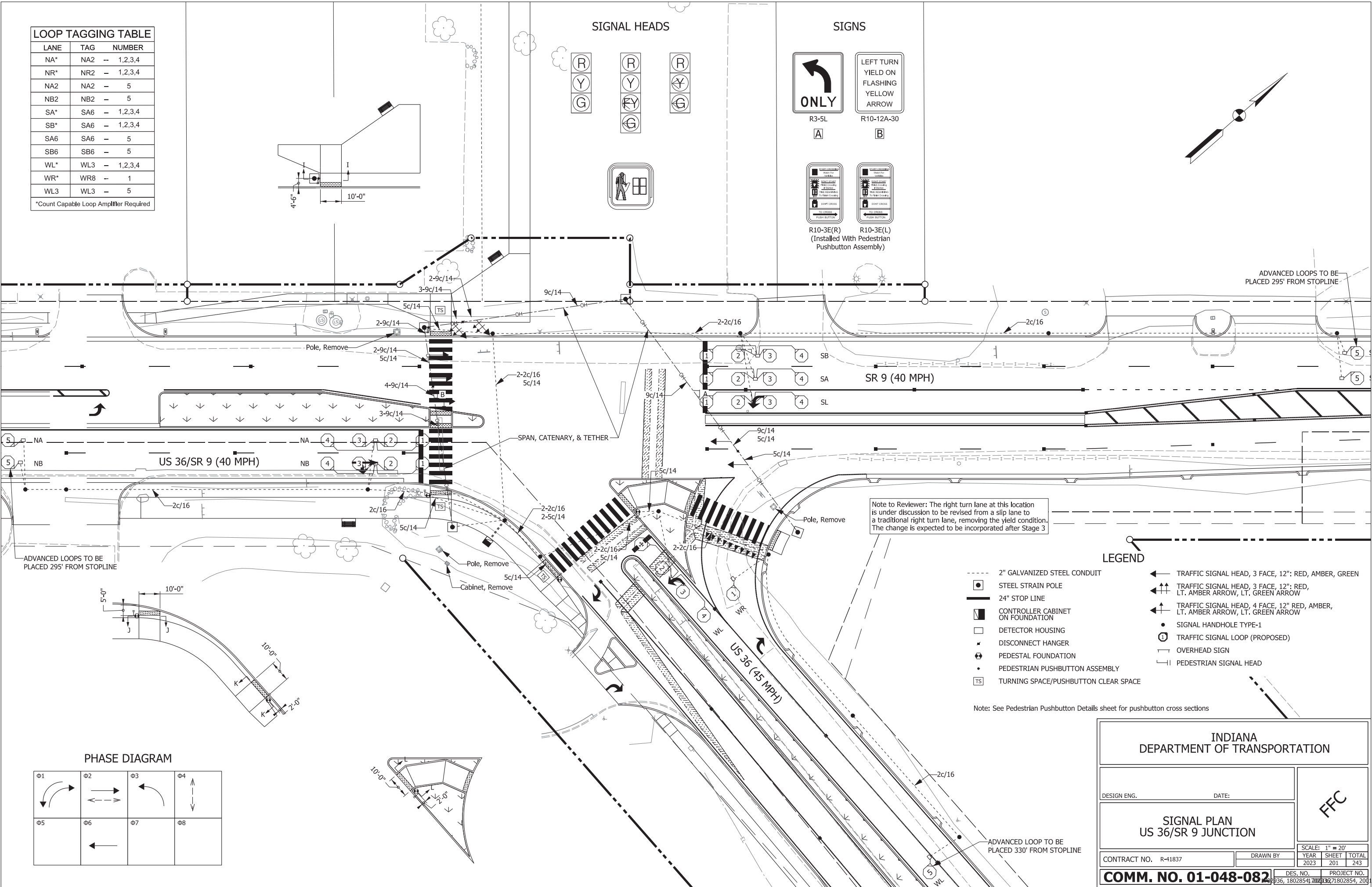
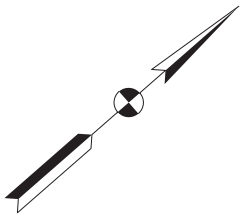
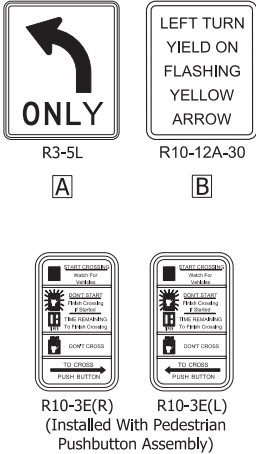
LANE	TAG	NUMBER
NA*	NA2 --	1,2,3,4
NR*	NR2 --	1,2,3,4
NA2	NA2 --	5
NB2	NB2 --	5
SA*	SA6 --	1,2,3,4
SB*	SA6 --	1,2,3,4
SA6	SA6 --	5
SB6	SB6 --	5
WL*	WL3 --	1,2,3,4
WR*	WR8 --	1
WL3	WL3 --	5

*Count Capable Loop Amplifier Required

SIGNAL HEADS



SIGNS



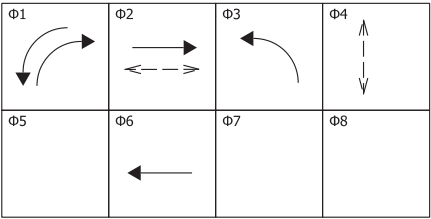
Note to Reviewer: The right turn lane at this location is under discussion to be revised from a slip lane to a traditional right turn lane, removing the yield condition. The change is expected to be incorporated after Stage 3

LEGEND

- 2" GALVANIZED STEEL CONDUIT
- STEEL STRAIN POLE
- 24" STOP LINE
- CONTROLLER CABINET ON FOUNDATION
- DETECTOR HOUSING
- DISCONNECT HANGER
- PEDESTAL FOUNDATION
- PEDESTRIAN PUSHBUTTON ASSEMBLY
- TURNING SPACE/PUSHBUTTON CLEAR SPACE
- TRAFFIC SIGNAL HEAD, 3 FACE, 12": RED, AMBER, GREEN
- TRAFFIC SIGNAL HEAD, 3 FACE, 12": RED, LT. AMBER ARROW, LT. GREEN ARROW
- TRAFFIC SIGNAL HEAD, 4 FACE, 12" RED, AMBER, LT. AMBER ARROW, LT. GREEN ARROW
- SIGNAL HANDHOLE TYPE-1
- TRAFFIC SIGNAL LOOP (PROPOSED)
- OVERHEAD SIGN
- PEDESTRIAN SIGNAL HEAD

Note: See Pedestrian Pushbutton Details sheet for pushbutton cross sections

PHASE DIAGRAM



INDIANA
DEPARTMENT OF TRANSPORTATION

DESIGN ENG. DATE:

SIGNAL PLAN
US 36/SR 9 JUNCTION

CONTRACT NO. R-41837

DRAWN BY

SCALE: 1" = 20'

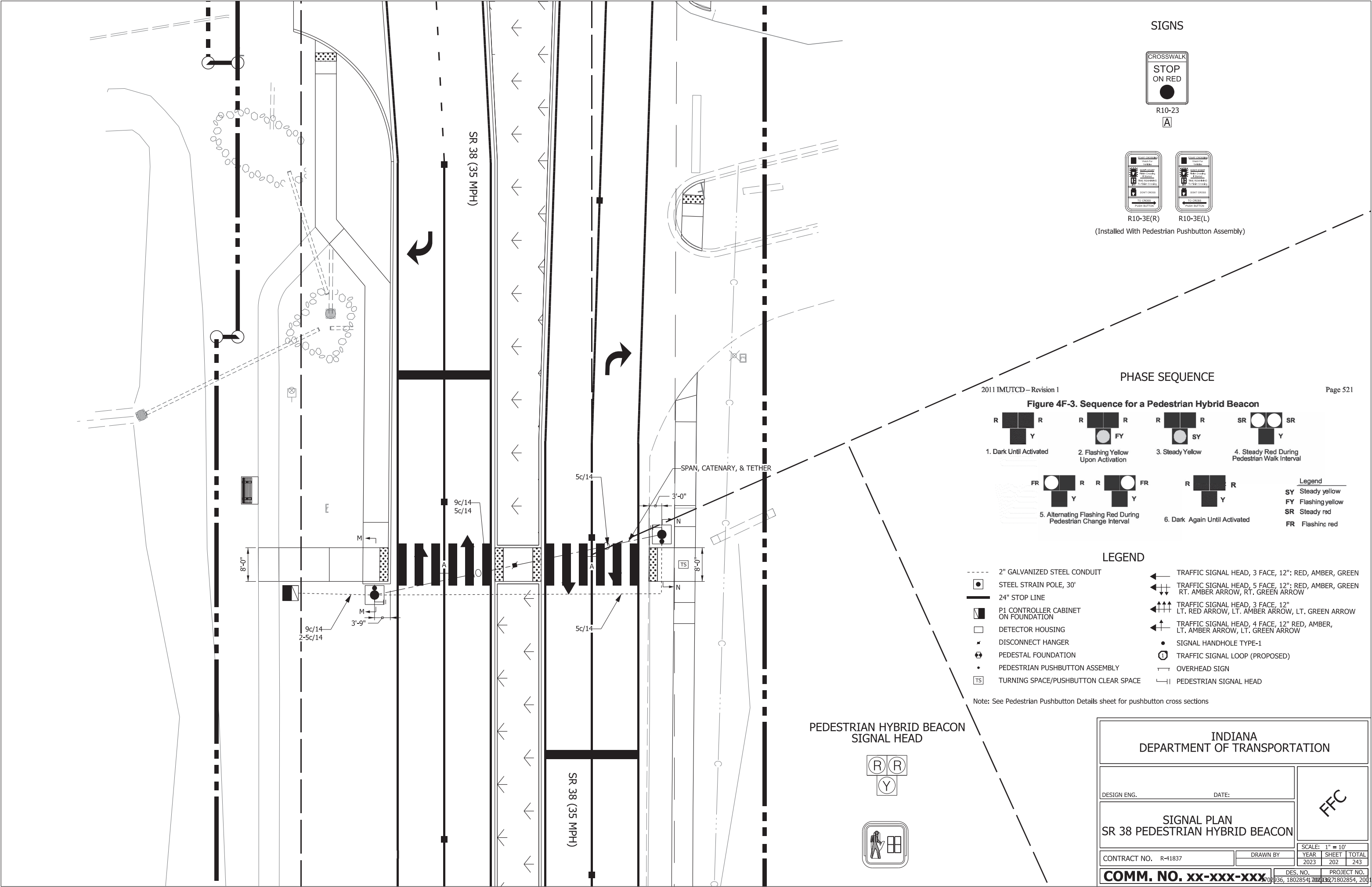
YEAR SHEET TOTAL

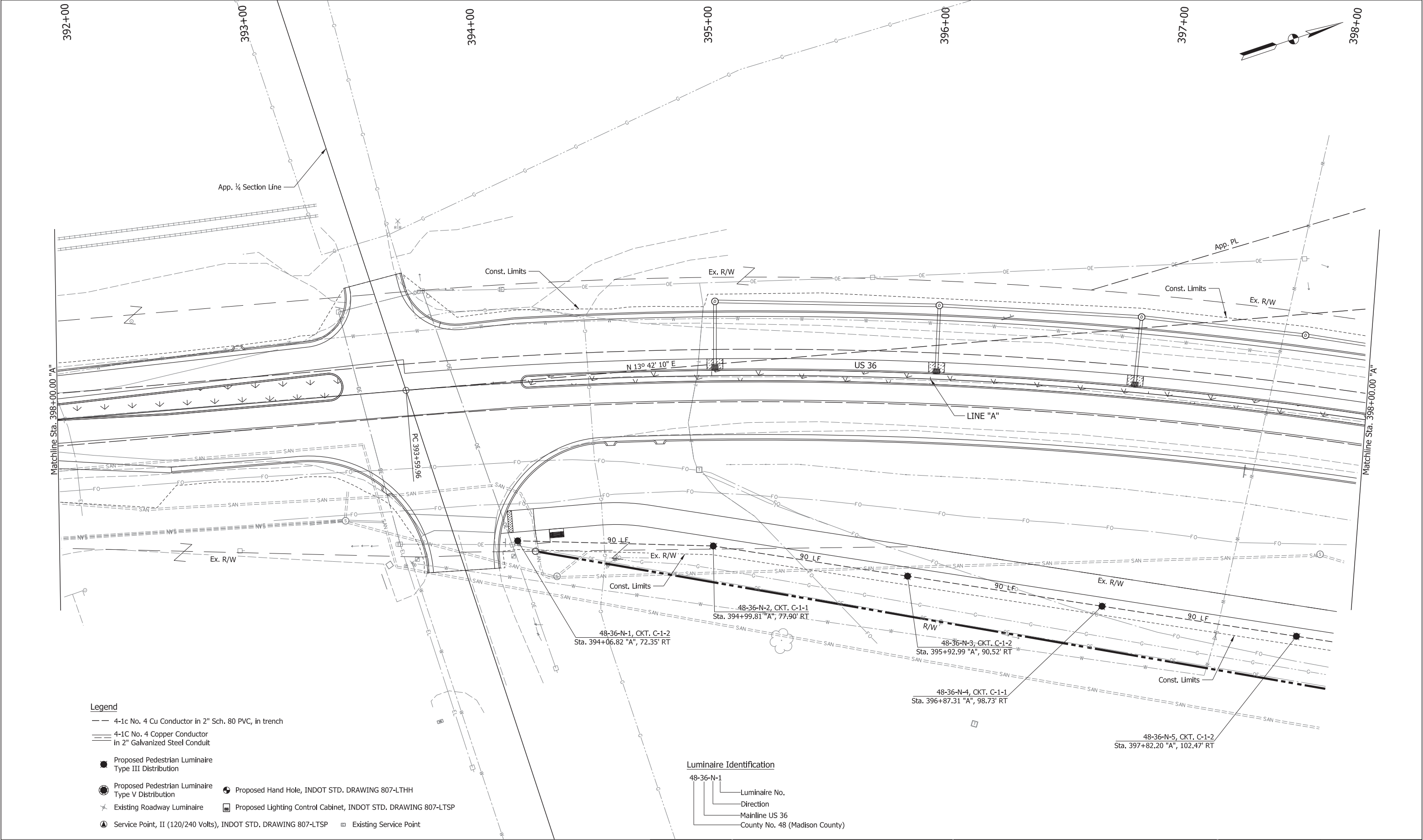
2023 201 243

COMM. NO. 01-048-082

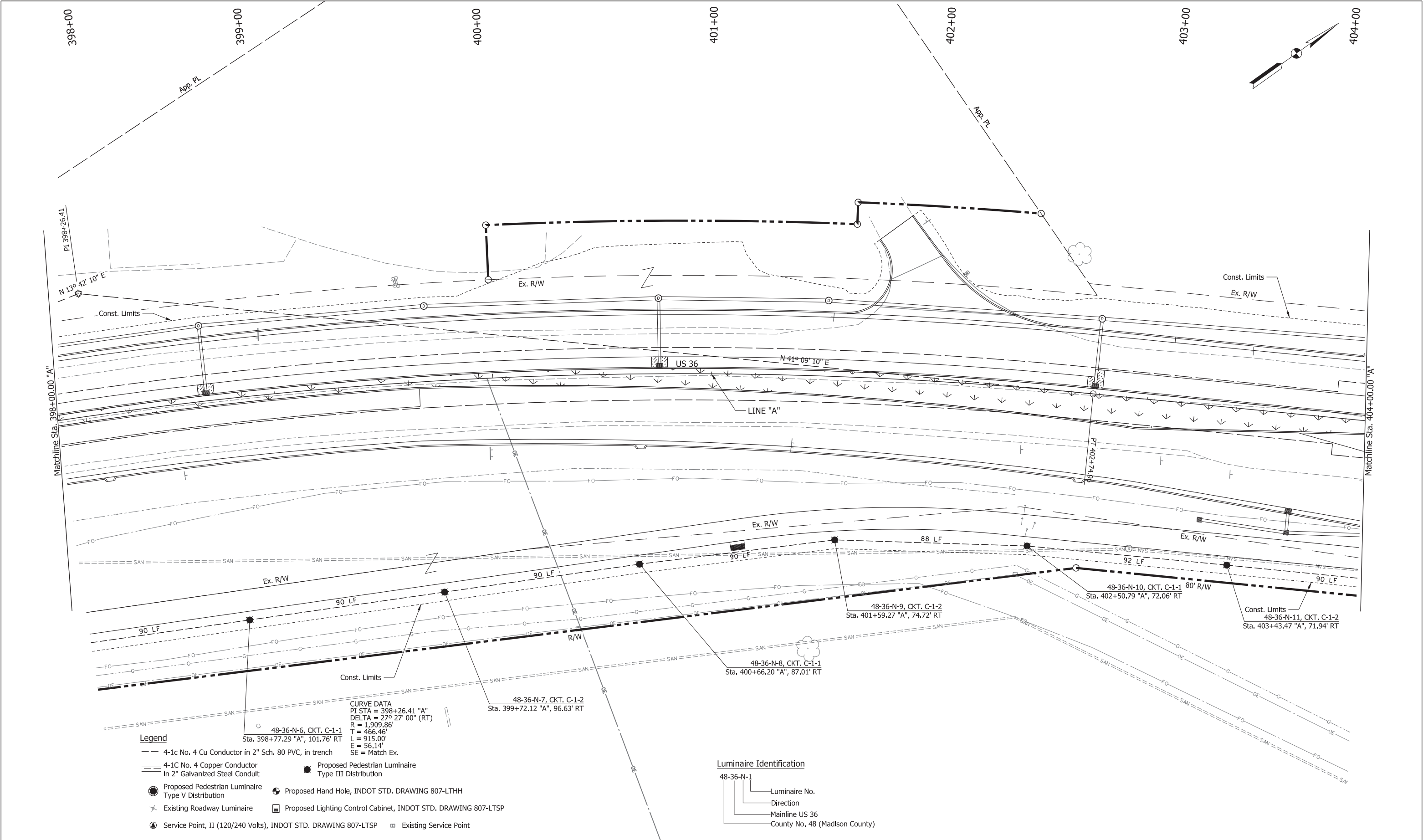
DES. NO. PROJECT NO.

1802854 1802854 1802854 1802854





CDM Smith 211 North Pennsylvania Street, Ste 1750 Indianapolis, IN 46204 Tel: (317) 829-9600	STAGE 3	RECOMMENDED FOR APPROVAL DESIGNED: HMH CHECKED: SMS	DESIGN ENGINEER DRAWN: BDM CHECKED: MJV	INDIANA DEPARTMENT OF TRANSPORTATION LIGHTING DETAILS US 36 - LINE "A"	SCALE 1" = 20'-0"	BRIDGE FILE
						DESIGNATION 1702936, 1802854, 2001127
					SURVEY BOOK ELECTRONIC CONTRACT R-41837	SHEETS 204 of 243 PROJECT 1702936, 1802854, 2001127



Legend

- 4-1c No. 4 Cu Conductor in 2" Sch. 80 PVC, in trench
- 4-1c No. 4 Copper Conductor in 2" Galvanized Steel Conduit
- Proposed Pedestrian Luminaire Type V Distribution
- Existing Roadway Luminaire
- Service Point, II (120/240 Volts), INDOT STD. DRAWING 807-LTSP
- Proposed Pedestrian Luminaire Type III Distribution
- Proposed Hand Hole, INDOT STD. DRAWING 807-LTHH
- Proposed Lighting Control Cabinet, INDOT STD. DRAWING 807-LTSP
- Existing Service Point

CURVE DATA
PI STA = 398+26.41 "A"
DELTA = 27° 27' 00" (RT)
R = 1,909.86'
T = 466.46'
L = 915.00'
E = 56.14'
SE = Match Ex.

Luminaire Identification

- 48-36-N-1
- Luminaire No.
- Direction
- Mainline US 36
- County No. 48 (Madison County)

**CDM
Smith**

211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED
FOR APPROVAL

DESIGN ENGINEER DATE

DESIGNED: HMH

DRAWN: BDM

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

**LIGHTING DETAILS
US 36 - LINE "A"**

SCALE

1" = 20'-0"

BRIDGE FILE

DESIGNATION

1702936, 1802854, 2001127

SURVEY BOOK

ELECTRONIC

CONTRACT

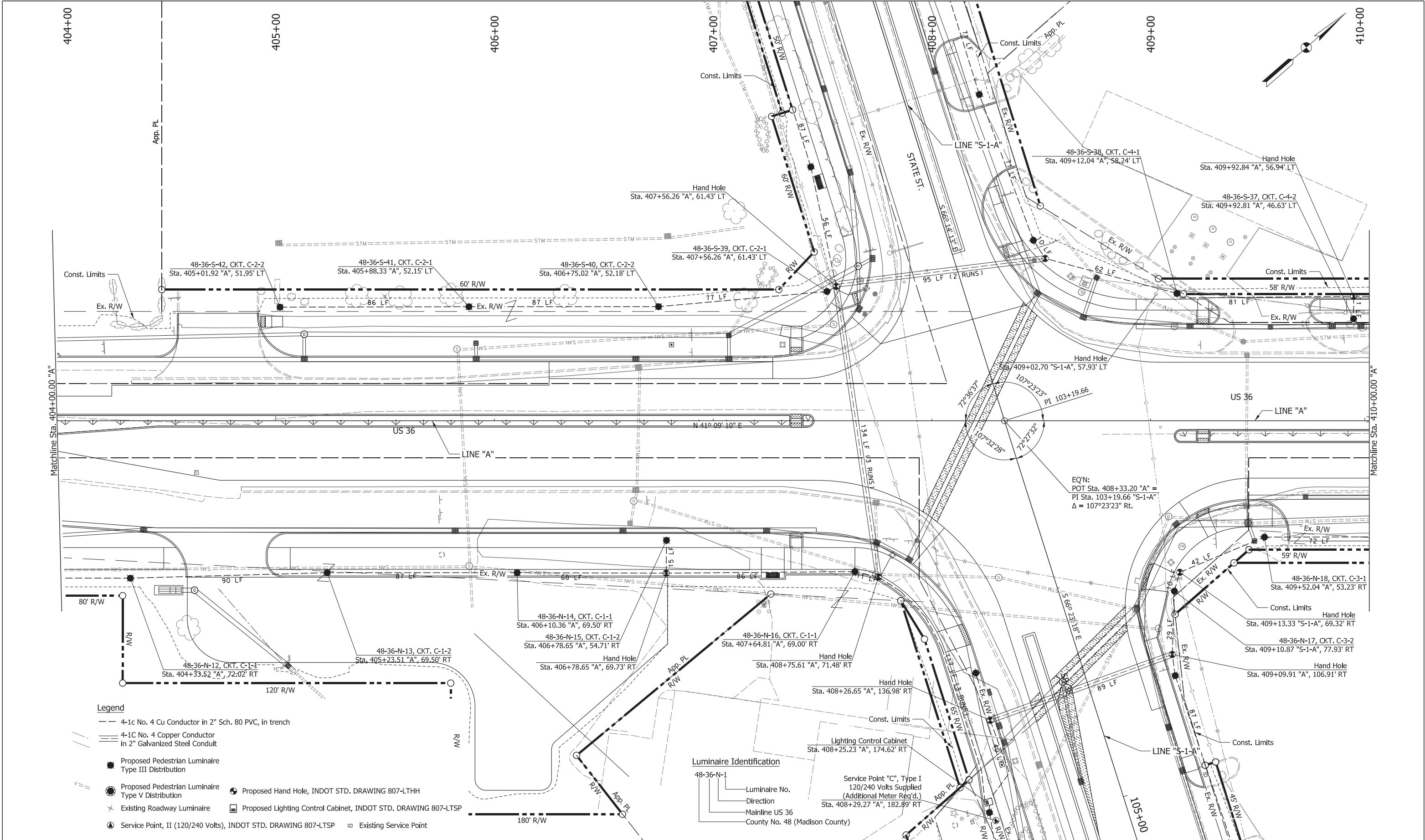
R-41837

SHEETS

205 of 243

PROJECT

1702936, 1802854, 2001127



Legend

- 4-1c No. 4 Cu Conductor in 2" Sch. 80 PVC, in trench
- 4-1C No. 4 Copper Conductor in 2" Galvanized Steel Conduit
- Proposed Pedestrian Luminaire Type III Distribution
- Proposed Pedestrian Luminaire Type V Distribution
- Existing Roadway Luminaire
- Service Point, II (120/240 Volts), INDOT STD. DRAWING 807-LTSP
- Proposed Hand Hole, INDOT STD. DRAWING 807-LTHH
- Proposed Lighting Control Cabinet, INDOT STD. DRAWING 807-LTSP
- Existing Service Point

Luminaire Identification

- 48-36-N-1
- Luminaire No.
- Direction
- Mainline US 36
- County No. 48 (Madison County)

**CDM
Smith**

211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED
FOR APPROVAL

DESIGN ENGINEER

DATE

DESIGNED: HMM

DRAWN: BDM

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

**LIGHTING DETAILS
US 36 - LINE "A"**

SCALE

1" = 20'-0"

BRIDGE FILE

DESIGNATION

1702936, 1802854, 2001127

SURVEY BOOK

ELECTRONIC

CONTRACT

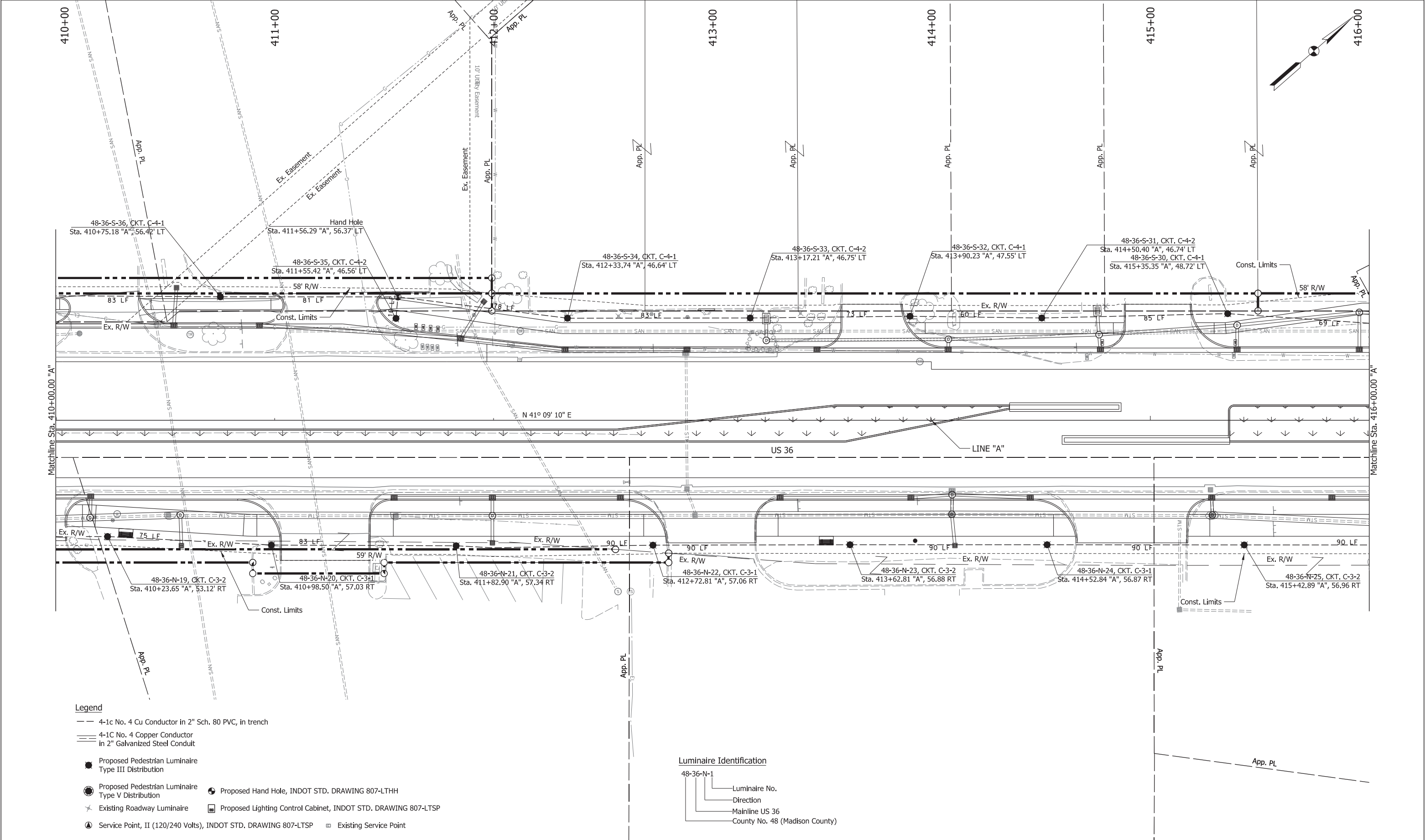
R-41837

SHEETS

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PROJECT

1702936, 1802854, 2001127



Legend

- 4-1c No. 4 Cu Conductor in 2" Sch. 80 PVC, in trench
- 4-1C No. 4 Copper Conductor in 2" Galvanized Steel Conduit
- Proposed Pedestrian Luminaire Type III Distribution
- Proposed Pedestrian Luminaire Type V Distribution
- Existing Roadway Luminaire
- Service Point, II (120/240 Volts), INDOT STD. DRAWING 807-LTSP
- Proposed Hand Hole, INDOT STD. DRAWING 807-LTHH
- Proposed Lighting Control Cabinet, INDOT STD. DRAWING 807-LTSP
- Existing Service Point

Luminaire Identification

- 48-36-N-1
- Luminaire No.
- Direction
- Mainline US 36
- County No. 48 (Madison County)

**CDM
Smith**

211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED
FOR APPROVAL

DESIGN ENGINEER

DATE

DESIGNED: HMM

DRAWN: BDM

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

LIGHTING DETAILS
US 36 - LINE "A"

SCALE

1" = 20'-0"

BRIDGE FILE

DESIGNATION

1702936, 1802854, 2001127

SURVEY BOOK

ELECTRONIC

CONTRACT

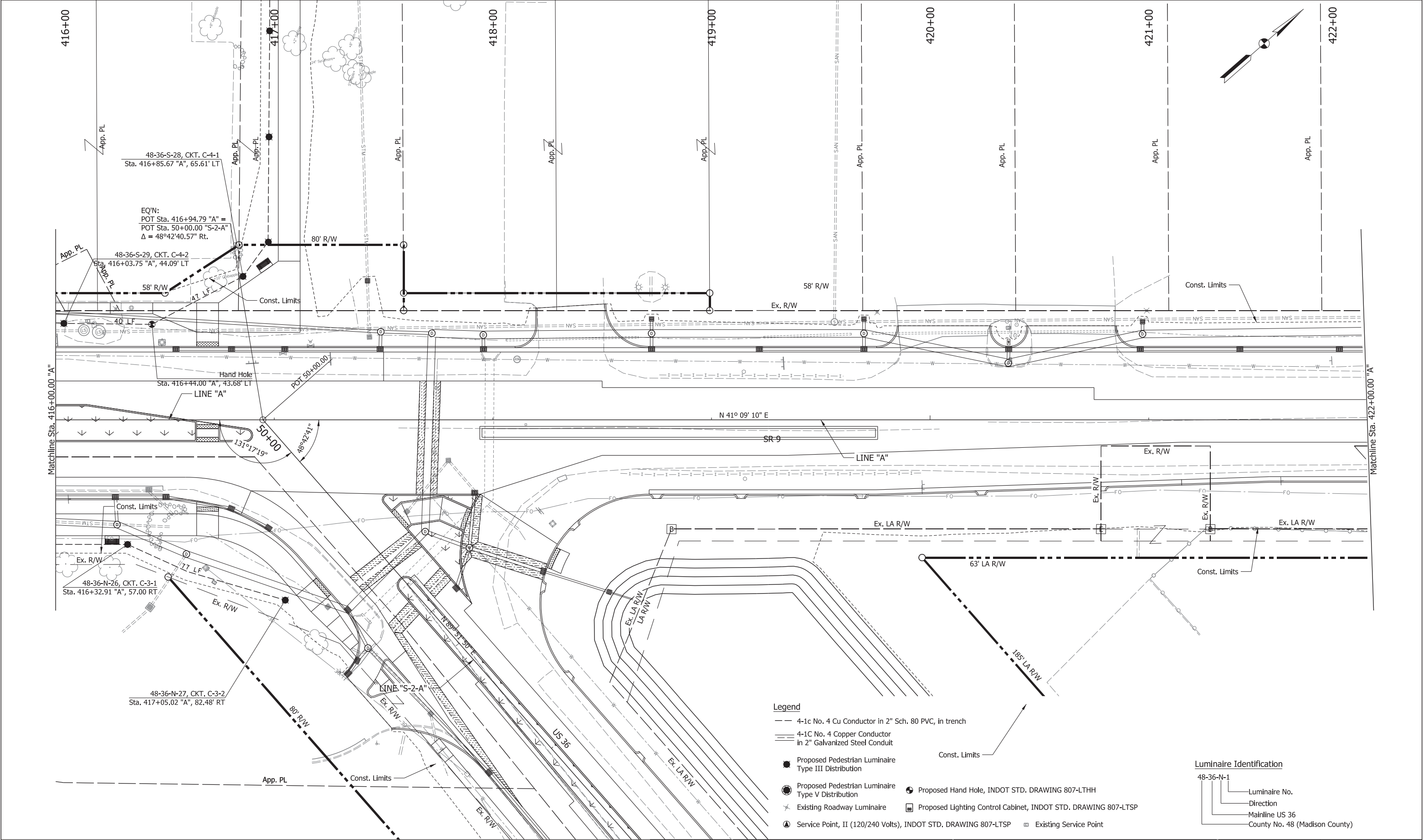
R-41837

SHEETS

207 of 243

PROJECT

1702936, 1802854, 2001127



Legend

- 4-1c No. 4 Cu Conductor in 2" Sch. 80 PVC, in trench
- 4-1C No. 4 Copper Conductor in 2" Galvanized Steel Conduit
- Proposed Pedestrian Luminaire Type III Distribution
- Proposed Pedestrian Luminaire Type V Distribution
- Existing Roadway Luminaire
- Service Point, II (120/240 Volts), INDOT STD. DRAWING 807-LTSP
- Proposed Hand Hole, INDOT STD. DRAWING 807-LTHH
- Proposed Lighting Control Cabinet, INDOT STD. DRAWING 807-LTSP
- Existing Service Point

Luminaire Identification

- 48-36-N-1
- Luminaire No.
- Direction
- Mainline US 36
- County No. 48 (Madison County)

**CDM
Smith**

211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED
FOR APPROVAL

DESIGN ENGINEER

DATE

DESIGNED: HMH

DRAWN: BDM

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

**LIGHTING DETAILS
US 36 - LINE "A"**

SCALE

1" = 20'-0"

BRIDGE FILE

DESIGNATION

1702936, 1802854, 2001127

SURVEY BOOK

ELECTRONIC

CONTRACT

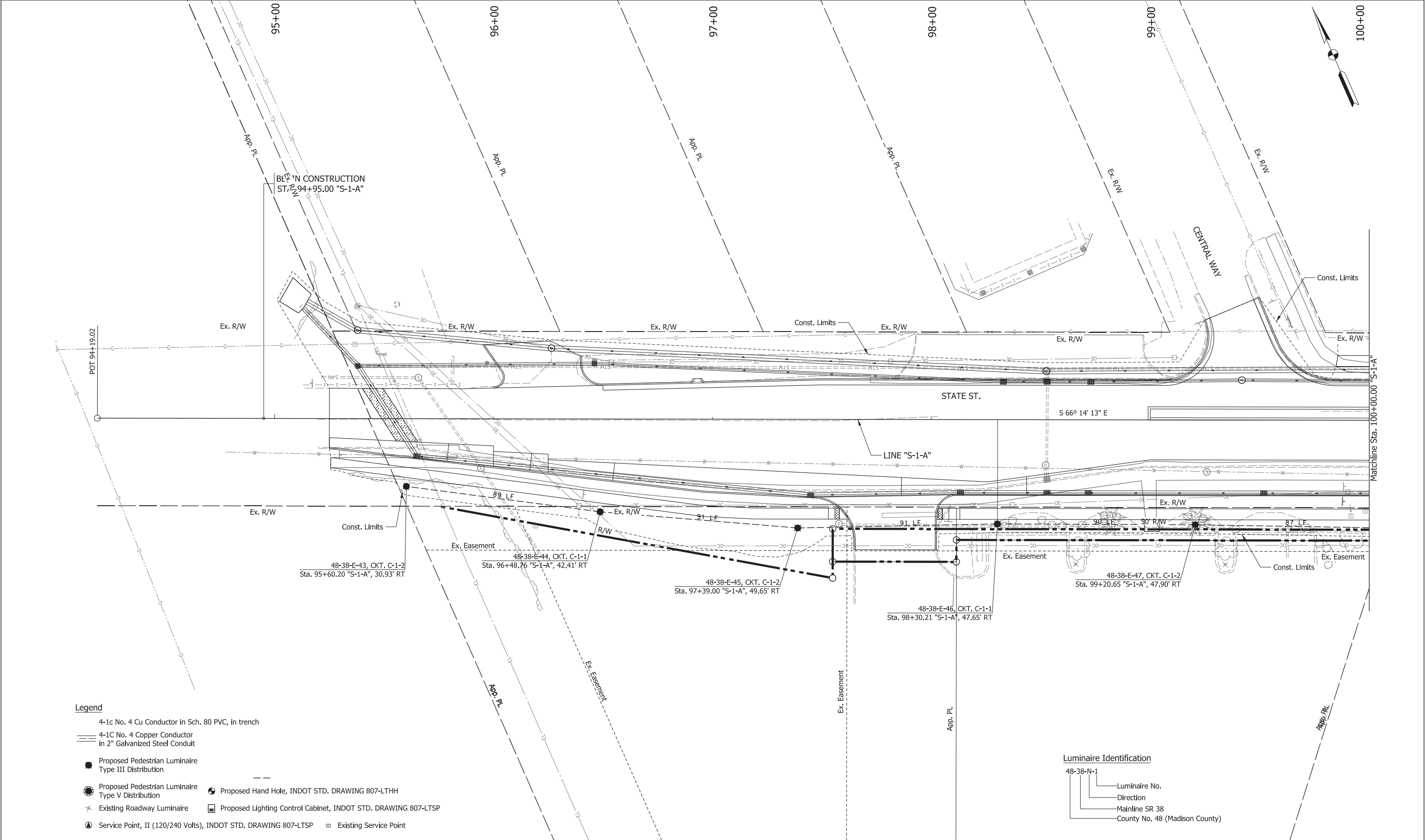
R-41837

SHEETS

208 of 243

PROJECT

1702936, 1802854, 2001127



Legend

- 4-1c No. 4 Cu Conductor in Sch. 80 PVC, in trench
- 4-1C No. 4 Copper Conductor in 2" Galvanized Steel Conduit
- Proposed Pedestrian Luminaire Type III Distribution
- Proposed Pedestrian Luminaire Type V Distribution
- Existing Roadway Luminaire
- Service Point, II (120/240 Volts), INDOT STD. DRAWING 807-LTSP
- Proposed Hand Hole, INDOT STD. DRAWING 807-LTHH
- Proposed Lighting Control Cabinet, INDOT STD. DRAWING 807-LTSP
- Existing Service Point

Luminaire Identification

- 48-38-N-1
- Luminaire No.
- Direction
- Mainline SR 38
- County No. 48 (Madison County)

**CDM
Smith**

211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED
FOR APPROVAL

DESIGN ENGINEER DATE

DESIGNED: HMH

DRAWN: BDM

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

**LIGHTING DETAILS
STATE STREET - LINE "S-1-A"**

SCALE

1" = 20'-0"

BRIDGE FILE

DESIGNATION

1702936, 1802854, 2001127

SURVEY BOOK

ELECTRONIC

CONTRACT

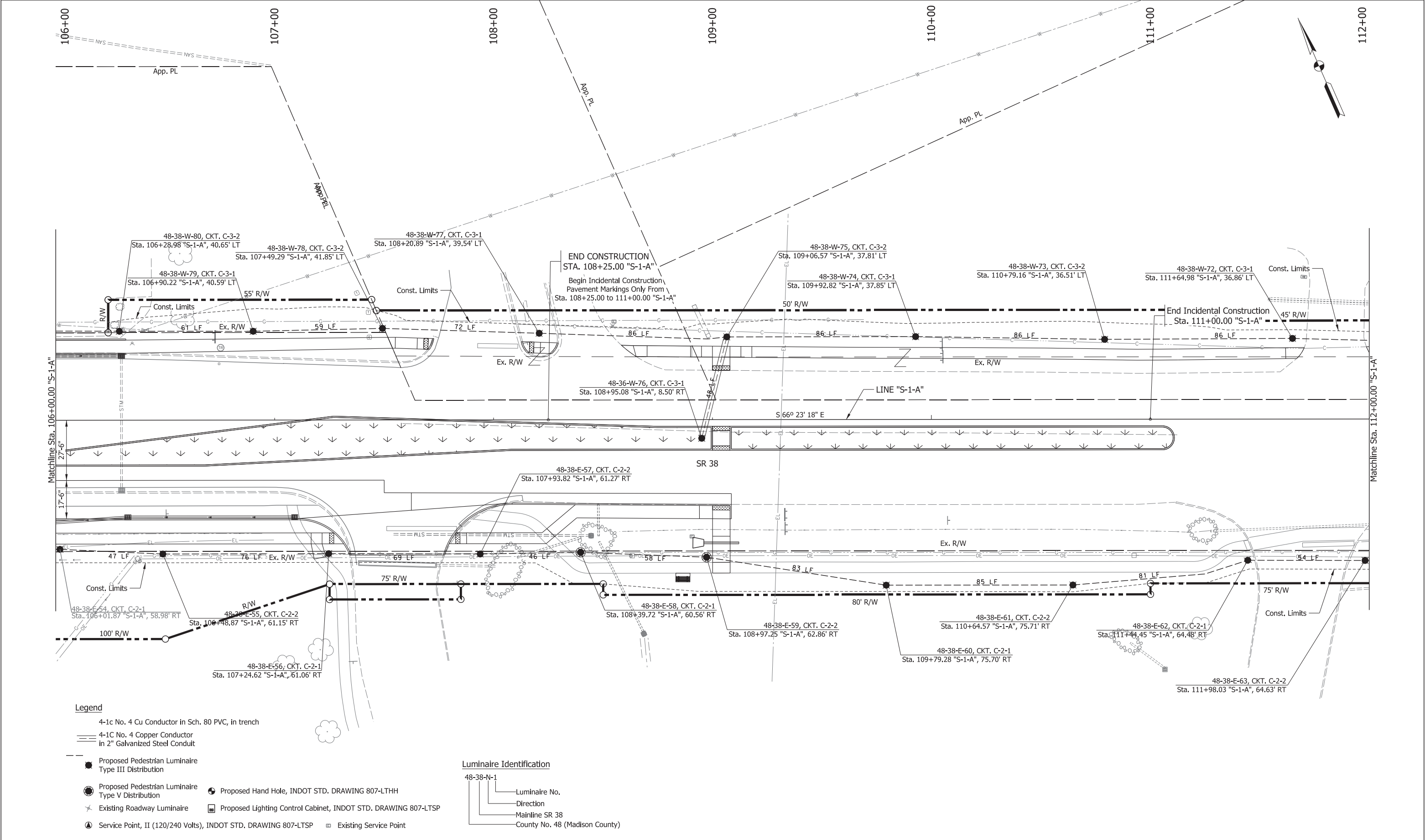
R-41837

SHEETS

209 of 243

PROJECT

1702936, 1802854, 2001127



Legend

- 4-1c No. 4 Cu Conductor in Sch. 80 PVC, in trench
- 4-1C No. 4 Copper Conductor in 2" Galvanized Steel Conduit
- Proposed Pedestrian Luminaire Type III Distribution
- Proposed Pedestrian Luminaire Type V Distribution
- Existing Roadway Luminaire
- Service Point, II (120/240 Volts), INDOT STD. DRAWING 807-LTSP
- Proposed Hand Hole, INDOT STD. DRAWING 807-LTHH
- Proposed Lighting Control Cabinet, INDOT STD. DRAWING 807-LTSP
- Existing Service Point

Luminaire Identification

- 48-38-N-1
- Luminaire No.
- Direction
- Mainline SR 38
- County No. 48 (Madison County)

**CDM
Smith**

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Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER

DATE

DESIGNED: HMM

DRAWN: BDM

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

**LIGHTING DETAILS
SR 38 - LINE "S-1-A"**

SCALE

1" = 20'-0"

BRIDGE FILE

DESIGNATION

1702936, 1802854, 2001127

SURVEY BOOK

SHEETS

ELECTRONIC

211

of

243

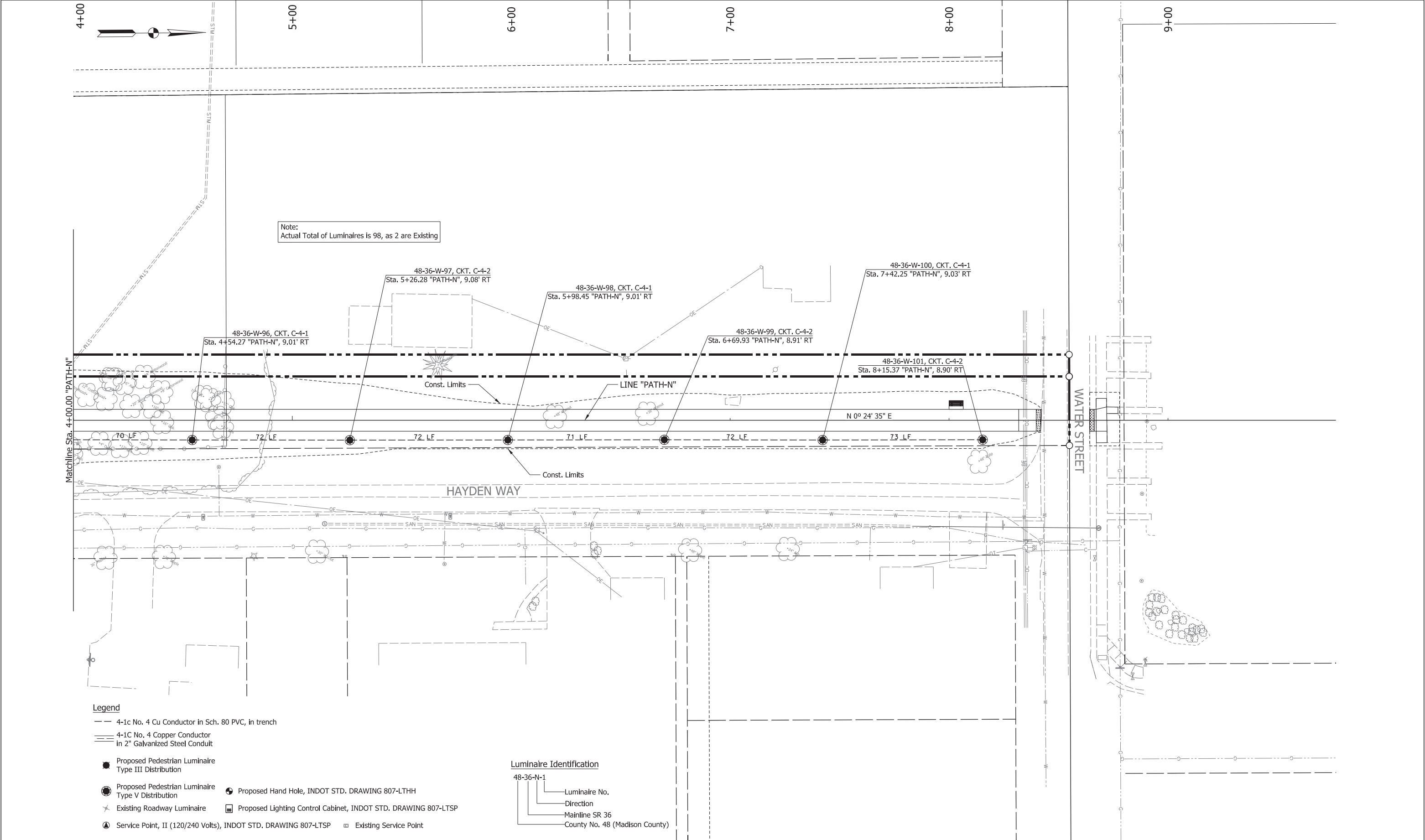
CONTRACT

PROJECT

R-41837

1702936, 1802854, 2001127







211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

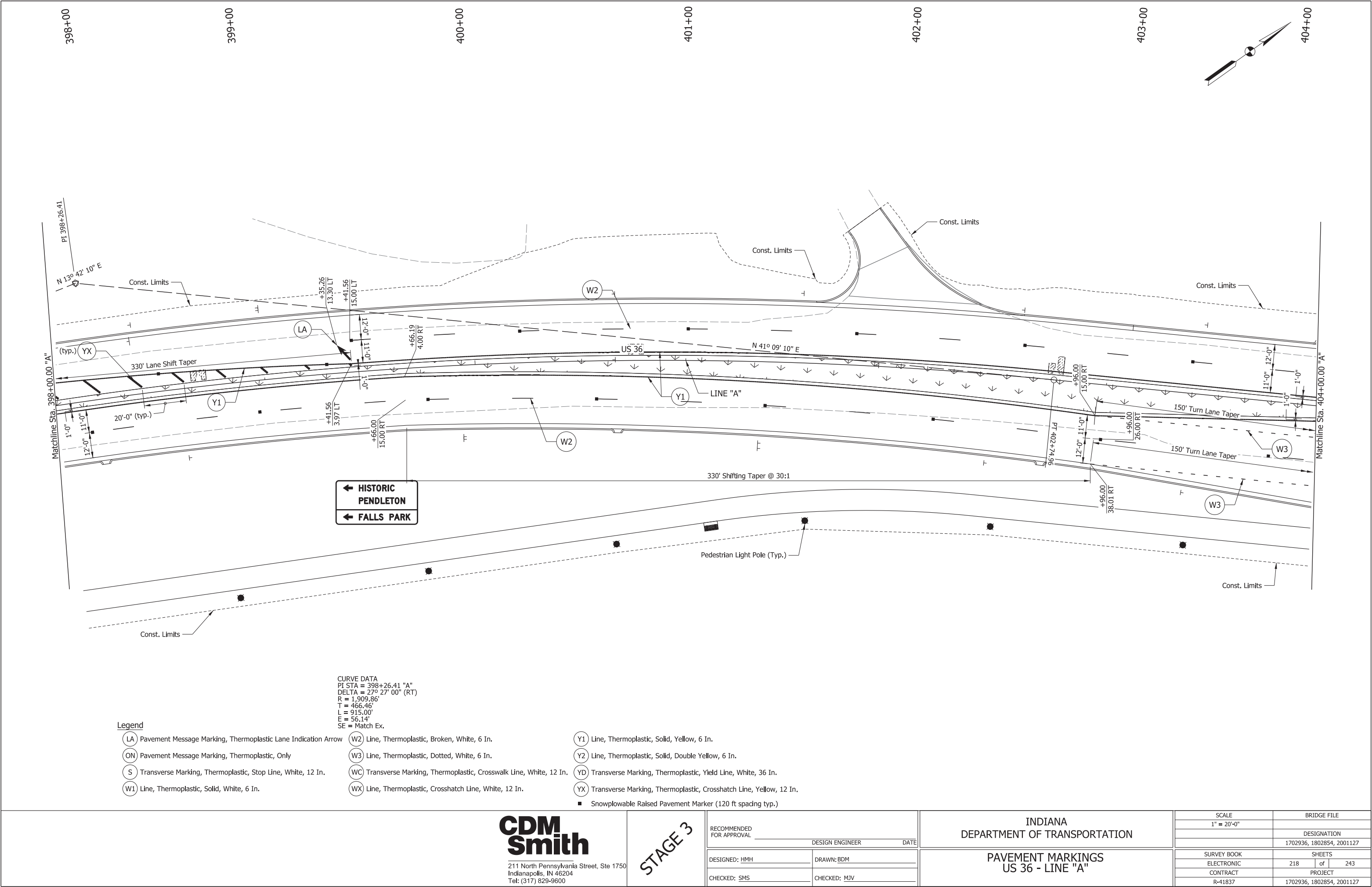
STAGE 3

RECOMMENDED FOR APPROVAL _____	
DESIGN ENGINEER	DATE
DESIGNED: HMM	DRAWN: BDM
CHECKED: SMS	CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

LIGHTING DETAILS
LINE "PATH-N"

SCALE 1" = 20'-0"	BRIDGE FILE
	DESIGNATION 1702936, 1802854, 2001127
SURVEY BOOK	SHEETS
ELECTRONIC	214 of 243
CONTRACT	PROJECT
R-41837	1702936, 1802854, 2001127



CURVE DATA
PI STA = 398+26.41 "A"
DELTA = 27° 27' 00" (RT)
R = 1,909.86'
T = 466.46'
L = 915.00'
E = 56.14'
SE = Match Ex.

Legend

- (LA) Pavement Message Marking, Thermoplastic Lane Indication Arrow

(ON) Pavement Message Marking, Thermoplastic, Only

(S) Transverse Marking, Thermoplastic, Stop Line, White, 12 In.

(W1) Line, Thermoplastic, Solid, White, 6 In.
- (W2) Line, Thermoplastic, Broken, White, 6 In.

(W3) Line, Thermoplastic, Dotted, White, 6 In.

(WC) Transverse Marking, Thermoplastic, Crosswalk Line, White, 12 In.

(WX) Line, Thermoplastic, Crosshatch Line, White, 12 In.
- (Y1) Line, Thermoplastic, Solid, Yellow, 6 In.

(Y2) Line, Thermoplastic, Solid, Double Yellow, 6 In.

(YD) Transverse Marking, Thermoplastic, Yield Line, White, 36 In.

(YX) Transverse Marking, Thermoplastic, Crosshatch Line, Yellow, 12 In.
- Snowplowable Raised Pavement Marker (120 ft spacing typ.)

CDM
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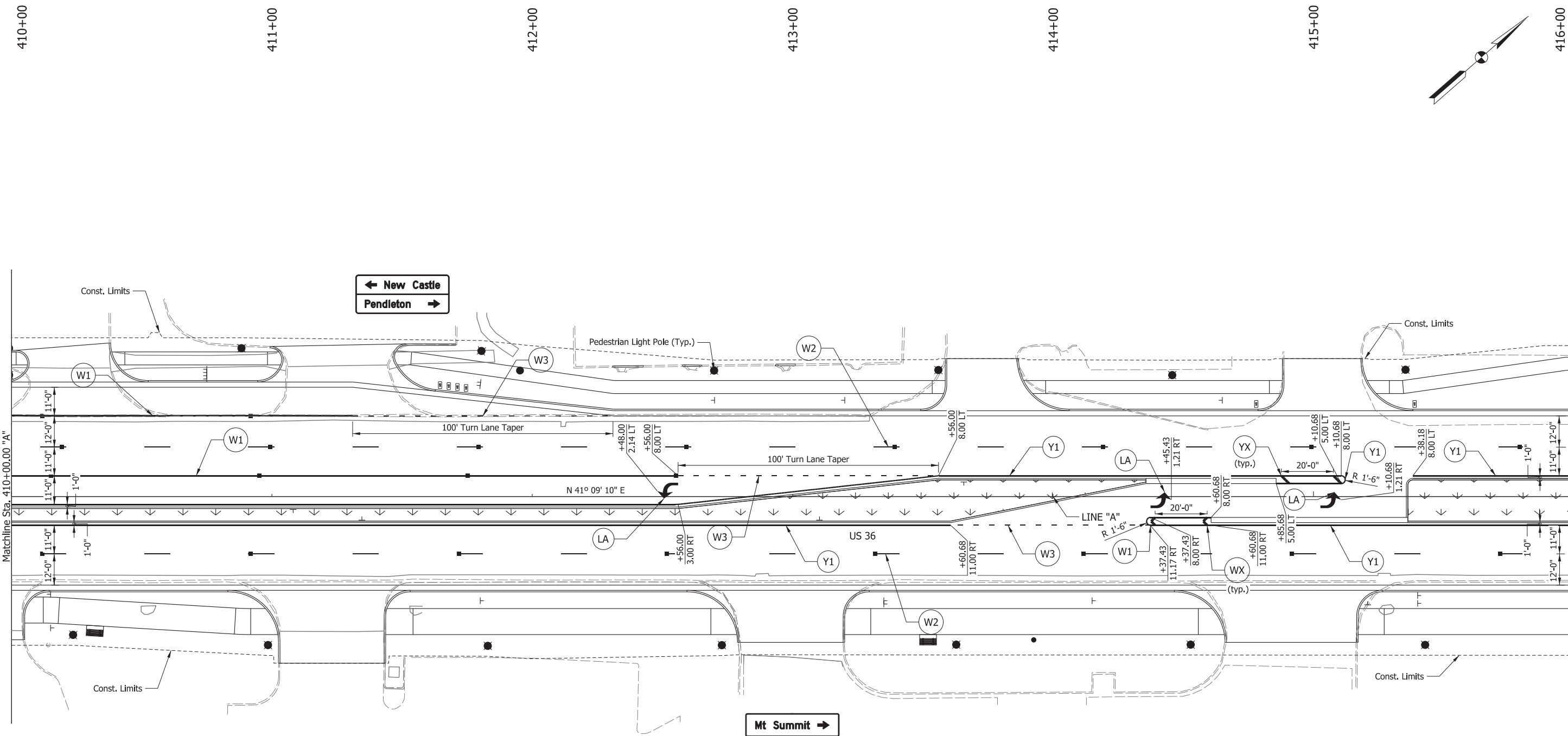
211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED FOR APPROVAL _____	
DESIGNED: HMH	DRAWN: BDM
CHECKED: SMS	CHECKED: MJV

INDIANA DEPARTMENT OF TRANSPORTATION	
PAVEMENT MARKINGS US 36 - LINE "A"	

SCALE 1" = 20'-0"	BRIDGE FILE	
	DESIGNATION	
	1702936, 1802854, 2001127	
SURVEY BOOK	SHEETS	
ELECTRONIC	218	of 243
CONTRACT	PROJECT	
R-41837	1702936, 1802854, 2001127	



- Legend**

 - LA Pavement Message Marking, Thermoplastic Lane Indication Arrow
 - ON Pavement Message Marking, Thermoplastic, Only
 - S Transverse Marking, Thermoplastic, Stop Line, White, 12 In.
 - W1 Line, Thermoplastic, Solid, White, 6 In.
 - W2 Line, Thermoplastic, Broken, White, 6 In.
 - W3 Line, Thermoplastic, Dotted, White, 6 In.
 - WC Transverse Marking, Thermoplastic, Crosswalk Line, White, 12 In.
 - WX Line, Thermoplastic, Crosshatch Line, White, 12 In.
 - Y1 Line, Thermoplastic, Solid, Yellow, 6 In.
 - Y2 Line, Thermoplastic, Solid, Double Yellow, 6 In.
 - YD Transverse Marking, Thermoplastic, Yield Line, White, 36 In.
 - YX Transverse Marking, Thermoplastic, Crosshatch Line, Yellow, 12 In.
 - Snowplowable Raised Pavement Marker (120 ft spacing typ.)

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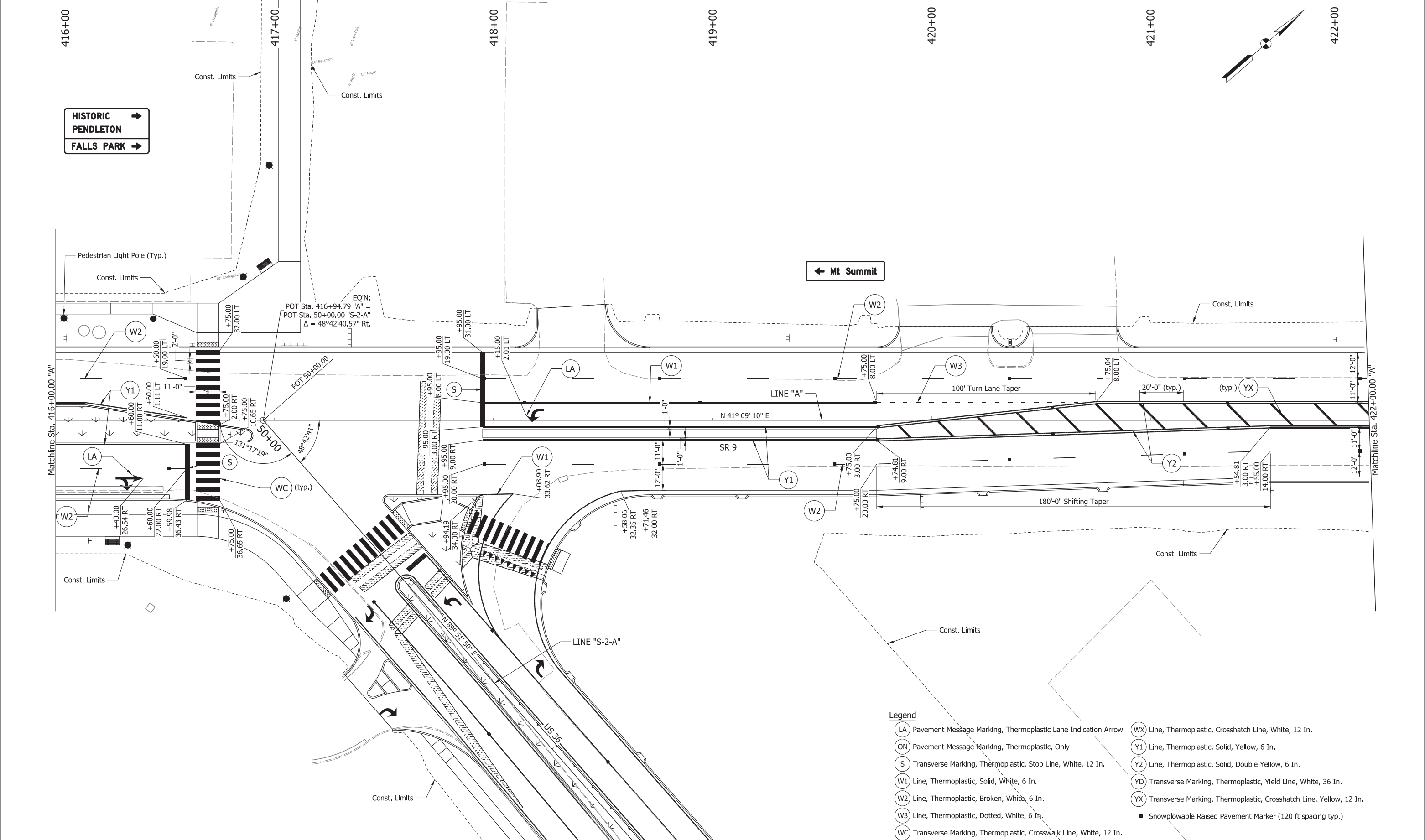
STAGE 3

RECOMMENDED FOR APPROVAL _____	
DESIGNED: HMM	DRAWN: BDM
CHECKED: SMS	CHECKED: MJV

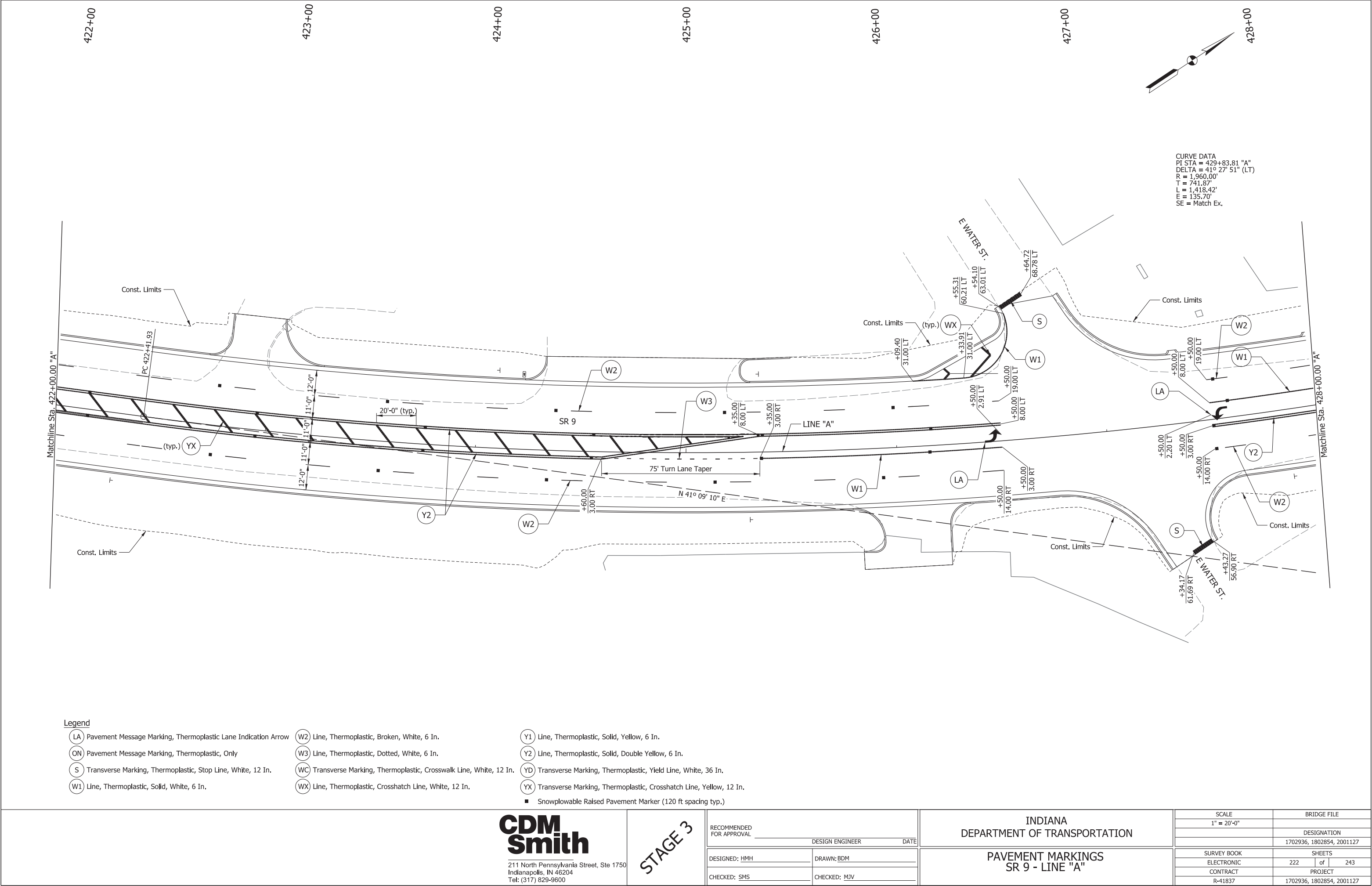
INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS
US 36 - LINE "A"

SCALE 1" = 20'-0"	BRIDGE FILE	
	DESIGNATION	
	1702936, 1802854, 2001127	
SURVEY BOOK	SHEETS	
ELECTRONIC	220	of 243
CONTRACT	PROJECT	
R-41837	1702936, 1802854, 2001127	



CDM Smith 211 North Pennsylvania Street, Ste 1750 Indianapolis, IN 46204 Tel: (317) 829-9600	STAGE 3	RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____		INDIANA DEPARTMENT OF TRANSPORTATION		SCALE 1" = 20'-0"	BRIDGE FILE
		DESIGNED: HMH CHECKED: SMS		DRAWN: BDM CHECKED: MJV		PAVEMENT MARKINGS US 36 / SR 9 - LINE "A"	
						SURVEY BOOK ELECTRONIC CONTRACT R-41837	SHEETS 221 of 243 PROJECT 1702936, 1802854, 2001127



CURVE DATA
PI STA = 429+83.81 "A"
DELTA = 41° 27' 51" (LT)
R = 1,960.00'
T = 741.87'
L = 1,418.42'
E = 135.70'
SE = Match Ex.

Legend

- LA Pavement Message Marking, Thermoplastic Lane Indication Arrow

ON Pavement Message Marking, Thermoplastic, Only

S Transverse Marking, Thermoplastic, Stop Line, White, 12 In.

W1 Line, Thermoplastic, Solid, White, 6 In.
- W2 Line, Thermoplastic, Broken, White, 6 In.

W3 Line, Thermoplastic, Dotted, White, 6 In.

WC Transverse Marking, Thermoplastic, Crosswalk Line, White, 12 In.

WX Line, Thermoplastic, Crosshatch Line, White, 12 In.
- Y1 Line, Thermoplastic, Solid, Yellow, 6 In.

Y2 Line, Thermoplastic, Solid, Double Yellow, 6 In.

YD Transverse Marking, Thermoplastic, Yield Line, White, 36 In.

YX Transverse Marking, Thermoplastic, Crosshatch Line, Yellow, 12 In.
- Snowplowable Raised Pavement Marker (120 ft spacing typ.)

CDM
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STAGE 3

RECOMMENDED
FOR APPROVAL

DESIGN ENGINEER

DATE

DESIGNED: HMH

DRAWN: BDM

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS
SR 9 - LINE "A"

SCALE

1" = 20'-0"

BRIDGE FILE

DESIGNATION

1702936, 1802854, 2001127

SURVEY BOOK

ELECTRONIC

CONTRACT

R-41837

SHEETS

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of

243

PROJECT

1702936, 1802854, 2001127

434+00

435+00

436+00

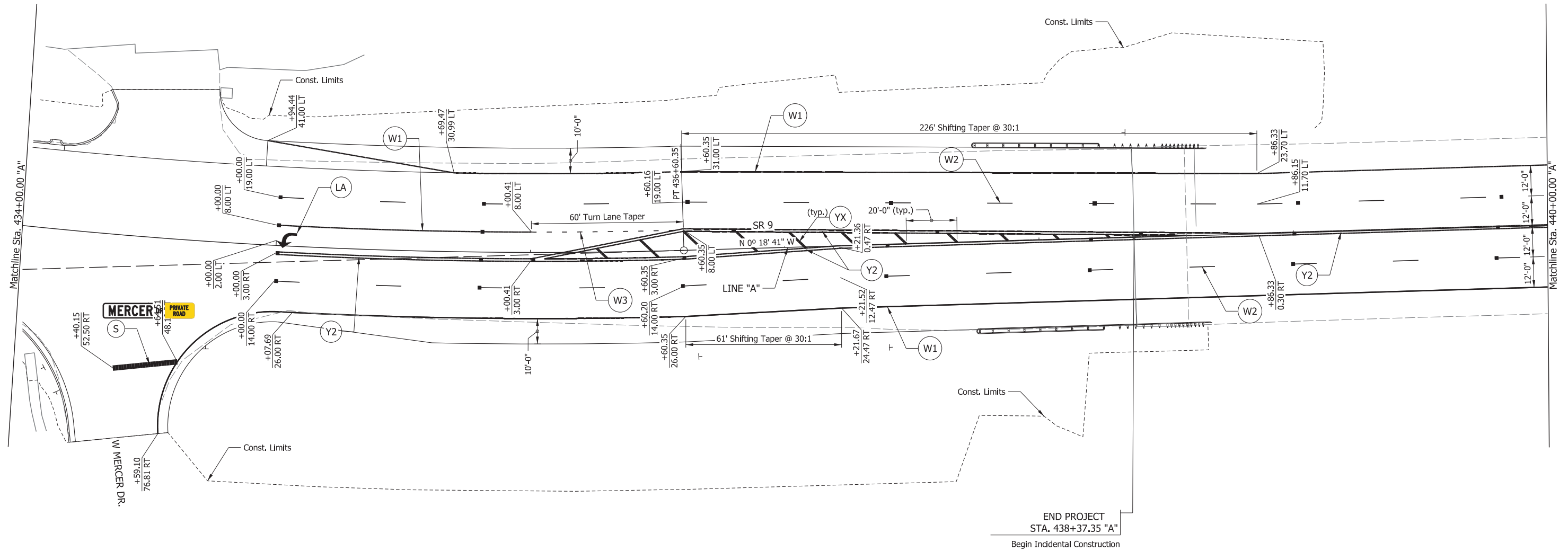
437+00

438+00

439+00

440+00

CURVE DATA
PI STA = 429+83.81 "A"
DELTA = 41° 27' 51" (LT)
R = 1,960.00'
T = 741.87'
L = 1,418.42'
E = 135.70'
SE = Match Ex.



Legend

- | | | |
|--|---|---|
| (LA) Pavement Message Marking, Thermoplastic Lane Indication Arrow | (W2) Line, Thermoplastic, Broken, White, 6 In. | (Y1) Line, Thermoplastic, Solid, Yellow, 6 In. |
| (ON) Pavement Message Marking, Thermoplastic, Only | (W3) Line, Thermoplastic, Dotted, White, 6 In. | (Y2) Line, Thermoplastic, Solid, Double Yellow, 6 In. |
| (S) Transverse Marking, Thermoplastic, Stop Line, White, 12 In. | (WC) Transverse Marking, Thermoplastic, Crosswalk Line, White, 12 In. | (YD) Transverse Marking, Thermoplastic, Yield Line, White, 36 In. |
| (W1) Line, Thermoplastic, Solid, White, 6 In. | (WX) Line, Thermoplastic, Crosshatch Line, White, 12 In. | (YX) Transverse Marking, Thermoplastic, Crosshatch Line, Yellow, 12 In. |
| | | ■ Snowplowable Raised Pavement Marker (120 ft spacing typ.) |

- Snowplowable Raised Pavement Marker (120 ft spacing typ.)



211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER

DATE _____

DESIGNED: HMH

DRAWN: BDM

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS
SR 9 - LINE "A"

SCALE

$$1'' = 20'-0''$$

BRIDGE FILE

DESIGNATION

36, 1802854, 2001127

SURVEY BOOK

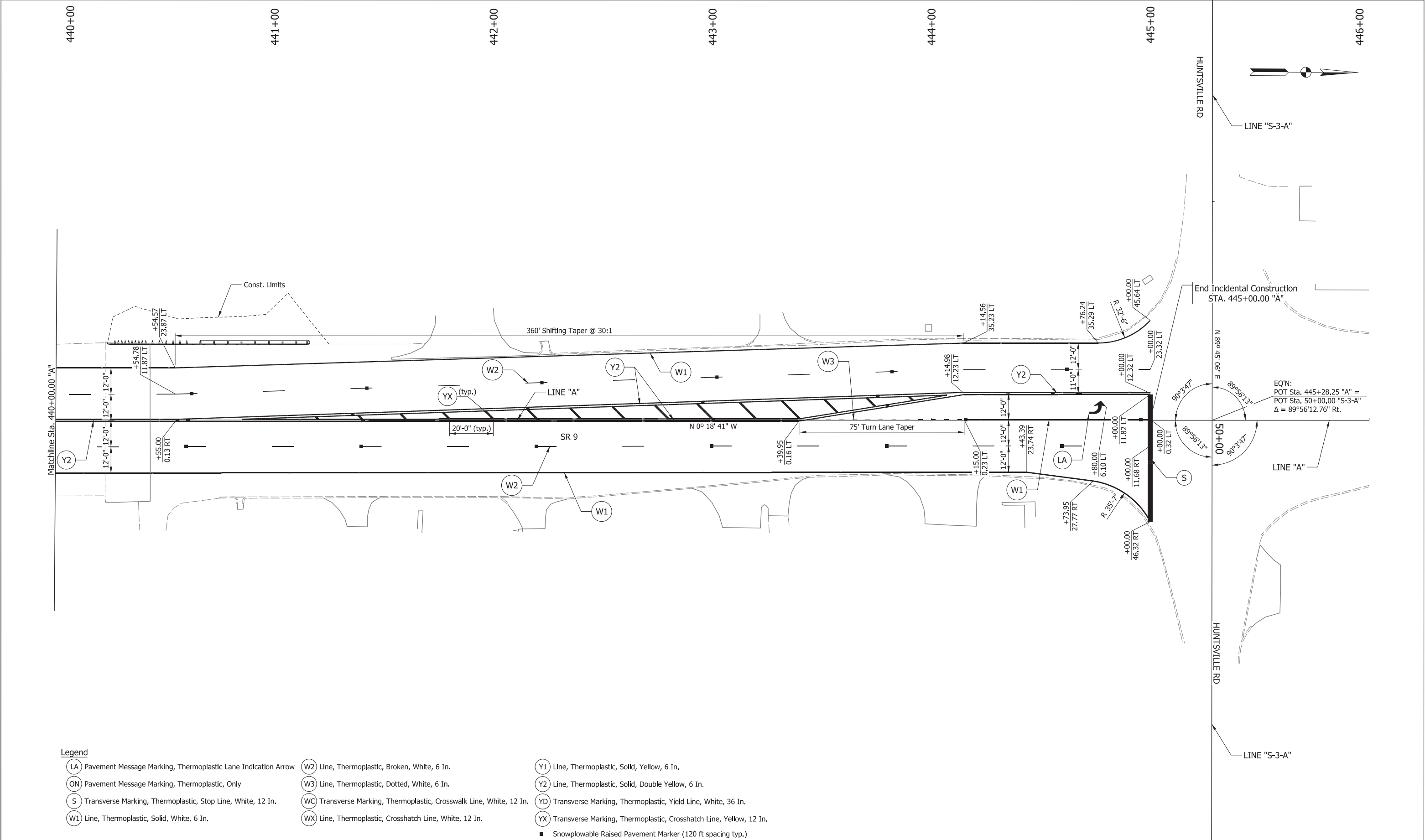
SHEETS

ELECTRONIC

	of	243
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CONTRACT

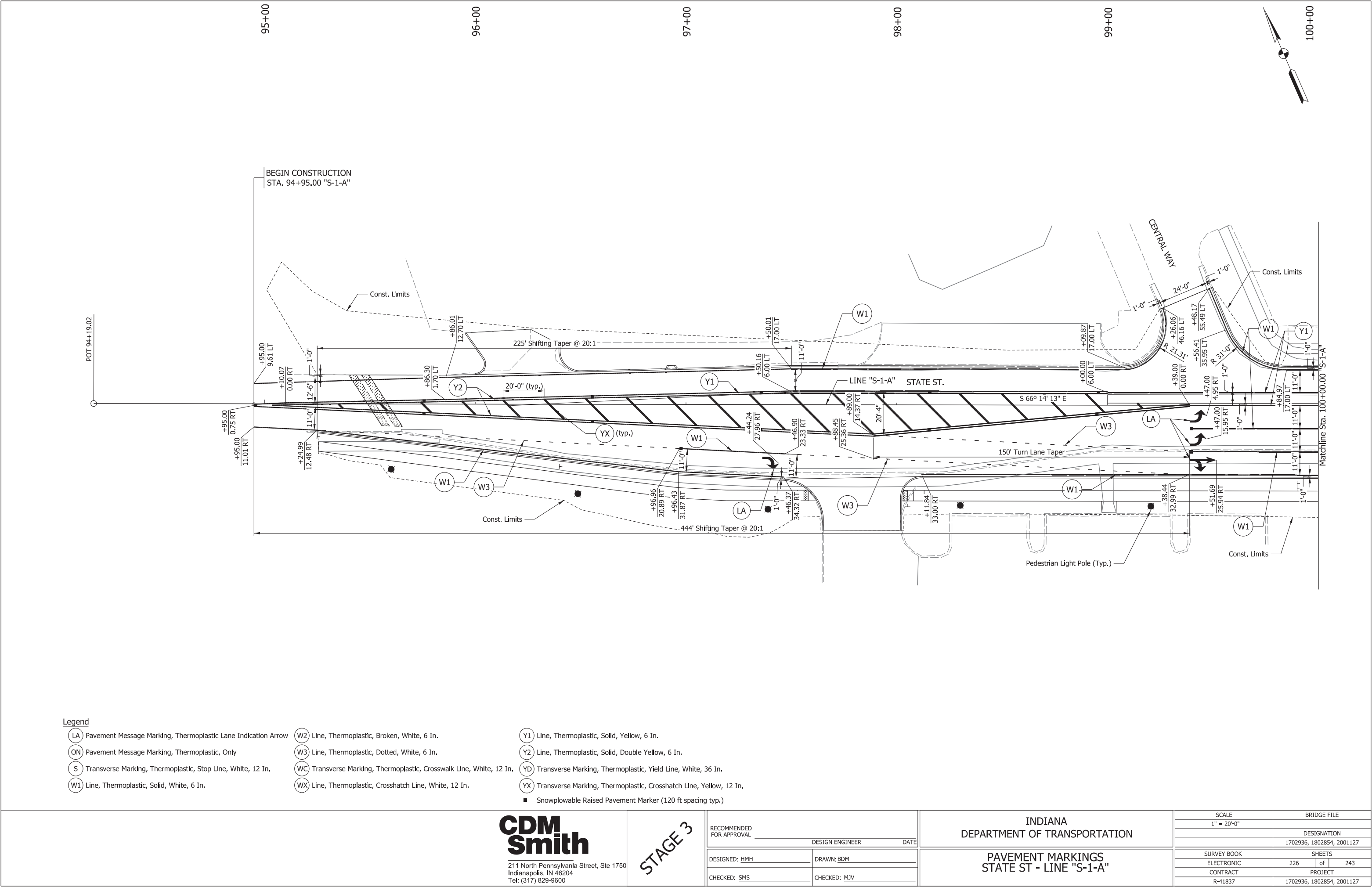
PROJECT



- Legend**

 - LA Pavement Message Marking, Thermoplastic Lane Indication Arrow
 - ON Pavement Message Marking, Thermoplastic, Only
 - S Transverse Marking, Thermoplastic, Stop Line, White, 12 In.
 - W1 Line, Thermoplastic, Solid, White, 6 In.
 - W2 Line, Thermoplastic, Broken, White, 6 In.
 - W3 Line, Thermoplastic, Dotted, White, 6 In.
 - WC Transverse Marking, Thermoplastic, Crosswalk Line, White, 12 In.
 - WX Line, Thermoplastic, Crosshatch Line, White, 12 In.
 - Y1 Line, Thermoplastic, Solid, Yellow, 6 In.
 - Y2 Line, Thermoplastic, Solid, Double Yellow, 6 In.
 - YD Transverse Marking, Thermoplastic, Yield Line, White, 36 In.
 - YX Transverse Marking, Thermoplastic, Crosshatch Line, Yellow, 12 In.
- Snowplowable Raised Pavement Marker (120 ft spacing typ.)

CDM Smith 211 North Pennsylvania Street, Ste 1750 Indianapolis, IN 46204 Tel: (317) 829-9600	STAGE 3	RECOMMENDED FOR APPROVAL _____		INDIANA DEPARTMENT OF TRANSPORTATION		SCALE 1" = 20'-0"		BRIDGE FILE			
		DESIGN ENGINEER _____		DATE _____				DESIGNATION 1702936, 1802854, 2001127			
		DESIGNED: <u>HMH</u>		DRAWN: <u>BDM</u>		PAVEMENT MARKINGS SR 9 - LINE "A"		SURVEY BOOK		SHEETS	
								ELECTRONIC		225 of 243	
								CONTRACT		PROJECT	
		CHECKED: <u>SMS</u>		CHECKED: <u>MJV</u>				R-41837		1702936, 1802854, 2001127	



Legend

- LA

Pavement Message Marking, Thermoplastic Lane Indication Arrow
- ON

Pavement Message Marking, Thermoplastic, Only
- S

Transverse Marking, Thermoplastic, Stop Line, White, 12 In.
- W1

Line, Thermoplastic, Solid, White, 6 In.
- W2

Line, Thermoplastic, Broken, White, 6 In.
- W3

Line, Thermoplastic, Dotted, White, 6 In.
- WC

Transverse Marking, Thermoplastic, Crosswalk Line, White, 12 In.
- WX

Line, Thermoplastic, Crosshatch Line, White, 12 In.
- Y1

Line, Thermoplastic, Solid, Yellow, 6 In.
- Y2

Line, Thermoplastic, Solid, Double Yellow, 6 In.
- YD

Transverse Marking, Thermoplastic, Yield Line, White, 36 In.
- YX

Transverse Marking, Thermoplastic, Crosshatch Line, Yellow, 12 In.
- Snowplowable Raised Pavement Marker (120 ft spacing typ.)

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Indianapolis, IN 46204
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STAGE 3

RECOMMENDED
FOR APPROVAL

DESIGN ENGINEER DATE

DESIGNED: HMH

DRAWN: BDM

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS
STATE ST - LINE "S-1-A"

SCALE

1" = 20'-0"

BRIDGE FILE

DESIGNATION

1702936, 1802854, 2001127

SURVEY BOOK

ELECTRONIC

CONTRACT

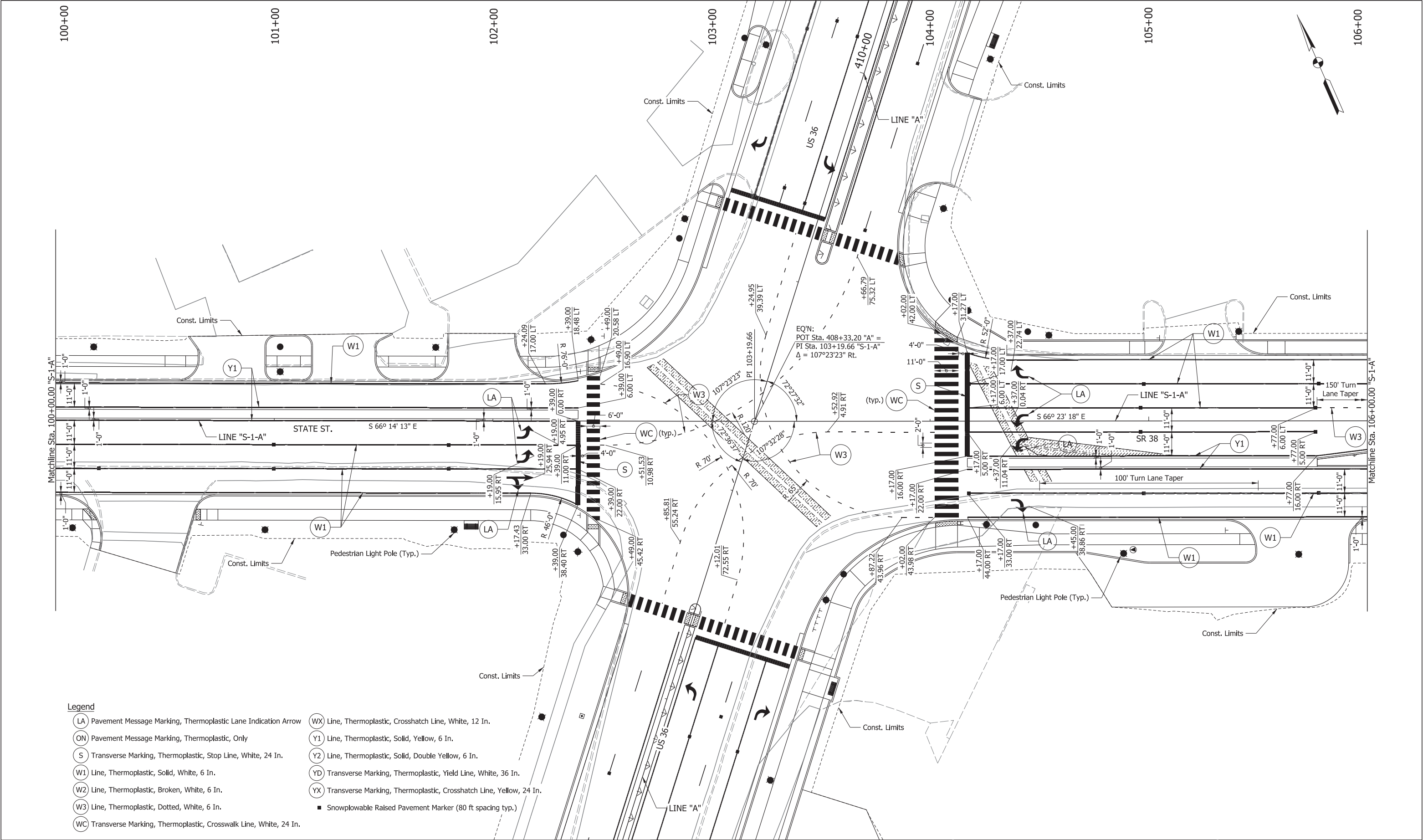
R-41837

SHEETS

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PROJECT

1702936, 1802854, 2001127



Legend

- (LA) Pavement Message Marking, Thermoplastic Lane Indication Arrow

(ON) Pavement Message Marking, Thermoplastic, Only

(S) Transverse Marking, Thermoplastic, Stop Line, White, 24 In.

(W1) Line, Thermoplastic, Solid, White, 6 In.

(W2) Line, Thermoplastic, Broken, White, 6 In.

(W3) Line, Thermoplastic, Dotted, White, 6 In.

(WC) Transverse Marking, Thermoplastic, Crosswalk Line, White, 24 In.
- (WX) Line, Thermoplastic, Crosshatch Line, White, 12 In.

(Y1) Line, Thermoplastic, Solid, Yellow, 6 In.

(Y2) Line, Thermoplastic, Solid, Double Yellow, 6 In.

(YD) Transverse Marking, Thermoplastic, Yield Line, White, 36 In.

(YX) Transverse Marking, Thermoplastic, Crosshatch Line, Yellow, 24 In.

■ Snowplowable Raised Pavement Marker (80 ft spacing typ.)



211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER

DATE

DESIGNED: HMM

DRAWN: BDM

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS
STATE ST / SR 38 - LINE "S-1-A"

SCALE

1" = 20'-0"

BRIDGE FILE

DESIGNATION

1702936, 1802854, 2001127

SURVEY BOOK

ELECTRONIC

CONTRACT

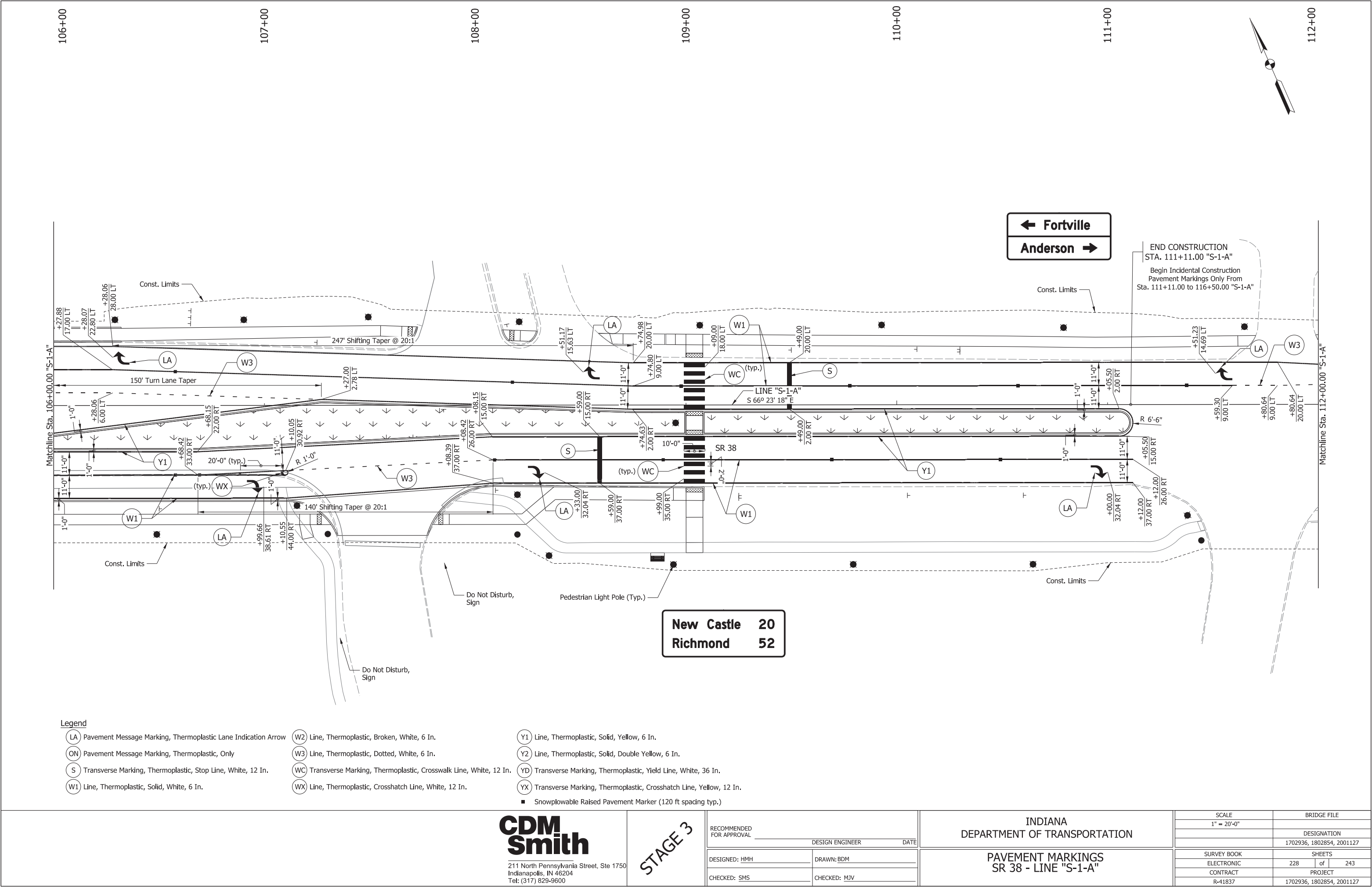
R-41837

SHEETS

227 of 243

PROJECT

1702936, 1802854, 2001127



Legend

- LA

Pavement Message Marking, Thermoplastic Lane Indication Arrow
- ON

Pavement Message Marking, Thermoplastic, Only
- S

Transverse Marking, Thermoplastic, Stop Line, White, 12 In.
- W1

Line, Thermoplastic, Solid, White, 6 In.
- W2

Line, Thermoplastic, Broken, White, 6 In.
- W3

Line, Thermoplastic, Dotted, White, 6 In.
- WC

Transverse Marking, Thermoplastic, Crosswalk Line, White, 12 In.
- WX

Line, Thermoplastic, Crosshatch Line, White, 12 In.
- Y1

Line, Thermoplastic, Solid, Yellow, 6 In.
- Y2

Line, Thermoplastic, Solid, Double Yellow, 6 In.
- YD

Transverse Marking, Thermoplastic, Yield Line, White, 36 In.
- YX

Transverse Marking, Thermoplastic, Crosshatch Line, Yellow, 12 In.
- Snowplowable Raised Pavement Marker (120 ft spacing typ.)

CDM
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211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED
FOR APPROVAL

DESIGN ENGINEER DATE

DESIGNED: HMH

DRAWN: BDM

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS
SR 38 - LINE "S-1-A"

SCALE

1" = 20'-0"

BRIDGE FILE

DESIGNATION

1702936, 1802854, 2001127

SURVEY BOOK

ELECTRONIC

CONTRACT

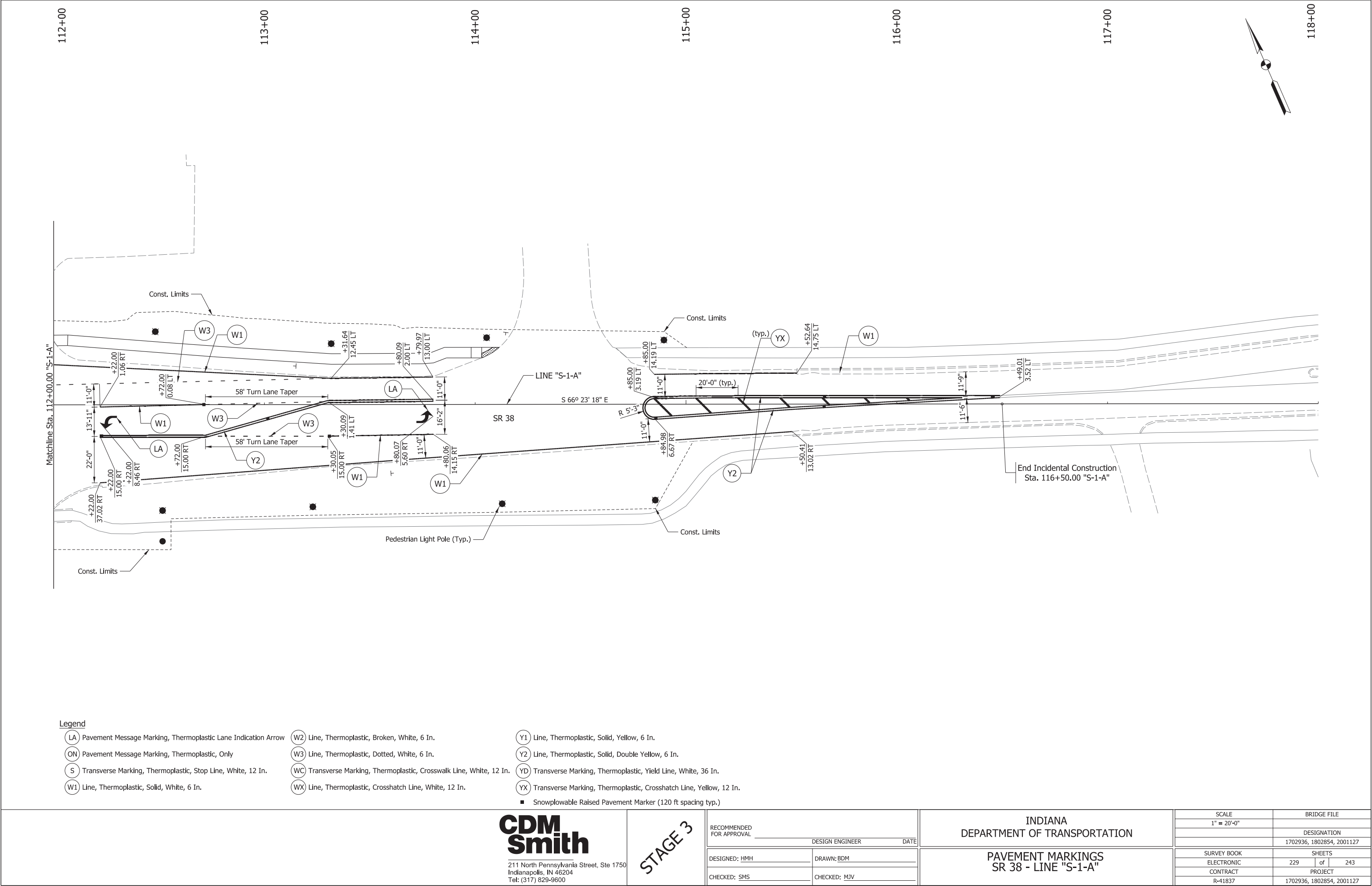
R-41837

SHEETS

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PROJECT

1702936, 1802854, 2001127



- Legend**
- | | | |
|--|---|---|
| (LA) Pavement Message Marking, Thermoplastic Lane Indication Arrow | (W2) Line, Thermoplastic, Broken, White, 6 In. | (Y1) Line, Thermoplastic, Solid, Yellow, 6 In. |
| (ON) Pavement Message Marking, Thermoplastic, Only | (W3) Line, Thermoplastic, Dotted, White, 6 In. | (Y2) Line, Thermoplastic, Solid, Double Yellow, 6 In. |
| (S) Transverse Marking, Thermoplastic, Stop Line, White, 12 In. | (WC) Transverse Marking, Thermoplastic, Crosswalk Line, White, 12 In. | (YD) Transverse Marking, Thermoplastic, Yield Line, White, 36 In. |
| (W1) Line, Thermoplastic, Solid, White, 6 In. | (WX) Line, Thermoplastic, Crosshatch Line, White, 12 In. | (YX) Transverse Marking, Thermoplastic, Crosshatch Line, Yellow, 12 In. |
| | | ■ Snowplowable Raised Pavement Marker (120 ft spacing typ.) |

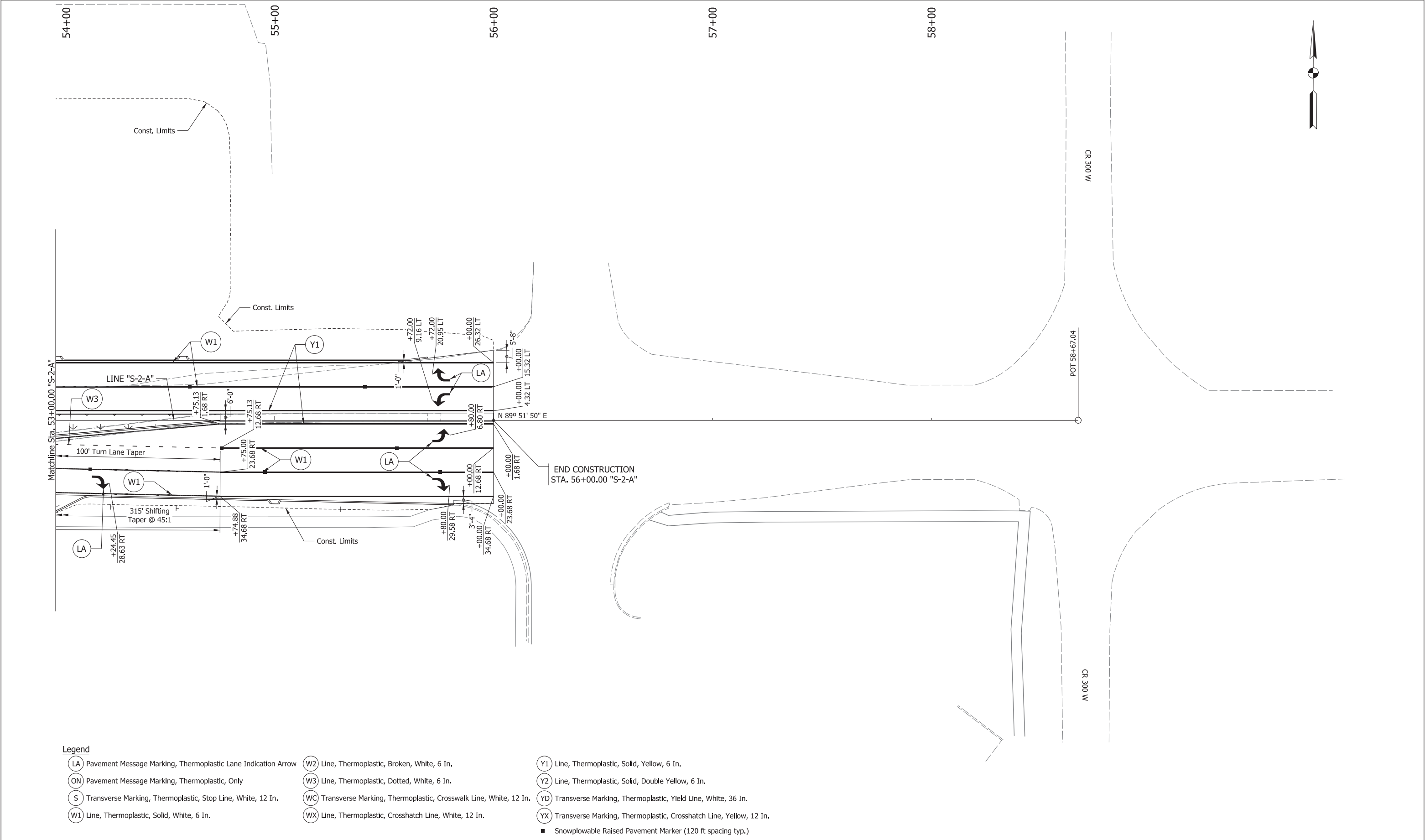
**CDM
Smith**
211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED FOR APPROVAL _____	
DESIGNED: HMH	DRAWN: BDM
CHECKED: SMS	CHECKED: MJV
DESIGN ENGINEER _____ DATE _____	

INDIANA DEPARTMENT OF TRANSPORTATION	
PAVEMENT MARKINGS SR 38 - LINE "S-1-A"	

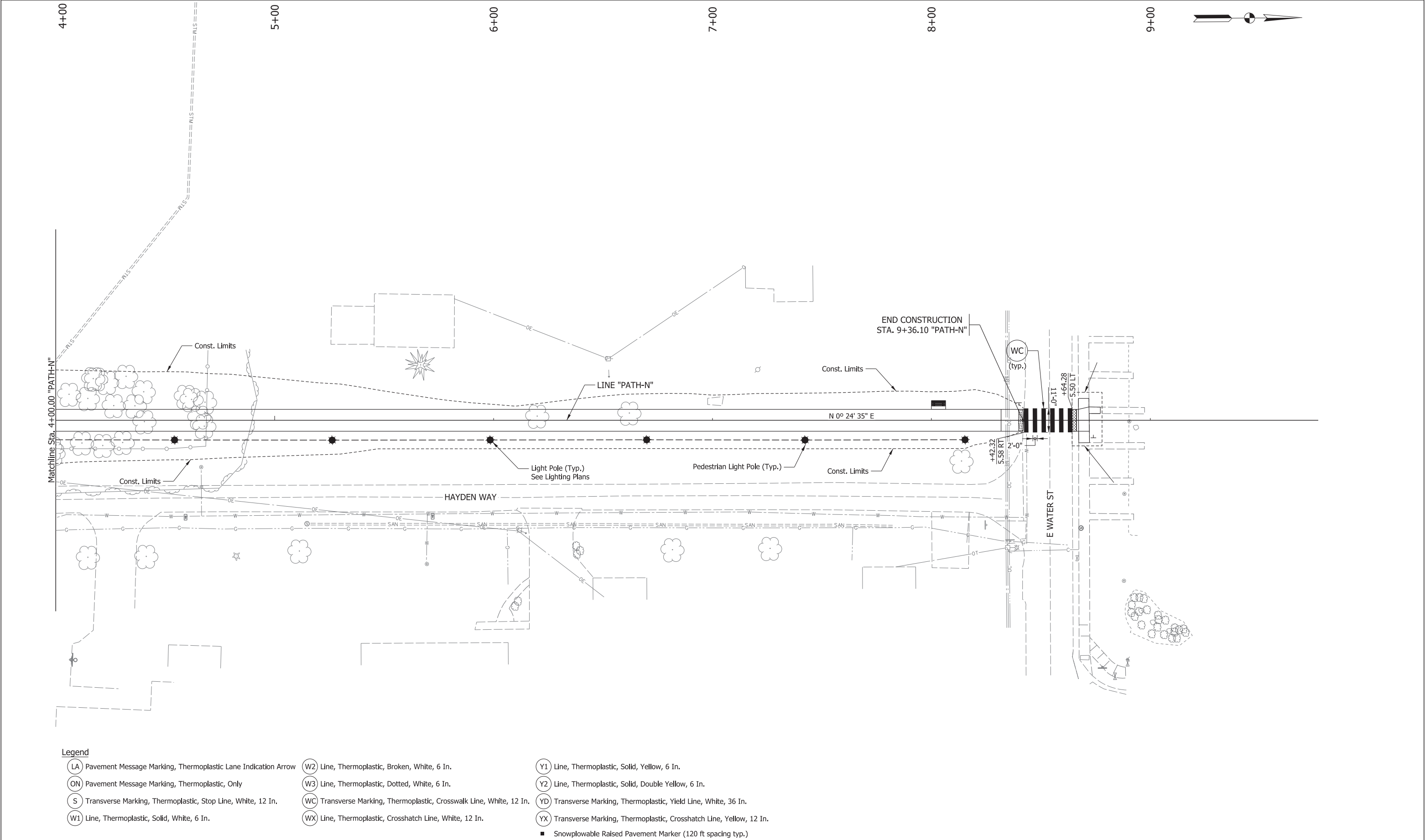
SCALE 1" = 20'-0"	BRIDGE FILE	
	DESIGNATION	
	1702936, 1802854, 2001127	
SURVEY BOOK	SHEETS	
ELECTRONIC	229	of 243
CONTRACT	PROJECT	
R-41837	1702936, 1802854, 2001127	



- Legend**

 - LA Pavement Message Marking, Thermoplastic Lane Indication Arrow
 - ON Pavement Message Marking, Thermoplastic, Only
 - S Transverse Marking, Thermoplastic, Stop Line, White, 12 In.
 - W1 Line, Thermoplastic, Solid, White, 6 In.
 - W2 Line, Thermoplastic, Broken, White, 6 In.
 - W3 Line, Thermoplastic, Dotted, White, 6 In.
 - WC Transverse Marking, Thermoplastic, Crosswalk Line, White, 12 In.
 - WX Line, Thermoplastic, Crosshatch Line, White, 12 In.
 - Y1 Line, Thermoplastic, Solid, Yellow, 6 In.
 - Y2 Line, Thermoplastic, Solid, Double Yellow, 6 In.
 - YD Transverse Marking, Thermoplastic, Yield Line, White, 36 In.
 - YX Transverse Marking, Thermoplastic, Crosshatch Line, Yellow, 12 In.
- Snowplowable Raised Pavement Marker (120 ft spacing typ.)

CDM Smith 211 North Pennsylvania Street, Ste 1750 Indianapolis, IN 46204 Tel: (317) 829-9600	STAGE 3	RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____ DESIGNED: HMH _____ DRAWN: BDM _____ CHECKED: SMS _____ CHECKED: MJV _____	INDIANA DEPARTMENT OF TRANSPORTATION PAVEMENT MARKINGS US 36 - LINE "S-2-A"	SCALE 1" = 20'-0"	BRIDGE FILE
					DESIGNATION
					1702936, 1802854, 2001127
				SURVEY BOOK	SHEETS
				ELECTRONIC	231 of 243
				CONTRACT	PROJECT
				R-41837	1702936, 1802854, 2001127



See Page 93 for Construction Details Legend.

CDM
Smith

211 North Pennsylvania Street, Ste 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

STAGE 3

RECOMMENDED FOR APPROVAL
DESIGNED: HMM
CHECKED: SMS

DESIGN ENGINEER
DRAWN: BDM
CHECKED: MJV

DATE

INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING DETAILS
SHARED-USE PATH - LINE "PATH-N"

SCALE
1" = 20'-0"

BRIDGE FILE

DESIGNATION
1702936, 1802854, 2001127

SURVEY BOOK
ELECTRONIC
CONTRACT
R-41837

SHEETS
232 of 243
PROJECT
1702936, 1802854, 2001127

pw:\\cdmsmith-az02-pw.bentley.com:pw_pt1\Documents\118931\249691\10 Transportation\02 Engineering Services NM_30pct\01 Roadway Design\10 CADD\02 Details\Sht PM_PATHN_20_01.dgn

B-177

APPENDIX C: EARLY COORDINATION

Early Coordination Package
Early Coordination Responses
Re-Coordination Package
Re-Coordination Responses
2nd Re-Coordination Package
2nd Re-Coordination Responses



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N758-ES
Indianapolis, Indiana 46204

Eric Holcomb, Governor
Joe McGuinness, Commissioner

June 7, 2021

Re: Early Coordination Letter, Des. Nos.: 1702936 and 1802854, Road Project along US 36 and SR 9, from 0.28 Mile South of SR 38 to Huntsville Road, Madison County, Indiana

To Whom It May Concern:

The Indiana Department of Transportation (INDOT), with federal funding, intends to proceed with a project involving the aforementioned road project in Madison County. This letter is part of the early coordination phase of the environmental review process. We are requesting comments from your area of expertise regarding any possible environmental effects associated with this project. **Please use the above designation numbers and description in your reply.** We will incorporate your comments into a study of the project's environmental impacts.

This project is located along US 36 and State Route (SR) 9 to the north and is locally known as Pendleton Pike, from 0.28 mile south of SR 38 to Huntsville Road, with construction on State Street, SR 38, and US 36 east of the SR 9 junction included, in Madison County.

- This section of US 36 is a two lane Urban – Minor Arterial and Urban – Other Principal Arterial roadway that consists of two 12 foot (ft) travel lanes bordered by variable shoulders (0–11 ft). There are 12 ft turn lanes present in numerous locations in this section of US 36, while a raised median is present in some sections.
- This section of SR 9 is a two lane Urban – Other Principal Arterial roadway that consists of two 12 ft travel lanes bordered by variable shoulders (0–13 ft). Varied turn lanes are present in numerous locations within this section of SR 9. A bridge (Structure No. (9)67-48-06938) carries SR 9 over Fall Creek within the project area. This bridge is in satisfactory to good condition (6 to 7 out of 9).
- This section of SR 38 is a two lane Urban – Minor Arterial roadway that consists of two 12 ft travel lanes bordered by variable shoulders (0–2 ft). There are 12 ft turn lanes present within sections of SR 38 along the eastern end of the project. A small pedestrian bridge is present along the southern side of SR 38. The bridge is over a drainage pipe with riprap for erosion control. This bridge will not be impacted by this project.
- This section of State Street is a two lane Urban – Minor Arterial roadway that consists of two 12 ft travel lanes bordered by an approximate 4 ft shoulder on the left side and curb and gutter on the right side with variation existing from Central Way to the intersection with US 36, where there is only curb and gutter. A 12 ft left turn lane is present toward the western end of the project area on State Street.

The existing roadway configuration experiences heavy traffic queuing during peak hours along the corridor and features non-compliant Americans with Disabilities Act curb ramps. The draft need is due to heavy queuing that occurs during peak hours, and from diverted traffic from I-69. Traffic projections indicate continued growth of traffic in the area. The draft purpose is to reduce travel delay on SR 9/US 36. The approximate existing right-of-way on each side of the centerline throughout the project area varies between 20–43 ft on US 36, 20–32.5 ft on SR 9, and 20 ft on SR 38 and State Street.

The proposed project is anticipated to add additional travel lanes by constructing two additional through lanes on US 36/SR 9/SR 67 from Madison Avenue/Lick Creek Pike to the bridge over Fall Creek (four lanes already exist between the bridge and CR 500 South/Huntsville Road), with an additional center lane from the south junction (at State Street) to Mercer Lane. The left and right turn lanes on SR 9/SR 67/US 36 at the south junction (at State Street) to Mercer Lane will be retained with widening as needed. At the south junction, dual left turns on eastbound State Street and dual left turns on westbound SR 38 will be constructed. The westbound right turn lane on SR 38 and the westbound through lane on State Street will be

retained in their current locations with the needed widening occurring to the south. At the north junction (where US 36 splits off to the east), the westbound US 36 right turn lane storage will be extended to the first commercial drive with widening to the north. Curb and gutter with curb turnouts will be used to reduce the additional right-of-way needed for shoulders, while still having surface drainage. At the northern termini, the project narrows down to the pavement edges starting at the bridge over Fall Creek and continuing to its end. No work will be performed in the waterway or on the bridge piers. Expected work at the bridge is limited to removing the existing striping and painting new stripes. The small pedestrian bridge over a drainage pipe along SR 38 will not be impacted by this project. The project would require the acquisition of 3 acres of permanent right-of-way. The approximate permanent right-of-way widths from centerline throughout the project area would vary between 53–124 ft along SR 9, 50–63 ft along SR 38, and 58 ft along US 36. The project would also require approximately 0.3 acre of temporary right-of-way. The approximate temporary right-of-way widths from centerline throughout the project area would vary between 50–87 ft along SR 9, and 70–74 ft along SR 38 (no temporary right-of-way would be acquired along US 36). The project limits would be approximately 0.9 mile in length. The proposed method of traffic maintenance is anticipated to require phased construction to maintain traffic with one lane in each direction. The project is anticipated to begin construction in Spring 2023.

Land use in the vicinity of the project is urban, primarily including commercial properties with residences and agricultural fields nearby. Pendleton Heights High School is located adjacent to the southeastern end of the project area, and a railroad crosses the project area at Madison Avenue and State Street. Falls Park, a managed land, is located to the northwest of the project area. The INDOT Environmental Services Division (ESD) Ecology & Waterway Permitting Office (EWPO) will review the waters and wetlands determinations completed by ASC Group, Inc. to identify any ecological resources that may be present. The project is anticipated to qualify for the Rangewide Programmatic Agreement for the Indiana bat and northern long-eared bat by completing the Information for Planning and Consultation (IPaC). Coordination will occur with INDOT Cultural Resources Office (CRO) to evaluate the project area for archaeological and historic resources and for Section 106 compliance. The results of this investigation will be forwarded to the State Historic Preservation Officer (SHPO) for review and concurrence as appropriate.

Please provide your response within thirty (30) calendar days from the date of this letter. However, should you find that an extension to the response time is necessary, a reasonable amount may be granted upon request. If you have any questions regarding this matter, please feel free to contact Harry Nikides, Indiana Regional Manager, at hnikides@ascgroup.net or 317.915.9300, ext. 100 or Stacey Sorrell, INDOT Project Manager, at ssorrell@indot.in.gov or 317.467.3449. Thank you in advance for your input.

Sincerely,



Harry Nikides
Indiana Regional Manager
ASC Group, Inc.

cc: Harry Nikides, ASC Group, Inc.
Stacey Sorrell, INDOT
Scott Sandstrom, CDM Smith

Attachments:

List of Agencies
Maps/Graphics (Location, Topographic, Aerial, and Photographs)

Early Coordination Recipient List



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N758-ES
Indianapolis, Indiana 46204

Eric Holcomb, Governor
Joe McGuinness, Commissioner

The following agencies received Early Coordination Letters:

Sent 6-7-2021:

Federal Highway Administration (FHWA)
Federal Office Building, Room 254
575 North Pennsylvania Street
Indianapolis, IN 46204
(Electronic Coordination)
Robert Dirks –Greenfield District Robert.Dirks@dot.gov

Indiana Geological and Water Survey (IGWS)
611 North Walnut Grove
Bloomington, IN 47405
(Electronic Coordination)
<https://igws.indiana.edu/eAssessment>

Environmental Coordinator
Indiana Department of Natural Resources-Division of Fish and
Wildlife (IDNR-DFW)
402 West Washington Street, Room W273
Indianapolis, IN 46204
(Electronic Coordination)
environmentalreview@dnr.in.gov

Chief, Groundwater Section
Indiana Department of Environmental Management (IDEM)
100 North Senate Avenue
Indianapolis, IN 46204
(Electronic Coordination)
https://www.in.gov/idem/clean_water/pages/wellhead/

IDEM
(Electronic Coordination)

Field Environmental Officer
Chicago Regional Office
U.S. Department of Housing and Urban Development
Metcalf Federal Building
77 West Jackson Boulevard, Room 2401
Chicago, IL 60604
(Electronic Coordination)
Melanie.H.Castillo@hud.gov

Indiana Department of Transportation (INDOT)
Greenfield District Office
32 South Broadway
Greenfield, IN 46140
(Electronic Coordination)
TDarrah@indot.in.gov

State Conservationist
Natural Resources Conservation Service (NRCS)
6013 Lakeside Boulevard
Indianapolis, IN 46278
(Electronic Coordination)
Rick.neilson@in.usda.gov

INDOT
Office of Aviation
100 North Senate Avenue, Room 955
Indianapolis, IN 46204
(Electronic Coordination)
JCourtade@indot.in.gov

Madison County Council of Governments (MCCOG)
739 Main Street
Anderson, Indiana 46016
(Electronic Coordination)
hmpo@heartlandmpo.org

Madison County Council
Madison County Government Center
Council Chambers Room 110
16 East 9th Street
Anderson, Indiana 46016

Madison County Commissioner
Mike Phipps – Middle District Commissioner
Madison County Government Center
16 East 9th Street
Anderson, Indiana 46016
(Electronic Coordination)
mphipps@madisoncounty.in.gov

Madison County Highway Department
Madison County Government Center
16 East 9th Street
Anderson, Indiana 46016

Madison County Surveyor
Madison County Government Center
16 East 9th Street
Anderson, Indiana 46016
(Electronic Coordination)
tshepherd@madisoncounty.in.gov

Madison County Drainage Board
Madison County Government Center
16 East 9th Street
Anderson, Indiana 46016
(Electronic Coordination)
tbaldridge@madisoncounty.in.gov

Madison County Highway Department
Madison County Government Center
16 East 9th Street
Anderson, Indiana 46016

Madison County Government – Planning Division
Brad Newman – Floodplain Administrator
16 East 9th Street
Anderson, Indiana 46016
(Electronic Coordination)
bnewman@madisoncounty.in.gov

South Madison Community School Corporation
Mark Hall, Superintendent
203 South Heritage Way
Pendleton, Indiana 46064
(Electronic Coordination)
mhall@smcsc.com

Pendleton Heights High School
Connie Rickert, Principal
1 Arabian Drive
Pendleton, Indiana 46064
(Electronic Coordination)
Crickert@smcsc.com

Madison County Sheriff's Department
Madison County Government Center
16 East 9th Street
Anderson, Indiana 46016
(Electronic Coordination)
sheriff@madisoncounty.in.gov

Madison County Emergency Management
419 Ernie Lu Avenue
Anderson, Indiana 46013

Pendleton Police Department
Marc Farrer – Police Chief
550 North Pendleton Avenue
Pendleton, Indiana 46064

Pendleton Fire Department
Jeff Moore, Fire Chief
100 South Broadway
P.O. Box 230
Pendleton, Indiana 46064
(Electronic Coordination)
jmoore@town.pendleton.in.us

Pendleton Utility Office
Tracie Dodd, Manager
100 West State Street
P.O. Box 230
Pendleton, Indiana 46064
(Electronic Coordination)
tdodd@town.pendleton.in.us

Pendleton Town Manager - Scott Reske
100 West State Street
P.O. Box 230
Pendleton, Indiana 46064
(Electronic Coordination)
sreske@town.pendleton.in.us

INDOT Utilities and Railroads
Michael B. Jett – Utilities and Railroad Director
100 North Senate Avenue, IGCN 642
Indianapolis, Indiana 46204
(Electronic Coordination)
mjett@indot.in.gov

The City of Anderson
MS4 Coordinator
City Engineering Office
Michael Spyers – City Engineer
120 East 8th Street
Anderson, Indiana 46018
(Electronic Coordination)
mspyers@cityofanderson.com

The City of Anderson
MS4 Coordinator
City Engineering Office
Walter Evans – Assistant Stormwater Superintendent
120 East 8th Street
Anderson, Indiana 46018
(Electronic Coordination)
wevans@cityofanderson.com

Indianapolis Central Office
Division of Oil and Gas
402 West Washington Street, Room 293
Indianapolis, Indiana 46204

IDEM Office of Land Quality
Loic Maniet – Project Manager
Underground Storage Tanks Branch
100 North Senate Avenue, IGCN 1101
Indianapolis, Indiana 46204
(Electronic Coordination)
lmaniet@idem.in.gov

IDEM Office of Land Quality
Brandon Davis – Environmental Manager
UST Compliance Underground Storage Tanks
100 North Senate Avenue, IGCN 1101
Indianapolis, Indiana 46204
(Electronic Coordination)
brdavis@idem.in.gov

Sent 3-25-2022

Chief, Groundwater Section
IDEM
100 North Senate Avenue
Indianapolis, IN 46204
(Electronic Coordination)
jsullivan@idem.IN.gov

Town of Pendleton Water Works
100 West State Street
P.O. Box 230
Pendleton, IN 46064
(Electronic Coordination)
tmccurdy@fcrwd.com

IDEM
Lynette Schrowe – Technical Environmental Specialist
RE: LUST Speedway #7155
100 North Senate Avenue IGCN 1101
Indianapolis, IN 46204
(Electronic Coordination)
LSchrow1@idem.in.gov

From: [Courtade, Julian](#)
To: [Lashae Black](#)
Subject: Re: Des 1702936 US 36 and SR 9, 0.28 Mile South of SR 38 to Huntsville Road (Road Project) - Early Coordination Letter
Date: Monday, June 7, 2021 5:03:05 PM

Lashae Black,

I reviewed the Early Coordination Letter and found no issues with any surrounding airspace or public-use airports. This is due to the project meeting the required glideslope criteria from the nearest public-use facility according to 14 CFR Part 77 – Safe, efficient use, and preservation of the navigable airspace.

If any object will exceed 200 ft in height regardless of location, the object will need to be airspaced with the FAA 45 days prior to construction through the OEAAA portal below.

<https://oeaaa.faa.gov/oeaaa/external/searchAction.jsp>

Please let me know if you have any questions!

Thanks,

Julian L. Courtade

Chief Airport Inspector

[100 North Senate Ave](#), N758-MM

Indianapolis, IN 46204

Cell: [\(317\) 954-7385](tel:3179547385)

Email: jcourtade@indot.in.gov

From: Lashae Black <lblack@ascgroup.net>
Sent: Monday, June 7, 2021 4:01:20 PM
To: hNikides <hnikides@ascgroup.net>
Cc: Sorrell, Stacey L <SSorrell@indot.IN.gov>; Sandstrom, Scott <sandstroms@cdmsmith.com>; lkonicki@ascgroup.net <lkonicki@ascgroup.net>; Stephanie Kline <skline@ascgroup.net>; Jennifer Rhodes <jrhodes@ascgroup.net>
Subject: Des 1702936 US 36 and SR 9, 0.28 Mile South of SR 38 to Huntsville Road (Road Project) - Early Coordination Letter

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

Des. No.: 1702936

Project Description: Road Project on US 36 and SR 9, 0.28 Mile South of SR 38 to Huntsville Road

Location: Madison County, Indiana

From: [Maniet, Loic](#)
To: [Lashae Black](#)
Subject: Re: Des 1702936 US 36 and SR 9, 0.28 Mile South of SR 38 to Huntsville Road (Road Project) - Early Coordination Letter
Date: Tuesday, June 8, 2021 9:18:16 AM
Attachments: [pastedImagebase640.png](#)
[pastedImagebase641.png](#)
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[pastedImagebase643.png](#)
[pastedImagebase644.png](#)
[pastedImagebase645.png](#)
[INDOT DES 1702936 US 36 and SR9.xlsx](#)

Ms. Black,

I reviewed the files for possible service stations (active or not) within the area of your project. You will find included an Excel file include the sites found within the proposed work area. There are two active stations, one former station, and a State Cleanup site (CVS). If you have any questions, feel free to contact me.

Sincerely,



Loic Maniet
Senior Compliance Manager | UST Compliance Section
Petroleum Branch | Office of Land Quality
Indiana Department of Environmental Management

(317) 232-3592 | lmaniet@idem.in.gov



From: Lashae Black <lblack@ascgroup.net>
Sent: Monday, June 7, 2021 4:01 PM
To: hNikides <hnikides@ascgroup.net>
Cc: Sorrell, Stacey L <SSorrell@indot.IN.gov>; Sandstrom, Scott <sandstroms@cdmsmith.com>; lkonicki@ascgroup.net <lkonicki@ascgroup.net>; Stephanie Kline <skline@ascgroup.net>; Jennifer Rhodes <jrhodes@ascgroup.net>
Subject: Des 1702936 US 36 and SR 9, 0.28 Mile South of SR 38 to Huntsville Road (Road Project) - Early Coordination Letter

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

Des. No.: 1702936

Project Description: Road Project on US 36 and SR 9, 0.28 Mile South of SR 38 to Huntsville Road

Location: Madison County, Indiana

INDOT and FHWA are in the planning stage for a Road project on US 36 and SR 9, 0.28 Mile South of SR 38 to Huntsville Road in Madison County, Indiana.

Name	Address	Facility ID	UST violation Open	LUST Open	UST Violation Date	Active Tanks	Comments
Rickers/OO Gas N Go	7175 S State Road 67, Pendleton	5379	N	N	9/23/2019	3	Paperwork received
Speedway	7167 S State Road 67, Pendleton	3497	N	N		5	
Rickers/Former Swifty 240	6933 S State Road 67, Pendleton	5239	N	N		0	
CVS/Formerly Micromatic Textron Operations	620 E State Street, Pendleton	NA	N	N		0	State Cleanup, removed 500 gallons UST

From: Royer, Brian [<mailto:BRoyer@dnr.IN.gov>]
Sent: Tuesday, June 29, 2021 2:48 PM
To: Harry Nikides <hNikides@ascgroup.net>
Subject: ECL response for Des. Nos.:1702936, and 1802854

This project has 2 old Trenton gas wells within or at the edge of the project area. The wells are said to have been drilled around 1900 by Pendleton Natural Gas Company. We have no plugging records on the wells but it does not look like they still exist at surface in present day. They could have been plugged many years ago and it is unclear how they are plugged without any records. If these wells are encountered during this project they will need to be cleaned out and plugged properly. The 2 wells are along state street/hwy 38. The well ID's on the two wells are IGS # 142510, and 142512. Please note these two wells in your plans and keep an eye out for any casing or pipe out there during any excavations.

Also please send any further construction coordination paperwork directly to me from now on to ensure a rapid response.

Thanks,

Brian Royer

Orphan Well Manager
Indiana Department of Natural Resources
Division of Oil & Gas
Cell- 317-417-6556
www.dnr.IN.gov

** Please let us know about the quality of our service by taking this brief [customer survey](#).*

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

DNR #: ER-23770

Request Received: June 7, 2021

Requestor: ASC Group Incorporated
Harry Nikides
9376 Castlegate Drive
Indianapolis, IN 46256

Project: US 36 and SR 9 roadway improvements, from 0.28 mile south of SR 38 to Huntsville Road, Pendleton; Des #1702936 & 1802854

County/Site info: Madison

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

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

Regulatory Assessment: This proposal may require the formal approval of our agency pursuant to the Flood Control Act (IC 14-28-1) for any proposal to construct, excavate, or fill in or on the floodway of Fall Creek, unless it qualifies under the INDOT and IDNR Memorandum of Understanding for Maintenance Activity Exemption, dated March 1997. Please include a copy of this letter with the permit application, if required.

Natural Heritage Database: The Natural Heritage Program's data have been checked. The American Badger (*Taxidea taxus*), a state species of special concern, has been documented within the project area.

Fish & Wildlife Comments: Badgers are a wide ranging species that prefer an open, prairie-type habitat, with Indiana being at the eastern edge of their natural range. The range of the badger continues to expand as a result of land-use changes from forest to farmland and open pastureland. Impacts to the American badger or its preferred habitat are unlikely as a result of this project.

If tree removal is needed, the Division of Fish & Wildlife recommends avoiding removing urban trees to the greatest extent possible and replacing trees that must be removed. Street trees are important to fish and wildlife resources in urban areas. Indiana's street trees also provide millions of dollars of tangible benefits to Indiana communities by their presence in the urban environment. Their shade and beauty contribute to the quality of life. They provide significant increases in real estate values, create attractive settings for commercial businesses, and improve community neighborhood appeal. Trees decrease energy consumption by providing shade and acting as windbreaks. They reduce water treatment costs and impede soil erosion by slowing the runoff of stormwater. Trees also cool the air temperature, cleanse pollutants from the air, and produce oxygen while absorbing carbon dioxide. Trees are an integral component of the urban environment. Proactively managing and maintaining a street tree population will ultimately maximize the benefits afforded by their aesthetic and ecological functions. The following links give a good overview of the benefits of a street tree program and how to select the right species to avoid the negative impacts of non-native invasive species such as the common and popular Bradford pear: <https://www.in.gov/dnr/forestry/3605.htm> > Community & Urban Forestry > Tree Species Lists.

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

Trees removed in an urban setting should be mitigated by planting five trees, at least 2 inches in diameter-at-breast height (dbh), for each tree which is removed that is 10" dbh or greater (5:1 mitigation based on the number of large trees) or by using the 1:1 replacement ratio based on area depending on the type of habitat impacted (individual canopy tree removal in an urban streetscape or park-like environment versus removal of habitat supporting a tree canopy, woody understory, and herbaceous layer). Impacts under 0.10 acres may still involve the replacement of large diameter trees but typically do not require any additional mitigation or additional plantings beyond seeding and stabilizing disturbed areas. There are exceptions for high quality habitat sites however.

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

1. Revegetate all bare and disturbed areas that are not currently mowed and maintained with a mixture of grasses, sedges, and wildflowers native to Central Indiana and specifically for stream bank/floodway stabilization purposes as soon as possible upon completion; turf-type grasses (including low-endophyte, friendly endophyte, and endophyte free tall fescue but excluding all other varieties of tall fescue) may be used in currently mowed areas only. A native herbaceous seed mixture must include at least 5 species of grasses and sedges and 5 species of wildflowers.
2. Minimize and contain within the project limits all tree and brush clearing.
3. Do not excavate in the waterway and minimize disturbance to bank vegetation and contain disturbance to within the project limits.
4. Do not cut any trees suitable for Indiana bat or Northern Long-eared bat roosting (greater than 5 inches dbh, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30.
5. Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the stream or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.
6. Seed and protect all disturbed streambanks and slopes not protected by other methods that are 3:1 or steeper with erosion control blankets that are heavy-duty, biodegradable, and net free or that use loose-woven / Leno-woven netting to minimize the entrapment and snaring of small-bodied wildlife such as snakes and turtles (follow manufacturer's recommendations for selection and installation); seed and apply mulch on all other disturbed areas.

Contact Staff:

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

Christie L. Stanifer

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

Date: July 7, 2021



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N758-ES
Indianapolis, Indiana 46204

Eric Holcomb, Governor
Michael Smith, Commissioner

March 31, 2023

Re: Early Coordination Letter, Des. Nos.: 1702936 and 1802854, Road Project and Des. No. 2001127, Pedestrian Connectivity Project along US 36 and SR 9, from 0.28 Mile South of SR 38 to Huntsville Road, Madison County, Indiana – Combined and Updated Project Scope

To Whom It May Concern:

The Indiana Department of Transportation (INDOT) and the Town of Pendleton, with federal funding, intend to proceed with a project involving the aforementioned road and pedestrian connectivity project in Madison County. This letter is part of the early coordination phase of the environmental review process. We are requesting comments from your area of expertise regarding any possible environmental effects associated with this project. **Please use the above designation numbers and description in your reply.** We will incorporate your comments into a study of the project's environmental impacts.

The proposed undertaking covers a combined INDOT State project (the "State project") [Des. Nos. 1702936 and 1802854] and a Local Public Agency (LPA) project (Des. No. 2001127) under the Madison County Council of Governments (MCCOG). These projects are located along US 36/State Road (SR) 9/SR 67 corridor in the Town of Pendleton, Madison County. There is significant overlap between the footprint of both the State and LPA projects, as well as areas specific to both projects. In addition to a shared footprint, there are elements of both projects that rely on the other's completion in order for each to fulfill their respected purposes. Therefore, these projects are being evaluated together for the purpose of this report while maintaining distinctions between project areas when appropriate. Mentioned roadways that serve as project area limits throughout this document have multiple names and have been reduced, as appropriate, for clarity.

State Project: Des. Nos. 1702936 and 1802854: This project is located along US 36 and SR 9 to the north and is locally known as Pendleton Pike, from 0.28 mile south of SR 38 to Huntsville Road, with construction on State Street, SR 38, and US 36 east of the SR 9 junction included, in Madison County.

- This section of US 36 is a two lane Urban – Minor Arterial and Urban – Other Principal Arterial roadway that consists of two 12-foot (ft) travel lanes bordered by variable shoulders (0–11 ft). There are 12-ft turn lanes present in numerous locations in this section of US 36, while a raised median is present in some sections.
- This section of SR 9/SR 67 is a two lane Urban – Other Principal Arterial roadway that consists of two 12-ft travel lanes bordered by variable shoulders (0–13 ft). Varied turn lanes are present in numerous locations within this section of SR 9. A bridge (Structure No. (9)67-48-06938) carries SR 9 over Fall Creek within the project area. This bridge is in satisfactory to good condition (6 to 7 out of 9).
- This section of SR 38 is a two lane Urban – Minor Arterial roadway that consists of two 12-ft travel lanes bordered by variable shoulders (0–2 ft). There are 12-ft turn lanes present within sections of SR 38 along the eastern end of the project. A small pedestrian bridge is present along the southern side of SR 38. The bridge is over a drainage pipe with riprap for erosion control. This bridge will not be impacted by this project.
- This section of State Street is a two lane Urban – Minor Arterial roadway that consists of two 12-ft travel lanes bordered by an approximate 4-ft shoulder on the left side and curb and gutter on the right side with variation existing from Central Way to the intersection with US 36, where there is only curb and gutter. A 12-ft left turn lane is present toward the western end of the project area on State Street.

The existing roadway configuration experiences heavy traffic queuing during peak hours along the corridor and features non-compliant Americans with Disabilities Act (ADA) curb ramps. The draft need for Des. Nos. 1702936 and 1802854 is

due to heavy queuing that occurs during peak hours, and from diverted traffic from I-69. Traffic projections indicate continued growth of traffic in the area. The draft purpose for Des. Nos. 1702936 and 1802854 is to reduce travel delay on SR 9/US 36. The approximate existing right-of-way on each side of the centerline throughout the project area varies between 20–43 ft on US 36, 20–32.5 ft on SR 9, and 20 ft on SR 38 and State Street.

The proposed road project is anticipated to add additional travel lanes by constructing two additional through lanes on US 36/SR 9/SR 67 from Madison Avenue/Angle Road to the bridge over Fall Creek (four lanes already exist between the bridge and County Road (CR) 500 South/Huntsville Road), with an additional center lane from the south junction (at State Street) to Mercer Lane. The left and right turn lanes on SR 9/SR 67/US 36 at the south junction (at State Street) to Mercer Lane will be retained with widening as needed. At the south junction, dual left turns on eastbound State Street and dual left turns on westbound SR 38 will be constructed. The westbound right turn lane on SR 38 and the westbound through lane on State Street will be retained in their current locations with the needed widening occurring to the south. At the north junction (where US 36 splits off to the east), the westbound US 36 right turn lane storage will be extended to the first commercial drive with widening to the north. Curb and gutter with a closed drainage system and curb turnouts where open ditches can be retained to reduce the additional right-of-way needed for shoulders, while still providing surface drainage. The State project is anticipated to grade and adjust the roadsides for the LPA project. At the northern termini, the project narrows down to the pavement edges starting at the bridge over Fall Creek and continuing to its end. No work will be performed in the waterway or on the bridge piers. Expected work at the bridge is limited to removing the existing striping and painting new stripes. The small pedestrian bridge over a drainage pipe along SR 38 will not be impacted by this project. A detention pond is anticipated to be added northeast of the US 36/SR 9 split.

LPA Project: Des. No. 2001127: The footprint is mostly within the project area for the added travel lanes project (Des. Nos. 1702936 and 1802854), but extends further east along SR 38/State Street to just west of the roundabout at the SR 38/State Street and South CR 300 West intersection, 0.08 mile further south along US 36/SR 9/SR 67 south of the East Madison Avenue/Angle Road intersection, and further east along US 36 adjacent to Pendleton High School between SR 38/State Street and Angle Road. It also extends west opposite the US 36 east leg at the north junction with SR 9 through an existing open area to Hayden Way and then north alongside Hayden Way to Water Street.

- This section of Hayden Way is a two-lane local roadway that has a 14-ft traveled way.
- This section of Water Street is a two-lane Urban – Major Collector roadway that consists of two 11-ft travel lanes. The north side of Water Street has a sidewalk across from Hayden Way.

The construction for the LPA Project is being funded in two phases with two additional Des. Nos. Des. No. 2300272 will fund Phase 2 and will involve the area that is located 0.02 mile south of Madison Avenue/Angle Road (Lick Creek Pike) to SR 38/State Street. Des. No. 2300273 will fund Phase 3 and will involve the area that is located 0.01 mile south of the north junction of US 36 to 0.17 mile west of SR 9/SR 67 at Water Street.

The approximate existing right-of-way on each side of the centerline throughout the project area varies between 20–43 ft on US 36, 20–32.5 ft on SR 9, 20 ft on SR 38 and State Street, 25 ft on Hayden Way, and 0–25 ft on Water Street.

The draft need for Des. No. 2001127 is due to the existing traffic congestion, the anticipated increase in vehicular traffic, and the lack of safe pedestrian and bicycle access to Pendleton High School and businesses in the area and between the high school and Water Street, where the Town's recreation facilities exist. The draft purpose for Des. No. 2001127 is to address pedestrian and bicycle accessibility by increasing pedestrian and bicycle connectivity and to improve vehicular safety by reducing conflict points through the implementation of access management methods along a high-traffic corridor.

The proposed pedestrian connectivity project is anticipated to add pedestrian infrastructure. This will include raised landscaped medians on US 36 and SR 38, pedestrian connectivity (sidewalks and shared-use paths), ADA compliance for all pedestrian elements and curb ramps, a drainage, pedestrian lighting, signage, and other amenities, as well as pedestrian refuge islands, accessible pedestrian signals, pedestrian and bicycle counter, and benches. A shared-use path will be installed on the east side of US 36 from Angle Road to the SR 9 junction. A shared-use path will also be installed on the west side of SR 9, from the US 36 junction to the west through an open area and then along Hayden Way to Water Street. Sidewalk will be installed on the north and south sides of State Street and SR 38, on the south side of the US 36 east leg of the north junction, and the west side of US 36 between State Street and the US 36/SR 9 north junction. Curb ramps will be placed at the intersections of US 36/State Street and US 36/SR 9, and at the termini of the paths at Angle Road and Water Street.

The combined road and pedestrian connectivity project would require the acquisition of a total of 5.12 acres of permanent right-of-way and 0.74 acre of temporary right-of-way. The approximate permanent right-of-way widths from centerline throughout the project area would vary between 58–180 ft along US 36 and SR 9, 40–80 ft along SR 38 and State Street, and 50–185 ft along US 36 (east leg). The approximate temporary right-of-way widths from centerline throughout the project area would vary between 58–95 ft along US 36 and SR 9, and 65–75 ft along SR 38 and State Street. No temporary right-of-way would be acquired along US 36 (east leg). The project limits would be approximately 0.9 mile in length. The proposed method of traffic maintenance is anticipated to require phased construction to maintain traffic with one lane in each direction. The project is anticipated to begin construction in Fall 2024.

Land use in the vicinity of the project is urban, primarily including commercial properties with residences and agricultural fields nearby. Pendleton Heights High School is located adjacent to the southeastern end of the project area, and a railroad crosses the project area at Madison Avenue and State Street. Falls Park, a managed land, is located to the northwest of the project area. The INDOT Environmental Services Division (ESD) Ecology & Waterway Permitting Office (EWPO) will review the waters and wetlands determinations completed by ASC Group, Inc. to identify any ecological resources that may be present. The project is anticipated to qualify for the Range-wide Programmatic Agreement for the Indiana bat and northern long-eared bat by completing the Information for Planning and Consultation (IPaC). Coordination will occur with INDOT Cultural Resources Office (CRO) to evaluate the project area for archaeological and historic resources and for Section 106 compliance. The results of this investigation will be forwarded to the State Historic Preservation Officer (SHPO) for review and concurrence as appropriate.

Please provide your response within thirty (30) calendar days from the date of this letter. However, should you find that an extension to the response time is necessary, a reasonable amount may be granted upon request. If you have any questions regarding this matter, please feel free to contact Harry Nikides, Indiana Regional Manager, at hnikides@ascgroup.net or 317.915.9300, ext. 100; Kim Szewczak, INDOT Project Manager, at kszewczak@indot.in.gov or 317.289.3193; Scott Reske, Pendleton Town Manager, at 765.778.2173; or Hannah Urbanski, Planning Director of the Town of Pendleton, at 765.778.2173. Thank you in advance for your input.

Sincerely,



Harry Nikides
Indiana Regional Manager
ASC Group, Inc.

cc: Harry Nikides, ASC Group, Inc.
Kim Filson, INDOT
Scott Sandstrom, CDM Smith

Attachments:

List of Agencies

Maps/Graphics (Location, Topographic, Aerial, and Photographs)



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N758-ES
Indianapolis, Indiana 46204

Eric Holcomb, Governor
Michael Smith, Commissioner

The following agencies received Early Coordination Letters:

Sent 6-7-2021 and 3-31-2023 (unless otherwise noted):

Federal Highway Administration (FHWA)
Federal Office Building, Room 254
575 North Pennsylvania Street
Indianapolis, IN 46204
(Electronic Coordination)

6-7-2021: Robert Dirks –Greenfield District

Robert.Dirks@dot.gov

3-31-2023: Kari Carmany-George – Crawfordsville, Greenfield,
and LaPorte Districts k.carmanygeorge@dot.gov

Indiana Geological and Water Survey (IGWS)
611 North Walnut Grove
Bloomington, IN 47405
(Electronic Coordination)
<https://igws.indiana.edu/eAssessment>

Environmental Coordinator
Indiana Department of Natural Resources
Division of Fish and Wildlife (IDNR-DFW)
402 West Washington Street, Room W273
Indianapolis, IN 46204
(Electronic Coordination)
environmentalreview@dnr.in.gov

Section Chief, Groundwater Section
Indiana Department of Environmental Management (IDEM)
100 North Senate Avenue
Indianapolis, IN 46204
(Electronic Coordination)
6-7-2021: [https://www.in.gov/idem/clean water/pages/wellhead/](https://www.in.gov/idem/clean%20water/pages/wellhead/)
3-31-2023: ATurnbow@idem.IN.gov

Section Chief, Wetlands and Stormwater Programs
IDEM
100 North Senate Avenue
Indianapolis, IN 46204
(Electronic Coordination)
3-31-2023: JTurner2@idem.in.gov CC: rbraun@idem.in.gov

Field Environmental Officer
Chicago Regional Office
U.S. Department of Housing and Urban Development
Metcalf Federal Building
77 West Jackson Boulevard, Room 2401
Chicago, IL 60604
(Electronic Coordination)
6-7-2021: Melanie.H.Castillo@hud.gov
3-31-2023: Erik.r.sandstedt@hud.gov

Environmental Section Manager - Greenfield District Office
Indiana Department of Transportation (INDOT)
32 South Broadway
Greenfield, IN 46140
(Electronic Coordination)
6-7-2021: TDarrah@indot.in.gov
3-31-2023: rbales@indot.in.gov

Environmental Policy Manager – Central Office
INDOT
100 North Senate Avenue,
Indianapolis, IN 46204
(Electronic Coordination)
3-31-2023: nfoheybreting@indot.in.gov

Project Manager - Greenfield District
INDOT
32 South Broadway
Greenfield, IN 46140
(Electronic Coordination)
6-7-2021: ssorrell@indot.in.gov
3-31-2023: kszewczak@indot.in.gov

State Conservationist
Natural Resources Conservation Service (NRCS)
6013 Lakeside Boulevard
Indianapolis, IN 46278
(Electronic Coordination)
6-7-2021: Rick.neilson@in.usda.gov
3-31-2023: john.allen@usda.gov

INDOT
Office of Aviation
100 North Senate Avenue, Room 955
Indianapolis, IN 46204
(Electronic Coordination)
6-7-2021: JCourtade@indot.in.gov
3-31-2023: tlewandowski@indot.in.gov

Madison County Council of Governments (MCCOG)
739 Main Street
Anderson, IN 46016
(Electronic Coordination)
6-7-2021: hmpo@heartlandmpo.org
3-31-2023: jerry@heartlandmpo.org

Madison County Council
Madison County Government Center
Council Chambers Room 110
16 East 9th Street
Anderson, IN 46016
(Electronic Coordination)
3-31-2023: noreply@madisoncounty.in.gov

Middle District Commissioner
Madison County Commissioner's Office
Madison County Government Center
16 East 9th Street
Anderson, IN 46016
(Electronic Coordination)
6-7-2021: mphipps@madisoncounty.in.gov
3-31-2023: dlikens@madisoncounty.in.gov

Madison County Engineer's Office
Madison County Government Center
16 East 9th Street
Anderson, IN 46016
(Electronic Coordination)
Jessica Bastin – jbastin@madisoncounty.in.gov

Madison County Highway Department
Madison County Government Center
16 East 9th Street
Anderson, IN 46016

Madison County Surveyor
Madison County Government Center
16 East 9th Street
Anderson, IN 46016
(Electronic Coordination)
tshepherd@madisoncounty.in.gov

Madison County Drainage Board
Madison County Government Center
16 East 9th Street
Anderson, IN 46016
(Electronic Coordination)
tbaldridge@madisoncounty.in.gov
3-31-2023: Email bounced back
4-5-2023: Hard copy mailed

Madison County Government – Planning Division
Brad Newman –Floodplain Administrator
16 East 9th Street
Anderson, IN 46016
(Electronic Coordination)
bnewman@madisoncounty.in.gov

South Madison Community School Corporation
Mark Hall, Superintendent
203 South Heritage Way
Pendleton, IN 46064
(Electronic Coordination)
mhall@smcsc.com

Pendleton Heights High School
RE: RFI - School, Recreational Facility, and NPDES Facility
1 Arabian Drive
Pendleton, IN 46064
(Electronic Coordination)
Connie Rickert, Principal - Crickert@smcsc.com
6-7-2021 and 4-5-2023 only

Madison County Sheriff's Department
Madison County Government Center
16 East 9th Street
Anderson, IN 46016
(Electronic Coordination)
sheriff@madisoncounty.in.gov

Madison County Emergency Management
419 Ernie Lu Avenue
Anderson, IN 46013

Pendleton Police Department
Marc Farrer – Police Chief
550 North Pendleton Avenue
Pendleton, IN 46064

Pendleton Fire Department - Fire Chief
100 South Broadway
P.O. Box 230
Pendleton, IN 46064
(Electronic Coordination)
6-7-2021: jmoore@town.pendleton.in.us
3-31-2023: cnodine@town.pendleton.in.us

St. Vincent Anderson Hospital
2015 Jackson Street
Anderson, IN 46016

Pendleton Utility Office
Tracie Dodd, Manager
100 West State Street
P.O. Box 230
Pendleton, IN 46064
(Electronic Coordination)
tdodd@town.pendleton.in.us

Pendleton Town Manager and MS4 Coordinator - Scott Reske
100 West State Street
P.O. Box 230
Pendleton, IN 46064
(Electronic Coordination)
sreske@town.pendleton.in.us

INDOT Utilities and Railroads
Utilities and Railroad Director
100 North Senate Avenue, IGCN 642
Indianapolis, IN 46204
(Electronic Coordination)
6-7-2021: Michael B. Jett – mjett@indot.in.gov
3-31-2023: Sam Anderson – saanderson@indot.in.gov Email bounced back
4-5-2023: Email updated and resent saanderson2@indot.in.gov

The City of Anderson - MS4 Coordinators
City Engineering Office
120 East 8th Street
Anderson, IN 46018
(Electronic Coordination)
Michael Spyers – City Engineer mspyers@cityofanderson.com
CC: Walter Evans – Asst. Stormwater Superintendent
wevans@cityofanderson.com
3-31-2023: Spyers and Evans emails bounced back and said to
contact Chuck Leser - Cleser@cityofanderson.com

IDNR - Indianapolis Central Office
Division of Oil and Gas
RE: RFI - Petroleum Wells
402 West Washington Street, Room 293
Indianapolis, IN 46204
6-7-2021 and 4-5-2023: Hard copies mailed

IDEM Office of Land Quality
Loic Maniet – Project Manager
Underground Storage Tanks Branch
100 North Senate Avenue, IGCN 1101
Indianapolis, IN 46204
(Electronic Coordination)
lmaniet@idem.in.gov

IDEM Office of Land Quality
Brandon Davis – Environmental Manager
UST Compliance Underground Storage Tanks
100 North Senate Avenue, IGCN 1101
Indianapolis, IN 46204
(Electronic Coordination)
brdavis@idem.in.gov
3-31-2023: Email bounced back
4-5-2023: Hard copy mailed

Sent 3-25-2022 only:

Chief, Groundwater Section
IDEM
100 North Senate Avenue
Indianapolis, IN 46204
(Electronic Coordination)
jsulliva@idem.IN.gov

Sent 3-25-2022 and 3-31-2023:

Town of Pendleton Water Works
100 West State Street
P.O. Box 230
Pendleton, IN 46064
(Electronic Coordination)
tmcurdy@fcrwd.com

Sent 3-25-2022 and 4-5-2023:

IDEM
Lynette Schrowe – Technical Environmental Specialist
RE: RFI - LUST Speedway #7155
100 North Senate Avenue IGCN 1101
Indianapolis, IN 46204
(Electronic Coordination)
LSchrow1@idem.in.gov
4-5-2023: Email bounced back and hard copy mailed

Sent 4-5-2023:

Indiana Gas Company dba. Vectren Corporation
RE: RFI - Natural gas pipeline
One Vectren Square
211 Northwest Riverside Drive
Evansville, IN 47708

CSX Railroad
RE: RFI - CSX Railroad
Corporate Headquarters
500 Water Street, 15th Floor
Jacksonville, FL 32202

CSX Transportation
RE: RFI - CSX Railroad
1503 Meridian Street
Anderson, IN 46016

IDEM Institutional Controls Section
RE: RFI - Speedway #7155
100 North Senate Avenue
Indianapolis, IN 46204
(Electronic Coordination)
institutionalcontrols@idem.IN.gov

Sent 4-7-2023:

Citizens Water – Indianapolis
RE: Source Water Assessment Area
2020 North Meridian Street
Indianapolis, IN 46202
(Electronic Coordination)
John Havard - JHavard@citizensenergygroup.com

Pendleton Water Company
RE: Wellhead Protection Area
100 West State Street
P.O. Box 230
Pendleton, IN 46064
(Electronic Coordination)
Ryan Brashears - rbrashears@town.pendleton.in.us

Jennifer Rhodes

From: Lewandowski, Tyler <TLewandowski@indot.IN.gov>
Sent: Monday, April 3, 2023 7:49 AM
To: Jennifer Rhodes; Harry Nikides
Cc: Sandstrom, Scott; Cameron Berry; Szewczak, Kimberly
Subject: RE: Des 1702936 and 1802854 Road and Des 2001127 Pedestrian Projects - Early Coordination Letter

Good morning,

After review, no tall structure permit is required for the project if all equipment being used is under 200 feet in height. Please let our office know if you have any further questions.

Thank you,

Tyler Lewandowski
Project Manager
INDOT Office of Aviation
(317) 495-4875
tlewandowski@indot.in.gov
www.aviation.indot.in.gov



From: Jennifer Rhodes <jrhodes@ascgroup.net>
Sent: Friday, March 31, 2023 3:42 PM
To: hNikides <hnikides@ascgroup.net>
Cc: Sandstrom, Scott <sandstroms@cdmsmith.com>; Cameron Berry <cberry@ascgroup.net>; Szewczak, Kimberly <KSzewczak@indot.IN.gov>
Subject: Des 1702936 and 1802854 Road and Des 2001127 Pedestrian Projects - Early Coordination Letter

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

Des. Nos.: 1702936, 1802854, and 2001127

Project Description: Des. Nos.: 1702936 and 1802854, Road Project and Des. No. 2001127, Pedestrian Connectivity Project along US 36 and SR 9, from 0.28 Mile South of SR 38 to Huntsville Road, Madison County, Indiana – Combined and Updated Project Scope

Location: Madison County, Indiana

The Indiana Department of Transportation (INDOT) and the Town of Pendleton, with federal funding, are in the planning stage for a Road and Pedestrian Connectivity Projects on US 36 and SR 9, 0.28 Mile South of SR 38 to Huntsville Road in Madison County, Indiana.

This letter is part of the early coordination phase of the environmental review process. We are requesting comments from your area of expertise regarding potential environmental impacts with recommendations for avoidance, minimization, and mitigation.

Jennifer Rhodes

From: Maniet, Loic <Imaniet@idem.IN.gov>
Sent: Tuesday, April 4, 2023 8:19 AM
To: Jennifer Rhodes
Subject: RE: Des 1702936 and 1802854 Road and Des 2001127 Pedestrian Projects - Early Coordination Letter

Jennifer,

There are a few service stations in the area:

Ricker/BP: 7175 South SR 67 (Northwest corner of E State Rd and US 67) – No active LUST – Facility ID 5379 - Active
Speedway 7155: 7167 South SR 67 (along SR 67, north of E State St) – No active LUST – Facility ID 3497 - Active
Former Swifty: 6933 S SR 67 (along 67, north of water street) – No active LUST – Facility ID 5239 – All USTs removed - inactive

You can find additional information regarding each of those facilities in our Virtual File Cabinet.

Sincerely,



Loic Maniet

Senior Compliance Manager | UST Compliance Section
Petroleum Branch | Office of Land Quality
Indiana Department of Environmental Management

(317) 232-3592 | Imaniet@idem.in.gov



From: Jennifer Rhodes <jrhodes@ascgroup.net>
Sent: Friday, March 31, 2023 3:42 PM
To: hNikides <hnikides@ascgroup.net>
Cc: Sandstrom, Scott <sandstroms@cdmsmith.com>; Cameron Berry <cberry@ascgroup.net>; Szewczak, Kimberly <KSzewczak@indot.IN.gov>
Subject: Des 1702936 and 1802854 Road and Des 2001127 Pedestrian Projects - Early Coordination Letter

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Des. Nos.: 1702936, 1802854, and 2001127

Project Description: Des. Nos.: 1702936 and 1802854, Road Project and Des. No. 2001127, Pedestrian Connectivity Project along US 36 and SR 9, from 0.28 Mile South of SR 38 to Huntsville Road, Madison County, Indiana – Combined and Updated Project Scope

Location: Madison County, Indiana

The Indiana Department of Transportation (INDOT) and the Town of Pendleton, with federal funding, are in the planning stage for a Road and Pedestrian Connectivity Projects on US 36 and SR 9, 0.28 Mile South of SR 38 to Huntsville Road in Madison County, Indiana.



Organization and Project Information

Project ID:

Des. ID: 1702936, 1802854, 2001127

Project Title: US 36 and SR 9 Road and Pedestrian Connectivity Projects

Name of Organization: ASC Group Inc.

Requested by: Cameron Berry

Environmental Assessment Report

1. Geological Hazards:

- High liquefaction potential
- Floodway

2. Mineral Resources:

- Bedrock Resource: High Potential
- Sand and Gravel Resource: High Potential

3. Active or abandoned mineral resources extraction sites:

- Petroleum Exploration Wells

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

DISCLAIMER:

This document was compiled by Indiana University, Indiana Geological Survey, using data believed to be accurate; however, a degree of error is inherent in all data. This product is distributed "AS-IS" without warranties of any kind, either expressed or implied, including but not limited to warranties of suitability to a particular purpose or use. No attempt has been made in either the design or production of these data and document to define the limits or jurisdiction of any federal, state, or local government. The data used to assemble this document are intended for use only at the published scale of the source data or smaller (see the metadata links below) and are for reference purposes only. They are not to be construed as a legal document or survey instrument. A detailed on-the-ground survey and historical analysis of a single site may differ from these data and this document.

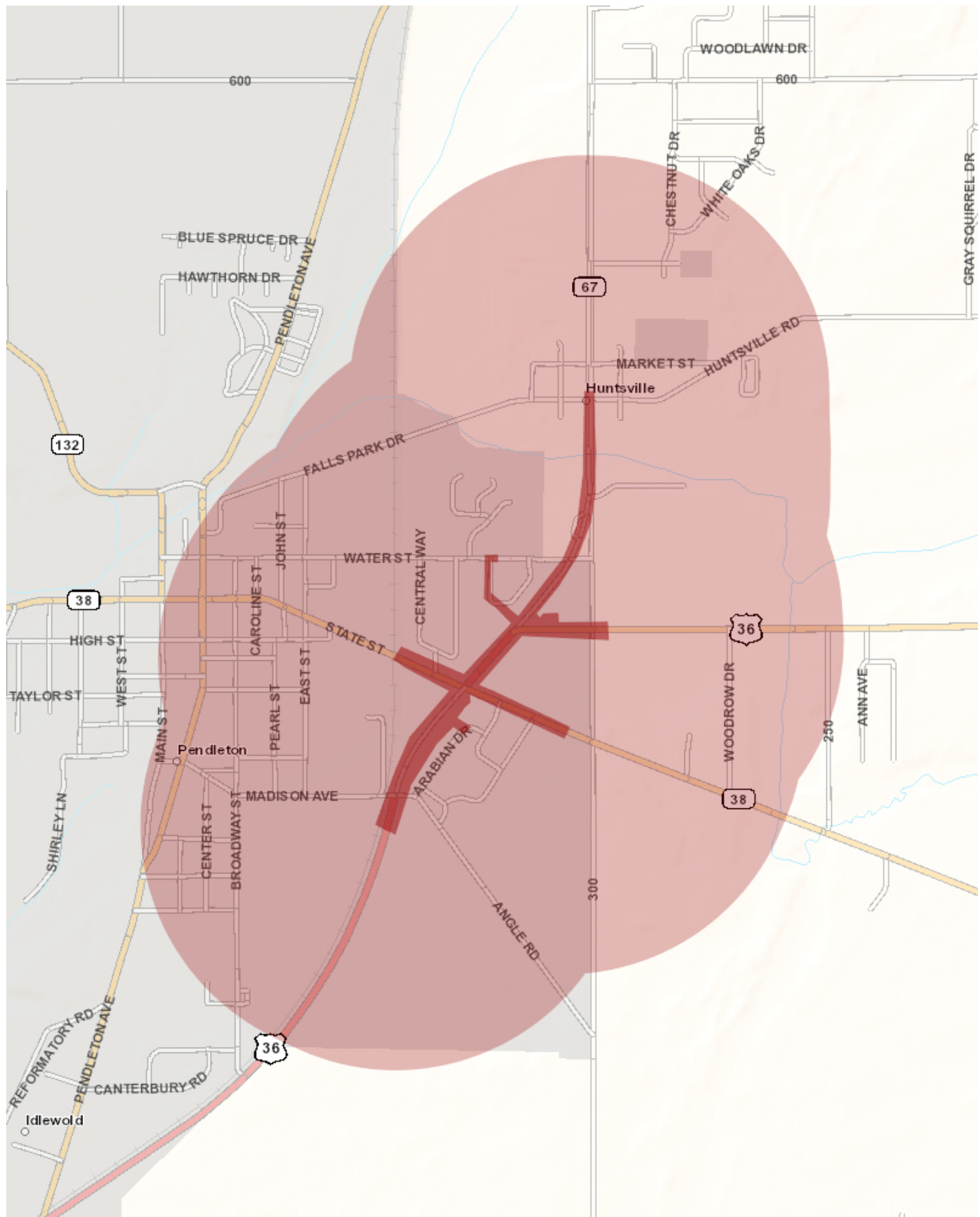
This information was furnished by Indiana Geological Survey

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

Email: IGSEnvir@indiana.edu

Phone: 812 855-7428

Date: April 04, 2023



Metadata:

- https://maps.indiana.edu/metadata/Geology/Petroleum_Wells.html
- https://maps.indiana.edu/metadata/Geology/Seismic_Earthquake_Liquefaction_Potential.html
- https://maps.indiana.edu/metadata/Geology/Industrial_Minerals_Sand_Gravel_Resources.html
- https://maps.indiana.edu/metadata/Hydrology/Floodplains_FIRM.html
- https://maps.indiana.edu/metadata/Geology/Bedrock_Geology.html

Jennifer Rhodes

From: Turnbow, Alisha <ATurnbow@idem.IN.gov>
Sent: Thursday, April 6, 2023 6:10 PM
To: Jennifer Rhodes
Cc: Sandstrom, Scott; Harry Nikides; Cameron Berry; Szewczak, Kimberly; John Havard (JHavard@citizensenergygroup.com)
Subject: RE: Des 1702936 and 1802854 Road and Des 2001127 Pedestrian Projects - Early Coordination Letter
Attachments: Proximity to WPA (1702936, 1802854, 2001127).pdf

Hi Jennifer,

Des No 1702936, 1802854, and 2001127 are located in Citizens Water – Indianapolis' Source Water Assessment Area and in Pendleton Water Company's Wellhead Protection Area.

The contact for Citizens Water – Indianapolis is John Havard and he can be reached at JHavard@citizensenergygroup.com and 317-693-8716.

The contact for Pendleton Water Company is Ryan Brashears and they can be reached at rbrashears@town.pendleton.in.us and 317-315-4252.

Let me know what questions you have.

Sincerely,



Alisha Turnbow
Environmental Manager
Office of Water Quality
Drinking Water Branch, Groundwater Section
(317) 233-9158 • aturnbow@idem.IN.gov

Indiana Department of Environmental Management



IDEM values your feedback.

Please take two minutes and complete this brief survey.



From: Jennifer Rhodes <jrhodes@ascgroup.net>
Sent: Friday, March 31, 2023 3:43 PM
To: Turnbow, Alisha <ATurnbow@idem.IN.gov>
Cc: Sandstrom, Scott <sandstroms@cdmsmith.com>; hNikides <hnikides@ascgroup.net>; Cameron Berry <cberry@ascgroup.net>; Szewczak, Kimberly <KSzewczak@indot.IN.gov>
Subject: Des 1702936 and 1802854 Road and Des 2001127 Pedestrian Projects - Early Coordination Letter

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Des. Nos.: 1702936, 1802854, and 2001127

Project Description: Des. Nos.: 1702936 and 1802854, Road Project and Des. No. 2001127, Pedestrian Connectivity Project along US 36 and SR 9, from 0.28 Mile South of SR 38 to Huntsville Road, Madison County, Indiana – Combined and Updated Project Scope



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

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

Eric J. Holcomb
Governor

Brian C. Rockensuess
Commissioner

April 6, 2023

ASC Group, Inc
Attention: Jennifer Rhodes
9376 Castlegate Drive
Indianapolis, IN 46256

Dear Jennifer Rhodes:

Re: Wellhead Protection Area
Proximity Determination
Des No 1702936 and 1802854, Road Project and
Des. No. 2001127, Pedestrian Connectivity
Project along US 36 and SR 9, from 0.28 Mile
South of SR 38 to Huntsville Road,
Madison County, Indiana
Combined and Updated Project Scope

Upon review of the above referenced project site, it has been determined that the proposed project area **is located within** a Wellhead Protection Area. If the contact information is needed for the WHPA, please contact the reference located at the bottom of the letter for the appropriate information. The information is accurate to the best of our knowledge; however, there are in some cases a few factors that could impact the accuracy of this determination. Some Wellhead Protection Area Delineations have not been submitted, and many have not been approved by this office. In these cases, we use a 3,000-foot fixed radius buffer to make the proximity determination. To find the status of a Public Water Supply System's (PWSS's) Wellhead Protection Area Delineation please visit our tracking database at <http://www.in.gov/idem/cleanwater/2456.htm> and scroll to the bottom of the page.

In addition to the proposed project area being located within a Wellhead Protection Area; the project area **is located within** a Source Water Assessment Area for a PWSS's surface water intake. The Source Water Assessment Area relates to the surface water drainage area that water could potentially flow and influence water quality for a PWSS's source of drinking water. The PWSS that could be impacted by the project is Citizens Water – Indianapolis. A contact person for Citizens Water – Indianapolis is John Havard, and he could be reached via e-mail and/or phone at: JHavard@citizensenergygroup.com and 317-693-8716. The contact information is provided as a courtesy and reference for you if any issues arise that could potentially impact the water quality for the PWSS during the course of the project. It is not a requirement of IDEM that you contact the system regarding the project.



A State that Works

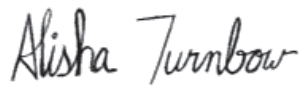
Please Reduce, Reuse, Recycle

Jennifer Rhodes
Page 2

In the future, **please consider using this self-service tool** if it suits your needs. The Drinking Water Branch has a self-service tool which allows one to determine wellhead proximity without submitting the application form. Go to <https://www.in.gov/idem/cleanwater/pages/wellhead/> and use the instructions at the bottom of the page.

If you have any additional questions, please feel free to contact me at the address above or at 317-233-9158 and aturnbow@idem.in.gov.

Sincerely,

A handwritten signature in black ink that reads "Alisha Turnbow". The signature is written in a cursive, flowing style.

Alisha Turnbow,
Environmental Manager
Ground Water Section
Drinking Water Branch
Office of Water Quality

Electronic cc: John Havard, Citizens Water – Indianapolis

Jennifer Rhodes

From: Havard, John E. <JHavard@citizensenergygroup.com>
Sent: Monday, April 10, 2023 12:04 PM
To: Jennifer Rhodes
Subject: RE: Des 1702936 and 1802854 Road and Des 2001127 Pedestrian Projects - Early Coordination Letter

Hello Jennifer,

Thanks for sharing this information with me. I have reviewed the letter and read that for the Fall Creek bridge that “No work will be performed in the waterway or on the bridge piers. Expected work at the bridge is limited to removing the existing striping and painting new stripes.” As such, I do not have any concerns or questions.

John Havard, PE
Manager, Environmental Technical Programs
O: 317.693.8716



From: Jennifer Rhodes <jrhodes@ascgroup.net>
Sent: Friday, April 7, 2023 1:37 PM
To: Havard, John E. <JHavard@citizensenergygroup.com>; 'rbrashears@town.pendleton.in.us' <rbrashears@town.pendleton.in.us>
Cc: Sandstrom, Scott <sandstroms@cdmsmith.com>; Harry Nikides <hNikides@ascgroup.net>; Cameron Berry <cberry@ascgroup.net>; 'Kim Szewczak' <kszewczak@indot.in.gov>
Subject: Des 1702936 and 1802854 Road and Des 2001127 Pedestrian Projects - Early Coordination Letter

WARNING: This email originated outside of Citizens Energy Group. **DO NOT CLICK** links or attachments unless you recognize the sender and know the content is safe.

Des. Nos.: 1702936, 1802854, and 2001127

Project Description: Des. Nos.: 1702936 and 1802854, Road Project and Des. No. 2001127, Pedestrian Connectivity Project along US 36 and SR 9, from 0.28 Mile South of SR 38 to Huntsville Road, Madison County, Indiana – Combined and Updated Project Scope

Location: Madison County, Indiana

The Indiana Department of Transportation (INDOT) and the Town of Pendleton, with federal funding, are in the planning stage for a Road and Pedestrian Connectivity Projects on US 36 and SR 9, 0.28 Mile South of SR 38 to Huntsville Road in Madison County, Indiana.

This letter is part of the early coordination phase of the environmental review process. We are requesting comments from your area of expertise regarding potential environmental impacts with recommendations for avoidance, minimization, and mitigation.

Please let us know if have any questions or concerns.

Thanks,
Jennifer Rhodes

Jennifer Rhodes

Jennifer Rhodes

From: Jennifer Rhodes
Sent: Tuesday, April 18, 2023 10:31 AM
To: 'Shaw, Larry'
Cc: 'Kim Szewczak'; 'BRedd@indot.in.gov'; 'Brad Armstrong'; 'Nicole_Henning@csx.com'; 'Wehbe, Sara'; 'Horiszny, Karen'; Harry Nikides; Cameron Berry
Subject: RE: ILDOT Des 1702936, 1802854 and 2001127 - Received in Jacksonville 4-11-2023
Attachments: State St and CSX Railroad plan sheet.pdf; Madison Ave and CSX Railroad plan sheet.pdf

Mr. Shaw,

The letter you received was to make you aware that a proposed project is located near CSX Railroad tracks. I've attached the plan sheets that show the railroad in the two areas near our project. The railroad is outside of the construction limits and will not be impacted by our project. Please let me know if you need anything else.

Thanks,

Jennifer

Jennifer Rhodes
Technical Editor

ASC Group, Inc.

800 Freeway Drive North, Suite 101
Columbus, Ohio 43229
614.268.2514 (office)
614.310.3543 (direct)

[Facebook](#) | [LinkedIn](#) | [Web](#)



CULTURAL • ENVIRONMENTAL • HAZARDOUS
EVALUATION & CONSULTING

From: Shaw, Larry <LShaw@benesch.com>
Sent: Tuesday, April 11, 2023 2:07 PM
To: Harry Nikides <hNikides@ascgroup.net>
Cc: KSzewczak@indot.in.gov; BRedd@indot.in.gov; Brad Armstrong <brad_armstrong@csx.com>; Nicole_Henning@csx.com; Wehbe, Sara <Sara_Wehbe@csx.com>; Horiszny, Karen <KHoriszny@benesch.com>
Subject: FW: ILDOT Des 1702936, 1802854 and 2001127 - Received in Jacksonville 4-11-2023

Harry Nikides
ASC Group

The attachments were received in the CSX Jacksonville, FL headquarters today.
Per a cursory review of the documents it appears that there may be two project involvements with CSX.
Without developed plans to evaluate, actual CSX involvement cannot be determined.
Please refer to the CSX Public Projects manual for guidance.

Please note that pedestrian facilities adjacent to or crossing CSX are highly discouraged and are likely to not be approved.

Should this project move forward, the CSX Public Project Group would administer the project on behalf of CSX and the responsible Agency will be required to enter into appropriate agreement(s) and provide reimbursement to CSX.

The CSX Public Projects Manual is available [here](#).

Respectfully,

Larry Shaw, PE

Senior Public Project Manager

lshaw@benesch.com

direct: 463-900-7875 mobile: 317-417-1902



From: Armstrong, Brad <Brad_Armstrong@csx.com>

Sent: Tuesday, April 11, 2023 1:19 PM

To: Shaw, Larry <LShaw@benesch.com>

Cc: Henning, Nicole (External) <Nicole_Henning@csx.com>

Subject: FW: ILDOT Des 1702936, 1802854 and 2001127 - Received in Jacksonville 4-11-2023

See attached. Please see what is needed. Reach out to agency and Sara if needed.

Brad Armstrong

CSX Transportation, Inc. – Public Projects

(513) 853-1221

4802 Decoursey Pike

Taylor Mill, KY 41015

The CSX Public Projects Manual is available [here](#).

From: Olsen, Eva (External) <Eva_Olsen@CSX.com>

Sent: Tuesday, April 11, 2023 12:41 PM

To: Armstrong, Brad <Brad_Armstrong@csx.com>; Henning, Nicole (External) <Nicole_Henning@csx.com>

Subject: ILDOT Des 1702936, 1802854 and 2001127 - Received in Jacksonville 4-11-2023

Good morning,

Please see attached letter and plan sheets for the subject project received in Jacksonville today.

Thanks,

Eva Olsen

Engineering Assistant to Scott Willis

904.359.3226

CSX – Public Projects
500 Water Street, J301
Jacksonville, FL 32202

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April 26, 2023

Jennifer Rhodes
ASC Group
800 Freeway Drive North, Suite 101
Columbus, Ohio 43229

Dear Ms. Rhodes:

The road project and pedestrian connectivity project along US 36 and SR 9, from 0.28 Mile South of SR 38 to Huntsville Road in Madison County, Indiana (Des. No. 1702936 and 1802854 Road Project) (Des. No. 2001127 Pedestrian Connectivity Project) as referred to in your letter received March 31, 2023, will not cause a conversion of prime farmland.

If you need additional information, please contact John Allen at 317-295-5859 or john.allen@usda.gov.

Sincerely,

JOHN ALLEN  Digitally signed by JOHN ALLEN
Date: 2023.04.26 11:15:03 -04'00'

JOHN ALLEN
State Soil Scientist

Enclosure

THIS IS NOT A PERMIT

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

DNR#: ER-23770-1

Request Received: March 31, 2023

Requestor:

Harry Nikides
ASC Group Incorporated
9376 Castlegate Drive
Indianapolis, IN 46256

Project:

US 36 and SR 9 roadway improvements, from 0.28 mile south of SR 38 to Huntsville Road, Pendleton; Des #1702936 & 1802854

Additional construction of sidewalks and shared-use paths, Town of Pendleton; Des #2001127

County/Site Info: Madison

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

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

Regulatory Assessment:

This proposal will require the formal approval for construction in a floodway under the Flood Control Act, IC 14-28-1 for work proposed in the floodway of Fall Creek. Please submit a copy of this letter with the permit application.

Natural Heritage Database:

The Natural Heritage Program's data have been checked. The American Badger (*Taxidea taxus*), a State species of special concern, has been documented within 0.5 miles of the project area. Falls Park has also been documented within 0.5 miles of the project area.

Fish and Wildlife Comments:

2021

The comments in our original response, dated June 7, 2023 (attached), remain valid. The recommendations below further address potential impacts identified in the proposed project area:

A) Pavement Rehabilitation:

Pavement rehabilitation projects typically do not have a significant impact on fish, wildlife, and botanical resources as long as best management practices (BMPs) are in place to limit the migration of Polycyclic aromatic hydrocarbons (PAHs) into local waterways. PAHs are a byproduct of asphalt and coal tar based sealants and negatively impact aquatic systems. The use of sealants that are free of petroleum and coal tar based products is encouraged whenever possible. Contaminated road runoff can significantly impact the aquatic environment through increased turbidity and release of sediment into the stream which can be harmful to fish and other aquatic organisms, their eggs, and their food supply. Where possible, road runoff should be directed to riprap turnouts and sediment filtration prior to entering a stream to reduce impacts to aquatic

species. We recommend the use of pollutant trapping technology such as storm drain inserts to reduce the runoff of roadside pollutants.

B) Drainage and Stormwater Management:

The Division of Fish and Wildlife recommends considering a more sustainable approach to stormwater management. The traditional model of stormwater management aims to drain runoff as quickly as possible with the help of channels and pipes, which increases peak flows and costs of stormwater management. This type of solution only transfers drainage problems from one section of a basin to another. A more sustainable approach should aim 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.). The following links give a good overview of traditional and sustainable stormwater management systems and their pros and cons for consideration during the design of the proposed project: <https://www.epa.gov/greeningepa/epa-facility-stormwater-management>; <https://www.epa.gov/greeningepa/stormwater-management-practices-epa-facilities>

C) Detention Pond:

Consider maintaining a minimum 15' wide buffer strip around the detention basin from the top of the bank landward after construction using a mixture of grasses, sedges, and wildflowers native to Central Indiana to help mitigate for potential nuisance Canada goose conflicts. Do not mow, cut, or spray the area. Post "Do Not Mow or Spray" signs along the buffer strip.

D) Landscaping:

Consider using native plants for any proposed on-site landscaping and revegetation. The following is a link to information on landscaping with native plants on the Indiana Native Plant Society (INPS) website: <https://indiananativeplants.org/landscaping/>

E) Lighting:

Most transportation corridor designers and municipalities are trending toward LED lighting. Certain types of LED lighting can have negative impacts on both human and wildlife health and safety. Scientific evidence suggests that artificial light at night has negative and deadly effects on many organisms including amphibians, birds, mammals, insects and plants (<https://www.darksky.org/light-pollution/wildlife/>). A June 2016 American Medical Association (AMA) report, "Human and Environmental Effects of Light Emitting Diode Community Lighting," concluded that "white LED street lighting patterns may contribute to the risk of chronic disease in the populations of cities in which they have been installed."

The International Dark-Sky Association has developed recommendations (<https://www.darksky.org/our-work/lighting/lighting-for-citizens/led-guide/>) for communities choosing LED lighting systems that will aid in the selection of lighting that is energy and cost efficient, yet ensures safety and security, protects wildlife, and promotes the goal of reducing light pollution:

- Always choose fully shielded fixtures that emit no light upward.
- Use "warm-white" or filtered LEDs (CCT < 3,000 K; S/P ratio < 1.2) to minimize harmful blue light emission.
- Look for products with adaptive controls like dimmers, timers, and motion sensors.
- Consider dimming or turning off lights during non-peak overnight hours.
- Avoid the temptation to over-light because of the higher luminous efficiency of LEDs.
- Only light the exact space and in the amount required for particular tasks.

F) Tree Removal:

The Division of Fish and Wildlife recommends avoiding removing urban trees to the greatest extent possible and replacing trees that must be removed. Urban trees are important to fish and wildlife resources in urban areas. Indiana's urban trees also provide millions of dollars of tangible benefits to Indiana communities by their presence in the urban environment. Their shade and beauty contribute to the quality of life. They provide significant increases in real estate values, create attractive settings for commercial businesses, and improve community neighborhood appeal. Trees decrease energy consumption by providing shade and acting as windbreaks. They reduce water treatment costs and impede soil erosion by slowing the runoff of stormwater. Trees also cool the air temperature, cleanse pollutants from the air, and produce oxygen while absorbing carbon dioxide. Trees are an integral component of the urban environment. Proactively managing and

maintaining an urban tree population will ultimately maximize the benefits afforded by their aesthetic and ecological functions. The following links give a good overview of the benefits of a street tree program and how to select the right species to avoid the negative impacts of non-native invasive species such as the common and popular Bradford pear: <https://www.in.gov/dnr/forestry/forestry-publications-and-presentations/> (scroll down to the Community & Urban Forestry section).

Contact Staff:

Our agency appreciates this opportunity to be of service. Please contact me at mbuffington@dnr.in.gov or (317) 233-4666 if we can be of further assistance.

Matt Buffington
Matt Buffington
Environmental Unit Supervisor
Division of Fish and Wildlife

Date: April 28, 2023

From: Royer, Brian <BRoyer@dnr.IN.gov>
Sent: Friday, May 5, 2023 7:41 AM
To: Harry Nikides <hNikides@ascgroup.net>
Subject: RE: DES. No 1702936 & 1802854 in Pendleton IN.

There are 2 wells that are presumed plugged in this project area. They were old Pendleton Natural Gas Company wells and we do not have any plugging records on them but have not found them to exist at surface. The well numbers are 142512, and 142510, they are shown on the provided mineral exploration map. They will probably not be close enough to the existing roadway to affect the project but if they are encountered they will need to be investigated and possibly more properly plugged as the way they are probably plugged is to the standards of the early 1900's and not today. If a steel casing or void hole is encountered in either of these location please contact me to investigate and I will provide guidance on how it needs to be dealt with.

Thanks,

Brian Royer
Orphan Well Manager
Indiana Department of Natural Resources
Division of Reclamation
317-417-6556
broyer@dnr.IN.gov
www.dnr.IN.gov

** Please let us know about the quality of our service by taking this brief [customer survey](#).*



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Indiana Ecological Services Field Office
620 South Walker Street
Bloomington, IN 47403-2121
Phone: (812) 334-4261 Fax: (812) 334-4273



In Reply Refer To:

04/03/2024 00:37:44 UTC

Project Code: 2022-0024750

Project Name: Des. Nos. 1702936, 1802854, & 2001127; US 36 (SR 9/SR 67) - Roadway Projects

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

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

Please use the species list provided and visit the U.S. Fish and Wildlife Service's Region 3 Section 7 Technical Assistance website at - <http://www.fws.gov/midwest/endangered/section7/>

[s7process/index.html](#). This website contains step-by-step instructions which will help you determine if your project will have an adverse effect on listed species and will help lead you through the Section 7 process. For all **wind energy projects and projects that include installing towers that use guy wires or are over 200 feet in height**, please contact this field office directly for assistance, even if no federally listed plants, animals or critical habitat are present within your proposed project or may be affected by your proposed project.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see <https://www.fws.gov/program/migratory-bird-permit/what-we-do>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see <https://www.fws.gov/library/collections/threats-birds>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both

migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/partner/council-conservation-migratory-birds>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. **Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.**

Attachment(s):

- Official Species List
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

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

This species list is provided by:

Indiana Ecological Services Field Office

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

PROJECT SUMMARY

Project Code: 2022-0024750

Project Name: Des. Nos. 1702936, 1802854, & 2001127; US 36 (SR 9/SR 67) - Roadway Projects

Project Type: Road/Hwy - Maintenance/Modification

Project Description: The Indiana Department of Transportation (INDOT) is in the planning stage for a proposed undertaking that includes a combined INDOT State project (Des. Nos. 1702936 and 1802854) and a Local Public Agency (LPA) project (Des. No. 2001127) under the Madison County Council of Governments (MCCOG). These projects are located along the US 36/ State Road (SR) 9/SR 67 corridor in the Town of Pendleton, Madison County. The need for both State and LPA projects are synonymous due to increasing vehicular traffic congestion along the US 36 (SR 9/SR 67) intersection corridor, which has worsened issues in safety and traffic management design for motorists and both pedestrian and bicycle travelers. There is significant overlap between the footprint of both projects and elements of both projects that rely on the other's completion in order for each to fulfill their respected purposes. Therefore, these projects are being evaluated together. The State project seeks to add travel lanes, install medians, reconstruct pedestrian facilities impacted by road widening, upgrade curb ramps up to ADA standards, and re-grade earth for the LPA project. The LPA project seeks to install pedestrian and bicycle infrastructure throughout the corridor and a nearby residential area. These projects will require a combined 5.12 acres of permanent right-of-way (ROW) and 0.737 acre of temporary ROW.

Suitable summer habitat is located within and adjacent to the combined project area. A total of 0.787 acre of tree removal will be required within 100 ft of the roadway. Dominant tree species include white mulberry (*Morus alba*), red maple (*Acer rubrum*), and Eastern red cedar (*Juniperus virginiana*). All tree trimming and removal will take place during the bat inactive season. An INDOT review of the USFWS bat database on June 15, 2023 did not indicate the presence of endangered bat species within 0.5 mile of the project area. Multiple small drainage pipes and one box culvert at the US 36/SR 9 split (Structure No. CV 036-048-89.07) will be removed and replaced. An inspection of the structure on June 9, 2023 did not indicate the presence of bats. An INDOT BIAS inspection on October 3, 2018, also did not indicate the presence of birds or bats utilizing the structure. Anticipated timing of construction is to begin in Summer 2024 and finish in Winter 2025. Certain elements of the project may extend this timeline. Permanent lighting will be installed south of the intersection of US 36 and SR 38/State Street and north of the US 36/ SR 9 split. Temporary lighting will be used throughout construction.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@40.002544549999996,-85.73206725887925,14z>



Counties: Madison County, Indiana

ENDANGERED SPECIES ACT SPECIES

There is a total of 5 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 2 of these species should be considered only under certain conditions.

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

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

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

MAMMALS

NAME	STATUS
Indiana Bat <i>Myotis sodalis</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: This species only needs to be considered if the project includes wind turbine operations. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: This species only needs to be considered if the project includes wind turbine operations. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

BIRDS

NAME	STATUS
Whooping Crane <i>Grus americana</i> Population: U.S.A. (AL, AR, CO, FL, GA, ID, IL, IN, IA, KY, LA, MI, MN, MS, MO, NC, NM, OH, SC, TN, UT, VA, WI, WV, western half of WY) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/758	Experimental Population, Non- Essential

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

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

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

BALD & GOLDEN EAGLES

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act¹ and the Migratory Bird Treaty Act².

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats³, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the ["Supplemental Information on Migratory Birds and Eagles"](#).

1. The [Bald and Golden Eagle Protection Act](#) of 1940.
2. The [Migratory Birds Treaty Act](#) of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Oct 15 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read ["Supplemental Information on Migratory Birds and Eagles"](#), specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

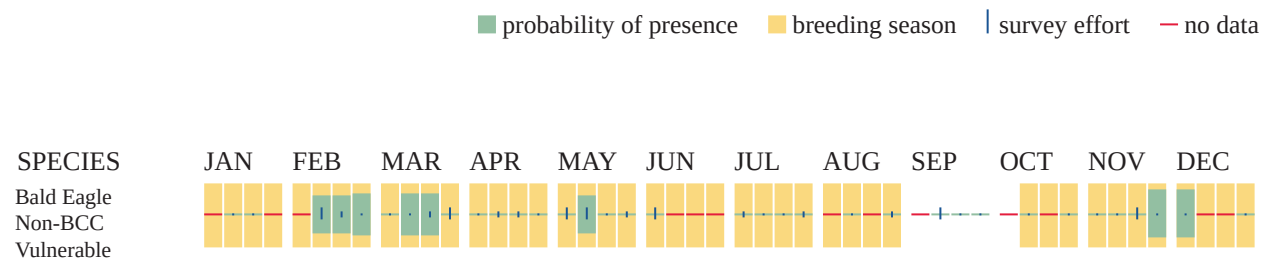
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (—)

A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats³ should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "[Supplemental Information on Migratory Birds and Eagles](#)".

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Oct 15 to Aug 31
Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Prothonotary Warbler <i>Protonotaria citrea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9439	Breeds Apr 1 to Jul 31
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398	Breeds May 10 to Sep 10
Rusty Blackbird <i>Euphagus carolinus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9478	Breeds elsewhere
Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9431	Breeds May 10 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

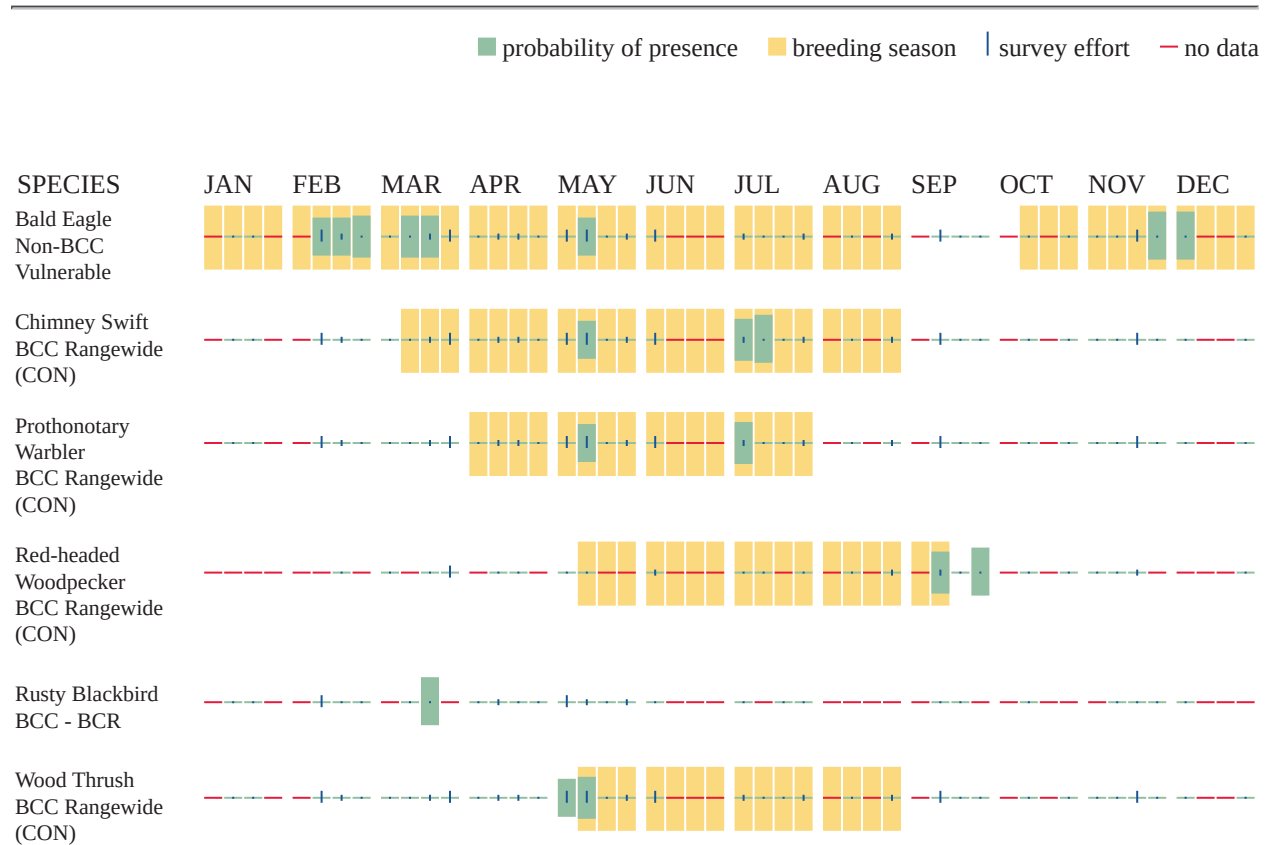
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (—)

A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

WETLANDS

Impacts to [NWJ wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

RIVERINE

- R2UBH

IPAC USER CONTACT INFORMATION

Agency: ASC Group
Name: Cameron Berry
Address: 9376 Castlegate Dr
City: Indianapolis
State: IN
Zip: 46256
Email: cberry@ascgroup.net
Phone: 3179159300

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Highway Administration

You have indicated that your project falls under or receives funding through the following special project authorities:

- BIPARTISAN INFRASTRUCTURE LAW (BIL) (OTHER)



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Indiana Ecological Services Field Office
620 South Walker Street
Bloomington, IN 47403-2121
Phone: (812) 334-4261 Fax: (812) 334-4273



In Reply Refer To:

June 26, 2023

Project code: 2022-0024750

Project Name: Des. Nos. 1702936, 1802854, & 2001127; US 36 (SR 9/SR 67) - Roadway Projects

Subject: Concurrence verification letter for the 'Des. Nos. 1702936, 1802854, & 2001127; US 36 (SR 9/SR 67) - Roadway Projects' project under the amended February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion (dated March 23, 2023) for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (NLEB).

To whom it may concern:

The U.S. Fish and Wildlife Service (Service) has received your request dated June 26, 2023 to verify that the **Des. Nos. 1702936, 1802854, & 2001127; US 36 (SR 9/SR 67) - Roadway Projects** (Proposed Action) may rely on the concurrence provided in the amended February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion (dated March 23, 2023) for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 *et seq.*).

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

The Service has 14 calendar days to notify the lead Federal action agency or designated non-federal representative if we determine that the Proposed Action does not meet the criteria for a NLAA determination under the PBO. If we do not notify the lead Federal action agency or designated non-federal representative within that timeframe, you may proceed with the Proposed Action under the terms of the NLAA concurrence provided in the PBO. This verification period allows Service Field Offices to apply local knowledge to implementation of the PBO, as we may identify a small subset of actions having impacts that were unanticipated. In such instances,

Service Field Offices may request additional information that is necessary to verify inclusion of the proposed action under the PBO.

For Proposed Actions that include bridge/culvert or structure removal, replacement, and/or maintenance activities: If your initial bridge/culvert or structure assessment documented signs of bat use or occupancy, or an assessment failed to detect Indiana bats and/or NLEBs, yet are later detected prior to, or during construction, please submit the Post Assessment Discovery of Bats at Bridge/Culvert or Structure Form (User Guide Appendix E) to this Service Office within 2 working days of any potential take. In these instances, potential incidental take of Indiana bats and/or NLEBs is covered under the Incidental Take Statement in the 2018 FHWA, FRA, FTA PBO (provided that the take is reported to the Service).

If the Proposed Action is modified, or new information reveals that it may affect the Indiana bat and/or northern long-eared bat in a manner or to an extent not considered in the PBO, further review to conclude the requirements of ESA Section 7(a)(2) may be required.

For Proposed Actions that include bridge/culvert or structure removal, replacement, and/or maintenance activities:

If your initial bridge/culvert or structure assessments failed to detect Indiana bats and/or NLEB use or occupancy, yet bats are later detected prior to, or during construction, please submit the Post Assessment Discovery of Bats at Bridge/Culvert or Structure Form (User Guide Appendix E) to this Service Office within 2 working days of the incident. In these instances, potential incidental take of Indiana bats and/or NLEBs may be exempted provided that the take is reported to the Service.

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

The following species may occur in your project area and **are not** covered by this determination:

- Monarch Butterfly *Danaus plexippus* Candidate
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered
- Whooping Crane *Grus americana* Experimental Population, Non-Essential

PROJECT DESCRIPTION

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

NAME

Des. Nos. 1702936, 1802854, & 2001127; US 36 (SR 9/SR 67) - Roadway Projects

DESCRIPTION

The Indiana Department of Transportation (INDOT) is in the planning stage for a proposed undertaking that includes a combined INDOT State project (Des. Nos. 1702936 and 1802854) and a Local Public Agency (LPA) project (Des. No. 2001127) under the Madison County Council of Governments (MCCOG). These projects are located along the US 36/ State Road (SR) 9/SR 67 corridor in the Town of Pendleton, Madison County. The need for both State and LPA projects are synonymous due to increasing vehicular traffic congestion along the US 36 (SR 9/SR 67) intersection corridor, which has worsened issues in safety and traffic management design for motorists and both pedestrian and bicycle travelers. There is significant overlap between the footprint of both projects and elements of both projects that rely on the other's completion in order for each to fulfill their respected purposes. Therefore, these projects are being evaluated together. The State project seeks to add travel lanes, install medians, reconstruct pedestrian facilities impacted by road widening, upgrade curb ramps up to ADA standards, and re-grade earth for the LPA project. The LPA project seeks to install pedestrian and bicycle infrastructure throughout the corridor and a nearby residential area. These projects will require a combined 5.12 acres of permanent right-of-way (ROW) and 0.737 acre of temporary ROW.

Suitable summer habitat is located within and adjacent to the combined project area. A total of 0.787 acre of tree removal will be required within 100 ft of the roadway. Dominant tree species include white mulberry (*Morus alba*), red maple (*Acer rubrum*), and Eastern red cedar (*Juniperus virginiana*). All tree trimming and removal will take place during the bat inactive season. An INDOT review of the USFWS bat database on June 15, 2023 did not indicate the presence of endangered bat species within 0.5 mile of the project area. Multiple small drainage pipes and one box culvert at the US 36/SR 9 split (Structure No. CV 036-048-89.07) will be removed and replaced. An inspection of the structure on June 9, 2023 did not indicate the presence of bats. An INDOT BIAS inspection on October 3, 2018, also did not indicate the presence of birds or bats utilizing the structure. Anticipated timing of construction is to begin in Summer 2024 and finish in Winter 2025. Certain elements of the project may extend this timeline. Permanent lighting will be installed south of the intersection of US 36 and SR 38/State Street and north of the US 36/ SR 9 split. Temporary lighting will be used throughout construction.

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@40.00247845,-85.73214182951571,14z>



DETERMINATION KEY RESULT

Based on your answers provided, this project(s) may affect, but is not likely to adversely affect the endangered Indiana bat and/or the endangered northern long-eared bat, therefore, consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required. However, also based on your answers provided, this project may rely on the concurrence provided in the amended February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion (dated March 23, 2023) for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

QUALIFICATION INTERVIEW

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

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

Automatically answered

Yes

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

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

Automatically answered

Yes

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

A) Federal Highway Administration (FHWA)

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

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

No

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

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

No

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

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

No

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

No

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

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

[2] The action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR Section 402.02). Further clarification is provided by the [User's Guide for the Range-wide Programmatic Consultation for Indiana Bat and Northern Long-eared Bat](#).

Yes

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

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

Yes

10. Will the project clear more than 20 acres of suitable habitat per 5-mile section of road/rail?

No

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

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

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

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

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

No

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

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

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

No

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

Yes

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

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

B) During the inactive season

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

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

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

No

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

Yes

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

B) During the inactive season

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

Yes

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

No

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

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

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

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

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

Yes

SUBMITTED DOCUMENTS

- US 36- Bridge Structure Bat Assessment Form.pdf <https://ipac.ecosphere.fws.gov/project/WVFYTYCWMZCTTOIUCTIMQKHG5Y/projectDocuments/127886389>

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

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

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

No

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

Yes

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

No

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

Yes

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

Yes

32. Will the project install *any* new or replace any existing **permanent** lighting in addition to the lighting already indicated for habitat removal (including the removal or trimming of trees) or bridge/structure removal, replacement or maintenance activities?

Yes

33. Is there *any* suitable habitat **within** 1,000 feet of the location(s) where **permanent** lighting (other than the lighting already indicated for habitat removal (including the removal or trimming of trees) or bridge/structure removal, replacement or maintenance activities) will be installed or replaced?

Yes

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

No

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

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

Yes

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

No

37. Are the project activities that are not associated with habitat removal, tree removal/trimming, bridge and/or structure activities, temporary or permanent lighting, or use of percussives consistent with a No Effect determination in this key?

Automatically answered

Yes, other project activities are limited to actions that DO NOT cause any additional stressors to the bat species as described in the BA/BO

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

Automatically answered

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

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

Automatically answered

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

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

Automatically answered

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

41. **General AMM 1**

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

Yes

42. **Tree Removal AMM 1**

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

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

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

Yes

43. **Tree Removal AMM 3**

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

Yes

44. **Tree Removal AMM 4**

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

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

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

Yes

45. **Lighting AMM 2**

Does the lead agency use the BUG (Backlight, Uplight, and Glare) system developed by the Illuminating Engineering Society^[1] to rate the amount of light emitted in unwanted directions?

[1] Refer to [The BUG System—A New Way To Control Stray Light](#)

Yes

46. **Lighting AMM 2**

Will the **permanent** lighting used during removal of suitable habitat and/or the removal/trimming of trees within suitable habitat be designed to be as close to 0 for all three BUG ratings as possible, with a priority of "uplight" of 0 and "backlight" as low as practicable?

Yes

47. **Lighting AMM 1**

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

Yes

48. **Lighting AMM 2**

Does the lead agency use the BUG (Backlight, Uplight, and Glare) system developed by the Illuminating Engineering Society^[1] to rate the amount of light emitted in unwanted directions?

[1] Refer to [The BUG System—A New Way To Control Stray Light](#)

Yes

49. **Lighting AMM 2**

Will the **permanent** lighting (other than any lighting already indicated for tree clearing or bridge/structure removal, replacement or maintenance activities) be designed to be as close to 0 for all three BUG ratings as possible, with a priority of "uplight" of 0 and "backlight" as low as practicable?

Yes

PROJECT QUESTIONNAIRE

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

N/A

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

N/A

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

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

0.787

4. Please describe the proposed bridge work:

The existing concrete box culvert will be removed and replaced on the approximate same alignment.

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

Summer of 2024 - Winter of 2025

6. Please enter the date of the bridge assessment:

June 9, 2023

AVOIDANCE AND MINIMIZATION MEASURES (AMMS)

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

TREE REMOVAL AMM 2

Apply time of year restrictions for tree removal when bats are not likely to be present, or limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/rail surface and **outside of documented** roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed.

LIGHTING AMM 2

When installing new or replacing existing permanent lights, use downward-facing, full cut-off lens lights (with same intensity or less for replacement lighting); or for those transportation agencies using the BUG system developed by the Illuminating Engineering Society, be as close to 0 for all three ratings with a priority of "uplight" of 0 and "backlight" as low as practicable.

TREE REMOVAL AMM 3

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

TREE REMOVAL AMM 4

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

GENERAL AMM 1

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

TREE REMOVAL AMM 1

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

LIGHTING AMM 1

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

DETERMINATION KEY DESCRIPTION: FHWA, FRA, FTA PROGRAMMATIC CONSULTATION FOR TRANSPORTATION PROJECTS AFFECTING NLEB OR INDIANA BAT

This key was last updated in IPaC on June 14, 2023. Keys are subject to periodic revision.

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

This decision key should only be used to verify project applicability with the Service's [amended February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion \(dated March 23, 2023\) for Transportation Projects](#). The programmatic biological opinion covers limited transportation activities that may affect either bat species, and addresses situations that are both likely and not likely to adversely affect either bat species. This decision key will assist in identifying the effect of a specific project/activity and applicability of the programmatic consultation. The programmatic biological opinion is not intended to cover all types of transportation actions. Activities outside the scope of the programmatic biological opinion, or that may affect ESA-listed species other than the Indiana bat or NLEB, or any designated critical habitat, may require additional ESA Section 7 consultation.

IPAC USER CONTACT INFORMATION

Agency: Indiana Department of Transportation

Name: Delaney Weston

Address: 32 S Broadway

City: Greenfield

State: IN

Zip: 46140

Email: dweston@indot.in.gov

Phone: 3174673901

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Highway Administration

Date & Time of Assessment 6/09/2023 @ 9:00 AM		DOT Project Des. Nos. 1702936, 1802854, & Number 2001127		Route/Facility Carried US 36		County Madison	
Federal Structure ID CV 036-048-89.07		Structure Coordinates 40.00164, -85.73283 (latitude and longitude)		Structure Height (approximate) 20 Ft		Structure Length 200 Ft	
Structure Type (check one)				Structure Material (check all that apply)			
Bridge Construction Style				Deck Material		Beam Material	
☐ Cast-in-place		☐ Pre-stressed Girder		☐ Metal		☐ None	
☐ Flat Slab/Box		☐ Steel I-beam		☐ Concrete		☐ Concrete	
☐ Truss		☐ Covered		☐ Timber		☐ Steel	
☐ Parallel Box Beam		☐ Other:		☐ Open grid		☐ Timber	
				☐ Other:		☐ Other:	
Culvert Type				Culvert Material		Creosote Evidence	
☒ Box		☐ Other Structure		☐ Metal		☐ Yes ☒ No	
☐ Pipe/Round				☒ Concrete		☐ Unknown	
☐ Other:				☐ Plastic		Notes:	
				☐ Stone/Masonry			
				☐ Other:			
Crossings Traversed (check all that apply)				Surrounding Habitat (check all that apply)			
☒ Bare ground		☒ Open vegetation		☐ Agricultural		☐ Grassland	
☐ Rip-rap		☐ Closed vegetation		☒ Commercial		☐ Ranching	
☐ Flowing water		☐ Railroad		☒ Residential-urban		☐ Riparian/wetland	
☐ Standing water		☐ Road/trail - Type:		☒ Residential-rural		☒ Mixed use	
☐ Seasonal water		☐ Other:		☒ Woodland/forested		☐ Other:	
Areas Assessed (check all that apply)							
Check all areas that apply. If an area is not present in the structure, check the "not present" box.							
Document all bat indicators observed during the assessment. Include the species present, if known, and provide photo documentation as indicated.							
Area (check if assessed)		Assessment Notes		Evidence of Bats (include photos if present)			
☐ All crevices and cracks: Bridges/culverts: rough surfaces or imperfections in concrete Other structures: soffits, rafters, attic areas		☒ Not present		☐ Visual - live # dead #		☐ Audible ☐ Species	
				☐ Guano		☐ Odor	
				☐ Staining		☐ Photos	
☒ Concrete surfaces (open roosting on concrete)		☐ Not present		☐ Visual - live # dead #		☐ Audible ☐ Species	
				☐ Guano		☐ Odor	
				☐ Staining		☐ Photos	
☐ Spaces between concrete end walls and the bridge deck		☒ Not present		☐ Visual - live # dead #		☐ Audible ☐ Species	
				☐ Guano		☐ Odor	
				☐ Staining		☐ Photos	
☐ Crack between concrete railings on top of the bridge deck		☒ Not present		☐ Visual - live # dead #		☐ Audible ☐ Species	
				☐ Guano		☐ Odor	
				☐ Staining		☐ Photos	
☐ Vertical surfaces on concrete I-beams		☒ Not present		☐ Visual - live # dead #		☐ Audible ☐ Species	
				☐ Guano		☐ Odor	
				☐ Staining		☐ Photos	
☐ Spaces between walls, ceiling joists		☒ Not present		☐ Visual - live # dead #		☐ Audible ☐ Species	
				☐ Guano		☐ Odor	
				☐ Staining		☐ Photos	
☒ Weep holes, scupper drains, and inlets/pipes		☐ Not present		☐ Visual - live # dead #		☐ Audible ☐ Species	
				☐ Guano		☐ Odor	
				☐ Staining		☐ Photos	
☐ All guiderails		☒ Not present		☐ Visual - live # dead #		☐ Audible ☐ Species	
				☐ Guano		☐ Odor	
				☐ Staining		☐ Photos	
☐ All expansion joints		☒ Not present		☐ Visual - live # dead #		☐ Audible ☐ Species	
				☐ Guano		☐ Odor	
				☐ Staining		☐ Photos	
Name: Cameron Berry				Signature: <i>Cameron Berry</i>			



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N758-ES
Indianapolis, Indiana 46204

Eric Holcomb, Governor
Michael Smith, Commissioner

January 29, 2024

Re: Early Coordination Letter, Des. Nos.: 1702936 and 1802854, Road Project and Des. No. 2001127, Pedestrian Connectivity Project along US 36 and SR 9, from 0.28 Mile South of SR 38 to Huntsville Road, Madison County, Indiana – Updated Right-of-Way and Additional Information Including Impacts

To Whom It May Concern:

The Indiana Department of Transportation (INDOT) and the Town of Pendleton, with federal funding, intend to proceed with a project involving the aforementioned road and pedestrian connectivity project in Madison County. This letter is part of the early coordination phase of the environmental review process. We are requesting comments from your area of expertise regarding any possible environmental effects associated with this project. **Please use the above designation numbers and description in your reply.** We will incorporate your comments into a study of the project's environmental impacts.

The proposed undertaking covers a combined INDOT State project (the "State project") [Des. Nos. 1702936 and 1802854] and a Local Public Agency (LPA) project (Des. No. 2001127) under the Madison County Council of Governments (MCCOG). These projects are located along US 36/State Road (SR) 9/SR 67 corridor in the Town of Pendleton, Madison County. There is significant overlap between the footprint of both the State and LPA projects, as well as areas specific to both projects. In addition to a shared footprint, there are elements of both projects that rely on the other's completion in order for each to fulfill their respected purposes. Therefore, these projects are being evaluated together for the purpose of this report while maintaining distinctions between project areas when appropriate. Mentioned roadways that serve as project area limits throughout this document have multiple names and have been reduced, as appropriate, for clarity.

State Project: Des. Nos. 1702936 and 1802854: This project is located along US 36 and SR 9 to the north and is locally known as Pendleton Pike, from 0.28 mile south of SR 38 to Huntsville Road, with construction on State Street, SR 38, and US 36 east of the SR 9 junction included, in Madison County.

- This section of US 36 is a two lane Urban – Minor Arterial and Urban – Other Principal Arterial roadway that consists of two 12-foot (ft) travel lanes bordered by variable shoulders (0–11 ft). There are 12-ft turn lanes present in numerous locations in this section of US 36, while a raised median is present in some sections.
- This section of SR 9/SR 67 is a two lane Urban – Other Principal Arterial roadway that consists of two 12-ft travel lanes bordered by variable shoulders (0–13 ft). Varied turn lanes are present in numerous locations within this section of SR 9. A bridge (Structure No. (9)67-48-06938) carries SR 9 over Fall Creek within the project area. This bridge is in satisfactory to good condition (6 to 7 out of 9).
- This section of SR 38 is a two lane Urban – Minor Arterial roadway that consists of two 12-ft travel lanes bordered by variable shoulders (0–2 ft). There are 12-ft turn lanes present within sections of SR 38 along the eastern end of the project. A small pedestrian bridge is present along the southern side of SR 38. The bridge is over a drainage pipe with riprap for erosion control. This bridge will not be impacted by this project.
- This section of State Street is a two lane Urban – Minor Arterial roadway that consists of two 12-ft travel lanes bordered by an approximate 4-ft shoulder on the left side and curb and gutter on the right side with variation existing from Central Way to the intersection with US 36, where there is only curb and gutter. A 12-ft left turn lane is present toward the western end of the project area on State Street.

The existing roadway configuration experiences heavy traffic queuing during peak hours along the corridor and features non-compliant Americans with Disabilities Act (ADA) curb ramps. The draft need for Des. Nos. 1702936 and 1802854 is

due to heavy queuing that occurs during peak hours, and from diverted traffic from I-69. Traffic projections indicate continued growth of traffic in the area. The draft purpose for Des. Nos. 1702936 and 1802854 is to reduce travel delay on SR 9/US 36. The approximate existing right-of-way (ROW) on each side of the centerline throughout the project area varies between 20–43 ft on US 36, 20–32.5 ft on SR 9, and 20 ft on SR 38 and State Street.

The proposed road project is anticipated to add additional travel lanes by constructing two additional through lanes on US 36/SR 9/SR 67 from Madison Avenue/Angle Road to the bridge over Fall Creek (four lanes already exist between the bridge and County Road (CR) 500 South/Huntsville Road), with an additional center lane from the south junction (at State Street) to Mercer Lane. The left and right turn lanes on SR 9/SR 67/US 36 at the south junction (at State Street) to Mercer Lane will be retained with widening as needed. At the south junction, dual left turns on eastbound State Street and dual left turns on westbound SR 38 will be constructed. The westbound right turn lane on SR 38 and the westbound through lane on State Street will be retained in their current locations with the needed widening occurring to the south. At the north junction (where US 36 splits off to the east), the westbound US 36 right turn lane storage will be extended to the first commercial drive with widening to the north. Curb and gutter with a closed drainage system and curb turnouts where open ditches can be retained to reduce the additional ROW needed for shoulders, while still providing surface drainage. The State project is anticipated to grade and adjust the roadsides for the LPA project. At the northern termini, the project narrows down to the pavement edges starting at the bridge over Fall Creek and continuing to its end. No work will be performed in the waterway or on the bridge piers. Expected work at the bridge is limited to removing the existing striping and painting new stripes. The small pedestrian bridge over a drainage pipe along SR 38 will not be impacted by this project. A detention pond is anticipated to be added northeast of the US 36/SR 9 split. **Updated: A 200-ft long by 4-ft wide with a 2-ft vertical opening reinforced concrete box structure (Structure No. CV 036-048-89.07) is located at the US 36/SR 9 split. This structure would be removed and its function would be incorporated into the enclosed drainage system as a part of this project.**

LPA Project: Des. No. 2001127: The footprint is mostly within the project area for the added travel lanes project (Des. Nos. 1702936 and 1802854), but extends further east along SR 38/State Street to just west of the roundabout at the SR 38/State Street and South CR 300 West intersection, 0.08 mile further south along US 36/SR 9/SR 67 south of the East Madison Avenue/Angle Road intersection, and further east along US 36 adjacent to Pendleton High School between SR 38/State Street and Angle Road. It also extends west opposite the US 36 east leg at the north junction with SR 9 through an existing open area to Hayden Way and then north alongside Hayden Way to Water Street.

- This section of Hayden Way is a two-lane local roadway that has a 14-ft traveled way.
- This section of Water Street is a two-lane Urban – Major Collector roadway that consists of two 11-ft travel lanes. The north side of Water Street has a sidewalk across from Hayden Way.

The construction for the LPA Project is being funded in two phases with two additional Des. Nos. Des. No. 2300272 will fund Phase 2 and will involve the area that is located 0.02 mile south of Madison Avenue/Angle Road (Lick Creek Pike) to SR 38/State Street. Des. No. 2300273 will fund Phase 3 and will involve the area that is located 0.01 mile south of the north junction of US 36 to 0.17 mile west of SR 9/SR 67 at Water Street.

The approximate existing ROW on each side of the centerline throughout the project area varies between 20–43 ft on US 36, 20–32.5 ft on SR 9, 20 ft on SR 38 and State Street, 25 ft on Hayden Way, and 0–25 ft on Water Street.

The draft need for Des. No. 2001127 is due to the existing traffic congestion, the anticipated increase in vehicular traffic, and the lack of safe pedestrian and bicycle access to Pendleton High School and businesses in the area and between the high school and Water Street, where the Town's recreation facilities exist. The draft purpose for Des. No. 2001127 is to address pedestrian and bicycle accessibility by increasing pedestrian and bicycle connectivity and to improve vehicular safety by reducing conflict points through the implementation of access management methods along a high-traffic corridor.

The proposed pedestrian connectivity project is anticipated to add pedestrian infrastructure. This will include raised landscaped medians on US 36 and SR 38, pedestrian connectivity (sidewalks and shared-use paths), ADA compliance for all pedestrian elements and curb ramps, a drainage, pedestrian lighting, signage, and other amenities, as well as pedestrian refuge islands, accessible pedestrian signals, pedestrian and bicycle counter, and benches. A shared-use path will be installed on the east side of US 36 from Angle Road to the SR 9 junction. A shared-use path will also be installed on the west side of SR 9, from the US 36 junction to the west through an open area and then along Hayden Way to Water Street. Sidewalk will be installed on the north and south sides of State Street and SR 38, on the south side of the US 36 east leg of the north junction, and the west side of US 36 between State Street and the US 36/SR 9 north junction. Curb ramps will be placed at

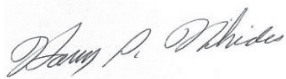
the intersections of US 36/State Street and US 36/SR 9, and at the termini of the paths at Angle Road and Water Street.

Original: The combined road and pedestrian connectivity project would require the acquisition of a total of 5.12 acres of permanent ROW and 0.74 acre of temporary ROW. **Updated: The combined State and LPA Projects would require the acquisition of a total of 5.122 acres of permanent ROW and 0.736 acre of temporary ROW from residential, commercial, wetland, utility, and school properties. The combined State and LPA Projects would require the reacquisition of a total of 5.744 acres of reacquisition ROW from residential, commercial, and school properties.** The approximate permanent ROW widths from centerline throughout the project area would vary between 58–180 ft along US 36 and SR 9, 40–80 ft along SR 38 and State Street, and 50–185 ft along US 36 (east leg). The approximate temporary ROW widths from centerline throughout the project area would vary between 58–95 ft along US 36 and SR 9, and 65–75 ft along SR 38 and State Street. No temporary ROW would be acquired along US 36 (east leg). **Updated: There would also be approximately 0.201 acre of permanent wetland impacts. Approximately 0.787 acre of tree trimming or removal would occur. Approximately 14.22 acres of total soil disturbance is anticipated within the project area for pavement widening, slope grading, and drainage work.** The project limits would be approximately 0.9 mile in length. The proposed method of traffic maintenance is anticipated to require phased construction to maintain traffic with one lane in each direction. The project is anticipated to begin construction in Fall 2024.

Land use in the vicinity of the project is urban, primarily including commercial properties with residences and agricultural fields nearby. Pendleton Heights High School is located adjacent to the southeastern end of the project area, and a railroad crosses the project area at Madison Avenue and State Street. Falls Park, a managed land, is located to the northwest of the project area. The INDOT Environmental Services Division (ESD) Ecology & Waterway Permitting Office (EWPO) will review the waters and wetlands determinations completed by ASC Group, Inc. to identify any ecological resources that may be present. The project is anticipated to qualify for the Range-wide Programmatic Agreement for the Indiana bat and northern long-eared bat by completing the Information for Planning and Consultation (IPaC). Coordination will occur with INDOT Cultural Resources Office (CRO) to evaluate the project area for archaeological and historic resources and for Section 106 compliance. The results of this investigation will be forwarded to the State Historic Preservation Officer (SHPO) for review and concurrence as appropriate.

Please provide your response within thirty (30) calendar days from the date of this letter. However, should you find that an extension to the response time is necessary, a reasonable amount may be granted upon request. If you have any questions regarding this matter, please feel free to contact Harry Nikides, Indiana Regional Manager, at hnikides@ascgroup.net or 317.915.9300, ext. 100; Kim Szewczak, INDOT Project Manager, at kszewczak@indot.in.gov or 317.289.3193; Scott Reske, Pendleton Town Manager, at 765.778.2173; or Hannah Urbanski, Planning Director of the Town of Pendleton, at 765.778.2173. Thank you in advance for your input.

Sincerely,



Harry Nikides
Indiana Regional Manager
ASC Group, Inc.

cc: Harry Nikides, ASC Group, Inc.
Kim Szewczak, INDOT
Scott Sandstrom, CDM Smith

Attachments:

List of Agencies
Maps/Graphics (Location, Topographic, Aerial, and Photographs)

2nd Re-Coordination Recipient List



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N758-ES
Indianapolis, Indiana 46204

Eric Holcomb, Governor
Michael Smith, Commissioner

The following agencies received Early Coordination Letters:

Sent 6-7-2021, 3-31-2023, and 1-29-2024 (unless otherwise noted):

Federal Highway Administration (FHWA)

Federal Office Building, Room 254

575 North Pennsylvania Street

Indianapolis, IN 46204

(Electronic Coordination)

6-7-2021: Robert Dirks -Greenfield District Robert.Dirks@dot.gov

3-31-2023 and 1-29-2024: Kari Carmany-George - Crawfordsville, Greenfield, and LaPorte Districts k.carmanygeorge@dot.gov

Indiana Geological and Water Survey (IGWS)

611 North Walnut Grove

Bloomington, IN 47405

(Electronic Coordination)

<https://igws.indiana.edu/eAssessment>

Environmental Coordinator

Indiana Department of Natural Resources

Division of Fish and Wildlife (IDNR-DFW)

402 West Washington Street, Room W273

Indianapolis, IN 46204

(Electronic Coordination)

environmentalreview@dnr.in.gov

Section Chief, Groundwater Section

Indiana Department of Environmental Management (IDEM)

100 North Senate Avenue

Indianapolis, IN 46204

(Electronic Coordination)

6-7-2021: https://www.in.gov/idem/clean_water/pages/wellhead/

3-31-2023 and 1-29-2024: ATurnbow@idem.IN.gov

Section Chief, Wetlands and Stormwater Programs

IDEM

100 North Senate Avenue

Indianapolis, IN 46204

(Electronic Coordination)

3-31-2023: JTurner2@idem.in.gov CC: rbraun@idem.in.gov

1-29-2024: Graham Wrin GCWrin@idem.IN.gov

Field Environmental Officer

Chicago Regional Office

U.S. Department of Housing and Urban Development

Metcalf Federal Building

77 West Jackson Boulevard, Room 2401

Chicago, IL 60604

(Electronic Coordination)

6-7-2021: Melanie.H.Castillo@hud.gov

3-31-2023 and 1-29-2024: Erik.r.sandstedt@hud.gov

Environmental Section Manager - Greenfield District Office

Indiana Department of Transportation (INDOT)

32 South Broadway

Greenfield, IN 46140

(Electronic Coordination)

6-7-2021: TDarrah@indot.in.gov

3-31-2023: rbales@indot.in.gov

Environmental Policy Manager – Central Office

INDOT

100 North Senate Avenue

Indianapolis, IN 46204

(Electronic Coordination)

3-31-2023: nfoheybreting@indot.in.gov

1-29-2024: APassmore@indot.IN.gov

Project Manager - Greenfield District

INDOT

32 South Broadway

Greenfield, IN 46140

(Electronic Coordination)

6-7-2021: ssorrell@indot.in.gov

3-31-2023 and 1-29-2024: kszewczak@indot.in.gov

State Conservationist

Natural Resources Conservation Service (NRCS)

6013 Lakeside Boulevard

Indianapolis, IN 46278

(Electronic Coordination)

6-7-2021: Rick.neilson@in.usda.gov

3-31-2023 and 1-29-2024: john.allen@usda.gov

INDOT

Office of Aviation

100 North Senate Avenue, Room 955

Indianapolis, IN 46204

(Electronic Coordination)

6-7-2021: JCourtade@indot.in.gov

3-31-2023 and 1-29-2024: tlewandowski@indot.in.gov

Madison County Council of Governments (MCCOG)

739 Main Street

Anderson, IN 46016

(Electronic Coordination)

6-7-2021: hmpo@heartlandmpo.org

3-31-2023 and 1-29-2024: jerry@heartlandmpo.org

www.in.gov/dot/

An Equal Opportunity Employer



Madison County Council
Madison County Government Center
Council Chambers Room 110
16 East 9th Street
Anderson, IN 46016
(Electronic Coordination)
3-31-2023 and 1-29-2024: noreply@madisoncounty.in.gov

Middle District Commissioner
Madison County Commissioner's Office
Madison County Government Center
16 East 9th Street
Anderson, IN 46016
(Electronic Coordination)
6-7-2021: mphipps@madisoncounty.in.gov
3-31-2023 and 1-29-2024: dlikens@madisoncounty.in.gov

Madison County Engineer's Office
Madison County Government Center
16 East 9th Street
Anderson, IN 46016
(Electronic Coordination)
Jessica Bastin – jbastin@madisoncounty.in.gov

Madison County Highway Department
Madison County Government Center
16 East 9th Street
Anderson, IN 46016

Madison County Surveyor
Madison County Government Center
16 East 9th Street
Anderson, IN 46016
(Electronic Coordination)
6-7-2021 and 3-31-2023: tshepherd@madisoncounty.in.gov
1-29-2024: surveyor@madisoncounty.in.gov

Madison County Drainage Board
Madison County Government Center
16 East 9th Street
Anderson, IN 46016
(Electronic Coordination)
6-7-2021: tbaldridge@madisoncounty.in.gov
3-31-2023: Email bounced back; **4-5-2023:** Hard copy mailed
1-29-2024: drainageboard@madisoncounty.in.gov

Madison County Government – Planning Division
Brad Newman –Floodplain Administrator
16 East 9th Street
Anderson, IN 46016
(Electronic Coordination)
bnewman@madisoncounty.in.gov

South Madison Community School Corporation
Mark Hall, Superintendent
203 South Heritage Way
Pendleton, IN 46064
(Electronic Coordination)
6-7-2021 and 3-31-2023: mhall@smcsc.com
1-29-2024: akruer@smcsc.com and lmiller@smcsc.com

Pendleton Heights High School - Principal
RE: RFI - School, Recreational Facility, and NPDES Facility
1 Arabian Drive
Pendleton, IN 46064
(Electronic Coordination)
6-7-2021 and 4-5-2023: Connie Rickert - Crickert@smcsc.com
1-29-2024: srose@smcsc.com

Madison County Sheriff's Department
Madison County Government Center
16 East 9th Street
Anderson, IN 46016
(Electronic Coordination)
sheriff@madisoncounty.in.gov

Madison County Emergency Management
419 Ernie Lu Avenue
Anderson, IN 46013

Pendleton Police Department
Marc Farrer – Police Chief
550 North Pendleton Avenue
Pendleton, IN 46064
(Electronic Coordination)
1-29-2024: chief@pendletonpd.org

Pendleton Fire Department - Fire Chief
100 South Broadway
P.O. Box 230
Pendleton, IN 46064
(Electronic Coordination)
6-7-2021: jmoore@town.pendleton.in.us
3-31-2023 and 1-29-2024: cnodine@town.pendleton.in.us

St. Vincent Anderson Hospital
2015 Jackson Street
Anderson, IN 46016

Pendleton Utility Office
100 West State Street
P.O. Box 230
Pendleton, IN 46064
(Electronic Coordination)
Tracie Dodd, Manager - tdodd@town.pendleton.in.us

Pendleton Town Manager and MS4 Coordinator - Scott Reske
100 West State Street
P.O. Box 230
Pendleton, IN 46064
(Electronic Coordination)
sreske@town.pendleton.in.us

INDOT Utilities and Railroads
Utilities and Railroad Director
100 North Senate Avenue, IGCN 642
Indianapolis, IN 46204
(Electronic Coordination)
6-7-2021: Michael B. Jett – mjett@indot.in.gov
3-31-2023: saanderson@indot.in.gov Email bounced back
4-5-2023 and 1-29-2024: Email updated/resent
saanderson2@indot.in.gov

The City of Anderson - MS4 Coordinators
City Engineering Office
120 East 8th Street
Anderson, IN 46018
(Electronic Coordination)

6-7-2021: Michael Spyers – City Engineer
mspyers@cityofanderson.com

CC: Walter Evans – Asst. Stormwater Superintendent
wevans@cityofanderson.com

3-31-2023: Spyers and Evans emails bounced back and said to contact Chuck Leser - Cleser@cityofanderson.com

1-29-2024: gelbert@cityofanderson.com

IDNR - Indianapolis Central Office
Division of Oil and Gas

RE: RFI - Petroleum Wells
402 West Washington Street, Room 293
Indianapolis, IN 46204

6-7-2021, 4-5-2023, and 1-29-2024: Hard copies mailed

IDEM Office of Land Quality
Loic Maniet – Project Manager
Underground Storage Tanks Branch
100 North Senate Avenue, IGCN 1101
Indianapolis, IN 46204
(Electronic Coordination)
lmaniet@idem.in.gov

IDEM Office of Land Quality
Brandon Davis – Environmental Manager
UST Compliance Underground Storage Tanks
100 North Senate Avenue, IGCN 1101
Indianapolis, IN 46204
(Electronic Coordination)
brdavis@idem.in.gov

3-31-2023: Email bounced back

4-5-2023: Hard copy mailed

1-29-2024: jfmetz@idem.IN.gov – email bounced back and hard copy sent

Sent 3-25-2022 only:

Chief, Groundwater Section
IDEM
100 North Senate Avenue
Indianapolis, IN 46204
(Electronic Coordination)
jsulliva@idem.IN.gov

Sent 3-25-2022, 3-31-2023, and 1-29-2024:

Town of Pendleton Water Works
100 West State Street
P.O. Box 230
Pendleton, IN 46064
(Electronic Coordination)
tmccurdy@fcrwd.com

Sent 3-25-2022, 4-5-2023, and 1-29-2024:

IDEM
Lynette Schrowe – Technical Environmental Specialist
RE: RFI - LUST Speedway #7155

100 North Senate Avenue IGCN 1101
Indianapolis, IN 46204

(Electronic Coordination)

LSchrow1@idem.in.gov

4-5-2023: Email bounced back and hard copy mailed

1-29-2024: Hard copy mailed

Sent 4-5-2023 and 1-29-2024:

Indiana Gas Company dba. Vectren Corporation
RE: RFI - Natural gas pipeline

One Vectren Square
211 Northwest Riverside Drive
Evansville, IN 47708

CSX Railroad
RE: RFI - CSX Railroad
Corporate Headquarters
500 Water Street, 15th Floor
Jacksonville, FL 32202

CSX Transportation
RE: RFI - CSX Railroad
1503 Meridian Street
Anderson, IN 46016

IDEM Institutional Controls Section
RE: RFI - Speedway #7155
100 North Senate Avenue
Indianapolis, IN 46204
(Electronic Coordination)
institutionalcontrols@idem.IN.gov

Sent 4-7-2023 and 1-29-2024:

Citizens Water – Indianapolis
RE: Source Water Assessment Area
2020 North Meridian Street
Indianapolis, IN 46202
(Electronic Coordination)
John Havard - JHavard@citizensenergygroup.com

Pendleton Water Company
RE: Wellhead Protection Area
100 West State Street
P.O. Box 230
Pendleton, IN 46064
(Electronic Coordination)
Ryan Brashears - rbrashears@town.pendleton.in.us

Sent 2-2-2024 only:

Regency MHP - Regency Estates, LLC WHP Area
RE: Wellhead Protection Area within 1,800 feet
380 North Cross Pointe Boulevard
Evansville, IN 47715
(Electronic Coordination)
Michael O'Connor – michael@mparkpartners.com

Jennifer Rhodes

From: Lewandowski, Tyler <TLewandowski@indot.IN.gov>
Sent: Monday, January 29, 2024 2:00 PM
To: Jennifer Rhodes
Subject: RE: Des 1702936 and 1802854 Road and Des 2001127 Pedestrian Projects - Early Coordination Letter

Good afternoon,

After review, no tall structure permit is required for the project if all equipment being used is under 200 feet in height. Please let our office know if you have any further questions.

Thank you,

Tyler Lewandowski
Project Manager
INDOT Office of Aviation
(317) 495-4875
tlewandowski@indot.in.gov
www.aviation.indot.in.gov



From: Jennifer Rhodes <jrhodes@ascgroup.net>
Sent: Monday, January 29, 2024 10:51 AM
To: hNikides <hnikides@ascgroup.net>
Cc: Sandstrom, Scott <sandstroms@cdmsmith.com>; Cameron Berry <cberry@ascgroup.net>; Szewczak, Kimberly <KSzewczak@indot.IN.gov>
Subject: Des 1702936 and 1802854 Road and Des 2001127 Pedestrian Projects - Early Coordination Letter

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Des. Nos.: 1702936, 1802854, and 2001127

Project Description: Des. Nos.: 1702936 and 1802854, Road Project and Des. No. 2001127, Pedestrian Connectivity Project along US 36 and SR 9, from 0.28 Mile South of SR 38 to Huntsville Road, Madison County, Indiana – Updated Right-of-Way and Additional Information Including Impacts

Location: Madison County, Indiana

The Indiana Department of Transportation (INDOT) and the Town of Pendleton, with federal funding, are in the planning stage for a Road and Pedestrian Connectivity Projects on US 36 and SR 9, 0.28 Mile South of SR 38 to Huntsville Road in Madison County, Indiana.

This letter is part of the early coordination phase of the environmental review process. We are requesting comments from your area of expertise regarding potential environmental impacts with recommendations for avoidance, minimization, and mitigation.

Federal Highway Administration
Indiana Geological and Water Survey

Jennifer Rhodes

From: Maniet, Loic <Imaniet@idem.IN.gov>
Sent: Tuesday, January 30, 2024 7:43 AM
To: Jennifer Rhodes
Subject: RE: Des 1702936 and 1802854 Road and Des 2001127 Pedestrian Projects - Early Coordination Letter

Jennifer,

I reviewed the location for the proposed projects and we have the following UST sites in the area:

- Facility ID 5379 – 7175 S SR 67 – Site is in compliance (UST) – LUST Incident #199611501 (No Further Action 4/3/2022)
- Facility ID 3497 – 7167 S SR 67 – Site is in compliance (UST) – Multiple LUST Incidents but all were issued No Further Actions letters.

Those are located along SR 67. I did not find other UST sites in the areas marked on the site plan

Sincerely,



Loic Maniet

Senior Compliance Manager | UST Compliance Section
Petroleum Branch | Office of Land Quality
Indiana Department of Environmental Management

(317) 232-3592 | Imaniet@idem.in.gov



From: Jennifer Rhodes <jrhodes@ascgroup.net>
Sent: Monday, January 29, 2024 10:51 AM
To: hNikides <hnikides@ascgroup.net>
Cc: Sandstrom, Scott <sandstroms@cdmsmith.com>; Cameron Berry <cberry@ascgroup.net>; Szewczak, Kimberly <KSzewczak@indot.IN.gov>
Subject: Des 1702936 and 1802854 Road and Des 2001127 Pedestrian Projects - Early Coordination Letter

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Des. Nos.: 1702936, 1802854, and 2001127

Project Description: Des. Nos.: 1702936 and 1802854, Road Project and Des. No. 2001127, Pedestrian Connectivity Project along US 36 and SR 9, from 0.28 Mile South of SR 38 to Huntsville Road, Madison County, Indiana – Updated Right-of-Way and Additional Information Including Impacts

Location: Madison County, Indiana

The Indiana Department of Transportation (INDOT) and the Town of Pendleton, with federal funding, are in the planning stage for a Road and Pedestrian Connectivity Projects on US 36 and SR 9, 0.28 Mile South of SR 38 to Huntsville Road in Madison County, Indiana.

Jennifer Rhodes

From: Havard, John E. <JHavard@citizensenergygroup.com>
Sent: Tuesday, January 30, 2024 10:17 AM
To: Jennifer Rhodes
Subject: RE: Des 1702936 and 1802854 Road and Des 2001127 Pedestrian Projects - Early Coordination Letter

Good Morning,

I do not have any comments regarding this project,

John Havard, PE
Manager, Environmental Technical Programs
O: 317.693.8716



From: Jennifer Rhodes <jrhodes@ascgroup.net>
Sent: Monday, January 29, 2024 10:51 AM
To: Harry Nikides <hNikides@ascgroup.net>
Cc: 'Sandstrom, Scott' <sandstroms@cdmsmith.com>; Cameron Berry <cberry@ascgroup.net>; 'Kim Szewczak' <kszewczak@indot.in.gov>
Subject: Des 1702936 and 1802854 Road and Des 2001127 Pedestrian Projects - Early Coordination Letter

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Des. Nos.: 1702936, 1802854, and 2001127

Project Description: Des. Nos.: 1702936 and 1802854, Road Project and Des. No. 2001127, Pedestrian Connectivity Project along US 36 and SR 9, from 0.28 Mile South of SR 38 to Huntsville Road, Madison County, Indiana – Updated Right-of-Way and Additional Information Including Impacts
Location: Madison County, Indiana

The Indiana Department of Transportation (INDOT) and the Town of Pendleton, with federal funding, are in the planning stage for a Road and Pedestrian Connectivity Projects on US 36 and SR 9, 0.28 Mile South of SR 38 to Huntsville Road in Madison County, Indiana.

This letter is part of the early coordination phase of the environmental review process. We are requesting comments from your area of expertise regarding potential environmental impacts with recommendations for avoidance, minimization, and mitigation.

Federal Highway Administration
Indiana Geological and Water Survey
Indiana Department of Natural Resources-Division of Fish and Wildlife
Indiana Department of Environmental Management
U.S. Department of Housing and Urban Development
INDOT-Greenfield District Office
INDOT-Central Office
INDOT-PM
Natural Resources Conservation Service
INDOT-Aviation

Jennifer Rhodes

From: Haulter, Crystal <CHaulter@idem.IN.gov>
Sent: Tuesday, January 30, 2024 2:09 PM
To: Jennifer Rhodes
Cc: Sandstrom, Scott; Cameron Berry; Szewczak, Kimberly; Harry Nikides
Subject: FW: Des 1702936 and 1802854 Road and Des 2001127 Pedestrian Projects - Early Coordination Letter
Attachments: Des 1702936 and 1802854 Road and Des 2001127 Pedestrian Projects - ECL.pdf; Des 1702936 and 1802854 Road and Des 2001127 Pedestrian Projects - ECL -RFI 7.pdf

Jennifer,

Thank you for your Early Coordination Letter for INDOT Des. No. 1702936 and 1802854 Road and Des 2001127 Pedestrian Projects. IDEM's Institutional Controls Group does not have any concerns with the proposed work as it pertains to the Environmental Restrictive Covenant (ERC) on the 7167 South SR 67 property, provided that proper handling, removal, and disposal of soil and/or groundwater is conducted in accordance with applicable laws, when and where appropriate.

Please contact me directly if you have any specific questions regarding this matter.

Thank you,
Crystal Haulter



Crystal Haulter

(She/Her/Hers)

Technical Environmental Specialist
Remediation Services Branch

(317) 234-1957 • chaulter@idem.IN.gov



www.idem.IN.gov

Scan the QR code to leave your feedback.

We appreciate your input!



From: Jennifer Rhodes <jrhodes@ascgroup.net>
Sent: Monday, January 29, 2024 11:00 AM
To: IDEM Institutional Controls <InstitutionalControls@idem.IN.gov>
Cc: Sandstrom, Scott <sandstroms@cdmsmith.com>; Cameron Berry <cberry@ascgroup.net>; Szewczak, Kimberly <KSzewczak@indot.IN.gov>; hNikides <hnikides@ascgroup.net>
Subject: RE: Des 1702936 and 1802854 Road and Des 2001127 Pedestrian Projects - Early Coordination Letter

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Sorry I forgot to attach the early coordination letter in my previous email.

Des. Nos.: 1702936, 1802854, and 2001127

Jennifer Rhodes

From: Turnbow, Alisha <ATurnbow@idem.IN.gov>
Sent: Wednesday, January 31, 2024 3:31 PM
To: Jennifer Rhodes
Cc: John Havard (JHavard@citizensenergygroup.com); Sandstrom, Scott; Cameron Berry; Szewczak, Kimberly; Harry Nikides
Subject: RE: Des 1702936 and 1802854 Road and Des 2001127 Pedestrian Projects - Early Coordination Letter
Attachments: Proximity to WPA (1702936 and 1802854).pdf

Hi Jennifer

Find attached to this email a response to the proximity request for Des No 1702936 and 1802854.

Des No 1702936 and 1802854 are located:

- in Citizens Water – Indianapolis Source Water Assessment (SWA) Area and their contact is in the attached letter.
- in Pendleton Water Company Wellhead Protection (WHP) Area. The contact for Pendleton Water Company is Ryan Brashears and they can be reached at brashears@town.pendleton.in.us and 317-315-4252.
- within 1,800 feet Regency MHP - Regency Estates, LLC WHP Area. The contact for Regency MHP - Regency Estates, LLC is Michael O'Connor and they can be reached at michael@mparkpartners.com and 302-336-8775.

Let me know what questions you have.

Sincerely,



Alisha Turnbow
Environmental Manager
Office of Water Quality
Drinking Water Branch, Groundwater Section
(317) 233-9158 • aturnbow@idem.IN.gov

Indiana Department of Environmental Management



IDEM values your feedback.

Please take two minutes and complete this brief survey.



From: Jennifer Rhodes <jrhodes@ascgroup.net>
Sent: Monday, January 29, 2024 10:51 AM
To: Turnbow, Alisha <ATurnbow@idem.IN.gov>
Cc: Sandstrom, Scott <sandstroms@cdmsmith.com>; Cameron Berry <cberry@ascgroup.net>; Szewczak, Kimberly <KSzewczak@indot.IN.gov>; hNikides <hnikides@ascgroup.net>
Subject: Des 1702936 and 1802854 Road and Des 2001127 Pedestrian Projects - Early Coordination Letter

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Des. Nos.: 1702936, 1802854, and 2001127



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

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

Eric J. Holcomb
Governor

Brian C. Rockensuess
Commissioner

January 31, 2024

ASC Group, Inc.
Attention: Harry Nikides
800 Freeway Drive North, Suite 101
Columbus, Ohio 43229

Dear Harry Nikides:

Re: Wellhead Protection Area
Proximity Determination
Des No 1702936 and 1802854
Road Project and Des. No. 2001127, Pedestrian
Connectivity Project along US 36 and SR 9, from
0.28 Mile South of SR 38 to Huntsville Road,
Madison County, Indiana

Upon review of the above referenced project site, it has been determined that the proposed project area **is located within** a Wellhead Protection Area. If the contact information is needed for the WHPA, please contact the reference located at the bottom of the letter for the appropriate information. The information is accurate to the best of our knowledge; however, there are in some cases a few factors that could impact the accuracy of this determination. Some Wellhead Protection Area Delineations have not been submitted, and many have not been approved by this office. In these cases, we use a 3,000-foot fixed radius buffer to make the proximity determination. To find the status of a Public Water Supply System's (PWSS's) Wellhead Protection Area Delineation please visit our tracking database at <http://www.in.gov/idem/cleanwater/2456.htm> and scroll to the bottom of the page.

In addition to the proposed project area being located within a Wellhead Protection Area; the project area **is located within** a Source Water Assessment Area for a PWSS's surface water intake. The Source Water Assessment Area relates to the surface water drainage area that water could potentially flow and influence water quality for a PWSS's source of drinking water. The PWSS that could be impacted by the project is Citizens Water – Indianapolis. A contact person for Citizens Water – Indianapolis is John Havard, and they could be reached via e-mail and/or phone at: JHavard@citizensenergygroup.com and 317-693-8716. The contact information is provided as a courtesy and reference for you if any issues arise that could potentially impact the water quality for the PWSS during the course of the project. It is not a requirement of IDEM that you contact the system regarding the project.



A State that Works

Please Reduce, Reuse, Recycle

In the future, **please consider using this self-service tool** if it suits your needs. The Drinking Water Branch has a self-service tool which allows one to determine wellhead proximity without submitting the application form. Go to <https://www.in.gov/idem/cleanwater/pages/wellhead/> and use the instructions at the bottom of the page.

If you have any additional questions, please feel free to contact me at the address above or at 317-233-9158 and aturnbow@idem.in.gov.

Sincerely,

A handwritten signature in black ink that reads "Alisha Turnbow". The signature is written in a cursive, flowing style.

Alisha Turnbow,
Environmental Manager
Ground Water Section
Drinking Water Branch
Office of Water Quality

Electronic cc: John Havard, Citizens Water – Indianapolis

February 13, 2024

Jennifer Rhodes
ASC Group
800 Freeway Drive North, Suite 101
Columbus, Ohio 43229

Dear Ms. Rhodes:

The purposed Road and Pedestrian Connectivity Projects on US 36 and SR 9, 0.28 Mile South of SR 38 to Huntsville Road in Madison County, Indiana. (Des. No. 1702936, 1802854, and 2001127) as referred to in your letter received January 29, 2024, will not cause a conversion of prime farmland.

If you need additional information, please contact John Allen at 317-295-5859 or john.allen@usda.gov.

Sincerely,

JOHN ALLEN

JOHN ALLEN
State Soil Scientist

Digitally signed by JOHN ALLEN
Date: 2024.02.15 12:32:10 -05'00'

Enclosures

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

DNR#: ER-23770-2

Request Received: January 29, 2024

Requestor:

Harry Nikides
ASC Group Incorporated
9376 Castlegate Drive
Indianapolis, IN 46256

Project:

US 36 & SR 9 roadway improvements and new small structure (CV 036-048-89.07) removal, Pendleton; Des #1702936 & 1802854

Construction of sidewalks and shared-use paths, with new wetland impacts and tree trimming/removal, Pendleton; Des #2001127

County/Site Info: Madison County

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

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

Regulatory Assessment:

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

Natural Heritage Database:

The Natural Heritage Program's data have been checked. To date, no plant or animal species listed as state or federally threatened, endangered, or rare have been reported to occur in the project vicinity.

Fish and Wildlife Comments:

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

A) Wetlands

Due to the presence or potential presence of wetland habitat on site, we recommend contacting and coordinating with the Indiana Department of Environmental Management (IDEM) 401 program and the US Army Corps of Engineers (USACE) 404 program.

B) Pavement Rehabilitation

Pavement rehabilitation projects typically do not have a significant impact on fish, wildlife, and botanical resources if best management practices (BMPs) are in place to limit the migration of polycyclic aromatic hydrocarbons (PAHs) into local waterways. PAHs are a byproduct of asphalt and coal tar-based sealants and

negatively impact aquatic systems. The use of sealants that are free of petroleum and coal tar-based products is encouraged whenever possible. Contaminated road runoff can significantly impact the aquatic environment through increased turbidity and release of sediment into the stream which can be harmful to fish and other aquatic organisms, their eggs, and their food supply. Where possible, road runoff should be directed to riprap turnouts and sediment filtration prior to entering a stream to reduce impacts to aquatic species. We recommend the use of pollutant trapping technology such as storm drain inserts to reduce the runoff of roadside pollutants where appropriate.

C) Drainage and Stormwater Management

The Division of Fish and Wildlife recommends considering a more sustainable approach to stormwater management. The traditional model of stormwater management aims to drain runoff as quickly as possible with the help of channels and pipes, which increases peak flows and costs of stormwater management. This type of solution only transfers drainage problems from one section of a basin to another. A more sustainable approach should aim 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.). The following links give a good overview of traditional and sustainable stormwater management systems and their pros and cons for consideration during the design of the proposed project: <https://www.epa.gov/greeningepa/epa-facility-stormwater-management>; <https://www.epa.gov/greeningepa/stormwater-management-practices-epa-facilities>.

D) Detention Pond

Consider maintaining a minimum 15' wide buffer strip around the detention basin from the top of the bank landward after construction using a mixture of grasses, sedges, and wildflowers native to Central Indiana to help mitigate for potential nuisance Canada goose conflicts. Do not mow, cut, or spray the area. Post "Do Not Mow or Spray" signs along the buffer strip.

E) Landscaping

Consider using native plants for any proposed on-site landscaping and revegetation. The following is a link to information on landscaping with native plants on the Indiana Native Plant Society (INPS) website: <https://indiananativeplants.org/landscaping/>.

F) Lighting

Most transportation corridor designers and municipalities are trending toward LED lighting. Certain types of LED lighting can have negative impacts on both human and wildlife health and safety. Scientific evidence suggests that artificial light at night has negative and deadly effects on many organisms including amphibians, birds, mammals, insects and plants (<https://www.darksky.org/light-pollution/wildlife/>). A June 2016 American Medical Association (AMA) report, "Human and Environmental Effects of Light Emitting Diode Community Lighting," concluded that "white LED street lighting patterns may contribute to the risk of chronic disease in the populations of cities in which they have been installed."

The International Dark-Sky Association has developed recommendations (<https://www.darksky.org/our-work/lighting/lighting-for-citizens/led-guide/>) for communities choosing LED lighting systems that will aid in the selection of lighting that is energy and cost efficient, yet ensures safety and security, protects wildlife, and promotes the goal of reducing light pollution:

- Always choose fully shielded fixtures that emit no light upward.
- Use "warm-white" or filtered LEDs (CCT < 3,000 K; S/P ratio < 1.2) to minimize harmful blue light emission.
- Look for products with adaptive controls like dimmers, timers, and motion sensors.
- Consider dimming or turning off lights during non-peak overnight hours.
- Avoid the temptation to over-light because of the higher luminous efficiency of LEDs.
- Only light the exact space and in the amount required for particular tasks.

G) Tree Removal

The Division of Fish and Wildlife recommends avoiding removing urban trees to the greatest extent possible and replacing trees that must be removed. Urban trees are important to fish and wildlife resources in urban areas. Indiana's urban trees also provide millions of dollars of tangible benefits to Indiana communities by their presence in the urban environment. Their shade and beauty contribute to the quality of life. They provide significant increases in real estate values, create attractive settings for commercial businesses, and improve community neighborhood appeal. Trees decrease energy consumption by providing shade and acting as windbreaks. They reduce water treatment costs and impede soil erosion by slowing the runoff of stormwater. Trees also cool the air temperature, cleanse pollutants from the air, and produce oxygen while absorbing carbon dioxide. Trees are an integral component of the urban environment. Proactively managing and maintaining an urban tree population will ultimately maximize the benefits afforded by their aesthetic and ecological functions. The following links give a good overview of the benefits of a street tree program and how to select the right species to avoid the negative impacts of non-native invasive species such as the common and popular Bradford pear: <https://www.in.gov/dnr/forestry/forestry-publications-and-presentations/> (scroll down to the Community & Urban Forestry section).

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

1. Revegetate all bare and disturbed areas that are not currently mowed and maintained with a mixture of grasses, sedges, and wildflowers native to Central Indiana as soon as possible upon completion; turf-type grasses (including low-endophyte, friendly endophyte, and endophyte free tall fescue but excluding all other varieties of tall fescue) may be used in currently mowed areas only. A native herbaceous seed mixture must include at least 5 species of grasses and sedges and 5 species of wildflowers.
2. Do not excavate in the waterway and minimize disturbance to bank vegetation and contain disturbance to within the project limits.
3. Do not cut any trees suitable for Indiana Bat or Northern Long-eared Bat roosting (3 inches or greater diameter-at-breast height, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30.
4. Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the waterbody or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.
5. Seed and protect all disturbed streambanks and slopes not protected by other methods that are 3:1 or steeper with erosion control blankets that are heavy-duty, biodegradable, and net free or that use loose-woven / Leno-woven netting to minimize the entrapment and snaring of small-bodied wildlife such as snakes and turtles (follow manufacturer's recommendations for selection and installation); seed and apply mulch on all other disturbed areas.
6. Plant five trees, 1 inch to 2 inches in diameter-at-breast height, for each tree which is removed that is 10 inches or greater in diameter-at-breast height.
7. Do not excavate or place fill in any riparian wetland.

Contact Staff:

Our agency appreciates this opportunity to be of service. Please contact me at RVanVoorhis@dnr.IN.gov or (317) 232-8163 if we can be of further assistance.

Rachel Van Voorhis
Rachel Van Voorhis
Environmental Coordinator
Division of Fish and Wildlife

Date: February 28, 2024

Jennifer Rhodes

From: Barnsbee, Alex S <AlBarnsbee@dnr.IN.gov>

Sent: Tuesday, March 5, 2024 7:28 AM

To: Harry Nikides <hNikides@ascgroup.net>

Cc: Szewczak, Kimberly <KSzewczak@indot.IN.gov>

Subject: Des. Nos.: 1702936, 1802854, and 2001127 (Pedestrian Connectivity Project along US 36 and SR 9)/ response

Good morning,

In regard to the footprint of the subject project area, our records indicate that there were 2(two) wells which fall within the project footprint. Permit #: 142510, & 142512 both have long since been plugged & abandoned, and since there is no longer any associated well casing left (still in the ground) for either well, they should not affect this project.

Thanks,

Alex Barnsbee

Geologist

Department of Natural Resources

Division of Oil & Gas

VoIP only Ph: (317) 550-5865

AlBarnsbee@dnr.IN.gov

DNR.IN.gov

APPENDIX D: SECTION 106 OF THE NHPA

Section 106 Documentation

Approved APE Finding

800.11 Document

Supporting Graphics

Consulting Parties Response Letters

Historic Property Report Title Page and Abstract

Phase Ia Archaeological Field Reconnaissance Report Title Page and Description

Publisher's Claim and Proof of Publication

Responses to 800.11 Finding

State Historical Preservation Officer (SHPO) Concurrence

Approved Addendum APE Finding

Addendum 800.11 Document

Supporting Graphics

Addendum Phase Ia Archaeological Field Reconnaissance Report Title Page and Description

2nd Addendum Phase Ia Archaeological Field Reconnaissance Report Title Page and Description

Responses to Addendum 800.11 Finding

Addendum State Historical Preservation Officer (SHPO) Concurrence

Affidavit of Publication and Proof of Publication



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N758-ES
Indianapolis, Indiana 46204

PHONE: (855) 463-6848

Eric Holcomb, Governor
Michael Smith, Commissioner

June 20, 2022

This letter was sent to the listed parties.

Dear Consulting Party,

The Indiana Department of Transportation (INDOT), with funding from the Federal Highway Administration (FHWA), proposes to proceed with the US 36/State Road (SR) 9 Added Travel Lanes (ATL) Project, in Pendleton and Huntsville, Fall Creek Township, Madison County (Des. Nos. 1702936 and 1802854).

This letter is part of the Section 106 review process for this project. Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic properties. We are requesting comments from you regarding the possible effects of this project. Please use the above Des. Number and project description in your reply and your comments will be incorporated into the formal environmental study.

A Section 106 early coordination letter was distributed on August 2, 2021. In addition, a letter distributed on September 10, 2021, notified consulting parties that an archaeology report was available for review and comment. A letter distributed on March 22, 2022, notified consulting parties that a Historic Property Report was available for review and comment.

The proposed undertaking is on SR 9/SR 67 from north of Huntsville Road/County Road (CR) 500 South in Huntsville at the northern end to south of East Madison Avenue/Lick Creek Pike in southeastern Pendleton at the southern end. The project area also includes portions of SR 38 and US 36 in Madison County, Indiana. The undertaking is within the Anderson South and Pendleton USGS Topographic Quadrangles, in Sections 15, 16, and 21, Township 18 North, Range 7 East.

The purpose of the ATL Project is to reduce travel delays on SR 9/US 36 and side roads. The need for this project stems from heavy queuing in peak hours, as well as anytime there is congestion or traffic backups on I-69, when people divert along this route between Indianapolis and Anderson. Traffic projections indicate continued growth in traffic. Additionally, as traffic increases, the likelihood and frequency of crashes would likely increase.

The ATL project will include construction of two additional through lanes on US 36/SR 9/SR 67 from Madison Avenue/Lick Creek Pike to the bridge over Fall Creek (four lanes already exist between the bridge and CR 500 South/Huntsville Road), with an additional raised median/left turn lane from the south junction (at SR 38/State Street) to the north junction (at US 36) to Mercer Lane. The left and right turn lanes on US 36/SR 9/SR 67 at the south junction (at State Street) to Mercer Lane will be retained with widening as needed to insert the second northbound and southbound through lanes. At the south junction, dual left turns on eastbound (EB) State Street and dual left turns on westbound (WB) SR 38 will be constructed. The WB right turn lane on SR 38 and the WB through lane on State Street will be retained in their current locations with the needed widening occurring to the south. At the north junction (where US 36 splits off to the east), the WB US 36 right turn lane storage will be extended to the first commercial drive with widening to the north. Curb with curb turnouts are intended to be used to reduce the additional right-of-way (ROW)

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takes for shoulders, while still having surface drainage. Additional inlets and pipes will also be added. At the northern terminus, the project narrows down to the pavement edges starting at the bridge over Fall Creek and continuing to its end with work limited to pavement markings. No work will be performed in the waterway or on the bridge piers. Expected work at the bridge is limited to removing the existing striping and painting new stripes. The small pedestrian bridge over a drainage pipe along SR 38 will not be impacted by this project. There will be approximately 3 acres of permanent and 0.3 acre of temporary ROW acquisition.

CDM Smith is under contract with INDOT to advance the environmental documentation for the referenced project. ASC Group, Inc. has been subcontracted to complete the Section 106 documentation for the project.

In accordance with 36 CFR 800.2 (c), you were invited to become a consulting party as part of the Section 106 process, or you are hereby invited to become a consulting party as part of the Section 106 process. Entities that have previously accepted consulting party status—as well as additional entities that are currently being invited to become consulting parties—are identified in the attached list.

The Section 106 process involves efforts to identify historic properties potentially affected by the undertaking, to assess the undertaking's effects and to seek ways to avoid, minimize, or mitigate any adverse effects on historic properties. For more information regarding the protection of historic resources, please see the Advisory Council on Historic Preservation's guide: *Protecting Historic Properties: A Citizen's Guide to Section 106 Review* available online at <https://www.achp.gov/sites/default/files/documents/2017-01/CitizenGuide.pdf>.

The Area of Potential Effects (APE) is the area in which the proposed project may cause alterations in the character or use of historic resources. The APE contains no resources listed in the National Register of Historic Places (NRHP).

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. As a result of the historic property identification and evaluation efforts, a house located at 3021 SR 38 is recommended as eligible for listing in the NRHP.

With regard to archaeological resources, an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards identified one (1) site within the project area. As a result of these efforts, site 12-M-0813 was recommended as eligible for listing in the NRHP. The design of the undertaking will avoid this site, and no further work is recommended as long as the site remains outside the project limits.

The "No Adverse Effect" finding is available for review in IN SCOPE at <http://erms.indot.in.gov/Section106Documents/> (the Des. No. is the most efficient search term, once in IN SCOPE). You are invited to review these documents and to respond with comments on any historic resource impacts incurred as a result of this project so that an environmental report can be completed. We also welcome your related opinions and other input to be considered in the preparation of the environmental document. If you prefer a hard-copy of this material, please respond to this email with your request as soon as you can.

Please review the information and comment within thirty (30) calendar days of receipt. If you indicate that you do not desire to be a consulting party or if you have not previously accepted consulting party status and you do not respond to this letter, you will not be included on the list of consulting parties for this project and will not receive further information about the project unless the design changes. Tribal consulting parties may enter the process at any time and are encouraged to respond to this notification with any comments or concerns at their earliest convenience.

For questions concerning specific project details, you may contact Leah J. Konicki of ASC Group, Inc. at 317-915-9300, ext. 103 or lkonicki@ascgroup.net. All future responses regarding the proposed project should be forwarded to ASC Group, Inc. at the following address:

ASC Group, Inc.
9376 Castlegate Drive
Indianapolis, IN 46256
lkonicki@ascgroup.net.

Tribal contacts may contact Patty Jo Korzeniewski at pkorzeniewski@indot.in.gov or 317-416-4377 or Kari Carmany-George at FHWA at K.CarmanyGeorge@dot.gov or 317-226-5629.

Sincerely,



Matthew S. Coon, Acting Manager
Cultural Resources Office
Environmental Services

Distribution List:

Beth K. McCord, Deputy State Historic Preservation Officer
Steve Schug, Main Street Pendleton, events@mainstreetpendleton.org
Peoria Tribe of Indians of Oklahoma
Eastern Shawnee Tribe of Oklahoma

**FEDERAL HIGHWAY ADMINISTRATION'S
SECTION 4(F) COMPLIANCE REQUIREMENTS (for historic properties) AND
SECTION 106 FINDINGS AND DETERMINATIONS
AREA OF POTENTIAL EFFECT
ELIGIBILITY DETERMINATIONS
EFFECT FINDING
US 36/SR 9 ADDED TRAVEL LANES PROJECT, PENDLETON AND HUNTSVILLE,
FALL CREEK TOWNSHIP, MADISON COUNTY, INDIANA
DES. NOS.: 1702936 and 1802854**

**AREA OF POTENTIAL EFFECTS
(Pursuant to 36 CFR Section 800.4(a)(1))**

The Area of Potential Effects (APE) typically is one parcel deep on either side of the project area and was determined by sight lines to and from the project. A map of the APE is included in Appendix A (Maps 1–3).

**ELIGIBILITY DETERMINATIONS
(Pursuant to 36 CFR 800.4(c)(2))**

3021 SR 38

The property is a two-story house with Italianate stylistic features. These features include a low pyramidal roof with wood brackets in the eaves. The house is constructed of concrete block, with the exterior walls covered with concrete blocks molded to resemble ashlar cut stone. The property is significant under Criterion C as an example of the Italianate architectural style and as an uncommon early example of a house constructed almost entirely of concrete blocks.

EFFECT FINDING

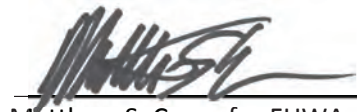
3021 SR 38: No Adverse Effect

The Indiana Department of Transportation (INDOT), acting on the Federal Highway Administration's (FHWA's) behalf, has determined a "No Adverse Effect" finding is appropriate for this undertaking.

INDOT respectfully requests the Indiana State Historic Preservation Officer provide written concurrence with the Section 106 determination of effect.

SECTION 4(F) COMPLIANCE REQUIREMENTS (for historic properties)

3021 SR 38 - This undertaking will not convert property from 3021 SR 38, a Section 4(f) historic property, to a transportation use; INDOT, acting on FHWA's behalf has determined the appropriate Section 106 finding is "No Adverse Effect"; therefore no Section 4(f) evaluation is required for 3021 SR 38.



Matthew S. Coon, for FHWA
Acting Manager
INDOT Cultural Resources

06/20/2022

Approved Date

**FEDERAL HIGHWAY ADMINISTRATION
DOCUMENTATION OF SECTION 106 FINDING OF
NO ADVERSE EFFECT
SUBMITTED TO THE STATE HISTORIC PRESERVATION OFFICER
PURSUANT TO 36 CFR Section 800.5(c)
US 36/SR 9 ADDED TRAVEL LANES PROJECT, PENDLETON AND HUNTSVILLE,
FALL CREEK TOWNSHIP, MADISON COUNTY, INDIANA
DES. NOS.: 1702936 and 1802854**

1. DESCRIPTION OF THE UNDERTAKING

The proposed undertaking (Des. Nos. 1702936 and 1802854) is the US 36/State Road (SR) 9 Added Travel Lanes (ATL) Project (Des. Nos. 1702936 and 1802854) in Pendleton and Huntsville, Fall Creek Township, Madison County, Indiana (Appendix A: Maps 1–3). The project is located on SR 9/SR 67 from north of Huntsville Road/County Road (CR) 500 South (S) in Huntsville at the northern end to south of East Madison Avenue/Lick Creek Pike in southeastern Pendleton at the southern end. The project area also includes portions of SR 38 and US 36 in Madison County, Indiana.

The purpose of the ATL project is to reduce travel delays on SR 9/US 36 and side roads. The need for this project stems from heavy queuing in peak hours, as well as anytime there is congestion or traffic backups on I-69, when people divert along this route between Indianapolis and Anderson. Traffic projections indicate continued growth in traffic. Additionally, as traffic increases, the likelihood and frequency of crashes would likely increase.

The ATL Project will include construction of two additional through lanes on US 36/SR 9/SR 67 from Madison Avenue/Lick Creek Pike to the bridge over Fall Creek (four lanes already exist between the bridge and CR 500 S/Huntsville Road), with an additional raised median/left turn lane from the south junction (at SR 38/State Street) to the north junction (at US 36) to Mercer Lane. The left and right turn lanes on US 36/SR 9/SR 67 at the south junction (at State Street) to Mercer Lane will be retained with widening as needed to insert the second northbound and southbound through lanes. At the south junction, dual left turns on eastbound (EB) State Street and dual left turns on westbound (WB) SR 38 will be constructed. The WB right turn lane on SR 38 and the WB through lane on State Street will be retained in their current locations with the needed widening occurring to the south. At the north junction (where US 36 splits off to the east), the WB US 36 right turn lane storage will be extended to the first commercial drive with widening to the north. Curb with curb turnouts are intended to be used to reduce the additional right-of-way (ROW) takes for shoulders, while still having surface drainage. Additional inlets and pipes will also be added. At the northern terminus, the project narrows down to the pavement edges starting at the bridge over Fall Creek and continuing to its end with work limited to pavement markings. No work will be performed in the waterway or on the bridge piers. Expected work at the bridge is limited to removing the existing striping and painting new stripes. The small pedestrian bridge over a drainage pipe along SR 38 will not be impacted by this project. There will be approximately 3 acres of permanent and 0.3 acre of temporary ROW acquisition.

Because this project is receiving funds from the Federal Highway Administration (FHWA), it is a federal undertaking subject to Section 106 of the National Historic Preservation Act.

The Area of Potential Effects (APE) was determined by sight lines to and from the project and is typically one parcel deep on either side of the project area (Appendix A: Maps 1–3).

The project area is located in Huntsville and Pendleton, and land use in the area is mixed commercial, institutional, and residential. The project area is in proximity to the NRHP-listed Pendleton Historic District (NR-0988); however, the district is not included within the APE due to sight lines and distance from the project area. The extant above-ground structures within the APE were built between the mid-nineteenth century and the present day (Appendix B: Photographs 1–18).

2. EFFORTS TO IDENTIFY HISTORIC PROPERTIES

The State Historic Preservation Officer (SHPO) is entitled to participate in the Section 106 process as a consulting party. The following other individuals and organizations were invited by letter dated August 2, 2021, which was sent out via email on August 2 and 3, 2021 (Appendix C: C-2 to C-11).

Kelly S. Gaskill, Madison County Commissioner
John Richwine, Madison County Commissioner
Mike Phipps, Madison County Commissioner
Jerrold Bridges, Madison County Council of Governments
Dave Benefiel, Madison County Council of Governments
Scott Harless, Madison County Highway Department
Stephen T. Jackson, Madison County Historian
Richard E. Kreegar, Madison County Historical Society
Michael Flowers, Indiana Landmarks, Eastern Regional Office
Chet Babb, Pendleton Town Council President
Scott Reske, Pendleton Town Manager
Kayla Hassett, Pendleton Planning Department
Rick Bowlin, Pendleton Department of Public Works
Pendleton Historical Museum
Steve Schug, Main Street Pendleton
Eastern Shawnee Tribe of Oklahoma
Miami Tribe of Oklahoma
Peoria Tribe of Indians of Oklahoma
Pokagon Band of Potawatomi Indians
Absentee Shawnee Tribe of Oklahoma
Delaware Nation of Oklahoma
Delaware Tribe of Indians, Oklahoma

Main Street Pendleton responded by email from Stephen Schug dated August 11, 2021, requesting consulting party status (Appendix C: C-12). The SHPO responded to the early coordination letter on August 12, 2021 (Appendix C: C-13 to C-14). The SHPO suggested inviting Historic Fall Creek, Pendleton Settlement, Inc., to participate in the Section 106 consultation, and provided contact information. SHPO also suggested including owners of any potentially historic properties from which ROW is likely to be taken should also be invited to participate in the Section 106 consultation for this project. The list of consulting parties included in Appendix C (Appendix C: C-6 to C-7) includes these additional names, and also has been annotated to indicate those consulting parties that accepted consulting party status, as requested by the SHPO in its letter.

No other consulting party responses were received.

Efforts to identify historic properties in the APE included a check of data available online at the Indiana State Historic Architectural and Archaeological Research Database (SHAARD) and the Indiana Historic Buildings, Bridges, and Cemeteries Map (IHBBC Map), a review of the *Madison County Interim Report* (1984), historical/architectural and archaeological fieldwork, and communication with consulting parties. Sources of information examined included NRHP listings, Indiana Register of Historic Sites and Structures (IRHSS) listings, the Indiana Historic Bridge Inventory, archaeological site maps, cultural resources management reports, and cemetery records.

There are no NRHP- or IRHSS-listed properties within the APE. No historic bridges, cemeteries, or previously recorded archaeological sites are located within the APE. One property in the APE has been recorded in the Indiana Historic Sites and Structures Inventory (IHSSI): 092-502-62005 is a ca. 1880 gabled ell house with Queen Anne-style features and is rated Contributing in the IHSSI.

The results of the field surveys were reported in a Historic Property Report (HPR) [Konicki et al. 2022] and a Phase Ia Archaeological Records Check and Reconnaissance Survey Report (Aukeman and Mustain 2021). The principal investigators for these reports meet the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61. The HPR recommended one property as eligible for listing in the NRHP: 3021 SR 38, an Italianate style house constructed of ornamental concrete blocks. The location of this property is shown on the map at Appendix A: Map 3.

The archaeological survey identified one site: 12-M-0813, a nineteenth to early twentieth century mill site. The archaeological survey report recommended that the site has potential to be eligible for listing in the NRHP under Criterion D and recommended that the site be avoided. The design of the project was altered to avoid the site. The report recommended no further archaeological investigation as long as the site remains outside of the project limits.

The Indiana Department of Transportation (INDOT), on behalf of FHWA, has reviewed these reports. A copy of the abstracts and summaries for the HPR and Phase Ia archaeology report are included in Appendix D.

A letter distributed on September 10, 2021, notified consulting parties (tribes only) that an archaeology report was available for review and comment (Appendix C: C-15 to C-20). By letter dated September 10, 2021, the Peoria Tribe of Indians of Oklahoma responded that it had no objection to the proposed project, but that if items are discovered that fall under the protection of the Native American Graves Protection and Repatriation Act (NAGPRA), "the Peoria Tribe requests immediate notification and consultation" (Appendix C: C-21).

By its letter dated September 24, 2021, SHPO concurred with the recommendation of the archaeology report that "there is insufficient information to determine whether archaeology site 12M813 is eligible for inclusion" in the NRHP (Appendix C: C-22 to C-23).

The Eastern Shawnee Tribe of Oklahoma responded by letter dated October 28, 2021, stating that "the project proposes No Adverse Effect or endangerment to known sites of interest to the Eastern Shawnee Tribe" (Appendix C: C-24). The letter went on to state, "However, should this project inadvertently discover an archeological site or object(s) we request that you immediately contact the Eastern Shawnee Tribe, as well as the appropriate state agencies (within 24 hours). We also ask that all ground disturbing activity stop until the Tribe and State agencies are consulted. Please note that any future changes to this project will require additional consultation."

Consulting parties were notified by letter dated March 22, 2022, that a HPR was available for review and comment (Appendix C: C-25 to C-31). By letter dated March 22, 2022, the Peoria Tribe of Indians of Oklahoma reiterated that it had no objection to the proposed project, with the request that they be notified immediately if any items that fall under NAGPRA are identified (Appendix C: C-32). The Eastern Shawnee Tribe of Oklahoma responded by letter dated March 28, 2022 (Appendix C: C-33), restating that “the project proposes No Adverse Effect or endangerment to known sites of interest to the Eastern Shawnee Tribe.”

No other consulting party comments were received in response to the archaeology report.

By letter dated April 5, 2022, the SHPO provided comments regarding the HPR (Appendix C: C-34 to C-35). The SHPO concurred that the APE proposed in the HPR appears to be of “adequate size to encompass the geographic area in which direct and indirect effects of a project of this nature could occur”. The SHPO noted that the Pendleton Historic District (NR-0988) lies just outside of the APE boundary to the west. SHPO went on to state its agreement with the conclusions of the HPR that the only historic property located within the project’s APE that is eligible for inclusion in the NRHP is the house at 3021 SR 38. The letter noted that this house had previously been found to be eligible under Des. No. 0170879 in 2008 and Des. No. 1297161 in 2014. In conclusion, the letter stated: “. . . we agree that the house appears to remain eligible under Criterion C. Furthermore, we agree that there are no other historic properties listed in or eligible for inclusion in the NRHP within the project’s APE.”

Regarding archaeological resources, SHPO re-stated that there is “insufficient information to determine whether archaeological site 12M813 is eligible for inclusion in the NRHP. We understand that the project has been redesigned to avoid site 12M813. Site 12M813 should be clearly marked and must be avoided by all ground-disturbing project activities.”

No other consulting party comments were received in response to the HPR.

3. DESCRIBE AFFECTED HISTORIC PROPERTIES

3021 SR 38

3021 SR 38 is a two-story Italianate-style house. The houses’ exterior walls consist of decorative concrete block, including blocks resembling ashlar cut stone for the walls with quoins at the corners. The low pyramidal roof has wood brackets under the eaves. The front porch foundation also consists of concrete block, and the porch features two decorative concrete columns. The house is significant under Criterion C as an excellent example of the Italianate style and for its use of decorative concrete blocks. The house has previously been determined eligible for the NRHP in 2008 under Des. No. 0170879 and in 2014 under Des. No. 1297161.

4. DESCRIBE THE UNDERTAKING'S EFFECTS ON HISTORIC PROPERTIES

3021 SR 38

The undertaking will not directly affect the house located at 3021 SR 38; however, the undertaking will be visible from the house. The construction along SR 38 will end approximately 650 feet west of the house,

with the ROW acquisition ending approximately 250 feet west of the house. Incidental construction consisting of pavement markings will end approximately 130 feet west of the house. The setting of the house has already been altered through the construction of a roundabout east of the house at SR 38 and CR S 300 W.

5. EXPLAIN APPLICATION OF CRITERIA OF ADVERSE EFFECT -- INCLUDE CONDITIONS OR FUTURE ACTIONS TO AVOID, MINIMIZE OR MITIGATE ADVERSE EFFECTS

According to 36 CFR 800.5(a)(1), “an adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association.” The criteria of adverse effect as defined in 36 CFR 800.5(a)(1) do not apply to this project. The citations included below are examples of Adverse Effects and not the criteria. Adverse Effects are not limited to these examples.

3021 SR 38

Per 36 CFR 800.5(a)(2)(i), the undertaking will not result in the “physical destruction of or damage to all or part of the property.” The undertaking will not physically affect the house located at 3021 SR 38.

Per 36 CFR 800.5(a)(2)(ii), the undertaking will not result in the “alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access, that is not consistent with the Secretary’s Standards for the Treatment of Historic Properties and/or other applicable guidelines.” The undertaking will not physically affect the house located at 3021 SR 38.

Per 36 CFR 800.5(a)(2)(iii), the undertaking will not result in the “removal of the property from its historic location.” The project will not remove the house located at 3021 SR 38 from its historic location.

Per 36 CFR 800.5(a)(2)(iv), the undertaking will not result in the “Change of the character of the property’s use or of physical features within the property’s setting that contribute to its historic significance.” The undertaking will not change the residential use of the house at 3021 SR 38. The undertaking will not alter physical features within the property’s setting that contribute to the house’s historic significance.

Per 36 CFR 800.5(a)(2)(v), the undertaking will not result in the “Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property’s significant historic features.” The widening of SR 38 will be a minor visual change within the viewshed of the house located at 3021 SR 38. However, the visual character of the surrounding area has already been changed through modern development, including commercial development to the north and schools to the west and southeast. SR 38 has already been widened west of the house in past projects, and a roundabout is now adjacent to the house to the east. The undertaking will not significantly alter the setting of the house in such a way as to diminish the house’s integrity. The project will not introduce new atmospheric or audible elements to the setting of the house.

Per 36 CFR 800.5(a)(2)(vi), the undertaking will not cause the “neglect of a property which causes its deterioration...” The undertaking will not cause neglect of the house located at 3021 SR 38.

Per 36 CFR 800.5(a)(2)(vii), the undertaking will not cause the “transfer, lease, or sale of property out of Federal ownership or control...” Ownership of the house located 3021 SR 38 will not change as a result of this project.

Therefore, the undertaking will have No Adverse Effect on the house located at 3021 SR 38.

6. SUMMARY OF CONSULTING PARTIES AND PUBLIC VIEWS

A Section 106 early coordination letter was distributed on August 2, 2021 (Appendix C: C-2 to C-11). Main Street Pendleton responded by email from Stephen Schug dated August 11, 2021, requesting consulting party status (Appendix C: C-12). The SHPO responded to the early coordination letter on August 12, 2021 (Appendix C: C-13 to C-14). The SHPO suggested inviting Historic Fall Creek, Pendleton Settlement, Inc., to participate in the Section 106 consultation, and provided contact information. SHPO also suggested including owners of any potentially historic properties from which ROW is likely to be taken should also be invited to participate in the Section 106 consultation for this project. The list of consulting parties included in Appendix C (Appendix C: C-6 to C-7) includes these additional names, and also has been annotated to indicate those consulting parties that accepted consulting party status, as requested by the SHPO in its letter.

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Regarding archaeological resources, SHPO re-stated that there is “insufficient information to determine whether archaeological site 12M813 is eligible for inclusion in the NRHP. We understand that the project has been redesigned to avoid site 12M813. Site 12M813 should be clearly marked and must be avoided by all ground-disturbing project activities.”

No other consulting party responses were received in regard to the HPR.

A public notice will be published in a local newspaper and the public will be afforded thirty (30) days to respond. If appropriate, this document will be revised after the expiration of the public comment period to include any substantive comments received.

APPENDIX

Appendix A. Maps

Appendix B. Photographs

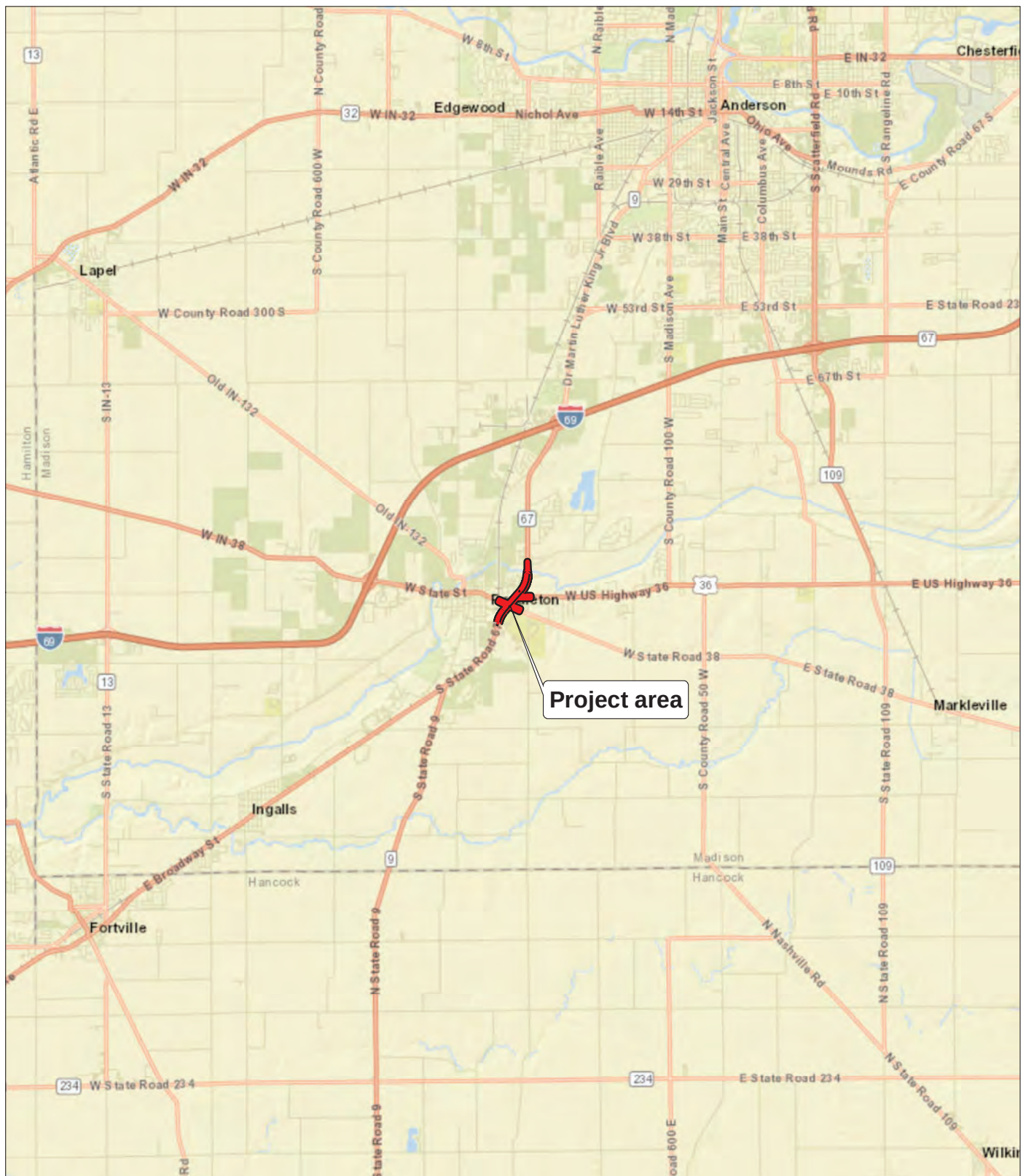
Appendix C. Consulting Parties List and Correspondence

Appendix D. Abstract and Summary for HPR and Phase Ib Archaeology Report

Appendix E. Plan Set

Note: a full copy of all of the reports in Appendix D can be found in IN SCOPE:
<http://erms.indot.in.gov/Section106Documents>.

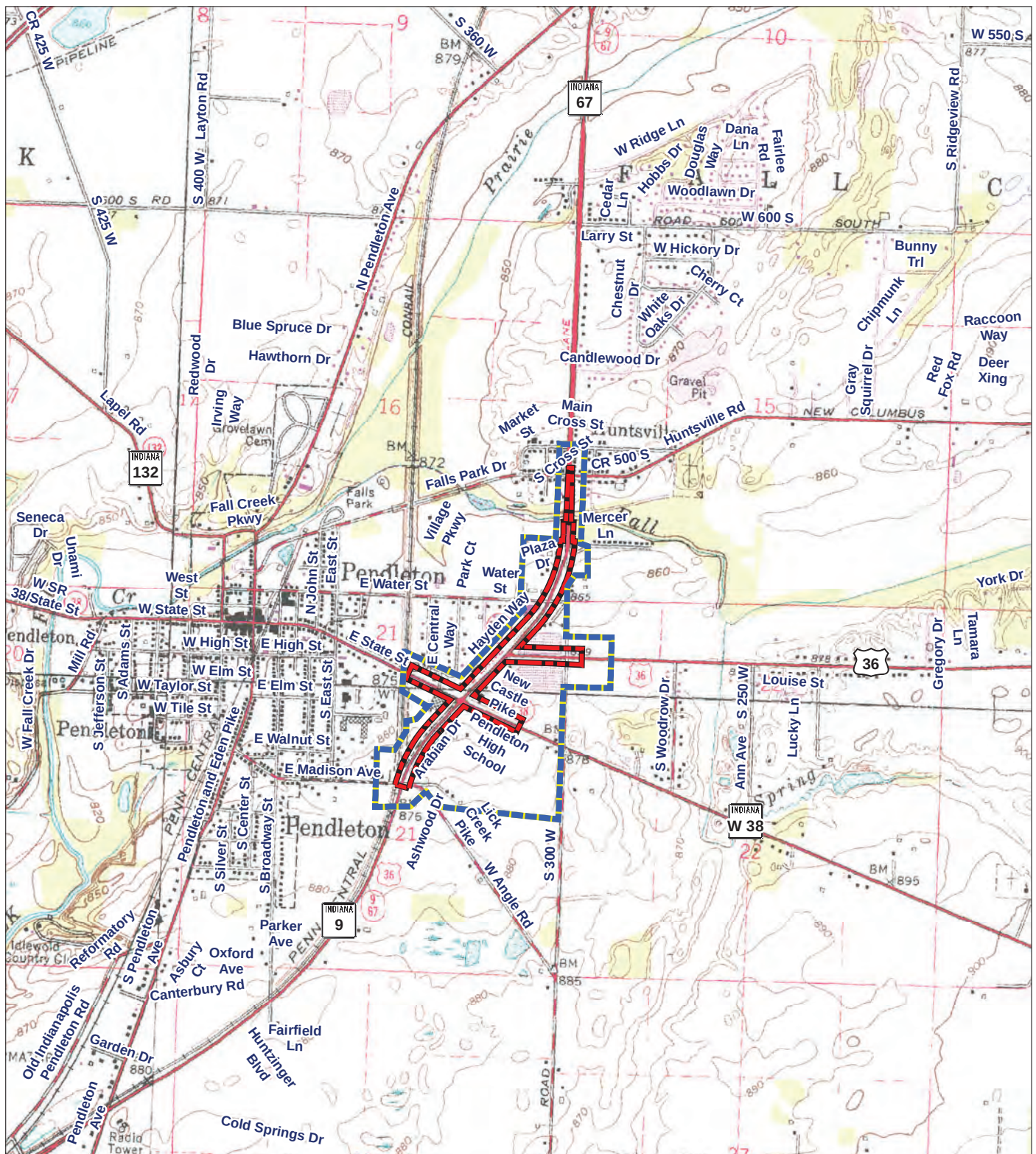
APPENDIX A. MAPS



Appendix A, Map 1

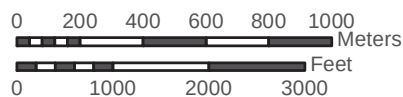
Portion of the ESRI World Street Map showing the vicinity of the project area for the Proposed US 36/SR 9 Added Travel Lanes Project (Des. Nos. 1702936 and 1802854)

Base: ESRI World Street Map



APE

Project area boundary



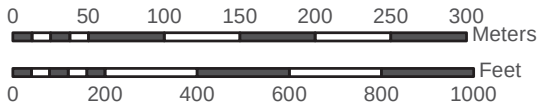
Appendix A, Map 2

Portions of the 1961 Anderson South, 1962 Ingalls, 1967 Lapel, and 1966 Pendleton, Indiana quadrangles (USGS 7.5' topographic maps) showing the project area and APE for the Proposed US 36/SR 9 Added Travel Lanes Project (Des. Nos. 1702936 and 1802854)

Base: USGS Anderson South, Ingalls, Lapel, and Pendleton, Indiana, 7.5' series quadrangles



- APE
- Project area boundary
- Architectural location
- NRHP recommended eligible
- Photo location



Base: Aerial photograph
2017



Appendix A, Map 3

Aerial photograph showing the project area, APE, properties in the APE recorded in the IHSSI, architectural locations, NRHP-eligible property, and photograph locations for the Proposed US 36/SR 9 Added Travel Lanes Project (Des. Nos. 1702936 and 1802854).

APPENDIX B. PHOTOGRAPHS



Photograph 1. Overview of house at 3021 SR 38, looking south.



Photograph 2. Street overview of SR 9, looking north from the Huntsville Road/CR 500 S/CR 500 S and SR 9 intersection.



Photograph 3. Street overview of Huntsville Road/CR 500 S/CR 500 S, looking northeast from SR 9.



Photograph 4. Street overview of Huntsville Road/CR 500 S/CR 500 S, looking west from the Huntsville Road/CR 500 S/CR 500 S and SR 9 intersection.



Photograph 5. View of Huntsville Road/CR 500 S/CR 500 S and SR 9, looking south toward project area.



Photograph 6. Overview of commercial property at SR 9 and Mercer Lane, looking southeast.



Photograph 7. Overview of commercial property at the northwest corner of Water Street and SR 9, looking northwest.



Photograph 8. Street overview of SR 9, looking north-northeast from the SR 9 and East Water Street intersection.



Photograph 9. Street overview of East Water Street, looking west from SR 9.



Photograph 10. Street overview of SR 9, looking northeast from the SR 67 and US 36 intersection.



Photograph 11. Street overview of S CR 300 W, looking north-northeast from the US 36 and S CR 300 W intersection.



Photograph 12. Street overview of US 36, looking west from the US 36 and S CR 300 W intersection.



Photograph 13. Overview of commercial lot on the west side of the SR 9 and US 36 intersection, looking southwest.



Photograph 14. Overview of commercial lot in the northeast quadrant of the SR 9 and SR 38 intersection, looking east-southeast.



Photograph 15. Street overview of SR 67, looking north from the SR 67 and SR 38 intersection.



Photograph 16. Street overview of S CR 300 W, looking north from SR 38.



Photograph 17. Street overview of SR 38, looking northwest from the SR 38 and S CR 300 W intersection.



Photograph 18. Overview of SR 67, looking north-northwest from the southern end of the project area.

APPENDIX C. CONSULTING PARTIES LIST AND CORRESPONDENCE



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N758-ES
Indianapolis, Indiana 46204

PHONE: (317) 296-0799

Eric Holcomb, Governor
Joe McGuinness, Commissioner

August 2, 2021

This letter was sent to the listed parties.

RE: US 36 and SR 9 Added Travel Lanes, Town of Pendleton, Fall Creek Township, Madison County (Des. Nos. 1702936 and 1802854).

Dear Consulting Party (see attached list),

The Indiana Department of Transportation (INDOT), with funding from the Federal Highway Administration, proposes to proceed with the US 36 and State Route (SR) 9 Added Travel Lanes (ATL) Project (Des. Nos. 1702936 and 1802854) in the Town of Pendleton, Fall Creek Township, Madison County, Indiana. ASC Group, Inc. is under contract with INDOT to advance the environmental documentation for the referenced project.

This letter is part of the early coordination phase of the environmental review process requesting comments associated with this project. We are requesting comments from your area of expertise regarding any possible environmental effects associated with this project. Please use the above Des. Numbers and project description in your reply and your comments will be incorporated into the formal environmental study.

The proposed undertaking is on SR 9/SR 67 from north of Huntsville Road/County Road (CR) 500 South in Huntsville at the northern end to south of East Madison Avenue/Lick Creek Pike in southeastern Pendleton at the southern end. The project area also includes portions of SR 38 and US 36 in Madison County, Indiana. The undertaking is within Fall Creek Township, Anderson South and Pendleton USGS Topographic Quadrangles, in Sections 15, 16, 21, and 22, Township 18 North, Range 7 East.

The purpose of the ATL project is to reduce travel delay on SR 9/US 36 and side roads. The need for this project stems from heavy queuing in peak hours as well as anytime there is congestion or traffic backups on I-69, when people divert along this route between Indianapolis and Anderson. Traffic projections indicate continued growth in traffic. Additionally, as traffic increases, the likelihood and frequency of crashes would likely increase.

The ATL project undertaking will include construction of two additional through lanes on US 36/SR 9/SR 67 from Madison Avenue/Lick Creek Pike to the bridge over Fall Creek (four lanes already exist between the bridge and CR 500 South/Huntsville Road), with an additional raised median/left turn lane from the south junction (at SR 38/State Street) to the north junction (at US 36) to Mercer Lane. The left and right turn lanes on US 36/SR 9/SR 67 at the south junction (at State Street) to Mercer Lane will be retained with widening as needed to insert the second northbound and southbound through lanes. At the south junction, dual left turns on eastbound (EB) State Street and dual left turns on westbound (WB) SR 38 will be constructed. The WB right turn lane on SR 38 and the WB through lane on State Street will be retained in their current locations with the needed widening occurring to the south. At the north junction (where US 36 splits off to the east), the WB US 36 right turn lane storage will be extended to the first commercial drive with widening to the north. Curb with

curb turnouts are intended to be used to reduce the additional right-of-way (ROW) takes for shoulders, while still having surface drainage. Additional inlets and pipes will also be added. At the northern terminus, the project narrows down to the pavement edges starting at the bridge over Fall Creek and continuing to its end with work limited to pavement markings. No work will be performed in the waterway or on the bridge piers. Expected work at the bridge is limited to removing the existing striping and painting new stripes. The small pedestrian bridge over a drainage pipe along SR 38 will not be impacted by this project. There will be approximately 3 acres of permanent and 0.3 acre of temporary ROW acquisition.

Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic and archaeological properties. In accordance with 36 CFR 800.2 (c), you are hereby requested to be a consulting party to participate in the Section 106 process. Entities that have been invited to participate in the Section 106 consultation process for this project are identified in the attached list. Per 36 CFR 800.3(f), we hereby request that the Indiana State Historic Preservation Officer (SHPO) notify this office if the SHPO staff is aware of any other parties that may be entitled to be consulting parties or should be contacted as potential consulting parties for the project.

The Section 106 process involves efforts to identify historic properties potentially affected by the undertaking, assess its effects and seek ways to avoid, minimize, or mitigate any adverse effects on historic properties. For more information regarding the protection of historic resources, please see the Advisory Council on Historic Preservation's guide: *Protecting Historic Properties: A Citizen's Guide to Section 106 Review* available online at <https://www.achp.gov/sites/default/files/documents/2017-01/CitizenGuide.pdf>.

The Area of Potential Effects (APE) is the area in which the proposed project may cause alterations in the character or use of historic resources. At this time, no cultural resource investigations have occurred; however, the results of cultural resource identification and evaluation efforts, both above-ground and archaeological, will be forthcoming. Consulting parties will receive notification when these reports are completed.

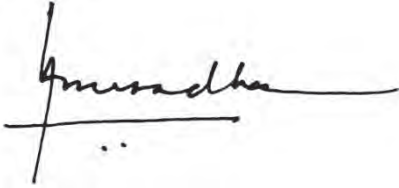
Please review the information and comment within thirty (30) calendar days of receipt. If you indicate that you do not desire to be a consulting party, or if you do not respond, you will not be included on the list of consulting parties for this project. If we do not receive your response in the time allotted, the project will proceed consistent with the proposed design and you will not receive further information about the project unless the design changes. Tribal consulting parties may enter the process at any time and are encouraged to respond to this notification with any comments or concerns at their earliest convenience.

For questions concerning specific project details, you may contact Leah J. Konicki of ASC Group, Inc. at 317-915-9300, ext. 103 or lkonicki@ascgroup.net. All future responses regarding the proposed project should be forwarded to ASC Group, Inc. at the following address:

Leah J. Konicki
Principal Investigator – Architectural Historian
ASC Group, Inc.
9376 Castlegate Drive
Indianapolis, IN 46256
lkonicki@ascgroup.net.

Tribal contacts may contact Shaun Miller at smiller@indot.in.gov or 317-416-0876 or Kari Carmany-George at FHWA at K.CarmanyGeorge@dot.gov or 317-226-5629.

Sincerely,



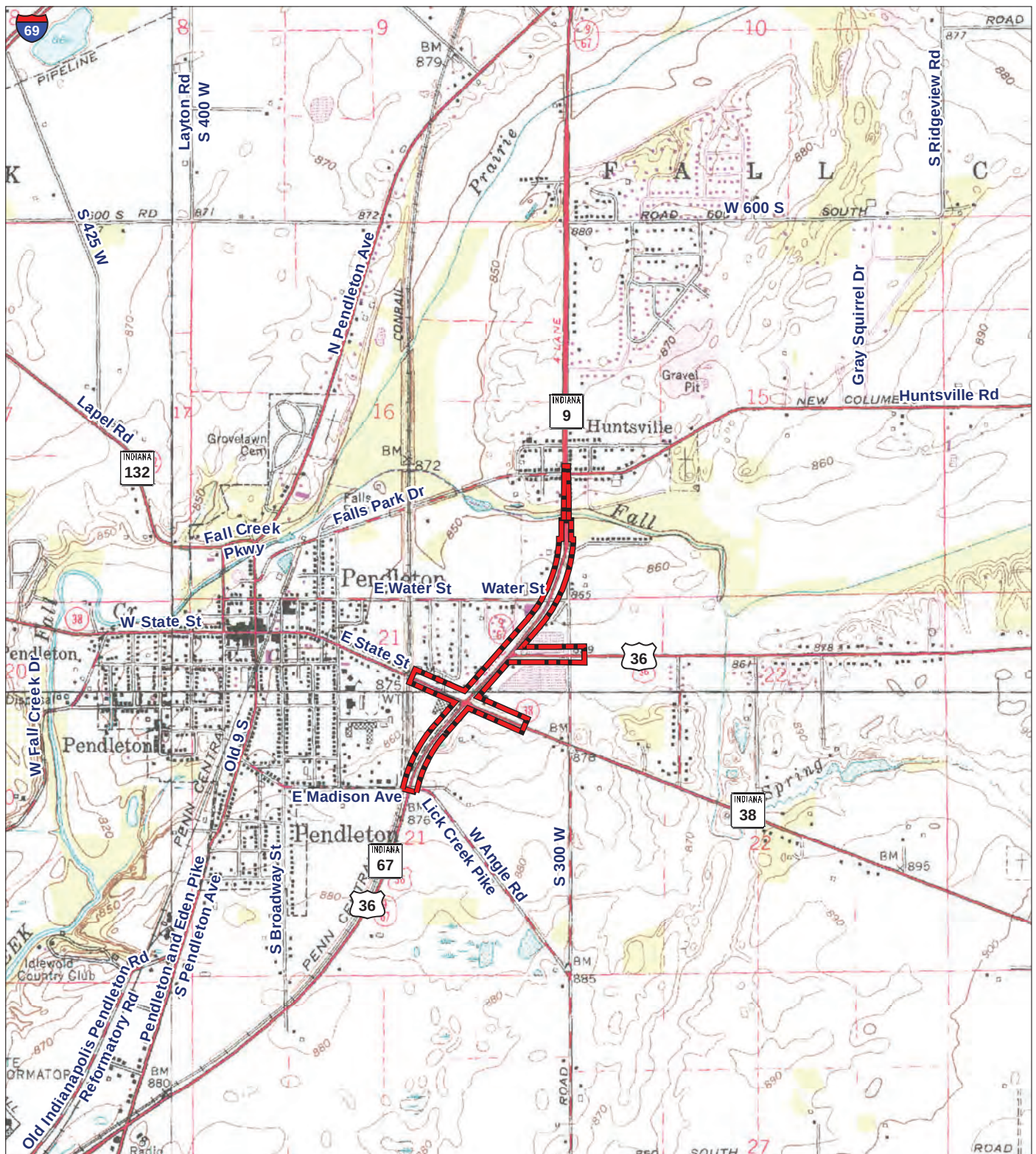
Anuradha V. Kumar, Manager
Cultural Resources Office
Environmental Services

Enclosures:

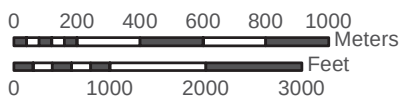
Topographic map showing project area

Distribution List:

Beth K. McCord, Deputy State Historic Preservation Officer
Kelly S. Gaskill, Madison County Commissioners, kgaskill@madisoncounty.in.gov
John Richwine, Madison County Commissioners, jrichwine@madisoncounty.in.gov
Mike Phipps, Madison County Commissioners, mphips@madisoncounty.in.gov
Dave Benefiel, Madison County Council of Governments, dave@heartlandmpo.org
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Indiana Landmarks Eastern Regional Office, east@indianalandmarks.org
Michael Flowers, Community Preservation Specialist, mflowers@indianalandmarks.org
Chet Babb, Pendleton Town Council President, cbabb@town.pendleton.in.us
Scott Reske, Pendleton Town Manager, sreske@town.pendleton.in.us
Kayla Hassett, Pendleton Planning Department, khassett@town.pendleton.in.us
Rick Bowlin, Pendleton Department of Public Works, rbowlin@town.pendleton.in.us
Pendleton Historical Museum, nnoel46176@gmail.com
Steve Schug, Main Street Pendleton, events@mainstreetpendleton.org
Eastern Shawnee Tribe of Oklahoma
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Pokagon Band of Potawatomi Indians
Absentee Shawnee Tribe of Oklahoma
Delaware Nation of Oklahoma
Delaware Tribe of Indians, Oklahoma



 Project area



Attachment A

Portion of the Anderson South, Ingalls, Lapel, Pendleton, Indiana (USGS 7.5' topographic map) showing the project area of Des. Nos. 1702936 & 1802854, Madison County, Indiana.

Base: USGS Anderson South, Ingalls, Lapel, and Pendleton, Indiana, 7.5' series quadrangles

**Des. Nos. 1702936 and 1802854
US 36 and SR 9 Added Travel Lanes
Madison County, Indiana
Consulting Parties List
(Yellow highlighting indicates those parties that accepted.)**

SHPO

Beth K. McCord, Deputy State Historic
Preservation Officer
Indiana DNR Division of Historic Preservation
and Archaeology
402 West Washington Street, W274
Indianapolis, IN 46204

Madison County Commissioners

Madison County Government Center
16 East 9th Street
Anderson, IN 46016
Kelly S. Gaskill, South District
kgaskill@madisoncounty.in.gov
John Richwine, North District
jrichwine@madisoncounty.in.gov
Mike Phipps, Middle District
mphips@madisoncounty.in.gov

Madison County Council of Governments

739 Main Street
Anderson, IN 46016
Jerrold Bridges, Executive Director
jerry@heartlandmpo.org
Dave Benefiel, Principal Transportation Planner
dave@heartlandmpo.org

Madison County Highway Department

Madison County Government Center
16 East 9th Street
Anderson, IN 46016
Scott Harless

Madison County Historian

2417 Sagamore Drive
Anderson, IN 46011
Stephen T. Jackson
madisoncountyhistorian@comcast.net

Madison County Historical Society

P.O. Box 696
Anderson, IN 46015-0696
765-683-0052
Richard E. Kreegar, President
madisonCHS@sbcglobal.net

Indiana Landmarks

Eastern Regional Office
Huddleston Farmhouse
838 National Road
Cambridge City, IN 47327
east@indianalandmarks.org

Michael Flowers, Community Preservation
Specialist
mflowers@indianalandmarks.org

Pendleton Town Council President

Chet Babb
100 West State Street
Pendleton, IN 46064
765-778-2173
cbabb@town.pendleton.in.us

Pendleton Town Manager

Scott Reske
100 West State Street
Pendleton, IN 46064
765-778-8370
sreske@town.pendleton.in.us

Pendleton Planning Department

Kayla Hassett
100 West State Street
Pendleton, IN 46064
765-778-8370
khassett@town.pendleton.in.us

Pendleton Department of Public Works

Rick Bowlin, Street Foreman
100 West State Street
Pendleton, IN 46064
765-778-8370
rbowlin@town.pendleton.in.us

Pendleton Historical Museum

223 Falls Park Drive
P.O. Box 345
Pendleton, IN 46064
Nnoel46176@gmail.com

Main Street Pendleton

Steve Schug, President
128 S. Pendleton Avenue
Pendleton, IN 46064\Steve Schug
steve@schugplanning.com
[Jack Wilson jwilson@solutions4ebiz.com](mailto:Jack.Wilson@jwilson@solutions4ebiz.com)

Eastern Shawnee Tribe of Oklahoma

Miami Tribe of Oklahoma

Peoria Tribe of Indians of Oklahoma

Pokagon Band of Potawatomi Indians
Absentee Shawnee Tribe of Oklahoma
Delaware Nation of Oklahoma
Delaware Tribe of Indians, Oklahoma

The following two parties were invited with
report distribution letter for archaeology report
9.10.2021

Historic Fall Creek, Pendleton Settlement, Inc.

JoAnn Karaffa
P. O. Box 146
Pendleton, IN 46064
kkenyon@mac.com

Richard and Shirley Richwine (owners,
Jimmie's Dairy Bar)
5593 S. Shadow Lane
Anderson, IN 46017-9542

From: [Leah Konicki](#)
To: ["BMccord@dnr.IN.gov"](#); ["kgaskill@madisoncounty.in.gov"](#); ["jrichwine@madisoncounty.in.gov"](#); ["jerry@heartlandmpo.org"](#); ["Dave Benefiel"](#); ["madisoncountyhistorian@comcast.net"](#); ["madisonCHS@sbcglobal.net"](#); ["east@indianalandmarks.org"](#); ["mflowers@indianalandmarks.org"](#); ["cbabb@town.pendleton.in.us"](#); ["sreske@town.pendleton.in.us"](#); [Kayla Hassett](#); ["rbowlin@town.pendleton.in.us"](#); ["nnoel46176@gmail.com"](#); ["events@mainstreetpendleton.org"](#)
Cc: ["Ross, Anthony"](#); ["Branigin, Susan"](#); [Kumar, Anuradha](#); [Miller, Shaun \(INDOT\)](#); ["Sandstrom, Scott"](#); [Sorrell, Stacey L](#); ["Vollmer, Michael J."](#); [Harry Nikides](#); [Lashae Black](#)
Subject: FHWA Project: Des. Nos. 1702936 and 1802854; ECL; US 36 and SR 9 Added Travel Lanes, Madison County, Indiana
Date: Monday, August 2, 2021 10:32:03 AM
Attachments: [US36_SR9ATL_Des1702936&1802854_CP and Tribal ECL_2021-8-02.pdf](#)

Des. Nos.: 1702936 and 1802854

Project Description: US 36 and SR 9 Added Travel Lanes

Location: Madison County

The Indiana Department of Transportation, with funding from the Federal Highway Administration, proposes to proceed with the US 36 and SR 9 Added Travel Lanes Project (Des. Nos. 1702936 and 1802854).

Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic properties. The following agencies/individuals are being invited to become consulting parties:

Beth K. McCord, Deputy State Historic Preservation Officer
Kelly S. Gaskill, Madison County Commissioners
John Richwine, Madison County Commissioners
Mike Phipps, Madison County Commissioners
Jerrold Bridges, Madison County Council of Governments
Dave Benefiel, Madison County Council of Governments
Scott Harless, Madison County Highway Department
Stephen T. Jackson, Madison County Historian
Richard E. Kreegar, Madison County Historical Society
Indiana Landmarks Eastern Regional Office
Michael Flowers, Community Preservation Specialist
Chet Babb, Pendleton Town Council President
Scott Reske, Pendleton Town Manager
Kayla Hassett, Pendleton Planning Department
Rick Bowlin, Pendleton Department of Public Works
Pendleton Historical Museum
Steve Schug, Main Street Pendleton
Eastern Shawnee Tribe of Oklahoma
Miami Tribe of Oklahoma
Peoria Tribe of Indians of Oklahoma
Pokagon Band of Potawatomi Indians
Absentee Shawnee Tribe of Oklahoma
Delaware Nation of Oklahoma
Delaware Tribe of Indians, Oklahoma

This letter is part of the early coordination phase of the environmental review process requesting comments associated with this project. We are requesting comments from your area of expertise regarding any possible environmental effects associated with this project. Please use the above Des. Numbers and project description in your reply and your comments will be incorporated into the formal environmental study.

Please review the attached letter, which is also located in IN SCOPE at <http://erms.indot.in.gov/Section106Documents/> (the Des. No. is the most efficient search term, once in IN SCOPE), and respond with your comments on any historic resource impacts incurred as a result of this project so that an environmental report can be completed. We also welcome your related opinions and other input to be considered in the preparation of the environmental document. If a hard copy of the materials is needed, please respond to this email with your request as soon as you can.

Consulting parties have thirty (30) calendar days from receipt of this information to review and provide comments. If we do not receive a response from an invited consulting party within the time allotted, the project will proceed consistent with the proposed design. Tribal consulting parties may enter the process at any time and are encouraged to respond to this notification with any comments or concerns at their earliest convenience.

Tribal contacts may contact Shaun Miller at smiller@indot.in.gov or 317-416-0876 or Kari Carmany-George at FHWA at K.CarmanyGeorge@dot.gov or 317-226-5629.
Thank you in advance for your input,

Leah J. Konicki
Project Manager/Principal Investigator - Architectural Historian

ASC Group, Inc.

9376 Castlegate Drive
Indianapolis, Indiana 46256
317.915.9300 ext. 103 (office)
317.565.9100 (cell)

[Facebook](#) | [LinkedIn](#) | [Web](#)



From: [Miller, Shaun \(INDOT\)](#)
To: ["thpo@estoo.net"](#); [Diane Hunter](#); ["lpappenfort@peoriatribe.com"](#); ["Matthew.Bussler@pokagonband-nsn.gov"](#); [snease@astribe.com](#); [Erin Paden](#); ["lheady@delawaretribe.org"](#)
Cc: [Leah Konicki](#); [Ross, Anthony](#); [Carmany-George, Karstin \(FHWA\)](#)
Subject: FHWA Project: Des. Nos. 1702936 and 1802854; ECL; US 36 and SR 9 Added Travel Lanes, Madison County, Indiana
Date: Tuesday, August 3, 2021 9:09:49 AM
Attachments: [US36_SR9ATL_Des1702936&1802854_CP and Tribal ECL_2021-8-02.pdf](#)

Des. Nos.: 1702936 and 1802854

Project Description: US 36 and SR 9 Added Travel Lanes

Location: Madison County

The Indiana Department of Transportation, with funding from the Federal Highway Administration, proposes to proceed with the US 36 and SR 9 Added Travel Lanes Project (Des. Nos. 1702936 and 1802854).

Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic properties. The following agencies/individuals are being invited to become consulting parties:

Beth K. McCord, Deputy State Historic Preservation Officer
Kelly S. Gaskill, Madison County Commissioners
John Richwine, Madison County Commissioners
Mike Phipps, Madison County Commissioners
Jerrold Bridges, Madison County Council of Governments
Dave Benefiel, Madison County Council of Governments
Scott Harless, Madison County Highway Department
Stephen T. Jackson, Madison County Historian
Richard E. Kreegar, Madison County Historical Society
Indiana Landmarks Eastern Regional Office
Michael Flowers, Community Preservation Specialist
Chet Babb, Pendleton Town Council President
Scott Reske, Pendleton Town Manager
Kayla Hassett, Pendleton Planning Department
Rick Bowlin, Pendleton Department of Public Works
Pendleton Historical Museum
Steve Schug, Main Street Pendleton
Eastern Shawnee Tribe of Oklahoma
Miami Tribe of Oklahoma
Peoria Tribe of Indians of Oklahoma
Pokagon Band of Potawatomi Indians
Absentee Shawnee Tribe of Oklahoma
Delaware Nation of Oklahoma
Delaware Tribe of Indians, Oklahoma

This letter is part of the early coordination phase of the environmental review process requesting comments associated with this project. We are requesting comments from your area of expertise

regarding any possible environmental effects associated with this project. Please use the above Des. Numbers and project description in your reply and your comments will be incorporated into the formal environmental study.

Please review the attached letter, which is also located in IN SCOPE at <http://erms.indot.in.gov/Section106Documents/> (the Des. No. is the most efficient search term, once in IN SCOPE), and respond with your comments on any historic resource impacts incurred as a result of this project so that an environmental report can be completed. We also welcome your related opinions and other input to be considered in the preparation of the environmental document. If a hard copy of the materials is needed, please respond to this email with your request as soon as you can.

Consulting parties have thirty (30) calendar days from receipt of this information to review and provide comments. If we do not receive a response from an invited consulting party within the time allotted, the project will proceed consistent with the proposed design. Tribal consulting parties may enter the process at any time and are encouraged to respond to this notification with any comments or concerns at their earliest convenience.

Tribal contacts may contact Shaun Miller at smiller@indot.in.gov or 317-416-0876 or Kari Carmany-George at FHWA at K.CarmanyGeorge@dot.gov or 317-226-5629.

Thank you in advance for your input,

Shaun Miller
INDOT, Cultural Resources Office
Archaeology Team Lead
(317)416-0876

From: [Steve Schug](#)
To: [Leah Konicki](#)
Cc: [Jack Wilson](#)
Subject: US 36/SR 9 added lanes project, Pendleton
Date: Wednesday, August 11, 2021 2:59:18 PM

Ms. Konicki

This is in response to the letter I received from you regarding the project mentioned above. Yes, our organization does wish to stay involved in the communications process as this project goes forward. As an historic preservation group, we seek to both retain and enhance local properties. We are also interested in retaining key cultural sites in our community which may or may not be historic.

Please keep me in the loop regarding next steps.

Sincerely,
Steve Schug, President
Main Street Pendleton

Steve



Stephen J Schug, CFP®
SJS Associates LLC
1080 W Huntsville Road,
Pendleton IN, 46064
Phone: 317.850.8936

Securities offered through the O.N.Equity Sales Company,
Member FINRA/SIPC,
90 Executive Drive, Suite F, Carmel, Indiana 46032.
317-324-8366



August 12, 2021

Leah J. Konicki
Principal Investigator - Architectural Historian
ASC Group, Inc.
9376 Castlegate Drive
Indianapolis, IN 46256

Federal Agency: Indiana Department of Transportation ("INDOT"),
on behalf of Federal Highway Administration, Indiana Division ("FHWA")

Re: Early coordination letter for the US 36 and SR 9 added travel lanes, Pendleton, Fall Creek
Township, Madison County, Indiana (Des. Nos. 1702936 and 1802854; DHPA No. 27955)

Dear Ms. Konicki:

Pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. § 306108), 36 C.F.R. Part 800, and the "Programmatic Agreement (PA) Among the Federal Highway Administration, the Indiana Department of Transportation, the Advisory Council on Historic Preservation and the Indiana State Historic Preservation Officer Regarding the Implementation of the Federal Aid Highway Program In the State of Indiana," the staff of the Indiana State Historic Preservation Officer ("Indiana SHPO") has reviewed your August 2, 2021, submission which enclosed INDOT's early coordination letter, received by our office on August 6, 2021, for this project in Pendleton, Fall Creek Township, Madison County, Indiana.

In addition to the consulting parties INDOT has invited, we suggest inviting Historic Fall Creek, Pendleton Settlement, Inc., an affiliate member of Indiana Landmarks to participate in the Section 106 consultation on this federal undertaking. Their contact information taken from the Indiana Landmarks Preservation Directory is below:

JoAnn Karaffa
P.O. Box 146
Pendleton, Indiana 46064
kscopyon@mac.com

However, if right-of-way is likely to be taken from a potentially historic property, it might be advisable to invite the owner of that property as soon as possible. In your next regular correspondence on this project, please advise us as to which of the invited consulting parties has accepted the invitation.

We look forward to reviewing the proposed area of potential effects and the reports on investigations of above-ground cultural resources and archaeological resources that the early coordination letter indicated will be forthcoming.

The Indiana SHPO staff's archaeological reviewer for this project is Beth McCord, and the structures reviewers are Caitlin Lehman and Danielle Kauffmann. However, if you have a question about the Section 106 process, please contact initially the INDOT Cultural Resources staff members who are assigned to this project.

In all future correspondence about the US 36 and SR 9 added travel lanes project in Madison County (Des. Nos. 1702936 and 1802854), please refer to DHPA No. 27955.

Very truly yours,

A handwritten signature in black ink, appearing to read "Beth K. McCord".

Beth K. McCord
Deputy State Historic Preservation Officer

BKM:CML:DMK:cml

emc: Anuradha Kumar, INDOT
Shaun Miller, INDOT
Susan Branigin, INDOT
Leah Konicki, ASC Group, Inc.
Beth McCord, DNR-DHPA
Danielle Kauffman, DNR-DHPA
Caitlin Lehman, DNR-DHPA



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N758-ES
Indianapolis, Indiana 46204

PHONE: (317) 296-0799

Eric Holcomb, Governor
Joe McGuinness, Commissioner

September 10, 2021

This letter was sent to the listed parties.

RE: US 36 and SR 9 Added Travel Lanes, Town of Pendleton, Fall Creek Township, Madison County (Des. Nos. 1702936 and 1802854).

Dear Consulting Party,

The Indiana Department of Transportation (INDOT), with funding from the Federal Highway Administration, proposes to proceed with the US 36 and State Route (SR) 9 Added Travel Lanes (ATL) Project (Des. Nos. 1702936 and 1802854) in the Town of Pendleton, Fall Creek Township, Madison County, Indiana. CDM Smith is under contract with INDOT, and ASC Group, Inc. has been subcontracted to advance the environmental documentation for the referenced project.

This letter is part of the Section 106 review process for this project. Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic and archaeological properties. We are requesting comments from you regarding the possible effects of this project. Please use the above Des. Number and project description in your reply and your comments will be incorporated into the formal environmental study.

A Section 106 early coordination letter was distributed on August 2, 2021.

The proposed undertaking is on SR 9/SR 67 from north of Huntsville Road/County Road (CR) 500 South in Huntsville at the northern end to south of East Madison Avenue/Lick Creek Pike in southeastern Pendleton at the southern end. The project area also includes portions of SR 38 and US 36 in Madison County, Indiana. The undertaking is within Fall Creek Township, Anderson South and Pendleton USGS Topographic Quadrangles, in Sections 15, 16, 21, and 22, Township 18 North, Range 7 East.

The purpose of the ATL project is to reduce travel delay on SR 9/US 36 and side roads. The need for this project stems from heavy queuing in peak hours, as well as anytime there is congestion or traffic backups on I-69, when people divert along this route between Indianapolis and Anderson. Traffic projections indicate continued growth in traffic. Additionally, as traffic increases, the likelihood and frequency of crashes would likely increase.

The ATL project will include construction of two additional through lanes on US 36/SR 9/SR 67 from Madison Avenue/Lick Creek Pike to the bridge over Fall Creek (four lanes already exist between the bridge and CR 500 South/Huntsville Road), with an additional raised median/left turn lane from the south junction (at SR 38/State Street) to the north junction (at US 36) to Mercer Lane. The left and right turn lanes on US 36/SR 9/SR 67 at the south junction (at State Street) to Mercer Lane will be retained with widening as needed to insert the second northbound and southbound through lanes. At the south junction, dual left turns on eastbound (EB) State Street

and dual left turns on westbound (WB) SR 38 will be constructed. The WB right turn lane on SR 38 and the WB through lane on State Street will be retained in their current locations with the needed widening occurring to the south. At the north junction (where US 36 splits off to the east), the WB US 36 right turn lane storage will be extended to the first commercial drive with widening to the north. Curb with curb turnouts are intended to be used to reduce the additional right-of-way (ROW) takes for shoulders, while still having surface drainage. Additional inlets and pipes will also be added. At the northern terminus, the project narrows down to the pavement edges starting at the bridge over Fall Creek and continuing to its end with work limited to pavement markings. No work will be performed in the waterway or on the bridge piers. Expected work at the bridge is limited to removing the existing striping and painting new stripes. The small pedestrian bridge over a drainage pipe along SR 38 will not be impacted by this project. There will be approximately 3 acres of permanent and 0.3 acre of temporary ROW acquisition.

CDM Smith is under contract with INDOT to advance the environmental documentation for the referenced project. ASC Group, Inc. has been subcontracted to complete the Section 106 documentation for the project.

In accordance with 36 CFR 800.2 (c), you were invited to become a consulting party as part of the Section 106 process, or you are hereby invited to become a consulting party as part of the Section 106 process. Entities that have previously accepted consulting party status--as well as additional entities that are currently being invited to become consulting parties--are identified in the attached list.

The Section 106 process involves efforts to identify historic properties potentially affected by the undertaking, to assess the undertaking's effects and to seek ways to avoid, minimize, or mitigate any adverse effects on historic properties. For more information regarding the protection of historic resources, please see the Advisory Council on Historic Preservation's guide: *Protecting Historic Properties: A Citizen's Guide to Section 106 Review* available online at <https://www.achp.gov/sites/default/files/documents/2017-01/CitizenGuide.pdf>.

The Area of Potential Effects (APE) is the area in which the proposed project may cause alterations in the character or use of historic resources. The APE contains no resources listed in the National Register of Historic Places (NRHP).

A historian who meets the Secretary of the Interior's Professional Qualification Standards is conducting a survey of above-ground resources within the APE for potential eligibility for the NRHP. A report of that investigation is forthcoming and will be distributed to consulting parties for review at a later date.

With regard to archaeological resources, an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards identified one site within the project area. As a result of these efforts, site 12-M-0813 was recommended as potentially eligible for listing in the NRHP and avoidance of the site is recommended. The current design of the project avoids the site area and the project is recommended to proceed as planned.

In its response to the early coordination letter, SHPO recommended the following two parties be invited to become consulting parties: Historic Fall Creek, Pendleton Settlement, Inc., and Richard and Shirley Richwine, owners of Jimmie's Dairy Bar. These entities are being invited to become consulting parties by this letter.

The Archaeology Report (Tribes only) is available for review in IN SCOPE at <http://erms.indot.in.gov/Section106Documents/> (the Des. No. is the most efficient search term, once in IN SCOPE). You are invited to review these documents and to respond with comments on any historic resource impacts incurred as a result of this project so that an environmental report can be completed. We also welcome your related opinions and other input to be considered in the preparation of the environmental document. If you prefer a hard-copy of this material, please respond to this email with your request as soon as you can.

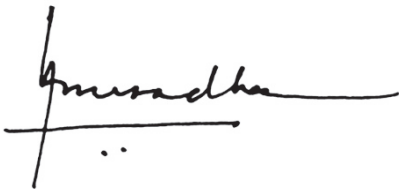
Please review the information and comment within thirty (30) calendar days of receipt. If you indicate that you do not desire to be a consulting party or if you have not previously accepted consulting party status and you do not respond to this letter, you will not be included on the list of consulting parties for this project and will not receive further information about the project unless the design changes. Tribal consulting parties may enter the process at any time and are encouraged to respond to this notification with any comments or concerns at their earliest convenience.

For questions concerning specific project details, you may contact Leah J. Konicki of ASC Group, Inc. at 317-915-9300, ext. 103 or lkonicki@ascgroup.net. All future responses regarding the proposed project should be forwarded to ASC Group, Inc. at the following address:

Leah J. Konicki
Principal Investigator – Architectural Historian
ASC Group, Inc.
9376 Castlegate Drive
Indianapolis, IN 46256
lkonicki@ascgroup.net.

Tribal contacts may contact Shaun Miller at smiller@indot.in.gov or 317-416-0876 or Kari Carmany-George at FHWA at K.CarmanyGeorge@dot.gov or 317-226-5629.

Sincerely,



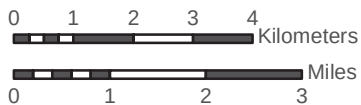
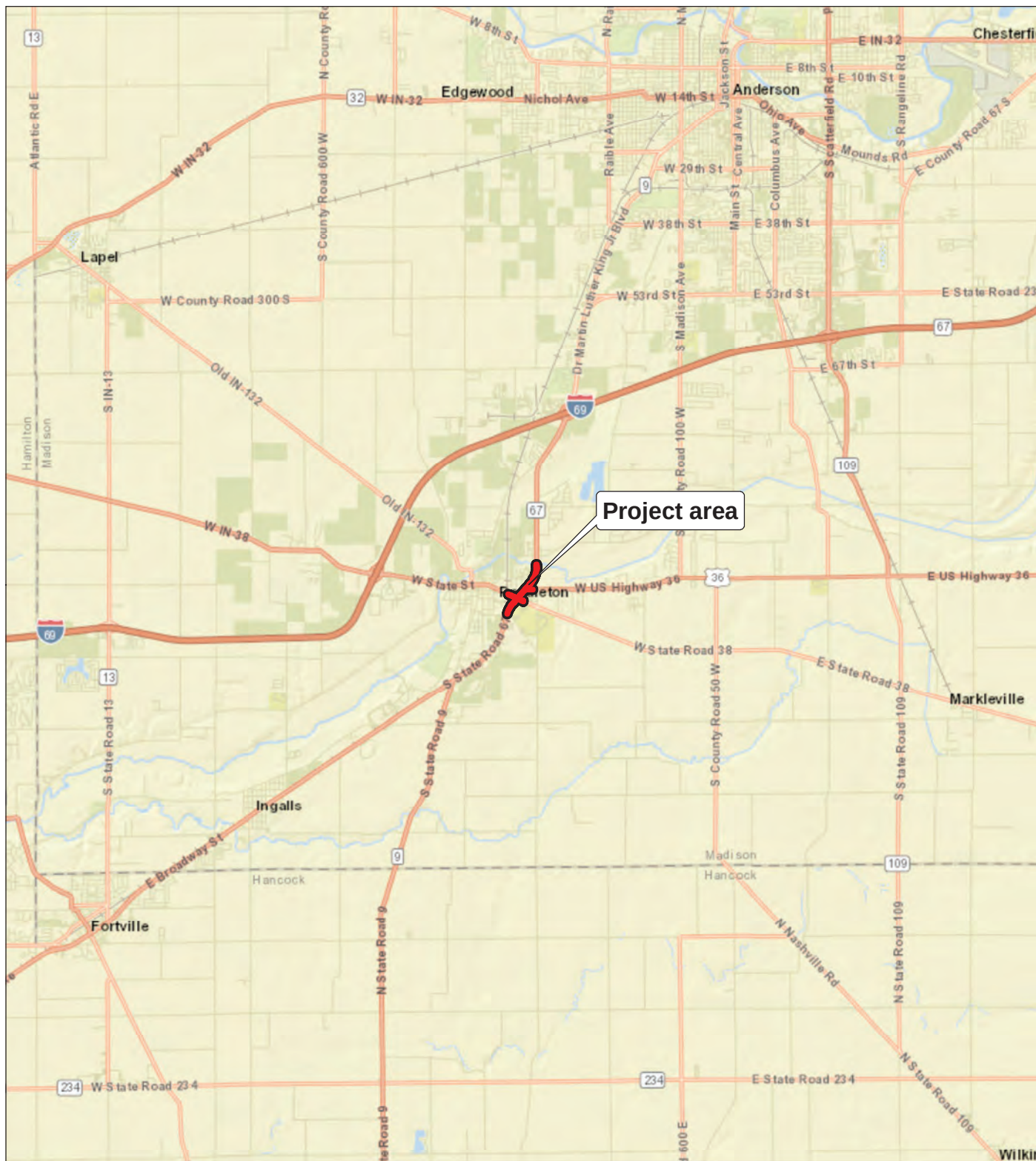
Anuradha V. Kumar, Manager
Cultural Resources Office
Environmental Services

Enclosures:

Topographic map showing the project area

Distribution List:

Beth K. McCord, Deputy State Historic Preservation Officer
Steve Schug, Main Street Pendleton, events@mainstreetpendleton.org
JoAnn Karaffa, Historic Fall Creek, Pendleton Settlement, Inc., kskenyon@mac.com
Richard and Shirley Richwine, owners, Jimmie's Dairy Bar, 5593 S. Shadow Lane, Anderson, IN 46017
Eastern Shawnee Tribe of Oklahoma
Miami Tribe of Oklahoma
Peoria Tribe of Indians of Oklahoma
Pokagon Band of Potawatomi Indians
Absentee Shawnee Tribe of Oklahoma
Delaware Nation of Oklahoma
Delaware Tribe of Indians, Oklahoma



Attachment 1

Portion of the ESRI World Street Map showing the vicinity of the project area.

Base: ESRI World Street Map

From: [Leah Konicki](#)
To: ["BMccord@dnr.IN.gov"](#); ["kskenyon@mac.com"](#); ["Steve Schug"](#); Jack Wilson
Cc: ["Coon, Matthew"](#); ["Ross, Anthony"](#); ["Sorrell, Stacey L."](#); ["Loveall, Michelle"](#); ["Miller, Shaun \(INDOT\)"](#); ["Lackey, Brett W."](#); ["Sandstrom, Scott"](#); ["Vollmer, Michael J."](#); [Harry Nikides](#); ["Dave Benefiel"](#); [Kayla Hassett](#)
Subject: RE: FHWA Project: Des. Nos. 1702936 and 1802854; Archaeology report; US 36 and SR 9 Added Travel Lanes, Madison County, Indiana
Date: Friday, September 10, 2021 3:50:08 PM

Des. Nos.: 1702936 and 1802854

Project Description: US 36 and SR 9 Added Travel Lanes

Location: Madison County

The Indiana Department of Transportation, with funding from the Federal Highway Administration, proposes to proceed with the US 36 and SR 9 Added Travel Lanes Project (Des. Nos. 1702936 and 1802854). The Section 106 Early Coordination Letter for this project was originally distributed on August 2, 2021.

As part of Section 106 of the National Historic Preservation Act, an Archaeology Report has been prepared and is ready for review and comment by consulting parties (Tribes only).

Please review this documentation located in IN SCOPE at <http://erms.indot.in.gov/Section106Documents/> (the Des. No. is the most efficient search term, once in IN SCOPE), and respond with any comments that you may have. If a hard copy of the materials is needed, please respond to this email with your request as soon as you can.

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Tribal contacts may contact Shaun Miller at smiller@indot.in.gov or 317-416-0876 or Kari Carmany-George at FHWA at K.CarmanyGeorge@dot.gov or 317-226-5629.
Thank you in advance for your input,

Leah J. Konicki
Project Manager/Principal Investigator - Architectural Historian

ASC Group, Inc.

9376 Castlegate Drive
Indianapolis, Indiana 46256
317.915.9300 ext. 103 (office)
317.565.9100 (cell)

[Facebook](#) | [LinkedIn](#) | [Web](#)

From: [Miller, Shaun \(INDOT\)](#)
To: ["thpo@estoo.net"; Diane Hunter; "lpappenfort@peoriatribe.com"; "Matthew.Bussler@pokagonband-nsn.gov"; snease@astribe.com; Erin Paden; "lheady@delawaretribe.org"](#)
Cc: [Ross, Anthony; Leah Konicki; Coon, Matthew; Carmany-George, Karstin \(FHWA\)](#)
Subject: FHWA Project: Des. Nos. 1702936 and 1802854; Archaeology report; US 36 and SR 9 Added Travel Lanes, Madison County, Indiana
Date: Monday, September 13, 2021 10:06:28 AM

Des. Nos.: 1702936 and 1802854

Project Description: US 36 and SR 9 Added Travel Lanes

Location: Madison County

The Indiana Department of Transportation, with funding from the Federal Highway Administration, proposes to proceed with the US 36 and SR 9 Added Travel Lanes Project (Des. Nos. 1702936 and 1802854). The Section 106 Early Coordination Letter for this project was originally distributed on August 2, 2021.

As part of Section 106 of the National Historic Preservation Act, an Archaeology Report has been prepared and is ready for review and comment by consulting parties (Tribes only).

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Tribal contacts may contact Shaun Miller at smiller@indot.in.gov or 317-416-0876 or Kari Carmany-George at FHWA at K.CarmanyGeorge@dot.gov or 317-226-5629.

Thank you in advance for your input,

Shaun Miller
INDOT, Cultural Resources Office
Archaeology Team Lead
(317)416-0876



PEORIA TRIBE OF INDIANS OF OKLAHOMA

118 S. Eight Tribes Trail (918) 540-2535 FAX (918) 540-2538

P.O. Box 1527

MIAMI, OKLAHOMA 74355

CHIEF
Craig Harper

SECOND CHIEF
vacant

September 10, 2021

Shaun Miller
Tribal Contact
INDOT
100 N Senate Ave., RM N642
Indianapolis, IN 46204

Re: **DES. Nos., 1702936 and 1802854- US 36 and SR 9 added travel lanes in Madison County.**

Thank you for providing notice of the referenced project. The Peoria Tribe of Indians of Oklahoma is unaware of any documentation directly linking Indian Religious Sites to the newly proposed project location. There appear to be no objects of cultural significance or artifacts linked to our tribe located on or near the project location.

The Peoria Tribe of Indians of Oklahoma is unaware of items covered under NAGPRA (Native American Graves Protection and Repatriation Act) to be associated with the proposed project site. These items include funerary or sacred objects; objects of cultural patrimony; or ancestral human remains.

The Peoria Tribe has no objection at this time to the proposed lane(s) project. If, however, at any time items are discovered which fall under the protection of NAGPRA, the Peoria Tribe requests immediate notification and consultation. In addition: state, local and tribal authorities should be advised as to the findings and construction halted until consultation with all concerned parties has occurred.

Karen Stand
Assistant Cultural Officer

TREASURER
Hank Downum

SECRETARY
Tonya Mathews

FIRST COUNCILMAN
Carolyn Ritchey

SECOND COUNCILMAN
Kara North

THIRD COUNCILMAN
Isabella Burrell



September 24, 2021

Leah J. Konicki
Principal Investigator – Architectural Historian
ASC Group, Inc.
9376 Castlegate Drive
Indianapolis, Indiana 46256

Federal Agency: Indiana Department of Transportation (“INDOT”),
on behalf of Federal Highway Administration, Indiana Division (“FHWA”)

Re: Phase Ia archaeological records check and reconnaissance survey report (Aukeman/Mustain,
8/19/2021) for US 36 and SR 9 added travel lanes (Des. No. 1702935 & 1802854; DHPA No.
27955)

Dear Ms. Konicki:

Pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. § 306108), 36 C.F.R. Part 800, and the “Programmatic Agreement (PA) Among the Federal Highway Administration, the Indiana Department of Transportation, the Advisory Council on Historic Preservation and the Indiana State Historic Preservation Officer Regarding the Implementation of the Federal Aid Highway Program In the State of Indiana,” the staff of the Indiana State Historic Preservation Officer (“Indiana SHPO”) has reviewed your September 10, 2021, submission which enclosed the archaeology report (Aukeman/Mustain, 8/19/2021), received by our office the same day for this project in Pendleton, Fall Creek Township, Madison County, Indiana.

Regarding the archaeological resources, based upon the submitted information and the documentation available to the staff of the Indiana SHPO, we concur with the opinion of the archaeologists, as expressed in the submitted archaeological reconnaissance survey report (Aukeman/Mustain, 8/19/2021), that there is insufficient information to determine whether archaeological site 12M813 is eligible for inclusion in the National Register of Historic Places (“NRHP”). We understand that the project has been redesigned to avoid site 12M813. Site 12M813 should be clearly marked and must be avoided by all ground-disturbing project activities. If the design is altered in the future and avoidance is not feasible, a plan for further archaeological investigations and evaluation of site 12M813 must be submitted to the INDNR-DHPA for review and comment prior to further field investigations. Further archaeological investigations must be conducted in accordance with the “Secretary of the Interior’s Standards and Guidelines for Archaeology and Historic Preservation” (48 F.R. 44716).

Please note that a site form for site 12M813 has **not** been submitted in SHAARD. Now would be an appropriate time to submit the form for review and approval. Please send an email notification to Beth McCord once the form has been submitted.

As INDOT’s September 10, 2021, letter indicates, the report on investigations of above-ground cultural resources is forthcoming. We look forward to reviewing and commenting on that report.

If any prehistoric or historic archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and -29) requires that the discovery be reported to the Indiana SHPO within two (2) business days. In that event, please call (317) 232-1646. Be advised that adherence to Indiana Code 14-21-1-27 and -29 does not obviate the need to adhere to applicable federal statutes and regulations, including but not limited to 36 C.F.R. Part 800.

The Indiana SHPO staff's archaeological reviewer for this project is Beth McCord, and the structures reviewers are Caitlin Lehman and Danielle Kauffmann. However, if you have a question about the Section 106 process, please contact initially the INDOT Cultural Resources staff members who are assigned to this project.

In all future correspondence about the US 36 and SR 9 added travel lanes project in Pendleton, Madison County (Des. No. 1702936 & 1802854), please refer to DHPA No. 27955.

Very truly yours,



Beth K. McCord
Deputy State Historic Preservation Officer

BKM:DMK:bkm

emc: Robert Dirks, PE, FHWA
Kari Carmany-George, FHWA
Anuradha Kumar, INDOT
Shaun Miller, INDOT
Susan Branigin, INDOT
Leah J. Konicki, ASC Group
Beth McCord, DNR-DHPA
Danielle Kauffmann, DNR-DHPA
Caitlin Lehman, DNR-DHPA



**EASTERN SHAWNEE
CULTURAL PRESERVATION DEPARTMENT**

70500 East 128 Road, Wyandotte, OK 74370

October 28, 2021

INDOT - Indiana Department of Transportation
100 N. Senate Ave. IGCN642
Indianapolis, IN 46201

RE: Des No 1702936 and 1802854, Madison County, IN

Dear Mr. Miller,

The Eastern Shawnee Tribe has received your letter regarding the above referenced project(s) within Madison County, IN. The Eastern Shawnee Tribe is committed to protecting sites important to Tribal Heritage, Culture and Religion. Furthermore, the Tribe is particularly concerned with historical sites that may contain but not limited to the burial(s) of human remains and associated funerary objects.

As described in your correspondence, and upon research of our database(s) and files, we find our people occupied these areas historically and/or prehistorically. However, the project proposes **NO Adverse Effect** or endangerment to known sites of interest to the Eastern Shawnee Tribe. Please continue project as planned. However, should this project inadvertently discover an archeological site or object(s) we request that you immediately contact the Eastern Shawnee Tribe, as well as the appropriate state agencies (within 24 hours). We also ask that all ground disturbing activity stop until the Tribe and State agencies are consulted. Please note that any future changes to this project will require additional consultation.

In accordance with the NHPA of 1966 (16 U.S.C. § 470-470w-6), federally funded, licensed, or permitted undertakings that are subject to the Section 106 review process must determine effects to significant historic properties. As clarified in Section 101(d)(6)(A-B), historic properties may have religious and/or cultural significance to Indian Tribes. Section 106 of NHPA requires Federal agencies to consider the effects of their actions on all significant historic properties (36 CFR Part 800) as does the National Environmental Policy Act of 1969 (43 U.S.C. § 4321-4347 and 40 CFR § 1501.7(a)). This letter evidences NHPA and NEPA historic properties compliance pertaining to consultation with this Tribe regarding the referenced proposed projects.

Thank you, for contacting the Eastern Shawnee Tribe, we appreciate your cooperation. Should you have any further questions or comments please contact our Office.

Sincerely,

Paul Barton, Tribal Historic Preservation Officer (THPO)
Eastern Shawnee Tribe of Oklahoma
(918) 666-5151 Ext:1833



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N758-ES
Indianapolis, Indiana 46204

PHONE: (317) 296-0799

Eric Holcomb, Governor
Joe McGuinness, Commissioner

March 22, 2022

This letter was sent to the listed parties.

RE: US 36 and SR 9 Added Travel Lanes (Des. Nos. 1702936 and 1802854) in Pendleton and Huntsville, Fall Creek Township, Madison County, Indiana

Dear Consulting Party,

The Indiana Department of Transportation (INDOT), with funding from the Federal Highway Administration, proposes to proceed with the US 36 and State Road (SR) 9 Added Travel Lanes (ATL) Project (Des. Nos. 1702936 and 1802854) in Pendleton and Huntsville, and US 36 Pedestrian Connectivity Project (Des. No. 2001127) in Pendleton, Fall Creek Township, Madison County, Indiana. CDM Smith is under contract with INDOT, and ASC Group, Inc. has been subcontracted to advance the environmental documentation for the referenced project.

This letter is part of the Section 106 review process for this project. Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic and archaeological properties. We are requesting comments from you regarding the possible effects of this project. Please use the above Des. Number(s) and project description in your reply and your comments will be incorporated into the formal environmental study.

A Section 106 early coordination letter was distributed on August 2, 2021. By email dated September 10, 2021, an archaeology report and distribution letter was sent to consulting parties.

The proposed undertaking is on SR 9/SR 67 from north of Huntsville Road/County Road (CR) 500 South in Huntsville at the northern end to south of East Madison Avenue/Lick Creek Pike in southeastern Pendleton at the southern end. The project area also includes portions of SR 38 and US 36 in Madison County, Indiana. The undertaking is within the Anderson South and Pendleton USGS Topographic Quadrangles, in Sections 15, 16, 21, Township 18 North, Range 7 East.

The purpose of the ATL project is to reduce travel delay on SR 9/US 36 and side roads. The need for this project stems from heavy queuing in peak hours, as well as anytime there is congestion or traffic backups on I-69, when people divert along this route between Indianapolis and Anderson. Traffic projections indicate continued growth in traffic. Additionally, as traffic increase, the likelihood and frequency of crashes would likely increase.

The ATL project will include construction of two additional through lanes on US 36/SR 9/SR 67 from Madison Avenue/Lick Creek Pike to the bridge over Fall Creek (four lanes already exist between the bridge and CR 500 South/Huntsville Road), with an additional raised median/left turn lane from the south junction (at SR 38/State Street) to the north junction (at US 36) to Mercer Lane. The left and right turn lanes on US 36/SR 9/SR 67 at the

south junction (at State Street) to Mercer Lane will be retained with widening as needed to insert the second northbound and southbound through lanes. At the south junction, dual left turns on eastbound (EB) State Street and dual left turns on westbound (WB) SR 38 will be constructed. The WB right turn lane on SR 38 and the WB through lane on State Street will be retained in their current locations with the needed widening occurring to the south. At the north junction (where US 36 splits off to the east), the WB US 36 right turn lane storage will be extended to the first commercial drive with widening to the north. Curb with curb turnouts are intended to be used to reduce the additional right-of-way (ROW) takes for shoulders, while still having surface drainage. Additional inlets and pipes will also be added. At the northern terminus, the project narrows down to the pavement edges starting at the bridge over Fall Creek and continuing to its end with work limited to pavement markings. No work will be performed in the waterway or on the bridge piers. Expected work at the bridge is limited to removing the existing striping and painting new stripes. The small pedestrian bridge over a drainage pipe along SR 38 will not be impacted by this project. There will be approximately 3 acres of permanent and 0.3 acre of temporary ROW acquisition.

CDM Smith is under contract with INDOT to advance the environmental documentation for the referenced project. ASC Group, Inc. has been subcontracted to complete the Section 106 documentation for the project.

In accordance with 36 CFR 800.2 (c), you were invited to become a consulting party as part of the Section 106 process, or you are hereby invited to become a consulting party as part of the Section 106 process. Entities that have previously accepted consulting party status--as well as additional entities that are currently being invited to become consulting parties--are identified in the attached list.

The Section 106 process involves efforts to identify historic properties potentially affected by the undertaking, to assess the undertaking's effects and to seek ways to avoid, minimize, or mitigate any adverse effects on historic properties. For more information regarding the protection of historic resources, please see the Advisory Council on Historic Preservation's guide: *Protecting Historic Properties: A Citizen's Guide to Section 106 Review* available online at <https://www.achp.gov/sites/default/files/documents/2017-01/CitizenGuide.pdf>.

The Area of Potential Effects (APE) is the area in which the proposed project may cause alterations in the character or use of historic resources. The APE contains no resources listed in the National Register of Historic Places (NRHP).

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. As a result of the historic property identification and evaluation efforts, one above-ground resource, a house at 3021 SR 38, is recommended as eligible for listing in the NRHP.

With regard to archaeological resources, an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards identified one (1) site within the project area. As a result of these efforts, Site 12-M-0813 was recommended as potentially eligible for listing in the NRHP and avoidance of the site is recommended. The current design of the project avoids the site area and the project is recommended to proceed as planned.

Stephen Schug, president of Main Street Pendleton, responded by email dated August 11, 2021, on behalf of the organization, accepting consulting party status. The Eastern Shawnee Tribe of Oklahoma responded by letter dated October 4, 2021, stating that the "project proposes NO Adverse Effect (emphasis in original) or endangerment to known sites of interest to the Eastern Shawnee Tribe."

In its response to the early coordination letter, the State Historic Preservation Office (SHPO) recommended that Historic Fall Creek, Pendleton Settlement, Inc., be invited to become a consulting party; this organization is being invited to become a consulting party by this letter. SHPO also recommended inviting as consulting parties, owners of any potentially historic properties where right-of-way may be taken. Because the Jimmie's Dairy Bar property was identified as potentially eligible, the owners Richard and Shirley Richwine, are also being invited to become consulting parties by this letter.

The Historic Property Report (HPR) is available for review in IN SCOPE at <http://erms.indot.in.gov/Section106Documents/> (the Des. No. is the most efficient search term, once in IN SCOPE). You are invited to review this document and to respond with comments on any historic resource impacts incurred as a result of this project so that an environmental report can be completed. We also welcome your related opinions and other input to be considered in the preparation of the environmental document. If you prefer a hard-copy of this material, please respond to this email with your request as soon as you can.

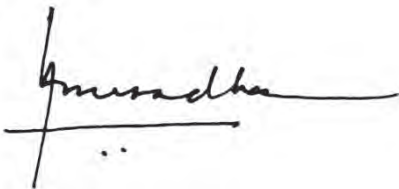
Please review the information and comment within thirty (30) calendar days of receipt. If you indicate that you do not desire to be a consulting party or if you have not previously accepted consulting party status and you do not respond to this letter, you will not be included on the list of consulting parties for this project and will not receive further information about the project unless the design changes. Tribal consulting parties may enter the process at any time and are encouraged to respond to this notification with any comments or concerns at their earliest convenience.

For questions concerning specific project details, you may contact Leah J. Konicki of ASC Group, Inc. at 317-915-9300, ext. 103 or lkonicki@ascgroup.net. All future responses regarding the proposed project should be forwarded to ASC Group, Inc. at the following address:

ASC Group, Inc.
9376 Castlegate Drive
Indianapolis, IN 46256
lkonicki@ascgroup.net.

Tribal contacts may contact Patricia Jo Korzeniewski at PKorzeniewski@indot.in.gov or 317-416-4377 or Kari Carmany-George at FHWA at K.CarmanyGeorge@dot.gov or 317-226-5629.

Sincerely,



Anuradha V. Kumar, Manager
Cultural Resources Office
Environmental Services

Enclosures:

Topographic map showing the project area

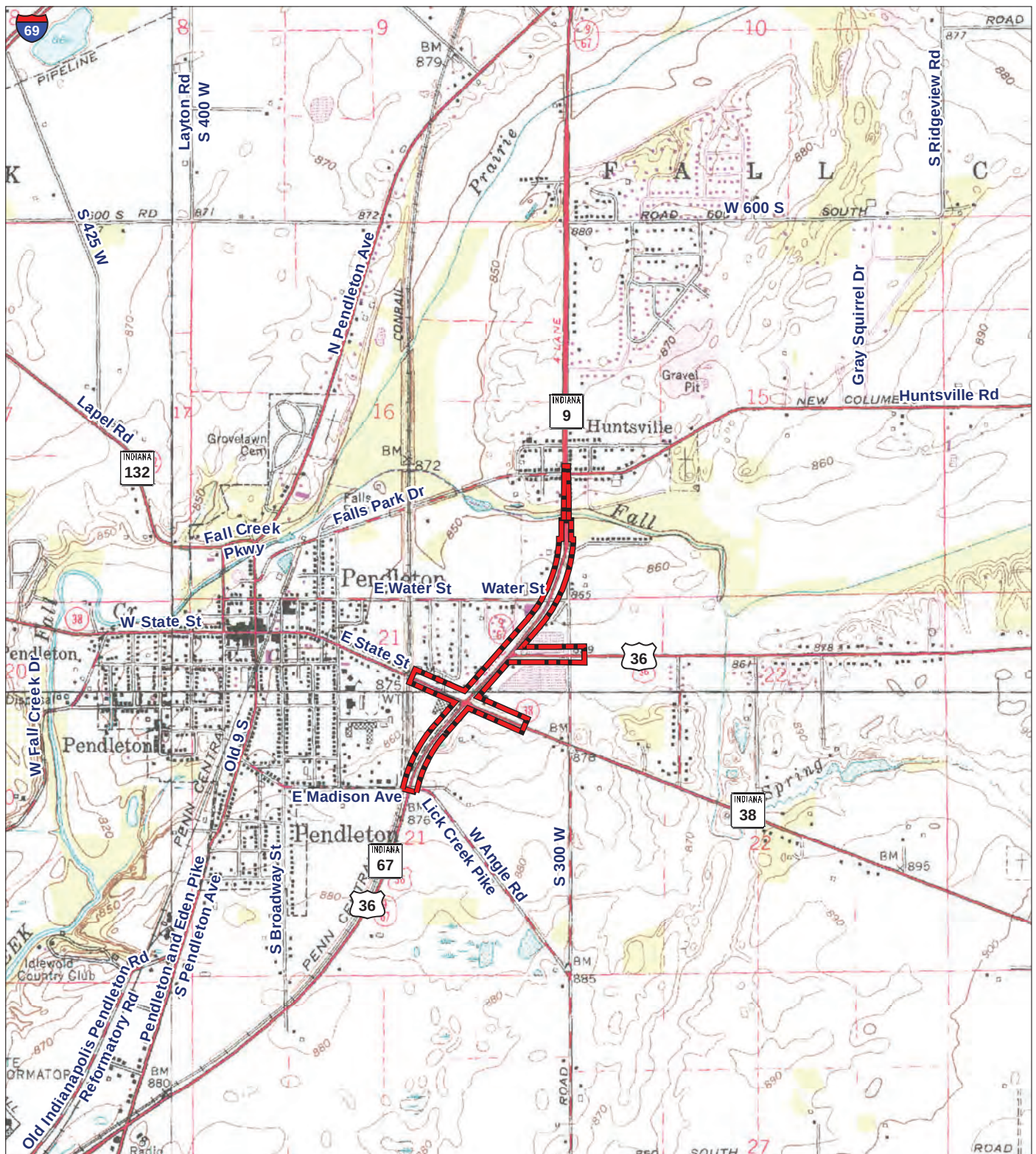
Distribution List:

Beth K. McCord, Deputy State Historic Preservation Officer

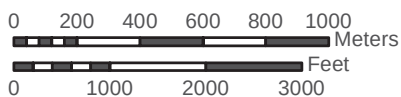
Steve Schug, Main Street Pendleton, events@mainstreetpendleton.org

JoAnn Karaffa, Historic Fall Creek, Pendleton Settlement, Inc., kskenyon@mac.com

Richard and Shirley Richwine, owners, Jimmie's Dairy Bar, 5593 S. Shadow Lane, Anderson, IN 46017
Eastern Shawnee Tribe of Oklahoma



 Project area



Attachment A

Portion of the Anderson South, Ingalls, Lapel, Pendleton, Indiana (USGS 7.5' topographic map) showing the project area of Des. Nos. 1702936 & 1802854, Madison County, Indiana.

Base: USGS Anderson South, Ingalls, Lapel, and Pendleton, Indiana, 7.5' series quadrangles

From: [Leah Konicki](#)
To: [McCord, Beth K](#); "[kskenyon@mac.com](#)"; "[steve@shugplanning.com](#)"; "[jwilson@solutions4ebiz.com](#)"
Cc: "[Coon, Matthew](#)"; "[Carpenter, Patrick A](#)"; "[Branigin, Susan](#)"; "[Korzeniewski, Patricia J](#)"; "[Lackey, Brett W.](#)"; "[Sandstrom, Scott](#)"; "[Vollmer, Michael J.](#)"; "[Dave Benefiel](#)"; "[hurbanski@town.pendleton.in.us](#)"; "[sreske@town.pendleton.in.us](#)"; "[kfilson@indot.in.gov](#)"
Subject: FHWA Project: Des. Nos. 1702936 and 1802854; HPR; US 36 and SR 9 Added Travel Lanes, Madison County, Indiana
Date: Tuesday, March 22, 2022 8:52:08 AM
Attachments: [US 36 SR 9 ATL 1702936 1802854 HPR RDL.PDF](#)

Des. Nos.: 1702936 and 1802854

Project Description: US 36 and SR 9 Added Travel Lanes

Location: Madison County

The Indiana Department of Transportation (INDOT), with funding from the Federal Highway Administration (FHWA), proposes to proceed with the US 36 and SR 9 Added Travel Lanes Project (Des. Nos. 1702936 and 1802854). The Section 106 Early Coordination Letter for this project was originally distributed on August 2, 2021.

As part of Section 106 of the National Historic Preservation Act, a Historic Property Report (HPR) has been prepared and is ready for review and comment by consulting parties.

Please review this documentation located in IN SCOPE at <http://erms.indot.in.gov/Section106Documents/> (the Des. No. is the most efficient search term, once in IN SCOPE), and respond with any comments that you may have. If a hard copy of the materials is needed, please respond to this email with your request as soon as you can.

Consulting parties have thirty (30) calendar days from receipt of this information to review and provide comment. Tribal consulting parties may enter the process at any time and are encouraged to respond to this notification with any comments or concerns at their earliest convenience. Tribal contacts may contact Patricia Jo Korzeniewski at pkorzeniewski@indot.in.gov or 317-416-4377 or Kari Carmany-George at FHWA at K.CarmanyGeorge@dot.gov or 317-226-5629. Thank you in advance for your input,

Leah J. Konicki
Principal Investigator - Architectural Historian
Cultural Resources Manager

ASC Group, Inc.

9376 Castlegate Drive
Indianapolis, Indiana 46256
317.915.9300 ext. 103 (office)
317.565.9100 (cell)

[Facebook](#) | [LinkedIn](#) | [Web](#)

From: [Carpenter, Patrick A](#)
To: [Leah Konicki](#)
Subject: FW: FHWA Project: Des. Nos. 1702936 and 1802854; HPR; US 36 and SR 9 Added Travel Lanes, Madison County, Indiana
Date: Wednesday, March 23, 2022 3:22:04 PM
Attachments: [US 36 SR 9 ATL 1702936 1802854 HPR RDL.PDF](#)

Here you go..

From: Korzeniewski, Patricia J <PKorzeniewski@indot.IN.gov>
Sent: Tuesday, March 22, 2022 9:42 AM
To: thpo@estoo.net; Diane Hunter <dhunter@miamination.com>; cechohawk@peoriatribes.com; Matthew.Bussler@pokagonband-nsn.gov; tonya@shawnee-tribe.com; snease@astribes.com; epaden@delawarenation-nsn.gov; lheady@delawaretribe.org
Cc: Coon, Matthew <mcoon@indot.IN.gov>; Korzeniewski, Patricia J <PKorzeniewski@indot.IN.gov>; Carpenter, Patrick A <PACarpenter@indot.IN.gov>; Carmany-George, Karstin (FHWA) <k.carmanygeorge@dot.gov>
Subject: FW: FHWA Project: Des. Nos. 1702936 and 1802854; HPR; US 36 and SR 9 Added Travel Lanes, Madison County, Indiana

Des. Nos.: 1702936 and 1802854

Project Description: US 36 and SR 9 Added Travel Lanes

Location: Madison County

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Patricia Jo Korzeniewski
Archaeologist and Environmental Manager
INDOT, Cultural Resources Office



PEORIA TRIBE OF INDIANS OF OKLAHOMA

118 S. Eight Tribes Trail (918) 540-2535 FAX (918) 540-2538

P.O. Box 1527

MIAMI, OKLAHOMA 74355

CHIEF
Craig Harper

SECOND CHIEF
Rosanna Dobbs

March 22, 2022

Patricia Korzeniewski, Archaeologist
Tribal Contact
INDOT
100 N Senate Ave., Rm 758-ES
Indianapolis, IN 46204

Re: Des#1702936 & 1802854; US 36 & SR 9 with added travel lanes, Madison County

Thank you for providing notice of the referenced project. The Peoria Tribe of Indians of Oklahoma is unaware of a direct link to the newly proposed project location.

The Peoria Tribe of Indians of Oklahoma is also unaware of items covered under Native American Graves Protection and Repatriation Act (NAGPRA) to be associated with the proposed project site, including funerary or sacred objects; objects of cultural patrimony; or ancestral human remains.

The Peoria Tribe has no objection at this time to the proposed project. If, however, at any time items are discovered which fall under the protection of NAGPRA, the Peoria Tribe requests immediate notification and consultation. In addition, state, local and tribal authorities should be advised as to the findings and construction halted until consultation with all concerned parties has occurred.

Please feel free to contact me directly at the number above if additional consultation is necessary. Thank you again for your consideration with this matter.

Sincerely,

Charla K. EchoHawk
Director of Cultural Preservation

TREASURER
Hank Downum

SECRETARY
Tonya Mathews

FIRST COUNCILMAN
Carolyn Ritchey

SECOND COUNCILMAN
Kara North

THIRD COUNCILMAN
Isabella Burrell



EASTERN SHAWNEE
CULTURAL PRESERVATION DEPARTMENT
70500 East 128 Road, Wyandotte, OK 74370

March 28, 2022

INDOT - Indiana Department of Transportation
100 N. Senate Ave. IGCN642
Indianapolis, IN 46201

RE: Des No. 1702936 & 1802854, Madison County, Indiana

Dear Ms. Korzeniewski,

The Eastern Shawnee Tribe has received your letter regarding the above referenced project(s) within Madison County, Indiana. The Eastern Shawnee Tribe is committed to protecting sites important to Tribal Heritage, Culture and Religion. Furthermore, the Tribe is particularly concerned with historical sites that may contain but not limited to the burial(s) of human remains and associated funerary objects.

As described in your correspondence, and upon research of our database(s) and files, we find our people occupied these areas historically and/or prehistorically. However, the project proposes **NO Adverse Effect** or endangerment to known sites of interest to the Eastern Shawnee Tribe. Please continue project as planned. However, should this project inadvertently discover an archeological site or object(s) we request that you immediately contact the Eastern Shawnee Tribe, as well as the appropriate state agencies (within 24 hours). We also ask that all ground disturbing activity stop until the Tribe and State agencies are consulted. Please note that any future changes to this project will require additional consultation.

In accordance with the NHPA of 1966 (16 U.S.C. § 470-470w-6), federally funded, licensed, or permitted undertakings that are subject to the Section 106 review process must determine effects to significant historic properties. As clarified in Section 101(d)(6)(A-B), historic properties may have religious and/or cultural significance to Indian Tribes. Section 106 of NHPA requires Federal agencies to consider the effects of their actions on all significant historic properties (36 CFR Part 800) as does the National Environmental Policy Act of 1969 (43 U.S.C. § 4321-4347 and 40 CFR § 1501.7(a)). This letter evidences NHPA and NEPA historic properties compliance pertaining to consultation with this Tribe regarding the referenced proposed projects.

Thank you, for contacting the Eastern Shawnee Tribe, we appreciate your cooperation. Should you have any further questions or comments please contact our Office.

Sincerely,

Paul Barton, Tribal Historic Preservation Officer (THPO)
Eastern Shawnee Tribe of Oklahoma
(918) 666-5151 Ext:1833
THPO@estoo.net



April 5, 2022

Leah J. Konicki
ASC Group, Inc.
9376 Castlegate Drive
Indianapolis, IN 46256

Federal Agency: Indiana Department of Transportation (“INDOT”),
on behalf of Federal Highway Administration, Indiana Division (“FHWA”)

Re: Historic property report (Konicki/Terheide/Terpstra, 2/21/2022) for the US 36 and SR 9 added
travel lanes (Des. Nos. 1702936 & 1802854; DHPA No. 27955)

Dear Ms. Konicki:

Pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. § 306108), 36 C.F.R. Part 800, and the “Programmatic Agreement (PA) Among the Federal Highway Administration, the Indiana Department of Transportation, the Advisory Council on Historic Preservation and the Indiana State Historic Preservation Officer Regarding the Implementation of the Federal Aid Highway Program In the State of Indiana,” the staff of the Indiana State Historic Preservation Officer (“Indiana SHPO”) has reviewed your March 22, 2022, submission which enclosed the historic property report (“HPR”; Konicki/Terheide/Terpstra; 2/21/2022), received by our office the same day, for this project in Pendleton, Fall Creek Township, Madison County, Indiana.

The area of potential effects (“APE”) proposed in the HPR appears to be of adequate size to encompass the geographic area in which direct and indirect effects of a project of this nature could occur. We note that the National Register of Historic Places (“NRHP”)-listed Pendleton Historic District (NR-0988) lies just outside the APE boundary to the west.

For the purposes of the Section 106 review of this federal undertaking, we agree with the conclusions of the HPR that the house at 3021 SR 38 is the only historic property located within the project’s APE that is eligible for inclusion in the NRHP. We note that this site was previously found to be eligible during the Section 106 review processes for Des. No. 0710879 (DHPA #5040) in 2008 and Des. No. 1297161 (DHPA #16354) in 2014. Although time has passed since these determinations, based upon the information provided, we agree that the house appears to remain eligible under Criterion C. Furthermore, we agree that there are no other historic properties listed in or eligible for inclusion in the NRHP within the project’s APE.

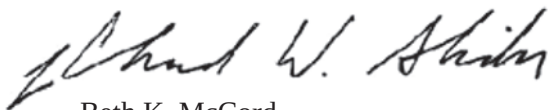
As previously indicated regarding the archaeological resources, there is insufficient information to determine whether archaeological site 12M813 is eligible for inclusion in the NRHP. We understand that the project has been redesigned to avoid site 12M813. Site 12M813 should be clearly marked and must be avoided by all ground-disturbing project activities. If the design is altered in the future and avoidance is not feasible, a plan for further archaeological investigations and evaluation of site 12M813 must be submitted to the DNR-DHPA for review and comment prior to further field investigations.

If any prehistoric or historic archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and -29) requires that the discovery be reported to the Indiana SHPO within two (2) business days. In that event, please call (317) 232-1646. Be advised that adherence to Indiana Code 14-21-1-27 and -29 does not obviate the need to adhere to applicable federal statutes and regulations, including but not limited to 36 C.F.R. Part 800.

The Indiana SHPO staff's archaeological reviewer for this project is Beth McCord, and the structures reviewers are Danielle Kauffman and Caitlin Lehman. However, if you have a question about the Section 106 process, please contact initially the INDOT Cultural Resources staff members who are assigned to this project.

In all future correspondence about the US 36 and SR 9 project in Madison County (Des. Nos. 1702936 & 1802854), please refer to DHPA No. 27955.

Very truly yours,



Beth K. McCord
Deputy State Historic Preservation Officer

BKM:CML:DMK:cml

cc: Richard and Shirley Richwine, owners, Jimmie's Dairy Bar
emc: Kari Carmany-George, FHWA
Anuradha Kumar, INDOT
Matt Coon, INDOT
Susan Branigin, INDOT
Leah Konicki, ASC Group, Inc.
Steve Schug, Main Street Pendleton
JoAnn Karaffa, Historic Fall Creek, Pendleton Settlement, Inc.
Eastern Shawnee Tribe of Oklahoma
Beth McCord, DNR-DHPA
Danielle Kauffmann, DNR-DHPA
Caitlin Lehman, DNR-DHPA

APPENDIX D. ABSTRACT AND SUMMARY FOR HPR AND PHASE IB ARCHAEOLOGY REPORT

**Historic Property Report for the
Proposed US 36/SR 9 Added Travel Lanes Project (Des. Nos. 1702936 and 1802854) in
Pendleton and Huntsville, Fall Creek Township, Madison County, Indiana**

By

**Leah J. Konicki, MEd, Sarah E. Terheide, MA,
and Douglas Terpstra, MS**

**Submitted By:
ASC Group, Inc.
9376 Castlegate Drive
Indianapolis, Indiana 46256
317.915.9300**

**Submitted To:
CDM Smith
201 South Capitol Avenue, Suite 1220
Indianapolis, Indiana 46225
317.637.5424**



Leah J. Konicki, Principal Investigator

February 21, 2022



**CULTURAL • ENVIRONMENTAL • HAZARDOUS
EVALUATION & CONSULTING**

MANAGEMENT SUMMARY

This report documents the identification and evaluation efforts for properties included in the Area of Potential Effects (APE) for the US 36/State Road (SR) 9 Added Travel Lanes (ATL) Project (Des. Nos. 1702936 and 1802854) in Pendleton and Huntsville, Fall Creek Township, Madison County, Indiana. Above-ground resources located within the project APE were identified and evaluated in accordance with Section 106, National Historic Preservation Act (NHPA) of 1966, as amended, and the regulations implementing Section 106 (36 CFR Part 800).

As a result of the NHPA, as amended, and CFR Part 800, federal agencies are required to take into account the impact of federal undertakings upon historic properties in the area of the undertaking. Historic properties include buildings, structures, sites, objects, and/or districts that are eligible for or listing in the National Register of Historic Places (NRHP). As this project is receiving funding from the Federal Highway Administration, it is subject to a Section 106 review.

The APE contains no properties listed in the NRHP. The APE contains one (1) property that is recommended eligible for listing in the NRHP: 3021 SR 38 (AL011).

CONCLUSIONS

The APE contains no resources listed in the NRHP. As a result of the identification and evaluation efforts for this project, one (1) resource is recommended eligible for listing in the NRHP for the purposes of this project: 3021 SR 38 (AL011).

**Phase Ia Archaeological Records Check and Reconnaissance Survey report for the proposed
US 36/SR 9 Added Travel Lanes Project (Des. No. 1702936 and 1802854) in Pendleton and
Huntsville, and the Proposed US 36 Pedestrian Connectivity Project (Des. No. 2001127), in
Pendleton, Fall Creek Township, Madison County, Indiana**

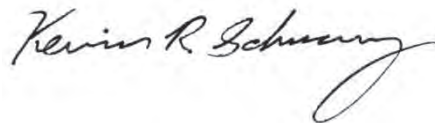
By

Eric Aukeman and Chuck Mustain

**Submitted By:
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Indiana Regional Manager
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**Submitted To:
CDM Smith Inc.
201 South Capitol Avenue, Suite 1220
Indianapolis, Indiana 46225
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August 19, 2021



Kevin Schwarz, PhD, RPA, Principal Investigator



**CULTURAL • ENVIRONMENTAL • HAZARDOUS
EVALUATION & CONSULTING**

MANAGEMENT SUMMARY

ASC Group, Inc. (ASC), under contract with CDM Smith Inc. (CDM), has completed a Phase Ia Archaeological Records Check and Reconnaissance Survey report for the proposed US 36/State Route (SR) 9 Added Travel Lanes Project (Des. No. 1702936 and 1802854) in Pendleton and Huntsville, and the Proposed US 36 Pedestrian Connectivity Project (Des. No. 2001127), in Pendleton, Fall Creek Township, Madison County, Indiana. The combined survey area of the projects is located in Sections 15, 16, and 21, Township 18E Range 7E, of Madison County, as shown on the 1961 Anderson South, 1962 Ingalls, 1967 Lapel, and the 1966 Pendleton, Indiana quadrangles (USGS 7.5' topographic maps).

The Indiana Department of Transportation (INDOT) is funding the added travel lanes project (Des. Nos. 1702936 and 1802854). The pedestrian connectivity project (Des. No. 2001127) is a Local Public Agency (LPA) funded trail project, sponsored by the Town of Pendleton, with a slightly different footprint than the added travel lanes project. As a result, Des. No. 2001127 is considered a separate project from the INDOT project; however, for purposes of archaeology, the results of both projects are discussed in this report at the recommendation of INDOT Cultural Resources Office (CRO).

The added travel lanes project seeks to add additional travel lanes at the SR 9 intersections of SR 38 and US 36 to ease the volume and flow of traffic. Road widening will be limited to about one lane width at all locations in order to minimize right-of-way impacts and will occur on the eastern and western sides of SR 9, along the southern side of US 36, and the northern side of SR 38.

The LPA pedestrian connectivity project includes elements of access management, pedestrian connectivity, Americans with Disabilities Act (ADA) compliance, drainage, lighting, signage, amenities, intersection design, and signalization. The footprint is mostly within that of the added travel lanes project, but extends further east along SR 38 to just west of the roundabout at South 300 West (S 300 W), further south along SR 9 south of the East Madison Avenue/Lick Creek Pike intersection, and further east toward Pendleton High School between SR 38 and Lick Creek Pike.

The combined survey area for these projects extends beyond both sides of SR 9 from just north of Huntsville Road in Huntsville to south of the intersection with East Madison Avenue at the southeastern end of Pendleton, a linear distance of about 1.7 kilometers (km) [1.1 miles (mi)]. The combined survey area also includes intersections of SR 9/US 36 with East State Street/SR 38 and US 36 (where US 36 splits off from SR 9 to the east). The survey area extends along both sides of East State Street/SR 38 to the railroad tracks northwest of SR 9/US 36, and to just west of S 300 W southeast of SR 9/US 36. The survey area also extends eastward along both sides of US 36 from the SR 9/US 36 split to east of S 300 W. The width of the survey area corridor is generally about 61 meters (m) [200 feet (ft)] wide, although it is slightly wider along US 36, east of the intersection with SR 9 (300.1 m [220 ft]). The combined survey area is within a mixed urban environment, with residential, commercial, and school uses. Approximately 17.2 hectares (ha) [42.4 acres (ac)] were surveyed, much of which was disturbed by underground utilities and surface grading or paved.

The purpose of the investigation is to determine whether archaeological resources exist within the survey area, where they exist, and to make preliminary recommendations of eligibility for inclusion on the Indiana Register of Historic Sites and Structures (IRHSS) and the National Register of Historic Places (NRHP).

The archaeological fieldwork was conducted in accordance with the *Indiana Cultural Resources Manual* (INDOT 2019) and the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology (IDNR, DHPA) [2019] archaeology guidelines. Fieldwork was also in accordance with the Indiana Historic Preservation Act (312 IAC 21 and 312 IAC 22), and pursuant to Section 106 of the National Historic Preservation Act (16 U.S.C. Section 470) and regulations found at 36 C.F.R. Part 800. All personnel conducting field and lab work meet professional qualifications.

The Phase Ia archaeological records check and reconnaissance survey of the combined survey area resulted in the documentation of one new site: 12-M-0813, a nineteenth to early twentieth century mill site. The site is located near the north bank of Fall Creek, east of SR 9. It is ASC's opinion that the site has potential to meet NRHP Criterion D (important information yield), which is the only criterion or criteria consideration under which the site is potentially eligible, and recommends that the site be avoided. The current design of the projects avoids the site area and the projects are recommended to proceed as planned, but if alterations to the layout of the projects expands the projects limits, then further archaeological investigations may be warranted.

In the unlikely event that archaeological deposits or human remains are encountered during the construction phase of the project, all work must cease within 30 m (100 ft) of the discovery and archaeologists from the IDNR, DHPA and the INDOT CRO must be notified.

CONCLUSIONS AND RECOMMENDATIONS

ASC, under contract with CDM, has completed a Phase Ia Archaeological Records Check and Reconnaissance Survey report for the proposed US 36/SR 9 added travel lanes project (Des. Nos. 1702936 and 1802854) in Pendleton and Huntsville, and the Proposed US 36 Pedestrian Connectivity Project (Des. No. 2001127), in Pendleton, Fall Creek Township, Madison County, Indiana. One archaeological site was recorded: 12-M-0813, a nineteenth–early twentieth century mill related site.

In establishing recommendations for determining the eligibility for inclusion of these sites on the IRHSS and NRHP, each site's significance and integrity must be addressed. There are seven aspects of integrity (location, design, setting, materials, workmanship, feeling, and association) that are used to judge how well the site conveys its significance (Andrus 1997). Typically for archaeological sites the aspects of location, design, materials, and association are most relevant in

assessing the sites ability to convey their significance; for archaeological sites this will typically be important information about its historic context (Criterion D). The criteria are as follows:

Criterion A: Associated with events that have made a significant contribution to the broad patterns of our history (typically contains ruins or extant buildings/structures with associated archaeological deposits which are “needed to convey, illustrate or help interpret the historical event or pattern”).

Criterion B: Associated with the lives of persons significant in our past (archaeological deposits are “needed to convey, illustrate or interpret a historic property that is strongly associated with the career or life of an important person”).

Criterion C: Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction (archaeological deposits are “needed to convey, illustrate, or interpret an historic property containing strongly associated architectural or related attributes that reflect a particular pattern, style or type”).

Criterion D: Have yielded, or may be likely to yield, information important in prehistory or history (Little et al. 2000).

It is ASC’s opinion that 12-M-0813 has the potential to meet NRHP Criterion A or D. Although the surrounding area has been heavily altered, the site maintains at least some aspects of integrity including: the site location, design, and materials, which is evidenced by the architectural remains that appear to remain at their historic location; and association, as the site appears to relate to the historic mill operations that were important to the economic development of Huntsville and may be associated with operations that date to the time of the founding of the town. Currently, the data yield about its historic context (i.e., nineteenth and early twentieth century mill operations in Huntsville) is limited, but the results of the Phase Ia field survey show that more and potentially important information might be gained by further study of the site.

Further investigation of the entire site may result in a better understanding of the post-occupation impacts to the site such as the channelization of Fall Creek and abandonment of the mill race that could aid in determining how and when the artifacts were dispersed and lead to a more precise dating of the site. Further excavations of the depression feature and architectural elements may provide a better understanding of the site function and how it relates to the historic mill activities. There is also potential for more buried features that have yet to be discovered that could yield important information. It is ASC’s opinion that the site should be avoided or that

further archaeological study of the site precede any construction related-disturbance to the site area.

The project designs were altered after the archaeological survey of the north end of the combined survey area that includes 12-M-0813. The revised project limits (Figure 6) avoids the site area and no impacts to the site are anticipated. Based on the current design, the projects are recommended to proceed as planned. However, if the project limits are altered, further archaeological investigations may be warranted. In the unlikely event that archaeological deposits or human remains are encountered during the construction phase of the project, all work must cease within 30 m (100 ft) of the discovery and archaeologists from the IDNR, DHPA and the INDOT-CRO must be notified.

APPENDIX E. PLAN SET

PROJECT	DESIGNATION
1702936	1702936
CONTRACT	
R-41837	

KIN DES. NUMBERS	
DESIGNATION NO.	DESCRIPTION
1702936	US 36 ADDED TRAVEL LANES
1802854	SR 9 ADDED TRAVEL LANES
2001127	US 36 PEDESTRIAN CONNECTIVITY

INDIANA DEPARTMENT OF TRANSPORTATION



ROAD PLANS

ROUTE: US 36 FROM: RP 88+0.6 (US 36) TO: RP62+0.3 (SR 9)

PROJECT NO. 1702936 P.E. 1702936 R/W 1702936 CONST.

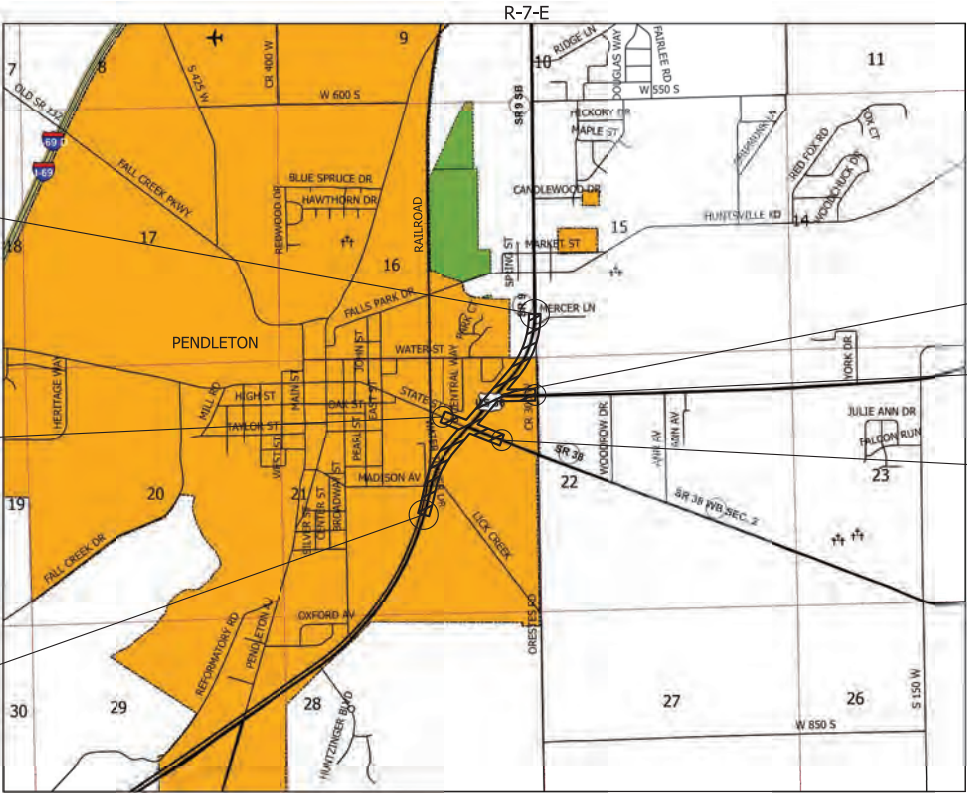
Note to Reviewer:
The US 36 Pedestrian Connectivity (Des. No. 2001127) project is combined with the added travel lanes projects in these plans. Final scope of work for the pedestrian project is not yet confirmed with the LPA, therefore some details are not included at this time, including drive profiles and shared-use path vertical control, in some areas.

ADDED TRAVEL LANES, ACCESS CONTROL, AND PEDESTRIAN IMPROVEMENTS ALONG US 36 FROM 0.28 MILE SOUTH OF SR 38 TO HUNTSVILLE ROAD, IN SECTIONS 15, 16, 21 AND 28, T-18-N, R-7-E, FALL CREEK TOWNSHIP, MADISON COUNTY, INDIANA.

END PROJECT
DES. 1702936/1802854/2001127
STA. 438+37.35 "A"

Begin Construction
Sta. 95+25.00 "S-1-A"

BEGIN PROJECT
DES. 1702936/1802854/2001127
STA. 390+69.00 "A"

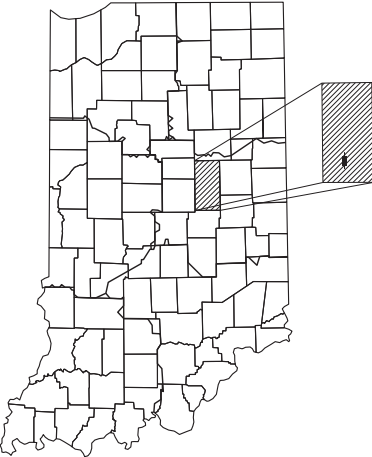


R-7-E
Madison County
SCALE: 1" = 2,000'

Begin Construction
Sta. 50+35.68 "S-2-A"

End Construction
Sta. 56+00.00 "S-2-A"

End Construction
Sta. 111+11.00 "S-1-A"



PROJECT LOCATION SHOWN BY
MADISON COUNTY

LATITUDE:	39° 59' 47.3" N
LONGITUDE:	85° 44' 16.5" W
GROSS LENGTH:	0.93 MI
NET LENGTH:	0.93 MI
MAX. GRADE:	3.17%

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

TRAFFIC DATA	US 36 South of North Jct RP 88+62 to 89+5	US 36 East of North Jct	SR 9 North of North Jct RP 62+10 to 62+33
A.A.D.T. (2023)	16,525 V.P.D.	7,380 V.P.D.	15,167 V.P.D.
A.A.D.T. (2043)	17,573 V.P.D.	N/A V.P.D.	16,020 V.P.D.
D.H.V (2043)	1,650 V.P.H.	N/A V.P.H.	1,410 V.P.H.
DIRECTIONAL DISTRIBUTION	51.71 %	65 %	49.37 %
TRUCKS	7.83 % A.A.D.T. 6.06 % D.H.V.	4 % A.A.D.T. N/A % D.H.V.	15.75 % A.A.D.T. 14.07 % D.H.V.

DESIGN DATA			
DESIGN SPEED	40 M.P.H.	45 M.P.H.	40 M.P.H.
PROJECT DESIGN CRITERIA	4R (NON-FREEWAY)	4R (NON-FREEWAY)	4R (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION	OTHER PRINCIPAL ARTERIAL	MINOR ARTERIAL	OTHER PRINCIPAL ARTERIAL
RURAL/URBAN	URBAN (INTERMEDIATE)	URBAN (INTERMEDIATE)	URBAN (INTERMEDIATE)
TERRAIN	LEVEL	LEVEL	LEVEL
ACCESS CONTROL	NONE	LIMITED ACCESS	NONE

TRAFFIC DATA	STATE STREET	SR 38
A.A.D.T. (2023)	11,358 V.P.D.	8,872 V.P.D.
A.A.D.T. (2043)	11,883 V.P.D.	9,589 V.P.D.
D.H.V (2043)	N/A V.P.H.	N/A V.P.H.
DIRECTIONAL DISTRIBUTION	63 %	62 %
TRUCKS	2 % A.A.D.T. N/A % D.H.V.	4 % A.A.D.T. N/A % D.H.V.

DESIGN DATA		
DESIGN SPEED	35 M.P.H.	35 M.P.H.
PROJECT DESIGN CRITERIA	4R (NON-FREEWAY)	4R (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION	MINOR ARTERIAL	MINOR ARTERIAL
RURAL/URBAN	URBAN (INTERMEDIATE)	URBAN (INTERMEDIATE)
TERRAIN	LEVEL	LEVEL
ACCESS CONTROL	NONE	NONE

CDM
Smith

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Indianapolis, IN 46225
Tel: (317) 829-9600

STAGE 2

PLANS
PREPARED BY: CDM SMITH, INC.

317-829-9600
PHONE NUMBER

CERTIFIED BY:

\$SIG DATE\$
DATE

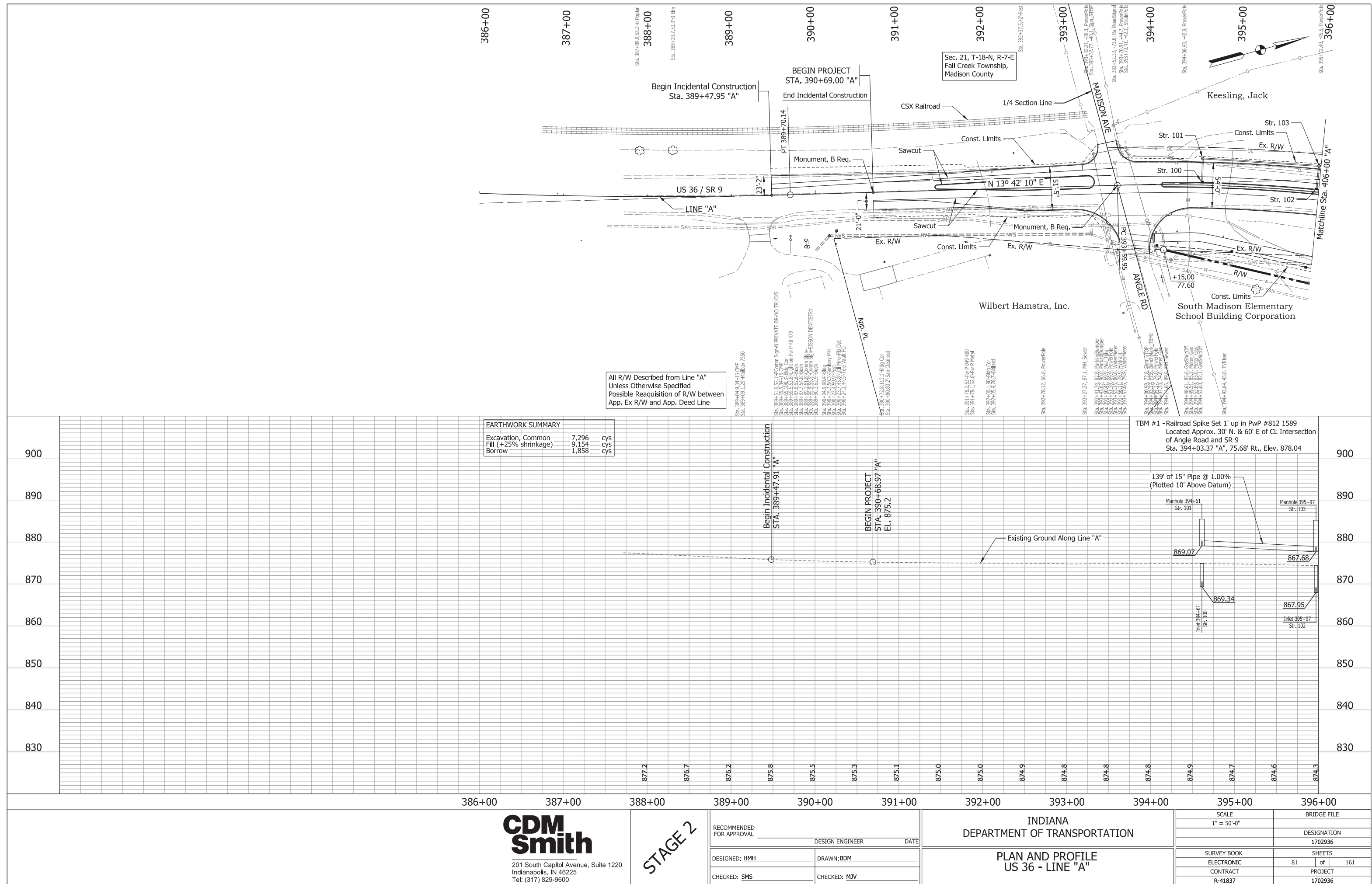
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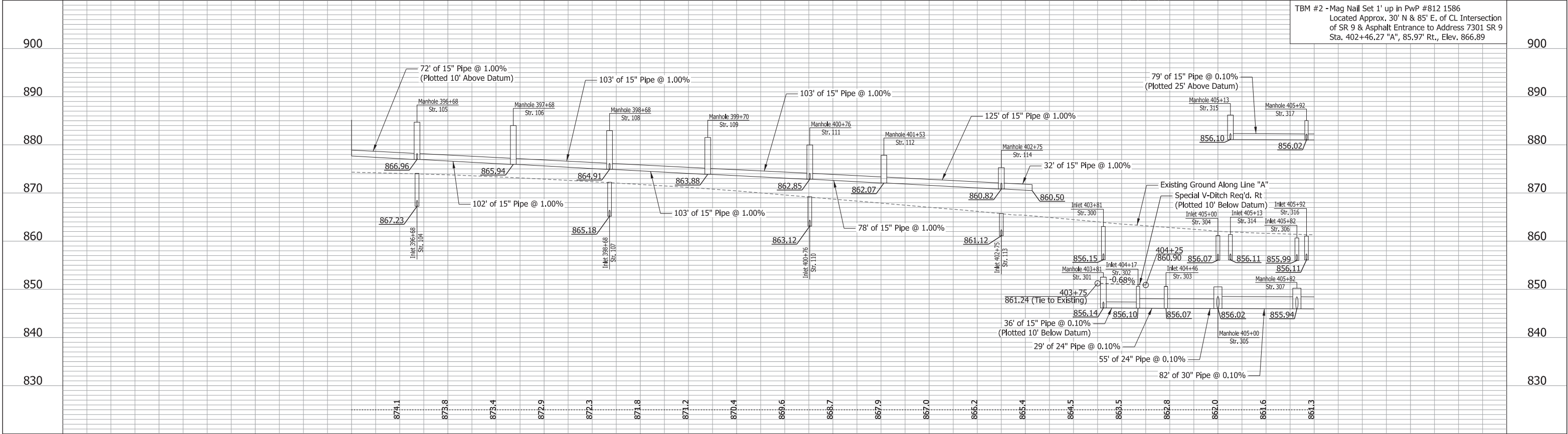
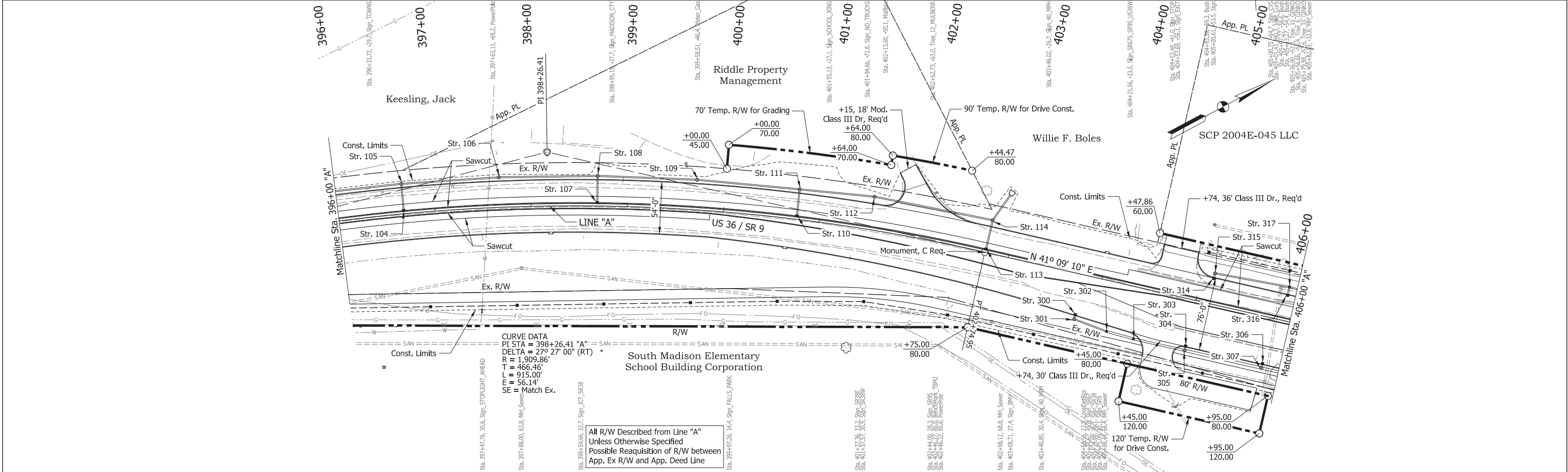
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DATE

DESIGNATION
1702936

SURVEY BOOK	SHEETS		
ELECTRONIC	1	of	161
CONTRACT	PROJECT		
R-41837	1702936		





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CHECKED: SMS

DESIGN ENGINEER

DRAWN: BDM
CHECKED: MJV

DATE

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PLAN AND PROFILE
US 36 - LINE "A"

SCALE
1" = 50'-0"

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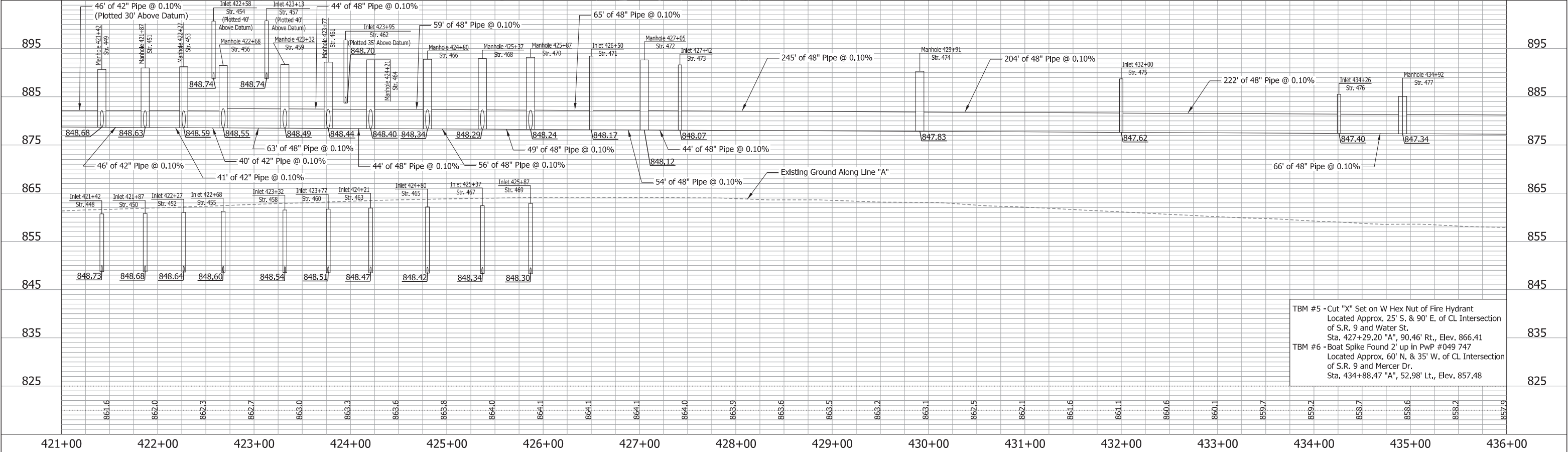
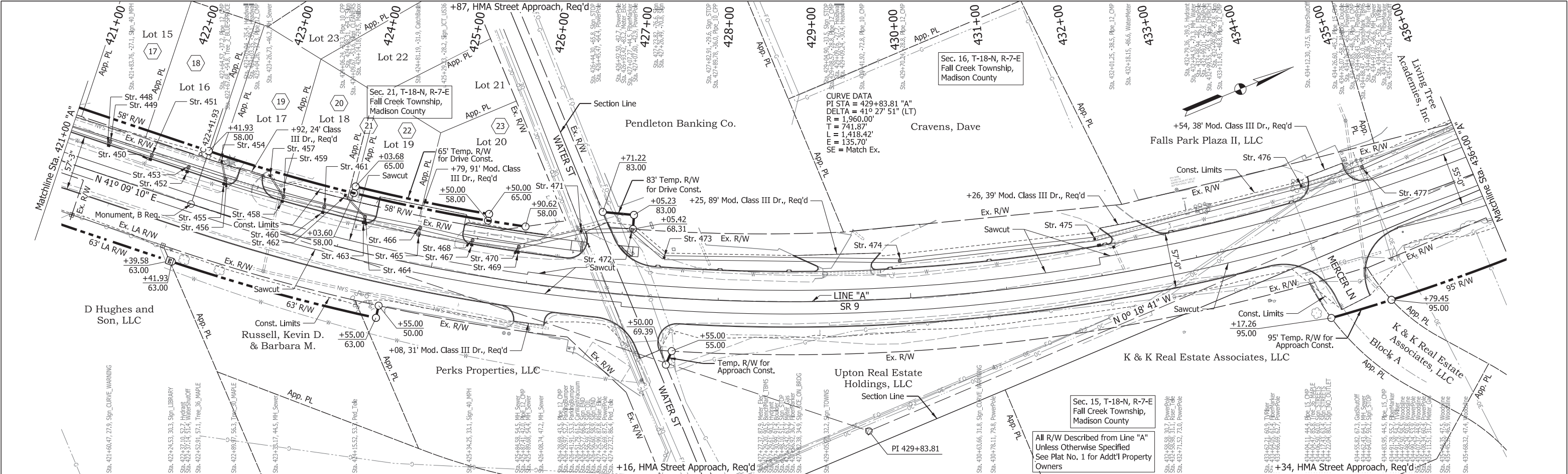
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CONTRACT
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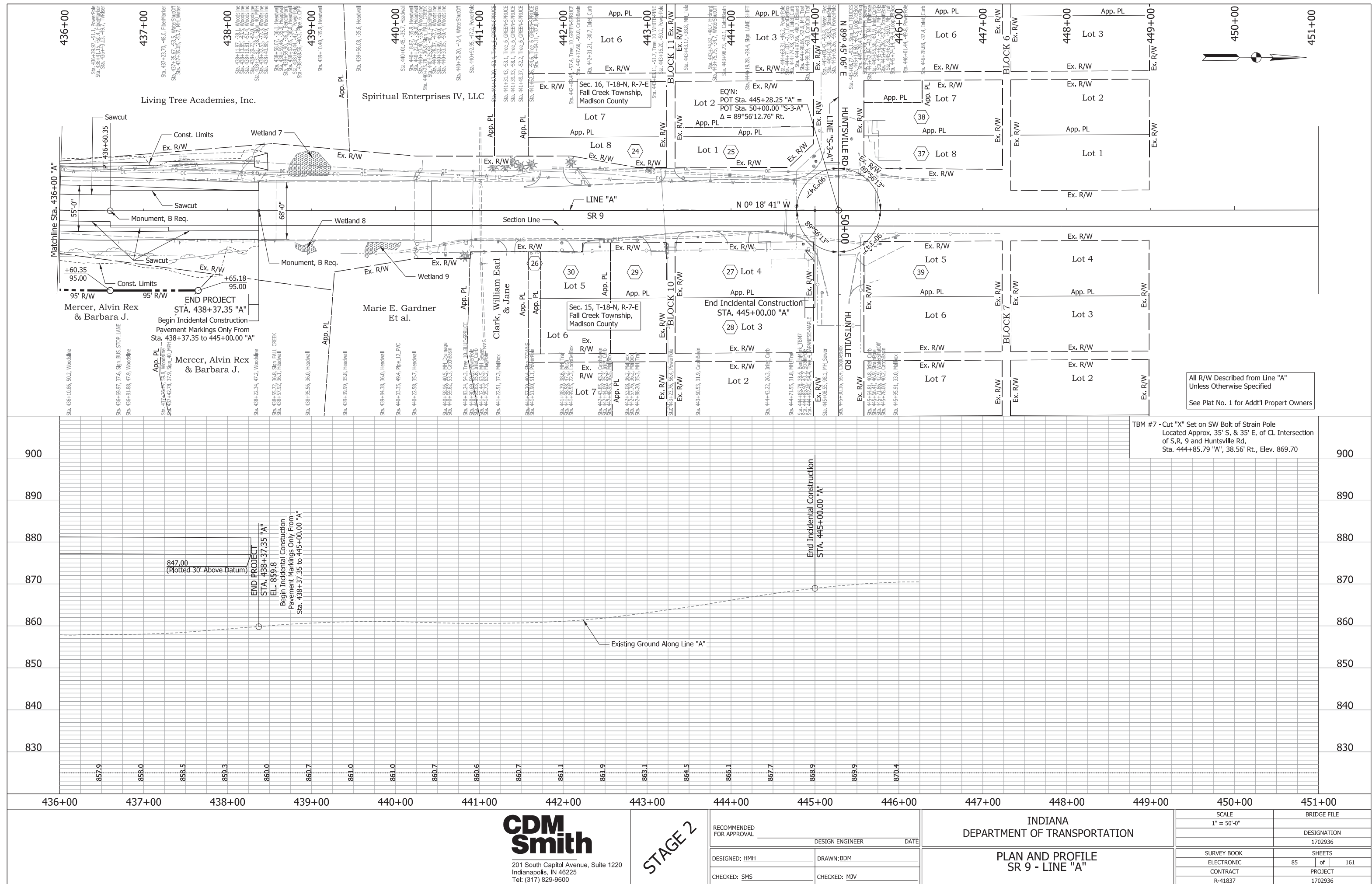
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PROJECT
1702936

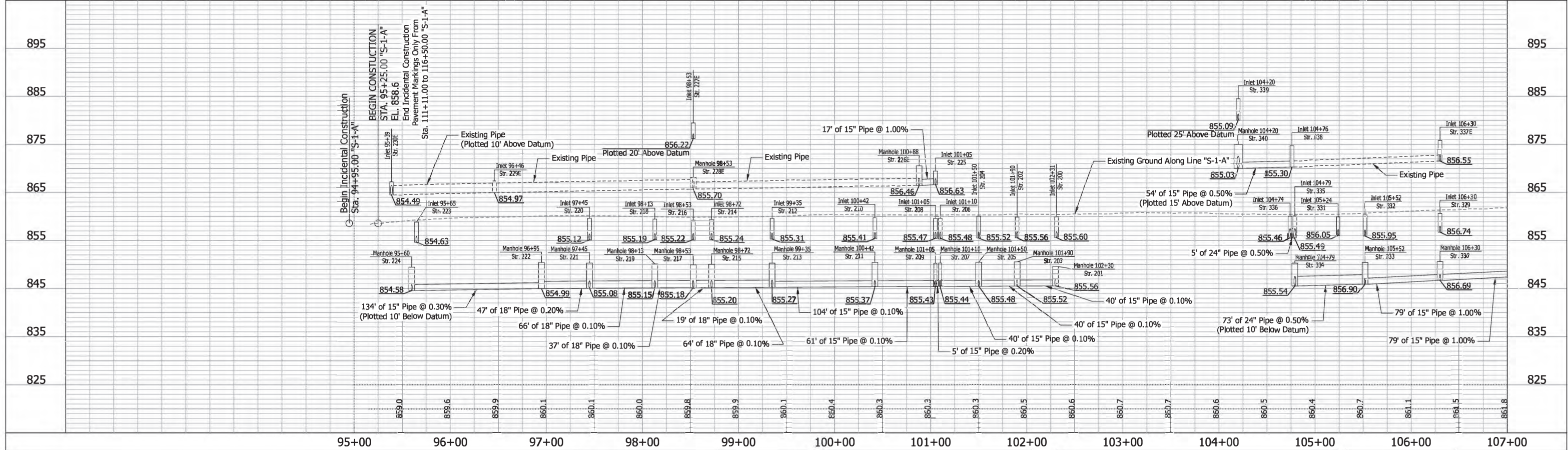
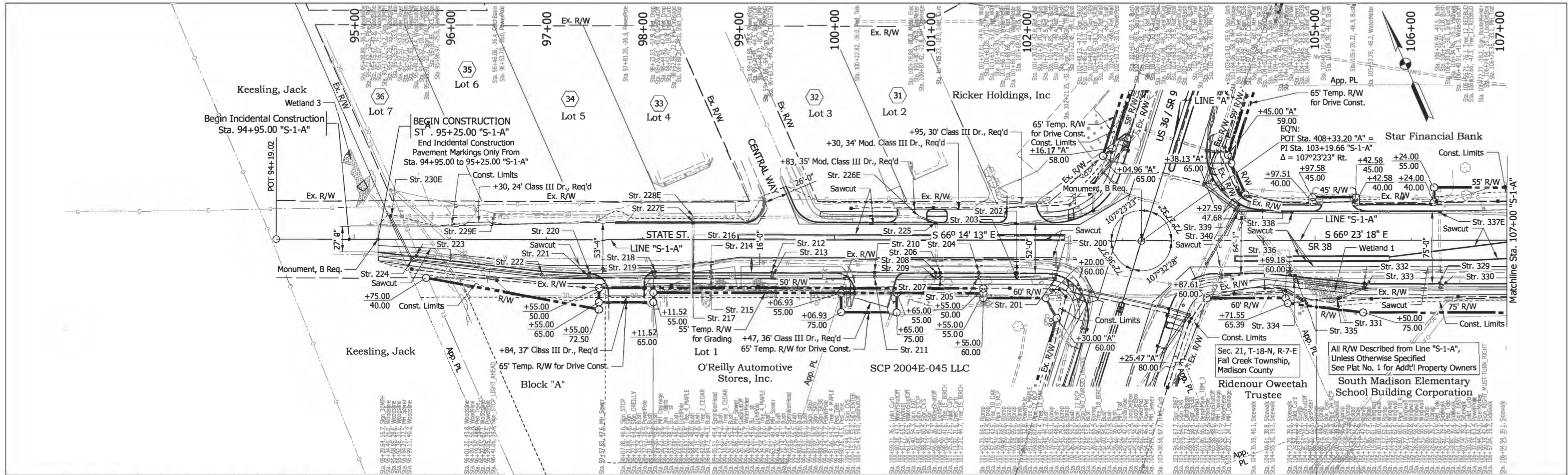
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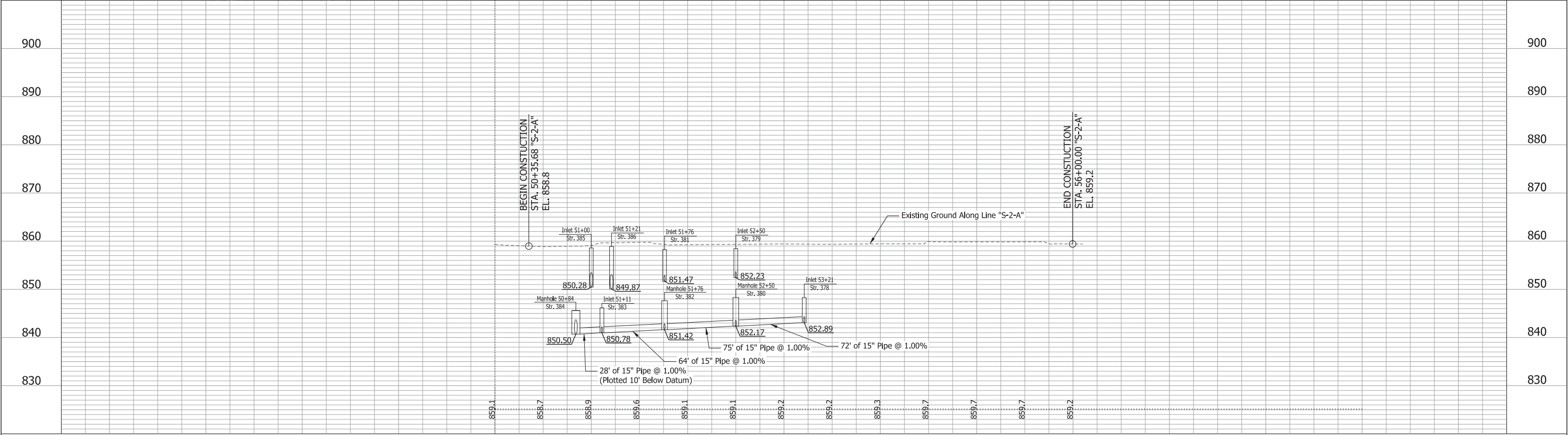
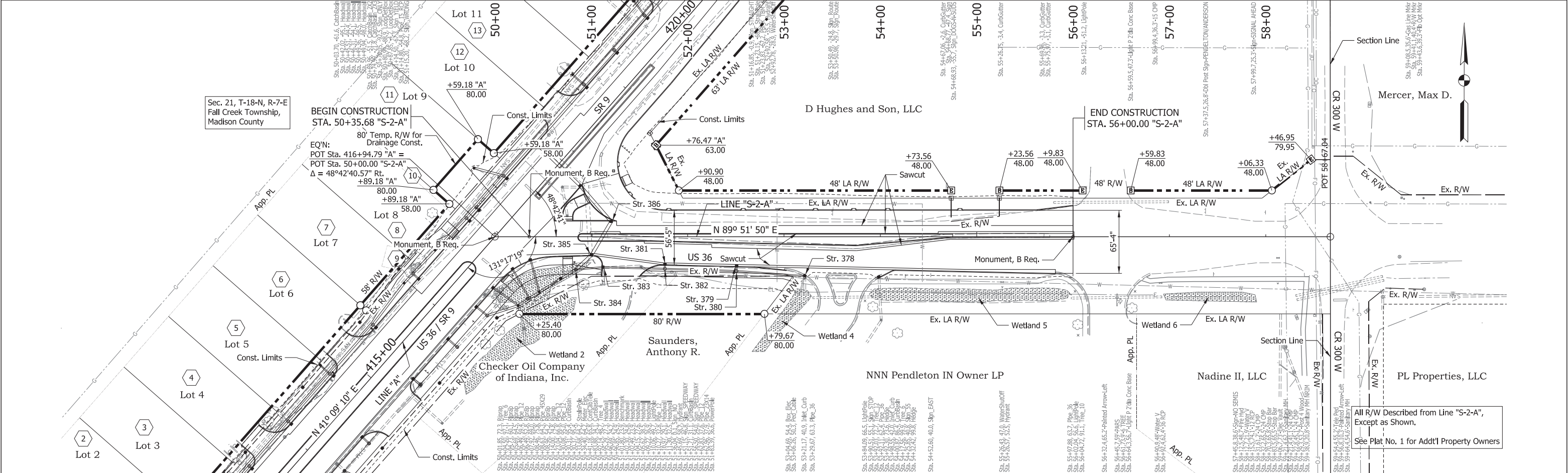


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										CONTRACT		PROJECT			
										R-41837		1702936			





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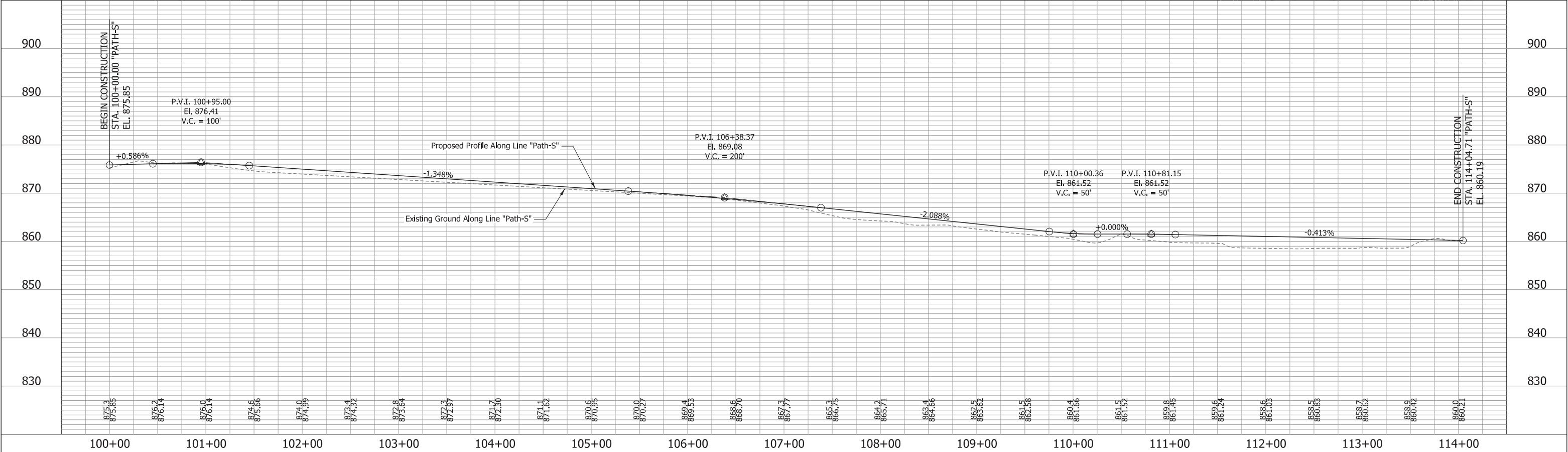
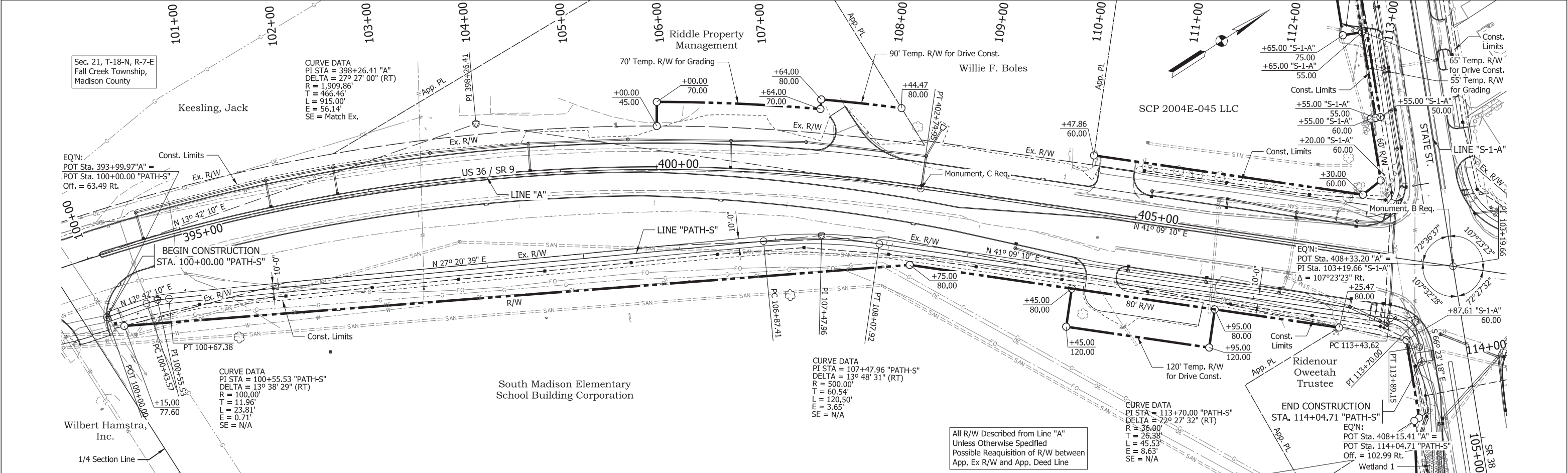
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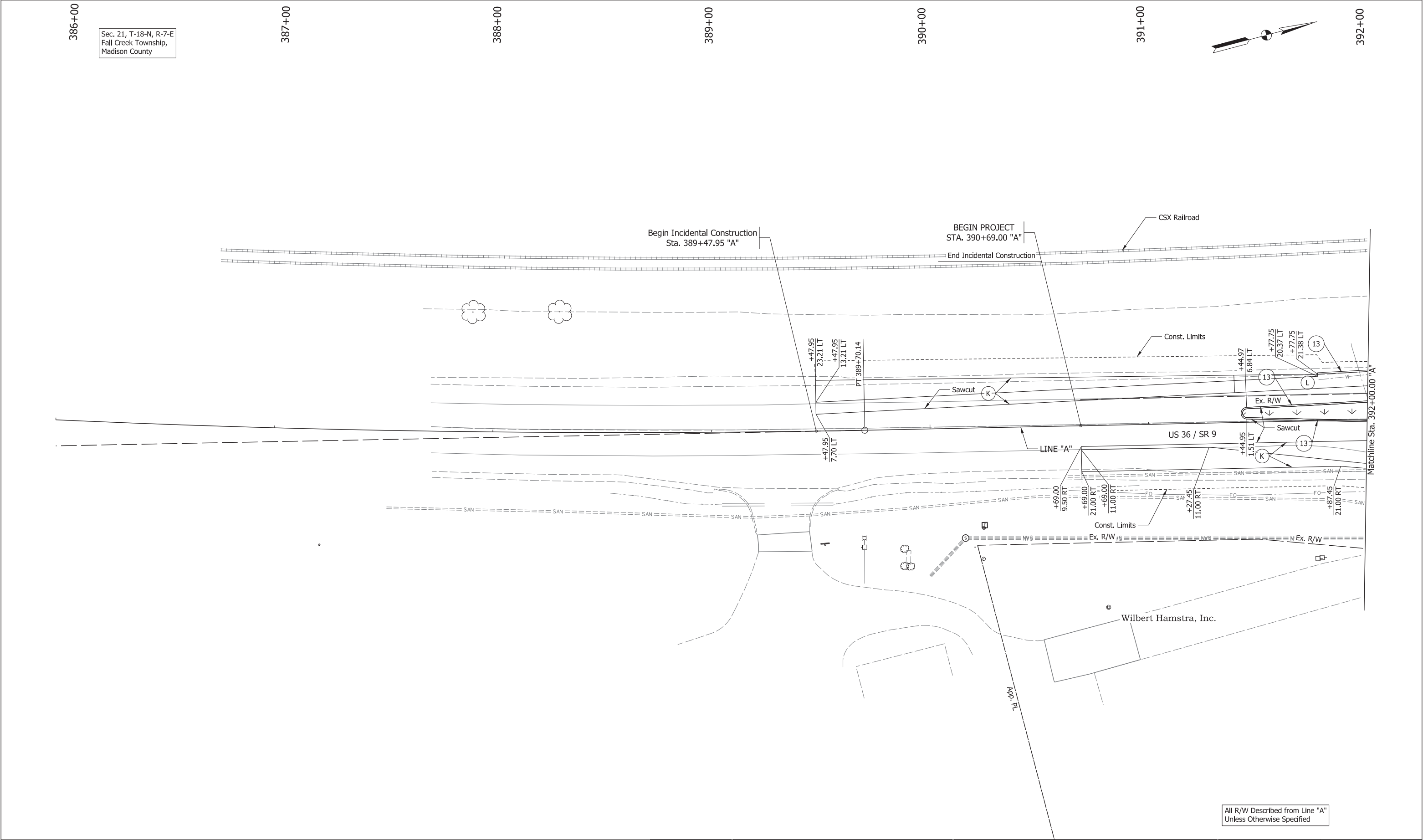
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PLAN AND PROFILE
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HORIZONTAL SCALE 1" = 50'-0"	BRIDGE FILE
VERTICAL SCALE 1" = 10'-0"	DESIGNATION 1702936
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CONTRACT R-41837	PROJECT 1702936



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		DESIGNED: <u>HMH</u>		DRAWN: <u>BDM</u>				1702936	
		CHECKED: <u>SMS</u>		CHECKED: <u>MJV</u>				SHEETS	
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				PLAN AND PROFILE SHARED-USE PATH - LINE "PATH-S"		PROJECT			
						CONTRACT		1702936	
						R-41837			



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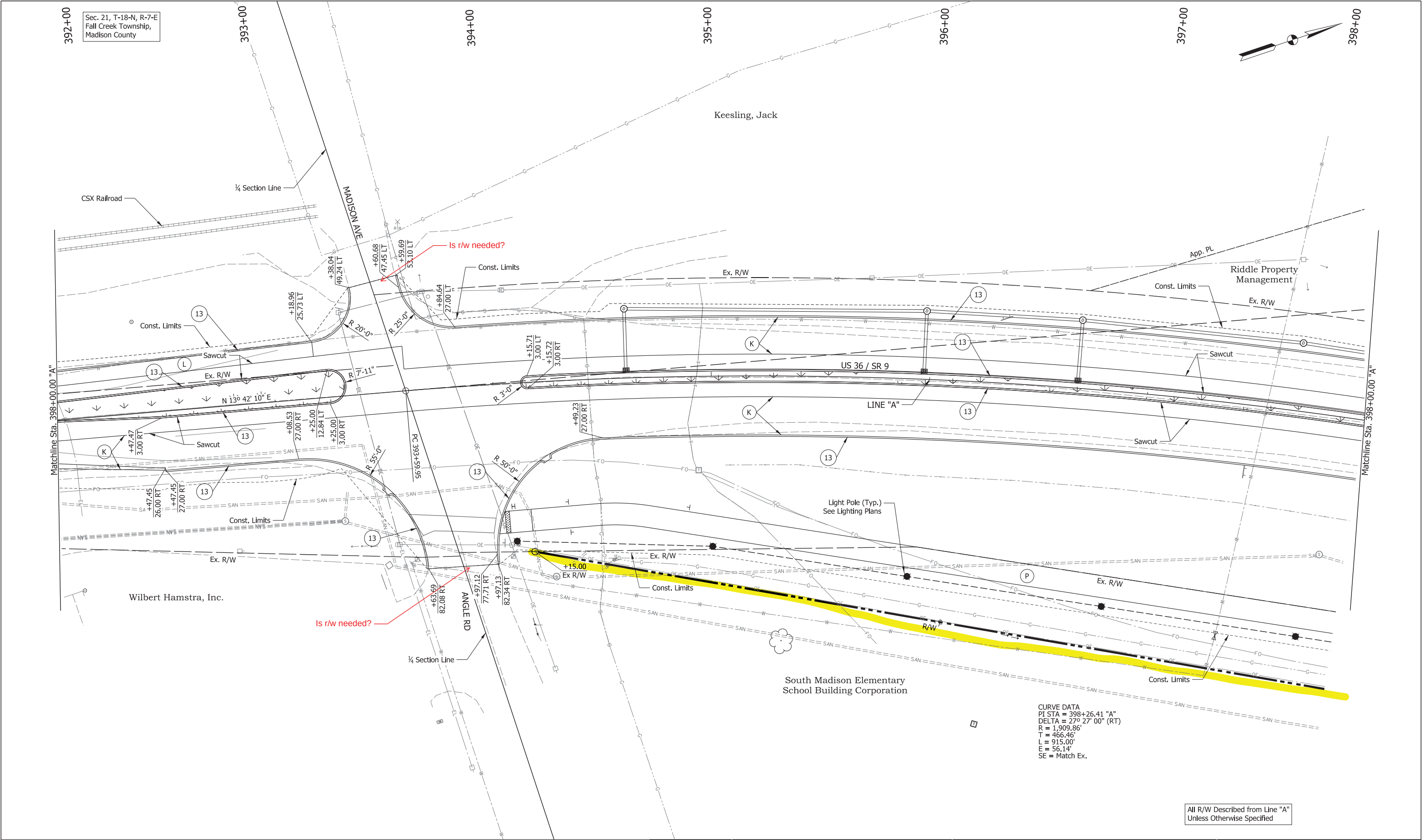
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CONSTRUCTION DETAILS
US 36 - LINE "A"

SCALE 1" = 20'-0"		BRIDGE FILE	
		DESIGNATION	
		1702936	
SURVEY BOOK		SHEETS	
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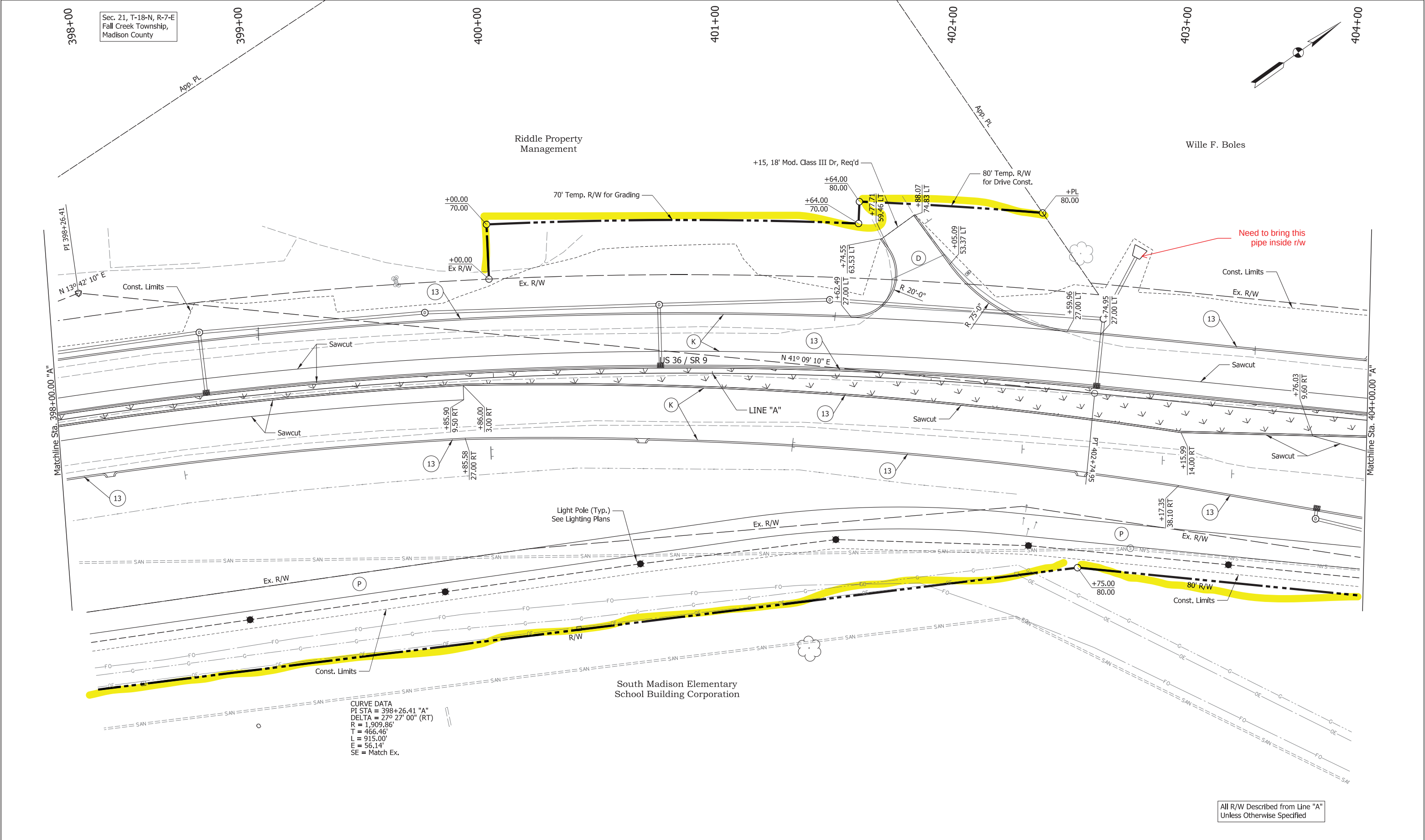
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CONSTRUCTION DETAILS
US 36 - LINE "A"

SCALE 1" = 20'-0"	BRIDGE FILE
	DESIGNATION 1702936
SURVEY BOOK	SHEETS
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CONSTRUCTION DETAILS
US 36 - LINE "A"

SCALE

1" = 20'-0"

BRIDGE FILE

DESIGNATION

1702936

SURVEY BOOK

ELECTRONIC

CONTRACT

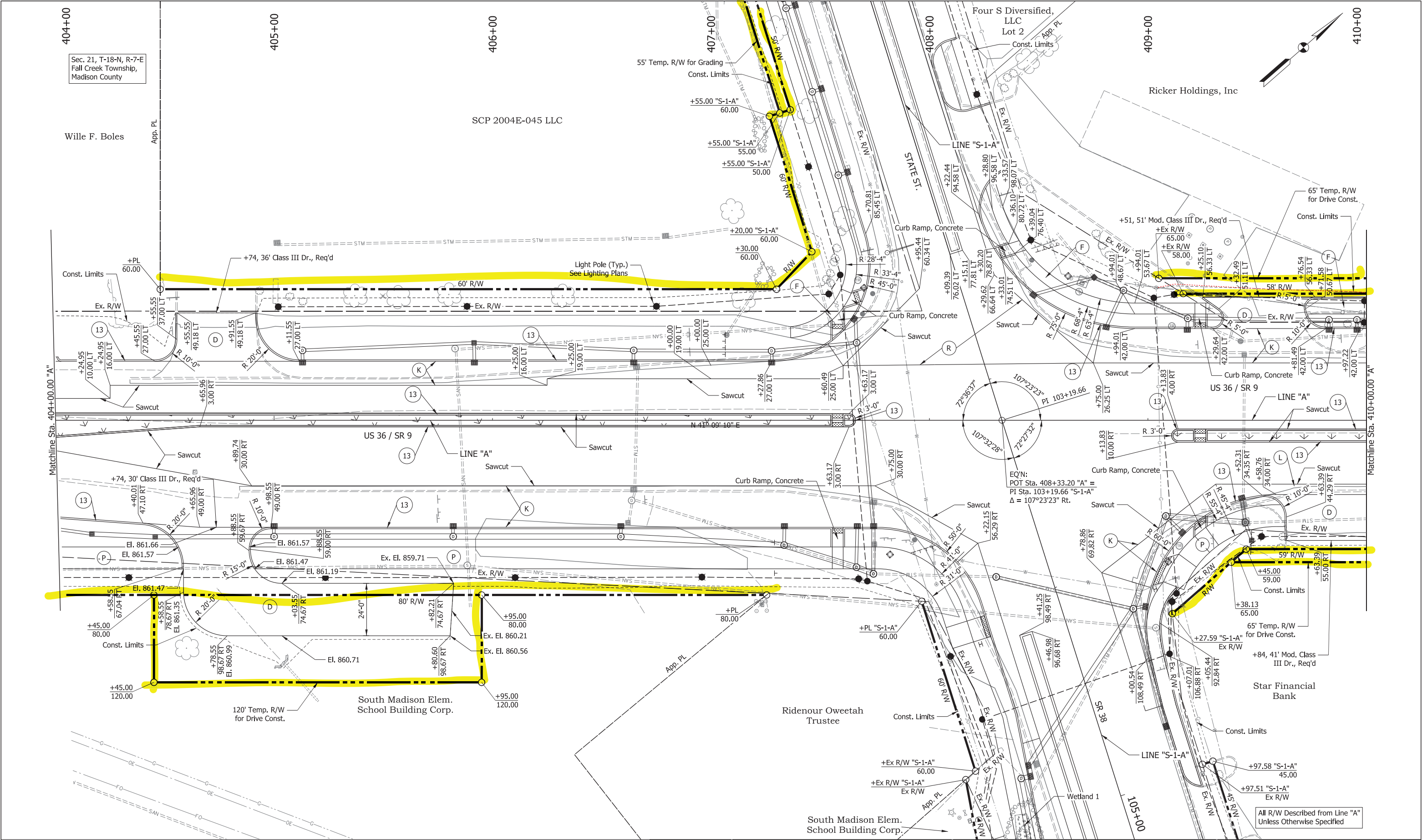
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SHEETS

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PROJECT

1702936



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CONSTRUCTION DETAILS
US 36 - LINE "A"

SCALE

1" = 20'-0"

BRIDGE FILE

DESIGNATION

1702936

SURVEY BOOK

ELECTRONIC

CONTRACT

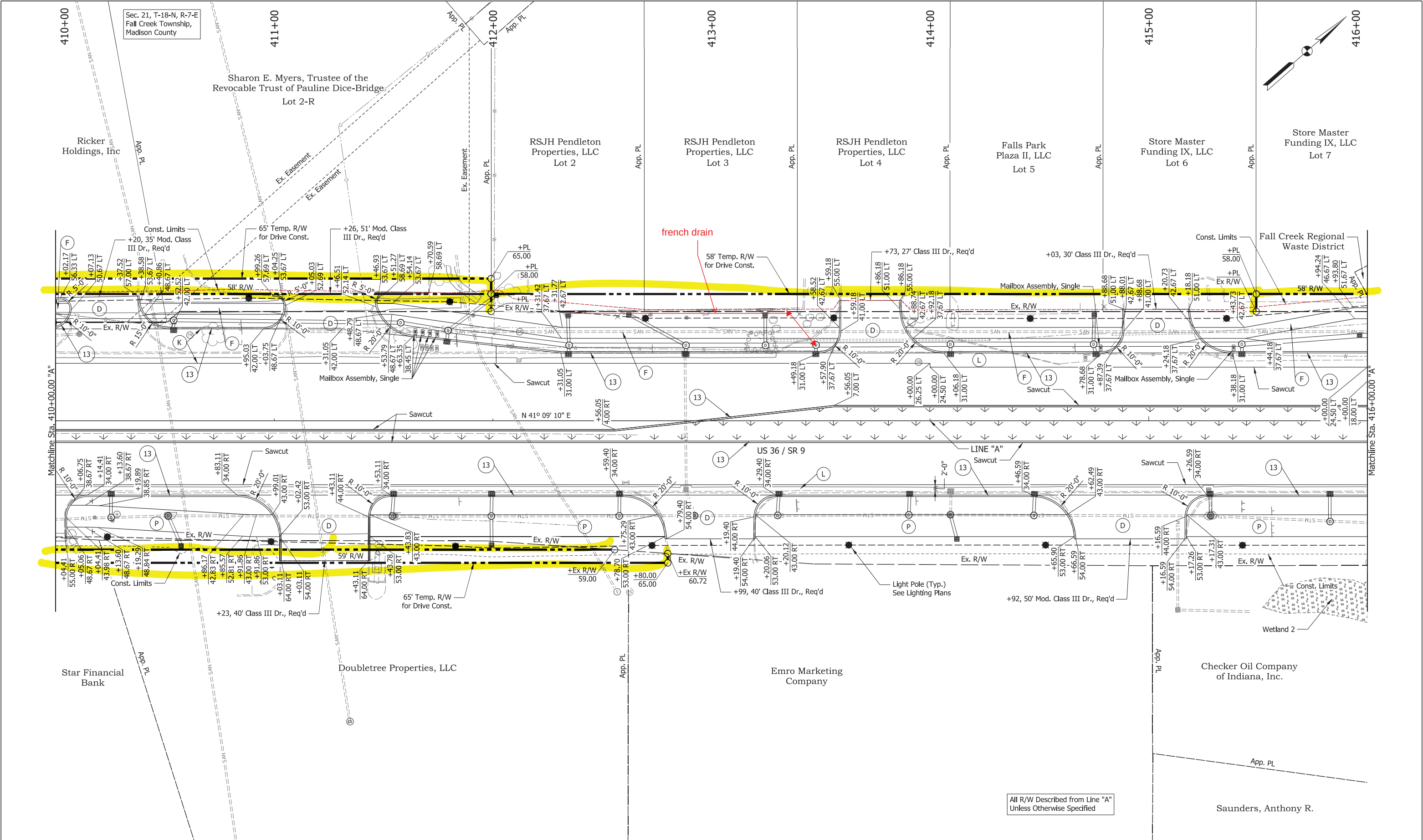
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1702936



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STAGE 2

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CONSTRUCTION DETAILS
US 36 - LINE "A"

SCALE

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BRIDGE FILE

DESIGNATION

1702936

SURVEY BOOK

ELECTRONIC

CONTRACT

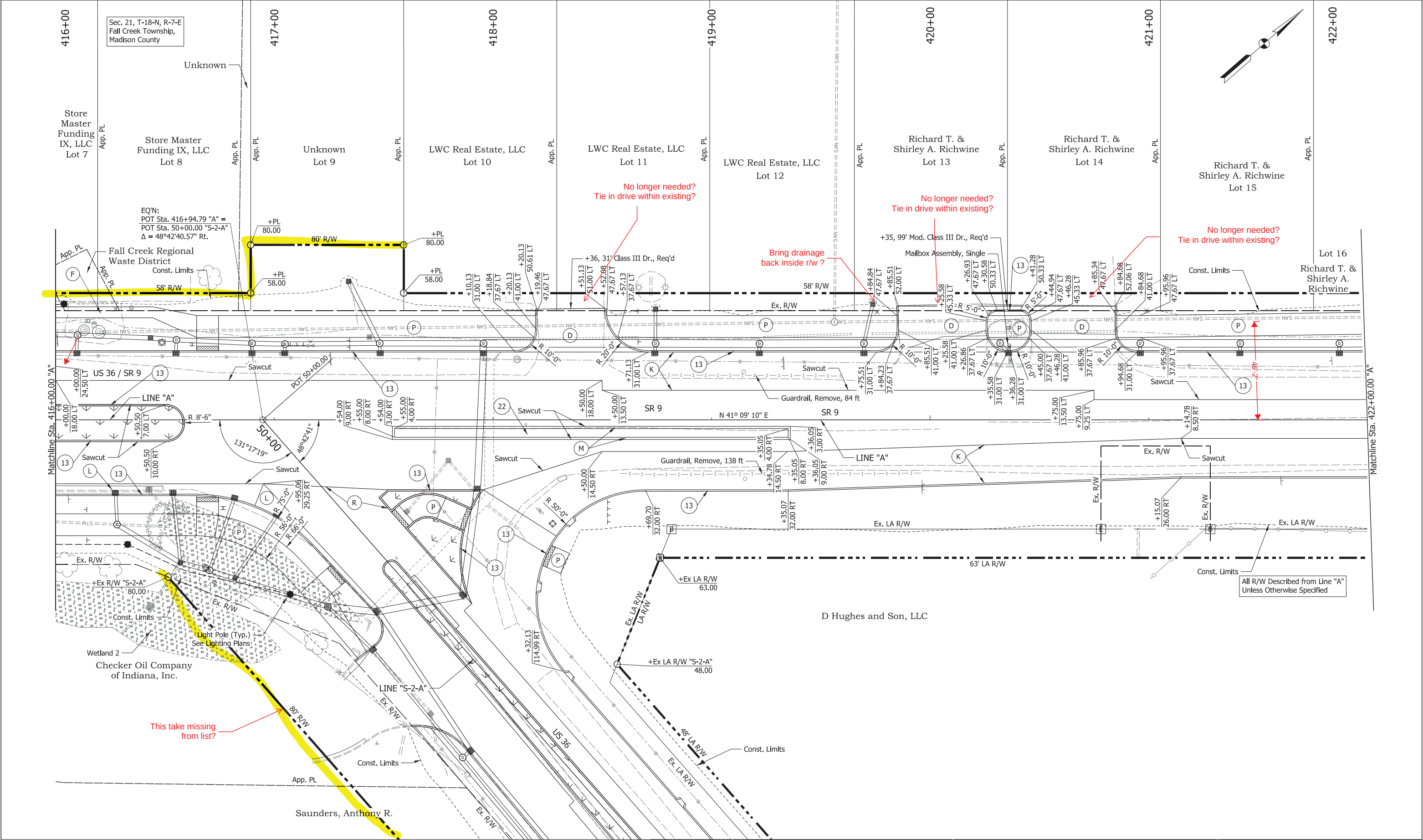
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PROJECT

1702936



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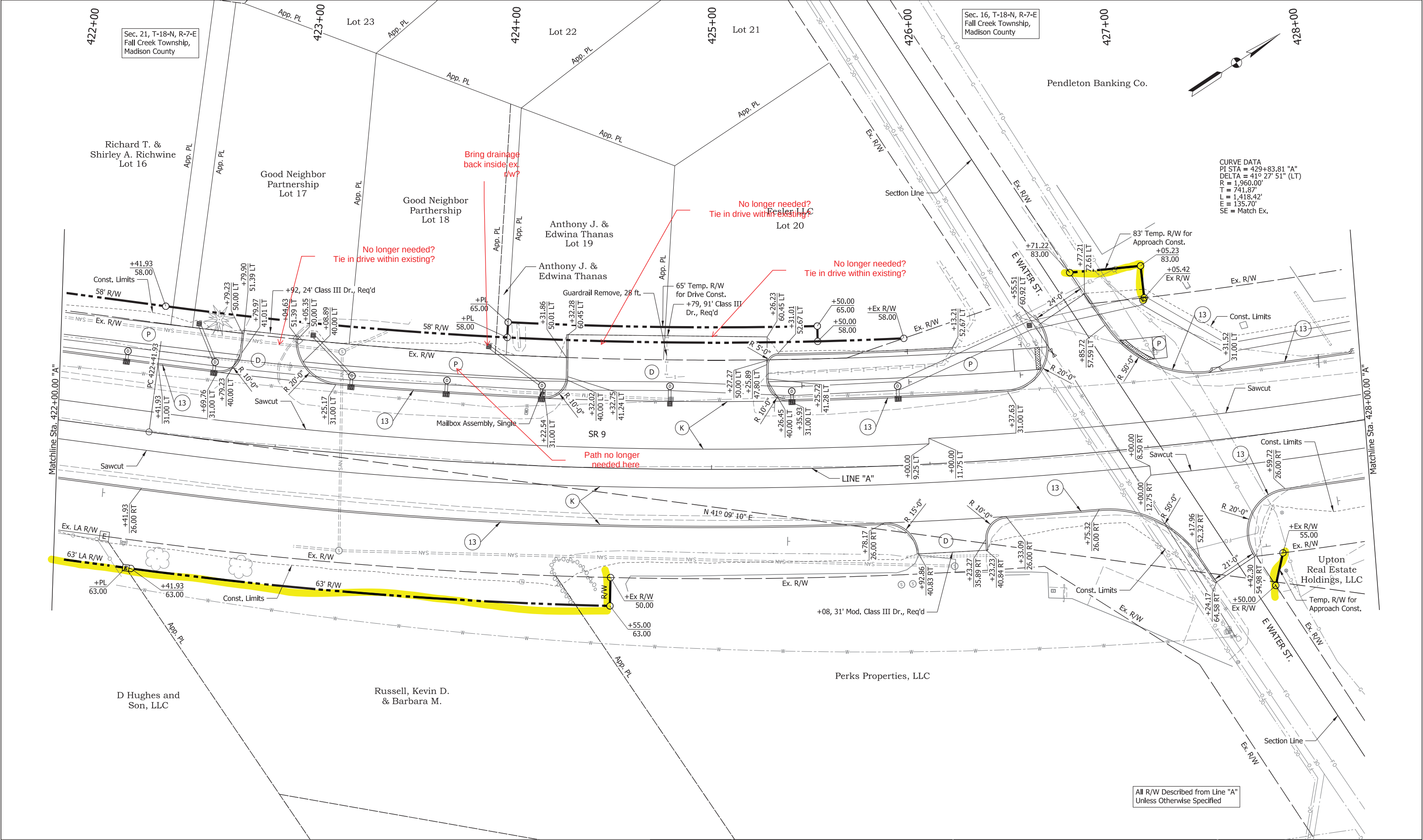
STAGE 2

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INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
US 36 / SR 9 - LINE "A"

SCALE 1" = 20'-0"	BRIDGE FILE
	DESIGNATION 1702936
SURVEY BOOK ELECTRONIC	SHEETS 96 of 161
CONTRACT R-41837	PROJECT 1702936



See Page 90 for Construction Details Legend.

**CDM
Smith**

201 South Capitol Avenue, Suite 1220
Indianapolis, IN 46225
Tel: (317) 829-9600

STAGE 2

RECOMMENDED
FOR APPROVAL

DESIGN ENGINEER

DATE

DESIGNED: HMH

DRAWN: BDM

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
SR 9 - LINE "A"

SCALE

1" = 20'-0"

BRIDGE FILE

DESIGNATION

1702936

SURVEY BOOK

ELECTRONIC

CONTRACT

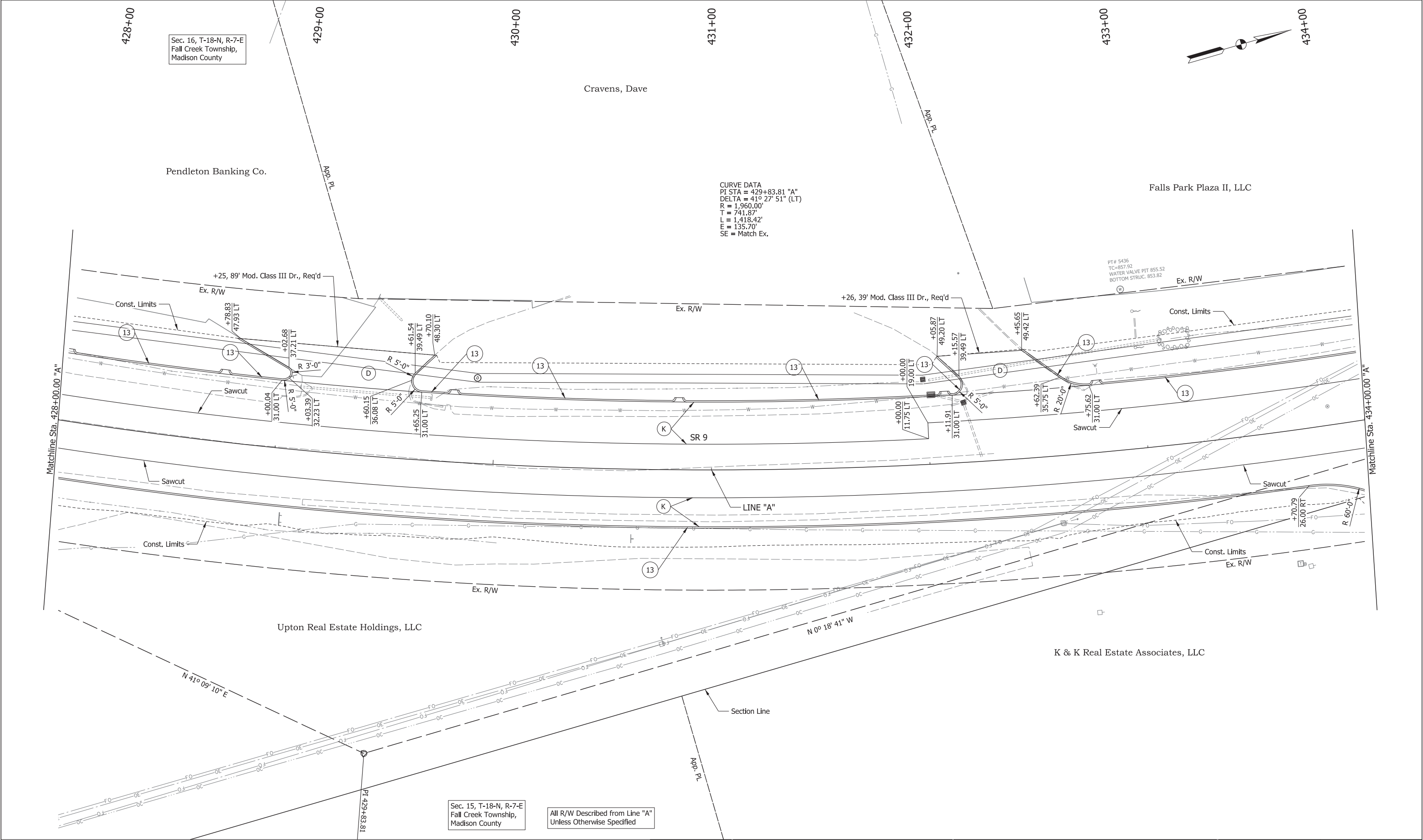
R-41837

SHEETS

97 of 161

PROJECT

1702936



See Page 90 for Construction Details Legend.

**CDM
Smith**

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Indianapolis, IN 46225
Tel: (317) 829-9600

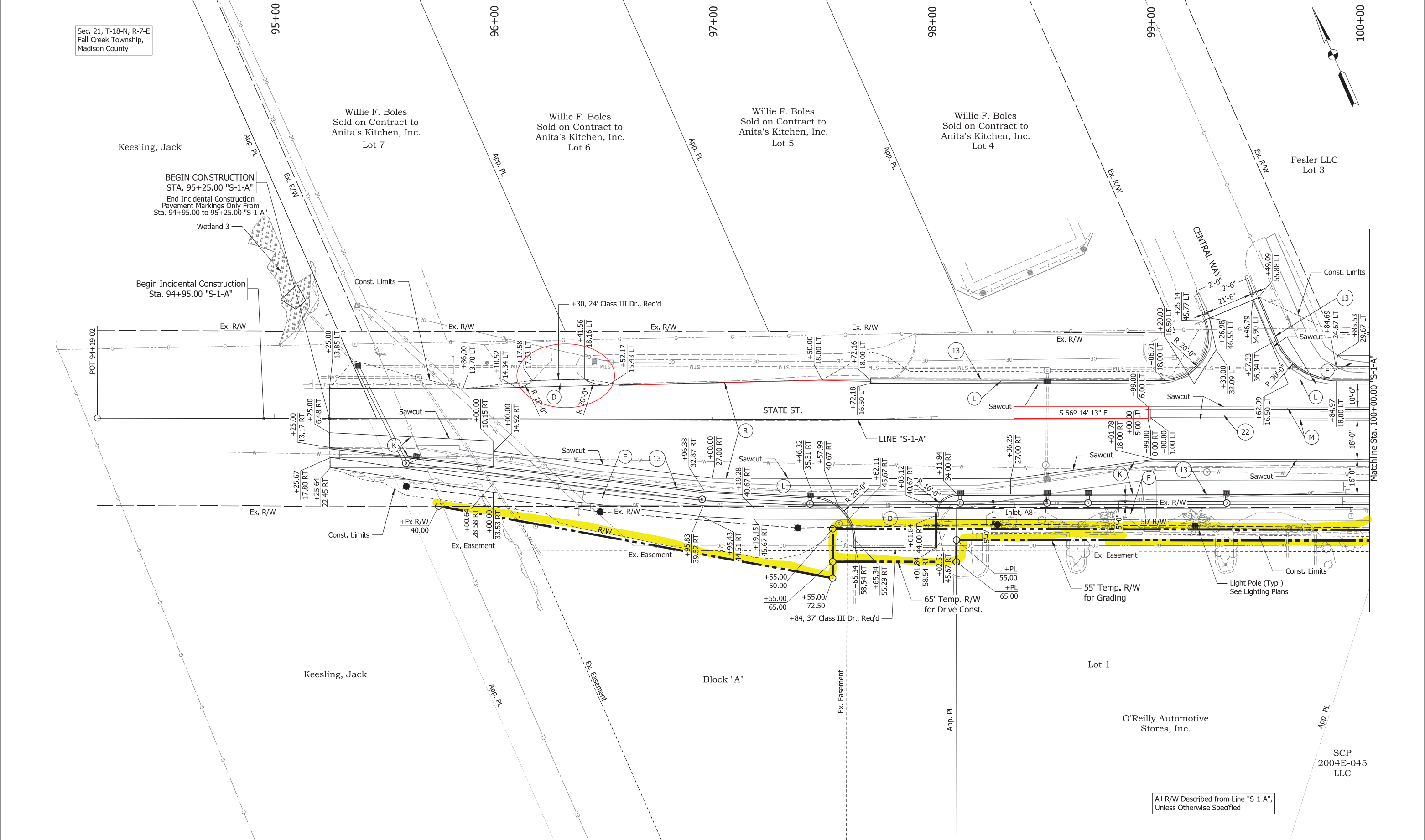
STAGE 2

RECOMMENDED FOR APPROVAL _____	
DESIGNED: HMM	DRAWN: BDM
CHECKED: SMS	CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
SR 9 - LINE "A"

SCALE 1" = 20'-0"	BRIDGE FILE	
	DESIGNATION	
	1702936	
SURVEY BOOK	SHEETS	
ELECTRONIC	98	of 161
CONTRACT	PROJECT	
R-41837	1702936	



See Page 90 for Construction Details Legend.

**CDM
Smith**

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Indianapolis, IN 46225
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STAGE 2

RECOMMENDED
FOR APPROVAL

DESIGN ENGINEER

DATE

DESIGNED: HMH

DRAWN: BDM

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
STATE ST - LINE "S-1-A"

SCALE

1" = 20'-0"

BRIDGE FILE

DESIGNATION

1702936

SURVEY BOOK

ELECTRONIC

CONTRACT

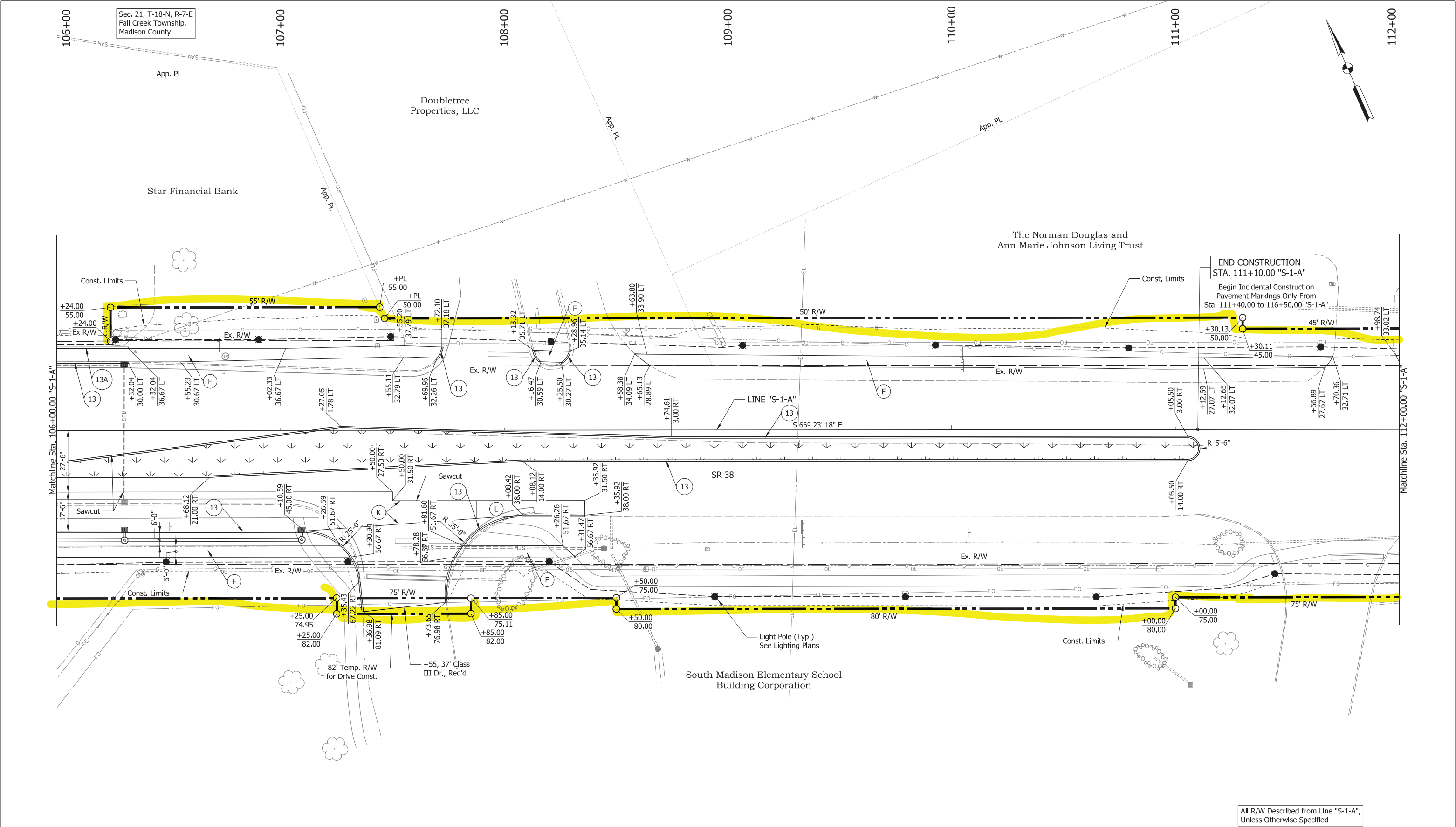
R-41837

SHEETS

100 of 161

PROJECT

1702936



See Page 90 for Construction Details Legend.

**CDM
Smith**

201 South Capitol Avenue, Suite 1220
Indianapolis, IN 46225
Tel: (317) 829-9600

STAGE 2

RECOMMENDED
FOR APPROVAL

DESIGN ENGINEER

DATE

DESIGNED: HMH

DRAWN: BDM

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
SR 38 - LINE "S-1-A"

SCALE

1" = 20'-0"

BRIDGE FILE

DESIGNATION

1702936

SURVEY BOOK

ELECTRONIC

CONTRACT

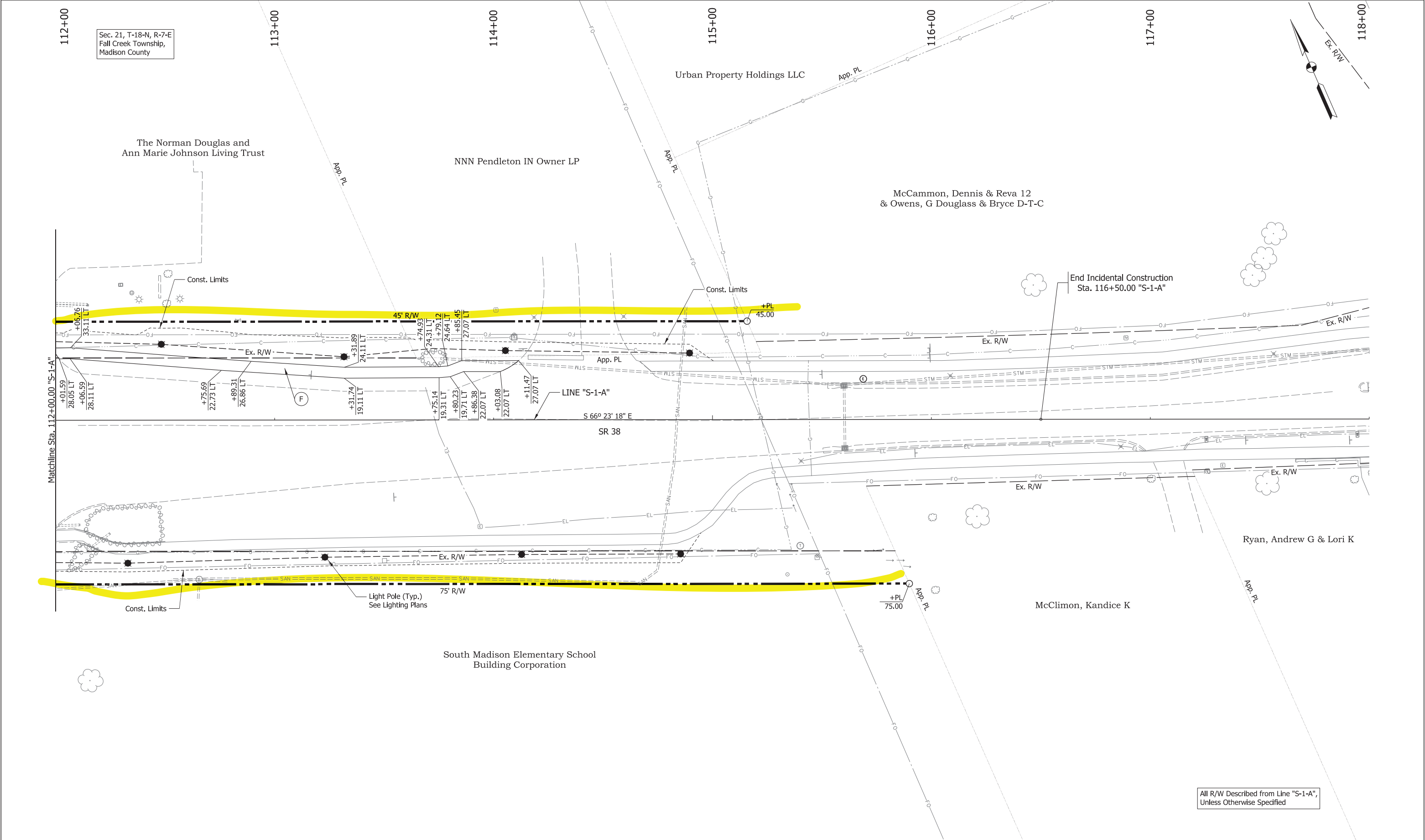
R-41837

SHEETS

102 of 161

PROJECT

1702936



See Page 90 for Construction Details Legend.

**CDM
Smith**

201 South Capitol Avenue, Suite 1220
Indianapolis, IN 46225
Tel: (317) 829-9600

STAGE 2

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FOR APPROVAL

DESIGN ENGINEER

DATE

DESIGNED: HMH

DRAWN: BDM

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
SR 38 - LINE "S-1-A"

SCALE

1" = 20'-0"

BRIDGE FILE

DESIGNATION

1702936

SURVEY BOOK

ELECTRONIC

CONTRACT

R-41837

SHEETS

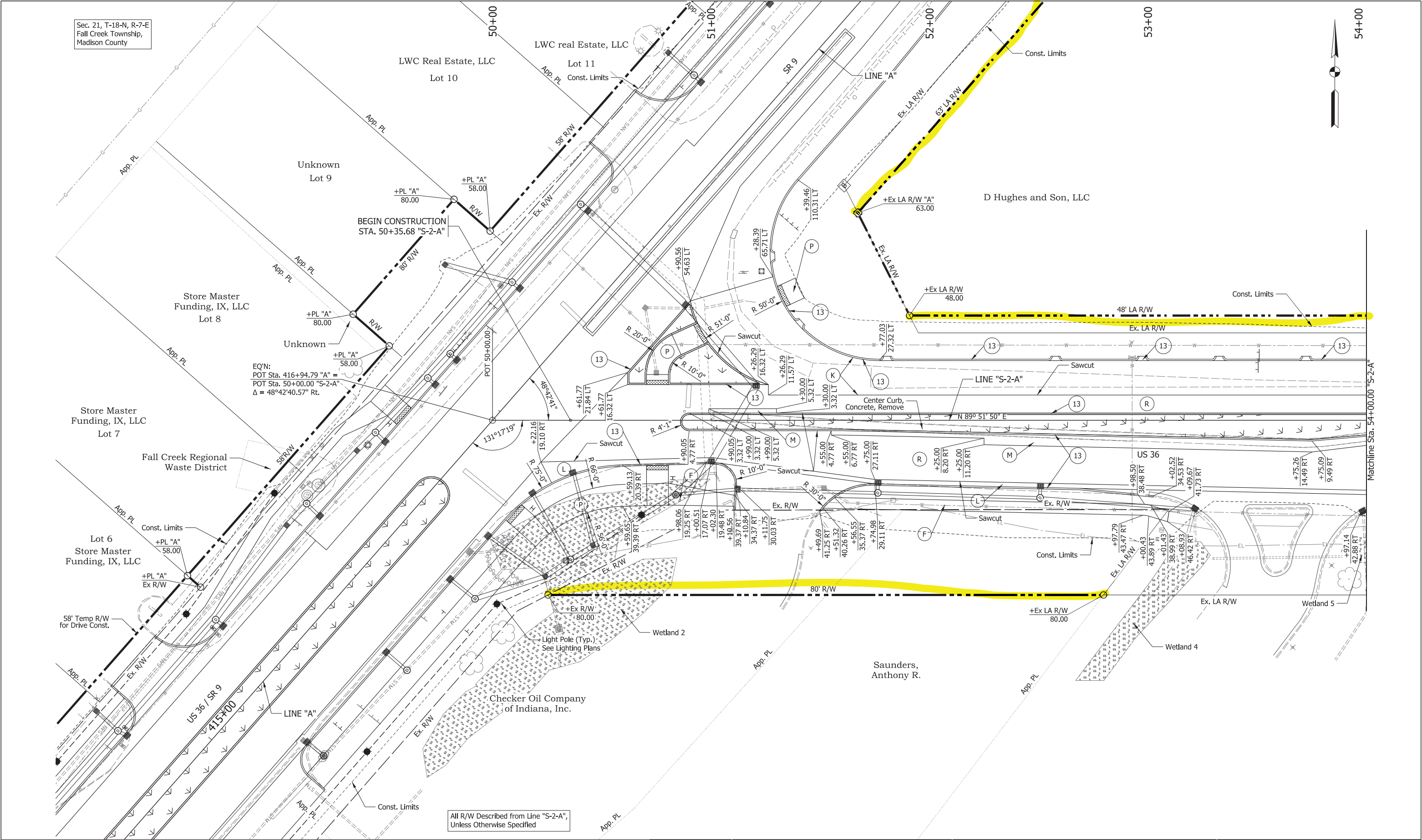
103

of

161

PROJECT

1702936



See Page 90 for Construction Details Legend.

**CDM
Smith**

201 South Capitol Avenue, Suite 1220
Indianapolis, IN 46225
Tel: (317) 829-9600

STAGE 2

RECOMMENDED
FOR APPROVAL

DESIGN ENGINEER

DATE

DESIGNED: HMH

DRAWN: BDM

CHECKED: SMS

CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
SR 9 - LINE "S-2-A"

SCALE

1" = 20'-0"

BRIDGE FILE

DESIGNATION

1702936

SURVEY BOOK

ELECTRONIC

CONTRACT

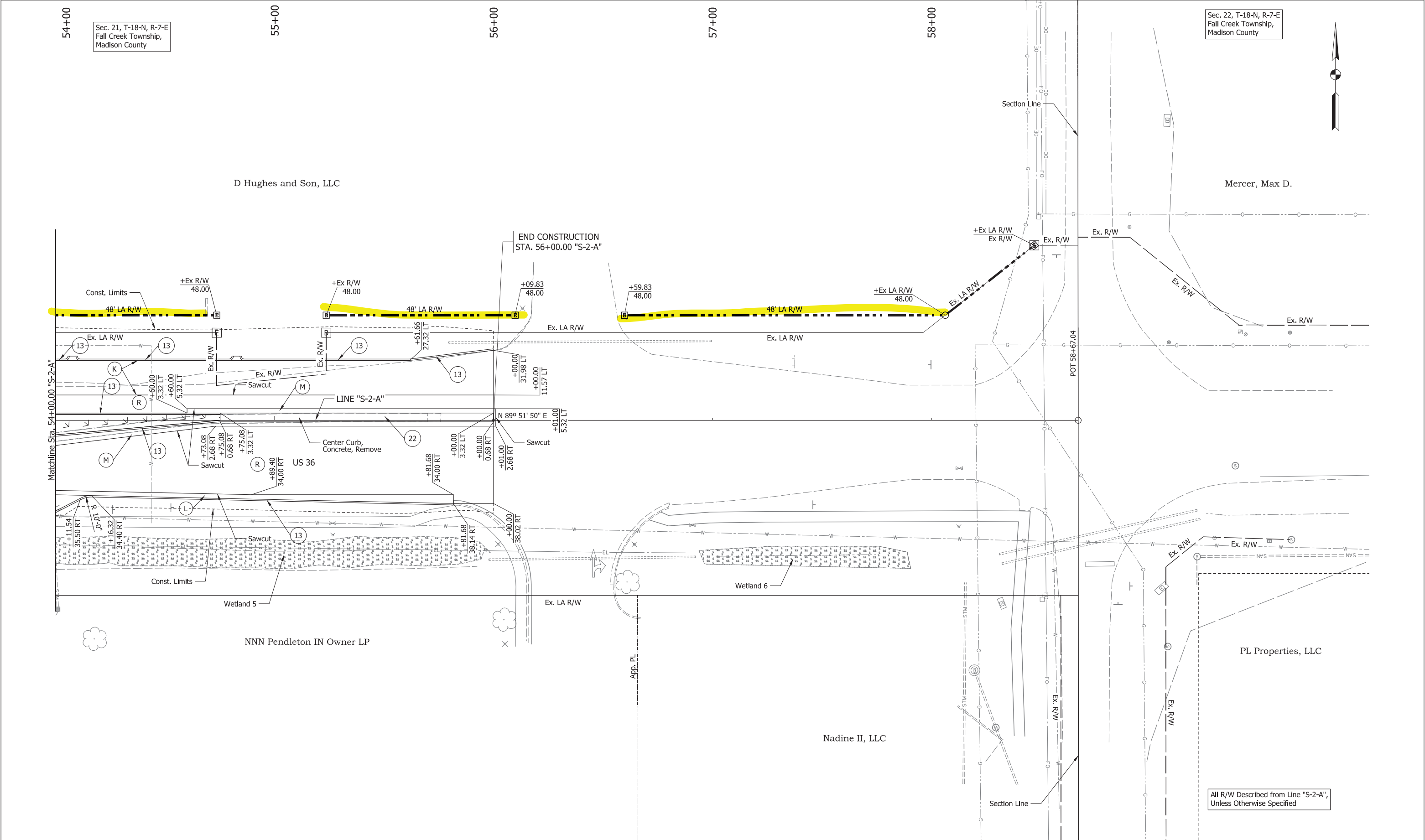
R-41837

SHEETS

104 of 161

PROJECT

1702936



See Page 90 for Construction Details Legend.

**Additional plan sheets have been removed and
can be found in the original report.**

**CDM
Smith**

201 South Capitol Avenue, Suite 1220
Indianapolis, IN 46225
Tel: (317) 829-9600

STAGE 2

RECOMMENDED FOR APPROVAL _____	
DESIGNED: HMM	DRAWN: BDM
CHECKED: SMS	CHECKED: MJV

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
SR 9 - LINE "S-2-A"

SCALE 1" = 20'-0"		BRIDGE FILE	
		DESIGNATION 1702936	
SURVEY BOOK		SHEETS	
ELECTRONIC		105	of 161
CONTRACT R-41837		PROJECT 1702936	

Public Notice
Des. Nos. 1702936 and 1802854

The Indiana Department of Transportation (INDOT) is planning to undertake an Added Travel Lanes Project, funded in part by the Federal Highway Administration (FHWA). The project is located in Pendleton and Huntsville, Fall Creek Township, Madison County.

Under the preferred alternative, the proposed project would involve construction of two additional through lanes on US 36/State Road (SR) 9/SR 67 from Madison Avenue/Lick Creek Pike to the bridge over Fall Creek, with an additional raised median/left turn lane from the south junction (at SR 38/State Street) to the north junction (at US 36) to Mercer Lane. The left and right turn lanes on US 36/SR 9/SR 67 at the south junction (at State Street) to Mercer Lane will be retained with widening as needed to insert the second northbound and southbound through lanes. At the south junction, dual left turns on eastbound (EB) State Street and dual left turns on westbound (WB) SR 38 will be constructed. At the north junction (where US 36 splits off to the east), the WB US 36 right turn lane storage will be extended to the first commercial drive with widening to the north. There will be approximately 3 acres of permanent and 0.3 acre of temporary right-of-way acquisition.

Properties listed in or eligible for the National Register of Historic Places (NRHP) located within the Area of Potential Effects (APE) include a house at 3021 SR 38. The proposed action impacts properties listed in or eligible for the NRHP. INDOT, on behalf of FHWA, has issued a "No Adverse Effect" finding for the project because the project will not diminish the integrity of the characteristics that qualify the historic properties within the APE for inclusion in the NRHP. In accordance with the National Historic Preservation Act, the views of the public are being sought regarding the effect of the proposed project on the historic elements as per 36 CFR 800.2(d), 800.3(e) and 800.6(a)(4). Pursuant to 36 CFR 800.4(d)(2), the documentation specified in 36 CFR 800.11(e) is available for inspection in ASC Group, Inc. Additionally, this documentation can be viewed electronically by accessing INDOT's Section 106 document posting website IN SCOPE at <http://erms.indot.in.gov/Section106Documents>. This documentation serves as the basis for the "No Adverse Effect" finding. The views of the public on this effect finding are being sought. Please reply with any comments to Leah Konicki, ASC Group, Inc., 9376 Castlegate Drive, Indianapolis, IN 46256, 317-915-9300, lkonicki@ascgroup.net no later than (**date to respond**).

In accordance with the "Americans with Disabilities Act", if you have a disability for which INDOT needs to provide accessibility to the document(s) such as interpreters or readers, please contact Kim Filson, 317-289-3193, kfilson@indot.in.gov.

Daily Reporter

Prescribed by State Board of Accounts

General Form No 99P (Rev. 2009A)

Attn: Carol Croto
Name: ASC Group, Inc./L
Address: 9376 Castlegate Dr.

City/State: Indianapolis, IN 46256
Acct #: G10636663
Order #: 60103409

AIM MEDIA INDIANA
d/b/a DAILY REPORTER
PO BOX 3213
McALLEN, TX 78502-3213
FED I.D. #32-0472774

(Government Unit) County: Hancock

PUBLISHER'S CLAIM

LINE COUNT

Data for computing costs: Number of equivalent lines per column	129
Number of Columns	1
Number of insertions	1

COMPUTATION OF CHARGES

129 lines, 1 column(s) x rate of 0.3637 cents per line

Additional charges for notices containing rule or tabular work
(50 percent surcharge included in rate above)

Charges for extra proofs of publication (\$1.00 for each proof in excess of two included in rate above)

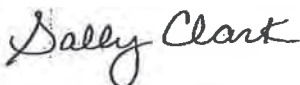
TOTAL AMOUNT OF CLAIM 46.92

Pursuant to the provisions and penalties of IC 5-11-10-1, I hereby certify that the foregoing account is just and correct, that the amount claimed is legally due, after allowing all just credits, and that no part of the same has been paid.

PUBLISHER'S AFFIDAVIT

I, Sally Clark, Legal Advertising Clerk of the newspaper of general circulation printed and published in the English language in the (city/town) of Greenfield in state and county aforesaid, and that the printed matter attached hereto is a true copy, which publication being as follows:

6/22/2022



Sally Clark/Legal Advertising Clerk

6/22/2022

Date

Page : 1 of 2 06/22/2022 07:35:23

Order Number : 60103409
PO Number : Leah Konicki
Customer : G10636663 ASC Group, Inc./L
Contact : Carol Croto
Address1 : 9376 Castlegate Dr.
Address2 :
City St Zip : Indianapolis IN 46256
Phone : (317) 915-9300 x104
Fax : (317) 915-9301
Credit Card :
Printed By : Sally Rohm
Entered By : Dee Berge
Keywords : Public Notice
Notes :
Zones :

Ad Number : 50135339
Ad Key :
Salesperson : 812 - DR Class 2 - Berge
Publication : Daily Reporter
Section : 60 Notices
Sub Section : 60 Notices
Category : 6015 Legals
Dates Run : 06/22/2022-06/22/2022
Days : 1
Size : 1 x 12.51, 129 lines
Words : 455
Ad Rate : L-Government
Ad Price : 46.92
Amount Paid : 0.00
Amount Due : 46.92

Legal Advertisement
Public Notice
Des. Nos. 1702936 and
1802854

The Indiana Department of Transportation (INDOT) is planning to undertake an Added Travel Lanes Project, funded in part by the Federal Highway Administration (FHWA). The project is located in Pendleton and Huntsville, Fall Creek Township, Madison County.

Under the preferred alternative, the proposed project would involve construction of two additional through lanes on US 36/State Road (SR) 9/SR 67 from Madison Avenue/Lick Creek Pike to the bridge over Fall Creek, with an additional raised median/left turn lane from the south junction (at SR 38/State Street) to the north junction (at US 36) to Mercer Lane. The left and right turn lanes on US 36/SR 9/SR 67 at the south junction (at State Street) to Mercer Lane will be retained with widening as needed to insert the second northbound and southbound through lanes. At the south junction, dual left turns on eastbound (EB) State Street and dual left turns on westbound (WB) SR 38 will be constructed. At the north junction (where US 36 splits off to the east), the WB US 36 right turn lane storage will be extended to the first commercial drive with widening to the north. There will be approximately 3 acres of permanent and 0.3 acre of temporary right-of-way acquisition.

Properties listed in or eligible for the National Register of Historic Places (NRHP) located within the Area of Potential Effects (APE) include a house at 3021 SR 38.

Order Number : 60103409
 PO Number : Leah Konicki
 Customer : G10636663 ASC Group, Inc./L
 Contact : Carol Croto
 Address1 : 9376 Castlegate Dr.
 Address2 :
 City St Zip : Indianapolis IN 46256
 Phone : (317) 915-9300 x104
 Fax : (317) 915-9301
 Credit Card :
 Printed By : Sally Rohm
 Entered By : Dee Berge
 Keywords : Public Notice
 Notes :
 Zones :

Ad Number : 50135339
 Ad Key :
 Salesperson : 812 - DR Class 2 - Berge
 Publication : Daily Reporter
 Section : 60 Notices
 Sub Section : 60 Notices
 Category : 6015 Legals
 Dates Run : 06/22/2022-06/22/2022
 Days : 1
 Size : 1 x 12.51, 129 lines
 Words : 455
 Ad Rate : L-Government
 Ad Price : 46.92
 Amount Paid : 0.00
 Amount Due : 46.92

The proposed action impacts properties listed in or eligible for the NRHP. INDOT, on behalf of FHWA, has issued a "No Adverse Effect" finding for the project because the project will not diminish the integrity of the characteristics that qualify the historic properties within the APE for inclusion in the NRHP. In accordance with the National Historic Preservation Act, the views of the public are being sought regarding the effect of the proposed project on the historic elements as per 36 CFR 800.2(d), 800.3(e) and 800.6(a)(4). Pursuant to 36 CFR 800.4(d)(2), the documentation specified in 36 CFR 800.11(e) is available for inspection in ASC Group, Inc. Additionally, this documentation can be viewed electronically by accessing INDOT's Section 106 document posting website IN SCOPE at <http://erms.indot.in.gov/Section106Documents>. This documentation serves as the basis for the "No Adverse Effect" finding. The views of the public on this effect finding are being sought. Please reply with any comments to Leah Konicki, ASC Group, Inc., 9376 Castlegate Drive, Indianapolis, IN 46256, 317-915-9300, lkonicki@ascgroup.net no later than July 25, 2022.

In accordance with the "Americans with Disabilities Act", if you have a disability for which INDOT needs to provide accessibility to the document(s) such as interpreters or readers, please contact Kim Filson, 317-289-3193, kfilson@indot.in.gov.
 60103409 hspaxlp
 DR 6/22/23

From: [Leah Konicki](#)
To: [McCord, Beth K](#); ["Sandstrom, Scott"](#); ["Vollmer, Michael J."](#); ["Dave Benefiel"](#); [Denise McKee](#); [Branigin, Susan](#); [Harry Nikides](#); ["hurbanski@town.pendleton.in.us"](#); ["sreske@town.pendleton.in.us"](#); [Filson, Kim](#); ["Carpenter, Patrick A"](#); ["events@mainstreetpendleton.org"](#); ["kskenyon@mac.com"](#)
Subject: FHWA Project: Des. Nos. 1702936 and 1802854; NAE Finding, US 36/SR 9 Added Travel Lanes Project, Madison County, Indiana
Date: Monday, June 20, 2022 11:34:02 AM

Des. Nos.: 1702936 and 1802854

Project Description: US 36/SR 9 Added Travel Lanes Project

Location: Pendleton and Huntsville, Fall Creek Township, Madison County, Indiana

The Indiana Department of Transportation (INDOT), with funding from the Federal Highway Administration (FHWA), proposes to proceed with the US 36/SR 9 Added Travel Lanes Project (Des. Nos. 1702936 and 1802854).

INDOT, on behalf of FHWA, has signed a determination of "No Adverse Effect" for this Section 106 undertaking. In accordance with 36 CFR 800.4(d), you and the other consulting parties that responded to the early coordination letter are being provided the documentation for this finding. You can view the determination of "No Adverse Effect" electronically by accessing INDOT's Section 106 document posting website IN SCOPE at <http://erms.indot.in.gov/Section106Documents/> (the Des. No. is the most efficient search term, once in IN SCOPE). If a hard copy of the materials is needed, please respond to this email with your request as soon as you can.

Consulting parties have thirty (30) calendar days from receipt of this information to review and provide comment. Tribal consulting parties may enter the process at any time and are encouraged to respond to this notification with any comments or concerns at their earliest convenience.

Tribal contacts may contact Patty Jo Korzeniewski at pkorzeniewski@indot.in.gov or 317-416-4377 or Kari Carmany-George at FHWA at K.CarmanyGeorge@dot.gov or 317-226-5629.

Thank you in advance for your input,

Leah J. Konicki
Principal Investigator - Architectural Historian
Cultural Resources Manager

ASC Group, Inc.

9376 Castlegate Drive
Indianapolis, Indiana 46256
317.565.9100

[Facebook](#) | [LinkedIn](#) | [Web](#)



From: [Korzeniewski, Patricia J](#)
To: [snease@astribe.com](#); [klucas@delawarenation-nsn.gov](#); [lheady@delawaretribe.org](#); [thpo@estoo.net](#); [THPO@MiamiNation.com](#); [cechohawk@peoriatribe.com](#); [Matthew.Bussler@pokagonband-nsn.gov](#); [Section106@shawnee-tribe.com](#)
Cc: [Carpenter, Patrick A](#); [Korzeniewski, Patricia J](#); [Carmany-George, Karstin \(FHWA\)](#); [Leah Konicki](#)
Subject: FHWA Project: Des. Nos. 1702936 and 1802854; NAE Finding, US 36/SR 9 Added Travel Lanes Project, Madison County, Indiana
Date: Monday, June 20, 2022 1:20:42 PM

Des. Nos.: 1702936 and 1802854

Project Description: US 36/SR 9 Added Travel Lanes Project

Location: Pendleton and Huntsville, Fall Creek Township, Madison County, Indiana

The Indiana Department of Transportation (INDOT), with funding from the Federal Highway Administration (FHWA), proposes to proceed with the US 36/SR 9 Added Travel Lanes Project (Des. Nos. 1702936 and 1802854).

INDOT, on behalf of FHWA, has signed a determination of “No Adverse Effect” for this Section 106 undertaking. In accordance with 36 CFR 800.4(d), you and the other consulting parties that responded to the early coordination letter are being provided the documentation for this finding. You can view the determination of “No Adverse Effect” electronically by accessing INDOT’s Section 106 document posting website IN SCOPE at <http://erms.indot.in.gov/Section106Documents/> (the Des. No. is the most efficient search term, once in IN SCOPE). If a hard copy of the materials is needed, please respond to this email with your request as soon as you can.

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Tribal Contacts please respond to INDOT’s Tribal Liaison, Patty Jo Korzeniewski at pkorzeniewski@indot.in.gov (317-416-4377) with any responses pertaining to this project including to provide INDOT/Indiana FHWA additional information about Tribal resources/concerns and questions/comments regarding the results of the cultural resources survey. The FHWA point of contact is Kari Carmany-George at K.CarmanyGeorge@dot.gov (317-226-5629).

Patricia Jo Korzeniewski
Archaeologist and Tribal Liaison
INDOT, Cultural Resources Office
100 North Senate Avenue, N758-ES
Indianapolis, Indiana 46204
PKorzeniewski@indot.in.gov
1-317-416-4377
M-F 7:30 – 3:30

From: Korzeniewski, Patricia J <PKorzeniewski@indot.IN.gov>
Sent: Thursday, June 23, 2022 10:41 AM
To: Leah Konicki <lkonicki@ascgroup.net>
Cc: Coon, Matthew <mcoon@indot.IN.gov>; Carpenter, Patrick A <PACarpenter@indot.IN.gov>; Korzeniewski, Patricia J <PKorzeniewski@indot.IN.gov>
Subject: RE: FHWA Project: Des. Nos. 1702936 and 1802854; NAE Finding, US 36/SR 9 Added Travel Lanes Project, Madison County, Indiana

Good morning,

Please see the Peoria Tribe response to the NAE finding that was sent on 3/22/2022.

Patricia Jo Korzeniewski
Archaeologist and Tribal Liaison
INDOT, Cultural Resources Office
100 North Senate Avenue, N758-ES
Indianapolis, Indiana 46204
PKorzeniewski@indot.in.gov
[1-317-416-4377](tel:1-317-416-4377)
M-F 7:30 - 3:

From: Karen Stand kstand@peoriatribe.com
Sent: Tuesday, June 21, 2022 12:09 PM
To: Korzeniewski, Patricia J PKorzeniewski@indot.IN.gov
Cc: Charla EchoHawk cechohawk@peoriatribe.com
Subject: RE: FHWA Project: Des. Nos. 1702936 and 1802854; NAE Finding, US 36/SR 9 Added Travel Lanes Project, Madison County, Indiana

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

Karen Stand
Cultural Preservation Assistant
Peoria Tribe of Indians of Oklahoma
Office 918.540.2535 | Fax 918.540.2538
kstand@peoriatribe.com



Attachment can be found on page D-59

From: Charla EchoHawk <cechohawk@peoriatribes.com>

Sent: Monday, June 20, 2022 4:21 PM

To: Karen Stand <kstand@peoriatribes.com>

Subject: FW: FHWA Project: Des. Nos. 1702936 and 1802854; NAE Finding, US 36/SR 9 Added Travel Lanes Project, Madison County, Indiana

Thank you, Karen!

Charla K. EchoHawk

Director of Cultural Preservation

Peoria Tribe of Oklahoma

Office 918.540.2535 Ext. 9228 | Fax 918.540.2538

cechohawk@peoriatribes.com



PEORIA TRIBE
OF INDIANS OF OKLAHOMA

From: Korzeniewski, Patricia J <PKorzeniewski@indot.IN.gov>

Sent: Thursday, June 23, 2022 10:13 AM

To: lkonicki@ascgroup.net

Cc: Coon, Matthew <mcoon@indot.IN.gov>; Korzeniewski, Patricia J <PKorzeniewski@indot.IN.gov>; Carpenter, Patrick

A <PA Carpenter@indot.IN.gov>

Subject: FW: FHWA Project: Des. Nos. 1702936 and 1802854; NAE Finding, US 36/SR 9 Added Travel Lanes Project, Madison County, Indiana

Good morning,

Please find the Shawnee Tribe's response below to the NAE finding.

Patricia Jo Korzeniewski

Archaeologist and Tribal Liaison

INDOT, Cultural Resources Office

100 North Senate Avenue, N758-ES

Indianapolis, Indiana 46204

PKorzeniewski@indot.in.gov

1-317-416-43

M-F 7:30 - 3:

From: [Korzeniewski, Patricia J](#)
To: [Leah Konicki](#)
Cc: [Coon, Matthew](#); [Korzeniewski, Patricia J](#); [Carpenter, Patrick A](#)
Subject: FW: FHWA Project: Des. Nos. 1702936 and 1802854; NAE Finding, US 36/SR 9 Added Travel Lanes Project, Madison County, Indiana
Date: Thursday, June 23, 2022 10:13:29 AM
Attachments: [image001.png](#)

Good morning,

Please find the Shawnee Tribe's response below to the NAE finding.

Patricia Jo Korzeniewski
Archaeologist and Tribal Liaison
INDOT, Cultural Resources Office
100 North Senate Avenue, N758-ES
Indianapolis, Indiana 46204
PKorzeniewski@indot.in.gov
1-317-416-4377
M-F 7:30 - 3:30

From: Section106 <section106@shawnee-tribe.com>
Sent: Wednesday, June 22, 2022 10:11 AM
To: Korzeniewski, Patricia J <PKorzeniewski@indot.IN.gov>
Subject: RE: FHWA Project: Des. Nos. 1702936 and 1802854; NAE Finding, US 36/SR 9 Added Travel Lanes Project, Madison County, Indiana

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This letter is in response to the above referenced project.

The Shawnee Tribe's Tribal Historic Preservation Department concurs that no known historic properties will be negatively impacted by this project. However, there is still potential for the discovery of unknown resources.

We have no issues or concerns at this time. Please continue with the project as planned, but in the event that archaeological materials are encountered during construction, use, or maintenance of this location, please re-notify us at that time as we would like to resume immediate consultation under such a circumstance.

If you have any questions, you may contact me via email at Section106@shawnee-tribe.com

Thank you for giving us the opportunity to comment on this project.

Sincerely,



Erin Paden

TRIBAL HISTORIC PRESERVATION
SPECIALIST

Office: (918) 542-2441, x140
Email: epaden@shawnee-tribe.com

29 S Hwy 69A
Miami, OK 74354

shawnee-tribe.com

From: Korzeniewski, Patricia J <PKorzeniewski@indot.IN.gov>

Sent: Monday, June 20, 2022 12:20 PM

To: snease@astribe.com; klucas@delawarenation-nsn.gov; lheady@delawaretribe.org;
thpo@estoo.net; THPO@MiamiNation.com; cechohawk@peoriatribes.com;
Matthew.Bussler@pokagonband-nsn.gov; Section106 <section106@shawnee-tribe.com>

Cc: Carpenter, Patrick A <PACarpenter@indot.IN.gov>; Korzeniewski, Patricia J
<PKorzeniewski@indot.IN.gov>; Carmany-George, Karstin (FHWA) <k.carmanygeorge@dot.gov>;
lkonicki@ascgroup.net

Subject: FHWA Project: Des. Nos. 1702936 and 1802854; NAE Finding, US 36/SR 9 Added Travel Lanes Project, Madison County, Indiana

CAUTION: External email. Do not click links or open attachments unless you are confident the content is safe.

Des. Nos.: 1702936 and 1802854

Project Description: US 36/SR 9 Added Travel Lanes Project

Location: Pendleton and Huntsville, Fall Creek Township, Madison County, Indiana

The Indiana Department of Transportation (INDOT), with funding from the Federal Highway Administration (FHWA), proposes to proceed with the US 36/SR 9 Added Travel Lanes Project (Des. Nos. 1702936 and 1802854).

INDOT, on behalf of FHWA, has signed a determination of "No Adverse Effect" for this Section 106 undertaking. In accordance with 36 CFR 800.4(d), you and the other consulting parties that responded to the early coordination letter are being provided the documentation for this finding. You can view the determination of "No Adverse Effect" electronically by accessing INDOT's Section 106 document posting website IN SCOPE at <http://erms.indot.in.gov/Section106Documents/> (the Des. No. is the most efficient search term, once in IN SCOPE). If a hard copy of the materials is needed, please respond to this email with your request as soon as you can.

Consulting parties have thirty (30) calendar days from receipt of this information to review and



Miami Tribe of Oklahoma

3410 P St. NW, Miami, OK 74354 • P.O. Box 1326, Miami, OK 74355
Ph: (918) 541-1300 • Fax: (918) 542-7260
www.miamination.com



Via email: PKorzeniewski@indot.in.gov

June 28, 2022

Patricia Jo Korzeniewski
Archaeologist and Environmental Manager
INDOT, Cultural Resources Office
100 North Senate Avenue, N758-ES
Indianapolis, Indiana 46204

Re: Des. No. 1702936 & 1802854, US 36 & SR 9 Added Travel Lanes, Madison County,
Indiana – Comments of the Miami Tribe of Oklahoma

Dear Ms. Korzeniewski:

Aya, kikwehsitoole – I show you respect. The Miami Tribe of Oklahoma, a federally recognized Indian tribe with a Constitution ratified in 1939 under the Oklahoma Indian Welfare Act of 1936, respectfully submits the following comments regarding Des. No. 1702936 & 1802854, US 36 & SR 9 Added Travel Lanes in Madison County, Indiana.

The Miami Tribe offers no objection to the above-referenced project at this time, as we are not currently aware of existing documentation directly linking a specific Miami cultural or historic site to the project site. However, given the Miami Tribe's deep and enduring relationship to its historic lands and cultural property within present-day Indiana, 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. In such a case, please contact me at 918-541-8966 or by email at THPO@miamination.com to initiate consultation.

The Miami Tribe accepts the invitation to serve as a consulting party to the proposed project. In my capacity as Tribal Historic Preservation Officer I am the point of contact for consultation.

Respectfully,

Diane Hunter
Tribal Historic Preservation Officer



June 29, 2022

Leah J. Konicki
ASC Group, Inc.
9376 Castlegate Drive
Indianapolis, IN 46256

Federal Agency: Indiana Department of Transportation (“INDOT”),
on behalf of Federal Highway Administration, Indiana Division (“FHWA”)

Re: Indiana Department of Transportation’s finding of “no adverse effect” on behalf of the Federal
Highway Administration for US 36 and SR 9 added travel lanes (Des. No. 1702936 and
1802854; DHPA No. 27955)

Dear Ms. Konicki:

Pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. § 306108), 36 C.F.R. Part 800, and the “Programmatic Agreement (PA) Among the Federal Highway Administration, the Indiana Department of Transportation, the Advisory Council on Historic Preservation and the Indiana State Historic Preservation Officer Regarding the Implementation of the Federal Aid Highway Program In the State of Indiana,” the staff of the Indiana State Historic Preservation Officer (“Indiana SHPO”) has reviewed your June 20, 2022, submission, which enclosed INDOT’s finding and supporting documentation, received by our office the same day for this project in Pendleton, Fall Creek Township, Madison County, Indiana.

As previously indicated, for the purposes of the Section 106 review of this federal undertaking, we agree with the conclusions of the historic property report that the house at 3021 SR 38 is the only historic property located within the project’s area of potential effects that is eligible for inclusion in the National Register of Historic Places (“NRHP”). We note that this site was previously found to be eligible during the Section 106 review processes for Des. No. 0710879 (DHPA #5040) in 2008 and Des. No 1297161 (DHPA #16354) in 2014. Although time has passed since these determinations, based upon the information provided, we agree that the house appears to remain eligible under Criterion C. Furthermore, we agree that there are no other historic properties listed in or eligible for inclusion in the NRHP within the project’s area of potential effect.

Also as previously indicated, regarding the archaeological resources, there is insufficient information to determine whether archaeological site 12M813 is eligible for inclusion in the NRHP. We understand that the project has been redesigned to avoid site 12M813. Site 12M813 should be clearly marked and must be avoided by all ground-disturbing project activities. If the design is altered in the future and avoidance is not feasible, a plan for further archaeological investigations and evaluation of site 12M813 must be submitted to the Indiana SHPO for review and comment prior to further field investigations. Further archaeological investigations must be conducted in accordance with the “Secretary of the Interior’s Standards and Guidelines for Archaeology and Historic Preservation” (48 F.R. 44716).

Accordingly, we concur with INDOT's June 20, 2022, Section 106 finding of "No Adverse Effect" on behalf of FHWA for this federal undertaking.

If any prehistoric or historic archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and -29) requires that the discovery be reported to the Indiana SHPO within two (2) business days. In that event, please call (317) 232-1646. Be advised that adherence to Indiana Code 14-21-1-27 and -29 does not obviate the need to adhere to applicable federal statutes and regulations, including but not limited to 36 C.F.R. Part 800.

The Indiana SHPO staff's archaeological reviewer for this project is Beth McCord, and the structures reviewers are Danielle Kauffmann and Caitlin Lehman. However, if you have a question about the Section 106 process, please contact initially the INDOT Cultural Resources staff members who are assigned to this project.

In all future correspondence about the US 36 and SR 9 added travel lanes project in Madison County (Des. No. 1702936 & 1802854), please refer to DHPA No. 27955.

Very truly yours,



Beth K. McCord
Deputy State Historic Preservation Officer

BKM:CML:DMK:cml

emc: Kari Carmany- George, FHWA
Matt Coon, INDOT
Susan Branigin, INDOT
Leah Konicki, ASC Group, Inc.
Steve Schug, Main Street Pendleton
Beth McCord, DNR-DHPA
Danielle Kauffmann, DNR-DHPA
Caitlin Lehman, DNR-DHPA



EASTERN SHAWNEE CULTURAL PRESERVATION DEPARTMENT

70500 East 128 Road, Wyandotte, OK 74370

August 22, 2022

INDOT - Indiana Department of Transportation

100 N. Senate Ave. IGCN642

Indianapolis, IN 46201

RE: *Des No 1802854, Madison County, IN*

Dear Ms. Korzeniewski,

The Eastern Shawnee Tribe has received your letter regarding the above referenced project(s) within Madison County, IN. The Eastern Shawnee Tribe is committed to protecting sites important to Tribal Heritage, Culture and Religion. Furthermore, the Tribe is particularly concerned with historical sites that may contain but not limited to the burial(s) of human remains and associated funerary objects.

As described in your correspondence, and upon research of our database(s) and files, we find our people occupied these areas historically and/or prehistorically. However, the project proposes **NO Adverse Effect** or endangerment to known sites of interest to the Eastern Shawnee Tribe. Please continue project as planned. However, should this project inadvertently discover an archeological site or object(s) we request that you immediately contact the Eastern Shawnee Tribe, as well as the appropriate state agencies (within 24 hours). We also ask that all ground disturbing activity stop until the Tribe and State agencies are consulted. Please note that any future changes to this project will require additional consultation.

In accordance with the NHPA of 1966 (16 U.S.C. § 470-470w-6), federally funded, licensed, or permitted undertakings that are subject to the Section 106 review process must determine effects to significant historic properties. As clarified in Section 101(d)(6)(A-B), historic properties may have religious and/or cultural significance to Indian Tribes. Section 106 of NHPA requires Federal agencies to consider the effects of their actions on all significant historic properties (36 CFR Part 800) as does the National Environmental Policy Act of 1969 (43 U.S.C. § 4321-4347 and 40 CFR § 1501.7(a)). This letter evidences NHPA and NEPA historic properties compliance pertaining to consultation with this Tribe regarding the referenced proposed projects.

Thank you, for contacting the Eastern Shawnee Tribe, we appreciate your cooperation. Should you have any further questions or comments please contact our Office.

Sincerely,

Paul Barton, Tribal Historic Preservation Officer (THPO)

Eastern Shawnee Tribe of Oklahoma

(918) 666-5151 Ext:1833

THPO@estoo.net



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N758-ES
Indianapolis, Indiana 46204

PHONE: (855) 463-6848

Eric Holcomb, Governor
Michael Smith, Commissioner

December 21, 2023

This letter was sent to the listed parties.

Dear Consulting Party,

The Indiana Department of Transportation (INDOT), with funding from the Federal Highway Administration (FHWA), proposes to proceed with the US 36/State Road (SR) 9 Added Travel Lanes (ATL) Project, in Pendleton and Huntsville, Fall Creek Township, Madison County (Des. Nos. 1702936 and 1802854). The Town of Pendleton, with funding from the FHWA and administrative oversight from the INDOT, proposes to proceed with the Pedestrian Connectivity Project (Des. No. 2001127) in Pendleton, Fall Creek Township, Madison County.

This letter is part of the Section 106 review process for this project. Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic properties. We are requesting comments from you regarding the possible effects of this project. Please use the above Des. Numbers and project description in your reply and your comments will be incorporated into the formal environmental study.

INDOT is reopening Section 106 consultation following the decision to combine the US 36/SR 9 ATL Project and the Pedestrian Connectivity Project into a single National Environmental Policy Act (NEPA) Categorical Exclusion (CE) document. Portions of the Pedestrian Connectivity Project extend outside of the APE for the ATL Project and additional Section 106 investigations were conducted.

The Pedestrian Connectivity Project was to be cleared through Section 106 under Categories B-1 and B-8 of the Minor Projects Programmatic Agreement (MPPA) prior to the combination of the projects under NEPA. However, the MPPA cannot be used to clear only part of an undertaking. When the projects were combined, a regular Section 106 clearance became necessary. Since the Pedestrian Connectivity Project largely overlaps the same areas as the US 36/SR 9 ATL Project, the two are being combined into one updated Section 106 finding. In addition, refinement of the design of the project resulted in the need for additional archaeological survey. This updated Section 106 finding also incorporates this additional survey.

CDM Smith is under contract with INDOT to advance the environmental documentation for the referenced project. ASC Group, Inc. has been subcontracted to complete the Section 106 documentation for the project.

In accordance with 36 CFR 800.2 (c), you were invited to become a consulting party as part of the Section 106 process, or you are hereby invited to become a consulting party as part of the Section 106 process. Entities that have previously accepted consulting party status—as well as additional entities that are currently being invited to become consulting parties—are identified in the attached list.

The Section 106 process involves efforts to identify historic properties potentially affected by the undertaking, to assess the undertaking's effects and to seek ways to avoid, minimize, or mitigate any adverse effects on historic properties. For more information regarding the protection of historic resources, please see the Advisory Council on Historic

Preservation's guide: *Protecting Historic Properties: A Citizen's Guide to Section 106 Review* available online at <https://www.achp.gov/sites/default/files/documents/2017-01/CitizenGuide.pdf>.

The Area of Potential Effects (APE) is the area in which the proposed project may cause alterations in the character or use of historic resources. The APE contains no resources listed in the National Register of Historic Places (NRHP).

A historian who meets the Secretary of the Interior's Professional Qualification Standards identified and evaluated above-ground resources within the expanded APE for potential eligibility for the NRHP. No additional above-ground resources were identified within the expanded APE that warrant a rating of Contributing or higher in the Indiana Historic Sites and Structures Inventory.

With regard to archaeological resources, an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards conducted two Addendum Phase Ia archaeological surveys of portions of the Pedestrian Connectivity Project that were not also part of the ATL Project. No archaeological sites or resources were identified. No further investigations appear warranted, and project clearance is suggested.

Due to the additional investigations completed, the lack of resources eligible for listing within the Indiana Register of Historic Sites and Structures and/or the NRHP within the expanded portions of the APE, and the lack of any additional impacts to the historic properties identified within the ATL Project APE resulting from the Pedestrian Connectivity Project, an addendum 800.11 document and updated finding of "No Adverse Effect" has been issued by INDOT.

The updated "No Adverse Effect" finding and addendum 800.11 documentation and the two addendum archaeology reports (Tribes and SHPO only) are available for review in IN SCOPE at <http://erms.indot.in.gov/Section106Documents/> (the Des. No. is the most efficient search term, once in IN SCOPE). You are invited to review these documents and to respond with comments on any historic resource impacts incurred as a result of this project so that an environmental report can be completed. We also welcome your related opinions and other input to be considered in the preparation of the environmental document. If you prefer a hard-copy of this material, please respond to this email with your request as soon as you can.

Please review the information and comment within thirty (30) calendar days of receipt. If you indicate that you do not desire to be a consulting party or if you have not previously accepted consulting party status and you do not respond to this letter, you will not be included on the list of consulting parties for this project and will not receive further information about the project unless the design changes. Tribal consulting parties may enter the process at any time and are encouraged to respond to this notification with any comments or concerns at their earliest convenience.

For questions concerning specific project details, you may contact Douglas Terpstra of ASC Group, Inc. at 614-268-2514, ext. 3556 or dterpstra@ascgroup.net. All future responses regarding the proposed project should be forwarded to ASC Group, Inc. at the following address:

ASC Group, Inc.
800 Freeway Drive North, Suite 101
Columbus, OH 43229
dterpstra@ascgroup.net

Tribal Contacts please respond to INDOT's Acting Tribal Liaison, Matt Coon mcoon@indot.in.gov (317-697-9752) with any responses pertaining to this project including to provide INDOT/Indiana FHWA additional information about Tribal resources/concerns and questions/comments regarding cultural resources. The FHWA point of contact is Kari Carmany-George at K.CarmanyGeorge@dot.gov (317-226-5629).

Sincerely,



Matthew S. Coon, Manager
Cultural Resources Office
Environmental Services

Distribution List:

Beth K. McCord, Deputy State Historic Preservation Officer
Olivia Pratt, Madison County Commissioner
John Richwine, Madison County Commissioner
Darlene Likens, Madison County Commissioner
Jerrold Bridges, Madison County Council of Governments
Dave Benefiel, Madison County Council of Governments
Scott Harless, Madison County Highway Department
Stephen T. Jackson, Madison County Historian
Melody Hull, Madison County Historical Society
Indiana Landmarks, Eastern Regional Office
Brittany Miller, Indiana Landmarks
Marissa Skaggs, Pendleton Town Council President
Scott Reske, Pendleton Town Manager
Denise McKee, Pendleton Planning Department
Rick Bowlin, Pendleton Department of Public Works
Nancy Noel, Pendleton Historical Museum
Steve Schug, Main Street Pendleton
Jack Wilson, Main Street Pendleton
Kevin Kenyon, Historic Fall Creek, Pendleton Settlement, Inc.
Richard and Shirley Richwine, owners, Jimmie's Dairy Bar
Eastern Shawnee Tribe of Oklahoma
Miami Tribe of Oklahoma
Peoria Tribe of Indians of Oklahoma
Pokagon Band of Potawatomi Indians
Shawnee Tribe
Absentee Shawnee Tribe of Oklahoma
Delaware Nation of Oklahoma
Delaware Tribe of Indians

**FEDERAL HIGHWAY ADMINISTRATION'S
SECTION 4(F) COMPLIANCE REQUIREMENTS (for historic properties) AND
SECTION 106 FINDINGS AND DETERMINATIONS
AREA OF POTENTIAL EFFECT
ELIGIBILITY DETERMINATIONS**

**EFFECT FINDING
US 36/SR 9 ADDED TRAVEL LANES PROJECT AND PEDESTRIAN CONNECTIVITY PROJECT, PENDLETON
AND HUNTSVILLE,
FALL CREEK TOWNSHIP, MADISON COUNTY, INDIANA
DES. NOS.: 1702936, 1802854, AND 2001127**

AREA OF POTENTIAL EFFECTS

(Pursuant to 36 CFR Section 800.4(a)(1))

The Area of Potential Effects (APE) for above-ground resources typically is one parcel deep on either side of the project area and was determined by sight lines to and from the project. The APE for archaeology encompasses all of the right-of-way required for the undertaking. The APE was expanded to cover areas for Des. No. 2001127 that were not covered by the previous APE for Des. Nos. 1702936 and 1802854. A map of the APE is included in Appendix A (Maps 1–3).

ELIGIBILITY DETERMINATIONS

(Pursuant to 36 CFR 800.4(c)(2))

3021 SR 38

The property is a two-story house with Italianate stylistic features. These features include a low pyramidal roof with wood brackets in the eaves. The house is constructed of concrete block, with the exterior walls covered with concrete blocks molded to resemble ashlar cut stone. The property is significant under Criterion C as an example of the Italianate architectural style and as an uncommon early example of a house constructed almost entirely of concrete blocks.

EFFECT FINDING

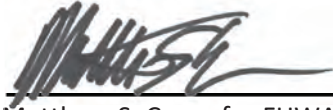
3021 SR 38: No Adverse Effect

The Indiana Department of Transportation (INDOT), acting on the Federal Highway Administration's (FHWA's) behalf, has determined a "No Adverse Effect" finding is appropriate for this undertaking.

INDOT respectfully requests the Indiana State Historic Preservation Officer provide written concurrence with the Section 106 determination of effect.

SECTION 4(F) COMPLIANCE REQUIREMENTS (for historic properties)

3021 SR 38 - This undertaking will not convert property from 3021 SR 38, a Section 4(f) historic property, to a transportation use; INDOT, acting on FHWA's behalf has determined the appropriate Section 106 finding is "No Adverse Effect"; therefore, no Section 4(f) evaluation is required for 3021 SR 38.



Matthew S. Coon, for FHWA
Manager
INDOT Cultural Resources

December 14, 2023
Approved Date

**ADDENDUM FEDERAL HIGHWAY ADMINISTRATION
DOCUMENTATION OF SECTION 106 FINDING OF
NO ADVERSE EFFECT
SUBMITTED TO THE STATE HISTORIC PRESERVATION OFFICER
PURSUANT TO 36 CFR Section 800.5(c)
US 36/SR 9 ADDED TRAVEL LANES PROJECT AND PEDESTRIAN CONNECTIVITY PROJECT, PENDLETON
AND HUNTSVILLE,
FALL CREEK TOWNSHIP, MADISON COUNTY, INDIANA
DES. NOS.: 1702936, 1802854, AND 2001127**

1. DESCRIPTION OF THE UNDERTAKING

The proposed undertaking is the US 36/State Road (SR) 9 Added Travel Lanes (ATL) Project (Des. Nos. 1702936 and 1802854) and Pedestrian Connectivity Project (Des. No. 2001127) in Pendleton and Huntsville, Fall Creek Township, Madison County, Indiana (Appendix A: Maps 1–3). The project is located on SR 9/SR 67 from north of Huntsville Road/County Road (CR) 500 South (S) in Huntsville at the northern end to south of E Madison Avenue/Lick Creek Pike in southeastern Pendleton at the southern end. The project area also includes portions of SR 38 and US 36.

The Indiana Department of Transportation (INDOT), acting on behalf of the Federal Highway Administration (FHWA), determined a finding of “No Adverse Effect” was appropriate for the US 36/SR 9 ATL Project on June 20, 2022. The Pedestrian Connectivity Project was to be cleared through Section 106 under Categories B-1 and B-8 of the Minor Projects Programmatic Agreement (MPPA) prior to the combination of the projects under National Environmental Policy Act (NEPA). However, the MPPA cannot be used to clear only part of an undertaking. When the projects were combined, a regular Section 106 clearance became necessary. Since the Pedestrian Connectivity Project largely overlaps the same areas as the US 36/SR 9 ATL Project, the two are being combined into one updated Section 106 finding. In addition, refinement of the design of the project resulted in the need for additional archaeological survey. This updated Section 106 finding also incorporates this additional survey.

INDOT has reopened Section 106 consultation following the decision to combine the US 36/SR 9 ATL Project and the Pedestrian Connectivity Project into a single NEPA Categorical Exclusion (CE) document. This addendum to the documentation of the Section 106 finding of “No Adverse Effect” summarizes the pedestrian project and assessment of effects for the pedestrian project.

Description of the Modified Undertaking

The Pedestrian Connectivity Project (Des. No. 2001127) is on US 36/SR 9/SR 67 from the north junction of US 36 and SR 9 at the northern end to just south of E Madison Avenue/Lick Creek Pike at the southern end. The project area also includes portions of State Street, SR 38, US 36 east of the north junction in Madison County, Indiana. The project area also consists of the corridor to the west which runs along Hayden Way and connects SR 9/SR 67 to E Water Street. The undertaking is within Fall Creek Township and is on the Anderson South and Pendleton United States Geological Survey (USGS) topographic quadrangles, in Sections 21 and 22, Township 18 North, Range 7 East.

The Pedestrian Connectivity Project (Des. No. 2001127) is associated with a separate, but related, project: the proposed US 36/SR 9 ATL Project (Des. Nos. 1702936 and 1802854) in Pendleton and Huntsville, Madison County, Indiana. The two projects are associated, but have been designated as separate projects

because the ATL Project is an INDOT undertaking and the Pedestrian Connectivity Project is a Local Public Agency (LPA) venture with a slightly different footprint. It is unclear if all aspects of the Pedestrian Connectivity Project will receive necessary funds to complete, but the footprint of all components of the project was surveyed. The two project areas were combined and surveyed jointly. The INDOT and LPA projects are located along a throughway of eastern Pendleton that is a concurrent highway including SR 9 and SR 67, while portions also include SR 38 and US 36. The combined project area spans from north of Huntsville Road/CR 500 S in Huntsville at the northern end to south of E Madison Avenue/Lick Creek Pike in southeastern Pendleton at the southern end. The project area also includes a section of E State Street from the railroad tracks west of SR 9 to just west of South CR 300 West (S CR 300 W), which is east of SR 9, and a section of US 36 from SR 9 to just east of S CR 300 W.

The purpose of the Pedestrian Connectivity Project is to address pedestrian and bicycle accessibility and safety by increasing pedestrian and bicycle connectivity and to improve vehicular safety by reducing conflict points through the implementation of access management methods along a high-traffic corridor. The need stems from the existing traffic congestion, anticipated increase in vehicular traffic, and the lack of safe pedestrian and bicycle access to Pendleton High School and businesses in the area. This project will provide a pedestrian and bicycle connection between the high school and E Water Street, where the town's recreation facilities exist.

The Pedestrian Connectivity Project includes elements of access management (raised landscaped medians on US 36 and SR 38), pedestrian connectivity (sidewalks and shared-use paths), Americans with Disabilities Act (ADA) compliance for all pedestrian elements and curb ramps, drainage, pedestrian lighting, signage, and other amenities, as well as pedestrian refuge islands, accessible pedestrian signals, pedestrian and bicycle counter, and benches. Concrete curb will be installed on the east and west sides of US 36 from south of E Madison Avenue to the SR 9 junction and then on the US 36 east leg and on the north and south side of E State Street and SR 38. A shared-use path will be installed on the east side of US 36 from Madison Avenue to the SR 9 junction. A shared-use path will be installed on the west side of SR 9 from the US 36 junction to the west through an open area and then along Hayden Way to E Water Street. Sidewalk will be installed on the north and south sides of E State Street and SR 38, on the south side of the US 36 east leg of the north junction, and the west side of US 36 between E State Street and the US 36/SR 9 north junction. Curb ramps will be placed at the intersections of US 36/E State Street and US 36/SR 9, and at the termini of the paths at E Madison Avenue and E Water Street.

Refinement of the project design since the "No Adverse Effect" finding of June 20, 2022, resulted in two areas that required additional archaeological survey. The first area is a proposed detention basin in the northeastern corner of the US 36/SR 9/SR 67 and US 36 intersection, which is need to offset the additional impervious area and keep peak runoff under acceptable levels at discharge points. The second area is adjacent to the R&R Market in the southeastern corner of the US 36/SR 9/SR 67 and SR 38 intersection and is required for drive access and paved areas for truck access to US 36/SR 67 (on the west) and to SR 38 (on the north). These areas are within the previously established Area of Potential Effects (APE) for above-ground resources.

The amounts of right-of-way required for both undertakings have been refined since INDOT, acting on behalf of FHWA, determined the finding of "No Adverse Effect" was appropriate for the US 36/SR 9 ATL Project on June 20, 2022. The total proposed right-of-way for the US 36/SR 9 ATL and Pedestrian Connectivity Project (Des. Nos. 2001127, 1702936, and 1802854) is 11.602 acres. The total proposed reacquisition right-of-way for the US 36/SR 9 ATL Project (Des. Nos. 1702936 and 1802854) is 5.744 acres. The proposed permanent right-of-way for the US 36/SR 9 ATL Project (Des. Nos. 1702936 and 1802854)

is 4.219 acres, while the proposed temporary right-of-way is 0.619 acre. The proposed permanent right-of-way for the Pedestrian Connectivity Project (Des. Nos. 2001127) is 0.903 acre, while the proposed temporary right-of-way is 0.117 acre.

Because this project is receiving funds from the FHWA, it is a federal undertaking subject to Section 106 of the National Historic Preservation Act.

The APE for above-ground resources was determined by sight lines to and from the project and is typically one parcel deep on either side of the project area. The APE for archaeology encompasses all of the right-of-way required by the undertaking (Appendix A: Maps 1–3). The APE was expanded to include areas for the Pedestrian Connectivity Project that were not covered under the previous APE for the US 36/SR 9 ATL Project. These areas include the Hayden Way segment of the shared-use path, where the APE extends to a tree line on the west and is one parcel deep to the north and east. Also, the south end of the Pedestrian Connectivity Project along US 36/SR 9/SR 67 extends slightly further south than the US 36/SR 9 ATL Project, and the APE has been extended a short distance south accordingly.

The project area is located in Huntsville and Pendleton, and land use in the area is mixed commercial, institutional, and residential. The project area is in proximity to the National Register of Historic Places (NRHP)-listed Pendleton Historic District (NR-0988); however, the district is not included within the APE due to sight lines and distance from the project area. The extant above-ground structures within the APE were built between the mid-nineteenth century and the present day (Appendix B: Photographs 1–18).

2. PREVIOUSLY IDENTIFIED HISTORIC PROPERTIES AND EFFECTS DETERMINATIONS

Efforts to identify historic properties in the APE included a check of data available online at the Indiana State Historic Architectural and Archaeological Research Database (SHAARD) and the Indiana Historic Buildings, Bridges, and Cemeteries Map (IHBBC Map), a review of the *Madison County Interim Report* (Historic Landmarks Foundation of Indiana (HLFI) 1984), historical/architectural and archaeological fieldwork, and communication with consulting parties. Sources of information examined included NRHP listings, Indiana Register of Historic Sites and Structures (IRHSS) listings, the Indiana Historic Bridge Inventory, archaeological site maps, cultural resources management reports, and cemetery records.

There are no NRHP- or IRHSS-listed properties within the APE. No historic bridges, cemeteries, or previously recorded archaeological sites are located within the APE. One property in the APE has been recorded in the Indiana Historic Sites and Structures Inventory (IHSSI): IHSSI No. 092-502-62005, a ca. 1880 gabled ell house with Queen Anne-style features and is rated Contributing in the IHSSI (Appendix A: Map 3).

The results of the field surveys for the ATL Project were reported in a Historic Property Report (HPR) [Konicki et al. 2022] and a Phase Ia Archaeological Records Check and Reconnaissance Survey Report (Aukeman and Mustain 2021). The principal investigators for these reports meet the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61. The HPR recommended one property as eligible for listing in the NRHP: 3021 SR 38, an Italianate-style house constructed of ornamental concrete blocks. The location of this property is shown on the map at Appendix A: Map 3.

The archaeological survey identified one site: 12-M-0813, a nineteenth to early twentieth century mill site. The archaeological survey report recommended that the site has potential to be eligible for listing in the NRHP under Criterion D and recommended that the site be avoided. The design of the ATL Project was

altered to avoid the site. The report recommended no further archaeological investigation as long as the site remains outside of the ATL Project limits. Site 12-M-0813 is not adjacent to the Pedestrian Connectivity Project area.

INDOT, acting on behalf of FHWA, determined a finding of “No Adverse Effect” was appropriate for this undertaking on June 20, 2022 (Appendix F: F-2 to F-10). A public notice was published in the *Greenfield Daily Reporter* on June 22, 2022, and the public was afforded the opportunity to comment (Appendix F: F-11 to F-13).

The Peoria Tribe of Indians of Oklahoma sent another copy of their March 22, 2022, letter, originally submitted to comment on the HPR and archaeology report, on June 21, 2022, stating that they are unaware of a direct link to the project location and that they have no objection to the proposed project (Appendix F: F-14).

The Shawnee Tribe concurred that no known historic properties will be negatively impacted by this project in an email dated June 22, 2022 (Appendix F: F-15 to F-16).

The Miami Tribe of Oklahoma responded in a letter dated June 28, 2022, stating that they offer no objection to the project, as they are not aware of existing documentation directly linking a specific Miami cultural or historic site to the project site (Appendix F: F-17).

The SHPO concurred with this finding in a letter dated June 29, 2022 (Appendix F: F-18 to F-19).

The Eastern Shawnee Tribe of Oklahoma, in a letter dated August 22, 2022, concurred that the project proposes No Adverse Effect or endangerment to known sites of interest to the Eastern Shawnee Tribe (Appendix F: F-20).

No other comments on the finding of effect were received.

The APE has been expanded to include portions of the Pedestrian Connectivity Project that fell outside of the APE for the ATL Project. Additional above-ground investigations identified no additional resources in the expanded APE that warrant a Contributing rating or higher per the IHSSI in addition to those identified in the HPR for the ATL Project (Appendix B: Photos 11–18 show the expanded APE area).

An addendum to the Phase Ia Archaeological Records Check and Reconnaissance Survey (Terheide 2022) was prepared to incorporate the Hayden Way link between Water Street and SR 9, which was developed after the 2021 archaeology report had been prepared. The addendum archaeology report identified no archaeological resources in this addendum project area. The addendum archaeology report will be distributed to the SHPO and Tribes concurrent with this addendum 800.11(e) documentation (Appendix D: D-2 to D-4).

A second addendum to the Phase Ia Archaeological Records Check and Reconnaissance Survey (Beckett 2023) was prepared to incorporate a detention basin and drive access to a commercial property that fell outside of the previous archaeological surveys. The second addendum archaeology report identified no archaeological resources in this addendum project area. The second addendum archaeology report will be distributed to the SHPO and Tribes concurrent with this addendum 800.11(e) documentation (Appendix D: D-5 to D-7).

3. DESCRIBE AFFECTED HISTORIC PROPERTIES

3021 SR 38

3021 SR 38 is a two-story Italianate-style house. The house's exterior walls consist of decorative concrete block, including blocks resembling ashlar cut stone for the walls with quoins at the corners. The low pyramidal roof has wood brackets under the eaves. The front porch foundation also consists of concrete block, and the porch features two decorative concrete columns. The house is significant under Criterion C as an excellent example of the Italianate style and for its use of decorative concrete blocks. The house has previously been determined eligible for the NRHP in 2008 under Des. No. 0170879 and in 2014 under Des. No. 1297161.

4. DESCRIBE THE UNDERTAKING'S EFFECTS ON HISTORIC PROPERTIES

3021 SR 38

The undertaking will not directly affect the house located at 3021 SR 38; however, elements of the undertaking will be visible from the house (Appendix E: E-17, E-34, E-47, and E-63). The construction along SR 38, consisting of a raised median, will end approximately 660 feet west of the house, with the ROW acquisition ending approximately 220 feet west of the house. Incidental construction consisting of pavement markings will end approximately 100 feet west of the house. There are existing sidewalks along both sides of SR 38 adjacent to this property, which will be retained. The closest sidewalk construction along SR 38 will be along the north side of the road to the west of the eastern access road from SR 38 into the shopping plaza. No sidewalk currently is present in this area, and the new shared-use path will connect to the existing sidewalk east of the access road. The sidewalk construction will end approximately 350 feet west of the house. There are existing roadway luminaire poles extending west from the roundabout (east of the house at the intersection of SR 38 and S CR 300 W) to the east edge of the Pendleton Heights High School property, including in front of 3021 SR 38. New pedestrian luminaires will be added along the sidewalk south of the road and the new sidewalk north of the road west of where the existing luminaires end. The closest new luminaire will be approximately 315 feet west of the house. No other amenities will be added in the vicinity of the house. The setting of the house has already been altered through the construction of the roundabout east of the house.

5. EXPLAIN APPLICATION OF CRITERIA OF ADVERSE EFFECT -- INCLUDE CONDITIONS OR FUTURE ACTIONS TO AVOID, MINIMIZE OR MITIGATE ADVERSE EFFECTS

According to 36 CFR 800.5(a)(1), "an adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association." The criteria of adverse effect as defined in 36 CFR 800.5(a)(1) do not apply to this project. The citations included below are examples of Adverse Effects and not the criteria. Adverse Effects are not limited to these examples.

3021 SR 38

Per 36 CFR 800.5(a)(2)(i), the undertaking will not result in the "physical destruction of or damage to all or part of the property." The undertaking will not physically affect the house located at 3021 SR 38.

Per 36 CFR 800.5(a)(2)(ii), the undertaking will not result in the “alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access, that is not consistent with the Secretary’s Standards for the Treatment of Historic Properties and/or other applicable guidelines.” The undertaking will not physically affect the house located at 3021 SR 38.

Per 36 CFR 800.5(a)(2)(iii), the undertaking will not result in the “removal of the property from its historic location.” The project will not remove the house located at 3021 SR 38 from its historic location.

Per 36 CFR 800.5(a)(2)(iv), the undertaking will not result in the “Change of the character of the property’s use or of physical features within the property’s setting that contribute to its historic significance.” The undertaking will not change the residential use of the house at 3021 SR 38. The undertaking will not alter any physical features within the property’s setting that contribute to the house’s historic significance.

Per 36 CFR 800.5(a)(2)(v), the undertaking will not result in the “Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property’s significant historic features.” The widening of SR 38 will be a minor visual change within the viewshed of the house located at 3021 SR 38. However, the visual character of the surrounding area has already been changed through modern development, including commercial development to the north and schools to the west and southeast. SR 38 has already been widened west of the house in past projects, and a roundabout is now adjacent to the house to the east. There are already existing sidewalks along SR 38 adjacent to this property, which will not be altered. The construction of the new sidewalk on the opposite side of the road to the west will not further change the visual character of the area. Similarly, there are existing luminaire poles in front of the property; the addition of luminaire poles further to the west will be only a very minor change in the visual character of the house’s setting. The undertaking will not significantly alter the setting of the house in such a way as to diminish the house’s integrity. The project will not introduce new atmospheric or audible elements to the setting of the house.

Per 36 CFR 800.5(a)(2)(vi), the undertaking will not cause the “neglect of a property which causes its deterioration...” The undertaking will not cause neglect of the house located at 3021 SR 38.

Per 36 CFR 800.5(a)(2)(vii), the undertaking will not cause the “transfer, lease, or sale of property out of Federal ownership or control...” Ownership of the house located 3021 SR 38 will not change as a result of this project.

Therefore, the undertaking will have No Adverse Effect on the house located at 3021 SR 38.

6. SUMMARY OF CONSULTING PARTIES AND PUBLIC VIEWS

The list of consulting parties included in Appendix C has been annotated to indicate those consulting parties that accepted consulting party status through the comment period on the June 20, 2022, finding. All originally invited consulting parties for the US 36/SR 9 ATL Project will be provided this addendum finding for a 30-day comment period.

A public notice for the addendum finding will be published in a local newspaper and the public will be afforded thirty (30) days to respond. If appropriate, this document will be revised after the expiration of the public comment period to include any substantive comments received.

APPENDIX

Appendix A. Maps

Appendix B. Photographs

Appendix C. Consulting Parties List

Appendix D. Abstract and Summary for the Addendum Phase Ia Archaeology Report

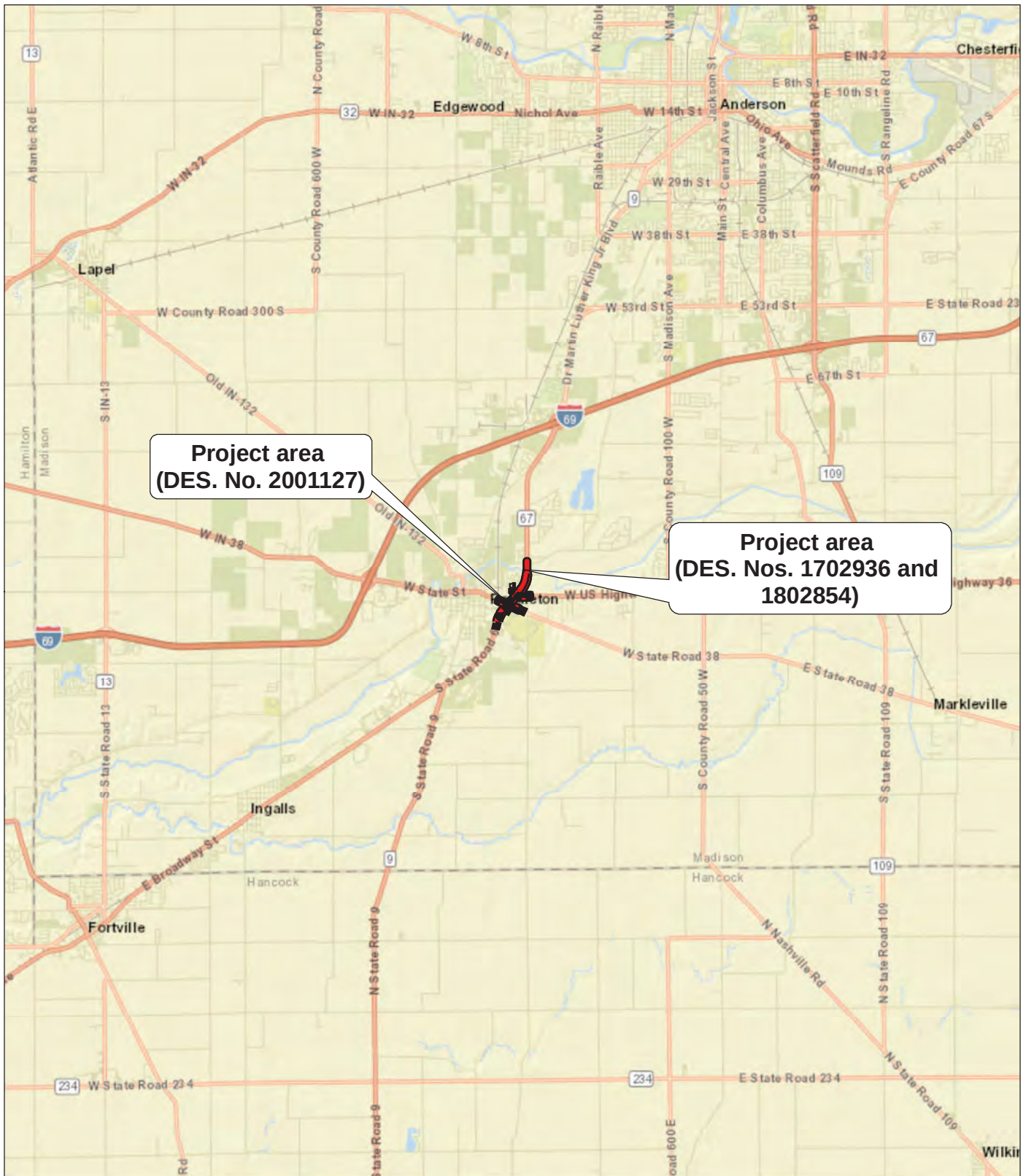
Appendix E. Plan Set **Appendix E was removed - plans can be found in Appendix B.**

Appendix F. Previous Findings and Documentation **Appendix F was removed - original finding/information is contained in pages Appendix D: D-2 to D-154.**

Note: A full copy of all of the reports in Appendix D can be found in IN SCOPE:

<http://erms.indot.in.gov/Section106Documents>.

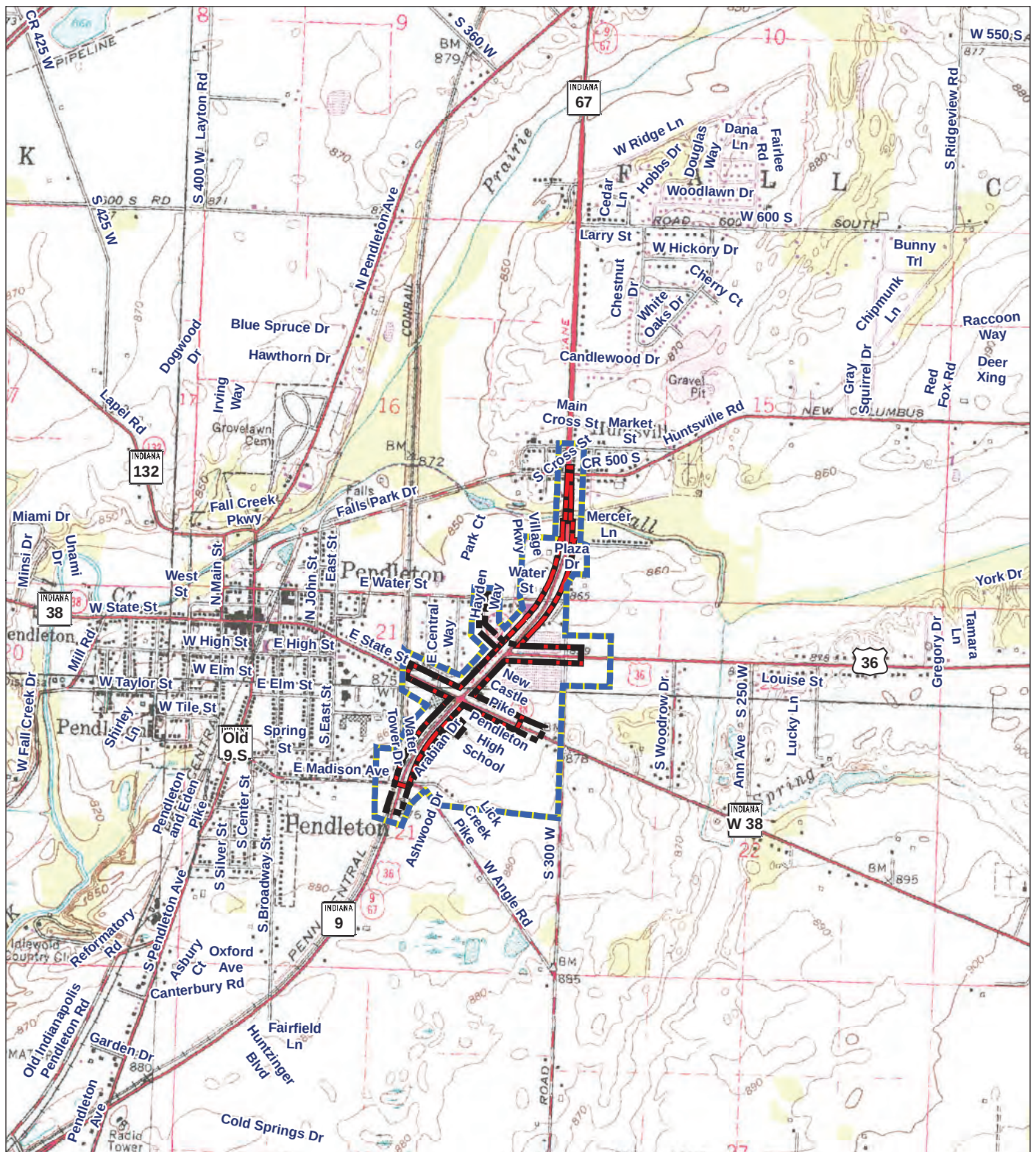
APPENDIX A. MAPS



Appendix A, Map 1

Portion of the ESRI World Street Map showing the vicinity of the project area for the Proposed US 36/SR 9 Added Travel Lanes Project (Des. Nos. 1702936 and 1802854)

Base: ESRI World Street Map



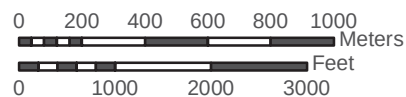
APE



Project area boundary (DES. No. 2001127)



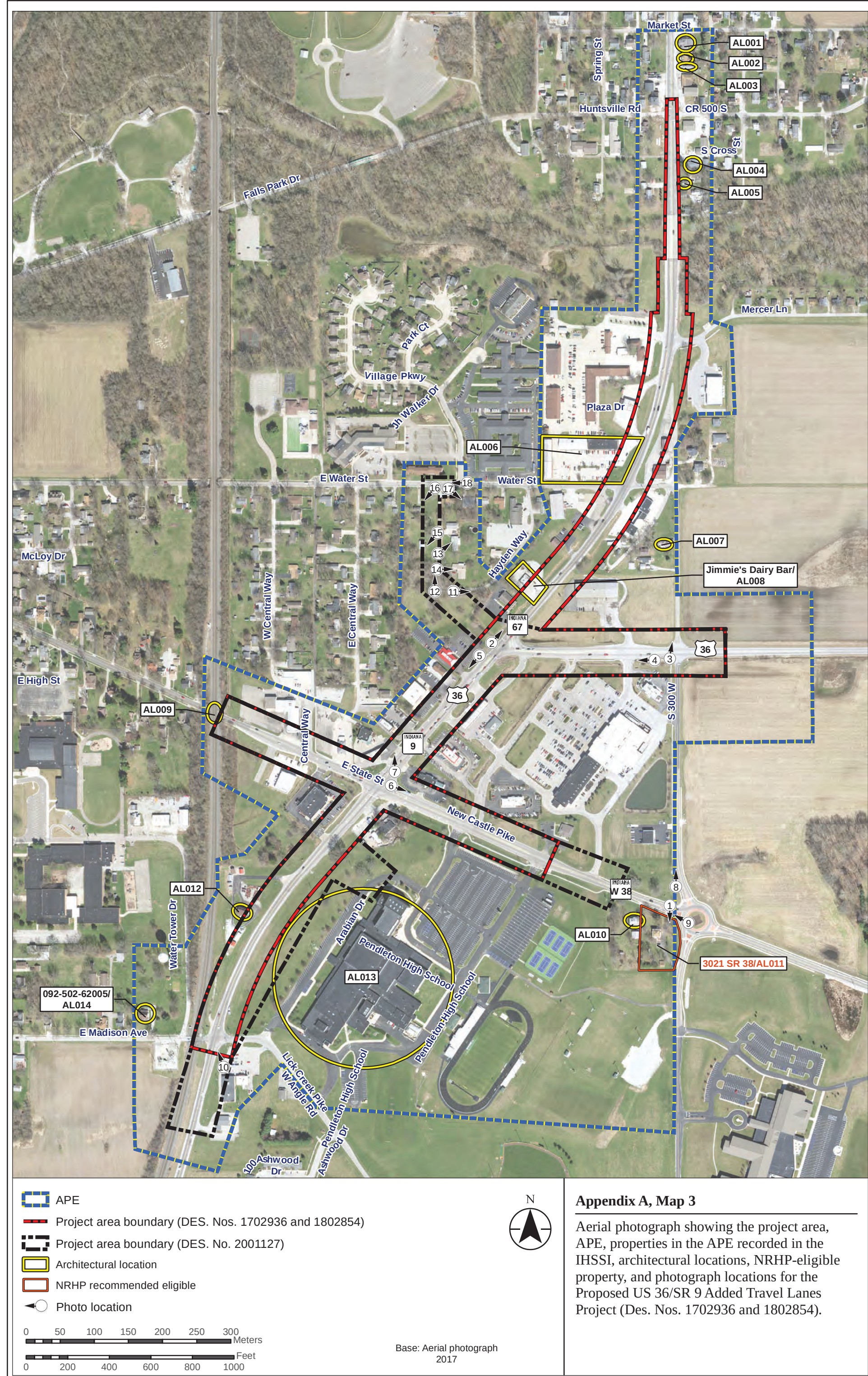
Project area boundary (DES. Nos. 1702936 and 1802854)



Appendix A, Map 2

Portions of the 1961 Anderson South, 1962 Ingalls, 1967 Lapel, and 1966 Pendleton, Indiana quadrangles (USGS 7.5' topographic maps) showing the project area and APE for the Proposed US 36/SR 9 Added Travel Lanes Project (Des. Nos. 1702936 and 1802854)

Base: USGS Anderson South, Ingalls, Lapel, and Pendleton, Indiana, 7.5' series quadrangles



APPENDIX B. PHOTOGRAPHS



Photograph 1. Overview of house at 3021 SR 38, looking south.



Photograph 2. Street overview of SR 9, looking northeast from the SR 67 and US 36 intersection.



Photograph 3. Street overview of S CR 300 W, looking north-northeast from the US 36 and S CR 300 W intersection.



Photograph 4. Street overview of US 36, looking west from the US 36 and S CR 300 W intersection.



Photograph 5. Overview of commercial lot on the west side of the SR 9 and US 36 intersection, looking southwest.



Photograph 6. Overview of commercial lot in the northeast quadrant of the SR 9 and SR 38 intersection, looking east-southeast.



Photograph 7. Street overview of SR 67, looking north from the SR 67 and SR 38 intersection.



Photograph 8. Street overview of S CR 300 W, looking north from SR 38.



Photograph 9. Street overview of SR 38, looking northwest from the SR 38 and S CR 300 W intersection.



Photograph 10. Overview of SR 67, looking north-northwest from the southern end of the project area.



Photo 11. View looking east along Hayden Way.



Photo 12. View looking north along Hayden Way.



Photograph 13. Overview of a ca. 1970 linear ranch house at 150 Hayden Way, looking northeast.



Photograph 14. Overview of a ca. 1970 ranch house at 140 Hayden Way, looking east.



Photo 15. Barn belonging to 614 Water Street, but located west of Hayden Way, looking southwest.



Photo 16. Water Street at Hayden Way, looking southwest.



Photo 17. Water Street at Hayden Way, looking southeast.



Photo 18. Water Street Terrace, apartment building, looking west.

APPENDIX C. CONSULTING PARTIES LIST

Des. Nos. 1702936, 1802854, and 2001127

US 36 and SR 9 Added Travel Lanes and Pedestrian Connectivity Projects

Madison County, Indiana

Consulting Parties List

(Yellow highlighting indicates those parties that previously accepted. All parties listed will be invited to review and comment on the addendum finding.)

SHPO

Beth K. McCord, Deputy State Historic
Preservation Officer
Indiana DNR Division of Historic Preservation
and Archaeology
402 West Washington Street, W274
Indianapolis, IN 46204

Madison County Commissioners

Madison County Government Center
16 East 9th Street
Anderson, IN 46016
Olivia Pratt, South District
opratt@madisoncounty.in.gov

John Richwine, North District
jrichwine@madisoncounty.in.gov
Darlene Likens, Middle District
dlikens@madisoncounty.in.gov

Madison County Council of Governments

739 Main Street
Anderson, IN 46016
Jerrold Bridges, Executive Director
jerry@heartlandmpo.org
Dave Benefiel, Principal Transportation Planner
dave@heartlandmpo.org

Madison County Highway Department

Madison County Government Center
16 East 9th Street
Anderson, IN 46016
Scott Harless
sharless@madisoncounty.in.gov

Madison County Historian

2417 Sagamore Drive
Anderson, IN 46011
Stephen T. Jackson
madisoncountyhistorian@comcast.net

Madison County Historical Society

P.O. Box 696
Anderson, IN 46015-0696
765-683-0052
Melody Hull, President
Madisonchs10@gmail.com

Indiana Landmarks

Eastern Regional Office
P.O. Box 284
Cambridge City, IN 47327
east@indianalandmarks.org
Brittany Miller, Director
bmiller@indianalandmarks.org

Pendleton Town Council President

Marissa Skaggs, President
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Pendleton, IN 46064
765-778-2173
MSkaggs@town.pendleton.in.us

Pendleton Town Manager

Scott Reske
100 West State Street
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765-778-8370
sreske@town.pendleton.in.us

Pendleton Planning Department

Denise McKee
100 West State Street
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765-778-8370
dmckee@town.pendleton.in.us

Pendleton Department of Public Works

Rick Bowlin, Street Foreman
100 West State Street
Pendleton, IN 46064
765-778-8370
rbowlin@town.pendleton.in.us

Pendleton Historical Museum

223 Falls Park Drive
P.O. Box 345
Pendleton, IN 46064
Nancy Noel, President
Nnoel46176@gmail.com

Main Street Pendleton

Steve Schug, President
128 S. Pendleton Avenue
Pendleton, IN 46064
Steve Schug
steve@schugplanning.com
Jack Wilson, Executive Director
jwilson@solutions4ebiz.com

Eastern Shawnee Tribe of Oklahoma

Miami Tribe of Oklahoma

Peoria Tribe of Indians of Oklahoma

Pokagon Band of Potawatomi Indians

Shawnee Tribe

Absentee Shawnee Tribe of Oklahoma
Delaware Nation of Oklahoma
Delaware Tribe of Indians

The following two parties were invited with
report distribution letter for archaeology report
9.10.2021

Historic Fall Creek, Pendleton Settlement, Inc.

Kevin Kenyon
P. O. Box 146
Pendleton, IN 46064
kskenyon@mac.com

Richard and Shirley Richwine
(owners, Jimmie's Dairy Bar)
5593 S. Shadow Lane
Anderson, IN 46017-9542

APPENDIX D. ABSTRACT AND SUMMARY FOR THE ADDENDUM PHASE IA ARCHAEOLOGY REPORT



INDIANA ARCHAEOLOGICAL SHORT REPORT

State Form 54566 (R3 / 3-22)

INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF HISTORIC PRESERVATION AND ARCHAEOLOGY

402 West Washington Street, Room W274

Indianapolis, Indiana 46204-2739

Telephone Number: (317) 232-1646

Fax Number: (317) 232-0693

E-mail: dhp@dnr.IN.gov

Where applicable, the use of this form is recommended but not required by the Division of Historic Preservation and Archaeology (DHPA).

Name(s) of author(s) Sarah Terheide	Date (month, day, year) August 9, 2022
Title of project An Addendum to a Phase Ia Archaeological Records Check and Reconnaissance Survey report for the proposed US 36/SR 9 Added Travel Lanes Project (Des. Nos. 1702936 and 1802854) in Pendleton and Huntsville, and the Proposed US 36 Pedestrian Connectivity Project (Des. No. 2001127), in Pendleton, Fall Creek Township, Madison County, Indiana	
This document is being used to report on the results of: ☐ Records check only ☒ Records check and Phase 1a archaeological reconnaissance ☐ An addendum to a previous archaeological report. For an addendum, provide the following information.	
Name(s) of author(s) of previous report Eric Aukeman and Chuck Mustain	
Title of previous report Phase Ia Archaeological Records Check and Reconnaissance Survey report for the proposed US 36/SR 9 Added Travel Lanes Project (Des. Nos. 1702936 and 1802854) in Pendleton and Huntsville, and the Proposed US 36 Pedestrian Connectivity Project (Des. No. 2001127), in Pendleton, Fall Creek Township, Madison County, Indiana	
Date of previous report (month, day, year) August 19, 2021	DHPA number N/A

PROJECT OVERVIEW

Description of project

The proposed undertaking is on US 36/State Road (SR) 9/SR 67 from the north junction of US 36 and SR 9 at the northern end to just south of East (E) Madison Avenue/Lick Creek Pike at the southern end. The combined original and addendum survey area also includes portions of State Street, SR 38, US 36 east of the north junction, and a corridor to the west including Hayden Way in Madison County, Indiana (Figure 1). The addendum survey area consists of a corridor which runs through several residential and commercial yards connecting SR 9 to E Water Street, running partially along Hayden Way. The undertaking is within Fall Creek Township, Anderson South and Pendleton United States Geological Survey (USGS) topographic quadrangles, in Sections 16, 21, and 22, Township 18 North, Range 7 East. The addendum survey area is confined within Sections 16 and 21, Township 18 North, Range 7 East (Figure 2).

This report is an addendum to an archaeological report covering two related projects: The proposed US 36/SR 9 Added Travel Lanes Project (Des. Nos. 1702936 and 1802854) in Pendleton and Huntsville, and the Proposed US 36 Pedestrian Connectivity Project (Des. No. 2001127), in Pendleton, Fall Creek Township, Madison County, Indiana. The two projects detailed in the original report are associated but have been designated as separate projects because the added travel lanes project is an Indiana Department of Transportation (INDOT) undertaking and the pedestrian connectivity project is a Local Public Agency (LPA) venture with a slightly different footprint. It is unclear if all aspects of the pedestrian connectivity project will receive necessary funds to complete, but the footprint of all components of the project was surveyed. The original survey areas for the two projects were combined and surveyed jointly. The INDOT and LPA projects are located along a thoroughway of eastern Pendleton that is a concurrent highway including SR 9, South SR 67; portions also include SR 38, and US 36. The survey area for the projects spans from north of Huntsville Road/County Road (CR) 500 South in Huntsville at the northern end to south of East Madison Avenue/Lick Creek Pike in southeastern Pendleton at the southern end. The survey area also includes a section of East State Street from the railroad tracks west of SR 9 to just west of South 300 West (S 300 W), which is east of SR 9 and a section of US 36 from SR 9 to just east of S 300 W.

This addendum reports on a reroute for the pedestrian connectivity project. The purpose of the pedestrian connectivity project is to address pedestrian and bicycle accessibility and safety by increasing pedestrian and bicycle connectivity and to improve vehicular safety by reducing conflict points through the implementation of access management methods along a high-traffic corridor. The need stems from the existing traffic congestion and anticipated increase in vehicular traffic and the lack of safe pedestrian and bicycle access to Pendleton High School and businesses in the area. This project will provide a pedestrian and bicycle connection between the high school and Water Street, where the Town's recreation facilities exist. In total, there will be approximately 3 acres of permanent right-of-way acquisition, and 0.3 acre of temporary right-of-way acquisition.

The pedestrian connectivity project includes elements of access management (raised landscaped medians on US 36 and SR 38), pedestrian connectivity (sidewalks and shared-use paths), Americans with Disabilities Act (ADA) compliance for all pedestrian elements and curb ramps, drainage, pedestrian lighting, signage, and other amenities, as well as pedestrian refuge islands, accessible pedestrian signals, pedestrian and bicycle counter, and benches. A shared use path will be

installed on the east side of US 36 from Madison Avenue to the SR 9 junction. Sidewalk will be installed on the north and south sides of State Street and SR 38, on the south side of the US 36 east leg of the north junction, and the west side of US 36 between State Street and the US 36/SR 9 north junction. Curb ramps will be placed at the intersections of US 36/State Street and US 36/SR 9, and at the termini of the paths at Madison Avenue and Water Street.

The addendum survey area will be used for a shared use path that will be installed on the west side of SR 9 from the US 36 junction to the west through an open area and then along Hayden Way to Water Street.

INDOT designation number(s) 2001127; 1702936 and 1802854	Project number IN-847-1	DHPA number	DHPA plan number
Prepared for: (Company / Institution / Agency) CDM Smith			
Name of contact Michael Vollmer			
Address (number and street, city, state, and ZIP code) 211 N. Pennsylvania St, Suite 1750, Indianapolis, Indiana 46204			
Telephone number ()	E-mail address vollmermj@cdmsmith.com		
Name of principal investigator Andrea Crider			
Name of company / institution ASC Group, Inc.			
Address (number and street, city, state, and ZIP code) 9376 Castlegate Drive, Indianapolis, IN 46225			
Telephone number (859)-380-4565	E-mail address acrider@ascgroup.net		
Signature of principal investigator (Required)			Date (month, day, year)

PROJECT LOCATION						
County Madison	USGS 7.5' series topographic quadrangle Anderson South, Indiana Pendleton, Indiana				Civil township Fall Creek	
Legal Location						
Grid alignment All four corners of a scaled 1.6 x 1.6 kilometer (km) [1 x 1 mile (mi)] locator tool was aligned to the four corners of Sections 16 and 21 on the Anderson South and Pendleton, Indiana quadrangles (IndianaMap 2022a).						
1/4	1/4	1/4	1/4	Section	Township	Range
	SW	SE	SE	16	18N	7E
	NW	NE	NE	21	18N	7E
Comments						
Property ownership (Check all that apply) ☒ Private ☒ Local Government ☐ State Government ☐ Federal Government ☐ Other						
Name of owner Chesterfield Management, Inc.; LCW Real Estate LLC; Kilmer, Joseph R & Beverly J; Store Master Funding IX LLC C/O White River Valley; the Town of Pendleton; and INDOT.						
Address of owner (number and street, city, state, and ZIP code) Chesterfield Management, Inc. 18077 River Road, Suite 102 Westfield, IN 46062 LCW Real Estate LLC 7008 W St Andrews Ave Yorktown, IN 47396 Kilmer, Joseph R. and Beverly J.						

Phase 1a archaeological reconnaissance <i>(Check all that apply)</i> ☐ No Phase 1a reconnaissance was conducted. ☒ Phase 1a reconnaissance located no archaeological resources. ☐ Previously recorded sites were in the project area. ☐ Artifacts and/or features at a previously recorded site(s) within the project area were not discovered. <i>List the site(s) below.</i> ☐ Phase 1a reconnaissance has identified landforms conducive to buried archaeological deposits. <i>Describe below.</i>	
List sites. None	
Describe landforms.	
Number of shovel probes excavated 38	Number of cores / auger probes 0
Describe disturbances. Attach photographs documenting disturbances. Disturbances included gravel, buried subsurface utilities, road grading, and landscaping associated with non-historic residential and commercial development.	
Actual area surveyed (hectares) 0.9	Actual area surveyed (acres) 2.2
Explain results of fieldwork. The area surveyed for this addendum extended through several residential and commercial yards from SR 67 where it intersects with US 36, to Water Street, approximately 248.1 m (813.9 ft) west of where it intersects with SR 67 (Figure 3; Photographs 1–8). The majority of shovel probes (n=24) exhibited disturbed soil profiles with gravel and non-historic concrete inclusions. A typical disturbed shovel probe consisted of a dark brown (10YR 3/3) silt loam mixed with yellowish brown (10YR 5/6) and black (10YR 2/1) clay extending to approximately 10–15 cmbs (3.9–5.9 inbs). This stratum was underlain by a dark brown (10YR 3/3) sandy silt loam, and in most cases terminated in a gravel impasse. Shovel probes exhibiting intact soils (n=14) showed a profile of a brown (10YR 4/3) to dark brown (10YR 3/3) silt loam with approximately 10 percent small cobble inclusions, extending to 15 cmbs (5.9 inbs). This upper stratum was underlain by a dark yellowish brown (10YR 4/4) silty clay loam with 10–15 percent cobble inclusions. No artifacts were observed, and areas that were not shovel tested were visually inspected. No archaeological sites were observed and no further assessment of the survey area is recommended.	

RECOMMENDATIONS
Records check <i>(Check all that apply)</i> ☐ No archaeological investigation is recommended before the project is allowed to proceed because the records check has determined that the project area does not have the potential to contain archaeological resources. ☐ A Phase 1a archaeological reconnaissance is recommended. ☐ Based upon the records check results, a Phase 1a archaeological reconnaissance was recommended and has been conducted. ☐ A cemetery development plan may be required under Indiana Code 14-21-1-26.5 because project ground disturbance will be within 100 feet of a cemetery.
Phase 1a archaeological reconnaissance <i>(Check all that apply)</i> ☒ It is recommended that the project be allowed to proceed as planned because the Phase 1a archaeological reconnaissance has located no archaeological sites within the project area and/or previously recorded sites that were investigated warrant no additional investigation. ☐ It is recommended that Phase 1c archaeological subsurface reconnaissance be conducted before the project is allowed to proceed. The Phase 1a archaeological reconnaissance has determined that the project area includes landforms which have the potential to contain buried archaeological deposits.
Other recommendations / commitments

Pursuant to IC-14-21-1, if any archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and 29) requires that the discovery must be reported to the Department of Natural Resources within two (2) business days. In that event, please call (317) 232-1646.

REQUIRED ATTACHMENTS



INDIANA ARCHAEOLOGICAL SHORT REPORT

State Form 54566 (R3 / 3-22)

INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF HISTORIC PRESERVATION AND ARCHAEOLOGY

402 West Washington Street, Room W274

Indianapolis, Indiana 46204-2739

Telephone Number: (317) 232-1646

Fax Number: (317) 232-0693

E-mail: dhp@dnr.IN.gov

Where applicable, the use of this form is recommended but not required by the Division of Historic Preservation and Archaeology (DHPA).

Name(s) of author(s) Shaun C. Beckett	Date (month, day, year) December 4, 2023
Title of project A Second Addendum to a Phase Ia Archaeological Records Check and Reconnaissance Survey for the Proposed US 36/SR 9 Added Travel Lanes Project (INDOT Des. Nos. 1702936 and 1802854) in Pendleton and Huntsville, and the Proposed US 36 Pedestrian Connectivity Project (INDOT Des. No. 2001127), in Pendleton, Fall Creek Township, Madison County, Indiana	
This document is being used to report on the results of: ☐ Records check only ☒ Records check and Phase 1a archaeological reconnaissance ☒ An addendum to a previous archaeological report. For an addendum, provide the following information.	
Name(s) of author(s) of previous report Eric Aukeman and Chuck Mustain (Original Report); Sarah Terheide (First Addendum Report)	
Title of previous report Phase Ia Archaeological Records Check and Reconnaissance Survey Report for the Proposed US 36/SR 9 Added Travel Lanes Project (Des. Nos. 1702936 and 1802854) in Pendleton and Huntsville, and the Proposed US 36 Pedestrian Connectivity Project (Des. No. 2001127), in Pendleton, Fall Creek Township, Madison County, Indiana (Original Report) An Addendum to a Phase Ia Archaeological Records Check and Reconnaissance Survey Report for the Proposed US 36/SR 9 Added Travel Lanes Project (Des. No. 1702936 and 1802854) in Pendleton and Huntsville, and the Proposed US 36 Pedestrian Connectivity Project (Des. No. 2001127), in Pendleton, Fall Creek Township, Madison County, Indiana (First Addendum Report)	
Date of previous report (month, day, year) August 19, 2021 (Original Report); October 12, 2022 (First Addendum Report)	DHPA number 27955

PROJECT OVERVIEW

Description of project

This report is a second addendum to an archaeological report covering two related projects: the proposed US 36/State Road (SR) 9 Added Travel Lanes Project (Des. Nos. 1702936 and 1802854) in Pendleton and Huntsville, and the Proposed US 36 Pedestrian Connectivity Project (Des. No. 2001127), in Pendleton, Fall Creek Township, Madison County, Indiana. The cultural and environment evaluation for the two projects detailed in the original report were combined. These two projects will, however, have funding from different entities. The Added Travel Lanes Project is an Indiana Department of Transportation (INDOT) undertaking and the Pedestrian Connectivity Project is a Local Public Agency (LPA) venture with a slightly different footprint. It is unclear if all aspects of the Pedestrian Connectivity Project will receive necessary funds to be completed, but the footprint of all components of the project was surveyed.

The INDOT and LPA projects are located along a thoroughway of eastern Pendleton that is a concurrent highway including SR 9, South SR 67; portions also include SR 38, and US 36. The project spans from north of Huntsville Road/County Road (CR) 500 South in Huntsville at the northern end to south of East Madison Avenue/Angle Road in southeastern Pendleton at the southern end. It also includes a section of East State Street from the railroad tracks west of SR 9 to just west of South CR 300 West, which is east of SR 9 and a section of US 36 from SR 9 to just east of South CR 300 West. The first addendum reported on a reroute for the Pedestrian Connectivity Project and consisted of a corridor which ran through several residential and commercial yards connecting SR 9 to East Water Street, running partially along Hayden Way.

The current survey area consists of two parcels, one at the northeastern corner of the US 36 north junction and the other on the southeastern corner of the US 36 and SR 38 intersection (Figures 1 and 2). The undertaking is within Fall Creek Township, on the Anderson South and Pendleton United States Geological Survey (USGS) topographic quadrangles, in Sections 15, 16, 21, and 22, Township 18 North, Range 7 East. The first addendum survey area was confined within Sections 16 and 21, Township 18 North, Range 7 East. The current survey area is solely within Section 21, Township 18 North, Range 7 East (Figure 2).

The two new survey areas have been added to the project plans to improve drainage. The first area is a proposed detention basin on the northeastern corner of the US 36/SR 9/SR 67 and US 36 intersection which is needed to offset the additional impervious area and keep peak runoff under acceptable levels at discharge points. This first area will need 0.47 acre of permanent right-of-way (ROW) in the additional investigation area. The second area (R&R 1) is adjacent to the R&R Market in the southeastern corner of the US 36/SR 9/SR 67 and SR 38 intersection which is needed for drive access to

US 36/SR 67 for the R&R Market and paved areas for truck access and will require 0.15 acre of permanent ROW in the additional investigation area (Figures 1–3). Drive construction for (R&R 2) is to provide drive access to SR 38 for the R&R Market and will require 0.06 acre of permanent ROW in the additional investigation area.

The need for both the combined INDOT and LPA projects are synonymous due to increasing vehicular traffic congestion along the US 36 (SR 9/SR 67) intersection corridor, which has subsequently exacerbated shortcomings in safety and traffic management design for motorists and both pedestrian and bicycle travelers. The need for Des. Nos. 1702936 and 1802854 is due to heavy queuing that occurs during peak hours, and from diverted traffic from I-69. Traffic projections indicate continued growth of traffic in the area. The existing roadway configuration experiences heavy traffic queuing during peak hours along the corridor and features non-compliant Americans with Disabilities Act (ADA) curb ramps. The need for Des. No. 2001127 is due to the existing traffic congestion, the anticipated increase in vehicular traffic, and the lack of safe pedestrian and bicycle access to Pendleton High School and businesses in the area and between the high school and Water Street, where the Town's recreation facilities exist. The purpose for Des. Nos. 1702936 and 1802854 is to reduce travel delay on SR 9/US 36. The purpose for Des. No. 2001127 is to address pedestrian and bicycle accessibility by increasing pedestrian and bicycle connectivity and to improve vehicular safety by reducing conflict points through the implementation of access management methods along a high-traffic corridor. In total, there will be approximately 5.12 acres of permanent ROW acquisition, and 0.74 acre of temporary ROW acquisition.

INDOT designation number(s) 1702936, 1802854, and 2001127	Project number ASC IN-824 and IN-847	DHPA number 27955	DHPA plan number
Prepared for: (Company / Institution / Agency) CDM Smith			
Name of contact Scott Sandstrom			
Address (number and street, city, state, and ZIP code) 211 North Pennsylvania Street, Suite 1750, Indianapolis, Indiana 46204			
Telephone number (317) 829-9644		E-mail address sandstroms@cdmsmith.com	
Name of principal investigator Andrea Crider, MA, RPA			
Name of company / institution ASC Group, Inc.			
Address (number and street, city, state, and ZIP code) 9376 Castlegate Drive, Indianapolis, Indiana 46225			
Telephone number (317) 915-9300		E-mail address acridera@ascgroup.net	
Signature of principal investigator (Required)			Date (month, day, year)

PROJECT LOCATION

County Madison	USGS 7.5' series topographic quadrangle Anderson South and Pendleton, Indiana	Civil township Fall Creek
-------------------	--	------------------------------

Legal Location

Grid alignment
All four corners of a scaled 1.6 x 1.6 kilometer (km) [1 x 1 mile (mi)] locator tool were aligned to the four corners of Section 21 on the Anderson South and Pendleton, Indiana quadrangles (IndianaMap 2023a).

1/4	1/4	1/4	1/4	Section	Township	Range
		NE	NE	21	18N	7E
	NE	SW	NE	21	18N	7E
	NW	SE	NE	21	18N	7E

Comments

Property ownership (Check all that apply)

☒ Private ☐ Local Government ☐ State Government ☐ Federal Government ☐ Other

Name of owner

INDOT (ROW); Ridenour, R. Oweetah & T/T; Rosales LLC; South Madison Elementary School

Phase 1a archaeological reconnaissance (Check all that apply) ☐ No Phase 1a reconnaissance was conducted. ☒ Phase 1a reconnaissance located no archaeological resources. ☐ Previously recorded sites were in the project area. ☐ Artifacts and/or features at a previously recorded site(s) within the project area were not discovered. <i>List the site(s) below.</i> ☐ Phase 1a reconnaissance has identified landforms conducive to buried archaeological deposits. <i>Describe below.</i>	
List sites.	
Describe landforms.	
Number of shovel probes excavated 16	Number of cores / auger probes 0
Describe disturbances. Attach photographs documenting disturbances. Commercial development, roadside drainage and grading, and marked subsurface utilities	
Actual area surveyed (hectares) 0.3	Actual area surveyed (acres) 0.7
Explain results of fieldwork. The northern portion of the survey area (detention area) is located within the front lawn of a commercial property on the northeastern corner of the US 36/SR 9/SR 67 and US 36 intersection. The southern portion of the survey area (R&R 1 and R&R 2) is adjacent to the R&R Market in the southeastern corner of the US 36/SR 9/SR 67 and SR 38 intersection (Figure 3; Photographs 1–6). Twelve shovel probes were excavated within the detention area (Photograph 1). Of these, only three exhibited soils that were obviously disturbed. These disturbed soils consisted of a very dark brown (10YR 2/2) clay loam extending to 25 centimeters below surface (cmbs) [9.8 inches below surface (inbs)], underlain by a dense gravel impasse. The remainder of the shovel probes consisted of a very dark brown (10YR 2/2) clay loam extending to 35 cmbs (13.8 inbs), underlain by a light yellowish brown (10YR 6/4) clay loam. As the upper stratum is consistent throughout all 12 shovel probes, including those with dense gravel inclusions, it is likely a layer of fill. It was therefore determined that all of the shovel probes within the detention area exhibited disturbed soils. Four shovel probes were excavated within areas R&R 1 and R&R 2 (Photographs 2–6). The majority of these areas appeared to be disturbed according to earlier aerial images, and due to grading and berms associated with residential development and the nearby road construction (Photographs 3–5). These four shovel probes were excavated towards the outer edge of the survey areas to confirm disturbance. Disturbed soils were revealed in all four shovel probes. These soils generally consisted of a dark yellowish brown (10YR 4/4) clay loam, mixed with yellowish brown (10YR 5/6) and light yellowish brown (10YR 6/4) clay, extending to 15 cmbs (5.9 inbs). The upper stratum contained approximately 15 percent gravel inclusions and was underlain by a gravel impasse. No artifacts were found and no archaeological sites were recorded within the survey area. No further archaeological assessment is recommended.	

RECOMMENDATIONS
Records check (Check all that apply) ☐ No archaeological investigation is recommended before the project is allowed to proceed because the records check has determined that the project area does not have the potential to contain archaeological resources. ☐ A Phase 1a archaeological reconnaissance is recommended. ☒ Based upon the records check results, a Phase 1a archaeological reconnaissance was recommended and has been conducted. ☐ A cemetery development plan may be required under Indiana Code 14-21-1-26.5 because project ground disturbance will be within 100 feet of a cemetery.
Phase 1a archaeological reconnaissance (Check all that apply) ☒ It is recommended that the project be allowed to proceed as planned because the Phase 1a archaeological reconnaissance has located no archaeological sites within the project area and/or previously recorded sites that were investigated warrant no additional investigation. ☐ It is recommended that Phase 1c archaeological subsurface reconnaissance be conducted before the project is allowed to proceed. The Phase 1a archaeological reconnaissance has determined that the project area includes landforms which have the potential to contain buried archaeological deposits.
Other recommendations / commitments

Amy Coombs

From: Amy Coombs
Sent: Tuesday, January 2, 2024 11:45 AM
To: 'jackwilson500@comcast.net'
Subject: FW: FHWA Project: Des. Nos. 1702936, 1802854, and 2001127; NAE Finding, US 36/SR 9 Added Travel Lanes Project, Madison County, Indiana



From: Amy Coombs
Sent: Thursday, December 28, 2023 3:01 PM
To: 'dlikens@madisoncounty.in.gov' <dlikens@madisoncounty.in.gov>; 'jrichwine@madisoncounty.in.gov' <jrichwine@madisoncounty.in.gov>; 'opratt@madisoncounty.in.gov' <opratt@madisoncounty.in.gov>; 'dave@heartlandmpo.org' <dave@heartlandmpo.org>; 'jerry@heartlandmpo.org' <jerry@heartlandmpo.org>; 'sharless@madisoncounty.in.gov' <sharless@madisoncounty.in.gov>; 'madisoncountyhistorian@comcast.net' <madisoncountyhistorian@comcast.net>; 'Madisonchs10@gmail.com' <Madisonchs10@gmail.com>; 'east@indianalandmarks.org' <east@indianalandmarks.org>; 'bmiller@indianalandmarks.org' <bmiller@indianalandmarks.org>; 'MSkaggs@town.pendleton.in.us' <MSkaggs@town.pendleton.in.us>; 'sreske@town.pendleton.in.us' <sreske@town.pendleton.in.us>; 'dmckee@town.pendleton.in.us' <dmckee@town.pendleton.in.us>; 'rbowlin@town.pendleton.in.us' <rbowlin@town.pendleton.in.us>; 'Nnoel46176@gmail.com' <Nnoel46176@gmail.com>; 'steve@schugplanning.com' <steve@schugplanning.com>; 'jwilson@solutions4ebiz.com' <jwilson@solutions4ebiz.com>; 'kskenyon@mac.com' <kskenyon@mac.com>
Cc: 'Alexander, Kelyn' <KAlexander3@indot.IN.gov>; 'Branigin, Susan' <SBranigin@indot.IN.gov>; 'Coon, Matthew' <mcoon@indot.IN.gov>; 'Sandstrom, Scott' <sandstroms@cdmsmith.com>; 'vollmermj@cdmsmith.com' <vollmermj@cdmsmith.com>; Harry Nikides <hNikides@ascgroup.net>; 'Szewczak, Kimberly' <KSzewczak@indot.IN.gov>; 'Passmore, Andrew D' <APassmore@indot.IN.gov>; 'Beauchamp, Tomas' <TBeauchamp@indot.IN.gov>; 'Bales, Ronald' <rbales@indot.IN.gov>; Andrea Crider <acrider@ascgroup.net>; 'Walton, David' <DWalton@indot.IN.gov>; Amy Coombs <acoombs@ascgroup.net>; Doug Terpstra <dterpstra@ascgroup.net>; 'Kennedy, Mary' <MKENNEDY@indot.IN.gov>
Subject: FHWA Project: Des. Nos. 1702936, 1802854, and 2001127; NAE Finding, US 36/SR 9 Added Travel Lanes Project, Madison County, Indiana

Des. Nos.: 1702936, 1802854, 2001127

Project Description: US 36/SR 9 Added Travel Lanes Project

Location: Pendleton and Huntsville, Fall Creek Township, Madison County, Indiana

The Indiana Department of Transportation (INDOT), with funding from the Federal Highway Administration (FHWA), proposes to proceed with the US 36/SR 9 Added Travel Lanes (ATL) Project (Des. Nos. 1702936 and 1802854). The Town of Pendleton, with funding from the FHWA and administrative oversight from the INDOT, proposes to proceed with the Pedestrian Connectivity Project (Des. No. 2001127) in Pendleton, Fall Creek Township, Madison County.

INDOT, on behalf of FHWA, has signed a determination of "No Adverse Effect" for this Section 106 undertaking. In accordance with 36 CFR 800.4(d), you and the other consulting parties that responded to the early coordination letter are being provided the documentation for this finding. You can view the determination of "No Adverse Effect" and Addendum 800.11 electronically by accessing INDOT's Section 106 document posting website IN SCOPE at

<http://erms.indot.in.gov/Section106Documents/> (the Des. No. is the most efficient search term, once in IN SCOPE). If a hard copy of the materials is needed, please respond to this email with your request as soon as you can.

Consulting parties have thirty (30) calendar days from receipt of this information to review and provide comment.

Tribal Contacts please respond to INDOT's Acting Tribal Liaison, Matt Coon mcoon@indot.in.gov; (317-697-9752) with any responses pertaining to this project including to provide INDOT/Indiana FHWA additional information about Tribal resources/concerns and questions/comments regarding cultural resources. The FHWA point of contact is Kari Carmany-George at K.CarmanyGeorge@dot.gov (317-226-5629).

Thank you in advance for your input,

Amy R. Coombs, Ph. D.

Architectural Historian

Principal Investigator

ASC Group, Inc.

9376 Castlegate Dr.

Indianapolis, Indiana 46256

317.915.9300 (office)

317.708.7371 (direct)

[Facebook](#) | [LinkedIn](#) | [Web](#)



Jennifer Rhodes

From: Amy Coombs
Sent: Thursday, January 18, 2024 12:59 PM
To: Jennifer Rhodes
Cc: Doug Terpstra
Subject: Fw: FHWA Project: Des. No. 2001127, Pedestrian Connectivity Project, Pendleton, Madison County, Indiana
Attachments: PedConnect_Des2001127_Addendum800.11RDL_2023-12-21.pdf

From: Kennedy, Mary <MKENNEDY@indot.IN.gov>
Sent: Thursday, December 28, 2023 8:44 AM
To: THPO@MiamiNation.com; thpo@estoo.net; Burgundy Fletcher; Matthew.Bussler@pokagonband-nsn.gov; Section106; snease@astribe.com; cspeck@delawarenation-nsn.gov; sbachor@delawaretribe.org
Cc: Coon, Matthew; Carmany-George, Karstin (FHWA); Amy Coombs; Alexander, Kelyn
Subject: FHWA Project: Des. No. 2001127, Pedestrian Connectivity Project, Pendleton, Madison County, Indiana

Des. Nos.: 2001127, 1702936 and 1802854

**Project Description: Pedestrian Connectivity Project; US 36/State Road (SR) 9 Added Travel Lanes (ATL) Project
Pendleton, Madison County, Indiana**

The Town of Pendleton, with funding from the Federal Highway Administration (FHWA) and administrative oversight from the INDOT, proposes to proceed with the Pedestrian Connectivity Project (Des. No. 2001127) in Pendleton, Fall Creek Township, Madison County. The Indiana Department of Transportation (INDOT), with funding from FHWA, proposes to proceed with the US 36/State Road (SR) 9 Added Travel Lanes (ATL) Project, in Pendleton and Huntsville, Fall Creek Township, Madison County (Des. Nos. 1702936 and 1802854).

INDOT is reopening Section 106 consultation following the decision to combine the US 36/SR 9 ATL Project and the Pedestrian Connectivity Project into a single National Environmental Policy Act (NEPA) Categorical Exclusion (CE) document. Portions of the Pedestrian Connectivity Project extend outside of the APE for the ATL Project and additional Section 106 investigations were conducted. Since the Pedestrian Connectivity Project largely overlaps the same areas as the US 36/SR 9 ATL Project, the two are being combined into one updated Section 106 finding. In addition, refinement of the design of the project resulted in the need for additional archaeological survey. This updated Section 106 finding also incorporates this additional survey. The attached letter provides more information.

An updated "No Adverse Effect" finding and addendum 800.11 documentation and two addendum archaeology reports (Tribes and SHPO only) are available for review in IN SCOPE at: <http://erms12c.indot.in.gov/Section106Documents/> (the Des. No. is the most efficient search term, once in IN SCOPE). Please review these materials and respond with your comments on any historic resource impacts incurred as a result of this project so that an environmental report can be completed. We also welcome your related opinions and other input to be considered in the preparation of the environmental document. If a hard copy of the materials is needed, please respond to this email with your request as soon as you can.

Consulting parties have thirty (30) calendar days from receipt of this information to review and provide comment. If we do not receive a response from an invited consulting party within the time allotted, the project will proceed consistent

with the proposed design. Therefore, if we do not receive a response within thirty (30) days, your agency or organization will not receive any further information on the project unless the scope of work changes.

Tribal Contacts please respond to INDOT's Acting Tribal Liaison, Matt Coon, at mcoon@indot.in.gov (317-697-9752) with any responses pertaining to this project including to provide INDOT/Indiana FHWA additional information about Tribal resources/concerns and questions/comments regarding cultural resources. The FHWA point of contact is Kari Carmany-George at K.CarmanyGeorge@dot.gov (317-226-5629).

Thank you in advance for your input,

Mary E. Kennedy

Historic Bridge Specialist

Indiana Department of Transportation

Central Office

Cell: 317-694-3607

Email: mkenney@indot.in.gov

[Find us on social media!](#)



Jennifer Rhodes

From: Laserfiche Notification <donotreply@laserfiche.com>
Sent: Thursday, January 4, 2024 5:04 PM
To: Coon, Matthew
Subject: Section 106 Consultation - Des. No. 2001127, 1702936, and 1802854

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

This email is in response to Des. No. 2001127, 1702936, and 1802854.

The Shawnee Tribe's Tribal Historic Preservation Department concurs that no known historic properties will be negatively impacted by this project. However, there is still potential for the discovery of unknown resources.

We have no issues or concerns at this time. Please continue with the project as planned, but in the event archaeological materials are encountered during construction, use, or maintenance of this location, please re-notify us at that time as we would like to resume immediate consultation under such a circumstance.

If you have any questions, you may contact me via email at Section106@shawnee-tribe.com

Thank you for giving us the opportunity to comment on this project



January 18, 2024

Douglas Terpstra
ASC Group, Inc.
800 Freeway Drive North, Suite 101
Columbus, OH 43229

Federal Agency: Indiana Department of Transportation (“INDOT”),
on behalf of Federal Highway Administration, Indiana Division (“FHWA”)

Re: Addendum archaeological short report (Terheide, 8/9/2022), second addendum archaeological short report (Beckett, 12/4/2023), addendum 800.11 documentation, and the Indiana Department of Transportation’s finding of “no adverse effect” on behalf of the Federal Highway Administration for the US 36 and SR 9 added travel lanes and pedestrian connectivity project (Des. Nos. 1702936, 1802854, & 2001127; DHPA No. 27955)

Dear Mr. Terpstra:

Pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. § 306108), 36 C.F.R. Part 800, and the “Programmatic Agreement (PA) Among the Federal Highway Administration, the Indiana Department of Transportation, the Advisory Council on Historic Preservation and the Indiana State Historic Preservation Officer Regarding the Implementation of the Federal Aid Highway Program In the State of Indiana,” the staff of the Indiana State Historic Preservation Officer (“Indiana SHPO”) has reviewed your December 21, 2023, submission, which enclosed the addendum archaeological short report (Terheide, 8/9/2022) second addendum archaeological short report (Beckett, 12/4/2023) and INDOT’s finding and addendum supporting documentation, received by our office December 28, 2023, for this project in Pendleton, Fall Creek Township, Madison County, Indiana.

We understand that a pedestrian connectivity project (Des. No. 2001127) has been combined with the added travel lanes project (Des. Nos. 1702936 & 1802854) previously reviewed by our office, and thus, the Section 106 consultation has been reopened.

The revised area of potential effects (“APE”) proposed in the submission appears to be of adequate size to encompass the geographic area in which direct and indirect effects of a project of this nature could occur.

As previously indicated, for the purposes of the Section 106 review of this federal undertaking, we agree with the conclusions of the historic property report that the house at 3021 SR 38 is the only historic property located within the project’s area of potential effects that is eligible for inclusion in the National Register of Historic Places (“NRHP”). We note that this site was previously found to be eligible during the Section 106 review processes for Des. No. 0710879 (DHPA #5040) in 2008 and Des. No. 1297161 (DHPA #16354) in 2014. Although time has passed since these determinations, based upon the information provided, we agree that the house appears to remain eligible under Criterion C. However, we do not believe that the characteristics which make this historic property

significant will be diminished by this federal undertaking. Furthermore, we agree that there are no other historic properties listed in or eligible for inclusion in the NRHP within the project's revised area of potential effects. Also as previously indicated, regarding the archaeological resources, there is insufficient information to determine whether archaeological site 12M813 is eligible for inclusion in the NRHP. We understand that the project has been redesigned to avoid site 12M813. Site 12M813 should be clearly marked and must be avoided by all ground-disturbing project activities.

Regarding the addendum archaeological surveys, based on the submitted information and the documentation available to the staff of the Indiana SHPO, we have not identified any currently known archaeological resources listed in or eligible for inclusion in the NRHP within the additional project areas. We concur with the opinion of the archaeologist, as expressed in the submitted addendum archaeological short reports (Terheide, 8/9/2022; Beckett, 12/4/2023), that no further archaeological investigations appear necessary.

Accordingly, we concur with INDOT's December 14, 2023, Section 106 finding of "No Adverse Effect" on behalf of FHWA for this federal undertaking.

If any prehistoric or historic archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and -29) requires that the discovery be reported to the Indiana SHPO within two (2) business days. In that event, please call (317) 232-1646. Be advised that adherence to Indiana Code 14-21-1-27 and -29 does not obviate the need to adhere to applicable federal statutes and regulations, including but not limited to 36 C.F.R. Part 800.

The Indiana SHPO staff's archaeological reviewer for this project is Beth McCord, and the structures reviewer is Caitlin Lehman. However, if you have a question about the Section 106 process, please contact initially the INDOT Cultural Resources staff members who are assigned to this project.

In all future correspondence about the US 36 and SR 9 added travel lanes and pedestrian connectivity project in Madison County (Des. Nos. 1702936, 1802854, & 2001127), please refer to DHPA No. 27955.

Very truly yours,



Beth K. McCord
Deputy State Historic Preservation Officer

BKM:CML:bkm

emc: Kari Carmany-George; FHWA
Matt Coon, INDOT
Susan Branigin, INDOT
Kelyn Alexander, INDOT
Leah Konicki, ASC Group, Inc.
Douglas Terpstra, ACS Group, Inc.
Steve Schug, Main Street Pendleton
Beth McCord, DNR-DHPA
Caitlin Lehman, DNR-DHPA



EASTERN SHAWNEE
CULTURAL PRESERVATION DEPARTMENT

70500 East 128 Road, Wyandotte, OK 74370

February 21, 2024

INDOT - Indiana Department of Transportation
100 N. Senate Ave. IGCN642
Indianapolis, IN 46201

RE: Des No. 2001127, Madison County, IN

Dear Mr. Coon,

The Eastern Shawnee Tribe has received your letter regarding the above referenced project(s) within Madison County, IN. The Eastern Shawnee Tribe is committed to protecting sites important to Tribal Heritage, Culture and Religion. Furthermore, the Tribe is particularly concerned with historical sites that may contain but not limited to the burial(s) of human remains and associated funerary objects.

As described in your correspondence, and upon research of our database(s) and files, we find our people occupied these areas historically and/or prehistorically. However, the project proposes **NO Adverse Effect** or endangerment to known sites of interest to the Eastern Shawnee Tribe. Please continue project as planned. However, should this project inadvertently discover an archeological site or object(s) we request that you immediately contact the Eastern Shawnee Tribe, as well as the appropriate state agencies (within 24 hours). We also ask that all ground disturbing activity stop until the Tribe and State agencies are consulted. Please note that any future changes to this project will require additional consultation.

In accordance with the NHPA of 1966 (16 U.S.C. § 470-470w-6), federally funded, licensed, or permitted undertakings that are subject to the Section 106 review process must determine effects to significant historic properties. As clarified in Section 101(d)(6)(A-B), historic properties may have religious and/or cultural significance to Indian Tribes. Section 106 of NHPA requires Federal agencies to consider the effects of their actions on all significant historic properties (36 CFR Part 800) as does the National Environmental Policy Act of 1969 (43 U.S.C. § 4321-4347 and 40 CFR § 1501.7(a)). This letter evidences NHPA and NEPA historic properties compliance pertaining to consultation with this Tribe regarding the referenced proposed projects.

Thank you, for contacting the Eastern Shawnee Tribe, we appreciate your cooperation. Should you have any further questions or comments please contact our Office.

Sincerely,

Lora Nuckolls, Tribal Historic Preservation Officer (THPO)
Eastern Shawnee Tribe of Oklahoma
(918) 238-5151 Ext:1840
THPO@estoo.net

Public Notice
Des. Nos. 1702936 and 1802854

The Indiana Department of Transportation (INDOT) proposes to proceed with the US 36/State Road (SR) 9 Added Travel Lanes (ATL) Project, in Pendleton and Huntsville, Fall Creek Township, Madison County. With funding from the FHWA and administrative oversight from the INDOT, proposes to proceed with the Pedestrian Connectivity Project (Des. No. 2001127) in Pendleton, Fall Creek Township, Madison County.

Under the preferred alternative, the proposed project would involve construction of two additional through lanes on US 36/State Road (SR) 9/SR 67 from Madison Avenue/Lick Creek Pike to the bridge over Fall Creek, with an additional raised median/left turn lane from the south junction (at SR 38/State Street) to the north junction (at US 36) to Mercer Lane. The left and right turn lanes on US 36/SR 9/SR 67 at the south junction (at State Street) to Mercer Lane will be retained with widening as needed to insert the second northbound and southbound through lanes. At the south junction, dual left turns on eastbound (EB) State Street and dual left turns on westbound (WB) SR 38 will be constructed. At the north junction (where US 36 splits off to the east), the WB US 36 right turn lane storage will be extended to the first commercial drive with widening to the north. There will be approximately 3 acres of permanent and 0.3 acre of temporary right-of-way acquisition.

Properties listed in or eligible for the National Register of Historic Places (NRHP) located within the Area of Potential Effects (APE) include a house at 3021 SR 38. The proposed action impacts properties listed in or eligible for the NRHP. INDOT, on behalf of FHWA, has issued a “No Adverse Effect” finding for the project because the project will not diminish the integrity of the characteristics that qualify the historic properties within the APE for inclusion in the NRHP. In accordance with the National Historic Preservation Act, the views of the public are being sought regarding the effect of the proposed project on the historic elements as per 36 CFR 800.2(d), 800.3(e) and 800.6(a)(4). Pursuant to 36 CFR 800.4(d)(2), the documentation specified in 36 CFR 800.11(e) is available for inspection in ASC Group, Inc. Additionally, this documentation can be viewed electronically by accessing INDOT’s Section 106 document posting website IN SCOPE at <http://erms.indot.in.gov/Section106Documents>. This documentation serves as the basis for the “No Adverse Effect” finding. The views of the public on this effect finding are being sought. Please reply with any comments to Amy Coombs, ASC Group, Inc., 9376 Castlegate Drive, Indianapolis, IN 46256, 317-915-9300, acoombs@ascgroup.net no later than (**date to respond**).

In accordance with the “Americans with Disabilities Act”, if you have a disability for which INDOT needs to provide accessibility to the document(s) such as interpreters or readers, please contact Kim Filson, 317-289-3193, kfilson@indot.in.gov.

AFFIDAVIT OF PUBLICATION

STATE OF INDIANA
County of Madison

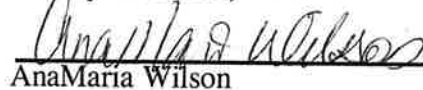
City of Anderson

ISSUED:

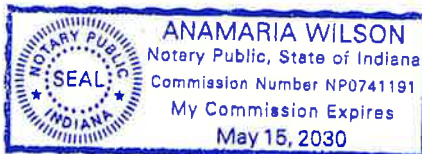
The subscriber, being duly sworn, deposes and says that
he (she) is the said Jennifer Hensley of THE HERALD BULLETIN
and that the foregoing notice for
PUBLIC NOTICE DES. NOS. 1
was published in said newspaper in one editions
of said newspaper issued between 03/05/2024 and 03/05/2024
Cost: 51.73



SUBSCRIBED AND SWORN BEFORE ME THIS
6th day of March, A.D. 2024


AnaMaria Wilson

Notary Public Seal, State of Indiana



Public Notice

Des. Nos. 1702936 and 1802854

The Indiana Department of Transportation (INDOT) proposes to proceed with the US 36/State Road (SR) 9 Added Travel Lanes (ATL) Project, in Pendleton and Huntsville, Fall Creek Township, Madison County. With funding from the FHWA and administrative oversight from the INDOT, proposes to proceed with the Pedestrian Connectivity Project (Des. No. 2001127) in Pendleton, Fall Creek Township, Madison County.

Under the preferred alternative, the proposed project would involve construction of two additional through lanes on US 36/State Road (SR) 9/SR 67 from Madison Avenue/Lick Creek Pike to the bridge over Fall Creek, with an additional raised median/left turn lane from the south junction (at SR 38/State Street) to the north junction (at US 36) to Mercer Lane. The left and right turn lanes on US 36/SR 9/SR 67 at the south junction (at State Street) to Mercer Lane will be retained with widening as needed to insert the second northbound and southbound through lanes. At the south junction, dual left turns on eastbound (EB) State Street and dual left turns on westbound (WB) SR 38 will be constructed. At the north junction (where US 36 splits off to the east), the WB US 36 right turn lane storage will be extended to the first commercial drive with widening to the north. There will be approximately 3 acres of permanent and 0.3 acre of temporary right-of-way acquisition.

Properties listed in or eligible for the National Register of Historic Places (NRHP) located within the Area of Potential Effects (APE)

continued next column

include a house at 3021 SR 38. The proposed action impacts properties listed in or eligible for the NRHP. INDOT, on behalf of FHWA, has issued a "No Adverse Effect" finding for the project because the project will not diminish the integrity of the characteristics that qualify the historic properties within the APE for inclusion in the NRHP. In accordance with the National Historic Preservation Act, the views of the public are being sought regarding the effect of the proposed project on the historic elements as per 36 CFR 800.2(d), 800.3(e) and 800.6(a)(4). Pursuant to 36 CFR 800.4(d)(2), the documentation specified in 36 CFR 800.11(a) is available for inspection in ASC Group, Inc. Additionally, this documentation can be viewed electronically by accessing INDOT's Section 106 document posting website IN SCOPE at <http://erms.indot.in.gov/Section106Documents>. This documentation serves as the basis for the "No Adverse Effect" finding. The views of the public on this effect finding are being sought. Please reply with any comments to Amy Coombs, ASC Group, Inc., 9376 Castlegate Drive, Indianapolis, IN 46256, 317-915-9300, acoombs@ascgroup.net no later than April 4, 2024.

In accordance with the "Americans with Disabilities Act", if you have a disability for which INDOT needs to provide accessibility to the document(s) such as interpreters or readers, please contact Kim Filson, 317-289-3193, kfilson@indot.in.gov.
HB-162 3/5 hspaxlp 1873450

APPENDIX E: RED FLAG HAZARDOUS MATERIAL

Red Flag Investigation - State Project

Red Flag Investigation - LPA Project

2022 RFI Re-Check with INDOT SAM

2023 RFI Re-Check with INDOT SAM

2023 RFI Culvert Check with INDOT SAM

2024 RFI Recommendation Re-Check with INDOT SAM



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N758-ES
Indianapolis, Indiana 46204

PHONE: (317) 694-8283

Eric Holcomb, Governor
Joe McGuinness, Commissioner

Date: May 5, 2021

To: Site Assessment & Management
Environmental Policy Office - Environmental Services Division (ESD)
Indiana Department of Transportation
100 North Senate Avenue, Room N758-ES
Indianapolis, Indiana 46204

From: Tina Hartman Davis
ASC Group, Inc.
9376 Castlegate Drive
Indianapolis, Indiana 46256
thartman@ascgroup.net

Re: RED FLAG INVESTIGATION
DES #1702936 and 1802854, State Project
Added Travel Lanes
US 36 and SR 9, from 0.28 Mile South of SR 38 to SR 9/SR 67 North Junction
Madison County, Indiana

PROJECT DESCRIPTION

Brief Description of Project: This project is located along US 36, which turns into SR 9 to the north, locally known as Pendleton Pike, in Pendleton. The project is between the US 36 and Madison Avenue/Lick Creek Pike (southwest of SR 38) intersection to the SR 9/SR 67 and CR 500 South/Huntsville Road intersection. The project seeks to add additional travel lanes by constructing four through lanes on SR 9/SR 67 from Madison Avenue/Lick Creek Pike to CR 500 South/Huntsville Road, with an additional center lane from the south junction (at State Street) to Mercer Lane. The left and right turn lanes on SR 9/SR 67/US 36 at the south junction (at State Street) to Mercer Lane will be retained with widening as needed. At the south junction, dual left turns on eastbound State Street and dual left turns on westbound SR 38 will be constructed. The westbound right turn lane on SR 38 and the westbound through lane on State Street will be retained in their current locations with the needed widening occurring to the south. At the north junction (where US 36 splits off to the east), the westbound US 36 right turn lane storage will be extended to the first commercial drive with widening to the north. Curb and gutter with curb turnouts will be used to reduce the additional right-of-way needed for shoulders, while still having surface drainage. At the northern termini, the project narrows down to the pavement edges starting at the bridge over Fall Creek and continuing to its end. No work will be performed in the waterway or on the bridge piers.

Bridge and/or Culvert Project: Yes ☐ No ☒ Structure # _____

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

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

Proposed right of way: Temporary ☒ # Acres 0.3 Permanent ☒ # Acres 3.0, Not Applicable ☐

Type and proposed depth of excavation: Excavation for the road widening and subgrade treatment is estimated to be about 2–3 feet (ft) deep. Some closed system drainage work will be needed. The depth of this work is not known at this time.

Maintenance of traffic: Construction will be phased to maintain traffic with one lane in each direction.

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

State Project: ☒ LPA: ☐

Any other factors influencing recommendations: N/A

INFRASTRUCTURE TABLE AND SUMMARY

Infrastructure Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Religious Facilities	7*	Recreational Facilities	7*
Airports ¹	N/A	Pipelines	1
Cemeteries	1	Railroads	2
Hospitals	N/A	Trails	2
Schools	5*	Managed Lands	1

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

Explanation:

Religious Facilities*: Although not mapped on the GIS layer, seven (7) religious facilities were identified within the 0.5 mile search radius. The nearest facility, Pendleton Community Church of God, is located 0.03 mile west of the project area. No impact is expected.

Cemeteries: One (1) cemetery is located within the 0.5 mile search radius. Huntsville Cemetery is located 0.29 mile east of the northern project terminus. No impact is expected.

Schools*: Five (5) schools, three (3) mapped and two (2) unmapped, are located within the 0.5 mile search radius. One (1) school, Pendleton Heights High School, is located adjacent to the east side of the project area, on the southeast corner of US 36 and SR 38. Coordination with Pendleton Heights High School will occur.

Recreational Facilities*: Seven (7) recreational facilities, six (6) mapped and one (1) unmapped, are located within the 0.5 mile search radius. One (1) facility, Pendleton Heights High School, is located adjacent to the east side of the project area, on the southeast corner of US 36 and SR 38. Coordination with Pendleton Heights High School will occur.

Pipelines: One (1) pipeline segment is located within the 0.5 mile search radius. The Indiana Gas Company Incorporated natural gas line is located 0.03 mile southeast of the southern termini of the project area. Coordination with Indiana Department of Transportation (INDOT) Utilities and Railroads should occur.

Railroads: Two (2) railroad segments are located within the 0.5 mile search radius. The CSX Railroad crosses the project area at Madison Avenue and State Street. Coordination with INDOT Utilities and Railroads should occur.

Trails: Two (2) trail segments are located within the 0.5 mile search radius. The nearest segment, Pendleton Trails Falls Park stone trail, is located within Falls Park, 0.28 mile west of the project area. No impact is expected.

Managed Lands: One (1) managed lands polygon, is located within the 0.5 mile search radius. Falls Park is located 0.15 mile west of the project area. No impact is expected.

WATER RESOURCES TABLE AND SUMMARY

Water Resources Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
NWI - Points	N/A	Canal Routes - Historic	N/A
Karst Springs	N/A	NWI - Wetlands	24
Canal Structures – Historic	N/A	Lakes	15
NPS NRI Listed	N/A	Floodplain - DFIRM	24
NWI-Lines	18	Cave Entrance Density	N/A
IDEM 303d Listed Streams and Lakes (Impaired)	3	Sinkhole Areas	N/A
Rivers and Streams	9	Sinking-Stream Basins	N/A

Explanation:

NWI-Lines: Eighteen (18) NWI-Line segments are located within the 0.5 mile search radius. Two (2) segments are located within the project area, at the northern termini. No work will occur within the waterway. No impact is expected.

IDEM 303d Listed Streams and Lakes (impaired): Three (3) 303d Listed Stream segments are located within the 0.5 mile search radius. One (1) segment, Fall Creek, is located within the project area, at the northern termini. Fall Creek is listed as impaired for Impaired Biotic Communities (IBC) and *E. coli*. Concerning IBC, Best Management Practices (BMPs) will be used to avoid further degradation to the stream. Workers who are working in or near water with *E. coli* should take care to wear appropriate personal protective equipment (PPE), observe proper hygiene procedures, including regular hand washing, and limit personal exposure.

Rivers and Streams: Nine (9) river and stream segments are located within the 0.5 mile search radius. One (1) segment of Fall Creek flows through the project area, at the northern termini. No work will occur within the waterway. No impact is expected.

NWI-Wetlands: Twenty-four (24) wetland polygons are located within the 0.5 mile search radius. One (1) wetland polygon is located adjacent to the east side of the project area, near the northern terminus and to the south of Fall Creek. No impact is expected.

Lakes: Fifteen (15) lakes are located within the 0.5 mile search radius. Three (3) lakes are shown located within the project area. However, no bodies of water are located at these locations. No impact is expected.

Floodplain-DFIRM: Twenty-four (24) floodplain polygons are located within the 0.5 mile search radius. Three (3) floodplain polygons are located within the project area, two (2) at northern termini and one (1) along US 36, east of S 300 W. Coordination with INDOT ESD Ecology and Waterway Permitting will occur.

MINING AND MINERAL EXPLORATION TABLE AND SUMMARY

Mining/Mineral Exploration Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Petroleum Wells	14	Mineral Resources	N/A
Mines – Surface	N/A	Mines – Underground	N/A

Explanation:

Petroleum Wells: Fourteen (14) petroleum wells are located within the 0.5 mile search radius. Two (2) wells, both owned by Pendleton Natural Gas Company, are located adjacent to the project area, south of SR 38 and east of the intersection with SR 67. Coordination with Indiana Department of Natural Resources (IDNR) Oil and Gas Division will occur.

HAZARDOUS MATERIAL CONCERNS TABLE AND SUMMARY

Hazardous Material Concerns Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Superfund	N/A	Manufactured Gas Plant Sites	N/A
RCRA Generator/TSD	1	Open Dump Waste Sites	1
RCRA Corrective Action Sites	N/A	Restricted Waste Sites	N/A
State Cleanup Sites	2	Waste Transfer Stations	N/A
Septage Waste Sites	N/A	Tire Waste Sites	N/A
Underground Storage Tank (UST) Sites	2	Confined Feeding Operations (CFO)	N/A
Voluntary Remediation Program	N/A	Brownfields	1
Construction Demolition Waste	N/A	Institutional Controls	3
Solid Waste Landfill	N/A	NPDES Facilities	10
Infectious/Medical Waste Sites	N/A	NPDES Pipe Locations	N/A
Leaking Underground Storage (LUST) Sites	3	Notice of Contamination Sites	N/A

Unless otherwise noted, site specific details presented in this section were obtained from documents reviewed on the Indiana Department of Environmental Management (IDEM) Virtual File Cabinet (VFC).

Explanation:

RCRA Generator/TSD: One (1) RCRA Generator/TSD site is located within the 0.5 mile search radius. The former Boles Chevrolet Incorporated, 641 East US 36, Pendleton, Indiana 46064 (Agency Interest ID: 40456), is mapped on the southern side of State Street; however, the facility is actually located adjacent to the project area on the northern side of State Street. The site currently holds a conditionally exempt small quantity generator status with the Environmental Protection Agency (EPA). The business is closed and no longer generates hazardous waste at this location. No impact is expected.

State Cleanup Sites: Two (2) State Cleanup Sites are located within the 0.5 mile search radius. The nearest site, formerly Fortville Auto Parts, 234 South Pendleton Avenue, Pendleton, Indiana 46064 (Agency Interest ID: 45942), is located 0.41 mile west of the project area, at the corner of South Pendleton Avenue and Elm Street. No impact is expected.

Underground Storage Tank (UST) Sites: Two (2) UST sites are located within the 0.5 mile search radius. One (1) is located adjacent to the project area. The former Swifty Service Station #240, 6933 South SR 67, Pendleton, Indiana 46064 (Agency Interest ID: 10998), is located on the western side of SR 67 between East Water Street and West Mercer Lane. A No Further Action (NFA) Determination Pursuant to Risk Integrated System of Closure (RISC) was issued by IDEM on March 29, 2016 and contamination remains in the area surrounding the site, but are below residential levels. If excavation occurs in this area, proper handling, removal, and disposal of soil and/or groundwater will be necessary.

Leaking Underground Storage (LUST) Sites: Three (3) LUST Sites are located within the 0.5 mile search radius. Two (2) sites are located adjacent to the project area.

- Former Marathon Unit #1636, 7175 South SR 67, Pendleton, Indiana 46064 (Regulatory Program ID: 5379), is located adjacent to the project area, at the northern corner of the intersection of SR 38 and SR 67. IDEM issued a NFA Approval Determination Pursuant to Remediation Closure Guide on April 3, 2002. Low levels of soil and groundwater contamination remain on the site. If excavation occurs in this area, it is likely that petroleum contamination will be encountered. Proper handling, removal, and disposal of soil and/or groundwater may be necessary.
- Speedway #7155, 7167 South SR 67, Pendleton, Indiana 46064 (Agency Interest ID: 11131), is located adjacent to the project area, southwest of the intersection of West US 30 and South SR 67. IDEM issued a NFA Approval Determination Pursuant to Remediation Closure Guide on November, 17, 2015. Low levels of soil contamination remain on the site, though groundwater monitoring and sampling results indicate this residual soil contamination is not leaching into the groundwater. An Environmental Restrictive Covenant (ERC) was placed on the property on October 28, 2015. If excavation occurs in this area, it is likely that petroleum contamination will be encountered. Proper handling, removal, and disposal of soil and/or groundwater may be necessary. Coordination will be conducted with the IDEM Project Manager identified in the VFC documentation before further site activities occur.

Open Dump Waste Site: One (1) open dump waste site is located within the 0.5 mile search radius. The Falls Creek site (Regulatory Program ID: 08072007a) is located 0.48 mile east-northeast of the project area in Falls Park. No impact is expected.

Brownfields: One (1) Brownfield is located within the 0.5 mile search radius. The former-Swifty Service Station #240, 6933 South SR 67, Pendleton, Indiana 46064 (Agency Interest ID: 10998), is located on the western side of SR 67 between East Water Street and West Mercer Lane. The site was a former service station from the 1950s until 2011 with Swifty Oil occupying the site from 1989 until close. The tanks were removed in 2014 and a release incident was reported during the UST closure. An NFA was issued by IDEM on March 29, 2016 with levels reported in soil and groundwater at below residential levels. The site was entered into the Brownfields program October 31, 2018. A Phase I Environmental Site Assessment (ESA) report was completed on December 6, 2018 and found no further environmental investigation of the site was warranted at that time. No impact is expected.

Institutional Controls: Three (3) Institutional Control sites are located within the 0.5 mile search radius. One (1) is located adjacent to the project area. The Speedway #7155, 7167 South SR 67, Pendleton, Indiana 46064 (Agency Interest ID: 11131), is located adjacent to the project area. An ERC was placed on the property on October 28, 2015. The ERC specifically prohibits the use for residential purposes, groundwater shall not be used or extracted for any purpose and the removal, excavation, or disturbance of soil will be conducted under the requirements of Indiana Occupational Safety and Health Administration/Occupational Safety and Health Administration (IOSHA/OSHA). Removed soil will be managed and disposed of under all applicable federal and state regulations. Coordination will be conducted with Lynette Schrowe (LSchrowe1@idem.in.gov) with IDEM before further site activities occur.

NPDES Facilities: Ten (10) NPDES Facilities are located within the 0.5 mile search radius. Six (6) NPDES facilities are adjacent to the project area.

- The Dollar General Store – Pendleton, Indiana, 6890 South SR 67 (Permit Number: INR10H017), is located at the intersection of Mercer Lane and SR 67. The permit expired on August 5, 2018. No impact is expected.
- Three (3) of the facilities are at the same location, 7167 South SR 67, which is south of the intersection of US 36 and SR 67.
 - Speedway Store #7155 (Permit Number: ING080091) had a permit, which expired on March 31, 2003. No impact is expected.
 - Speedway St #7155 Emro Mkting, 7167 South SR 67 (Permit Number: IN0057282) had a permit, which expired on May 31, 1998. No impact is expected.
 - Speedway #7155, 7167 South SR 67 (Permit Number: ING080310) had a permit, which expired on June 30, 2018. No impact is expected.
- Marathon Oil Station #1636, 7175 SR 67 (Permit Number: ING080080), is located north of the intersection of SR 38 and US 38. The permit expired on August 31, 2002. No impact is expected.
- Pendleton Heights High School Parking and Activity Center Addition, 1 Arabian Drive (Permit Number: INRA01662), is located south of the intersection of US 36 and SR 38. The permit expires on June 3, 2023. Coordination with the Pendleton Heights High School will occur.

ECOLOGICAL INFORMATION SUMMARY

The Madison County listing of the Indiana Natural Heritage Data Center information on endangered, threatened, or rare (ETR) species and high quality natural communities is provided at https://www.in.gov/dnr/nature-preserves/files/np_madison.pdf. A preliminary review of the Indiana Natural Heritage Database by Indiana Department of Transportation (INDOT) ESD did indicate the presence of ETR species within the 0.5 mile search radius. Coordination with US Fish and Wildlife Service (USFWS) and Indiana Department of Natural Resources (IDNR) will occur.

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent “Using the USFWS’s IPaC System for Listed Bat Consultation for INDOT Projects”. Coordination with US Fish and Wildlife Service (USFWS) and IDNR will occur.

RECOMMENDATIONS SECTION

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

INFRASTRUCTURE:

- Schools: One (1) school is located adjacent to the project area, on the southeast corner of US 36 and SR 38. Coordination with Pendleton Heights High School will occur.
- Recreational Facilities: One (1) recreation facility is located adjacent to the project area, on the southeast corner of US 36 and SR 38. Coordination with Pendleton Heights High School will occur.
- Pipelines: The Indiana Gas Company Incorporated natural gas line is located 0.03 mile southeast of the southern termini of the project area. Coordination with INDOT Utilities and Railroads should occur.
- Railroads: The CSX Railroad crosses the project area at Madison Avenue and State Street. Coordination with INDOT Utilities and Railroads should occur.

WATER RESOURCES:

- Three (3) floodplain polygons are located within the project area will require coordination with INDOT ESD Ecology and Waterway Permitting.

IDEM 303d Listed Streams and Lakes (impaired): One (1) segment, Fall Creek, is located within the project area. Fall Creek is listed as impaired for IBC and *E. coli*. Concerning IBC, BMPs will be used to avoid further degradation to the stream. Workers who are working in or near water with *E. coli* should take care to wear appropriate PPE, observe proper hygiene procedures, including regular hand washing, and limit personal exposure.

MINING/MINERAL EXPLORATION:

- Petroleum Wells: Two (2) wells, both owned by Pendleton Natural Gas Company, are located within or adjacent to the project area, south of SR 38 and east of the intersection with SR 67. Coordination with IDNR Oil and Gas Division will occur.

HAZARDOUS MATERIAL CONCERNS:

Leaking Underground Storage (LUST) Sites: Two (2) sites are within the project area.

- Former Marathon Unit #1636, 7175 South SR 67, Pendleton, Indiana 46064 (Regulatory Program ID: 5379), is located adjacent to the project area, at the northern corner of the intersection of SR 38 and SR 67. IDEM issued a NFA Approval Determination Pursuant to Remediation Closure Guide on April 3, 2002. Low levels of soil and groundwater contamination remain on the site. If excavation occurs in this area, it is likely that petroleum contamination will be encountered. Proper handling, removal, and disposal of soil and/or groundwater may be necessary.
- Speedway #7155, 7167 South SR 67, Pendleton, Indiana 46064 (Agency Interest ID: 11131), is located adjacent to the project area, southwest of the intersection of West US 30 and South SR 67. IDEM issued a NFA Approval Determination Pursuant to Remediation Closure Guide on November, 17, 2015. Low levels of soil contamination remain on the site, though groundwater monitoring and sampling results indicate this residual soil contamination is not leaching into the groundwater. An ERC was placed on the property on October 28, 2015. If excavation occurs in this area, it is likely that petroleum contamination will be encountered. Proper handling, removal, and disposal of soil and/or groundwater may be necessary. Coordination will be conducted with IDEM, Lynette Schrowe (LSchrowe1@idem.in.gov), before further site activities occur.

NPDES Facilities: Pendleton Heights High School Parking and Activity Center Addition, 1 Arabian Drive (Permit Number: INRA01662), is located south of the intersection of US 36 and SR 38. The permit expires on June 3, 2023. Coordination with the Pendleton Heights High School will occur.

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

Nicole Fohey
Breting

Digitally signed by
Nicole Fohey-Breting
Date: 2021.05.06
10:32:02 -04'00'

INDOT ESD concurrence: _____ (Signature)

Prepared by:
Tina Hartman Davis
GIS Manager
ASC Group, Inc.

Graphics:

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

SITE LOCATION: YES

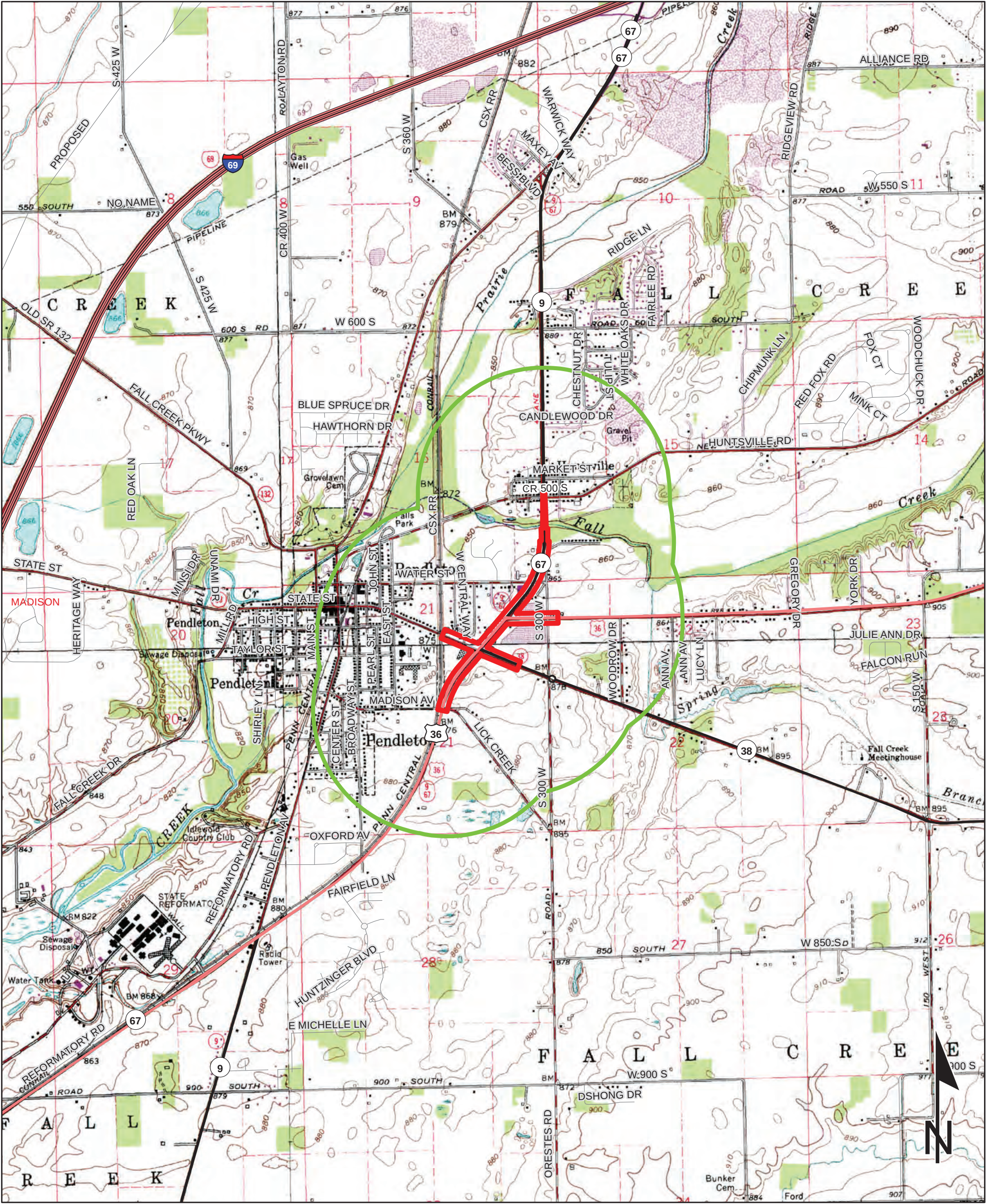
INFRASTRUCTURE: YES

WATER RESOURCES: YES

MINING/MINERAL EXPLORATION: YES

HAZARDOUS MATERIAL CONCERNS: YES

Red Flag Investigation - Site Location
US 36 and SR 9, from 0.28 Mile South of SR 38 to SR 9/SR 67 North Junction
Des. No. 1702936 & 1802854, Added Travel Lanes
Madison County, Indiana



Sources: 0.5 0.25 0 0.5 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.

ANDERSON SOUTH, INGALLS,
LAPEL, AND PENDLETON
QUADRANGLES
INDIANA

Red Flag Investigation - Infrastructure
US 36 and SR 9, from 0.28 Mile South of SR 38 to SR 9/SR 67 North Junction
Des. No. 1702936 & 1802854, Added Travel Lanes
Madison County, Indiana



Sources: 0.2 0.1 0 0.2 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.

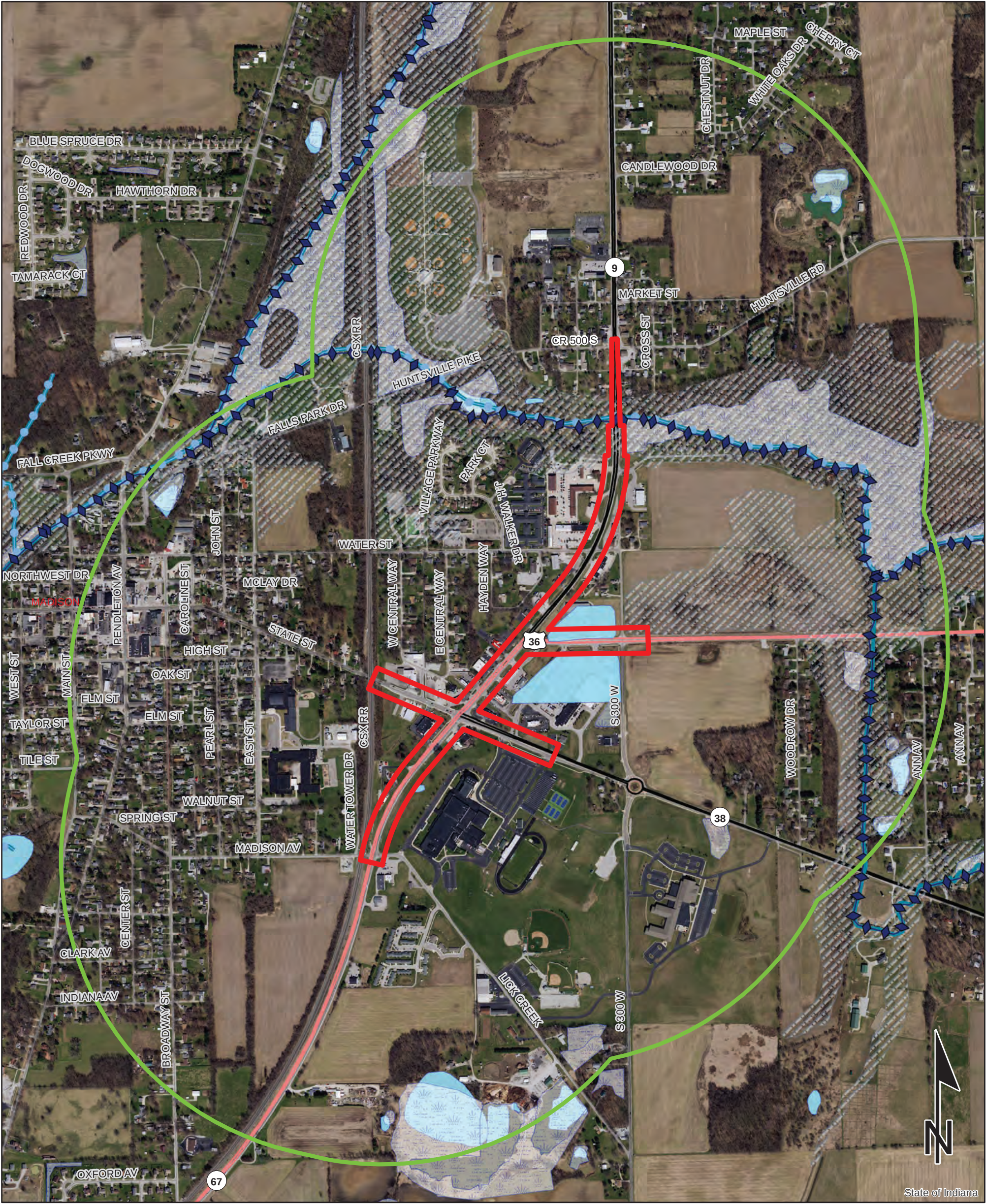
	Religious Facility		Recreation Facility		Project Area
	Airport		Pipeline		Half Mile Radius
	Cemeteries		Railroad		Toll
	Hospital		Trails		Interstate
	School		Managed Lands		State Route
			County Boundary		US Route
					Local Road

Red Flag Investigation - Water Resources

US 36 and SR 9, from 0.28 Mile South of SR 38 to SR 9/SR 67 North Junction

Des. No. 1702936 & 1802854, Added Travel Lanes

Madison County, Indiana



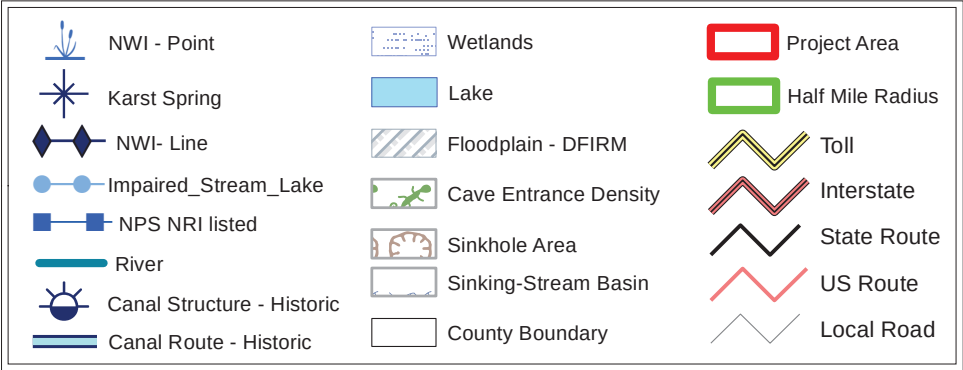
Sources:

Non Orthophotography
Data - Obtained from the State of Indiana Geographical Information Office Library

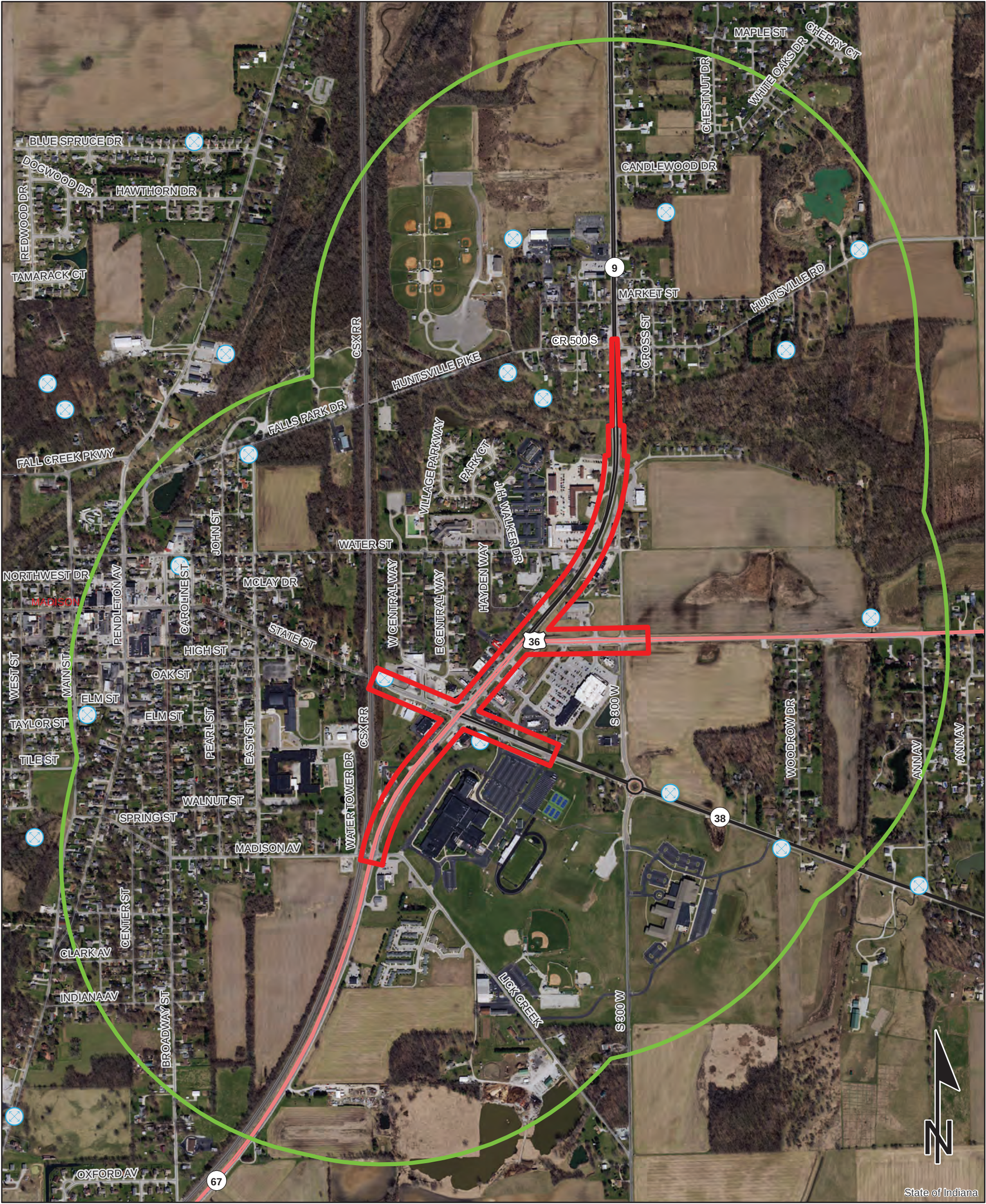
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

Map Projection: UTM Zone 16 N Map Datum: NAD83

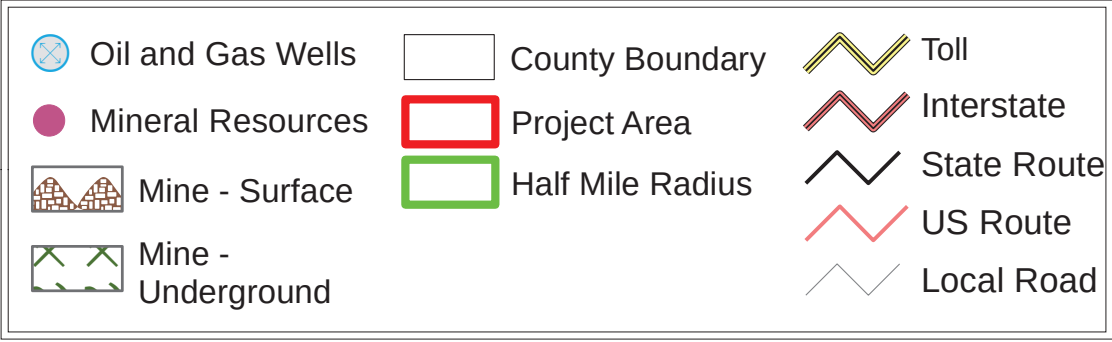
This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.



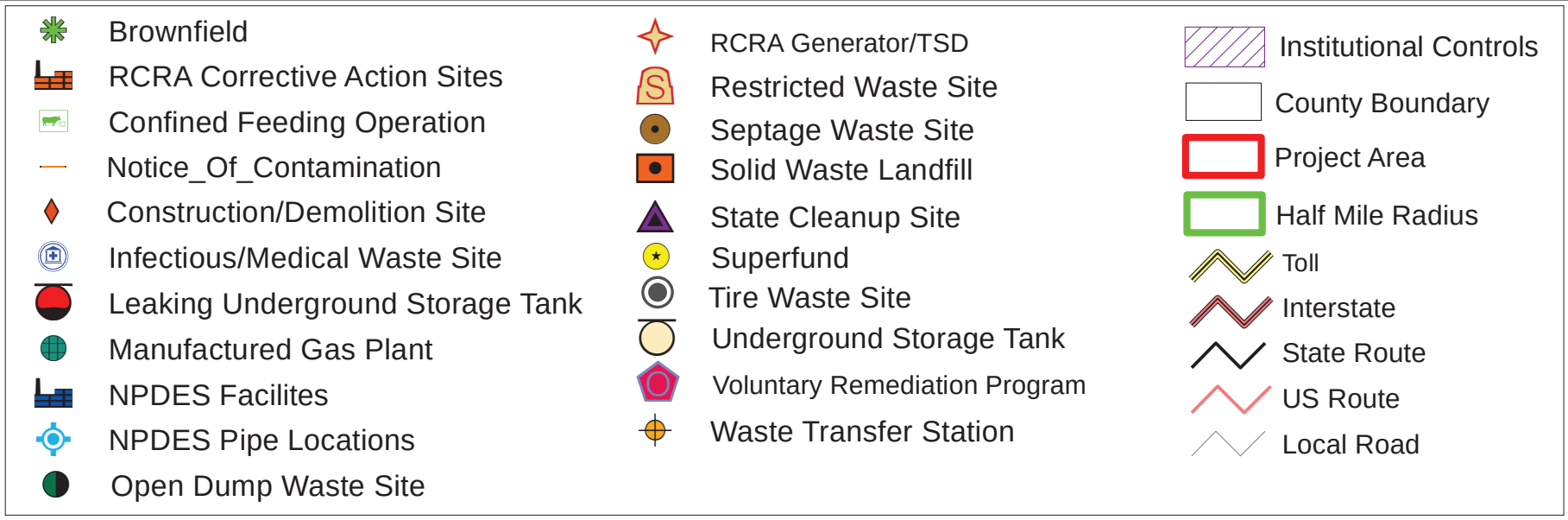
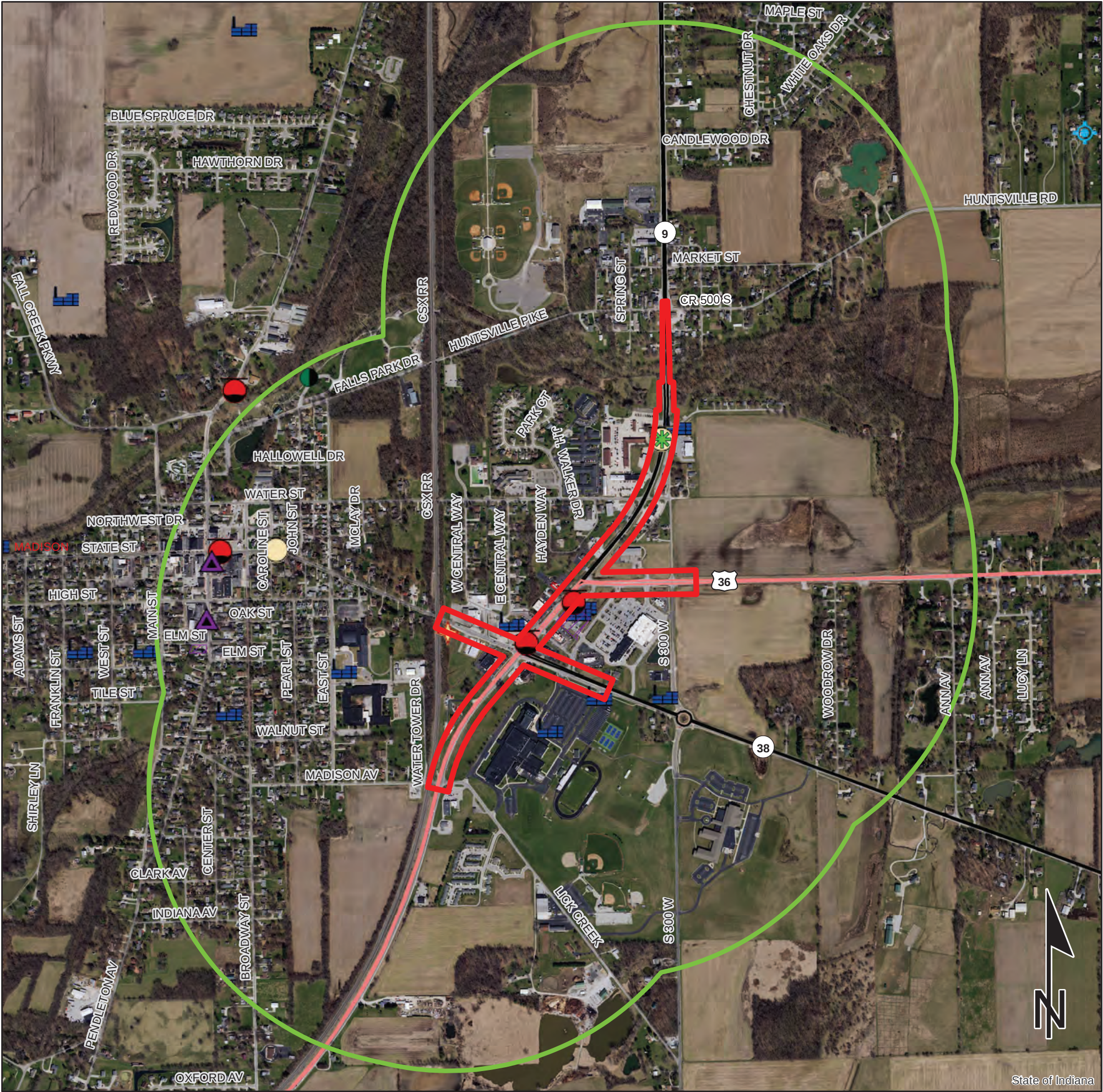
Red Flag Investigation - Mining/Mineral Exploration
US 36 and SR 9, from 0.28 Mile South of SR 38 to SR 9/SR 67 North Junction
Des. No. 1702936 & 1802854, Added Travel Lanes
Madison County, Indiana



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



Red Flag Investigation - Hazardous Material Concerns
US 36 and SR 9, from 0.28 Mile South of SR 38 to SR 9/SR 67 North Junction
Des. No. 1702936 & 1802854, Added Travel Lanes
Madison County, Indiana





CULTURAL • ENVIRONMENTAL • HAZARDOUS
EVALUATION & CONSULTING

Date: December 3, 2021

To: Site Assessment & Management (SAM)
Environmental Policy Office - Environmental Services Division (ESD)
Indiana Department of Transportation
100 N Senate Avenue, Room N758-ES
Indianapolis, IN 46204

From: Tina Hartman Davis
ASC Group, Inc.
9376 Castlegate Drive
Indianapolis, Indiana 46256
thartman@ascgroup.net

Re: RED FLAG INVESTIGATION
DES #2001127, LPA
Pedestrian Connectivity Project
US 36 and SR 9, from 0.36 Mile South of SR 38 to Water St/SR 9 North Junction
Madison County, Indiana

Note: This report briefly mentions a culvert placement in the "Type and proposed depth of excavation" section. This culvert has been identified as Structure No. CV 036-048-89.07 and is located at the US 36/SR 9 split. This structure is a 200-ft long by 4-ft wide with a 2-ft vertical opening reinforced concrete box culvert. It will be removed and replaced as a part of this project. Per the designer, there will be excavation to a depth of 11 ft below the road surface for the new drainage system, which is shallower than the depth mentioned for excavation in this report (A maximum depth of 12 ft will be excavated for drainage storm sewer and culvert placement).

PROJECT DESCRIPTION

Brief Description of Project: The Local Public Agency (LPA) pedestrian connectivity project includes elements of access management (raised landscaped medians on US 36 and SR 38), pedestrian connectivity (sidewalks and shared-use paths), Americans with Disabilities Act (ADA) compliance for all pedestrian elements and curb ramps, drainage, pedestrian lighting, signage, and other amenities, as well as pedestrian refuge islands and accessible pedestrian signals. The footprint is mostly within that of the added travel lanes project (Des. Nos. 1702936 and 1802854, submitted separately), but extends further east along SR 38 to just west of the roundabout at S 300 W, 0.08 mile further south along US 36 south of the East Madison Avenue/Lick Creek Pike intersection, and further east along US 36 adjacent to Pendleton High School between SR 38 and Lick Creek Pike. It ends at Water St. on the north side.

The purpose of the pedestrian connectivity project is for the Town of Pendleton (LPA project) to add pedestrian infrastructure along US 36, SR 9, State Street, and SR 38. The need stems from the anticipated increase in vehicle traffic and the lack of safe pedestrian access to Pendleton High School and businesses in the area, as well as a pedestrian connection between the high school and Water Street where the Town's recreation facilities exist. A 10 foot (ft) multi-use asphalt path (sidepath), crosswalks and concrete sidewalk connections will connect to and complete pedestrian connectivity per the Pendleton Bike Pedestrian Plan. ADA ramps will be installed throughout the project. Drainages will be buried, and pedestrian scaled lighting and signage will be installed.

Bridge and/or Culvert Project: Yes ☐ No ☒ Structure # _____

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

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

Proposed right of way: Temporary ☒ # Acres 0.3 Permanent ☒ # Acres 3.0, Not Applicable ☐

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An Equal Opportunity Employer

Type and proposed depth of excavation: Excavation for the road widening and subgrade treatment is estimated to be about 2–3 ft deep. A maximum depth of 12 ft will be excavated for drainage storm sewer and culvert placement.

Maintenance of traffic: Construction will be phased to maintain traffic with one lane in each direction.

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

State Project: ☐ LPA: ☒

Any other factors influencing recommendations: N/A

INFRASTRUCTURE TABLE AND SUMMARY

Infrastructure Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Religious Facilities	5*	Recreational Facilities	6
Airports ¹	N/A	Pipelines	1
Cemeteries	1	Railroads	2
Hospitals	N/A	Trails	2
Schools	4*	Managed Lands	1

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

Explanation:

Religious Facilities*: Although not mapped on the GIS layer, five (5) religious facilities were identified within the 0.5 mile search radius. The nearest facility, Pendleton Community Church of God, is located 0.07 mile west of the project area. No impact is expected.

Cemeteries: One (1) cemetery is located within the 0.5 mile search radius. Huntsville Cemetery is located 0.49 mile northeast of the northern project termini. No impact is expected.

Schools*: Four (4) schools, three (3) mapped and one (1) unmapped, are located within the 0.5 mile search radius. One (1) school, Pendleton Heights High School, is located adjacent to the east side of the project area, on the southeast corner of US 36 and SR 38. Coordination with Pendleton Heights High School will occur.

Recreational Facilities: Six (6) recreational facilities are located within the 0.5 mile search radius. One (1) facility, Pendleton Heights High School, is located adjacent to the east side of the project area, on the southeast corner of US 36 and SR 38. Coordination with Pendleton Heights High School will occur.

Pipelines: One (1) pipeline segment is located within the 0.5 mile search radius. The Indiana Gas Company Incorporated natural gas line is located 0.03 mile southeast of the southern termini of the project area. Coordination with the Indiana Gas Company should occur.

Railroads: Two (2) railroad segments are located within the 0.5 mile search radius. The CSX Railroad crosses the project area twice along and near the southern terminus of the project area along the west side, once at State Street and again at Madison Ave where it runs parallel with the project area. Coordination with the CSX Railroad should occur.

Trails: Two (2) trail segments are located within the 0.5 mile search radius. The nearest segment, Pendleton Trails Falls Park stone trail, is located within Falls Park, 0.41 mile northwest of the project area. No impact is expected.

Managed Lands: One (1) managed lands polygon is located within the 0.5 mile search radius. Falls Park is located 0.18 mile west of the project area. No impact is expected.

WATER RESOURCES TABLE AND SUMMARY

Water Resources Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
NWI - Points	N/A	Canal Routes - Historic	N/A
Karst Springs	N/A	NWI - Wetlands	21
Canal Structures – Historic	N/A	Lakes	13
NPS NRI Listed	N/A	Floodplain - DFIRM	19
NWI-Lines	18	Cave Entrance Density	N/A
IDEM 303d Listed Streams and Lakes (Impaired)	3	Sinkhole Areas	N/A
Rivers and Streams	9	Sinking-Stream Basins	N/A

Explanation:

NWI-Lines: Eighteen (18) NWI-Line segments are located within the 0.5 mile search radius. The nearest segment is located 0.22 mile north of the northern termini. No impact is expected.

IDEM 303d Listed Streams and Lakes (impaired): Three (3) 303d Listed Stream segments are located within the 0.5 mile search radius. One (1) segment, Fall Creek, is located 0.22 mile north of the northern project termini. No impact is expected.

Rivers and Streams: Nine (9) river and stream segments are located within the 0.5 mile search radius. One (1) segment of Fall Creek is located 0.22 mile north of the northern project termini. No impact is expected.

NWI-Wetlands: Twenty-one (21) wetland polygons are located within the 0.5 mile search radius. One (1) wetland polygon is located 0.05 mile north/east of the project area between SR 38 and US 36, east of SR 67. No impact is expected.

Lakes: Thirteen (13) lakes are located within the 0.5 mile search radius. Three (3) lakes are shown located within the project area. However, no bodies of water are located at these locations. No impact is expected.

Floodplain-DFIRM: Nineteen (19) floodplain polygons are located within the 0.5 mile search radius. One (1) floodplain polygon is located within the project area, along US 36, east of S 300 W. Coordination with the appropriate agency will occur.

MINING AND MINERAL EXPLORATION TABLE AND SUMMARY

Mining/Mineral Exploration Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Petroleum Wells	11	Mineral Resources	N/A
Mines – Surface	N/A	Mines – Underground	N/A

Explanation:

Petroleum Wells: Eleven (11) petroleum wells are located within the 0.5 mile search radius. Two (2) wells, both owned by Pendleton Natural Gas Company, are located adjacent to the project area, south of SR 38 and east of the intersection with SR 67. Coordination with Indiana Department of Natural Resources (IDNR) Oil and Gas Division will occur.

HAZARDOUS MATERIAL CONCERNS TABLE AND SUMMARY

Hazardous Material Concerns Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Superfund	N/A	Manufactured Gas Plant Sites	N/A
RCRA Generator/TSD	1	Open Dump Waste Sites	1
RCRA Corrective Action Sites	N/A	Restricted Waste Sites	N/A
State Cleanup Sites	2	Waste Transfer Stations	N/A
Septage Waste Sites	N/A	Tire Waste Sites	N/A
Underground Storage Tank (UST) Sites	2	Confined Feeding Operations (CFO)	N/A
Voluntary Remediation Program	N/A	Brownfields	1
Construction Demolition Waste	N/A	Institutional Controls	3
Solid Waste Landfill	N/A	NPDES Facilities	10
Infectious/Medical Waste Sites	N/A	NPDES Pipe Locations	N/A
Leaking Underground Storage (LUST) Sites	3	Notice of Contamination Sites	N/A

Unless otherwise noted, site specific details presented in this section were obtained from documents reviewed on the Indiana Department of Environmental Management (IDEM) Virtual File Cabinet (VFC).

Explanation:

RCRA Generator/TSD: One (1) RCRA Generator/TSD site is located within the 0.5 mile search radius. The former Boles Chevrolet Incorporated, 641 East US 36, Pendleton, Indiana 46064 (Agency Interest ID: 40456), is mapped on the southern side of State Street; however, the facility is actually located adjacent to the project area on the northern side of State Street. The site currently holds a conditionally exempt small quantity generator status with the Environmental Protection Agency (EPA). The business is closed and no longer generates hazardous waste at this location. No impact is expected.

State Cleanup Sites: Two (2) State Cleanup Sites are located within the 0.5 mile search radius. The nearest site, formerly Fortville Auto Parts, 234 South Pendleton Avenue, Pendleton, Indiana 46064 (Agency Interest ID: 45942), is located 0.41 mile west of the project area, at the corner of South Pendleton Avenue and Elm Street. No impact is expected.

Underground Storage Tank (UST) Sites: Two (2) UST sites are located within the 0.5 mile search radius. The nearest site, the former Swifty Service Station #240, 6933 South SR 67, Pendleton, Indiana 46064 (Agency Interest ID: 10998), is located on the western side of SR 67 between East Water Street and West Mercer Lane, 0.1 mile north of the project area and impacts do not appear to extend toward the project. No impact is expected.

Leaking Underground Storage (LUST) Sites: Three (3) LUST Sites are located within the 0.5 mile search radius. Two (2) sites are located adjacent to the project area.

- Former Marathon Unit #1636, 7175 South SR 67, Pendleton, Indiana 46064 (Regulatory Program ID: 5379), is located adjacent to the project area, at the northern corner of the intersection of SR 38 and SR 67. IDEM issued a NFA Approval Determination Pursuant to Remediation Closure Guide on April 3, 2002. Low levels of soil and groundwater contamination remain on the site. If excavation occurs in this area, it is likely that petroleum contamination will be encountered. Proper handling, removal, and disposal of soil and/or groundwater may be necessary.
- Speedway #7155, 7167 South SR 67, Pendleton, Indiana 46064 (Agency Interest ID: 11131), is located adjacent to the project area, southwest of the intersection of West US 36 and South SR 67. IDEM issued a NFA Approval Determination Pursuant to Remediation Closure Guide on November, 17, 2015. Low levels of soil contamination remain on the site, though groundwater monitoring and sampling results indicate this residual soil contamination is not leaching into the groundwater. An Environmental Restrictive Covenant (ERC) was placed on the property on October 28, 2015. If excavation occurs in this area, it is likely that petroleum contamination will be encountered. Proper handling, removal, and disposal of soil and/or groundwater may be necessary.

Open Dump Waste Site: One (1) open dump waste site is located within the 0.5 mile search radius. The Falls Creek site (Regulatory Program ID: 08072007a) is located 0.48 mile northwest of the project area in Falls Park. No impact is expected.

Brownfields: One (1) Brownfield is located within the 0.5 mile search radius. The former Swifty Service Station #240, 6933 South SR 67, Pendleton, Indiana 46064 (Agency Interest ID: 10998), is located on the western side of SR 67 between East Water Street and West Mercer Lane, 0.1 mile north of the project area. No impact is expected.

Institutional Controls: Three (3) Institutional Control sites are located within the 0.5 mile search radius. One (1) is located adjacent to the project area. The Speedway #7155, 7167 South SR 67, Pendleton, Indiana 46064 (Agency Interest ID: 11131), is located adjacent to the project area. An ERC was placed on the property on October 28, 2015. The ERC specifically prohibits the use for residential purposes, groundwater shall not be used or extracted for any purpose and the removal, excavation, or disturbance of soil will be conducted under the requirements of Indiana Occupational Safety and Health Administration/Occupational Safety and Health Administration (IOSHA/OSHA). Removed soil will be managed and disposed of under all applicable federal and state regulations. If excavation occurs in this area, it is likely that petroleum contamination will be encountered. Proper handling, removal, and disposal of soil and/or groundwater may be necessary. Coordination will be conducted with the IDEM Institutional Controls section (institutionalcontrols@idem.IN.gov) before RFC. Refer to Appendix G of the SAM Manual for the recommended procedure to manage and report contamination.

NPDES Facilities: Ten (10) NPDES Facilities are located within the 0.5 mile search radius. Seven (7) NPDES facilities are adjacent to the project area.

- Three (3) of the facilities are at the same location, 7167 South SR 67, which is south of the intersection of US 36 and SR 67.

- o Speedway Store #7155 (Permit Number: ING080091) had a permit, which expired on March 31, 2003. No impact is expected.
- o Speedway St #7155 Emro Mkting, 7167 South SR 67 (Permit Number: IN0057282) had a permit, which expired on May 31, 1998. No impact is expected.
- o Speedway #7155, 7167 South SR 67 (Permit Number: ING080310) had a permit, which expired on June 30, 2018. No impact is expected.
- Marathon Oil Station #1636, 7175 SR 67 (Permit Number: ING080080), is located north of the intersection of SR 38 and US 36. The permit expired on August 31, 2002. No impact is expected.
- Pendleton SRTS, Arabian Drive and SR 38, (Permit Number: INR10K058) had a permit, which expired on May 8, 2020. No impact is expected.
- Pendleton Heights High School Parking and Activity Center Addition, 1 Arabian Drive (Permit Number: INRA01662), is located south of the intersection of US 36 and SR 38. The permit expires on June 3, 2023. Coordination with the Pendleton Heights High School will occur.
- US 36 Force Main Replacement FCRWD, E State St and CR 300W, (Permit Number: INRA02452), is located northwest of the intersection of SR 38 and CR 300W. The permit has been terminated. No impact is expected.

ECOLOGICAL INFORMATION SUMMARY

The Madison County listing of the Indiana Natural Heritage Data Center information on endangered, threatened, or rare (ETR) species and high quality natural communities is provided at https://www.in.gov/dnr/nature-preserves/files/np_madison.pdf. A preliminary review of the Indiana Natural Heritage Database by Indiana Department of Transportation (INDOT) ESD did indicate the presence of ETR species within the 0.5 mile search radius. Coordination with US Fish and Wildlife Service (USFWS) and Indiana Department of Natural Resources (IDNR) will occur.

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

RECOMMENDATIONS SECTION

INFRASTRUCTURE:

- Schools: One (1) school is located adjacent to the east side of the project area, on the southeast corner of US 36 and SR 38. Coordination with Pendleton Heights High School will occur.
- Recreational Facilities: One (1) recreation facility is located adjacent to the east side of the project area, on the southeast corner of US 36 and SR 38. Coordination with Pendleton Heights High School will occur.
- Pipelines: The Indiana Gas Company Incorporated natural gas line is located 0.03 mile southeast of the southern termini of the project area. Coordination with the Indiana Gas Company should occur.
- Railroads: The CSX Railroad crosses the project area at Madison Avenue and State Street. Coordination with the CSX Railroad should occur.

WATER RESOURCES:

- One (1) floodplain polygon is located within the project area and will require coordination with the appropriate agency.

MINING/MINERAL EXPLORATION:

- Petroleum Wells: Two (2) wells, both owned by Pendleton Natural Gas Company, are located within or adjacent to the project area, south of SR 38 and east of the intersection with SR 67. Coordination with IDNR Oil and Gas Division will occur.

HAZARDOUS MATERIAL CONCERNS:

Leaking Underground Storage (LUST) Sites: Two (2) sites are adjacent to the project area.

- Former Marathon Unit #1636, 7175 South SR 67, Pendleton, Indiana 46064 (Regulatory Program ID: 5379), is located adjacent to the project area, at the northern corner of the intersection of SR 38 and SR 67. IDEM issued a NFA Approval Determination Pursuant to Remediation Closure Guide on April 3, 2002. Low levels of soil and groundwater contamination remain on the site. If excavation occurs in this area, it is likely that petroleum contamination will be encountered. Proper handling, removal, and disposal of soil and/or groundwater may be necessary.
- Speedway #7155, 7167 South SR 67, Pendleton, Indiana 46064 (Agency Interest ID: 11131), is located adjacent to the project area, southwest of the intersection of West US 36 and South SR 67. IDEM issued a NFA Approval Determination Pursuant to Remediation Closure Guide on November, 17, 2015. Low levels of soil contamination remain on the site, though groundwater monitoring and sampling results indicate this residual soil contamination is not leaching into the groundwater. An Environmental Restrictive Covenant (ERC) was placed on the property on October 28, 2015. If excavation occurs in this area, it is likely that petroleum contamination will be encountered. Proper handling, removal, and disposal of soil and/or groundwater may be necessary.

Institutional Controls: One (1) institutional control is located adjacent to the project area. The Speedway #7155, 7167 South SR 67, Pendleton, Indiana 46064 (Agency Interest ID: 11131), is located adjacent to the project area. An ERC was placed on the property on October 28, 2015. The ERC specifically prohibits the use for residential purposes, groundwater shall not be used or extracted for any purpose and the removal, excavation, or disturbance of soil will be conducted under the requirements of Indiana Occupational Safety and Health Administration/Occupational Safety and Health Administration (IOSHA/OSHA). Removed soil will be managed and disposed of under all applicable federal and state regulations. If excavation occurs in this area, it is likely that petroleum contamination will be encountered. Proper handling, removal, and disposal of soil and/or groundwater may be necessary. Coordination will be conducted with the IDEM Institutional Controls section (institutionalcontrols@idem.IN.gov) before RFC. Refer to Appendix G of the SAM Manual for the recommended procedure to manage and report contamination.

NPDES Facilities: Pendleton Heights High School Parking and Activity Center Addition, 1 Arabian Drive (Permit Number: INRA01662), is located south of the intersection of US 36 and SR 38. The permit expires on June 3, 2023. Coordination with the Pendleton Heights High School will occur.

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

Nicole
Fohey-
Breting

Digitally signed by
Nicole Fohey-Breting
Date: 2021.12.03
13:02:43 -05'00'

INDOT ESD concurrence: _____ (Signature)

Prepared by:
Tina Hartman Davis
GIS Manager
ASC Group, Inc.

Graphics:

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

SITE LOCATION: YES

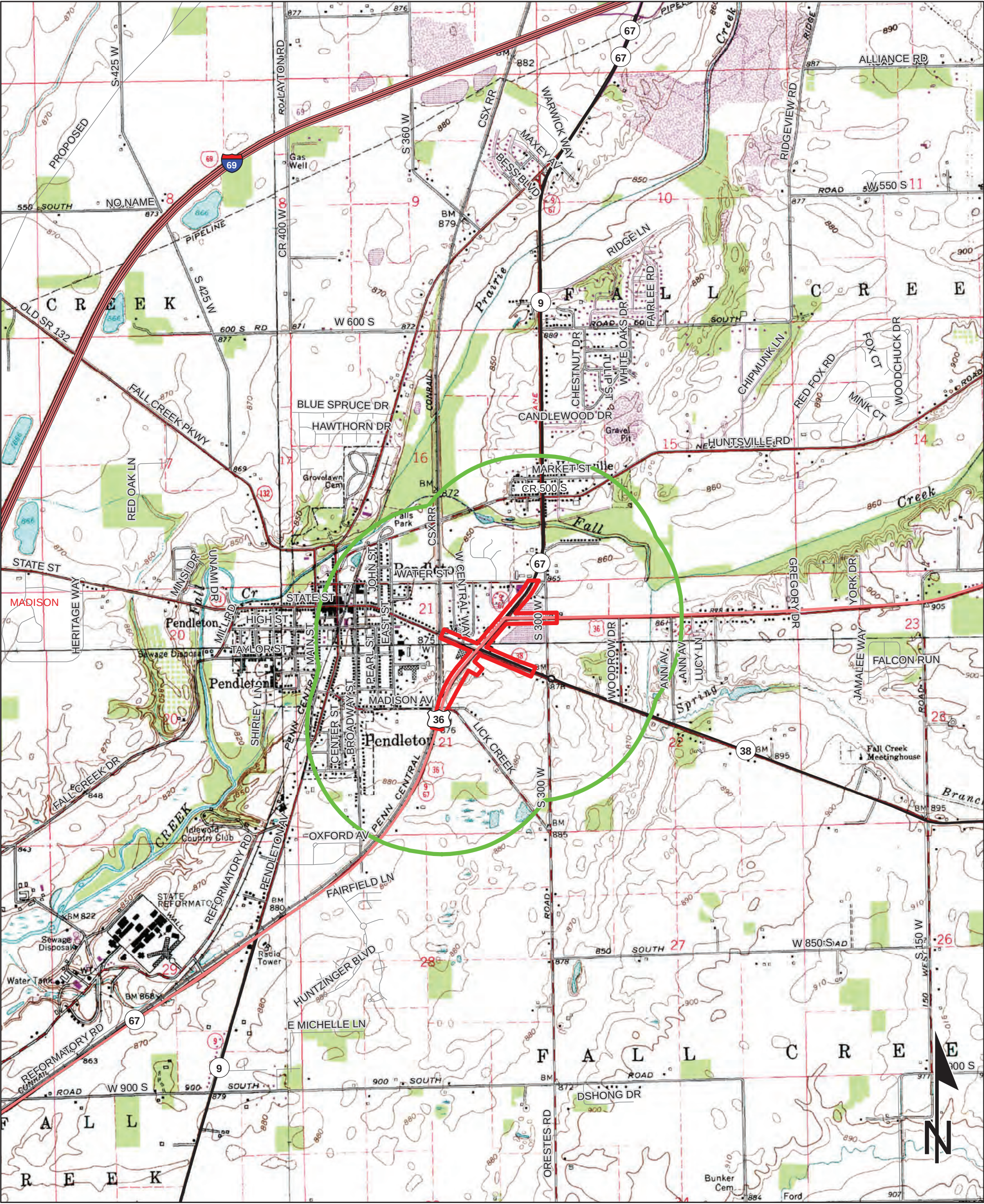
INFRASTRUCTURE: YES

WATER RESOURCES: YES

MINING/MINERAL EXPLORATION: YES

HAZARDOUS MATERIAL CONCERNS: YES

Red Flag Investigation - Site Location
US 36 and SR 9, from 0.36 Mile South of SR 38 to Water St/SR 9 North Junction
Des. No. 2001127, Pedestrian Connectivity Project
Madison County, Indiana



Sources: 0.5 0.25 0 0.5 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.

ANDERSON SOUTH, INGALLS,
LAPEL, AND PENDLETON
QUADRANGLES
INDIANA

Red Flag Investigation - Infrastructure

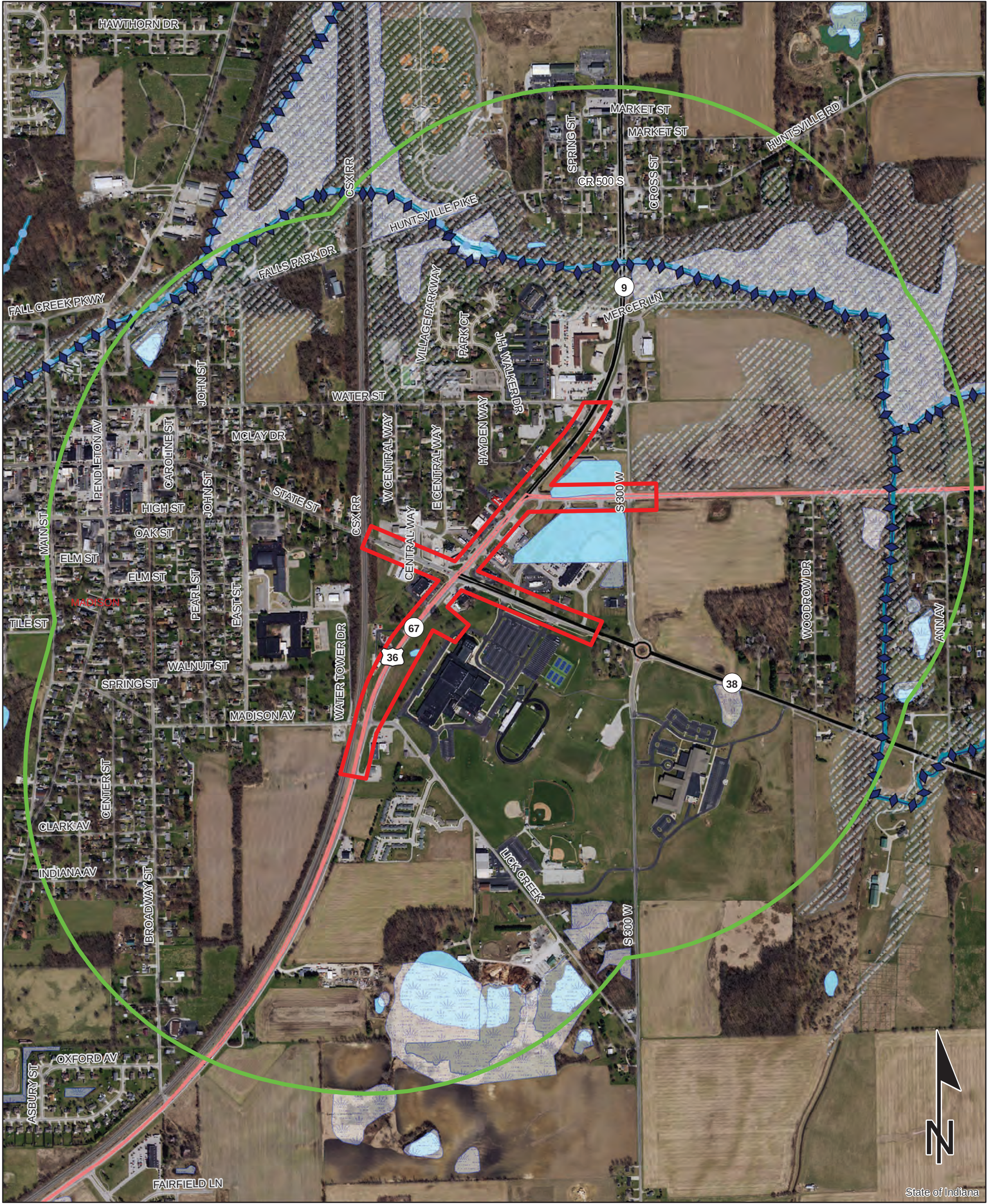
US 36 and SR 9, from 0.36 Mile South of SR 38 to Water St/SR 9 North Junction
Des. No. 2001127, Pedestrian Connectivity Project
Madison County, Indiana



Sources: 0.2 0.1 0 0.2 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.

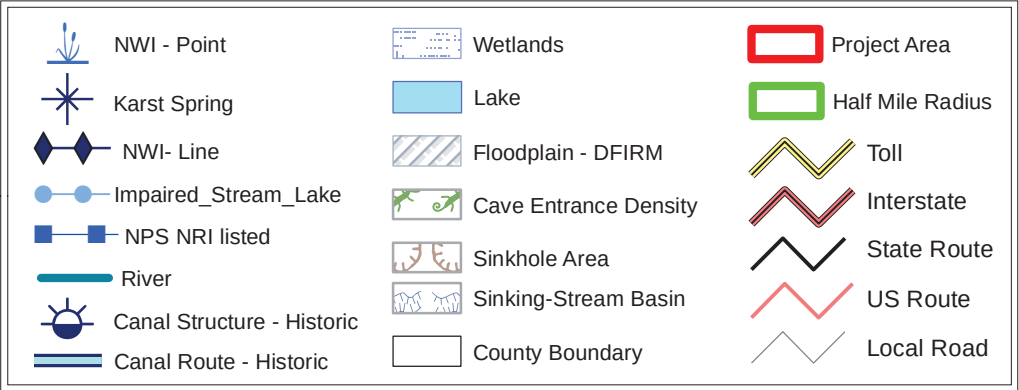
	Religious Facility		Recreation Facility		Project Area
	Airport		Pipeline		Half Mile Radius
	Cemeteries		Railroad		Toll
	Hospital		Trails		Interstate
	School		Managed Lands		State Route
			County Boundary		US Route
					Local Road

Red Flag Investigation - Water Resources
US 36 and SR 9, from 0.36 Mile South of SR 38 to Water St/SR 9 North Junction
Des. No. 2001127, Pedestrian Connectivity Project
Madison County, Indiana

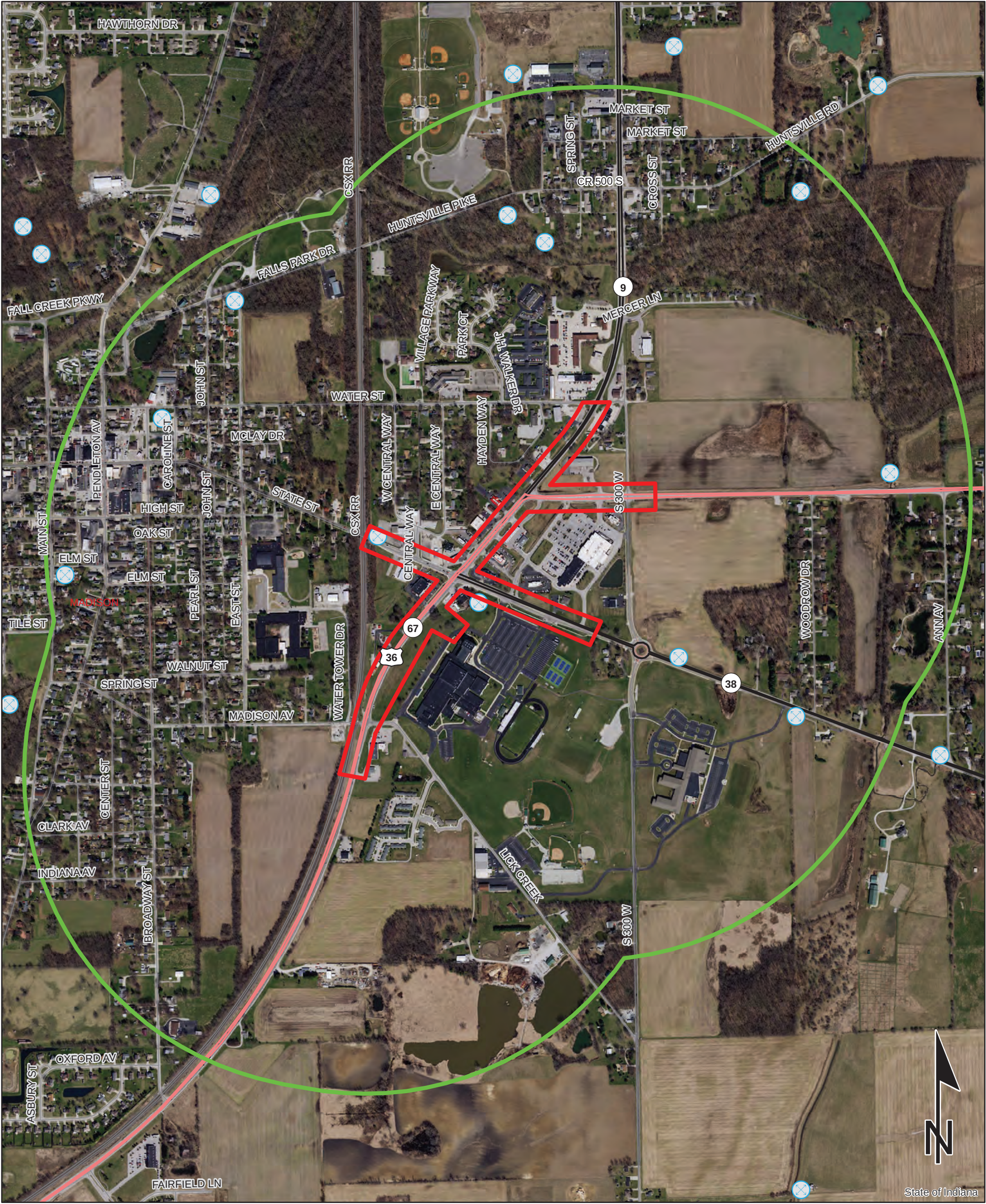


Sources:
Non Orthophotography
Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

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

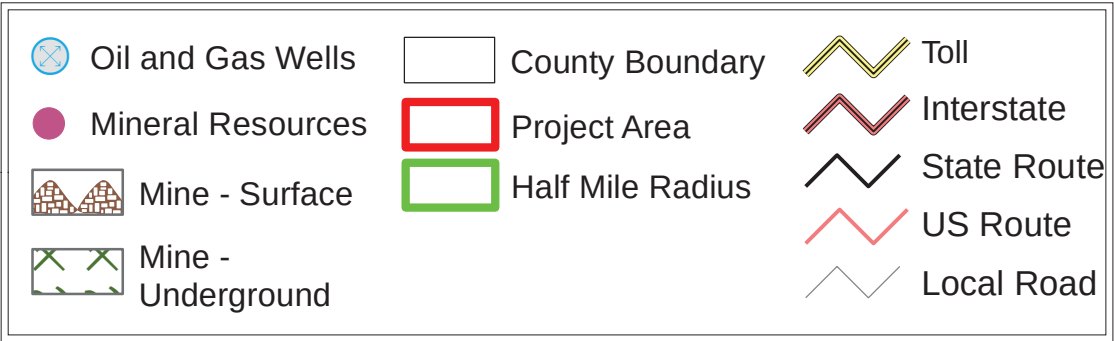


Red Flag Investigation - Mining/Mineral Exploration
US 36 and SR 9, from 0.36 Mile South of SR 38 to Water St/SR 9 North Junction
Des. No. 2001127, Pedestrian Connectivity Project
Madison County, Indiana



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

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



Red Flag Investigation - Hazardous Material Concerns
US 36 and SR 9, from 0.36 Mile South of SR 38 to Water St/SR 9 North Junction
Des. No. 2001127, Pedestrian Connectivity Project
Madison County, Indiana



	Brownfield		RCRA Generator/TSD		Institutional Controls
	RCRA Corrective Action Sites		Restricted Waste Site		County Boundary
	Confined Feeding Operation		Septage Waste Site		Project Area
	Notice_Of_Contamination		Solid Waste Landfill		Half Mile Radius
	Construction/Demolition Site		State Cleanup Site		Toll
	Infectious/Medical Waste Site		Superfund		Interstate
	Leaking Underground Storage Tank		Tire Waste Site		State Route
	Manufactured Gas Plant		Underground Storage Tank		US Route
	NPDES Facilites		Voluntary Remediation Program		Local Road
	NPDES Pipe Locations		Waste Transfer Station		
	Open Dump Waste Site				

0.2 0.1 0 0.2 Miles

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

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

From: INDOT esd.sam [mailto:esd.sam@indot.IN.gov]
Sent: Thursday, March 31, 2022 3:49 PM
To: Tina Davis <thartman@ascgroup.net>
Cc: Jenna Garrison <jgarrison@ascgroup.net>; Harry Nikides <hNikides@ascgroup.net>; Leah Konicki <lkonicki@ascgroup.net>
Subject: RE: DES 2001127 US 36 and SR 9 Ped Connectivity Addendum question

Hi Tina –

It does not appear as though an RFI Addendum is needed for this change in scope as there do not appear to be additional resources impacted or that will impact the new project area.

Please let SAM know if additional changes or updates to the project occur.

Thank you!
Sincerely,
Nicole

From: Tina Davis <thartman@ascgroup.net>
Sent: Wednesday, March 30, 2022 4:28 PM
To: INDOT esd.sam <esd.sam@indot.IN.gov>
Cc: Jenna Garrison <jgarrison@ascgroup.net>; hNikides <hnikides@ascgroup.net>; lkonicki@ascgroup.net
Subject: DES 2001127 US 36 and SR 9 Ped Connectivity Addendum question

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

INDOT SAM,
The LPA RFI for DES 2001127 was signed on Dec 3, 2021. We have been notified that there is an addition to the project area in the form of an pedestrian path that would extend from US 36/SR 9, northwest to Hayden Way and then north to Water Street. The portion from just north of SR 36 to Water Street, along SR 9, has been eliminated.

No additional resources are added with a .5 mile buffer and no additional impacts have been found.

The attached map shows the original project area and .5 mile buffer and the estimated revised project area and buffer in yellow. The new path will be 10 ft in width, with some drainage considerations including pipes and drainage ditches. Signs, benches, curb ramps and a crosswalk at Water Street are included.

Will an addendum to the previous RFI be the acceptable way to proceed?

Thank you for your guidance.

Tina

Tina Hartman Davis
Cartography Manager

ASC Group, Inc.
800 Freeway Drive North, Suite 101
Columbus, Ohio 43229
614.268.2514 (office)
614.310.3551 (direct)

[Facebook](#) | [LinkedIn](#) | [Web](#)

Jennifer Rhodes

From: INDOT esd.sam <esd.sam@indot.IN.gov>
Sent: Wednesday, May 24, 2023 2:35 PM
To: Jennifer Rhodes; Foheybreting, Nicole K
Cc: Tina Davis; Harry Nikides
Subject: RE: DES#1702936 and 1802854 (State) and 2001127 (LPA) RFIs

Hi Jennifer,

INDOT SAM concurs that no additional impacts are expected. The changes to the project description/area can be noted in the CE and since the reevaluation did not identify features requiring new coordination from the initial RFI, there is no need for an RFI Addendum. Make sure to include the statement "should additional changes to the project scope or extent occur, re-coordination with INDOT SAM will be necessary."

Have a great day!

Peter Washburn

Site Assessment & Management (SAM) Team Lead

Indiana Department of Transportation
100 North Senate Avenue N758 – Environmental Services Division
Indianapolis, Indiana 46204
Office: (317) 982-0912
Email: PWashburn1@indot.in.gov



From: Jennifer Rhodes <jrhodes@ascgroup.net>
Sent: Tuesday, May 9, 2023 11:32 AM
To: INDOT esd.sam <esd.sam@indot.IN.gov>
Cc: Tina Davis <thartman@ascgroup.net>; hNikides <hnikides@ascgroup.net>
Subject: DES#1702936 and 1802854 (State) and 2001127 (LPA) RFIs

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

INDOT SAM,

The attached RFIs were signed on May 6, 2021 (State) and December 3, 2021 (LPA). Since then, the projects have been combined and the project area has been revised. The attached combined map shows the old project area and half mile radius in yellow and the new project area in blue (state only), red (LPA only), and purple (combined areas) and half mile buffer in green.

State Project: Des. Nos. 1702936 and 1802854: This project is located along US 36 and SR 9 to the north and is locally known as Pendleton Pike, from 0.28 mile south of SR 38 to Huntsville Road, with construction on State Street, SR 38, and US 36 east of the SR 9 junction included, in Madison County. The proposed road project is anticipated to add additional travel lanes by constructing two additional through lanes on US 36/SR 9/SR 67 from Madison Avenue/Angle Road to the bridge over Fall Creek (four lanes already exist between the bridge and County Road (CR) 500 South/Huntsville Road),

with an additional center lane from the south junction (at State Street) to Mercer Lane. The left and right turn lanes on SR 9/SR 67/US 36 at the south junction (at State Street) to Mercer Lane will be retained with widening as needed. At the south junction, dual left turns on eastbound State Street and dual left turns on westbound SR 38 will be constructed. The westbound right turn lane on SR 38 and the westbound through lane on State Street will be retained in their current locations with the needed widening occurring to the south. At the north junction (where US 36 splits off to the east), the westbound US 36 right turn lane storage will be extended to the first commercial drive with widening to the north. Curb and gutter with a closed drainage system and curb turnouts where open ditches can be retained to reduce the additional right-of-way needed for shoulders, while still providing surface drainage. The State project is anticipated to grade and adjust the roadsides for the LPA project. At the northern termini, the project narrows down to the pavement edges starting at the bridge over Fall Creek and continuing to its end. No work will be performed in the waterway or on the bridge piers. Expected work at the bridge is limited to removing the existing striping and painting new stripes. The small pedestrian bridge over a drainage pipe along SR 38 will not be impacted by this project. A detention pond is anticipated to be added northeast of the US 36/SR 9 split.

LPA Project: Des. No. 2001127: The footprint is mostly within the project area for the added travel lanes project (Des. Nos. 1702936 and 1802854), but extends further east along SR 38/State Street to just west of the roundabout at the SR 38/State Street and South CR 300 West intersection, 0.08 mile further south along US 36/SR 9/SR 67 south of the East Madison Avenue/Angle Road intersection, and further east along US 36 adjacent to Pendleton High School between SR 38/State Street and Angle Road. It also extends west opposite the US 36 east leg at the north junction with SR 9 through an existing open area to Hayden Way and then north alongside Hayden Way to Water Street. The proposed pedestrian connectivity project is anticipated to add pedestrian infrastructure. This will include raised landscaped medians on US 36 and SR 38, pedestrian connectivity (sidewalks and shared-use paths), ADA compliance for all pedestrian elements and curb ramps, a drainage, pedestrian lighting, signage, and other amenities, as well as pedestrian refuge islands, accessible pedestrian signals, pedestrian and bicycle counter, and benches. A shared-use path will be installed on the east side of US 36 from Angle Road to the SR 9 junction. A shared-use path will also be installed on the west side of SR 9, from the US 36 junction to the west through an open area and then along Hayden Way to Water Street. Sidewalk will be installed on the north and south sides of State Street and SR 38, on the south side of the US 36 east leg of the north junction, and the west side of US 36 between State Street and the US 36/SR 9 north junction. Curb ramps will be placed at the intersections of US 36/State Street and US 36/SR 9, and at the termini of the paths at Angle Road and Water Street.

The combined road and pedestrian connectivity project would require the acquisition of a total of 5.12 acres of permanent right-of-way and 0.74 acre of temporary right-of-way. The approximate permanent right-of-way widths from centerline throughout the project area would vary between 58–180 ft along US 36 and SR 9, 40–80 ft along SR 38 and State Street, and 50–185 ft along US 36 (east leg). The approximate temporary right-of-way widths from centerline throughout the project area would vary between 58–95 ft along US 36 and SR 9, and 65–75 ft along SR 38 and State Street. No temporary right-of-way would be acquired along US 36 (east leg). The project limits would be approximately 0.9 mile in length. The proposed method of traffic maintenance is anticipated to require phased construction to maintain traffic with one lane in each direction. The project is anticipated to begin construction in Fall 2024.

Depth of excavation: Excavation for the road widening and subgrade treatment is estimated to be about 2–3 feet (ft) deep. A maximum depth of 12 ft will be excavated for drainage storm sewer and culvert placement. A detention pond is anticipated to be added northeast of the US 36/SR 9 split and is estimated to be about 5 ft deep; however, it is anticipated to be up to 10 ft from the edge of the proposed roadway to the bottom of the proposed detention basin.

No new features are within the new buffer and no new impacts are in project area.

Can the changes to the project description and project area just be noted in the CE?

Thanks,
Jennifer

Jennifer Rhodes
Technical Editor

Jennifer Rhodes

From: INDOT esd.sam <esd.sam@indot.IN.gov>
Sent: Monday, October 23, 2023 1:34 PM
To: Jennifer Rhodes; Barnes, Tracy
Cc: Tina Davis; Harry Nikides; Cameron Berry
Subject: RE: DES#1702936 and 1802854 (State) and 2001127 (LPA) RFIs

Hi Jennifer,

Thank you for the updated information! You can just note the updated structure number in the CE since the project area remains the same and no additional impacting features were identified. Please let me know if you need anything else.

Have a great day!

Peter Washburn

Sr. Environmental Manager Supervisor
Site Assessment & Management (SAM) Team Lead
Indiana Department of Transportation
100 North Senate Avenue N758 – Environmental Services Division
Indianapolis, Indiana 46204
Office: (317) 982-0912
Email: PWashburn1@indot.in.gov



Check out the new [ArcGIS Pro Template](#) available on the [Site Assessment and Management](#) webpage.

From: Jennifer Rhodes <jrhodes@ascgroup.net>
Sent: Wednesday, October 18, 2023 10:47 AM
To: INDOT esd.sam <esd.sam@indot.IN.gov>
Cc: Tina Davis <thartman@ascgroup.net>; hNikides <hnikides@ascgroup.net>; Cameron Berry <cberry@ascgroup.net>
Subject: DES#1702936 and 1802854 (State) and 2001127 (LPA) RFIs

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Sorry my previous email neglected to mention the Des. Nos. for the US 36/SR 9 Pendleton projects.

INDOT SAM,

The attached RFIs were signed on May 6, 2021 (State) and December 3, 2021 (LPA). The projects were combined and the RFI was rechecked. On May 24, 2023, INDOT SAM concurred that no additional impacts were expected and that the changes to the project description/area could be noted in the CE and since the reevaluation did not identify features requiring new coordination from the initial RFI, there was no need for an RFI Addendum.

The LPA RFI report briefly mentioned a culvert placement in the "Type and proposed depth of excavation" section. This culvert has been identified as Structure No. CV 036-048-89.07 and is located at the US 36/SR 9 split. This structure is a

200-ft long by 4-ft wide with a 2-ft vertical opening reinforced concrete box culvert. It will be removed and replaced as a part of this project. Per the designer, there will be excavation to a depth of 11 ft below the road surface for the new drainage system, which is shallower than the depth mentioned for excavation in the LPA RFI (A maximum depth of 12 ft will be excavated for drainage storm sewer and culvert placement).

There are a few Hazmat concerns adjacent to and southwest of the culvert location. Below are the RFI recommendations from the approved reports:

- LUST: Speedway #7155, 7167 South SR 67, Pendleton, Indiana 46064 (Agency Interest ID: 11131), is located adjacent to the project area, southwest of the intersection of West US 30 and South SR 67. IDEM issued a NFA Approval Determination Pursuant to Remediation Closure Guide on November, 17, 2015. Low levels of soil contamination remain on the site, though groundwater monitoring and sampling results indicate this residual soil contamination is not leaching into the groundwater. An Environmental Restrictive Covenant (ERC) was placed on the property on October 28, 2015. If excavation occurs in this area, it is likely that petroleum contamination will be encountered. Proper handling, removal, and disposal of soil and/or groundwater may be necessary. Coordination will be conducted with the IDEM Project Manager identified in the VFC documentation before further site activities occur.
- Institutional Control: Institutional Controls: Three (3) Institutional Control sites are located within the 0.5 mile search radius. One (1) is located adjacent to the project area. The Speedway #7155, 7167 South SR 67, Pendleton, Indiana 46064 (Agency Interest ID: 11131), is located adjacent to the project area. An ERC was placed on the property on October 28, 2015. The ERC specifically prohibits the use for residential purposes, groundwater shall not be used or extracted for any purpose and the removal, excavation, or disturbance of soil will be conducted under the requirements of Indiana Occupational Safety and Health Administration/Occupational Safety and Health Administration (IOSHA/OSHA). **State Project recommendation:** Removed soil will be managed and disposed of under all applicable federal and state regulations. Coordination will be conducted with Lynette Schrowe (LShrowe@idem.in.gov) with IDEM before further site activities occur. **LPA Project recommendation:** Removed soil will be managed and disposed of under all applicable federal and state regulations. If excavation occurs in this area, it is likely that petroleum contamination will be encountered. Proper handling, removal, and disposal of soil and/or groundwater may be necessary. Coordination will be conducted with the IDEM Institutional Controls section (institutionalcontrols@idem.IN.gov) before RFC. Refer to Appendix G of the SAM Manual for the recommended procedure to manage and report contamination.
- NPDES Facility: Three (3) of the facilities are at the same location, 7167 South SR 67, which is south of the intersection of US 36 and SR 67. 1) Speedway Store #7155 (Permit Number: ING080091) had a permit, which expired on March 31, 2003. No impact is expected. 2) Speedway St #7155 Emro Mkting, 7167 South SR 67 (Permit Number: IN0057282) had a permit, which expired on May 31, 1998. No impact is expected. 3) Speedway #7155, 7167 South SR 67 (Permit Number: ING080310) had a permit, which expired on June 30, 2018. No impact is expected.

Can the addition of the Structure No. just be noted in the CE? The project area remains the same from the May 2023 recheck.

Thanks,
Jennifer

Jennifer Rhodes
Technical Editor

ASC Group, Inc.
800 Freeway Drive North, Suite 101
Columbus, Ohio 43229
614.268.2514 (office)
614.310.3543 (direct)

Jennifer Rhodes

From: INDOT esd.sam <esd.sam@indot.IN.gov>
Sent: Friday, June 28, 2024 10:33 AM
To: Jennifer Rhodes
Cc: Tina Davis; Cameron Berry; Davis, Dariane
Subject: RE: DES#1702936 and 1802854 (State) and 2001127 (LPA) RFI Recommendations

Hi Jennifer,

The Institutional Control site is also a LUST site (both Speedway #7155, 7175 South SR 67), which was included in the recommendations. As for the UST site (Swiftly Service Station #240, 6933 South SR 67), I've reviewed documentation on the VFC and I don't see a concern to believe that a recommendation is warranted. The March 29, 2016 NFA Approval from IDEM gave unconditional closure to the site for soil, groundwater, and vapor. There was also a Phase I ESA Report from December 6, 2018 which concluded that no further environmental investigation was warranted.

At this point, I don't see a need to complete an Addendum since the Swiftly site was not included in the recommendations. If you feel that it may be necessary to address, you can note this exchange in the CE as confirmation.

Thanks!

Peter Washburn

*Sr. Environmental Manager Supervisor
Site Assessment & Management (SAM) Team Lead*

Indiana Department of Transportation
100 North Senate Avenue N758 – Environmental Services Division
Indianapolis, Indiana 46204

Cell: (317) 982-0912

Email: PWashburn1@indot.in.gov



From: Jennifer Rhodes <jrhodes@ascgroup.net>
Sent: Friday, June 28, 2024 9:52 AM
To: INDOT esd.sam <esd.sam@indot.IN.gov>
Cc: Tina Davis <thartman@ascgroup.net>; Cameron Berry <cberry@ascgroup.net>
Subject: DES#1702936 and 1802854 (State) and 2001127 (LPA) RFI Recommendations

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INDOT SAM,
I'm currently addressing INDOT comments for the Des 1702936/1802854/2001127 CE. However, I noticed on the RFI for the State portion that a couple of Hazmat items (UST and Institutional Control) did not get added to the recommendation section of the attached approved RFI. How would you like this to be addressed?

APPENDIX F: WATERS RESOURCES

Waters Report – Including NWI Map
Addendum Waters Report – Including NWI Map
Floodplain Map

**Waters of the U.S. Determination/Wetland Delineation Report
for the Proposed US 36 and SR 9 Added Travel Lanes Project over Fall Creek,
Fall Creek Township, Madison County, Indiana (Des. Nos. 1702936 and 1802854)**

By

Joshua Netherton, Ecologist, and Catherine Holland, Environmental Specialist

**Submitted By:
Harry S. Nikides
Indiana Regional Manager
ASC Group, Inc.
9376 Castlegate Drive
Indianapolis, Indiana 46256
317.915.9300**

**Submitted To:
Scott M. Sandstrom, PE, PMP
Project Manager
CDM Smith, Inc.
201 S Capitol Ave
Suite 1220
Indianapolis, Indiana 46225
317.829.9644**

Lead Agency: INDOT

July 9, 2021



**Waters of the U.S. Determination/Wetland Delineation Report
for the Proposed US 36 and SR 9 Added Travel Lanes Project over Fall Creek,
Fall Creek Township, Madison County, Indiana (Des. Nos. 1702936 and 1802854)**

Prepared by: Joshua Netherton, Ecologist, and Catherine Holland, Environmental Specialist

Completed Date: July 9, 2021

Date(s) of Waters Field Investigation:

September 30, 2020

Location (Figures 1–8):

Sections 15, 16, and 21, Township 18 North, Range 7 East

Anderson South and Pendleton, Indiana Quadrangles

Madison County, Indiana

Latitude: 40.006998°N, Longitude: -85.730087°W

Soils (Figure 5):

According to the Web Soil Survey (United States Department of Agriculture, Natural Resource Conservation Service [USDA, NRCS] 2020) and the Soil Survey Geographic (SSURGO) Database for Madison County, Indiana (USDA, NRCS 2020), the investigation area contains areas with nationally listed hydric soils (USDA, NRCS 2018) and hydric soils from the Madison County Hydric Soils List (USDA, NRCS online soil data access [SDA] 2019).

<u>Soil Name</u>	<u>Map Abbreviation</u>	<u>Classification</u>
Crosby silt loam, fine-loamy subsoil, 0–2 percent slopes	CrA	Hydric (2%)
Fox silt loam, 0–2 percent slopes	FoA	Hydric (5%)
Fox silt loam, till substratum, 0–2 percent slopes	FsA	Hydric (5%)
Genesee silt loam, 0–2 percent slopes, frequently flooded, brief duration	Gn	No rating
Gravel pits	Gr	No rating
Mahalasville silty clay loam, 0–2 percent slopes	Ml	Hydric (1–70%)
Mahalasville silty clay loam, limestone substratum	Mm	Hydric (100%)
Westland silty clay loam, 0–2 percent slopes	Wd	Hydric (70%)

National Wetland Inventory (NWI) Information (Figure 4):

The NWI mapping identified two mapped wetland features within the investigation area and eight wetland features mapped near the investigation area. These were identified as one palustrine forested wetland in the investigation area; one riverine perennial wetland (Fall Creek) flowing through the investigation area; one palustrine forested wetland east of the investigation area; five palustrine forested wetlands west of the investigation area; a palustrine unconsolidated-bottom wetland east of the investigation area; and a palustrine emergent wetland southeast of the investigation area in the NWI data (United States Fish and Wildlife Service [USFWS] 2019).

<u>Wetland Type</u>	<u>Location</u>
PFO1A	Eastern terminus of northern investigation area, abutting Fall Creek
R2UBH	Flowing west through northern project terminus (Fall Creek)
PFO1A	Approximately 0.05 mile east of investigation area, north of Fall Creek
PFO1A	Approximately 0.18 mile west of investigation area, north of Fall Creek
PFO1A	Approximately 0.22 mile west of investigation area, south of Fall Creek
PFO1A	Approximately 0.25 mile west of investigation area, north of Fall Creek
PFO1A	Approximately 0.29 mile west of investigation area, south of Fall Creek
PFO1A	Approximately 0.46 mile west of investigation area, north of Fall Creek
PUBGx	Approximately 0.19 mile east of investigation area from US 36 and SR 38
PEM1A	Approximately 0.26 mile southeast of investigation area

National Hydrography Dataset (NHD) Information (Figure 5):

According to the NHD (United States Geological Survey, National Hydrography Dataset [USGS, NHD] 2020), the investigation area contains eight (8) flowline features. The NHD flowlines for the investigation area are provided on Figure 5.

<u>NHD Flowline Type</u>	<u>Location</u>
Artificial Path	Passing under the bridge on Fall Creek
Stream/River	Flowing into investigation area at US 36 and SR 9
Canal/Ditch	Flowing under intersection of US 36 and SR 9
Canal/Ditch	Flowing along south side of US 36
Stream/River	Flowing from western project boundary on E State Street
Stream/River	Flowing parallel to railroad at western project terminus
Stream/River	Flowing through western project boundary
Pipeline	Crossing through southern project terminus

12 Digit HUC:

051202010804 – Prairie Creek-Fall Creek and 051202010808 – Flatfork Creek-Fall Creek

Attached Documents:

Maps (Project Location, Topographic, NWI with NHD, NRCS Soils, FEMA FIRM, and Aerials with resources and photograph locations)

Site Photographs

Wetland Determination Data Forms

Preliminary Jurisdictional Data (PJD) Form

PROJECT DESCRIPTION

Ecologist Joshua Netherton and Environmental Specialist Catherine Holland of ASC Group, Inc. (ASC), under contract with CDM Smith, Inc., conducted a Waters of the U.S. Determination/Wetland Delineation for the proposed added travel lanes project crossing Fall Creek, a named tributary to the White River crossing under SR 9 in Pendleton, Indiana. The

environmental fieldwork was performed throughout the project location on September 30, 2020 to determine the presence of wetlands and streams in the investigation area.

This project is located along SR 9 also known as Pendleton Pike in Pendleton, between US 36 and Madison Avenue/Lick Creek Pike (southwest of SR 38) to SR 9 and CR 500 S/Huntsville Road. The project seeks to add additional travel lanes by constructing four through lanes on SR 9 from Madison Avenue/Lick Creek Pike to CR 500 S/Huntsville Road, with an additional center lane from the south junction (at State Street) to Mercer Lane. The left and right turn lanes on SR 9/US 36 at the south junction (at State Street) to Mercer Lane will be retained with widening as needed. At the south junction, dual left turns on eastbound State Street and dual left turns on westbound SR 38 will be constructed. The westbound right turn lane on SR 38 and the westbound through lane on State Street will be retained in their current locations with the needed widening occurring to the south. At the north junction (where US 36 splits off to the east), the westbound US 36 right turn lane storage will be extended to the first commercial drive with widening to the north. Curb and gutter with curb turnouts are intended to be used to reduce additional right-of-way acquisitions for shoulders, while still having surface drainage. The current existing right-of-way varies extensively throughout the investigation area.

The investigation area for this waters report serves as the limits of the delineation, includes all of the resources that were investigated, and spans the US 36, SR 9, and SR 38 right-of-way throughout the investigation area. It also includes the bridges physical structure, the immediate area surrounding US 36, SR 9, and SR 38 and portions of the adjacent private properties. Maps (Figures 1–8) and photographs (Photographs 1–148) of the investigation area are included in the attachments.

FINDINGS

WETLANDS

Twenty sample points were studied for the presence of wetlands. Sample point observations revealed nine wetlands, seven emergent wetlands (Wetlands 1–7) and two forested wetlands (Wetlands 8 and 9), within the investigation area. The *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987), *Field Indicators of Hydric Soils in the United States: A Guide for Identifying and Delineating Hydric Soils, Version 8.2* (USDA, NRCS 2018), *National Wetland Plant List (NWPL) Version 3.4* (United States Army Corps of Engineers

[USACE] 2018), and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Version 2.0* (USACE 2010) were used to determine whether wetlands were present within the investigation area. Wetland determination forms are included in the attachments.

Wetland 1 (Sample Point 2)

Wetland 1 (Sample Point 2) is located in a depression approximately 200 feet (ft) southeast of the intersection of US 36 and SR 38, on the southern side of SR 38, at the end of an eroded roadside drainage ditch. This wetland was observed to be approximately 0.011 acre in size and is located completely within the investigation area. This wetland was not shown on the NWI map, but observed conditions in this investigation reflect those consistent with the classification of a palustrine, emergent, persistent, temporarily flooded (PEM1A) wetland based on the Cowardin et al. (1979) classification system. It was likely formed over time by seasonal and temporary flooding in the area. Wetland 1 is provisionally considered a Waters of the State. The wetland is not directly abutting a Waters of the U.S. and is not within an area inundated by flood water in a typical year. The wetland was given a quality rating of poor, due to the presence of low quality native vegetation, non-native vegetation, and low species diversity.

The dominant species in Wetland 1 are Pennsylvania smartweed (*Persicaria pensylvanica*), marsh seedbox (*Ludwigia palustris*), and celery-leaved buttercup (*Ranunculus sceleratus*). This observation passes the Rapid Test for Hydrophytic Vegetation, Dominance Test, and the Prevalence Index; therefore, satisfying the criteria for the dominance of hydrophytic vegetation. The soil at Sample Point 2 consists of a 5-inch layer of 90 percent very dark gray (10YR 3/1) muck with 10 percent yellowish brown (10YR 5/6) pore-lining concentrations overlying riprap. The soils were impenetrable beyond 5 inches. Several attempts were made to take deeper soil samples within the vicinity, but the same impenetrable layer was encountered each time. This sample satisfies the 2 cm Muck (A10) hydric soil indicator; therefore, it is a hydric soil (USDA, NRCS 2018). Three primary hydrology indicators Surface Water (A1), Saturation (A3), and Algal Mat or Crust (B4) and two secondary hydrology indicators, Geomorphic Position (D2) and a positive FAC-Neutral Test (D5), were observed in this wetland. These observations satisfy the criteria for wetland hydrology. All three criteria for determination of wetland presence are satisfied by the conditions found at Sample Point 2, therefore it is considered a wetland (Wetland 1). The wetland boundary was determined following successional test bores between the wetland point and the upland point (Sample Point 3) leading to an abrupt change in vegetation composition

and the absence of hydric soils and hydrological indicators. A gradual change in topography was also observed lending to the wetland boundary determination.

Wetland 2 (Sample Point 4)

Wetland 2 (Sample Point 4) is located in a depression abutting the south side of the intersection of US 36 and SR 9, in a drainage swale. This wetland was observed to be approximately 0.121 acre in size and is located completely within the investigation area. This wetland was not shown on the NWI map, but observed conditions in this investigation reflect those consistent with the classification of a palustrine, emergent, persistent, temporarily flooded (PEM1A) wetland based on the Cowardin et al. (1979) classification system. It was likely formed over time by seasonal and temporary flooding in the area. The wetland is provisionally considered Waters of the State. The wetland is not directly abutting a Waters of the U.S. and is not within an area inundated by flood water in a typical year. The wetland was given a quality rating of poor, due to the presence of low quality native vegetation, non-native vegetation, and low species diversity.

The dominant species in Wetland 2 are cockspur grass (*Echinochloa crus-galli*) and narrowleaf cattail (*Typha angustifolia*). This observation passes the Rapid Test for Hydrophytic Vegetation, Dominance Test, and Prevalence Index; therefore, satisfying the criteria for the dominance of hydrophytic vegetation. The soil at Sample Point 4 consists of a 2-inch layer of black (10YR 2/1) muck overlying a 14-inch layer of 85 percent light greenish gray (5G 8/1) clay loam with 15 percent yellowish brown (10YR 5/6) redox concentrations. This sample satisfies the 2 cm Muck (A10) and Loamy Gleyed Matrix (F2) hydric soil indicators; therefore, it is a hydric soil (USDA, NRCS 2018). Four primary hydrology indicators, Surface Water (A1), Saturation (A3), Algal Mat or Crust (B4), and Sparsely Vegetated Concave Surface (B8), as well as three secondary hydrology indicators, Drainage Patterns (B10), Geomorphic Position (D2), and a positive FAC-Neutral Test (D5), were observed in this wetland. These observations satisfy the criteria for wetland hydrology. All three criteria for wetland presence are satisfied by the conditions found at Sample Point 4; therefore, it is considered a wetland (Wetland 2). The wetland boundary was determined following successional test bores between the wetland point and the upland point (Sample Point 5) leading to an abrupt change in vegetation composition and the absence of hydrological indicators. A gradual change in topography was also observed lending to the wetland boundary determination.

Wetland 3 (Sample Point 6)

Wetland 3 (Sample Point 6) is located in a depression 0.14 mile northwest of the intersection of US 36 and SR 38, north of East State Street. This wetland is completely located in the investigation area. It was observed to be approximately 0.012 acre in size. This wetland was not shown on the NWI map, but observed conditions in this investigation reflect those consistent with the classification of a palustrine, emergent, persistent, temporarily flooded (PEM1A) wetland based on the Cowardin et al. (1979) classification system. It was likely formed over time by temporary and flooding from the associated drainage ditch and subsequent sedimentation. The wetland is provisionally considered Waters of the State. The wetland is not directly abutting a Waters of the U.S. and is not within an area inundated by flood water in a typical year. The wetland was given a quality rating of poor, due to the presence of low-quality native vegetation, non-native vegetation, low species diversity, and the prevalence of invasive reed canary grass (*Phalaris arundinacea*) and Japanese stilt grass (*Microstegium vimineum*).

The dominant species in Wetland 3 are red elm (*Ulmus rubra*), narrowleaf cattail (*Typha angustifolia*), reed canary grass (*Phalaris arundinacea*), and Japanese stilt grass (*Microstegium vimineum*). This observation passes the Dominance Test and Prevalence Index; therefore, satisfying the criteria for the dominance of hydrophytic vegetation. The soil at Sample Point 6 consists of a 16-inch layer of 85 percent very dark grayish brown (10YR 3/2) clay loam with 15 percent yellowish brown (10YR 5/6) redox concentrations. The soil contains approximately 5 percent organic matter. Riprap was also noted in close proximity to the sample point. This sample satisfies the Redox Dark Surface (F6) hydric soil indicator; therefore, it is a hydric soil (USDA, NRCS 2018). Two primary hydrology indicators, Surface Water (A1) and Saturation (A3), as well as three secondary indicators, Drainage Patterns (B10), Geomorphic Position (D2), and a positive FAC-Neutral Test (D5), were found in this wetland. These observations satisfy the criteria for wetland hydrology. All three criteria for wetland presence are satisfied by the conditions found at Sample Point 6; therefore, it is considered a wetland (Wetland 3). The wetland boundary was determined following successional test bores between the wetland point and the upland point (Sample Point 7) leading to an abrupt change in vegetation composition and an absence of hydric soils and hydrological indicators. A gradual change in topography was also observed lending to the wetland boundary determination.

Wetland 4 (Sample Point 8)

Wetland 4 (Sample Point 8) is located in a depression 0.06 mile to the east of the intersection of US 36 and SR 9, on the southern side of US 36. This wetland was observed to be approximately 0.022 acre in size within the investigation area. The wetland extends beyond the investigation area, to the southwest. This wetland was not shown on the NWI map, but observed conditions in this investigation reflect those consistent with the classification of a palustrine, emergent, persistent, temporarily flooded (PEM1A) wetland based on the Cowardin et al. (1979) classification system. It is a constructed swale and wetland conditions were likely formed over time by temporary and seasonal flooding from the associated drainage ditch and subsequent sedimentation. The wetland is provisionally considered Waters of the State. The wetland is not directly abutting a Waters of the U.S. and is not within an area inundated by flooding water in a typical year. Wetland 4 is hydrologically connected to Wetland 5 and Wetland 6. Wetland 4 was given a quality rating of poor, due to the presence of low quality native vegetation, non-native vegetation, and low species diversity.

The dominant species in Wetland 4 are rice cut-grass (*Leersia oryzoides*), marsh seedbox (*Ludwigia palustris*), and green bullrush (*Schoenoplectus tabernaemontani*). This observation passes the Rapid Test for Hydrophytic Vegetation, Dominance Test, and Prevalence Index; therefore, satisfying the criteria for the dominance of hydrophytic vegetation. The soil at Sample Point 8 consists of a 16-inch layer of black (10YR 2/1) muck. This sample satisfies the 2 cm Muck (A10) hydric soil indicator; therefore, it is a hydric soil (USDA, NRCS 2018). Three primary hydrology indicators, Surface Water (A1), Saturation (A3), and Aquatic Fauna (B13), as well as five secondary indicators, Drainage Patterns (B10), Crayfish Burrows (C8), Stunted or Stressed Plants (D1), Geomorphic Position (D2), and a positive FAC-Neutral Test (D5), were observed in this wetland, satisfying the criteria for wetland hydrology. All three criteria for wetland presence are satisfied by the conditions found at Sample Point 8; therefore, it is considered a wetland (Wetland 4). The wetland boundary was determined following successional test bores between the wetland point and the upland point (Sample Point 9) leading to an abrupt change in vegetation composition and an absence of hydric soils and hydrological indicators. A gradual change in topography was also observed lending to wetland boundary determination.

Wetland 5 (Sample Point 17)

Wetland 5 (Sample Point 17) is located in a depression 0.07 mile to the east of the intersection of US 36 and SR 9, on the southern side of US 36, extending 0.03 mile along the southern side of US 36. This wetland was observed to be approximately 0.059 acre in size within the investigation area. This wetland was not shown on the NWI map, but observed conditions in this investigation reflect those consistent with the classification of a palustrine, emergent, persistent, temporarily flooded (PEM1A) wetland based on the Cowardin et al. (1979) classification system. It is a constructed swale and wetland conditions were likely formed over time by temporary and seasonal flooding from the associated drainage ditch and subsequent sedimentation. The wetland is provisionally considered Waters of the State. The wetland is not directly abutting a Waters of the U.S. and is not within an area inundated by flooding water in a typical year. Wetland 5 is hydrologically connected to Wetland 4 to the west and Wetland 6 to the east. Wetland 5 was given a quality rating of poor, due to the presence of low quality native vegetation, non-native vegetation, and low species diversity.

The dominant species in Wetland 5 are reed canary grass (*Phalaris arundinacea*) and marsh seedbox (*Ludwigia palustris*). This observation passes the Rapid Test for Hydrophytic Vegetation, Dominance Test, and Prevalence Index; therefore, satisfying the criteria for the dominance of hydrophytic vegetation. The soil at Sample Point 17 consists of a 7-inch layer of black (10YR 2/1) muck overlying an impenetrable layer of gravel beyond 7 inches. Several attempts were made to take deeper soil samples within the vicinity, but the same impenetrable layer was encountered each time. This sample satisfies the 2 cm Muck (A10) hydric soil indicator; therefore, it is a hydric soil (USDA, NRCS 2018). Five primary hydrology indicators, Surface Water (A1), Saturation (A3), Algal Mat or Crust (B4), Sparsely Vegetated Concave Surface (B8), and Thin Muck Surface (C7), as well as three secondary indicators, Saturation Visible on Aerial Imagery (C9), Geomorphic Position (D2), and a positive FAC-Neutral Test (D5), were observed in this wetland, satisfying the criteria for wetland hydrology. All three criteria for wetland presence are satisfied by the conditions found at Sample Point 17; therefore, it is considered a wetland (Wetland 5). The wetland boundary was determined following successional test bores between the wetland point and the upland point (Sample Point 18) leading to an abrupt change in vegetation composition and an absence of hydric soils and hydrological indicators. A gradual change in topography was also observed lending to wetland boundary determination.

Wetland 6 (Sample Point 19)

Wetland 6 (Sample Point 19) is located in a depression 0.13 mile to the east of the intersection of US 36 and SR 9, extending 0.02 mile along the southern side of US 36. This wetland was observed to be approximately 0.019 acre in size within the investigation area. This wetland was not shown on the NWI map, but observed conditions in this investigation reflect those consistent with the classification of a palustrine, emergent, persistent, temporarily flooded (PEM1A) wetland based on the Cowardin et al. (1979) classification system. It is a constructed swale and wetland conditions were likely formed over time by temporary and seasonal flooding from the associated drainage ditch and subsequent sedimentation. The wetland is provisionally considered Waters of the State. The wetland is not directly abutting a Waters of the U.S. and is not within an area inundated by flooding water in a typical year. Wetland 6 is hydrologically connected to Wetland 4 and Wetland 5 to the west. Wetland 6 was given a quality rating of poor, due to the presence of low quality native vegetation, non-native vegetation, and low species diversity.

The dominant species in Wetland 6 are yellow bristle grass (*Setaria pumila*), green bullrush (*Schoenoplectus tabernaemontani*), and narrow-leaf cattail (*Typha angustifolia*). This observation passes the Dominance Test and Prevalence Index; therefore, satisfying the criteria for the dominance of hydrophytic vegetation. The soil at Sample Point 19 consists of a 16-inch layer of 90 percent dark grayish brown (10YR 4/2) clay loam with 10 percent yellowish brown (10YR 5/6) redox concentrations. This sample satisfies the Depleted Matrix (F3) hydric soil indicator; therefore, it is a hydric soil (USDA, NRCS 2018). Four primary hydrology indicators, Surface Water (A1), Saturation (A3), Algal Mat or Crust (B4), and Sparsely Vegetated Concave Surface (B8), as well as three secondary indicators, Saturation Visible on Aerial Imagery (C9), Geomorphic Position (D2), and a positive FAC-Neutral Test (D5), were observed in this wetland, satisfying the criteria for wetland hydrology. All three criteria for wetland presence are satisfied by the conditions found at Sample Point 19; therefore, it is considered a wetland (Wetland 6). The wetland boundary was determined following successional test bores between the wetland point and the upland point (Sample Point 20) leading to an abrupt change in vegetation composition and an absence of hydric soils and hydrological indicators. A gradual change in topography was also observed lending to wetland boundary determination.

Wetland 7 (Sample Point 10)

Wetland 7 (Sample Point 10) is located on a floodplain terrace at the southwestern quadrant of the intersection of Fall Creek and SR 9. This wetland was observed to be approximately 0.027 acre in size and is completely located within the investigation area. This wetland was not shown on the NWI map, but observed conditions in this investigation reflect those consistent with the classification of a palustrine, emergent, persistent, temporarily flooded (PFO1A) wetland based on the Cowardin et al. (1979) classification system. It was likely formed over time by temporary and seasonal flooding from Fall Creek. The wetland is likely jurisdictional, because it is abutting a perennial stream (Fall Creek), a named tributary to the White River. Wetland 7 was given a quality rating of poor, due to the presence of low quality native vegetation, non-native vegetation, invasive reed canary grass (*Phalaris arundinacea*), and low species diversity.

The dominant species in Wetland 7 are Siberian elm (*Ulmus pumila*), boxelder (*Acer negundo*), white ash (*Fraxinus americana*), reed canary grass (*Phalaris arundinacea*), and dotted smartweed (*Persicaria punctata*). This observation passes the Dominance Test and Prevalence Index; therefore, satisfying the criteria for the dominance of hydrophytic vegetation. The soil at Sample Point 10 consists of a 16-inch layer of grayish brown (10YR 5/2) sandy loam. The soils observed do not correspond to any of the hydric soil indicators (USDA, NRCS 2018). This sample point was taken on a terrace in an active floodplain. There is evidence of wetland hydrology and hydrophytic vegetation at this sampling point. As a result, the problematic hydric soils section of the regional supplement was consulted. It appears that the sampling point meets the criteria for the Fluvial Sediments within Floodplains problematic soil situation. These soils commonly occur on vegetated bars within the active channel and/or above the bankfull level of rivers and streams. In some cases, these soils lack hydric soil indicators due to seasonal or annual deposition of new soil material, low iron or manganese content, and/or low organic-matter content. One primary hydrology indicator, Drift Deposits (B3), as well as one secondary indicator, Drainage Patterns (B10), were observed in this wetland, satisfying the criteria for wetland hydrology. All three criteria for wetland presence are satisfied by the conditions found at Sample Point 10; therefore, it is considered a wetland (Wetland 7). The wetland boundary was determined following successional test bores between the wetland point and the upland point (Sample Point 11) leading to an abrupt change in vegetation composition and an absence of hydric soils and hydrological

indicators. A gradual change in topography was also observed lending to wetland boundary determination.

Wetland 8 (Sample Point 12)

Wetland 8 (Sample Point 12) is located in a depression at the southeastern quadrant of the intersection of Fall Creek and SR 9. This wetland was observed to be approximately 0.005 acre in size and is completely located within the investigation area. This wetland was shown to be a palustrine, emergent, persistent, temporarily flooded (PFO1A) wetland on the NWI map, and observed conditions in this investigation reflect those consistent with the classification based on the Cowardin et al. (1979) classification system. It was likely formed over time by temporary and seasonal flooding from Fall Creek. The wetland is likely jurisdictional, because it is abutting a perennial waterway, Fall Creek, a named tributary to the White River. Wetland 8 was given a quality rating of poor, due to the presence of low quality native vegetation, non-native vegetation, invasive reed canary grass (*Phalaris arundinacea*), and low species diversity.

The dominant species in Wetland 8 are boxelder (*Acer negundo*), reed canary grass (*Phalaris arundinacea*), and climbing buckwheat (*Fallopia scandens*). This observation passes the Dominance Test and Prevalence Index; therefore, satisfying the criteria for the dominance of hydrophytic vegetation. The soil at Sample Point 12 consists of a 16-inch layer of 90 percent very dark grayish brown (10YR 3/2) silt loam with 10 percent dark yellowish brown (10YR 4/6) pore-lining concentrations. The soils contain approximately 20 percent organic matter. This sample satisfies the Redox Dark Surface (F6) hydric soil indicator; therefore, it is a hydric soil (USDA, NRCS 2018). Two primary hydrology indicators, Water Marks (B1) and Drift Deposits (B3), as well as three secondary indicators, Stunted or Stressed Plants (D1), Geomorphic Position (D2), and a positive FAC-Neutral Test (D5), were found in this wetland, satisfying the criteria for wetland hydrology. All three criteria for wetland presence are satisfied by the conditions found at Sample Point 12; therefore, it is considered a wetland (Wetland 8). The wetland boundary was determined following successional test bores between the wetland point and the upland point (Sample Point 13) leading to an abrupt change in vegetation composition and an absence of hydric soils and hydrological indicators. A gradual change in topography was also observed lending to wetland boundary determination.

Wetland 9 (Sample Point 14)

Wetland 9 (Sample Point 14) is located on a floodplain terrace at the northeastern quadrant of the intersection of Fall Creek and SR 9. This wetland was observed to be approximately 0.009 acre in size and is completely located within the investigation area. This wetland was not shown on the NWI map, but observed conditions in this investigation reflect those consistent with the classification of a palustrine, emergent, persistent, temporarily flooded (PEM1A) wetland based on the Cowardin et al. (1979) classification system. It was likely formed over time by temporary and seasonal flooding from Fall Creek. The wetland is likely jurisdictional, because it is abutting a perennial stream (Fall Creek), a named tributary to the White River. The wetland was given a quality rating of poor, due to the presence of low quality native vegetation, non-native vegetation, and low species diversity.

The dominant species in Wetland 9 are Kentucky blue grass (*Poa pratensis*) and water smartweed (*Persicaria amphibia*). This observation passes the Dominance Test and Prevalence Index; therefore, satisfying the criteria for the dominance of hydrophytic vegetation. The soil at Sample Point 14 consists of a 16-inch layer of very dark grayish brown (10YR 3/2) silt loam. The soils observed do not correspond to any of the hydric soil indicators (USDA, NRCS 2018). This sample point was taken on a terrace in an active floodplain. There is evidence of wetland hydrology and hydrophytic vegetation at this sampling point. As a result, the problematic hydric soils section of the regional supplement was consulted. It appears that the sampling point meets the criteria for the Fluvial Sediments within Floodplains problematic soil situation. These soils commonly occur on vegetated bars within the active channel and/or above the bankfull level of rivers and streams. In some cases, these soils lack hydric soil indicators due to seasonal or annual deposition of new soil material, low iron or manganese content, and/or low organic-matter content. One primary hydrology indicator, Drift Deposits (B3), as well as five secondary indicators, Surface Soil Cracks (B6), Drainage Patterns (B10), Crayfish Burrows (C8), Stunted or Stressed Plants (D1), and a positive FAC-Neutral Test (D5) were observed in this wetland, satisfying the criteria for wetland hydrology. All three criteria for wetland presence are satisfied by the conditions found at Sample Point 14; therefore, it is considered a wetland (Wetland 9). The wetland boundary was determined following successional test bores between the wetland point and the upland point (Sample Point 15) leading to an abrupt change in vegetation composition and an absence of hydric soils and

hydrological indicators. A gradual change in topography was also observed lending to wetland boundary determination.

UPLANDS

Eleven samples (SP 1, SP 3, SP 5, SP 7, SP 9, SP 11, SP 13, SP 15, SP 16, SP 18, and SP 20) were taken outside of the observed wetlands. All points, excluding SP 1 and SP 16, were used to establish wetland boundaries.

Sample Point 1 (SP 1) was taken near the southwestern border of the investigation area. The dominant species observed at SP 1 were tall fescue (*Schedonorus arundinacea*) and Kentucky blue grass (*Poa pratensis*), which do not satisfy the criteria for the dominance of hydrophytic vegetation. The soil at the sample point consisted of a 7-inch layer of very dark grayish brown (10YR 3/2) clay loam over a 9-inch layer of 95 percent dark yellowish brown (10YR 4/4) clay loam with 5 percent yellowish brown (10YR 5/6) redox concentrations. This sample does not satisfy the criteria for the presence of hydric soils. No wetland hydrology indicators were observed at this location. Due to the absence of hydrophytic vegetation, hydric soils, and wetland hydrology, this sample point did not satisfy the criteria for a positive wetland determination; therefore, SP 1 is not a wetland.

Sample Point 3 (SP 3) was taken uphill of Wetland 1, in a mowed grass lawn. The dominant species observed at SP 3 were Kentucky blue grass (*Poa pratensis*) and dandelion (*Taraxacum officinale*), which do not satisfy the criteria for the dominance of hydrophytic vegetation. The soil at the sample point consisted of a 16-inch layer of dark grayish brown (10YR 4/2) clay loam. This sample does not satisfy the criteria for the presence of hydric soils. One secondary wetland hydrology indicator, Geomorphic Position (D2), was observed, which is insufficient to satisfy the criteria for wetland hydrology. Due to the absence of hydrophytic vegetation, hydric soils, and wetland hydrology, this sample point did not satisfy the criteria for a positive wetland determination; therefore, SP 3 is not a wetland.

Sample Point 5 (SP 5) was taken uphill of Wetland 2, south of the intersection of SR 9 and US 38, in a mowed grass lawn. The dominant species observed at SP 5 were Kentucky blue grass (*Poa pratensis*) and English plantain (*Plantago lanceolata*), which do not satisfy the criteria for the dominance of hydrophytic vegetation. The soil at the sample point consisted of a 5-inch layer of brown (10YR 4/3) sandy clay loam, underlain by an impenetrable layer of gravel fill.

Several attempts were made to take deeper soil samples with in the vicinity, but the same impenetrable layer was encountered each time. The soils observed do not correspond to any of the hydric soil indicators (USDA, NRCS 2018). No wetland hydrology indicators were observed at this location. Due to the absence of hydrophytic vegetation, hydric soils, and wetland hydrology, this sample point did not satisfy the criteria for a positive wetland determination; therefore, SP 5 is not a wetland.

Sample Point 7 (SP 7) was taken uphill of Wetland 3, south of the intersection of SR 9 and US 38, in a mowed grass lawn. The dominant species observed at SP 7 were smooth crab grass (*Digitaria ischaemum*) and Kentucky blue grass (*Poa pratensis*), which does not satisfy the criteria for the dominance of hydrophytic vegetation. The soil at the sample point consisted of a 4-inch layer of brown (10YR 4/3) sandy clay loam, underlain by a layer of impenetrable gravel fill. Several attempts were made to take deeper soil samples with in the vicinity, but the same impenetrable layer was encountered each time. The soils observed do not correspond to any of the hydric soil indicators (USDA, NRCS 2018). No wetland hydrology indicators were observed at this location. Due to the absence of hydrophytic vegetation, hydric soils, and wetland hydrology, this sample point did not satisfy the criteria for a positive wetland determination; therefore, SP 7 is not a wetland.

Sample Point 9 (SP 9) was taken uphill of Wetland 4, approximately 200 ft east of the intersection of SR 9 and US 38, on the southern side of US 38, in mowed grass. The dominant species observed at SP 9 was Kentucky blue grass (*Poa pratensis*). This observation passes the Dominance Test; therefore, satisfying the criteria for the presence of hydrophytic vegetation. The soil at the sample point consisted of a 16-inch layer of 95 percent very dark grayish brown (10YR 3/2) sandy clay loam, with 5 percent strong brown (7.5YR 5/8) redox concentrations. This sample corresponds to the Redox Dark Surface (F6) indicator, which satisfies the criteria for the presence of hydric soils. No wetland hydrology indicators were observed at this location. Despite the presence of hydrophytic vegetation and hydric soils, the hydrology at this sample point does not satisfy the criteria for a positive wetland determination; therefore, SP 9 is not a wetland.

Sample Point 11 (SP 11) was taken uphill of Wetland 7, at the southwestern quadrant of the intersection of Fall Creek and SR 9, in a mowed grass lawn. The dominant species observed at SP 11 were white mulberry (*Morus alba*), Morrow's honeysuckle (*Lonicera morrowii*), and Kentucky blue grass (*Poa pratensis*). This observation passes the Dominance Test; therefore,

satisfying the criteria for the presence of hydrophytic vegetation. The soil at the sample point consisted of a 3-inch layer of brown (10YR 4/3) sandy clay loam, underlain by a layer of impenetrable gravel. Several attempts were made to take deeper soil samples with in the vicinity, but the same impenetrable layer was encountered each time. The soils observed do not correspond to any of the hydric soil indicators (USDA, NRCS 2018). No wetland hydrology indicators were observed at this location. Despite the presence of hydrophytic vegetation, the soils and hydrology present at this sample point did not satisfy the criteria for a positive wetland determination; therefore, SP 11 is not a wetland.

Sample Point 13 (SP 13) was taken uphill of Wetland 8, at the southeastern quadrant of the intersection of Fall Creek and SR 9. The dominant species observed at SP 13 were northern hackberry (*Celtis occidentalis*), white ash (*Fraxinus americana*), black walnut (*Juglans nigra*), boxelder (*Acer negundo*), hairy wild rye (*Elymus villosus*), and wrinkle-leaf goldenrod (*Solidago rugosa*), which do not satisfy the criteria for the presence of hydrophytic vegetation. The soil at the sample point consisted of a 16-inch layer of 95 percent very dark grayish brown (10YR 3/2) sand, with 5 percent yellowish brown (10YR 5/6) redox concentrations. This sample corresponds to a Redox Dark Surface (F6) indicator, which satisfies the criteria for the presence of hydric soils (USDA, NRCS 2018). No wetland hydrology was observed at this location. Despite the presence of hydric soils, the vegetation and hydrology present at this sample point did not satisfy the criteria for a positive wetland determination; therefore, SP 13 is not a wetland.

Sample Point 15 (SP 15) was taken on a terrace, uphill of Wetland 9, at the northeastern quadrant of the intersection of Fall Creek and SR 9, in a mowed grass lawn. The dominant species observed at SP 15 were purple magnolia (*Magnolia liliiflorum*), English plantain (*Plantago lanceolata*), creeping Charlie (*Glechoma hederacea*), white clover (*Trifolium repens*), hooded blue violet (*Viola sororia*), and Kentucky blue grass (*Poa pratensis*), which do not satisfy the criteria for the presence of hydrophytic vegetation. The soil at the sample point consisted of a 16-inch layer of brown (10YR 4/3) sandy clay loam. This sample does not satisfy the criteria for the presence of hydric soils (USDA, NRCS 2018). No wetland hydrology indicators were observed at this location. Due to the absence of hydrophytic vegetation, hydric soils, and sufficient wetland hydrology, this sample point did not satisfy the criteria for a positive wetland determination; therefore, SP 15 is not a wetland.

Sample Point 16 (SP 16) was taken at the toe of a slope, at the northwestern quadrant of Fall Creek and SR 9. The dominant species observed at SP 16 were silver maple (*Acer saccharinum*), Morrow's honeysuckle (*Lonicera morrowii*), reed canary grass (*Phalaris arundinacea*), and river grape (*Vitis riparia*). This observation passes the Dominance Test and Prevalence Index; therefore, satisfying the criteria for the presence of hydrophytic vegetation. The soil at the sample point consisted of riprap. Several attempts were made to take deeper soil samples with in the vicinity, but the same impenetrable layer was encountered each time. This sample does not satisfy the criteria for the presence of hydric soils (USDA, NRCS 2018). No wetland hydrology was observed at this location. Due to the absence of hydric soils and wetland hydrology, this sample point did not satisfy the criteria for a positive wetland determination; therefore, SP 16 is not a wetland.

Sample Point 18 (SP 18) was taken on a terrace, uphill of Wetland 5, in a mowed grass lawn. The dominant species observed at SP 18 were red maple (*Acer rubrum*), eastern red cedar (*Juniperus virginiana*), burning bush (*Euonymus alatus*), Kentucky blue grass (*Poa pratensis*), and white clover (*Trifolium repens*), which do not satisfy the criteria for the presence of hydrophytic vegetation. The soil at the sample point consisted of a 16-inch layer of very dark grayish brown (10YR 3/2) clay loam. This sample does not satisfy the criteria for the presence of hydric soils (USDA, NRCS 2018). No wetland hydrology was observed at this location. Due to the absence of hydrophytic vegetation, hydric soils, and sufficient wetland hydrology, this sample point did not satisfy the criteria for a positive wetland determination; therefore, SP 18 is not a wetland.

Sample Point 20 (SP 20) was taken on a terrace, uphill of Wetland 6, to the west in a mowed grass lawn. The dominant species observed at SP 20 was Kentucky blue grass (*Poa pratensis*). This observation passes the Dominance Test and Prevalence Index; therefore, satisfying the criteria for the presence of hydrophytic vegetation. The soil at the sample point consisted of a 6-inch layer of 95 percent dark yellowish brown (10YR 4/4) sandy loam with 5 percent dark yellowish brown (10YR 4/6) redox concentrations overlying an impenetrable layer of gravel beyond 6 inches. Several attempts were made to take deeper soil samples with in the vicinity, but the same impenetrable layer was encountered each time. This sample does not satisfy the criteria for the presence of hydric soils (USDA, NRCS 2018). No wetland hydrology was observed at this

location. Due to the absence of hydric soils and wetland hydrology, this sample point did not satisfy the criteria for a positive wetland determination; therefore, SP 20 is not a wetland.

STREAMS

A preliminary jurisdictional waters determination was performed in the field to determine if waterways that possessed a defined channel and streambed as defined by the ordinary high water mark (OHWM) were present in the investigation area. A Preliminary Jurisdictional Determination (PJD) Form is included in the attachments. One perennial stream, Fall Creek, was observed within the investigated area. An OHWM was observed for Fall Creek. Fall Creek is provisionally considered a Waters of the U.S.

FALL CREEK

A single perennial waterway, Fall Creek, was identified in the investigation area. Fall Creek is a named perennial stream and is a tributary to the White River. Fall Creek drains into the White River approximately 28.9 miles southwest of the investigation area. Land use around the stream is predominantly residential. Fall Creek does appear on the NWI Map (USFWS 2019) [Figure 5]. Fall Creek also appears as a solid blue line stream on the USGS map and is likely a Waters of the U.S. (Figures 2 and 3). The stream flows west through the investigation area. Approximately 202 linear ft of Fall Creek are within the investigation area. Fall Creek demonstrates an OHWM of 59.5 ft wide and is an estimated 1-ft deep as observed from the banks, outside of the influence of the structure, during a period of low flow on September 30, 2020. The measurement was taken at 40.006965°N, -85.730321°W. The observed physical evidence used to establish the OHWM include physical characteristics such as a clear, natural line impressed on the bank, changes in the character of soil, and destruction of terrestrial vegetation, among other indicators. Fall Creek has an upstream drainage area of 86.662 miles².

Fall Creek was observed to be of average quality, based on the following observations. Sand, silt, and gravel were the dominant substrates observed in the stream. There were mostly sandy shallows with riffles and few pools observed within the stream. Aquatic fauna was not encountered during the field investigation. Vegetation along the banks is disturbed within the investigation area, especially in and around Wetland 9 and SP 15, which are part of a mowed lawn. Vegetation along the banks of Fall Creek is characterized by the prevalence of early successional,

non-native, and invasive species. In-stream habitats and overhead vegetation were noted around Fall Creek. No storm water drainage features were observed discharging into Fall Creek.

CONCLUSIONS

Nine wetlands (Wetlands 1–9) were determined and delineated in the investigation area (Table 1), three of which are likely Waters of the U.S. (Wetlands 7–9). Wetlands 1–6 are provisionally considered Waters of the State. Additionally, a single perennial stream (Fall Creek) was observed in the investigation area (Table 2). Fall Creek was observed with a defined bed, bank, and OHWM, and is likely a Water of the U.S.

Every effort should be taken to avoid and minimize impacts to the waterway and wetlands. If impacts are necessary, then mitigation may be required. The INDOT Environmental Services Division should be contacted immediately if impacts will occur. The final determination of jurisdictional waters is ultimately made by the USACE. This report is our best judgment based on the guidelines set forth by the USACE.

Table 1. Wetland Summary
US 36 and SR 9 Added Travel Lanes Project, Fall Creek Township,
Madison County, Indiana (Des. Nos. 1702936 and 1802854)

Wetland ID	Photos	Lat/Long	Type	Area (acres)	Quality	Likely Water of the U.S.
1	15–20, 22	39.999411°N -85.734524°W	Palustrine Emergent PEM1A	0.011	Poor	No
2	39–48	40.001204°N -85.733115°W	Palustrine Emergent PEM1A	0.121	Poor	No
3	60–63	40.000776°N -85.73771°W	Palustrine Emergent PEM1A	0.012	Poor	No
4	82–86	40.001386°N -85.731988°W	Palustrine Emergent PEM1A	0.022	Poor	No
5	90, 92, 94, 136–139	40.001374°N -85.731647°W	Palustrine Emergent PEM1A	0.059	Poor	No
6	91, 143–145	40.001381°N -85.730424°W	Palustrine Emergent PEM1A	0.019	Poor	No
7	103, 104	40.006865°N -85.730313°W	Palustrine Forested PFO1A	0.027	Poor	Yes
8	108–111	40.006903°N -85.729913°W	Palustrine Forested PFO1A	0.005	Poor	Yes
9	118–122	40.007111°N -85.729935°W	Palustrine Emergent PEM1A	0.009	Poor	Yes

Table 2. Stream Summary
US 36 and SR 9 Added Travel Lanes Project, Fall Creek Township,
Madison County, Indiana (Des. Nos. 1702936 and 1802854)

Stream ID	Photos	OHWM Width (ft)	Depth (ft)	OHWM Lat/Long	USGS Blue-line	Flow Regime	Riffles and Pools	Substrate	Quality	Likely Water of the U.S.
Fall Creek	100, 101, 110, 115, 119–121, 127, 135	59.6 59.5	1.0	40.006965°N, -85.730321°W	Yes	Perennial	Yes	Silt, sand, and gravel	Average	Yes

Table 3. Data Point Summary
US 36 & SR 9 Added Travel Lanes Project, Fall Creek Township,
Madison County, Indiana (Des. No. 1702936 & 1802854)

Data Point	Vegetation	Soils	Hydrology	Wetland
1	No	No	No	No
2	Yes	Yes	Yes	Yes
3	No	No	No	No
4	Yes	Yes	Yes	Yes
5	No	No	No	No
6	Yes	Yes	Yes	Yes
7	No	No	No	No
8	Yes	Yes	Yes	Yes
9	Yes	Yes	No	No
10	Yes	Yes	Yes	Yes
11	Yes	No	No	No
12	Yes	Yes	Yes	Yes
13	No	Yes	No	No
14	Yes	Yes	Yes	Yes
15	No	No	No	No
16	Yes	No	No	No
17	Yes	Yes	Yes	Yes
18	No	No	No	No
19	Yes	Yes	Yes	Yes
20	Yes	No	No	No

ACKNOWLEDGEMENT

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



7/9/2021

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11/25/2020

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INDOT District: Greenfield

Attachments:

Maps (Project Location, Topographic, NWI with NHD, NRCS Soils, FEMA FIRM, and Aerials with resources and photograph locations)

Figures 1-3 removed and can be found in Appendix B

Photographs

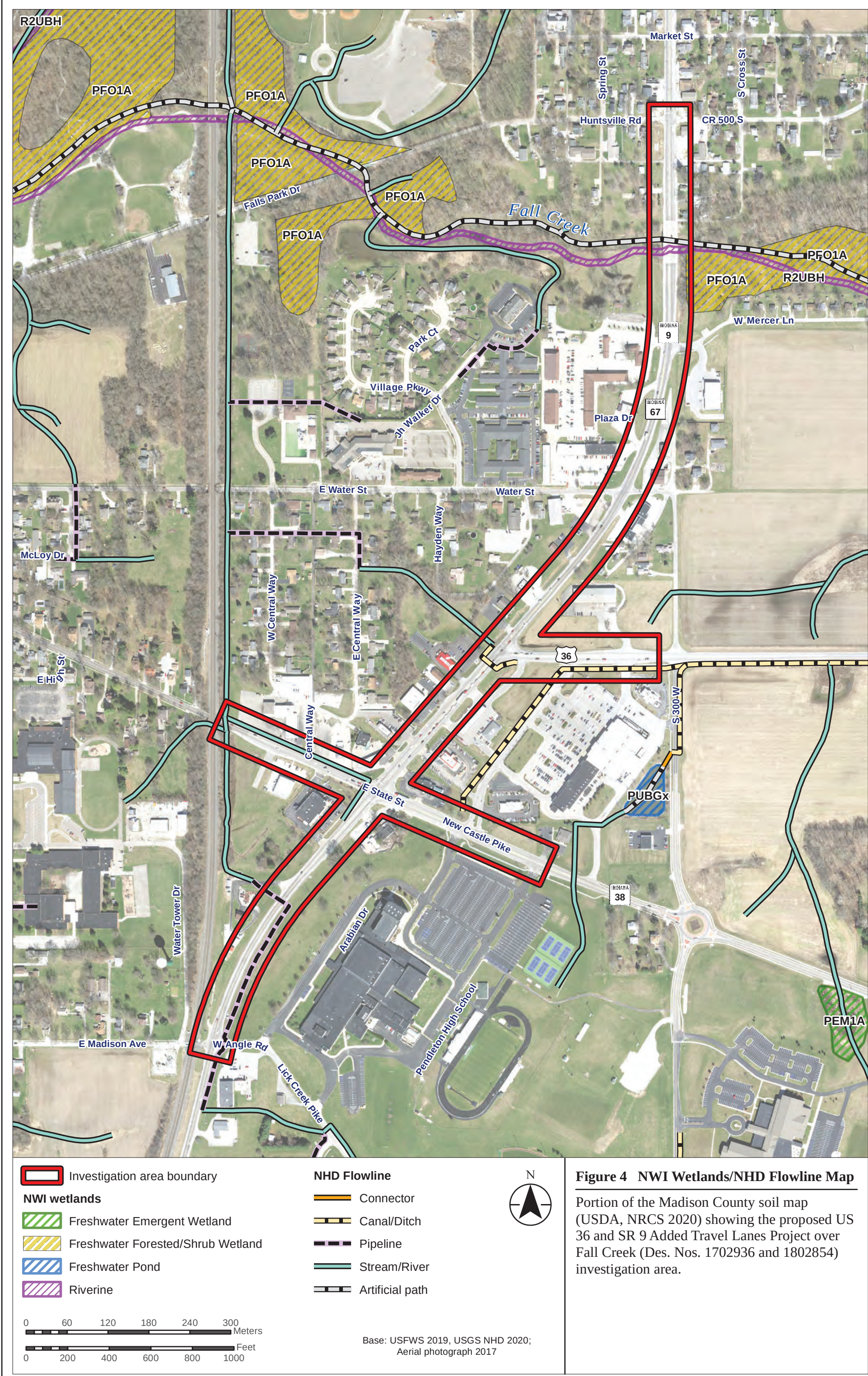
Wetland Determination Data Forms

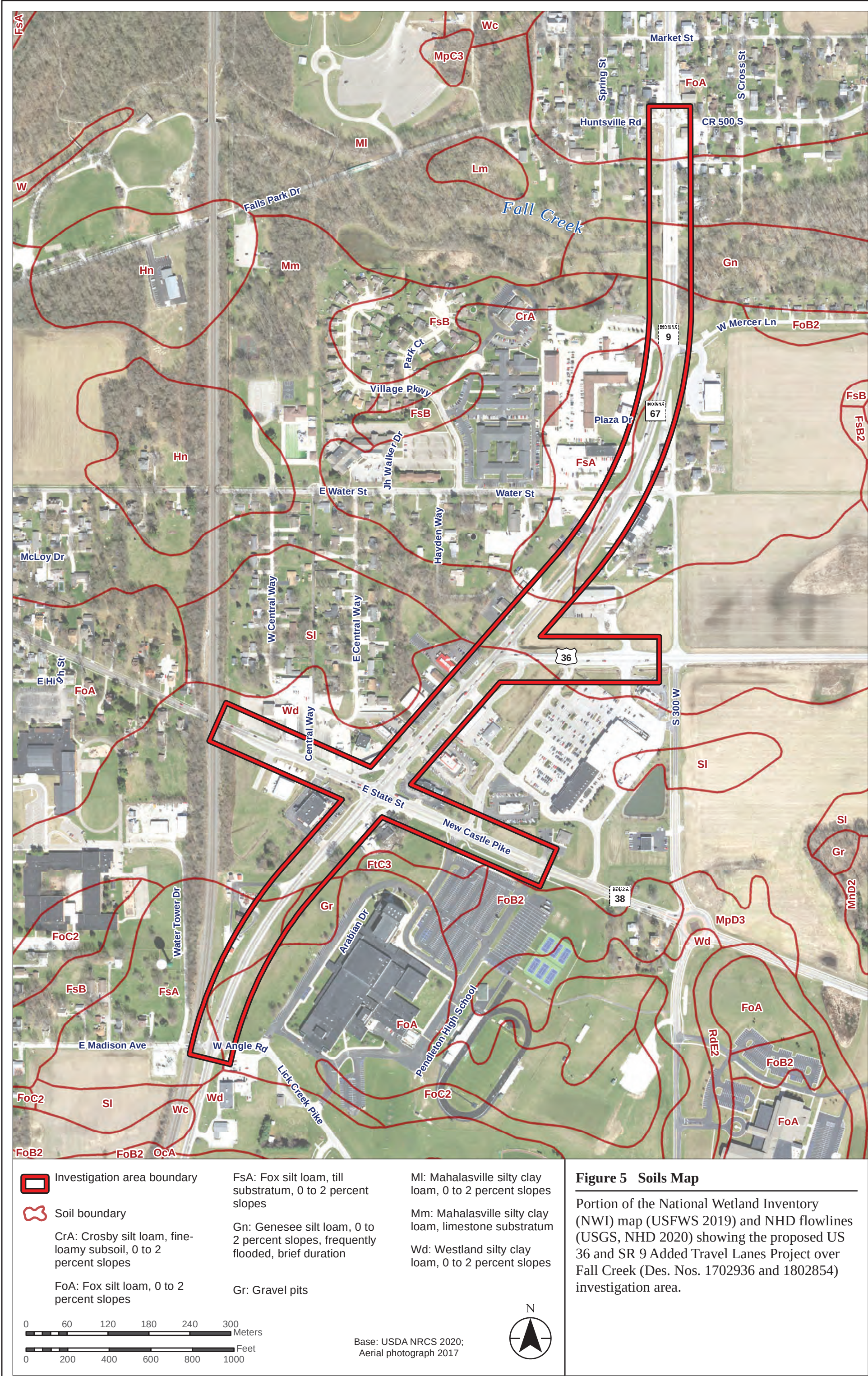
Preliminary Jurisdictional Data (PJD) Form

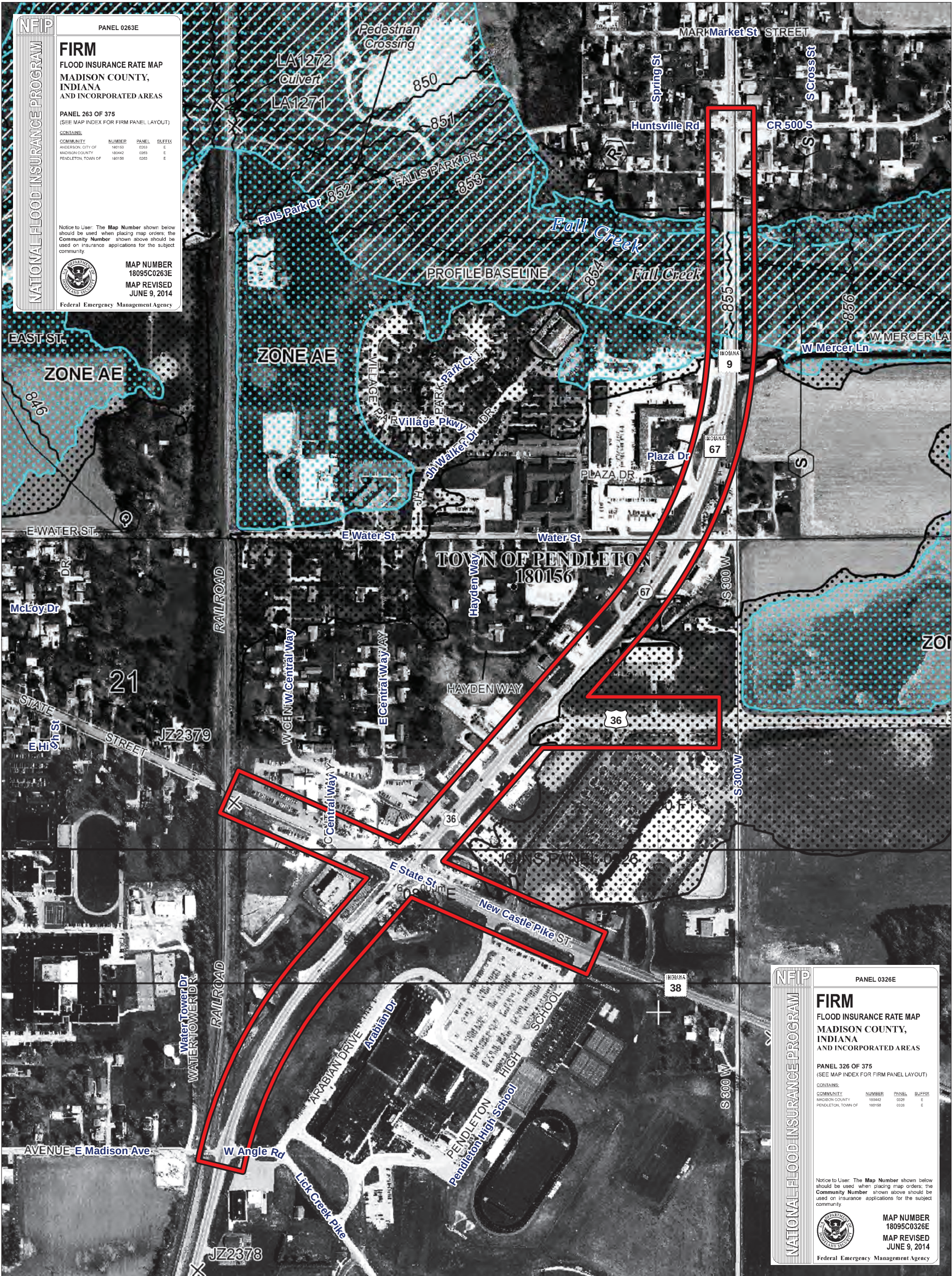
Photographs, Wetland Forms, and PJD Form have been removed and can be found in the original approved Waters report.

REFERENCES

- Cowardin, Lewis M., Virginia Carter, Francis C. Golet, and Edward T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. US Fish and Wildlife Service, FWS/OBS-79/31, December 1979.
- Environmental Laboratory. 1987. *Corps of Engineers Wetland Delineation Manual*. Technical Report Y-87-1, US Army Engineer Waterways Experiment Station, Vicksburg, MS.
- FEMA. 2014. Madison County Floodplain Insurance Rate Map (FIRM). Panels 0263E and 0326E. Federal Emergency Management Agency. Washington, D.C. June 9, 2014. <https://msc.fema.gov/portal>.
- USACE. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region Version 2.0*. United States Army Engineer Research and Development Center. Vicksburg, MS. August 2010.
- USACE. 2018. *National Wetland Plant List (NWPL) Version 3.4*. United States Army Engineer Research and Development Center. Vicksburg, MS. August 2018. http://wetlandplants.usace.army.mil/nwpl_static/v33/home/home.html.
- USDA, NRCS. 2018. *Field Indicators of Hydric Soils in the United States: A Guide for Identifying and Delineating Hydric Soils, Version 8.2*. G.W. Hurt and L.M. Vasilas (eds.). USDA, NRCS, in cooperation with the National Technical Committee on Hydric Soils.
- USDA, NRCS. 2019. On-Line Soils Data Access (SDA). *Hydric Soils Lists, Madison County, Indiana*. US Department of Agriculture, Natural Resources Conservation Service.
- USDA, NRCS. 2020. Web Soil Survey Geographic Database for Madison County, Indiana. US Department of Agriculture, Natural Resources Conservation Service. Fort Worth, Texas. <http://websoilsurvey.nrcs.usda.gov/app/HomePage.html>.
- USFWS. 2019. US Fish and Wildlife Service National Wetlands Inventory Online Mapper <http://wetlandsfws.er.usgs.gov/wtlnds/launch.html>.
- USGS, NHD. 2020. US Geological Survey, National Hydrography Dataset Online website. <https://www.usgs.gov/core-science-systems/ngp/national-hydrography>.







 Investigation area boundary

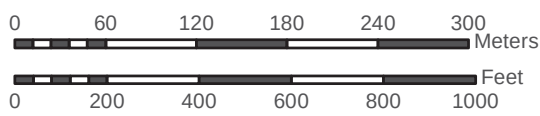
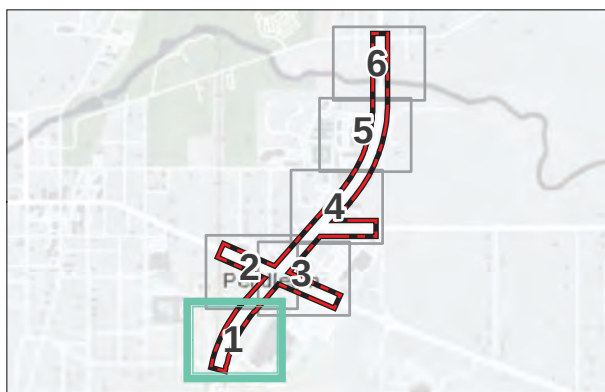
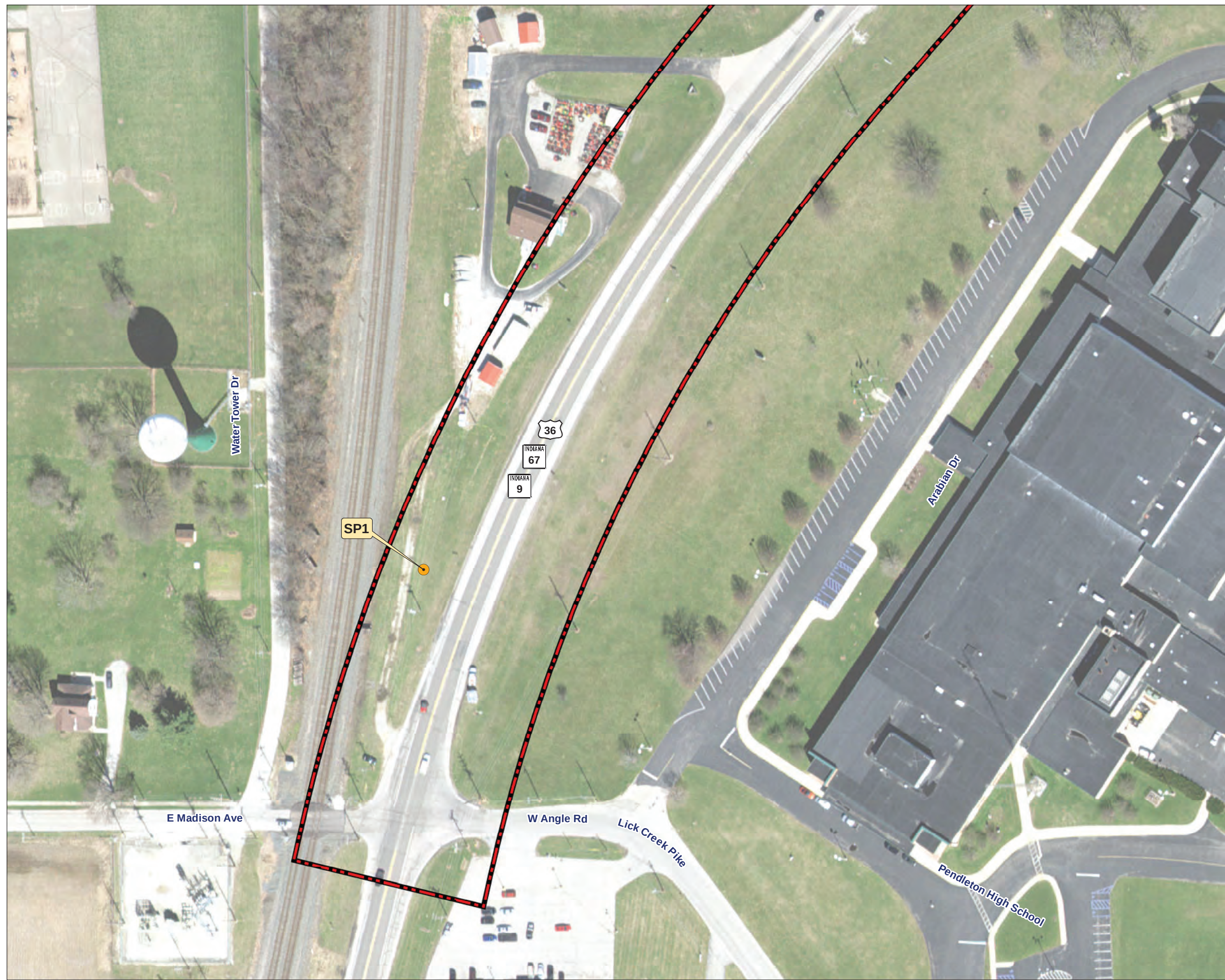


Figure 6 FEMA Floodplain Map

FEMA FIRM map showing the proposed US 36 and SR 9 Added Travel Lanes Project over Fall Creek (Des. Nos. 1702936 and 1802854) investigation area.



-  Investigation area boundary
-  Sample point

Base: Aerial photograph
2017

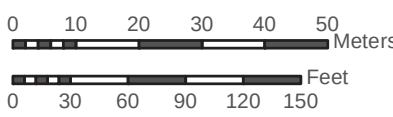
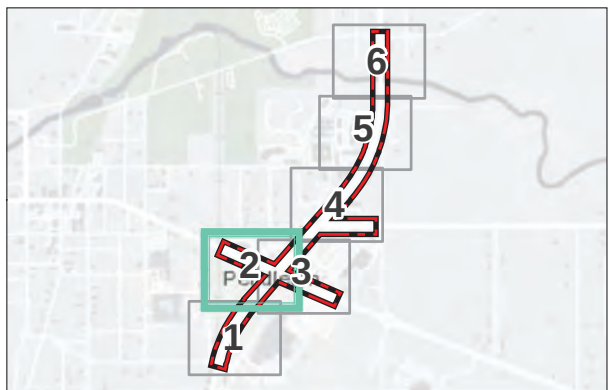
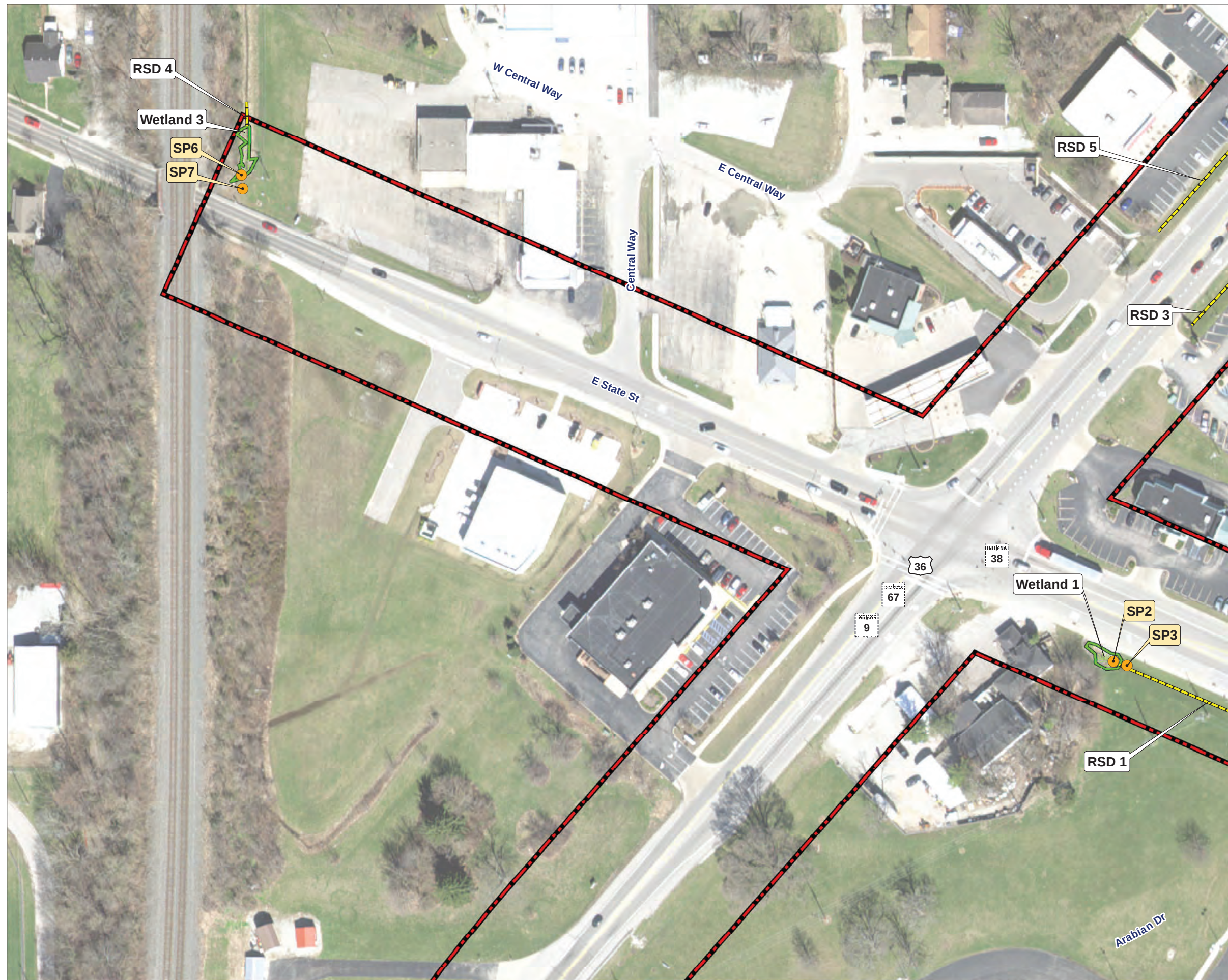


Figure 7-1 Water Resource Map

Aerial photograph showing the ecological resources for the proposed US 36 and SR 9 Added Travel Lanes Project over Fall Creek (Des. Nos. 1702936 and 1802854) investigation area.



- Investigation area boundary
- Roadside ditch
- Wetland
- Sample point

Base: Aerial photograph
2017

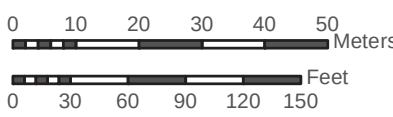
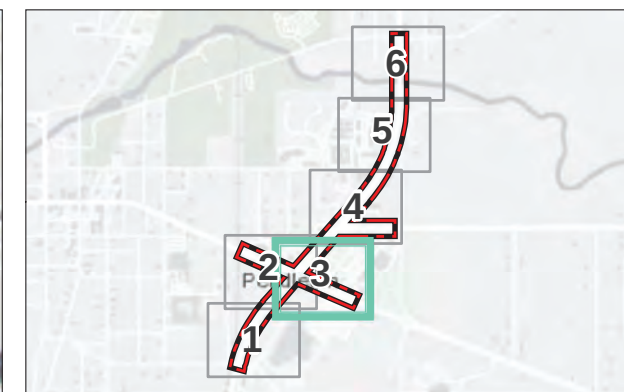
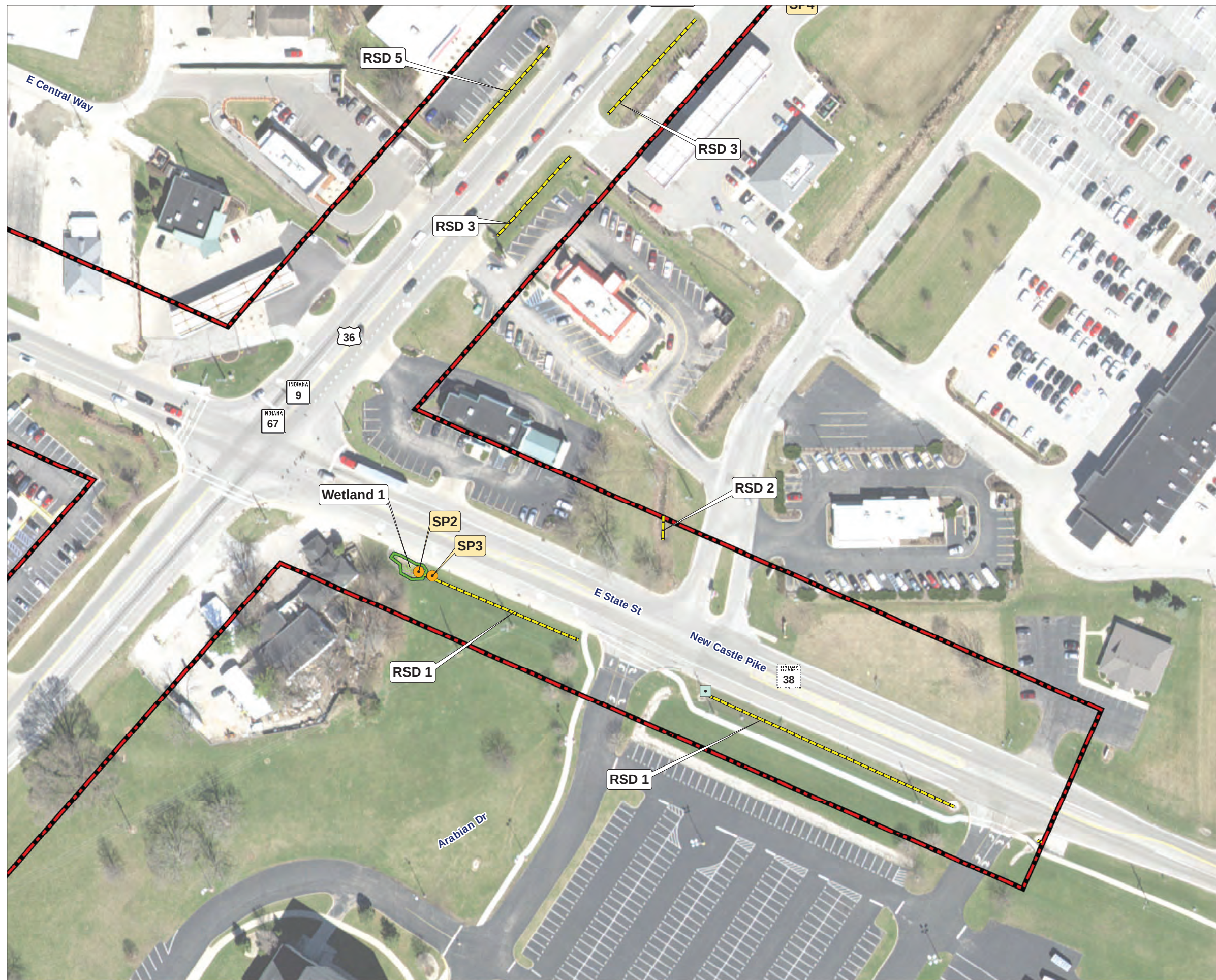


Figure 7-2 Water Resource Map

Aerial photograph showing the ecological resources for the proposed US 36 and SR 9 Added Travel Lanes Project over Fall Creek (Des. Nos. 1702936 and 1802854) investigation area.



- Investigation area boundary
- Roadside ditch
- Wetland
- Sample point

Base: Aerial photograph
2017

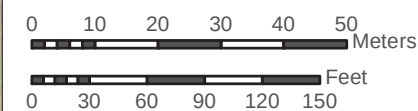
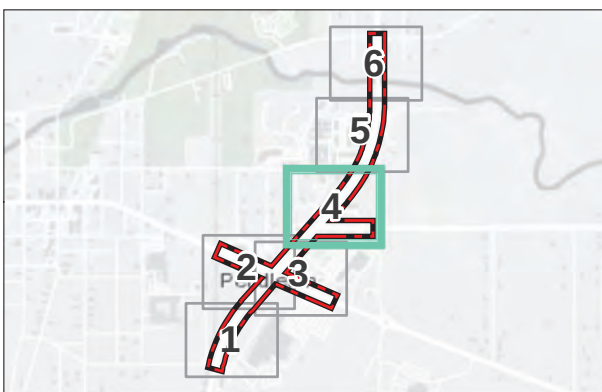
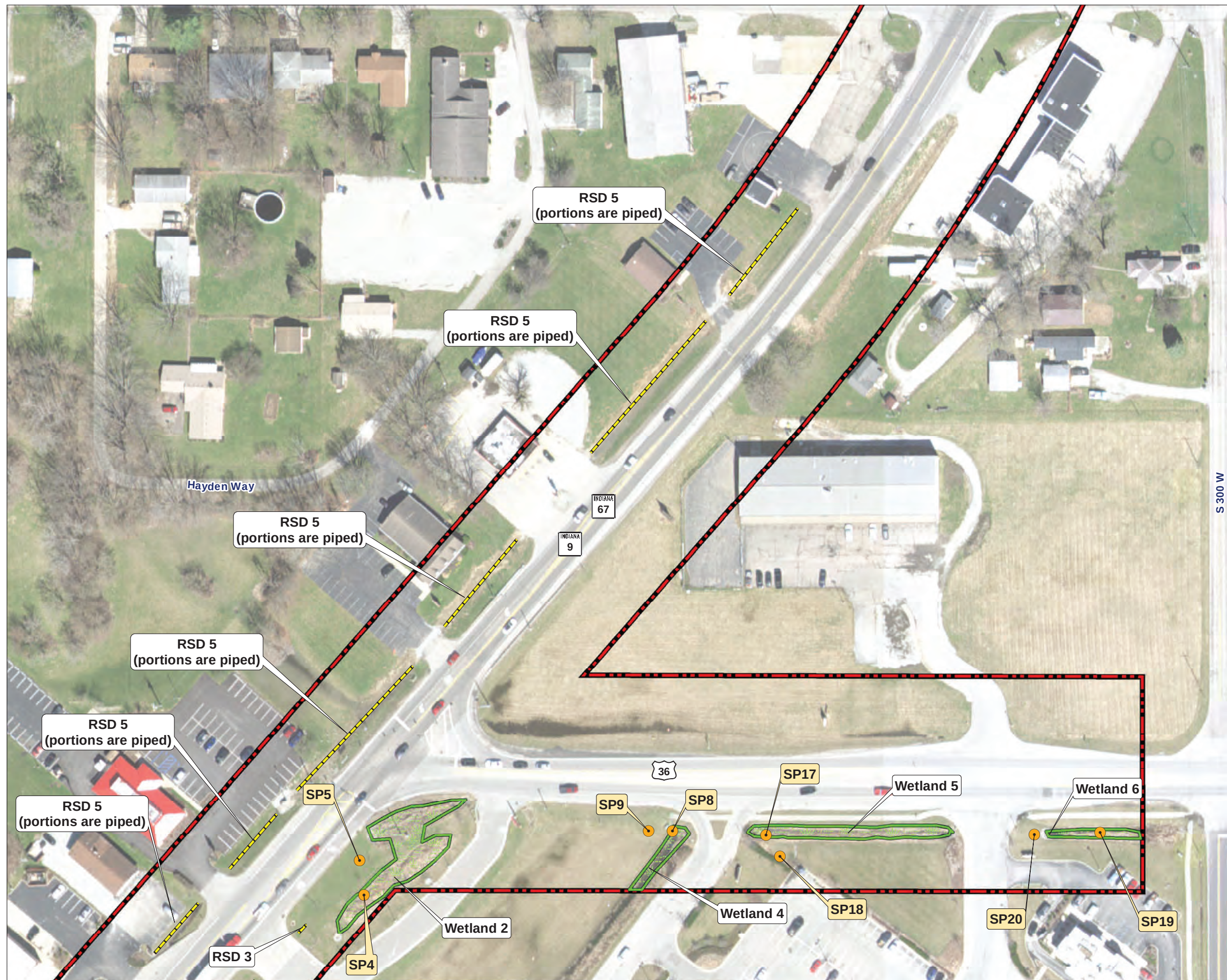


Figure 7-3 Water Resource Map

Aerial photograph showing the ecological resources for the proposed US 36 and SR 9 Added Travel Lanes Project over Fall Creek (Des. Nos. 1702936 and 1802854) investigation area.



- Investigation area boundary
- Roadside ditch
- Wetland
- Sample point

Base: Aerial photograph
2017

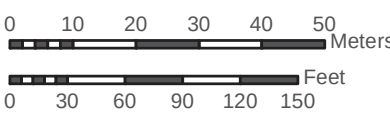
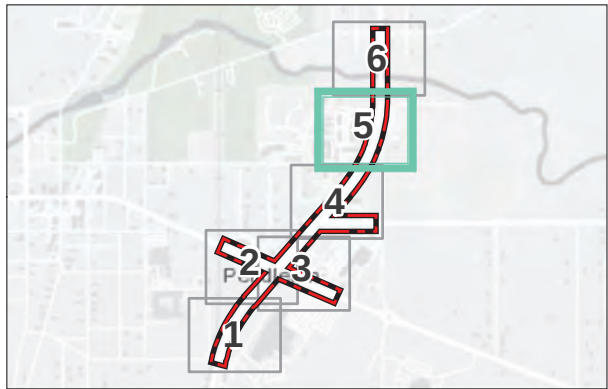
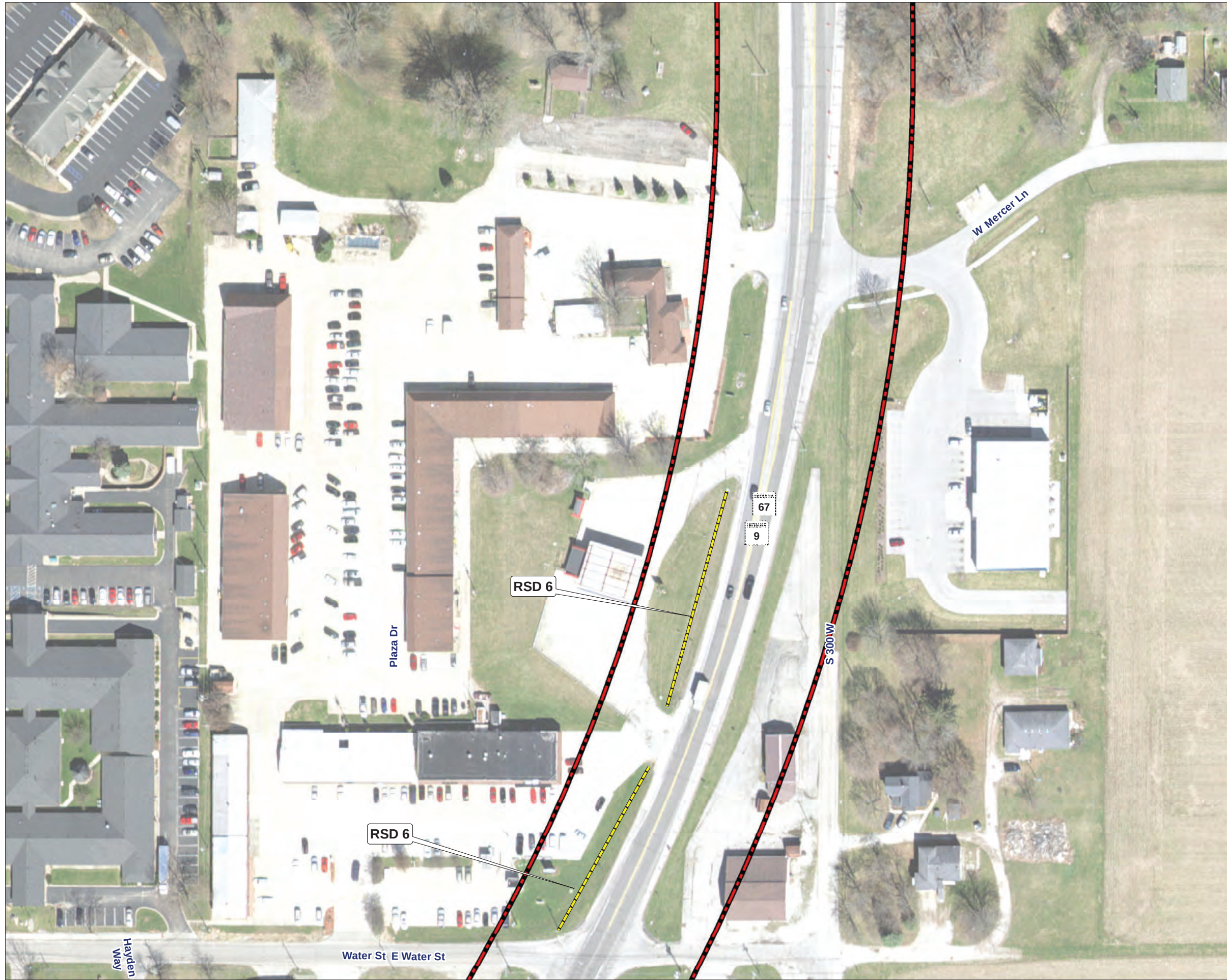


Figure 7-4 Water Resource Map
Aerial photograph showing the ecological resources for the proposed US 36 and SR 9 Added Travel Lanes Project over Fall Creek (Des. Nos. 1702936 and 1802854) investigation area.



-  Investigation area boundary
-  Roadside ditch

Base: Aerial photograph
2017

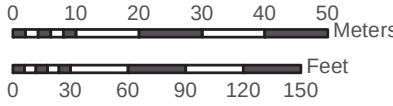
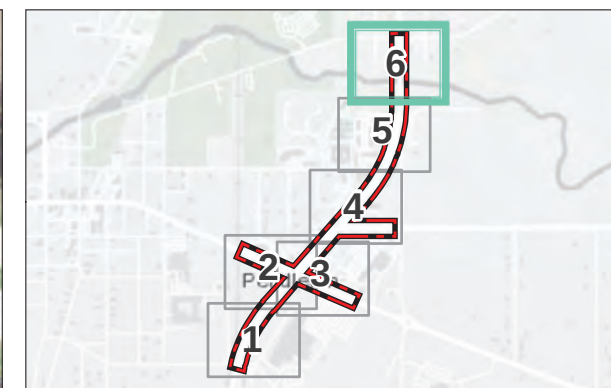
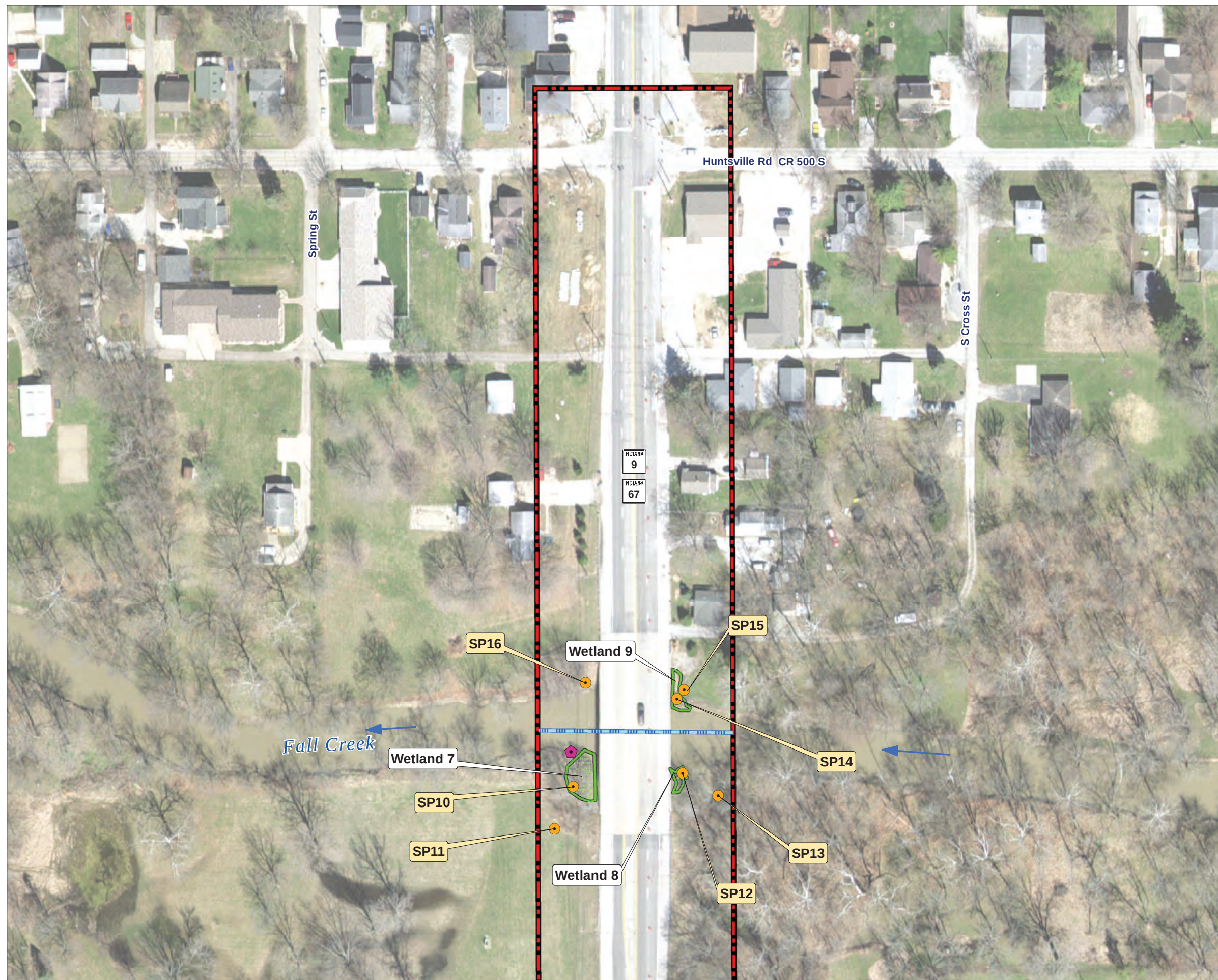


Figure 7-5 Water Resource Map

Aerial photograph showing the ecological resources for the proposed US 36 and SR 9 Added Travel Lanes Project over Fall Creek (Des. Nos. 1702936 and 1802854) investigation area.



-  Investigation area boundary
-  Wetland
-  Sample point
-  OHWM

Base: Aerial photograph
2017

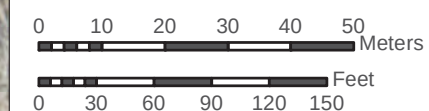
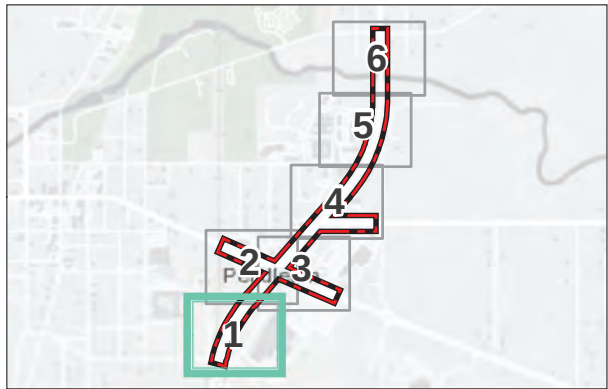
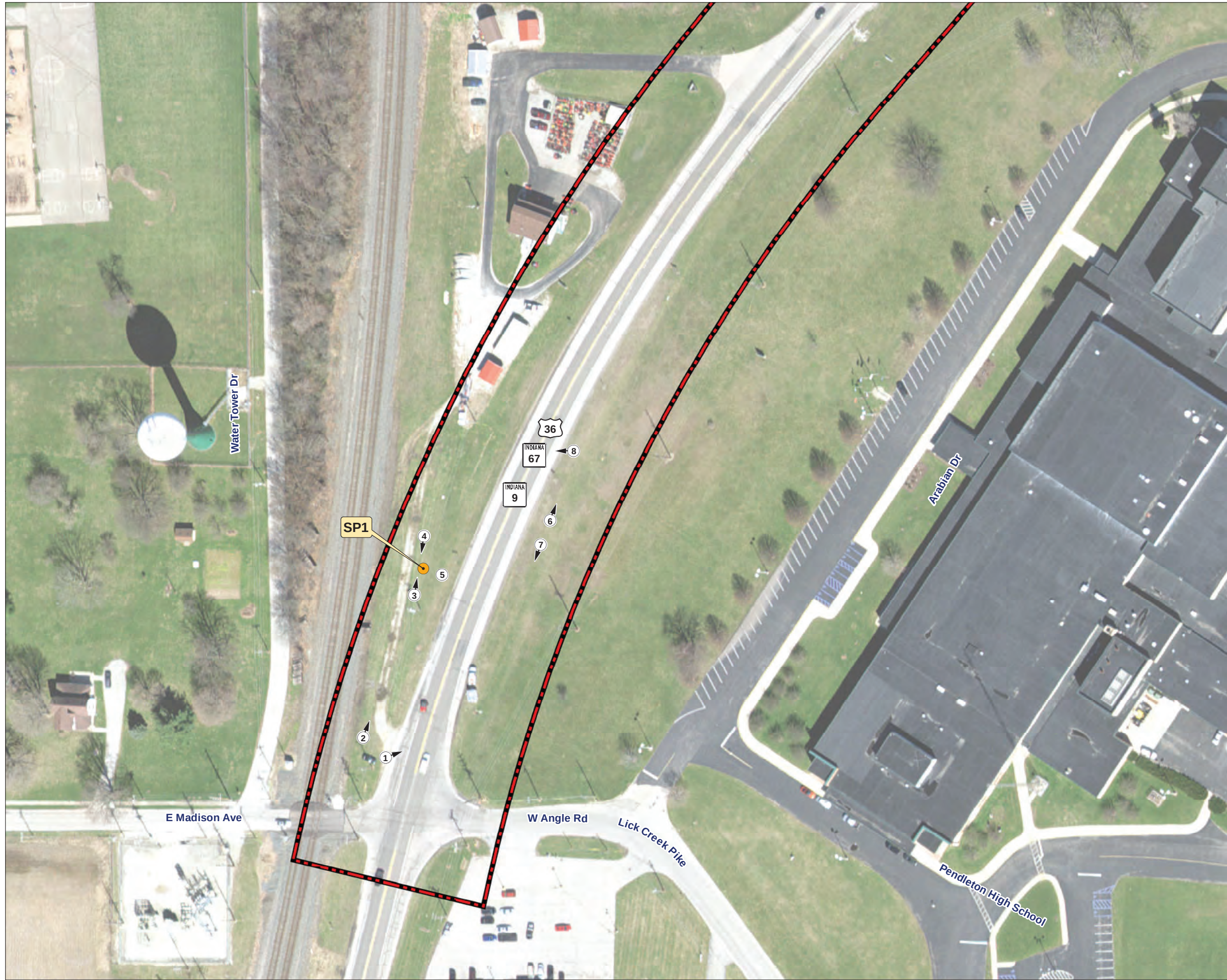


Figure 7-6 Water Resource Map

Aerial photograph showing the ecological resources for the proposed US 36 and SR 9 Added Travel Lanes Project over Fall Creek (Des. Nos. 1702936 and 1802854) investigation area.



- Investigation area boundary
- Sample point
- Photo location
- Photo location (No direction)

Base: Aerial photograph
2017

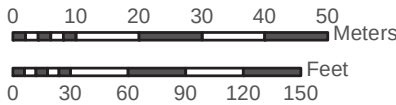
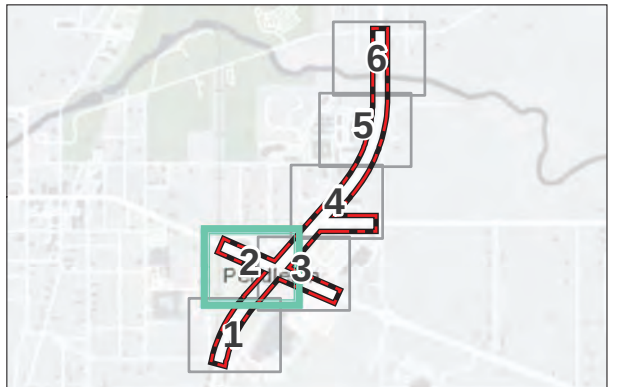
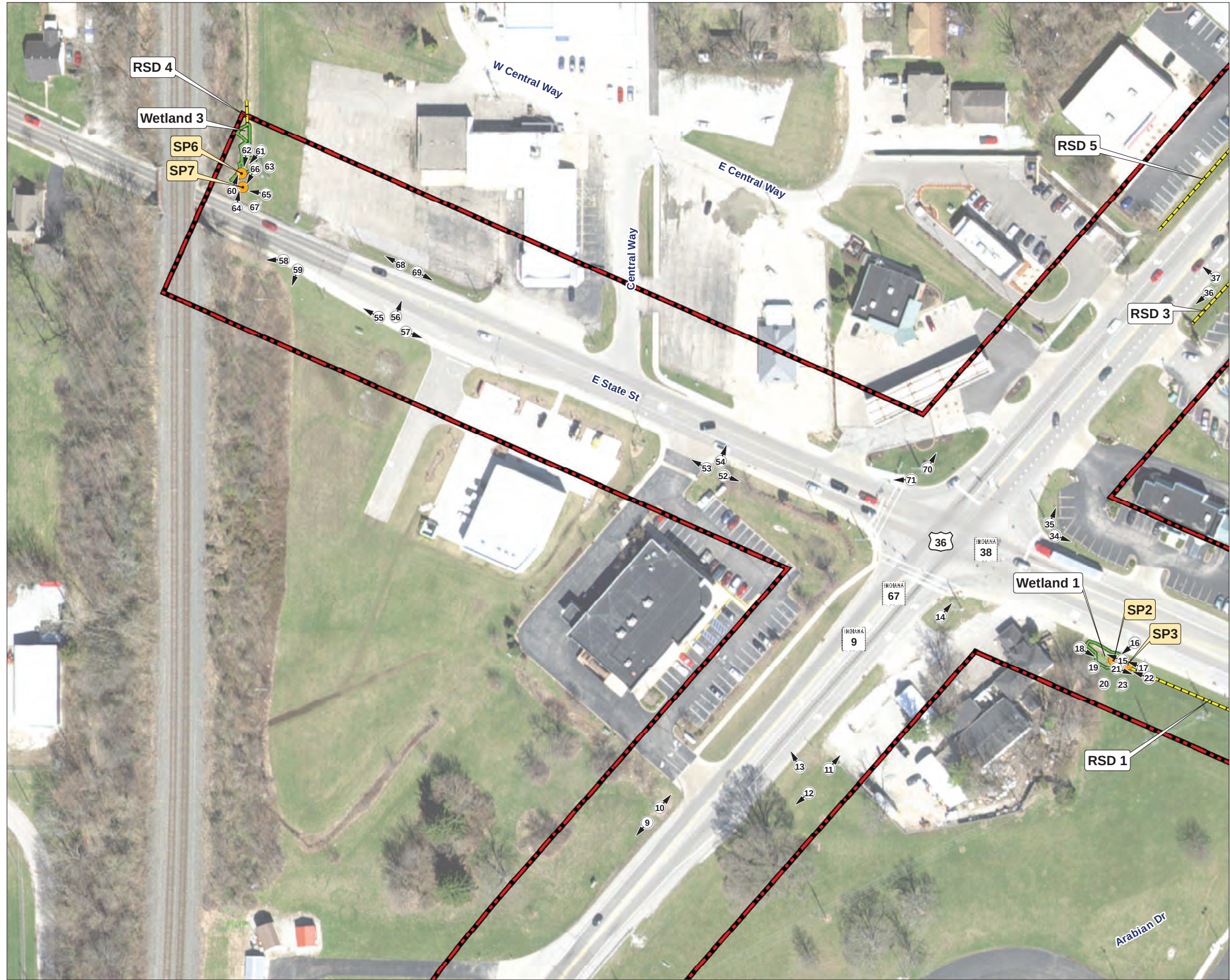


Figure 8- 1 Photo Location Map

Aerial photograph showing the ecological resources and photograph locations for the proposed US 36 and SR 9 Added Travel Lanes Project over Fall Creek (Des. Nos. 1702936 and 1802854) investigation area.



- Investigation area boundary
- Roadside ditch
- Wetland
- Sample point
- Photo location
- Photo location (No direction)

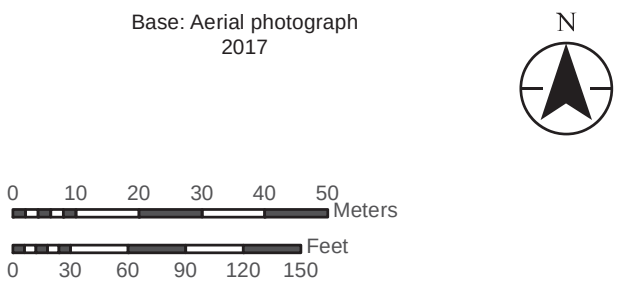
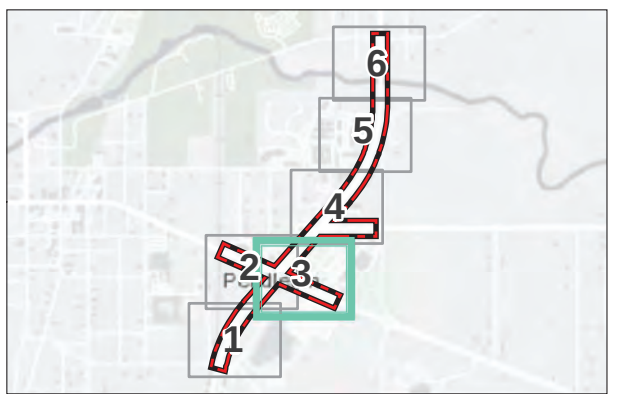
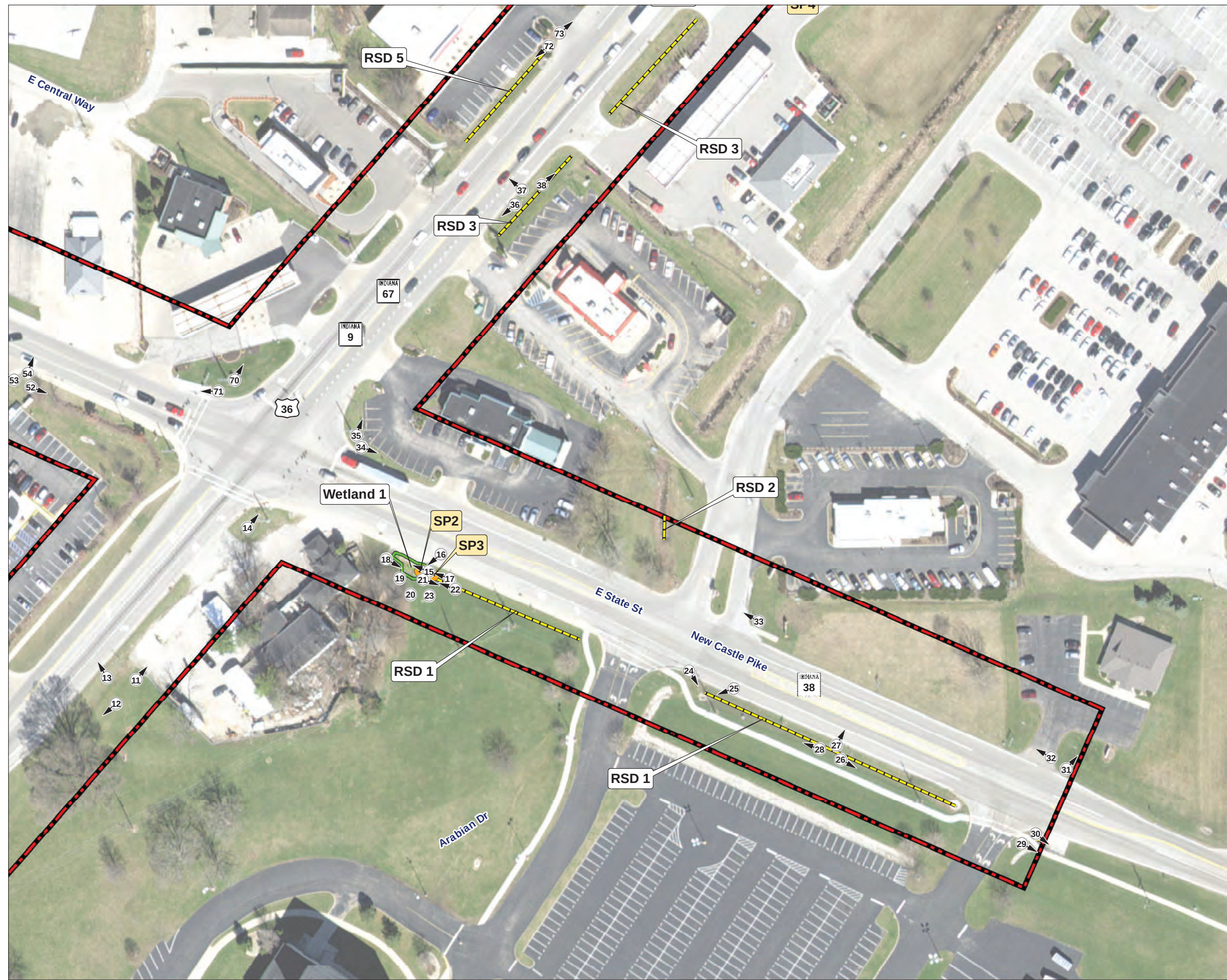


Figure 8- 2 Photo Location Map

Aerial photograph showing the ecological resources and photograph locations for the proposed US 36 and SR 9 Added Travel Lanes Project over Fall Creek (Des. Nos. 1702936 and 1802854) investigation area.



- Investigation area boundary
- Roadside ditch
- Wetland
- Sample point
- Photo location
- Photo location (No direction)

Base: Aerial photograph
2017

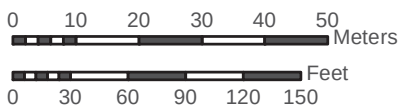
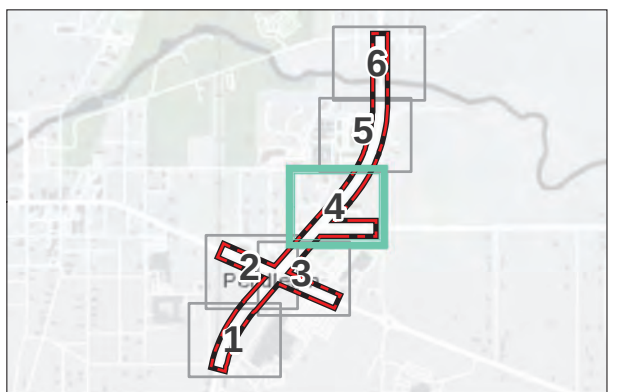
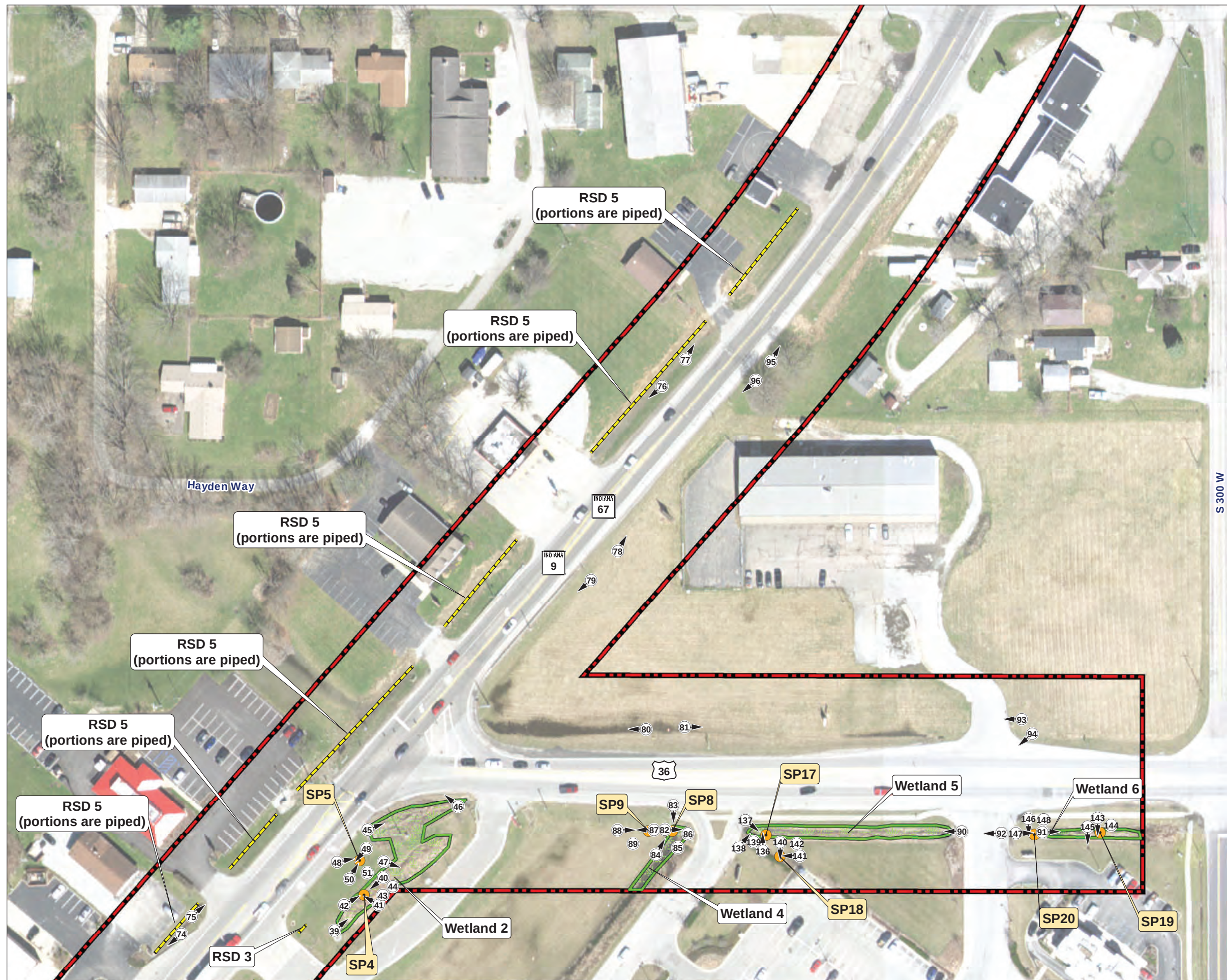


Figure 8- 3 Photo Location Map

Aerial photograph showing the ecological resources and photograph locations for the proposed US 36 and SR 9 Added Travel Lanes Project over Fall Creek (Des. Nos. 1702936 and 1802854) investigation area.



- Investigation area boundary
- Roadside ditch
- Wetland
- Sample point
- Photo location
- Photo location (No direction)

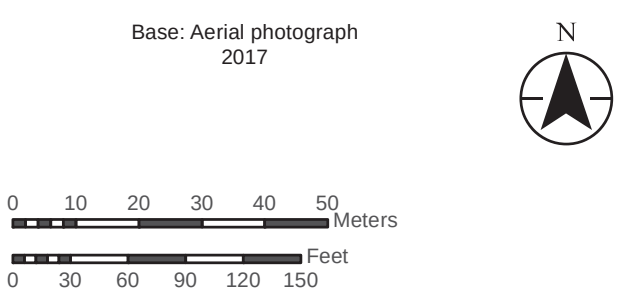
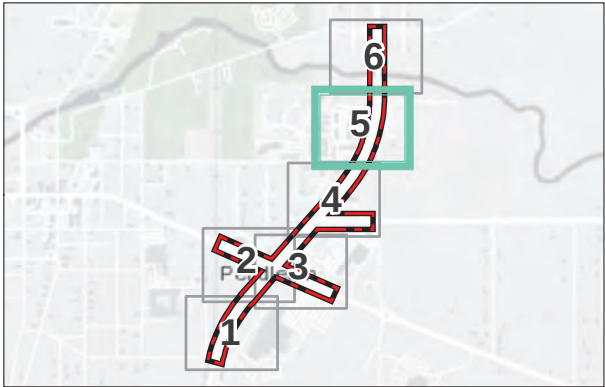
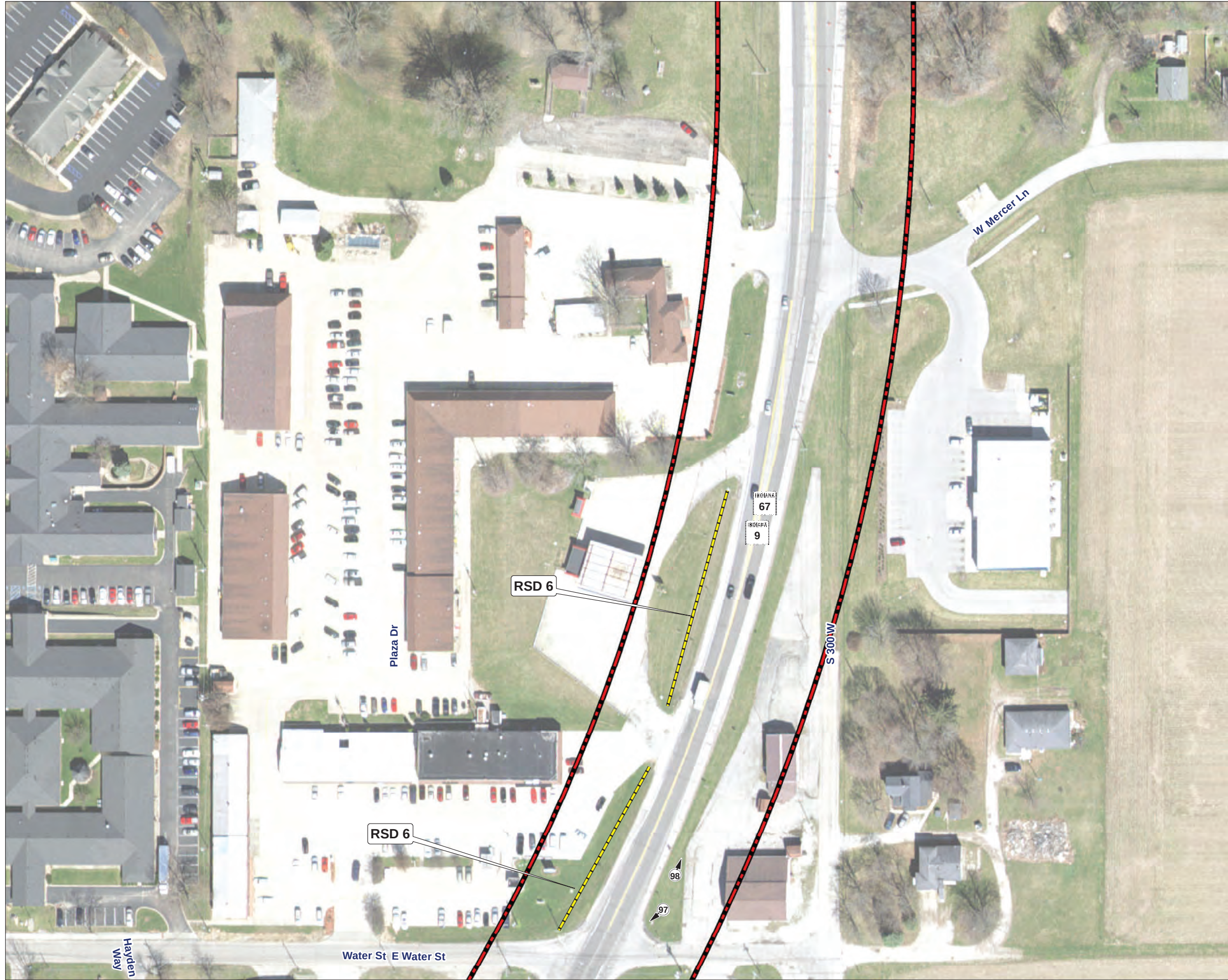


Figure 8- 4 Photo Location Map

Aerial photograph showing the ecological resources and photograph locations for the proposed US 36 and SR 9 Added Travel Lanes Project over Fall Creek (Des. Nos. 1702936 and 1802854) investigation area.



- Investigation area boundary
- Roadside ditch
- Photo location

Base: Aerial photograph
2017

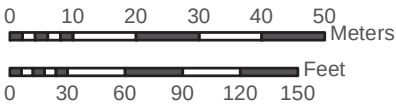
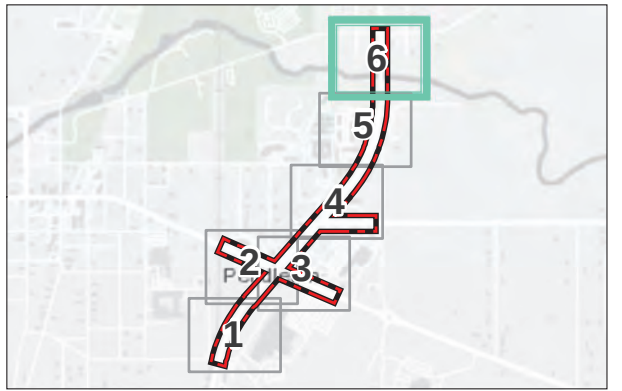
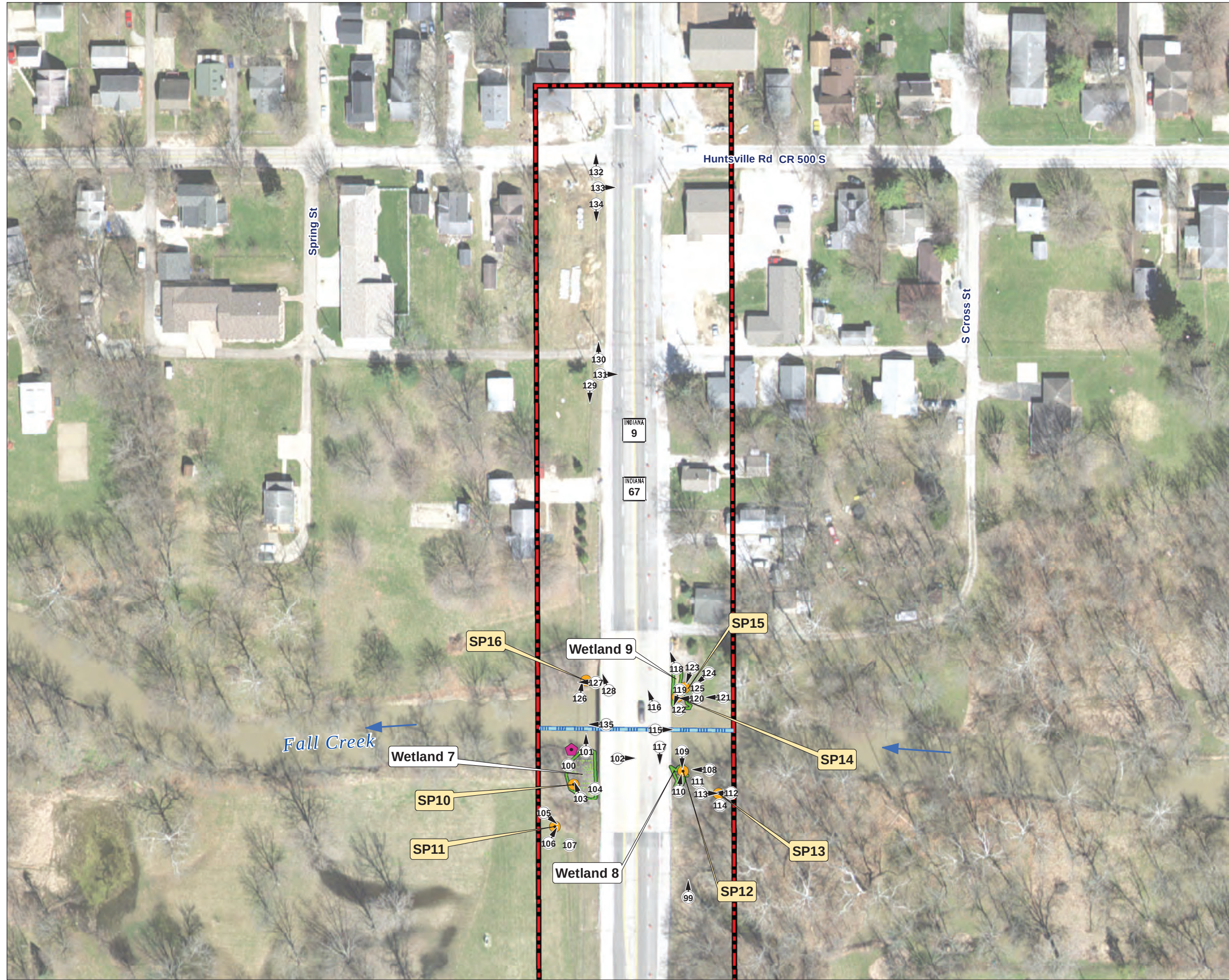


Figure 8- 5 Photo Location Map

Aerial photograph showing the ecological resources and photograph locations for the proposed US 36 and SR 9 Added Travel Lanes Project over Fall Creek (Des. Nos. 1702936 and 1802854) investigation area.



- Investigation area boundary
- Wetland
- Sample point
- OHW
- Photo location
- Photo location (No direction)

Base: Aerial photograph
2017

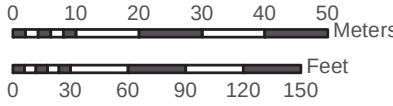


Figure 8- 6 Photo Location Map

Aerial photograph showing the ecological resources and photograph locations for the proposed US 36 and SR 9 Added Travel Lanes Project over Fall Creek (Des. Nos. 1702936 and 1802854) investigation area.

Waters of the U.S. Determination and Wetland Delineation Report

State Project:

US 36 (SR 9/SR 67) Added Travel Lanes,
INDOT Des. Nos. 1702936 and 1802854

LPA Project:

US 36 (SR 9/SR 67) Bicycle and Pedestrian Facilities,
INDOT Des. No. 2001127

Approved Report Prepared by: Joshua Netherton, Ecologist and Catherine Holland, Environmental Specialist

Amended by: L. David Cohen, Environmental Specialist and Len Mikles, Principal Ecologist
ASC Group, Inc.

Original Report Approval Date: July 14, 2021 (State Project only)

Amended Date: August 28, 2023

Project Description:

Date(s) of Field Investigation:

September 30, 2020; October 30, 2020; May 28, 2021; June 13, 2022; June 29, 2022;
September 18, 2022; May 15, 2023; and July 7, 2023

Sections 15, 16, 21, and 22, Township 18 North, Range 7 East

Anderson South and Pendleton, Indiana Quadrangles

Madison County, Indiana

Central Latitude/Longitude: 40.00080°N, -85.73396°W

Project Description: The original approved report only covered the State project. The proposed undertaking described throughout this report covers a combined Indiana Department of Transportation (INDOT) State project (the “State project”) [INDOT Des. Nos. 1702936 and 1802854] and a Local Public Agency (LPA) project (INDOT Des. No. 2001127) under the Madison County Council of Governments (MCCOG). These projects are located along US 36/State Road (SR) 9/SR 67 corridor in the Town of Pendleton, Madison County. There is significant overlap between the footprint of both the State and LPA projects, as well as areas specific to both projects (Figures 1–8). In addition to a shared footprint, there are elements of both projects that rely on the other’s completion in order for each to fulfill their respected purposes. Therefore, these projects are being evaluated together for the purpose of this report while maintaining distinctions between investigation areas when appropriate. Mentioned roadways that serve as project area limits throughout this document have multiple names and have been reduced, as appropriate, for clarity. Figures 1–8 show the specific project limits.

State Project: INDOT Des. Nos. 1702936 and 1802854: This project is located along US 36 and SR 9 to the north and is locally known as Pendleton Pike, from 0.28 mile south of SR 38 to Huntsville Road, with construction on State Street, SR 38, and US 36 east of the SR 9 junction

included, in Madison County. The proposed State project seeks to add travel lanes and widen existing lanes throughout the corridor while grading and adjusting roadsides for the LPA project.

LPA Project: INDOT Des. No. 2001127: The footprint is mostly within the project area for the State project, but extends further east along SR 38/State Street to just west of the roundabout at the SR 38/State Street and South County Road (CR) 300 West intersection, 0.08 mile further south along US 36/SR 9/SR 67 south of the East Madison Avenue/Angle Road intersection, and further east along US 36 adjacent to Pendleton High School between SR 38/State Street and Angle Road. It also extends west opposite the US 36 east leg at the north junction with SR 9 through an existing open area to Hayden Way and then north alongside Hayden Way to Water Street. The LPA project seeks to install pedestrian and bicycle infrastructure throughout the corridor and throughout a nearby residential area.

The need for both State and LPA projects are synonymous due to increasing vehicular traffic congestion along the US 36 (SR 9/SR 67) intersection corridor, which has subsequently exacerbated shortcomings in safety and traffic management design for motorists and both pedestrian and bicycle travelers. Approximately 5.12 acres (ac) of permanent right-of-way (ROW) acquisition and 0.74 ac of temporary ROW acquisition will be required, total, between these projects.

Desktop Reconnaissance:

The following information reflects the combined investigation area of both the State and LPA project limits, which include portions that overlap and portions that are unique to each project.

Soils (Figure 4):

According to the Web Soil Survey (United States Department of Agriculture, Natural Resource Conservation Service [USDA, NRCS] 2020b) and the Soil Survey Geographic (SSURGO) Database for Madison County, Indiana (USDA, NRCS 2020a), the combined investigation area contains areas with nationally listed hydric soils (USDA, NRCS 2018) and hydric soils from the Madison County Hydric Soils List (USDA, NRCS online soil data access [SDA] 2019).

Table 1. USDA, NRCS SSURGO Mapped Soil Units.

Soil Unit Name	Symbol	Flooding Frequency	Drainage Class	Hydric Soil Category	Hydric Rating
Crosby silt loam, fine-loamy subsoil, 0 to 2 percent slopes	CrA	None	Somewhat poorly drained	Predominantly Non-hydric	Hydric (2%)
Fox silt loam, 0 to 2 percent slopes	FoA	None	Well drained	Predominantly Non-hydric	Hydric (5%)
Fox silt loam, 2 to 6 percent slopes, moderately eroded	FoB2	None	Well drained	Predominantly Non-hydric	Hydric (10%)
Fox silt loam, till substratum, 0 to 2 percent slopes	FsA	None	Well drained	Predominantly Non-hydric	Hydric (5%)
Fox soils, 6 to 12 percent slopes, severely eroded	FtC3	None	Well drained	Non-hydric	Non-hydric (0%)
Genesee silt loam, 0 to 2 percent slopes, frequently flooded, brief duration	Gn	Frequent	Well drained	Non-hydric	Non-hydric (0%)

Table 1. USDA, NRCS SSURGO Mapped Soil Units.

Soil Unit Name	Symbol	Flooding Frequency	Drainage Class	Hydric Soil Category	Hydric Rating
Gravel pits	Gr	None	N/A	Non-hydric	Non-hydric (0%)
Mahalasville silty clay loam, 0 to 2 percent slopes	Ml	None	Poorly drained	Predominantly Hydric	Hydric (98%)
Mahalasville silty clay loam, limestone substratum	Mm	None	Poorly drained	Hydric	Hydric (100%)
Sleeth silt loam, 0 to 2 percent slopes	Sl	None	Somewhat poorly drained	Predominantly Non-hydric	Hydric (3%)
Washtenaw complex	Wc	None	Poorly drained	Hydric	Hydric (100%)
Westland silty clay loam, 0 to 2 percent slopes	Wd	None	Poorly drained	Predominantly Hydric	Hydric (94%)

National Wetland Inventory (NWI) Information (Figure 5):

The NWI mapping identified two wetland features within the investigation area and eight wetland features within 0.5 mile (mi) of the investigation area. The two mapped wetland features observed in the investigation area are located within the State project limits and include one palustrine forested wetland southeast of the SR 9 crossing over Fall Creek and one riverine perennial wetland (Fall Creek). There is one palustrine forested wetland and one palustrine unconsolidated-bottom wetland located east of the investigation area, five palustrine forested wetlands located west of the investigation area, and one palustrine emergent wetland located southeast of the investigation area (United States Fish and Wildlife Service [USFWS] 2019).

Wetland Type	Location
1- PFO1A	Within and along the northeast boundary of the investigation area
1- R2UBH	Flowing west through the north end of the investigation area
1- PFO1A	East of the investigation area, north of Fall Creek
5- PFO1A	West of the investigation area, north of Fall Creek
1- PUBGx	East of the investigation area
1- PEM1A	Southeast of the investigation area

National Hydrography Dataset (NHD) (Figure 5):

According to the NHD (United States Geological Survey, National Hydrography Dataset [USGS, NHD] 2020), the investigation area contains ten flowline features. The NHD flowlines for the investigation area are provided on Figure 5.

NHD Flowline Type	Location
Artificial Path	Passing under the bridge for Fall Creek
Stream/River	Flowing into investigation area at US 36 and SR 9
Canal/Ditch	Flowing under the intersection of US 36 and SR 9
Canal/Ditch	Flowing along south side of US 36
Canal/Ditch	Flowing along the east side of S CR 300W
Stream/River	Flowing from western project boundary on East State Street
Stream/River	Flowing parallel to railroad at western project terminus
Stream/River	Flowing through the western project boundary
Stream/River	Crossing through southern project terminus
Pipeline	Crossing through southern project terminus

Upstream Drainage (Figure 9):

According to USGS StreamStats Services (USGS 2016), the upstream drainage area for Fall Creek, from the SR 9 crossing (40.00700°N, -85.73009°W), is approximately 86.668 square mi.

HUC-12:

051202010804 – Prairie Creek-Fall Creek; and

051202010808 – Flatfork Creek-Fall Creek

Figures 1-3 removed and can be found in Appendix B

Attached Documents:

- Maps (Project Location, Topographic, NRCS Soils, NWI with NHD, Indiana Department of Natural Resources [IDNR] Floodplain, Aerials with Aquatic Resources and Photograph Key, and StreamStats Upstream Drainage)
- Photographs
- Wetland Determination Data Forms
- Preliminary Jurisdictional Determination (PJD) Form

Photographs, Wetland Forms, and PJD Form have been removed and can be found in the original approved Addendum Waters report.

FIELD RECONNAISSANCE:

ASC Group, Inc. (ASC), under contract with CDM Smith, Inc., conducted an investigation to determine the potential presence of jurisdictional Waters of the U.S. (WOTUS) or Waters of the State for the proposed combined project investigation area on September 30, 2020; October 30, 2020; May 28, 2021; June 13, 2022; June 29, 2022; September 18, 2022; May 15, 2023; and July 7, 2023. Investigated resources (Fall Creek and Wetlands 1–9) discovered in the approved report for the State project have been incorporated into this document.

Identification of resources within this document are identified as those existing within the footprint of the State project, or “overlapping” the LPA project, and those existing solely within the footprint of the LPA project. The investigation area for this waters report serves as the limits of the delineation, includes all of the resources that were investigated, and spans the US 36, SR 9, and SR 38 ROW throughout the investigation area. It also includes the bridges physical structure, the immediate area surrounding US 36, SR 9, and SR 38 and portions of the adjacent private properties. Maps (Figures 1–9) and photographs (Photographs 1–184) of the investigation area are included in the attachments.

STREAMS

A preliminary jurisdictional waters determination was performed in the field to determine the presence of waterways that possessed a defined channel and streambed, as defined by the

ordinary high water mark (OHWM), within the combined investigation area. A Preliminary Jurisdictional Determination (PJD) Form is included in the attachments. One named, perennial stream, Fall Creek, was observed within the northern investigation area and only flows through the limits of the State project. An OHWM was observed for Fall Creek. Fall Creek is provisionally considered a jurisdictional WOTUS.

Fall Creek

One perennial waterway, Fall Creek, was observed within and adjacent to the investigation area. Land use around the stream is predominantly residential. Approximately 202 linear feet (ft) of Fall Creek is located within the investigation area, under the bridge carrying SR 9, and flows to the west. Two points were taken to determine an OHWM for Fall Creek (Figure 7, Sheet 9; Figure 8, Sheet 9). The observed physical evidence used to establish the OHWM include physical characteristics such as a clear, natural line impression on the bank, changes in the character of soil, and destruction of terrestrial vegetation, among other indicators. The OHWMs were each measured away from the influence of the bridge, outside of the influence of the historic stream channel modifications for the structure, and during a period of average flow on October 3, 2022. The widest measurement, at OHWM 1, and deepest measurement, at OHWM 2, will be used for this report. OHWM 1 was taken downstream from the SR 9 Bridge in Fall Creek and demonstrated a width of 57.25 ft and depth of 1.67 ft. The measurement for OHWM 1 was taken at 40.007055° N, -85.730450° W (Figure 8, Sheet 9). OHWM 2 was taken upstream from the existing structure inlet at 40.007001° N, -85.729734° W and demonstrated a width of 42 ft and depth of 2 ft (Figure 8, Sheet 9). The observed stream is mapped on the USGS StreamStats database and has an upstream drainage area of 86.668 square mi.

Fall Creek appears on the NWI Map as a riverine wetland (USFWS 2019) [Figure 5] and as a solid-perennial blue line on USGS topographic mapping (Figures 2 and 3). Fall Creek is a named perennial stream and a tributary with a significant nexus to the White River, a WOTUS, where it drains at their confluence approximately 28.9 mi southwest of the investigation area. The White River ultimately drains to the Wabash River, which is a Traditional Navigable Waterway (TNW). Fall Creek was observed to be of average quality during the field investigation. Cobble, sand, and silt were the dominant substrates observed within the stream bed. The stream contained sandy shallows and a few riffle and pool features and received moderate vegetative overhead cover from trees and shrubs along the stream bank. Vegetation within the stream was sparse and provided

little in-stream habitat. Vegetation along the banks of Fall Creek is characterized by the prevalence of early successional, non-native, and invasive tree and shrub species. Sections of stream bank along residential property were cleared of vegetation or maintained. Aquatic fauna was observed within Fall Creek. No stormwater drainage features were observed discharging into this area of Fall Creek.

Table 2. Stream Summary Table.

Water Feature Name	Photos	Lat/Long	OHWM Width (ft)	OHWM Depth (ft)	USGS Blue-line? Type?	Riffles? Pools?	Quality	Substrate	Likely Waters of U.S.?	Linear ft/ Acreage
Fall Creek	96, 98, 99, 108, 110, 116–125	40.007055°N, -85.730071°W	57.25	2	Solid, Perennial	Riffles and Pools	Average	Cobble, sand, and silt	Yes	202 ft, 0.265 ac

WETLANDS

Twenty-nine sample points (SP1–SP29) were taken to determine the presence of jurisdictional wetlands throughout the combined investigation area during multiple site visits. Please refer to Table 3 for more information on these sample points. Observations during the site visits revealed the presence of 14 wetlands, 11 emergent wetlands (Wetlands 1–6, 8, 10, and 12–14) and 3 forested wetlands (Wetlands 7, 9, and 11), within the combined investigation area. The *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987), *Field Indicators of Hydric Soils in the United States: A Guide for Identifying and Delineating Hydric Soils, Version 8.2* (USDA, NRCS 2018), *National Wetland Plant List (NWPL) Version 3.4* (United States Army Corps of Engineers [USACE] 2018), and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Version 2.0* (USACE 2010) were used to determine whether wetlands were present within the investigation area. Wetland determination forms are included in the attachments.

Sample Point 1 (Upland)

Sample Point 1 (SP1) was taken near the southwestern border of the investigation area (Figure 8, Sheet 1). The dominant vegetation species observed at SP1 include tall fescue (*Schedonorus arundinacea*) and Kentucky blue grass (*Poa pratensis*), which do not satisfy any indicators for the presence of hydrophytic vegetation. The soil observed at SP1 consisted of a 7-inch layer of very dark grayish brown (10YR 3/2) clay loam over a 9-inch layer of 95 percent dark yellowish brown (10YR 4/4) clay loam with 5 percent yellowish brown (10YR 5/6) redox

concentrations. This sample does not satisfy any indicators for the presence of hydric soils (USDA, NRCS 2018). No wetland hydrology indicators were observed at this location. SP1 did not satisfy any of the three criteria required for a positive wetland determination; therefore, this area is not a wetland.

Sample Point 2 (Wetland 1)

Sample Point 2 (SP2) was taken adjacent to the riprap footprint outside of a drainage pipe inlet in a partially-vegetated, concave roadside ditch (RSD), approximately 200 ft southeast of the US 36/SR 38 intersection roadside, and indicates the presence of Wetland 1 (Figure 8, Sheets 2–4). This wetland was delineated with a sub-meter global positioning system (GPS) and found to be approximately 0.011 ac in size and is located entirely within the overlap investigation area. Wetland 1 does not appear on the NWI map, but field observations align with a palustrine, emergent, persistent, temporarily flooded (PEM1A) wetland based on the Cowardin et al. (1979) classification system. It was likely formed over time by seasonal and temporary flooding in the area. Wetland 1 drains into an abutting non-jurisdictional pipe inlet that conveys water northward to Fall Creek; therefore, Wetland 1 has a significant nexus with Fall Creek (a WOTUS), which flows into the White River and is a tributary to the Wabash River (a TNW), and is likely a jurisdictional WOTUS. The wetland was given a quality rating of poor due to the presence of low-quality native and non-native or invasive vegetation, low species diversity, and proximity to the roadway.

The dominant vegetation species observed at Wetland 1 include Pennsylvania smartweed (*Persicaria pensylvanica*), marsh seedbox (*Ludwigia palustris*), and celery-leaved buttercup (*Ranunculus sceleratus*). This observation passes the Rapid Test for Hydrophytic Vegetation, Dominance Test, and the Prevalence Index; therefore, satisfying the criteria for the presence of hydrophytic vegetation. The soil observed at SP2 consists of a 6-inch layer of very dark gray (10YR 3/1) silt loam, followed by a 6-inch layer of 90 percent very dark grayish brown (10YR 3/2) silty clay loam with 10 percent dark yellowish brown (10YR 3/4) pore lining concentrations, followed by a 6-inch layer of 85 percent dark gray (10YR 4/1) silty clay with 15 percent dark yellowish brown (10YR 3/4) pore lining concentrations. This sample satisfies the Depleted Below Dark Surface (A11), Loamy Mucky Mineral (F1), and Redox Dark Surface (F6) indicators for the presence of hydric soils (USDA, NRCS 2018). Two primary hydrology indicators (Surface Water [A1] and Algal Mat or Crust [B4]) and two secondary hydrology indicators (Geomorphic Position

[D2] and a positive FAC-Neutral Test [D5]), were observed at SP2. These observations satisfy the criteria for wetland hydrology. All three criteria for determination of wetland presence are satisfied by the conditions found at SP2; therefore, this area is a confirmed wetland. The wetland boundary was determined following successional test bores between the wetland point and the upland point (Sample Point 3) leading to an abrupt change in vegetation composition and the absence of hydric soils and hydrological indicators. A gradual change in topography was also observed leading to the wetland boundary determination.

Sample Point 3 (Upland – Wetland 1)

Sample Point 3 (SP3) was taken uphill of Wetland 1 in a maintained, grassy terrace and indicates the upland boundary for Wetland 1 (Figure 8, Sheets 2–4). The dominant vegetation species observed at SP3 were Kentucky blue grass (*Poa pratensis*) and dandelion (*Taraxacum officinale*), which do not satisfy any indicators for the presence of hydrophytic vegetation. The soil observed at SP3 consisted of a 16-inch layer of dark grayish brown (10YR 4/2) clay loam. This sample does not satisfy any indicators for the presence of hydric soils (USDA, NRCS 2018). One secondary wetland hydrology indicator was observed (Geomorphic Position [D2]), which does not satisfy the wetland hydrology criterion. SP3 did not satisfy any of the three criteria required for a positive wetland determination; therefore, this area is not a wetland.

Sample Point 4 (Wetland 2)

Sample Point 4 (SP4) was taken in a depression 0.14 mi northwest of the US 36/SR 38 intersection, north of East State Street, and indicates the presence of Wetland 2 (Figure 8, Sheet 3). This wetland was delineated with a sub-meter GPS and found to be approximately 0.012 ac in size and is located entirely within the overlap investigation area. Wetland 2 does not appear on the NWI map, but field observations align with a palustrine, emergent, persistent, temporarily flooded (PEM1A) wetland based on the Cowardin et al. (1979) classification system. It was likely formed over time by seasonal and temporary flooding from the associated drainage ditch and subsequent sedimentation. Wetland 2 drains into an abutting non-jurisdictional pipe inlet that conveys water northward to Fall Creek; therefore, Wetland 2 has a significant nexus with Fall Creek (a WOTUS), which flows into the White River and is a tributary to the Wabash River (a TNW), and is likely a jurisdictional WOTUS. The wetland was given a quality rating of poor due to the presence of low-quality native and non-native or invasive vegetation, low species diversity, and proximity to the roadway.

The dominant species observed at Wetland 2 include red elm (*Ulmus rubra*), narrowleaf cattail (*Typha angustifolia*), reed canary grass (*Phalaris arundinacea*), and Japanese stilt grass (*Microstegium vimineum*). This observation passes the Dominance Test and Prevalence Index; therefore, satisfying the criteria for the presence of hydrophytic vegetation. The soil observed at SP4 consists of a 16-inch layer of 85 percent very dark grayish brown (10YR 3/2) clay loam with 15 percent yellowish brown (10YR 5/6) redox concentrations in the matrix. The soil contains approximately 5 percent organic matter. Riprap was also noted in close proximity to the sample point. This sample satisfies the Redox Dark Surface (F6) indicator for the presence of hydric soils (USDA, NRCS 2018). One primary hydrology indicator (Surface Water [A1]) and three secondary indicators (Drainage Patterns [B10], Geomorphic Position [D2], and a positive FAC-Neutral Test [D5]) were observed at SP4. These observations satisfy the criteria for wetland hydrology. All three criteria for determination of wetland presence are satisfied by the conditions found at SP4; therefore, this area is a confirmed wetland. The wetland boundary was determined following successional test bores between the wetland point and the upland point (Sample Point 5) leading to an abrupt change in vegetation composition and the absence of hydric soils and hydrological indicators. A gradual change in topography was also observed lending to the wetland boundary determination.

Sample Point 5 (Upland – Wetland 2)

Sample Point 5 (SP5) was taken uphill of Wetland 2, northwest of the US 36/SR 38 intersection, in a maintained, grassy terrace and indicates the upland boundary for Wetland 2 (Figure 8, Sheet 3). The dominant vegetation species observed at SP5 include smooth crab grass (*Digitaria ischaemum*) and Kentucky blue grass (*Poa pratensis*), which do not satisfy any indicators for the presence of hydrophytic vegetation. The soil observed at SP5 consisted of a 4-inch layer of brown (10YR 4/3) sandy clay loam, underlain by a layer of impenetrable gravel fill. Shovel refusal was observed at a depth of 4 inches. Several attempts were made to take deeper soil samples within the vicinity, but the same impenetrable layer was encountered each time. This sample does not satisfy any indicators for the presence of hydric soils (USDA, NRCS 2018). No wetland hydrology indicators were observed at this location. SP5 did not satisfy any of the three criteria required for a positive wetland determination; therefore, this area is not a wetland.

Sample Point 6 (Wetland 3)

Sample Point 6 (SP6) was taken in a concave depression southeast of the US 36/SR 9 split and indicates the presence of Wetland 3 (Figure 8, Sheet 5). This wetland was delineated with a sub-meter GPS and found to be approximately 0.121 ac in size and is located entirely within the overlap investigation area. Wetland 3 does not appear on the NWI map, but field observations align with a palustrine, emergent, persistent, temporarily flooded (PEM1A) wetland based on the Cowardin et al. (1979) classification system. It was likely formed over time by seasonal and temporary flooding in the area. Wetland 3 drains into an abutting non-jurisdictional pipe inlet that conveys water northward to Fall Creek; therefore, Wetland 3 has a significant nexus with Fall Creek (a WOTUS), which flows into the White River and is a tributary to the Wabash River (a TNW), and is likely a jurisdictional WOTUS. The wetland was given a quality rating of poor due to the presence of low-quality native and non-native or invasive vegetation, low species diversity, and proximity to the roadway.

The dominant vegetation species observed at Wetland 3 include cockspur grass (*Echinochloa crus-galli*) and narrowleaf cattail (*Typha angustifolia*). This observation passes the Rapid Test for Hydrophytic Vegetation, Dominance Test, and the Prevalence Index; therefore, satisfying the criteria for the presence of hydrophytic vegetation. The soil observed at SP6 consists of a 2-inch layer of black (10YR 2/1) muck overlying a 14-inch layer of 85 percent light greenish gray (5G 8/1) clay loam with 15 percent yellowish brown (10YR 5/6) redox concentrations in the matrix. This sample satisfies the 2 centimeter (cm) Muck (A10) and Loamy Gleyed Matrix (F2) indicators for the presence of hydric soils (USDA, NRCS 2018). Three primary hydrology indicators (Surface Water [A1], Algal Mat or Crust [B4], and Sparsely Vegetated Concave Surface [B8]) and three secondary hydrology indicators (Drainage Patterns [B10], Geomorphic Position [D2], and a positive FAC-Neutral Test [D5]) were observed at SP6. These observations satisfy the criteria for wetland hydrology. All three criteria for determination of wetland presence are satisfied by the conditions found at SP6; therefore, this area is a confirmed wetland. The wetland boundary was determined following successional test bores between the wetland point and the upland point (Sample Point 7) leading to an abrupt change in vegetation composition and the absence of hydric soils and hydrological indicators. A gradual change in topography was also observed lending to the wetland boundary determination.

Sample Point 7 (Upland – Wetland 3)

Sample Point 7 (SP7) was taken uphill of Wetland 3, south of the intersection of SR 9 and US 38, in a maintained, grassy terrace and indicates the upland boundary for Wetland 3 (Figure 8, Sheet 5). The dominant vegetation species observed at SP7 include Kentucky blue grass (*Poa pratensis*) and English plantain (*Plantago lanceolata*), which do not satisfy any indicators for the presence of hydrophytic vegetation. The soil observed at SP7 consisted of a 5-inch layer of brown (10YR 4/3) sandy clay loam, underlain by an impenetrable layer of gravel fill. Shovel refusal was observed at a depth of 5 inches. Several attempts were made to take deeper soil samples within the vicinity, but the same impenetrable layer was encountered each time. This sample does not satisfy any indicators for the presence of hydric soils (USDA, NRCS 2018). No wetland hydrology indicators were observed at this location. SP7 did not satisfy any of the three criteria required for a positive wetland determination; therefore, this area is not a wetland.

Sample Point 8 (Wetland 4)

Sample Point 8 (SP8) was taken in a concave depression 0.06 mi east of the US 36/SR 9 split, south of US 36, and indicates the presence of Wetland 4 (Figure 8, Sheets 5 and 7). This wetland was delineated with a sub-meter GPS and found to be approximately 0.022 ac in size, within the overlap investigation area, and extends southwest beyond the investigation area limits. Wetland 4 does not appear on the NWI map, but field observations align with a palustrine, emergent, persistent, temporarily flooded (PEM1A) wetland based on the Cowardin et al. (1979) classification system. Wetland conditions likely formed over time in this swale through temporary and seasonal flooding from the associated drainage ditch and subsequent sedimentation. Wetland 4 drains eastward through Wetlands 5, 6, and 13 through a non-jurisdictional pipe inlet that conveys water to the east and northward to Fall Creek. Therefore, Wetland 4 has a significant nexus with Fall Creek (a WOTUS), which flows into the White River and is a tributary to the Wabash River (a TNW), and is likely a jurisdictional WOTUS. Wetland 4 is hydrologically connected to Wetlands 5, 6, and 13. The wetland was given a quality rating of poor due to the presence of low-quality native and non-native or invasive vegetation, low species diversity, and proximity to the roadway.

The dominant vegetation species observed at Wetland 4 include rice cut-grass (*Leersia oryzoides*), marsh seedbox (*Ludwigia palustris*), and green bullrush (*Schoenoplectus tabernaemontani*). This observation passes the Rapid Test for Hydrophytic Vegetation,

Dominance Test, and the Prevalence Index; therefore, satisfying the criteria for the presence of hydrophytic vegetation. The soil observed at SP8 consists of a 16-inch layer of black (10YR 2/1) muck. This sample satisfies the 2 cm Muck (A10) indicator for the presence of hydric soils (USDA, NRCS 2018). Two primary hydrology indicators (Surface Water [A1] and Aquatic Fauna [B13]) and five secondary indicators (Drainage Patterns [B10], Crayfish Burrows [C8], Stunted or Stressed Plants [D1], Geomorphic Position [D2], and a positive FAC-Neutral Test [D5]) were observed at SP8. These observations satisfy the criteria for wetland hydrology. All three criteria for determination of wetland presence are satisfied by the conditions found at SP8; therefore, this area is a confirmed wetland. The wetland boundary was determined following successional test bores between the wetland point and the upland point (Sample Point 9) leading to an abrupt change in vegetation composition and the absence of hydric soils and hydrological indicators. A gradual change in topography was also observed lending to the wetland boundary determination.

Sample Point 9 (Upland – Wetland 4)

Sample Point 9 (SP9) was taken uphill of Wetland 4, approximately 200 ft east of the US 36/SR 9 split, south of US 36, in a maintained, grassy terrace and indicates the upland boundary for Wetland 4 (Figure 8, Sheets 5 and 7). The dominant vegetation species observed at SP9 include Kentucky blue grass (*Poa pratensis*). This observation passes the Dominance Test; therefore, satisfying the criteria for the presence of hydrophytic vegetation. The soil observed at SP9 consisted of a 16-inch layer of 95 percent very dark grayish brown (10YR 3/2) sandy clay loam, with 5 percent strong brown (7.5YR 5/8) pore lining redox concentrations. This sample corresponds to the Redox Dark Surface (F6) indicator, which satisfies the criteria for the presence of hydric soils (USDA, NRCS 2018). No wetland hydrology indicators were observed at this location. SP9 only satisfied two of the three criteria required for a positive wetland determination; therefore, this area is not a wetland.

Sample Point 10 (Wetland 5)

Sample Point 10 (SP10) was taken in a concave depression 0.07 mi east of the US 36/SR 9 split, south of US 36, and indicates the presence of Wetland 5 (Figure 8, Sheets 5 and 7). This wetland was delineated with a sub-meter GPS and found to be approximately 0.059 ac in size and is located entirely within the overlap investigation area. Wetland 5 does not appear on the NWI map, but field observations align with a palustrine, emergent, persistent, temporarily flooded (PEM1A) wetland based on the Cowardin et al. (1979) classification system. The depression is an

artificial swale, and wetland conditions were likely formed over time by temporary and seasonal flooding from the associated drainage ditch and subsequent sedimentation. Wetland 5 drains into an abutting non-jurisdictional pipe inlet that conveys water to the east and northward to Fall Creek; therefore, Wetland 5 has a significant nexus with Fall Creek (a WOTUS), which flows into the White River and is a tributary to the Wabash River (a TNW), and is likely a jurisdictional WOTUS. Wetland 4 is hydrologically connected to Wetlands 4 and 6. The wetland was given a quality rating of poor due to the presence of low-quality native and non-native or invasive vegetation, low species diversity, and proximity to the roadway.

The dominant vegetation species observed in Wetland 5 include reed canary grass (*Phalaris arundinacea*) and marsh seedbox (*Ludwigia palustris*). This observation passes the Rapid Test for Hydrophytic Vegetation, Dominance Test, and the Prevalence Index; therefore, satisfying the criteria for the presence of hydrophytic vegetation. The soil observed at SP10 consists of a 7-inch layer of black (10YR 2/1) muck overlying an impenetrable layer of gravel beyond 7 inches. Shovel refusal was observed at a depth of 7 inches. Several attempts were made to take deeper soil samples within the vicinity, but the same impenetrable layer was encountered each time. This sample satisfies the 2 cm Muck (A10) hydric soil indicator; therefore, it is a hydric soil (USDA, NRCS 2018). Four primary hydrology indicators (Surface Water [A1], Algal Mat or Crust [B4], Sparsely Vegetated Concave Surface [B8], and Thin Muck Surface [C7]) and three secondary indicators (Saturation Visible on Aerial Imagery [C9], Geomorphic Position [D2], and a positive FAC-Neutral Test [D5]) were observed at SP10. These observations satisfy the criteria for wetland hydrology. All three criteria for determination of wetland presence are satisfied by the conditions found at SP10; therefore, this area is a confirmed wetland. The wetland boundary was determined following successional test bores between the wetland point and the upland point (Sample Point 11) leading to an abrupt change in vegetation composition and the absence of hydric soils and hydrological indicators. A gradual change in topography was also observed lending to the wetland boundary determination.

Sample Point 11 (Upland – Wetland 5)

Sample Point 11 (SP11) was taken uphill of Wetland 5 in a maintained, grassy terrace and indicates the upland boundary for Wetland 5 (Figure 8, Sheets 5 and 7). The dominant vegetation species observed at SP11 include red maple (*Acer rubrum*), eastern red cedar (*Juniperus virginiana*), burning bush (*Euonymus alatus*), Kentucky blue grass (*Poa pratensis*), and white

clover (*Trifolium repens*), which do not satisfy any indicators for the presence of hydrophytic vegetation. The soil observed at SP11 consisted of a 16-inch layer of very dark grayish brown (10YR 3/2) clay loam. This sample does not satisfy any indicators for the presence of hydric soils (USDA, NRCS 2018). No wetland hydrology was observed at this location. SP11 did not satisfy any of the three criteria required for a positive wetland determination; therefore, this area is not a wetland.

Sample Point 12 (Wetland 6)

Sample Point 12 (SP12) was taken in a concave depression 0.13 mi east of the US 36/SR 9 split, south of US 36, and indicates the presence of Wetland 6 (Figure 8, Sheet 7). This wetland was delineated with a sub-meter GPS and found to be approximately 0.019 ac in size and is located entirely within the overlap investigation area. Wetland 6 does not appear on NWI mapping, but field observations align with a palustrine, emergent, persistent, temporarily flooded (PEM1A) wetland based on the Cowardin et al. (1979) classification system. The depression is an artificial swale, and wetland conditions were likely formed over time by temporary and seasonal flooding from the associated drainage ditch and subsequent sedimentation. Wetland 6 drains into an abutting non-jurisdictional pipe inlet that conveys water to the east and northward to Fall Creek; therefore, Wetland 6 has a significant nexus with Fall Creek (a WOTUS), which flows into the White River and is a tributary to the Wabash River (a TNW), and is likely a jurisdictional WOTUS. Wetland 6 is hydrologically connected to Wetlands 4, 5, and 13. The wetland was given a quality rating of poor due to the presence of low-quality native and non-native or invasive vegetation, low species diversity, and proximity to the roadway.

The dominant vegetation species observed in Wetland 6 include yellow bristle grass (*Setaria pumila*), green bullrush (*Schoenoplectus tabernaemontani*), and narrow-leaf cattail (*Typha angustifolia*). This observation passes the Dominance Test and Prevalence Index; therefore, satisfying the criterion for the presence of hydrophytic vegetation. The soil observed at SP12 consists of a 16-inch layer of 90 percent dark grayish brown (10YR 4/2) clay loam with 10 percent yellowish brown (10YR 5/6) redox concentrations. This sample satisfies the Depleted Matrix (F3) indicator for the presence of hydric soils (USDA, NRCS 2018). Three primary hydrology indicators (Surface Water [A1], Algal Mat or Crust [B4], and Sparsely Vegetated Concave Surface [B8]) and three secondary indicators (Saturation Visible on Aerial Imagery [C9], Geomorphic Position [D2], and a positive FAC-Neutral Test [D5]) were observed at SP12. These

observations satisfy the criteria for wetland hydrology. All three criteria for determination of wetland presence are satisfied by the conditions found at SP12; therefore, this area is a confirmed wetland. The wetland boundary was determined following successional test bores between the wetland point and the upland point (Sample Point 13) leading to an abrupt change in vegetation composition and the absence of hydric soils and hydrological indicators. A gradual change in topography was also observed leading to the wetland boundary determination.

Sample Point 13 (Upland – Wetland 6)

Sample Point 13 (SP13) was taken uphill of Wetland 6 in a maintained, grassy terrace and indicates the upland boundary for Wetland 6 (Figure 8, Sheet 7). The dominant vegetation species observed at SP13 was Kentucky blue grass (*Poa pratensis*). This observation passes the Dominance Test; therefore, satisfying the criteria for the presence of hydrophytic vegetation. The soil observed at SP13 consisted of a 6-inch layer of 95 percent dark yellowish brown (10YR 4/4) sandy loam with 5 percent dark yellowish brown (10YR 4/6) redox concentrations overlying an impenetrable layer of gravel beyond 6 inches. Shovel refusal was observed at a depth of 6 inches. Several attempts were made to take deeper soil samples within the vicinity, but the same impenetrable layer was encountered each time. This sample does not satisfy any indicators for the presence of hydric soils (USDA, NRCS 2018). No wetland hydrology was observed at this location. SP13 satisfied the hydrophytic vegetation criterion required for a positive wetland determination but did not satisfy the criteria for hydric soils or wetland hydrology; therefore, this area is not a wetland.

Sample Point 14 (Wetland 7)

Sample Point 14 (SP14) was taken in a concave depression, southeast of the SR 9/SR 67 crossing over Fall Creek, and indicates the presence of Wetland 7 (Figure 8, Sheet 9). This wetland was delineated with a sub-meter GPS and found to be approximately 0.005 ac in size and is located entirely within the State investigation area. This wetland is classified as a palustrine, forested, temporarily flooded (PFO1A) wetland on NWI mapping, based on the Cowardin et al. (1979) classification system. It was likely formed over time by temporary and seasonal flooding from Fall Creek. Wetland 7 is abutting Fall Creek (a WOTUS), which flows into the White River and is a tributary to the Wabash River (a TNW), and is likely a jurisdictional WOTUS. Wetland 7 was given a quality rating of poor, due to the presence of low quality native vegetation, non-native vegetation, invasive reed canary grass (*Phalaris arundinacea*), and low species diversity.

The dominant vegetation species observed in Wetland 8 include boxelder (*Acer negundo*), reed canary grass (*Phalaris arundinacea*), and climbing buckwheat (*Fallopia scandens*). This observation passes the Dominance Test and Prevalence Index; therefore, satisfying the criterion for the presence of hydrophytic vegetation. The soil observed at SP14 consists of a 16-inch layer of 90 percent very dark grayish brown (10YR 3/2) silt loam with 10 percent dark yellowish brown (10YR 4/6) pore lining concentrations. The soils contain approximately 20 percent organic matter. This sample satisfies the Redox Dark Surface (F6) indicator for the presence of hydric soils (USDA, NRCS 2018). Two primary hydrology indicators (Water Marks [B1] and Drift Deposits [B3]) and three secondary indicators (Stunted or Stressed Plants [D1], Geomorphic Position [D2], and a positive FAC-Neutral Test [D5]) were observed at SP14. These observations satisfy the wetland hydrology criterion. All three criteria for determination of wetland presence are satisfied by the conditions found at SP14; therefore, this area is a confirmed wetland. The wetland boundary was determined following successional test bores between the wetland point and the upland point (Sample Point 15) leading to an abrupt change in vegetation composition and the absence of hydric soils and hydrological indicators. A gradual change in topography was also observed leading to the wetland boundary determination.

Sample Point 15 (Upland – Wetland 7)

Sample Point 15 (SP15) was taken uphill of Wetland 7, south of Fall Creek and east of SR 9, and indicates the upland boundary for Wetland 7 (Figure 8, Sheet 9). The dominant vegetation species observed at SP15 include northern hackberry (*Celtis occidentalis*), white ash (*Fraxinus americana*), black walnut (*Juglans nigra*), boxelder (*Acer negundo*), hairy wild rye (*Elymus villosus*), and wrinkle-leaf goldenrod (*Solidago rugosa*), which do not satisfy any indicators for the presence of hydrophytic vegetation. The soil observed at SP15 consisted of a 16-inch layer of 95 percent very dark grayish brown (10YR 3/2) sand, with 5 percent yellowish brown (10YR 5/6) redox concentrations. This sample corresponds to a Redox Dark Surface (F6) indicator for the presence of hydric soils (USDA, NRCS 2018). No wetland hydrology was observed at this location. SP15 satisfied the hydric soil criterion required for a positive wetland determination but did not satisfy the criteria for hydrophytic vegetation or wetland hydrology; therefore, this area is not a wetland.

Sample Point 16 (Wetland 8)

Sample Point 16 (SP16) was taken on a floodplain terrace, northeast of the SR 9/SR 67 crossing over Fall Creek, and indicates the presence of Wetland 8 (Figure 8, Sheet 9). This wetland was delineated with a sub-meter GPS and found to be approximately 0.009 ac in size and located entirely within the State investigation area. Wetland 8 does not appear on NWI mapping, but field observations align with a palustrine, emergent, persistent, temporarily flooded (PEM1A) wetland based on the Cowardin et al. (1979) classification system. It was likely formed over time by temporary and seasonal flooding from Fall Creek. Wetland 8 is abutting Fall Creek (a WOTUS), which flows into the White River and is a tributary to the Wabash River (a TNW), and is likely a jurisdictional WOTUS. The wetland was given a quality rating of poor, due to the presence of low quality native vegetation, non-native vegetation, and low species diversity.

The dominant vegetation species observed in Wetland 8 include Kentucky blue grass (*Poa pratensis*) and water smartweed (*Persicaria amphibia*). This observation passes the Dominance Test and Prevalence Index; therefore, satisfying the criterion for the presence of hydrophytic vegetation. The soil observed at SP16 consists of a 16-inch layer of very dark grayish brown (10YR 3/2) silt loam. This observation does not correspond to any indicators for the presence of hydric soils (USDA, NRCS 2018). Since Wetland 8 is located within an active floodplain abutting Fall Creek, the soils at SP16 are influenced by the persistent deposition of fluvial sediments that lack iron and manganese from organic matter. This has resulted in soil that lacks indicators for the presence of hydric soils and meets the criteria for problematic soils due to fluvial sediments within floodplains (Environmental Laboratory 1987). One primary hydrology indicator (Drift Deposits [B3]) and five secondary indicators (Surface Soil Cracks [B6], Drainage Patterns [B10], Crayfish Burrows [C8], Stunted or Stressed Plants [D1], and a positive FAC-Neutral Test [D5]) were observed at SP16. These observations satisfy the wetland hydrology criterion. Considering the presence of hydrophytic vegetation and wetland hydrology at SP16, the problematic soils observed are assumed hydric. All three criteria for determination of wetland presence are satisfied by the conditions found at SP16; therefore, this area is a confirmed wetland. The wetland boundary was determined following successional test bores between the wetland point and the upland point (Sample Point 17) leading to an abrupt change in vegetation composition and the absence of hydric soils and hydrological indicators. A gradual change in topography was also observed leading to the wetland boundary determination.

Sample Point 17 (Upland – Wetland 8)

Sample Point 17 (SP17) was taken uphill of Wetland 8, northeast of the SR 9/SR 67 crossing over Fall Creek, in a maintained, grassy terrace and indicates the upland boundary for Wetland 8 (Figure 8, Sheet 9). The dominant vegetation species observed at SP17 include purple magnolia (*Magnolia liliiflorum*), English plantain (*Plantago lanceolata*), creeping Charlie (*Glechoma hederacea*), white clover (*Trifolium repens*), hooded blue violet (*Viola sororia*), and Kentucky blue grass (*Poa pratensis*), which do not satisfy any indicators for the presence of hydrophytic vegetation. The soil observed at SP17 consisted of a 16-inch layer of brown (10YR 4/3) sandy clay loam. This sample does not satisfy any indicators for the presence of hydric soils (USDA, NRCS 2018). No wetland hydrology indicators were observed at this location. SP17 did not satisfy any of the three criteria required for a positive wetland determination; therefore, this area is not a wetland.

Sample Point 18 (Upland)

Sample Point 18 (SP18) was taken at the toe of a hillslope, northwest of the SR 9/SR 67 crossing over Fall Creek (Figure 8, Sheet 9). The dominant vegetation species observed at SP18 include silver maple (*Acer saccharinum*), Morrow's honeysuckle (*Lonicera morrowii*), reed canary grass (*Phalaris arundinacea*), and river grape (*Vitis riparia*). This observation passes the Dominance Test indicator; therefore, satisfying the criteria for the presence of hydrophytic vegetation. The soil observed at SP18 consisted of organic matter between riprap. Shovel refusal was observed at the surface. Several attempts were made to take deeper soil samples within the vicinity, but the same impenetrable layer was encountered each time. This sample does not satisfy any indicators for the presence of hydric soils (USDA, NRCS 2018). No wetland hydrology was observed at this location. SP18 satisfied the hydrophytic vegetation criterion required for a positive wetland determination but did not satisfy the criteria for hydric soils or wetland hydrology; therefore, this area is not a wetland.

Sample Point 19 (Wetland 9)

Sample Point 19 (SP19) was taken on a floodplain terrace, southwest of the SR 9/SR 67 crossing over Fall Creek, and indicates the presence of Wetland 9 (Figure 8, Sheet 9). This wetland was delineated with a sub-meter GPS and found to be approximately 0.027 ac in size and is located entirely within the State investigation area. Wetland 9 does not appear on NWI mapping, but field observations align with a palustrine, forested, persistent, temporarily flooded (PFO1A) wetland

based on the Cowardin et al. (1979) classification system. It was likely formed over time by temporary and seasonal flooding from Fall Creek. Wetland 9 is abutting Fall Creek (a WOTUS), which flows into the White River and is a tributary to the Wabash River (a TNW), and is likely a jurisdictional WOTUS. The wetland was given a quality rating of poor, due to the presence of low quality native vegetation, non-native vegetation, and low species diversity.

The dominant vegetation species observed in Wetland 9 include Siberian elm (*Ulmus pumila*), boxelder (*Acer negundo*), white ash (*Fraxinus americana*), reed canary grass (*Phalaris arundinacea*), and dotted smartweed (*Persicaria punctata*). This observation passes the Dominance Test and Prevalence Index indicators; therefore, satisfying the criterion for the presence of hydrophytic vegetation. The soil observed at SP19 consists of a 16-inch layer of grayish brown (10YR 5/2) sandy loam. This observation does not correspond to any indicators for the presence of hydric soils (USDA, NRCS 2018). Since Wetland 9 is located within an active floodplain abutting Fall Creek, the soils at SP19 are influenced by the persistent deposition of fluvial sediments that lack iron and manganese from organic matter. This has resulted in soil that lacks indicators for the presence of hydric soils and meets the criteria for problematic soils due to fluvial sediments within floodplains (Environmental Laboratory 1987). One primary hydrology indicator (Drift Deposits [B3]) and one secondary indicator (Drainage Patterns [B10]) were observed at SP19. These observations satisfy the wetland hydrology criterion. Considering the presence of hydrophytic vegetation and wetland hydrology at SP19, the problematic soils observed are assumed hydric. All three criteria for determination of wetland presence are satisfied by the conditions found at SP19; therefore, this area is a confirmed wetland. The wetland boundary was determined following successional test bores between the wetland point and the upland point (Sample Point 20) leading to an abrupt change in vegetation composition and the absence of hydric soils and hydrological indicators. A gradual change in topography was also observed leading to the wetland boundary determination.

Sample Point 20 (Upland – Wetland 9)

Sample Point 20 (SP20) was taken uphill of Wetland 9, southwest of the SR 9/SR 67 crossing over Fall Creek, in a maintained, grassy terrace and indicates the upland boundary for Wetland 9 (Figure 8, Sheet 9). The dominant vegetation species observed at SP20 include white mulberry (*Morus alba*), Morrow's honeysuckle (*Lonicera morrowii*), and Kentucky blue grass (*Poa pratensis*). This observation passes the Dominance Test indicator; therefore, satisfying the

criterion for the presence of hydrophytic vegetation. The soil observed at SP20 consisted of a 3-inch layer of brown (10YR 4/3) sandy clay loam, underlain by a layer of impenetrable gravel. Shovel refusal was observed at a depth of 3 inches. Several attempts were made to take deeper soil samples within the vicinity, but the same impenetrable layer was encountered each time. The soils observed do not correspond to any of the hydric soil indicators (USDA, NRCS 2018). No wetland hydrology indicators were observed at this location. SP20 satisfied the hydrophytic vegetation criterion required for a positive wetland determination but did not satisfy the criteria for hydric soils or wetland hydrology; therefore, this area is not a wetland.

Sample Point 21 (Wetland 10)

Sample Point 21 (SP21) was taken in a linear swale located between two commercial properties, west of the US 36/SR 9 split, and indicates the presence of Wetland 10 (Figure 8, Sheets 5 and 6). Moderate drought conditions were observed at the time of sampling (U.S. Drought Monitor 2022). This wetland was delineated with a sub-meter GPS and found to be approximately 0.010 ac in size and is located entirely within the LPA investigation area. Wetland 10 does not appear on NWI mapping, but field observations align with a palustrine, emergent, persistent, temporarily flooded (PEM1A) wetland based on the Cowardin et al. (1979) classification system. The swale is likely influenced by the remnants of an old, blown-out agricultural tile drain that was not maintained as the area was developed, which allowed for wetland conditions to form over time due to temporary and seasonal flooding. The swale extends southeast to a perpendicular roadside drainage feature (RSD 5). Inefficient grading at their confluence has helped the swale retain excess water, while NHD flowline mapping shows the swale as a stream line that appears to flow northward through non-jurisdictional drainage features and pipes to Fall Creek (USGS NHD 2020) [Figure 5]. Wetland 10 drains into non-jurisdictional drainage features that convey water northward to Fall Creek; therefore, Wetland 10 has a significant nexus with Fall Creek (a WOTUS), which flows into the White River and is a tributary to the Wabash River (a TNW), and is likely a jurisdictional WOTUS. Wetland 10 is hydrologically connected to Wetlands 3, 11, and 12. The wetland was given a quality rating of poor due to the presence of low-quality native and non-native or invasive vegetation, low species diversity, and its proximity to the roadway.

The dominant vegetation species observed in Wetland 10 include American sycamore (*Plantanus occidentalis*), silver maple (*Acer saccharinum*), spotted lady's-thumb (*Persicaria maculosa*), and dotted smartweed (*Persicaria punctata*). This observation passes the Rapid Test

for Hydrophytic Vegetation, Dominance Test, and Prevalence Index indicators; therefore, satisfying the criterion for the presence of hydrophytic vegetation. The soil observed at SP21 consists of a 7-inch layer of 95 percent dark gray (10YR 4/1) silt loam with 5 percent yellowish brown (10YR 5/6) matrix concentrations, followed by an 11-inch layer of 70 percent dark yellowish brown (10YR 3/4) silty clay loam with 30 percent dark brown (10YR 3/3) matrix concentrations. This sample satisfies the Depleted Matrix (F6) indicator for the presence of hydric soils (USDA, NRCS 2018). Two primary hydrology indicators (Sparsely Vegetated Concave Surface [B8] and Other [explained above]) and five secondary indicators (Surface Soil Cracks [B6], Crayfish Burrows [C8], Saturation Visible on Aerial Imagery [C9], Geomorphic Position [D2], and a positive FAC-Neutral Test [D5]) were observed at SP21. These observations satisfy the criterion for wetland hydrology. All three criteria for determination of wetland presence are satisfied by the conditions found at SP21; therefore, this area is a confirmed wetland. The wetland boundary was determined following successional test bores between the wetland point and the upland point (Sample Point 22), leading to an abrupt change in vegetation composition and the absence of hydric soils and hydrological indicators. A gradual change in topography was also observed, lending to the wetland boundary determination.

Sample Point 22 (Upland – Wetlands 10 and 11)

Sample Point 22 (SP22) was taken in a grassy terrace southwest of where Wetland 10 abuts Wetland 11, west of the US 36/SR 9 split, and indicates the upland boundaries for Wetlands 10 and 11 (Figure 8, Sheets 5 and 6). The dominant vegetation species observed at SP22 include American sycamore (*Plantanus occidentalis*), silver maple (*Acer saccharinum*), Kentucky blue grass (*Poa pratensis*), red fescue (*Festuca rubra*), and smooth crab grass (*Digitaria ischaemum*). These observations satisfy the Dominance Test indicator for the presence of hydrophytic vegetation. The soil observed at SP22 consisted of a 10-inch layer of 95 percent dark grayish brown (10YR 4/2) silty clay loam. Dry, compacted soil and gravel were encountered at 10 inches. Shovel refusal was observed at a depth of 10 inches. Several attempts were made to take deeper soil samples within the vicinity, but the same impenetrable layer was encountered each time. The soils observed at SP22 do not correspond to any of the hydric soil indicators (USDA, NRCS 2018). Only one secondary wetland hydrology indicator (a positive FAC-Neutral Test [D5]) was observed at this location. SP22 satisfied the hydrophytic vegetation criterion required for a positive wetland

determination but did not satisfy the criteria for hydric soils or wetland hydrology; therefore, this area is not a wetland.

Sample Point 23 (Wetland 11)

Sample Point 23 (SP23) was taken in a round, forested concave depression on a grassy, maintained terrace between two commercial properties, west of the US 36/SR 9 split, and indicates the presence of Wetland 11. Moderate drought conditions were observed at the time of sampling (U.S. Drought Monitor 2022). This wetland was delineated with a sub-meter GPS and found to be approximately 0.031 ac in size and is located entirely within the investigation area. Wetland 11 does not appear on NWI mapping, but field observations align with a palustrine, forested, temporarily flooded (PFO1A) wetland based on the Cowardin et al. (1979) classification system. The depression is likely influenced by the remnants of an old, blown-out agricultural tile drain that was not maintained as the area was developed, which allowed for wetland conditions to form over time due to temporary and seasonal flooding. The depression drains southeast through the swale containing Wetland 10 and further to a perpendicular roadside drainage feature (RSD 5). Inefficient grading has helped the depression and adjacent swale retain excess water, while NHD flowline mapping shows a stream line through that area that appears to flow northward through non-jurisdictional drainage features and drainage pipes to Fall Creek (USGS NHD 2020) [Figure 5]. Wetland 11 drains into non-jurisdictional drainage features that convey water northward to Fall Creek; therefore, Wetland 11 has a significant nexus with Fall Creek (a WOTUS), which flows into the White River and is a tributary to the Wabash River (a TNW), and is likely a jurisdictional WOTUS. Wetland 11 is hydrologically connected to Wetlands 3, 10, and 12. The wetland was given a quality rating of poor due to its small size within a largely maintained terrace, the presence of low-quality native and non-native or invasive vegetation, low species diversity, and its proximity to commercial development.

The dominant vegetation species observed in Wetland 11 include American sycamore (*Plantanus occidentalis*), silver maple (*Acer saccharinum*), Morrow's honeysuckle (*Lonicera morrowii*), eastern poison ivy (*Toxicodendron radicans*), and river grape (*Vitis riparia*). This observation passes the Dominance Test and Prevalence Index indicators; therefore, satisfying the criterion for the presence of hydrophytic vegetation. The soil observed at SP23 consists of a 4-inch layer of very dark gray (10YR 3/1) silty clay loam with a high amount of organic matter, followed by an 8-inch layer of 90 percent very dark brown (10YR 2/2) silty clay loam with 10 percent dark

yellowish brown (10YR 4/4) redox concretions in the matrix, followed by a 2-inch layer of 60 percent very dark brown (10YR 2/2) clay loam with 40 percent dark yellowish brown (10YR 4/4) redox concretions in the matrix. Shovel refusal was observed at a depth of 14 inches. Several attempts were made to take deeper soil samples within the vicinity, but the same impenetrable layer was encountered each time. This sample satisfies the Redox Dark Surface (F6) indicator for the presence of hydric soils (USDA, NRCS 2018). Two primary hydrology indicators (Sparsely Vegetated Concave Surface [B8] and Other [explained above]) and three secondary indicators (Crayfish Burrows [C8], Saturation Visible on Aerial Imagery [C9], and Geomorphic Position [D2]) were observed at SP23. These observations satisfy the criterion for wetland hydrology. All three criteria for determination of wetland presence are satisfied by the conditions found at SP23; therefore, this area is a confirmed wetland. The wetland boundary was determined following successional test bores between the wetland point and the upland point (Sample Point 22), leading to an abrupt change in vegetation composition and the absence of hydric soils and hydrological indicators. A gradual change in topography was also observed, lending to the wetland boundary determination.

Sample Point 24 (Wetland 12)

Sample Point 24 (SP24) was taken in a distinct concave depression on a grassy, maintained terrace between two commercial properties, west of the US 36/SR 9 split, and indicates the presence of Wetland 12 (Figure 8, Sheets 5 and 6). This wetland was delineated with a sub-meter GPS and found to be approximately 0.001 ac in size and is located entirely within the LPA investigation area. Wetland 12 does not appear on NWI mapping, but field observations align with a palustrine, emergent, persistent, temporarily flooded (PEM1A) wetland based on the Cowardin et al. (1979) classification system. The depression is likely influenced by the remnants of an old, blown-out agricultural tile drain that wasn't maintained as the area was developed, which allowed for wetland conditions to form over time due to temporary and seasonal flooding. While this wetland appears isolated, there is a clear connection in the subsurface flow of groundwater southeast towards Wetlands 10 and 11; therefore, Wetland 12 has a significant nexus with Fall Creek (a WOTUS), which flows into the White River and is a tributary to the Wabash River (a TNW), and is likely a jurisdictional WOTUS. The wetland was given a quality rating of poor due to its small size within a largely maintained terrace, the presence of low-quality native and non-native or invasive vegetation, and low species diversity.

The dominant vegetation species observed in Wetland 12 include great ragweed (*Ambrosia trifida*), curly dock (*Rumex crispus*), and reed canary grass (*Phalaris arundinacea*). This observation passes the Dominance Test and Prevalence Index indicators; therefore, satisfying the criterion for the presence of hydrophytic vegetation. The soil observed at SP24 consists of an 18-inch layer of 100 percent very dark gray (10YR 3/1) mucky silt loam with a high amount of organic matter. This sample satisfies the Loamy Mucky Mineral (F1) indicator for the presence of hydric soils (USDA, NRCS 2018). Five primary hydrology indicators (Surface Water [A1], High Water Table [A2], Saturation [A3], Sparsely Vegetated Concave Surface [B8], and Other [explained above]) and two secondary indicators (Crayfish Burrows [C8] and Geomorphic Position [D2]) were observed at SP24. These observations satisfy the criterion for wetland hydrology. All three criteria for determination of wetland presence are satisfied by the conditions found at SP24; therefore, this area is a confirmed wetland. The wetland boundary was determined following successional test bores between the wetland point and the upland point (Sample Point 25), leading to an abrupt change in vegetation composition and the absence of hydric soils and hydrological indicators. A gradual change in topography was also observed, lending to the wetland boundary determination.

Sample Point 25 (Upland – Wetland 12)

Sample Point 25 (SP25) was taken in a maintained, grassy terrace, west of the US 36/SR 9 split, and indicates the upland boundary for Wetland 12 (Figure 8, Sheets 5 and 6). The dominant vegetation species observed at SP25 include black walnut (*Juglans nigra*), sandbar willow (*Salix interior*), and Kentucky blue grass (*Poa pratensis*). These observations satisfy the Dominance Test indicator for the presence of hydrophytic vegetation. The soil observed at SP25 consisted of a 9-inch layer of 100 percent very dark grayish brown (10YR 3/2) silty clay loam, followed by a 9-inch layer of 60 percent dark grayish brown (10YR 4/2) sandy clay with 40 percent dark yellowish brown (10YR 4/4) redox concentrations in the matrix. This sample satisfies the Depleted Below Dark Surface (A11) and Depleted Matrix (F3) indicators for the presence of hydric soils (USDA, NRCS 2018). No wetland hydrology was observed at this location. SP25 satisfied the hydrophytic vegetation and hydric soils criteria required for a positive wetland determination but did not satisfy the criterion for wetland hydrology; therefore, this area is not a wetland.

Sample Point 26 (Wetland 13)

Sample Point 26 (SP26) was taken in a concave depression southeast of the US 36/CR 300 West intersection and indicates the presence of Wetland 13 (Figure 8, Sheet 7). This wetland was delineated with a sub-meter GPS and found to be approximately 0.054 ac in size, within the LPA investigation area, and extends eastward outside of the project boundary. Wetland 13 does not appear on NWI mapping, but field observations align with a palustrine, emergent, persistent, temporarily flooded (PEM1A) wetland based on the Cowardin et al. (1979) classification system. The depression is an artificial swale, and wetland conditions were likely formed over time by temporary and seasonal flooding from the associated drainage ditch and subsequent sedimentation. Wetland 13 drains into an abutting non-jurisdictional pipe inlet that conveys water to the east and northward to Fall Creek; therefore, Wetland 13 has a significant nexus with Fall Creek (a WOTUS), which flows into the White River and is a tributary to the Wabash River (a TNW), and is likely a jurisdictional WOTUS. Wetland 13 is hydrologically connected to Wetlands 4–6. The wetland was given a quality rating of poor due to the presence of low-quality native and non-native or invasive vegetation, low species diversity, and proximity to the roadway.

The dominant vegetation species observed in Wetland 13 include yellow bristle grass (*Setaria pumila*), green bullrush (*Schoenoplectus tabernaemontani*), and narrow-leaf cattail (*Typha angustifolia*). This observation passes the Dominance Test and Prevalence Index; therefore, satisfying the criterion for the presence of hydrophytic vegetation. The soil observed at SP26 consists of a 17-inch layer of 90 percent dark grayish brown (10YR 4/2) clay loam with 10 percent yellowish brown (10YR 5/6) redox concentrations. This sample satisfies the Depleted Matrix (F3) indicator for the presence of hydric soils (USDA, NRCS 2018). Three primary hydrology indicators (Surface Water [A1], Algal Mat or Crust [B4], and Sparsely Vegetated Concave Surface [B8]) and three secondary indicators (Saturation Visible on Aerial Imagery [C9], Geomorphic Position [D2], and a positive FAC-Neutral Test [D5]) were observed at SP26. These observations satisfy the criteria for wetland hydrology. All three criteria for determination of wetland presence are satisfied by the conditions found at SP26; therefore, this area is a confirmed wetland. The wetland boundary was determined following successional test bores between the wetland point and the upland point (Sample Point 27) leading to an abrupt change in vegetation composition and the absence of hydric soils and hydrological indicators. A gradual change in topography was also observed lending to the wetland boundary determination.

Sample Point 27 (Upland – Wetland 13)

Sample Point 27 (SP27) was taken uphill of Wetland 13 in a maintained, grassy terrace and indicates the upland boundary for Wetland 13 (Figure 8, Sheet 7). The dominant vegetation species observed at SP27 was Kentucky blue grass (*Poa pratensis*). This observation passes the Dominance Test; therefore, satisfying the criteria for the presence of hydrophytic vegetation. The soil observed at SP27 consisted of a 7-inch layer of 95 percent dark yellowish brown (10YR 4/4) sandy loam with 5 percent dark yellowish brown (10YR 4/6) redox concentrations overlying an impenetrable layer of gravel beyond 7 inches. Shovel refusal was observed at a depth of 7 inches. Several attempts were made to take deeper soil samples within the vicinity, but the same impenetrable layer was encountered each time. This sample does not satisfy any indicators for the presence of hydric soils (USDA, NRCS 2018). No wetland hydrology was observed at this location. SP27 satisfied the hydrophytic vegetation criterion required for a positive wetland determination but did not satisfy the criteria for hydric soils or wetland hydrology; therefore, this area is not a wetland.

Sample Point 28 (Wetland 14)

Sample Point 28 (SP28) was taken in a concave depression east of the US 36/SR 9/SR 67 intersection and indicates the presence of Wetland 14 (Figure 8, Sheets 5–7). This wetland was delineated with a sub-meter GPS and found to be approximately 0.099 ac in size and extends eastward along US 36. Wetland 14 does not appear on NWI mapping, but field observations align with a palustrine, emergent, persistent, temporarily flooded (PEM1A) wetland based on the Cowardin et al. (1979) classification system. The depression is an artificial swale, and wetland conditions were likely formed over time by temporary and seasonal flooding from stormwater road run-off and subsequent sedimentation. Wetland 14 drains into an abutting non-jurisdictional pipe inlet that conveys water to the east and northward to Fall Creek; therefore, Wetland 14 has a significant nexus with Fall Creek (a WOTUS), which flows into the White River and is a tributary to the Wabash River (a TNW), and is likely a jurisdictional WOTUS. The wetland was given a quality rating of poor due to the presence of low-quality native and non-native or invasive vegetation, low species diversity, and proximity to the roadway.

The dominant vegetation species observed in Wetland 14 include creeping-Jenny (*Lysimachia nummularia*) and common spike-rush (*Eleocharis palustris*). This observation passes the Rapid Test for Hydrophytic Vegetation, Dominance Test, and Prevalence Index; therefore,

satisfying the criterion for the presence of hydrophytic vegetation. The soil observed at SP26 consists of a 3-inch layer of 100 percent very dark gray (10YR 3/1) loamy soil underlain by a 9-inch layer of 95 percent dark gray (10YR 4/1) loamy soil with 5 percent dark yellowish brown (10YR 4/6) redox concentrations. The soil could not be sampled below 12 inches due to an impenetrable layer of fill being encountered. Shovel refusal was observed at a depth of 12 inches. Several attempts were made to take deeper soil samples within the vicinity, but the same impenetrable layer was encountered each time. This sample satisfies the Depleted Matrix (F3) indicator for the presence of hydric soils (USDA, NRCS 2018). One primary hydrology indicator (Surface Water [A1]) and three secondary indicators (Saturation Visible on Aerial Imagery [C9], Geomorphic Position [D2], and a positive FAC-Neutral Test [D5]) were observed at SP28. These observations satisfy the criteria for wetland hydrology. All three criteria for determination of wetland presence are satisfied by the conditions found at SP28; therefore, this area is a confirmed wetland. The wetland boundary was determined following successional test bores between the wetland point and the upland point (Sample Point 29) leading to an abrupt change in vegetation composition and the absence of hydric soils and hydrological indicators. A gradual change in topography was also observed lending to the wetland boundary determination.

Sample Point 29 (Upland – Wetland 14)

Sample Point 29 (SP29) was taken uphill of Wetland 14 in a maintained, grassy terrace and indicates the upland boundary for Wetland 14 (Figure 8, Sheets 5–7). The dominant vegetation species observed at SP29 was Kentucky blue grass (*Poa pratensis*) and tall false rye grass (*Schedonorus arundinaceus*). This observation does not pass the Dominance Test and Prevalence Index; therefore, not satisfying the criteria for the presence of hydrophytic vegetation. The soil observed at SP29 consisted of an 18-inch layer of 100 percent very dark gray (10YR 3/1) loamy soil. This sample does not satisfy any indicators for the presence of hydric soils (USDA, NRCS 2018). No wetland hydrology was observed at this location. SP29 did not satisfy the three criteria for a positive wetland determination; therefore, this area is not a wetland.

Table 3. Wetland Data Point Summary Table.

Data Point	Hydrophytic Vegetation?	Hydric Soils?	Hydrology?	Wetland?	Date Taken	Project Area
1	No	No	No	No	9/30/2020	Overlap
2	Yes	Yes	Yes	Yes	9/18/2022	Overlap
3	No	No	No	No	9/30/2020	Overlap
4	Yes	Yes	Yes	Yes	9/30/2020	Overlap
5	No	No	No	No	9/30/2020	Overlap
6	Yes	Yes	Yes	Yes	9/30/2020	Overlap
7	No	No	No	No	9/30/2020	Overlap
8	Yes	Yes	Yes	Yes	9/30/2020	Overlap
9	Yes	Yes	No	No	9/30/2020	Overlap
10	Yes	Yes	Yes	Yes	9/30/2020	Overlap
11	No	No	No	No	9/30/2020	Overlap
12	Yes	Yes	Yes	Yes	9/30/2020	Overlap
13	Yes	No	No	No	9/30/2020	Overlap
14	Yes	Yes	Yes	Yes	9/30/2020	State
15	No	Yes	No	No	9/30/2020	State
16	Yes	Yes	Yes	Yes	9/30/2020	State
17	No	No	No	No	9/30/2020	State
18	Yes	No	No	No	9/30/2020	State
19	Yes	Yes	Yes	Yes	9/30/2020	State
20	Yes	No	No	No	9/30/2020	State
21	Yes	Yes	Yes	Yes	6/29/2022	LPA
22	Yes	No	No	No	6/29/2022	LPA
23	Yes	Yes	Yes	Yes	6/29/2022	LPA
24	Yes	Yes	Yes	Yes	9/18/2022	LPA
25	Yes	Yes	No	No	9/18/2022	LPA
26	Yes	Yes	Yes	Yes	10/30/2020	LPA
27	Yes	No	No	No	10/30/2020	LPA
28	Yes	Yes	Yes	Yes	5/15/2023 and 7/7/2023	Overlap
29	No	No	No	No	5/15/2023	Overlap

Table 4. Wetland Summary Table.

Wetland Name	Photos	Lat/Long	Type	Total Area (acres)	Quality	Likely Water of the U.S.
1	12–14, 16	39.999411° N -85.734524° W	Palustrine Emergent PEM1A	0.011	Poor	Yes
2	30–33	40.000776° N -85.737710° W	Palustrine Emergent PEM1A	0.012	Poor	Yes
3	44–52	40.001204° N -85.733115° W	Palustrine Emergent PEM1A	0.121	Poor	Yes
4	57–61	40.001386° N -85.731988° W	Palustrine Emergent PEM1A	0.022	Poor	Yes
5	65–68, 72	40.001374° N -85.731647° W	Palustrine Emergent PEM1A	0.059	Poor	Yes
6	73–76	40.001381° N -85.730424° W	Palustrine Emergent PEM1A	0.019	Poor	Yes
7	89–92	40.006903° N -85.729913° W	Palustrine Forested PFO1A	0.005	Poor	Yes
8	97–101	40.007111° N -85.729935° W	Palustrine Emergent PEM1A	0.009	Poor	Yes
9	111–112	40.006865° N -85.730313° W	Palustrine Forested PFO1A	0.027	Poor	Yes
10	133–137	40.001880° N, -85.733376° W	Palustrine Emergent PEM1A	0.010	Poor	Yes
11	142–144	40.001940° N, -85.733459° W	Palustrine Forested PFO1A	0.031	Poor	Yes
12	145–148	40.002024° N, -85.733592° W	Palustrine Emergent PEM1A	0.001	Poor	Yes
13	159–162	40.001462° N, -85.729084° W	Palustrine Emergent PEM1A	0.054	Poor	Yes
14	80, 171–177	40.0017942° N, -85.732428° W	Palustrine Emergent PEM1A	0.099	Poor	Yes

ROADSIDE DITCHES (RSDs)

Six RSDs (RSDs 1–6) were observed within the combined investigation areas during the September 30, 2020 and subsequent field visits (Figure 7, Sheets 2–8; Figure 8, Sheets 2–8). No RSDs are located within the LPA project area. These features did not exhibit a well-defined OHWM or a well-defined bed and bank. These features are likely non-jurisdictional, artificial roadside drainage features.

Table 5. Roadside Ditches (RSDs) Table.

RSD No.	Location	Length (ft)	Flow Direction
RSD 1	Along SR 38, to the south, and east of US 36	453.03	West to east
RSD 2	Perpendicular to the north of SR 38, and west of Arabian Drive	25.57	South to north
RSD 3	Perpendicular to the north of State Street, and east of the railroad tracks	9.62	South to north
RSD 4	Along US 36, to the east, and south of the SR 9 split	254.54	South to north
RSD 5	Along US 36, to the west, between SR 38 and Water Street	857.09	South to north
RSD 6	Along US 36, to the west, between Mercer Lane and Water Street	418.68	South to north

OPEN WATER

No open water features were observed within or adjacent to the combined investigation areas.

FLOODWAYS

According to the IDNR Indiana Floodplain Information Portal, the investigation area in three separate areas; along Fall Creek in the northern portion of the study area, along US 36 and S CR 300 W, and along SR 38/State Street; is located within IDNR Approximate Floodway boundaries (Figure 6).

WILDLIFE CROSSINGS

Suitable terrestrial habitat for wildlife crossings is present within the investigation area near the Fall Creek crossing; however, no evidence of wildlife crossings was observed within the investigation area.

BIRDS AND BATS

No evidence of birds or bats was observed within the investigation area. The investigation area is located within the range of the state and federally-endangered Indiana bat (*Myotis sodalis*) and the state and federally-endangered northern long-eared bat (*Myotis septentrionalis*). Bats were not observed under the Fall Creek structure or within any pipes present in the investigation area. Potential roosting habitat is located within the investigation area. However, there was no evidence found of bats using the structure.

CONCLUSIONS

Fourteen wetlands (Wetlands 1–14) were observed and delineated within the combined investigation area (Table 4). These wetlands are likely jurisdictional WOTUS since they appear to have a hydrological connection to Fall Creek, which flows into the White River, which flows into the Wabash River, which is considered a TNW. Additionally, a single perennial stream (Fall Creek) was observed within the State investigation area (Table 2). Fall Creek was observed with a defined bed, bank, and OHWM, and is likely a jurisdictional WOTUS since it has a hydrological connection to the Wabash River.

Every effort should be taken to avoid and minimize impacts to the waterway and wetlands. If impacts are necessary, then mitigation may be required. The INDOT Environmental Services Division should be contacted immediately if impacts will occur. The final determination of jurisdictional waters is ultimately made by the USACE. This report is our best judgment based on the guidelines set forth by the USACE.

Acknowledgement:

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



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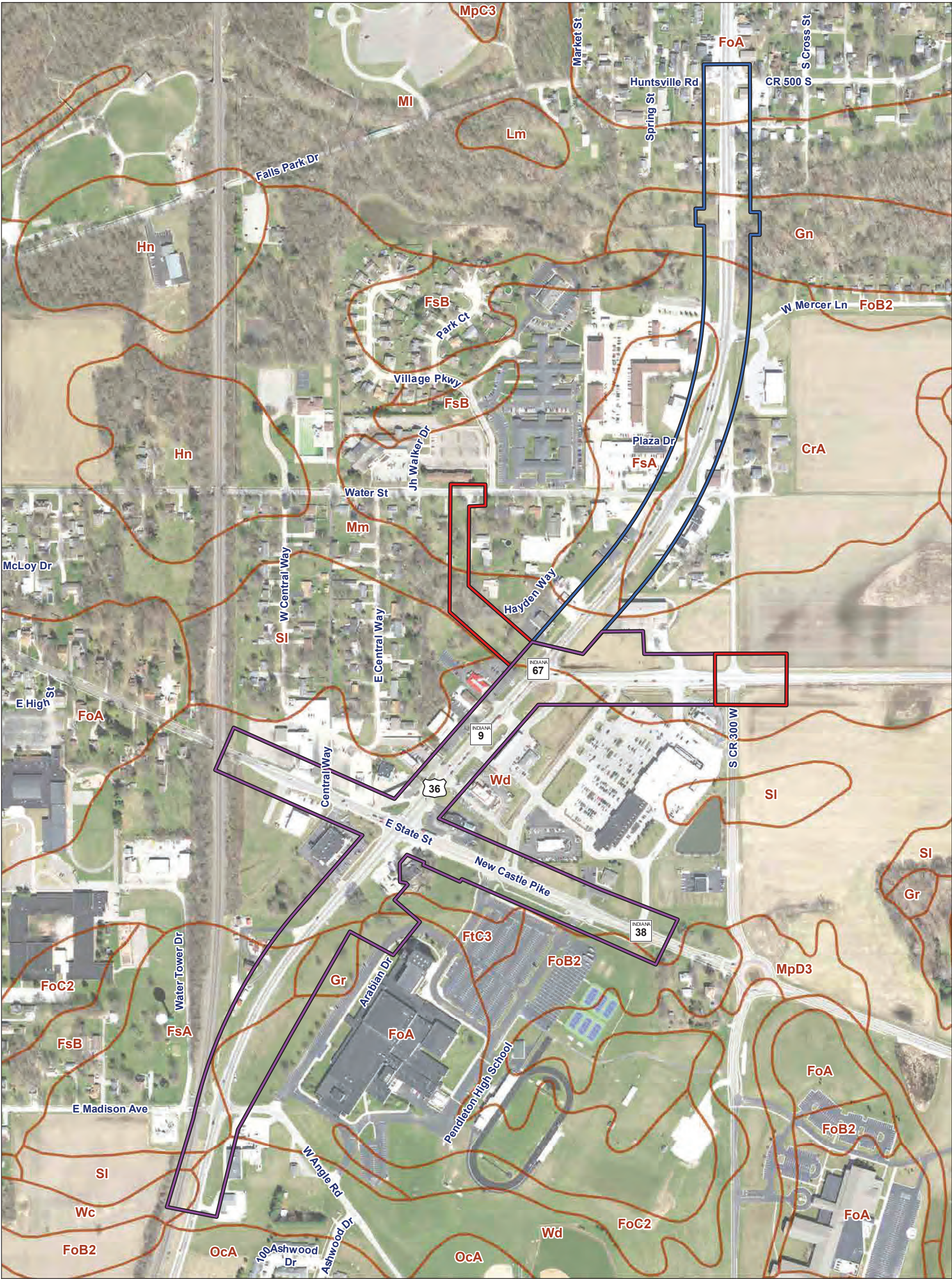
INDOT District: Greenfield



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EVALUATION & CONSULTING

REFERENCES

- Cowardin, Lewis M., Virginia Carter, Francis C. Golet, and Edward T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. US Fish and Wildlife Service, FWS/OBS-79/31, December 1979.
- Environmental Laboratory. 1987. *Corps of Engineers Wetland Delineation Manual*. Technical Report Y-87-1, US Army Engineer Waterways Experiment Station, Vicksburg, MS.
- Indiana Department of Natural Resources (IDNR), Division of Water. 2022. Indiana Floodplain Information Portal (INFIP). IDNR. Indianapolis, IN. September 22, 2022. <https://indnr.maps.arcgis.com/apps/webappviewer/index.html?id=05026dabc2e8461983e196d56a213c1e>.
- USACE. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region Version 2.0*. United States Army Engineer Research and Development Center. Vicksburg, MS. August 2010.
- USACE. 2018. *National Wetland Plant List (NWPL) Version 3.4*. United States Army Engineer Research and Development Center. Vicksburg, MS. August 2018. http://wetlandplants.usace.army.mil/nwpl_static/v33/home/home.html.
- USDA, NRCS. 2018. *Field Indicators of Hydric Soils in the United States: A Guide for Identifying and Delineating Hydric Soils, Version 8.2*. G.W. Hurt and L.M. Vasilas (eds.). USDA, NRCS, in cooperation with the National Technical Committee on Hydric Soils.
- USDA, NRCS. 2019. Online Soils Data Access (SDA). *Hydric Soils Lists, Madison County, Indiana*. US Department of Agriculture, Natural Resources Conservation Service.
- USDA, NRCS. 2020a. Soil Survey Geographic (SSURGO) Database for Madison County, Indiana. <https://www.nrcs.usda.gov/resources/data-and-reports/soil-survey-geographic-database-ssurgo>.
- USDA, NRCS. 2020b. Web Soil Survey Geographic Database for Madison County, Indiana. US Department of Agriculture, Natural Resources Conservation Service. Fort Worth, Texas. <http://websoilsurvey.nrcs.usda.gov/app/HomePage.html>.
- US Drought Monitor. 2022. US Drought Monitor Website. <https://droughtmonitor.unl.edu/>.
- USFWS. 2019. US Fish and Wildlife Service National Wetlands Inventory Online Mapper <http://wetlandsfws.er.usgs.gov/wtlnds/launch.html>.
- USGS. 2016. StreamStats Application Website. <https://streamstats.usgs.gov/ss/>.
- USGS, NHD. 2020. US Geological Survey, National Hydrography Dataset Online website. <https://www.usgs.gov/core-science-systems/ngp/national-hydrography>.



Investigation area

LPA project

State project

LPA and State projects overlap

Soil boundary

CrA: Crosby silt loam, fine-loamy subsoil, 0 to 2 percent slopes

FoA: Fox silt loam, 0 to 2 percent slopes

FoB2: Fox silt loam, 2 to 6 percent slopes, moderately eroded

FsA: Fox silt loam, till substratum, 0 to 2 percent slopes

FtC3: Fox soils, 6 to 12 percent slopes, severely

Gn: Genesee silt loam, 0 to 2 percent slopes, frequently flooded, brief duration

Gr: Gravel pits

MI: Mahalasville silty clay loam, 0 to 2 percent slopes

Mm: Mahalasville silty clay loam, limestone

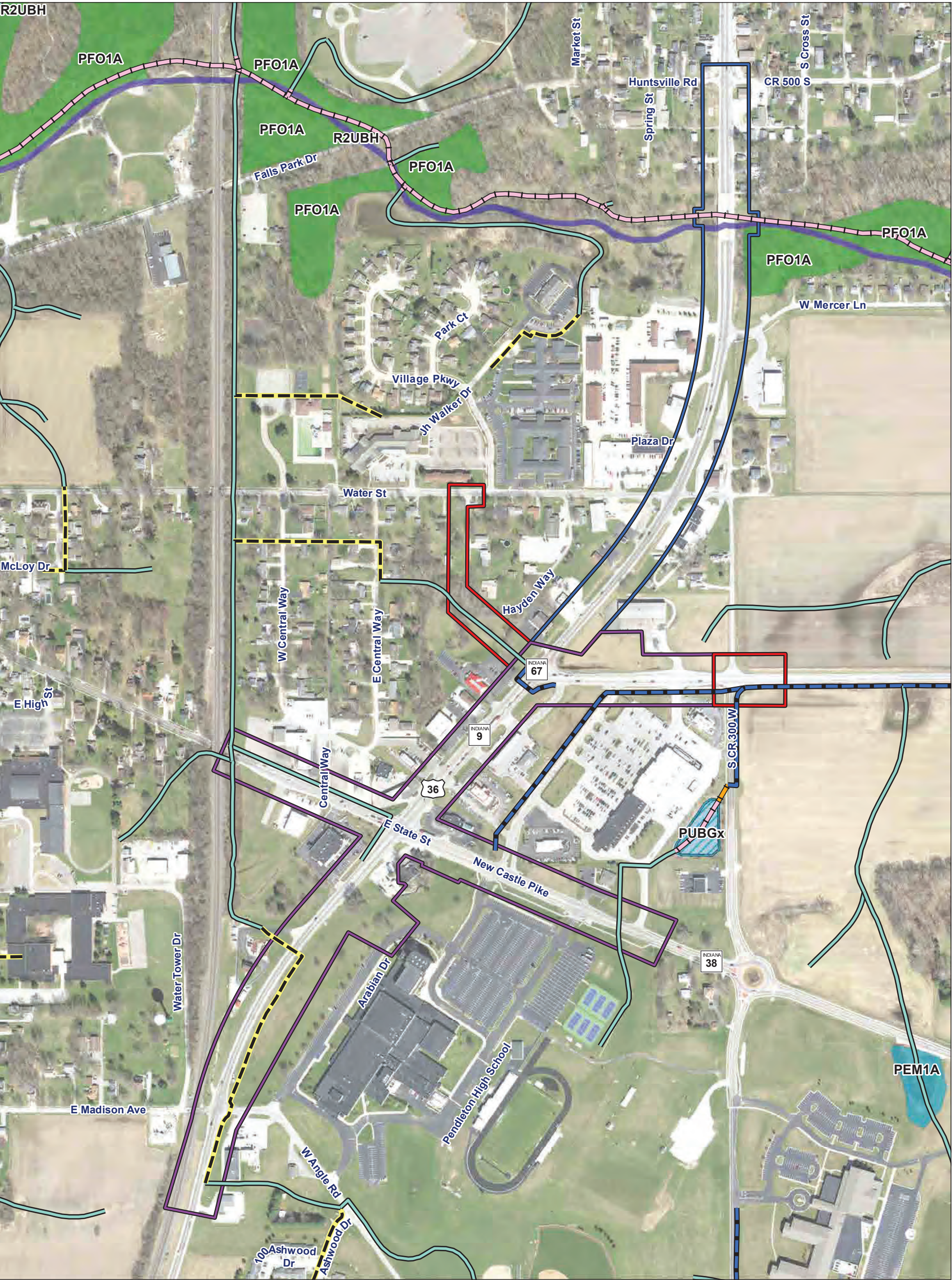
SI: Sleeth silt loam, 0 to 2 percent slopes

Wc: Washtenaw complex

Wd: Westland silty clay loam, 0 to 2 percent slopes

Figure 4

Portion of the Madison County soil map (USDA, NRCS 2020) showing the combined investigation areas for proposed US 36 and SR 9 Projects (INDOT Des. Nos. 1702936, 1802854, and 2001127).



Investigation area

- LPA project
- State project
- LPA and State projects overlap

NWI wetlands

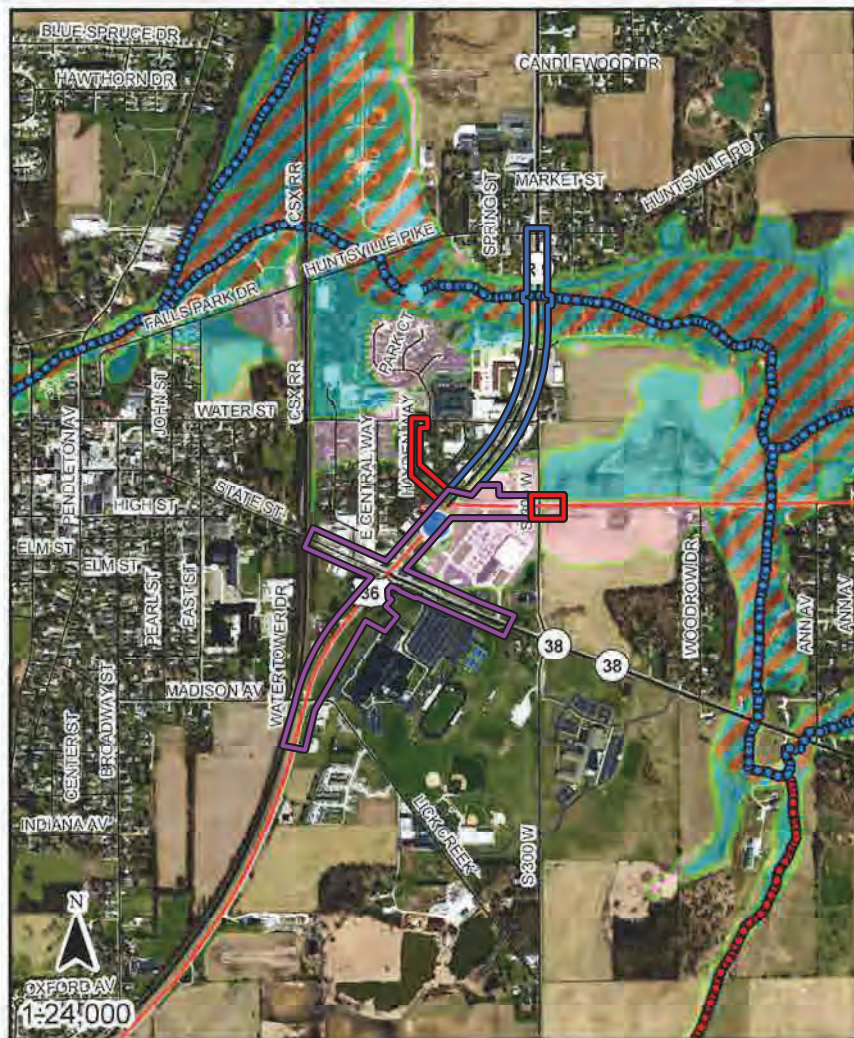
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine

NHD flowlines

- Connector
- Canal/Ditch
- Pipeline
- Stream/River
- Artificial Path

Figure 5

Portion of the National Wetland Inventory (NWI) map (USFWS 2019) and NHD Flowlines (USGS, NHD 2020) showing the combined investigation areas for proposed US 36 and SR 9 Projects (INDOT Des. Nos. 1702936, 1802854, and 2001127).



- Point of Interest
- Base Flood Elevation Point
- Flood Elevation Points**
 - STUDIED STREAM
 - JURISDICTIONAL UNSTUDIED STREAM
- Rivers and Streams at least 1 square mile**
- Drainage Area (sq. miles)**
 - 1 - 10
 - 10 - 100
 - 100 - 500
- FEMA Zone AE Floodway; FEMA Administrative Floodway
- FEMA Zone AE
- Additional Floodplain Area; DNR .2 Percent Flood Hazard
- Point of Interest Coordinates (WGS84)
Long: -85.733511818
Lat: 40.0010262631

The information provided below is based on the point of interest shown in the map above.

County: **Madison**

Approximate Ground Elevation: **859.5 feet (NAVD88)**

Stream Name:

Base Flood Elevation: **853.4 feet (NAVD88)**

Fall Creek

Drainage Area: **Not available**

Best Available Flood Hazard Zone: **Not Mapped**

National Flood Hazard Zone: **Not Mapped**

Is a Flood Control Act permit from the DNR needed for this location? **See following pages**

Is a local floodplain permit needed for this location? **Contact your local Floodplain Administrator-**

Floodplain Administrator: **Kayla Hassett, Planning and Zoning Administrator**

Community Jurisdiction: **Town Of Pendleton, City proper**

Phone: **(765) 778-8370**

Email: **khassett@town.pendleton.in.us**

US Army Corps of Engineers District: **Louisville**

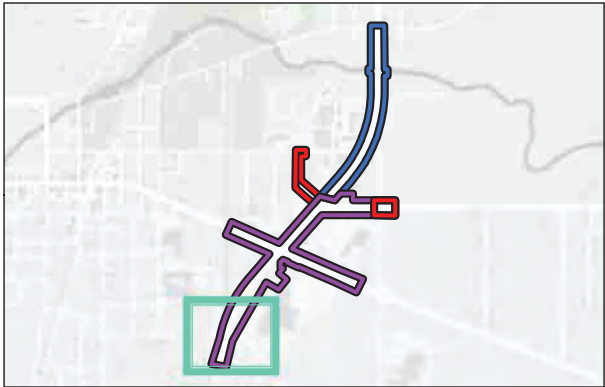
Date Generated: 8/21/2023

Investigation area

- LPA project
- State project
- LPA and State projects overlap

Figure 6

Portion of the IDNR Best Available Floodplain for the combined investigation areas for proposed US 36 and SR 9 Projects (INDOT Des. Nos. 1702936, 1802854, and 2001127).



Investigation area

- LPA and State projects overlap
- Sample point

Base: Aerial photograph
2017

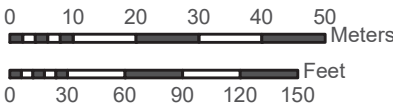
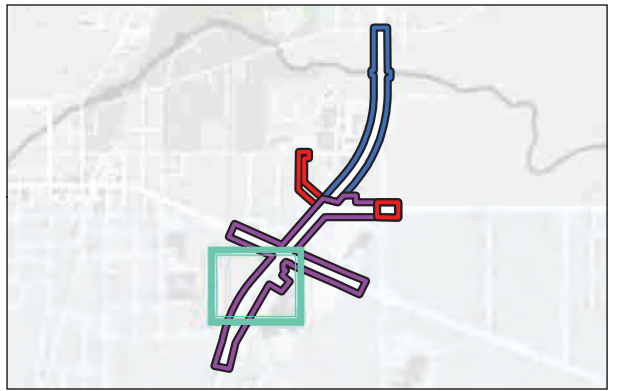


Figure 7 **Sheet 1 of 9**
Aerial photograph showing the ecological resources for the combined investigation areas for proposed US 36 and SR 9 Projects (INDOT Des. Nos. 1702936, 1802854, and 2001127). (9 Sheets)



Investigation area

- LPA and State projects overlap
- Wetland
- Sample point
- Roadside ditch

Base: Aerial photograph
2017

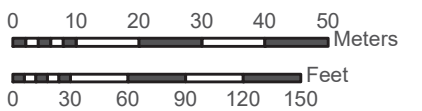
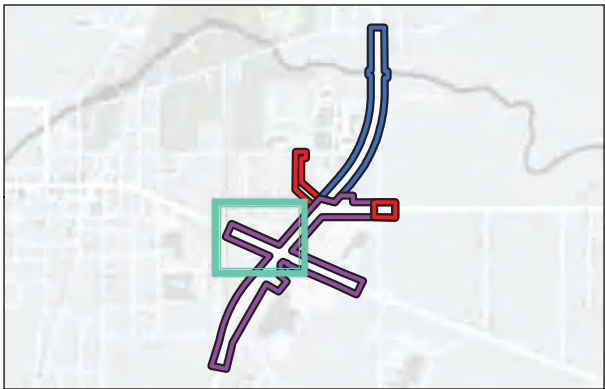
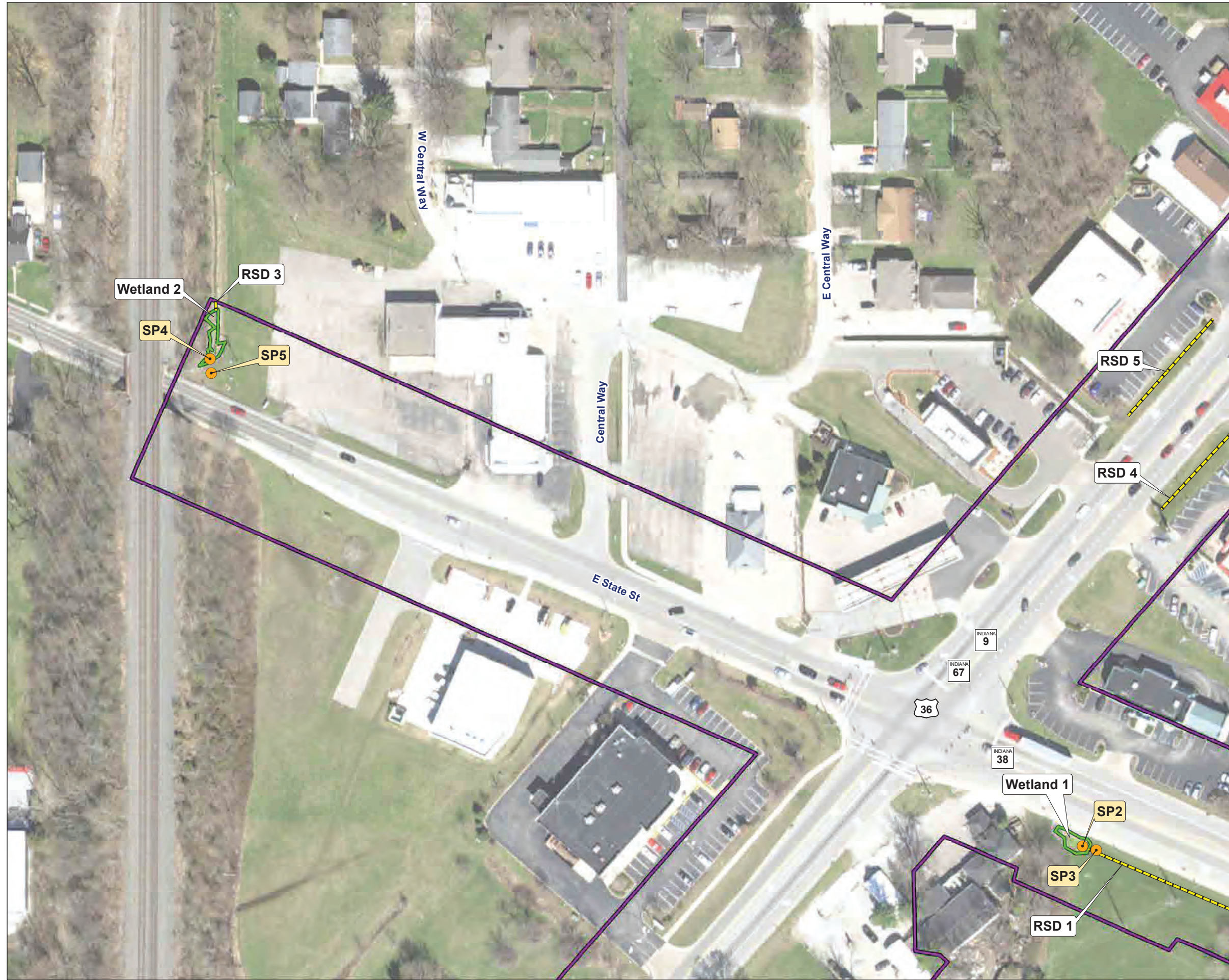


Figure 7

Sheet 2 of 9

Aerial photograph showing the ecological resources for the combined investigation areas for proposed US 36 and SR 9 Projects (INDOT Des. Nos. 1702936, 1802854, and 2001127). (9 Sheets)



Investigation area

- LPA and State projects overlap
- Wetland
- Sample point
- Roadside ditch

Base: Aerial photograph
2017

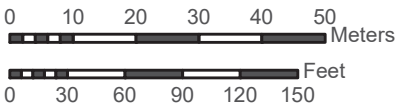
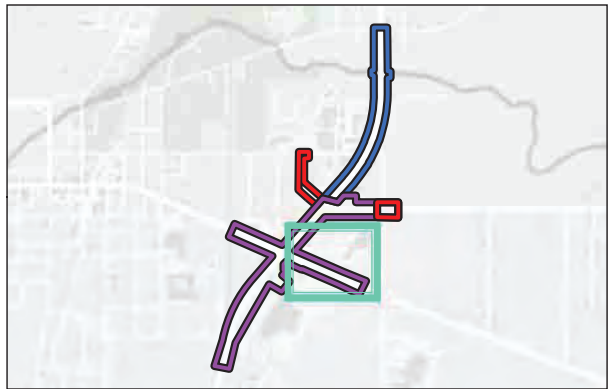


Figure 7 **Sheet 3 of 9**
Aerial photograph showing the ecological resources for the combined investigation areas for proposed US 36 and SR 9 Projects (INDOT Des. Nos. 1702936, 1802854, and 2001127). (9 Sheets)



Investigation area

- LPA and State projects overlap
- Wetland
- Sample point
- Roadside ditch

Base: Aerial photograph
2017

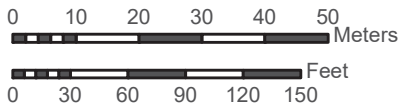
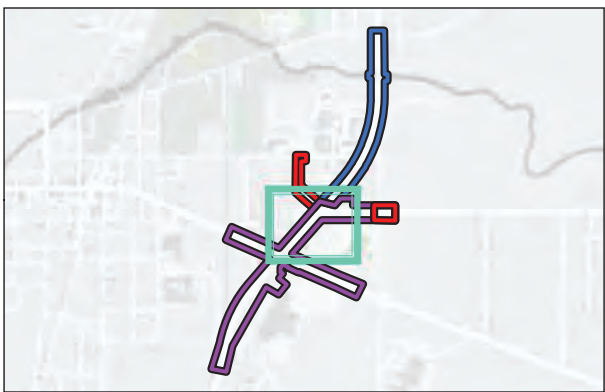


Figure 7

Sheet 4 of 9

Aerial photograph showing the ecological resources for the combined investigation areas for proposed US 36 and SR 9 Projects (INDOT Des. Nos. 1702936, 1802854, and 2001127). (9 Sheets)



Investigation area

- LPA project
- State project
- LPA and State projects overlap
- Wetland
- Sample point
- Roadside ditch
- Resource extends outside Investigation Area

Base: Aerial photograph
2017

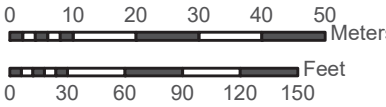
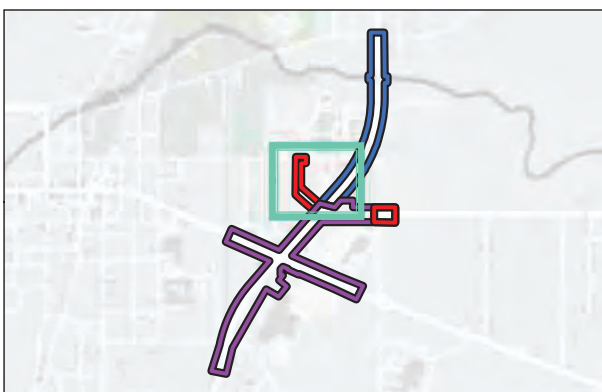
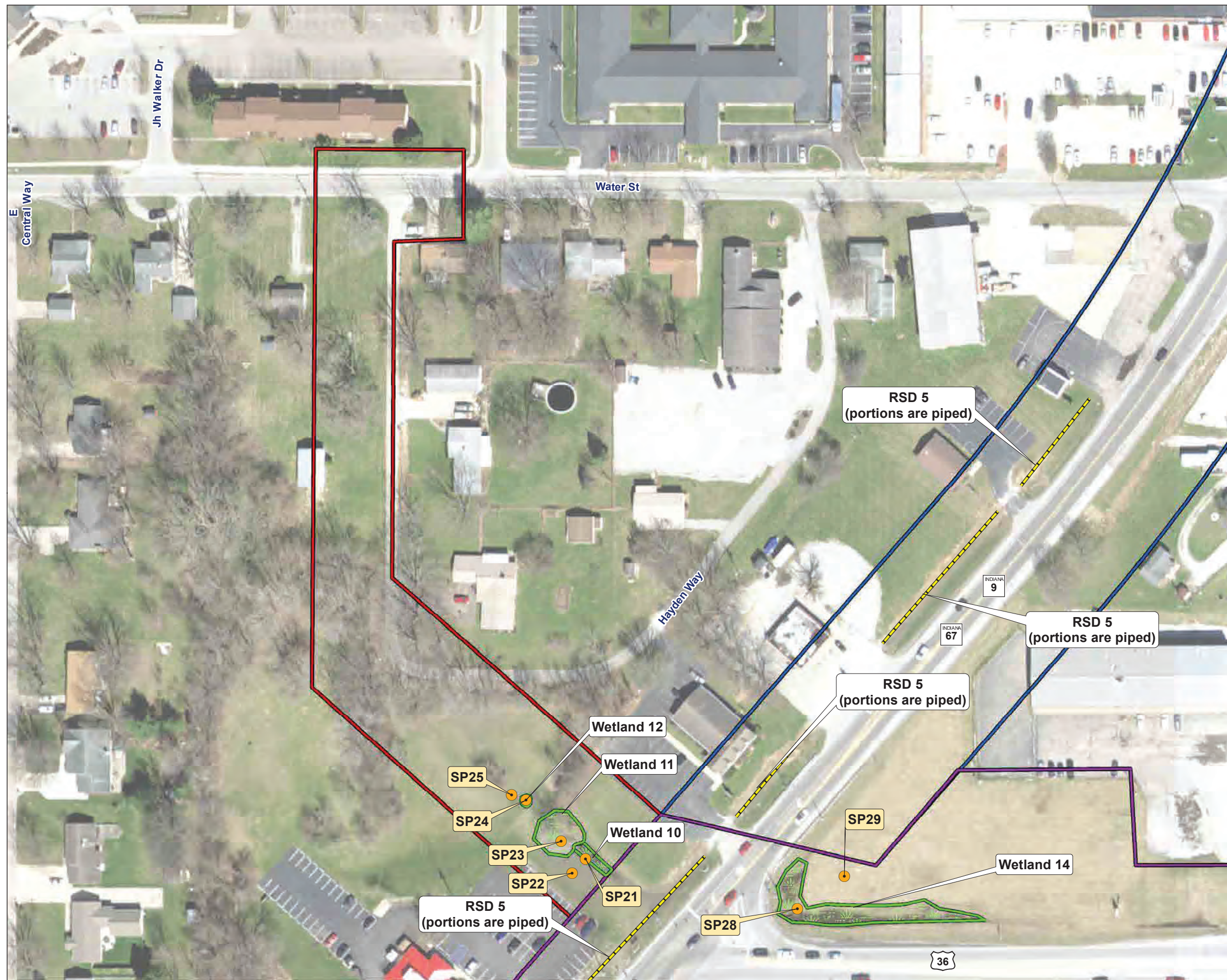


Figure 7 **Sheet 5 of 9**
Aerial photograph showing the ecological resources for the combined investigation areas for proposed US 36 and SR 9 Projects (INDOT Des. Nos. 1702936, 1802854, and 2001127). (9 Sheets)



Investigation area

-  LPA project
-  State project
-  LPA and State projects overlap
-  Wetland
-  Sample point
-  Roadside ditch

Base: Aerial photograph
2017

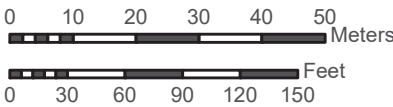
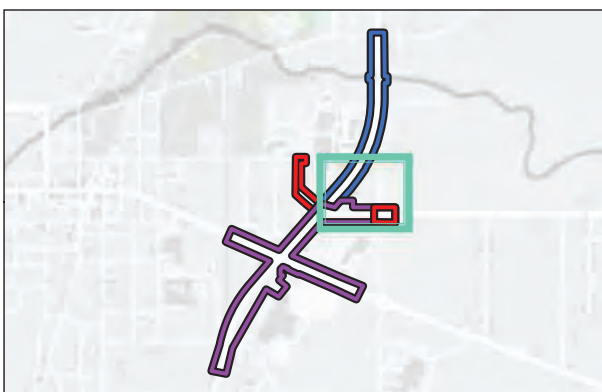
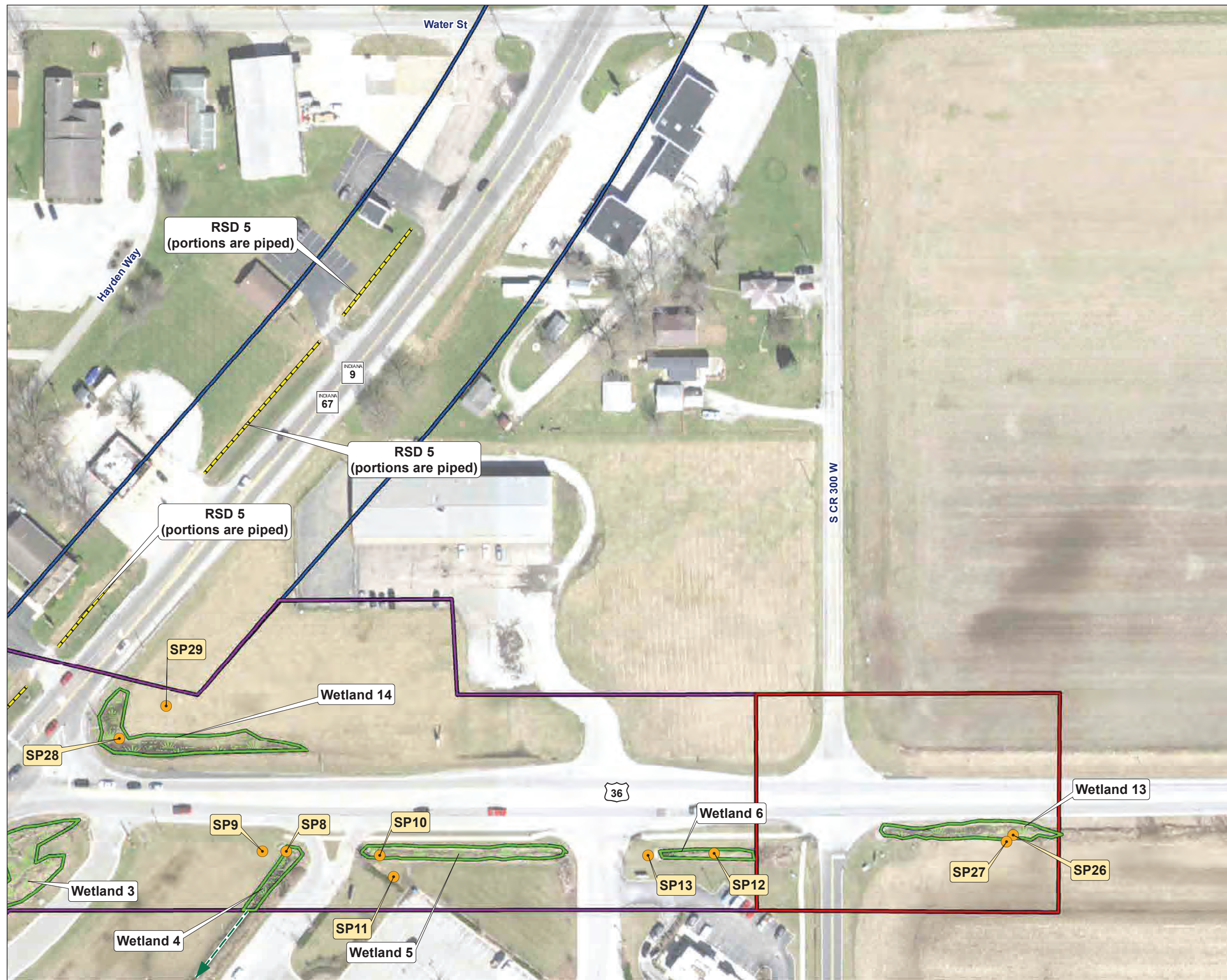


Figure 7 **Sheet 6 of 9**
Aerial photograph showing the ecological resources for the combined investigation areas for proposed US 36 and SR 9 Projects (INDOT Des. Nos. 1702936, 1802854, and 2001127). (9 Sheets)



Investigation area

- LPA project
- State project
- LPA and State projects overlap
- Wetland
- Sample point
- Roadside ditch
- > Resource extends outside Investigation Area

Base: Aerial photograph
2017

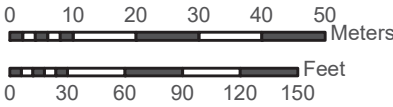
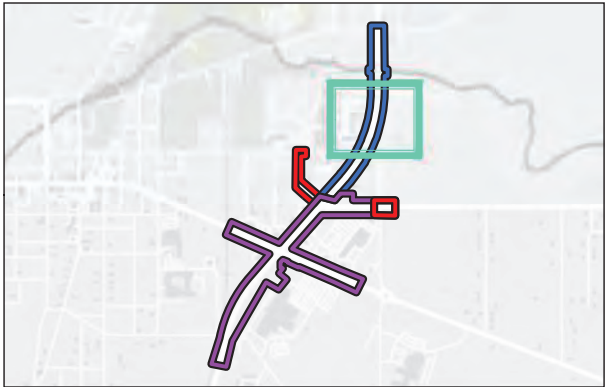
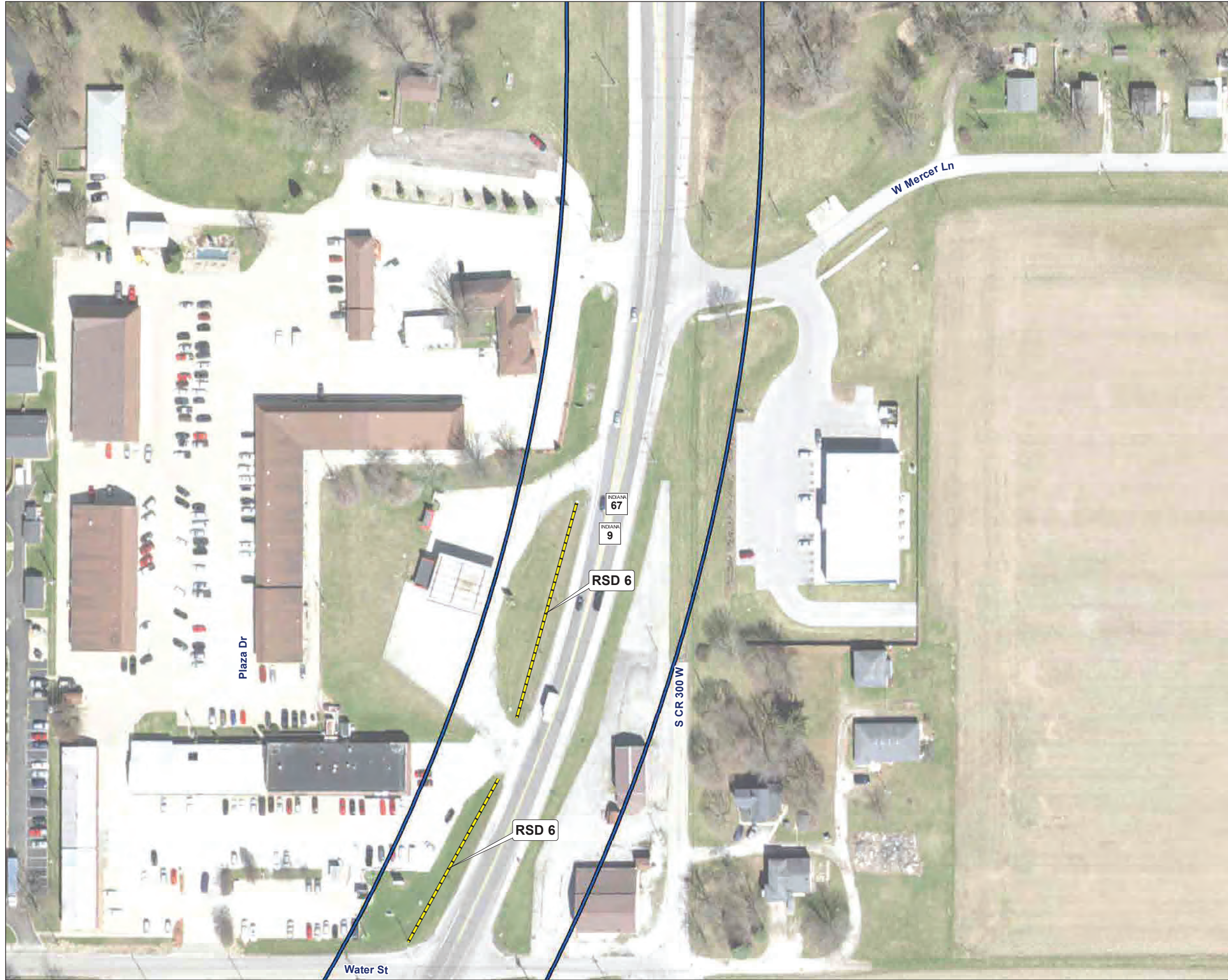


Figure 7 **Sheet 7 of 9**
Aerial photograph showing the ecological resources for the combined investigation areas for proposed US 36 and SR 9 Projects (INDOT Des. Nos. 1702936, 1802854, and 2001127). (9 Sheets)



Investigation area

- State project
- Roadside ditch

Base: Aerial photograph
2017

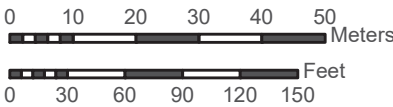
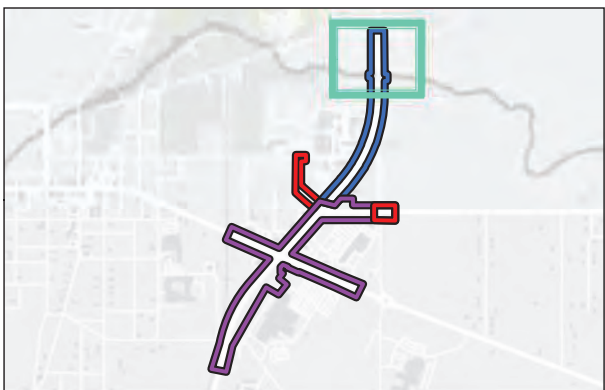
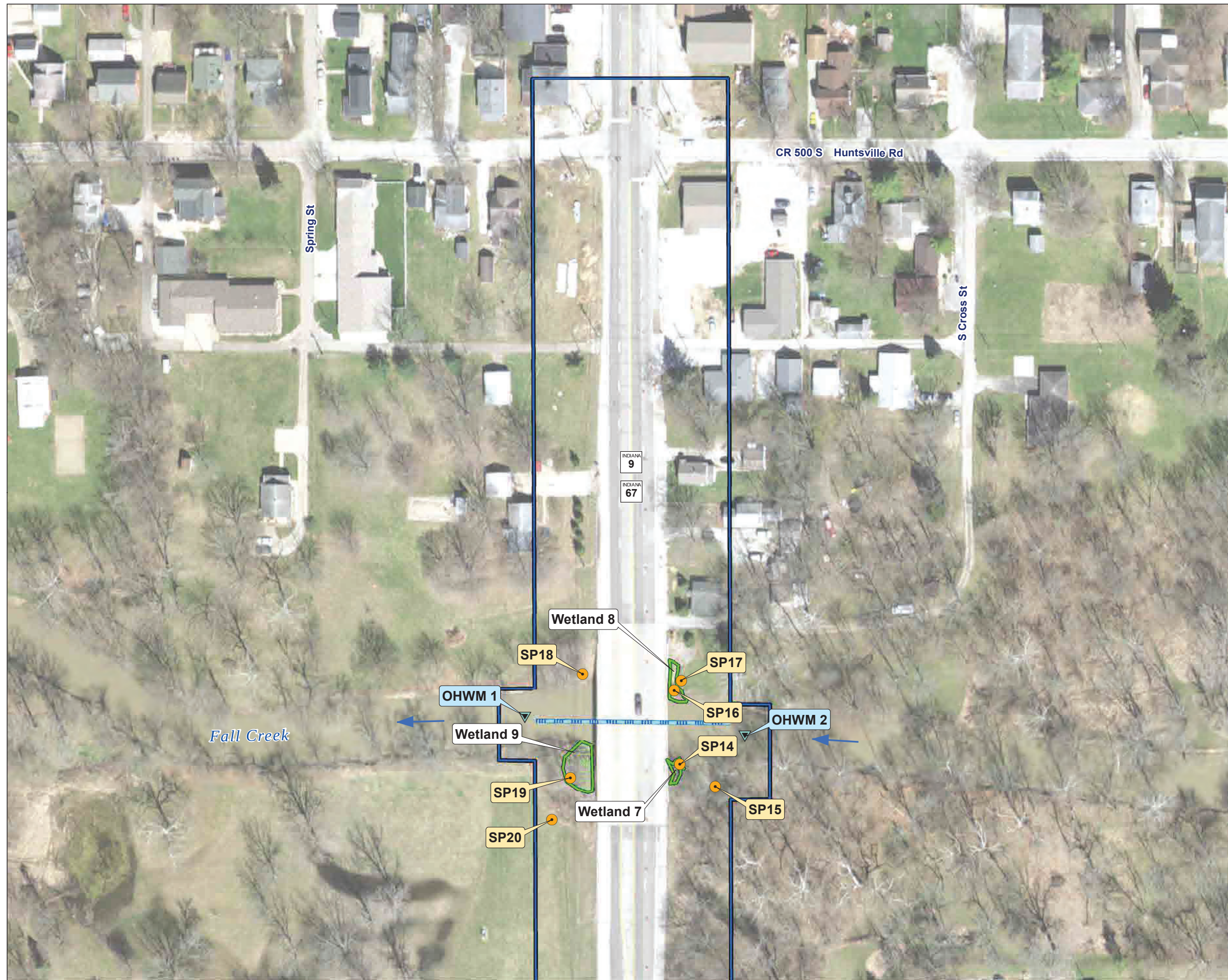


Figure 7 **Sheet 8 of 9**
Aerial photograph showing the ecological resources for the combined investigation areas for proposed US 36 and SR 9 Projects (INDOT Des. Nos. 1702936, 1802854, and 2001127). (9 Sheets)



Investigation area

- State project
- Stream
- Wetland
- Sample point
- OHWM
- Flow direction

Base: Aerial photograph
2017

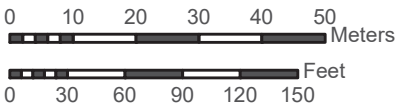
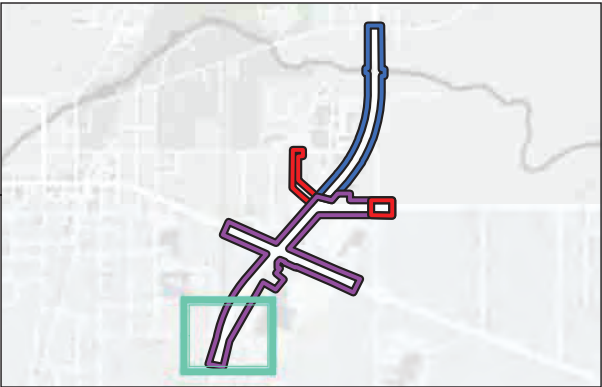


Figure 7 **Sheet 9 of 9**

Aerial photograph showing the ecological resources for the combined investigation areas for proposed US 36 and SR 9 Projects (INDOT Des. Nos. 1702936, 1802854, and 2001127). (9 Sheets)



Investigation area

- LPA and State projects overlap
- Sample point
- Photo location
- Photo location (No direction)

Base: Aerial photograph
2017

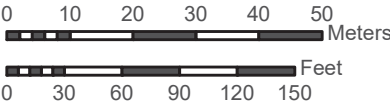
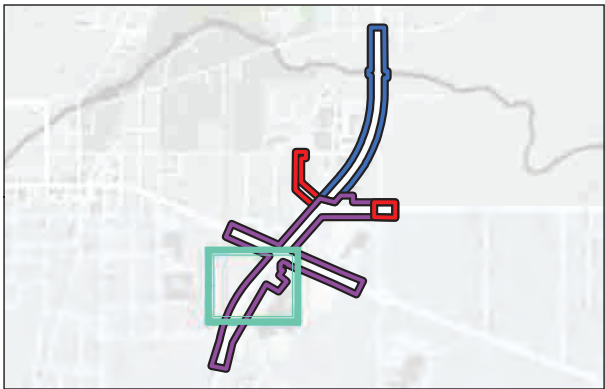


Figure 8 **Sheet 1 of 9**

Aerial photograph showing the ecological resources and photograph locations for the combined investigation areas for proposed US 36 and SR 9 Projects (INDOT Des. Nos. 1702936, 1802854, and 2001127). (9 Sheets)



Investigation area

- LPA and State projects overlap
- Wetland
- Sample point
- Roadside ditch
- Photo location
- Photo location (No direction)

Base: Aerial photograph
2017

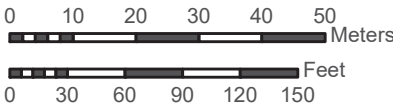
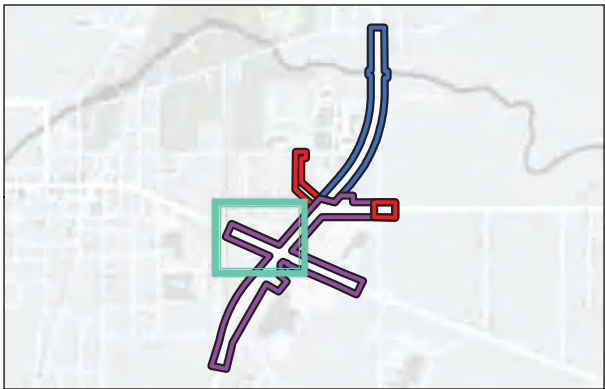
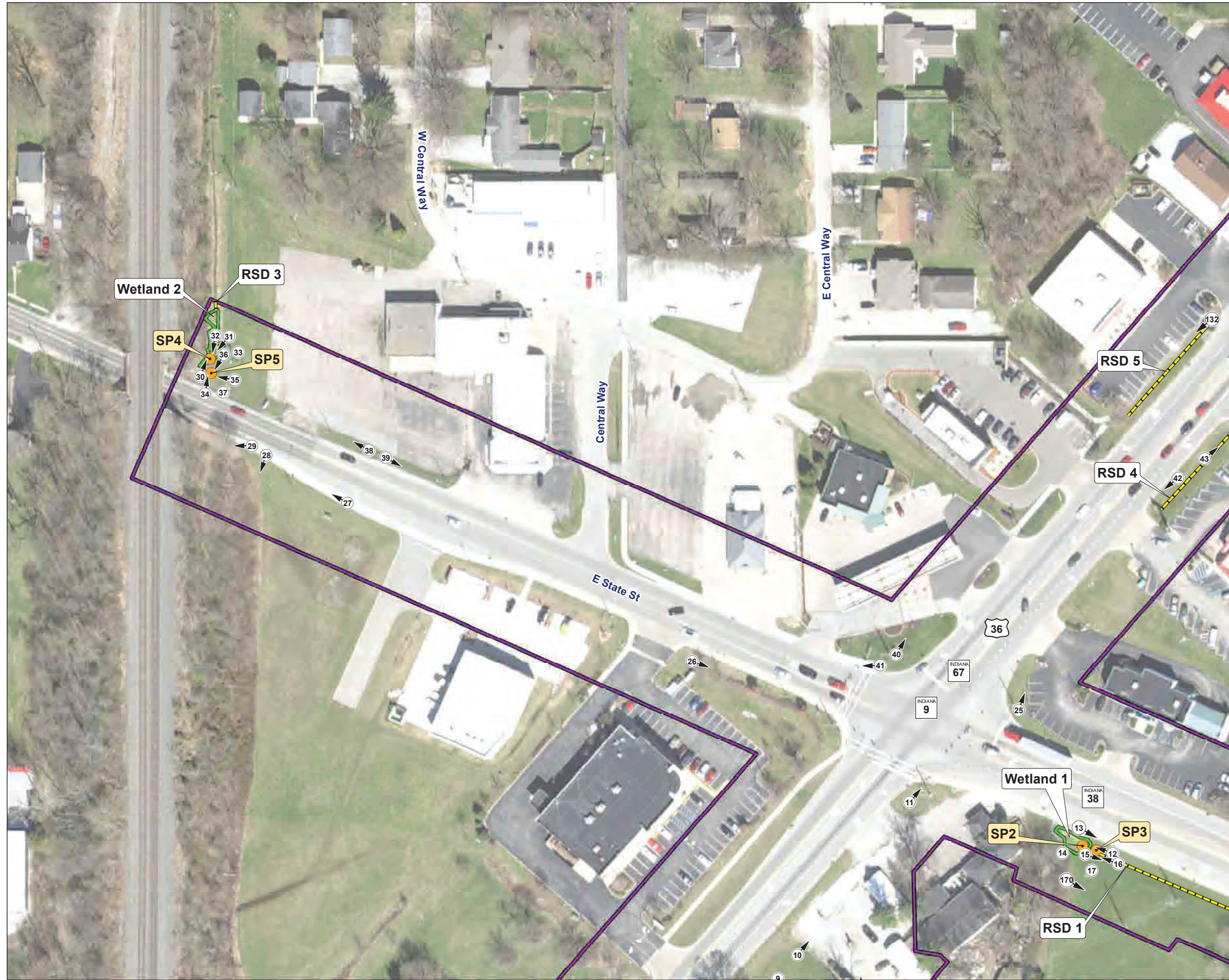


Figure 8 **Sheet 2 of 9**
Aerial photograph showing the ecological resources and photograph locations for the combined investigation areas for proposed US 36 and SR 9 Projects (INDOT Des. Nos. 1702936, 1802854, and 2001127). (9 Sheets)



Investigation area

- LPA and State projects overlap
- Wetland
- Sample point
- Roadside ditch
- Photo location
- Photo location (No direction)

Base: Aerial photograph
2017

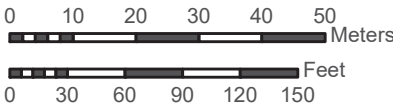
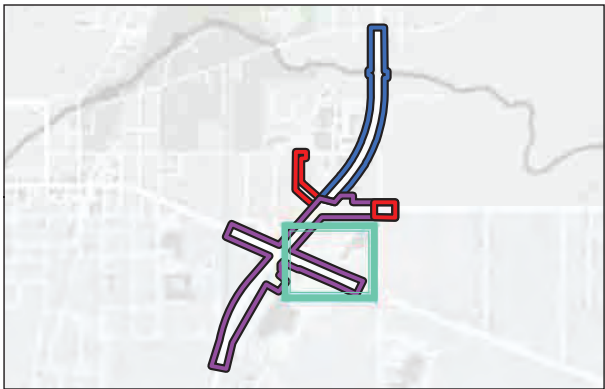


Figure 8

Sheet 3 of 9

Aerial photograph showing the ecological resources and photograph locations for the combined investigation areas for proposed US 36 and SR 9 Projects (INDOT Des. Nos. 1702936, 1802854, and 2001127). (9 Sheets)



Investigation area

- LPA and State projects overlap
- Wetland
- Sample point
- Roadside ditch
- Photo location
- Photo location (No direction)

Base: Aerial photograph
2017

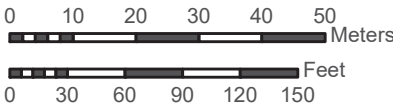
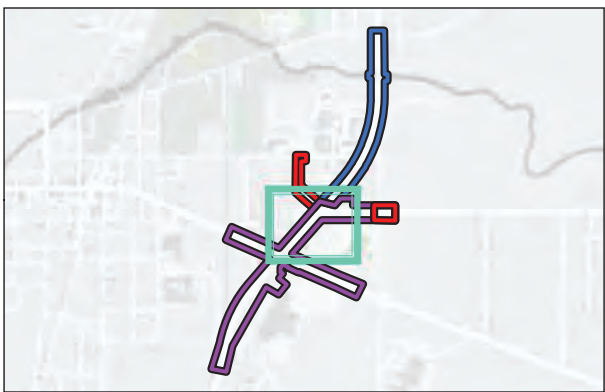


Figure 8

Sheet 4 of 9

Aerial photograph showing the ecological resources and photograph locations for the combined investigation areas for proposed US 36 and SR 9 Projects (INDOT Des. Nos. 1702936, 1802854, and 2001127). (9 Sheets)



Investigation area

- LPA project
- State project
- LPA and State projects overlap
- Wetland
- Sample point
- Roadside ditch
- Resource extends outside Investigation Area
- ◀ Photo location
- Photo location (No direction)

Base: Aerial photograph
2017

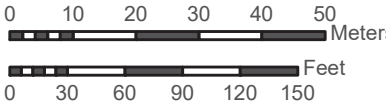
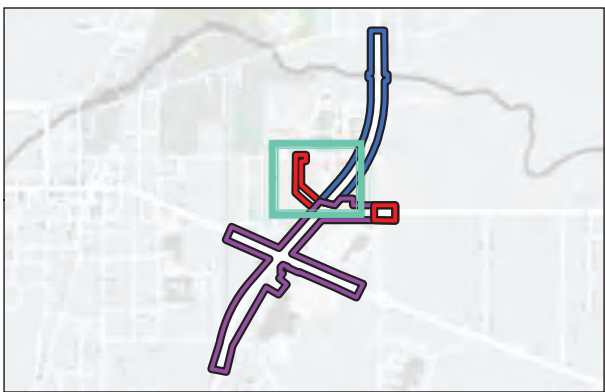
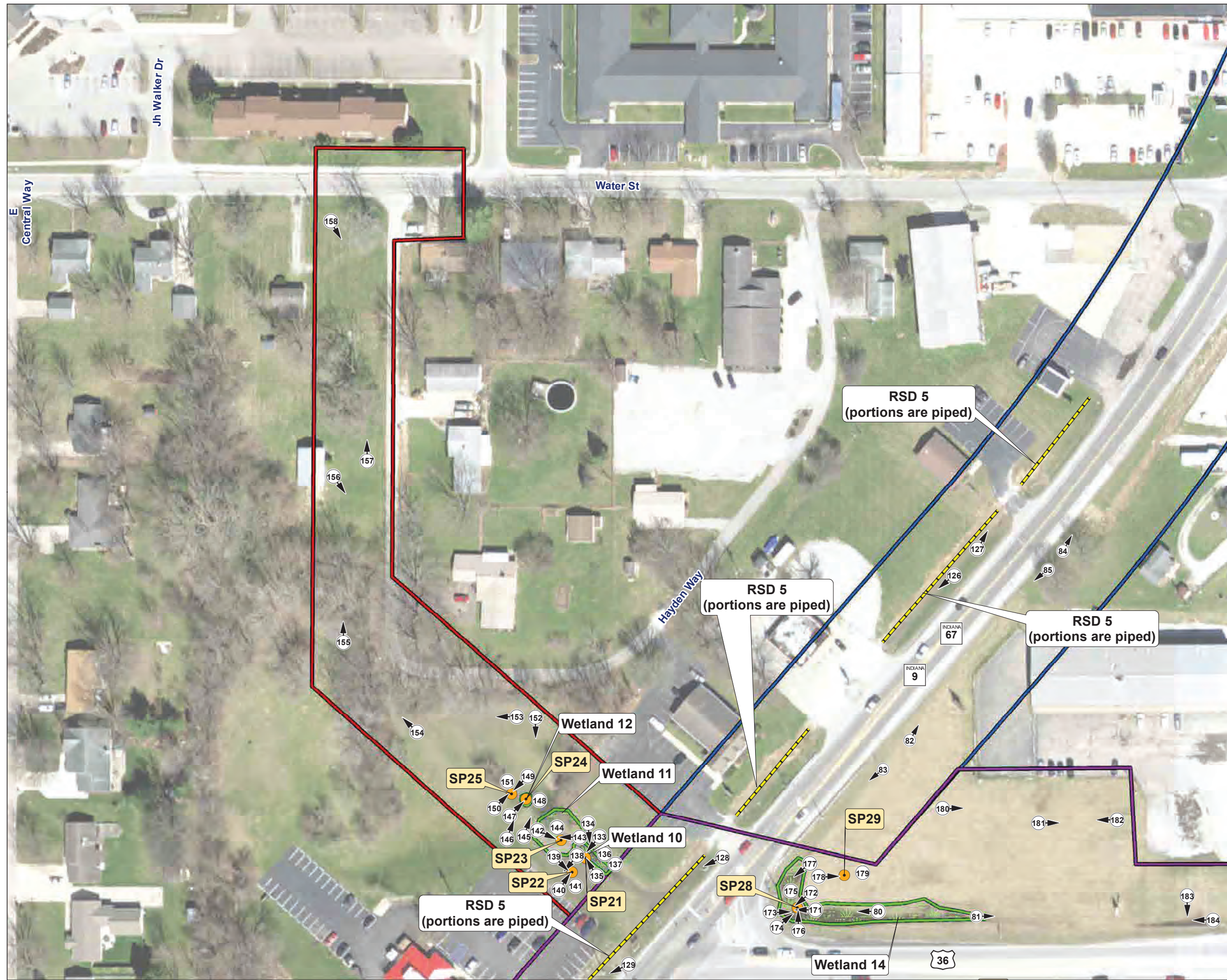


Figure 8 **Sheet 5 of 9**
Aerial photograph showing the ecological resources and photograph locations for the combined investigation areas for proposed US 36 and SR 9 Projects (INDOT Des. Nos. 1702936, 1802854, and 2001127). (9 Sheets)



Investigation area

- LPA project
- State project
- LPA and State projects overlap
- Wetland
- Sample point
- Roadside ditch
- Photo location
- Photo location (No direction)

Base: Aerial photograph
2017

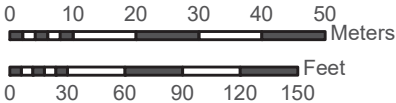
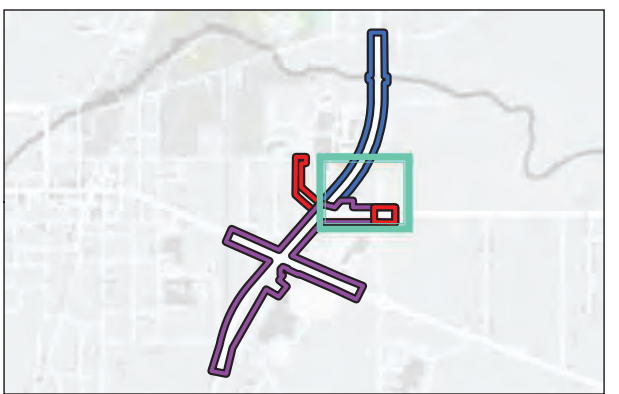
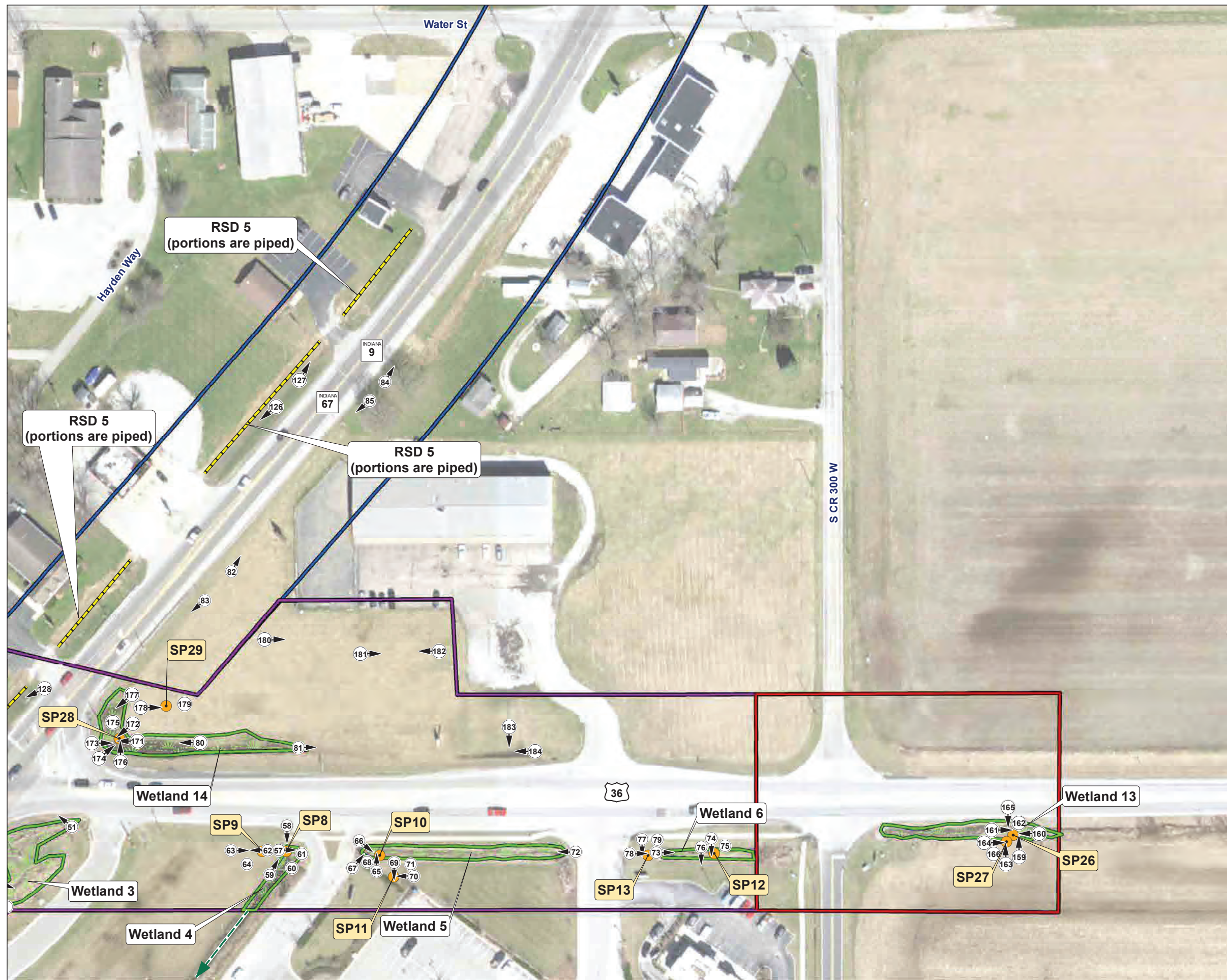


Figure 8 **Sheet 6 of 9**
Aerial photograph showing the ecological resources and photograph locations for the combined investigation areas for proposed US 36 and SR 9 Projects (INDOT Des. Nos. 1702936, 1802854, and 2001127). (9 Sheets)



Investigation area

- LPA project
- State project
- LPA and State projects overlap
- Wetland
- Sample point
- Roadside ditch
- ➔ Resource extends outside Investigation Area
- ➔ Photo location
- Photo location (No direction)

Base: Aerial photograph
2017

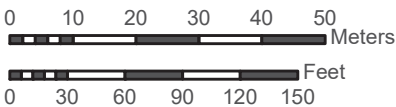
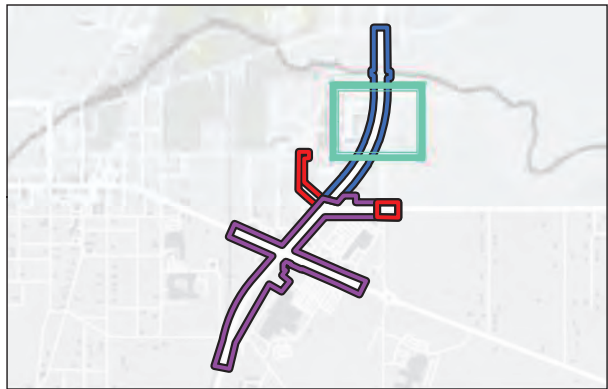
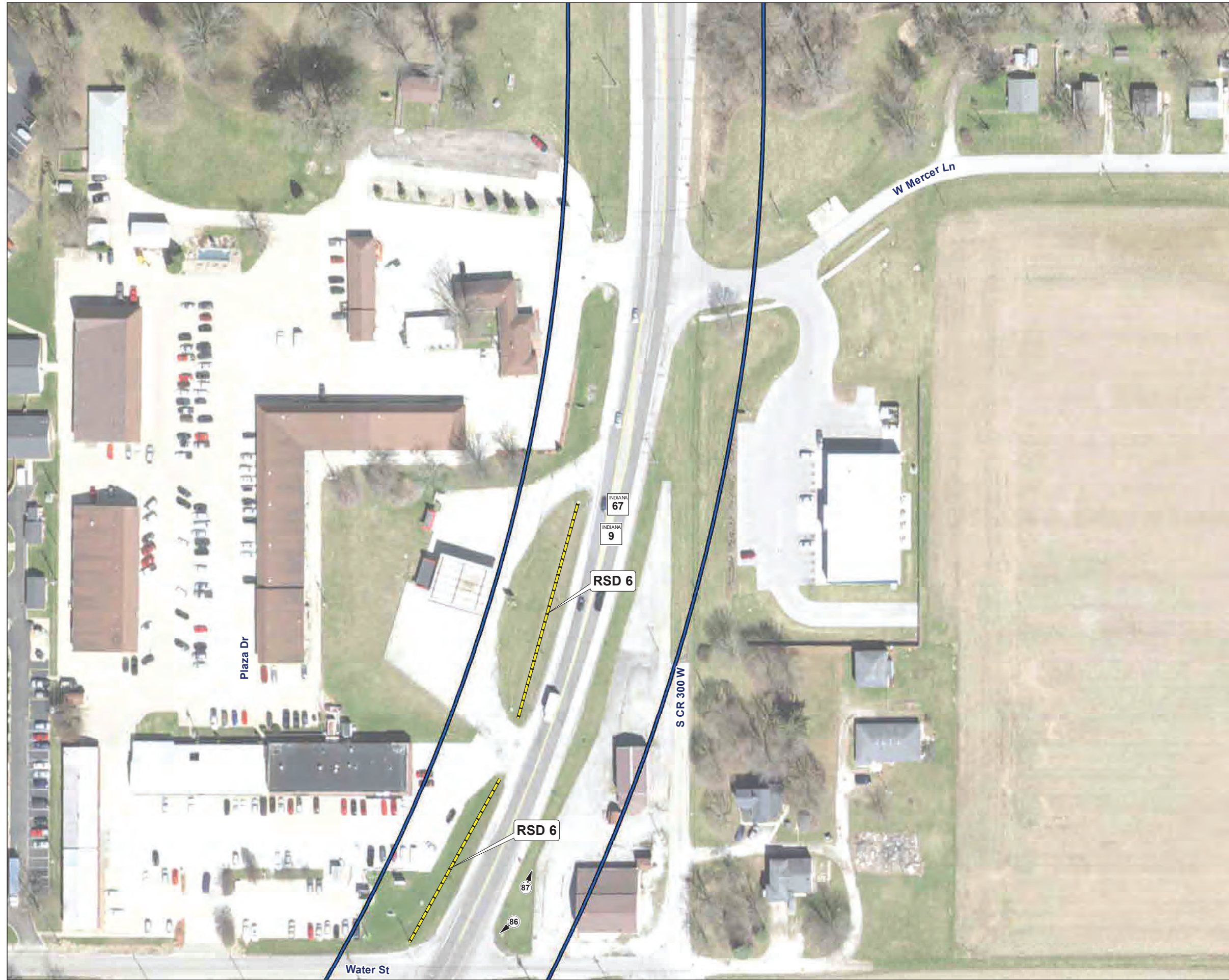


Figure 8

Sheet 7 of 9

Aerial photograph showing the ecological resources and photograph locations for the combined investigation areas for proposed US 36 and SR 9 Projects (INDOT Des. Nos. 1702936, 1802854, and 2001127). (9 Sheets)



Investigation area

- State project
- Roadside ditch
- Photo location

Base: Aerial photograph
2017

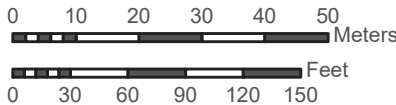
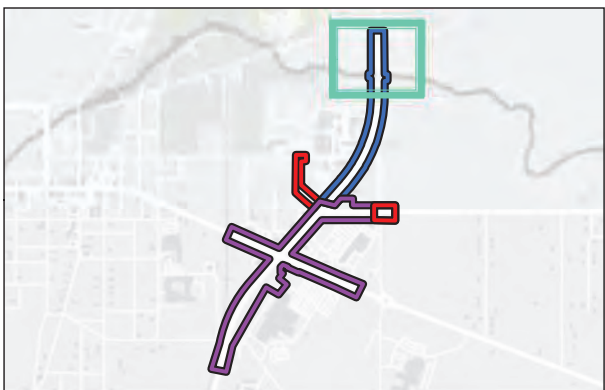
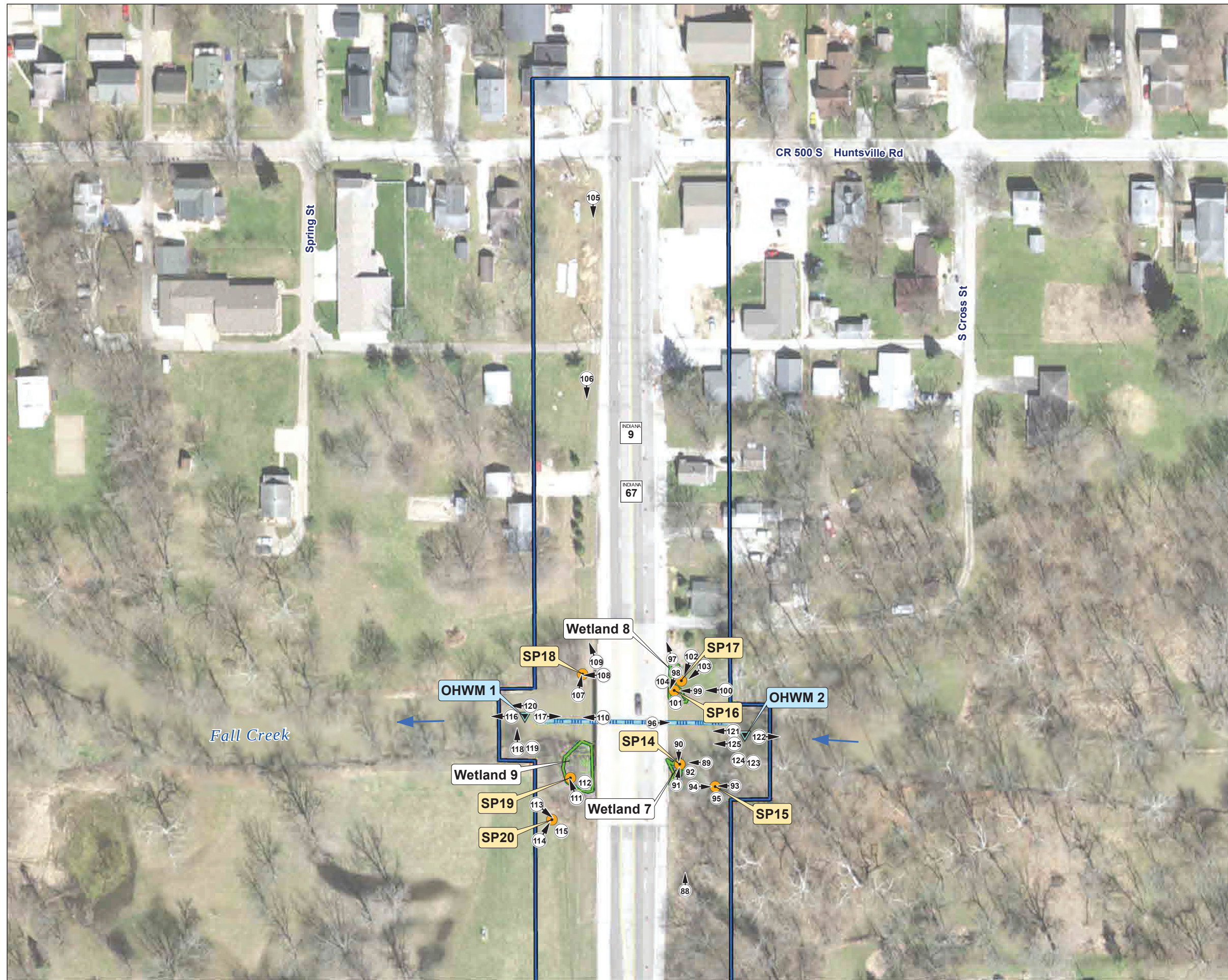


Figure 8

Sheet 8 of 9

Aerial photograph showing the ecological resources and photograph locations for the combined investigation areas for proposed US 36 and SR 9 Projects (INDOT Des. Nos. 1702936, 1802854, and 2001127). (9 Sheets)



Investigation area

- State project
- Stream
- Wetland
- Sample point
- OHWM
- Photo location
- Photo location (No direction)
- Flow direction

Base: Aerial photograph
2017

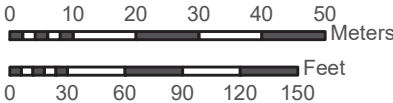


Figure 8 **Sheet 9 of 9**

Aerial photograph showing the ecological resources and photograph locations for the combined investigation areas for proposed US 36 and SR 9 Projects (INDOT Des. Nos. 1702936, 1802854, and 2001127). (9 Sheets)

State Project: US 36 (SR 9/SR 67) Added Travel Lanes, INDOT Des. Nos. 1702936 and 1802854 & US 36 (SR 9/SR 67) Bicycle and Pedestrian Facilities, INDOT Des. No. 2001127

Region ID: IN

Workspace ID: IN20230717102658353000

Clicked Point (Latitude, Longitude): 40.00694, -85.73040

Time: 2023-07-17 06:27:25 -0400



> Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	86.668	square miles

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

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USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Application Version: 4.16.0

StreamStats Services Version: 1.2.22

NSS Services Version: 2.2.1

Figure 9

Portion of the USGS StreamStats map (USGS 2016) for the proposed US 36 and SR 9 Projects (INDOT Des. Nos. 1702936, 1802854, and 2001127).

Base: USGS StreamStats, <https://streamstats.usgs.gov/ss/>, 2023



- Point of Interest
- Base Flood Elevation Point
- Flood Elevation Points**
 - STUDIED STREAM
- Rivers and Streams at least 1 square mile**
- Drainage Area (sq. miles)**
 - 10 - 100
- ▨ FEMA Zone AE Floodway; FEMA Administrative Floodway
- ▨ FEMA Zone AE
- ▨ Additional Floodplain Area; DNR .2 Percent Flood Hazard

Point of Interest Coordinates
(WGS84)
Long: **-85.7322319818**
Lat: **40.0022919309**

The information provided below is based on the point of interest shown in the map above.

County: **Madison**

Approximate Ground Elevation: **861.1 feet (NAVD88)**

Stream Name:
Fall Creek

Base Flood Elevation: **854.4 feet (NAVD88)**

Drainage Area: **Not available**

Best Available Flood Hazard Zone: **Not Mapped**

National Flood Hazard Zone: **Not Mapped**

Is a Flood Control Act permit from the DNR needed for this location? **See following pages**

Is a local floodplain permit needed for this location? **Contact your local Floodplain Administrator-**

Floodplain Administrator: **Kayla Hassett, Planning and Zoning Administrator**

Community Jurisdiction: **Town Of Pendleton, City proper**

Phone: **(765) 778-8370**

Email: **khassett@town.pendleton.in.us**

APPENDIX G: PUBLIC INVOLVEMENT

Notice of Survey Letters

INDOT News Release for Public Meeting 5-24-2023

Public Meeting Information 6-7-2023

Comments/Questions Regarding Public Meeting



June 9, 2020

Notice of Survey

RE: U.S. 36 from Madison Ave. north to SR 9 at Huntsville Rd. in Madison County

Dear Property Owner,

Certified Engineering, Inc. has been selected by INDOT for field survey of the above referenced project. Our information indicates that you own property near the above proposed roadway project. Certified Engineering, Inc. will be performing a survey of the project area in the near future. It may be necessary for representatives from Certified Engineering, Inc. to enter your property to complete this work. This is permitted by law per Indiana Code (IC) 8-23-7-26. Anyone performing this type of work has been instructed to identify him or herself, if you are available, before they enter your property. If you no longer own this property or it is currently occupied by someone else, please let us know the name of the new owner or occupant so that we can contact them about the survey.

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

The survey is needed for this roadway project. Please be assured of our sincere desire to cause you as little inconvenience as possible during this survey.

If any problems do occur, please contact Jason Hesler of Certified Engineering, Inc. at (317) 546-1599 or at 3939 Millersville Road, Indianapolis, Indiana 46205. Thank you in advance for your cooperation.

Sincerely,

Certified Engineering, Inc.

A handwritten signature in black ink, appearing to read "JRH", is written over the printed name.

Jason R. Hesler, PE, PLS



March 23, 2022

Notice of Survey

RE: U.S. 36 from Madison Ave. north to SR 9 at Huntsville Rd. in Madison County

Dear Property Owner,

Certified Engineering, Inc. has been selected by INDOT for field survey of the above referenced project. Our information indicates that you own property near the above proposed roadway project. Certified Engineering, Inc. will be performing a survey of the project area in the near future. It may be necessary for representatives from Certified Engineering, Inc. to enter your property to complete this work. This is permitted by law per Indiana Code (IC) 8-23-7-26. Anyone performing this type of work has been instructed to identify him or herself, if you are available, before they enter your property. If you no longer own this property or it is currently occupied by someone else, please let us know the name of the new owner or occupant so that we can contact them about the survey.

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

The survey is needed for this roadway project. Please be assured of our sincere desire to cause you as little inconvenience as possible during this survey.

If any problems do occur, please contact Jason Hesler of Certified Engineering, Inc. at (317) 546-1599 or at 3939 Millersville Road, Indianapolis, Indiana 46205. Thank you in advance for your cooperation.

Sincerely,

Certified Engineering, Inc.

A handwritten signature in black ink, appearing to read "JRH", is written over the printed name.

Jason R. Hesler, PE, PLS



May 4, 2023

Notice of Survey

RE: U.S. 36 from Madison Ave. north to SR 9 at Huntsville Rd. in Madison County

Dear Property Owner,

Certified Engineering, Inc. has been selected by INDOT for field survey of the above referenced project. Our information indicates that you own property near the above proposed roadway project. Certified Engineering, Inc. will be performing a survey of the project area in the near future. It may be necessary for representatives from Certified Engineering, Inc. to enter your property to complete this work. This is permitted by law per Indiana Code (IC) 8-23-7-26. Anyone performing this type of work has been instructed to identify him or herself, if you are available, before they enter your property. If you no longer own this property or it is currently occupied by someone else, please let us know the name of the new owner or occupant so that we can contact them about the survey.

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

The survey is needed for this roadway project. Please be assured of our sincere desire to cause you as little inconvenience as possible during this survey.

If any problems do occur, please contact Jason Hesler of Certified Engineering, Inc. at (317) 546-1599 or at 3939 Millersville Road, Indianapolis, Indiana 46205. Thank you in advance for your cooperation.

Sincerely,

Certified Engineering, Inc.

A handwritten signature in black ink, appearing to read "JRH", is written over the printed name.

Jason R. Hesler, PE, PLS



Indiana Department of Transportation

Email Address

Subscribe

Share Bulletin



e.g. name@example.com

INDOT Hosts Public Information Meeting for U.S. 36 and State Road 9 in Pendleton

Indiana Department of Transportation sent this bulletin at 05/24/2023 01:41 PM EDT

Having trouble viewing this email? [View it as a Web page.](#)



INDOT Hosts Public Information Meeting for U.S. 36 and State Road 9 in Pendleton

MADISON COUNTY, Ind. - The Indiana Department of Transportation announces a public information meeting for the U.S. 36 and State Road 9 corridor in Pendleton on Wednesday, June 7, from 6:00 p.m. to 8:00 p.m. This project aims to reduce travel delay, improve pedestrian and bicycle accessibility and connectivity and improve safety by reducing conflict points.

Doors open at 6:00 p.m. at the Pendleton Heights High School cafeteria (1 Arabian Dr., Pendleton, IN 46064). The presentation is from 6:30 - 7:00 p.m. followed by an open house. During the open house portion, the project team will be able to present their findings in depth, answer one-on-one questions and receive feedback from the public, The project team is seeking public feedback on the initial design and concept for the future of the U.S. 36 and State Road 9 corridor so they can further refine their plans to best balance all interests.

As proposed, the project involves construction of additional vehicular travel lanes along U.S. 36 and State Road 9 from Madison Ave. to the bridge over Fall Creek and additional turn lanes at the intersection of U.S. 36 and State Road 38 and the intersection of U.S. 36 and State Road 9. In addition, sidewalk and shared-use path with amenities such as lighting and benches, is proposed along U.S. 36, State Street, State Road 38, and Hayden Way as part of this project. Access management using raised medians is proposed along U.S. 36, State St., and State Road 38.

The Maintenance of Traffic (MOT) plan for the project is under development and a preliminary MOT plan will be presented at the public meeting. Access to all properties will be maintained during construction. INDOT will coordinate with emergency services, local school corporation officials and project stakeholders to ensure potential disruptions and impacts are minimized as much as possible. The project will require approximately 5.1 acres of permanent new right-of-way, in addition to some temporary right-of-way needed during construction.

Public comments will be taken as part of the public information meeting. All written statements submitted prior to, during, and for a period of 30 days following the meeting date, will be evaluated, considered and addressed in subsequent environmental documentation. Written comments may be submitted prior to the public hearing and within the comment period to kszewczak@indot.in.gov. Meeting participants will have time to view project displays and speak with project representatives during an informal open house session before and after the presentation.

In accordance with the Americans with Disabilities Act (ADA), persons with disabilities or representing an ADA and/or Limited English Proficiency (LEP) population are encouraged to contact Scott Sandstrom, (317) 829-9644 or sandstroms@cdmsmith.com, in advance to coordinate services such as participation during the meeting, language, visual, and audio interpretation services.

US 36 ADDED TRAVEL LANES AND PEDESTRIAN CONNECTIVITY Public Information Meeting



Pendleton Heights High School Cafeteria
June 7, 2023
6-8 PM

1 Arabian Dr.
Pendleton, IN 46064

Learn about upcoming IMPROVEMENTS coming to the US 36 corridor in Pendleton

Stay Informed

Motorists in East Central Indiana can monitor road closures, road conditions, and traffic alerts any time via:

- Facebook: facebook.com/INDOTEast
- Twitter: [@INDOTEast](https://twitter.com/INDOTEast)
- TrafficWise: 511in.org
- Mobile App: [iTunes App Store](#) and the [Google Play store for Android](#)

About the Indiana Department of Transportation

INDOT continues to solidify the Hoosier State as the Crossroads of America by implementing Gov. Eric J. Holcomb's \$30 billion Next Level Roads plan. With six district offices and 3,500 employees, the agency is responsible for constructing and maintaining more than 29,000 lane miles of highways, more than 5,700 bridges, and supporting 4,500 rail miles and 127 aviation facilities across the state. INDOT was recently ranked #1 in the United States for infrastructure in CNBC's 2022 "America's Top States for Business" ranking. Learn more about INDOT at in.gov/indot.

Customer Service
1-855-463-6848
www.indot4u.com

Media Contact
Kyleigh Cramer
317-864-3164
kcramer@indot.in.gov

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G-5

US 36 Added Travel Lanes and Pedestrian Connectivity

Wednesday, June 7, 2023
6:30 p.m.

Pendleton Heights High School

Welcome

- Purpose of public meeting
- Format
- Visit our sign-in table
- Informational handout
- Submit written comments
- Project display area



Public Information Meeting Presentation Slides

US 36 ATL and Pedestrian Connectivity in Pendleton

• Project Team

- INDOT Greenfield District
- Town of Pendleton
- CDM Smith and consultant team



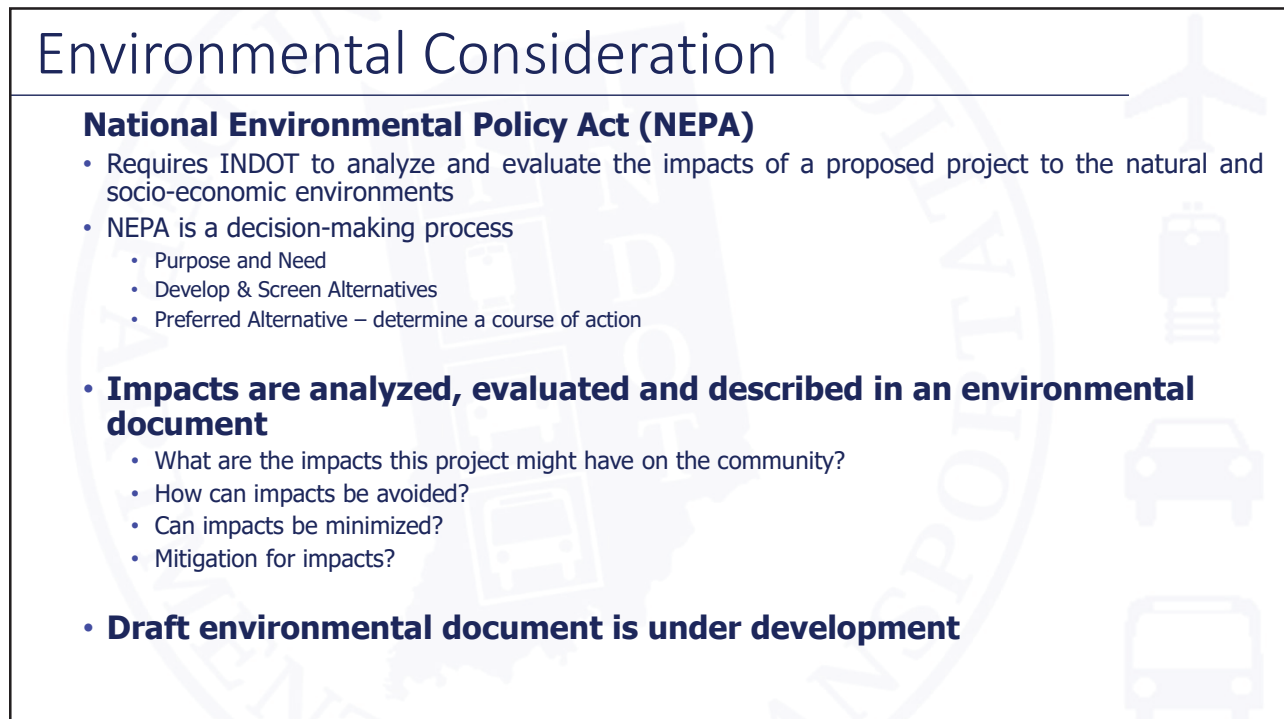
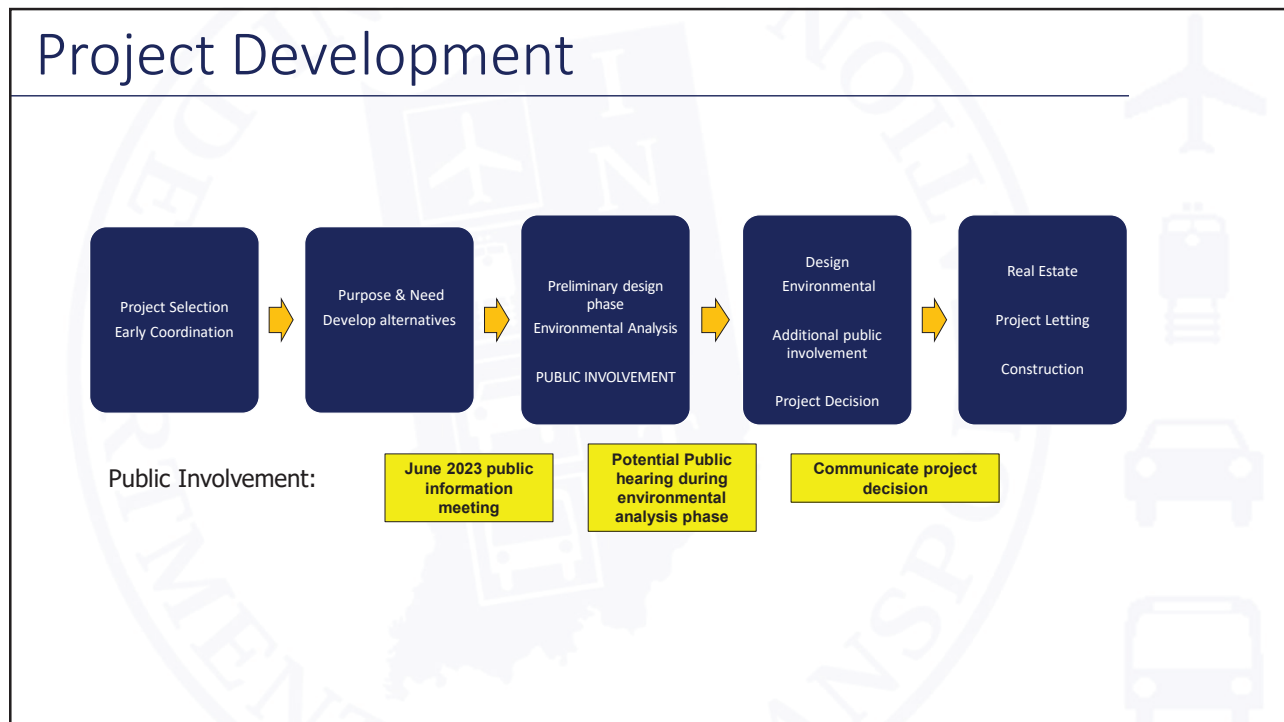
- Public meeting notice posted in Pendleton Post-Times
- INDOT posted a news release
- INDOT and Town of Pendleton social media posted the announcement
- A copy of presentation and project documentation will be available for review online via – on.in.gov/US36ATL

Project Stakeholders

- Indiana Department of Transportation
- Federal Highway Administration
- Town of Pendleton
- Madison County
- Madison County Council of Governments (MPO)
- Elected & local officials
- Residents and citizens
- Commuters
- Businesses
- Emergency services
- Schools
- Churches
- Community organizations



Public Information Meeting Presentation Slides



Public Information Meeting Presentation Slides

Types of items evaluated

- Right-of-way
- Streams, Wetlands, and Other Waters
- Floodplains
- Endangered Species
- Farmland
- Cultural Resources (Historic/Archaeological)
- Parks and Recreational Lands (Trails)
- Air Quality
- Community Impacts
- Public Involvement



Environmental Analysis & Public Involvement

- **Notice of Entry for Survey – 2020, 2022, and 2023**
 - Letters mailed to properties within general area
 - Describes early project proposal
 - Project personnel in area, access to properties
 - Gather data for environmental analysis
- **Public information meeting – June 2023 (TODAY)**
 - Project webpage: on.in.gov/US36ATL
- **Section 106 of National Historic Preservation Act – 2021-2023**
 - Take into account proposal's impact to historic & archaeological properties
 - Public invited to participate
 - Public notices issued with 30-day comment period
 - "No Adverse Effect" finding anticipated
- **Draft environmental document – November 2023**
 - Opportunity to request a public hearing at that time

Project Location

- US 36 and SR 9 from approximately Angle Road to Huntsville Road
- State Street from RR to US 36
- SR 38 from US 36 to west of roundabout
- US 36 from SR 9 to CR 300



Existing Conditions

- US 36 / SR 9
 - Two 12-foot travel lanes with shoulders except between Jct's which is four lanes and curbed
- State Street / SR 38
 - Two 12-foot travel lanes with turn lanes
- US 36 East Leg
 - Two 12-foot travel lanes with turn lanes
- Open drainage for most of corridor
- Limited sidewalk
- Signalized intersections at State St/SR 38 and US 36/SR 9
- Traffic congestion and safety concerns
- No lighting



Public Information Meeting Presentation Slides

Crash Data

- Crash data is from 2017 to 2019
 - Total crashes is 166
 - Index of Crash Frequency is 6.02
 - Index of Crash Cost is 4.58
- Main types of collisions are rear end, right angle, and left turn

Type of Collision	Number
Backing Crash	2
Collision with Object in Road	2
Head On	4
Left Turn	20
Left / Right Turn	4
Opposite Direction Sideswipe	2
Other	9
Ran Off Road	9
Rear End	75
Right Angle	37
Same Direction Sideswipe	2
Total	166

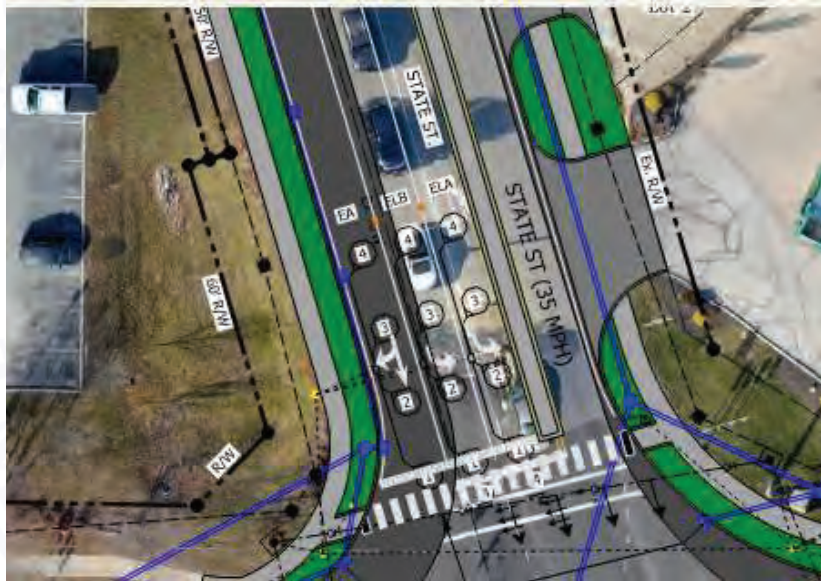
Purpose and Need

- Purpose
 - Reduce travel delay
 - Improve pedestrian and bicycle accessibility and connectivity
 - Improve safety by reducing conflict points
- Need
 - Heavy congestion and queuing during peak hours and when I-69 is diverted
 - Lack of safe pedestrian and bicycle access

Alternatives Considerations

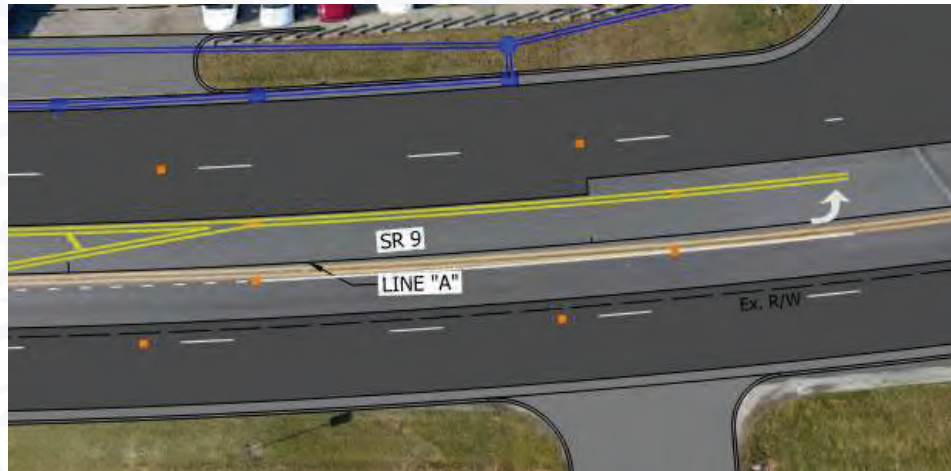
- **Goals of the project**
 - Add capacity
 - Improve pedestrian infrastructure
 - Improve safety
- **Iterative analysis for alternatives**
 - Improve EB State St operations
 - Additional through lane
 - Add turn lanes at intersections
 - Pedestrian infrastructure
 - Access management

Improve EB State St Operations



Public Information Meeting Presentation Slides

Additional Through Lane



Add Turn Lanes at Intersections



Pedestrian Infrastructure



Access Management

What is Access Management?

Access management is a set of techniques used to control entry to highways and other roadways. Good access management promotes the **safe** and **efficient** use of the transportation network. The Preferred Alternative includes added raised medians along State Street, SR 38, and US 36 to improve traffic operations.

How

The Preferred Alternative proposes to **restrict the location of left turns** off of State Street, SR 38, and US 36

Why

Following INDOT design standards for access control, limiting left turns would:

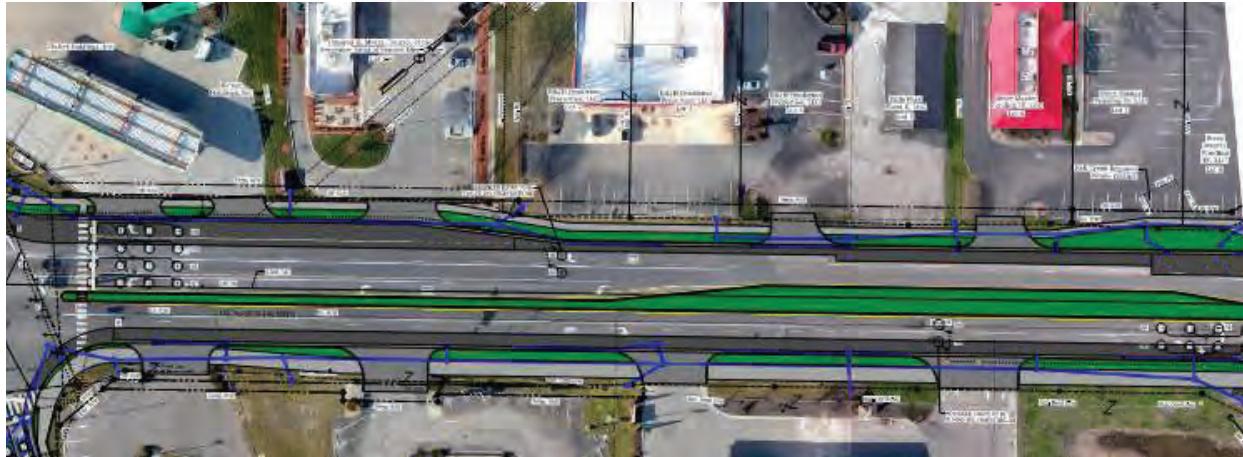


Improve safety by decreasing the chance of collision from oncoming traffic and rear-end crashes



Improve operations by reducing backups along State Street, SR 38, and US 36

Access Management



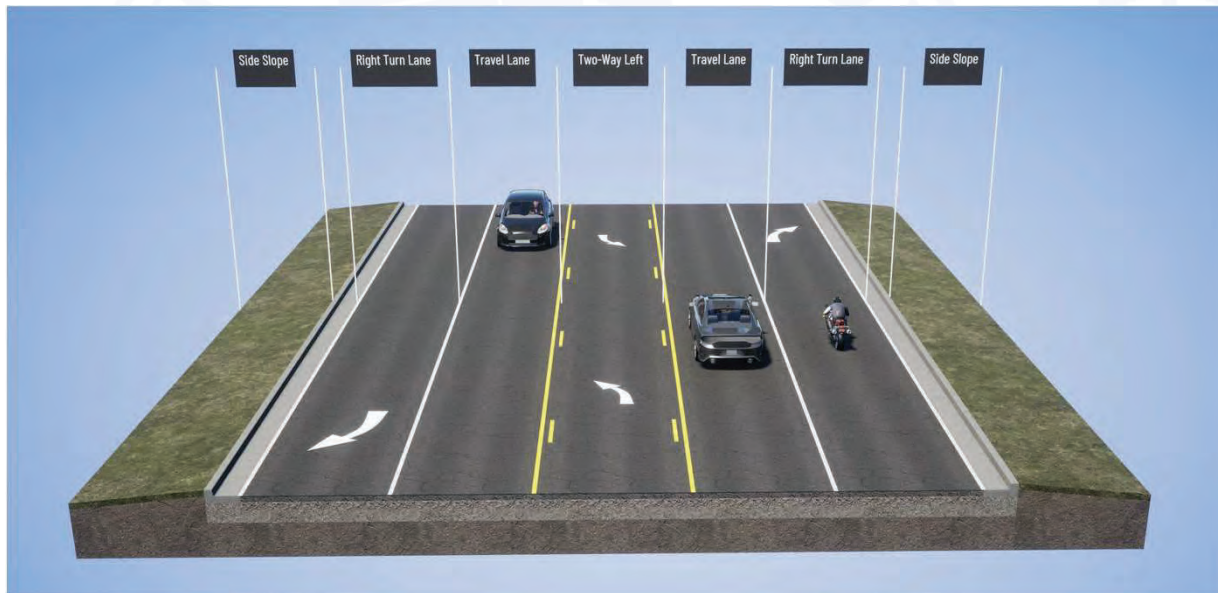
Preferred Alternative - Proposed Improvements

- Add travel lanes on US 36
- Add turn lanes at both major intersections
- Improve drainage
- Improve pedestrian infrastructure*
 - Sidewalk
 - Shared-use Paths
 - Lighting
 - Amenities
- Access management
- Other improvements

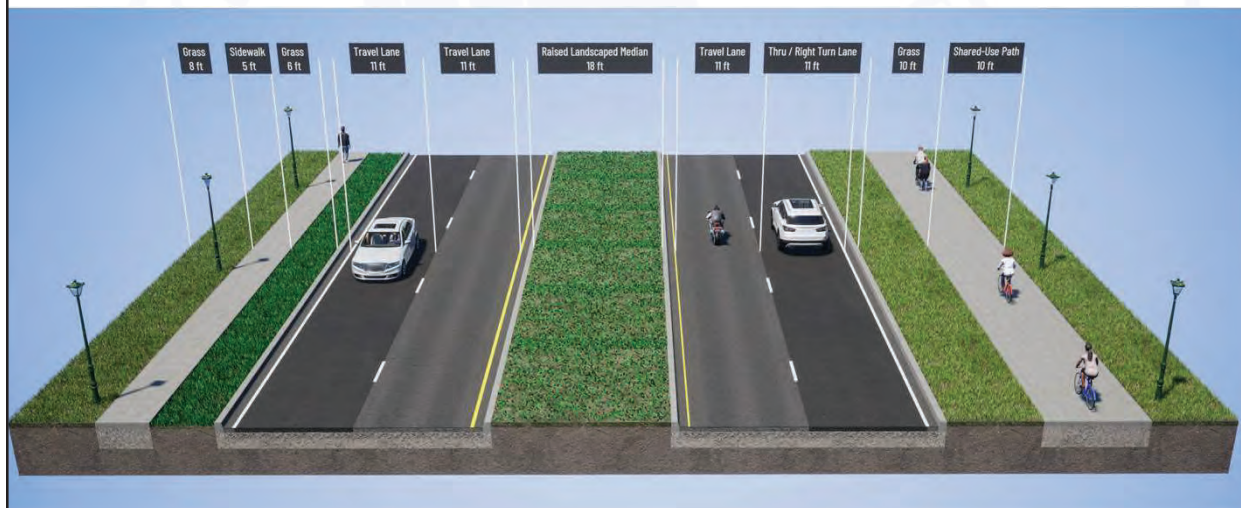
* Pedestrian infrastructure construction is split into three phases by geography and will be constructed in separate years.

Public Information Meeting Presentation Slides

Existing Typical Section – US 36



Proposed Typical Section – US 36



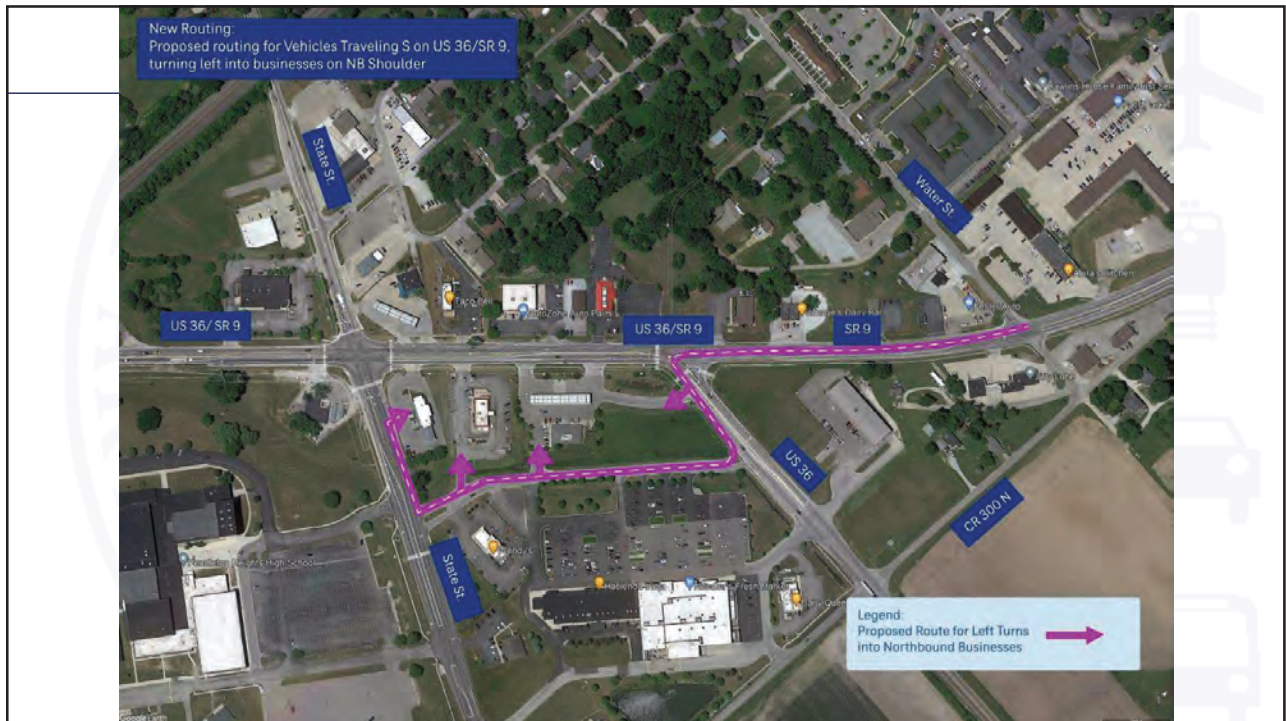
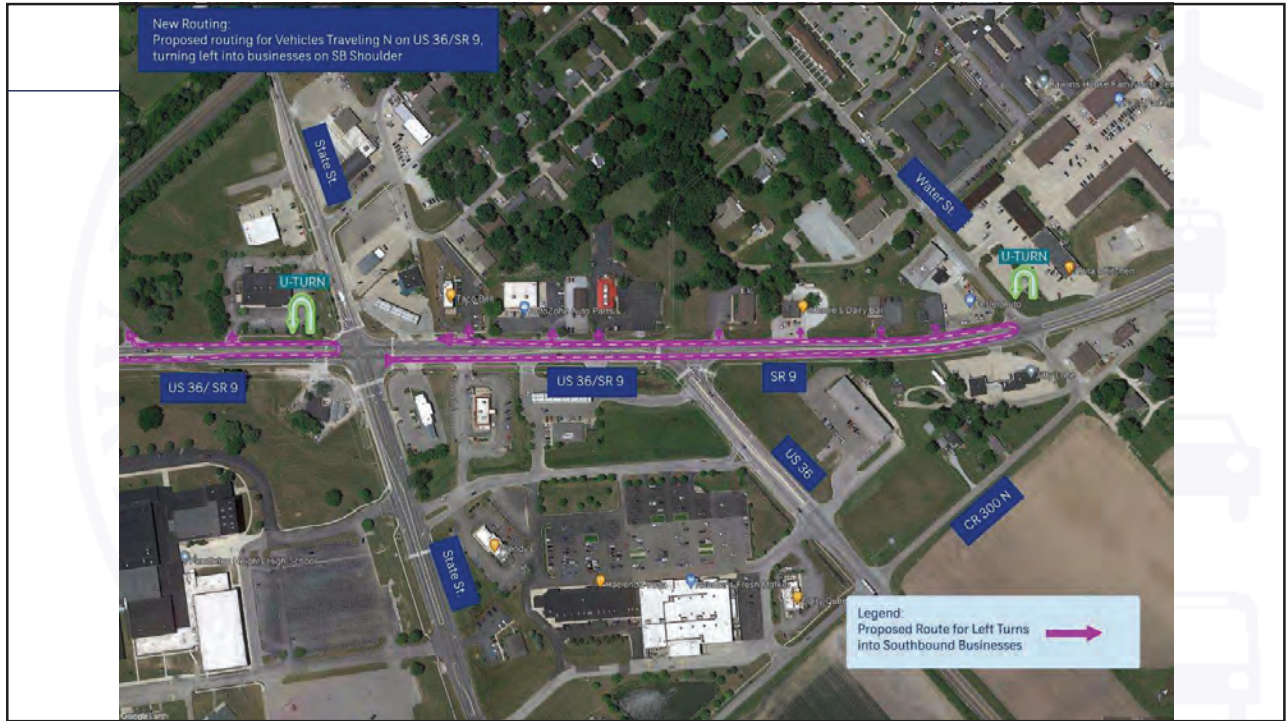
Typical Section – HAWK Signal (Pedestrian Hybrid Beacon)



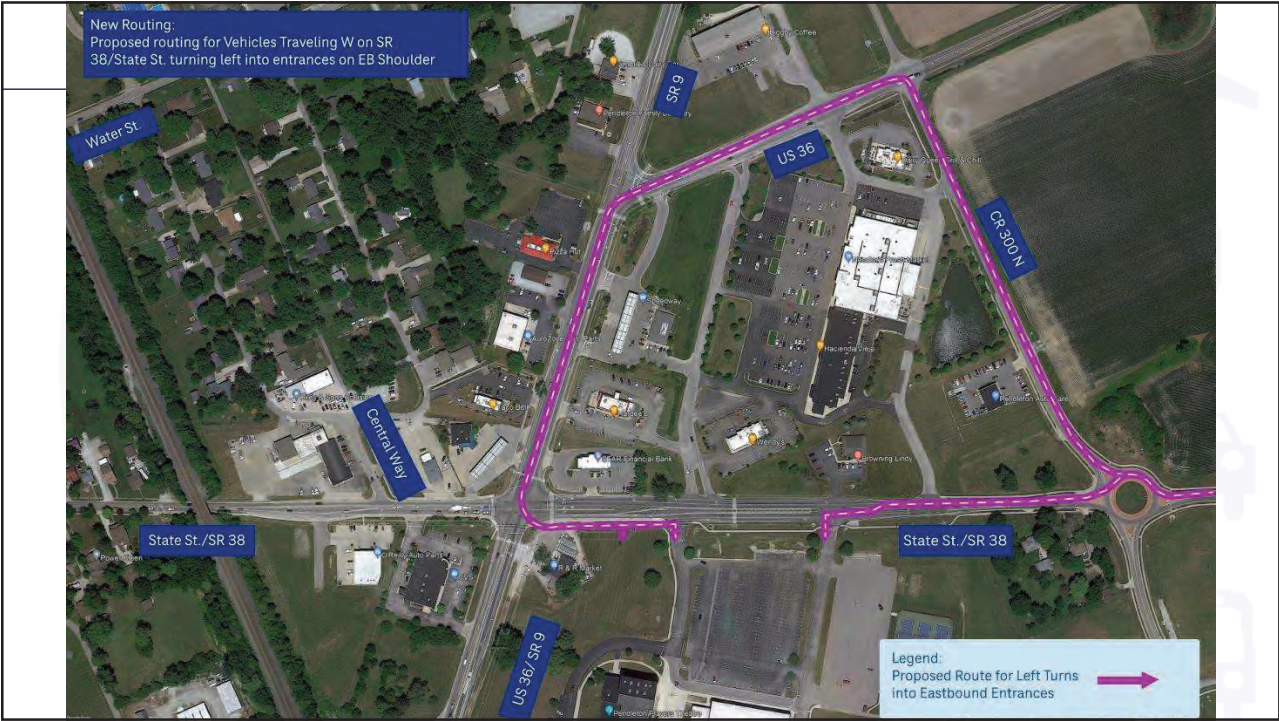
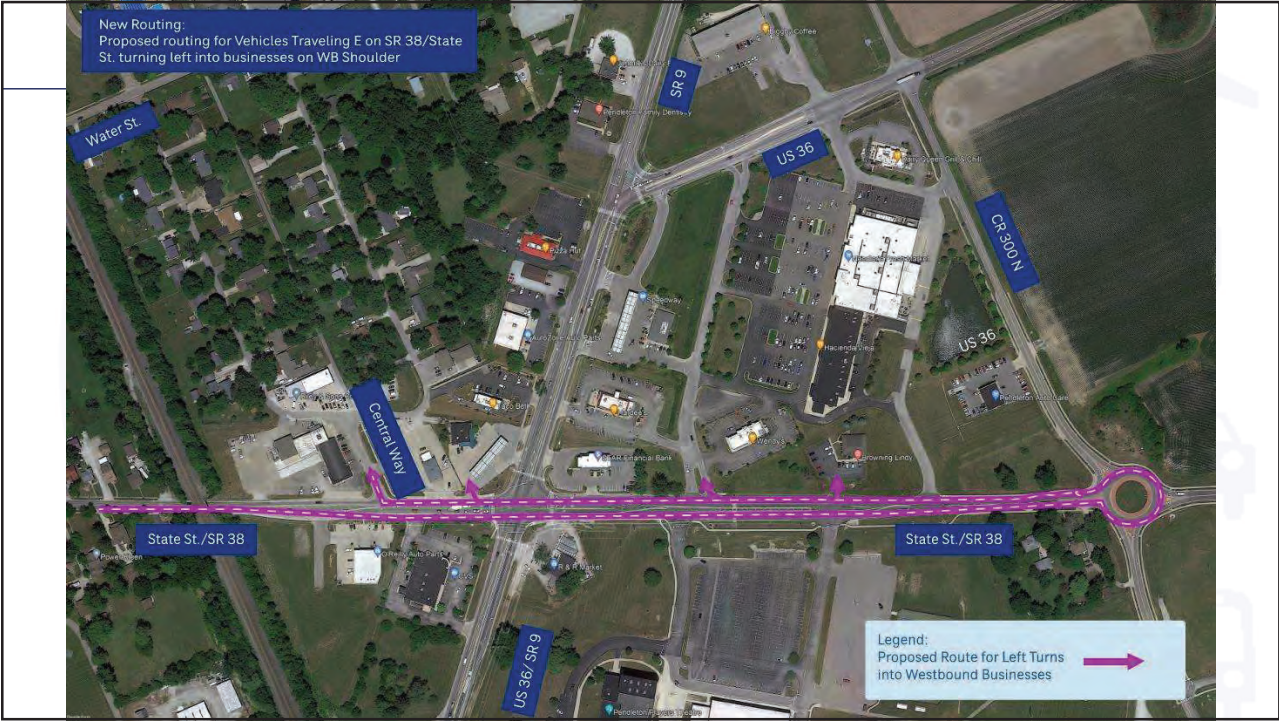
Pedestrian Routing to/from school and HAWK



Public Information Meeting Presentation Slides

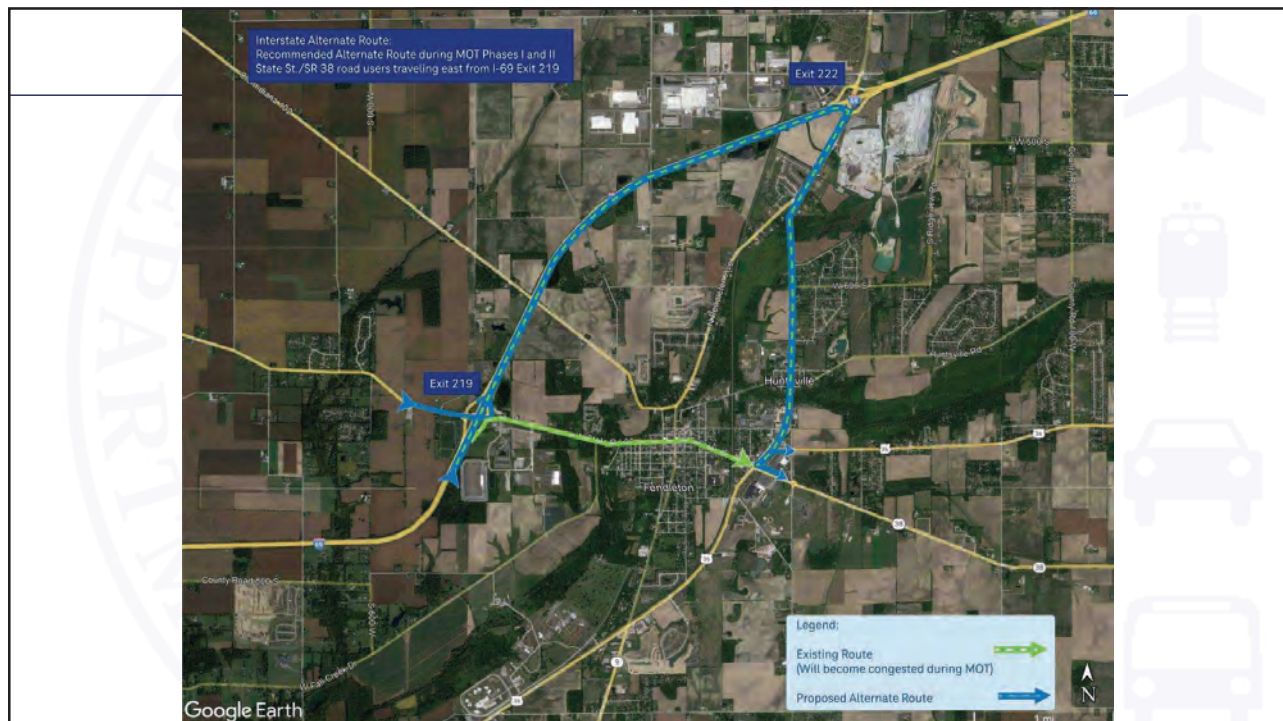


Public Information Meeting Presentation Slides



Maintenance of Traffic

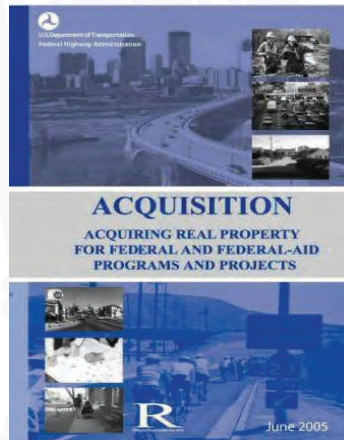
- Maintain local access to all residences, farm fields and businesses during construction using surrounding roads, temporary entrances or other appropriate means
- Phase 0: Strengthen shoulders on US 36 and SR 9
- Phase 1: Construct one side of each road
- Phase 2: Construct the other side of each road
- Phase 3: Median construction



Public Information Meeting Presentation Slides



Real Estate



Real Estate Acquisition Process

- **Uniform Act of 1970**

- All federal, state and local governments must comply
- Requires an offer for just compensation

- **Acquisition Process**

- Appraisals
- Review Appraisals
- Negotiations

- **Right-of-way (ROW)**

- **Permanent**

- Permanent ROW is land, once purchased by INDOT from the legal land owner, becomes ROW owned by INDOT
- Approximately 5.1 acres required

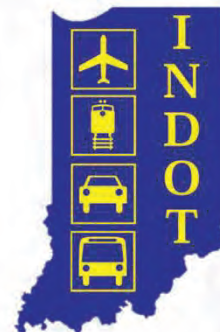
- **Temporary**

- Temporary ROW is land required during the construction of a project and is used for the purposes of construction-related activity
- INDOT pays legal land owner a fee for land use during construction
- Approximately 0.7 acres required

ROW acquisition activities are ongoing

Project Schedule

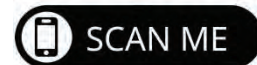
- Preliminary Engineering – ongoing
- Environmental Analysis Phase – ongoing
- Real estate acquisition activities – 2023/2024
 - Appraising
 - Negotiations/buying
- Utilities coordination/relocation – 2024
- Construction – 2024 through 2025
 - Phase 1 – All road work and ped work between Jcts
- Future construction
 - Phase 2 – Pedestrian work south of SR 38
 - Phase 3 – Pedestrian work along Hayden Way



Public Information Meeting Presentation Slides

Submit Public Comments

- **Submit public comments using:**
 - Public Comment Form at this meeting
 - Use the QR code and comment through INDOT's website (indot4u.com)
- **INDOT respectfully requests that comments be submitted by Friday, July 7, 2023**
 - Submit to Kim Szewczak, Project Manager, kszewczak@indot.in.gov
- Comments will be reviewed, evaluated and given full consideration during decision-making process



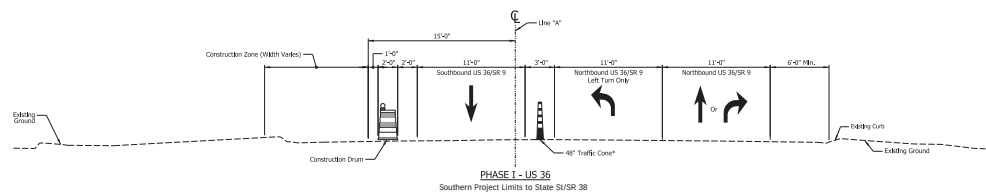
Thank You

- **Please visit with the project team following the presentation**
- **Project Open House**
 - Project maps and displays
 - Project team informal Q & A
- Public Meeting webpage – **on.in.gov/US36atl**
- **Follow project updates on social media**
 - Facebook: facebook.com/INDOTEast/
 - Twitter: @INDOTEast

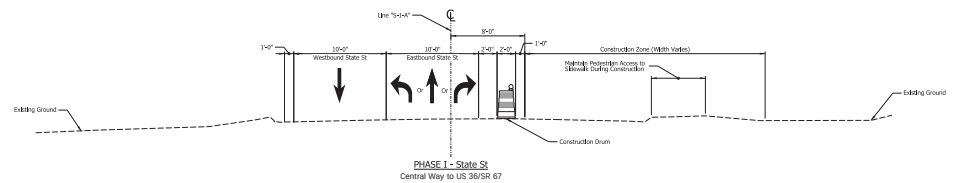
Environmental Map Board maps can be found in Appendix B.

Maintenance of Traffic - Phase I of Construction

US 36/SR 9

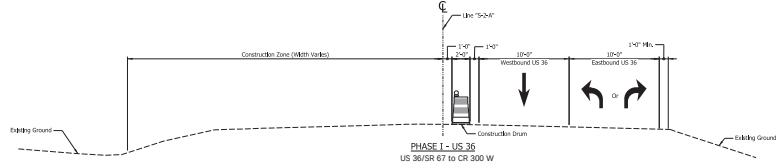


State St/SR 38



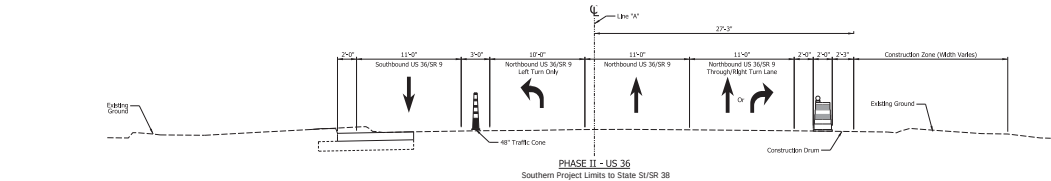
PHASE I - US 36
: State St/SR 38 to US 36 East

US 36

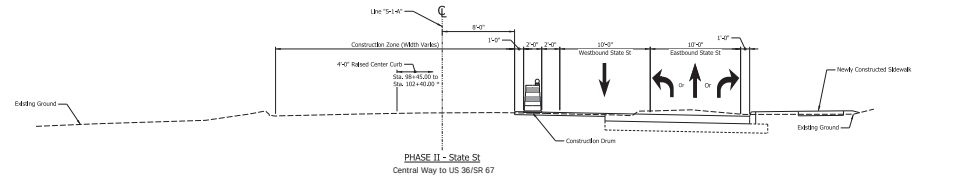


Maintenance of Traffic - Phase II of Construction

US 36/SR 9

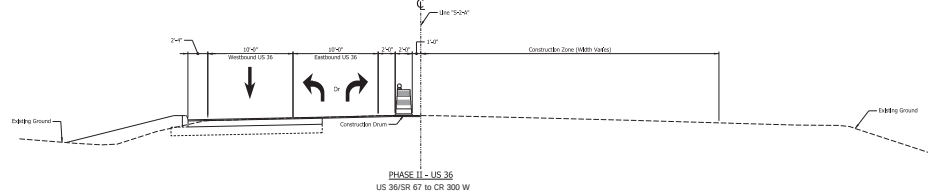


State St/SR 38



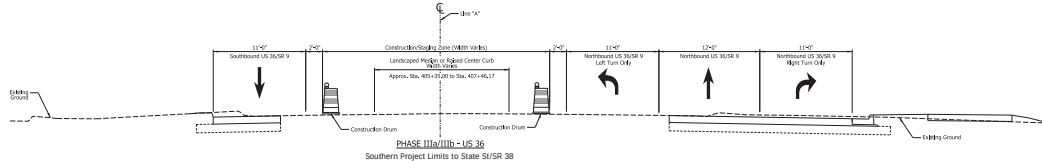
PHASE II - US 36
State St/SR 38 to US 36 East L

US 36

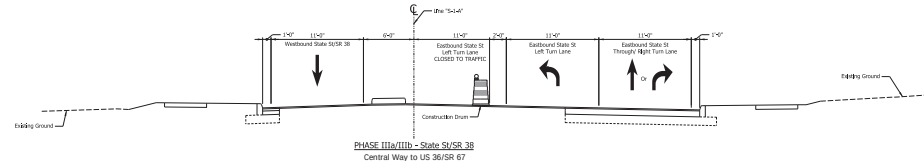


Maintenance of Traffic - Phase IIIa/IIIb of Construction

US 36/SR 9

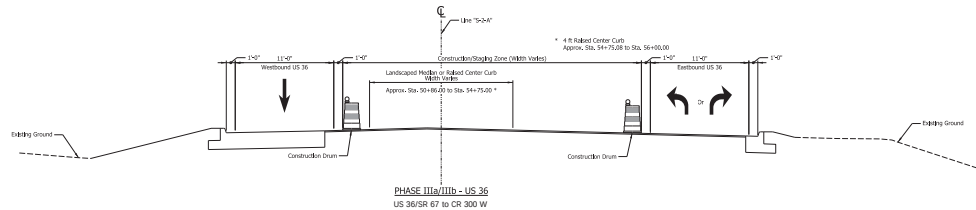


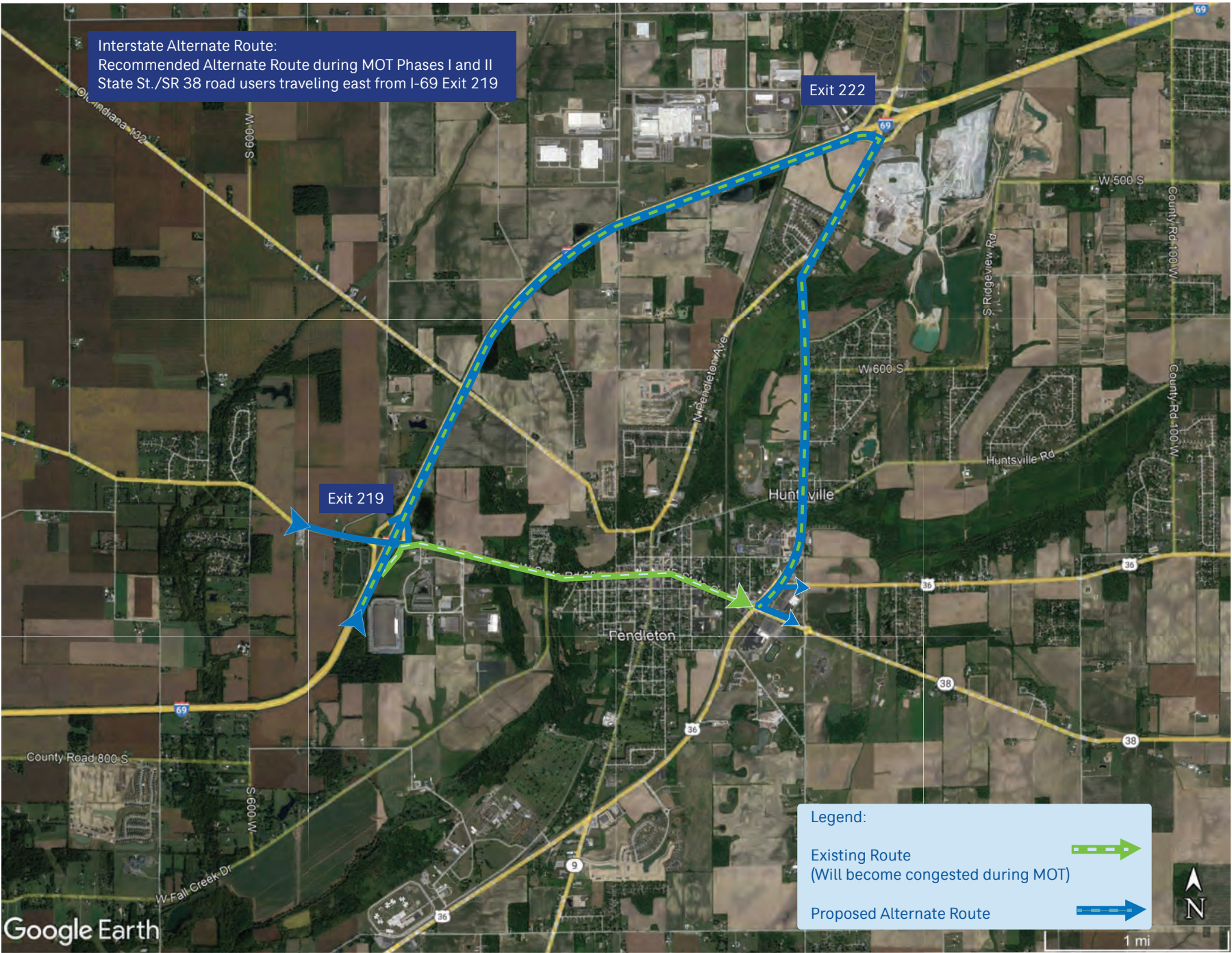
State St/SR 38



PHASE IIIa/IIIb - US 36/SR 38
State St/SR 38 to US 36 East Le

US 36

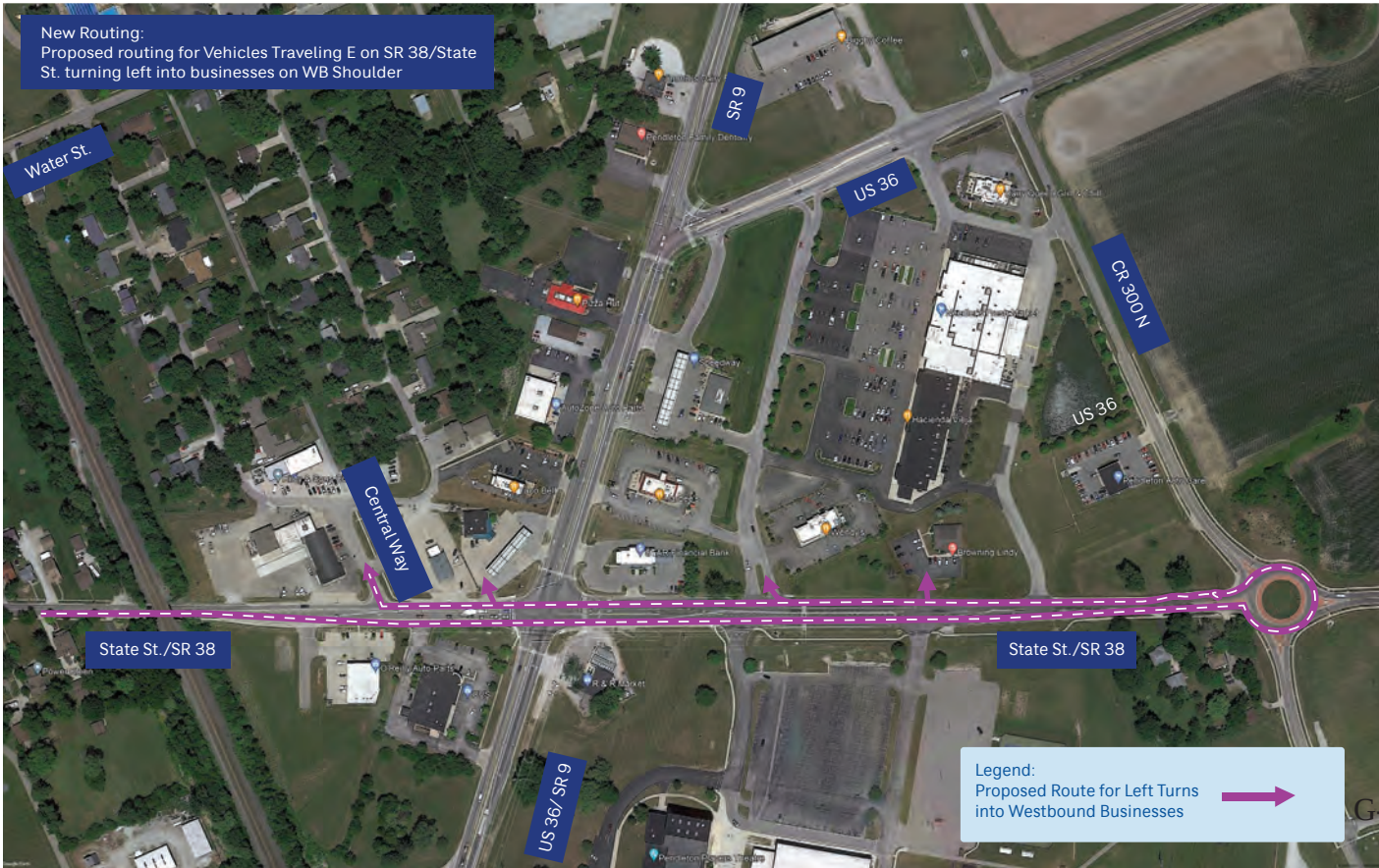


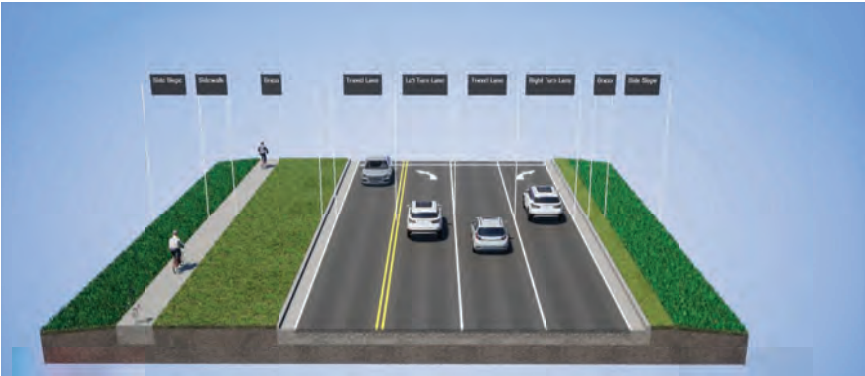


SR 67/SR 9 - New Routes for Left Turns into Businesses



SR 38/ State St. - New Routes for Left Turns into Businesses



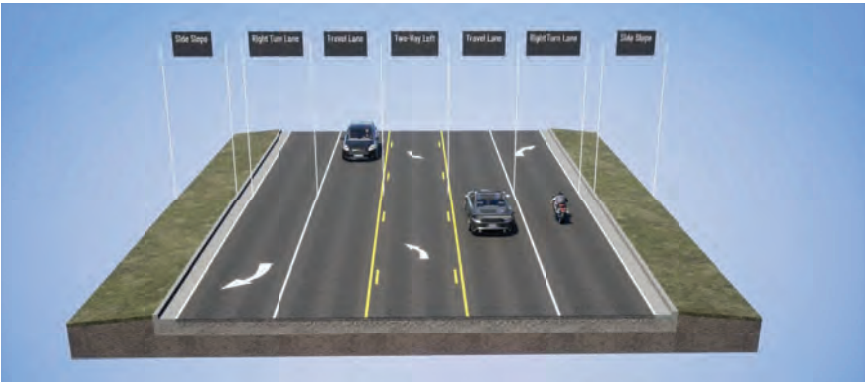


EXISTING

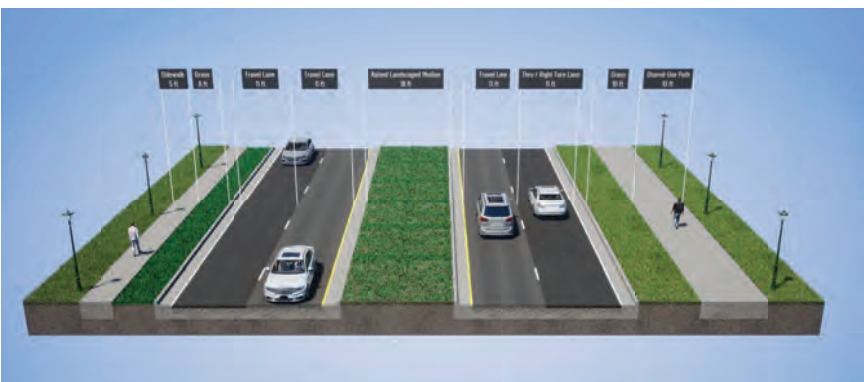


PROPOSED

US 36 SOUTH OF STATE ST/SR 38 INTERSECTION



EXISTING



PROPOSED

US 36 BETWEEN STATE ST/SR 38 AND US 36 INTERSECTIONS



EXISTING

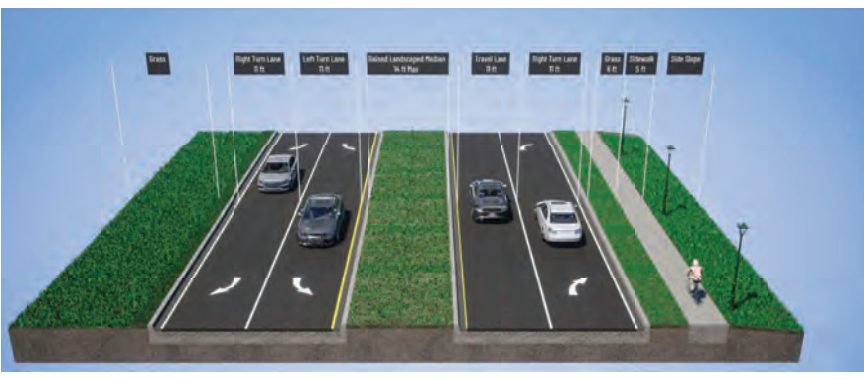


PROPOSED

STATE STREET



EXISTING



PROPOSED

US 36 EAST LEG



PROPOSED HAWK SIGNAL (PEDESTRIAN HYBRID BEACON)

SR 38 NEAR PENDLETON HEIGHTS HIGH SCHOOL



\$FILES

CDM
Smith

211 North Pennsylvania Street, Suite 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

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

INDIANA DEPARTMENT OF TRANSPORTATION		SCALE 1" = 20'-0"	BRIDGE FILE \$BRIDGE_FILES
HAYDEN WAY PATH LINE "PATH-N"			DESIGNATION \$DES_NUM
			SURVEY BOOK \$SRV_BKS
			\$PAGE_NUMS 1 of \$TOTAL_PAGES
			CONTRACT \$CON_NUMS
			\$PROD_NUMS



**CDM
Smith**
211 North Pennsylvania Street, Suite 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

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

INDIANA
DEPARTMENT OF TRANSPORTATION

US 36
LINE "A"

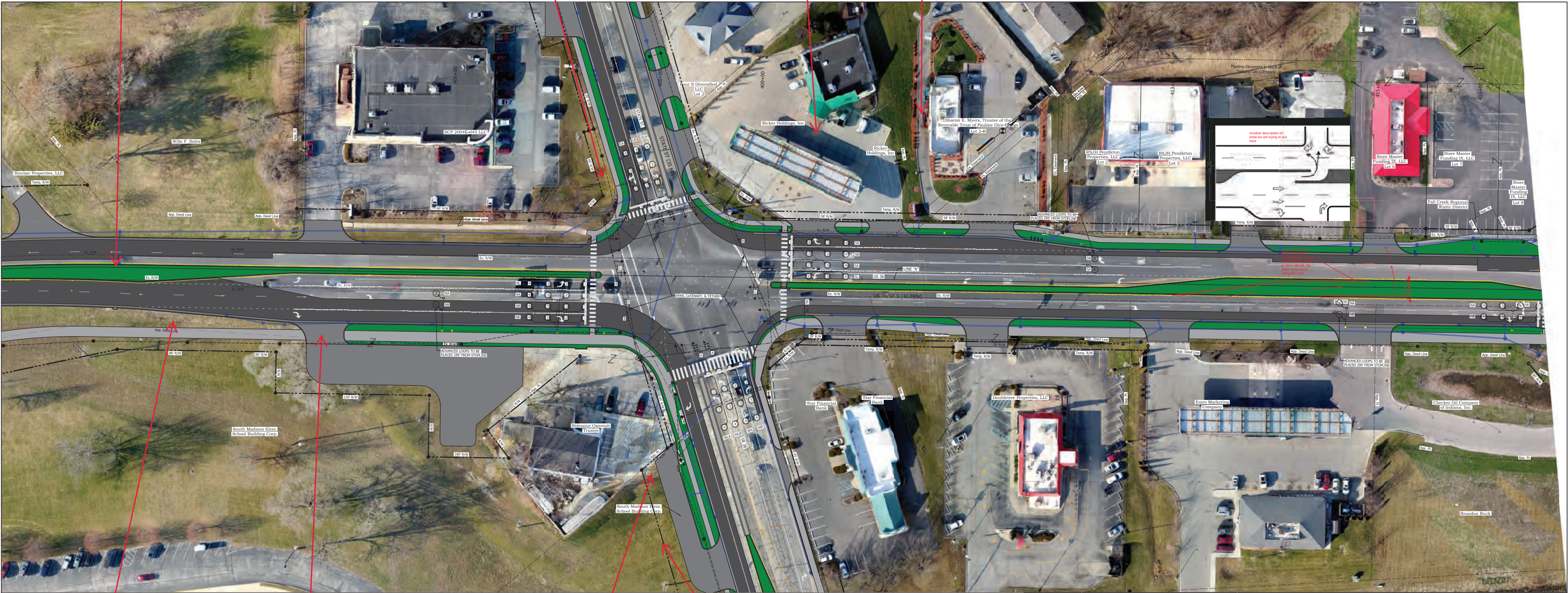
SCALE 1" = 20'-0"	BRIDGE FILE
	DESIGNATION
SURVEY BOOK	SHEETS
CONTRACT	1 of 1 PROJECT

Comment 2:
HS Crossing

Comment 5:
Add right turn lane

Comment 11:
Check school bus/truck
auto turn SB to WB at
State Street

Comment 7:
Create access out back
to Central Way



Comment 3:
WB-38? (hard to decipher)
auto turn movements at
R&R, which way in/out?

Comment 1:
Extend right turn lane on
SR 67 north to ease traffic

Comment 4:
Move ditch and tile back past new
access drive

New catch basin with headwall and
tile for underground spring water

Comment 13:
Spring uses the existing
pipe

CDM
Smith
211 North Pennsylvania Street, Suite 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

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

INDIANA DEPARTMENT OF TRANSPORTATION
US 36 LINE "A"

SCALE 1" = 20'-0"	BRIDGE FILE
SURVEY BOOK	DESIGNATION
CONTRACT	SHEETS 1 of PROJECT



Comment 8:
Classic control device
(Signal light) needed - left
from east on Water Street

Comment 9:
Need roundabout or
signal at Water Street

Comment 10:
Water Street traffic
concerns redo analysis



211 North Pennsylvania Street, Suite 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

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

INDIANA
DEPARTMENT OF TRANSPORTATION

SR 9
LINE "A"

SCALE 1" = 20'-0"	BRIDGE FILE
	DESIGNATION
SURVEY BOOK	SHEETS
CONTRACT	PROJECT



3FILES

CDM
Smith

211 North Pennsylvania Street, Suite 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

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

INDIANA DEPARTMENT OF TRANSPORTATION		SCALE 1" = 20'-0"	BRIDGE FILE
SR 9 LINE "A"		SURVEY BOOK	DESIGNATION
		CONTRACT	SHEETS 1 of 1
			PROJECT

Comment 12:
Signal preemption at signals
for emergency vehicles

Comment 6:
Close off this access



**CDM
Smith**
211 North Pennsylvania Street, Suite 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

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

INDIANA
DEPARTMENT OF TRANSPORTATION

STATE ST / SR 38
LINE "S-2-A"

SCALE 1" = 20'-0"	BRIDGE FILE
SURVEY BOOK	DESIGNATION
CONTRACT	SHEETS 1 of 1 PROJECT

Comment 14:
School speed limit signs
are off by 1 hour - do they
need reset for the time
change?





211 North Pennsylvania Street, Suite 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____ DATE _____	INDIANA DEPARTMENT OF TRANSPORTATION	SCALE 1" = 20'-0"	BRIDGE FILE	
DESIGNED: _____	DRAWN: _____		SR 38 LINE "S-1-A"	DESIGNATION	
CHECKED: _____	CHECKED: _____			SURVEY BOOK	SHEETS
				CONTRACT	PROJECT



9FILES

**CDM
Smith**
211 North Pennsylvania Street, Suite 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

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

INDIANA
DEPARTMENT OF TRANSPORTATION

US 36 EAST LEG
LINE "S-2-A"

SCALE 1" = 20'-0"	BRIDGE FILE
	DESIGNATION
SURVEY BOOK	SHEETS
CONTRACT	1 of 1 PROJECT

US 36 ADDED TRAVEL LANES AND PEDESTRIAN CONNECTIVITY

Des. Nos. 1702936/1802854/2001127

PUBLIC INFORMATION MEETING

JUNE 7, 2023

6:00 PM

Pendleton Heights High School

SCHEDULE

6:00 pm / Welcome!

6:30 pm / Formal Presentation

7:00 pm / Open House with
Information Stations

8:00 pm / Meeting Adjourns

INFORMATION STATIONS

Environmental

What is NEPA (National Environmental Policy Act) and its use in the project design process?

Maintenance of Traffic and Construction Timeline

How will local access be maintained?
What will the phases of construction be?
What detours will be available?

Project Features and Improvements

What is being added and improved?
What are the benefits?

Right-Of-Way Acquisition

What are the kinds of right-of-way?
What is the process?

PROJECT DESCRIPTION

- This project will add travel lanes, access management, and pedestrian infrastructure along US 36 and SR 9 in Pendleton, Madison County.
- The purpose of the project is to reduce travel delay, improve pedestrian and bicycle accessibility and connectivity, and improve safety by reducing conflict points.
- As proposed, the project involves construction of additional vehicular travel lanes along US 36 and SR 9 from Madison Avenue to the bridge over Fall Creek and additional turn lanes at the intersection of US 36 and SR 38 and the intersection of US 36 and SR 9. In addition, sidewalk and shared-use path with amenities such as lighting and benches, is proposed along US 36, State Street, SR 38, and Hayden Way as part of this project. Access management using raised medians is proposed along US 36, State Street, and SR 38.



COMMENTS & FEEDBACK

Opportunity to give official written comments at the public comment station.

Official comments are welcome via email (kszewczak@indot.in.gov) until July 7, 2023.





PLEASE SIGN IN

Personal Information (i.e., phone numbers and addresses) has been removed from this list and on the following correspondence.

Meeting Topic: US 36 Added Travel Lanes and Pedestrian Connectivity Public Information Meeting

Meeting Date: June 7, 6pm to 8pm @ Pendleton Heights High School

NAME	ORGANIZATION	PHONE NUMBER	EMAIL
Please Print	-		
Valarie Huffman	-		
Clarence King	-		
Ralph Ridenour	-		
Richard Shelton	-		
Linda Shelton	-		
Jim Henderson			
Brady Extn	Times-Post		
TERRY RUTWINE	SUMMIT DAIRY BAR		
Sandy Butler	HFC, PS		
Jeff Webster	Joe Citizen		
Aubrey Fesler	Fesler Auto		
Blake Fesler	Fesler Auto		
Neal Smith	Smith Family Farms		
David Benefiel	Anderson MPO		
Ken Beers	-		
Ryan Phelps	Anderson MPO		
Candy Stewart	SMCSC		

Please Print



PLEASE SIGN IN

Meeting Topic: US 36 Added Travel Lanes and Pedestrian Connectivity Public Information Meeting

Meeting Date: June 7, 6pm to 8pm @ Pendleton Heights High School

NAME	ORGANIZATION	PHONE NUMBER	EMAIL
Please Print			
Steve Lindum	Indot		
Dave Happe			
Matt Monroe	Pendleton Resident		
Kathy Ridemour			
Brandon Buck	Land Owner		
Mace Bond	Land Owner		
Mike Roanack	PBA		
Kirk Kinnaman	—		

Please Print

Moore, Austin D.

From: Szewczak, Kimberly
Sent: Thursday, June 1, 2023 9:30 AM
To: Sandstrom, Scott; hnikides
Subject: FW: Pendleton - US 36/SR 67/SR 9 Improvements

Here is my reply

Thank you!

Kim Szewczak

Project Manager

INDOT – Greenfield District

32 S. Broadway Street

Greenfield, IN 46140

Cell: (317) 289-3193

Email: kszewczak@indot.in.gov



From: Szewczak, Kimberly
Sent: Thursday, June 1, 2023 8:53 AM
To: Kyle Eichhorn [REDACTED]
Subject: RE: Pendleton - US 36/SR 67/SR 9 Improvements

The materials from the public meeting will be posted to the website after the public meeting. The website is on.in.gov/US36ATL. Please let me know if you have any other questions 😊

Thank you!

Kim Szewczak

Project Manager

INDOT – Greenfield District

32 S. Broadway Street

Greenfield, IN 46140

Cell: (317) 289-3193

Email: kszewczak@indot.in.gov



From: Kyle Eichhorn [REDACTED]
Sent: Thursday, June 1, 2023 8:33 AM
To: Szewczak, Kimberly [REDACTED]
Subject: Pendleton - US 36/SR 67/SR 9 Improvements

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

Good Morning,

Would it be possible to get a link for the current plans for this improvement project? I will be unable to attend the public information session on June 7 and would like to see the plans.

Thanks,
Kyle Eichhorn

COMMENTS AND QUESTIONS

Brandon Buck

NAME

PHONE (OPTIONAL)

A

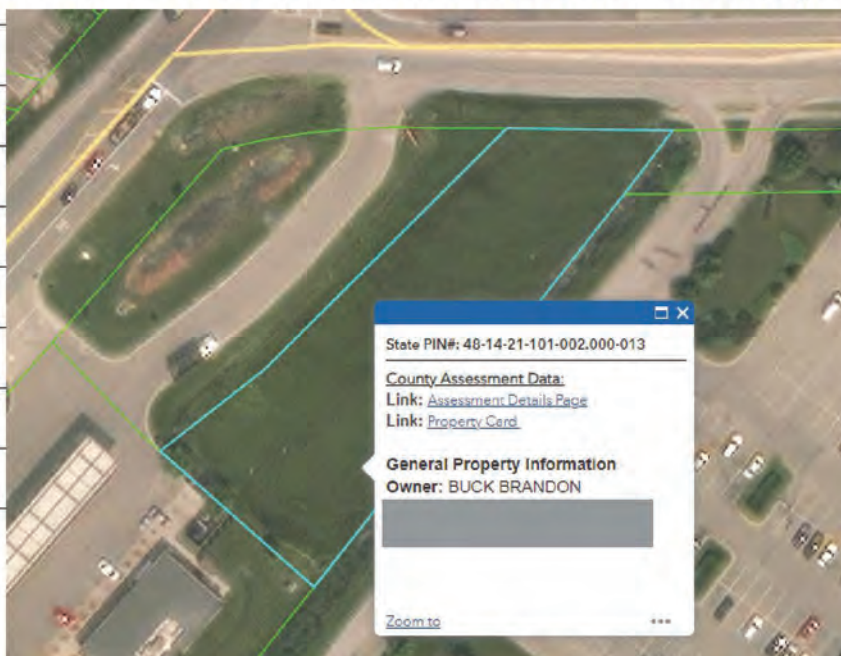
EMAIL ADDRESS

COMMENT

Would it be possible to get an entrance put into my property that is just east of 67 on the south side of 36?

Comment response 7/5/2023:
Thank you for your question.

No drives being cut off on south side of US 36 east leg with this project. Any other accesses would be paid for by owner and permitted by INDOT. It is likely that INDOT and the town will require you to purchase an access easement to use the Needler's access road to access your property.



on.in.gov/US36ATL

COMMENTS AND QUESTIONS

Candy Stewart

NAME

ADDRESS

EMAIL ADDRESS

COMMENT

In regards to Angle Road and SR 67 needs to have a stop light or round-a-bout. Currently buses are not allowed to turn left on SR 67 toward Angelle. They have to go several miles down 300 W to 900 S to SR 67. That is very time consuming for drivers and deadhead miles that are unnecessary and costly. Those drivers affected do not arrive to their elementary on time which is frustrating for the principals.

Wanted to be certain the rear exit from Dealers the public will be able to turn left (East to roundabout @ 300 W).

also wanted to be certain there will be a left hand turn onto the further east drive into PHHS for all student drivers and buses coming from the



East side of the district.

Comment response 7/5/2023:
Thank you for your comments.

SR 67/Angle Road does not warrant a signal right now. A roundabout is outside the scope of this project so this would need to be addressed in a separate project. We recommend reaching out to the organizations and committees that can determine if a project is needed and can acquire the necessary funding. Please see the list of contacts to the right.

Yes, all turns allowed to rear Needler's entrance off SR 38. Yes, all turns allowed at PHHS east drive.

INDOT

https://indottsc.service-now.com/csm?id=report_a_concern_public

Madison County Council of Governments

<https://www.heartlandmpo.org/contact>

Town of Pendleton

<https://www.town.pendleton.in.us/home/webforms/questions-comments>

South Madison Community School Corporation School Board
schoolboard@smcsc.com

COMMENTS AND QUESTIONS

Sandi Butler

NAME

PHONE (OPTIONAL)

ADDRESS

EMAIL ADDRESS

COMMENT

Stop light at The corner of Water St. & 67

Comment response 7/5/2023:

Thank you for sharing your recommendation.

A stop light is not currently warranted for this intersection. However, other improvements are being made to improve the performance of this intersection. SR 67/SR 9 is being increased to 4 lanes as part of this project which should reduce the length of queues and provide more opportunity to make left turns. A small loon added in SW corner to help with Water St U-turns. INDOT and the town will monitor the performance of the intersections after construction to determine if additional measures are needed that could be included in a future project.

Comment and response noted. No contact information to provide a response. Comment closed.



From: Sandi Butler [REDACTED]
Sent: Thursday, July 6, 2023 12:47:31 PM
To: Szewczak, Kimberly [REDACTED]
Subject: Re: US 36/ SR 67 Public Information Comment Response

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

Thank you for your response. It will continue to be a concern after the four lanes are added plus the median section which will not allow our local businesses/customers access. The proposed suggestion of making a U-turn is not a good solution. The median will reduce visibility and accessibility. The inability to make turns on the highway may restrict the customer base primarily to commuters who use the highway for direct travel. This could result in a smaller pool of potential customers, reducing the volume of business for establishments on the medians. It is not convenient to reroute through other roads or make U-turns. Diverting traffic patterns always leads to confusion. Our safety concerns on a four-way highway with no turning can result in increased speeds and limited opportunities for drivers to slow down or stop. Our community is very active with festivals, sport games along with school functions going on throughout the year. We are a busy community! Our community should be inviting, not creating a driving route that may frustrate drivers. Please rethink the median.

Thank you,
Sandi Butler

On Thu, Jul 6, 2023 at 8:54 AM Szewczak, Kimberly [REDACTED] wrote:

Sandi,

Good morning! Please see the attached and let me know if you have any questions. Thank you so much 😊

Thank you!

Kim Szewczak

Project Manager

INDOT – Greenfield District

32 S. Broadway Street

Greenfield, IN 46140



COMMENTS AND QUESTIONS

NAME

TERRY RICHMOND

PHONE (OPTIONAL)

ADDRESS

EMAIL ADDRESS

COMMENT

THE PROPOSED STRIPPING PREVENTING NORTH BOUND
TRAFFIC FROM TURNING INTO JIMMIES DAIRY BAR
(LEFT TURN) WILL CREATE MANY TRAFFIC PROBLEMS
AT WATER STREET AND I-24. CURTAIL A LOT OF
BUSINESS FOR ALL BUSINESSES ON THIS STRETCH OF
HIGHWAY.

THIS WILL NOT HELP TRAFFIC FLOW, BUT WILL
CAUSE MUCH CONGESTION.

Comment response 7/5/2023:

Thank you for sharing your concerns.

The concern for impacts to businesses is understandable. The main goals of this project are to improve traffic flow and safety. With this in mind, eliminating left turns at most locations greatly reduces conflict points and the chance of crashes. Alternate routes are available and the public is expected to adjust when medians or restrictions on turns are introduced.



COMMENTS AND QUESTIONS

Hannah Kimes

NAME

PHONE (OPTIONAL)

ADDRESS

EMAIL ADDRESS

COMMENT

Concern for the intersection on 167/Water St and the U-TURNS that will increase due to this. Access to My Property () and future flow of traffic and already existing drainage issues.

Ped walk way access on Hayden Way and the process of completion. What does this entail for ~~my~~ easement during construction?

Comment response 7/5/2023:

Thank you for sharing your concerns.

Drainage is being improved with this project. Most water will now outlet at Fall Creek. A detention basin is being constructed to store water during storm events and reduce flooding chances.

Small loon added in SW corner to help with Water St U-turns. The INDOT and the town will monitor the performance of the intersection after construction to determine if additional measures are needed that could be included in a future project.

During construction, will not have any impacts on its existing property. No temporary or permanent ROW is currently expected to be needed from this property for this project. Access will not be impacted to the driveway off of Water St.



on.in.gov/US36ATL

COMMENTS AND QUESTIONS

Valarie Huffman

NAME

PHONE (OPTIONAL)

ADDRESS

EMAIL ADDRESS

COMMENT

A HUGE concern of mine is the intersection of Water Street and 67. This intersection is really hard to turn left and even right at now. With all the changes you are making, it is going to be impossible to turn off Water Street left or right because of the 4 lanes of traffic plus all the people that are doing U-turns.

I'm also concerned about the access to my property and future flow of traffic along Hayden Way and Water Street. Also, for the extra businesses (Public Library, Brown's Pool, Sno Castle, Falls Plaza, and the elderly people at Fall Creek Retirement Home that walk along Water Street).

Please take time to think about the Water Street and 67 intersection.

Thank you!



on.in.gov/US36ATL

Comment response 7/5/2023:
Thank you for sharing your concerns.

SR 67/SR 9 is being increased to 4 lanes as part of this project which should reduce the length of queues and provide more opportunity to make left turns. A small loop added in SW corner to help with Water St U-turns. We do not believe that traffic along Hayden Way will be impacted and Water Street is not expected to have significantly more traffic as result of this project. INDOT and the town will monitor the performance of the intersection and the roadways after construction to determine if additional measures are needed that could be included in a future project.

From: THOMAS BOND [REDACTED]
Sent: Thursday, June 8, 2023 11:15 AM
To: Szewczak, Kimberly [REDACTED]
Subject: US36 / 67 / 9 Project Pendleton

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

Thank you for hosting this informational meeting last evening.

I would like to submit some comments regarding this project. For clarity sake, I will refer to the main north/south road as 67 from Angle Road to Huntsville. 36 will be where 36 leave 67 and heads east.

1. Water Street is one of my greatest concerns. That intersection is extremely dangerous today. I think added traffic signals would restrict the follow of traffic on 67 and it would result in four traffic signals within $\frac{3}{4}$ of a mile. The best and safest solution would be a roundabout. This would keep traffic flowing and would reduce accidents especially higher speed head on and side impact collisions. If the current thoroughfare plans for the area are completed, this intersection will become even more used as the plan is to close of the existing T intersection of 36 and 67 and realign 36 to meet up to Water Street. It is show on page 63, 74 and 85 of this document. [2021_pendleton_thoroughfare_plan_0.pdf](#) This should be coupled with #2.
2. The grass median on 67 should be extended to Water Street to remove any chance of left turns across 3 lanes of traffic and to keep the through lanes moving.
3. On 67 southbound just south of State Street, there should be a small turn lane into CVS. This would keep the traffic lanes from being slowed due to a turning vehicle.
4. On 67 southbound at the GoGet gas station, the south access entrance should be closed off in favor of a slightly wider north access entrance. It would eliminate redundancy and curb cuts.
5. On northbound 67, the dedicated right turn lane to 36 east should be added to this project so there is a dedicated right turn lane and two through lanes.
6. On northbound 67 approaching State Street, the eastbound right turn lane needs to be extended further south perhaps another 100'.
7. On eastbound State Street before and at the 67 intersection, there should be a dedicated right turn lane from the CVS entrance to 67 to keep the single through lane moving and reducing backups into town.
8. The median on State Street west of 67, should be stopped either be stopped at Central Way, or the median should be realigned to permit left turns into Central Way while still not permitting left turns out on to State Street. This would keep the median the same length as the plan currently indicates but to turn left you would have to be left of the median in a left turn only lane. (does that make sense as I am describing it?)
9. The CVS entrance on 67 should be extended west to meet up with the O'Reilly's entrance of State Street and the State Street entrance to CVS eliminated. This road would go behind O'Reilly's to meet up with that entrance road.
10. I have concerns with the crossing signal system on 38 from the HS to Wendy's. I think that will disrupt traffic flow especially during busy traffic times. I think a tunnel would be a better approach both under 38 and under 67 south R&R. I know this would add cost but keep one pedestrian from being seriously injured or killed trying to cross multiple lanes of traffic is a better approach. You have designed wonderful pedestrian crossing but from experience, the kids don't use them.
11. Hayden Road should be extended behind the business on 67 to provide additional access.
12. If possible, realign existing 36 to be more perpendicular to 67. Also realign Central Way to be more perpendicular to State Street.
13. On westbound 36 at 67, the existing right turn lane needs to be extended another 75' to keep left and right turning cars separate.

Thank you for considering these suggestions. If you have questions, please feel free to contact me.

Mike Bond

From: THOMAS BOND [REDACTED]
Sent: Thursday, June 15, 2023 9:57 PM
To: Szewczak, Kimberly [REDACTED]
Subject: RE: US36 / 67 / 9 Project Pendleton

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I forgot to attach this example to try and show an example of #8. If you are not the correct person to send these suggestions to, please let me know who they should be sent to.

Mike Bond

From: [THOMAS BOND](#)
Sent: Thursday, June 15, 2023 9:55 PM
To: [REDACTED]
Subject: RE: US36 / 67 / 9 Project Pendleton

Did you have any comments on my suggestions?

Mike Bond

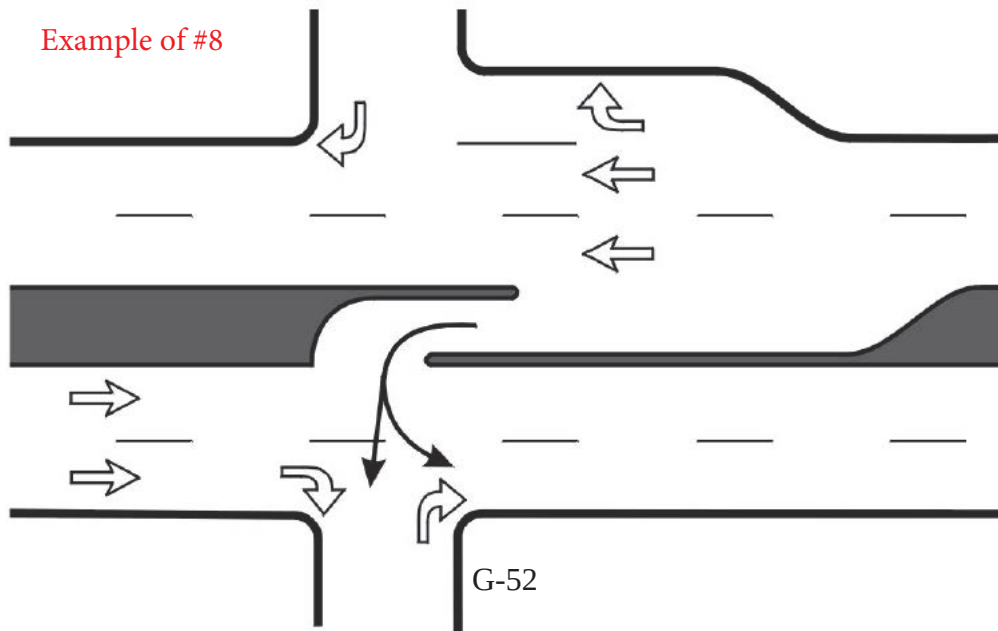
From: [THOMAS BOND](#)
Sent: Thursday, June 8, 2023 11:15 AM
To: [REDACTED]
Subject: US36 / 67 / 9 Project Pendleton

Thank you for hosting this informational meeting last evening.

I would like to submit some comments regarding this project. For clarity sake, I will refer to the main north/south road as 67 from Angle Road to Huntsville. 36 will be where 36 leave 67 and heads east.

1. Water Street is one of my greatest concerns. That intersection is extremely dangerous today. I think added traffic signals would restrict the flow of traffic on 67 and it would result in four traffic signals within $\frac{3}{4}$ of a mile. The best and safest solution would be a roundabout. This would keep traffic flowing and would reduce accidents especially higher speed head on and side impact collisions. If the current thoroughfare plans for the area are completed, this intersection will become even more used as the plan is to close off the existing T intersection of

Example of #8



From: Mike Bond [REDACTED]
Sent: Tuesday, June 20, 2023 4:26 PM
To: Szewczak, Kimberly [REDACTED]
Subject: Re: US36 / 67 / 9 Project Pendleton

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

I appreciate your responses. Is there any chance the Water Street intersection can be addressed to make it safer during this project? Even a traffic signal would help if a roundabout can't be added (even if the realignment of 36 can't be done during this project).

Mike Bond
[REDACTED]

On Jun 20, 2023, at 3:28 PM, Szewczak, Kimberly [REDACTED] wrote:

Thomas,

Good afternoon! I apologize for the delay in responding, I have been in and out of the office the last couple of days. Attached are the responses to your questions. Please let me know if you have any other questions. 😊 Have a great rest of the week!

Thank you!

Kim Szewczak

Project Manager

INDOT – Greenfield District
32 S. Broadway Street

[REDACTED]
<image001.jpg>

<image002.jpg>

<image003.jpg>

<image004.png>

<image005.jpg>

<image006.jpg>

<image007.png>

Comments from Mike Bond received on Thursday, June 8.
Responses in [blue](#).

1. Water Street is one of my greatest concerns. That intersection is extremely dangerous today. I think added traffic signals would restrict the flow of traffic on 67 and it would result in four traffic signals within $\frac{3}{4}$ of a mile. The best and safest solution would be a roundabout. This would keep traffic flowing and would reduce accidents especially higher speed head on and side impact collisions. If the current thoroughfare plans for the area are completed, this intersection will become even more used as the plan is to close of the existing T intersection of 36 and 67 and realign 36 to meet up to Water Street. It is shown on page 63, 74 and 85 of this document. [2021 pendleton_thoroughfare_plan_0.pdf](#) This should be coupled with #2.

The primary purpose and need of the state project is to address the capacity issues of the corridor. The primary purpose and need of the town project is to add pedestrian connectivity and amenities. Improving safety in the corridor is also a goal of the project since there is a significant crash history. The proposal to relocate the SR 67/US 36 junction to Water Street with a roundabout would be expected to reduce crashes but is outside the scope of this project and would require significant additional funding. This will be performed as a separate project if it is deemed necessary and can be funded.

2. The grass median on 67 should be extended to Water Street to remove any chance of left turns across 3 lanes of traffic and to keep the through lanes moving.

The current plan is to use painted medians with 2 sets of double yellow lines and cross hatches between the north junction (East leg of US 36) and Water Street. Vehicles are not allowed to make a left or U-Turn across painted median but still allow emergency vehicles to be able to cross when needed. Being able to quickly access the opposite side of SR 67 was raised as a concern of the Pendleton Fire Department prior to the public information meeting. In addition, prioritizing available funding comes into play in relation to the cost of additional physical median.

3. On 67 southbound just south of State Street, there should be a small turn lane into CVS. This would keep the traffic lanes from being slowed due to a turning vehicle.

We are making SR 67 two lanes through the corridor, so cars have the option of changing to the left lane to go around a turning vehicle.

4. On 67 southbound at the GoGet gas station, the south access entrance should be closed off in favor of a slightly wider north access entrance. It would eliminate redundancy and curb cuts.

Gas stations typically have multiple entrances on at least one street to provide a separate entrance to the gas pumps and the parking for the convenience store. This also provides access for fuel trucks to park, unload their fuel and reenter SR 67. Since we are adding medians, all their entrances will be right in/right out only the fuel trucks would not be able to use State Street since trucks are not allowed through the town center.

5. On northbound 67, the dedicated right turn lane to 36 east should be added to this project so there is a dedicated right turn lane and two through lanes.

The volume of traffic is not high enough to warrant a dedicated right turn lane since the new design will have two through lanes. Cars will have the option of changing to the left lane to go around a turning vehicle. The analysis shows Level of Service within the acceptable range for the future condition at this intersection for all movements.

6. On northbound 67 approaching State Street, the eastbound right turn lane needs to be extended further south perhaps another 100'.

The proposed right turn lane matches the existing right turn lane length at about 285 ft. Storage is something that is not as much of an issue here since we do allow right turns on red. The current lane length can store approximately 14 vehicles. The analysis shows Level of Service within the acceptable range for the future condition at this intersection for all movements.

7. On eastbound State Street before and at the 67 intersection, there should be a dedicated right turn lane from the CVS entrance to 67 to keep the single through lane moving and reducing backups into town.

According to our analysis the shared right and through lane is expected to operate at a Level of Service within the acceptable range for the future condition.

8. The median on State Street west of 67, should be stopped either be stopped at Central Way, or the median should be realigned to permit left turns into Central Way while still not permitting left turns out on to State Street. This would keep the median the same length as the plan currently indicates but to turn left you would have to be left of the median in a left turn only lane. (Does that make sense as I am describing it?)

Yes, it makes sense the way that you are describing it. Revising to this type of layout would require shortening the left turn lanes to SR 67 and it would also allow a conflict point to remain that may cause driver confusion with it being so close to the mainline turn lanes.

9. The CVS entrance on 67 should be extended west to meet up with the O'Reilly's entrance of State Street and the State Street entrance to CVS eliminated. This road would go behind O'Reilly's to meet up with that entrance road.

This is a site plan consideration for the property owner(s) and the Town to consider. This is outside the scope of this project.

10. I have concerns with the crossing signal system on 38 from the HS to Wendy's. I think that will disrupt traffic flow especially during busy traffic times. I think a tunnel would be a better approach both under 38 and under 67 south R&R. I know this would add cost but keep one pedestrian from being seriously injured or killed trying to cross multiple lanes of traffic is a better approach. You have designed wonderful pedestrian crossing but from experience, the kids don't use them.

A pedestrian tunnel was considered by the Town across SR 67 and the rough estimate was determined to be between 1 and 2 million dollars.

11. Hayden Road should be extended behind the business on 67 to provide additional access.

This is something the Town may consider but is outside the scope of this project.

12. If possible, realign existing 36 to be more perpendicular to 67. Also realign Central Way to be more perpendicular to State Street.

The current design improves the intersection geometrics without the need to realign the approach. Central Way is being changed to a right in/right out only configuration so realigning Central Way would have minimal benefit.

13. On westbound 36 at 67, the existing right turn lane needs to be extended another 75' to keep left and right turning cars separate.

The current design extends the existing right turn lane by almost 500 ft.

Jennifer Rhodes

From: Sandstrom, Scott
Sent: Wednesday, June 21, 2023 1:44 PM
To: Szewczak, Kimberly; hnikides
Cc: Vollmer, Michael J.
Subject: RE: US36 / 67 / 9 Project Pendleton

Kim,
I think letting Luis see this particular follow-up question and respond may be appropriate.

But our general response would be that based on analysis completed to date, a signal is not warranted at the Water Street intersection, but INDOT will continue to evaluate in the future.

-Scott

Scott M. Sandstrom, PE, PMP | Senior Project Manager | CDM Smith | [cdmsmith.com](mailto:scott.sandstrom@cdmsmith.com)

From: Szewczak, Kimberly
Sent: Wednesday, June 21, 2023 12:45 PM
To: Sandstrom, Scott
Subject: FW: US36 / 67 / 9 Project Pendleton

Thank you!

Kim Szewczak

Project Manager

INDOT – Greenfield District
32 S. Broadway Street
Greenfield, IN 46140



From: Mike Bond
Sent: Tuesday, June 20, 2023 4:26 PM
To: Szewczak, Kimberly
Subject: Re: US36 / 67 / 9 Project Pendleton

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

Jennifer Rhodes

From: Szewczak, Kimberly [REDACTED]
Sent: Friday, December 15, 2023 11:21 AM
To: Mike Bond
Cc: Sandstrom, Scott; Vollmer, Michael J.
Subject: RE: US36 / 67 / 9 Project Pendleton

Mike, Good morning! I sincerely apologize for the delay in responding to your question from June. We were waiting on the Traffic Engineer to weigh in and then he accepted another position downtown in our Central Office department. There was some disconnect on if your question got answered or not. I wanted to give you the response that I received. Based on analysis completed to date, a signal is not warranted at the Water Street intersection, but INDOT will continue to evaluate in the future. For this project, a small loon is now planned to aid in potential U-turn movements that will now take place at this intersection. Other measures further south are also being evaluated to reduce the number of potential U-turns at Water Street.

Again, I apologize for not responding more quickly. Please let me know if you have any more questions or concerns. 😊

Thank you!

Kim Szewczak

Project Manager

INDOT – Greenfield District
32 S. Broadway Street
Greenfield, IN 46140



From: Mike Bond [REDACTED]
Sent: Tuesday, June 20, 2023 4:26 PM
To: Szewczak, Kimberly [REDACTED]
Subject: Re: US36 / 67 / 9 Project Pendleton

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

I appreciate your responses. Is there any chance the Water Street intersection can be addressed to make it safer during this project? Even a traffic signal would help if a roundabout can't be added (even if the realignment of 36 can't be done during this project).

Mike Bond



Kay Wolverton voicemail

From: WOLVERTON TOM [REDACTED]
Sent: Monday, June 12, 2023 2:13 PM
To: Lindsay, Ian J. [REDACTED]
Subject: Voice Mail (57 seconds)

Hello, my name is Kay Wolverton and I'm trying to reach Ian. I'd like to know more about the State Road 67 and 36 intersection there at Pendleton IN. I understand there's supposed to be a retention pond put in there, and I had heard a roundabout. I'm concerned there's a property that sets there on the corner. Need to know what is really happening there. My cell phone is [REDACTED] Thank you. Bye bye.

You received a voice mail from [WOLVERTON TOM](#)

Thank you for using Transcription! If you don't see a transcript above, it's because the audio quality was not clear enough to transcribe.

[Set Up Voice Mail](#)

From: Sandstrom, Scott [REDACTED]
Sent: Tuesday, June 13, 2023 10:14 AM
To: Szewczak, Kimberly [REDACTED] Harry Nikides [REDACTED]
Cc: Vollmer, Michael J. [REDACTED] Lindsay, Ian J. [REDACTED]
Subject: RE: US 36 Property Interest Voice Mail (57 seconds)

For the record, I spoke with Kaye about the following items:

- She was interested in the Hughes property – the NE corner of SR 9/US 36
- She said here are several interested properties in buying the Hughes property – I took this to mean the entire parcel not just the open area for the detention basin
- I told her the plan is to take land for a detention basin in the open area in that corner and some land on the SR 9 side
- She asked about the west side of SR 9 and I told her no takes are planned at this time other than temporary
- She asked about roundabouts and I told her no roundabouts are planned on this project
- Her email is [REDACTED] and I am sending her two of the roll plot sheets that will eventually be online

-Scott

Scott M. Sandstrom, PE, PMP | Senior Project Manager | CDM Smith | [REDACTED]
cdmsmith.com

From: Sandstrom, Scott [REDACTED]

Sent: Tuesday, June 13, 2023 10:14 AM

To: [REDACTED]

Cc: Vollmer, Michael J. [REDACTED] Harry Nikides [REDACTED] Szewczak, Kimberly [REDACTED]

Subject: US 36 ATL - Hughes Property

Kaye,

Please see attached for two roll plots in the area of the Hughes property that were shown at the public meeting last week. In the near future these will also be published to INDOT's website at <http://on.in.gov/US36ATL>.

Thanks,

-Scott

Scott M. Sandstrom, PE, PMP

Senior Project Manager

Discipline Leader – Complete Corridors Design

CDM Smith

211 N. Pennsylvania St, Suite 1750, Indianapolis, IN 46204



cdmsmith.com

We're celebrating our [75th anniversary!](#)





3FILES

**CDM
Smith**
211 North Pennsylvania Street, Suite 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

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

INDIANA
DEPARTMENT OF TRANSPORTATION

SR 9
LINE "A"

SCALE 1" = 20'-0"	BRIDGE FILE
	DESIGNATION
SURVEY BOOK	SHEETS
CONTRACT	PROJECT



**CDM
Smith**
211 North Pennsylvania Street, Suite 1750
Indianapolis, IN 46204
Tel: (317) 829-9600

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

INDIANA
DEPARTMENT OF TRANSPORTATION

US 36 EAST LEG
LINE "S-2-A"

SCALE 1" = 20'-0"	BRIDGE FILE
	DESIGNATION
SURVEY BOOK	SHEETS
CONTRACT	1 of 1 PROJECT

From: Christine Dudley [REDACTED]
Sent: Thursday, June 15, 2023 1:39 PM
To: Szewczak, Kimberly [REDACTED]
Subject: Pendleton State Road 36 widening project

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

I am not sure I completely understand what is planned for the town of Pendleton. If I am asking for something you have already planned, I apologize. I just simply did not understand.

I am pleased to see the introduction of pedestrian paths on State Road 36 and State road 38 better connecting the residential areas east of 67 with the town and the schools. I also am pleased to see an effort to connect the school with the shopping center. I have crossed the lanes of traffic as a walker and there are times when it is challenging.. I am not sure pedestrians would be safer with a site hawk crossing as in my experience I do not feel safe crossing so many lanes of traffic especially with young children.

I am opposed to the widening of roads and the addition of turn lanes to these roads making them more difficult to cross and prioritizing vehicular travel over pedestrians. Unfortunately Pendleton, much like Fortville, Ingalls and Carmel, has grown beyond the main automobile thoroughfares that border it. It makes sense that instead of widening roads to prioritize traffic, the town stop now and look at what other towns have done to solve the traffic problem and connect their communities. Fortville is currently in the process of narrowing state road 67 and rerouting traffic around the town to unite the two halves of its community and link the town with the schools via trail system. Similarly Carmel went to the effort of lowering its main north south roadways (Keystone) underneath east west residential roadways to better connect the community. Noblesville is doing the same with State Road 37. Additionally Indianapolis is contemplating lowering I 65 and routing pedestrian friendly roads over the interstate to better connect neighborhoods divided as the interstate was built. Pendleton should be doing the same thing.

When the grocery store and middle school were moved to the east of State Road 67 it divided the town into two halves and made it dangerous for residents to walk from one side of 67 to the other. The town has repeatedly said it wants to remain a walkable town as it grows. This must continue to be its highest priority.

I appreciate that there are too many accidents. I agree speed is probably the cause. I often travel the roads and intersections discussed. However, as roads are widened, speeds increase. Additionally, I do not perceive there to be traffic congestion at the intersections except in the evening. Why are these cars on 67 and not on I69? Where are these vehicles going? Often there are trucks. Where are they going? The 67 corridor between state road 9 and Fall Creek Bridge is a key area that needs to be slower, narrower lanes, more pedestrian friendly with roundabouts or lowered to accommodate smooth flow of traffic while making it feel like the town is connected.

I support pedestrian safety and slowing traffic with roundabouts even if it makes it harder to get from one point to another and oppose widening roadways to accomodate more traffic. I would be open to more interstate access.

Also as an aside Madison county is in the process of planning its transportation master plan which includes south Madison County. It seems wise to be planning changes proposed at this meeting with that planning process.
Christine Dudley

From: Christine Dudley [REDACTED]
Sent: Thursday, July 6, 2023 9:41 AM
To: Szewczak, Kimberly [REDACTED]
Subject: Re: Pendleton State Road 36 widening project

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

Thank you for your detailed reply. I am sorry more cannot be done at this time to address the division of the town by this major roadway, but I do understand budget limitations and the need to preserve the route for truck traffic. I think when Fortville is able to make changes to the truck route, it is hard to not want the same for Pendleton. As a taxpayer I would always prefer to do things once even if it costs more if it saves money in the future, but I also know even in my own budgetary life, this is not always possible. Do you have images of the planned improvements or are they on public display at the Pendleton Library or online?

Thank you, Christine Dudley

On Wed, Jun 21, 2023 at 12:41 PM Szewczak, Kimberly [REDACTED] wrote:

Good afternoon, Christine! The benefit of a Pedestrian Hybrid Beacon (PHB) also known as a Hawk Signal is that it uses a red signal light that can be enforced by police and is more easily understood by the traveling public.

Safety is also being improved by providing a raised median with a refuge which reduces the number lanes crossed and makes the roadway seem narrower than it is which causes drivers to subconsciously feel like they need to drive slower than they normally would. We are also adding lighting for the crossing which will make the pedestrians using the crossing more visible when there are low light conditions such as nighttime, early morning or during inclement weather.

We understand you concern with walkability and improving pedestrian infrastructure is a major goal of this project. At the same time, this route is on the national truck network and is a major vehicular junction between multiple state routes so vehicular mobility is of great importance to INDOT and is the primary goal of this project. Adding turn lanes and through lanes is a cost-effective way to convey traffic through the intersections. While there are other methods that could be used, many of those that you referenced are significantly more costly and beyond what can be budgeted for this project. The additional width is being accounted for the design by improving crosswalks and providing median refuges where possible.

As you noted this location has more crashes than should be expected. Speed is one factor, but lack of traffic control and channelization is another factor. The proposed medians should help address both factors. Many vehicles use this corridor instead of I-69 because SR 67/SR 9 connect different locations. There are many trucks because this route is on the national truck network and provides connectivity more from the south than I-69 which connects from the west and the lanes need to be kept at a reasonable width to accommodate the trucks that use this corridor.

We have worked very closely with the town on this project and while we cannot meet all their objectives in this project, it does not preclude any of their future plans and is incorporating some of their pedestrian improvement plans with this project.

Our understanding is that maintaining walkability will continue to be a priority for the town but since this is an INDOT route that will need to be balanced with vehicular mobility.

National Truck Network Map



Please let me know if you have any more questions or concerns 😊

Thank you!

Kim Szewczak

Project Manager

INDOT – Greenfield District

32 S. Broadway Street

Greenfield, IN 46140



From: Christine Dudley [REDACTED]
Sent: Thursday, June 15, 2023 1:39 PM
To: Szewczak, Kimberly [REDACTED]
Subject: Pendleton State Road 36 widening project

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

I am not sure I completely understand what is planned for the town of Pendleton. If I am asking for something you have already planned, I apologize. I just simply did not understand.

I am pleased to see the introduction of pedestrian paths on State Road 36 and State road 38 better connecting the residential areas east of 67 with the town and the schools. I also am pleased to see an effort to connect the school with the shopping center. I have crossed the lanes of traffic as a walker and there are times when it is challenging.. I am

From: Christine Dudley [REDACTED]
Sent: Friday, July 21, 2023 11:28 AM
To: Szewczak, Kimberly [REDACTED]
Subject: Re: Pendleton State Road 36 widening project

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

Yes. I do feel better hearing specific improvements to this crossing. I appreciate the detail.

The only comment I can make going forward is truck routes and pedestrians are inconsistent with one another. I do understand rerouting truck traffic was not part of this project, but there should be a long range plan to abandon 67 as truck traffic route. Just as Fortville has outgrown the ability for 67 to be a truck route, so has McCordsville, Pendleton and Ingalls. This is in the state of Indiana's interest to prioritize the growth of these communities as they some of the few municipal areas slated to increase in population in the state. They are some of the few places with quality of life that draw remote workers to the state from other states. Increasing the quality of life of the people who live there by making them pedestrian friendly in areas where they have grown should be a priority for the state and the state should not rely on communities to advocate for themselves for this. It should be a given. The state should be prospective and not just continue to think in terms of trucks and pedestrians sharing space or prioritizing truck and vehicular traffic through an area of high pedestrian use. Those two things really do not go together.

As an aside I appreciate INDOT following federal and state standards, however, pedestrian deaths have increased to such an alarming level in the United States, I think that a better measure for whether INDOT has designed something well is a "best practices to protect pedestrians" standard and finding creative solutions to separate high speed or high weight vehicular traffic from areas where pedestrians want to walk.

Not to tell you your job, I am not an expert, but I did read this and it is part of the reason this project has frustrated me.
<https://www.ghsa.org/resources/Pedestrians23>

Thank you again. You really have done a beautiful job of answering my questions. I still disagree with this project and its goals, but I do feel heard and believe now I know what to ask my elected officials for.

Christine

On Thu, Jul 20, 2023 at 4:08 PM Szewczak, Kimberly [REDACTED] wrote:

Christine,

Good afternoon. We do have a website setup with information on this project at the following location: <https://on.in.gov/US36ATL>.

The layout of this crossing is shown in our visualization in the roll plots provided on the website directly linked here: https://www.in.gov/indot/files/PublicMeetingRollPlots_SR38.pdf

As we mentioned, for the crossing south leg (US 36/SR 67) of the intersection we are providing a refuge in the median. What I forgot to mention before is that this crossing refuge is more for

slower moving pedestrians that may have difficulty completing the crossing in the signal time provided. The available crossing time will be enough for somebody walking at an average speed, so cross-country runners should not have any difficulty making the crossing in the time provided.

The sidewalk and shared use path near the 38/67 intersection will be pulled back from the curb with a grassy area between the sidewalk and the roadway. The corners with the gas station and CVS have a 6ft sidewalk with a 6 ft wide grassy area, and the Star Financial Bank and R&R Market corners have a 10 ft shared use path with a 2 ft grassy area. We think that this will be much safer and more comfortable for pedestrians than the current 6 ft sidewalk that is right next to the roadway and should give larger groups like the cross-country runners plenty of space when waiting to cross the intersection. This is shown on the roll plot linked above.

For the intersection, we are also adding in the missing crosswalks on the east (SR 38) and north legs (US 36/SR 67). The crossing of the north leg (US 36/SR 67) will have a similar median refuge as the south leg (US 36/SR 67). All crossings will have accessible pedestrian signal (APS) push buttons which you can read about here: <http://www.apsguide.org/>.

Americans with Disabilities Act (ADA) Compliant Curb Ramp are also being included which you can find information on at this site: <https://www.access-board.gov/ada/guides/chapter-4-ramps-and-curb-ramps/>

Crosswalk pavement markings will follow the Indiana MUTCD (Manual on Uniform Traffic Control Devices) requirements using a “piano key” configuration. This will make the crosswalk more visible to drivers than the existing two transverse lines at each edge of the crosswalk.

While this crossing was not a primary focus of this project, we do take the design of these crossings very seriously and ensure that we meet all federal and state requirements.

Additionally, we are including a shared use path in this project that runs on the east side of US 36/ SR 67 that crosses SR 38 at the South Junction and then crosses US 36/SR 67 just south of the US 36 East Leg/North Junction. Since this is for a shared use path, these crossings will be wider and therefore have a higher capacity than the other crossings.

I hope this addresses your concerns and thank you again for your interest in this project.

Thank you!

Kim Szewczak

Project Manager

INDOT – Greenfield District 32

S. Broadway Street Greenfield,

IN 46140



From: Christine Dudley [REDACTED]
Sent: Tuesday, July 18, 2023 9:55 PM
To: Szewczak, Kimberly [REDACTED]
Subject: Re: Pendleton State Road 36 widening project

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

I really appreciate your patient responses. You have not convinced me that pedestrians will be safer with this plan than they are now crossing 67. Specifically, what transportation tools are used by this plan to increase pedestrian safety crossing 67 at 38/67 intersection from R and R Market to CVS? I did reach out and made a comment to the town of Pendleton and MCCOG.

----- Forwarded message -----

From: Szewczak, Kimberly [REDACTED]
Date: Tue, Jul 18, 2023 at 8:05 AM
Subject: RE: Pendleton State Road 36 widening project
To: Christine Dudley [REDACTED]

Christine,

Please see the responses below [in blue](#).

Please let me know if you have any other questions 😊

Thank you!

Kim Szewczak

Project Manager

INDOT – Greenfield District

32 S. Broadway Street

Greenfield, IN 46140





From: Christine Dudley [REDACTED]
Sent: Friday, July 7, 2023 7:19 PM
To: Szewczak, Kimberly [REDACTED]
Subject: Pendleton State Road 36 widening project

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

Thank you. I am curious if any pedestrian traffic surveys were done? I have a few suggestions based on my anecdotal observations.

No pedestrian studies were performed. However, the town initiated a project to improve pedestrian connectivity since there are currently gaps in the sidewalk/path system that they wanted to fill.

1) Prioritize pedestrian traffic crossing the 38/67 intersection on the south side of 38.

The primary crossing at the 38 and 67 intersection used by pedestrians is from the high school to the town of Pendleton (and back) on the south side of 38. This is because the sidewalk into Pendleton is on this side and because the school is on this side of 38. This would be from R and R Market to the CVS store (and back). The median as designed does not look large enough to hold the cross country teams or large numbers of students who would be waylaid there. Making this a grassy median would make it feel safer though it would be a maintenance issue. As an observation, it is not uncommon for the boys and girls cross country team to cross State Street by O'Reilly's Auto where there is no crosswalk because in many respects it feels safer than to cross at the intersection with so many moving cars.

We understand your desire to prioritize pedestrian traffic. Improving pedestrian infrastructure is a major goal of this project. At the same time, this route is on the national truck network and is a major vehicular junction between multiple state routes so vehicular mobility is of great importance to INDOT and is the primary goal of this project. We did provide a median refuge which should help; unfortunately, we were limited on space so could not make the refuge any larger.

2) As a safety enhancement, having a pedestrian only crossing cycle where it was safe for pedestrians to cross all four ways at once at this intersection would help to make the intersection feel safer for pedestrians.

Due to the amount of vehicular traffic, it is not possible to do this without creating traffic issues. Allowing non-conflicting pedestrian movements to occur the same time as vehicular movements is more efficient and necessary at busy intersections like these.

3) The cross walk crossing 38 at the 67 and 38 intersection looks larger and more deliberate for pedestrians. This does not really make sense to me as there is no reason for pedestrians to go this way and it encourages pedestrian traffic crossing all the business vehicle entrances. Additionally there will be more left hand turns from 67 to east bound 38 due to customers leaving the businesses on the east side of 67 and needing to return to their homes east of 67.

The larger crossing is for the shared use path that connects the high school to other parts of Pendleton to the northwest.

4) As the report noted, a major non intersection crossing across 38 is from the high school to the fast food restaurants in the Needlers Plaza where the site hawk has been added. Consider connecting site hawk crossing with pedestrian trail behind the businesses ultimately connecting to the new crossing at the 36/67 intersection. I am not sure if this will be safer when traffic is diverted to this access drive, but at present it would be. I understand that this is not the area being worked on and so would not likely be possible.

The pedestrian signal location was decided based on where high school students typically cross SR 38 at the west Needler's entrance.

5) I am very happy with the the connecting trail to the library next to the Pizza Hut and the proposed safer crossing of 67 to get to the grocery store/businesses. Connecting this crossing all the way to the Dairy Queen makes sense as the sidewalk already exists from the access drive to 300w.

We are glad that you are happy with this addition.

6) I note that a crosswalk has been added across 36 at this intersection. I am not sure why this has been done as it is not safe to walk on the north side of 36 and there is no drawn pedestrian access to any of the businesses in the shopping center with Papa Johns.

This has been done to provide a safe pedestrian crossing across US 36. It is expected that sidewalk will eventually be extended as part of future development. Having this done now eliminates the need to have the intersection modified as part of a separate project.

7) I note the new traffic signal at 36 and 300W. I would prefer a round-a-bout at the intersection of 36 and 300 west instead of a traffic signal. I traveled this route multiple times a day for over 15 years and do not see the need for a traffic signal. However, a round-a-bout does make sense and would assist the many student drivers who use this intersection without stopping traffic flow. Additionally it would make it easier for pedestrians to cross 36 at this location. At this time significant numbers of people walk from housing on 36 to the Needlers Plaza and the schools on the north side of 36 walking with traffic. There is very little shoulder there to walk on. I understand that the budget cannot include adding trail access this far from the work zone, but this is a significant pedestrian route that is not being addressed by the plan and enticing people to cross at the larger intersection instead of where there is much less traffic does not make sense. Additionally this would set up future pedestrian access to the Dollar General from the new trail system using 300W as opposed to 67. If a round-a-bout is not possible, a 4 way stop is preferable to a traffic signal.

This is only going to be a temporary signal for during construction due to an expected increase in traffic going through this intersection while some movements are restricted due to the limited space that will be available to maintain traffic. This will return to being a 4-way stop once construction is complete.

8) I am not really sure what is planned at the Angle Road intersection with 67. At this time the railroad crossing is closed to traffic, but this is not shown on the plan. Often people want to turn south onto 67 from Angle Road and it is a challenging turn. Adding U-turn traffic for drivers will just make it harder. This should ideally be a round-a-bout as that would allow better traffic flow and slow traffic on 67 heading into the busy intersection. I also think it is possible that adding medians here will divert pedestrian traffic to this location crossing 67 into the residential part of Pendleton across the railroad tracks. A round-a-bout here would make that easier and possible. I realize creating a place where pedestrians cross the railroad tracks does not make sense, but I think it will happen anyway if the new crossing at 38 does not feel safer.

Minimal changes are proposed at the Angle Road intersection. US 36/SR 67 is being increased to 2 through lanes in each direction and it was determined the terminating one of the lanes in a left turn into the high school was more beneficial than tapering the through lane south of the intersection. A roundabout is outside the scope of this project so this would need to be addressed in a

separate project. We recommend reaching out to the organizations and committees that can determine if a project is needed and can acquire the necessary funding. Please see the list of

contacts here.

INDOT

https://indottsc.service-now.com/csm?id=report_a_concern_public

Madison County Council of Governments

<https://www.heartlandmpo.org/contact>

Town of Pendleton

<https://www.town.pendleton.in.us/home/webforms/questions-comments>

South Madison Community School Corporation School Board

schoolboard@smcsc.com

On Thu, Jul 6, 2023 at 10:42 AM Szewczak, Kimberly [REDACTED] wrote:

You can visit the project website to review the information that was presented at the Public Information meeting. <http://on.in.gov/US36ATL>

Thank you!

Kim Szewczak

Project Manager

INDOT – Greenfield District

32 S. Broadway Street

Greenfield, IN 46140



From: Christine Dudley [REDACTED]
Sent: Thursday, July 6, 2023 9:41 AM
To: Szewczak, Kimberly [REDACTED]
Subject: Re: Pendleton State Road 36 widening project

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Thank you for your detailed reply. I am sorry more cannot be done at this time to address the division of the town by this major roadway, but I do understand budget limitations and the need to preserve the route for truck traffic. I think when Fortville is able to make changes to the truck route, it is hard to not want the same for Pendleton. As a taxpayer I

Jennifer Rhodes

From: MAYRA ARTEAGA [REDACTED]
Sent: Friday, June 16, 2023 11:03 AM
To: Sandstrom, Scott
Subject: Voice Mail (26 seconds)
Attachments: audio.mp3

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: US 36

Correct spelling: Mayra Arteaga

Hi, this is ~~Mayra Ortega~~ with Highgarden Real Estate. I got your number from K Wolverton. I was calling in regards to some information that she had given me in regards to some vacant lots in Pendleton. If you get a chance, will you please call me back at [REDACTED]. And again, my name is Myra. Thank you.

You received a voice mail from [MAYRA ARTEAGA](#).

Thank you for using Transcription! If you don't see a transcript above, it's because the audio quality was not clear enough to transcribe.

[Set Up Voice Mail](#)

Correct spelling: Mayra Arteaga

Notes from call with Myra Ortega on 6/16/23 at 3:55p



Discussion was about Hughes property.

I told her a detention basin and R/W take is planned here and the r/w acquisition process will start soon.

Her client (Hughes) is looking to sell the land to develop or develop himself.

I told her the website to download files to view the plans.

Jennifer Rhodes

From: Sandstrom, Scott
Sent: Thursday, June 22, 2023 4:21 PM
To: 'Szewczak, Kimberly'; hnikides
Subject: RE: SR 9 / 67 & US 36 - Pendleton, IN

Kim,
You can send them a link to the project website – <http://on.in.gov/US36ATL>.

Thanks,
-Scott

Scott M. Sandstrom, PE, PMP | Senior Project Manager | CDM Smith | 
cdmsmith.com

From: Szewczak, Kimberly
Sent: Thursday, June 22, 2023 2:44 PM
To: Sandstrom, Scott; hnikides
Subject: FW: SR 9 / 67 & US 36 - Pendleton, IN

Thank you!

Kim Szewczak
Project Manager
INDOT – Greenfield District
32 S. Broadway Street
Greenfield, IN 46140



From: Brian Cross 
Sent: Thursday, June 22, 2023 2:39 PM
To: Szewczak, Kimberly 
Cc: DAVE CRAVENS 
Subject: SR 9 / 67 & US 36 - Pendleton, IN

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

Please send me a link to the plans recently presented to the public.
We are currently in the permitting phase of a new commercial property located at 6933 S SR 67 and would like to evaluate what impacts the new INDOT project may have.

Thank you,

Brian Cross

Civil Site Group, Inc.



Jennifer Rhodes

From: Szewczak, Kimberly [REDACTED]
Sent: Thursday, June 22, 2023 4:31 PM
To: Brian Cross
Cc: DAVE CRAVENS
Subject: RE: SR 9 / 67 & US 36 - Pendleton, IN

Here is the link to the plans from the Public Information meeting. <http://on.in.gov/US36ATL>.
Please let em know if you have any questions 😊

Thank you!

Kim Szewczak

Project Manager

INDOT – Greenfield District
32 S. Broadway Street
Greenfield, IN 46140



From: Brian Cross [REDACTED]
Sent: Thursday, June 22, 2023 2:39 PM
To: Szewczak, Kimberly [REDACTED]
Cc: DAVE CRAVENS [REDACTED]
Subject: SR 9 / 67 & US 36 - Pendleton, IN

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Thank you,

Brian Cross

Civil Site Group, Inc.



Jennifer Rhodes

From: Vollmer, Michael J.
Sent: Friday, June 30, 2023 4:45 PM
To: Hannah Urbanski
Cc: Sandstrom, Scott; [REDACTED]
Subject: FW: Pendleton Fire Chief Comments and Responses US 36 ATL and Pedestrian Connectivity

Hannah,

Please forward this response if you agree.

Thanks,
Michael

Michael J. Vollmer, PE | Transportation Engineer | CDM Smith | [REDACTED] | cdmsmith.com

Chris,

Thank you for your feedback. As you may be aware, we have many stakeholders in this project with competing interests that we are trying to balance. Capacity and safety for the roadway users are the two of the most important factors that we are trying to address, therefore added travel lanes and raised medians have been proposed. We also want to address and find solutions to your concerns where possible while still meeting our goals for the project.

Please see our responses below and let us know if you have any questions.

Thanks,
Michael

Michael J. Vollmer, PE | Transportation Engineer | CDM Smith | [REDACTED] | cdmsmith.com

From: Sandstrom, Scott [REDACTED]
Sent: Friday, June 30, 2023 12:59 PM
To: Vollmer, Michael J. [REDACTED]
Subject: FW:

Scott M. Sandstrom, PE, PMP | Senior Project Manager | CDM Smith | [REDACTED]
cdmsmith.com

From: Hannah Urbanski [REDACTED]
Sent: Friday, June 30, 2023 12:54 PM
To: Sandstrom, Scott [REDACTED]

See below for Chief Nodine's comments.

Hannahrose Urbanski

Planning Director

■ ■ ■



■ ■ ■



100 West State Street
P.O. Box 230
Pendleton, IN 46064
www.town.pendleton.in.us

From: Chris Nodine [REDACTED]
Sent: Friday, June 30, 2023 12:39 PM
To: Hannah Urbanski [REDACTED]
Subject:

==CAUTION! This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe. The sender of this email may not be who they claim to be.==

Hannah

Please see my concerns regarding the US 36 and ST RD 67 INDOT Project.

A few items of concern the 36/67 project.

1. We always use the viaduct when responding to a call that is in our South and East district. During the peak traffic times we have issues clearing the Eastbound traffic due to oncoming traffic turning South to West filling up that travel portion. If INDOT places a divider we will not be able to travel to oncoming traffic and if all 3 proposed travel lanes (Eastbound) are filled waiting on the light to change we will not be able to proceed due to the cars not being able to go anywhere.

The planned divider only extends to just west of Central Way so if there is a traffic backup in all 3 lanes that should be noticeable while approaching the backup and the westbound lanes could still be used if needed. We could also investigate the use of emergency vehicle preemption.

2. The use of 300w. The increase of medians and alternate traffic flow will increase 300W, during school hours 300w is heavily traveled as parents are using this road to drop kids off at the Middle School as well as the same time all high school kids that drive use this route to gain access to the High School Lot. If there is a barrier on State St East of the 67 interchange then this will force more traffic onto a county road that is not wide enough for a lot of traffic.

The median east of the SR 67 intersection will restrict lefts into the Needler's entrance but the second entrance to the east will still be open for left turns. Left turns into the west high school entrance will be restricted but the entrance further east will still allow left turns into and out of the school. CR 300W is only about 20 ft wide but that is of sufficient width for passenger car traffic and should not be that restrictive to traffic.

3. Use of Needlers entrance on the back side of Speedway and Hardees, I may be completely wrong but I believe this is a private drive as the town does not maintain it.

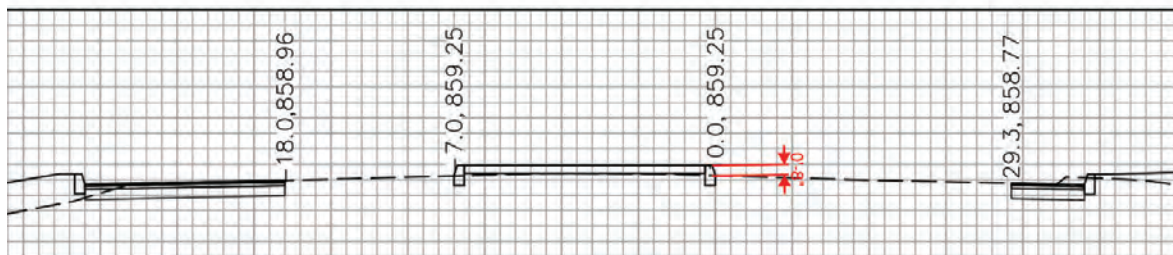
Yes, that is our understanding and why we did not show this as an alternate through route for traffic to use due to the planned movement restrictions. We did show it an alternate way to get to those destinations.

4. Medians on 67 North and South of 36/38 ...Delayed access into business on the Westside of 67 due to us having to travel to the nearest turn around and double back.

The curbs will only be 6-8" in height so trucks should be able to traverse over them directly to their destination in an emergency, if needed.

5. Hydrant usage. If we get a fire in the area and have to use a hydrant we will have to shut down the roadway and drag hoses by hand over the median wall to the other side of the roadway. This will exhaust the members!

A median wall is not proposed on this project. We are utilizing grassy medians or concrete center curb depending on the location. These will only be 8" maximum in height so it should not be difficult to traverse by foot and trucks may be able to traverse them in an emergency if needed. If this is a serious concern, I suggest requesting that the town water utility add a fire hydrant on the opposite side where there is not one currently prior to the road being reconstructed.



6. If we have an accident on the interstate and it is shut down for a lengthy time period. Semi traffic backs up now to Huntsville and I feel that it will be worse if there is barriers in place for emergency vehicles to try to get around the semis as they will not have room to move over.

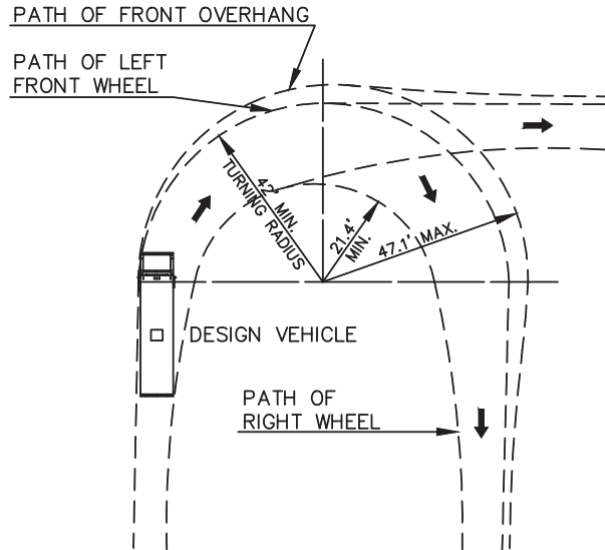
A median wall is not proposed on this project. We are utilizing grassy medians or concrete center curb depending on the location. These will only be 8" maximum in height so it should not be difficult to traverse by foot and may trucks may be able to traverse them in an emergency. In addition, this project is adding additional travel lanes, so any increase in traffic due to diversion on I-69 should create less congestion on SR 67.

7. Water Street corridor is NOT wide enough for sustainable traffic flow. This is a reduced speed zone around the pool and nursing homes and by placing this type of restrictions will 100% cause this road to be used more then what it is designed for.

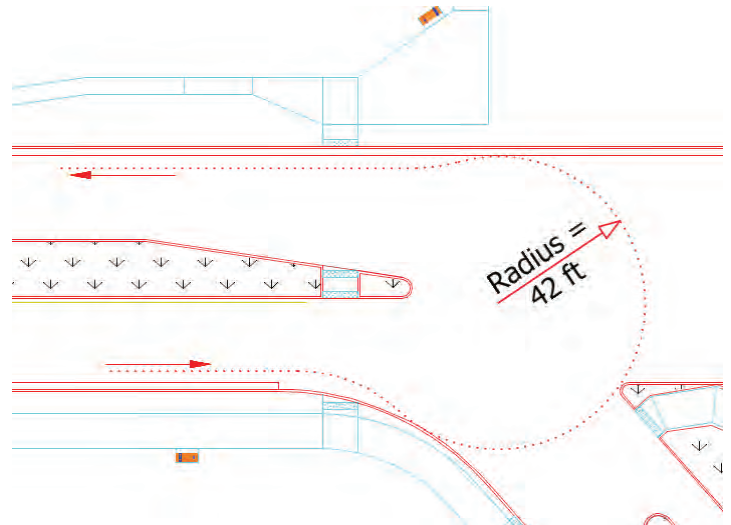
The restrictions in movement are unlikely to affect most of the traffic travelling through the corridor and we do not expect a substantial amount of traffic to divert to water street. The Water St corridor is somewhat narrow with a total pavement width of 18 to 20 ft but that is of sufficient width for passenger car traffic and should not considerably restrict traffic flow.

8. U turns are not an option for fire trucks!

North of the US 36 East leg (North Junction) there will only be painted medians which could also be used for a multipoint turn around. Additionally, at the north junction (SR 67/US 36), there is just enough room for a fire engine to make a u turn maneuver within the intersection footprint. See graphics provided below for information and illustration.



MINIMUM TURNING PATH FOR FIRE ENGINES:
ENGINE E561 KME 42'±
ENGINE EL563 SUTPHEN 42' MIN.
ENGINE EL564 PIERCE 42' MIN.



To summarize, I am not in favor of this type of design. I am sure that there is other options to present other then raised medians.

Respectfully submitted
Chris Nodine



Chris Nodine
Fire Chief
South Madison Fire Territory

Sent from [Mail](#) for Windows

INDOT PM responded to Don Silver on 7/17/2023

From: Faus, Stacie R [REDACTED]
Sent: Thursday, July 13, 2023 8:38:36 AM
To: Szewczak, Kimberly [REDACTED]
Cc: West, Kristina [REDACTED]; Sexton, Katherine [REDACTED] Thomas, Kaylyn R [REDACTED]; DuSold, Adelle [REDACTED]
Subject: SR 67 - Pendleton Project ID #1702936- Project Questions

Kim,

Can you assist with these customer questions?

Mr. Don Silver from Indy Culver's Corporate Office called and stopped in to request a meeting with Clark to discuss the following questions for project ID#1702936. He is looking to have a Culver's built in this area and wants to know if the business will be impacted.

Where will the median be added?
What land will you be acquiring for the project?
What is the actual timing for the project?

Customer contact info, if needed:
Don Silver
[REDACTED]

Thanks,

Stacie

"Don't dwell on what went wrong. Instead, focus on what to do next. Spend your energies on moving forward toward finding the answer." – *Denis Waitley, Author and Motivational Speaker*

Stacie Faus
Customer Service Manager
32 South Broadway
Greenfield, IN 46140
[REDACTED]



Jennifer Rhodes

From: Vollmer, Michael J.
Sent: Monday, July 17, 2023 5:48 PM
To: Szewczak, Kimberly
Cc: Sandstrom, Scott; Harry Nikides
Subject: RE: SR 67 - Pendleton Project ID #1702936- Project Questions

Kim,

Please see our responses below [in blue](#).

Please send these on if you agree or let me know if you would like me to make any revisions.

We can also provide the public information meeting plans to them if they do not already have them.

Thanks,
Michael

Michael J. Vollmer, PE | Transportation Engineer | CDM Smith | [REDACTED] cdmsmith.com

From: Sandstrom, Scott [REDACTED]
Sent: Sunday, July 16, 2023 7:57 PM
To: Vollmer, Michael J. [REDACTED]
Subject: FW: SR 67 - Pendleton Project ID #1702936- Project Questions

Michael,

Please formulate a response here. If you're good with it and don't have any concerns, go ahead and respond to Kim. CC: me and Harry Nikides. Then, store the email exchange on PW here: [Email Comments](#)

-Scott

Scott M. Sandstrom, PE, PMP | Senior Project Manager | CDM Smith | [REDACTED]
cdmsmith.com

From: Szewczak, Kimberly [REDACTED]
Sent: Thursday, July 13, 2023 8:42 AM
To: Sandstrom, Scott [REDACTED] hnikides [REDACTED]
Subject: Re: SR 67 - Pendleton Project ID #1702936- Project Questions

Thank you!

Kim Szewczak
Project Manager

INDOT – Greenfield District
32 S. Broadway Street
Greenfield, IN 46140
[REDACTED]

From: Faus, Stacie R [REDACTED]
Sent: Thursday, July 13, 2023 8:38:36 AM
To: Szewczak, Kimberly [REDACTED]
Cc: West, Kristina [REDACTED]; Sexton, Katherine [REDACTED] Thomas, Kaylyn R
[REDACTED] DuSold, Adelle [REDACTED]
Subject: SR 67 - Pendleton Project ID #1702936- Project Questions

Kim,

Can you assist with these customer questions?

Mr. Don Silver from Indy Culver's Corporate Office called and stopped in to request a meeting with Clark to discuss the following questions for project ID#1702936. He is looking to have a Culver's built in this area and wants to know if the business will be impacted.

Where will the median be added?

Median will be added to...

On US 36/SR 67 from Angle Road to State Street/SR 38

On State Street from Central Way to US 36/SR 67

On SR 38 from US 36/SR 67 to the east Pendleton Heritage High School/east Needler's entrance

On US 36/SR 67 from Angle Road to State Street/SR 38

On US 36/SR 67 from State Street/SR 38 to US 36 East Leg

On US 36 East Leg from SR 67 to the east Needler's entrance.

On SR 67/SR 9 from US 36 East Leg to the entrance into Jimmie's Dairy Bar

See the roll plots from the public information meeting on the website at ["on.in.gov/US36ATL"](https://on.in.gov/US36ATL) for more details.

What land will you be acquiring for the project?

ROW amounts have been updated to 5.122 acres of permanent ROW and 0.736 acre of temporary ROW

5.12 acres of permanent R/W is being acquired for this project and 0.74 acres of temporary R/W is also needed for construction.

See the roll plots from the public information meeting on the website at ["on.in.gov/US36ATL"](https://on.in.gov/US36ATL) for more details.

If you are looking at a particular parcel, we can provide more information as needed.

What is the actual timing for the project?

Letting for the main project is currently planned in the summer of 2024 and construction is expected to be completed by the end of the 2025 construction season.

Customer contact info, if needed:

Don Silver

[REDACTED]

Thanks,

Stacie

"Don't dwell on what went wrong. Instead, focus on what to do next. Spend your energies on moving forward toward finding the answer." – *Denis Waitley, Author and Motivational Speaker*

Stacie Faus

APPENDIX H: AIR QUALITY

STIP Page

TIP Pages

Indiana Department of Transportation (INDOT)
State Preservation and Local Initiated Projects FY 2024 - 2028

SPONSOR	CONTR ACT # / LEAD DES	STIP NAME	ROUTE	WORK TYPE	DISTRICT	MILES	FEDERAL CATEGORY	Total Cost of Project*	PROGRAM	PHASE	FEDERAL	MATCH	2024	2025	2026	2027	2028
Madison County																	
Summitville	2000843	Init.	ST 1090	Railroad Protection	LaPorte	0	STBG	\$550,000.00	Local Safety Program - 130	CN	\$550,000.00	\$0.00			\$550,000.00		
Performance Measure Impacted: Safety																	
Location: Mill St DOT# 539649E on Norfolk Southern																	
Alexandria	40831 / 1800243	M 29	ST 1002	Road Reconstruction (3R/4R Standards)	Greenfield	.3	STBG	\$6,655,267.88	Local Funds	CN	\$0.00	\$6,056,000.00	\$6,056,000.00				
									Anderson MPO	CN	\$4,951,000.00	\$0.00	\$4,951,000.00				
Location: Washington St phase3 - Chestnut to SR 9 (Park Ave)																	
Comments:See document for Federal Appropriation splits																	
Indiana Department of Transportation	41837 / 1702936	M 21	US 36	Added Travel Lanes	Greenfield	.44	STBG	\$14,180,192.00	Local Funds	CN	-\$1,858,400.00	-\$464,600.00		(\$2,323,000.00)			
									Local Funds	PE	-\$30,124.80	-\$7,531.20	(\$37,656.00)				
Performance Measure Impacted: Reliability and Freight Reliability																	
Location: from .28 mi. S. of SR 38 to SR9/SR67 N. Jct.																	
Comments:Decrease of \$37,656 STBG to PE Decrease of \$2,323,000 of CN in FY 25 includes des 1802854 and 2001127 MCCOG Mod 12-27-23 "Exempt" for Air Quality																	
Madison County	42792 / 1902803	M 32	IR 2240	Bridge Deck Replacement	Greenfield	.136	STBG	\$2,469,783.56	Local Bridge Program	CN	\$238,000.00	\$0.00		(\$1,500,000.00)			\$1,738,000.00
									Local Funds	CN	\$0.00	\$59,000.00		(\$375,000.00)			\$434,000.00
Performance Measure Impacted: Bridge Condition																	
Location: Bridge on Range Line Road/200E between SR 232/Mounds Road and 10th Street over the White River.																	
Comments:\$1,875,000 in CN removed from FY 25 and moved to future years. MCCOG MPO Mod 2-27-24 "Exempt"?for?Air?Quality?																	
Indiana Department of Transportation	43476 / 2000161	M 21	SR 32	Intersection Improvement, Roundabout	Greenfield	.02	STBG	\$7,146,110.81	Safety Consulting	PE	\$561,600.00	\$140,400.00	\$702,000.00				
Performance Measure Impacted: Safety																	
Location: 3 intersection improvement projects2000161, 2000162 SR 13 @ SR32; SR 32 @t CR 925W; SR 32 @ CR 600W																	
Comments:Move PE \$701,523 from FY 22 to FY 24 MCCOG Mod 12-27-23 "Exempt" for Air Quality																	
Indiana Department of Transportation	43476 / 2000161	M 71	SR 32	Intersection Improvement, Roundabout	Greenfield	.02	STBG	\$7,276,975.81	Safety ROW	RW	\$0.00	\$0.00	(\$860,000.00)	\$860,000.00			

*Estimated Costs left to Complete Project column is for costs that may extend beyond the four years of a STIP. This column is not fiscally constrained and is for information purposes.

**Madison County Council of Governments (Anderson MPO)
FY 2022-2026 Transportation Improvement Program (TIP)**

All Projects: Current Through 7-3-24

REF	PROJECT DETAILS					PROJECT FUNDING							PERFORMANCE MEASURES							MTP PLANNING		AIR QUALITY CONFORMITY			REFERENCE DOCUMENTS			
	DES	Spawner Name	Work Category (Work Type)	Location & Description	County	Funding Obligation Year (State Fiscal)	Project Phase	Federal Funds by Phase	Required Local/State Matching Funds	Total Funds by Phase	Federal Funding Program	Letting Date (3-8 weeks prior to Construction Date of CN Phase)	Contract Number (CN Phase)	Total Project Cost	Complete Streets (MPO)	Safety (MPO/USDOT)	Payment Condition (MPO/USDOT)	Bridge Condition (MPO/USDOT)	Reliability & Freight Reliability (MPO/USDOT)	Congestion Mitigation & Air Quality (CMAQ) (MPO/USDOT)	Transit (MPO/USDOT)	MTP Project Category	Analysis Period	AQ Conformity Analysis		Exempt Project Type (AQ)	Reference (AQ)	
Section 1: MPO Funded LPA Projects - Non-Exempt from Air Quality Conformity Analysis																												
1	2100092	Ingalls	Added Travel Lanes	CR 800 S (136th Street) Corridor Improvement Project: Phase 1, Atlantic Road (E. CR 168 - Hamilton-Madison County Line) to SR 13 (CR 900 W/Madison Street) [Includes PI Phases 1 & 2, RW & CN Phase 1 only] (Ingalls)	48	2022	PE	\$ 98,647	\$ 24,662	\$ 123,309	STBG	7/9/2025	8-43712	\$ 4,500,000	Scope Provided by MPO			X					MOVE	2020-2025	AQC Non-Exempt included in MTP 2045 adopted October 2020, Central Indiana Transportation Conformity Determination Report July 2020 and USDOT Conformity Letter 9-28-20	N/A	N/A	Res. 3-15-21, Mod. 7-12-21, Res. 3-3-22, Res. 4-25-24 Non-Exempt
2	2100092	Ingalls	Added Travel Lanes	CR 800 S (136th Street) Corridor Improvement Project: Phase 1, Atlantic Road (E. CR 168 - Hamilton-Madison County Line) to SR 13 (CR 900 W/Madison Street) [Includes PI Phases 1 & 2, RW & CN Phase 1 only] (Ingalls)	48	2022	PE	\$ 143,269	\$ 35,818	\$ 179,087	TA (STBG)	7/9/2025	8-43712	\$ 4,500,000	Scope Provided by MPO			X					MOVE	2020-2025	AQC Non-Exempt included in MTP 2045 adopted October 2020, Central Indiana Transportation Conformity Determination Report July 2020 and USDOT Conformity Letter 9-28-20	N/A	N/A	Res. 3-15-21, Mod. 7-12-21, Res. 3-3-22, Res. 4-25-24 Non-Exempt
3	2100092	Ingalls	Added Travel Lanes	CR 800 S (136th Street) Corridor Improvement Project: Phase 1, Atlantic Road (E. CR 168 - Hamilton-Madison County Line) to SR 13 (CR 900 W/Madison Street) [Includes PI Phases 1 & 2, RW & CN Phase 1 only] (Ingalls)	48	2022	PE	\$ 733,738	\$ 183,435	\$ 917,173	STBG	7/9/2025	8-43712	\$ 4,500,000	Scope Provided by MPO			X					MOVE	2020-2025	AQC Non-Exempt included in MTP 2045 adopted October 2020, Central Indiana Transportation Conformity Determination Report July 2020 and USDOT Conformity Letter 9-28-20	N/A	N/A	Res. 3-15-21, Mod. 7-12-21, Res. 3-3-22, Res. 4-25-24 Non-Exempt
4	2100092	Ingalls	Added Travel Lanes	CR 800 S (136th Street) Corridor Improvement Project: Phase 1, Atlantic Road (E. CR 168 - Hamilton-Madison County Line) to SR 13 (CR 900 W/Madison Street) [Includes PI Phases 1 & 2, RW & CN Phase 1 only] (Ingalls)	48	2025	PE	\$ 50,720	\$ 12,680	\$ 63,400	STBG	7/9/2025	8-43712	\$ 4,500,000	Scope Provided by MPO			X					MOVE	2020-2025	AQC Non-Exempt included in MTP 2045 adopted October 2020, Central Indiana Transportation Conformity Determination Report July 2020 and USDOT Conformity Letter 9-28-20	N/A	N/A	Res. 3-15-21, Mod. 7-12-21, Res. 3-3-22, Res. 4-25-24 Non-Exempt
5	2100092	Ingalls	Added Travel Lanes	CR 800 S (136th Street) Corridor Improvement Project: Phase 1, Atlantic Road (E. CR 168 - Hamilton-Madison County Line) to SR 13 (CR 900 W/Madison Street) [Includes PI Phases 1 & 2, RW & CN Phase 1 only] (Ingalls)	48	2026	RW	\$ -	\$ 64,000	\$ 64,000	N/A	7/9/2025	8-43712	\$ 4,500,000	Scope Provided by MPO			X					MOVE	2020-2025	AQC Non-Exempt included in MTP 2045 adopted October 2020, Central Indiana Transportation Conformity Determination Report July 2020 and USDOT Conformity Letter 9-28-20	N/A	N/A	Res. 3-15-21, Mod. 7-12-21, Res. 3-3-22, Res. 4-25-24 Non-Exempt
6	2100092	Ingalls	Added Travel Lanes	CR 800 S (136th Street) Corridor Improvement Project: Phase 1, Atlantic Road (E. CR 168 - Hamilton-Madison County Line) to SR 13 (CR 900 W/Madison Street) [Includes PI Phases 1 & 2, RW & CN Phase 1 only] (Ingalls)	48	2026	CN	\$ -	\$ 8,290,150	\$ 8,290,150	N/A	7/9/2025	8-43712	\$ 4,500,000	Scope Provided by MPO			X					MOVE	2020-2025	AQC Non-Exempt included in MTP 2045 adopted October 2020, Central Indiana Transportation Conformity Determination Report July 2020 and USDOT Conformity Letter 9-28-20	N/A	N/A	Res. 3-15-21, Mod. 7-12-21, Res. 3-3-22, Res. 4-25-24 Non-Exempt
7	2101290	Ingalls	Added Travel Lanes	CR 800 S (136th Street) Corridor Improvement Project: Phase 2, Intersection Improvement with Roundabout @ Atlantic Road (E. CR 168 - Hamilton-Madison County Line)	48	2026	RW	\$ -	\$ 10,315	\$ 10,315	N/A	7/9/2026	8-44087	\$ 1,562,315	Scope Provided by MPO			X					MOVE	2020-2025	AQC Non-Exempt included in MTP 2045 adopted October 2020, Central Indiana Transportation Conformity Determination Report July 2020 and USDOT Conformity Letter 9-28-20	N/A	N/A	Res. 3-3-22, Res. 4-25-24 Non-Exempt
Section 2: Non-MPO Funded Projects - Non-Exempt from Air Quality Conformity Analysis																												
8	1552299	Anderson	New Road Construction	67th Street Extension Project: Layton Road (CR 400 W) to SR 38 (PE Phase) & 67th Street Extension Project: Phase 1, Layton Road (CR 400 W) to 1.5 miles west of Foster Branch Ditch (RW & CN Phase)	48	2025	RW	\$ -	\$ 70,000	\$ 70,000	N/A	1/15/2025	8-38985	\$ 9,187,045	Scope Provided by MPO			X					MOVE	2020-2025	AQC Non-Exempt per 2020-2023 TIP Document Amendment & MTP 2024 Amendment USDOT Conformity Letter 9-28-20	N/A	N/A	Res. 10-2-15, Res. 2-5-16, Res. 5-16-17, Res. 3-10-17, Res. 4-4-15, Res. 5-11-19, Adopted with 2022-2026 TIP (Courtney TIP Amendment - Res. 2-15-21)
9	1552299	Anderson	New Road Construction	67th Street Extension Project: Layton Road (CR 400 W) to SR 38 (PE Phase) & 67th Street Extension Project: Phase 1, Layton Road (CR 400 W) to 1.5 miles west of Foster Branch Ditch (RW & CN Phase)	48	2026	CN	\$ -	\$ 6,698,750	\$ 6,698,750	N/A	1/15/2025	8-38985	\$ 9,187,045	Scope Provided by MPO			X					MOVE	2020-2025	AQC Non-Exempt per 2020-2023 TIP Document Amendment & MTP 2024 Amendment USDOT Conformity Letter 9-28-20	N/A	N/A	Res. 10-2-15, Res. 2-5-16, Res. 5-16-17, Res. 3-10-17, Res. 4-4-15, Res. 5-11-19, Adopted with 2022-2026 TIP (Courtney TIP Amendment - Non-Exempt)
10	1702936	INDOT	Added Travel Lanes	US 36 (SR 9/58 47), .28 miles S. of SR 38 to N. Junction of SR 9/58 67 (Ponderton)	48	2022	PE	\$ 80,000	\$ 20,000	\$ 100,000	STBG	11/16/2022	8-41817	\$ 9,670,368	Technical Memo Provided by MPO			X					N/A	2020-2025	AQC Non-Exempt per 2020-2023 TIP Document Amendment & MTP 2024 Amendment USDOT Conformity Letter 9-28-20	N/A	N/A	Res. 12-13-18, Res. 2-14-19, Adopted with 2020-2023 TIP, USDOT Conformity Finding Letter 9-21-19, Res. 1-8-21
11	1702936	INDOT	Added Travel Lanes	US 36 (SR 9/58 47), .28 miles S. of SR 38 to N. Junction of SR 9/58 67 (Ponderton)	48	2022	RW	\$ 240,000	\$ 60,000	\$ 300,000	STBG	11/16/2022	8-41817	\$ 9,670,368	Technical Memo Provided by MPO			X					N/A	2020-2025	AQC Non-Exempt per 2020-2023 TIP Document Amendment & MTP 2024 Amendment USDOT Conformity Letter 9-28-20	N/A	N/A	Res. 12-13-18, Res. 2-14-19, Adopted with 2020-2023 TIP, USDOT Conformity Finding Letter 9-21-19, Res. 1-8-21
12	1702936	INDOT	Added Travel Lanes	US 36 (SR 9/58 47), .28 miles S. of SR 38 to N. Junction of SR 9/58 67 (Ponderton)	48	2023	CN	\$ 2,616,294	\$ 654,074	\$ 3,270,368	STBG	11/16/2022	8-41817	\$ 9,670,368	Technical Memo Provided by MPO			X					N/A	2020-2025	AQC Non-Exempt per 2020-2023 TIP Document Amendment & MTP 2024 Amendment USDOT Conformity Letter 9-28-20	N/A	N/A	Res. 12-13-18, Res. 2-14-19, Adopted with 2020-2023 TIP, USDOT Conformity Finding Letter 9-21-19, Res. 1-8-21
13	1900132	INDOT	Intersect. Improv. W/ Added Turn Lanes	SR 9 @ CR 800 N (Linwood Road) (Anderson)	48	2024	RW	\$ 103,500	\$ 11,500	\$ 115,000	HSP	7/12/2023	8-42410	\$ 1,157,410	Exempt	X							N/A	2020-2025	AQC Exempt - 8-5-20 - Redesignated as AQC Non-Exempt per 2020-2023 TIP Document Amendment & MTP 2024 Amendment USDOT Conformity Letter 9-28-20 & 3-3-22	N/A	N/A	Res. 8-1-19, Res. 8-6-20, Adopted with 2022-2026 TIP (Courtney TIP Amendment - Non-Exempt), Res. 3-3-22, Res. 4-25-24 Non-Exempt
14	1900132	INDOT	Intersect. Improv. W/ Added Turn Lanes	SR 9 @ CR 800 N (Linwood Road) (Anderson)	48	2025	CN	\$ 971,587	\$ 108,176	\$ 1,081,763	HSP	7/12/2023	8-42410	\$ 1,157,410	Exempt	X							N/A	2020-2025	AQC Exempt - 8-5-20 - Redesignated as AQC Non-Exempt per 2020-2023 TIP Document Amendment & MTP 2024 Amendment USDOT Conformity Letter 9-28-20 & 3-3-22	N/A	N/A	Res. 8-1-19, Res. 8-6-20, Adopted with 2022-2026 TIP (Courtney TIP Amendment - Non-Exempt), Res. 3-3-22, Res. 4-25-24 Non-Exempt
15	1900171	INDOT	New Signal Installation	SR 13 @ CR 800 S (Ingalls)	48	2023	RW	\$ 1,520	\$ 380	\$ 1,900	STBG	7/12/2023	8-41311	\$ 872,053	Exempt	X							N/A	2020-2025	AQC Exempt - 2-13-20 - Redesignated as AQC Non-Exempt per 2020-2023 TIP Document Amendment & MTP 2024 Amendment USDOT Conformity Letter 9-28-20 & AQC Exempt 12-7-22 & 4-24-23	N/A	N/A	Res. 2-20-20, Adopted with 2022-2026 TIP (Courtney TIP Amendment - Non-Exempt), Res. 4-28-23, Res. 12-8-22, Mod. 3-27-24
16	1900171	INDOT	New Signal Installation	SR 13 @ CR 800 S (Ingalls)	48	2024	CN	\$ 1,771,245	\$ 442,811	\$ 2,214,056	STBG	7/12/2023	8-41311	\$ 872,053	Exempt	X							N/A	2020-2025	AQC Exempt - 2-13-20 - Redesignated as AQC Non-Exempt per 2020-2023 TIP Document Amendment & MTP 2024 Amendment USDOT Conformity Letter 9-28-20 & AQC Exempt 12-7-22 & 4-24-23	N/A	N/A	Res. 2-20-20, Adopted with 2022-2026 TIP (Courtney TIP Amendment - Non-Exempt), Res. 4-28-23, Res. 12-8-22, Mod. 3-27-24
17	1802854	INDOT	Added Travel Lanes	US 36, US 36 North Junction to Huntsville Road (Ponderton)	48	2022	RW	\$ 120,000	\$ 30,000	\$ 150,000	STBG	11/16/2022	8-41817	\$ 1,780,936	Technical Memo Provided by MPO			X					N/A	2020-2025	USDOT Conformity Letter 4-25-22	N/A	N/A	Res. 9-28-21

**Madison County Council of Governments (Anderson MPO)
FY 2022-2026 Transportation Improvement Program (TIP)**

All Projects: Current Through 7-3-24

REF	PROJECT DETAILS					PROJECT FUNDING										PERFORMANCE MEASURES										MTP PLANNING		AIR QUALITY CONFORMITY			
	DES	Sponsor Name	Work Category (Work Type)	Location & Description	County	Funding Obligation Year (State Fiscal)	Project Phase	Federal Funds by Phase	Required Local/State Matching Funds	Total Funds by Phase	Federal Funding Program	Letting Date (3-5 weeks prior to Obligation Date of CR Phase)	Contract Number (CR Phase)	Total Project Cost	Complete Streets (MPO)	Safety (MPO/NDOT)	Pavement Condition (MPO/NDOT)	Bridge Condition (MPO/NDOT)	Reliability & Freight Accessibility (MPO/NDOT)	Congestion Mitigation & Air Quality (CMAQ) (MPO/NDOT)	Transit (MPO/NDOT)	MTP Project Category	Analysis Period	AQ Conformity Analysis	Exempt Project Type (AQ)	Reference (AQ)	REFERENCE DOCUMENTS				
18	1802854	INDOT	Added Travel Lane	US 36, US 36 North Junction to Huntsville Road (Pavement)	48	2023	CN	\$ 1,311,933	\$ 327,883	\$ 1,639,816	STBG	11/16/2022	8-41837	\$ 1,789,916	Technical Memo Provided by MPO	X							N/A	2020-2025	USDOT Conformity Letter 4-25-22	N/A	N/A	Res. 3-28-21			
Section 3: MPO-Funded LPA Projects - Exempt from Air Quality Conformity Analysis																															
19	1900390	Anderson	Traffic Signals Modernization	Anderson Traffic Signalization System Modernization Project, various locations throughout the City of Anderson (Ph-PE All Phases & PE/RW/CN -Phase 1/Group 1)	30	2022	PE	\$ 237,522	\$ -	\$ 237,522	HSP	1/12/2022	T-41881	\$ 1,911,600	Scope Provided by MPO	X							MOVE	2020-2025	AQCE Exempt - 3-3-20 & 3-3-22	Safety: Projects that Correct, Improve, or Eliminate a Hazardous Location or Feature (2)	40 CFR 93.128.2	Res. 1-28-19, Res. 2-14-19, Adopted with 2020-2023 TIP, Res. 3-4-20, Res. 6-4-20, Mod. 8-3-20, Res. 10-1-20, Res. 3-3-22, Res. 1-31-23, Mod. 12-27-23			
20	1900390	Anderson	Traffic Signals Modernization	Anderson Traffic Signalization System Modernization Project, various locations throughout the City of Anderson (Ph-PE All Phases & PE/RW/CN -Phase 1/Group 1)	30	2023	CN	\$ 873,113	\$ -	\$ 873,113	HSP (STBG)	1/12/2022	T-41881	\$ 1,911,600	Scope Provided by MPO	X							MOVE	2020-2025	AQCE Exempt - 3-3-20 & 3-3-22	Safety: Projects that Correct, Improve, or Eliminate a Hazardous Location or Feature (2)	40 CFR 93.128.2	Res. 1-28-19, Res. 2-14-19, Adopted with 2020-2023 TIP, Res. 3-4-20, Res. 6-4-20, Mod. 8-3-20, Res. 10-1-20, Res. 3-3-22, Res. 1-31-23, Mod. 12-27-23			
21	1900390	Anderson	Traffic Signals Modernization	Anderson Traffic Signalization System Modernization Project, various locations throughout the City of Anderson (Ph-PE All Phases & PE/RW/CN -Phase 1/Group 1)	30	2023	CN	\$ 285,768	\$ -	\$ 285,768	HSP	1/12/2022	T-41881	\$ 1,911,600	Scope Provided by MPO	X							MOVE	2020-2025	AQCE Exempt - 3-3-20 & 3-3-22	Safety: Projects that Correct, Improve, or Eliminate a Hazardous Location or Feature (2)	40 CFR 93.128.2	Res. 1-28-19, Res. 2-14-19, Adopted with 2020-2023 TIP, Res. 3-4-20, Res. 6-4-20, Mod. 8-3-20, Res. 10-1-20, Res. 3-3-22, Res. 1-31-23, Mod. 12-27-23			
22	1900390	Anderson	Traffic Signals Modernization	Anderson Traffic Signalization System Modernization Project, various locations throughout the City of Anderson (Ph-PE All Phases & PE/RW/CN -Phase 1/Group 1)	30	2023	CN	\$ 66,119	\$ -	\$ 66,119	HSP (CN)	1/12/2022	T-41881	\$ 1,911,600	Scope Provided by MPO	X							MOVE	2020-2025	AQCE Exempt - 3-3-20 & 3-3-22	Safety: Projects that Correct, Improve, or Eliminate a Hazardous Location or Feature (2)	40 CFR 93.128.2	Res. 1-28-19, Res. 2-14-19, Adopted with 2020-2023 TIP, Res. 3-4-20, Res. 6-4-20, Mod. 8-3-20, Res. 10-1-20, Res. 3-3-22, Res. 1-31-23, Mod. 12-27-23			
23	1900390	Anderson	Traffic Signals Modernization	Anderson Traffic Signalization System Modernization Project, various locations throughout the City of Anderson (Ph-PE All Phases & PE/RW/CN -Phase 1/Group 1)	30	2024	CN	\$ 106,100	\$ -	\$ 106,100	HSP (STBG)	1/12/2022	T-41881	\$ 1,911,600	Scope Provided by MPO	X							MOVE	2020-2025	AQCE Exempt - 3-3-20 & 3-3-22	Safety: Projects that Correct, Improve, or Eliminate a Hazardous Location or Feature (2)	40 CFR 93.128.2	Res. 1-28-19, Res. 3-14-19, Adopted with 2020-2023 TIP, Res. 3-4-20, Res. 6-4-20, Mod. 8-3-20, Res. 10-1-20, Res. 3-3-22, Res. 1-31-23, Mod. 12-27-23			
24	192449	Fortville	Bike/Pedestrian Facilities	CR 200 W Pedestrian Safety Project, .5 miles S. of CR 900 N to South Entrance to Mt. Vernon High School	30	2022	PE	\$ 14,399	\$ 3,600	\$ 17,999	STBG	10/14/2021	R-39074	\$ 1,210,551	Scope Provided by MPO					X			PROTECT	2020-2025	AQCE Exempt - 11-15-19 & 3-3-22	Air Quality: Bicycle and Pedestrian Facilities (3)	40 CFR 93.128.3	CMAQ Eligibility Finding 6-14-12, CMAQ Eligibility Finding 6-26-15, Project Eligibility Review Project Submission (2014), Res. 11-10-15, Res. 4-7-16, Adopted with 2020-2023 TIP, Res. 11-15-19, Res. 2-10-20, Res. 10-1-20, Res. 3-3-22			
25	192449	Fortville	Bike/Pedestrian Facilities	CR 200 W Pedestrian Safety Project, .5 miles S. of CR 900 N to South Entrance to Mt. Vernon High School	30	2022	RW	\$ 8,728	\$ 2,182	\$ 10,910	STBG	10/14/2021	R-39074	\$ 1,210,551	Scope Provided by MPO					X			PROTECT	2020-2025	AQCE Exempt - 11-15-19 & 3-3-22	Air Quality: Bicycle and Pedestrian Facilities (3)	40 CFR 93.128.3	CMAQ Eligibility Finding 6-14-12, CMAQ Eligibility Finding 6-26-15, Project Eligibility Review Project Submission (2014), Res. 11-10-15, Res. 4-7-16, Adopted with 2020-2023 TIP, Res. 11-15-19, Res. 2-10-20, Res. 10-1-20, Res. 3-3-22			
26	192449	Fortville	Bike/Pedestrian Facilities	CR 200 W Pedestrian Safety Project, .5 miles S. of CR 900 N to South Entrance to Mt. Vernon High School	30	2022	CN	\$ 106,599	\$ 61,212	\$ 167,811	STBG	10/14/2021	R-39074	\$ 1,210,551	Scope Provided by MPO					X			PROTECT	2020-2025	AQCE Exempt - 11-15-19 & 3-3-22	Air Quality: Bicycle and Pedestrian Facilities (3)	40 CFR 93.128.3	CMAQ Eligibility Finding 6-14-12, CMAQ Eligibility Finding 6-26-15, Project Eligibility Review Project Submission (2014), Res. 11-10-15, Res. 4-7-16, Adopted with 2020-2023 TIP, Res. 11-15-19, Res. 2-10-20, Res. 10-1-20, Res. 3-3-22			
27	192449	Fortville	Bike/Pedestrian Facilities	CR 200 W Pedestrian Safety Project, .5 miles S. of CR 900 N to South Entrance to Mt. Vernon High School	30	2022	CN	\$ 743,697	\$ 185,925	\$ 929,622	CMAQ	10/14/2021	R-39074	\$ 1,210,551	Scope Provided by MPO					X			PROTECT	2020-2025	AQCE Exempt - 11-15-19 & 3-3-22	Air Quality: Bicycle and Pedestrian Facilities (3)	40 CFR 93.128.3	CMAQ Eligibility Finding 6-14-12, CMAQ Eligibility Finding 6-26-15, Project Eligibility Review Project Submission (2014), Res. 11-10-15, Res. 4-7-16, Adopted with 2020-2023 TIP, Res. 11-15-19, Res. 2-10-20, Res. 10-1-20, Res. 3-3-22			
28	192449	Fortville	Bike/Pedestrian Facilities	CR 200 W Pedestrian Safety Project, .5 miles S. of CR 900 N to South Entrance to Mt. Vernon High School	30	2022	CN	\$ 133,204	\$ 33,301	\$ 166,505	STBG	10/14/2021	R-39074	\$ 1,210,551	Scope Provided by MPO					X			PROTECT	2020-2025	AQCE Exempt - 11-15-19 & 3-3-22	Air Quality: Bicycle and Pedestrian Facilities (3)	40 CFR 93.128.3	CMAQ Eligibility Finding 6-14-12, CMAQ Eligibility Finding 6-26-15, Project Eligibility Review Project Submission (2014), Res. 11-10-15, Res. 4-7-16, Adopted with 2020-2023 TIP, Res. 11-15-19, Res. 2-10-20, Res. 10-1-20, Res. 3-3-22			
29	192447	Fortville	Bike/Pedestrian Facilities	MT Vernon Trail - Phase 1, Maple Street/Fortville Pike from Garden Street to North CR 200 W	30	2022	PE	\$ 14,399	\$ 3,600	\$ 17,999	STBG	7/13/2022	R-39072	\$ 1,682,272	Scope Provided by MPO					X			PROTECT	2020-2025	AQCE Exempt - 11-15-19, 6-5-20, & 3-3-22	Air Quality: Bicycle and Pedestrian Facilities (3)	40 CFR 93.128.3	CMAQ Eligibility Finding 6-14-12, Project Eligibility Review Project Submission (2014), Res. 11-10-15, Res. 4-7-16, Res. 3-2-17, Adopted with 2020-2023 TIP, Res. 11-15-19, Res. 2-10-20, Res. 6-4-20, Res. 10-1-20, Res. 3-3-22, Res. 1-31-23, Mod. 12-27-23			
30	192447	Fortville	Bike/Pedestrian Facilities	MT Vernon Trail - Phase 1, Maple Street/Fortville Pike from Garden Street to North CR 200 W	30	2024	PE	\$ 44,000	\$ 11,000	\$ 55,000	STBG	7/13/2022	R-39072	\$ 1,682,272	Scope Provided by MPO					X			PROTECT	2020-2025	AQCE Exempt - 11-15-19, 6-5-20, & 3-3-22	Air Quality: Bicycle and Pedestrian Facilities (3)	40 CFR 93.128.3	CMAQ Eligibility Finding 6-14-12, Project Eligibility Review Project Submission (2014), Res. 11-10-15, Res. 4-7-16, Res. 3-2-17, Adopted with 2020-2023 TIP, Res. 11-15-19, Res. 2-10-20, Res. 6-4-20, Res. 10-1-20, Res. 3-3-22, Res. 1-31-23, Mod. 12-27-23			
31	192447	Fortville	Bike/Pedestrian Facilities	MT Vernon Trail - Phase 1, Maple Street/Fortville Pike from Garden Street to North CR 200 W	30	2022	RW	\$ 25,448	\$ 6,412	\$ 32,060	STBG	7/13/2022	R-39072	\$ 1,682,272	Scope Provided by MPO					X			PROTECT	2020-2025	AQCE Exempt - 11-15-19, 6-5-20, & 3-3-22	Air Quality: Bicycle and Pedestrian Facilities (3)	40 CFR 93.128.3	CMAQ Eligibility Finding 6-14-12, Project Eligibility Review Project Submission (2014), Res. 11-10-15, Res. 4-7-16, Res. 3-2-17, Adopted with 2020-2023 TIP, Res. 11-15-19, Res. 2-10-20, Res. 6-4-20, Res. 10-1-20, Res. 3-3-22, Res. 1-31-23, Mod. 12-27-23			
32	192447	Fortville	Bike/Pedestrian Facilities	MT Vernon Trail - Phase 1, Maple Street/Fortville Pike from Garden Street to North CR 200 W	30	2023	CN	\$ 141,034	\$ 35,259	\$ 176,293	STBG	7/13/2022	R-39072	\$ 1,682,272	Scope Provided by MPO					X			PROTECT	2020-2025	AQCE Exempt - 11-15-19, 6-5-20, & 3-3-22	Air Quality: Bicycle and Pedestrian Facilities (3)	40 CFR 93.128.3	CMAQ Eligibility Finding 6-14-12, Project Eligibility Review Project Submission (2014), Res. 11-10-15, Res. 4-7-16, Res. 3-2-17, Adopted with 2020-2023 TIP, Res. 11-15-19, Res. 2-10-20, Res. 6-4-20, Res. 10-1-20, Res. 3-3-22, Res. 1-31-23, Mod. 12-27-23			
33	192447	Fortville	Bike/Pedestrian Facilities	MT Vernon Trail - Phase 1, Maple Street/Fortville Pike from Garden Street to North CR 200 W	30	2023	CN	\$ 743,697	\$ 185,925	\$ 929,622	CMAQ	7/13/2022	R-39072	\$ 1,682,272	Scope Provided by MPO					X			PROTECT	2020-2025	AQCE Exempt - 11-15-19, 6-5-20, & 3-3-22	Air Quality: Bicycle and Pedestrian Facilities (3)	40 CFR 93.128.3	CMAQ Eligibility Finding 6-14-12, Project Eligibility Review Project Submission (2014), Res. 11-10-15, Res. 4-7-16, Res. 3-2-17, Adopted with 2020-2023 TIP, Res. 11-15-19, Res. 2-10-20, Res. 6-4-20, Res. 10-1-20, Res. 3-3-22, Res. 1-31-23, Mod. 12-27-23			
34	192447	Fortville	Bike/Pedestrian Facilities	MT Vernon Trail - Phase 1, Maple Street/Fortville Pike from Garden Street to North CR 200 W	30	2023	CN	\$ 141,269	\$ 35,818	\$ 179,087	TA (STBG)	7/13/2022	R-39072	\$ 1,682,272	Scope Provided by MPO					X			PROTECT	2020-2025	AQCE Exempt - 11-15-19, 6-5-20, & 3-3-22	Air Quality: Bicycle and Pedestrian Facilities (3)	40 CFR 93.128.3	CMAQ Eligibility Finding 6-14-12, Project Eligibility Review Project Submission (2014), Res. 11-10-15, Res. 4-7-16, Res. 3-2-17, Adopted with 2020-2023 TIP, Res. 11-15-19, Res. 2-10-20, Res. 6-4-20, Res. 10-1-20, Res. 3-3-22, Res. 1-31-23, Mod. 12-27-23			
35	192447	Fortville	Bike/Pedestrian Facilities	MT Vernon Trail - Phase 1, Maple Street/Fortville Pike from Garden Street to North CR 200 W	30	2023	CN	\$ 21,592	\$ 5,898	\$ 29,490	CMAQ	7/13/2022	R-39072	\$ 1,682,272	Scope Provided by MPO					X			PROTECT	2020-2025	AQCE Exempt - 11-15-19, 6-5-20, & 3-3-22	Air Quality: Bicycle and Pedestrian Facilities (3)	40 CFR 93.128.3	CMAQ Eligibility Finding 6-14-12, Project Eligibility Review Project Submission (2014), Res. 11-10-15, Res. 4-7-16, Res. 3-2-17, Adopted with 2020-2023 TIP, Res. 11-15-19, Res. 2-10-20, Res. 6-4-20, Res. 10-1-20, Res. 3-3-22, Res. 1-31-23, Mod. 12-27-23			

**Madison County Council of Governments (Anderson MPO)
FY 2022-2026 Transportation Improvement Program (TIP)**

All Projects: Current Through 7-3-24

REF	PROJECT DETAILS					PROJECT FUNDING										PERFORMANCE MEASURES										MTP PLANNING		AIR QUALITY CONFORMITY				REFERENCE DOCUMENTS
	DES	Sponsor Name	Work Category (Work Type)	Location & Description	County	Funding Obligation Year (State Fiscal)	Project Phase	Federal Funds by Phase	Required Local/State Matching Funds	Total Funds by Phase	Federal Funding Program	Letting Date (3-8 weeks prior to Obligation Date of CN Phase)	Contract Number (CN Phase)	Total Project Cost	Complete Streets (MPO)	Safety (MPO/NDOT)	Payment Condition (MPO/NDOT)	Bridge Condition (MPO/NDOT)	Reliability & Freight Feasibility (MPO/NDOT)	Congestion Mitigation & Air Quality (CMAQ) (MPO/NDOT)	Transit (MPO/NDOT)	MTP Project Category	Analysis Period	AQ Conformity Analysis	Exempt Project Type (AQ)	Reference (AQ)						
54	180243	Alexandria	Road Reconstruction (SR/VR Standard)	Washington Street Corridor Improvement Project: Phase 4, Wayne Street to Curve Street	48	2024	CN	\$ 768,081	\$ 193,021	\$ 960,102	STNG	7/12/2023	8-40862	\$ 2,550,566	Scope Provided by MPO		X						CONNECT	2020-2025	AQD Exempt 9-15-23 & USDOT Conformity Letter 7-12-21	Air Quality: Bicycle and Pedestrian Facilities (33)	42 CFR 91.126.33	Res. 2-3-18, Adopted with 2020-2023 TIP, Res. 10-1-20, Adopted with 2022-2026 TIP (Courtney TIP Amendment - Exempt from October 2020), Res. 9-29-23, Mod. 12-27-23, Res. 1-26-24, Mod. 1-10-24, Mod. 7-3-24				
55	180243	Alexandria	Road Reconstruction (SR/VR Standard)	Washington Street Corridor Improvement Project: Phase 4, Wayne Street to Curve Street	48	2024	CN	\$ 346,112	\$ 77,876	\$ 423,988	TA (STNG)	7/12/2023	8-40862	\$ 2,550,566	Scope Provided by MPO		X						CONNECT	2020-2025	AQD Exempt 9-15-23 & USDOT Conformity Letter 7-12-21	Air Quality: Bicycle and Pedestrian Facilities (33)	42 CFR 91.126.33	Res. 2-3-18, Adopted with 2020-2023 TIP, Res. 10-1-20, Adopted with 2022-2026 TIP (Courtney TIP Amendment - Exempt from October 2020), Res. 9-29-23, Mod. 12-27-23, Res. 1-26-24, Mod. 1-10-24, Mod. 7-3-24				
56	180244	Alexandria	Road Reconstruction (SR/VR Standard)	Washington Street Corridor Improvement Project: Phase 5, Pennsylvania Street to Curve Street (Includes Railroad Crossing)	48	2024	PE	\$ 4,960	\$ 1,240	\$ 6,200	STNG	7/12/2023	8-40863	\$ 1,272,120	Scope Provided by MPO		X						CONNECT	2020-2025	AQD Exempt 9-15-23 & USDOT Conformity Letter 7-12-21	Safety: Railroad/Highway Crossing Warning Devices (6)	42 CFR 91.126.6	Res. 2-3-18, Adopted with 2020-2023 TIP, Res. 10-1-20, Adopted with 2022-2026 TIP (Courtney TIP Amendment - Exempt from October 2020), Res. 9-29-23, Mod. 12-27-23, Res. 1-26-24, Mod. 1-10-24, Mod. 4-20-24				
	180244	Alexandria	Road Reconstruction (SR/VR Standard)	Washington Street Corridor Improvement Project: Phase 5, Pennsylvania Street to Curve Street (Includes Railroad Crossing)	48	2024	PE	\$ 2,240	\$ 560	\$ 2,800	STNG	7/12/2023	8-40863	\$ 1,272,120	Scope Provided by MPO		X						CONNECT	2020-2025	AQD Exempt 9-15-23 & USDOT Conformity Letter 7-12-21	Safety: Railroad/Highway Crossing Warning Devices (6)	42 CFR 91.126.6	Res. 2-3-18, Adopted with 2020-2023 TIP, Res. 10-1-20, Adopted with 2022-2026 TIP (Courtney TIP Amendment - Exempt from October 2020), Res. 9-29-23, Mod. 12-27-23, Res. 1-26-24, Mod. 1-10-24, Mod. 4-20-24				
58	180244	Alexandria	Road Reconstruction (SR/VR Standard)	Washington Street Corridor Improvement Project: Phase 5, Pennsylvania Street to Curve Street (Includes Railroad Crossing)	48	2024	CN	\$ 701,533	\$ 175,884	\$ 876,917	STNG	7/12/2023	8-40863	\$ 1,272,120	Scope Provided by MPO		X						CONNECT	2020-2025	AQD Exempt 9-15-23 & USDOT Conformity Letter 7-12-21	Safety: Railroad/Highway Crossing Warning Devices (6)	42 CFR 91.126.6	Res. 2-3-18, Adopted with 2020-2023 TIP, Res. 10-1-20, Adopted with 2022-2026 TIP (Courtney TIP Amendment - Exempt from October 2020), Res. 9-29-23, Mod. 12-27-23, Res. 1-26-24, Mod. 1-10-24, Mod. 4-20-24				
59	180244	Alexandria	Road Reconstruction (SR/VR Standard)	Washington Street Corridor Improvement Project: Phase 5, Pennsylvania Street to Curve Street (Includes Railroad Crossing)	48	2024	CN	\$ 43,045	\$ 10,762	\$ 53,807	STNG	7/12/2023	8-40863	\$ 1,272,120	Scope Provided by MPO		X						CONNECT	2020-2025	AQD Exempt 9-15-23 & USDOT Conformity Letter 7-12-21	Safety: Railroad/Highway Crossing Warning Devices (6)	42 CFR 91.126.6	Res. 2-3-18, Adopted with 2020-2023 TIP, Res. 10-1-20, Adopted with 2022-2026 TIP (Courtney TIP Amendment - Exempt from October 2020), Res. 9-29-23, Mod. 12-27-23, Res. 1-26-24, Mod. 1-10-24, Mod. 4-20-24				
60	180244	Alexandria	Road Reconstruction (SR/VR Standard)	Washington Street Corridor Improvement Project: Phase 5, Pennsylvania Street to Curve Street (Includes Railroad Crossing)	48	2024	CN	\$ 64,480	\$ 16,120	\$ 80,600	STNG	7/12/2023	8-40863	\$ 1,272,120	Scope Provided by MPO		X						CONNECT	2020-2025	AQD Exempt 9-15-23 & USDOT Conformity Letter 7-12-21	Safety: Railroad/Highway Crossing Warning Devices (6)	42 CFR 91.126.6	Res. 2-3-18, Adopted with 2020-2023 TIP, Res. 10-1-20, Adopted with 2022-2026 TIP (Courtney TIP Amendment - Exempt from October 2020), Res. 9-29-23, Mod. 12-27-23, Res. 1-26-24, Mod. 1-10-24, Mod. 4-20-24				
61	190145	Fortville	Intersect: Improve W/T New Signals	CR 200 W & Fortville Pike Intersection Safety Improvement Project	30	2023	CN	\$ 186,000	\$ -	\$ 186,000	HSP	7/13/2022	8-39072	\$ 217,835	Scope Provided by MPO		X						PROTECT	2020-2025	AQD Exempt - 11-15-19 & 6-5-20	Air Quality: Bicycle and Pedestrian Facilities (33)	42 CFR 91.126.33	Res. 4-4-18, Adopted with 2020-2023 TIP, Res. 11-15-18, Res. 2-20-20, Res. 8-6-20, Res. 10-1-20, Res. 1-11-23				
62	190145	Fortville	Intersect: Improve W/T New Signals	CR 200 W & Fortville Pike Intersection Safety Improvement Project	30	2023	CN	\$ 62,707	\$ -	\$ 62,707	HSP	7/13/2022	8-39072	\$ 217,835	Scope Provided by MPO		X						PROTECT	2020-2025	AQD Exempt - 11-15-19 & 6-5-20	Air Quality: Bicycle and Pedestrian Facilities (33)	42 CFR 91.126.33	Res. 4-4-18, Adopted with 2020-2023 TIP, Res. 11-15-18, Res. 2-20-20, Res. 8-6-20, Res. 10-1-20, Res. 1-11-23				
63	2001127	Pendleton	Bike/Pedestrian Facilities	US 36 (SR 9/5047) Pedestrian Connectivity Project, .28 miles S. of SR 38 to N. Junction of SR 5/046?	48	2022	PE	\$ 96,000	\$ 24,000	\$ 120,000	STNG	7/10/2024	8-41837	\$ 3,990,000	Scope Provided by MPO						X		PROTECT	2020-2025	AQD Exempt - 3-3-20, 4-6-21, 3-3-22, & 9-15-23	Air Quality: Bicycle and Pedestrian Facilities (33)	42 CFR 91.126.33	Res. 3-6-20, Res. 6-4-20, Res. 10-1-20, Res. 4-7-21, Res. 3-3-22, Res. 4-7-22, Res. 4-15-22, Mod. 12-8-22, Res. 1-31-23, Res. 9-29-23, Mod. 12-27-23				
64	2001127	Pendleton	Bike/Pedestrian Facilities	US 36 (SR 9/5047) Pedestrian Connectivity Project, .28 miles S. of SR 38 to N. Junction of SR 5/046?	48	2024	PE	\$ 202,344	\$ 50,586	\$ 252,930	STNG	7/10/2024	8-41837	\$ 3,990,000	Scope Provided by MPO						X		PROTECT	2020-2025	AQD Exempt - 3-3-20, 4-6-21, 3-3-22, & 9-15-23	Air Quality: Bicycle and Pedestrian Facilities (33)	42 CFR 91.126.33	Res. 3-6-20, Res. 6-4-20, Res. 10-1-20, Res. 4-7-21, Res. 3-3-22, Res. 4-7-22, Res. 4-15-22, Mod. 12-8-22, Res. 1-31-23, Res. 9-29-23, Mod. 12-27-23				
65	2001127	Pendleton	Bike/Pedestrian Facilities	US 36 (SR 9/5047) Pedestrian Connectivity Project, .28 miles S. of SR 38 to N. Junction of SR 5/046?	48	2023	HW	\$ -	\$ -	\$ -	N/A	7/10/2024	8-41837	\$ 3,990,000	Scope Provided by MPO						X		PROTECT	2020-2025	AQD Exempt - 3-3-20, 4-6-21, 3-3-22, & 9-15-23	Air Quality: Bicycle and Pedestrian Facilities (33)	42 CFR 91.126.33	Res. 3-6-20, Res. 6-4-20, Res. 10-1-20, Res. 4-7-21, Res. 3-3-22, Res. 4-7-22, Res. 4-15-22, Mod. 12-8-22, Res. 1-31-23, Res. 9-29-23, Mod. 12-27-23				
66	2001127	Pendleton	Bike/Pedestrian Facilities	US 36 (SR 9/5047) Pedestrian Connectivity Project, .28 miles S. of SR 38 to N. Junction of SR 5/046?	48	2026	CN	\$ 868,543	\$ 217,136	\$ 1,085,677	STNG	7/10/2024	8-41837	\$ 3,990,000	Scope Provided by MPO						X		PROTECT	2020-2025	AQD Exempt - 3-3-20, 4-6-21, 3-3-22, & 9-15-23	Air Quality: Bicycle and Pedestrian Facilities (33)	42 CFR 91.126.33	Res. 3-6-20, Res. 6-4-20, Res. 10-1-20, Res. 4-7-21, Res. 3-3-22, Res. 4-7-22, Res. 4-15-22, Mod. 12-8-22, Res. 1-31-23, Res. 9-29-23, Mod. 12-27-23				
67	2001127	Pendleton	Bike/Pedestrian Facilities	US 36 (SR 9/5047) Pedestrian Connectivity Project, .28 miles S. of SR 38 to N. Junction of SR 5/046?	48	2026	CN	\$ 189,848	\$ 47,462	\$ 237,310	HSP	7/10/2024	8-41837	\$ 3,990,000	Scope Provided by MPO						X		PROTECT	2020-2025	AQD Exempt - 3-3-20, 4-6-21, 3-3-22, & 9-15-23	Air Quality: Bicycle and Pedestrian Facilities (33)	42 CFR 91.126.33	Res. 3-6-20, Res. 6-4-20, Res. 10-1-20, Res. 4-7-21, Res. 3-3-22, Res. 4-7-22, Res. 4-15-22, Mod. 12-8-22, Res. 1-31-23, Res. 9-29-23, Mod. 12-27-23				
68	2001127	Pendleton	Bike/Pedestrian Facilities	US 36 (SR 9/5047) Pedestrian Connectivity Project, .28 miles S. of SR 38 to N. Junction of SR 5/046?	48	2026	CN	\$ 771,836	\$ 192,959	\$ 964,795	STNG	7/10/2024	8-41837	\$ 3,990,000	Scope Provided by MPO						X		PROTECT	2020-2025	AQD Exempt - 3-3-20, 4-6-21, 3-3-22, & 9-15-23	Air Quality: Bicycle and Pedestrian Facilities (33)	42 CFR 91.126.33	Res. 3-6-20, Res. 6-4-20, Res. 10-1-20, Res. 4-7-21, Res. 3-3-22, Res. 4-7-22, Res. 4-15-22, Mod. 12-8-22, Res. 1-31-23, Res. 9-29-23, Mod. 12-27-23				
69	2001127	Pendleton	Bike/Pedestrian Facilities	US 36 (SR 9/5047) Pedestrian Connectivity Project, .28 miles S. of SR 38 to N. Junction of SR 5/046?	48	2026	CN	\$ 349,142	\$ 87,286	\$ 436,428	TA (STNG)	7/10/2024	8-41837	\$ 3,990,000	Scope Provided by MPO						X		PROTECT	2020-2025	AQD Exempt - 3-3-20, 4-6-21, 3-3-22, & 9-15-23	Air Quality: Bicycle and Pedestrian Facilities (33)	42 CFR 91.126.33	Res. 3-6-20, Res. 6-4-20, Res. 10-1-20, Res. 4-7-21, Res. 3-3-22, Res. 4-7-22, Res. 4-15-22, Mod. 12-8-22, Res. 1-31-23, Res. 9-29-23, Mod. 12-27-23				
70	2001127	Pendleton	Bike/Pedestrian Facilities	US 36 (SR 9/5047) Pedestrian Connectivity Project, .28 miles S. of SR 38 to N. Junction of SR 5/046?	48	2026	CN	\$ 304,633	\$ 76,159	\$ 380,792	CR	7/10/2024	8-41837	\$ 3,990,000	Scope Provided by MPO						X		PROTECT	2020-2025	AQD Exempt - 3-3-20, 4-6-21, 3-3-22, & 9-15-23	Air Quality: Bicycle and Pedestrian Facilities (33)	42 CFR 91.126.33	Res. 3-6-20, Res. 6-4-20, Res. 10-1-20, Res. 4-7-21, Res. 3-3-22, Res. 4-7-22, Res. 4-15-22, Mod. 12-8-22, Res. 1-31-23, Res. 9-29-23, Mod. 12-27-23				
71	2001811	Pendleton	Bike/Pedestrian Facilities	Pendleton Business Park Trail: Phase 1, West side of Fall Creek Drive to Franklin Street (includes installation of Historic Bridge as a Pedestrian Bridge)	48	2023	PE	\$ 873,440	\$ 218,360	\$ 1,091,800	STNG	TBD	66920	TBD	Scope Provided by MPO						X		PROTECT	2020-2025	AQD Exempt 12-7-22	Air Quality: Bicycle and Pedestrian Facilities (33)	42 CFR 91.126.33	Res. 3-6-20, Adopted with 2022-2026 TIP (Courtney TIP Amendment - Exempt from October 2020), Res. 12-22-22, Res. 1-11-23, Mod. 7-3-24				

All Projects: Current Through 7-3-24

H-6

Combined STIP/TIP Costs

PE Costs												
STIP/TIP	CONTRACT #	LEAD DES	PHASE	FEDERAL	MATCH	2022	2023	2024	2025	2026	2027	2028
STIP	R-41837	1702936	PE	-\$30,124.80	-\$7,531.20			-\$37,656.00				
TIP	R-41837	1702936	PE	\$80,000	\$20,000	\$100,000						
TIP	R-41837	2001127	PE	\$96,000	\$24,000	\$120,000						
TIP	R-41837	2001127	PE	\$202,344	\$50,586			\$252,930				
Totals				\$378,344.00	\$94,586.00	\$220,000.00	\$0.00	\$215,274.00	\$0.00	\$0.00	\$0.00	\$0.00
RW Costs												
STIP/TIP	CONTRACT #	LEAD DES	PHASE	FEDERAL	MATCH	2022	2023	2024	2025	2026	2027	2028
TIP	R-41837	1702936	RW	\$240,000	\$60,000	\$300,000						
TIP	R-41837	1802854	RW	\$120,000	\$30,000	\$150,000						
TIP	R-41837	2001127	RW	-	-	-						
TIP	R-44917	2300273	RW	-	\$35,000				\$35,000			
Totals				\$360,000.00	\$125,000.00	\$450,000.00	\$0.00	\$0.00	\$35,000.00	\$0.00	\$0.00	\$0.00
CN Costs												
STIP/TIP	CONTRACT #	LEAD DES	PHASE	FEDERAL	MATCH	2022	2023	2024	2025	2026	2027	2028
STIP	R-41837	1702936	CN	-\$1,858,400.00	-\$464,600.00				-\$2,323,000.00			
TIP	R-41837	1702936	CN	\$2,616,294	\$654,074		\$3,270,368					
TIP	R-41837	1802854	CN	\$1,311,933	\$327,983		\$1,639,916					
TIP	R-41837	2001127	CN	\$868,541	\$217,136					\$1,085,677		
TIP	R-41837	2001127	CN	\$189,848	\$47,462					\$237,310		
TIP	R-41837	2001127	CN	\$771,836	\$192,959					\$964,795		
TIP	R-41837	2001127	CN	\$349,142	\$87,286					\$436,428		
TIP	R-41837	2001127	CN	\$304,633	\$76,159					\$380,792		
TIP	R-44917	2300272	CN	-	\$525,000					\$525,000		
TIP	R-44917	2300273	CN	-	\$300,000					\$300,000		
Totals				\$6,412,227.00	\$2,428,059.00	\$0.00	\$4,910,284.00	\$0.00	-\$2,323,000.00	\$3,930,002.00	\$0.00	\$0.00
All Costs												
STIP/TIP	CONTRACT #	LEAD DES	PHASE	FEDERAL	MATCH	2022	2023	2024	2025	2026	2027	2028
STIP	R-41837	1702936	CN	-\$1,858,400.00	-\$464,600.00				-\$2,323,000.00			
STIP	R-41837	1702936	PE	-\$30,124.80	-\$7,531.20			-\$37,656.00				
TIP	R-41837	1702936	CN	\$2,616,294	\$654,074		\$3,270,368					
TIP	R-41837	1802854	CN	\$1,311,933	\$327,983		\$1,639,916					
TIP	R-41837	2001127	CN	\$868,541	\$217,136					\$1,085,677		
TIP	R-41837	2001127	CN	\$189,848	\$47,462					\$237,310		
TIP	R-41837	2001127	CN	\$771,836	\$192,959					\$964,795		
TIP	R-41837	2001127	CN	\$349,142	\$87,286					\$436,428		
TIP	R-41837	2001127	CN	\$304,633	\$76,159					\$380,792		
TIP	R-44917	2300272	CN	-	\$525,000					\$525,000		
TIP	R-44917	2300273	CN	-	\$300,000					\$300,000		
TIP	R-41837	1702936	PE	\$80,000	\$20,000	\$100,000						
TIP	R-41837	2001127	PE	\$96,000	\$24,000	\$120,000						
TIP	R-41837	2001127	PE	\$202,344	\$50,586			\$252,930				
TIP	R-41837	1702936	RW	\$240,000	\$60,000	\$300,000						
TIP	R-41837	1802854	RW	\$120,000	\$30,000	\$150,000						
TIP	R-41837	2001127	RW	-	-	-						
TIP	R-44917	2300273	RW	-	\$35,000				\$35,000			
Totals				\$7,150,571.00	\$2,647,645.00	\$670,000.00	\$4,910,284.00	\$215,274.00	-\$2,288,000.00	\$3,930,002.00	\$0.00	\$0.00

Note: An amendment to adjust the Fiscal Year (FY) costs into current FYs has been submitted and is awaiting approval.

**Federal Transit
Administration**
Region V
200 West Adams St., Suite 320
Chicago, IL 60606-5253



**U.S. Department
of Transportation**

Federal Highway Administration
Indiana Division
575 N. Pennsylvania St., Rm 254
Indianapolis, IN 46204-1576

September 1, 2023

Mr. Michael Smith
Commissioner
Indiana Department of Transportation
100 N Senate Ave. N955
Indianapolis, IN 46204

SUBJECT: Indiana FY2024-2028 STIP Approval and Associated Federal Planning Finding

Dear Mr. Smith:

The Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) have completed our review of the FY2024-2028 Indiana Statewide Transportation Improvement Program (INSTIP), which was submitted by the Indiana Department of Transportation (INDOT) request letter dated August 23, 2023.

Based on our review of the information provided, certifications of the Statewide and Metropolitan transportation planning processes for and within the state of Indiana, and our participation in those transportation planning processes (including planning certification reviews conducted in Transportation Management Areas), FHWA and FTA are jointly approving the FY2024-2028 STIP, including the Metropolitan Planning Organization (MPO) Transportation Improvement Programs (TIPs) incorporated into the STIP by reference, subject to the corrective actions identified in the attached Federal Planning Finding (FPF) report. FHWA and FTA consider the projects in the 5th year for informational purposes only, and our approval does not exceed four years per 23 CFR 450.220(c).

FHWA and FTA are required under 23 CFR 450.220(b) to document and issue an FPF in conjunction with the approval of the FY2024-2028 STIP. At a minimum, the FPF verifies that the development of the STIP is consistent with the provisions of both the Statewide and Metropolitan transportation planning requirements. FHWA and FTA find that the Indiana FY2024-2028 STIP substantially meets the transportation planning requirements and are approving the STIP subject to the corrective actions outlined in the FPF. This approval is effective September 1, 2023 and is given with the understanding that an eligibility determination of individual projects for funding must be met, and INDOT must ensure the satisfaction of all administrative and statutory requirements, as well as address the corrective actions outlined in the attached report.

If you have questions or need additional information concerning our approval and the FPF, please contact Ms. Erica Tait of the FHWA Indiana Division at (317) 226-7481, or by email at erica.tait@dot.gov, or Mr. Tony Greep of the FTA Region 5 Office at (312) 353-1646, or by email at anthony.greep@dot.gov.

Sincerely,

**KELLEY
BROOKINS** Digitally signed by
KELLEY BROOKINS
Date: 2023.08.31
17:33:15 -05'00'

Kelley Brookins
Regional Administrator
FTA Region V

Sincerely,

**JERMAINE
R HANNON** Digitally signed by
JERMAINE R HANNON
Date: 2023.09.01
11:46:31 -04'00'

Jermaine R. Hannon
Division Administrator
FHWA Indiana Division



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N758-Executive Office
Indianapolis, Indiana 46204

PHONE: (855) 463-6848

Eric Holcomb, Governor
Michael Smith, Commissioner

August 28, 2023

Mr. Jermaine R. Hannon, Division Administrator
FHWA Indiana Division
575 North Pennsylvania St., Room 254
Indianapolis, IN 46204

Ms. Kelley Brookins, Regional Administrator
FTA Region 5
200 West Adams St.
Suite 320
Chicago, IL 60606-5253

Dear Mr. Hannon /Ms. Brookins:

The Indiana Department of Transportation is pleased to submit its FY 2024-2028 Statewide Transportation Improvement Program (STIP) for review and approval by your offices.

Included in the final submitted document is a listing of the state's expansion/preservation and local small urban and rural and rural transit projects. The following Metropolitan Planning Organization TIPs will be included in the FY 2024-2028 STIP by reference.

- | | |
|---|--------------|
| Area Plan Commission of Tippecanoe County (APCTC) | FY 2024-2028 |
| • https://www.tippecanoe.in.gov/DocumentCenter/View/40728/FY-2024-2028-TIP-including-0-amendments | |
| Bloomington-Monroe County Metropolitan Planning Organization (BMCMPPO) | FY 2024-2028 |
| • https://bloomington.in.gov/sites/default/files/2023-08/BMCMPPO%20FY%202024%20-%202028%20TIP%20-%2006-30-23%20-%20ADOPTED%20FINAL.pdf | |
| Columbus Area Metropolitan Planning Organization (CAMPO) | FY 2024-2028 |
| • https://www.columbus.in.gov/planning/tip/ | |
| Delaware-Muncie Metropolitan Plan Commission (DMMPC) | FY 2022-2025 |
| • <i>Including Amendments/modifications through 2/14/23</i> | |
| • https://www.co.delaware.in.us/egov/documents/1692987897_47263.pdf | |
| Evansville Metropolitan Planning Organization (EMPO) | FY 2024-2028 |
| • http://www.evansvillempo.com/Docs/TIP/TIP_2024-2028/TIP_2024-2028.pdf | |
| Kokomo-Howard County Governmental Coordinating Council (KHCGCC) | FY 2022-2026 |
| • <i>Including Amendments/modification through 7/28/23</i> | |
| • https://www.kokomompo.com/project/tip-2020-2024/ | |

www.in.gov/dot/

An Equal Opportunity Employer



Kentuckiana Regional Planning and Development Agency (KIPDA)	FY 2023-2026
• https://www.kipda.org/wp-content/uploads/2023/05/FY2023-TIP-FINAL-5-25.pdf	
Indianapolis Metropolitan Planning Organization (IMPO)	FY 2024-2027
• https://www.indympo.org/whats-underway/irtip	
Michiana Area Council of Governments (MACOG)	FY 2024-2028
• http://www.macog.com/docs/transportation/tip/approved/fy2028tip_projects.pdf	
Madison County Council of Governments (MCCOG)	FY 2022-2026
• <i>Including Amendments/modifications through 7/28/23</i>	
• https://irp.cdn-website.com/65a760a0/files/uploaded/TIP%202022-2026%20-%20updated%205-1-23.pdf	
Northeastern Indiana Regional Coordinating Council (NIRCC)	FY 2024-2028
• https://www.nircc.com/uploads/1/2/9/8/129837621/final_2024-2028_tip_5-25-23.pdf	
Northwestern Indiana Regional Planning Commission (NIRPC)	FY 2022-2026
• <i>Including Amendments/modifications through 7/25/23</i>	
• https://nirpc.org/2040-plan/mobility/transportation-improvement-program/	
Ohio-Kentucky-Indiana Regional Council of Governments (OKI)	FY 2024-2027
• https://www.oki.org/transportation-planning/transportation-improvement-program-tip/	
Terre Haute Area Metropolitan Planning Organization (THAMPO)	FY 2024-2028
• https://www.terrehautempo.com/images/THAMPO_2024_2028_AdoptionTIP.pdf	

In addition, INDOT has expanded our public involvement process by taking advantage of virtual meeting techniques and allowing accessibility to online documents, materials, virtual meeting registration, recorded virtual meetings, and comment forms. INDOT also leveraged our planning partner contacts (MPOs, RPOs, LTAP), social media, and notifications sent to local libraries, housing authorities, senior aging centers, and local newspapers across the state.

We greatly appreciate FHWA/FTA support in the development of the STIP 2024-2028 and look forward to working together to achieve our mutual goals. Should you have any questions pertaining to this amendment, please contact April Leckie, STIP Administration at 317-232-5466 or at aleckie@indot.in.gov.

Sincerely,



Michael Smith, Commissioner
Indiana Department of Transportation

cc: (w/enclosure): Angelica Salgado, FTA
Cecilia Crenshaw, FTA
Erica Tait, FHWA
Lyndsay Quist, INDOT
Kristin Brier, INDOT
Kathy Eaton-McKalip, INDOT
Louis Feagans, INDOT

April Leckie, INDOT
Roy Nunnally, INDOT
Larry Buckel, INDOT
Jay Mitchell, INDOT
Jason Casteel, INDOT
Michael McNeil, INDOT

APPENDIX I: ADDITIONAL STUDIES/REPORTS

Land and Water Conservation Fund List - Madison County
Bridge Inspection Report
Culvert Inspection Report
EJ Analysis
Noise Report
Abbreviated Engineer's Report
Air Quality Report
Mini Scope

Land and Water Conservation Fund (LWCF) County Property List for Indiana (Last Updated March 2022)

ProjectNumber	SubProjectCode	County	Property
1800255	1800255	Madison	Alvin D. Brown Memorial Pool
1800299	1800299	Madison	Alvin D. Brown Memorial Pool
1800477	1800477a	Madison	Anderson Riverwalk
1800258	1800258	Madison	Athletic Park
1800204	1800204	Madison	Beulah Park
1800238	1800238	Madison	Beulah Park
1800587	1800587	Madison	Bodenhorn Park
1800169.6	1800169.6	Madison	Crawford Field
1800292	1800292	Madison	Elwood Municipal Swimming Pool
1800254	1800254	Madison	Falls Park
1800136	1800136	Madison	Funk Historic (8th St.) Park
1800534	1800534	Madison	General Pulaski Park
1800139	1800139	Madison	General Pulaski ParkE. 38th St. Park
1800466	1800466	Madison	Grand Avenue Wetlands & Killbuck Walkway
1800370	1800370	Madison	Maple Meadows Park/Frankton Community Park
1800171	1800171H	Madison	Mounds State Park
1800305	1800305G	Madison	Mounds State Park
1800312	1800312I	Madison	Mounds State Park
1800382	1800382	Madison	Mounds State Park
1800413	1800413O	Madison	Mounds State Park
1800169	1800169	Madison	Shadyside Recreation Complex (Aqua Gardens)
1800287	1800287	Madison	Shepherd Park
1800145	1800145	Madison	Southside Sports Complex
1800143	1800143	Madison	Streaty Park
1800442	1800442	Madison	Walbridge Acres Park

*Park names may have changed. If acquisition of publically owned land or impacts to publically owned land is anticipated, coordination with IDNR, Division of Outdoor Recreation, should occur.

Found at: <https://www.in.gov/indot/engineering/environmental-services/environmental-policy/>

Bridge Inspection Report

(9)67-48-06938 A
SR 9/SR 67
over
FALL CREEK



Inspection Date: 11/03/2022

Inspected By: Andrew Olson Moyano

Inspection Type(s): Routine

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Pages 9 to 25 and 28 to 48 have been removed.

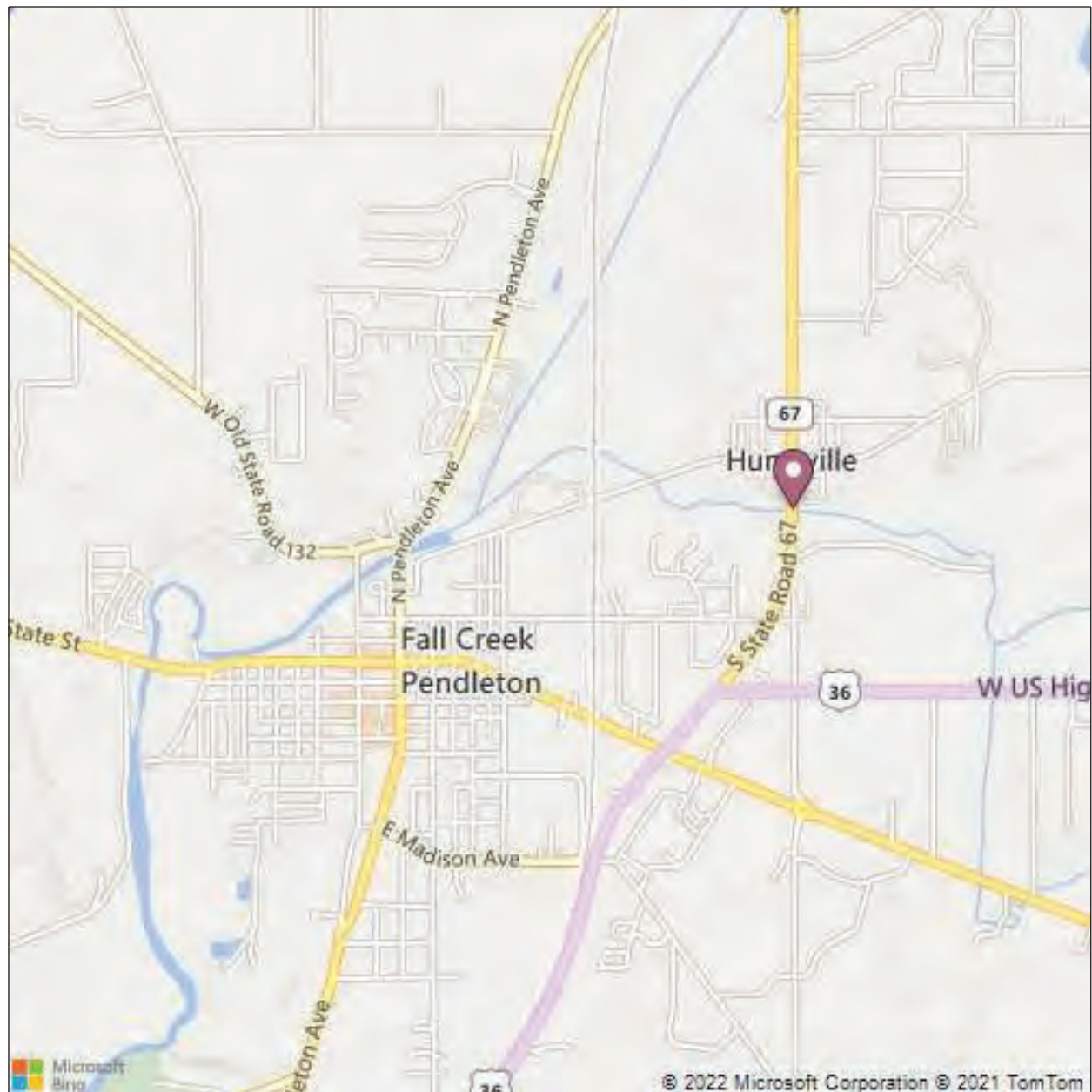
Inspector: Andrew Olson Moyano

Inspection Date: 11/03/2022

Asset Name: (9)67-48-06938 A

Facility Carried: SR 9/SR 67

Bridge Inspection Report



Latitude: 40.00702

Longitude: -85.73009

Inspector: Andrew Olson Moyano

Inspection Date: 11/03/2022

Asset Name: (9)67-48-06938 A

Facility Carried: SR 9/SR 67

Bridge Inspection Report

General Notes

**The facility carried is no longer considered a NHS route by FHWA.
NHS coding for this bridge was updated based on new INDOT NHS maps in 2018.
5/17/18 by Jim Mickler**

Bent #1 is SOUTH.

The Bridge was Built in 1993, under contract B-20468.
'A' Rehab (Overlaid deck & approach slabs, Plugged deck drains) in 2021, B-41135.

Condition Summary: Structure is in good condition overall. Slab undersides have minor to moderate longitudinal cracks with delaminations, efflorescence & rust-staining along construction joints - heavier in the end spans.

Scour Critical: Bridge was determined to be scour critical per 01-05-2020 Scour Memo. A Scour POA has been implemented.

Inspector: Andrew Olson Moyano

Asset Name: (9)67-48-06938 A

Inspection Date: 11/03/2022

Facility Carried: SR 9/SR 67

Bridge Inspection Report

IDENTIFICATION

(1) STATE CODE:	185 - Indiana	(12) BASE HIGHWAY NETWORK:	0
(8) STRUCTURE:	024140	(13A) INVENTORY ROUTE:	
(5 A-B-C-D-E) INV. ROUTE:	1 - 3 - 1 - 00009 - 0	(13B) SUBROUTE NUMBER:	
(2) HIGHWAY AGENCY DISTRICT:	03 - Greenfield	(16) LATITUDE:	40.00702
(3) COUNTY CODE:	048 - MADISON	(17) LONGITUDE:	-85.73009
(4) PLACE CODE:	00000 - N/A	(98) BORDER	
(6) FEATURES INTERSECTED:	FALL CREEK	A) STATE NAME:	
(7) FACILITY CARRIED:	SR 9/SR 67	B) PERCENT	%
(9) LOCATION:	02.22 S I-69	(99) BORDER BRIDGE STRUCT. NO:	
(11) MILEPOINT:	0004.920		

STRUCTURE TYPE AND MATERIAL

(43) STRUCTURE TYPE, MAIN:		(45) NUMBER OF SPANS IN MAIN	005
A) KIND OF MATERIAL/DESIGN:	2 - Concrete continuous	UNIT:	
B) TYPE OF DESIGN/CONSTR:	01 - Slab	(46) NUMBER OF APPROACH SPANS:	0000
(44) STRUCTURE TYPE, APPROACH SPANS:		(107) DECK STRUCTURE TYPE:	1 - Concrete Cast-in-Place
A) KIND OF MATERIAL/DESIGN:	0 - Other	(108) WEARING SURFACE/PROT SYS:	
B) TYPE OF DESIGN/CONSTR:	00 - Other	A) WEARING SURFACE:	3 - Latex Concrete or similar additive
		B) DECK MEMBRANE:	0 - None
		C) DECK PROTECTION:	1 - Epoxy Coated Reinforcing

AGE OF SERVICE

(27) YEAR BUILT:	1993	(28) LANES:	
(106) YEAR RECONSTRUCTED:	2021	A) ON BRIDGE:	03
(42) TYPE OF SERVICE:		B) UNDER BRIDGE:	00
A) ON BRIDGE:	1 - Highway	(29) AVERAGE DAILY TRAFFIC:	013631
B) UNDER BRIDGE:	5 - Waterway	(30) YEAR OF AVERAGE DAILY TRAFFIC:	2021
		(109) AVERAGE DAILY TRUCK TRAFFIC:	08 %
		(19) BYPASS DETOUR LENGTH:	002 MI

Inspector: Andrew Olson Moyano

Asset Name: (9)67-48-06938 A

Inspection Date: 11/03/2022

Facility Carried: SR 9/SR 67

Bridge Inspection Report

GEOMETRIC DATA

(48) LENGTH OF MAX SPAN:	0039.5	FT	(35) STRUCTURE FLARED:	0 - No flare
(49) STRUCTURE LENGTH:	00165.0	FT	(10) INV RTE, MIN VERT CLEARANCE:	99.99 FT
(50) CURB/SIDEWALK WIDTHS:			(47) TOT HORIZ CLEARANCE:	069.3 FT
A) LEFT	00.0	FT	(53) VERT CLEAR OVER BR RDWY:	99.99 FT
B) RIGHT:	00.0	FT	(54) MIN VERTICAL UNDERCLEARANCE:	
(51) BRDG RDWY WIDTH CURB-TO-CURB:	069.3	FT	A) REFERENCE FEATURE:	N
(52) DECK WIDTH, OUT-TO-OUT:	072.3	FT	B) MIN VERT UNDERCLEAR:	00.00 FT
(32) APPROACH ROADWAY	068.0	FT	(55) LATERAL UNDERCLEARANCE RIGHT:	
(33) BRIDGE MEDIAN:	0 - No median		A) REFERENCE FEATURE:	N
			B) MIN LATERAL UNDERCLEAR:	000.0 FT
(34) SKEW:	00	DEG	(56) MIN LATERAL UNDERCLEAR ON LEFT:	00.0 FT

INSPECTIONS

(90) INSPECTION DATE:	11/03/2022	(91) DESIGNATED INSPECTION FREQUENCY:	24 MONTHS
(92) CRITICAL FEATURE INSPECTION:		(93) CRITICAL FEATURE INSPECTION DATE:	
A) FRACTURE CRITICAL REQUIRED/FREQUENCY:	N	A) FRACTURE CRITICAL DATE:	
B) UNDERWATER INSPECTION REQUIRED/FREQUENCY:	N	B) UNDERWATER INSP DATE:	
C) OTHER SPECIAL INSPECTION REQUIRED/FREQUENCY:	N	C) OTHER SPECIAL INSP DATE:	

CONDITION

(58) DECK:	7 - Good Condition (some minor problems)	(60) SUBSTRUCTURE:	7 - Good Condition (some minor problems)
(58.01) WEARING SURFACE:	9 - Excellent Condition	(61) CHANNEL/CHANNEL PROTECTION:	6 - Bank slump. widespread minor damage
(59) SUPERSTRUCTURE:	7 - Good Condition (some minor problems)	(62) CULVERTS:	N - Not Applicable

CONDITION COMMENTS**(58) DECK:** 7 - Good Condition (some minor problems)Comments:
See Superstructure.**(58.01) WEARING SURFACE:** 9 - Excellent ConditionComments:
New latex concrete overlay in 2021.

Inspector: Andrew Olson Moyano

Inspection Date: 11/03/2022

Asset Name: (9)67-48-06938 A

Facility Carried: SR 9/SR 67

Bridge Inspection Report

(59) SUPERSTRUCTURE: 7 - Good Condition (some minor problems)

Comments:

Continuous Reinforced Concrete Slab: longitudinal cracking with delaminations, efflorescence & rust-staining - heavier in the end spans; delaminations along centerline longitudinal construction joint in spans D & E - minor rebar exposed in Span D; minor delaminations & spalls around several drain pipes - drains plugged with 2021 rehab; SW corner of bridge appears to have been reconstructed full-depth during original construction; some vertical cracks on fascias esp. at interior bents.

(60) SUBSTRUCTURE: 7 - Good Condition (some minor problems)

Comments:

Substructure is concrete encased H-piles into Rock.

(61) CHANNEL/CHANNEL PROTECTION 6 - Bank slump. widespread minor damage

Comments:

Channel flows from East to West below the bridge.
Upstream channel: bank erosion & roots exposed; leaning & downed trees; minor drift caught in flood plain SE; drift collecting in span C below bridge and at East end of Bent 4.
Downstream channel has minor bank erosion; leaning & downed trees.
Channel protection is riprap at end bents.

(62) CULVERTS: N - Not Applicable

Comments:

LOAD RATING AND POSTING

(31) DESIGN LOAD:	5 - HS 20	(66) INVENTORY RATING:	1.154
(70) BRIDGE POSTING	5 - Equal to or above legal loads	(65) INVENTORY RATING METHOD:	8 - Load and Resistance Factor Rating (LRFR) rating report by rating factor (RF) method using HL-93 loadings.
(41) STRUCTURE OPEN/POSTED/CLOSED:	A - Open	(66B) INVENTORY RATING (H):	
(64) OPERATING RATING:	1.495	(66C) TONS POSTED :	
(63) OPERATING RATING METHOD:	8 - Load and Resistance Factor Rating (LRFR) rating report by rating factor (RF) method using HL-93 loadings.	(66D) DATE POSTED/CLOSED:	

APPRAISAL

SUFFICIENCY RATING:	98.1	(36) TRAFFIC SAFETY FEATURE:	
STATUS:	0	36A) BRIDGE RAILINGS:	1
(67) STRUCTURAL EVALUATION:	7	36B) TRANSITIONS:	1
(68) DECK GEOMETRY:	9	36C) APPROACH GUARDRAIL:	1
(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL:	N	36D) APPROACH GUARDRAIL ENDS:	1

Inspector: Andrew Olson Moyano

Asset Name: (9)67-48-06938 A

Inspection Date: 11/03/2022

Facility Carried: SR 9/SR 67

Bridge Inspection Report

- (71) WATERWAY ADEQUACY: **9 - Bridge Above Flood Water Elevations**
Comments:
Q100 ~ S. Appr. P.G.
- (72) APPROACH ROADWAY ALIGNMENT: **8 - Equal to present desirable criteria**
Comments:
- (113) SCOUR CRITICAL BRIDGES: **3 - Foundations unstable for scour conditions**
Comments:
Bridge determined to be scour critical per 01-05-2020 Scour Memo. Scour POA has been implemented.

CLASSIFICATION

(20) TOLL:	3 - On Free Road	(21) MAINT. RESPONSIBILITY:	01 - State Highway Agency
(22) OWNER:	01 - State Highway Agency	(26) FUNCTIONAL CLASS OF INVENTORY RTE:	06 - Rural - Minor Arterial
(37) HISTORICAL SIGNIFICANCE:	5 - Not eligible	(100) STRAHNET HIGHWAY:	Not a STRAHNET route
(101) PARALLEL STRUCTURE:	N - No parallel structure	(102) DIRECTION OF TRAFFIC:	2-way traffic
(103) TEMPORARY STRUCTURE:		(104) HIGHWAY SYSTEM OF INVENTORY ROUTE:	0 - Structure/Route is NOT on NHS
(105) FEDERAL LANDS HIGHWAYS:	0-Not Applicable	(110) DESIGNATED NATIONAL NETWORK:	Inventory route on National Truck Network
(112) NBIS BRIDGE LENGTH:	Yes		

NAVIGATION DATA

(38) NAVIGATION CONTROL:	0 - No navigation control on waterway (bridge permit not required)	(39) NAVIGATION VERTICAL CLEAR:	000.0 FT
(111) PIER OR ABUTMENT PROTECTION:		(116) MINIMUM NAVIGATION VERT. CLEARANCE, VERT. LIFT BRIDGE:	FT
		(40) NAV HORIZONTAL CLEARANCE:	0000.0 FT

PROPOSED IMPROVEMENTS

(75A) TYPE OF WORK:	(95) ROADWAY IMPROVEMENT COST: \$	000000
(75B) WORK DONE BY:	(96) TOTAL PROJECT COST:	\$ 000000
(76) LENGTH OF IMPROVEMENT: 00000.0 FT	(97) YR OF IMPROVEMENT COST EST:	
(94) BRIDGE IMPROVEMENT COST: \$ 000000	(114) FUTURE AVG DAILY TRAFFIC:	015255
	(115) YR OF FUTURE ADT:	2041

Photo pages (Pages 9 to 25) have been removed

Inspector: Olson Moyano, Andrew
Inspection Date: 11/03/2022

Structure Number: 024140
Facility Carried: SR 9/SR 67

Bridge Inspection Report

Miscellaneous Asset Data
Asset Management

024140

Load Rating 2:

Has the dead load or the structural condition of the primary load carrying members changed since the last inspection? No

Extended Frequency:

Submittal Date:

Inspector:

INDOT Reviewer:

This bridge has been accepted into the Extended Frequency Program.

Approval Date:

Joints: * Indicate location, type, and rating of lowest rated joint.

N - ONLY to
remove other value
that is no longer
present.

Comments:

Terminal Joints: *Rating of lowest rated terminal joint. N

Comments:

Concrete Slopewall: *Rating of lowest rated slopewall. N

Comments:

Bearings: * Indicate type, and rating of lowest rated bearing.

N - No Bearing(s)

Comments:

Inspector: Olson Moyano, Andrew
Inspection Date: 11/03/2022

Structure Number: 024140
Facility Carried: SR 9/SR 67

Bridge Inspection Report

Approach Slabs: * Indicate if present & condition rating.

1 - Approach Slabs

8 - Very good condition, no significant cracks

Comments:

Approach slabs: overlaid in 2021 - cracking along IA joints in NBL.

New IA joints in 2021.

Paint: * Indicate if paint present, year painted & condition rating.

N - No Paint

N

Comments:

Endangered Species: * If yes, add one photo to the dropdown field

Bats: seen or heard under structure? *

N

Birds/swallows/nests seen? Empty nests present? *

N

BRIDGE Culvert Geometry:

Barrel Length:

Height:

Width:

Pages 28 to 48 have been removed

Culvert Inspection Report

CV 036-048-89.07

US 36

over



Inspection Date: 10/03/2018

Inspected By: Travis Smith

Inspection Type(s): Culvert

TABLE OF CONTENTS

	PAGE NUMBER
LOCATION MAP	3
EXECUTIVE SUMMARY <i>Executive Summary was blank. Page removed.</i>	5
CULVERT INSPECTION OUTPUT REPORT	6
CULVERT ADDITIONAL TREATMENT OUTPUT REPORT	8
PICTURES <i>Pictures to end of report was blank. Pages removed.</i>	9
SKETCHES	10
MISCELLANEOUS ASSET DATA	11
MAINTENANCE - CULVERT	12

Inspector: Travis Smith
Inspection Date: 10/03/2018

Asset Name: CV 036-048-89.07
Facility Carried: US 36

Culvert Inspection Report

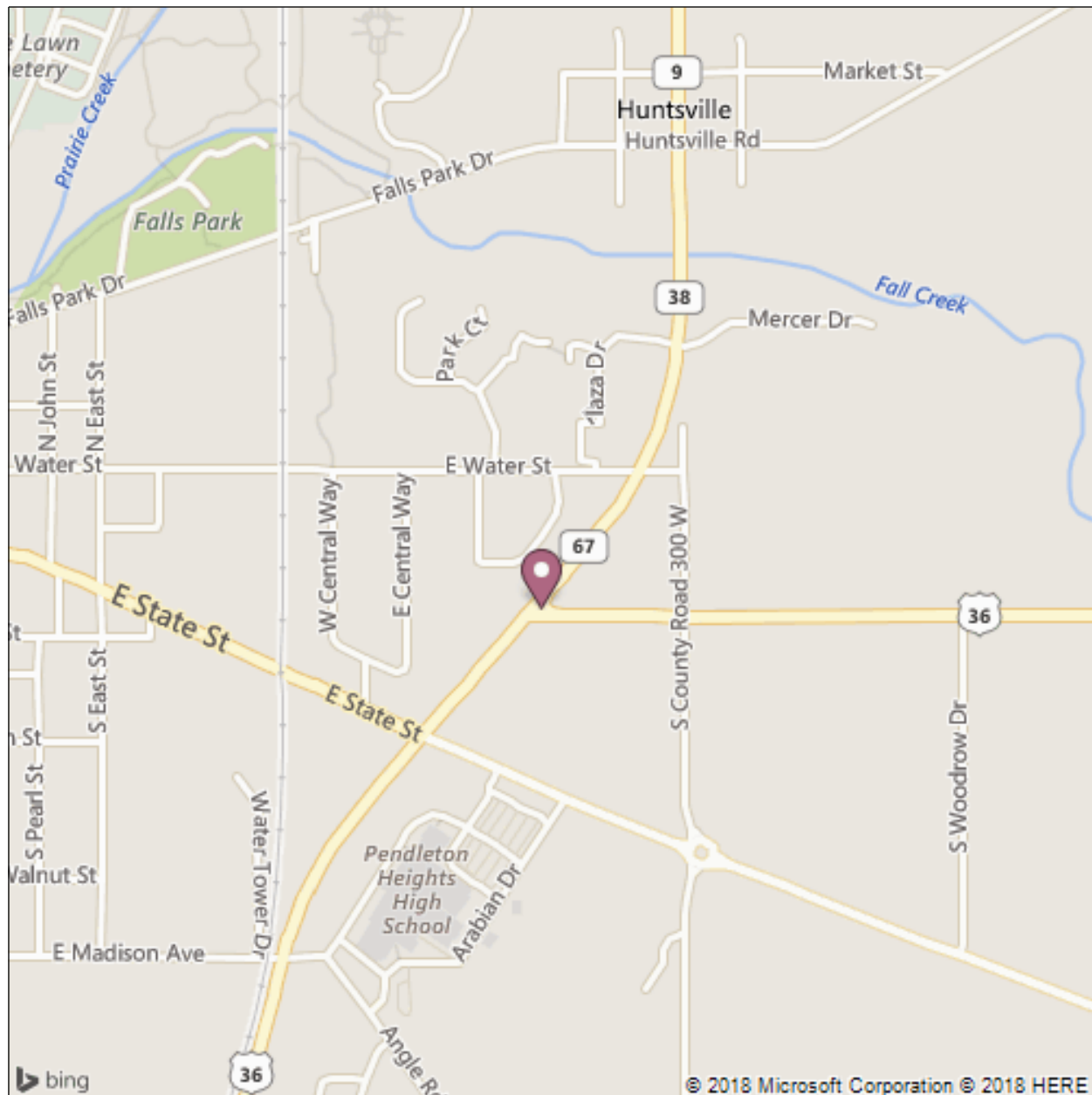


Latitude: 40.00164
Longitude: -85.73283

Inspector: Travis Smith
Inspection Date: 10/03/2018

Asset Name: CV 036-048-89.07
Facility Carried: US 36

Culvert Inspection Report



Latitude: 40.00164
Longitude: -85.73283

Large Culvert Inspection Report

(8) Asset Code:	93004048	(27) Year Built:	0000
Asset Name:	CV 036-048-89.07	(90) Inspection Date:	10/03/2018
OLD Culvert ID:	SS-36-48-89.07	(91) Inspection Frequency:	60
Team Assignment:	03	☐ Additional Treatment Exists	

Identification

(2) Highway Agency District:	03	(3) County Code:	048
Sub District:	3500	Ramp ID:	
(42B) Type of Service (Under):	5	☐ Adjacent to Roadway	
(7) Facility Carried:	US 36	(6) Features Intersected:	
(9) Location:	0.020 E SR 9/36/67 E JCT	(9.01) Location Additional Description:	located below intersection N SR 9/ US 36/ SR 67
(11) Milepoint:	6.52	(16) Latitude:	40.00164
		(17) Longitude:	-85.73283
Classification:			
(104) Highway System of the Inventory Route:	0	(26) Functional Classification of Inventory Route:	02

Geometric Data

Culvert: Kind of Material:	1. Concrete	Culvert: Type of Structure:	19. 4 Sided Box Culvert	Min Est Fill Cover (ft):	2.00
Culvert: Max. Horizontal Opening (ft.):	4.00	Culvert: Max. Vertical Opening (ft.):	2.00	(34) Skew:	
Barrel Length (ft.):	200.00	Original Culvert Shape:	Box		

Measurement Remarks:

Structure Additional Description: Reinforced Concrete Box structure jogs below pavement

Openings:

Direction	Opening Latitude	Opening Longitude	Direction	Opening Latitude	Opening Longitude
1.			3.		
2.			4.		

Openings Comments:

☐ Follow Up Required:

**If checked, please describe for follow up:

Endangered Species

Bats: seen or heard under structure? * N

Birds/swallows/nests seen? Empty nests present? N

* If yes, add one photo to the dropdown field

General Condition Ratings

(36A) Bridge Railings:	N	(36C) Approach Guardrail:	
(36B) Transitions:		(36D) Approach Guardrail Ends:	

Culvert:

(62) Culvert - Rating:	7
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(62) Culvert Rating Comments:	Minor random cracking.
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Deck:

(58) Deck:	N
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(58a) Deck Comments:	
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Superstructure:

(59) Superstructure:	N
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(59.01) Superstructure Comments:	
----------------------------------	--

Substructure:

(60) Substructure:	N
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(60.01) Substructure Comments:	
--------------------------------	--

Channel:

(61) Channel and Channel Protection:	7
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(61.01) Channel and Channel Protection Comments:	~3"-6" of silt & riprap.
--	--------------------------

Bank Erosion Rating:	7
----------------------	---

Drift/Sediment Rating	6
-----------------------	---

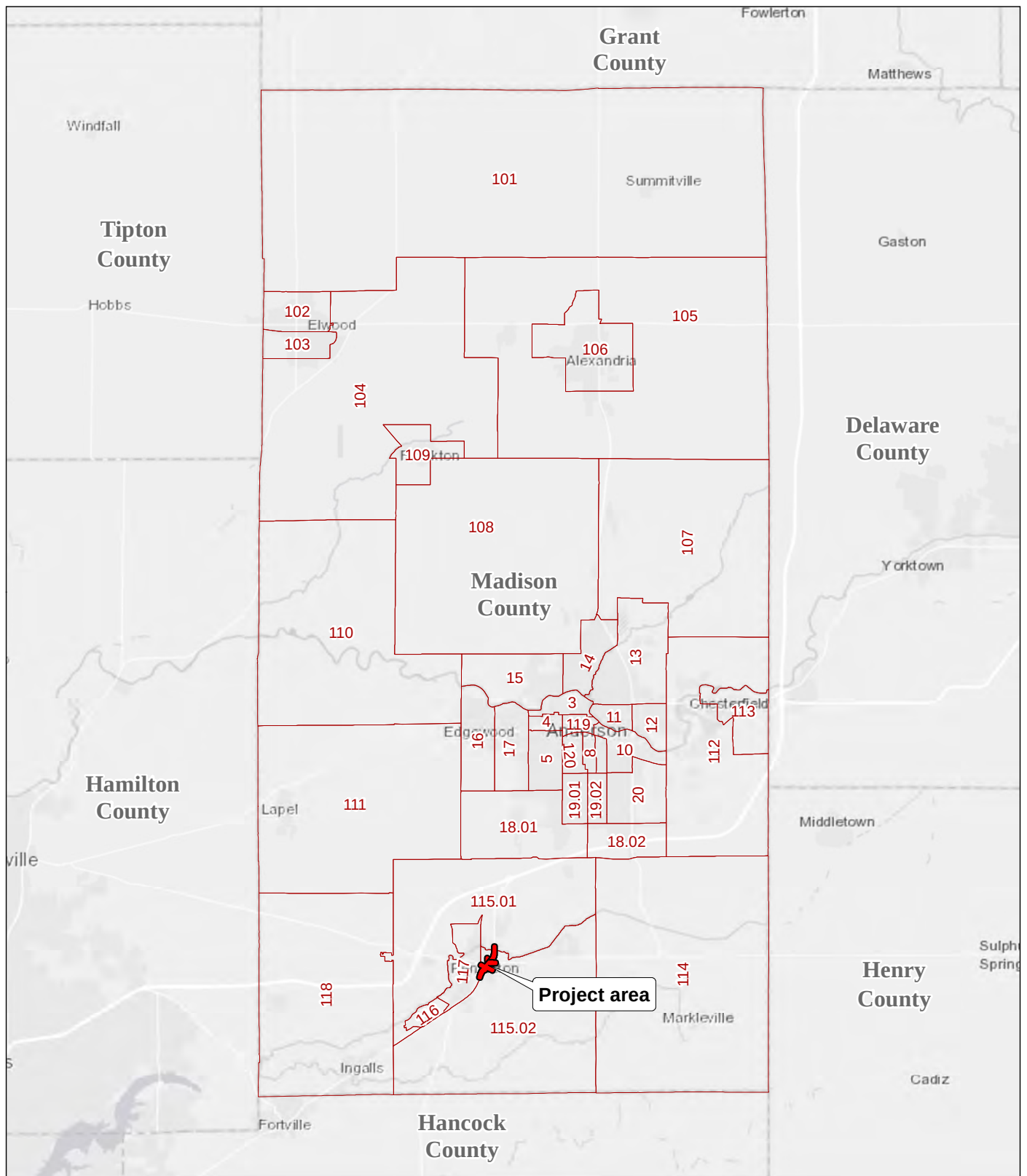
Channel Alignment Rating	7
--------------------------	---

☐ Check this box if culvert has OBSTRUCTED flow

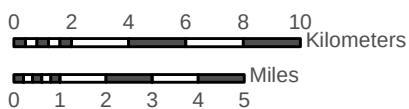
Describe Obstruction:

Overtopping Frequency:

Overtopping Frequency Comments:



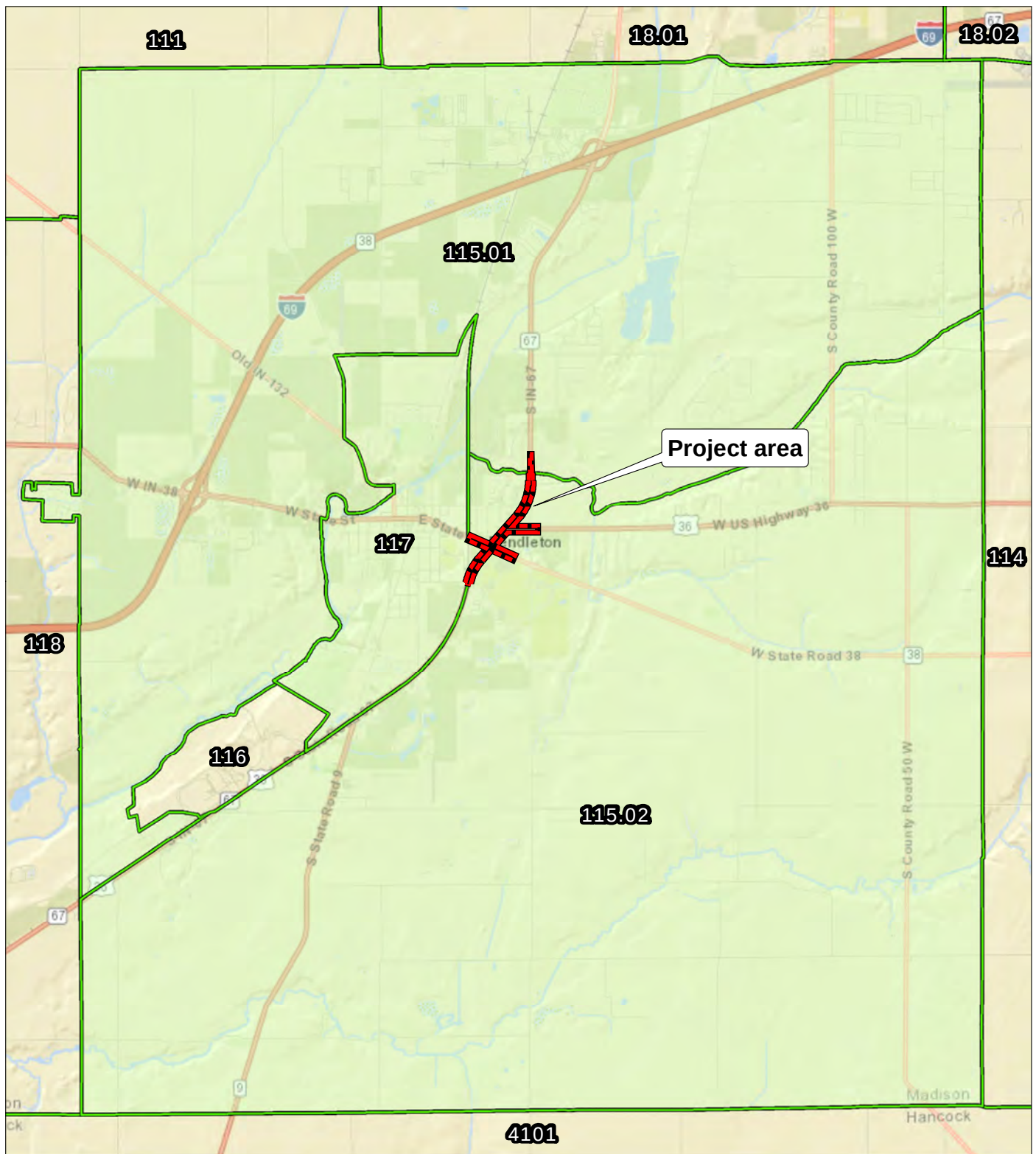
- Project area
- Census tract



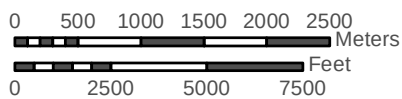
Appendix I

Map of Madison County and its Census Tracts
Madison County, Indiana – Showing Project Area

Base: ESRI World Street Map



- - - - - Project area
- Census tract



Appendix I

Map of Census Tracts 115.01, 115.02, 117.0
Madison County, Indiana – Showing Project Area

Base: U.S. Census bureau, 2015-2019,
American Community Survey 5-Year Estimates, 2022;
ESRI World Street Map

Madison County Minority Populations
Census Tracts: 115.01, 115.02, and 117

The project under Des. Nos. 1702936, 1802854, and 2001127 are within this tract.

	Estimated Total	Estimated Total of Non- Minority Populations (White Alone)	Estimated Total of Minority Populations	% Minority	125% COC
COC – Madison County, Indiana	129,455	109,837	19,618	15.15%	18.94%
AC-1 – Census Tract 115.01, Madison County, Indiana	4,867	4,606	261	5.36%	6.70%
AC-2 – Census Tract 115.02, Madison County, Indiana	4,226	3,920	306	7.24%	9.05%
AC-3 – Census Tract 117, Madison County, Indiana	2,248	2,167	81	3.60%	4.50%

Madison County Low Income Populations
Census Tracts: 115.01, 115.02, and 117

The project under Des. Nos. 1702936, 1802854, and 2001127 are within this tract.

	Estimate Total Population	Estimated Total Income Past 12 Months Below Poverty Level	% Low Income	125% COC
COC – Madison County, Indiana	123,020	20,338	16.53%	20.67%
AC-1 – Census Tract 115.01, Madison County, Indiana	4,843	288	5.95%	7.43%
AC-2 – Census Tract 115.02, Madison County, Indiana	3,873	234	6.04%	7.55%
AC-3 – Census Tract 117, Madison County, Indiana	2,239	35	1.56%	1.95%

POVERTY STATUS IN THE PAST 12 MONTHS BY SEX BY AGE		United States[®] Census Bureau
Note: The table shown may have been modified by user selections. Some information may be missing.		
DATA NOTES		
TABLE ID:	B17001	
SURVEY/PROGRAM:	American Community Survey	
VINTAGE:	2019	
DATASET:	ACSDT5Y2019	
PRODUCT:	ACS 5-Year Estimates Detailed Tables	
UNIVERSE:	Population for whom poverty status is determined	
FTP URL:	None	
API URL:	https://api.census.gov/data/2019/acs/acs5	
USER SELECTIONS		
TABLES	B17001	
GEOS	Madison County, Indiana; Indiana; Census Tract 115.01, Madison County, Indiana; Census Tract 115.02, Madison County, Indiana; Census Tract 117, Madison County, Indiana	
EXCLUDED COLUMNS	None	
APPLIED FILTERS	None	
APPLIED SORTS	None	
PIVOT & GROUPING	None	
WEB ADDRESS	https://data.census.gov/cedsci/table?q=B17001%3A%20POVERTY%20STATUS%20IN%20THE%20PAST%2012%20MONTHS%20BY%20SEX%20BY%20AGE&g=0400000US18_0500000US18095_1400000US18095011501,18095011502,18095011700	
TABLE NOTES	Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.	
	Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.	
	Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.	
	Source: U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates	
	Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see ACS Technical Documentation). The effect of nonsampling error is not represented in these tables.	
	The 2015-2019 American Community Survey (ACS) data generally reflect the September 2018 Office of Management and Budget (OMB) delineations of metropolitan and micropolitan statistical areas. In certain instances, the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB delineation lists due to differences in the effective dates of the geographic entities.	
	Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.	
	Explanation of Symbols: * An "***" entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate. * An "-" entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution, or the margin of error associated with a median was larger than the median itself. * An "-" following a median estimate means the median falls in the lowest interval of an open-ended distribution. * An "+" following a median estimate means the median falls in the upper interval of an open-ended distribution. * An "****" entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate. * An "*****" entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate. * An "N" entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small. * An "(X)" means that the estimate is not applicable or not available.	
COLUMN NOTES	None	

	Indiana		Madison County, Indiana		Census Tract 115.01, Madison County, Indiana		Census Tract 115.02, Madison County, Indiana		Census Tract 117, Madison County, Indiana	
Label	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Total:	6,461,389	±1,693	123,020	±423	4,843	±300	3,873	±252	2,239	±217
Income in the past 12 months below poverty level:	867,996	±9,966	20,338	±1,235	288	±173	234	±151	35	±32
Male:	381,859	±5,594	8,982	±627	129	±87	122	±81	29	±12
Under 5 years	43,989	±1,572	1,028	±250	9	±15	0	±12	0	±12
5 years	7,631	±682	167	±92	0	±12	0	±12	0	±12
6 to 11 years	48,404	±1,649	869	±205	0	±12	24	±38	0	±12
12 to 14 years	22,334	±1,118	539	±145	5	±9	12	±19	0	±12
15 years	7,452	±619	297	±111	0	±12	0	±12	0	±12
16 and 17 years	13,506	±736	315	±98	25	±39	0	±12	0	±12
18 to 24 years	61,879	±2,103	1,070	±222	0	±12	12	±19	0	±12
25 to 34 years	42,100	±1,619	1,030	±208	47	±56	23	±25	0	±12
35 to 44 years	35,815	±1,443	1,176	±198	5	±10	0	±12	9	±14
45 to 54 years	35,917	±1,459	876	±221	21	±23	22	±25	0	±12
55 to 64 years	36,578	±1,191	1,050	±187	9	±14	14	±21	20	±23
65 to 74 years	16,051	±784	327	±95	0	±12	6	±11	0	±12
75 years and over	10,203	±640	238	±92	8	±13	9	±15	0	±12
Female:	486,137	±6,248	11,356	±801	159	±113	112	±75	6	±9
Under 5 years	41,248	±1,444	849	±161	0	±12	12	±19	0	±12
5 years	8,447	±685	296	±137	0	±12	0	±12	0	±12
6 to 11 years	48,463	±1,668	991	±194	0	±12	13	±21	0	±12
12 to 14 years	21,297	±1,350	747	±203	24	±39	0	±12	0	±12
15 years	7,038	±660	171	±82	0	±12	0	±12	0	±12
16 and 17 years	14,249	±813	365	±122	4	±9	0	±12	0	±12
18 to 24 years	75,804	±2,124	1,373	±265	33	±40	7	±13	0	±12
25 to 34 years	74,728	±1,831	1,669	±260	0	±12	34	±31	0	±12
35 to 44 years	54,989	±1,688	1,319	±192	29	±40	0	±12	0	±12
45 to 54 years	45,285	±1,481	1,438	±222	62	±52	25	±27	0	±12
55 to 64 years	45,600	±1,328	1,199	±214	7	±12	9	±14	6	±9
65 to 74 years	25,146	±1,033	597	±158	0	±12	12	±14	0	±12
75 years and over	23,843	±912	342	±82	0	±12	0	±12	0	±12
Income in the past 12 months at or above poverty level:	5,593,393	±10,351	102,682	±1,289	4,555	±300	3,639	±286	2,204	±218
Male:	2,789,231	±5,932	51,027	±758	2,224	±219	1,874	±175	1,049	±153
Under 5 years	165,939	±1,629	2,675	±243	103	±53	101	±57	80	±56
5 years	33,178	±1,176	552	±121	78	±59	56	±44	0	±12
6 to 11 years	211,883	±2,499	3,817	±286	111	±68	109	±54	109	±61
12 to 14 years	115,702	±2,017	2,001	±247	71	±58	77	±55	47	±33
15 years	39,734	±1,112	636	±135	108	±62	63	±57	23	±27
16 and 17 years	76,221	±1,216	1,176	±148	117	±71	99	±51	42	±45
18 to 24 years	236,580	±2,222	4,015	±295	174	±81	100	±53	69	±46
25 to 34 years	376,564	±2,032	6,288	±289	178	±67	174	±71	133	±59
35 to 44 years	360,653	±1,695	6,295	±244	229	±86	215	±67	111	±42
45 to 54 years	380,545	±1,722	7,146	±297	267	±70	367	±101	148	±52
55 to 64 years	380,918	±1,381	7,091	±187	367	±76	244	±82	144	±51
65 to 74 years	259,938	±1,134	5,659	±117	288	±73	178	±57	92	±38
75 years and over	151,376	±875	3,676	±105	133	±49	91	±49	51	±27
Female:	2,804,162	±6,289	51,655	±744	2,331	±189	1,765	±170	1,155	±136
Under 5 years	157,799	±1,460	2,619	±192	98	±54	51	±50	24	±29
5 years	31,635	±1,160	736	±177	44	±52	0	±12	44	±45
6 to 11 years	204,504	±2,525	2,865	±264	144	±73	128	±77	61	±39
12 to 14 years	104,992	±2,158	1,634	±231	226	±72	96	±62	61	±47
15 years	37,202	±1,207	453	±117	52	±42	33	±37	20	±25
16 and 17 years	74,362	±1,321	1,434	±146	59	±40	88	±55	56	±41
18 to 24 years	206,380	±1,920	3,237	±269	36	±28	37	±25	70	±54
25 to 34 years	353,262	±1,966	6,107	±266	307	±111	150	±75	96	±50
35 to 44 years	353,932	±1,841	6,290	±190	304	±85	254	±61	183	±44
45 to 54 years	382,104	±1,685	7,035	±230	255	±79	301	±70	167	±48
55 to 64 years	396,960	±1,639	7,579	±234	400	±84	327	±93	110	±45
65 to 74 years	287,819	±1,165	6,550	±169	251	±56	153	±58	139	±52
75 years and over	213,211	±1,048	5,116	±170	155	±73	147	±51	124	±52
Percent low income	13.43358216		16.53227118		5.946727235		6.04182804		1.563197856	
			20.66533897		7.433409044		7.55228505		1.95399732	

HISPANIC OR LATINO ORIGIN BY RACE		United States[®] Census Bureau
Note: The table shown may have been modified by user selections. Some information may be missing.		
DATA NOTES		
TABLE ID:	B03002	
SURVEY/PROGRAM:	American Community Survey	
VINTAGE:	2019	
DATASET:	ACSDT5Y2019	
PRODUCT:	ACS 5-Year Estimates Detailed Tables	
UNIVERSE:	Total population	
FTP URL:	None	
API URL:	https://api.census.gov/data/2019/acs/acs5	
USER SELECTIONS		
TABLES	B03002	
GEOS	Indiana; Madison County, Indiana; All Block Groups within Census Tract 115.01, Madison County, Indiana; All Block Groups within Census Tract 115.02, Madison County, Indiana; All Block Groups within Census Tract 117, Madison County, Indiana	
EXCLUDED COLUMNS	None	
APPLIED FILTERS	None	
APPLIED SORTS	None	
PIVOT & GROUPING	None	
WEB ADDRESS	https://data.census.gov/cedsci/table?q=B03002&g=04000000US18_05000000US18095_14000000US18095011501%241500000,18095011502%241500000,18095011700%241500000&tid=ACSDT5Y2019.B03002	
TABLE NOTES	Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties. Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section. Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section. Source: U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see ACS Technical Documentation). The effect of nonsampling error is not represented in these tables. The 2015-2019 American Community Survey (ACS) data generally reflect the September 2018 Office of Management and Budget (OMB) delineations of metropolitan and micropolitan statistical areas. In certain instances, the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB delineation lists due to differences in the effective dates of the geographic entities. Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization. Explanation of Symbols: * An "***" entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate. * An "-" entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution, or the margin of error associated with a median was larger than the median itself. * An "-" following a median estimate means the median falls in the lowest interval of an open-ended distribution. * An "+" following a median estimate means the median falls in the upper interval of an open-ended distribution. * An "****" entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate. * An "*****" entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate. * An "N" entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small. * An "(X)" means that the estimate is not applicable or not available.	
COLUMN NOTES	None	

Table: ACSDT5Y2019.B03002

	Indiana		Madison County, Indiana		Census Tract 115.01, Madison County, Indiana		Census Tract 115.02, Madison County, Indiana		Census Tract 117, Madison County, Indiana	
Label	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Total:	6,665,703	*****	129,455	*****	4,867	±299	4,226	±286	2,248	±217
Not Hispanic or Latino:	6,203,853	±263	124,154	*****	4,802	±294	4,123	±286	2,197	±214
White alone	5,271,071	±1,100	109,837	±110	4,606	±282	3,920	±285	2,167	±212
Black or African American alone	616,545	±3,021	10,037	±482	13	±16	92	±48	0	±12
American Indian and Alaska Native alone	12,348	±724	205	±74	0	±12	14	±21	0	±12
Asian alone	150,840	±1,752	660	±151	17	±30	0	±12	0	±12
Native Hawaiian and Other Pacific Islander alone	1,981	±249	12	±14	0	±12	0	±12	0	±12
Some other race alone	10,786	±1,150	235	±155	12	±19	2	±6	0	±12
Two or more races:	140,282	±3,509	3,168	±531	154	±117	95	±64	30	±25
Two races including Some other race	3,927	±679	51	±32	0	±12	0	±12	0	±12
Two races excluding Some other race, and three or more races	136,355	±3,407	3,117	±523	154	±117	95	±64	30	±25
Hispanic or Latino:	461,850	±263	5,301	*****	65	±68	103	±86	51	±54
White alone	282,320	±4,167	3,669	±357	58	±67	100	±86	51	±54
Black or African American alone	10,042	±1,289	218	±132	0	±12	0	±12	0	±12
American Indian and Alaska Native alone	3,434	±791	97	±37	0	±12	3	±6	0	±12
Asian alone	1,139	±297	3	±7	0	±12	0	±12	0	±12
Native Hawaiian and Other Pacific Islander alone	525	±200	0	±28	0	±12	0	±12	0	±12
Some other race alone	134,961	±4,271	974	±292	7	±12	0	±12	0	±12
Two or more races:	29,429	±1,929	340	±153	0	±12	0	±12	0	±12
Two races including Some other race	18,054	±1,538	225	±128	0	±12	0	±12	0	±12
Two races excluding Some other race, and three or more races	11,375	±1,153	115	±62	0	±12	0	±12	0	±12
Percent Minority	20.9225043		15.1543007		5.36264639		7.24088973		3.60320285	
COC			18.9428759		6.70330799		9.05111216		4.50400356	

**Noise Analysis for the
Proposed US 36/SR 9 Added Travel Lanes Project (Des. Nos. 1702936 and 1802854) in
Pendleton and Huntsville, Fall Creek Township, Madison County, Indiana**

By

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November 10, 2022



CULTURAL • ENVIRONMENTAL • HAZARDOUS
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INTRODUCTION

ASC Group, Inc., under contract with CDM Smith Inc. completed a noise assessment for the planned Noise Analysis for the US 36/State Road (SR) 9 (Des. Nos. 1702936 and 1802854) in Madison County, Indiana (Figures 1–5). This noise analysis was done to satisfy requirements of the Indiana Department of Transportation (INDOT) Traffic Noise Policy (INDOT 2017), which is INDOT’s implementation of the Federal Highway Administration (FHWA) regulations found in Title 23 of the Code of Federal Regulations (CFR) Part 772, as modified on July 13, 2010. The analysis conforms to procedures specified in both the INDOT Traffic Noise Policy and in FHWA guidance (FHWA 2011).

This report is organized with a project description section following this introduction that describes the project and evaluates its project type under FHWA regulations. The next section identifies land uses in terms of FHWA activity classifications and noise abatement criteria. Within the identified land-use areas, individual receptors are identified for analysis. Noise impact criteria are also discussed in this section. The subsequent section evaluates existing and future noise levels, including descriptions of the modeling approach and input data, field measurements, and model validation/calibration. Modeling results are presented in this section for Existing, No-Build, and Build scenarios. Noise abatement measures and construction noise issues are discussed in the next section, followed by a final section that summarizes the noise analysis and its conclusions. Tables (Tables 1–5) and figures (Figures 1–5) are located at the end of the text before the appendices. Appendix A contains a description of noise fundamentals and terminology that may be useful to readers not already knowledgeable in traffic noise analysis. Appendix B contains copies of field data sheets and equipment calibration certificates. Input and output files from computer modeling runs are available in electronic format.

PROJECT DESCRIPTION AND TYPE

This project is comprised of two adjacent INDOT projects located on US 36 and SR 9 in and near the City of Pendleton in Madison County, Indiana. Lead project Des. No. 1702936 proposes to widen US 36 from 0.28-mile south of SR 38 to the SR 9/SR 67 north junction. Project Des. No. 1802854 proposed to widen SR 9 from the SR 9/SR 67 north junction to Huntsville Road. Together, these projects add additional travel lanes at the intersections of US 36

and SR 38 (south junction) and US 36 and SR 9 (north junction) to ease the volume and flow of traffic.

Because this project adds new through lanes, it is considered a Type I project as defined in FHWA (2011). For Type I projects, INDOT (2017) requires that traffic noise be analyzed over an area extending 500 feet from the edge of pavement where construction will occur. Figure 2 shows the noise study area for this project.

NOISE SENSITIVE AREAS, LAND USES AND RECEPTORS

Under FHWA regulations, a traffic noise impact occurs when predicted traffic noise levels in the Build scenario approach or exceed noise abatement criteria (NAC) values or when a substantial increase is predicted to occur compared with existing noise levels. Noise abatement is considered wherever such impacts occur. NAC are defined based on land use activity categories as shown in Table 1. The NAC values are used solely to determine when noise impacts occur and when noise abatement is considered; they should not be considered Federal standards or even desirable noise levels.

INDOT (2017) defines the term “approach” to mean within 1 A-weighted decibel (dBA) of a NAC and a “substantial” increase to mean that future noise levels exceed existing levels by 15 dBA or more. Thus, for a Category B land use area with a NAC $L_{eq}(h)$ of 67 dBA, an impact occurs at a receptor and noise abatement is considered for that receptor if predicted noise levels reach 66 dBA. However, if the existing noise level for the area is 45 dBA, then an impact would occur and noise abatement would be considered if the predicted noise level exceeded 60 dBA.

Aerial photos were used to classify land uses within the noise study area according to the categories given in Table 1 and to identify individual receptors within those land use areas. Land uses and receptor locations were verified during a site visit on August 2, 2022. All types of land use categories are present in the noise study area. Land uses are shown as shaded regions on Figure 2.

Noise sensitive areas (NSAs) are areas where the noise environment is expected to be reasonably consistent and land uses are similar. For this project, 10 NSAs were identified. These are shown on Figure 2.

FHWA (2011) defines a receptor as a discrete or representative location of a noise sensitive area for any of the land uses listed in Table 1. Receptors were located within each NSA

for use in determining noise levels through modeling. For land use types B, C, and E, receptors were located in exterior areas of frequent human use, for example, on patios and balconies. Where no exterior area of frequent human use was observed at residential structures, receptors were placed near entryways. Land use Category D represents interiors for non-residential sensitive areas defined in Category C. For Category D receptors, the receptor was placed just inside the building. No receptors were placed in Category F areas for purposes of determining noise impacts because Category F land use is not considered noise sensitive. Receptors used in the modeling analysis are shown on Figures 3–5. They are labeled with the identification number used in the modeling files and in the results tables presented later in this report.

EXISTING AND FUTURE NOISE LEVELS

This section describes the modeling approach used to compute existing and future noise levels, input data used in the modeling, and field measurements used in model validation.

SCENARIOS

Three scenarios were evaluated: Existing (current conditions), No-Build (future conditions if the project is not constructed), and Build (future conditions if the project is constructed). FHWA regulations use results of the Existing and Build scenarios to determine if impacts will occur. The No-Build scenario was analyzed to provide additional information for National Environmental Policy Act (NEPA) documents. Existing and No-Build scenarios include the existing highway configuration. The only difference is that current traffic data are used for the Existing scenario and Design Year (2043) traffic projections are used for the No-Build scenario. The Build scenario includes the proposed new lanes on SR 9 and uses Design Year traffic data. Receptors were the same for all three scenarios.

MODELING

Each scenario was modeled using the current version of the FHWA's Traffic Noise Model (TNM) version 2.5 (Anderson et al. 1998; Lau et al. 2004). Input data requirements for TNM include detailed information about roadway alignments, elevations, and traffic volumes. In addition, other elements that may affect noise transmission between the roadways and the receptors can be specified as necessary. These other elements include topography, existing barriers, buildings, trees, and ground surfaces. TNM input data elements are described below.

Roads

The main source of highway noise in the study area is US 36/SR 9. Other roads with available traffic data were also included in the model, including State Street and County Road (CR) 300 W.

In the modeling, one TNM roadway was defined for each travel lane. Traffic volumes were assigned to each travel lane as appropriate for the scenario being modeled. Details of the traffic volumes assigned are given in the traffic section below.

Roadway elevations for proposed alignments used in modeling were obtained from the design drawings provided by CDM Smith, Inc. Elevations for existing roads were obtained from Google Earth and are reasonably representative for the purposes of modeling.

Traffic Data

Annual Average Daily Traffic (AADT) volumes were projected into the Design Year in INDOT (2020) for US 36/SR 9. These were used for the Build and No-Build scenarios. In addition, recent AADTs as well as hourly counts and vehicle classification data were obtained from the Madison County Council of Governments (MCCOG) website <https://mccog.public.ms2soft.com/tcds/tsearch.asp?loc=Mccog&mod=TCDS>. These data were used to estimate peak hour Existing and Design Year traffic volumes broken down into the vehicle classifications used in the noise model. For this project, traffic speeds were equal to the speed limit for all vehicles. Traffic data obtained for roads in the noise study are shown in Table 2. Traffic volumes used in the TNM modeling are given in Table 3. Calculations and factors are explained in the footnotes to the tables.

Topography

Terrain elevation in the project area is relatively flat, rising gradually from west to east. In the modeling, elevations for roads and receptors were used, but no terrain lines were considered necessary. As noted above, elevations for roads were obtained from the design drawings. Elevations for receptors were obtained from Google Earth and are reasonably representative for the purposes of modeling.

Other TNM Data Elements

Other data elements that may be defined in TNM include building rows, tree zones, ground zones, and existing barriers. None of these elements were needed for this project.

MEASUREMENTS AND MODEL CALIBRATION/VALIDATION

This section describes the ambient noise measurements obtained for this project and how those measurements were used to (1) characterize the ambient noise environment and (2) to validate the TNM model for this application. Sounds in the noise study area may arise from a variety of sources, of which traffic on nearby roads is only one. Other noise sources may include nearby industrial operations, air conditioners, lawn mowers and other home maintenance equipment, power transformers, aircraft, animals, children, etc. TNM is only capable of modeling traffic noise, so it is important in trying to predict future noise levels to determine if traffic noise dominates the area or if other noises in the area are significant. This is done by comparing measured noise levels with modeling results at the measurement locations as discussed below.

Measurements

Noise measurements were taken at three locations on August 2, 2022. Measurement locations are shown on aerial photos on Figures 4 and 5.

Noise measurements were made using a Quest SoundPro Sound Level Meter (SLM) that met the American National Standards Institute (ANSI) SI.4-1993, TYPE II standards for accuracy (ANSI 1993) and that was capable of automatically computing L_{eq} values. SLM calibration was checked using a 114-dB calibrator before and after each measurement. Measurement durations were at least 15 minutes in order to adequately capture noise variations over time and obtain an accurate L_{eq} value. During measurements, wind speeds were low and no rain occurred. The ground and nearby road surfaces were dry. Copies of field notes are in Appendix B.

Model Validation

In order to validate the modeling setup used in this project, TNM was run at measurement locations M1, M2, and M3 using traffic data collected during the measurements. Roads and other TNM elements (except receptors) were the same as in the Existing scenario. Table 4 lists the measurement sites and gives measured and modeled noise levels for each site, where applicable. As shown in the table, modeled values agreed measurements within less than 1 dBA at all three locations. Therefore, the model is considered valid.

MODELING RESULTS AND IMPACT IDENTIFICATION

Predicted noise levels are shown in Table 5 for all three scenarios. For Category D receptors, the modeled levels were reduced by 20 dBA to represent the effect of a typical structure with closed windows (FHWA 2011). The reduced levels were then compared with the lower NAC value for Category D.

Noise levels at receptors 52, 53, and 55 in NSA 10 exceed the impact criterion of 66 dBA in all three modeled scenarios. No other predicted noise levels approach or exceed the NAC and no Build noise levels exceed existing levels by 15 dBA or more.

NOISE ABATEMENT ALTERNATIVES

Because there are noise impacts in the Design Year (build scenario), noise abatement measurements must be considered for NSA 10. Considered noise abatement measures include traffic management measures, noise insulation, alteration of alignment, acquisition of real property, and noise barrier construction.

Traffic management measures such as reducing speed limits may reduce noise levels at the impacted receptors, but may also impact traffic flow and increase congestion. Noise insulation is only available for impacted non-profit and public buildings, not residences. Alignment alterations are not feasible at this location because there are impacted residences on both sides of the highway. INDOT's ability to acquire property for mitigation or to mitigate sites off of state rights-of-way (ROW) is limited and would not be effective in this case. Noise barriers would not be technically feasible for these receptors without eliminating driveway access to the properties. None of the available abatement measures are considered feasible or reasonable.

UNDEVELOPED AREAS

One area of undeveloped Category G land exists in the noise study area. It is located north of Mercer Drive and east of SR 9. Undeveloped receptors were placed every 50 feet from the edge of SR 9 as shown on Figure 5. These receptors were modeled using the Build scenario roadways and traffic. Results for undeveloped area receptors are shown at the bottom of Table 5. Noise levels in this area are not expected to exceed residential NAC at 50 feet from the edge of the road.

CONSTRUCTION NOISE

All developed land uses and activities adjacent to the proposed project will be affected by the noise generated during construction activities, primarily by heavy machinery. Heavy machinery (such as front-end loaders, bulldozers, graders, dump trucks, pavers, etc.) will produce noise at levels ranging from 70 to nearly 100 dBA at a distance of 50 feet. However, it is difficult to accurately predict levels of construction noise at a particular receptor or group of receptors as the machinery is constantly moving in unpredictable patterns.

Daily construction normally occurs during daylight hours when occasional loud noises are more tolerable. No one location is expected to be exposed to construction noise of long duration; therefore, extended disruption of normal activities is not anticipated. However, provisions will be included in the plans and specifications requiring the contractor to make every reasonable effort to minimize construction noise through abatement measures such as work-hour controls and maintenance of muffler systems. Equipment will be operated in compliance with all applicable local ordinances and regulations pertaining to construction noise.

Due to the temporary nature of construction noise, no construction noise barriers are proposed for this project.

PUBLIC INVOLVEMENT

Public involvement for this project is expected to follow INDOT requirements for highway projects as documented in INDOT (2021). However, because no impacts are expected and no barrier is proposed, no noise-related public involvement is anticipated for this project.

SUMMARY AND CONCLUSIONS

Noise modeling results for the proposed project show impacts at three receptors. However, based on the studies thus far accomplished, the State of Indiana has not identified any locations where noise abatement is likely. Noise abatement measures that were studied at these locations were based upon preliminary design costs and design criteria. Noise abatement has not been found to be feasible for these receptors without eliminating driveway access to the properties. A re-evaluation of the noise analysis will occur during final design. If during final design it has been determined that conditions have changed such that noise abatement is feasible and reasonable, the abatement measures might be provided. The final decision on the installation of any abatement measure(s) will be made upon the completion of the project's final design and the public involvement processes.

LITERATURE CITED

- 23 CFR Part 772. 2010. "Procedures for Abatement of Highway Traffic Noise and Construction Noise." <http://edocket.access.gpo.gov/2010/pdf/2010-15848.pdf>.
- Anderson, Grant S., Cynthia S. Y. Lee, Gregg O. Fleming, and Christopher W. Menge. 1998. *FHWA Traffic Noise Model® Version 1.0 User's Guide*, U.S. DOT, FHWA, Washington, DC, http://www.fhwa.dot.gov/environment/noise/traffic_noise_model/old_versions/tnm_version_10/users_guide/index.cfm, January.
- ANSI. 1993. "Specification for Sound Level Meters." *American National Standard, ANSI Standard S1.4-1993*. New York: American National Standards Institute.
- FHWA. 2011. *Highway Traffic Noise Analysis and Abatement Policy and Guidance*, U.S. Department of Transportation Federal Highway Administration, http://www.fhwa.dot.gov/environment/noise/regulations_and_guidance/analysis_and_abatement_guidance/revguidance.pdf, revised January.
- INDOT. 2021. *INDOT Project Development Public Involvement Procedures Manual*, Indiana Department of Transportation, https://www.in.gov/indot/files/Project-Development_PIPM-July-2021_FINAL.pdf, July.
- INDOT. 2020. *Project Traffic Forecast Report, DES No. 1702936, US-36 from .28 mi. S. of SR 38 to SR9/SR67 N. Jct., From RP 88+62 to RP 89+5, Madison County*, Aug. 6.
- INDOT. 2017. *Indiana Department of Transportation Traffic Noise Analysis Procedure 2017*, Indiana Department of Transportation, <http://www.in.gov/indot/files/2017%20INDOT%20Noise%20Policy.pdf>.
- Lau, Michael C., Cynthia S. Y. Lee, Judith L. Rochat, Eric R. Boeker, and Gregg O. Fleming. 2004. *FHWA Traffic Noise Model® User's Guide (Version 2.5 Addendum)*, U.S. DOT, FHWA, Washington, D.C., http://www.fhwa.dot.gov/environment/noise/traffic_noise_model/tnm_v25/users_manual/index.cfm, April.
- Lee, Cynthia S. Y., and Gregg O. Fleming. 1996. *Measurement of Highway-Related Noise*, <http://www.fhwa.dot.gov/environment/noise/measurement/measure.cfm>, FHWA-PD-96-046, May.

FIGURES



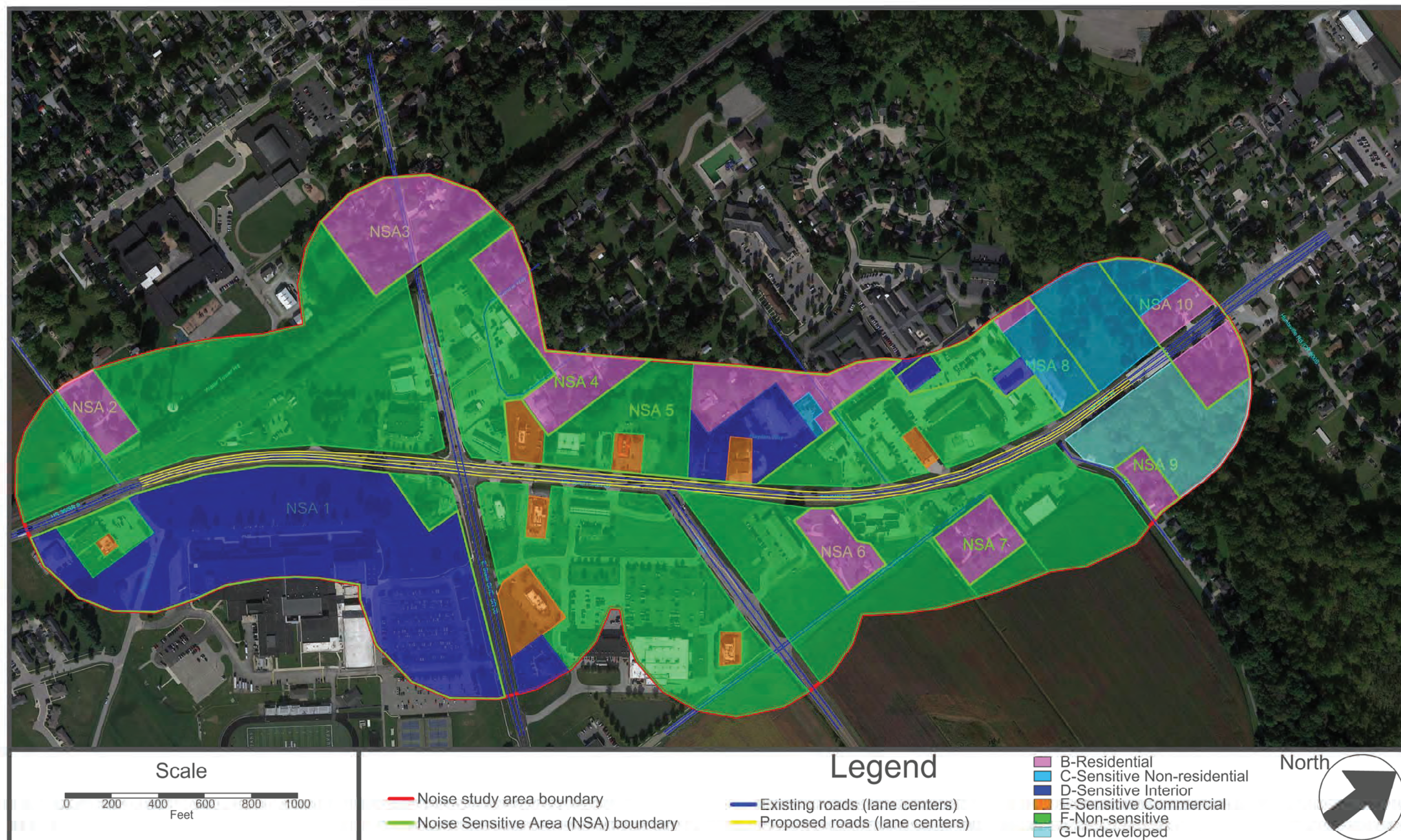


Figure 2. Noise Sensitive Areas and Land Uses for US 36/SR 9 Added Travel Lanes.

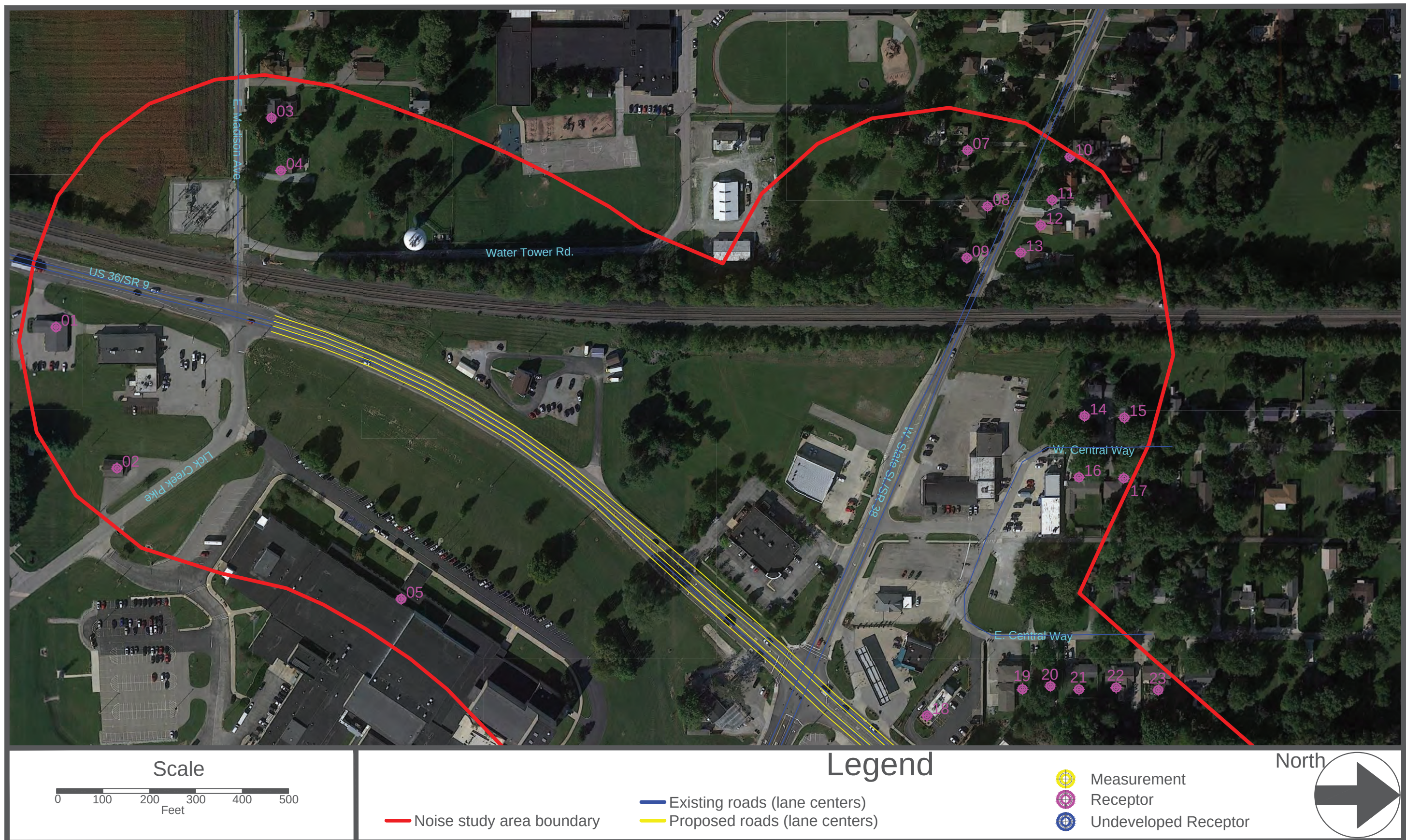


Figure 3. Receptor Locations for US 36/SR 9 Added Travel Lanes (Sheet 1 of 3).

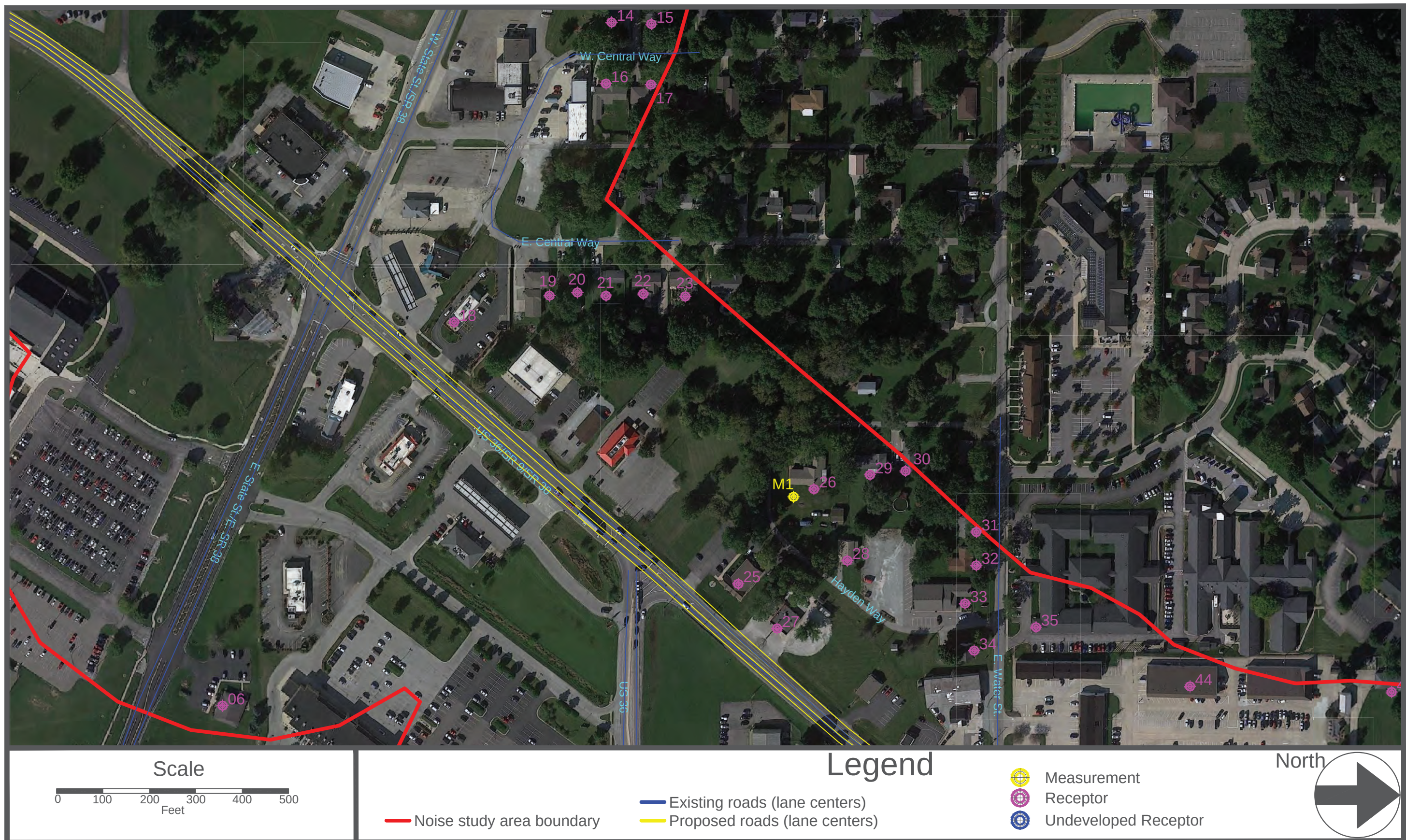


Figure 4. Receptor Locations for US 36/SR 9 Added Travel Lanes (Sheet 2 of 3).



Figure 5. Receptor Locations for US 36/SR 9 Added Travel Lanes (Sheet 3 of 3).

TABLES

Table 1. Noise Abatement Criteria.

Activity Category	L_{eq}(h) dBA	Description of Activity Category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	Residential
C	67 (Exterior)	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, daycare centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or non-profit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings
D	52 (Interior)	Auditoriums, daycare centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or non-profit institutional structures, radio studios, recording studios, schools, and television studios
E	72 (Exterior)	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A–D or F
F	--	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing
G	--	Undeveloped lands that are not permitted

Table 2. Traffic Data.

Road	Direction	Speed, mph	Existing		Design Year (2043)		Peak Hour Percent of AADT	Percentages of Vehicles in TNM Classes					Traffic Count Station No.
			No. of Lanes	AADT, Veh/day	No. of Lanes	AADT, Veh/day		Cars	Med. Trucks	Heavy Trucks	Buses	Motorcycles	
CR S 300 W	SB	35	1	567	1	648	10%	95.1%	2.9%	1.4%	0.2%	0.7%	LR48006961
CR S 300 W	NB	35	1	553	1	632	10%	97.4%	0.7%	0.9%	0.0%	0.9%	
US 36_SR 9 S of State	SB	40	1	6,168	2	7,269	9%	83.3%	5.7%	6.5%	3.1%	1.1%	480100
US 36_SR 9 S of State	NB	40	1	6,188	2	7,292	9%	83.7%	5.5%	7.1%	2.6%	1.0%	
US 36_SR 9 N of State	SB	40	1	8,946	2	9,752	8%	91.7%	0.0%	8.2%	0.1%	0.2%	480110
US 36_SR 9 N of State	NB	40	1	9,313	2	10,152	8%	91.8%	0.0%	7.9%	0.0%	0.3%	
SR 9 N of US 36	SB	40	1	7,285	2	7,877	8%	82.8%	5.0%	6.8%	3.9%	1.5%	480200
SR 9 N of US 36	NB	40	1	7,583	2	8,200	8%	82.4%	5.0%	7.1%	4.1%	1.4%	
State E of US 36	WB	35	1	4,739	1	5,166	12%	97.8%	1.3%	0.7%	0.0%	0.2%	480750
State E of US 36	EB	35	1	4,738	1	5,165	12%	97.6%	1.4%	0.8%	0.0%	0.2%	
State W of US 36	WB	30	1	5,549	1	6,049	10%	97.8%	1.3%	0.7%	0.0%	0.2%	481057
State W of US 36	EB	30	1	5,549	1	6,049	10%	97.6%	1.4%	0.8%	0.0%	0.2%	
US 36 E of SR 9	WB	55	1	3,723	1	4,059	10%	91.7%	0.0%	8.2%	0.1%	0.2%	480120
US 36 E of SR 9	EB	55	1	3,876	1	4,225	10%	91.8%	0.0%	7.9%	0.0%	0.3%	

Notes:

Existing AADTs for all roads were obtained from the MCCOG web site (<https://mccog.public.ms2soft.com/tcds/tsearch.asp?loc=Mccog&mod=TCDS>).

Design Year AADTs for US 36 and SR 9 segments were obtained from INDOT (2020). For other roads, Design Year AADTs were estimated from existing AADTs using the INDOT growth factors for similar segments of US 36/SR 9.

Design Year traffic projections are expected to be the same whether or not the project is built, so, Build and No-Build traffic volumes are the same.

CR S 300 W existing AADTs were obtained from a station nearly 2 miles south of the project area because that was the nearest station. Traffic volumes within the project area may be different.

Vehicle classification data were taken from traffic count data on the MCCOG site where available and combined into the classification needed for the TNM model. For other roads, the classification data was used from the most similar road with data. The vehicle classification distribution is assumed to stay reasonably constant through the Design Year.

The percentage of peak hour traffic volume to AADT was determined from hourly data counts given on the MCCOG web site. It was assumed that these percentages will be reasonably constant through the Design Year.

Table 3. Traffic Volumes for TNM (Per Lane).

Road	Speed, mph	Existing					Build and No-Build				
		Cars	Med. Trucks	Heavy Trucks	Buses	Motorcycles	Cars	Med. Trucks	Heavy Trucks	Buses	Motorcycles
CR S 300 W: SB	35	55	2	1	0	0	62	2	1	0	0
CR S 300 W: NB	35	55	0	1	0	1	62	0	1	0	1
US 36_SR 9 S of State: SB	40	454	31	35	17	6	268	18	21	10	3
US 36_SR 9 S of State: NB	40	458	30	39	14	6	270	18	23	8	3
US 36_SR 9 N of State: SB	40	681	0	61	0	2	371	0	33	0	1
US 36_SR 9 N of State: NB	40	710	0	61	0	2	387	0	33	0	1
SR 9 N of US 36: SB	40	498	30	41	23	9	269	16	22	13	5
SR 9 N of US 36: NB	40	516	32	44	26	9	279	17	24	14	5
State E of US 36: WB	35	541	7	4	0	1	590	8	4	0	1
State E of US 36: EB	35	540	8	4	0	1	589	8	5	0	1
State W of US 36: WB	30	548	7	4	0	1	598	8	4	0	1
State W of US 36: EB	30	548	8	4	0	1	597	8	5	0	1
US 36 E of SR 9: WB	55	326	0	29	0	1	356	0	32	0	1
US 36 E of SR 9: EB	55	340	0	29	0	1	371	0	32	0	1

Notes:

Numbers of vehicles for each vehicle class were calculated from the values in Table 2 by multiplying the appropriate AADT by the hourly percent and the class percent then dividing by the number of lanes.

Table 4. Noise Measurements.

Location	Date and Time	Reading, dBA	Calibration		Drift Corrections	Leq, dBA	
			Initial, dBA	Final, dBA		Measured (Corrected)	Modeled
M1 (residence)	08/02/2022 at 2:24 PM	56.1	113.5	113.4	0.55	56.7	57
M2 (residence)	08/02/2022 at 1:27 PM	56.7	113.4	113.4	0.6	57.3	57.7
M3 (residence)	08/02/2022 at 12:15 PM	60.8	113.6	113.4	0.5	61.3	62.1
a Drift Correction = Reference Level (114.0) - 1/2 (Final + Initial), per Section 3.1.4 of FWHM Manual, Measurement of Highway-Related Noise, May 1996.							

Table 5. Noise Modeling Results.

Receptor	Activity Category	Impact Criterion	Predicted Noise Levels (dBA)		
			Existing	No-Build	Build
1	D	51	41.9	42.7	43.2
2	D	51	33.2	33.9	35.2
3	B	66	52.4	53.1	54.6
4	B	66	54.6	55.3	56.9
5	D	51	33.9	34.6	36.1
6	D	51	36.0	36.4	36.9
7	B	66	54.2	54.6	54.8
8	B	66	62.7	63.1	63.1
9	B	66	63.4	63.8	63.8
10	B	66	60.0	60.4	60.4
11	B	66	59.7	60.1	60.2
12	B	66	59.7	60.1	60.2
13	B	66	62.1	62.4	62.5
14	B	66	52.0	52.5	53.5
15	B	66	51.1	51.6	52.7
16	B	66	52.9	53.4	54.7
17	B	66	52.0	52.5	53.8
18	E	71	64.7	65.1	68.0
19	B	66	58.9	59.4	61.9
20	B	66	57.9	58.4	60.8
21	B	66	57.4	57.8	60.1
22	B	66	56.6	57.0	59.0
23	B	66	55.4	55.8	57.7
24	E	71	60.8	61.2	61.4
25	D	51	45.7	46.0	47.6
26	B	66	57.1	57.5	59.4
27	E	71	66.6	66.9	68.2
28	D	51	38.1	38.5	40.3
29	B	66	55.0	55.3	56.9
30	B	66	53.9	54.3	55.7
31	B	66	53.5	53.8	55.0
32	B	66	54.1	54.5	55.8
33	C	51	35.4	35.8	37.2
34	B	66	56.8	57.1	58.5
35	B	66	54.4	54.7	55.9
36	B	66	64.8	65.1	65.7
37	B	66	64.9	65.3	65.9
38	B	66	58.1	58.5	59.2
39	B	66	58.3	58.7	59.5
40	B	66	58.2	58.6	59.3
41	B	66	58.1	58.4	59.2
42	B	66	59.1	59.5	60.2
43	B	66	56.6	57.0	57.8
44	D	51	33.7	34.1	34.9
45	D	51	37.9	38.2	38.9
46	B	66	52.5	52.9	53.2
47	C	66	59.2	59.5	59.9
48	B	66	54.6	55.0	55.4

Table 5. Noise Modeling Results.

Receptor	Activity Category	Impact Criterion	Predicted Noise Levels (dBA)		
			Existing	No-Build	Build
49	B	66	53.5	53.8	54.2
50	B	66	52.4	52.7	53.1
51	C	66	55.7	56.0	56.0
52	B	66	66.2	66.5	66.5
53	B	66	67.5	67.8	67.8
54	B	66	64.8	65.1	65.1
55	B	66	68.4	68.7	68.7
56	B	66	64.6	64.9	64.9
U01	G	N/A	0.0	0.0	64.8
U02	G	N/A	0.0	0.0	62.5
U03	G	N/A	0.0	0.0	60.3
U04	G	N/A	0.0	0.0	58.5
U05	G	N/A	0.0	0.0	56.8
U06	G	N/A	0.0	0.0	55.7
U07	G	N/A	0.0	0.0	54.8
U08	G	N/A	0.0	0.0	53.9
U09	G	N/A	0.0	0.0	53.1
U10	G	N/A	0.0	0.0	52.4
NOTE:					
Yellow shading indicates that the impact criteria is exceeded.					

APPENDIX A: NOISE FUNDAMENTALS

This Appendix describes basic acoustical principles and terminology as they are applied to highway noise. Noise is often defined as undesirable sound. Some sounds (such as music or birds singing) are not considered noise by most people, but other sounds from sources such as trucks on a highway or planes passing overhead are typically considered noise. This report focuses on the noises associated with highway traffic, though other noises may have been included in some measured noise levels. Traffic noises arise due to vehicle engines and exhausts, tire vibration, horns, brakes, etc. Each noise source produces its own combination of sounds. In the following paragraphs, some basic principles of sound are discussed in the context of highway noise analysis.

Loudness

Sound is created when a source vibrates in air, creating pressure pulses that move through the air or other medium away from the source in waves. When these pressure waves reach a receiver like the human ear, the pressure variations are interpreted as sounds. More forceful vibrations mean higher pressures in the sound waves, and these are interpreted by the human ear as louder or more intense sounds.

Sound pressures to which people may be exposed can vary greatly. For example, the sound pressure of leaves rustling at night might be 200 micropascals (μPa), and the sound pressure of a jet plane passing overhead might be 6,000,000 μPa . To simplify handling such large ranges of numbers, loudness is usually expressed as a Sound Pressure Level (SPL), which is expressed in units called decibels (dB). The dB is defined based on a logarithmic scale relative to a defined reference level. Mathematically, the SPL in dB is defined in Equation (1).

$$\text{SPL (in dB)} = 20 \log_{10} (p/p_0) \quad (1)$$

Where p = the sound pressure in μPa ;

p_0 = the reference sound pressure (normally 20 μPa , the typical hearing threshold of a young adult).

In the example given above, leaves rustling at 200 μPa would give an SPL of about 20 dB and a jet plane at 6,000,000 μPa would have an SPL of about 110 dB. Decibel levels associated with other common noises include a quiet bedroom at night (30 dB), normal speech with someone 3 feet away (67 dB), and a gasoline-powered lawn mower from 3 feet away (90 dB).

Because of the way the decibel is defined mathematically and the way human ears respond to sound intensities, comparing the “noisiness” of two sounds based on their dB values is not straightforward. For example, a truck passing on the highway might be generating a sound pressure level of 90 dB at a listener. However, the addition of a second identical truck will not produce 180 dB, nor will it double the apparent loudness to the listener. In fact, the second truck would only produce an additional 3 dB (for a total SPL of 93 dB) and the average listener would just barely be able to discern any difference in loudness. It would require 10 identical trucks to double the apparent loudness for the listener, at which point the SPL would increase by 10 to a value of 100 dB. Thus, for most highway applications, two rules of thumb are commonly used:

- A change of less than 3 dB is not noticeable to most people, and
- An increase of 10 dB will sound twice as loud and a decrease of 10 dB will sound half as loud.

Frequency

In addition to loudness, sounds can also be described by how fast the pressure changes over time. Increasing the vibration rate at the source (more beats per minute) will cause the air pressure to change at a higher frequency. The human ear perceives the frequency of the sound pressure wave as pitch. For example, different notes played on a piano have different frequencies. Lower frequencies are perceived as being lower in pitch while higher frequencies are perceived as being higher in pitch.

Frequency is measured in units of Hertz (Hz), which represent the number of times the pressure changes per second. Normal human ears can detect frequencies ranging from approximately 30 Hz to 16,000 Hz. However, the ear is best at hearing mid-range frequencies (around 1,000 Hz). For example, if a person hears two sounds that have the same pressure level (same dB value), but one sound is at 200 Hz and the other is at 1,000 Hz, the 1,000 Hz sound will seem to be much louder.

In recognition of this human hearing phenomenon, a frequency-weighting scheme called A-weighting is used in representing highway sound levels. In the A-weighting scheme, sound levels from various frequencies are weighted using the factors shown in Table A-1 to essentially subtract out portions of the sounds (mostly in the lower frequencies) that human ears do not hear well. Then the weighted sounds are added together to yield a single value (designated dBA) that approximately simulates the overall loudness that the human ear would perceive. All noise levels presented in this report are A-weighted values.

Duration

In addition to the relatively quick pressure variations (hundreds or thousands per second) that are measured as frequency, sound levels may also vary over longer time periods of minutes or hours. Noise measurements made at regular time intervals at the same location will generally vary widely, making it difficult to compare overall noise levels associated with a highway project at two or more locations or traffic scenarios.

One option for describing a varying sound environment is to measure the sound exposure level (SEL), which is the total sound energy of a single sound event and takes into account both its intensity and duration. One way to understand SEL is to think of it as the sound level you would experience if all of the sound energy of a sound event occurred in one second. This normalization to a duration of one second allows the direct comparison of sounds of different durations.

Another alternative is to look at average noise levels over a specified time period. Several noise descriptors or metrics are used to describe time-averaged noise levels. The L_{eq} is a single number that describes the mean sound intensity level during a specified time period. The time period can be one hour or several hours. The symbol $L_{eq}(h)$ is typically used to denote an L_{eq} for the noisiest hour of the day. $L_{eq}(\text{day})$ and $L_{eq}(\text{night})$ refer to averages over daylight and nighttime hours, respectively. L_{dn} is essentially a weighted average of $L_{eq}(\text{day})$ and $L_{eq}(\text{night})$ values where nighttime sounds are weighted more heavily than daylight sounds. Another descriptor that is occasionally used is $L_{10}(h)$, which is the sound level exceeded 10 percent of the time over a one-hour period. The noise measurements and modeling results presented in this report are $L_{eq}(h)$ values.

Noise Measurement

Noise levels for highway projects are measured following FHWA guidance (Lee and Fleming 1996). A Sound Level Meter (SLM) that meets or exceeds American National Standards Institute (ANSI) S1.4-1993, TYPE II standards for accuracy (ANSI 1993) is required. The SLM detects sounds using a microphone that converts the sound pressure levels into electrical signals. The electrical signals are then amplified and recorded or displayed. Typically, the SLM measures sounds of all frequencies within its operating range and add these together to produce a single sound level measurement. Filtering circuitry is included to automatically give A-weighted

results. In addition, some SLMs have integrating capabilities built in so that L_{eq} values can be obtained directly.

Calibration of the SLM is important to ensure that accurate measurements are obtained. In addition to annual calibration in the lab, a calibrator is also used before and after field measurements. The calibrator generates a known volume sound level at a single frequency (typically either 94 or 114 dB at 1,000 Hz). By placing the calibrator over the SLM microphone and obtaining a reading, accuracy of the SLM can be checked. If SLM readings obtained using the calibrator are off by less than 1 dB, the measurement readings can be corrected for instrument drift. If the calibration readings are off by more than 1 dB, the measurement readings must be discarded.

In the field, the SLM is situated with the microphone pointing up so that highway sounds all impinge on the membrane at the end of the microphone at an incidence angle of 90 degrees (grazing incidence). The microphone is situated atop a tripod or other support at a height of 5 feet above the ground to simulate the height of the average listener's ears. A windscreen is placed over the microphone to eliminate wind noise from the measurements. Measurement periods of at least 15 minutes are used to obtain a good estimate of the $L_{eq}(h)$.

While noise measurements are being made, traffic counts are obtained for nearby roadways. Counts are made of different vehicle types in each travel direction. In situations where traffic volumes are too large to count using a tally sheet, a video camera may be used to record the traffic so it can be counted later.

A number of environmental factors can affect noise readings in the field, including meteorological conditions (wind speed and direction, humidity, temperature, precipitation), terrain, ground surface (paved, grass, etc.), distance to nearby roads, and the presence of structures and buildings that may block or reflect traffic noise. All of these things should be measured and/or described when field measurements are taken.

Noise Modeling

Noise modeling is the calculation of noise levels at one or more receptor locations using complex mathematical equations representing the physics of sound propagation. Various parameters must be known or estimated to use these equations. Such parameters include the physical relationship of source to receptor (distance, height differences, intervening terrain, type of ground surface, locations of barriers, etc.) and the noise emissions of the source.

For highway noise modeling, the latest version of the Traffic Noise Model (TNM), TNM 2.5, is used. This model was developed by the FHWA for use in highway noise analyses and is accepted by most state transportation authorities. As described in its User's Manual (Anderson et al. 1998; Lau et al. 2004), TNM calculates noise levels at user-specified receptor locations using the volume, speed, and vehicle mix of traffic on nearby roadways. Noise emissions profiles for various vehicle types are built into the model and are used with site-specific traffic data to define the noise source term. TNM then calculates the propagation of noise from one or more sources to user-specified receptors, taking into account terrain and ground surface variations and the presence of existing buildings and natural noise barriers. TNM also contains tools for designing noise barriers and evaluating their effectiveness.

Table A-1. A-Weighted Frequency Response Factors.

Center of Frequency Range (Hz)	A-Weighted Response Factor (dB)
31.5	-39
63	-26
125	-16
250	-9
500	-3
1,000	0
2,000	+1
4,000	+1
8,000	-1
16,000	-7

APPENDIX B: FIELD NOTES

(MI)

215

9

25

3

1

Cars

Lt. Trucks

Heavy Trucks

M

Bus

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L_{max} = 76.8

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L_{min} = 45.4

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L_{eq} = 56.1

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15 min
Record

- Two cars drive past mic
on Hayden Way @ same time
(1 diesel)
(1 gas)

(M2)

Cars

Lt Trucks

Heavy Trucks

M

BUS

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Start cal

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113.4 dB

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1

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end: 113.4 dB

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Time start

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1:27pm

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1:42pm

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Dogs

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Circulators

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$L_{max} = 68.5$

$L_{min} = 49.0$

$L_{eq} = 56.7$

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15 min
Record

Dogs were not too Bad

178

11

28

5

0

(M3)

Cars
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+++

Lt Truck
+++

By T.

M

Bus

+++

+++

+++

+++

+++

1

Cal start +++

113.6 dB +++

end: 113.4 dB +++

(12:15 pm start) +++

+++

(12:30 pm end) +++

+++

(circled!)
++++
++++
++++
++++
++++
++++
++++

$L_{max} = 72.1$ 209 5 26 0 0
 $L_{min} = 43.3$
 $L_{eq} = 60.8$

over 15 min Record

All measurements were taken by ASC employee S. Jennings on August 2, 2022.

Jennifer Rhodes

From: Harry Nikides
Sent: Monday, September 25, 2023 10:08 AM
To: Cameron Berry; Jennifer Rhodes
Subject: FW: US 36 at SR 9 Des No. 1702936 & 1802854 Roadway project- Noise Report

Here is the approval e-mail for the Noise report

Harry S. Nikides
Indiana Regional Manager

ASC Group, Inc.
9376 Castlegate Drive
Indianapolis IN 46256
317-915-9300 x 1 (Office)
317-965-7313 (cell)

[Facebook](#) | [LinkedIn](#) | [Web](#)



From: Bales, Ronald <rbales@indot.IN.gov>
Sent: Monday, November 21, 2022 8:41 AM
To: Moira Snuffer <msnuffer@ascgroup.net>; Harry Nikides <hNikides@ascgroup.net>
Cc: Szewczak, Kimberly <KSzewczak@indot.IN.gov>; Passmore, Andrew D <APassmore@indot.IN.gov>; Foheybreting, Nicole K <NFoheyBreting@indot.IN.gov>; sandstroms@cdmsmith.com
Subject: RE: US 36 at SR 9 Des No. 1702936 & 1802854 Roadway project- Noise Report

A traffic noise analysis report was completed by ASC Group in November 2022 to evaluate potential traffic noise impacts for the proposed US 36 and SR 9 project in Pendleton, Indiana. Traffic noise was evaluated at all receptors within 500 feet of edge of pavement within the study area. Traffic noise levels were evaluated for the existing (2020) and projected (2043) traffic volumes for the build alternative.

This report evaluated potential noise impacts for the proposed improvements in compliance with the Federal Highway Administration's (FHWA) Procedures for Abatement of Highway Traffic Noise and Construction Noise as presented in the Code of Federal Regulations, Title 23 Part 772 (23 CFR 772) and the Indiana Department of Transportation (INDOT) *Traffic Noise Analysis Procedure* (2017).

Predicted design year (2043) noise levels would approach or exceed the Noise Abatement Criteria (NAC) at 3 (three) receptors resulting in the need to evaluate noise abatement. Noise abatement was analyzed at the impacted locations. No barriers met the feasibility and reasonableness criterion established by the INDOT *Traffic Noise Analysis Procedure* (2017).

Based on the studies thus far accomplished, the State of Indiana has not identified any locations where noise abatement is likely. A re-evaluation of the noise analysis will occur during final design. If during final design it has been determined that conditions have changed such that noise abatement is feasible and reasonable, the abatement measures might be provided. The final decision on the installation of any abatement measure(s) will be made upon the completion of the project's final design and the public involvement process.

This email will serve as INDOT's approval of the traffic noise analysis report for the proposed US 36 and SR 9 Project (Des 1702936, 1802854).

Ron Bales

Environmental Section Manager

Indiana Department of Transportation – Greenfield District
32 South Broadway
Greenfield, IN 46140

Office: (317) 515-7908

Email: rbales@indot.in.gov



From: Moira Snuffer <msnuffer@ascgroup.net>

Sent: Monday, November 14, 2022 3:16 PM

To: INDOT Coordinator 3 <indotcoordinator3@indot.IN.gov>

Cc: hNikides <hnikides@ascgroup.net>; 'Sandstrom, Scott' <sandstroms@cdmsmith.com>; INDOT Coordinator 7 <indotcoordinator7@indot.IN.gov>; Szewczak, Kimberly <KSzewczak@indot.IN.gov>

Subject: US 36 at SR 9 Des No. 1702936 & 1802854 Roadway project- Noise Report

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

Hello Coordinator 3,

On behalf of Mike Stafford, I have re-uploaded the Noise report for US 36 at SR 9 Des No. 1702936 & 1802854.

Please let us know if you have any comments.

Thank you,

[Moira Snuffer](#), [WPIT](#), MS

Ecologist/Environmental Scientist

ASC Group, Inc.

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614.596.1354 (direct)

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Please do not respond to this email. It is automatically generated.

The following files were added successfully into the ERMS system for user MSNUFFE01:

ENV_TransLtr 1702936_1802854 For Roadway Services.pdf as document type of Design Documents.

Abbreviated Engineer's Report

Des. 1702936 and 1802854

Added Travel Lanes on US 36 and SR 9

From R.P. 88+0.6 (US 36) to R.P. 62+0.3 (SR 9) in Madison County, IN

November 5, 2020

(Revised from August 28, 2020)



Executive Summary

This abbreviated engineer's report provides an analysis and evaluation of the existing condition and proposed alternatives for the US 36/SR 9 Added Travel Lanes project (Des. Nos. 1702936 and 1802854) in Madison County, Indiana. Heavy queuing occurs during peak hours along this corridor, as well as when traffic diverts from I-69 between Indianapolis and Anderson. The purpose of the project is to reduce travel delay on US 36, SR 9, and the side roads, and improve non-compliant curb ramps. This report summarizes existing conditions, including existing typical cross sections, access control, pavement history, including recent FY21 resurfacing projects along US 36, SR 9, and SR 38, traffic forecasts, and crash history. Two signalized intersections exist along the corridor – the south junction and the north junction. The south junction is the intersection of US 36 and SR 38/State Street. The north junction is the intersection of US 36 and SR 9.

Three proposed alternates are discussed apart from the “do nothing” alternate. Alternate 4 is the preferred alternate and includes constructing a 5-lane cross section along US 36 and SR 9 between SR 38 and Mercer Lane with a 4-lane cross section north and south to the project limits. In addition, turn lanes will be added at both the north and south junctions for most movements and the traffic signals will be modified. Alternate 4 provides the greatest operational improvement and allows for future extension of the 4-lane cross section south of this project. The conceptual level preliminary cost estimate for the preferred alternate is \$4,536,108.69, including \$3,642,227.24 for construction.

Maintenance of traffic (MOT) is proposed to be handled using a part width scheme. Phase 1 would relocate utilities, construct shoulder strengthening and temporary pavement, and potentially install proposed traffic signals. Phase 2 would shift lanes to the east side of the corridor while the west side is widened. Phase 3 would reverse Phase 2. MOT on the side roads would follow similar phasing and be coordinated with the main corridor. Pedestrian MOT, business access, and school access are challenges that will be addressed in the detailed design.

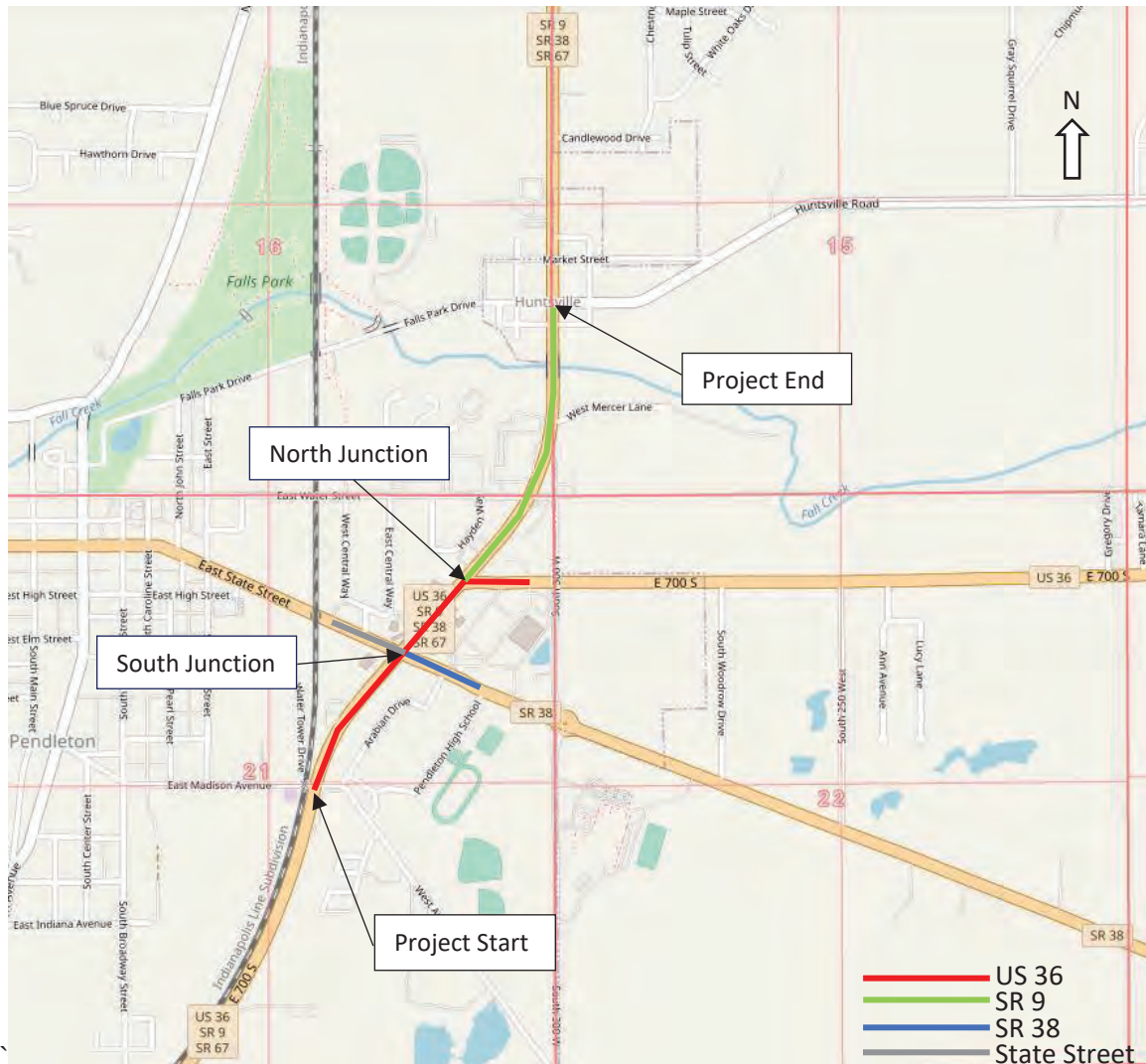
Environmentally, this project will likely require a CE-4 environmental document. An IDNR well identified in the red flag investigation is located near the south junction; no impacts are anticipated. Similarly, Fall Creek flows beneath SR 9, but no impacts are expected at the bridge. Hazmat locations such as underground storage tanks also exist. A Section 106 Review may be needed to ensure no adverse impacts to the Downtown Pendleton historic district. A category B-3 MPPA determination is assumed at this stage. A wetlands/waters of the US survey will be performed and will help to determine whether Section 404/401 permits will be required due to proposed impacts. An NPDES Rule 5 permit will be required. This project will require additional permanent right-of-way and temporary right-of-way; the project is currently scoped for 24 parcels.

An active CSX railroad line runs parallel to US 36 at the southern end of the project. Detailed design will determine whether project limits will encroach on the 50-foot threshold for a railroad agreement or the 25-foot threshold for a flagging requirement. The closest location will be at the far south end of the project limits. Many utilities exist in the corridor, both underground and overhead. Relocations are expected. The project will specifically attempt to avoid the sanitary lift station near the north junction and a gas pipeline near the southern project limit.



Project Location

This intersection improvement with added travel lanes project is located along US 36 and SR 9 in Sections 15, 16, and 21 T-18-N and R-7-E of Fall Creek Township, Madison County in Pendleton and Huntsville, Indiana. This project is in the Greenfield District and the Greenfield Subdistrict. The project is approximately 1 mile in length, begins at Latitude: 39° 59' 47.3" N, and Longitude: 85° 44' 16.5" W, and ends at Latitude: 40° 00' 30.7" N, and Longitude: 85° 43' 48.4" W.



Project Need and Purpose

The purpose of the project is to reduce travel delay on US 36 and SR 9 and side roads and bringing non-compliant curb ramps up to ADA standards. Heavy queuing occurs during peak hours as well as when traffic diverts from I-69 between Indianapolis and Anderson. Traffic projections indicate continued growth in traffic. Additionally, as traffic increases, safety becomes a larger concern as the number of crashes will likely increase.



Existing Facility

There are four main routes included in this project. They are not on the National Highway System (NHS), and the functional classifications are as follows:

- US 36 south and east of the North Junction is a suburban minor arterial,
- SR 9 north of the North Junction is a suburban principal arterial, and
- SR 38 is a suburban minor arterial.
- State Street is a suburban minor arterial

There are several intersections throughout the corridor with various controls as follows:

- US 36 and Madison Ave/Lick Creek Pike is two-way stop sign controlled,
- US 36 and SR 38 (South Junction) is traffic signal controlled,
- US 36 and SR 9 (North Junction) is traffic signal controlled,
- SR 9 and E Water St is two-way stop sign controlled,
- SR 9 and Plaza Dr, both north and south T-intersections, are one-way stop sign controlled,
- SR 9 and W Mercer Ln T-intersection is one-way stop sign controlled,
- SR 9 and S Cross St has no stop control,
- SR 9 and CR 500 S/Huntsville Rd is traffic signal controlled,
- State Street and Central Way T-intersection is one-way stop sign controlled, and
- SR 38 and Arabian Drive (entrance to high school) T-intersection is one-way stop sign controlled.

There are also several commercial and residential drives, some of which are stop sign controlled as follows:

- Along US 36, there are two commercial drives with stop signs,
- Along SR 9, there are no commercial drives with stop signs,
- Along State Street, there are two commercial drives with stop signs, and
- Along SR 38, there is one commercial drive with a stop sign.

US 36 has shoulder and curbed sections:

- From the beginning of the project to the South Junction there are approx. 11 ft wide shoulders
- From the South Junction to the North Junction there is curb and gutter, and
- From the North Junction east to the end of construction there is a shoulder on the north side which varies from 0 ft to 11 ft and no shoulder on the south side.

SR 9 also has shoulder and curbed sections:

- From the North Junction to the bridge over Fall Creek the shoulder varies from approx. 3 ft to 12 ft, with some areas of 0 ft where the shoulder is used as a right turn lane,
- North of the bridge over Fall Creek there is approx. 10 ft shoulder on the left side for about 170 ft, and curb on the right side and the rest of the left side to the project end.

State Street has mostly curb and gutter with some short stretches of shoulder:

- From the start of construction to Central Way there is approx. 4 ft wide shoulder on the left side and curb and gutter on the right side, and
- From Central Way to the South Junction, there is curb and gutter.



SR 38 has mostly curb and gutter with some short stretches of shoulder:

- From the South Junction, to Arabian Drive there is curb and gutter, and
- From Arabian Drive to the end of construction there is approx. 2 ft shoulder on both sides.

The existing cross sections of US 36 are as follows (Approx. Widths, Typical Sections attached):

- US 36 from the start of the project to the South Junction consists of two 12 ft through lanes with a 12 ft right turn lane and a 12 ft left turn lane on the north and south legs of the South Junction,
- South of the North Junction, there is a 12 ft wide two-way left turn lane for approximately 240 ft,
- On the south leg of the North Junction, the northbound through lane narrows to 11 ft and there is a 12 ft right turn lane,
- The east leg of the North Junction has 12 ft lanes with a 4 ft wide raised median and a painted median which varies from 0 ft to 10 ft, and
- US 36 eastbound from the North Junction has a 12 ft right turn lane for the commercial development to the south and a 12 ft left turn lane for the commercial development to the north.

The existing cross sections of SR 9 are as follows (Approx. Widths, Typical Sections attached):

- On the north leg of the North Junction, the southbound through lane is 11 ft with an 11 ft left turn lane and the northbound through lane is 12 ft,
- North of the North Junction, there are two 12 ft through lanes,
- At the intersection of SR 9 and E Water Street there are 12 ft right turn lanes on both the north and south side,
- At the intersection of SR 9 and W Mercer Lane, there is a 12 ft left turn lane northbound into the commercial area to the west and 12 ft right and left turn lanes southbound into the commercial area or east onto W Mercer Lane,
- North of the bridge over Fall Creek, there are four 12 ft through lanes with a 12 ft left turn lane at the intersection with CR 500 S/Huntsville Road.

The existing cross section of State Street is as follows (Approx. Widths, Typical Section attached):

- State Street has two 12 ft through lanes and a 12 ft left turn lane on the west leg of the South Junction,

The existing cross sections of SR 38 is as follows (Approx. Widths, Typical Sections attached):

- On the east leg of the South Junction there are two 12 ft through lanes, one 12 ft right turn lane, one 12 ft left turn lane, and a 12 ft right turn lane eastbound to Arabian Drive, and
- At the east end of the project, past Arabian Drive, SR 38 has two 12 ft through lanes, a 12 ft right turn eastbound lane, and a 12 ft right-through lane.

Existing drainage in the area consists of mostly open ditch but does have a closed system with a inlets and pipes running through the curbed section. Several culverts also exist within the project area and various depth ditches are used to convey storm water.

The existing horizontal and vertical alignments will be retained, along with the existing pavement cross slopes. Existing pavement drainage patterns will be maintained. The proposed pavement widening will extend off of proposed sawcuts on the existing pavement and will perpetuate the existing cross slopes.



Pavement History

US 36/SR 9

Year	Location (approx. distances)	Pavement	Width
1934	Project start to 300 ft S of bridge over Fall Creek	9"-7"-9" Reinforced Concrete	30 ft
	300 ft S of bridge over Fall Creek to 100 ft N of bridge	Either 9"-7"-9" Reinforced Concrete, or ¾" Natural Rock Asphalt Wearing Course on 13½" Macadam Base & 1½" Fine Aggregate Subgrade, or 1½" Bituminous Concrete on 12½" Macadam Base & 1½" Fine Aggregate Subgrade	40 ft
	100 ft N of bridge over Fall Creek to 230 ft N of bridge	7" Existing Concrete Pavement on right, with 9"-7"-9" Reinforced Concrete Widening, on left	18 ft on Rt, 22 ft on Lt
	230 ft N of bridge to project end	7" Existing Concrete Pavement on right, with 9"-7"-9" Reinforced Concrete Widening, on left, & 3½" Bituminous Macadam Surface on 1½" Fine Aggregate Subgrade, on left and right	18 ft on Rt 22 ft on Lt 6.5 ft shoulder both sides
1990	100 ft S of bridge over Fall Creek to 150 ft N of bridge	1" Bituminous Surface on 2" Bituminous Binder on 9" Bituminous Base on 4.6" Bituminous Base 5D on 9" Compacted Aggregate Base #53, and 3" Bituminous Base 5D shoulders	48 ft 10 ft shoulders
2002	263 m S of South Junction to 213 m S of South Junction	32 mm HMA Surface on existing pavement, with 32 mm HMA Surface, Shoulder on 70 mm HMA Intermediate Shoulder, on 200m Compacted Aggregate Base, 0, Size 53, on left	12.4 m - 13.2 m
	213 m S of South Junction to approx. 115 m S of South Junction	32 mm HMA Surface on existing pavement, with 32 mm HMA Surface, Shoulder on 70 mm HMA Intermediate Shoulder, on 200m Compacted Aggregate Base, 0, Size 53, on left & right	12.4 m - 13.2 m
	115 m S of South Junction to center of South Junction	32 mm HMA Surface on existing pavement, with 32 mm HMA Surface on 70 mm HMA Intermediate, on 204 mm HMA Base	18.0 m
	Center of South Junction to 56 m N of South Junction	38 mm milling with 32 mm HMA Surface overlay and 32 mm HMA Surface on 70 mm HMA Intermediate, on 204 mm HMA Base widening	18.0 m
	56 m N of South Junction to 136 m N of South Junction	32 mm HMA Surface on existing pavement, with 32 mm HMA Surface on 70 mm HMA Intermediate, on 204 mm HMA Base	18.0 m
	136 m N of South Junction to 79 m S of North Junction	32 mm HMA Surface on existing pavement, with 32 mm HMA Surface on 70 mm HMA Intermediate, on 204 mm HMA Base, right side only	17.4 m
	79 m S of North Junction to 20 m S of North Junction	32 mm HMA Surface on existing pavement, with 32 mm HMA Surface on 70 mm HMA Intermediate, on 204 mm HMA Base, right side only	Varies
2013	N side of bridge over Fall Creek for 54 ft	Approx. 2" milling with 1½" HMA Surface on 2½" HMA Intermediate, and 10" Widening with HMA, Type B with 1½" HMA Surface on 2½" HMA Intermediate, and 1½" HMA Surface on 2½" HMA Intermediate on 10" HMA Base on Subgrade Treatment widening	48 ft wide 0 ft to 11 ft on Rt 0 ft to 12 ft on Lt
	54 ft N of bridge over Fall Creek to project end	Approx. 2" milling with 1½" HMA Surface on 2 ½" HMA Intermediate, 40 ft to 48 ft wide and 10" Widening with HMA, Type B with 1½" HMA Surface on 2½" HMA Intermediate, and 3" HMA Surface on 6" Compacted Aggregate Base, 0, No. 53 on Subgrade Treatment shoulders, varying width, on both sides	40 ft to 48 ft 1.5 ft min both sides Shoulders vary



SR 38/State Street

Year	Location (approx. distances)	Pavement	Width
2002	Project start to 75 m W of South Junction	32 mm HMA Surface on existing pavement, with 32 mm HMA Surface on 70 mm HMA Intermediate, on 204 mm HMA Base widening	10.8 m
	75 m W of South Junction to 46 m W of South Junction	38 mm milling with 32 mm HMA Surface overlay and 32 mm HMA Surface on 70 mm HMA Intermediate, on 204 mm HMA Base widening	10.8 m
	46 m W of South Junction to center of South Junction	32 mm HMA Surface on existing pavement, with 32 mm HMA Surface on 70 mm HMA Intermediate, on 204 mm HMA Base widening	10.8 m
	Center of South Junction to 56 m E of South Junction	32 mm HMA Surface on existing pavement, with 32 mm HMA Surface on 70 mm HMA Intermediate, on 204 mm HMA Base widening	18.0 m
	56 m E of South Junction to 69 m E of South Junction	38 mm milling with 32 mm HMA Surface overlay and 32 mm HMA Surface on 70 mm HMA Intermediate, on 204 mm HMA Base widening	18.0 m
	69 m E of South Junction to project end	32 mm HMA Surface on existing pavement, with 32 mm HMA Surface on 70 mm HMA Intermediate, on 204 mm HMA Base widening	18.0 m

Note: Pavement history information missing from between the years of 1934 and 1990 for US 36/SR 9 and from before 2002 for SR 38. Pavement condition data was not available in the RFP or mini-scope materials

FY 2021 Resurfacing Work

US 36 (Des No 1801939, RS-40588)

Year	Location (approx. distances)	Pavement	Width
FY 2021	Project start to 500 ft S of South Junction	Milling, Asphalt, 1.5 in. with 1.5 in. HMA Surface	44 ft
	500 ft S of South Junction to 350 ft S of South Junction	Milling, Asphalt, 1.5 in. with 1.5 in. HMA Surface	Varies Max 68 ft
	350 ft S of South Junction to 100 ft S of North Junction	Milling, Asphalt, 1.5 in. with 1.5 in. HMA Surface	48 ft
	100 ft S of North Junction to 150 ft N of North Junction	Milling, Asphalt, 1.5 in. with 1.5 in. HMA Surface	44 ft

This project's proposed curb ramps at State St/SR 38 would be removed and reconstructed due to the widening required.

SR 9 (Des No 1801939, RS-40588)

Year	Location (approx. distances)	Pavement	Width
FY 2021	150 ft N of North Junction to 1350 ft N of North Junction	Milling, Asphalt, 1.5 in. with 1.5 in. HMA Surface	44 ft
	1350 ft N of North Junction to 1750 ft N of North Junction	Milling, Asphalt, 1.5 in. with 1.5 in. HMA Surface	Varies Max 68 ft
	1750 ft N of North Junction to 1950 ft N of North Junction	Milling, Asphalt, 1.5 in. with 1.5 in. HMA Surface	68 ft



SR 38 (Des No 1800779, RS-41045)

Year	Location (approx. distances)	Pavement	Width
2021	South Junction to 400 ft E of South Junction	Milling, Asphalt, 1.5 in. with 1.5 in. HMA Surface	57 ft to 59 ft
	400 ft E of South Junction to 802 ft E of South Junction	Milling, Asphalt, 1.5 in. with 1.5 in. HMA Surface	57 ft

This project's proposed curb ramps at Arabian Drive and the two commercial entrances on the north side would be removed and reconstructed due to the widening required and the addition of curb.

Traffic Data

	US 36 south of South Junction	US 36 from South Junction to North Junction	SR 9 from North Junction to CR 500 S/Huntsville Rd
AADT (2016):	(2018) 12,522 vpd	16,159 vpd	14,868 vpd
AADT (2023):	12,905 vpd	16,525 vpd	15,167 vpd
AADT (2043):	14,435 vpd	17,573 vpd	16,020 vpd
DHV (2043):	9.62%	9.39%	8.80%
DHV (2043):	1,389 vph	1,651 vph	1,410 vph
Commercial Vehicles:	9.07% AADT	7.83% AADT	15.75% AADT
	6.40% DHV	6.06% DHV	14.07% DHV
	49.59% AADT Directional Distribution Per year growth for forecast = 0.61% See traffic forecast attached.	51.71% AADT Directional Distribution Per year growth for forecast = 0.32% See traffic forecast attached.	49.37% AADT Directional Distribution Per year growth for forecast = 0.29% See traffic forecast attached.

Crash History

Below is a summary of crashes from 2017 to 2019 along the entire project area. Information on individual crashes and RoadHat 3.0 analyses for the entire corridor and for the North Junction (as provided in the mini-scope) are included in the attachments. In general, the two analyses indicate how many standard deviations the corridor or intersection deviates from the expected crashes. An Index of Crash Frequency (ICF) of 0 indicates that the road is performing as expected, and an ICF of 2 or higher indicates a high crash location with the location being two standard deviations away from expected. For the entire corridor, the ICF is 6.02 and the Index of Crash Cost (ICC) is 4.58, indicating that the entire corridor is a high frequency and severity corridor for crashes. For the North Junction, the ICF is 1.52 and the ICC is 1.44 as provided in the mini scope, indicating that while the intersection is not performing exactly as expected, it is not the most likely location for crashes, nor high severity crashes, on the corridor.

Total Number of Crashes: 166



Type of Collision	Number
Backing Crash	2
Collision with Object in Road	2
Head On	4
Left Turn	20
Left / Right Turn	4
Opposite Direction Sideswipe	2
Other	9
Ran Off Road	9
Rear End	75
Right Angle	37
Same Direction Sideswipe	2
Total	166

Primary Factor	Number
Animal / Object in Roadway	1
Brake Failure or Defective	2
Cell Phone Usage	1
Disregard Signal / Reg Sign	3
Driver Asleep or Fatigued	1
Driver Distracted	10
Failure to Yield Right of Way	83
Following Too Closely	42
Improper Lane Usage	2
Improper Passing	1
Improper Turning	4
Insecure / Leaky Load	1
Left of Center	2
Overcorrecting / Oversteering	1
Oversize / Overweight Load	1
Ran Off Road	5
Speed too Fast for Weather Conditions	2
Unsafe Backing	2
Unsafe Lane Movement	2
Total	166

Number of Injuries	Number
Fatal	0
Incapacitating	18
Non-Incapacitating	11
Possible	2
Property Damage Only	135
Total	166

In reviewing the 166 crashes over the three-year timeline, it appears that rear end and right-angle crashes are prevalent. Interestingly, a four-way intersection or T-intersection was not typically listed as the location for a crash. In addition, the main primary factors were following too closely and failure to yield the right of way. Based on this information, one may assume instead that many of these crashes occurred in areas of driveway access which may lead people to slow down unexpectedly or pull out in front of others. It is also possible that rear-end crashes occurred at the



back of queues and were not recorded as at the intersection because the location at the back of the queue was some distance away from the intersection. This analysis confirms the desire to include access control in the form of raised medians on this project. Doing so will reduce the number of conflict points. Even in areas with painted medians, it is recommended to limit driveway traffic to right-in, right-out. This will eliminate many conflict points along the corridor. Less expensive although more maintenance intensive solutions could be used, such as mountable curb or delineators, if paint is not enough to deter drivers.

Identification of Proposal

Alternate 1: Do nothing

With the continued growth in traffic, capacity and safety will continue to be issues of concern. If nothing is done, the number of accidents, especially back of queue, will continue to rise.

Alternate 2: Construct 4-lane cross-section with dual left turns EB at SR 38

The 4-lane cross-section will be extended from Huntsville Rd/CR 500 S down to Madison Ave/Lick Creek Pike. Existing left-turn and TWLT lanes will be perpetuated. Curb and gutter with curb turnouts are intended to be used to avoid the need for additional R/W takes for shoulders while still maintaining surface drainage. The WB right turn storage will be extended back approximately 30 ft to the first commercial drive on US 36 east of the North Junction to allow right-turning vehicles to bypass the heavy WB left-turning traffic. The EB approach at State Street will add approximately 3500 sq ft of pavement to the south side of the road to accommodate dual-left turns. The NB approach at SR 38 would add pavement to maintain the dedicated right-turn lane distinct from the two through lanes. There would also be recommendations for adding islands for right-in-right-out movements and private drive at various locations within the project limits to be determined. The existing traffic signals at the North and South Junctions will be modified and adjusted to fit the added travel lanes. Per INDOT's latest policy, lighting will also be added at the intersections. This alternative shows some improvements.

Alternate 3: Restrict improvements to EB dual left at SR 38 & added storage for WB RT at US 36

The analysis of implementing minor improvements at the SR 38 and US 36 intersections to resolve foreseeable issues was considered. The AM peak was analyzed in Synchro and there were issues with queuing in the corridor and at the intersections that were not being addressed both in terms of delay and in the microsimulation. Due to a lane drop at the northbound RT movement at the North Junction, heavy weave/merge movements were noticed.

Alternate 4: Alternate 2 plus WB dual lefts at South Junction, SB right turn lane at South Junction, and 5-lane cross section between South Junction and Mercer Ln (Preferred Alternative)

This alternative retains all of the aspects of Alternate 2, but also includes the following:

- WB Dual lefts at South Junction which improve the LOS for the approach from an E (66.4 sec/veh delay) in the AM peak for Alternate 2 compared to a D (41.8 sec/veh delay). This is a 33% reduction. The storage length will not be changed appreciably, but the addition of the second lane causes the EB through lane to line up with the receiving lane and increases the throughput for the limited left turn phase.



- The SB right turn lane at the South Junction improves from an E (56.7 sec/veh) to a D (36.8 sec/veh) for that movement in the PM peak. Operationally, if this lane is not included, it will increase the likelihood of drivers cutting through the gas station lot on the corner. However, there is a risk that the R/W take will adversely affect the access to that parcel by tanker trucks or customers at the pump. Further analysis is needed in design.
- The addition of the 5-lane section between the South Junction and Mercer Ln allows for left turn lanes from the mainline to Water St as well as flexibility for future TWLTLs as needed in the future. The take is shown for this addition entirely to the west but could be redistributed as necessary in the detailed design phase considering the availability and cost of R/W and drainage design.
- Also as in Alternate 2, the existing traffic signals at the North and South Junctions will be modified and adjusted to fit the added travel lanes. Per INDOT's latest policy, lighting will also be added at the intersections.

This alternative provides the greatest operational improvement through this portion of Pendleton and allows for future extension of the 4-lane cross-section south of this project as needed. This is the preferred alternative.

Traffic Maintenance During Construction

Traffic will be maintained using a partial width phasing scheme and, depending on the phasing, left turns may be blocked during construction if there are alternative routes for drivers to get to their destinations. Coordination between the school district, emergency responders, and local businesses will be important. The Determination of Significant Work Zone Impacts is included in the attachments and shows that this project will be Significant. The level of detail for the TMP will be determined during the design phase.

The first phase of MOT will allow for utility relocations, any necessary shoulder strengthening, temporary pavement, and installation of proposed traffic signals, if desired.

The second phase of MOT will shift lanes to one side of the roadway to allow for widening and construction of the added turn lanes. The direction of the traffic shift will be determined by the utility relocation needs, proposed drainage improvements and widening locations. During this phase traffic would be shifted to the east side of the road and the west side of the road will be widened.

The third phase of MOT would switch the traffic to the other side of the facility to complete construction of the added travel lanes.

MOT on the other roadways adjacent to the corridor (SR 38 and US 36 east of the North Junction) would follow similar phased construction in order to complete the work and maintain lanes.

Challenges with the maintenance of traffic for this project will include pedestrian MOT, business access, and access to the nearby schools. The pedestrian improvements would likely be constructed at the time of the widening to the same side. Pedestrian MOT throughout the project will be designed to ensure connectivity and safe access for pedestrians around or through work zones using the latest INDOT and IMUTCD standards. Extra signage noting that businesses remain open and how to access their storefronts should be provided with the project. Short term



closures and detours may be required or desired in order to speed up the work near the high school prior to school starting.

The maintenance of traffic plan will be discussed with INDOT throughout the design process to arrive at the desired design.

Environmental Issues

This project will likely fall under the Categorical Exclusion (CE-4) NEPA document. A Preliminary Red Flag Investigation was conducted during the proposal phase and found several items. An IDNR Well is located southeast of the intersection of US 36 and SR 38, but there are no direct impacts anticipated. Fall Creek flows beneath SR 9 in the northern part of the project, but there are no direct impacts anticipated and erosion control measures will be established during construction. There are underground storage tanks and other possible hazmat locations within the project area. A more thorough RFI and Phase 1a archaeological records check and site reconnaissance survey will need to occur. Downtown Pendleton is a Historic District and, while it is not within the project limits, a Section 106 may be needed to ensure there are no adverse impacts. See the attachments for the preliminary RFI maps.

A Minor Projects Programmatic Agreement (MPPA) determination will be made in coordination with INDOT-CRO. Category B-3 is assumed at this stage. This project will also include an air quality analysis as part of the environmental document.

Permits Required

A wetlands/waters of the U.S. survey will be performed. Although not confirmed to be needed, permits may include Section 404/401 depending on the results of the survey and potential impacts. An NPDES Rule 5 Permit is required for this project as a result of the soil disturbance. The Storm Water Quality Manager Level will be determined in conjunction with INDOT at a later date.

Right-of-Way Impact

There is right-of-way impact expected on this project. Reacquisition of right-of-way may be necessary. Currently, the project is scoped for obtaining right-of-way from 24 parcels. With the potential that many of the properties may end up in condemnation, right-of-way acquisition will be a priority at the start of design. Per discussion with INDOT at the design kickoff meeting, permanent right-of-way is preferred over temporary right-of-way, allowing for easier improvements and maintenance in the future.

Railroad Impacts

There are no railroad crossings within the project limits. A railroad runs parallel to US 36 at the south end of the project. Designers will aim to stay at least 50' away from the tracks on Madison and on State Street to avoid the need for a railroad agreement and at least 25' away from the tracks to avoid a flagging agreement. If for some reason this is not possible, railroad coordination will be started as soon as possible with the district.



Utility Impacts

Utilities in Area (see Indiana 811 Design Ticket)

- AT&T Transmission (Communication)
- Comcast (Cable, Communication)
- Crown Castle (Fiber)
- Duke Energy (Electric, Communication)
- Fall Creek Regional Waste District (Wastewater)
- Frontier (Communication)
- Nine Star Connect (Formerly Hancock Telecom) (Communication)
- Pendleton, Town of (Water, Electric, Stormwater)
- Vectren (Gas)

Utilities present at the project site include gas, electric, water, stormwater, telecommunications, fiber optic, and wastewater. Both above and below ground utilities exist and run both parallel and across US 36, SR 9, and SR 38. There is an electrical substation on the southwest corner of US 36 and Madison Avenue, but no impacts are anticipated. Care should be taken to avoid a wastewater lift station located southwest of the North Junction. Design exceptions may be required in order to avoid this facility. There is also a gas pipeline which crosses within the project area near the southern project limit. If at a shallow depth, a unique special provision prohibiting vibratory rollers may be needed.

With the construction of the pavement widening, adjustments of manholes, inlets, and other structures is to be expected. Utility relocation is expected due to the pavement widening, sidewalk and curb ramp improvements and the roadside drainage earthwork that is required. CDM Smith will design the project to avoid utility relocations where possible. Subsurface Utility Exploration (SUE) should be utilized where applicable to determine the depth of utilities that may be in conflict to determine if relocation is avoidable. Utility coordination will need to be settled quickly for this project. Currently, there are only four months between Stage 3 and letting.

Preliminary Cost Estimate (Preferred Alternative)

	<u>2020</u>	<u>Source</u>
Right-of-Way Purchase, Permanent	\$141,594.55	Attached Spreadsheet
Right-of-Way Purchase, Temporary	\$2,112.79	Attached Spreadsheet
Preliminary Engineering	\$642,674.00	Contract
Railroad	\$7,500.00	See Below
Utilities Relocation	\$100,000.00	Mini-Scope
Construction	\$3,642,227.24	Quantities & Cost Estimate
<i>Total</i>	<i>\$4,536,108.58</i>	

The construction estimate created as part of this report is higher than INDOT's current programmed amount. This engineer's report construction cost assumes full depth pavement in widening areas and as replacement of existing shoulders that are to be future travel lanes. The full depth pavement layer depths and materials are assumed since pavement design has not taken place. Existing pavement is assumed to require HMA resurfacing. Curb is assumed along the new widening from the North Junction to Mercer Lane and in areas where the widening impacts existing curb. Impacted drainage structures are assumed to be removed and



reconstructed along the new curb line. Maintenance of traffic is assumed to be 10% of other costs. Additional rounded costs for signals and drainage are also included. As well as the typical percentages for construction engineering, mobilization, and clearing. A conceptual contingency percentage of 20% on top of the total of all items is used.

The railroad cost estimate for railroad flagging assumed \$1,500 per day (for 8 hours minimum) for five days which will only be needed if there is construction within 25 ft of the tracks. This project's construction limits are to be determined and may be within 50 feet of the rail which would require a railroad agreement. There will be further coordination with the INDOT railroad coordinator for the project.

Project Design Criteria (US 36)

Facility	US 36
NHS Route	No
Work Type	3R
Functional Classification	Minor Arterial
Terrain	Level
Rural/Urban	Suburban
Design Speed	40 mph
Posted Speed	40 mph
Access Control	None
Proposed Number of Lanes and Width	4 @ 11 ft, 2 aux NB & SB at SR 38 @ 11 ft
Curb Offset / Uncurbed Pvd Shld Width	1 ft min, 0 ft aux / 10 ft right min, 4 ft left min, 2 ft min aux (IDM Fig. 55-3E)
Maximum Grade	40 mph: 8.75%
Cross Slope (Travel Lane)	2%-3% (IDM Fig. 55-3E)
Sidewalk Width	4 ft with 5 ft buffer (des) (IDM Fig. 55-3E)
Horizontal Curves (min.)	535 ft (40 mph, IDM Fig. 43-2B)
Superelevation	Match Existing (6% max.)
Obstruction-Free Zone (Curbed)	40 mph: 2.5 ft from face of curb due to signal poles (IDM 55-5.02, 4)
Obstruction-Free Zone (Uncurbed)	40 mph: 10 ft plus 10 ft min. shoulder width (IDM 55-5.02(1))
Max. Existing Right-of-Way Width	Varies, approx. 86 ft
Min. Existing Right-of-Way Width	Varies, approx 40 ft



Project Design Criteria (SR 9)

Facility	SR 9
NHS Route	No
Work Type	3R
Functional Classification	Principal Arterial
Terrain	Level
Rural/Urban	Suburban
Design Speed	40 mph
Posted Speed	40 mph
Access Control	None
Proposed Number of Lanes and Width	4 @ 11 ft, 1 aux SB at US 36 @ 11 ft, 1 aux NB & SB at Water St & at Mercer Ln @11 ft
Curb Offset / Uncurbed Pvd Shld Width	1 ft min, 0 ft aux / 10 ft right min, 4 ft left min, 2 ft min aux (IDM Fig. 55-3E)
Maximum Grade	40 mph: 8.75%
Cross Slope (Travel Lane)	2%-3% (IDM Fig. 55-3E)
Sidewalk Width	N/A
Horizontal Curves (min.)	535 ft (40 mph, IDM Fig. 43-2B)
Superelevation	Match Existing (6% max.)
Obstruction-Free Zone (Curbed)	40 mph: 2.5 ft from face of curb due to signal poles (IDM 55-5.02, 4)
Obstruction-Free Zone (Uncurbed)	40 mph: 10 ft plus 10 ft min. shoulder width (IDM 55-5.02(1))
Max. Existing Right-of-Way Width	Varies, approx. 65 ft
Min. Existing Right-of-Way Width	Varies, approx. 40 ft

Project Design Criteria (SR 38/State Street)

Facility	SR 38/State Street
NHS Route	No
Work Type	3R
Functional Classification	Minor Arterial
Terrain	Level
Rural/Urban	Suburban
Design Speed	35 mph
Posted Speed	35 mph
Access Control	None
Proposed Number of Lanes and Width	2 @ 11 ft, 2 aux EB at US 36 @ 11 ft, 3 aux WB & EB at US 36 @11 ft, 1 aux EB at entrance to school
Curb Offset / Uncurbed Pvd Shld Width	1 ft min, 0 ft aux / 10 ft right min, 4 ft left min, 2 ft min aux (IDM Fig. 55-3E)
Maximum Grade	35 mph: 9%
Cross Slope (Travel Lane)	2%-3% (IDM Fig. 55-3E)
Sidewalk Width	4 ft with 5 ft buffer (des) (IDM Fig. 55-3E)
Horizontal Curves (min.)	370 ft (35 mph, IDM Fig. 43-2B)
Superelevation	Match Existing (6% max.)
Obstruction-Free Zone (Curbed)	35 mph: 2.5 ft from face of curb due to signal poles (IDM 55-5.02, 4)
Obstruction-Free Zone (Uncurbed)	35 mph: 10 ft plus 10 ft min. shoulder width (IDM 55-5.02(1))
Max. Existing Right-of-Way Width	Varies, approx. 40 ft
Min. Existing Right-of-Way Width	Varies, approx. 40 ft

Although not determined, Level One design exceptions may be required in order to construct the widening within this limited space urban corridor. Design exceptions would be most valuable in areas of utility congestion and sensitive right-of-way takes in order to minimize impacts.

**CHANGES TO PROPOSAL:**

The Project Manager, Scoping Manager, and District Traffic Engineer shall be consulted if deviation from the proposal is determined to be necessary during a later phase of project development. The person initiating the change shall send a memo to the project manager for concurrence. The memo shall include justification for the change and the estimated cost difference.



Concurrence

The document was prepared by:

DATE: 11/5/2020

Michael J. Vollmer, PE
CDM Smith, Inc.
Transportation Engineer

Reviewed by: Scoping Manager Review

DATE: November 9, 2020

Aschalew Aberra
INDOT Greenfield District
Scoping Manager
Recommend: APPROVAL / DISAPPROVAL

Reviewed by: Traffic Review

DATE: 11/13/2020

Luis Laracuent
INDOT Greenfield District
Greenfield District Traffic Engineer
Recommend: APPROVAL / DISAPPROVAL

Reviewed by: Systems Asset Management

DATE: 11/10/2020

Amy Groff
Greenfield District Systems Asset Manager
Recommend: APPROVAL / DISAPPROVAL

Reviewed by: PM Review

DATE: 11/10/2020

Michelle Loveall
INDOT Project Manager
Recommend: APPROVAL / DISAPPROVAL



Attachments have been removed

Summary of Attachments

Attachment	Page(s)
Project Location Map	A1
Functional Map	A2
Traffic Forecast Report	A3-A19
Existing Typical Sections	A20-A24
Project Area Crash Data	A25-A27
RoadHat Analysis – Entire Corridor	A28
RoadHat Analysis – North Junction	A29-A30
Preliminary RFI Maps	A31-A34
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Determination of Significant Work Zone Impacts	A37
Design Kickoff Meeting Minutes	A38-A41
Quantities	A42-A50
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Adjusted Layout	A147-A152
Site Photographs	A153-A159

**Air Quality Assessment for
US 36/SR 9 Additional Travel Lanes,
INDOT Des. Nos. 1702936 and 1802854,
Madison County, Indiana**

By

Michael A. Stafford, PhD, Air/Noise Specialist

**Air Quality Assessment for
US 36/SR 9 Additional Travel Lanes,
INDOT Des. Nos. 1702936 and 1802854,
Madison County, Indiana**

By

Michael A. Stafford, PhD, Air/Noise Specialist

**Submitted by:
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Lead Agency: Indiana Department of Transportation

February 9, 2024



**CULTURAL • ENVIRONMENTAL • HAZARDOUS
EVALUATION & CONSULTING**

INTRODUCTION

ASC Group, Inc., under contract with CDM Smith, Inc., completed an air quality assessment for a planned widening project on US 36/State Road (SR) 9 in Madison County, Indiana. Because this project is subject to federal funding and approval, the National Environmental Policy Act (NEPA) of 1969 requires the evaluation of potential environmental impacts, including air quality. In addition, Section 176(c) of the Clean Air Act (CAA), last amended in 1990 (<https://www.epa.gov/clean-air-act-overview>), requires that transportation projects conform to applicable State Implementation Plans (SIPs), which are federally mandated plans for improving or maintaining air quality to meet national standards. These conformity requirements are codified in Part 93 of Title 40 of the Code of Federal Regulations (40 CFR Part 93). This assessment was conducted following current Federal Highway Administration (FHWA) procedures and guidelines (FHWA 2016, 2017) as well as Indiana Department of Transportation (INDOT) policies (INDOT 2008, 2021a).

This project was determined to meet applicable conformity requirements and is not expected to have any significant impact on air quality.

PROJECT DESCRIPTION

For purposes of this air quality assessment, this project is comprised of two adjacent INDOT projects located on US 36 and SR 9 in and near the City of Pendleton in Madison County, Indiana. Lead project Des. No. 1702936 proposes to widen US 36 from 0.28 mile south of SR 38 to the SR 9/SR 67 north junction. Project Des. No. 1802854 proposed to widen SR 9 from the SR 9/SR 67 north junction to Huntsville Road. Together, these projects add additional travel lanes at the intersections of US 36 and SR 38 (south junction) and US 36 and SR 9 (north junction) to ease the volume and flow of traffic (CDM Smith 2020).

The projects are planned for construction in 2025 (Updated Construction Year) and plans are based on traffic projections through 2043 (Design Year). Construction Year and Design Year traffic data for US 36 were provided by INDOT (2020) based on projections from traffic counts taken in 2016 and 2018. The data show the following:

- Total traffic volumes and heavy truck fractions in the Design Year are projected to be about the same whether the project is built or not.

- The highest total traffic volumes occur on US 36 south of the US 36/SR 9 junction, with a Design Year annual average daily traffic (AADT) of about 17,000 vehicles per day.
- The highest heavy truck traffic volumes occur on SR 9 north of the US 36/SR 9 junction, with a Design Year AADT of about 2,500 trucks per day.

AIR QUALITY STANDARDS

In response to the CAA, the United States Environmental Protection Agency (U.S. EPA) established National Ambient Air Quality Standards (NAAQS) for six pollutants that adversely affect human health and welfare. These six pollutants are often called "criteria" pollutants. There are two types of NAAQS codified in 40 CFR Part 50. Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings. Any geographical area in which one or more NAAQS are not being met is called a nonattainment area.

Vehicular traffic is a primary contributor to air pollutant levels for three of the six criteria pollutants. These three pollutants are carbon monoxide (CO), particulate matter (PM), and ozone. Two particle sizes are regulated for PM; particles less than 10 microns in diameter (PM₁₀) and less than 2.5 microns in diameter (PM_{2.5}). Characteristics of these pollutants are discussed in the air quality impacts assessment below. NAAQS for these pollutants are shown in Table 1.

Table 1. National Ambient Air Quality Standards for Transportation-Related Pollutants (U.S. EPA 2023).

Pollutant	Primary Standard	Averaging Times	Secondary Standard
CO	9 ppm (10 mg/m ³)	8-hour ^(a)	None
	35 ppm (40 mg/m ³)	1-hour ^(a)	None
Particulate Matter (PM ₁₀)	150 µg/m ³	24-hour ^(b)	Same as Primary
Particulate Matter (PM _{2.5})	12.0 µg/m ³	Annual ^(c) (Arithmetic Mean)	15.0 µg/m ³
	35 µg/m ³	24-hour ^(d)	Same as Primary
Ozone	0.07 ppm	8-hour ^(e)	Same as Primary

Notes: Units of measure for the standards are parts per million (ppm) by volume, milligrams per cubic meter of air (mg/m³), and micrograms per cubic meter of air (µg/m³).

(a) Not to be exceeded more than once per year.

(b) Not to be exceeded more than once per year on average over 3 years.

(c) To attain this standard, the 3-year average of the weighted annual mean PM_{2.5} concentrations from single or multiple community-oriented monitors must not exceed 12.0 µg/m³ (primary) or exceed 15.0 µg/m³ (secondary).

(d) To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 35 µg/m³ (effective December 17, 2006).

(e) To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.07 ppm.

Other criteria pollutants include sulfur dioxide (SO₂), nitrogen dioxide (NO₂), and lead. In the past, motor vehicles were a major source of lead emissions that was virtually eliminated as leaded gasoline was phased out.

In addition to the criteria air pollutants, toxic air pollutants (or air toxics) are pollutants that cause or may cause cancer or other serious health effects, such as reproductive effects or birth defects. Air toxics may also cause adverse environmental and ecological effects. The CAA identifies 188 air toxics. The U.S. EPA has identified 21 pollutants as mobile source air toxics (MSATs), including diesel particulate matter, benzene, and other organic materials and metals. No national air quality standards have been established yet for MSATs, but research is ongoing and analysis is required under NEPA for transportation projects.

Fuel combustion by motor vehicles and other sources releases carbon dioxide (CO₂), which is considered a ‘greenhouse gas’ that traps heat within the earth’s atmosphere and contributes to global climate change. CO₂ is not directly harmful to humans and no NAAQS have been established for it or other greenhouse gases under the CAA.

EXISTING AIR QUALITY

Attainment/nonattainment classifications for Madison County are shown on the U.S. EPA’s Green Book website (https://www3.epa.gov/airquality/greenbook/anayo_in.html). On April 30, 2004, the entire county was designated as nonattainment for ozone (8-hour) until the standard was revoked on April 2006. The county was officially redesignated to maintenance status on October 19, 2007. Madison County was included in the Indiana Department of Environmental Management (IDEM) plan for maintaining the attainment status (IDEM 2007). This plan was accepted by U.S. EPA when the county was reclassified to attainment. The plan was updated in 2019 (IDEM 2019) to demonstrate that the counties included in the original plan continued to comply with applicable NAAQS. That update was approved by U.S. EPA in the Federal Register (FR) on December 13, 2019, with an effective date of January 13, 2020 (84 FR 68049).

Madison County is considered attainment or unclassifiable for all criteria pollutants other than ozone.

CONFORMITY

As a former ozone nonattainment area, Madison County is now considered in maintenance status. Highway projects located within maintenance areas must meet the conformity requirements of 40 CFR 93 just as nonattainment areas do. For this project, conformity regulations apply for ozone. The project is not exempt from conformity analysis under 40 CFR 93.126 or 93.128, but it is included in long-range planning documents prepared by Madison County Council of Governments (MCCOG), which is the metropolitan planning organization for Madison County. Specifically, the project is listed on pages 1–4 of the Transportation Improvement Program (TIP) prepared for Fiscal Year (FY) 2022–2026 by MCCOG (MCCOG 2023). This TIP was incorporated into the FY 2024-2028 Statewide Transportation Improvement Program (STIP), which was approved by the Federal Transit Administration and the FHWA on September 1, 2023 (INDOT 2023). Therefore, this project meets the conformity requirements of 40 CFR 93.

AIR QUALITY IMPACT ASSESSMENTS

Qualitative assessments for transportation-related pollutants are documented below in terms of applicable NAAQS, existing pollutant concentration levels, and emission rates. Quantitative hot-spot analysis was not required for any of these pollutants because the project is not in or near a nonattainment or maintenance area for any pollutant other than ozone. Based on these qualitative assessments, this project is not expected to cause any adverse air quality impacts.

CARBON MONOXIDE

Carbon monoxide (CO) is emitted directly from vehicle exhausts. High CO emissions are typically associated with situations in which vehicles sit idling or move slowly in areas where ventilation is poor and emissions can concentrate to form high localized concentrations. Thus, CO is of localized concern rather than being a regional problem. Also, as reflected in the relatively short averaging times of its NAAQS (9 ppm for eight hours and 35 ppm for one hour), its potential human health effects are acute (short-term) rather than chronic (long-term). Thus, for CO, the emissions of concern are localized within the project area over time periods of one to eight hours.

The proposed highway widening will improve traffic flow and reduce stopping and idling emissions which tend to cause the largest CO emissions. In addition, the road is located in open terrain, with none of the valleys or large buildings that tend to trap CO emissions and lead to high CO concentrations. Furthermore, the project is located too far away to impact any CO nonattainment or maintenance area. Thus, no modeling or other detailed analysis is considered necessary. The project should have minimal, if any, effect on CO concentrations and will not cause or contribute to CO levels that exceed the NAAQS.

OZONE

Ground-level ozone is the major component of smog. Ozone in the upper atmosphere (the “ozone layer”) occurs naturally and protects life on earth from harmful ultraviolet radiation, but ozone at ground level is a noxious pollutant. Ground-level ozone is not emitted directly, but is formed by the reaction of oxides of nitrogen (NO_x) and volatile organic compounds (VOCs) in the presence of sunlight. Both NO_x and VOCs are emitted by motor vehicles, among other sources. Because of the way ozone is formed, it is a regional phenomenon and cannot be analyzed on a localized basis. Its health effects are considered to be primarily acute rather than chronic, as reflected in the NAAQS, which is set for an 8-hour averaging time.

As documented in the most recent ozone maintenance plan update (IDEM 2019), typical summer day emissions of VOCs and NO_x from transportation sources are expected to continue to decrease in the years 2014 through 2028, which should result in decreased regional ozone levels. As discussed above, this project was included in transportation planning documents that were determined to conform to the SIP. Therefore, this project is not expected to cause or contribute to ozone levels that exceed the NAAQS and no further analysis is required.

PARTICULATE MATTER

Particulate matter (PM) is the term used for a mixture of solid particles and liquid droplets found in the air. These particles come in a wide range of sizes and can remain suspended in the air for extended periods. PM can be emitted directly by a source or formed in the atmosphere by the transformation of gaseous emissions. Fine particles (PM_{2.5}) are caused primarily by fuel combustion in motor vehicles and other sources, as well as through the transformation of gaseous emissions, such as SO₂, NO_x, and VOCs. Coarser particles (PM₁₀) generally consist of dust that is entrained by the wind or by human activities and particulate emissions from industrial sources such as crushing and grinding operations. From a

transportation perspective, PM_{2.5} is of primary concern as it is most associated with vehicular sources such as engine exhaust, particularly from diesel trucks, brake wear, and tire wear.

Health effects associated with PM_{2.5} can be both acute and chronic, so daily (24-hour) and annual NAAQS have been established for PM_{2.5}. In addition to health problems, airborne particles cause soiling and damage to materials and reduce visibility in many parts of the United States. Since PM_{2.5} is both emitted directly and formed in the atmosphere from other pollutants, both local and regional scales must be considered.

With a projected truck traffic volume of less than 10,000 trucks per day, this project does not fit the criteria of a project of air quality concern under 40 CFR 93.123(b)(1). Furthermore, the project is located too far away to impact any PM₁₀ or PM_{2.5} nonattainment or maintenance area. Therefore, under U.S. EPA and FHWA guidance (FHWA and U.S. EPA 2006), a localized (or “hotspot”) analysis is not required for this project and no modeling or other detailed analysis is considered necessary. The project should have minimal, if any, effect on PM₁₀ or PM_{2.5} concentrations and will not cause or contribute to PM₁₀ or PM_{2.5} levels that exceed the NAAQS.

MOBILE SOURCE AIR TOXICS

The CAA identified 188 air toxics, also known as hazardous air pollutants. The U.S. EPA assessed this expansive list of toxics and identified a group of 21 as mobile source air toxics, which were published in the Federal Register (FR) as the final rule, *Control of Emissions of Hazardous Air Pollutants from Mobile Sources* (66 FR 17235). The U.S. EPA also extracted a subset of this list of 21 that it now labels as the six priority MSATs. These are benzene, formaldehyde, acetaldehyde, diesel particulate matter/diesel exhaust organic gases, acrolein, and 1,3-butadiene.

Qualitative Assessment

This project involves added travel lanes on existing roads with total projected traffic volumes of less than 140,000 vehicles per day. As such, it is classified as having a low potential for MSAT impacts under the FHWA tiered approach for analyzing MSATs (FHWA 2016), and a qualitative analysis is considered appropriate. Technical shortcomings of emissions and dispersion models and uncertain science with respect to health effects prevent meaningful or reliable estimates of MSAT emissions and health impacts of MSATs at the project level. However, it is possible to qualitatively assess the levels of future MSAT emissions under the

project and provide a basis for identifying and comparing the potential differences among MSAT emissions, if any, from the various alternatives.

For this project, future traffic volumes are expected to be the same whether the project is built or not, i.e., Build and No-Build Alternatives. The increased capacity due to added lanes is designed to handle the expected traffic volumes more efficiently but not to result in increased volumes or changes in the mix of various types of vehicles, e.g., heavy trucks. Thus, the vehicle miles travelled (VMT) and vehicle fleet mix associated with this project will be similar in the Build and No-Build Alternatives. Because the amount of MSAT emitted is proportional to the VMT, assuming that other variables such as fleet mix are the same MSAT emissions should be the same also for the Build and No-Build Alternatives.

In addition, MSAT emissions are typically lower at higher traffic speeds, so if the project is successful in improving traffic flow, MSAT emissions may actually be lower in the Build Scenario. Also, MSAT emissions will likely be lower than present levels in the Design Year as a result of U.S. EPA's national control programs that are projected to reduce annual MSAT emissions by over 90 percent between 2010 and 2050 (FHWA 2016). Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future in nearly all cases.

The additional travel lanes proposed as part of the Build Alternative may have the effect of moving some traffic closer to nearby homes, schools, and businesses. Therefore, there may be localized areas where ambient concentrations of MSAT could be higher for businesses and residences under the Build Alternative than the No-Build Alternative. Such localized increases in MSAT concentrations would likely be most pronounced along the expanded roadway sections that would be built on SR 9 north of the US 36/SR 9 junction where the highest heavy truck traffic volumes would be. However, the magnitude and the duration of these potential increases compared to the No-Build Alternative cannot be reliably quantified due to incomplete or unavailable information in forecasting project-specific MSAT health impacts.

In sum, when a highway is widened, the localized level of MSAT emissions for the Build Alternative could be higher relative to the No Build Alternative, but this could be offset due to increases in speeds and reductions in congestion (which are associated with lower MSAT

emissions). Also, MSAT will be lower in other locations when traffic shifts away from them. However, on a regional basis, EPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause region-wide MSAT levels to be significantly lower than today.

Uncertainties Due To Incomplete or Unavailable Information

Whenever available technical tools do not enable accurate determinations of project-specific health impacts due to the emission changes associated with the Build and No-Build Alternatives, 40 CFR 1502.22(b)) requires a discussion of incomplete or unavailable information. FHWA guidance (FHWA 2016) states that "information is incomplete or unavailable to credibly predict the project-specific health impacts due to changes in MSAT emissions associated with a proposed set of highway alternatives" and that the outcome of any such assessment would be "influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual health impacts directly attributable to MSAT exposure associated with a proposed action."

Forecasting health effects for an air pollutant requires emissions modeling, dispersion modeling, exposure modeling, and health impact assessment. For MSATs, all of these steps are encumbered by technical shortcomings or uncertain science. It is particularly difficult to reliably forecast 70-year lifetime MSAT concentrations and exposure near roadways; to determine the portion of time that people are actually exposed at a specific location; and to establish the extent attributable to a proposed action, especially given that some of the information needed is unavailable.

The U.S. EPA is the lead regulatory authority responsible for assessing and regulating hazardous air pollutants, including MSATs. They maintain the Integrated Risk Information System (IRIS), which is "a compilation of electronic reports on specific substances found in the environment and their potential to cause human health effects" (<https://www.epa.gov/iris/>). The Health Effects Institute (HEI) is also active in the research and analyses of the human health effects of MSAT and published a review MSAT exposure and health effects (HEI 2007). The HEI document points out the considerable uncertainties associated with the existing estimates of toxicity of the various MSAT, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population. As a result, there is no national

consensus on air dose-response values assumed to protect the public health and welfare for MSAT compounds.

There is also the lack of a national consensus on an acceptable level of risk. U.S. EPA currently uses a two-tiered approach to setting standards that seeks to maximize the number of people with risks less than one in a million. Information is incomplete or unavailable to establish that even the largest of highway projects would result in levels of risk greater than deemed acceptable.

Because of the limitations in the methodologies for forecasting health impacts described, any predicted difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with predicting the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against project benefits, such as reducing traffic congestion, accident rates, and fatalities plus improved access for emergency response, that are better suited for quantitative analysis.

GREENHOUSE GASES

Greenhouse gases (GHGs) include carbon dioxide (CO₂), methane, and other chemicals that behave in the atmosphere as ways to promote climate change through the retention of heat in the atmosphere. According to the FHWA, transportation is responsible for one-quarter of the greenhouse gas emissions for the United States. On April 2, 2007, the Supreme Court issued a decision in *Massachusetts et al. v. U.S. Environmental Protection Agency et al.* that the U.S. EPA does have the authority to establish motor vehicle standards for CO₂ and other greenhouse gases. The U.S. EPA has not yet established those emission standards. Recent interim guidance by the Council on Environmental Quality (CEQ) recommends quantifying GHG emissions and estimating social costs associated with such emissions in NEPA documents (Federal Register Vol. 88, No. 5, Monday, January 9, 2023). However, neither FHWA nor INDOT have established procedures or requirements for implementing this guidance.

As noted above, the additional lanes proposed in this project are expected to improve safety and traffic flow, not to increase traffic volumes, which are expected to be determined by population growth and other factors. Because traffic volumes will be the same whether or not the project is built, GHG emissions will not increase due to the project. Future reductions in GHG emissions may occur in the project area due to regional or national trends in fuel efficiency and the use of electric vehicles, but these are not easily quantifiable.

SUMMARY

This project meets the conformity requirements of 40 CFR Part 93 for ozone. No air quality impacts are anticipated for other criteria pollutants. Concentrations of MSATs and GHG emissions in the region are expected to decrease from present levels regardless of whether the project is built or not.

LITERATURE CITED

- CDM Smith, Inc. 2020. *Abbreviated Engineer's Report, Des. 1702936 and 1802854, Added Travel Lanes on US 36 and SR 9 From R.P. 88+0.6 (US 36) to R.P. 62+0.3 (SR 9) in Madison County, IN*. November 5 (Revised from August 28, 2020).
- FHWA. 2016. *Memorandum: Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents*, From E. Biondi, Office of Natural Environment, October 18. Available at https://www.fhwa.dot.gov/environment/air_quality/air_toxics/policy_and_guidance/msat/2016msat.pdf, accessed on September 29, 2021.
- FHWA. 2017. *Transportation Conformity: A Basic Guide for State and Local Officials*, FHWA-HEP-17-034, February. Available at https://www.fhwa.dot.gov/Environment/air_quality/conformity/2017_guide/fhwahep17034.pdf, accessed on September 29, 2021.
- FHWA and U.S. EPA. 2006. *Transportation Conformity Guidance for Qualitative Hot-spot Analyses in PM_{2.5} and PM₁₀ Nonattainment and Maintenance Areas*, EPA420-B-06-902, March. Available at https://www.fhwa.dot.gov/environment/air_quality/conformity/policy_and_guidance/pmhotspotguidatt.cfm, accessed on September 29, 2021.
- HEI. 2007. *Mobile-Source Air Toxics: A Critical Review of the Literature on Exposure and Health Effects*, Special Report 16. Available at <https://www.healtheffects.org/publication/mobile-source-air-toxics-critical-review-literature-exposure-and-health-effects>, accessed on September 29, 2021.
- IDEM. 2007. *Request for Redesignation and Maintenance Plan for Ozone Attainment in the 8-Hour Ozone Basic Nonattainment Area: Central Indiana Area*, March. Available at <https://www.in.gov/idem/sips/redesignation-petitions-and-maintenance-plans/central-redesignation-plans/>, accessed on September 29, 2021.
- IDEM. 2019. *Full Maintenance Plan Update for the Indianapolis, Indiana 1887 8-Hour Ozone Area: Boone, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, and Shelby Counties, Indiana*, June. Available at <https://www.in.gov/idem/sips/redesignation-petitions-and-maintenance-plans/central-redesignation-plans/>, accessed on September 29, 2021.
- INDOT. 2008. *Procedural Manual for Preparing Environmental Documents, 2008 Version*. Available at https://www.in.gov/indot/engineering/files/Procedural_Manual_for_Preparing_Environmental_Studies_2008.pdf, accessed on September 29, 2021.
- INDOT. 2020. *Project Traffic Forecast Report, DES No. 1702936, US-36 from .28 mi. S. of SR 38 to SR9/SR67 N. Jct., From RP 88+62 to RP 89+5, Madison County*, August 6.
- INDOT. 2021. *Indiana Categorical Exclusion Manual*, February 1. Available at <https://www.in.gov/indot/engineering/files/Categorical-Exclusion-Manual-February-2021.pdf>, accessed on September 29, 2021.

INDOT. 2023. *Indiana Department of Transportation State Transportation Improvement Program (STIP) FY2024-FY2028*. Available at https://www.in.gov/indot/files/Pages-from-STIP_2024-2028-approved-part1.pdf, accessed on October 30, 2023.

MCCOG. 2023. *Madison County Council of Governments (Anderson MPO) FY 2022-2026 Transportation Improvement Program (TIP) All Projects Current Through 5-1-23*, accessed on October 30, 2023.

USDOT. 2019. Letter from Kelley Brookins (FTA) and Mayele Sosa (FHWA) to Joe McGuinness (INDOT) July 2. Available at https://www.in.gov/indot/files/STIP_2020-2024-Approval_letters.pdf, accessed on September 29, 2021.

U.S. EPA. 2023. Criteria Air Pollutants: NAAQS Table. Available at <https://www.epa.gov/criteria-air-pollutants/naaqs-table>, accessed on September 29, 2021 and February 6, 2024.

From: INDOT Coordinator 3 <indotcoordinator3@indot.IN.gov>
Sent: Wednesday, March 6, 2024 11:08 AM
To: Passmore, Andrew D; Cameron Berry; INDOT Coordinator 3
Cc: Cameron Berry; Szewczak, Kimberly; ddefelice@ascgoup.net; Jennifer Rhodes; Tina Davis
Subject: RE: DES No's 1702936, 1802854, US 36 (SR 9/SR 67) Added Travel Lanes, Air Quality Report, Revised Document

Two ENV files for contract R-41837 1702936/1802854 have been transitioned to REVIEW COMPLETE.

ENV_TransLtr DN1702936-1802854_AirQualityRpt.pdf as document type of Design Documents.		
	UCM Title:	ENV TransLtr 1702936, 1802854 For Roadway Services
	Content ID:	DOT12C006755433
US36 SR9 ATL_DN1702936-1802854_AirQualityRpt.pdf as document type of Design Documents.		
	UCM Title:	ENV DraftEnvDoc 1702936, 1802854 For Roadway Services
	Content ID:	DOT12C006755434

Kayleigh Carrier

Funds Specialist

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Greenfield District: CPM

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[Find us on social media!](#)



From: Passmore, Andrew D <APassmore@indot.IN.gov>
Sent: Wednesday, March 6, 2024 10:26 AM
To: Cameron Berry <cberry@ascgroup.net>; INDOT Coordinator 3 <indotcoordinator3@indot.IN.gov>
Cc: Cameron Berry <cberry@ascgroup.net>; Passmore, Andrew D <APassmore@indot.IN.gov>; Szewczak, Kimberly <KSzewczak@indot.IN.gov>; ddefelice@ascgoup.net; Jennifer Rhodes <jrhodes@ascgroup.net>; thartman@ascgroup.net
Subject: RE: DES No's 1702936, 1802854, US 36 (SR 9/SR 67) Added Travel Lanes, Air Quality Report, Revised Document

Cameron,

Thank you for the revised air quality assessment report. INDOT ESD concurs with this assessment. Please include this with the NEPA document for the project.

Coordinator 3,

This can be placed in REVIEW COMPLETE.

Drew Passmore

NEPA Review Team Lead

Environmental Services Division
Indiana Department of Transportation

Cell: (317) 439-7500

Call Application Report Project (Mini Scope)

FORM VERSION:

7/6/2015

FORM VERSION BY: Andrew Fitzgerald, PTOE, PE

Date:	12/19/2017	District:	GREENFIELD	SCORE:	48
DES:	1702936, 1802854	Sub-District:	Greenfield		
Proposed FY:	2023	Asset Group:	MOBILITY		
Work Type:	Added Travel Lanes	Work Category:	District Intersection Improvement Project		

Project Location

Route:	US 36 & SR 9	City/Town:	Pendleton	County 1	Madison	County 2	
RP Start:	88+0.6 (US 36)	Latitude Start:	39°59'47.3"N	Longitude Start:	85°44'16.5"W		
RP End:	62+0.3 (SR 9)	Latitude End:	40°00'30.7"N	Longitude End:	85°43'48.4"W		
AADT FY:	2016	AADT:	18,259	% Trucks:	8.1%		
Length:	1 mi	# Lanes:	2	Lane Mi:	2	On National	Truck Network
Func. Class:	Other Principal Arterial (OPA)			Area:		NHS:	No
Str. #		NBI #:		Bridge / Culvert: Length (FT) / Width (FT):		Bridge Area (SFT):	

Location Description: Pendleton Pike in/near Pendleton between US 36 & Madison Ave/Lick Creek Pike (SW of SR 38) to SR 9 & CR 500 S/Huntsville Rd

SEE IT: WHAT IS THE CURRENT AND PROJECTED CONDITION AND WHY IS THIS A PROBLEM (FOCUS ON THE PROBLEM)

The route, known as Pendleton Pike, that consists of US 36 and SR 9 on the eastern edge of Pendleton regularly sees heavy queuing in the peak hours most noticeably at the intersections of US 36 & SR 38 (S Jct) and US 36 & SR 9 (N Jct). This stretch of roadway services local and regional traffic on a daily basis and sees increased traffic anytime there are issues on I-69 between Anderson and Indianapolis. There is currently a 4-lane cross-section on SR 9 between I-69 and Huntsville on the northeast side of Pendleton. The capacity on the mainline and the side streets in this area were initially identified in the mid-2000's, and submitted but not funded for budgetary reasons. Since that time, traffic has grown and traffic projections indicate that it is likely to continue for the foreseeable future (see attached).

INSERT ONE OR TWO PICTURES OF PRIMARY PROBLEM:



DATE AND TYPE OF LAST MAJOR TREATMENT:				DATE:	
PROJECT CONDITION RATINGS:		LOS:		Icc:	2.79
Wearing Surface:		Deck:		Bridge/Culvert Super:	
Type / Culverts/ pipes:		Bridge Scour:		Substructure (Bridge/ Culvert):	
IRI:		PCR:		Culvert:	
		RUT:		Friction #:	
				Other:	

INTENT/ PURPOSE OF PROJECT (INITIAL STATEMENT OF ESSENTIAL PROJECT PURPOSE:

Reduce the delay on Pendleton Pike from Huntsville to Madison Ave/Lick Creek Pike (SW of SR 38) and reduce delay on the side street approaches at SR 38 and US 36 (N Jct).

Completed FULL SCOPE:	NO	KPI Delta:		KPI UNIT:	
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OWN IT: Alternatives

PRELIMINARY ALTERNATIVES THAT ARE CONTEMPLATED (ANALYSED) WITH COSTS:

1. Construct 4-lane cross-section with dual left turns EB at SR 38:

The 4-lane cross-section will be continued from Huntsville Rd/CR 500 S down to Madison Ave/Lick Creek Pike. Existing left-turn and TWLT lanes will be perpetuated. Curb and gutter with curb turnouts are intended to be used to avoid the need for additional R/W takes for shoulders while still having surface drainage. The WB right turn storage will be brought back to the first commercial drive on US 36 east of the intersection to allow right-turning vehicles to bypass the heavy WB left-turning traffic. The EB approach at SR 38 will add pavement to the south side of the road to accommodate dual-left turns. The NB approach at SR 38 would add pavement to maintain the dedicated right-turn lane distinct from the two through lanes. There would also be recommendations for adding islands for right-in-right-out movements at private drives at various locations within the project limits to be determined during the Engineering Assessment. This alternative shows some improvements, but Alternative 3 below offers significant improvements in performance for minor additions within the scope of the project.

2. Restrict improvements to EB dual left at SR 38 and added storage for WB RT at US 36:

This option was analyzed to consider whether making minor improvements at the SR 38 and US 36 intersections would resolve foreseeable issues. The AM peak was analyzed in Synchro and there were issues with queuing in the corridor and at the intersections that were not being addressed both in terms of delay and in the microsimulation. This option also requires the heavy EB dual lefts at SR 38 to potentially weave/merge because one lane would be dropped at the NB RT at US 36.

3. Alternative 1 PLUS WB dual lefts at SR 38, SB right turn lane at SR 38, and 5-lane cross-section between US 36 and Mercer Ln: Preferred Alternative, \$3.7mil

This alternative retains all of the aspects of the first alternative, but also includes the followings:

- WB dual lefts at SR 38 which would improve the LOS for the approach from an E (66.4 sec/veh delay) in the AM peak for Alternative 1 compared to a D (41.8 sec/veh delay) which is approximately a 33% reduction. The storage length will not be changed appreciably, but the addition of the second lane causes the EB through lane to line up with the receiving lane and increases the throughput for the limited left turn phase.
- The SB right turn lane at SR 38 sees an improvement of E (56.7 sec/veh) to a D (36.8 sec/veh) for that movement in the PM peak. Operationally, if this lane is not included, it will increase the likelihood of drivers cutting through the gas station lot on the corner. However, there is a risk that the R/W take will adversely affect the access to the parcel by

tanker trucks or customers at the pump. The pros and cons will need to be weighed during design.

-The addition of the 5-lane section between US 36 and Mercer Ln allows for left turn lanes from mainline to the Water St as well as flexibility for future TWLTLs as needed in the future. The take is shown for this addition entirely to the west, but could be redistributed as necessary in the design phase considering the availability and cost of R/W and drainage design.

This alternative provides the greatest operational improvement through this portion of Pendleton Pike and allows for future extension of the 4-lane cross-section SW of this project as needed.

4. Do nothing; This alternative will not improve the conditions indicated in the problem statement above. This alternative is not prudent.

CONSEQUENCES IF NO ACTION IS TAKEN (DO NOTHING ALTERNATIVE IS SELECTED):

Existing operational issues at this location are currently noticeable and this area is projected to see continued growth in traffic. In addition to increased delays and burden elsewhere in the traffic network, crashes associated with congestion (such as back of queue) are expected to increase as well.

SECONDARY CONSIDERATIONS OR GOALS WITH COSTS:

See above

Attach extra sheets as necessary to fully describe the alternatives.

Will Further Analysis/Assessment be required beyond this form?

SOLVE IT: Project Recommendations and Costs									
QUANTIFIABLE PRIMARY GOAL(S) OF PROJECT (WHAT ARE WE PURCHASING SUCH AS CONDITION, SERVICE LIFE, LOS, OR CRF):									
This is expected to greatly improve LOS in both the near and long-term									
Estimated Total Project Costs:		\$3,700,000		COMMENTS					
Right of Way Purchase (RW1):	YES	COST:	\$ 300,000						
Right of Way Services (RW2):		COST:	\$ -						
Preliminary Engineering 1 (PE1):	YES	COST:	\$ 362,000	15% of construction for PE and environmental					
Preliminary Engineering 2 (PE2):		COST:	\$ -						
Maintenance of Traffic:	NO	COST:	\$ 315,000	15% of other construction costs					
Railroad PE (RR1):	NO	COST:	\$ -						
Railroad PE (RR2):		COST:	\$ -						
Environmental Study:	YES	COST:	\$ -	Included in PE					
Utilities PE (UT1):	YES	COST:	\$ 100,000						
Utilities CN (UT2):		COST:	\$ -						
Construction (CN):	YES	COST:	\$ 2,623,000	15% contingency					
Construction Engineering (CE):		COST:	\$ -						
Relinquishment Payment (RQP):		COST:	\$ -						
Other Considerations:	NO	COST:	\$ -	Drainage work might be necessary for underdrains					
Other Projects within Limits									
DES:	1701070	FY:	2020	Work Type:	HMA Overlay	Location:	US 36, Fortville to SR 9 N Jct		
DES:		FY:		Work Type:		Location:			
DES:		FY:		Work Type:		Location:			
Miscellaneous Notes									
ANTICIPATED NUMBER OF CONSTRUCTION SEASONS TO COMPLETE(1, 2 or 3 seasons):								1 FY	
ANTICIPATED NUMBER OF YEARS TO COMPLETE DESIGN (1, 2 or 3 fiscal years):								1	
CALL HISTORY: This is this project's first submittal									
Attachments									
Pictures	NO		Asset Team Scoring Sheet:	YES	Mobility History:		NO		
Spreadsheets (calcs):	YES		Engineer Assessment:	NO					
Solution Schematic:	YES		Bridge/Culvert Inspection Report:	NA					
Cost Calculations:	YES		Accident History:	YES					
Location Map:	YES		Pathway Data:	NO					
Additional Comments									
Other items relevant to the project not specifically listed elsewhere.									
Report Prepared By and Approved By									
Report Prepared By and Approved By				Title:	Signature				
Prepared by:	Adam Tyra			Traffic Staff Engineer	<i>Adam Tyra</i>				
Reviewed by:	Luis Laracuente			DTE	<i>Luis Laracuente</i>				
Approval by:	Luis Laracuente			DTE	<i>Luis Laracuente</i>	APPROVED ON:			
NOTE: Any changes require a re-submittal of Call Application Report.									
FORM VERSION: 7/6/2015					FORM VERSION BY: Andrew Fitzgerald, PTOE, PE				

Mapping was removed. Updated mapping can be found in Appendix B.

Leet-Black Scoring Tool

Statewide Capacity Needs Project Scoring 05-2013

Route and Location

Description of Proposed Improvement

Name of Analyst

Date

US 36/SR 9 in Pendleton between Lick Creek Pike and Huntsville

Converting mainline cross-section to 4 lanes with turn lanes and adding lanes and storage to side streets, most noticeably at SR 38

Adam Tyra

12/18/2017

Factor #	Mobility Scoring Factor Description	Raw Score	Weight	Weighted Score	Max
#1	Traffic Safety (lcc-based))	1	3	3	15
#2	Current Congestion (LOS based)	2	5	10	25
#3	Cost Effectiveness (value)	3	4	12	20
#4	Roadway Class	3	2	6	10
#5	Public and Other Interests	5	1	5	5
#6	Route Continuity and Corridor Completion	4	2	8	10
#7	Connectivity and Accessibility	1	2	2	10
#8	Direct Economic Impact/Opportunity	2	1	2	5
Supp Factor	Earmarks & Other Contributions by External Means		7	0	35
Total Score				48	100

Congestion Relief

"x" if Yes

Connectivity/Accessibility

"x" if Yes

"x" one only

Factor #1

	lcc<0.0	
X	lcc<1.0	1
	lcc<2.0	
	lcc<3.0	
	lcc<4.0	
	lcc>=4.0	

"x" one only

Factor # 2 (use "EX LOS" sheet)

	LOS A	
	LOS B	
X	LOS C	2
	LOS D	
	LOS E	
	LOS F	

Factor # 3

See "MEI" and "Cost Effectiveness Score" sheets	
	3

Factor # 4

	On National Highway System	
X	On Statewide Mobility Network	1.5
	On Regional Mobility Network	
X	Functionally Classified as Arterial, Freeway, Expressway or Interstate	1
	On Indiana's 4R Network	
X	On National Truck Network	0.5

Factor # 5

	Opposition	
	Neutral Opposition and Support	
	Low Level of Positive Support	
	Moderate Level of Positive Support	
	High Level of Positive Support	
X	Very High Level of Positive Support	5

Factor # 6

	Negative Effect on Consistency and Conformity	
	Neutral Effect on Consistency and Conformity	
	Low Positive Effect on Consistency and Conformity	
	Fair/Moderate Positive Effect on Consistency and Conformity	
X	High Positive Effect on Consistency and Conformity	4
	Very High Positive Effect on Consistency and Conformity	

Factor # 7

	Negative Effect	
x	No Effect or Unknown	1
	Low Positive Effect	
	Fair/Moderate Positive Effect	
	High Positive Effect	
	Very High Positive Effect	

Factor # 8

	Negative Impact	
	No Impact or Unknown	
x	Low Positive Impact	2
	Fair/Moderate Positive Impact	
	High Positive Impact	
	Very High Positive Impact	

Cost Estimate

\$ 3,300,000

Contribution

Supplementary Factor

0 %

	Not Advisable	
	N/A	
	N/A	
	N/A	
	N/A	
	N/A	

Notes

I-96

Study Name GF-US 36/SR 9 & Angle Rd Pendleton
Start Date Monday, October 16, 2017 12:00 AM
End Date Tuesday, October 17, 2017 12:00 AM
Site Code

Report Summary

Time Period	Class.	Southbound						Westbound						Northbound						Eastbound						Total
		R	T	L	U	I	O	R	T	L	U	I	O	R	T	L	U	I	O	R	T	L	U	I	O	
Peak 1	Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Specified Period	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
12:00 AM - 12:00 PM	Cars	24	409	126	1	560	305	44	12	12	0	68	247	84	254	5	0	343	430	9	37	6	0	52	41	1023
One Hour Peak	%	89%	76%	84%	100%	78%	77%	79%	75%	92%	0%	80%	87%	89%	76%	63%	0%	79%	77%	82%	95%	100%	0%	93%	80%	79%
6:45 AM - 7:45 AM	Light Goods Vehicle	3	99	13	0	115	62	8	4	1	0	13	22	7	54	1	0	62	102	2	2	0	0	4	8	194
	%	11%	18%	9%	0%	16%	16%	14%	25%	8%	0%	15%	8%	7%	16%	13%	0%	14%	18%	18%	5%	0%	0%	7%	16%	15%
	Buses	0	8	11	0	19	6	4	0	0	0	4	14	3	2	0	0	5	8	0	0	0	0	0	0	28
	%	0%	1%	7%	0%	3%	2%	7%	0%	0%	0%	5%	5%	3%	1%	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%	2%
	Single-Unit Truck	0	14	0	0	14	14	0	0	0	0	0	0	0	14	2	0	16	14	0	0	0	0	0	2	30
	%	0%	3%	0%	0%	2%	4%	0%	0%	0%	0%	0%	0%	0%	4%	25%	0%	4%	2%	0%	0%	0%	0%	0%	4%	2%
	Truncated Truck	0	8	0	0	8	9	0	0	0	0	0	0	0	9	0	0	9	8	0	0	0	0	0	0	17
	%	0%	1%	0%	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	2%	1%	0%	0%	0%	0%	0%	0%	1%
	Total	27	538	150	1	716	396	56	16	13	0	85	283	94	333	8	0	435	562	11	39	6	0	56	51	1292
	PHF	0.61	0.81	0.54	0.25	0.81	0.85	0.52	0.44	0.54	0	0.51	0.59	0.64	0.84	0.67	0	0.79	0.8	0.69	0.7	0.75	0	0.7	0.75	0.82
	Approach %					55%	31%					7%	22%					34%	43%					4%	4%	
	% HV					6%						5%						7%						0%		
Peak 2	Motorcycles	0	3	0	0	3	1	0	0	0	0	0	0	0	1	0	0	1	3	0	0	0	0	0	0	4
Specified Period	%	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
12:00 PM - 12:00 AM	Cars	41	396	53	0	490	457	30	15	11	0	56	96	31	420	3	0	454	412	5	12	7	0	24	59	1024
One Hour Peak	%	85%	81%	85%	0%	82%	73%	68%	83%	85%	0%	75%	83%	89%	74%	100%	0%	75%	81%	100%	63%	70%	0%	71%	86%	78%
4:45 PM - 5:45 PM	Light Goods Vehicle	7	74	6	0	87	150	10	3	2	0	15	17	4	137	0	0	141	76	0	7	3	0	10	10	253
	%	15%	15%	10%	0%	15%	24%	23%	17%	15%	0%	20%	15%	11%	24%	0%	0%	23%	15%	0%	37%	30%	0%	29%	14%	19%
	Buses	0	1	0	0	1	1	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	2
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Single-Unit Truck	0	8	2	0	10	4	2	0	0	0	2	2	0	2	0	0	2	8	0	0	0	0	0	0	14
	%	0%	2%	3%	0%	2%	1%	5%	0%	0%	0%	3%	2%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%	0%	1%
	Truncated Truck	0	8	1	0	9	11	2	0	0	0	2	1	0	9	0	0	9	8	0	0	0	0	0	0	20
	%	0%	2%	2%	0%	2%	2%	5%	0%	0%	0%	3%	1%	0%	2%	0%	0%	1%	2%	0%	0%	0%	0%	0%	0%	2%
	Total	48	490	62	0	600	624	44	18	13	0	75	116	35	570	3	0	608	508	5	19	10	0	34	69	1317
	PHF	0.8	0.94	0.67	0	0.92	0.92	0.69	0.56	0.46	0	0.67	0.74	0.67	0.94	0.38	0	0.93	0.93	0.42	0.79	0.83	0	0.85	0.82	0.96
	Approach %					46%	47%					6%	9%					46%	39%					3%	5%	
	% HV					3%						5%						2%						0%		

Study Name GF-US 36/SR 9 @ SR 38
Start Date Tuesday, August 29, 2017 12:00 AM
End Date Wednesday, August 30, 2017 12:00 AM
Site Code

Report Summary

Time Period	Class.	Southbound						Westbound						Northbound						Eastbound						Total
		R	T	L	U	I	O	R	T	L	U	I	O	R	T	L	U	I	O	R	T	L	U	I	O	
Peak 1	Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Specified Period	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
12:00 AM - 12:00 PM	Cars	181	430	167	0	778	384	68	221	119	0	408	419	59	217	29	0	305	584	35	193	99	0	327	431	1818
One Hour Peak	%	86%	87%	84%	0%	86%	78%	82%	75%	79%	0%	77%	85%	81%	77%	83%	0%	78%	85%	74%	87%	79%	0%	83%	80%	82%
6:45 AM - 7:45 AM	Light Goods Vehicle	27	44	24	0	95	67	9	57	25	0	91	58	9	39	4	0	52	71	2	25	19	0	46	88	284
	%	13%	9%	12%	0%	11%	14%	11%	19%	17%	0%	17%	12%	12%	14%	11%	0%	13%	10%	4%	11%	15%	0%	12%	16%	13%
	Buses	0	3	3	0	6	5	2	8	7	0	17	7	2	0	2	0	4	19	9	2	3	0	14	10	41
	%	0%	1%	2%	0%	1%	1%	2%	3%	5%	0%	3%	1%	3%	0%	6%	0%	1%	3%	19%	1%	2%	0%	4%	2%	2%
	Single-Unit Truck	0	6	3	0	9	22	3	7	0	0	10	6	1	15	0	0	16	7	1	2	4	0	7	7	42
	%	0%	1%	2%	0%	1%	4%	4%	2%	0%	0%	2%	1%	1%	5%	0%	0%	4%	1%	2%	1%	3%	0%	2%	1%	2%
	Tractor-Trailer	2	9	1	0	12	13	1	0	0	0	1	3	2	12	0	0	14	9	0	0	0	0	0	2	27
	%	1%	2%	1%	0%	1%	3%	1%	0%	0%	0%	0%	1%	3%	4%	0%	0%	4%	1%	0%	0%	0%	0%	0%	0%	1%
	Total	210	492	198	0	900	491	83	293	151	0	527	493	73	283	35	0	391	690	47	222	125	0	394	538	2212
	PHF	0.83	0.91	0.55	0	0.86	0.83	0.61	0.81	0.74	0	0.77	0.62	0.52	0.85	0.51	0	0.82	0.88	0.59	0.74	0.68	0	0.88	0.81	0.84
	Approach %					41%	22%					24%	22%					18%	31%					18%	24%	
	% HV					3%						5%						9%						5%		
Peak 2	Motorcycles	4	1	0	0	5	3	1	0	0	0	1	0	0	1	0	0	1	1	0	0	1	0	1	4	8
Specified Period	%	2%	0%	0%	0%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
12:00 PM - 12:00 AM	Cars	154	337	109	0	600	743	61	215	87	0	363	484	78	416	43	0	537	460	36	297	266	0	599	412	2099
One Hour Peak	%	90%	83%	83%	0%	85%	77%	76%	81%	78%	0%	79%	82%	88%	76%	86%	0%	78%	83%	95%	80%	79%	0%	81%	85%	81%
5:00 PM - 6:00 PM	Light Goods Vehicle	13	54	21	0	88	191	12	49	25	0	86	99	10	112	6	0	128	81	2	68	67	0	137	68	439
	%	8%	13%	16%	0%	12%	20%	15%	18%	22%	0%	19%	17%	11%	20%	12%	0%	19%	15%	5%	18%	20%	0%	18%	14%	17%
	Buses	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Single-Unit Truck	0	2	1	0	3	11	4	1	0	0	5	5	1	5	1	0	7	2	0	3	2	0	5	2	20
	%	0%	0%	1%	0%	0%	1%	5%	0%	0%	0%	1%	1%	1%	1%	2%	0%	1%	0%	0%	1%	1%	0%	1%	0%	1%
	Tractor-Trailer	0	10	1	0	11	17	2	0	0	0	2	2	0	15	0	0	15	10	0	1	0	0	1	0	29
	%	0%	2%	1%	0%	2%	2%	3%	0%	0%	0%	0%	0%	0%	3%	0%	0%	2%	2%	0%	0%	0%	0%	0%	0%	1%
	Total	171	405	132	0	708	965	80	265	112	0	457	590	89	549	50	0	688	555	38	369	336	0	743	486	2596
	PHF	0.79	0.84	0.8	0	0.91	0.91	0.8	0.88	0.76	0	0.91	0.97	0.82	0.92	0.62	0	0.91	0.9	0.73	0.9	0.82	0	0.95	0.89	0.96
	Approach %					27%	37%					18%	23%					27%	21%					29%	19%	
	% HV					2%						2%						3%						1%		

Study Name GF- US 36 & SR9/SR 67 (Pendleton)
Start Date Thursday, August 31, 2017 12:00 AM
End Date Thursday, August 31, 2017 8:45 PM
Site Code

Report Summary

Time Period	Class.	Southbound					Westbound					Northbound					Total
		T	L	U	I	O	R	L	U	I	O	R	T	U	I	O	
Peak 1	Motorcycles	2	0	0	2	1	0	4	0	4	0	0	1	0	1	6	7
Specified Period	%	0%	0%	0%	0%	0%	0%	1%	0%	1%	0%	0%	0%	0%	0%	1%	0%
12:00 AM - 12:00 PM	Cars	477	55	0	532	424	64	220	0	284	150	95	360	0	455	697	1271
One Hour Peak	%	77%	79%	0%	77%	80%	78%	76%	0%	76%	80%	81%	80%	0%	80%	77%	78%
7:00 AM - 8:00 AM	Light Goods Vehi	102	13	0	115	72	14	66	0	80	32	19	58	0	77	168	272
	%	16%	19%	0%	17%	14%	17%	23%	0%	21%	17%	16%	13%	0%	14%	18%	17%
	Buses	3	1	0	4	5	1	0	0	1	3	2	4	0	6	3	11
	%	0%	1%	0%	1%	1%	1%	0%	0%	0%	2%	2%	1%	0%	1%	0%	1%
	Single-Unit Truc	23	0	0	23	16	3	0	0	3	1	1	13	0	14	23	40
	%	4%	0%	0%	3%	3%	4%	0%	0%	1%	1%	1%	3%	0%	2%	3%	2%
	Articulated Truc	12	1	0	13	12	0	1	0	1	2	1	12	0	13	13	27
	%	2%	1%	0%	2%	2%	0%	0%	0%	0%	1%	1%	3%	0%	2%	1%	2%
	Total	619	70	0	689	530	82	291	0	373	188	118	448	0	566	910	1628
	PHF	0.73	0.8	0	0.73	0.97	0.82	0.89	0	0.88	0.87	0.84	0.99	0	0.97	0.77	0.85
	Approach %				42%	33%				23%	12%				35%	56%	
	% HV				6%					1%					6%		
Peak 2	Motorcycles	3	1	0	4	4	0	1	0	1	4	3	4	0	7	4	12
Specified Period	%	0%	1%	0%	0%	1%	0%	1%	0%	0%	1%	1%	1%	0%	1%	0%	1%
12:00 PM - 8:45 PM	Cars	551	140	0	691	582	101	145	0	246	345	205	481	0	686	696	1623
One Hour Peak	%	81%	85%	0%	81%	78%	80%	74%	0%	77%	80%	76%	77%	0%	77%	79%	79%
4:45 PM - 5:45 PM	Light Goods Vehi	109	20	0	129	136	20	45	0	65	73	53	116	0	169	154	363
	%	16%	12%	0%	15%	18%	16%	23%	0%	20%	17%	20%	19%	0%	19%	18%	18%
	Buses	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Single-Unit Truc	7	2	0	9	16	5	3	0	8	6	4	11	0	15	10	32
	%	1%	1%	0%	1%	2%	4%	2%	0%	2%	1%	1%	2%	0%	2%	1%	2%
	Articulated Truc	13	1	0	14	12	0	1	0	1	4	3	12	0	15	14	30
	%	2%	1%	0%	2%	2%	0%	1%	0%	0%	1%	1%	2%	0%	2%	2%	1%
	Total	684	164	0	848	750	126	195	0	321	432	268	624	0	892	879	2061
	PHF	0.9	0.89	0	0.92	0.97	0.88	0.8	0	0.87	0.96	0.87	0.94	0	0.95	0.94	0.97
	Approach %				41%	36%				16%	21%				43%	43%	
	% HV				3%					3%					3%		

Study Name GF-SR 9 & Water St Pendleton
Start Date Monday, October 16, 2017 12:00 AM
End Date Tuesday, October 17, 2017 12:00 AM
Site Code

Report Summary

Time Period	Class.	Southbound						Westbound						Northbound						Eastbound						Total
		R	T	L	U	I	O	R	T	L	U	I	O	R	T	L	U	I	O	R	T	L	U	I	O	
Peak 1	Motorcycles	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1
Specified Period	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
12:00 AM - 12:00 PM	Cars	50	475	18	0	543	373	47	3	0	0	50	28	4	313	46	0	363	517	42	6	13	0	61	99	1017
One Hour Peak	%	89%	83%	100%	0%	84%	81%	89%	75%	0%	0%	88%	100%	100%	79%	79%	0%	80%	83%	78%	100%	100%	0%	84%	84%	83%
7:00 AM - 8:00 AM	it Goods Vehi	6	68	0	0	74	59	5	1	0	0	6	0	0	54	11	0	65	80	12	0	0	0	12	18	157
	%	11%	12%	0%	0%	11%	13%	9%	25%	0%	0%	11%	0%	0%	14%	19%	0%	14%	13%	22%	0%	0%	0%	16%	15%	13%
	Buses	0	2	0	0	2	4	0	0	0	0	0	0	0	4	0	0	4	2	0	0	0	0	0	0	6
	%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%
	ngle-Unit Truc	0	21	0	0	21	15	1	0	0	0	1	0	0	14	1	0	15	21	0	0	0	0	0	1	37
	%	0%	4%	0%	0%	3%	3%	2%	0%	0%	0%	2%	0%	0%	4%	2%	0%	3%	3%	0%	0%	0%	0%	0%	1%	3%
	ticultural Truc	0	6	0	0	6	8	0	0	0	0	0	0	0	8	0	0	8	6	0	0	0	0	0	0	14
	%	0%	1%	0%	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	2%	1%	0%	0%	0%	0%	0%	0%	1%
	Total	56	572	18	0	646	460	53	4	0	0	57	28	4	394	58	0	456	626	54	6	13	0	73	118	1232
	PHF	0.82	0.75	0.9	0	0.78	0.89	0.7	0.5	0	0	0.71	0.88	0.5	0.9	0.81	0	0.88	0.74	0.61	0.5	0.46	0	0.7	0.82	0.89
	Approach %					52%	37%					5%	2%					37%	51%					6%	10%	
	% HV					4%						2%						6%						0%		
Peak 2	Motorcycles	0	4	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	5	1	0	1	0	2	0	6
Specified Period	%	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%	0%	2%	0%	1%	0%	0%
12:00 PM - 12:00 AM	Cars	57	428	21	0	506	527	45	6	1	0	52	31	3	446	54	0	503	496	67	7	36	0	110	117	1171
One Hour Peak	%	88%	81%	88%	0%	82%	81%	83%	86%	100%	0%	84%	86%	100%	81%	74%	0%	80%	81%	78%	78%	86%	0%	80%	81%	81%
4:45 PM - 5:45 PM	it Goods Vehi	8	75	3	0	86	105	9	1	0	0	10	5	0	91	19	0	110	91	16	2	5	0	23	28	229
	%	12%	14%	13%	0%	14%	16%	17%	14%	0%	0%	16%	14%	0%	16%	26%	0%	17%	15%	19%	22%	12%	0%	17%	19%	16%
	Buses	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	ngle-Unit Truc	0	10	0	0	10	8	0	0	0	0	0	0	0	8	0	0	8	12	2	0	0	0	2	0	20
	%	0%	2%	0%	0%	2%	1%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	2%	2%	0%	0%	0%	1%	0%	1%
	ticultural Truc	0	9	0	0	9	9	0	0	0	0	0	0	0	9	0	0	9	9	0	0	0	0	0	0	18
	%	0%	2%	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%	1%
	Total	65	527	24	0	616	650	54	7	1	0	62	36	3	554	73	0	630	614	86	9	42	0	137	145	1445
	PHF	0.68	0.9	0.67	0	0.86	0.84	0.61	0.88	0.25	0	0.62	0.75	0.25	0.87	0.83	0	0.85	0.9	0.9	0.45	0.58	0	0.76	0.84	0.91
	Approach %					43%	45%					4%	2%					44%	42%					9%	10%	
	% HV					3%						0%						3%						1%		



Traffic Forecast Request

Welcome NSTURDEVANT

Indiana Department of Transportation
Indianapolis, IN 46204
317-232-6779 Voice
317 232-5478 FAX

10/5/2017 12:00:00 AM

TO:

FROM: Gregory Katter, PE
Forecast Engineer

RE: US 36 US 36/SR 9/ SR 67(Pendleton Pike) from approx SR 9 S. Jct to Hunstville Rd.
Madison County

DES # 7778138

Below is the traffic forecast developed for the above referenced project:

Segment Name: On US 36 from US36/ SR 9/SR 67 (Pendleton Pike) to SR 38 (State St.)

2016 AADT	12,360
2017 AADT	12,510
2023 AADT	13,380
2033 AADT	14,840
2038 AADT	15,570
2043 AADT	16,300
2043 DHV	9.8%

Commercial Vehicles

15.63 % AADT

12.55 % DHV

Peak Hour = 5 PM

Directional Distribution = 50.08% Positive Direction

The per year growth rate used for this forecast = 1.18%

Segment Name: On US 36 from SR 38 (State St.) to SR 9/SR 67 N. Jct.

2016 AADT	18,260
2017 AADT	18,390
2023 AADT	19,140
2033 AADT	20,400
2038 AADT	21,030

Commercial Vehicles

8.11 % AADT

6.04 % DHV

2043 AADT	21,660
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2043 DHV	9.16%
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Peak Hour = 5 PM

Directional Distribution = 51.00% Positive Direction

The per year growth rate used for this forecast = 0.69%

Segment Name: On SR 9 from SR 9/SR 67 N. Jct. to Huntsville Rd.

2016 AADT	14,870
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2017 AADT	15,000
-----------	--------

2023 AADT	15,800
-----------	--------

2033 AADT	17,120
-----------	--------

2038 AADT	17,780
-----------	--------

2043 AADT	18,440
-----------	--------

2043 DHV	8.76%
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Peak Hour = 5 PM

Directional Distribution = 49.37% Positive Direction

The per year growth rate used for this forecast = 0.89%

Commercial Vehicles

15.75 % AADT

14.12 % DHV

For ESAL Projections requests, the volume forecasted is the highest volume in the project area.

It should be recognized by users of this forecast that the base AADT has an accuracy of plus or minus 10%. It is the responsibility of the designer to exercise professional judgment when using this data to influence design decisions.

If you have any questions, please feel free to contact Greg Katter at 317-232-6779.

Indiana Department of Transportation

Node	1003 Pendleton Pike & Madison Ave/Lick Creek Pike											
Count Year	10/16/2017											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Traf Vol	6	39	11	13	16	56	8	333	94	150	538	27
HV %	0%	0%	0%	5%	5%	5%	7%	7%	7%	6%	6%	6%
PHF	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Growth Rate	1.18%	1.18%	1.18%	1.18%	1.18%	1.18%	1.18%	1.18%	1.18%	1.18%	1.18%	1.18%
2023 Growth Fact	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
2043 Growth Fact	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36
Node	1004 Pendleton Pike & SR 38											
Count Year	8/29/2017											
	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Base Traf Vol	125	222	47	151	293	83	35	283	73	198	492	210
HV %	5%	5%	5%	5%	5%	5%	9%	9%	9%	3%	3%	3%
PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Growth Rate	0.94%	0.94%	0.94%	0.94%	0.94%	0.94%	0.94%	0.94%	0.94%	0.94%	0.94%	0.94%
2023 Growth Fact	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
2043 Growth Fact	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27
Node	1005 Pendleton Pike & US 36											
Count Year	8/31/2017											
	WBL	WBR	NET	NER	SWL	SWT						
Base Traf Vol	291	82	448	118	70	619						
HV %	1%	1%	6%	6%	6%	6%						
PHF	0.85	0.85	0.85	0.85	0.85	0.85						
Growth Rate	0.69%	0.69%	0.69%	0.69%	0.69%	0.69%						
2023 Growth Fact	1.04	1.04	1.04	1.04	1.04	1.04						
2043 Growth Fact	1.20	1.20	1.20	1.20	1.20	1.20						
Node	1006 Pendleton Pike & Water St											
Count Year	10/16/2017											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Traf Vol	13	6	54	1	4	53	58	394	4	18	572	56
HV %	0%	0%	0%	2%	2%	2%	6%	6%	6%	4%	4%	4%
PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Rate	0.69%	0.69%	0.69%	0.69%	0.69%	0.69%	0.69%	0.69%	0.69%	0.69%	0.69%	0.69%
2023 Growth Fact	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
2043 Growth Fact	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20

Node	1003 Pendleton Pike & Madison Ave/Lick Creek Pike											
Count Year	10/16/2017											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Traf Vol	10	19	5	13	18	44	3	570	35	62	490	48
HV %	0%	0%	0%	5%	5%	5%	2%	2%	2%	3%	3%	3%
PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Rate	1.18%	1.18%	1.18%	1.18%	1.18%	1.18%	1.18%	1.18%	1.18%	1.18%	1.18%	1.18%
2023 Growth Fact	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
2043 Growth Fact	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36
Node	1004 Pendleton Pike & SR 38											
Count Year	8/29/2017											
	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Base Traf Vol	336	369	38	112	265	80	50	549	89	132	405	171
HV %	1%	1%	1%	2%	2%	2%	3%	3%	3%	2%	2%	2%
PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Rate	0.94%	0.94%	0.94%	0.94%	0.94%	0.94%	0.94%	0.94%	0.94%	0.94%	0.94%	0.94%
2023 Growth Fact	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
2043 Growth Fact	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27
Node	1005 Pendleton Pike & US 36											
Count Year	8/31/2017											
	WBL	WBR	NET	NER	SWL	SWT						
Base Traf Vol	195	126	624	268	164	684						
HV %	3%	3%	3%	3%	3%	3%						
PHF	0.97	0.97	0.97	0.97	0.97	0.97						
Growth Rate	0.69%	0.69%	0.69%	0.69%	0.69%	0.69%						
2023 Growth Fact	1.04	1.04	1.04	1.04	1.04	1.04						
2043 Growth Fact	1.20	1.20	1.20	1.20	1.20	1.20						
Node	1006 Pendleton Pike & Water St											
Count Year	10/16/2017											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Traf Vol	42	9	86	1	7	54	73	554	3	24	527	65
HV %	1%	1%	1%	0%	0%	0%	3%	3%	3%	3%	3%	3%
PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Rate	0.69%	0.69%	0.69%	0.69%	0.69%	0.69%	0.69%	0.69%	0.69%	0.69%	0.69%	0.69%
2023 Growth Fact	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
2043 Growth Fact	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20

Timings

1004: Pendleton Pike (US 36/SR 67) & State St/SR 38

12/05/2017



Lane Group	EBL	EBT	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations											
Traffic Volume (vph)	125	222	151	293	83	35	283	73	198	492	210
Future Volume (vph)	125	222	151	293	83	35	283	73	198	492	210
Turn Type	D.P+P	NA	D.P+P	NA	pm+ov	D.P+P	NA	pm+ov	D.P+P	NA	pm+ov
Protected Phases	7	4	3	8	1	5	2	3	1	6	7
Permitted Phases	8		4		8	6		2	2		6
Detector Phase	7	4	3	8	1	5	2	3	1	6	7
Switch Phase											
Minimum Initial (s)	10.0	15.0	10.0	15.0	10.0	10.0	15.0	10.0	10.0	15.0	10.0
Minimum Split (s)	16.0	36.0	16.0	24.0	16.0	16.0	24.0	16.0	16.0	24.0	16.0
Total Split (s)	16.0	36.0	16.0	36.0	16.0	16.0	27.0	16.0	16.0	27.0	16.0
Total Split (%)	16.8%	37.9%	16.8%	37.9%	16.8%	16.8%	28.4%	16.8%	16.8%	28.4%	16.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	None	C-Max	None
Act Effect Green (s)	33.3	23.3	33.3	23.3	41.4	40.1	25.6	41.6	37.7	34.1	50.1
Actuated g/C Ratio	0.35	0.25	0.35	0.25	0.44	0.42	0.27	0.44	0.40	0.36	0.53
v/c Ratio	0.49	0.73	0.55	0.79	0.14	0.17	0.72	0.12	0.60	0.89	0.26
Control Delay	22.5	40.9	24.0	46.0	3.1	11.9	36.0	3.9	20.7	41.8	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.5	40.9	24.0	46.0	3.1	11.9	36.0	3.9	20.7	41.8	2.6
LOS	C	D	C	D	A	B	D	A	C	D	A
Approach Delay		35.1		33.0			27.9			28.0	
Approach LOS		D		C			C			C	

Intersection Summary

Cycle Length: 95

Actuated Cycle Length: 95

Offset: 87 (92%), Referenced to phase 2:NESW and 6:NESW, Start of Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 30.4

Intersection LOS: C

Intersection Capacity Utilization 78.0%

ICU Level of Service D

Analysis Period (min) 15

Description: Pendleton Pike & SR 38

Splits and Phases: 1004: Pendleton Pike (US 36/SR 67) & State St/SR 38

Ø1	Ø2 (R)	Ø3	Ø4
16 s	27 s	16 s	36 s
Ø5	Ø6 (R)	Ø7	Ø8
16 s	27 s	16 s	36 s

Queues

1004: Pendleton Pike (US 36/SR 67) & State St/SR 38

12/05/2017



Lane Group	EBL	EBT	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Group Flow (vph)	149	320	180	349	99	42	337	87	236	586	250
v/c Ratio	0.49	0.73	0.55	0.79	0.14	0.17	0.72	0.12	0.60	0.89	0.26
Control Delay	22.5	40.9	24.0	46.0	3.1	11.9	36.0	3.9	20.7	41.8	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.5	40.9	24.0	46.0	3.1	11.9	36.0	3.9	20.7	41.8	2.6
Queue Length 50th (ft)	56	170	69	196	0	7	194	9	65	~396	14
Queue Length 95th (ft)	79	220	94	247	20	17	#313	30	m136	#628	m26
Internal Link Dist (ft)		1809		1481			1380			800	
Turn Bay Length (ft)	375		130		700	275		275	300		450
Base Capacity (vph)	307	564	329	571	728	243	469	707	392	662	945
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.57	0.55	0.61	0.14	0.17	0.72	0.12	0.60	0.89	0.26

Intersection Summary

Description: Pendleton Pike & SR 38

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM 2010 Signalized Intersection Summary
1004: Pendleton Pike (US 36/SR 67) & State St/SR 38

12/05/2017

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	125	222	47	151	293	83	35	283	73	198	492	210
Future Volume (veh/h)	125	222	47	151	293	83	35	283	73	198	492	210
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1900	1810	1810	1810	1743	1743	1743	1845	1845	1845
Adj Flow Rate, veh/h	149	264	56	180	349	99	42	337	87	236	586	250
Adj No. of Lanes	1	1	0	1	1	1	1	1	1	1	1	1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	5	5	5	5	5	5	9	9	9	3	3	3
Cap, veh/h	304	342	73	323	430	527	209	525	601	388	620	689
Arrive On Green	0.10	0.24	0.24	0.10	0.24	0.24	0.07	0.30	0.30	0.11	0.34	0.34
Sat Flow, veh/h	1723	1448	307	1723	1810	1538	1660	1743	1482	1757	1845	1568
Grp Volume(v), veh/h	149	0	320	180	349	99	42	337	87	236	586	250
Grp Sat Flow(s),veh/h/ln	1723	0	1755	1723	1810	1538	1660	1743	1482	1757	1845	1568
Q Serve(g_s), s	5.9	0.0	16.2	7.3	17.3	4.3	1.5	15.9	3.5	8.7	29.4	10.1
Cycle Q Clear(g_c), s	5.9	0.0	16.2	7.3	17.3	4.3	1.5	15.9	3.5	8.7	29.4	10.1
Prop In Lane	1.00		0.17	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	304	0	415	323	430	527	209	525	601	388	620	689
V/C Ratio(X)	0.49	0.00	0.77	0.56	0.81	0.19	0.20	0.64	0.14	0.61	0.94	0.36
Avail Cap(c_a), veh/h	308	0	554	325	571	648	267	525	601	388	620	689
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.65	0.65	0.65
Uniform Delay (d), s/veh	24.5	0.0	33.9	24.7	34.2	21.9	22.0	28.7	17.8	21.1	30.7	17.8
Incr Delay (d2), s/veh	1.2	0.0	4.7	2.1	6.6	0.2	0.5	5.9	0.5	1.8	18.5	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	8.4	3.6	9.4	1.9	0.7	8.5	1.5	4.4	18.2	4.5
LnGrp Delay(d),s/veh	25.7	0.0	38.6	26.8	40.8	22.1	22.5	34.6	18.3	22.9	49.2	18.7
LnGrp LOS	C		D	C	D	C	C	C	B	C	D	B
Approach Vol, veh/h		469			628			466			1072	
Approach Delay, s/veh		34.5			33.8			30.5			36.3	
Approach LOS		C			C			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.0	34.6	15.9	28.4	12.7	37.9	15.8	28.6				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	10.0	21.0	10.0	30.0	10.0	21.0	10.0	30.0				
Max Q Clear Time (g_c+I1), s	10.7	17.9	9.3	18.2	3.5	31.4	7.9	19.3				
Green Ext Time (p_c), s	0.0	1.8	0.0	3.4	0.0	0.0	0.1	3.2				
Intersection Summary												
HCM 2010 Ctrl Delay			34.4									
HCM 2010 LOS			C									

Timings

1005: Pendleton Pike (US 36/SR 67) & US 36

12/05/2017



Lane Group	WBL	WBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	291	82	448	118	70	619
Future Volume (vph)	291	82	448	118	70	619
Turn Type	Prot	pm+ov	NA	pm+ov	pm+pt	NA
Protected Phases	8	1	2	8	1	6
Permitted Phases		8		2	6	
Detector Phase	8	1	2	8	1	6
Switch Phase						
Minimum Initial (s)	15.0	10.0	15.0	15.0	10.0	15.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	29.0	24.0	42.0	29.0	24.0	66.0
Total Split (%)	30.5%	25.3%	44.2%	30.5%	25.3%	69.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?		Yes	Yes		Yes	
Recall Mode	None	None	C-Max	None	None	C-Max
Act Effect Green (s)	21.2	37.2	45.8	73.0	61.8	61.8
Actuated g/C Ratio	0.22	0.39	0.48	0.77	0.65	0.65
v/c Ratio	0.86	0.14	0.61	0.12	0.18	0.63
Control Delay	56.4	4.3	11.0	0.2	6.7	14.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.4	4.3	11.0	0.2	6.7	14.0
LOS	E	A	B	A	A	B
Approach Delay	45.0		8.7			13.3
Approach LOS	D		A			B

Intersection Summary

Cycle Length: 95

Actuated Cycle Length: 95

Offset: 0 (0%), Referenced to phase 2:NET and 6:SWTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 19.0

Intersection LOS: B

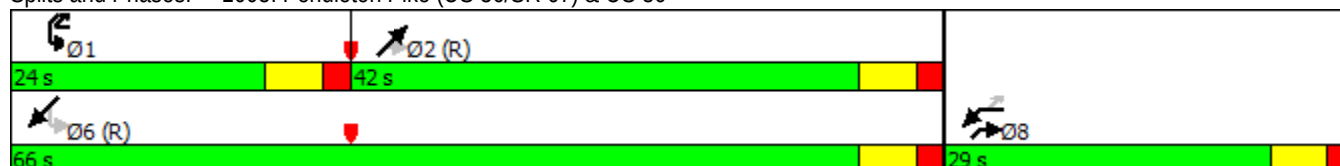
Intersection Capacity Utilization 63.0%

ICU Level of Service B

Analysis Period (min) 15

Description: Pendleton Pike & US 36

Splits and Phases: 1005: Pendleton Pike (US 36/SR 67) & US 36



Queues

1005: Pendleton Pike (US 36/SR 67) & US 36

12/05/2017



Lane Group	WBL	WBR	NET	NER	SWL	SWT
Lane Group Flow (vph)	342	96	527	139	82	728
v/c Ratio	0.86	0.14	0.61	0.12	0.18	0.63
Control Delay	56.4	4.3	11.0	0.2	6.7	14.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.4	4.3	11.0	0.2	6.7	14.0
Queue Length 50th (ft)	194	0	78	0	19	291
Queue Length 95th (ft)	#296	25	130	m0	24	374
Internal Link Dist (ft)	1787		800			930
Turn Bay Length (ft)		100		750		
Base Capacity (vph)	432	811	862	1229	557	1164
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.12	0.61	0.11	0.15	0.63

Intersection Summary

Description: Pendleton Pike & US 36

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM 2010 Signalized Intersection Summary
1005: Pendleton Pike (US 36/SR 67) & US 36

12/05/2017

								
Movement	WBL	WBR	NET	NER	SWL	SWT		
Lane Configurations								
Traffic Volume (veh/h)	291	82	448	118	70	619		
Future Volume (veh/h)	291	82	448	118	70	619		
Number	3	18	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1881	1881	1792	1792	1792	1792		
Adj Flow Rate, veh/h	342	0	527	139	82	728		
Adj No. of Lanes	1	1	1	1	1	1		
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85		
Percent Heavy Veh, %	1	1	6	6	6	6		
Cap, veh/h	378	505	886	1075	465	1188		
Arrive On Green	0.21	0.00	0.49	0.49	0.11	0.66		
Sat Flow, veh/h	1792	1599	1792	1524	1707	1792		
Grp Volume(v), veh/h	342	0	527	139	82	728		
Grp Sat Flow(s),veh/h/ln	1792	1599	1792	1524	1707	1792		
Q Serve(g_s), s	17.7	0.0	20.0	2.8	1.8	21.9		
Cycle Q Clear(g_c), s	17.7	0.0	20.0	2.8	1.8	21.9		
Prop In Lane	1.00	1.00		1.00	1.00			
Lane Grp Cap(c), veh/h	378	505	886	1075	465	1188		
V/C Ratio(X)	0.91	0.00	0.59	0.13	0.18	0.61		
Avail Cap(c_a), veh/h	434	555	886	1075	609	1188		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	0.81	0.81	1.00	1.00		
Uniform Delay (d), s/veh	36.6	0.0	17.2	4.5	10.0	9.1		
Incr Delay (d2), s/veh	20.6	0.0	2.4	0.2	0.2	2.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	10.9	0.0	10.4	2.1	0.8	11.5		
LnGrp Delay(d),s/veh	57.2	0.0	19.6	4.7	10.2	11.5		
LnGrp LOS	E		B	A	B	B		
Approach Vol, veh/h	342		666			810		
Approach Delay, s/veh	57.2		16.5			11.3		
Approach LOS	E		B			B		
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	16.0	53.0				69.0		26.0
Change Period (Y+Rc), s	6.0	6.0				6.0		6.0
Max Green Setting (Gmax), s	18.0	36.0				60.0		23.0
Max Q Clear Time (g_c+I1), s	3.8	22.0				23.9		19.7
Green Ext Time (p_c), s	0.1	6.6				9.6		0.3
Intersection Summary								
HCM 2010 Ctrl Delay			21.8					
HCM 2010 LOS			C					

Timings

1004: Pendleton Pike (US 36/SR 67) & State St/SR 38

12/05/2017



Lane Group	EBL	EBT	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations											
Traffic Volume (vph)	336	369	112	265	80	50	549	89	132	405	171
Future Volume (vph)	336	369	112	265	80	50	549	89	132	405	171
Turn Type	D.P+P	NA	D.P+P	NA	pm+ov	D.P+P	NA	pm+ov	D.P+P	NA	pm+ov
Protected Phases	7	4	3	8	1	5	2	3	1	6	7
Permitted Phases	8		4		8	6		2	2		6
Detector Phase	7	4	3	8	1	5	2	3	1	6	7
Switch Phase											
Minimum Initial (s)	10.0	15.0	10.0	15.0	10.0	10.0	15.0	10.0	10.0	15.0	10.0
Minimum Split (s)	21.0	36.0	16.0	24.0	16.0	16.0	24.0	16.0	16.0	24.0	21.0
Total Split (s)	23.0	36.0	16.0	29.0	16.0	16.0	42.0	16.0	16.0	42.0	23.0
Total Split (%)	20.9%	32.7%	14.5%	26.4%	14.5%	14.5%	38.2%	14.5%	14.5%	38.2%	20.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	None	C-Max	None
Act Effect Green (s)	37.9	27.9	37.9	20.9	36.9	49.3	38.1	54.1	48.1	41.3	64.3
Actuated g/C Ratio	0.34	0.25	0.34	0.19	0.34	0.45	0.35	0.49	0.44	0.38	0.58
v/c Ratio	0.91	0.90	0.50	0.78	0.13	0.14	0.90	0.11	0.57	0.60	0.18
Control Delay	55.3	61.6	28.5	58.1	0.5	11.4	45.4	1.0	25.3	27.7	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.3	61.6	28.5	58.1	0.5	11.4	45.4	1.0	25.3	27.7	3.2
LOS	E	E	C	E	A	B	D	A	C	C	A
Approach Delay		58.7		40.8			37.2			21.4	
Approach LOS		E		D			D			C	

Intersection Summary

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 91 (83%), Referenced to phase 2:NESW and 6:NESW, Start of Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 39.7

Intersection LOS: D

Intersection Capacity Utilization 89.8%

ICU Level of Service E

Analysis Period (min) 15

Description: Pendleton Pike & SR 38

Splits and Phases: 1004: Pendleton Pike (US 36/SR 67) & State St/SR 38

Ø1	Ø2 (R)	Ø3	Ø4	Ø5	Ø6 (R)	Ø7	Ø8
16 s	42 s	16 s	36 s	16 s	42 s	23 s	29 s

Existing AM Peak 10/04/2017 Existing AM Peak
AET

Synchro 9 Report
Page 4

Queues

1004: Pendleton Pike (US 36/SR 67) & State St/SR 38

12/05/2017



Lane Group	EBL	EBT	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Group Flow (vph)	350	424	117	276	83	52	572	93	138	422	178
v/c Ratio	0.91	0.90	0.50	0.78	0.13	0.14	0.90	0.11	0.57	0.60	0.18
Control Delay	55.3	61.6	28.5	58.1	0.5	11.4	45.4	1.0	25.3	27.7	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.3	61.6	28.5	58.1	0.5	11.4	45.4	1.0	25.3	27.7	3.2
Queue Length 50th (ft)	175	279	51	182	0	11	394	4	45	263	8
Queue Length 95th (ft)	#313	#442	89	277	1	m22	#617	10	99	315	28
Internal Link Dist (ft)		1809		1481			1380			800	
Turn Bay Length (ft)	375		130		700	275		275	300		450
Base Capacity (vph)	384	509	235	389	629	369	639	846	241	699	999
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.83	0.50	0.71	0.13	0.14	0.90	0.11	0.57	0.60	0.18

Intersection Summary

Description: Pendleton Pike & SR 38

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM 2010 Signalized Intersection Summary
1004: Pendleton Pike (US 36/SR 67) & State St/SR 38

12/05/2017

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	336	369	38	112	265	80	50	549	89	132	405	171
Future Volume (veh/h)	336	369	38	112	265	80	50	549	89	132	405	171
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1863	1863	1863	1845	1845	1845	1863	1863	1863
Adj Flow Rate, veh/h	350	384	40	117	276	83	52	572	93	138	422	178
Adj No. of Lanes	1	1	0	1	1	1	1	1	1	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	2	2	2	3	3	3	2	2	2
Cap, veh/h	390	426	44	253	350	439	339	646	687	269	684	826
Arrive On Green	0.15	0.25	0.25	0.09	0.19	0.19	0.07	0.35	0.35	0.09	0.37	0.37
Sat Flow, veh/h	1792	1676	175	1774	1863	1583	1757	1845	1568	1774	1863	1583
Grp Volume(v), veh/h	350	0	424	117	276	83	52	572	93	138	422	178
Grp Sat Flow(s),veh/h/ln	1792	0	1850	1774	1863	1583	1757	1845	1568	1774	1863	1583
Q Serve(g_s), s	17.0	0.0	24.4	5.1	15.5	4.4	1.9	32.1	3.9	5.2	20.4	6.7
Cycle Q Clear(g_c), s	17.0	0.0	24.4	5.1	15.5	4.4	1.9	32.1	3.9	5.2	20.4	6.7
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	390	0	470	253	350	439	339	646	687	269	684	826
V/C Ratio(X)	0.90	0.00	0.90	0.46	0.79	0.19	0.15	0.89	0.14	0.51	0.62	0.22
Avail Cap(c_a), veh/h	390	0	505	258	389	473	372	646	687	271	684	826
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.80	0.80	0.80
Uniform Delay (d), s/veh	31.6	0.0	39.7	28.6	42.6	30.3	19.8	33.7	18.4	24.4	28.5	14.2
Incr Delay (d2), s/veh	22.7	0.0	18.6	1.3	9.5	0.2	0.2	16.4	0.4	1.3	3.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	0.0	14.9	2.6	8.9	2.0	0.9	19.3	1.8	2.6	11.1	3.0
LnGrp Delay(d),s/veh	54.3	0.0	58.4	29.9	52.1	30.5	20.0	50.1	18.9	25.7	31.8	14.7
LnGrp LOS	D		E	C	D	C	C	D	B	C	C	B
Approach Vol, veh/h	774				476		717				738	
Approach Delay, s/veh	56.5				42.9		43.9				26.5	
Approach LOS	E				D		D				C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.9	44.5	15.7	33.9	14.0	46.4	23.0	26.6				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	10.0	36.0	10.0	30.0	10.0	36.0	17.0	23.0				
Max Q Clear Time (g_c+I1), s	7.2	34.1	7.1	26.4	3.9	22.4	19.0	17.5				
Green Ext Time (p_c), s	0.1	1.2	0.1	1.5	0.0	5.4	0.0	2.1				
Intersection Summary												
HCM 2010 Ctrl Delay			42.6									
HCM 2010 LOS			D									

Timings

1005: Pendleton Pike (US 36/SR 67) & US 36

12/05/2017



Lane Group	WBL	WBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	195	126	624	268	164	684
Future Volume (vph)	195	126	624	268	164	684
Turn Type	Prot	pm+ov	NA	pm+ov	pm+pt	NA
Protected Phases	8	1	2	8	1	6
Permitted Phases		8		2	6	
Detector Phase	8	1	2	8	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	15.0	10.0	10.0	15.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	27.0	24.0	59.0	27.0	24.0	83.0
Total Split (%)	24.5%	21.8%	53.6%	24.5%	21.8%	75.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?		Yes	Yes		Yes	
Recall Mode	None	None	C-Max	None	None	C-Max
Act Effect Green (s)	17.2	33.4	64.6	87.7	80.8	80.8
Actuated g/C Ratio	0.16	0.30	0.59	0.80	0.73	0.73
v/c Ratio	0.74	0.23	0.59	0.21	0.35	0.52
Control Delay	60.0	5.5	6.2	0.2	7.5	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.0	5.5	6.2	0.2	7.5	8.6
LOS	E	A	A	A	A	A
Approach Delay	38.6		4.4			8.4
Approach LOS	D		A			A

Intersection Summary

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 109 (99%), Referenced to phase 2:NET and 6:SWTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 11.4

Intersection LOS: B

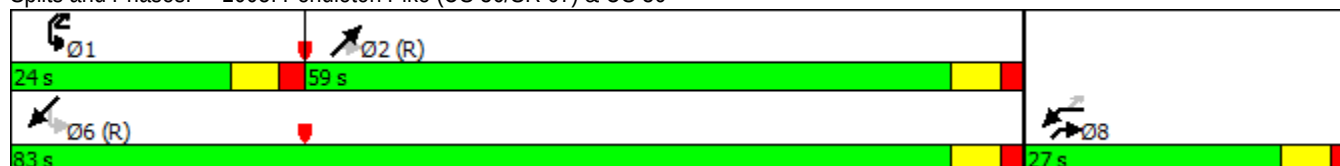
Intersection Capacity Utilization 67.7%

ICU Level of Service C

Analysis Period (min) 15

Description: Pendleton Pike & US 36

Splits and Phases: 1005: Pendleton Pike (US 36/SR 67) & US 36



Queues

1005: Pendleton Pike (US 36/SR 67) & US 36

12/05/2017



Lane Group	WBL	WBR	NET	NER	SWL	SWT
Lane Group Flow (vph)	201	130	643	276	169	705
v/c Ratio	0.74	0.23	0.59	0.21	0.35	0.52
Control Delay	60.0	5.5	6.2	0.2	7.5	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.0	5.5	6.2	0.2	7.5	8.6
Queue Length 50th (ft)	136	0	62	0	28	167
Queue Length 95th (ft)	210	40	m100	m0	65	300
Internal Link Dist (ft)	1787		800			930
Turn Bay Length (ft)		100		750		
Base Capacity (vph)	334	668	1083	1351	571	1355
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.19	0.59	0.20	0.30	0.52

Intersection Summary

Description: Pendleton Pike & US 36

m Volume for 95th percentile queue is metered by upstream signal.

HCM 2010 Signalized Intersection Summary
1005: Pendleton Pike (US 36/SR 67) & US 36

12/05/2017

								
Movement	WBL	WBR	NET	NER	SWL	SWT		
Lane Configurations								
Traffic Volume (veh/h)	195	126	624	268	164	684		
Future Volume (veh/h)	195	126	624	268	164	684		
Number	3	18	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845		
Adj Flow Rate, veh/h	201	0	643	276	169	705		
Adj No. of Lanes	1	1	1	1	1	1		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97		
Percent Heavy Veh, %	3	3	3	3	3	3		
Cap, veh/h	233	350	1131	1169	469	1399		
Arrive On Green	0.13	0.00	0.61	0.61	0.09	0.76		
Sat Flow, veh/h	1757	1568	1845	1568	1757	1845		
Grp Volume(v), veh/h	201	0	643	276	169	705		
Grp Sat Flow(s),veh/h/ln	1757	1568	1845	1568	1757	1845		
Q Serve(g_s), s	12.3	0.0	22.8	6.0	3.3	16.4		
Cycle Q Clear(g_c), s	12.3	0.0	22.8	6.0	3.3	16.4		
Prop In Lane	1.00	1.00		1.00	1.00			
Lane Grp Cap(c), veh/h	233	350	1131	1169	469	1399		
V/C Ratio(X)	0.86	0.00	0.57	0.24	0.36	0.50		
Avail Cap(c_a), veh/h	335	442	1131	1169	596	1399		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	0.43	0.43	1.00	1.00		
Uniform Delay (d), s/veh	46.7	0.0	12.6	4.3	8.6	5.2		
Incr Delay (d2), s/veh	14.7	0.0	0.9	0.2	0.5	1.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	6.9	0.0	11.7	4.0	1.7	8.7		
LnGrp Delay(d),s/veh	61.5	0.0	13.5	4.5	9.1	6.5		
LnGrp LOS	E		B	A	A	A		
Approach Vol, veh/h	201		919			874		
Approach Delay, s/veh	61.5		10.8			7.0		
Approach LOS	E		B			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	16.0	73.4				89.4		20.6
Change Period (Y+Rc), s	6.0	6.0				6.0		6.0
Max Green Setting (Gmax), s	18.0	53.0				77.0		21.0
Max Q Clear Time (g_c+I1), s	5.3	24.8				18.4		14.3
Green Ext Time (p_c), s	0.3	10.5				12.3		0.3
Intersection Summary								
HCM 2010 Ctrl Delay			14.3					
HCM 2010 LOS			B					

Intersection

Int Delay, s/veh 94.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	39	11	13	16	56	8	333	94	150	538	27
Future Vol, veh/h	6	39	11	13	16	56	8	333	94	150	538	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	130	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	0	0	0	5	5	5	7	7	7	6	6	6
Mvmt Flow	10	65	18	22	27	93	13	552	156	249	892	45

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2029	1969	892	2010	1969	552	892	0	0	552	0	0
Stage 1	1390	1390	-	579	579	-	-	-	-	-	-	-
Stage 2	639	579	-	1431	1390	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.15	6.55	6.25	4.17	-	-	4.16	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.545	4.045	3.345	2.263	-	-	2.254	-	-
Pot Cap-1 Maneuver	43	~ 63	344	43	61	528	740	-	-	998	-	-
Stage 1	178	211	-	496	496	-	-	-	-	-	-	-
Stage 2	468	504	-	164	206	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 4	~ 29	344	-	28	528	740	-	-	998	-	-
Mov Cap-2 Maneuver	~ 4	~ 29	-	-	28	-	-	-	-	-	-	-
Stage 1	173	100	-	481	481	-	-	-	-	-	-	-
Stage 2	353	489	-	26	98	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, \$ 2156.6			0.2	2.1
HCM LOS	F	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	740	-	-	19	-	998	-
HCM Lane V/C Ratio	0.018	-	-	4.888	-	0.249	-
HCM Control Delay (s)	10	0	\$ 2156.6	-	9.8	0	-
HCM Lane LOS	A	A	-	F	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	12.1	-	1	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Timings

1004: Pendleton Pike (US 36/SR 67) & State St/SR 38

12/08/2017



Lane Group	EBL	EBT	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations											
Traffic Volume (vph)	125	222	151	293	83	35	283	73	198	492	210
Future Volume (vph)	125	222	151	293	83	35	283	73	198	492	210
Turn Type	D.P+P	NA	D.P+P	NA	pm+ov	D.P+P	NA	pm+ov	D.P+P	NA	pm+ov
Protected Phases	7	4	3	8	1	5	2	3	1	6	7
Permitted Phases	8		4		8	6		2	2		6
Detector Phase	7	4	3	8	1	5	2	3	1	6	7
Switch Phase											
Minimum Initial (s)	10.0	15.0	10.0	15.0	10.0	10.0	15.0	10.0	10.0	15.0	10.0
Minimum Split (s)	16.0	36.0	16.0	24.0	16.0	16.0	24.0	16.0	16.0	24.0	16.0
Total Split (s)	16.0	36.0	16.0	36.0	19.0	16.0	44.0	16.0	19.0	47.0	16.0
Total Split (%)	13.9%	31.3%	13.9%	31.3%	16.5%	13.9%	38.3%	13.9%	16.5%	40.9%	13.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	None	C-Max	None
Act Effect Green (s)	39.5	29.5	39.5	29.5	42.5	52.7	38.5	54.5	51.5	44.7	55.9
Actuated g/C Ratio	0.34	0.26	0.34	0.26	0.37	0.46	0.33	0.47	0.45	0.39	0.49
v/c Ratio	0.89	0.89	0.97	0.95	0.19	0.26	0.73	0.14	0.81	1.04	0.35
Control Delay	83.1	62.5	80.1	74.4	3.1	12.4	35.7	4.2	30.1	70.9	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	83.1	62.5	80.1	74.4	3.1	12.4	35.7	4.2	30.1	70.9	2.5
LOS	F	E	F	E	A	B	D	A	C	E	A
Approach Delay		69.0		64.8			27.8			46.0	
Approach LOS		E		E			C			D	

Intersection Summary

Cycle Length: 115

Actuated Cycle Length: 115

Offset: 114 (99%), Referenced to phase 2:NESW and 6:NESW, Start of Green

Natural Cycle: 115

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.04

Intersection Signal Delay: 51.4

Intersection LOS: D

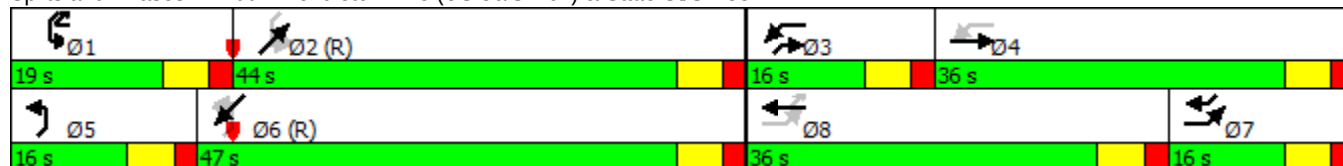
Intersection Capacity Utilization 90.3%

ICU Level of Service E

Analysis Period (min) 15

Description: Pendleton Pike & SR 38

Splits and Phases: 1004: Pendleton Pike (US 36/SR 67) & State St/SR 38



Queues

1004: Pendleton Pike (US 36/SR 67) & State St/SR 38

12/08/2017



Lane Group	EBL	EBT	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Group Flow (vph)	189	407	228	443	125	53	428	110	299	744	318
v/c Ratio	0.89	0.89	0.97	0.95	0.19	0.26	0.73	0.14	0.81	1.04	0.35
Control Delay	83.1	62.5	80.1	74.4	3.1	12.4	35.7	4.2	30.1	70.9	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	83.1	62.5	80.1	74.4	3.1	12.4	35.7	4.2	30.1	70.9	2.5
Queue Length 50th (ft)	93	283	115	322	0	12	284	13	105	~640	11
Queue Length 95th (ft)	#194	#404	#220	#461	21	24	370	34	m#168	#786	m25
Internal Link Dist (ft)		1809		1481			1380			800	
Turn Bay Length (ft)	375		130		700	275		275	300		450
Base Capacity (vph)	212	466	236	472	647	203	583	777	367	716	897
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.87	0.97	0.94	0.19	0.26	0.73	0.14	0.81	1.04	0.35

Intersection Summary

Description: Pendleton Pike & SR 38

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM 2010 Signalized Intersection Summary
1004: Pendleton Pike (US 36/SR 67) & State St/SR 38

12/08/2017

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	125	222	47	151	293	83	35	283	73	198	492	210
Future Volume (veh/h)	125	222	47	151	293	83	35	283	73	198	492	210
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1900	1810	1810	1810	1743	1743	1743	1845	1845	1845
Adj Flow Rate, veh/h	189	336	71	228	443	125	53	428	110	299	744	318
Adj No. of Lanes	1	1	0	1	1	1	1	1	1	1	1	1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	5	5	5	5	5	5	9	9	9	3	3	3
Cap, veh/h	227	375	79	245	468	572	180	580	622	360	691	724
Arrive On Green	0.09	0.26	0.26	0.09	0.26	0.26	0.07	0.33	0.33	0.11	0.37	0.37
Sat Flow, veh/h	1723	1449	306	1723	1810	1538	1660	1743	1482	1757	1845	1568
Grp Volume(v), veh/h	189	0	407	228	443	125	53	428	110	299	744	318
Grp Sat Flow(s),veh/h/ln	1723	0	1755	1723	1810	1538	1660	1743	1482	1757	1845	1568
Q Serve(g_s), s	7.1	0.0	25.7	10.0	27.6	3.9	2.1	25.0	5.4	13.0	43.1	3.6
Cycle Q Clear(g_c), s	7.1	0.0	25.7	10.0	27.6	3.9	2.1	25.0	5.4	13.0	43.1	3.6
Prop In Lane	1.00		0.17	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	227	0	454	245	468	572	180	580	622	360	691	724
V/C Ratio(X)	0.83	0.00	0.90	0.93	0.95	0.22	0.29	0.74	0.18	0.83	1.08	0.44
Avail Cap(c_a), veh/h	228	0	458	245	472	575	207	580	622	360	691	724
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.49	0.49	0.49
Uniform Delay (d), s/veh	49.7	0.0	41.1	34.4	41.8	10.5	26.3	33.9	20.9	25.6	35.9	8.1
Incr Delay (d2), s/veh	22.2	0.0	19.9	38.6	28.2	0.2	0.9	8.2	0.6	7.9	47.2	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	0.0	14.9	5.1	17.4	1.7	1.0	13.3	2.3	7.0	31.0	4.0
LnGrp Delay(d),s/veh	71.9	0.0	61.0	73.0	70.0	10.7	27.2	42.1	21.5	33.5	83.2	9.0
LnGrp LOS	E		E	E	E	B	C	D	C	C	F	A
Approach Vol, veh/h	596		796			591			1361			
Approach Delay, s/veh	64.5		61.5			36.9			54.9			
Approach LOS	E		E			D			D			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.0	44.3	16.0	35.7	14.2	49.1	16.0	35.8				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	13.0	38.0	10.0	30.0	10.0	41.0	10.0	30.0				
Max Q Clear Time (g_c+I1), s	15.0	27.0	12.0	27.7	4.1	45.1	9.1	29.6				
Green Ext Time (p_c), s	0.0	6.1	0.0	0.7	0.0	0.0	0.3	0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			55.0									
HCM 2010 LOS			E									

Timings

1005: Pendleton Pike (US 36/SR 67) & US 36

12/08/2017



Lane Group	WBL	WBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	291	82	448	118	70	619
Future Volume (vph)	291	82	448	118	70	619
Turn Type	Prot	pm+ov	NA	pm+ov	pm+pt	NA
Protected Phases	8	1	2	8	1	6
Permitted Phases		8		2	6	
Detector Phase	8	1	2	8	1	6
Switch Phase						
Minimum Initial (s)	15.0	10.0	15.0	15.0	10.0	15.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	37.0	24.0	54.0	37.0	24.0	78.0
Total Split (%)	32.2%	20.9%	47.0%	32.2%	20.9%	67.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?		Yes	Yes		Yes	
Recall Mode	None	None	C-Max	None	None	C-Max
Act Effect Green (s)	29.2	45.2	57.8	93.0	73.8	73.8
Actuated g/C Ratio	0.25	0.39	0.50	0.81	0.64	0.64
v/c Ratio	0.91	0.17	0.70	0.13	0.27	0.76
Control Delay	66.5	7.9	15.5	1.3	9.3	17.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.5	7.9	15.5	1.3	9.3	17.3
LOS	E	A	B	A	A	B
Approach Delay	53.6		12.5			16.5
Approach LOS	D		B			B

Intersection Summary

Cycle Length: 115

Actuated Cycle Length: 115

Offset: 0 (0%), Referenced to phase 2:NET and 6:SWTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 23.6

Intersection LOS: C

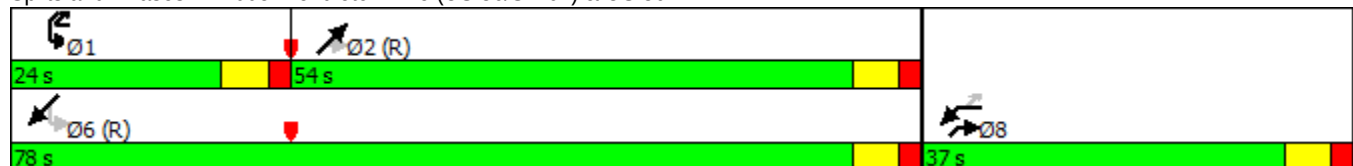
Intersection Capacity Utilization 71.0%

ICU Level of Service C

Analysis Period (min) 15

Description: Pendleton Pike & US 36

Splits and Phases: 1005: Pendleton Pike (US 36/SR 67) & US 36



Queues

1005: Pendleton Pike (US 36/SR 67) & US 36

12/08/2017



Lane Group	WBL	WBR	NET	NER	SWL	SWT
Lane Group Flow (vph)	411	116	632	167	99	874
v/c Ratio	0.91	0.17	0.70	0.13	0.27	0.76
Control Delay	66.5	7.9	15.5	1.3	9.3	17.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.5	7.9	15.5	1.3	9.3	17.3
Queue Length 50th (ft)	289	14	188	4	24	370
Queue Length 95th (ft)	#412	45	m234	m10	40	405
Internal Link Dist (ft)	1787		800			930
Turn Bay Length (ft)		100		750		
Base Capacity (vph)	481	785	900	1285	457	1150
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.15	0.70	0.13	0.22	0.76

Intersection Summary

Description: Pendleton Pike & US 36

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM 2010 Signalized Intersection Summary

1005: Pendleton Pike (US 36/SR 67) & US 36

12/08/2017

								
Movement	WBL	WBR	NET	NER	SWL	SWT		
Lane Configurations								
Traffic Volume (veh/h)	291	82	448	118	70	619		
Future Volume (veh/h)	291	82	448	118	70	619		
Number	3	18	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1881	1881	1792	1792	1792	1792		
Adj Flow Rate, veh/h	411	0	632	167	99	874		
Adj No. of Lanes	1	1	1	1	1	1		
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85		
Percent Heavy Veh, %	1	1	6	6	6	6		
Cap, veh/h	440	532	916	1153	370	1165		
Arrive On Green	0.25	0.00	0.51	0.51	0.09	0.65		
Sat Flow, veh/h	1792	1599	1792	1524	1707	1792		
Grp Volume(v), veh/h	411	0	632	167	99	874		
Grp Sat Flow(s),veh/h/ln	1792	1599	1792	1524	1707	1792		
Q Serve(g_s), s	25.8	0.0	30.6	3.4	2.7	38.3		
Cycle Q Clear(g_c), s	25.8	0.0	30.6	3.4	2.7	38.3		
Prop In Lane	1.00	1.00		1.00	1.00			
Lane Grp Cap(c), veh/h	440	532	916	1153	370	1165		
V/C Ratio(X)	0.93	0.00	0.69	0.14	0.27	0.75		
Avail Cap(c_a), veh/h	483	570	916	1153	489	1165		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	0.67	0.67	1.00	1.00		
Uniform Delay (d), s/veh	42.5	0.0	21.2	3.8	14.5	13.7		
Incr Delay (d2), s/veh	24.4	0.0	2.9	0.2	0.4	4.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	15.8	0.0	15.8	3.0	1.3	20.1		
LnGrp Delay(d),s/veh	66.8	0.0	24.1	4.0	14.9	18.2		
LnGrp LOS	E		C	A	B	B		
Approach Vol, veh/h	411		799			973		
Approach Delay, s/veh	66.8		19.9			17.9		
Approach LOS	E		B			B		
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	16.0	64.8				80.8		34.2
Change Period (Y+Rc), s	6.0	6.0				6.0		6.0
Max Green Setting (Gmax), s	18.0	48.0				72.0		31.0
Max Q Clear Time (g_c+I1), s	4.7	32.6				40.3		27.8
Green Ext Time (p_c), s	0.2	8.7				12.5		0.4
Intersection Summary								
HCM 2010 Ctrl Delay			27.8					
HCM 2010 LOS			C					

Intersection

Int Delay, s/veh 3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	↕
Traffic Vol, veh/h	13	6	54	1	4	53	58	394	4	18	572	56
Future Vol, veh/h	13	6	54	1	4	53	58	394	4	18	572	56
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	130	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	2	2	2	6	6	6	4	4	4
Mvmt Flow	18	8	73	1	5	71	78	531	5	24	771	76

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1546	1508	771	1548	1508	531	771	0	0	531	0	0
Stage 1	820	820	-	688	688	-	-	-	-	-	-	-
Stage 2	726	688	-	860	820	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.12	6.52	6.22	4.16	-	-	4.14	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.518	4.018	3.318	2.254	-	-	2.236	-	-
Pot Cap-1 Maneuver	94	122	403	93	121	548	826	-	-	1026	-	-
Stage 1	372	392	-	436	447	-	-	-	-	-	-	-
Stage 2	419	450	-	351	389	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	68	101	403	62	100	548	826	-	-	1026	-	-
Mov Cap-2 Maneuver	68	101	-	62	100	-	-	-	-	-	-	-
Stage 1	322	374	-	377	387	-	-	-	-	-	-	-
Stage 2	311	389	-	269	371	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	42.7		17		1.2		0.2	
HCM LOS	E		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	826	-	-	190	379	1026	-
HCM Lane V/C Ratio	0.095	-	-	0.518	0.206	0.024	-
HCM Control Delay (s)	9.8	0	-	42.7	17	8.6	0
HCM Lane LOS	A	A	-	E	C	A	A
HCM 95th %tile Q(veh)	0.3	-	-	2.6	0.8	0.1	-

Intersection

Int Delay, s/veh 12.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	↕
Traffic Vol, veh/h	10	19	5	13	18	44	3	570	35	62	490	48
Future Vol, veh/h	10	19	5	13	18	44	3	570	35	62	490	48
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	130	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	5	5	5	2	2	2	3	3	3
Mvmt Flow	14	27	7	18	26	62	4	808	50	88	694	68

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1730	1686	694	1703	1686	808	694	0	0	808	0	0
Stage 1	870	870	-	816	816	-	-	-	-	-	-	-
Stage 2	860	816	-	887	870	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.15	6.55	6.25	4.12	-	-	4.13	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.545	4.045	3.345	2.218	-	-	2.227	-	-
Pot Cap-1 Maneuver	70	95	446	71	92	376	901	-	-	813	-	-
Stage 1	349	372	-	367	386	-	-	-	-	-	-	-
Stage 2	353	393	-	335	365	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	37	76	446	43	74	376	901	-	-	813	-	-
Mov Cap-2 Maneuver	37	76	-	43	74	-	-	-	-	-	-	-
Stage 1	346	301	-	364	383	-	-	-	-	-	-	-
Stage 2	272	389	-	243	296	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	154.4		140.3		0		1	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	901	-	-	64	113	813	-
HCM Lane V/C Ratio	0.005	-	-	0.753	0.94	0.108	-
HCM Control Delay (s)	9	0	-	154.4	140.3	10	0
HCM Lane LOS	A	A	-	F	F	A	A
HCM 95th %tile Q(veh)	0	-	-	3.4	5.9	0.4	-

Timings

1004: Pendleton Pike (US 36/SR 67) & State St/SR 38

12/08/2017



Lane Group	EBL	EBT	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations											
Traffic Volume (vph)	336	369	112	265	80	50	549	89	132	405	171
Future Volume (vph)	336	369	112	265	80	50	549	89	132	405	171
Turn Type	D.P+P	NA	D.P+P	NA	pm+ov	D.P+P	NA	pm+ov	D.P+P	NA	pm+ov
Protected Phases	7	4	3	8	1	5	2	3	1	6	7
Permitted Phases	8		4		8	6		2	2		6
Detector Phase	7	4	3	8	1	5	2	3	1	6	7
Switch Phase											
Minimum Initial (s)	10.0	15.0	10.0	15.0	10.0	10.0	15.0	10.0	10.0	15.0	10.0
Minimum Split (s)	21.0	36.0	16.0	24.0	16.0	16.0	24.0	16.0	16.0	24.0	21.0
Total Split (s)	28.0	39.0	16.0	27.0	16.0	16.0	49.0	16.0	16.0	49.0	28.0
Total Split (%)	23.3%	32.5%	13.3%	22.5%	13.3%	13.3%	40.8%	13.3%	13.3%	40.8%	23.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	None	C-Max	None
Act Effect Green (s)	43.0	33.0	43.0	21.0	37.0	54.2	43.0	59.0	53.0	46.2	74.2
Actuated g/C Ratio	0.36	0.28	0.36	0.18	0.31	0.45	0.36	0.49	0.44	0.38	0.62
v/c Ratio	1.14	1.05	0.71	1.08	0.18	0.24	1.10	0.14	0.84	0.75	0.21
Control Delay	122.7	95.3	44.1	118.7	3.0	10.5	93.9	2.9	52.3	33.7	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	122.7	95.3	44.1	118.7	3.0	10.5	93.9	2.9	52.3	33.7	2.8
LOS	F	F	D	F	A	B	F	A	D	C	A
Approach Delay		107.7		80.2			76.0			29.7	
Approach LOS		F		F			E			C	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 100 (83%), Referenced to phase 2:NESW and 6:NESW, Start of Green

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.14

Intersection Signal Delay: 73.2

Intersection LOS: E

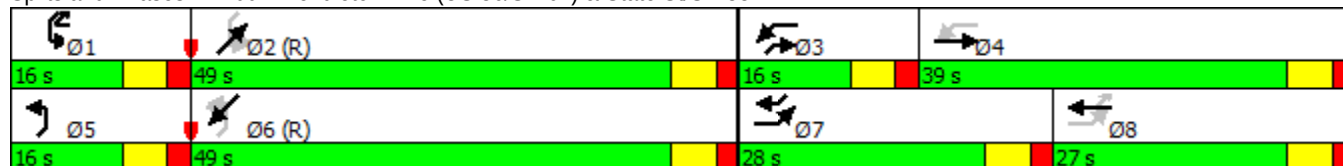
Intersection Capacity Utilization 107.3%

ICU Level of Service G

Analysis Period (min) 15

Description: Pendleton Pike & SR 38

Splits and Phases: 1004: Pendleton Pike (US 36/SR 67) & State St/SR 38



Queues

1004: Pendleton Pike (US 36/SR 67) & State St/SR 38

12/08/2017



Lane Group	EBL	EBT	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Group Flow (vph)	445	538	148	351	106	66	726	118	175	536	226
v/c Ratio	1.14	1.05	0.71	1.08	0.18	0.24	1.10	0.14	0.84	0.75	0.21
Control Delay	122.7	95.3	44.1	118.7	3.0	10.5	93.9	2.9	52.3	33.7	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	122.7	95.3	44.1	118.7	3.0	10.5	93.9	2.9	52.3	33.7	2.8
Queue Length 50th (ft)	~352	~452	73	~303	0	16	~640	14	82	349	12
Queue Length 95th (ft)	#561	#672	#154	#492	24	m26	#881	m26	m#196	#494	m27
Internal Link Dist (ft)		1809		1481			1380			800	
Turn Bay Length (ft)	375		130		700	275		275	300		450
Base Capacity (vph)	390	513	209	326	582	280	661	840	209	717	1064
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.14	1.05	0.71	1.08	0.18	0.24	1.10	0.14	0.84	0.75	0.21

Intersection Summary

Description: Pendleton Pike & SR 38

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM 2010 Signalized Intersection Summary
1004: Pendleton Pike (US 36/SR 67) & State St/SR 38

12/08/2017

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	336	369	38	112	265	80	50	549	89	132	405	171
Future Volume (veh/h)	336	369	38	112	265	80	50	549	89	132	405	171
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1863	1863	1863	1845	1845	1845	1863	1863	1863
Adj Flow Rate, veh/h	444	488	50	148	351	106	66	726	118	175	536	226
Adj No. of Lanes	1	1	0	1	1	1	1	1	1	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	2	2	2	3	3	3	2	2	2
Cap, veh/h	388	463	47	207	326	409	268	661	692	207	685	872
Arrive On Green	0.18	0.28	0.28	0.08	0.17	0.17	0.07	0.36	0.36	0.08	0.37	0.37
Sat Flow, veh/h	1792	1679	172	1774	1863	1583	1757	1845	1568	1774	1863	1583
Grp Volume(v), veh/h	444	0	538	148	351	106	66	726	118	175	536	226
Grp Sat Flow(s),veh/h/ln	1792	0	1851	1774	1863	1583	1757	1845	1568	1774	1863	1583
Q Serve(g_s), s	22.0	0.0	33.1	7.0	21.0	6.4	2.6	43.0	5.5	7.5	30.7	9.0
Cycle Q Clear(g_c), s	22.0	0.0	33.1	7.0	21.0	6.4	2.6	43.0	5.5	7.5	30.7	9.0
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	388	0	510	207	326	409	268	661	692	207	685	872
V/C Ratio(X)	1.14	0.00	1.05	0.72	1.08	0.26	0.25	1.10	0.17	0.84	0.78	0.26
Avail Cap(c_a), veh/h	388	0	510	208	326	409	284	661	692	208	685	872
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.69	0.69	0.69
Uniform Delay (d), s/veh	35.4	0.0	43.5	31.5	49.5	35.4	23.8	38.5	20.3	29.6	33.7	14.1
Incr Delay (d2), s/veh	90.6	0.0	55.0	11.1	71.8	0.3	0.5	64.7	0.5	19.1	6.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.6	0.0	24.7	4.0	17.3	2.8	1.3	33.8	2.5	6.8	16.9	4.0
LnGrp Delay(d),s/veh	126.0	0.0	98.5	42.6	121.3	35.7	24.2	103.2	20.8	48.7	39.8	14.6
LnGrp LOS	F		F	D	F	D	C	F	C	D	D	B
Approach Vol, veh/h	982				605		910				937	
Approach Delay, s/veh	111.0				87.1		86.8				35.4	
Approach LOS	F				F		F				D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.0	49.0	15.9	39.1	14.9	50.1	28.0	27.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	10.0	43.0	10.0	33.0	10.0	43.0	22.0	21.0				
Max Q Clear Time (g_c+I1), s	9.5	45.0	9.0	35.1	4.6	32.7	24.0	23.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	5.9	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			79.7									
HCM 2010 LOS			E									

Timings

1005: Pendleton Pike (US 36/SR 67) & US 36

12/08/2017



Lane Group	WBL	WBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	195	126	624	268	164	684
Future Volume (vph)	195	126	624	268	164	684
Turn Type	Prot	pm+ov	NA	pm+ov	pm+pt	NA
Protected Phases	8	1	2	8	1	6
Permitted Phases		8		2	6	
Detector Phase	8	1	2	8	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	15.0	10.0	10.0	15.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	28.0	24.0	68.0	28.0	24.0	92.0
Total Split (%)	23.3%	20.0%	56.7%	23.3%	20.0%	76.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?		Yes	Yes		Yes	
Recall Mode	None	None	C-Max	None	None	C-Max
Act Effect Green (s)	20.0	37.3	70.7	96.7	88.0	88.0
Actuated g/C Ratio	0.17	0.31	0.59	0.81	0.73	0.73
v/c Ratio	0.83	0.26	0.71	0.25	0.52	0.63
Control Delay	71.2	5.6	5.6	0.1	12.9	11.5
Queue Delay	0.0	0.0	0.2	0.0	0.0	0.0
Total Delay	71.2	5.6	5.8	0.1	12.9	11.5
LOS	E	A	A	A	B	B
Approach Delay	45.4		4.1			11.8
Approach LOS	D		A			B

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NET and 6:SWTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 13.7

Intersection LOS: B

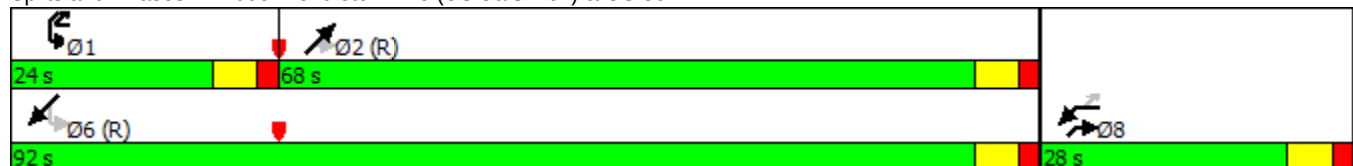
Intersection Capacity Utilization 78.3%

ICU Level of Service D

Analysis Period (min) 15

Description: Pendleton Pike & US 36

Splits and Phases: 1005: Pendleton Pike (US 36/SR 67) & US 36



Queues

1005: Pendleton Pike (US 36/SR 67) & US 36

12/08/2017



Lane Group	WBL	WBR	NET	NER	SWL	SWT
Lane Group Flow (vph)	241	156	772	332	203	846
v/c Ratio	0.83	0.26	0.71	0.25	0.52	0.63
Control Delay	71.2	5.6	5.6	0.1	12.9	11.5
Queue Delay	0.0	0.0	0.2	0.0	0.0	0.0
Total Delay	71.2	5.6	5.8	0.1	12.9	11.5
Queue Length 50th (ft)	179	2	58	0	41	263
Queue Length 95th (ft)	#294	46	m179	m1	105	476
Internal Link Dist (ft)	1787		800			930
Turn Bay Length (ft)		100		750		
Base Capacity (vph)	321	671	1087	1349	470	1353
Starvation Cap Reductn	0	0	36	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.23	0.73	0.25	0.43	0.63

Intersection Summary

Description: Pendleton Pike & US 36

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM 2010 Signalized Intersection Summary
1005: Pendleton Pike (US 36/SR 67) & US 36

12/08/2017

								
Movement	WBL	WBR	NET	NER	SWL	SWT		
Lane Configurations								
Traffic Volume (veh/h)	195	126	624	268	164	684		
Future Volume (veh/h)	195	126	624	268	164	684		
Number	3	18	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845		
Adj Flow Rate, veh/h	241	0	772	332	203	846		
Adj No. of Lanes	1	1	1	1	1	1		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97		
Percent Heavy Veh, %	3	3	3	3	3	3		
Cap, veh/h	269	371	1132	1202	375	1378		
Arrive On Green	0.15	0.00	0.61	0.61	0.08	0.75		
Sat Flow, veh/h	1757	1568	1845	1568	1757	1845		
Grp Volume(v), veh/h	241	0	772	332	203	846		
Grp Sat Flow(s),veh/h/ln	1757	1568	1845	1568	1757	1845		
Q Serve(g_s), s	16.2	0.0	33.4	7.5	4.5	25.7		
Cycle Q Clear(g_c), s	16.2	0.0	33.4	7.5	4.5	25.7		
Prop In Lane	1.00	1.00		1.00	1.00			
Lane Grp Cap(c), veh/h	269	371	1132	1202	375	1378		
V/C Ratio(X)	0.90	0.00	0.68	0.28	0.54	0.61		
Avail Cap(c_a), veh/h	322	418	1132	1202	492	1378		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	0.09	0.09	1.00	1.00		
Uniform Delay (d), s/veh	49.9	0.0	15.4	4.1	14.3	7.1		
Incr Delay (d2), s/veh	23.2	0.0	0.3	0.1	1.2	2.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	9.6	0.0	17.0	5.4	3.4	13.7		
LnGrp Delay(d),s/veh	73.1	0.0	15.7	4.2	15.5	9.2		
LnGrp LOS	E		B	A	B	A		
Approach Vol, veh/h	241		1104			1049		
Approach Delay, s/veh	73.1		12.3			10.4		
Approach LOS	E		B			B		
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	16.0	79.6				95.6		24.4
Change Period (Y+Rc), s	6.0	6.0				6.0		6.0
Max Green Setting (Gmax), s	18.0	62.0				86.0		22.0
Max Q Clear Time (g_c+I1), s	6.5	35.4				27.7		18.2
Green Ext Time (p_c), s	0.4	13.6				17.9		0.2
Intersection Summary								
HCM 2010 Ctrl Delay			17.6					
HCM 2010 LOS			B					

HCM 2010 TWSC
1006: Pendleton Pike (US 36/SR 67) & Water St

12/08/2017

Intersection												
Int Delay, s/veh	40.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	↔
Traffic Vol, veh/h	42	9	86	1	7	54	73	554	3	24	527	65
Future Vol, veh/h	42	9	86	1	7	54	73	554	3	24	527	65
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	130	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	1	1	1	0	0	0	3	3	3	3	3	3
Mvmt Flow	55	12	113	1	9	71	96	731	4	32	695	86

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1721	1681	695	1744	1681	731	695	0	0	731	0	0
Stage 1	758	758	-	923	923	-	-	-	-	-	-	-
Stage 2	963	923	-	821	758	-	-	-	-	-	-	-
Critical Hdwy	7.11	6.51	6.21	7.1	6.5	6.2	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.11	5.51	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.11	5.51	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.509	4.009	3.309	3.5	4	3.3	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	71	95	444	69	96	425	896	-	-	869	-	-
Stage 1	401	417	-	326	351	-	-	-	-	-	-	-
Stage 2	309	350	-	371	418	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 44	73	444	37	73	425	896	-	-	869	-	-
Mov Cap-2 Maneuver	~ 44	73	-	37	73	-	-	-	-	-	-	-
Stage 1	328	389	-	267	287	-	-	-	-	-	-	-
Stage 2	204	287	-	250	390	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s\$	408.8	26.5	1.1	0.4
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	896	-	-	108	248	869	-
HCM Lane V/C Ratio	0.107	-	-	1.673	0.33	0.036	-
HCM Control Delay (s)	9.5	0	-	\$ 408.8	26.5	9.3	0
HCM Lane LOS	A	A	-	F	D	A	A
HCM 95th %tile Q(veh)	0.4	-	-	13.9	1.4	0.1	-

Notes			
~: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection

Int Delay, s/veh 29.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	39	11	13	16	56	8	333	94	150	538	27
Future Vol, veh/h	6	39	11	13	16	56	8	333	94	150	538	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	130	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	5	5	5	2	2	2	3	3	3
Mvmt Flow	9	55	16	18	23	79	11	472	133	213	762	38

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1751	1700	781	1736	1719	472	800	0	0	472	0	0
Stage 1	1206	1206	-	494	494	-	-	-	-	-	-	-
Stage 2	545	494	-	1242	1225	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.15	6.55	6.25	4.12	-	-	4.13	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.545	4.045	3.345	2.218	-	-	2.227	-	-
Pot Cap-1 Maneuver	68	93	398	67	88	586	823	-	-	1085	-	-
Stage 1	226	259	-	551	542	-	-	-	-	-	-	-
Stage 2	526	550	-	211	248	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	37	73	398	21	69	586	823	-	-	1085	-	-
Mov Cap-2 Maneuver	37	73	-	21	69	-	-	-	-	-	-	-
Stage 1	221	208	-	539	531	-	-	-	-	-	-	-
Stage 2	426	538	-	120	199	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	206	293.9	0.2	1.9
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	823	-	-	77 90	1085	-	-
HCM Lane V/C Ratio	0.014	-	-	1.03 1.338	0.196	-	-
HCM Control Delay (s)	9.4	0	-	206 293.9	9.1	-	-
HCM Lane LOS	A	A	-	F F	A	-	-
HCM 95th %tile Q(veh)	0	-	-	5.6 8.9	0.7	-	-

Timings

1004: Pendleton Pike (US 36/SR 67) & State St/SR 38

12/08/2017



Lane Group	EBL	EBT	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT
Lane Configurations										
Traffic Volume (vph)	125	222	151	293	83	35	283	73	198	492
Future Volume (vph)	125	222	151	293	83	35	283	73	198	492
Turn Type	Prot	NA	Prot	NA	pm+ov	D.P+P	NA	Perm	D.P+P	NA
Protected Phases	7	4	3	8	1	5	2		1	6
Permitted Phases					8	6		2	2	
Detector Phase	7	4	3	8	1	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	10.0	15.0	10.0	15.0	10.0	10.0	15.0	15.0	10.0	15.0
Minimum Split (s)	21.0	36.0	16.0	24.0	16.0	16.0	24.0	24.0	16.0	24.0
Total Split (s)	21.0	36.0	16.0	31.0	17.0	16.0	26.0	26.0	17.0	27.0
Total Split (%)	22.1%	37.9%	16.8%	32.6%	17.9%	16.8%	27.4%	27.4%	17.9%	28.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effect Green (s)	10.7	24.9	10.0	24.2	42.2	38.5	24.1	24.1	36.1	32.5
Actuated g/C Ratio	0.11	0.26	0.11	0.25	0.44	0.41	0.25	0.25	0.38	0.34
v/c Ratio	0.42	0.73	1.08	0.82	0.14	0.18	0.42	0.18	0.59	0.78
Control Delay	42.6	39.4	129.9	47.5	3.3	12.6	24.8	2.8	18.1	27.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.6	39.4	129.9	47.5	3.3	12.6	24.8	2.8	18.1	27.6
LOS	D	D	F	D	A	B	C	A	B	C
Approach Delay		40.4		64.1			19.6			25.5
Approach LOS		D		E			B			C

Intersection Summary

Cycle Length: 95

Actuated Cycle Length: 95

Offset: 81 (85%), Referenced to phase 2:NESW and 6:NESW, Start of Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.08

Intersection Signal Delay: 36.3

Intersection LOS: D

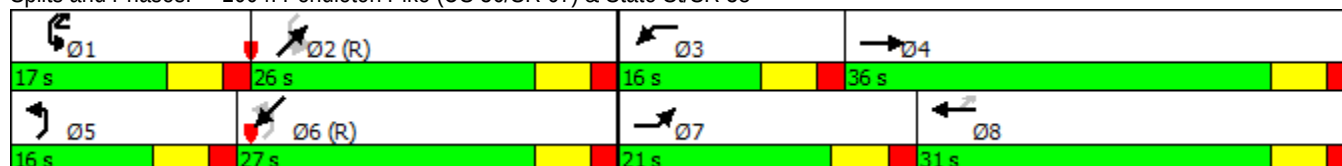
Intersection Capacity Utilization 83.2%

ICU Level of Service E

Analysis Period (min) 15

Description: Pendleton Pike & SR 38

Splits and Phases: 1004: Pendleton Pike (US 36/SR 67) & State St/SR 38



Queues

1004: Pendleton Pike (US 36/SR 67) & State St/SR 38

12/08/2017



Lane Group	EBL	EBT	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT
Lane Group Flow (vph)	165	356	200	388	110	46	374	97	262	929
v/c Ratio	0.42	0.73	1.08	0.82	0.14	0.18	0.42	0.18	0.59	0.78
Control Delay	42.6	39.4	129.9	47.5	3.3	12.6	24.8	2.8	18.1	27.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.6	39.4	129.9	47.5	3.3	12.6	24.8	2.8	18.1	27.6
Queue Length 50th (ft)	48	188	~135	217	0	9	104	6	74	228
Queue Length 95th (ft)	78	268	#273	314	27	m21	152	23	131	#443
Internal Link Dist (ft)		683		1481			1380			800
Turn Bay Length (ft)	450		300		700	275		275	300	
Base Capacity (vph)	547	586	186	514	768	257	887	525	449	1197
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.61	1.08	0.75	0.14	0.18	0.42	0.18	0.58	0.78

Intersection Summary

Description: Pendleton Pike & SR 38

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM 2010 Signalized Intersection Summary
1004: Pendleton Pike (US 36/SR 67) & State St/SR 38

12/08/2017

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	125	222	47	151	293	83	35	283	73	198	492	210
Future Volume (veh/h)	125	222	47	151	293	83	35	283	73	198	492	210
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1863	1863	1863	1845	1845	1845	1863	1863	1900
Adj Flow Rate, veh/h	165	294	62	200	388	110	46	374	97	262	651	278
Adj No. of Lanes	2	1	0	1	1	1	1	2	1	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	2	2	2	3	3	3	2	2	2
Cap, veh/h	361	366	77	187	454	570	252	994	445	463	787	336
Arrive On Green	0.10	0.24	0.24	0.11	0.24	0.24	0.07	0.28	0.28	0.12	0.33	0.33
Sat Flow, veh/h	3476	1507	318	1774	1863	1583	1757	3505	1568	1774	2418	1032
Grp Volume(v), veh/h	165	0	356	200	388	110	46	374	97	262	476	453
Grp Sat Flow(s),veh/h/ln	1738	0	1825	1774	1863	1583	1757	1752	1568	1774	1770	1681
Q Serve(g_s), s	4.2	0.0	17.4	10.0	18.9	4.5	1.5	8.1	4.5	9.9	23.6	23.6
Cycle Q Clear(g_c), s	4.2	0.0	17.4	10.0	18.9	4.5	1.5	8.1	4.5	9.9	23.6	23.6
Prop In Lane	1.00		0.17	1.00		1.00	1.00		1.00	1.00		0.61
Lane Grp Cap(c), veh/h	361	0	443	187	454	570	252	994	445	463	576	547
V/C Ratio(X)	0.46	0.00	0.80	1.07	0.85	0.19	0.18	0.38	0.22	0.57	0.83	0.83
Avail Cap(c_a), veh/h	549	0	576	187	490	600	306	994	445	463	576	547
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.86	0.86	0.86
Uniform Delay (d), s/veh	40.0	0.0	33.9	42.5	34.3	20.9	20.8	27.3	26.0	20.6	29.6	29.6
Incr Delay (d2), s/veh	0.9	0.0	6.2	86.0	13.0	0.2	0.3	1.1	1.1	1.4	11.2	11.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	9.6	9.3	11.3	2.0	0.8	4.1	2.1	4.9	13.3	12.7
LnGrp Delay(d),s/veh	40.9	0.0	40.1	128.5	47.3	21.1	21.1	28.4	27.1	22.0	40.8	41.3
LnGrp LOS	D		D	F	D	C	C	C	C	C	D	D
Approach Vol, veh/h		521			698			517			1191	
Approach Delay, s/veh		40.4			66.4			27.5			36.9	
Approach LOS		D			E			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	33.0	16.0	29.0	13.0	36.9	15.9	29.2				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	11.0	20.0	10.0	30.0	10.0	21.0	15.0	25.0				
Max Q Clear Time (g_c+I1), s	11.9	10.1	12.0	19.4	3.5	25.6	6.2	20.9				
Green Ext Time (p_c), s	0.0	5.2	0.0	3.6	0.0	0.0	0.3	1.8				
Intersection Summary												
HCM 2010 Ctrl Delay			42.9									
HCM 2010 LOS			D									

Timings

1005: Pendleton Pike (US 36/SR 67) & US 36

12/08/2017



Lane Group	WBL	WBR	NET	SWL	SWT
Lane Configurations					
Traffic Volume (vph)	291	82	448	70	619
Future Volume (vph)	291	82	448	70	619
Turn Type	Prot	pm+ov	NA	pm+pt	NA
Protected Phases	8	1	2	1	6
Permitted Phases		8		6	
Detector Phase	8	1	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	15.0	10.0	15.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0
Total Split (s)	37.0	24.0	34.0	24.0	58.0
Total Split (%)	38.9%	25.3%	35.8%	25.3%	61.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag		Lead	Lag	Lead	
Lead-Lag Optimize?		Yes	Yes	Yes	
Recall Mode	None	None	C-Max	None	C-Max
Act Effect Green (s)	24.4	40.4	42.6	58.6	58.6
Actuated g/C Ratio	0.26	0.43	0.45	0.62	0.62
v/c Ratio	0.80	0.14	0.45	0.19	0.35
Control Delay	46.3	4.3	5.2	8.4	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	46.3	4.3	5.2	8.4	9.8
LOS	D	A	A	A	A
Approach Delay	37.1		5.2		9.7
Approach LOS	D		A		A

Intersection Summary

Cycle Length: 95

Actuated Cycle Length: 95

Offset: 2 (2%), Referenced to phase 2:NET and 6:SWTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 14.4

Intersection LOS: B

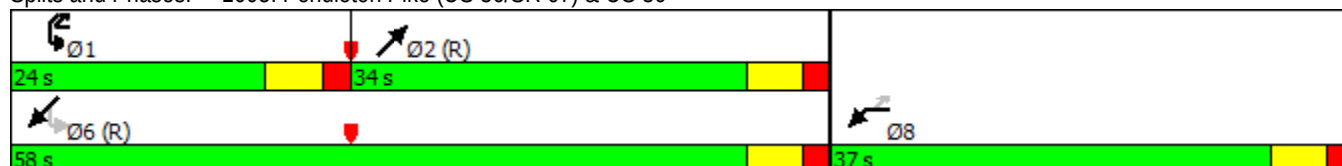
Intersection Capacity Utilization 62.1%

ICU Level of Service B

Analysis Period (min) 15

Description: Pendleton Pike & US 36

Splits and Phases: 1005: Pendleton Pike (US 36/SR 67) & US 36



Queues

1005: Pendleton Pike (US 36/SR 67) & US 36

12/08/2017



Lane Group	WBL	WBR	NET	SWL	SWT
Lane Group Flow (vph)	360	101	700	87	766
v/c Ratio	0.80	0.14	0.45	0.19	0.35
Control Delay	46.3	4.3	5.2	8.4	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	46.3	4.3	5.2	8.4	9.8
Queue Length 50th (ft)	202	4	24	18	135
Queue Length 95th (ft)	280	29	46	36	200
Internal Link Dist (ft)	1787		800		930
Turn Bay Length (ft)		300		200	
Base Capacity (vph)	571	843	1541	552	2161
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.63	0.12	0.45	0.16	0.35

Intersection Summary

Description: Pendleton Pike & US 36

HCM 2010 Signalized Intersection Summary
1005: Pendleton Pike (US 36/SR 67) & US 36

12/08/2017

								
Movement	WBL	WBR	NET	NER	SWL	SWT		
Lane Configurations								
Traffic Volume (veh/h)	291	82	448	118	70	619		
Future Volume (veh/h)	291	82	448	118	70	619		
Number	3	18	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845		
Adj Flow Rate, veh/h	360	0	554	146	87	766		
Adj No. of Lanes	1	1	2	0	1	2		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97		
Percent Heavy Veh, %	3	3	3	3	3	3		
Cap, veh/h	401	523	1312	344	514	2263		
Arrive On Green	0.23	0.00	0.48	0.48	0.11	0.65		
Sat Flow, veh/h	1757	1568	2840	722	1757	3597		
Grp Volume(v), veh/h	360	0	353	347	87	766		
Grp Sat Flow(s),veh/h/ln	1757	1568	1752	1717	1757	1752		
Q Serve(g_s), s	18.9	0.0	12.5	12.6	2.0	9.4		
Cycle Q Clear(g_c), s	18.9	0.0	12.5	12.6	2.0	9.4		
Prop In Lane	1.00	1.00		0.42	1.00			
Lane Grp Cap(c), veh/h	401	523	836	820	514	2263		
V/C Ratio(X)	0.90	0.00	0.42	0.42	0.17	0.34		
Avail Cap(c_a), veh/h	573	677	836	820	662	2263		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	0.93	0.93	1.00	1.00		
Uniform Delay (d), s/veh	35.6	0.0	16.2	16.3	9.1	7.6		
Incr Delay (d2), s/veh	13.0	0.0	1.5	1.5	0.2	0.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	10.6	0.0	6.3	6.3	0.9	4.6		
LnGrp Delay(d),s/veh	48.6	0.0	17.7	17.8	9.3	8.0		
LnGrp LOS	D		B	B	A	A		
Approach Vol, veh/h	360		700			853		
Approach Delay, s/veh	48.6		17.7			8.2		
Approach LOS	D		B			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	16.0	51.3				67.3		27.7
Change Period (Y+Rc), s	6.0	6.0				6.0		6.0
Max Green Setting (Gmax), s	18.0	28.0				52.0		31.0
Max Q Clear Time (g_c+I1), s	4.0	14.6				11.4		20.9
Green Ext Time (p_c), s	0.1	6.8				10.7		0.8
Intersection Summary								
HCM 2010 Ctrl Delay			19.3					
HCM 2010 LOS			B					

HCM 2010 TWSC
1006: Pendleton Pike (US 36/SR 67) & Water St

12/08/2017

Intersection

Int Delay, s/veh 2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	6	54	1	4	53	58	394	4	18	572	56
Future Vol, veh/h	13	6	54	1	4	53	58	394	4	18	572	56
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	-	200	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	1	1	1	0	0	0	3	3	3	3	3	3
Mvmt Flow	17	8	71	1	5	70	76	520	5	24	754	74

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1254	1517	414	1104	1551	262	828	0	0	525	0	0
Stage 1	839	839	-	675	675	-	-	-	-	-	-	-
Stage 2	415	678	-	429	876	-	-	-	-	-	-	-
Critical Hdwy	7.52	6.52	6.92	7.5	6.5	6.9	4.16	-	-	4.16	-	-
Critical Hdwy Stg 1	6.52	5.52	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.52	5.52	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.51	4.01	3.31	3.5	4	3.3	2.23	-	-	2.23	-	-
Pot Cap-1 Maneuver	129	119	590	168	115	743	793	-	-	1031	-	-
Stage 1	329	382	-	415	456	-	-	-	-	-	-	-
Stage 2	588	452	-	580	369	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	101	103	590	125	99	743	793	-	-	1031	-	-
Mov Cap-2 Maneuver	101	103	-	125	99	-	-	-	-	-	-	-
Stage 1	297	365	-	375	412	-	-	-	-	-	-	-
Stage 2	475	409	-	477	353	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.8	13.8	1.3	0.4
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	793	-	-	101	401	484	1031	-	-
HCM Lane V/C Ratio	0.096	-	-	0.17	0.197	0.158	0.023	-	-
HCM Control Delay (s)	10	-	-	47.8	16.2	13.8	8.6	0.2	-
HCM Lane LOS	B	-	-	E	C	B	A	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.6	0.7	0.6	0.1	-	-

Intersection

Int Delay, s/veh 11.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔	↔	↔	
Traffic Vol, veh/h	10	19	5	13	18	44	3	570	35	62	490	48
Future Vol, veh/h	10	19	5	13	18	44	3	570	35	62	490	48
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	130	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	5	5	5	2	2	2	3	3	3
Mvmt Flow	14	27	7	18	26	62	4	808	50	88	694	68

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1764	1720	728	1737	1754	808	762	0	0	808	0	0
Stage 1	904	904	-	816	816	-	-	-	-	-	-	-
Stage 2	860	816	-	921	938	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.15	6.55	6.25	4.12	-	-	4.13	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.545	4.045	3.345	2.218	-	-	2.227	-	-
Pot Cap-1 Maneuver	66	90	427	67	84	376	850	-	-	813	-	-
Stage 1	334	358	-	367	386	-	-	-	-	-	-	-
Stage 2	353	393	-	320	339	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	37	80	427	45	74	376	850	-	-	813	-	-
Mov Cap-2 Maneuver	37	80	-	45	74	-	-	-	-	-	-	-
Stage 1	331	319	-	364	383	-	-	-	-	-	-	-
Stage 2	272	389	-	257	302	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	150	131.8	0	1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	850	-	-	65	116	813	-
HCM Lane V/C Ratio	0.005	-	-	0.741	0.916	0.108	-
HCM Control Delay (s)	9.3	0	-	150	131.8	10	-
HCM Lane LOS	A	A	-	F	F	A	-
HCM 95th %tile Q(veh)	0	-	-	3.3	5.7	0.4	-

Timings

1004: Pendleton Pike (US 36/SR 67) & State St/SR 38

12/08/2017



Lane Group	EBL	EBT	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT
Lane Configurations										
Traffic Volume (vph)	336	369	112	265	80	50	549	89	132	405
Future Volume (vph)	336	369	112	265	80	50	549	89	132	405
Turn Type	Prot	NA	Prot	NA	pm+ov	D.P+P	NA	Perm	D.P+P	NA
Protected Phases	7	4	3	8	1	5	2		1	6
Permitted Phases					8	6		2	2	
Detector Phase	7	4	3	8	1	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	10.0	15.0	10.0	15.0	10.0	10.0	15.0	15.0	10.0	15.0
Minimum Split (s)	21.0	36.0	16.0	24.0	16.0	16.0	24.0	24.0	16.0	24.0
Total Split (s)	21.0	36.0	16.0	31.0	16.0	16.0	27.0	27.0	16.0	27.0
Total Split (%)	22.1%	37.9%	16.8%	32.6%	16.8%	16.8%	28.4%	28.4%	16.8%	28.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effect Green (s)	14.7	29.2	10.0	24.5	40.5	33.0	21.8	21.8	31.8	25.0
Actuated g/C Ratio	0.15	0.31	0.11	0.26	0.43	0.35	0.23	0.23	0.33	0.26
v/c Ratio	0.83	0.94	0.80	0.73	0.14	0.25	0.90	0.24	0.66	0.81
Control Delay	53.7	58.0	71.9	42.3	4.1	13.5	41.4	2.5	34.1	31.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.7	58.0	71.9	42.3	4.1	13.5	41.4	2.5	34.1	31.7
LOS	D	E	E	D	A	B	D	A	C	C
Approach Delay		56.0		42.8			34.4			32.1
Approach LOS		E		D			C			C

Intersection Summary

Cycle Length: 95

Actuated Cycle Length: 95

Offset: 80 (84%), Referenced to phase 2:NESW and 6:NESW, Start of Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.94

Intersection Signal Delay: 41.4

Intersection LOS: D

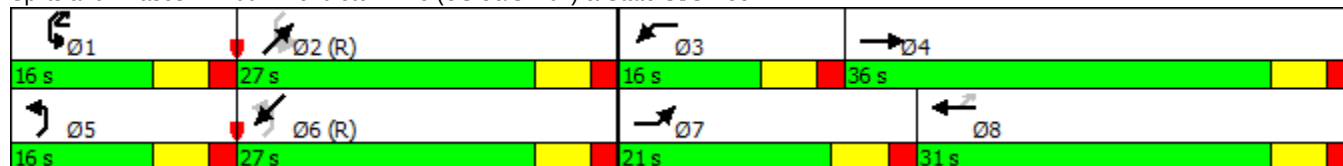
Intersection Capacity Utilization 85.4%

ICU Level of Service E

Analysis Period (min) 15

Description: Pendleton Pike & SR 38

Splits and Phases: 1004: Pendleton Pike (US 36/SR 67) & State St/SR 38



Queues

1004: Pendleton Pike (US 36/SR 67) & State St/SR 38

12/08/2017



Lane Group	EBL	EBT	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT
Lane Group Flow (vph)	445	538	148	351	106	66	726	118	175	762
v/c Ratio	0.83	0.94	0.80	0.73	0.14	0.25	0.90	0.24	0.66	0.81
Control Delay	53.7	58.0	71.9	42.3	4.1	13.5	41.4	2.5	34.1	31.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.7	58.0	71.9	42.3	4.1	13.5	41.4	2.5	34.1	31.7
Queue Length 50th (ft)	135	307	89	192	1	12	228	6	53	130
Queue Length 95th (ft)	#208	#507	#191	293	30	m23	#334	m12	m#133	#344
Internal Link Dist (ft)		683		1481			1380			800
Turn Bay Length (ft)	450		300		700	275		275	300	
Base Capacity (vph)	547	589	186	490	733	259	805	492	264	937
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.91	0.80	0.72	0.14	0.25	0.90	0.24	0.66	0.81

Intersection Summary

Description: Pendleton Pike & SR 38

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM 2010 Signalized Intersection Summary
1004: Pendleton Pike (US 36/SR 67) & State St/SR 38

12/08/2017

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	336	369	38	112	265	80	50	549	89	132	405	171
Future Volume (veh/h)	336	369	38	112	265	80	50	549	89	132	405	171
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1863	1863	1863	1845	1845	1845	1863	1863	1900
Adj Flow Rate, veh/h	444	488	50	148	351	106	66	726	118	175	536	226
Adj No. of Lanes	2	1	0	1	1	1	1	2	1	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	2	2	2	3	3	3	2	2	2
Cap, veh/h	515	520	53	183	493	584	252	807	361	280	602	253
Arrive On Green	0.15	0.31	0.31	0.10	0.26	0.26	0.09	0.23	0.23	0.10	0.25	0.25
Sat Flow, veh/h	3476	1679	172	1774	1863	1583	1757	3505	1568	1774	2431	1021
Grp Volume(v), veh/h	444	0	538	148	351	106	66	726	118	175	390	372
Grp Sat Flow(s),veh/h/ln	1738	0	1851	1774	1863	1583	1757	1752	1568	1774	1770	1682
Q Serve(g_s), s	11.9	0.0	26.9	7.8	16.2	4.3	2.5	19.1	6.0	6.9	20.2	20.3
Cycle Q Clear(g_c), s	11.9	0.0	26.9	7.8	16.2	4.3	2.5	19.1	6.0	6.9	20.2	20.3
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		0.61
Lane Grp Cap(c), veh/h	515	0	573	183	493	584	252	807	361	280	438	417
V/C Ratio(X)	0.86	0.00	0.94	0.81	0.71	0.18	0.26	0.90	0.33	0.63	0.89	0.89
Avail Cap(c_a), veh/h	549	0	584	187	493	584	284	807	361	281	438	417
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	0.90	0.90
Uniform Delay (d), s/veh	39.5	0.0	31.9	41.7	31.6	20.3	24.3	35.5	30.4	25.7	34.5	34.5
Incr Delay (d2), s/veh	12.7	0.0	22.9	22.3	4.8	0.1	0.5	15.0	2.4	3.8	20.9	22.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	0.0	17.4	4.9	8.9	1.9	1.2	11.0	2.8	3.7	12.4	12.0
LnGrp Delay(d),s/veh	52.2	0.0	54.8	64.0	36.4	20.4	24.8	50.5	32.8	29.6	55.4	56.7
LnGrp LOS	D		D	E	D	C	C	D	C	C	E	E
Approach Vol, veh/h		982			605			910			937	
Approach Delay, s/veh		53.7			40.4			46.3			51.1	
Approach LOS		D			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.9	27.9	15.8	35.4	14.2	29.5	20.1	31.1				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	10.0	21.0	10.0	30.0	10.0	21.0	15.0	25.0				
Max Q Clear Time (g_c+I1), s	8.9	21.1	9.8	28.9	4.5	22.3	13.9	18.2				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.6	0.0	0.0	0.2	3.2				
Intersection Summary												
HCM 2010 Ctrl Delay			48.7									
HCM 2010 LOS			D									

Timings

1005: Pendleton Pike (US 36/SR 67) & US 36

12/08/2017



Lane Group	WBL	WBR	NET	SWL	SWT
Lane Configurations					
Traffic Volume (vph)	195	126	624	164	684
Future Volume (vph)	195	126	624	164	684
Turn Type	Prot	pm+ov	NA	pm+pt	NA
Protected Phases	8	1	2	1	6
Permitted Phases		8		6	
Detector Phase	8	1	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	15.0	10.0	15.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0
Total Split (s)	26.0	24.0	45.0	24.0	69.0
Total Split (%)	27.4%	25.3%	47.4%	25.3%	72.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag		Lead	Lag	Lead	
Lead-Lag Optimize?		Yes	Yes	Yes	
Recall Mode	None	None	C-Max	None	C-Max
Act Effect Green (s)	17.1	35.0	48.0	65.9	65.9
Actuated g/C Ratio	0.18	0.37	0.51	0.69	0.69
v/c Ratio	0.77	0.25	0.64	0.54	0.35
Control Delay	53.0	9.2	2.2	9.5	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	53.0	9.2	2.2	9.5	5.3
LOS	D	A	A	A	A
Approach Delay	35.8		2.2		6.1
Approach LOS	D		A		A

Intersection Summary

Cycle Length: 95

Actuated Cycle Length: 95

Offset: 0 (0%), Referenced to phase 2:NET and 6:SWTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 9.0

Intersection LOS: A

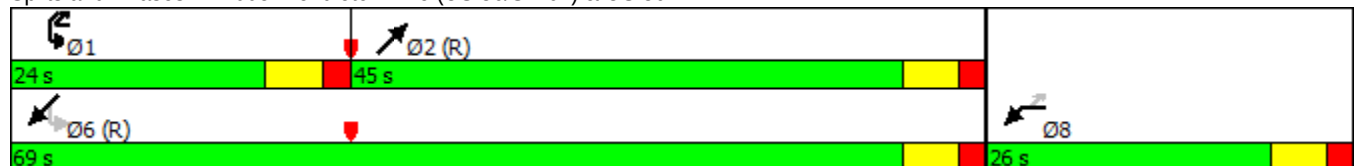
Intersection Capacity Utilization 69.9%

ICU Level of Service C

Analysis Period (min) 15

Description: Pendleton Pike & US 36

Splits and Phases: 1005: Pendleton Pike (US 36/SR 67) & US 36



Queues

1005: Pendleton Pike (US 36/SR 67) & US 36

12/08/2017



Lane Group	WBL	WBR	NET	SWL	SWT
Lane Group Flow (vph)	241	156	1104	203	846
v/c Ratio	0.77	0.25	0.64	0.54	0.35
Control Delay	53.0	9.2	2.2	9.5	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	53.0	9.2	2.2	9.5	5.3
Queue Length 50th (ft)	137	26	1	24	105
Queue Length 95th (ft)	216	59	m11	42	72
Internal Link Dist (ft)	1787		800		930
Turn Bay Length (ft)		300		200	
Base Capacity (vph)	368	729	1735	472	2431
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.65	0.21	0.64	0.43	0.35

Intersection Summary

Description: Pendleton Pike & US 36

m Volume for 95th percentile queue is metered by upstream signal.

HCM 2010 Signalized Intersection Summary
1005: Pendleton Pike (US 36/SR 67) & US 36

12/08/2017

								
Movement	WBL	WBR	NET	NER	SWL	SWT		
Lane Configurations								
Traffic Volume (veh/h)	195	126	624	268	164	684		
Future Volume (veh/h)	195	126	624	268	164	684		
Number	3	18	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845		
Adj Flow Rate, veh/h	241	0	772	332	203	846		
Adj No. of Lanes	1	1	2	0	1	2		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97		
Percent Heavy Veh, %	3	3	3	3	3	3		
Cap, veh/h	277	412	1308	562	427	2509		
Arrive On Green	0.16	0.00	0.55	0.55	0.11	0.72		
Sat Flow, veh/h	1757	1568	2482	1026	1757	3597		
Grp Volume(v), veh/h	241	0	566	538	203	846		
Grp Sat Flow(s),veh/h/ln	1757	1568	1752	1664	1757	1752		
Q Serve(g_s), s	12.7	0.0	20.5	20.6	4.0	8.6		
Cycle Q Clear(g_c), s	12.7	0.0	20.5	20.6	4.0	8.6		
Prop In Lane	1.00	1.00		0.62	1.00			
Lane Grp Cap(c), veh/h	277	412	959	911	427	2509		
V/C Ratio(X)	0.87	0.00	0.59	0.59	0.47	0.34		
Avail Cap(c_a), veh/h	370	495	959	911	575	2509		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	0.47	0.47	1.00	1.00		
Uniform Delay (d), s/veh	39.0	0.0	14.4	14.4	10.2	5.1		
Incr Delay (d2), s/veh	15.5	0.0	1.3	1.3	0.8	0.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	7.4	0.0	10.2	9.8	2.2	4.2		
LnGrp Delay(d),s/veh	54.6	0.0	15.6	15.7	11.0	5.4		
LnGrp LOS	D		B	B	B	A		
Approach Vol, veh/h	241		1104			1049		
Approach Delay, s/veh	54.6		15.7			6.5		
Approach LOS	D		B			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	16.0	58.0				74.0		21.0
Change Period (Y+Rc), s	6.0	6.0				6.0		6.0
Max Green Setting (Gmax), s	18.0	39.0				63.0		20.0
Max Q Clear Time (g_c+I1), s	6.0	22.6				10.6		14.7
Green Ext Time (p_c), s	0.4	10.4				18.2		0.3
Intersection Summary								
HCM 2010 Ctrl Delay			15.6					
HCM 2010 LOS			B					

HCM 2010 TWSC
1006: Pendleton Pike (US 36/SR 67) & Water St

12/08/2017

Intersection												
Int Delay, s/veh	6.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	42	9	86	1	7	54	73	554	3	24	527	65
Future Vol, veh/h	42	9	86	1	7	54	73	554	3	24	527	65
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	-	200	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	1	1	1	0	0	0	3	3	3	3	3	3
Mvmt Flow	55	12	113	1	9	71	96	731	4	32	695	86

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1363	1728	390	1342	1769	367	781	0	0	735	0	0
Stage 1	801	801	-	925	925	-	-	-	-	-	-	-
Stage 2	562	927	-	417	844	-	-	-	-	-	-	-
Critical Hdwy	7.52	6.52	6.92	7.5	6.5	6.9	4.16	-	-	4.16	-	-
Critical Hdwy Stg 1	6.52	5.52	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.52	5.52	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.51	4.01	3.31	3.5	4	3.3	2.23	-	-	2.23	-	-
Pot Cap-1 Maneuver	108	88	612	112	84	636	826	-	-	860	-	-
Stage 1	346	397	-	294	351	-	-	-	-	-	-	-
Stage 2	481	347	-	589	382	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	75	73	612	69	69	636	826	-	-	860	-	-
Mov Cap-2 Maneuver	75	73	-	69	69	-	-	-	-	-	-	-
Stage 1	306	370	-	260	310	-	-	-	-	-	-	-
Stage 2	366	307	-	433	356	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	54.9		20.8		1.2		0.6	
HCM LOS	F		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	826	-	-	75	360	309	860	-	-
HCM Lane V/C Ratio	0.117	-	-	0.738	0.348	0.265	0.037	-	-
HCM Control Delay (s)	9.9	-	-	133.5	20.2	20.8	9.3	0.3	-
HCM Lane LOS	A	-	-	F	C	C	A	A	-
HCM 95th %tile Q(veh)	0.4	-	-	3.5	1.5	1	0.1	-	-

Intersection

Int Delay, s/veh 29.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	39	11	13	16	56	8	333	94	150	538	27
Future Vol, veh/h	6	39	11	13	16	56	8	333	94	150	538	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	130	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	5	5	5	2	2	2	3	3	3
Mvmt Flow	9	55	16	18	23	79	11	472	133	213	762	38

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1751	1700	781	1736	1719	472	800	0	0	472	0	0
Stage 1	1206	1206	-	494	494	-	-	-	-	-	-	-
Stage 2	545	494	-	1242	1225	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.15	6.55	6.25	4.12	-	-	4.13	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.545	4.045	3.345	2.218	-	-	2.227	-	-
Pot Cap-1 Maneuver	68	93	398	67	88	586	823	-	-	1085	-	-
Stage 1	226	259	-	551	542	-	-	-	-	-	-	-
Stage 2	526	550	-	211	248	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	37	73	398	21	69	586	823	-	-	1085	-	-
Mov Cap-2 Maneuver	37	73	-	21	69	-	-	-	-	-	-	-
Stage 1	221	208	-	539	531	-	-	-	-	-	-	-
Stage 2	426	538	-	120	199	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	206	293.9	0.2	1.9
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	823	-	-	77 90	1085	-	-
HCM Lane V/C Ratio	0.014	-	-	1.03 1.338	0.196	-	-
HCM Control Delay (s)	9.4	0	-	206 293.9	9.1	-	-
HCM Lane LOS	A	A	-	F F	A	-	-
HCM 95th %tile Q(veh)	0	-	-	5.6 8.9	0.7	-	-

Timings

1004: Pendleton Pike (US 36/SR 67) & State St/SR 38

12/12/2017



Lane Group	EBL	EBT	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations											
Traffic Volume (vph)	125	222	151	293	83	35	283	73	198	492	210
Future Volume (vph)	125	222	151	293	83	35	283	73	198	492	210
Turn Type	Prot	NA	Prot	NA	pm+ov	D.P+P	NA	Perm	D.P+P	NA	Perm
Protected Phases	7	4	3	8	1	5	2		1	6	
Permitted Phases					8	6		2	2		6
Detector Phase	7	4	3	8	1	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	15.0	10.0	15.0	10.0	10.0	15.0	15.0	10.0	15.0	15.0
Minimum Split (s)	21.0	36.0	16.0	24.0	16.0	16.0	24.0	24.0	16.0	24.0	24.0
Total Split (s)	21.0	36.0	16.0	31.0	19.0	16.0	24.0	24.0	19.0	27.0	27.0
Total Split (%)	22.1%	37.9%	16.8%	32.6%	20.0%	16.8%	25.3%	25.3%	20.0%	28.4%	28.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effect Green (s)	10.7	24.9	10.0	24.2	43.0	38.5	23.3	23.3	36.1	32.5	32.5
Actuated g/C Ratio	0.11	0.26	0.11	0.25	0.45	0.41	0.25	0.25	0.38	0.34	0.34
v/c Ratio	0.42	0.73	0.55	0.82	0.14	0.14	0.43	0.19	0.58	0.54	0.38
Control Delay	42.6	39.4	46.8	47.5	3.1	11.6	25.8	3.2	18.0	22.0	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.6	39.4	46.8	47.5	3.1	11.6	25.8	3.2	18.0	22.0	3.1
LOS	D	D	D	D	A	B	C	A	B	C	A
Approach Delay		40.4		40.3			20.3			16.7	
Approach LOS		D		D			C			B	

Intersection Summary

Cycle Length: 95

Actuated Cycle Length: 95

Offset: 80 (84%), Referenced to phase 2:NESW and 6:NESW, Start of Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 27.2

Intersection LOS: C

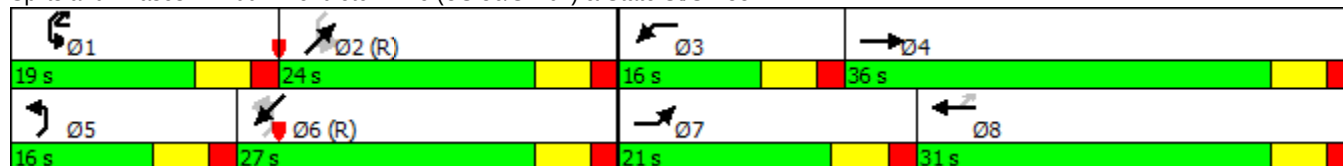
Intersection Capacity Utilization 74.3%

ICU Level of Service D

Analysis Period (min) 15

Description: Pendleton Pike & SR 38

Splits and Phases: 1004: Pendleton Pike (US 36/SR 67) & State St/SR 38



Queues

1004: Pendleton Pike (US 36/SR 67) & State St/SR 38

12/12/2017



Lane Group	EBL	EBT	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Group Flow (vph)	165	356	200	388	110	46	374	97	262	651	278
v/c Ratio	0.42	0.73	0.55	0.82	0.14	0.14	0.43	0.19	0.58	0.54	0.38
Control Delay	42.6	39.4	46.8	47.5	3.1	11.6	25.8	3.2	18.0	22.0	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.6	39.4	46.8	47.5	3.1	11.6	25.8	3.2	18.0	22.0	3.1
Queue Length 50th (ft)	48	188	59	217	0	9	104	6	74	144	14
Queue Length 95th (ft)	78	268	95	314	26	m21	156	25	131	#235	26
Internal Link Dist (ft)		683		1481			1380			800	
Turn Bay Length (ft)	450		300		700	275		275	300		200
Base Capacity (vph)	547	586	361	514	787	339	861	514	464	1210	724
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.61	0.55	0.75	0.14	0.14	0.43	0.19	0.56	0.54	0.38

Intersection Summary

Description: Pendleton Pike & SR 38

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM 2010 Signalized Intersection Summary
1004: Pendleton Pike (US 36/SR 67) & State St/SR 38

12/12/2017

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	125	222	47	151	293	83	35	283	73	198	492	210
Future Volume (veh/h)	125	222	47	151	293	83	35	283	73	198	492	210
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1863	1863	1863	1845	1845	1845	1863	1863	1863
Adj Flow Rate, veh/h	165	294	62	200	388	110	46	374	97	262	651	278
Adj No. of Lanes	2	1	0	2	1	1	1	2	1	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	2	2	2	3	3	3	2	2	2
Cap, veh/h	361	366	77	360	453	585	309	961	430	471	1154	516
Arrive On Green	0.10	0.24	0.24	0.10	0.24	0.24	0.07	0.27	0.27	0.13	0.33	0.33
Sat Flow, veh/h	3476	1507	318	3442	1863	1583	1757	3505	1568	1774	3539	1583
Grp Volume(v), veh/h	165	0	356	200	388	110	46	374	97	262	651	278
Grp Sat Flow(s),veh/h/ln	1738	0	1825	1721	1863	1583	1757	1752	1568	1774	1770	1583
Q Serve(g_s), s	4.2	0.0	17.4	5.2	18.9	4.5	1.5	8.2	4.5	9.9	14.4	13.6
Cycle Q Clear(g_c), s	4.2	0.0	17.4	5.2	18.9	4.5	1.5	8.2	4.5	9.9	14.4	13.6
Prop In Lane	1.00		0.17	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	361	0	443	360	453	585	309	961	430	471	1154	516
V/C Ratio(X)	0.46	0.00	0.80	0.55	0.86	0.19	0.15	0.39	0.23	0.56	0.56	0.54
Avail Cap(c_a), veh/h	549	0	576	362	490	616	364	961	430	491	1154	516
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.86	0.86	0.86
Uniform Delay (d), s/veh	40.0	0.0	33.9	40.4	34.3	20.3	18.7	28.0	26.7	20.6	26.4	26.2
Incr Delay (d2), s/veh	0.9	0.0	6.2	1.8	13.2	0.2	0.2	1.2	1.2	1.1	1.7	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	9.6	2.6	11.4	2.0	0.7	4.2	2.1	4.9	7.3	6.4
LnGrp Delay(d),s/veh	40.9	0.0	40.1	42.3	47.5	20.5	19.0	29.2	27.9	21.7	28.2	29.6
LnGrp LOS	D		D	D	D	C	B	C	C	C	C	C
Approach Vol, veh/h		521			698			517			1191	
Approach Delay, s/veh		40.4			41.8			28.0			27.1	
Approach LOS		D			D			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	32.1	15.9	29.0	13.0	37.0	15.9	29.1				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	13.0	18.0	10.0	30.0	10.0	21.0	15.0	25.0				
Max Q Clear Time (g_c+I1), s	11.9	10.2	7.2	19.4	3.5	16.4	6.2	20.9				
Green Ext Time (p_c), s	0.1	4.2	0.2	3.6	0.0	2.8	0.3	1.8				
Intersection Summary												
HCM 2010 Ctrl Delay			33.1									
HCM 2010 LOS			C									

Timings

1005: Pendleton Pike (US 36/SR 67) & US 36

12/12/2017



Lane Group	WBL	WBR	NET	SWL	SWT
Lane Configurations					
Traffic Volume (vph)	291	82	448	70	619
Future Volume (vph)	291	82	448	70	619
Turn Type	Prot	pm+ov	NA	pm+pt	NA
Protected Phases	8	1	2	1	6
Permitted Phases		8		6	
Detector Phase	8	1	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	15.0	10.0	15.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0
Total Split (s)	37.0	24.0	34.0	24.0	58.0
Total Split (%)	38.9%	25.3%	35.8%	25.3%	61.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag		Lead	Lag	Lead	
Lead-Lag Optimize?		Yes	Yes	Yes	
Recall Mode	None	None	C-Max	None	C-Max
Act Effect Green (s)	24.4	40.4	42.6	58.6	58.6
Actuated g/C Ratio	0.26	0.43	0.45	0.62	0.62
v/c Ratio	0.80	0.14	0.45	0.19	0.35
Control Delay	46.3	4.3	5.0	8.2	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	46.3	4.3	5.0	8.2	9.7
LOS	D	A	A	A	A
Approach Delay	37.1		5.0		9.6
Approach LOS	D		A		A

Intersection Summary

Cycle Length: 95

Actuated Cycle Length: 95

Offset: 94 (99%), Referenced to phase 2:NET and 6:SWTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 14.3

Intersection LOS: B

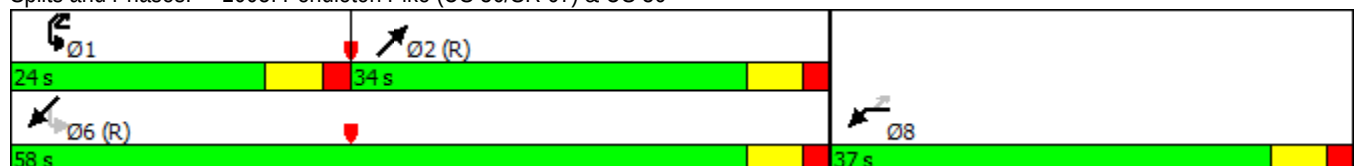
Intersection Capacity Utilization 62.1%

ICU Level of Service B

Analysis Period (min) 15

Description: Pendleton Pike & US 36

Splits and Phases: 1005: Pendleton Pike (US 36/SR 67) & US 36



Queues

1005: Pendleton Pike (US 36/SR 67) & US 36

12/12/2017



Lane Group	WBL	WBR	NET	SWL	SWT
Lane Group Flow (vph)	360	101	700	87	766
v/c Ratio	0.80	0.14	0.45	0.19	0.35
Control Delay	46.3	4.3	5.0	8.2	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	46.3	4.3	5.0	8.2	9.7
Queue Length 50th (ft)	202	4	24	16	135
Queue Length 95th (ft)	280	29	46	32	200
Internal Link Dist (ft)	1787		800		930
Turn Bay Length (ft)		300		200	
Base Capacity (vph)	571	843	1541	552	2161
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.63	0.12	0.45	0.16	0.35

Intersection Summary

Description: Pendleton Pike & US 36

HCM 2010 Signalized Intersection Summary
1005: Pendleton Pike (US 36/SR 67) & US 36

12/12/2017

								
Movement	WBL	WBR	NET	NER	SWL	SWT		
Lane Configurations								
Traffic Volume (veh/h)	291	82	448	118	70	619		
Future Volume (veh/h)	291	82	448	118	70	619		
Number	3	18	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845		
Adj Flow Rate, veh/h	360	0	554	146	87	766		
Adj No. of Lanes	1	1	2	0	1	2		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97		
Percent Heavy Veh, %	3	3	3	3	3	3		
Cap, veh/h	401	523	1312	344	514	2263		
Arrive On Green	0.23	0.00	0.48	0.48	0.11	0.65		
Sat Flow, veh/h	1757	1568	2840	722	1757	3597		
Grp Volume(v), veh/h	360	0	353	347	87	766		
Grp Sat Flow(s),veh/h/ln	1757	1568	1752	1717	1757	1752		
Q Serve(g_s), s	18.9	0.0	12.5	12.6	2.0	9.4		
Cycle Q Clear(g_c), s	18.9	0.0	12.5	12.6	2.0	9.4		
Prop In Lane	1.00	1.00		0.42	1.00			
Lane Grp Cap(c), veh/h	401	523	836	820	514	2263		
V/C Ratio(X)	0.90	0.00	0.42	0.42	0.17	0.34		
Avail Cap(c_a), veh/h	573	677	836	820	662	2263		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	0.93	0.93	1.00	1.00		
Uniform Delay (d), s/veh	35.6	0.0	16.2	16.3	9.1	7.6		
Incr Delay (d2), s/veh	13.0	0.0	1.5	1.5	0.2	0.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	10.6	0.0	6.3	6.3	0.9	4.6		
LnGrp Delay(d),s/veh	48.6	0.0	17.7	17.8	9.3	8.0		
LnGrp LOS	D		B	B	A	A		
Approach Vol, veh/h	360		700			853		
Approach Delay, s/veh	48.6		17.7			8.2		
Approach LOS	D		B			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	16.0	51.3				67.3		27.7
Change Period (Y+Rc), s	6.0	6.0				6.0		6.0
Max Green Setting (Gmax), s	18.0	28.0				52.0		31.0
Max Q Clear Time (g_c+I1), s	4.0	14.6				11.4		20.9
Green Ext Time (p_c), s	0.1	6.8				10.7		0.8
Intersection Summary								
HCM 2010 Ctrl Delay			19.3					
HCM 2010 LOS			B					

HCM 2010 TWSC
1006: Pendleton Pike (US 36/SR 67) & Water St

12/12/2017

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	6	54	1	4	53	58	394	4	18	572	56
Future Vol, veh/h	13	6	54	1	4	53	58	394	4	18	572	56
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	-	200	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	1	1	1	0	0	0	3	3	3	3	3	3
Mvmt Flow	17	8	71	1	5	70	76	520	5	24	754	74

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1254	1517	414	1104	1551	262	828	0	0	525	0	0
Stage 1	839	839	-	675	675	-	-	-	-	-	-	-
Stage 2	415	678	-	429	876	-	-	-	-	-	-	-
Critical Hdwy	7.52	6.52	6.92	7.5	6.5	6.9	4.16	-	-	4.16	-	-
Critical Hdwy Stg 1	6.52	5.52	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.52	5.52	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.51	4.01	3.31	3.5	4	3.3	2.23	-	-	2.23	-	-
Pot Cap-1 Maneuver	129	119	590	168	115	743	793	-	-	1031	-	-
Stage 1	329	382	-	415	456	-	-	-	-	-	-	-
Stage 2	588	452	-	580	369	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	101	103	590	125	99	743	793	-	-	1031	-	-
Mov Cap-2 Maneuver	101	103	-	125	99	-	-	-	-	-	-	-
Stage 1	297	365	-	375	412	-	-	-	-	-	-	-
Stage 2	475	409	-	477	353	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	21.8		13.8		1.3		0.4	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	793	-	-	101	401	484	1031	-	-
HCM Lane V/C Ratio	0.096	-	-	0.17	0.197	0.158	0.023	-	-
HCM Control Delay (s)	10	-	-	47.8	16.2	13.8	8.6	0.2	-
HCM Lane LOS	B	-	-	E	C	B	A	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.6	0.7	0.6	0.1	-	-

Intersection

Int Delay, s/veh 11.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔	↔	↔	
Traffic Vol, veh/h	10	19	5	13	18	44	3	570	35	62	490	48
Future Vol, veh/h	10	19	5	13	18	44	3	570	35	62	490	48
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	130	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	5	5	5	2	2	2	3	3	3
Mvmt Flow	14	27	7	18	26	62	4	808	50	88	694	68

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1764	1720	728	1737	1754	808	762	0	0	808	0	0
Stage 1	904	904	-	816	816	-	-	-	-	-	-	-
Stage 2	860	816	-	921	938	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.15	6.55	6.25	4.12	-	-	4.13	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.545	4.045	3.345	2.218	-	-	2.227	-	-
Pot Cap-1 Maneuver	66	90	427	67	84	376	850	-	-	813	-	-
Stage 1	334	358	-	367	386	-	-	-	-	-	-	-
Stage 2	353	393	-	320	339	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	37	80	427	45	74	376	850	-	-	813	-	-
Mov Cap-2 Maneuver	37	80	-	45	74	-	-	-	-	-	-	-
Stage 1	331	319	-	364	383	-	-	-	-	-	-	-
Stage 2	272	389	-	257	302	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	150	131.8	0	1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	850	-	-	65	116	813	-
HCM Lane V/C Ratio	0.005	-	-	0.741	0.916	0.108	-
HCM Control Delay (s)	9.3	0	-	150	131.8	10	-
HCM Lane LOS	A	A	-	F	F	A	-
HCM 95th %tile Q(veh)	0	-	-	3.3	5.7	0.4	-

Timings

1004: Pendleton Pike (US 36/SR 67) & State St/SR 38

12/12/2017



Lane Group	EBL	EBT	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations											
Traffic Volume (vph)	336	369	112	265	80	50	549	89	132	405	171
Future Volume (vph)	336	369	112	265	80	50	549	89	132	405	171
Turn Type	Prot	NA	Prot	NA	pm+ov	D.P+P	NA	Perm	D.P+P	NA	Perm
Protected Phases	7	4	3	8	1	5	2		1	6	
Permitted Phases					8	6		2	2		6
Detector Phase	7	4	3	8	1	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	15.0	10.0	15.0	10.0	10.0	15.0	15.0	10.0	15.0	15.0
Minimum Split (s)	21.0	36.0	16.0	24.0	16.0	16.0	24.0	24.0	16.0	24.0	24.0
Total Split (s)	21.0	36.0	16.0	31.0	19.0	16.0	24.0	24.0	19.0	27.0	27.0
Total Split (%)	22.1%	37.9%	16.8%	32.6%	20.0%	16.8%	25.3%	25.3%	20.0%	28.4%	28.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effect Green (s)	14.7	29.2	10.0	24.5	42.1	33.0	20.3	20.3	31.8	25.0	25.0
Actuated g/C Ratio	0.15	0.31	0.11	0.26	0.44	0.35	0.21	0.21	0.33	0.26	0.26
v/c Ratio	0.83	0.94	0.41	0.73	0.14	0.20	0.97	0.25	0.60	0.58	0.39
Control Delay	53.7	58.0	43.5	42.3	3.7	12.8	55.7	2.9	32.5	27.6	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.7	58.0	43.5	42.3	3.7	12.8	55.7	2.9	32.5	27.6	3.7
LOS	D	E	D	D	A	B	E	A	C	C	A
Approach Delay		56.0		35.8			45.7			22.8	
Approach LOS		E		D			D			C	

Intersection Summary

Cycle Length: 95

Actuated Cycle Length: 95

Offset: 80 (84%), Referenced to phase 2:NESW and 6:NESW, Start of Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.97

Intersection Signal Delay: 40.7

Intersection LOS: D

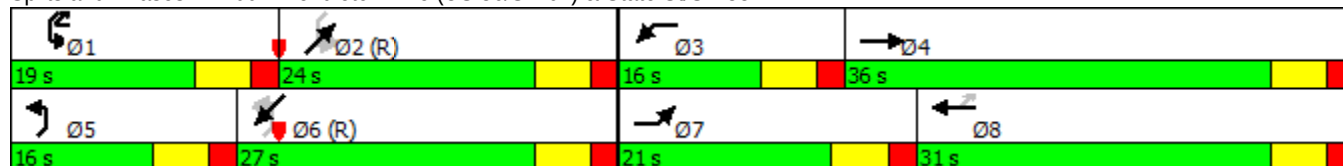
Intersection Capacity Utilization 84.5%

ICU Level of Service E

Analysis Period (min) 15

Description: Pendleton Pike & SR 38

Splits and Phases: 1004: Pendleton Pike (US 36/SR 67) & State St/SR 38



Queues

1004: Pendleton Pike (US 36/SR 67) & State St/SR 38

12/12/2017



Lane Group	EBL	EBT	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Group Flow (vph)	445	538	148	351	106	66	726	118	175	536	226
v/c Ratio	0.83	0.94	0.41	0.73	0.14	0.20	0.97	0.25	0.60	0.58	0.39
Control Delay	53.7	58.0	43.5	42.3	3.7	12.8	55.7	2.9	32.5	27.6	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.7	58.0	43.5	42.3	3.7	12.8	55.7	2.9	32.5	27.6	3.7
Queue Length 50th (ft)	135	307	43	192	1	12	~248	6	55	166	14
Queue Length 95th (ft)	#208	#507	74	293	28	m23	#373	m14	136	182	13
Internal Link Dist (ft)		683		1481			1380			800	
Turn Bay Length (ft)	450		300		700	275		275	300		200
Base Capacity (vph)	547	589	361	490	780	325	747	469	321	932	583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.91	0.41	0.72	0.14	0.20	0.97	0.25	0.55	0.58	0.39

Intersection Summary

Description: Pendleton Pike & SR 38

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM 2010 Signalized Intersection Summary
1004: Pendleton Pike (US 36/SR 67) & State St/SR 38

12/12/2017

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	336	369	38	112	265	80	50	549	89	132	405	171
Future Volume (veh/h)	336	369	38	112	265	80	50	549	89	132	405	171
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1863	1863	1863	1845	1845	1845	1863	1863	1863
Adj Flow Rate, veh/h	444	488	50	148	351	106	66	726	118	175	536	226
Adj No. of Lanes	2	1	0	2	1	1	1	2	1	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	2	2	2	3	3	3	2	2	2
Cap, veh/h	515	520	53	355	493	584	307	807	361	280	877	392
Arrive On Green	0.15	0.31	0.31	0.10	0.26	0.26	0.09	0.23	0.23	0.10	0.25	0.25
Sat Flow, veh/h	3476	1679	172	3442	1863	1583	1757	3505	1568	1774	3539	1583
Grp Volume(v), veh/h	444	0	538	148	351	106	66	726	118	175	536	226
Grp Sat Flow(s),veh/h/ln	1738	0	1851	1721	1863	1583	1757	1752	1568	1774	1770	1583
Q Serve(g_s), s	11.9	0.0	26.9	3.8	16.2	4.3	2.5	19.1	6.0	6.9	12.8	11.9
Cycle Q Clear(g_c), s	11.9	0.0	26.9	3.8	16.2	4.3	2.5	19.1	6.0	6.9	12.8	11.9
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	515	0	573	355	493	584	307	807	361	280	877	392
V/C Ratio(X)	0.86	0.00	0.94	0.42	0.71	0.18	0.21	0.90	0.33	0.63	0.61	0.58
Avail Cap(c_a), veh/h	549	0	584	362	493	584	339	807	361	338	877	392
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	0.90	0.90
Uniform Delay (d), s/veh	39.5	0.0	31.9	39.9	31.6	20.3	22.8	35.5	30.4	25.7	31.7	31.4
Incr Delay (d2), s/veh	12.7	0.0	22.9	0.8	4.8	0.1	0.3	15.0	2.4	2.3	2.9	5.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	0.0	17.4	1.9	8.9	1.9	1.2	11.0	2.8	3.5	6.6	5.8
LnGrp Delay(d),s/veh	52.2	0.0	54.8	40.7	36.4	20.4	23.2	50.5	32.8	28.1	34.6	36.8
LnGrp LOS	D		D	D	D	C	C	D	C	C	C	D
Approach Vol, veh/h		982			605			910			937	
Approach Delay, s/veh		53.7			34.7			46.2			33.9	
Approach LOS		D			C			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.9	27.9	15.8	35.4	14.2	29.5	20.1	31.1				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	13.0	18.0	10.0	30.0	10.0	21.0	15.0	25.0				
Max Q Clear Time (g_c+I1), s	8.9	21.1	5.8	28.9	4.5	14.8	13.9	18.2				
Green Ext Time (p_c), s	0.2	0.0	0.2	0.6	0.0	4.1	0.2	3.2				
Intersection Summary												
HCM 2010 Ctrl Delay			42.9									
HCM 2010 LOS			D									

Timings

1005: Pendleton Pike (US 36/SR 67) & US 36

12/12/2017



Lane Group	WBL	WBR	NET	SWL	SWT
Lane Configurations					
Traffic Volume (vph)	195	126	624	164	684
Future Volume (vph)	195	126	624	164	684
Turn Type	Prot	pm+ov	NA	pm+pt	NA
Protected Phases	8	1	2	1	6
Permitted Phases		8		6	
Detector Phase	8	1	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	15.0	10.0	15.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0
Total Split (s)	37.0	24.0	34.0	24.0	58.0
Total Split (%)	38.9%	25.3%	35.8%	25.3%	61.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag		Lead	Lag	Lead	
Lead-Lag Optimize?		Yes	Yes	Yes	
Recall Mode	None	None	C-Max	None	C-Max
Act Effect Green (s)	18.4	36.1	46.9	64.6	64.6
Actuated g/C Ratio	0.19	0.38	0.49	0.68	0.68
v/c Ratio	0.71	0.25	0.65	0.55	0.35
Control Delay	47.0	15.3	10.2	10.9	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	47.0	15.3	10.2	10.9	5.9
LOS	D	B	B	B	A
Approach Delay	34.6		10.2		6.9
Approach LOS	C		B		A

Intersection Summary

Cycle Length: 95

Actuated Cycle Length: 95

Offset: 94 (99%), Referenced to phase 2:NET and 6:SWTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 12.6

Intersection LOS: B

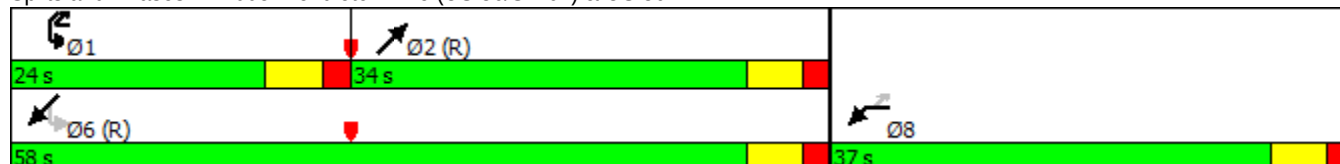
Intersection Capacity Utilization 69.9%

ICU Level of Service C

Analysis Period (min) 15

Description: Pendleton Pike & US 36

Splits and Phases: 1005: Pendleton Pike (US 36/SR 67) & US 36



Queues

1005: Pendleton Pike (US 36/SR 67) & US 36

12/12/2017



Lane Group	WBL	WBR	NET	SWL	SWT
Lane Group Flow (vph)	241	156	1104	203	846
v/c Ratio	0.71	0.25	0.65	0.55	0.35
Control Delay	47.0	15.3	10.2	10.9	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	47.0	15.3	10.2	10.9	5.9
Queue Length 50th (ft)	137	51	59	27	62
Queue Length 95th (ft)	200	75	m88	53	122
Internal Link Dist (ft)	1787		800		930
Turn Bay Length (ft)		300		200	
Base Capacity (vph)	571	717	1687	463	2384
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.42	0.22	0.65	0.44	0.35

Intersection Summary

Description: Pendleton Pike & US 36

m Volume for 95th percentile queue is metered by upstream signal.

HCM 2010 Signalized Intersection Summary
1005: Pendleton Pike (US 36/SR 67) & US 36

12/12/2017

								
Movement	WBL	WBR	NET	NER	SWL	SWT		
Lane Configurations								
Traffic Volume (veh/h)	195	126	624	268	164	684		
Future Volume (veh/h)	195	126	624	268	164	684		
Number	3	18	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845		
Adj Flow Rate, veh/h	241	0	772	332	203	846		
Adj No. of Lanes	1	1	2	0	1	2		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97		
Percent Heavy Veh, %	3	3	3	3	3	3		
Cap, veh/h	281	416	1303	559	426	2501		
Arrive On Green	0.16	0.00	0.55	0.55	0.11	0.71		
Sat Flow, veh/h	1757	1568	2482	1026	1757	3597		
Grp Volume(v), veh/h	241	0	566	538	203	846		
Grp Sat Flow(s),veh/h/ln	1757	1568	1752	1664	1757	1752		
Q Serve(g_s), s	12.7	0.0	20.6	20.7	4.1	8.7		
Cycle Q Clear(g_c), s	12.7	0.0	20.6	20.7	4.1	8.7		
Prop In Lane	1.00	1.00		0.62	1.00			
Lane Grp Cap(c), veh/h	281	416	955	907	426	2501		
V/C Ratio(X)	0.86	0.00	0.59	0.59	0.48	0.34		
Avail Cap(c_a), veh/h	573	677	955	907	574	2501		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	0.40	0.40	1.00	1.00		
Uniform Delay (d), s/veh	38.8	0.0	14.5	14.5	10.3	5.1		
Incr Delay (d2), s/veh	7.4	0.0	1.1	1.2	0.8	0.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	6.7	0.0	10.2	9.7	2.2	4.2		
LnGrp Delay(d),s/veh	46.2	0.0	15.6	15.7	11.2	5.5		
LnGrp LOS	D		B	B	B	A		
Approach Vol, veh/h	241		1104			1049		
Approach Delay, s/veh	46.2		15.7			6.6		
Approach LOS	D		B			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	16.0	57.8				73.8		21.2
Change Period (Y+Rc), s	6.0	6.0				6.0		6.0
Max Green Setting (Gmax), s	18.0	28.0				52.0		31.0
Max Q Clear Time (g_c+I1), s	6.1	22.7				10.7		14.7
Green Ext Time (p_c), s	0.4	4.2				16.9		0.6
Intersection Summary								
HCM 2010 Ctrl Delay			14.8					
HCM 2010 LOS			B					

HCM 2010 TWSC
1006: Pendleton Pike (US 36/SR 67) & Water St

12/12/2017

Intersection

Int Delay, s/veh 6.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	42	9	86	1	7	54	73	554	3	24	527	65
Future Vol, veh/h	42	9	86	1	7	54	73	554	3	24	527	65
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	-	200	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	1	1	1	0	0	0	3	3	3	3	3	3
Mvmt Flow	55	12	113	1	9	71	96	731	4	32	695	86

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1363	1728	390	1342	1769	367	781	0	0	735	0	0
Stage 1	801	801	-	925	925	-	-	-	-	-	-	-
Stage 2	562	927	-	417	844	-	-	-	-	-	-	-
Critical Hdwy	7.52	6.52	6.92	7.5	6.5	6.9	4.16	-	-	4.16	-	-
Critical Hdwy Stg 1	6.52	5.52	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.52	5.52	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.51	4.01	3.31	3.5	4	3.3	2.23	-	-	2.23	-	-
Pot Cap-1 Maneuver	108	88	612	112	84	636	826	-	-	860	-	-
Stage 1	346	397	-	294	351	-	-	-	-	-	-	-
Stage 2	481	347	-	589	382	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	75	73	612	69	69	636	826	-	-	860	-	-
Mov Cap-2 Maneuver	75	73	-	69	69	-	-	-	-	-	-	-
Stage 1	306	370	-	260	310	-	-	-	-	-	-	-
Stage 2	366	307	-	433	356	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	54.9		20.8		1.2		0.6	
HCM LOS	F		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	826	-	-	75	360	309	860	-	-
HCM Lane V/C Ratio	0.117	-	-	0.738	0.348	0.265	0.037	-	-
HCM Control Delay (s)	9.9	-	-	133.5	20.2	20.8	9.3	0.3	-
HCM Lane LOS	A	-	-	F	C	C	A	A	-
HCM 95th %tile Q(veh)	0.4	-	-	3.5	1.5	1	0.1	-	-

		Node	1003 Pendleton Pike & Madison Ave/Lick Creek Pike											
			EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing	AM	Movement	F	-	-	-	-	-	A	A	-	A	A	-
		Approach	F			-			-			-		
		Intersection	-											
	PM	Movement	F	-	-	F	-	-	A	A	-	A	A	-
		Approach	F			F			-			-		
		Intersection	-											
Alt 1	AM	Movement	F	-	-	-	-	-	A	A	-	A	A	-
		Approach	F			-			-			-		
		Intersection	-											
	PM	Movement	F	-	-	F	-	-	A	A	-	A	-	-
		Approach	F			F			-			-		
		Intersection	-											
Alt 3	AM	Movement	F	-	-	F	-	-	A	A	-	A	-	-
		Approach	F			F			-			-		
		Intersection	-											
	PM	Movement	F	-	-	F	-	-	A	A	-	A	-	-
		Approach	F			F			-			-		
		Intersection	-											

		Node	1004 Pendleton Pike & SR 38											
			EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Existing	AM	Movement	E	-	E	E	E	B	C	D	C	C	F	A
		Approach	E			E			D			D		
		Intersection	E (55.0)											
	PM	Movement	F	-	F	D	F	D	C	F	C	D	D	B
		Approach	F			F			F			D		
		Intersection	E (79.7)											
Alt 1	AM	Movement	D	-	D	F	D	C	C	C	C	C	D	D
		Approach	D			E			C			D		
		Intersection	D (42.9)											
	PM	Movement	D	-	D	E	D	C	C	D	C	C	E	E
		Approach	D			D			D			D		
		Intersection	D (48.7)											
Alt 3	AM	Movement	D	-	D	D	D	C	B	C	C	C	C	C
		Approach	D			D			C			C		
		Intersection	C (33.1)											
	PM	Movement	D	-	D	D	D	C	C	D	C	C	C	D
		Approach	D			C			D			C		
		Intersection	D (42.9)											

		Node	1005		Pendleton Pike & US 36			
			WBL	WBR	NET	NER	SWL	SWT
Existing	AM	Movement	E	-	C	A	B	B
		Approach	E		B		B	
		Intersection	C (27.8)					
	PM	Movement	E	-	B	A	B	A
		Approach	E		B		B	
		Intersection	B (17.6)					
Alt 1	AM	Movement	D	-	B	B	A	A
		Approach	D		B		A	
		Intersection	B (19.3)					
	PM	Movement	D	-	B	B	B	A
		Approach	D		B		A	
		Intersection	B (15.6)					
Alt 3	AM	Movement	D	-	B	B	A	A
		Approach	D		B		A	
		Intersection	B (19.3)					
	PM	Movement	D	-	B	B	B	A
		Approach	D		B		A	
		Intersection	B (14.8)					

		Node	1006 Pendleton Pike & Water St											
			EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing	AM	Movement	-	E	-	-	C	-	A	A	-	A	A	-
		Approach	E			C			-			-		
		Intersection	-											
	PM	Movement	-	F	-	-	D	-	A	A	-	A	A	-
		Approach	F			D			-			-		
		Intersection	-											
Alt 1	AM	Movement	-	E	-	-	C	-	B	-	-	A	A	-
		Approach	C			B			-			-		
		Intersection	-											
	PM	Movement	-	F	-	-	C	-	A	-	-	A	A	-
		Approach	F			C			-			-		
		Intersection	-											
Alt 3	AM	Movement	-	E	C	-	B	-	B	-	-	A	A	-
		Approach	C			B			-			-		
		Intersection	-											
	PM	Movement	F	C	-	C	-	-	A	-	-	A	A	-
		Approach	F			C			-			-		
		Intersection	-											

Estimate

Des 1702936
Location Pendleton Pike South of SR 38 (S Jct) and CR 500 S/Huntsville Rd
Call Year 2023

Quantities

Added Full Depth HMA 11,850 syd
Added HMA Shoulder 2,400 syd
Sidewalk 1,250 syd
Curb & Gutter 7,000 lft

Item	Qty	UOM	Unit Cost	Total Cost
Pavement Removal	3,950	SYD	\$ 28.58	\$ 112,891.00
Excavation	3,850	CYS	\$ 36.59	\$ 140,871.50
Base course	14,250	SYD	\$ 7.75	\$ 110,437.50
HMA	8,877	TON	\$ 105.36	\$ 935,280.72
Widening Reinforcement	14,250	SYD	\$ 6.54	\$ 93,195.00
Curb & Gutter	7,000	LFT	\$ 30.00	\$ 210,000.00
Sidewalk, Concrete	1,250	SYD	\$ 75.77	\$ 94,712.50
Signal Work	2	EA	\$ 200,000.00	\$ 400,000.00
MOT	1	LS	15%	\$ 314,608.23
			Construction Cost	\$ 2,412,000.00
			R/W	\$ 300,000.00
			PE & Envir	\$ 362,000.00
			Utilities	\$ 100,000.00
			Contingency (15%)	\$ 477,000.00
			Total Cost	\$ 3,651,000.00
			Estimate	\$ 3,700,000

Index of Crash Frequency and Cost - Form F1		Page 1/2
Location	US 36 @ SR 9/67	
GIS		
Post		
Analyst	Nathan Sturdevant	
Date	2/6/2017	
INPUT		
Road Facility Type	Signalized Urban State-State Intersection	
Major Road AADT (veh/day)	16990	
Minor Road AADT (veh/day)	7576	
T-intersection Indicator (1 if present, 0 otherwise)	1	
First Year with Crash Data (yyyy)	2013	
Last Year with Crash Data (yyyy)	2015	
Number of Crashes (crash/period)		
Fatal and Incapacitating Injury Crashes	2	
Non-Incapacitating and Possible Injury Crashes	3	
Property Damage Only Crashes	21	
Route or Road Type	Signalized Urban State-State Intersection	
Average Crash Costs (\$)		
Fatal and Incapacitating Injury Crashes	261400	
Non-Incapacitating and Possible Injury Crashes	31400	
Property Damage Only Crashes	6900	
Crash Cost Year (yyyy)	2013	
OUTPUT		
Expected Crash Frequency (crash/year)		
Fatal and Incapacitating Injury Crashes	0.063	
Non-Incapacitating and Possible Injury Crashes	0.72	
Property Damage Only Crashes	3.13	
All Crashes	3.91	
Index of Crash Frequency	1.52	
Index of Crash Cost	1.44	

Index of Crash Frequency and Cost - Form F1		Page 2/2
Location	US 36 @ SR 9/67	
GIS		
Post		

Analyst	Nathan Sturdevant
Date	2/6/2017
Comments:	