

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

Road No./County:	State Road (SR) 47 & SR 38/Hamilton County
Designation Number(s):	1601982 & 2000816
Project Description/Termini:	SR 47 Road Reconstruction and Mule Barn Road Realignment (1601982), and SR 47/ SR 38 Roundabout (2000816). SR 47 from Boone/Hamilton County Line Road, also referred to as County Road (CR) North (N) 1200 East (E), approximately 1.7 miles east through the SR 47 and SR 38 intersection and approximately 0.11 mile south of SR 47 on Mule Barn 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	
_____	_____	ADWP March 12, 2024
INDOT DE Initials and Date	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: Laura Jack, Michael Baker International, Inc.

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

Note: Refer to the most current INDOT CE Manual, guidance language, and other ESD resources for further guidance regarding any section of this form.

Part I – Public Involvement

Every Federal action requires some level of public involvement, providing for early and continuous opportunities throughout the project development process. **The level of public involvement should be commensurate with the proposed action.**

Does the project have a historic bridge processed under the Historic Bridges PA*?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If No, then:		
Opportunity for a Public Hearing Required?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

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

Notice of Entry letters were mailed to potentially affected property owners near the project area on February 23, 2021 notifying them about the project and that individuals responsible for land surveying and field activities may be seen in the area. A sample copy of the Notice of Entry letter is included in Appendix G, page 1.

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 *Indianapolis Star* on May 18, 2023, 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 June 18, 2023. The text of the public notice and the affidavit of publication appear in Appendix D, page 1-3. Four comments were received after this date objecting to the project's finding of "No Adverse Effect", and one comment concurred with the finding. After reviewing these comments, FHWA hosted a consulting party meeting on August 14, 2023, in compliance with 36 CFR 800.5(c)(2)(i). The intent of the meeting was for FHWA staff to listen to consulting parties' objections and to consider their input. FHWA provided a transcript of the meeting to consulting parties on August 22, 2023. FHWA reviewed the information presented by the consulting parties, in accordance with 36 CFR 800.5(b) and determined the project will have "No Adverse Effect" on the Ogle Farmstead on September 19, 2023 (Appendix D, page 43).

Section 4(f)

In compliance with Section 4(f) of the U.S. Department of Transportation Act of 1966 (49 USC 303), hereafter referred to as "Section 4(f)" of 23 CFR 774.5(b)(2), a legal notice of the *de minimis* use finding for impacts to the Monon Trail and Biddle Memorial Park was published in *The Times*, serving Hamilton County, on August 18, 2021. The public comment period closed 30 days later on September 17, 2021. No comments were received. The text of the public notice and the affidavit appear in Appendix J, page 1-2.

Public Information Meeting

A public information meeting flyer was sent out by INDOT to the Town of Sheridan to post (Appendix G, page 6) and project information was posted on INDOT's Greenfield District website (Appendix G, page 7). INDOT posted a news release bulletin to announce the public information meeting on July 18, 2022 (Appendix G, page 8) and the Hamilton County Reporter newspaper posted a notice on July 20, 2022 (Appendix G, page 10). The public information meeting was held on July 27, 2022 at the Sheridan Community Center to inform the public of the project purpose and need, proposed improvements, and anticipated project schedule (Appendix G, page 12). General comments were asked at the meeting about the project's parcel impacts and access during construction.

Project Does Meet

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 comment and/or request a public hearing. Therefore, a legal notice will appear in a local publication contingent upon the release of

This is page 2 of 38 Project name: SR 47 Rd Reconstruction & Mule Barn Rd
Realignment and SR 47/SR 38 Roundabout Date: February 26, 2024

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

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 INDOT District: Greenfield

Local Name of the Facility: SR 47 and SR 38

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.

The project is needed to address the existing SR 47 roadway pavement condition which is deteriorating with fatigue, block, and edge cracking that requires on-going maintenance as identified in the February 7, 2020 Engineering Assessment Report (Appendix K, page 1). In addition, there is no comprehensive storm sewer system along the SR 47 corridor, only sporadic curb inlets along the northern side streets between Main Street and Biddle Memorial Park. In many areas, there are no side ditches to convey water away from the roadway resulting in a saturated subgrade and deteriorated pavement.

Pedestrian facilities within the project area are missing or incomplete. The Sheridan 2013 Comprehensive Plan (https://sheridan.in.gov/Sheridan_with_Resolution_112013.pdf) identified the goal of developing a complete pedestrian-friendly streetscape environment, including continuous sidewalks and crosswalks along SR 47. The majority of the Sheridan population resides north of SR 47 while resources such as the Sheridan Mall, the Monon Trail, and Biddle Memorial Park are located south of SR 47. There is no continuous connection for bicyclists and pedestrians to these various resources and through observations the commercial developments generate a notable volume of pedestrian traffic.

Traffic data was obtained from the INDOT Traffic Count Database System (TCDS) and is identified in the February 7, 2020 Engineering Assessment Report for SR 47 (Appendix K, page 9). Table 1 shows a summary of the traffic data for SR 47.

Table 1. Traffic Data taken from February 7, 2020 Engineering Assessment Report

Road Segment	AADT			% DHV	Truck % AADT
	2016 (Count Year)	2023 (Construction Year)	2043 (Design Year)		
Start of Project to West Road	4,613	5,039	6,379	9	25
Hamilton Street to Main Street	7,331	8,269	11,215	10	15
Main Street to SR 38	7,132	7,914	10,371	9	10

This is page 3 of 38 Project name: SR 47 Rd Reconstruction & Mule Barn Rd Realignment and SR 47/SR 38 Roundabout Date: February 26, 2024

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

Preliminary turn length analysis was conducted within the project area following the procedures outlined in Chapter 305 of the Indiana Design Manual (Appendix K, page 9). The preliminary analysis indicated that roughly 22 percent (95 vehicles) of the AM peak hour and 17 percent (89 vehicles) of the PM peak hour eastbound traffic on SR 47 makes a left turn to travel northbound on Main Street. This meets Indiana Design Manual criteria (shown in Figure 46-4C of the Indiana Design Manual) that warrants an exclusive turn lane.

Mule Barn Road, located south of SR 47, and South (S) California Street, located north of SR 47, are offset intersections that require drivers to make left turn movements within approximately 100 feet of the intersections. Mule Barn Road and S California Street are identified in the 2007 Hamilton County Thoroughfare Plan as secondary arterial routes (Appendix J, page 11). Crash data from the period of January 2016 through December 2018 identified five crashes that have occurred at the SR 47 intersection with Mule Barn Road and the SR 47 intersection with S California Street (Appendix K, page 10). The primary factor in the cause of the crashes was attributed to driver error with half of the crashes being rear end collisions. The crash data identifies that the roadway is operating within normal range for similar roadways in the state of Indiana. However, coordination with the Town of Sheridan has identified that future development, including a new neighborhood Maple Run currently under construction located south of SR 47 and west of Mule Barn Road, is anticipated to increase traffic volumes on Mule Barn Road. Mule Barn Road is likely to become the primary route for residents traveling north into Sheridan. In addition, the Town of Sheridan's letter dated April 22, 2019, requested that local knowledge and desires be considered and listed the intersections of SR 47 with Mule Barn Road and S California Street (Appendix C, page 16).

INDOT Greenfield Traffic Crash Summary data identified 12 crashes have occurred at the intersection of SR 47/SR 38 from 2014-2017 and include rear end collisions and sideswipe collisions (Appendix K, page 40). The existing SR 47/SR 38 intersection was determined to be inadequate and an impediment to traffic flow as identified in the February 7, 2020 Intersection Evaluation (Appendix K, page 23). The level of service (LOS) for the design year (2043) at the SR 47/SR 38 intersection for AM peak hours is "C" and for PM peak hours is "E". The LOS is a qualitative concept which has been developed to characterize an acceptable degree of congestion as perceived by the motorists with a range of A (best) to F (worst). A LOS of A represents free flow traffic with low volumes and no delays; and a LOS of F represents forced flow with very low speeds, volumes exceeding capacity, and long delays. INDOT's design requirement for a state route is a minimum LOS of C or better.

The purpose of the project is to extend the service life of the SR 47 roadway, improve drainage, increase load carrying capacity of the pavement, improve connectivity for bicycle and pedestrian movements which meet local community goals, and improve overall traffic flow and turning movements throughout the project area. Improving traffic flow will reduce the stop and go movements and congestion that can lead to crashes. The purpose is to also improve the SR 47/SR 38 LOS to a LOS of "B" or better for AM and PM peak hours.

PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Hamilton

Municipality: Town of Sheridan

Limits of Proposed Work: SR 47 from Boone/Hamilton County Line Road, also referred to as CR N 1200 East E, approximately 1.7 miles east through the SR 47 and SR 38 intersection and approximately 0.11 mile south of SR 47 on Mule Barn Road

Total Work Length: 1.7 Mile(s)

Total Work Area: 14 Acre(s)

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

Yes¹	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>
Date: <input style="width: 100%;" type="text"/>	

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.

This is page 4 of 38 Project name: SR 47 Rd Reconstruction & Mule Barn Rd Realignment and SR 47/SR 38 Roundabout Date: February 26, 2024

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

Location:

The project is located on SR 47 from the Boone/Hamilton County Line Road (CR N 1200 E) through the SR 47/SR 38 intersection and on Mule Barn Road approximately 0.11 mile south of SR 47 in Sheridan, Hamilton County, Indiana (Appendix B, page 1). The west terminus of the project is the Boone/Hamilton County Line Road. The project extends approximately 1.7 miles to the east terminus near the intersection of SR 47 and SR 38. The western limit of the Sheridan mall, located approximately 0.5 mile east of the Boone/Hamilton County Line Road, marks the transition between the in town section of the roadway and the out of town section of the roadway (Appendix B, page 3). The project is located in Sections 5 and 6, Township 19 N, Range 3 E, and Sections 31 and 32, Township 20 N, Range 3 E as shown on the *Sheridan, IN*, 7.5-minute topographic quadrangle map (USGS) (Appendix B, page 2).

Existing Conditions:

SR 47 is a major east-west route, along the southern edge of the Town of Sheridan serving a combination of commercial and residential traffic as identified in the February 7, 2020, Engineering Assessment Report (Appendix K, page 1). SR 47 is functionally classified as a major collector. SR 47 is a two-lane highway with 11-foot wide travel lanes and approximately 2-foot wide aggregate shoulders. SR 47 has a speed limit of 55 mph at the west end of the project. The speed limit is reduced to 30 mph approximately 0.40 miles east of the Boone/Hamilton County Line and continues throughout the project area to the eastern limits at the SR 47 and SR 38 intersection.

The existing SR 47 corridor is narrow with residential buildings lining both sides of the roadway. The land use varies within the project limits. At the west end of the project outside of the corporate limits of town (referred to as out of town), the land use is agricultural on the south and industrial on the north. From the corporate limits of Sheridan east to S Hamilton Street, the properties adjacent to the roadway are zoned commercial. East of S Hamilton Street, the properties adjacent to the roadway are zoned as a combination of residential and commercial, with an industrial segment south/west of the Monon Trail alignment. At the eastern project limits of the intersection of SR 47/SR 38, adjacent properties are zoned commercial on the north side of the roadway and public space on the south side of the roadway at Biddle Memorial Park.

The western edge of the Sheridan Mall is generally considered the boundary between rural (out of town) and urban (in town) within the project corridor (Appendix B, page 3). There are two stop-controlled intersections for the north-south movements within the corridor, N 1200E (Boone/Hamilton County Line) and S Georgia Street. There are numerous T-intersections throughout the corridor including West (W) Road, Wesco Parkway, Arrow Street, Maple Run Drive, S Hamilton Street, S Sheridan Avenue, Mule Barn Road, S California Street, S Main Street, Adams St., Park Avenue, S Mallot Street, Opel Street, S Bailey Street, S Hudson Street, and Park Place. There is a five way-stop at the SR 47/SR 38 intersection which also connects to the entrance of Biddle Memorial Park. SR 47 and SR 38 do not cross perpendicular to one another, the north approach of SR 38 has a skew of approximately 60° from perpendicular, while the south approach is approximately 40°.

Overall, the existing pavement on SR 47 is in poor condition with fatigue, block, and edge cracking requiring ongoing maintenance as identified in the February 7, 2020, Engineering Assessment Report (Appendix K, page 1). The roadway received a deep patch and chip seal in 2015, and an intermittent mill and overlay between Mule Barn Road and the western limits of Biddle Memorial Park in 2018. The existing drainage features are limited to isolated shallow swales and limited storm sewer inlets at occasional intersections. In many areas, there are no side ditches to convey water away from the roadway, which results in a saturated subgrade and the deterioration of the pavement.

There are numerous commercial driveways as well as unofficial driveway pull outs that have developed at residences on the north side of SR 47. A sidewalk is present on the south side of SR 47, for approximately 0.30 miles, from Arrow Street to S Sheridan Avenue (Appendix B, page 3). An existing pedestrian crossing traverses SR 47, connecting the southern sidewalk to the north side of SR 47, east of S Sheridan Avenue. This sidewalk connects the residential areas on the north side of SR 47 to residential communities as well as the Sheridan Mall on the south side of SR 47. This section of the existing sidewalk has Americans with Disabilities Act (ADA) curb ramps installed. Additionally, there is a section of sidewalk on the south side of SR 47 from Park Place to 85 feet east of Park Place terminating at a residential lot line. Throughout the rest of the project limits, there are no pedestrian accommodations. The commercial developments generate a notable volume of pedestrian traffic.

Biddle Memorial Park is a public park located south of SR 47. There are three existing entrances to Biddle Memorial Park, one located at the west end of the park on SR 47, one at the intersection of SR 47/SR 38, and one at east end of the park on SR 38. The Monon Trail, a publicly owned recreation trail, runs behind Biddle Memorial Park with the northern terminus approximately 50 feet south of SR 47 (Appendix B, page 3). Biddle Memorial Park and the Monon Trail are Section 4(f) resources, and more information is included in the Section 4(f) section of this document and Appendix J. The Town of Sheridan is the official with jurisdiction (OWJ) for both resources. Town officials noted interest in including a crossing at SR 47 since the trail at the time of coordination was planned to be extended through the Town of Sheridan in 2022 (Appendix J, page 7). The Town of Sheridan Monon Trail extension (north of SR 47) is programmed and now anticipated to be built in Summer of 2024.

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

The Sheridan 2013 Comprehensive Plan (https://sheridan.in.gov/Sheridan_with_Resolution_112013.pdf) identified transportation goals including developing a complete pedestrian-friendly streetscape environment consisting of continuous sidewalks, crosswalks, street trees, and lighting along SR 47. Town officials expressed that pedestrian access and safety along SR 47 are of paramount importance particularly for connectivity of the Sheridan Mall strip mall, the Monon Trail, and Biddle Memorial Park during the initial project kickoff meeting in November of 2018 and again in the second project kickoff meeting in August of 2019. With the majority of the Sheridan population residing north of SR 47, pedestrian crossings and sidewalks to the Sheridan Mall, the Monon Trail, and Biddle Memorial Park are necessary to meet the connectivity goals of the community.

Traffic data was obtained from the INDOT Traffic Count Database System (TCDS) and identified in the February 7, 2020 Engineering Assessment Report for SR 47 (Appendix K, page 9). Table 1 shows a summary of the traffic data.

Table 1. Traffic Data taken from February 7, 2020 Engineering Assessment Report

Road Segment	AADT			% DHV	Truck % AADT
	2016 (Count Year)	2023 (Construction Year)	2045 (Design Year)		
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Hamilton Street to Main Street	7,331	8,269	11,215	10	15
Main Street to SR 38	7,132	7,914	10,371	9	10

Preliminary turn length analysis was conducted within the project area following the procedures outlined in Chapter 305 of the Indiana Design Manual (Appendix K, page 9). The preliminary analysis indicated that roughly 22 percent (95 vehicles) of the AM peak hour and 17 percent (89 vehicles) of the PM peak hour eastbound traffic on SR 47 makes a left turn to travel northbound on Main Street. This meets Indiana Design Manual criteria (shown in Figure 46-4C of the Indiana Design Manual) that warrants an exclusive turn lane.

Crash data from the period of January 2016 through December 2018 identified five crashes that have occurred at the intersection of Mule Barn Road, south of SR 47, and South (S) California Street, north of SR 47, with SR 47 and three crashes have occurred at the intersection of Main Street and SR 47 (Appendix K, page 10). The primary factor in the cause of the crashes was attributed to driver error with half of the crashes being rear end collisions. The crash data identifies that the roadway is operating within normal range for similar roadways in the state of Indiana. However, studies show that future development, including a new neighborhood Maple Run currently under construction located south of SR 47 and west of Mule Barn Road, is anticipated to increase traffic volumes on Mule Barn Road. Mule Barn Road is likely to become the primary route for residents traveling north into Sheridan.

INDOT Greenfield Traffic Crash Summary data identified 12 crashes have occurred at the intersection of SR 47/SR 38 from 2014-2017 and include rear end collisions and sideswipe collisions (Appendix K, page 40). The existing SR 47/SR 38 intersection was determined to be inadequate and an impediment to traffic flow as identified in the February 7, 2020 Intersection Evaluation (Appendix K, page 23). The level of service (LOS) for the design year (2043) at the SR 47/SR 38 intersection for AM peak hours is "C" and for PM peak hours is "E". The LOS is a qualitative concept which has been developed to characterize an acceptable degree of congestion as perceived by the motorists with a range of A (best) to F (worst). A LOS of A represents free flow traffic with low volumes and no delays; and a LOS of F represents forced flow with very low speeds, volumes exceeding capacity, and long delays. INDOT's design requirement for a state route is a minimum LOS of C or better.

One eligible National Register of Historic Places (NRHP) property, Ogle Farmstead, was identified within the project area south of SR 47 and east of Mule Barn Road (Appendix B, page 3). Refer to the Cultural Resources section of this document.

Preferred Alternative (Alternative 3b and 5):

The FHWA and INDOT propose two improvement projects, the SR 47 Road Reconstruction and Mule Barn Road Realignment (INDOT Des. No. 1601982) and the SR 47/SR 38 Roundabout (INDOT Des. No. 2000816).

Des. No. 1601982: SR 47 Roadway Reconstruction & Mule Barn Road Realignment

The proposed SR 47 project involves the reconstruction of the roadway to accommodate two, 12-foot wide travel lanes with curb and gutter and a 5-foot to 6-foot wide sidewalk along the south side of the road. For the rural segment (Hamilton-Boone County Line to

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

approximately the western limits of the Sheridan Mall), the proposed treatment consists of a mill and resurface of the existing pavement and a three-foot widening of the existing shoulders. For the urban segment (western limits of the Sheridan Mall to SR 38), the proposed treatment consists of pavement reconstruction, curb and gutter, sidewalk, an enclosed drainage system, and the realignment of Mule Barn Road. The proposed sidewalk will be placed along the south side of SR 47 only. West of S Sheridan Ave, the sidewalk will be 5-feet wide and will match the current sidewalk location. East of S Sheridan Ave, the sidewalk will be adjacent to the back of curb and will be 6-feet wide. The Monon Trail will be extended to meet the new sidewalk along the south side of SR 47 (Appendix B, page 20). A new crosswalk, located just west of Opel Street near the proposed roundabout, will be added to provide bicyclists and pedestrians safe access to the north side of SR 47 where new sidewalk and another crosswalk will be added allow access to the east at the north end of the proposed roundabout (Appendix B, page 20). The new sidewalk and crosswalks will provide pedestrians access from the park and adjacent neighborhoods to commercial businesses on the north side that were not previously accessible for bicyclist and pedestrians. Throughout the corridor, the roadway centerline will remain in its existing location, due to the combination of the narrow width of the SR 47 corridor and residential buildings lining both sides of the roadway.

To improve traffic operations and turning movements, a turn lane will be constructed on SR 47 for eastbound traffic turning left onto S Main Street. To accommodate the turn lane, the existing two lane roadway will begin to widen along the south side of the roadway, beginning at a point near S Ohio Street. East of the turn lane at S Main Street, SR 47 will return to a two lane road. The length of a turn lane is determined using guidance provided in the INDOT design manual. Turn lanes have three components: 1) Taper- this is the length required to shift the eastbound travel lane south by 12 feet in order to provide room for the turn lane; 2) Deceleration- this is the distance recommended to allow adequate distance to slow a vehicle to the appropriate speed; and 3) Storage Length- this length should be sufficient to avoid the possibility of left-turning vehicles stopping in the through lanes while waiting for a gap in the opposing traffic. Both the taper and storage lengths have specific criteria that must be met for the facility to operate properly. The deceleration distance is an optional criterion in restricted urban environments. The deceleration distance was analyzed for the turn lane but was removed to minimize impacts to the NRHP eligible Ogle Farmstead. Removing the deceleration distance allowed the overall turn lane length to be reduced by 280 feet. Refer to the Cultural Resources section of this document.

Throughout the rural portion of the SR 47 corridor, the existing drainage ditches and patterns will be maintained with minor alterations to accommodate the proposed pavement widening. A fully enclosed storm sewer system will be constructed throughout the urban portion of the project. Storm water will be collected using curb inlets along the roadway or yard inlets located behind the curbs. The western portion of the system will discharge to Thistlewaite Drain, while the eastern portion will discharge to the William Krause Drain. To prevent an increase in the drainage discharge rate, the outfalls will be reduced. This reduction creates a backup in the overall system which is mitigated by oversizing portions of the system to allow for the storage of stormwater. This is generally referred to as inline detention.

Also included in Des No. 1601982 is the Realignment of Mule Barn Road, which will be funded by the Town of Sheridan and constructed as part of the larger SR 47 reconstruction. The realignment shifts the existing intersection of Mule Barn Road and SR 47 east approximately 100 feet so that it aligns with S California Street. The realigned Mule Barn Road will extend south approximately 550 feet before turning southwest and rejoining the existing alignment of Mule Barn Road (Appendix B, 19).

Des. No. 2000816: Single Lane Roundabout

This portion of the project involves the reconstruction of the intersection of SR 47/SR 38 as a single-lane roundabout (Appendix B, page 20). The center of the intersection will shift to the southwest to avoid significant impacts to a bank property located in the northeast quadrant, and to better align the exterior truck aprons with the grassy areas in the northwest and southeast quadrants. The roundabout location will also include the installation of INDOT standard roadway lighting and pedestrian facilities including the previously mentioned sidewalk and crosswalks. Existing drainage patterns along the south and east approaches will be retained. The existing primary entrance drive for the Biddle Memorial Park, currently located at the SR 47/SR 38 intersection, will be eliminated. The other two existing entrances, one on SR 47 and one on SR 38, will remain in place. The SR 47 drive will be upgraded with an entrance lane and dual exit lanes, left and right turn lanes, and become the new primary entrance (Appendix B, page 23). The total width of the entrance drive will be 33 feet. The Biddle Memorial Park and Monon Trail parking will not be impacted by the project.

Maintenance of Traffic (MOT)

The SR 47 work will detour to routes SR 38 and US 421 (Appendix B, page 44-51). The work along SR 47 will be split into three phases: Phase 1 will begin at the western terminus of the project and extend to the west side of the Sheridan Mall, approximately 0.51 miles, Phase 2 will be from the west side of the Sheridan Mall to a point just west of Mule Barn Road, approximately 0.46 miles, and Phase 3 will start from just west of Mule Barn Road to the west side of the GetGo gas station, approximately 0.60 miles and will include the realignment of Mule Barn Road. Each phase will be constructed under a full closure with durations between 2 and 3 months. Pedestrian MOT will utilize a temporary surface to maintain existing sidewalk facilities during construction. Following the completion of SR 47, the SR 47/SR 38 roundabout will be constructed in two phases, north/south traffic being first moved to the east,

This is page 7 of 38 Project name: SR 47 Rd Reconstruction & Mule Barn Rd
Realignment and SR 47/SR 38 Roundabout Date: February 26, 2024

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

then to the west building half of the intersection at a time. East/west traffic will not be continuous through the intersection, with a 3-phase signal maintaining only one side of the intersection based on the phase of construction. East/west traffic will be detoured using US 31, SR 32, and US 421 (Appendix B, pages 73-77).

During construction, the Monon Trail will be temporarily closed, from the Opel Street parking lot north to SR 47. After construction, the trail will be fully reopened and connect to SR 47. There will be a temporary closure of the SR 47 entrance to Biddle Memorial Park during Phase 3 of construction. During the temporary closure, there will still be access to Biddle Memorial Park from the SR 47/SR 38 intersection and SR 38 entrance. During the SR 47/SR 38 roundabout phase of construction the SR 38 entrance will remain open. The official detour for Phase 3 is approximately 21.53 miles and for the roundabout construction is approximately 30.89 miles; however local streets can be utilized for local traffic (approximately 6.38 miles). The access to parking will remain the same throughout construction as the park parking areas will not be impacted. After construction, the SR 47 entrance, which will become the new primary entrance, and the SR 38 entrance will remain open. Refer to MOT section of this document.

Right of Way (ROW)

The project will require approximately 4.82 acres of permanent ROW and 1.15 acres of temporary ROW. Approximately 0.12 acre of permanent ROW will be acquired from CSX Transportation, who owns the parcel at the northern end of the Monon Trail, in order to extend and connect the trail with the improved sidewalk and crosswalk associated with the new roadway. Approximately 0.60 acre of permanent ROW is needed from Biddle Memorial Park to construct the proposed SR 47 roadway reconstruction and the new roundabout at the SR 47/SR 38 intersection. In addition, approximately 0.03 acre of temporary ROW will be required from Biddle Memorial Park during construction.

Since the Monon Trail and Biddle Memorial Park are Section 4(f) resources and the project will take ROW from these resources, a *de minimis* letter was prepared and minimization measures will be implemented. Refer to the Section 4(f) section of this document and Appendix J. The minimization measures are included as firm commitments in the Environmental Commitments Section of this document.

The project will require approximately 0.096 acre of permanent ROW and 0.044 acre of temporary ROW from the NRHP eligible Ogle Farmstead. Approximately 0.050 acre will be paved due to curbing and sidewalk. The FHWA determined on September 19, 2023, that the project will have "No Adverse Effect". Additional information can be found in the Cultural Resources Section of this document and in Appendix D.

Meets Purpose and Need

The preferred alternative meets the purpose and need by extending the service life of the SR 47 roadway; improving drainage; increasing the load carrying capacity of the pavement; improving connectivity for bicycle and pedestrian movements with new sidewalk, crosswalks, and the Monon Trail extension which will connect to the new sidewalk; and improving the overall traffic flow and turning movements throughout the project area. Traffic flow will be improved throughout the project with an added turn lane on SR 47 for eastbound traffic turning left to head northbound onto S Main Street, realignment and improved connection at Mule Barn Road with SR 47 and S California Street, and the removal of the five way stop at the SR 47/SR 38 intersection. The new SR 47/SR 38 intersection is anticipated to have an LOS of A for AM and PM peak hours.

Logical Termini/Independent Utility:

The preferred alternative has independent utility, meaning its intent is to provide a road reconstruction and improve the intersection and it includes connection to the necessary adjacent side streets to make it a stand-alone project and is not dependent on any other projects current or planned. The project's logical termini is based on roadway geometry to connect to the existing network and adjacent side streets. The project ends at the Boone/Hamilton County and the project is entirely within Hamilton County. To the west of the project area is Boone County and SR 47 to the west of the project area has existing wider usable shoulders and ditches that this project will better match.

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.

As stated in existing conditions, the western limit of the Sheridan Mall marks the transition between the urban (in town) and rural (out of town) sections of the project (Appendix B, page 3). The existing SR 47 corridor is narrow with residential buildings lining both sides of the roadway. Based on this restricted urban environment and the potential impacts, the following alternatives were considered. These are summarized from the February 7, 2020 Engineering Assessment Report and February 7, 2020 Intersection

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

Evaluation in Appendix K.

SR 47 Roadway Alternatives (for Des. No. 1601982):

- Alternative 1: No Build
- Alternative 2: Pavement Reconstruction with Curb, without Sidewalk (in town)/Functional Overlay (out of town) with Rural Shoulder
- Alternative 3: Pavement Reconstruction with Curb with Sidewalk (in town)/Functional Overlay (out of town)
 - Alternative 3a: Sidewalk North/South Sides of SR 47
 - Alternative 3b: Sidewalk Just on South Side of SR 47 (Preferred)
 - Alternative 3c: Shared Use Path

Alternative 1: No Build

The No Build (do nothing) alternative would leave the existing pavement, pedestrian facilities, and intersection in place, as is, with minor improvements and routine maintenance; the existing pavement would continue to deteriorate. This alternative does not address the lack of connectivity for pedestrians/bicyclists within the project area; therefore, it does not meet the project's purpose and need. The No Build was dismissed from further consideration.

Alternative 2: Pavement Reconstruction with Curb, without Sidewalk (in town)/Functional Overlay with Rural Shoulder (out of town)

Alternative 2 includes a Hot Mix Asphalt (HMA) overlay with concrete curb and gutter and a rural shoulder with a 2-foot usable width. The pavement would be reconstructed with 12-foot travel lanes in each direction. A curb and gutter section would be added on both sides of SR 47 to allow for the accumulation and transportation of stormwater runoff. In addition, the curb and gutter would act as a traffic calming device by encouraging lower speeds throughout the developed limits of the Town of Sheridan. Alternative 2 would improve traffic flow with the incorporation of a new turn lane for eastbound traffic turning left onto northbound Main Street. This alternative would not provide bicyclist/pedestrian facilities; therefore, it does not meet the project's purpose and need. Alternative 2 was dismissed from further consideration.

Alternative 3: Pavement Reconstruction with Curb with Sidewalk (in town)/Functional Overlay with Rural Shoulder (out of town)

Alternative 3 includes pavement reconstruction with curb and sidewalk within town and a functional overlay with rural shoulder, a paved shoulder with no curb or gutter, out of town.

Alternative 3a: Sidewalk on North and South Sides of SR 47

Alternative 3a would provide ADA compliant sidewalks on both the north and south side of SR 47 for the in town section of the corridor. It would provide a direct connection on the south sides of the roadway to the northern terminus of the Monon Trail. With this alternative, the existing sidewalk along the south side of SR 47 would be widened to include a buffer that would match the buffer provided in the new sidewalk design from Sheridan Avenue to Arrow Street. In this way, the new and old sidewalks will merge, saving construction and material costs. Given the tight restrictions within the narrow corridor, this alternative would require greater amounts of ROW, resulting in impacts to residential homes located north of SR 47, including possible relocations. Alternative 3a would meet the project's purpose and need; however, due to these greater direct community impacts, Alternative 3a was dismissed from further consideration.

Alternative 3b: Sidewalk Just on South Side of SR 47 (Preferred)

This alternative would provide a 5-foot to 6-foot wide sidewalk along the south side of the road. *Refer to Preferred Alternative discussion above.*

Alternative 3c: Shared-Use Path

Alternative 3c would construct a 10-foot to 12-foot wide shared use path along the south side of SR 47 with a 5-foot buffer. The shared use path would narrow to connect with the newly constructed 6-foot sidewalk along the south side of SR 47 from Sheridan Avenue to Arrow Street. ROW would be required for this alternative. Alternative 3c meets the project's purpose and need. However, given the tight restrictions along SR 47, this alternative would require greater amounts of ROW and would have greater impacts to residential properties. Therefore, Alternative 3c was dismissed from further consideration.

SR 47 and SR 38 Intersection Alternatives (Des 2000816):

- Alternative 4: Existing Intersection Improvement(s)
 - Alternative 4a: Traffic Signalization
 - Alternative 4b: Signalization of the Existing Geometry including Auxiliary Lanes
 - Alternative 4c: Signalization with Improved Geometry including Auxiliary Lanes (South Leg Shift 40-Degree Skew from Perpendicular)

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

- Alternative 5: New Intersection as a Single- Lane Roundabout (Preferred)

Alternative 4: Existing Intersection Improvement(s)

Alternative 4a: Traffic Signalization

This alternative includes the installation of a traffic signal at the existing SR 47 and SR 38 intersection, as warranted under INDOT's Traffic Signal Warrant Evaluation. Under this option, no widening for turn lanes would be included. This alternative would not improve traffic flow and therefore would not meet the project's purpose and the need. Alternative 4a was dismissed from further consideration.

Alternative 4b: Signalization of the Existing Geometry including Auxiliary Lanes

This alternative consists of widening the SR 38 northbound and southbound approaches to accommodate exclusive left turn lanes. The SR 38 roadway typical sections would consist of three 12-foot travel lanes. All intersection approaches within the limits of work would include a 6-inch vertical face curb, with a 2-foot offset from the edge of the travel lane. The curb would help with traffic calming along with the separation of vehicular and pedestrian facilities.

The overall intersection limits of work would accommodate the addition of the SR 38 turn lanes, minor side road modifications to adjust radius returns, and curb installation with sidewalks. The west leg of SR 47 limit of work would extend roughly 200 feet beyond the intersection to Ricker's driveway and would accommodate adjustments to the intersection radius returns and pedestrian facilities. The east leg of W. 236th Street limit of work would extend roughly 200 feet beyond the intersection to the Dairy Queen and Valero driveways and would accommodate adjustments to the intersection radius returns and pedestrian facilities. A 5-foot-wide sidewalk would be included and set 4-feet behind the curb to avoid utility impacts. The new sidewalk would give pedestrians access from the park and adjacent neighborhoods to Dairy Queen. A crosswalk at the SR 38 north leg would connect pedestrian access from the Dairy Queen to the pedestrian infrastructure.

This alternative would have minimal ROW impacts that would not exceed sliver takes or additional easements. Utility impacts would occur in the northwest quadrant intersection radius return. Impact to a high-pressure gas line in the southwest intersection quadrant along the radius return is a possibility under this alternative. According to the Indiana Design Manual, at grade intersections should not exceed 20° off perpendicular or 30° off perpendicular in conditions to limit geographic, utility, and ROW constraints. The existing intersection skews are 40° off perpendicular for the SR 38 north leg and almost 60° off perpendicular for the SR 38 south leg. This alternative meets the purpose and need but was not selected as the preferred alternative based on its longer queue lengths and reduced effectiveness against fatalities and injury crashes, when compared to the preferred alternative. Alternative 4b was dismissed from further consideration.

Alternative 4c: Signalization with Improved Geometry including Auxiliary Lanes (South Leg Shift 40-Degree Skew from Perpendicular)

This alternative resembles the SR 38 north leg, the SR 47 west leg, and the W 236th Street east leg. Under this concept, the SR 38 south leg would shift off the existing alignment via a reverse curve approaching the intersection. This reverse curve would align the SR 38 north leg and the SR 38 south leg at the same skew angle. The first horizontal curve would have a radius that maintains a design speed of 35 mph. The second horizontal curve would have a radius to accommodate full superelevation at a design superelevation of 4%. This alternative would implement pedestrian accommodations. This alternative would require ROW from Biddle Memorial Park to accommodate the shifted alignment of the SR 38 south leg. However, the impacts would not affect the baseball field adjacent to the roadway. Three utility poles located between SR 38 and Biddle Memorial Park would likely need to be relocated. In addition, the high-pressure gas line at the southwest quadrant of the intersection would most likely be impacted. This alternative meets the project's purpose and need but was not selected based on its longer queue lengths and reduced effectiveness against fatalities and injury crashes, when compared to the preferred alternative. Alternative 4c was dismissed from further consideration.

Alternative 5: New Intersection as a Single Lane Roundabout (Preferred)

This alternative would construct a single lane roundabout at the intersection of SR 47/SR 38. *Refer to Preferred Alternative discussion above.*

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

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 (It would not meet the Purpose and Need):

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

ROADWAY CHARACTER:

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

Name of Roadway SR 47
 Functional Classification: Major State Collector
 Current ADT: 7,331 VPD (2016) Design Year ADT: 11,215 VPD (2045)
 Design Hour Volume (DHV): 1,122 Truck Percentage (%) 15
 Designed Speed (mph): 35 Legal Speed (mph): 35

	Existing	Proposed
Number of Lanes:	2	2+ left turn lane at Main St
Type of Lanes:	Through lanes	2 through, 1 left turn lane
Pavement Width:	22 ft.	24 ft.
Shoulder Width:	2 ft.	0 ft.
Median Width:	0 ft.	0 ft.
Sidewalk Width:	0 ft.	6 ft.

Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

Name of Roadway SR 38
 Functional Classification: Major State Collector
 Current ADT: 3,498 VPD (2016) Design Year ADT: 4,736 VPD (2045)
 Design Hour Volume (DHV): 464 Truck Percentage (%) 7.6
 Designed Speed (mph): 35 Legal Speed (mph): 35

	Existing	Proposed
Number of Lanes:	2	2
Type of Lanes:	Through lanes	Through lanes
Pavement Width:	10 ft.	12 ft.
Shoulder Width:	1 ft.	1 ft.
Median Width:	0 ft.	0 ft.
Sidewalk Width:	0 ft.	5-6 ft.

Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

Name of Roadway Mule Barn Road
 Functional Classification: Local City Street
 Current ADT: 1,958 VPD (2018) Design Year ADT: 6,359 VPD (2045)

Indiana Department of Transportation

County Hamilton Route SR 47 & SR 38 Des. No. 1601982 & 2000816

Design Hour Volume (DHV): N/A Truck Percentage (%): N/A
 Designed Speed (mph): 30 Legal Speed (mph): 30

	Existing	Proposed
Number of Lanes:	2	2
Type of Lanes:	Through lanes	Through lanes
Pavement Width:	10 ft.	10 ft.
Shoulder Width:	1 ft.	1 ft.
Median Width:	N/A ft.	N/A ft.
Sidewalk Width:	N/A ft.	N/A ft.

Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

Name of Roadway Main Street
 Functional Classification: Local City Street
 Current ADT: N/A VPD (20-) Design Year ADT: N/A VPD (20-)
 Design Hour Volume (DHV): N/A Truck Percentage (%): N/A
 Designed Speed (mph): 20 Legal Speed (mph): 20

	Existing	Proposed
Number of Lanes:	2	2
Type of Lanes:	Through lanes	Through lanes
Pavement Width:	12 ft.	12 ft.
Shoulder Width:	1 ft.	1 ft.
Median Width:	0 ft.	0 ft.
Sidewalk Width:	0 ft.	0 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): CLV-54202 Sufficiency Rating: N/A
 (Rating, Source of Information)

	Existing	Proposed
Bridge/Structure Type:	24" Reinforced Concrete Pipe	24" Reinforced Concrete Pipe
Number of Spans:	1	1
Weight Restrictions:	N/A ton	N/A ton
Height Restrictions:	N/A ft.	N/A ft.
Curb to Curb Width:	N/A ft.	N/A ft.
Outside to Outside Width:	22 ft.	24 ft.
Shoulder Width:	1 ft.	2 ft.

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

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

	Existing	Proposed
Bridge/Structure Type:	72" Reinforced Concrete Pipe	72" Reinforced Concrete Pipe
Number of Spans:	1	1
Weight Restrictions:	N/A	N/A
Height Restrictions:	N/A	N/A
Curb to Curb Width:	N/A	N/A
Outside to Outside Width:	22	24
Shoulder Width:	1	1

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 are two existing structures within the project area. One structure, CLV-54202, is a 24" reinforced concrete pipe, approximately 56' in length, located approximately 2,650' east of the Hamilton-Boone County line. SR 47 will be widened by roughly 2-foot in each direction. The existing culvert is in good condition and is sufficiently long enough where the structure will not have to be lengthened as part of the project. The other structure (no structure number) is a 72" reinforced concrete pipe, approximately 89' in length, located approximately 3,875 feet east of the Hamilton-Boone County line. This pipe is part of the Thistlewaite Drain in Hamilton County. SR 47 will be reconstructed ovetop of the structure, but it will not require any modifications. Portions of the proposed drainage system east and west of the legal drain will discharge immediately downstream of this existing structure. The structures do not exhibit any features that would be considered historic.

MAINTENANCE OF TRAFFIC (MOT) DURING CONSTRUCTION:

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

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

The MOT detour routes for the SR 47 work will utilize SR 38 and US 421. Reference Appendix B, pages 44-51 and 73-77 for the MOT plans. The work along SR 47 will be split into three phases: Phase 1 will begin at the western terminus of the project and extend to the west side of the Sheridan Mall (Appendix B, page 44), approximately 0.51 miles, Phase 2 will be from the west side of the Sheridan Mall to a point just west of Mule Barn Road, approximately 0.46 miles (Appendix B, page 46), and Phase 3 will start from just west of Mule Barn Road to the west side of the GetGo gas station, approximately 0.60 miles and will include the realignment of Mule Barn Road (Appendix B, page 48). Each phase will be constructed under a full closure with durations between 2 and 3 months. The official detour length for each phase is approximately 21.53 miles; however, local streets can be utilized for local traffic. Pedestrian MOT will utilize a temporary surface, access mat, to maintain existing sidewalk facilities during construction (Appendix B, page 51). The temporary surface area is approximately 0.32 mile long. Following the completion of SR 47, the SR 38/SR 47 roundabout will be constructed in two phases, north/south traffic being first moved to the east, then to the west building half of the intersection at a time. East/west traffic will not be continuous through the intersection, with a 3-phase signal maintaining only one side of the intersection based on the phase of construction. East/west traffic will be detoured using US 31, SR 32, and US 421 (Appendix B, page 73). The detour length for the roundabout is approximately 30.89 miles; however local streets can be utilized for local traffic.

During construction, the Monon Trail will be temporarily closed, from the Opel Street parking lot north to SR 47. After construction,

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

the trail will be fully reopened and connect to SR 47. There will be a temporary closure of the SR 47 entrance to Biddle Memorial Park during Phase 3 of construction. During the temporary closure, there will still be access to Biddle Memorial Park from the SR 47/SR 38 intersection and SR 38 entrance. During the SR 47/SR 38 roundabout phase of construction the SR 38 entrance will remain open. The official detour for Phase 3 is approximately 21.53 miles and for the roundabout construction is approximately 30.89; however local streets can be utilized for local traffic (approximately 6.38 miles). The access to parking will remain the same throughout construction as the park parking areas will not be impacted. After construction, the SR 47 entrance, which will become the new primary entrance, and SR 38 entrance will remain open.

The closures/lane restrictions will pose a temporary inconvenience to traveling motorists (including school buses and emergency services); however, no significant delays are anticipated as the project will be done in phases which allows portions of the existing SR 47 to remain open and allow continued connection to local side streets which can be utilized by local traffic. Delays may occur during construction but will cease with project completion.

ESTIMATED PROJECT COST AND SCHEDULE:

Engineering: \$ 2,520,000 (2023) Right-of-Way: \$ 1,100,000* (2023) Construction: \$ 7,444,000 (2024)

Anticipated Start Date of Construction: Summer 2024

*Moved forward with ROW for non-Section 4(f) properties at risk with State funds, ROW for Section 4(f) properties will be purchased after approval of NEPA document.

RIGHT OF WAY:

Land Use Impacts	Amount (acres)	
	Permanent	Temporary
Residential	1.07	0.44
Commercial	0.85	0.64
Agricultural	2.18	0.04
Forest		
Wetlands		
Other: Recreational	0.72	0.03
Other:		
TOTAL	4.82	1.15

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 existing typical ROW widths range from 25 feet from the centerline of SR 47 to a maximum width of 38 feet from the centerline of SR 47 in certain areas of the project area.

The project will require approximately 4.82 acres of permanent ROW and 1.15 acres of temporary ROW. Approximately 0.85 acres of permanent from commercial, 2.18 acres from agricultural, and 0.72 acre from recreational. Approximately 0.44 acre of temporary from residential, 0.64 acre from commercial, 0.04 acre from agricultural, and 0.03 acre from recreational. Approximately 0.12 acre of permanent ROW will be acquired from CSX Transportation, who owns the parcel, at the northern end of the Monon Trail, in order to extend and connect the trail with the improved sidewalk and crosswalk associated with the new roadway. Approximately 0.60 acre of permanent ROW is needed from Biddle Memorial Park to construct the proposed SR 47 roadway reconstruction and the new roundabout at the SR 47 and SR 38 intersection. In addition, approximately 0.03 acre of temporary ROW will be required from Biddle Memorial Park during construction. A Master Property Impact Table that breaks down the ROW by parcel ID and land use can be found in Appendix B, page 28.

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.

This is page 14 of 38 Project name: SR 47 Rd Reconstruction & Mule Barn Rd
Realignment and SR 47/SR 38 Roundabout Date: February 26, 2024

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

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

SECTION A - an 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 February 1, 2019, again on December 31, 2020 to additional recipients, and follow up on October 9, 2023 to recipients who had previously responded for an opportunity to provide any updates. The project originally included Des. No. 1592544, SR 38 HMA Overlay; however, it has independent utility and therefore it was separated to be its own project in 2021 and is documented in a separate CE. A copy of the early coordination letters and responses can be found in Appendix C. The early coordination recipient list is shown in Table 2 with the date responses were received.

Table 2. Early Coordination List

Agency	Date Sent	Date Response Received	Appendix
Indiana Department of Natural Resources, Division of Fish and Wildlife (IDNR, DFW)	February 1, 2019, follow up October 9, 2023	March 1, 2019 & October 12, 2023	Appendix C, page 4
Indiana Department of Environmental Management (IDEM) automated response	February 1, 2019	June 12, 2019	Appendix C, page 7
IDEM Groundwater Section	February 1, 2019	February 13, 2019	Appendix C, page 12
United States Fish and Wildlife Service (USFWS)	February 1, 2019, follow up October 9, 2023	February 27, 2029	Appendix C, page 14
Indiana Geological and Water Survey (IGWS)	February 1, 2019	August 26, 2021	Appendix C, page 22
United States Army Corps of Engineers (USACE)	February 1, 2019	No response received	N/A
Natural Resources Conservation Service (NRCS)/United States Department of Agriculture (USDA)	December 31, 2020	December 10, 2021	Appendix C, page 24
United States Environmental Protection Agency (USEPA)	February 1, 2019	No response received	N/A
Federal Highway Administration (FHWA)	February 1, 2019	No response received	N/A
United States Department of Housing & Urban Development (HUD)	February 1, 2019	No response received	N/A
National Park Service (NPS)	February 1, 2019	No response received	N/A
INDOT Central Office Environmental Services Division	February 1, 2019	No response received	N/A
INDOT Greenfield District	February 1, 2019	No response received	N/A
Indiana County Council Members	February 1, 2019	No response received	N/A
Sheridan Town Council	February 1, 2019	April 22, 2019	Appendix C, page 16
Indiana County Surveyor	February 1, 2019	No response received	N/A
Indiana County Highway Supervisor	February 1, 2019	No response received	N/A
Hamilton County	February 1, 2019	No response received	N/A
Hamilton County Plan Commission	February 1, 2019	No response received	N/A
Sheridan Airport	December 31, 2020	No response received	N/A
Sheridan Community Schools	December 31, 2020	No response received	N/A
Sheridan Police Department	December 31, 2020	No response received	N/A
Sheridan Fire Department	December 31, 2020	No response received	N/A
IDNR Oil and Gas Division	December 31, 2020	No response received	N/A
INDOT Aviation	December 31, 2020	No response received	N/A

The Sheridan Town Council responded to early coordination on April 22, 2019 stating, "I want to express our deep appreciation to the attention of the two roadways [SR 47 & SR 38] designated to receive improvements. The improvement of these State Roads will most assuredly improve transportation, economic development and the overall quality of life in our town" (Appendix C, page 16). Continued coordination with the Town of Sheridan has occurred throughout the project. All applicable recommendations are included in the

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

Environmental Commitments section of this CE document.

SECTION B – ECOLOGICAL RESOURCES:

Streams, Rivers, Watercourses & Other Jurisdictional Features

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

Presence

X

Impacts

Yes	No
X	

Total stream(s) in project area: 51.5 Linear feet Total impacted stream(s): 51.5 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)
Eagle Creek	Perennial	27.3	27.3	Flows south, likely a Water of the US
UNT to Eagle Creek	Intermittent	24.2	24.2	Flows south, likely a Water of the US

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.

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

Based on a desktop review, the aerial map of the project area (Appendix B, page 1), the water resource map in the Red Flag Investigation (RFI) report (Appendix E, page 12) there are five streams, rivers, watercourse or jurisdictional ditches within the 0.5 mile search radius. That number was updated by the site visit on October 6, 2020 by Michael Baker. Two streams, Eagle Creek and unnamed tributary (UNT) to Eagle Creek, are present within the project area. 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 within the project area.

A *Waters of the U.S. Determination/Wetland Delineation Report* was approved by INDOT Ecology and Waterway Permitting Office on September 6, 2021. Please refer to Appendix F, page 1 for the *Waters of the U.S. Determination/Wetland Delineation Report*. It was determined that Eagle Creek and UNT to Eagle Creek are likely jurisdictional waters. The USACE makes all final determinations regarding jurisdiction.

UNT to Eagle Creek

UNT to Eagle Creek, identified on the USGS NHD map, was identified in the field west of the Sheridan Mall. UNT to Eagle Creek is an intermittent dashed stream within the study area according to the USGS topographic map and is not classified on the NWI map. UNT to Eagle Creek is approximately 24.2 linear feet within the study area and has an average OHWM of 8 feet wide and a depth of less than 1 inch. The stream substrate was vegetated and silt. The riparian land included maintained/mowed upland grass. The quality would be considered poor because it has no riffles and pools or canopy cover. UNT to Eagle Creek flows south then east into Eagle Creek approximately 0.52 miles from the study area.

Eagle Creek is an IDEM 303d Impaired Stream, listed for E. Coli (Appendix E, page 1). Workers who are working in or near water with E. Coli should take care to wear appropriate PPE, observe proper hygiene procedures, including regular hand washing, and limit personal exposure. This is included as a firm commitment in the Environmental Commitments Section of this document.

The project will impact approximately 24.2 linear feet of UNT to Eagle Creek due to the placement of riprap.

Eagle Creek

Eagle Creek, identified on the USGS NHD and NWI maps, was identified in the field east of the Sheridan Mall. Eagle Creek is identified as a blue-line perennial stream on the USGS topographic map and classified as R5UBH on the NWI map. Eagle Creek is approximately 27.3 feet within the study area and has an average OHWM of 8 feet wide and a depth of 6 inches. The stream substrate was gravel. The riparian corridor consists of mowed upland grass. The quality would be considered poor because it has no riffles and pools and no canopy cover. Eagle Creek flows south.

The project will impact approximately 27.3 linear feet of Eagle Creek due to the placement of riprap.

The project will impact a total of 51.5 linear feet of stream. Avoidance and minimization measures were considered throughout the development of the project by reducing shoulder widths to the greatest extent possible. Complete avoidance was not possible to provide the roadway reconstruction and shoulder improvements. Due to the proposed impacts being minor in nature, mitigation is not anticipated.

Early coordination letters were sent on February 1, 2019 by Michael Baker to the USFWS, IDNR, IDEM, USACE and again on October 9, 2023 to IDNR and USFWS. USFWS responded on February 27, 2019 stating that USFWS has no objections to the project as currently proposed and to protect water quality we recommend using pollutant-trapping technology such as storm drain inserts, etc. to reduce runoff pollutants directly to the stream system (Appendix C, page 14). IDNR responded on October 12, 2023 stating "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." In addition, IDNR standard recommendations were provided (Appendix C, page 5). IDEM's auto generated response listed standard recommendations for water and biotic quality (Appendix C, page 7). USACE did not respond. Soil and erosion control measures will be implemented for the project to minimize project runoff into waterways. All applicable recommendations are included as commitments in the Environmental Commitments Section of this document.

This is page 17 of 38 Project name: SR 47 Rd Reconstruction & Mule Barn Rd
Realignment and SR 47/SR 38 Roundabout Date: February 26, 2024

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

Open Water Feature(s)	Presence	Impacts	
		Yes	No
Reservoirs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lakes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Farm Ponds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Retention/Detention Basin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Storm Water Management Facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

Based on the desktop review, the aerial map of the project area (Appendix B, page 1), and the RFI report (Appendix E, page 12) there are nine lakes within the 0.5 mile search radius. That number was updated by the site visit on October 6, 2020 by Michael Baker. A *Waters of the U.S. Determination/Wetland Delineation Report* was approved by INDOT Ecology and Waterway Permitting Office on September 6, 2021. Please refer to Appendix F, page 1 for the *Waters of the U.S. Determination/Wetland Delineation Report*. It was determined that no open water features are present within or adjacent to the project area, therefore, no impacts are expected.

Early coordination letters were sent on February 1, 2019 by Michael Baker to the USFWS, IDNR, IDEM, USACE and October 9, 2023 to IDNR and USFWS. USFWS responded on February 27, 2019 stating that USFWS has no objections to the project as currently proposed and to protect water quality we recommend using pollutant-trapping technology such as storm drain inserts, etc. to reduce runoff pollutants directly to the stream system (Appendix C, page 14). IDNR responded on October 12, 2023 with standard recommendations (Appendix C, page 5). IDEM's auto generated response listed standard recommendations for water and biotic quality (Appendix C, page 7). USACE did not respond. Since there are no open water features within the project area no commitments are applicable.

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

Total wetland area: 0.42 Acre(s) Total wetland area impacted: 0.081 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)
Wetland 1	Forested	0.42	0.081	Likely a Water of the US

Wetlands (Mark all that apply)	Documentation	ESD Approval Dates
	Wetland Determination	<input checked="" type="checkbox"/>
Wetland Delineation	<input checked="" type="checkbox"/>	September 6, 2021
USACE Isolated Waters Determination	<input type="checkbox"/>	

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

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

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

X
X

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, page 1), and the RFI report (Appendix E, page 12) there are twenty-three wetlands within the 0.5 mile search radius. That number was updated by the October 6, 2020 site visit by Michael Baker. One forested wetland, Wetland 1, is located within or adjacent to the project.

A *Waters of the U.S. Determination/Wetland Delineation Report* was approved by INDOT Ecology and Waterway Permitting Office on September 6, 2021. Please refer to Appendix F, page 1 for the *Waters of the U.S. Determination/Wetland Delineation Report*. It was determined that Wetland 1 is likely a jurisdictional wetland. The USACE makes all final determinations regarding jurisdiction.

Wetland 1

Wetland 1 is located south of SR 47. Wetland 1 was identified as a PFO1A on the NWI map. Wetland 1 is a forested wetland that is approximately 0.42 acres. Wetland 1 would be classified as average quality within the study area because there was a diverse plant community however it is also disturbed near the roadway. Wetland 1 extends south outside of the study area. Wetland 1 would likely be a jurisdictional wetland because it directly abuts to UNT to Eagle Creek outside of the study area limits approximately 254 feet south of SR 47. One data point, Upl-DP2 was taken outside of Wetland 1. The dominant vegetation at Upl-DP2 was Kentucky bluegrass (*Poa pratensis*) and white clover (*Trifolium repens*). The soil was identified as 0-10 inches 10YR 3/3 loam with a restrictive layer of rocks/gravel at 10 inches. There was no wetland hydrology present. No wetland indicators were identified at Upl-DP2.

The project will permanently impact approximately 0.081 acre of Wetland 1 due to excavation and grading and the placement of 195.6 cubic yards of earth fill for the shoulder widening. Avoidance and minimization measures were considered throughout the development of the project by reducing the shoulder widths to the greatest extent possible. Complete avoidance was not possible to provide the roadway reconstruction and shoulder improvements. Due to the proposed wetland impacts being minor in nature, mitigation is not anticipated. The boundary of Wetlands 1 will be shown on the plans, and the area of Wetland 1 that will not be disturbed will be marked with "Do Not Disturb" notations. This is included as a firm project commitment.

Early coordination letters were sent on February 1, 2019 by Michael Baker to the USFWS, IDNR, IDEM, USACE and on October 9, 2023 to IDNR and USFWS. USFWS responded on February 27, 2019 stating that USFWS has no objections to the project as currently proposed and to protect water quality we recommend using pollutant-trapping technology such as storm drain inserts, etc. to reduce runoff pollutants directly to the stream system (Appendix C, page 14). Soil and erosion control measures will be implemented to reduce runoff. IDNR responded on October 12, 2023 with standard recommendations (Appendix C, page 5). IDEM's auto generated response listed standard recommendations for water and biotic quality (Appendix C, page 7). USACE did not respond. All applicable recommendations are included as commitments in the Environmental Commitments Section of this document.

	Presence	Impacts	
Terrestrial Habitat	X	Yes X	NO

Total terrestrial habitat in project area: 2.98 Acre(s) Total tree clearing: 1.8* 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

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

measure to avoid, minimize, and mitigate if impacts will occur.

Based on a desktop review, a site visit on October 6, 2020 by Michael Baker, the aerial map of the project area (Appendix B, page 1), the project area is agricultural, residential and commercial. The residential areas consist of maintained upland vegetation and trees. The project will remove approximately 20 trees (*1.8 acres, calculated based on the IPaC conversion of 20 trees multiplied by 0.09). The trees to be removed are within 100 feet from an existing roadway. The total work area disturbance is anticipated to be approximately 2.98 acres which includes disturbance to maintained roadside, farmland, and maintained lawns. This exceeds 1 acre; therefore, a Construction Stormwater General Permit (CSGP) is required. Mitigation is not anticipated for the tree removal as there is no permit or regulation that requires it.

There are terrestrial habitats, including forested habitat, present adjacent to the project area. Approximately 0.081 acre of Wetland 1, which is a forested wetland, will be impacted. However, the area that will be impacted of Wetland 1 is made up of a herb stratum and shrub stratum. The tree stratum starts beyond the ROW limits.

Early coordination letters were sent on February 1, 2019 by Michael Baker to the USFWS, IDNR, IDEM, USACE and October 9, 2023 to IDNR and USFWS. USFWS responded on February 27, 2019 stating that USFWS has no objections to the project as currently proposed and to protect water quality we recommend using pollutant-trapping technology such as storm drain inserts, etc. to reduce runoff pollutants directly to the stream system (Appendix C, page 14). The CSGP will address runoff and implement soil and erosion control measures. IDNR responded on October 12, 2023 with standard recommendations to avoid, minimize, or compensate for impacts to fish, wildlife, and botanical resources to the greatest extent possible (Appendix C, page 5). IDEM's auto generated response listed standard recommendations for water and biotic quality (Appendix C, page 7). USACE did not respond. All applicable recommendations are included as commitments in the Environmental Commitments Section of this document.

Protected Species

Federally Listed Bats

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

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

Determination Received for Listed Bats from USFWS: NE NLAA LAA

Other Species not included in IPaC

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

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

Migratory Birds

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

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

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

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

Based on a desktop review and the RFI report (Appendix E, page 1) completed by Michael Baker on April 17, 2020 the IDNR Hamilton County Endangered, Threatened and Rare (ETR) Species List has been checked. According to the IDNR-DFW early coordination response letter dated October 12, 2023 (Appendix C, page 5), the Natural Heritage Program's Database has been checked and no federally threatened, endangered, or rare plant or animal species have been reported to occur in the project vicinity. An INDOT 0.5 mile bat review occurred on January 18, 2024 and there were no documented sites within a half-mile of the project.

Project information was submitted through the USFWS's Information for Planning and Consultation (IPaC) portal, and an official species list was generated (Appendix C, page 40). The project is within range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally endangered northern long-eared bat (NLEB) (*Myotis septentrionalis*). Other species were generated in the IPaC species list along with the Indiana bat and NLEB. The official species list generated from IPaC indicated three other species present within the project area: the tricolored bat (*Perimyotis subflavus*), whooping crane (*Grus americana*), and the monarch butterfly (*Danaus plexippus*). The tricolored bat status is listed as proposed endangered, the whooping crane is listed as experimental population, non-essential, and the monarch butterfly is listed as a candidate species. No critical habitat was identified for any of these species within the study area. No further coordination is required.

The project qualifies for the *Range-wide Programmatic Informal Consultation for the Indiana bat and NLEB*, dated May 2016 (revised February 2018), between FHWA, Federal Railroad Administration (FRA), Federal Transit Administration (FTA), and USFWS. An effect determination key was completed on January 18, 2024, and based on the responses provided, the project was found to "May Affect Not Likely to Adversely Affect" the Indiana bat and/or the NLEB (Appendix C, page 26). INDOT reviewed and verified the effect finding on January 22, 2024 and requested USFWS's review of the finding (Appendix C, page 52). 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) that are applicable to this project include: General AMMs, Lighting AMMs, and Tree Removal AMMs. All AMMs and/or commitments are included as firm commitments in the Environmental Commitments section of this document.

A culvert structure inspection occurred on October 6, 2020 and no signs of bats were found (Appendix J, page 9). USFWS Bridge/Structure Assessment are only valid for two years. Since construction will begin after October 6, 2022 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.

Early coordination letters were sent on February 1, 2019 by Michael Baker to the USFWS, IDNR, IDEM, USACE and October 9, 2023 to IDNR and USFWS. USFWS responded on February 27, 2019 stating that USFWS has no objections to the project as currently proposed (Appendix C, page 14). IDNR responded on October 12, 2023 and did not have any specific comments to any species (Appendix C, page 5). IDEM's auto generated response listed standard recommendations for water and biotic quality (Appendix C, page 7). USACE did not respond. All applicable recommendations are included as commitments in the Environmental Commitments Section of this document.

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

Geological and Mineral Resources

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

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

Date Karst Evaluation reviewed by INDOT EWPO (if applicable): N/A

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)

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

Based on a desktop review, the project is located outside the designated karst region of Indiana 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, page 2) and the RFI report (Appendix E, page 1), there are no karst features identified within or adjacent to the project area. In the early coordination response dated August 26, 2021, the Indiana Geological and Water Survey (IGWS) did not indicate that karst features exist in the project area (Appendix C, page 22). IGWS identified that there are geological hazards including moderate liquefaction potential, 1% annual chance flood hazard; mineral resources including high potential for bedrock resource and low potential for sand and gravel resource; and abandoned industrial mineral resources petroleum exploration wells. The features will not be affected because there are no bedrock, sand or gravel sites within or adjacent to the project area. The RFI report indicated one (1) petroleum well adjacent to SR 47 (Appendix E, page 1). Coordination with IDNR Oil and Gas Division occurred on December 31, 2020 and no response was received. The response from IGWS has been communicated with the designer on August 26, 2021. 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

Impacts

Yes	No
	X
	X
	X

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

Yes	No
	X

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

Sole Source Aquifer

The project is located in Hamilton 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/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 Indiana Department of Environmental Managements Wellhead Proximity Determinator website (<http://www.in.gov/idem/cleanwater/pages/wellhead/>) was accessed on February 10, 2019 by Michael Baker. This project is located within a Wellhead Protection Area or Source Water Area. In an early coordination letter dated February 13, 2019, IDEM stated the project is located within two Source Water Assessment areas for a Public Water Supply System's (PWSS's) surface water intake (Appendix C, page 10). 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 PWSSs that could be impacted by the project are Citizens Water – Indianapolis and Speedway Water Works. The contractor shall follow all INDOT Standard Specifications Section 205 and will implement stormwater best management practices. No impacts to the source water assessments areas are expected.

Water Wells

The Indiana Department of Natural Resources Water Well Record Database website (<https://www.in.gov/dnr/water/3595.htm>) was accessed on May 26, 2022 by Michael Baker. Five unconsolidated wells are shown on the IDNR water well viewer map but were not field identified. The physical address of the owner address locates the wells outside the project construction limits; therefore, there are likely no wells located within the project area. Therefore, no impacts are expected. Should it be determined during the ROW phase that water wells will be affected, a cost to cure will likely be included in the appraisal to restore the wells.

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

Urban Area Boundary

Based on a desktop review in the RFI (Appendix E, page 4) by Michael Baker on April 17, 2020 this project is not located in an Urban Area Boundary (UAB). An early coordination letter was sent on December 31, 2020 to the Hamilton County Stormwater MS4 coordinator. The MS4 coordinator did not respond within the 30-day time frame.

Public Water System

Based on a desktop review, a site visit on September 2, 2021 by Michael Baker, the aerial map of the project area (Appendix B, page 1), the February 7, 2020 Engineer's Report, and review of the plans in Appendix B, this project is located where there is a public water system. Coordination is ongoing with the local water utility companies.

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

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.

The Indiana Department of Natural Resources Indiana Floodway Information Portal website (<http://dnrmaps.dnr.in.gov/appsphp/fdms/>) was accessed on May 26, 2022 by Michael Baker. This project is not located in a regulatory floodplain as determined from approved IDNR floodplain maps (Appendix F, page 13). Therefore, it does not fall within the guidelines for the implementation of 23 CFR 650, 23 CFR 771, and 44 CFR. No impacts are expected.

IDNR responded to early coordination on October 12, 2023 stating that formal approval by the IDNR under the regulatory programs administered by the Division of Water is not required for this project (Appendix C, page 5).

Farmland	<u>Presence</u>	<u>Impacts</u>	
		<u>Yes</u>	<u>No</u>
Agricultural Lands	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Prime Farmland (per NRCS)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Total Points (from Section VII of CPA-106/AD-1006*)	<u>150</u>		

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

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, a site visit on October 6, 2020 by Michael Baker, the aerial map of the project area (Appendix B, page 1) the project will convert 3.31 acres of farmland as defined by the Farmland Protection Policy Act. An early coordination letter was sent on December 31, 2020 to Natural Resources Conservation Service (NRCS). Coordination with NRCS resulted in a score of 150 on the AD 1006 Form (Appendix C, page 25). The total permanent ROW being acquired from agricultural lands is 2.18 acres. However, on the AD 1006 Form NRCS filled out the total acres to be converted directly as 3.31 acres because at the time of

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

alterations in the character or use of historic properties, if any such properties exist. The APE is influenced by the scale and nature of the undertaking..." (36 CFR 800.16[d]).

The above-ground APE complies with the Indiana Department of Transportation's (INDOT's) directive regarding APEs for reconstruction and roundabout projects. Per the INDOT Cultural Resources Manual, the suggested APE for road resurfacing projects includes immediately adjacent properties. For streetscape improvements, roundabouts, and trail projects, the suggested APE includes adjacent properties and properties within the project viewshed (Part II, Chapter 5, Page 4). The APE is one-parcel deep on all sides surrounding the immediate project footprint with consideration given to broadened areas as appropriate for potential auditory or visual impacts. Due to the large size of some of the agricultural parcels, the APE truncates after inclusion of a 500-foot buffer of land; it would not be appropriate to include the entirety of these lots as the property past the 500-foot buffer has no potential to be affected by the project. The APE follows parcel lines, except where prudent to truncate or expand the survey area in consideration of potential visual impacts, resulting in an irregularly shaped polygon. It includes 184 acres (0.29 square miles) and is a mixture of residential, recreational, commercial, and industrial uses (Appendix D, page 28).

Coordination with Consulting Parties:

A Section 106 early coordination letter (ECL) was distributed on March 15, 2021. In addition, a letter distributed on August 23, 2021, notified consulting parties that a Historic Property Report (HPR) and Archaeology Report (tribes only) were available for review and comment. On September 20, 2021, the State Historic Preservation Office (SHPO) commented on the eligibility of the Ogle Farmstead, saying, "we do not believe we have enough information to determine edibility for inclusion in the National Register of Historic Places." As a result, an Additional Information (AI) Report was prepared and distributed to consulting parties on December 9, 2021. A letter distributed on May 11, 2022, notified consulting parties that an Effects Report was available for review and comment. Between March 2021 and December 2022, over 50 comments were received from consulting parties. Tribal consultants who responded to consultation invitation included the Miami Tribe of Oklahoma, the Eastern Shawnee Tribe of Oklahoma, and the Peoria Tribe of Indians of Oklahoma. In general, the Tribes expressed no objection to the proposed undertaking, but requested to be contacted if any archaeological sites or human remains were discovered throughout the course of the project. A full summary of correspondence is included in Appendix D, page 21.

A consulting party meeting was held on May 24, 2022, to discuss the undertaking's potential impacts to the Ogle Farmstead. The second consulting party meeting was held on August 23, 2022, to discuss the property boundary. A revised AI Report was distributed to consulting parties on October 14, 2022. The signed 800.11 findings and documentation were sent to consulting parties on April 28, 2023.

Table 3. Consulting Parties List

Consulting Party	Responded to Invitation?
• Baas, Christopher	Yes
• Hamilton County Historian	No
• Delaware Nation of Oklahoma	No
• Delaware Tribe of Indians, Oklahoma	No
• Eastern Shawnee Tribe of Oklahoma	Yes
• Hamilton County Commissioners	No
• Hamilton County Highway Engineer	No
• Hamilton County Historical Society	No
• Indiana Division of Historic Preservation and Archaeology	Yes
• Indiana Landmarks-Central Regional Office	Yes
• Indianapolis Metropolitan Planning Organization	No
• Miami Tribe of Oklahoma	Yes
• Peoria Tribe of Indians of Oklahoma	Yes
• Pokagon Band of Potawatomi Indians	No
• Shawnee Tribe	No
• Sheridan Historical Society	No
• Sheridan Town of (representative Todd Burton)	Yes
• Sitar, Caroline (Property Owner)	Yes

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

Archaeology:

Thomas Bodor, an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards, reviewed the proposed project and completed a Phase IA archaeological assessment, which resulted in no sites identified within the SR 47 project area. SR 47 runs east/west along the southern part of the Town of Sheridan and contains a mix of mid-to-late-twentieth century residential and commercial construction interspersed with active agricultural fields adjacent to the roadway. Extensive disturbance within the APE has occurred due to installation and maintenance of numerous buried utilities and from roadway construction and shoulder maintenance (e.g., drainage ditches, grading/filling). According to the Indiana State Historic Architectural and Archaeological Research Database (SHAARD), there are no previously recorded sites within the APE for this project. Based on the results of background research and the Phase IA assessment, Qualified Professional archaeologists recommended no additional investigations; the SHPO agreed with this recommendation in a letter dated September 20, 2021.

Historic Properties:

Qualified Professional architectural historians used historical maps and aerial photographs to determine the historic development of the project area/APE. In this way, they were able to locate above-ground resources not previously surveyed that will be 50 years of age or older by the time of project letting. A field survey, consisting of a vehicular and pedestrian examination of the APE was conducted March 1-2, 2021, to verify the condition of the previously recorded resources and to identify and evaluate previously unrecorded resources within the APE that were constructed in or before 1973. The architectural historians documented 27 newly identified, individual, Contributing resources; eight newly identified, Non-Contributing resources; one newly identified, individual Notable resource; and two previously surveyed, extant, Contributing, individual resources. The only resource meriting additional consideration was the Ogle Farmstead, which was carried forward for additional evaluation.

Project historians initially evaluated the Ogle Farmstead as not eligible for listing in the NRHP. However, after distribution of the AI Report in December 2021, comments received from consulting parties compelled INDOT to reconsider the recommendation. The SHPO's comments in January and February of 2022 notified INDOT that they believed the Ogle Farmstead was eligible under Criterion A in the area of agriculture, with boundaries limited to the "parcel with the historic buildings," and a period of significance from 1908 to 1921. The first consulting party meeting was held on May 24, 2022, at the Ogle Farmstead. While consulting parties generally agreed on the property's eligibility, they did not agree on its boundary, with some entities advocating for the inclusion of the adjacent agricultural parcel within the resource's boundary. A second consulting party meeting was held on August 23, 2022, to present and discuss the findings of additional research on the Ogle Farmstead. Materials included photographs and documents provided by Ms. Sitar, including a complete chain of title. Researchers also reviewed agricultural census data as well as contextual information regarding crop raising and livestock farming in the county. Project historians revised the AI Report in October 2022; however, the report continued to recommend the original property boundary (farmstead parcel only).

On September 15, 2022, two consulting parties, a property owner and representative, submitted a Historic Preservation Certification Application Part 1 (HPCA Part 1) for the property (including the adjacent parcel—the farm field) to the Indiana Division of Historic Preservation and Archaeology (IN-DHPA) for their review. That application, which requested a preliminary determination for individual listing in the National Register to determine whether the property may qualify for historic rehabilitation tax credits, was reviewed by IN-DHPA outside of the Section 106 process by the same personnel who reviewed the NRHP eligibility status of the property and attended the Section 106 consulting parties meeting in August 2022. IN-DHPA forwarded the application to the National Park Service (NPS) on October 12, 2022, prior to the consulting parties' receipt of the Revised AI Report.

INDOT-CRO received a letter dated November 7, 2022, from the SHPO informing INDOT-CRO that a Historic Preservation Certification Application had been submitted to NPS and that NPS had responded to the application. The letter stated, "while we appreciate the receipt of the Revised Additional Information Report, the NPS response has confirmed that the historic property boundary for the farmstead should include not just the cluster of farmhouse and adjacent outbuildings, but also the surrounding agricultural land."

On November 29, 2022, an inter-agency meeting between INDOT-CRO, Michael Baker, SHPO, and IN-DHPA was held via Teams. As requested, SHPO said they reviewed the Revised AI Report but did not think the report information superseded the NPS "certification" [sic] of the property as eligible with the boundary including both parcels, the farmyard with the buildings and the agricultural field. DHPA stated that while the "certification" was not a Determination of Eligibility from the Keeper of the NRHP, they

This is page 26 of 38 Project name: SR 47 Rd Reconstruction & Mule Barn Rd
Realignment and SR 47/SR 38 Roundabout Date: February 26, 2024

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

consider it to be the same. They further stated that there is no recourse to overturning this "certification" until a nomination is submitted to the Indiana State Historic Preservation Review Board. For the purpose of advancing the project through the Section 106 review, INDOT-CRO agreed to include the farmstead and agricultural parcels in the historic property boundary for the purposes of the Section 106 review.

As a result, the only historic property within the project APE is the Ogle Farmstead, located at 200 W. 10th Street, Adams Township, Hamilton County, Indiana. Situated along the south side of the road, the farmstead includes a farmhouse, a barn, an equipment/livestock shed, a privy, an octagonal building, and a chicken coop. The property was built by James and Sarah Ogle in 1908-1909 and was used in support of agricultural activities on adjacent farmland and on additional, non-contiguous tracts.

An Effects Report was prepared to identify minimization measures of project impacts to the Ogle Farmstead (Appendix D, page 32). The Preferred Alternative (3b/5) was originally designed with a longer deceleration distance for the new left turn lane at S Main Street. The deceleration distance, the length recommended to allow adequate distance to slow a vehicle to the appropriate speed, is an optional design feature in urban environments. In the original design of the Preferred Alternative, the deceleration lane cut across the entire length of the Ogle Farmstead resulting in more ROW being required from the property. The original design also had the new pavement edge and sidewalk farther into the property. By forgoing the deceleration distance, the overall turn lane length was reduced by 280 feet thereby minimizing direct effects on the Ogle Farmstead. The total required ROW was reduced to 0.096 acre of permanent and 0.044 acre of temporary ROW. The amount of the property being paved for curbing and sidewalk is 0.050 acre. The introduction of new curb, gutter, and sidewalk requires the removal of large landscaping stones lining the front of the property. The stones were added ca. 2007-2008 and are non-contributing elements of the historic property. In addition, the post-and-wire fencing (non-contributing) located along portions of the north property line will also be removed to accommodate the new pedestrian features. Any shrubs or small plantings within the new ROW will be removed, including two to three small trees. A letter dated May 11, 2022, notified the consulting parties that the Effects Report was available for review and comment.

Documentation Findings:

INDOT, acting on FHWA's behalf, has determined a "No Adverse Effect" finding is appropriate for this undertaking (Appendix D, page 7). SHPO concurred with the finding on May 25, 2023 (Appendix D, page 41).

Public Involvement:

A legal notice informing the public of FHWA's finding of "No Adverse Effect" was published in the *Indianapolis Star* on May 18, 2023, 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 June 18, 2023. The text of the public notice and the affidavit of publication appear in Appendix D, pages 1-3. Four comments were received after this date objecting to the project's finding of "No Adverse Effect", and one letter concurred with the finding. After reviewing these comments, FHWA hosted a meeting on August 14, 2023 in compliance with 36 CFR 800.5(c)(2)(i) with the consulting parties. The intent of the meeting was for FHWA staff to listen to consulting parties' objections and to consider their input. A transcript of the meeting was provided to consulting parties on August 22, 2023. FHWA reviewed the information presented by the consulting parties, in accordance with 36 CFR 800.5(b) and determined the project will have "No Adverse Effect" on the Ogle Farmstead on September 2023 (Appendix D, page 43).

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

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

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	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Publicly owned recreation area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (school, state/national forest, bikeway, etc.)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Wildlife and Waterfowl Refuges			
National Wildlife Refuge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
National Natural Landmark	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State Wildlife Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State Nature Preserve	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Historic Properties			
Site eligible and/or listed on the NRHP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<u>Evaluations Prepared</u>			
Programmatic Section 4(f)	<input type="checkbox"/>		
"De minimis" Impact	<input checked="" type="checkbox"/>		
Individual Section 4(f)	<input type="checkbox"/>		
Any exception included in 23 CFR 774.13	<input type="checkbox"/>		

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

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

Based on a desktop review, the aerial map of the project area (Appendix B, page 1), and the RFI report (Appendix E, page 1), there are fourteen potential 4(f) resources located within the 0.5 mile search radius. According to additional research and by the site visit on September 2, 2021 by Michael Baker, there are three 4(f) resources, Biddle Memorial Park, the Monon Trail, and the Ogle Farmstead located within the project area.

A determination of a *de minimis* impact on parks and recreation areas may be made when all three of the following criteria are satisfied:

1. The transportation use of the Section 4(f) resource, together with any impact avoidance, minimization, and mitigation or enhancement measures incorporated into the project, does not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f);
2. The public has been afforded an opportunity to review and comment on the effects of the project on the protected activities, features, and attributes of the Section 4(f) resource; and
3. The official(s) with jurisdiction (OWJ) over the property are informed of U.S. DOT's intent to make the *de minimis* impact determination based on their written concurrence that the project will not adversely affect the activities, features, and attributes that qualify the property for protection under Section 4(f).

A determination of *de minimis* impact on a historic site may be made when all three of the following criteria are satisfied:

1. The process required by Section 106 of the National Historic Preservation Act (NHPA) results in the determination of "no adverse effect" or "no historic properties affected" with the concurrence of the State Historic Preservation Officer (SHPO) and/or Tribal Historic Preservation Officer (THPO), and Advisory Council on Historic Preservation (ACHP), if

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

- the ACHP is participating in the Section 106 consultation;
2. The SHPO and/or THPO, and ACHP, if the ACHP is participating in the Section 106 consultation, is informed of U.S. DOT's intent to make a *de minimis* impact determination based on their written concurrence in the Section 106 determination; and
 3. U.S. DOT has considered the views of any consulting parties participating in the Section 106 consultation.

Biddle Memorial Park and Monon Trail

Biddle Memorial Park is a public park/recreation area. The Monon Trail is a public recreation trail. The Town of Sheridan is the OWJ for both resources. The project will not result in a change of ownership for the Monon Trail or Biddle Memorial Park. While there will be a physical change to the driveway of the park and the trail, the functionality of these entities will remain unchanged. The trail and park components will not be impacted such as the playground and ball fields. The new ADA compliant sidewalks will provide improved pedestrian and bicyclist connections to the Monon Trail and Biddle Memorial Park.

The projects will require approximately 0.12 acre of permanent ROW from CSX Transportation, who owns the parcel, to extend the Monon Trail to connect to the improved sidewalk and crosswalk associated with the new roadway. Approximately 0.60 acre of permanent ROW is needed from Biddle Memorial Park to construct the proposed SR 47 roadway reconstruction and the new roundabout at the SR 47 and SR 38 intersection. Approximately 0.03 acre of temporary ROW will also be required from Biddle Memorial Park during construction (Appendix B, page 27).

Coordination occurred with the Town of Sheridan throughout the project and the proposed impacts and potential measures to minimize harm were discussed in July 2021. The following measures were agreed on by INDOT and the Town of Sheridan and will be provided as firm project commitments in the Environmental Commitments section of this document (Appendix J, page 6):

1. Upgrade the existing SR 47 entrance driveway connection to Biddle Memorial Park
2. Connect the Monon Trail to the SR 47 sidewalk
 - i. With the Town of Sheridan planning to build a new segment of the Monon Trail north of SR 47, INDOT will install a crossing on SR 47 for connection to the northern limits of the trail
3. Pay a cost to cure for the Biddle Memorial Park sign and reestablish vehicular circulation within the park (connect the two roads that connected to the existing drive at the intersection)

Minor uses may qualify for a *de minimis* finding when the use does not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f). The designed action for Des. No. 1601982 and Des. No. 2000816 will not adversely impact the activities, features, and attributes that qualify the properties, Biddle Memorial Park and the Monon Trail, for protection under Section 4(f) of the Department of Transportation Act of 1966 and in accordance with SAFETEA-LU Section 6009 (a). As such, it is the intent of INDOT, along with the Federal Highway Administration to issue a finding of *de minimis*.

A legal public notice was posted in *The Times*, serving Hamilton County, for the project on August 18, 2021 offering the public an opportunity to provide comments on the *de minimis* use of the Section 4(f) resources (Appendix J, page 1). The public comment period closed 30 days later on September 17, 2021. No comments were received. The Town of Sheridan concurred with these measures and the *de minimis* use of Biddle Memorial Park and the Monon Trail in a signed letter dated October 25, 2021 (Appendix J, page 3). FHWA's approval of this CE document will constitute the issuance of the *de minimis* finding.

Ogle Farmstead

The Ogle Farmstead was identified as eligible for listing in the NRHP; therefore, it is considered a Section 4(f) resource. The project undertaking will convert approximately 0.096 acres from the Ogle Farmstead to a transportation use; the INDOT, acting on FHWA's behalf, has determined the appropriate Section 106 finding is "No Adverse Effect"; therefore, FHWA hereby intends to issue a *de minimis* finding for the Ogle Farmstead, pursuant to SAFETEA-LU, thereby satisfying FHWA's responsibilities under Section 4(f) for this historic property (Appendix D, page 7).

The Preferred Alternative was originally designed with a longer deceleration distance for the new left turn lane at S Main Street. The deceleration distance, the length recommended to allow adequate distance to slow a vehicle to the appropriate speed, is an optional design feature in urban environments. In the original design of the Preferred Alternative, the deceleration lane cut across the entire length of the Ogle Farmstead resulting in more ROW. The original design also had the new pavement edge and sidewalk farther into the property. By forgoing the deceleration distance, the overall turn lane length was reduced by 280 feet thereby minimizing direct effects on the Ogle Farmstead (Appendix D, 32). The overall ROW needed was reduced and the project now requires approximately 0.096 acre of permanent ROW and 0.044 acre of temporary ROW from the Ogle Farmstead. Approximately 0.050 acre of the property will be paved for the proposed curbing and sidewalk.

All Section 4(f) resources within the project area have a determination of *de minimis* impact. All applicable Section 4(f) project

This is page 29 of 38 Project name: SR 47 Rd Reconstruction & Mule Barn Rd
Realignment and SR 47/SR 38 Roundabout Date: February 26, 2024

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

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

Section 6(f) Involvement

Presence

Use

Section 6(f) Property

Yes

No

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

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

A review of 6(f) properties on the INDOT ESD website revealed a total of 10 properties in Hamilton County (Appendix J, page 8). None of these properties are located within or adjacent to the project area. Biddle Memorial Park is not encumbered by 6(f) funds. 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
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

Location in STIP:

Currently in progress in current STIP amendment A24-06

Name of MPO (if applicable):

N/A

Location in TIP (if applicable):

N/A

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.

This project is currently in the STIP amendment A24-06 for Fiscal Year (FY) 2024-2028 which is in progress. Once completed the updated STIP will be included in the final document.

The project is located in Hamilton County, which is currently in non-attainment for 8-Hour Ozone and Annual PM_{2.5} according to IDEM's website: <https://www.in.gov/idem/sips/nonattainment-status-of-counties/>. The 1997 annual fine particles standard was revoked on August 24, 2016 and the Ozone 8-hour standard was revoked in 2015 but is being evaluated for conformity due to the February 16, 2018, South Coast Air Quality Management District V. Therefore, the conformity requirements of 40 CFR 93 have been met.

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

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

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: N/A

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

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

SECTION H – COMMUNITY IMPACTS

Regional, Community & Neighborhood Factors

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

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

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

As with any proposed infrastructure improvement, the community and, specifically, adjacent property owners and occupants will experience some degree of direct, indirect, and cumulative impacts. The impacts will be mostly temporary due to construction.

Hamilton County has an approved ADA transition plan viewable online at <https://www.hamiltoncounty.in.gov/804/ADA-Transition-Plan-2022>. The Town of Sheridan has a 2013 Comprehensive Plan that includes an ADA Transition Plan, which is viewable online at http://www.sheridan.org/Sheridan_Comprehensive.pdf. The project is in compliance with both the County and City's ADA transition plans. The Sheridan 2013 Comprehensive Plan identifies the goal of developing a complete pedestrian-friendly streetscape environment, including continuous sidewalks and crosswalks along SR 47. The project meets these goals by providing pedestrian access with new continuous ADA compliant sidewalk. The new sidewalk will connect residential areas to commercial resources and recreational resources including the Monon Trail and Biddle Memorial Park. The sidewalk and a new crosswalk will provide a safer connection from the south side of SR 47 to the north side of SR 47.

An event calendar was viewed on Hamilton Counties website <https://www.visithamiltoncounty.com/events/>. Close coordination has been conducted with the Town of Sheridan about the timing of construction and any community events that may be planned. In addition, the Town of Sheridan upcoming events calendar was viewed on website page <https://www.townplanner.com/sheridan/in/events/> and via the Town of Sheridan Facebook page <https://www.facebook.com/sheridaneventscommittee/>. One event, the Harvest Moon Festival, occurs in October at Biddle Memorial Park. Coordination with the Town of Sheridan will continue to occur about construction activities and the timing of the phased construction to minimize disruptions. This is included as a firm project commitment in the Environmental Commitments section of this document. While the official detour routes are approximately 22 miles and 31 miles for the roundabout construction, local roads can

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

be utilized for local traffic. Therefore, impacts to community events within and adjacent to the project area are not expected.

The Town of Sheridan had provided input throughout the project and is fully supportive of the project and believes the project will improve transportation, economic development, and overall quality of life in their town (Appendix C, page 16).

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, page 1) and the RFI report (Appendix E, page 1), there are twelve (12) facilities located within the 0.5 mile of the project. That number was updated to two (2) facilities by the site visit on October 6, 2020 by Michael Baker. The project area includes the recreational facility Biddle Memorial Park and the Monon Trail.

MOT will provide a temporary inconvenience however local access will be maintained, and detour routes will be phased to minimize inconveniences. MOT can be found in Appendix B page 44-51 and 73-77. Coordination with the Town of Sheridan, who owns the recreational facilities Biddle Memorial Park and the Monon Trail, has occurred throughout the project.

Overall, the project will improve connectivity within the project area to these facilities. The new ADA compliant sidewalks will provide improved pedestrian and bicyclist connections to the Monon Trail, Biddle Memorial Park, and the Sheridan Mall. Improved traffic flow will benefit emergency services and the traveling public.

There are public and private utilities located throughout the project area. Utility relocation is anticipated and coordination is currently on-going, although no significant disruption of service is anticipated. If any utility relocations result in any additional environmental impacts that are not assessed in this environmental document, an Additional Information (AI) document will need to be prepared. This is included as a firm project commitment.

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

Environmental Justice (EJ) (Presidential EO 12898)

During the development of the project were EJ issues identified?

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

Does the project require an EJ analysis?

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

If YES, then:

Are any EJ populations located within the project area?

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

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

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

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.

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

Under FHWA Order 6640.23A, FHWA and the project sponsor, as a recipient of funding from FHWA (in this case the potential for federal funding in the future), 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.

Potential EJ impacts are detected by locating minority and low-income populations relative to a reference population to determine if populations of EJ concern exist and whether there could be disproportionately high and adverse impacts to them. The reference population may be a county, city or town and is called the community of comparison (COC). In this project, the COC is Hamilton County. The community that overlaps the project area is called the affected community (AC). In this project, the AC is Census Tract 1103.03, Block Group 2, Block Group 3, and Block Group 5. AC has a population of concern for EJ if the population is more than 50% minority or low-income or if the low-income or minority population is 125% of the COC. Data from the 2020 American Community Survey (ACS) 5-Year Estimates was obtained from the US Census Bureau Website <https://data.census.gov/cedsci/> on December 30, 2021 by Michael Baker (Appendix I). The data collected for minority and low-income populations within the AC are summarized in Table 4.

Table 4. SR 47 Rd Reconstruction & Mule Barn Rd Realignment & SR 47/SR 38 Roundabout EJ AC comparison to COC

Census Bureau 2020 ACS 5-Year Estimates Information	COC Hamilton County, Indiana	AC-1 Census Tract 1103.03, Block Group 2, Hamilton County, Indiana	AC-2 Census Tract 1103.03, Block Group 3, Hamilton County, Indiana	AC-3 Census Tract 1103.03, Block Group 5, Hamilton County, Indiana
Minority Population EJ Analysis				
Minority Population (Non-white)	46,267	0	102	46
Percent Minority	14.00%	0.00%	9.16%	2.11%
125% of COC	17.50%	AC <125% COC		
Minority Population of EJ Concern?		No	No	No
Low Income Population EJ Analysis				
Total Below Poverty Level	2,730	10	44	18
Percent Low-Income (below poverty level)	2.97%	4.90%	16.79%	2.77%
125% of COC	3.71%	AC >125% COC		
Low Income Households of Concern?		Yes	Yes	No

AC-1 Block Group 2, Census Tract 1103.03 has a percent minority of 0% which is below 50% and below the 125% COC threshold. AC-1 has a percent low-income of 4.90% which is below 50% but above the 125% COC threshold. Therefore, AC-1 does not have a minority population of EJ concern but has a low-income population of EJ concern.

AC-2 Block Group 3, Census Tract 1103.03 has a percent minority of 9.16% which is below 50% and below the 125% COC threshold. AC-2 has a percent low-income of 16.79% which is below 50% but above the 125% COC threshold. Therefore, AC-2 does not have a minority population of EJ concern but has a low-income population of EJ concern.

AC-3 Block Group 5, Census Tract 1103.03 has a percent minority of 2.11% which is below 50% and below the 125% COC threshold. AC-3 has a percent low-income of 2.77% which is below 50% and the 125% COC threshold. Therefore, AC-3 does not have a minority population of EJ concern or a low-income population of EJ concern.

Conclusion

The MOT detour routes for the SR 47 work will utilize SR 38 and US 421. Reference Appendix B, pages 44-51 and 73-77 for the MOT plans. The work along SR 47 will be split into three phases: Phase 1 will begin at the western terminus of the project and extend to the west side of the Sheridan Mall (Appendix B, page 44), approximately 0.51 miles, Phase 2 will be from the west side of the Sheridan Mall to a point just west of Mule Barn Road, approximately 0.46 miles (Appendix B, page 46), and Phase 3 will start from just west of Mule Barn Road to the west side of the GetGo gas station, approximately 0.60 miles and will include the realignment of Mule Barn Road (Appendix B, page 48). Each phase will be constructed under a full closure with durations between 2 and 3 months. The official detour length for each phase is approximately 21.53 miles; however, local streets can be utilized for local traffic. Pedestrian MOT will utilize a temporary surface, access mat, to maintain existing sidewalk facilities during construction

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

(Appendix B, page 51). The temporary surface area is approximately 0.32 mile long. Following the completion of SR 47, the SR 38/SR 47 roundabout will be constructed in two phases, north/south traffic being first moved to the east, then to the west building half of the intersection at a time. East/west traffic will not be continuous through the intersection, with a 3-phase signal maintaining only one side of the intersection based on the phase of construction. East/west traffic will be detoured using US 31, SR 32, and US 421 (Appendix B, page 73). The detour length for the roundabout is approximately 30.89 miles; however local streets can be utilized for local traffic.

During construction, the Monon Trail will be temporarily closed, from the Opel Street parking lot north to SR 47. After construction, the trail will be fully reopened and connect to SR 47. There will be a temporary closure of the SR 47 entrance to Biddle Memorial Park during Phase 3 of construction. During the temporary closure, there will still be access to Biddle Memorial Park from the SR 47/SR 38 intersection and SR 38 entrance. During the SR 47/SR 38 roundabout phase of construction the SR 38 entrance will remain open. The official detour for Phase 3 is approximately 21.53 miles and for the roundabout construction is approximately 30.89; however local streets can be utilized for local traffic (approximately 6.38 miles). The access to parking will remain the same throughout construction as the park parking areas will not be impacted. After construction, the SR 47 entrance, which will become the new primary entrance, and SR 38 entrance will remain open.

The project will require approximately 4.82 acres of permanent ROW and 1.15 acres of temporary ROW. Approximately 0.19 acre of permanent ROW will be acquired from CSX Transportation at the northern end of the Monon Trail, in order to extend and connect the trail with the improved sidewalk and crosswalk associated with the new roadway. Approximately 0.72 acre of permanent ROW is needed from Biddle Memorial Park to construct the proposed SR 47 roadway reconstruction and the new roundabout at the SR 47 and SR 38 intersection. In addition, approximately 0.03 acre of temporary ROW will be required from Biddle Memorial Park during construction.

The Monon Trail will be extended to meet the new sidewalk along the south side of SR 47. A new crosswalk, located just west of Opel Street, will be added near the proposed roundabout to provide bicyclists and pedestrians safe access to the north side of SR 47 where new sidewalk and another crosswalk will be added allow access to the east at the north end of the proposed roundabout (Appendix B, page 20). The new sidewalk and crosswalks will provide pedestrians access from the park and adjacent neighborhoods to commercial businesses on the north side that were not previously accessible for bicyclist and pedestrians.

While EJ populations were identified within the project study area in AC-1 and AC-2 located north of SR 47, the preferred alternative avoided and minimized permanent impacts to the greatest extent possible by keeping the sidewalk on the south side of SR 47 and minimizing ROW as much as possible. Approximately 0.93 acre of permanent ROW and approximately 0.59 acre of temporary ROW is required from the north side of SR 47 where the EJ populations are located. No more than 0.12 acre is required from any parcel on the north side of SR 47. The majority of ROW is being acquired from non-EJ populations on the south side, approximately 3.89 acre of permanent ROW and approximately 0.56 of temporary ROW, more than three times the ROW acquired on the north side of SR 47 in EJ populations. Therefore, ROW impacts are minor and will not require relocations or change the use of any parcel. The project will have temporary inconveniences to all populations (EJ and non-EJ) during construction, but detour routes are provided for vehicles, pedestrians, and bicyclists and local streets can also be utilized for local traffic. In addition, the phased construction allows certain areas of the project limits to remain open and resources along the project area to still be accessible. Therefore, the detour and temporary construction will not have a disproportionately high and adverse impact to EJ populations.

The project does not have adverse effects to EJ populations. There are none of the following adverse effects: displacements or relocations of people and businesses, air, noise, water pollution, destruction of man-made and natural resources, aesthetic values, community cohesion, availability of public facilities and services, employment effects, tax and property value losses, and disruption of desirable community and regional growth. The project provides an overall net benefit to EJ and non-EJ populations by improving community cohesion by improving connectivity for bicycle and pedestrian movements throughout the project area and improving traffic flow at the intersection of SR 47 and SR 38 and at the intersection of Mule Barn Road and SR 47, near S California Street. Therefore, the project will not have a disproportionately high and adverse impact to EJ populations.

INDOT ESD reviewed the project information and concurred on December 8, 2023 that the impacts associated with this project of EJ concern relative to non-EJ populations in accordance with the provisions of Executive Order 12898 and FHWA Order 6640.23a (Appendix I, page 16).

Indiana Department of Transportation

County Hamilton Route SR 47 & SR 38 Des. No. 1601982 & 2000816

Relocation of People, Businesses or Farms

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

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

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

Discuss any relocations that will occur due to the project. If a BIS or CSRS is required, discuss the results in the discussion below.
No relocations of people, businesses, or farms will take place as a result of this project.

SECTION I – HAZARDOUS MATERIALS & REGULATED SUBSTANCES

Hazardous Materials & Regulated Substances (Mark all that apply)

Documentation

- 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?

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

Date RFI concurrence by INDOT SAM (if applicable): April 20, 2020

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, a RFI was completed by Michael Baker and signed by INDOT SAM on April 20, 2020 (Appendix E, Page 8). The RFI was conducted with another Des. No. 1592544 which has independent utility therefore it is a separate project with a separate CE document. A reevaluation of GIS was completed on January 1, 2023, by Michael Baker due to the age of the approved RFI. No new resources were identified other than the previously identified resources in the approved RFI. Therefore, an addendum to the previously approved RFI is not required. Twenty-five (25) hazardous material sites are located within 0.5 mile of the combined project area. The RFI identified a Brownfield and National Pollution Discharge Elimination Systems (NPDES) within the SR 47 project area.

Brownfield

Biddle Park Expansion is located at S. Opel Street and SR 47 and referenced by Agency ID 22674. This site is mapped 0.2 mile east of the project area, however, the address indicates a different location which falls within the project area. The site is located adjacent to the Monon Trail and west of the town's main park known as Biddle Park. According to a Phase I and Limited Phase II conducted by SIECO, Inc. in June 2000, the site was previously a brick factory, glass factory, and most recently a bulk petroleum storage facility. After that, the site was left abandoned with evidence of improper/illegal disposal of solid waste. The solid waste was indicated by several piles of waste tires, auto/truck chassis, and broken concrete. Soil and groundwater sampling was conducted during the Limited Phase II and petroleum hydrocarbons were detected as shallow as 2 ft-bgs in soil. This site is now the location of the parking lot to the Biddle Park. 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. Before proper removal and disposal of soil and/or groundwater, analysis for RCRA metals will be necessary by the contractor.

NPDES Facilities

SR 47 Utility Extension and Proposed Streets is located at SR 47 and CR 1200 E. This NPDES site is identified as a Municipal or Water District and the permit is in effect. The project sponsor will coordinate with the permit holder prior to construction.

Countryside Industrial Park Section 2 located at SR 47 and Countryside Park Drive. This NPDES is identified as a privately-owned facility and the permit is in effect. The project sponsor will coordinate with the permit holder prior to construction.

EMC Precision Machining II, LLC is located at 701 S. Main St. This NPDES is a privately-owned facility and the permit is in effect. The project sponsor will coordinate with the permit holder prior to construction.

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

Ricker's Sheridan is located at 990 S. White Ave. This NPDES is identified as a privately-owned facility and the permit is in effect. The project sponsor will coordinate with the permit holder prior to construction.

Firm project commitments have been added to the Environmental Commitments Section of this CE document.

Part IV – Permits and Commitments

PERMITS CHECKLIST

Permits (mark all that apply)

Likely Required

Army Corps of Engineers (404/Section10 Permit)

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

IN Department of Environmental Management (401/Rule 5)

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

IN Department of Natural Resources

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

Mitigation Required

US Coast Guard Section 9 Bridge Permit	<input type="checkbox"/>
Others (Please discuss in the discussion below)	X

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

The following permits are anticipated:

- CSGP (formerly Rule 5) based on >1 acre land disturbance.
- 401/404 RGP based on impact to waterways and wetland.
- County Drain permit for Hamilton County.

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.

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

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 Greenfield District Environmental Section will be contacted immediately. (INDOT ESD)
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. If any utility relocations result in any additional environmental impacts that are not assessed in this environmental document, an Additional Information (AI) document will need to be prepared. (INDOT ESD)
4. The SR 47 entrance drive to Biddle Memorial Park will be upgraded to include an entrance lane and dual exist lanes, left and right turn lanes. (INDOT ESD)
5. The Monon Trail will be extended to the SR 47 sidewalk and a crosswalk will be added to SR 47 for connection to the northern limits of the proposed Monon Trail extension. (INDOT ESD)
6. A cost to cure will be paid for the Biddle Memorial Park sign and reestablish vehicular circulation within the park (connect the two roads that connected to the existing drive at the intersection. (INDOT ESD)
7. One event, the Harvest Moon Festival, occurs in October at Biddle Memorial Park. Coordination with the Town of Sheridan will continue to occur about construction activities and the timing of the phased construction to minimize disruptions. (INDOT ESD)
8. The boundary of Wetlands 1 will be shown on the plans, and the area of Wetland 1 that will not be disturbed will be marked with "Do Not Disturb" notations. (INDOT EWPO)
9. Eagle Creek is an IDEM 303d Impaired Stream, listed for E. Coli. Workers who are working in or near water with E. Coli should take care to wear appropriate PPE, observe proper hygiene procedures, including regular hand washing, and limit personal exposure. (INDOT SAM)
10. Biddle Park Expansion is located at S. Opel Street and SR 47 and referenced by Agency ID 22674. This site is now the location of the parking lot to the Biddle Park. 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. Before proper removal and disposal of soil and/or groundwater, analysis for RCRA metals will be necessary by the contractor. (INDOT SAM)
11. SR 47 Utility Extension and Proposed Streets is located at SR 47 and CR 1200 E. This NPDES site is identified as a Municipal or Water District and the permit is in effect. The project sponsor will coordinate with the permit holder prior to construction. (INDOT SAM)
12. Countryside Industrial Park Section 2 located at SR 47 and Countryside Park Drive. This NPDES is identified as a privately-owned facility and the permit is in effect. The project sponsor will coordinate with the permit holder prior to construction. (INDOT SAM)
13. EMC Precision Machining II, LLC is located at 701 S. Main St. This NPDES is a privately-owned facility and the permit is in effect. The project sponsor will coordinate with the permit holder prior to construction. (INDOT SAM)
14. Ricker's Sheridan is located at 990 S. White Ave. This NPDES is identified as a privately-owned facility and the permit is in effect. The project sponsor will coordinate with the permit holder prior to construction. (INDOT SAM)
15. General AMM1: Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs. (USFWS)
16. Tree Removal AMM1: Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal. (USFWS)
17. Tree Removal AMM2: Apply time of year restrictions April 1st through September 30th 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)
18. Tree Removal AMM3: Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits). (USFWS)
19. Tree Removal AMM4: Do not remove documented Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 mile of roosts, or documented foraging habitat any time of year. (USFWS)
20. Lighting AMM1: Direct temporary lighting away from suitable habitat during the active season. (USFWS)
21. Lighting AMM2: When installing new or replacing existing permanent lights, use downward-facing, full cut-off lens lights

This is page 37 of 38 Project name: SR 47 Rd Reconstruction & Mule Barn Rd
Realignment and SR 47/SR 38 Roundabout Date: February 26, 2024

Indiana Department of Transportation

County Hamilton

Route SR 47 & SR 38

Des. No. 1601982 & 2000816

(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)

22. Since construction will begin after October 6, 2022, an inspection of the structure by a qualified individual, must be performed. Inspection of the structure should check for presence of bats/bat indicators and/or presence of birds. The results of the inspection must indicate no signs of bats or birds. If signs of bats or birds are documented during this inspection, the INDOT District Environmental Manager must be contacted immediately. (INDOT ESD)

For Further Consideration:

23. To protect water quality, we recommend using pollutant-trapping technology such as storm drain inserts, etc. to reduce runoff of urban pollutants directly to the stream system. (USFWS)
24. 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-DFW)
25. The need for new lighting was not mentioned in the submitted information but could potentially be needed in certain areas. 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. The Division of Fish and Wildlife strongly encourages visiting the International Dark-Sky Association's website to learn more about the potential negative impacts of improperly selected LED lighting systems, if required: <https://www.darksky.org/our-work/lighting/lighting-for-citizens/led-guide/> (IDNR-DFW)
26. If erosion control blankets are used, they shall be heavy-duty, biodegradable, and net free or 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. (IDNR-DFW)
27. Plant five trees, at least 2 inches in diameter-at-breast height, for each tree which is removed that is ten inches or greater in diameter-at-breast height. (IDNR-DFW)

Table of Contents

Appendix A - INDOT Supporting Documentation

Categorical Exclusion Threshold Chart.....	A1
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Appendix B – Graphics

Aerial Project Location Map	B1
USGS Topographic Map	B2
Existing Conditions Map	B3
Photo Key Maps	B4-B8
Photos	B9-B18
Preferred Alternative Exhibit.....	B19
Preferred Alternative Roundabout & Trail Connection Exhibit	B20
Preferred Alternative ROW & Property Impacts Maps	B21-B27
Preferred Alternative ROW & Property Impacts Table.....	B28-B29
Roadway Plan Set	B30-B146
Roundabout Plan Set	B147-B192

Appendix C – Early Coordination

Early Coordination Letter (ECL) dated February 1, 2019 & ECL List	C1-C3
Indiana Department of Natural Resources (IDNR) Response dated March 1, 2019	C4
Updated IDNR Response dated October 12, 2023	C5-C6
Indiana Department of Environmental Management (IDEM) automated response.....	C7-C11
IDEM Wellhead Protection Area Response dated February 13, 2019.....	C12-C13
USFWS Response dated February 27, 2019.....	C14-C15
Sheridan Town Council Response dated April 22, 2019.....	C16-C17
ECL dated December 31, 2020 & ECL List.....	C18-C21
Indiana Geological and Water Survey (IGWS) Response dated August 26, 2021	C22-C23
United States Department of Agriculture Response (USDA) dated December 10, 2021	C24
Farmland Conversion Impact Rating Form dated November 10, 2021	C25
USFWS Concurrence Letter dated January 18, 2024	C26-C39
USFWS Official Species List dated January 17, 2024	C40-C51
INDOT Concurrence Email.....	C52

Appendix D – Section 106 Documentation

Publisher’s Affidavit for 800.11	D1-D3
Pages from approved 800.11 Documentation.....	D4-D29
Pages from approved Effects Report	D30-D35
Pages from approved Historic Properties Report (HPR) Documentation.....	D36-D38
Pages from approved Archaeological Short Report Documentation	D39-D40
SHPO “No Adverse Effect” Effect Finding Concurrence Letter.....	D41-D42
FHWA Effect Finding Letter.....	D43-D45

Appendix E – Red Flag Investigation

Red Flag Investigation Report approved April 20, 2020.....	E1-E14
INDOT Email about Mule Barn Road dated March 18, 2021	E15

Appendix F – Water Resources

Waters Report approved September 6, 2021	F1-F37
--	--------

Appendix G: Public Involvement

Notice of Entry Letter dated February 23, 2021	G1-G5
Public Information Meeting Flyer	G6
INDOT Greenfield District website.....	G7
INDOT News Release Bulletin	G8-G9

Hamilton County Reporter News ReleaseG10-G11
Public Information Meeting Presentation dated July 27, 2022G12-G20

Appendix H – Air Quality

Project Listing in 2024-2028 STIP H1

Appendix I: Environmental Justice

EJ Analysis Map I1
US Census Bureau 2020 ACS Low Income Data, Hamilton County I2-I10
US Census Bureau 2020 ACS Race Data, Hamilton County I11-I15
INDOT EJ Concurrence Email dated December 8, 2023I16

Appendix J: Additional Studies

Publisher’s Affidavit for Section 4(f) J1
Newspaper Legal Notice for Section 4(f) J2
OWJ Section 4(f) *de minimis* Letter signed October 25, 2021 J3-J5
Section 4(f) Mitigation Options Map..... J6
Proposed Monon Trail Extension Letter dated September 16, 2021 J7
Land and Water Conservation Fund (LWCF) Hamilton County List..... J8
Structure Bat Assessment Form J9-J10
2007 Hamilton County Thoroughfare Plan J11

Appendix K: 2019 Engineering Report

Pages from the February 7, 2020 Engineering Assessment’s ReportK1-K22
Pages from the February 7, 2020 Intersection Evaluation K23-K48