

APPENDIX E: RED FLAG AND HAZARDOUS MATERIALS



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N758-ES
Indianapolis, Indiana 46204

PHONE: (855) 463-6848
(855) INDOT 4U

Eric Holcomb, Governor
Joe McGuinness, Commissioner

Date: January 13, 2022

To: Site Assessment & Management (SAM)
Environmental Policy Office - Environmental Services Division (ESD)
Indiana Department of Transportation
100 N Senate Avenue, Room N758-ES
Indianapolis, IN 46204

From: Christine Meador
HNTB Corporation
111 Monument Circle
Indianapolis, IN 46204
cmeador@hntb.com

Re: RED FLAG INVESTIGATION
DES #2000186, State Project
Median U-Turn
US 41 at Washington Avenue
Vanderburgh County, Indiana

PROJECT DESCRIPTION

Brief Description of Project: The project will include the construction of a Median U-Turn intersection at US 41 and Washington Avenue, approximately 1.00 mile south of the intersection of US 41 and SR 66/SR 62. This location includes a principal arterial segment of US 41 and a minor arterial segment of Washington Avenue. The project will eliminate left turns at the intersection, and motorists will utilize signalized U-turn access points on US 41. The project will also include directional signage, maintenance of drainage within the project extents, and replacement of traffic signals. Utilities may be relocated if in conflict with the project.

This project is being conducted in coordination with the Pedestrian Grade Separation / US 41 at Washington Avenue (Des. No. 1902709). A pedestrian overpass will be constructed on the north side of this intersection and pedestrian crosswalks across US 41 will be removed.

Bridge and/or Culvert Project: Yes No Structure #

If this is a bridge project, is the bridge Historical? Yes No , Select Non-Select

(Note: If the project involves a historical bridge, please include the bridge information in the Recommendations Section of the report).

Proposed right of way: Temporary # Acres _____ Permanent # Acres <0.5, Not Applicable

Type and proposed depth of excavation: Roadway reconstruction will be less than 3 feet in depth. Drainage improvements may be up to 4 feet in depth. Directional signage is not anticipated to require excavation. Traffic signal replacement will be up to 23 feet in depth.

Maintenance of traffic: Phased construction maintaining one lane of traffic in each direction on US 41 and on Washington Avenue will be maintained at all times.

Work in waterway: Yes No Below ordinary high water mark: Yes No

State Project: LPA:

Any other factors influencing recommendations: N/A

INFRASTRUCTURE TABLE AND SUMMARY

Infrastructure			
Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Religious Facilities	12	Recreational Facilities	6
Airports ¹	N/A	Pipelines	N/A
Cemeteries	N/A	Railroads	1
Hospitals	N/A	Trails	1
Schools	4	Managed Lands	2

¹In order to complete the required airport review, a review of public-use airports within 3.8 miles (20,000 feet) is required.

Explanation:

Religious Facilities: Twelve (12) religious facilities are located within the 0.5 mile search radius. The nearest facility, Eastside Baptist Church, is currently identified as Grace of Christ Church. The facility is located approximately 0.04 mile southeast of the project area at the southeast corner of Washington Avenue and Harland Avenue. Coordination with Grace of Christ Church will occur.

Schools: Four (4) schools are located within the 0.5 mile search radius. The nearest facility, Benjamin Bosse High School, is located approximately 0.02 mile east of the project area in the northeast corner of Washington Avenue and US 41. Coordination with Benjamin Bosse High School and the Evansville Vanderburgh School Corporation will occur.

Recreational Facilities: Six (6) recreational facilities are located within the 0.5 mile search radius. The nearest facility is associated with Benjamin Bosse High School and is located approximately 0.02 mile northeast of the project area in the northeast quadrant of Washington Avenue and US 41. Coordination with Benjamin Bosse High School and the Evansville Vanderburgh School Corporation will occur.

Railroads: One (1) railroad segment is located within the 0.5 mile search radius. The railroad segment extends north-south along the west side of US 41 within the project area. This railroad is noted as inactive and has been converted to a rails to trails multi-use trail, Phase 3D - Hi- Rail Corridor, as mentioned below. No impact is expected.

Trails: One (1) trail segment is located in the 0.5 mile search radius. The trail, Phase 3D - Hi-Rail Corridor, is located within the project area. Coordination with Evansville Park and Recreational Department will occur.

Managed Lands: Two (2) managed lands are located within the 0.5 mile search radius. The nearest, Akin Park, is located 0.10 mile west of the project area. No impact is expected.

WATER RESOURCES TABLE AND SUMMARY

Water Resources			
Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
NWI - Points	N/A	Canal Routes - Historic	N/A
Karst Springs	N/A	NWI - Wetlands	N/A
Canal Structures – Historic	N/A	Lakes	N/A
NPS NRI Listed	N/A	Floodplain - DFIRM	N/A
NWI-Lines	N/A	Cave Entrance Density	N/A
IDEM 303d Listed Streams and Lakes (Impaired)	N/A	Sinkhole Areas	N/A
Rivers and Streams	N/A	Sinking-Stream Basins	N/A

Explanation: No water resources were identified within the 0.5 mile search radius.

MINING AND MINERAL EXPLORATION TABLE AND SUMMARY

Mining/Mineral Exploration			
Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Petroleum Wells	N/A	Mineral Resources	N/A
Mines – Surface	N/A	Mines – Underground	N/A

Explanation: No mining and mineral exploration sites were identified within the 0.5 mile search radius.

HAZARDOUS MATERIAL CONCERNS TABLE AND SUMMARY

Hazardous Material Concerns			
Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Superfund	N/A	Manufactured Gas Plant Sites	N/A
RCRA Generator/ TSD	N/A	Open Dump Waste Sites	N/A
RCRA Corrective Action Sites	N/A	Restricted Waste Sites	N/A
State Cleanup Sites	1	Waste Transfer Stations	N/A
Septage Waste Sites	N/A	Tire Waste Sites	N/A
Underground Storage Tank (UST) Sites	5	Confined Feeding Operations (CFO)	N/A
Voluntary Remediation Program	1	Brownfields	N/A
Construction Demolition Waste	N/A	Institutional Controls	2
Solid Waste Landfill	N/A	NPDES Facilities	13*
Infectious/Medical Waste Sites	N/A	NPDES Pipe Locations	N/A
Leaking Underground Storage (LUST) Sites	8	Notice of Contamination Sites	N/A

Unless otherwise noted, site specific details presented in this section were obtained from documents reviewed on the Indiana Department of Environmental Management (IDEM) Virtual File Cabinet (VFC).

Explanation:

One (1) State Cleanup site is located within the 0.5 mile search radius. Clayton's 1 (AI #40425) is located at 1400 Washington Avenue at the northeast corner of Washington Avenue and Lodge Avenue, approximately 0.15 mile east of the project area. Although not mapped in the GIS layer, this site is also a Voluntary Remediation Program site. The site was used as a dry-cleaning facility from sometime prior to 1956 until 1982. Contaminants of Concern (COCs), including tetrachloroethylene (TCE) and its degradation products, were discovered in November 2008 during a limited subsurface investigation. According to the *First Quarter 2021 Groundwater Monitoring Report* (Troy Risk, Inc., April 8, 2021), the dissolved chlorinated solvent plume is widespread on and off-site, extending several blocks southwest of the site. The groundwater flow is to the southwest and the depth of groundwater varies between 8 and 17 feet below ground surface. The contaminate plume for vinyl chloride is noted extending from the site at Washington Avenue and Lodge Avenue southwest to just east of Henning Avenue and north of Madison Avenue which is approximately 0.1 mile east of the project. If de-watering will be utilized, then coordination with INDOT SAM will occur before RFC.

Underground Storage Tank (UST): Five (5) USTs are located within the 0.5 mile search radius. Two (2) icons are mapped adjacent to the project area: Bigfoot/Circle K #143, 1148 Washington Avenue, Evansville, IN 47715 (FID# 22702) is a gas station adjacent to the northwest quadrant of the project area. IDEM conducted a UST Inspection on January 6, 2017, and the facility was found to be in compliance with equipment, operating, and maintenance requirements set forth in Indiana's UST Rule 329 IAC 9. A suspected release was noted on July 23, 2015. This release was contained by secondary containment and all faulty equipment repaired or replaced. No impact is expected.

Tucker Management, 1138 Washington Square, FID # 18734/Agency ID # 44449, is mapped within the project area; however, this facility is incorrectly mapped and is actually located 2.75 miles east of the project area. No impact is expected.

Voluntary Remediation Program: One (1) voluntary remediation program site is located within the 0.5 mile search radius. The site, Berry Bearings, RPID # 6961201/Agency ID # 43953, is located 0.38 mile southwest of the project area. No impact is expected.

Leaking Underground Storage Tank (LUST): Eight (8) LUSTs are located within the 0.5 mile search radius. The nearest facility, Busler Enterprises, FID # 2723/Agency ID # 43577, is located 0.14 mile east of the project area. IDEM issued a No Further Action Determination Approval Pursuant to IDEM RISC Guidance on March 18, 2013. No impact is expected.

Institutional Controls: Two (2) institutional controls are located within the 0.5 mile search radius. The nearest facility, Busler Enterprises, FID # 2723/Agency ID # 43577, is located 0.14 mile east of the project area. See LUST section for more information. No impact is expected.

NPDES Facilities*: Thirteen (13) NPDES facilities, ten mapped and three unmapped, are located within the 0.5 mile search radius. The nearest facility, Benjamin Bosse High School, 1300 Washington Avenue, Permit # INR10N851/Agency ID # 45135, is adjacent to the proposed project. IDEM issued a Construction Stormwater Authorization Permit for this facility on May 9, 2017. The permit is in effect and expires May 8, 2022. Coordination with Benjamin Bosse High School will occur.

ECOLOGICAL INFORMATION SUMMARY

The Vanderburgh County listing of the Indiana Natural Heritage Data Center information on endangered, threatened, or rare (ETR) species and high quality natural communities is provided at https://www.in.gov/dnr/naturepreserve/files/np_vanderburgh.pdf. A preliminary review of the Indiana Natural Heritage Database by INDOT ESD did not indicate the presence of ETR species within the 0.5 mile search radius. Coordination with USFWS and IDNR will occur.

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

RECOMMENDATIONS SECTION

Include recommendations from each section. If there are no recommendations, please indicate N/A:

INFRASTRUCTURE:

Religious Facilities: Grace of Christ Church is located approximately 0.04 mile southeast of the project area at the southeast corner of Washington Avenue and Harland Avenue. Coordination with Grace of Christ Church will occur.

Schools: Benjamin Bosse High School is located approximately 0.02 mile east of the project area in the northeast corner of Washington Avenue and US 41. Coordination with Benjamin Bosse High School and the Evansville Vanderburgh School Corporation will occur.

Recreational Facilities: A recreation facility associated with Benjamin Bosse High School is located approximately 0.02 mile northeast of the project area in the northeast quadrant of Washington Avenue and US 41. Coordination with Benjamin Bosse High School and the Evansville Vanderburgh School Corporation will occur.

Trails: Phase 3D - Hi-Rail Corridor is located within the project area. Coordination with Evansville Park and Recreational Department will occur.

WATER RESOURCES: N/A

MINING/MINERAL EXPLORATION: N/A

HAZARDOUS MATERIAL CONCERNS:

One (1) State Cleanup site is located within the 0.5 mile search radius. Clayton's 1 (AI #40425) is located at 1400 Washington Avenue at the northeast corner of Washington Avenue and Lodge Avenue, approximately 0.15 mile east of the project area. Although not mapped in the GIS layer, this site is also a Voluntary Remediation Program site. The site was used as a dry-cleaning facility from sometime prior to 1956 until 1982. Contaminants of Concern (COCs), including tetrachloroethylene (TCE) and its degradation products, were discovered in November 2008 during a limited subsurface investigation. According to the *First Quarter 2021 Groundwater Monitoring Report* (Troy Risk, Inc., April 8, 2021), the dissolved chlorinated solvent plume is widespread on and off-site, extending several blocks southwest of the site. The groundwater flow is to the southwest and the depth of groundwater varies between 8 and 17 feet below ground surface. The contaminate plume for vinyl chloride is noted extending from the site at Washington Avenue and Lodge Avenue southwest to just east of Henning Avenue and north of Madison Avenue which is approximately 0.1 mile east of the project. If de-watering will be utilized, then coordination with INDOT SAM will occur before RFC.

NPDES Facilities*: Thirteen (13) NPDES facilities, ten mapped and three unmapped, are located within the 0.5 mile search radius. The nearest facility, Benjamin Bosse High School, 1300 Washington Avenue, Permit # INR10N851/Agency ID # 45135, is adjacent to the proposed project. IDEM issued a Construction Stormwater Authorization Permit for this facility on May 9, 2017. The permit is in effect and expires May 8, 2022. Coordination with Benjamin Bosse High School will occur.

ECOLOGICAL INFORMATION: Coordination with USFWS and IDNR will occur. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

INDOT ESD concurrence: Nicole Fohey-Breting (Signature)
Digitally signed by Nicole Fohey-Breting
Date: 2022.01.14 15:41:05 -05'00'

Prepared by
Christine Meador, Senior Project Manager
HNTB

Graphics:

A map for each report section with a 0.5 mile search radius buffer around all project area(s) showing all items identified as possible items of concern is attached. If there is not a section map included, please change the YES to N/A:

SITE LOCATION: YES

INFRASTRUCTURE: YES

WATER RESOURCES: N/A

MINING/MINERAL EXPLORATION: N/A

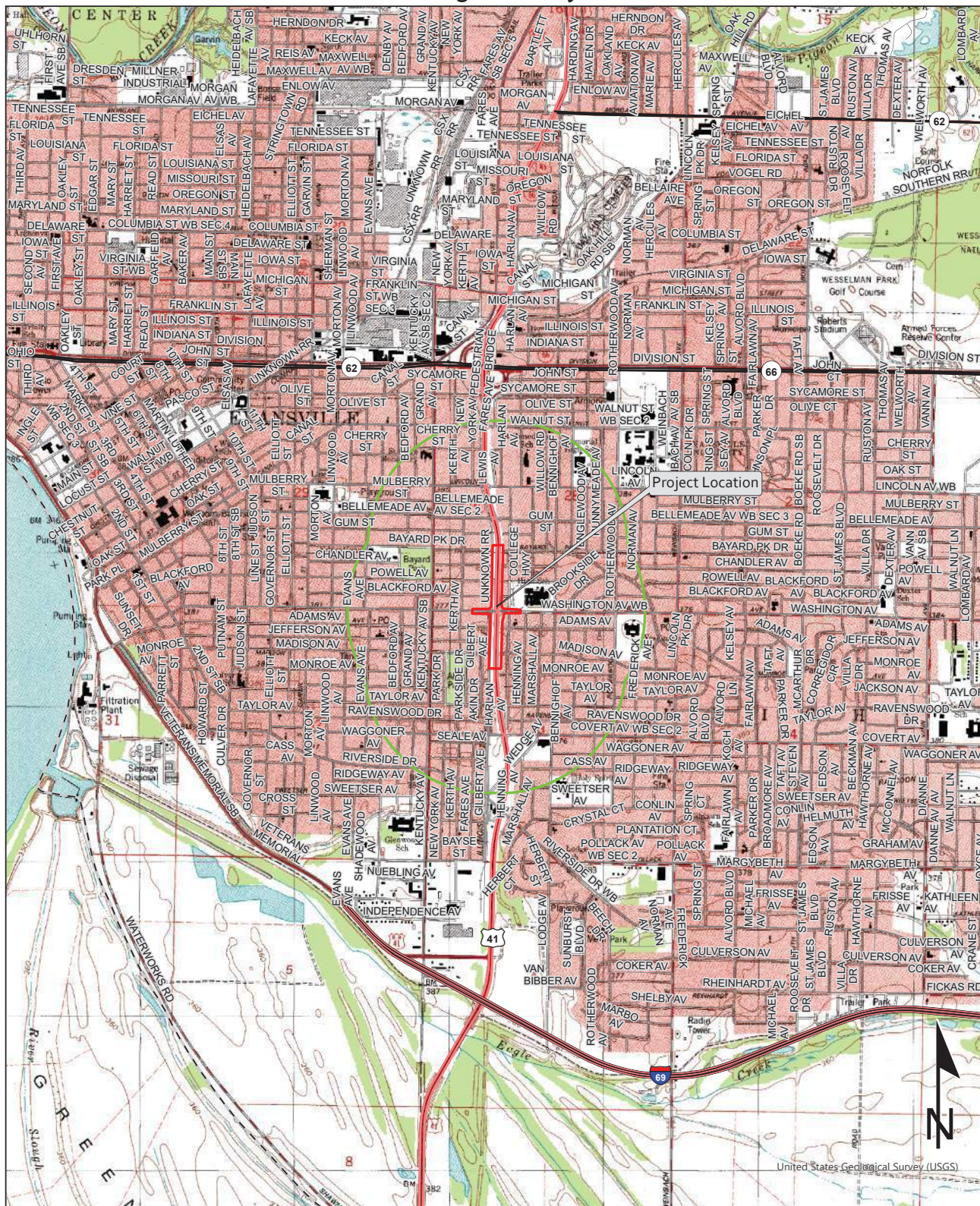
HAZARDOUS MATERIAL CONCERNS: YES

Red Flag Investigation - Site Location

US 41 at Washington Avenue

Des. No. 2000186, Median U-Turn

Vanderburgh County, Indiana



Sources: 0 0.25 0.5 1 Miles
Non Orthophotography
Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: State Plane Indiana West (FIPS 1301 Ft US)
Map Datum: NAD83

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

Des. No. 200186

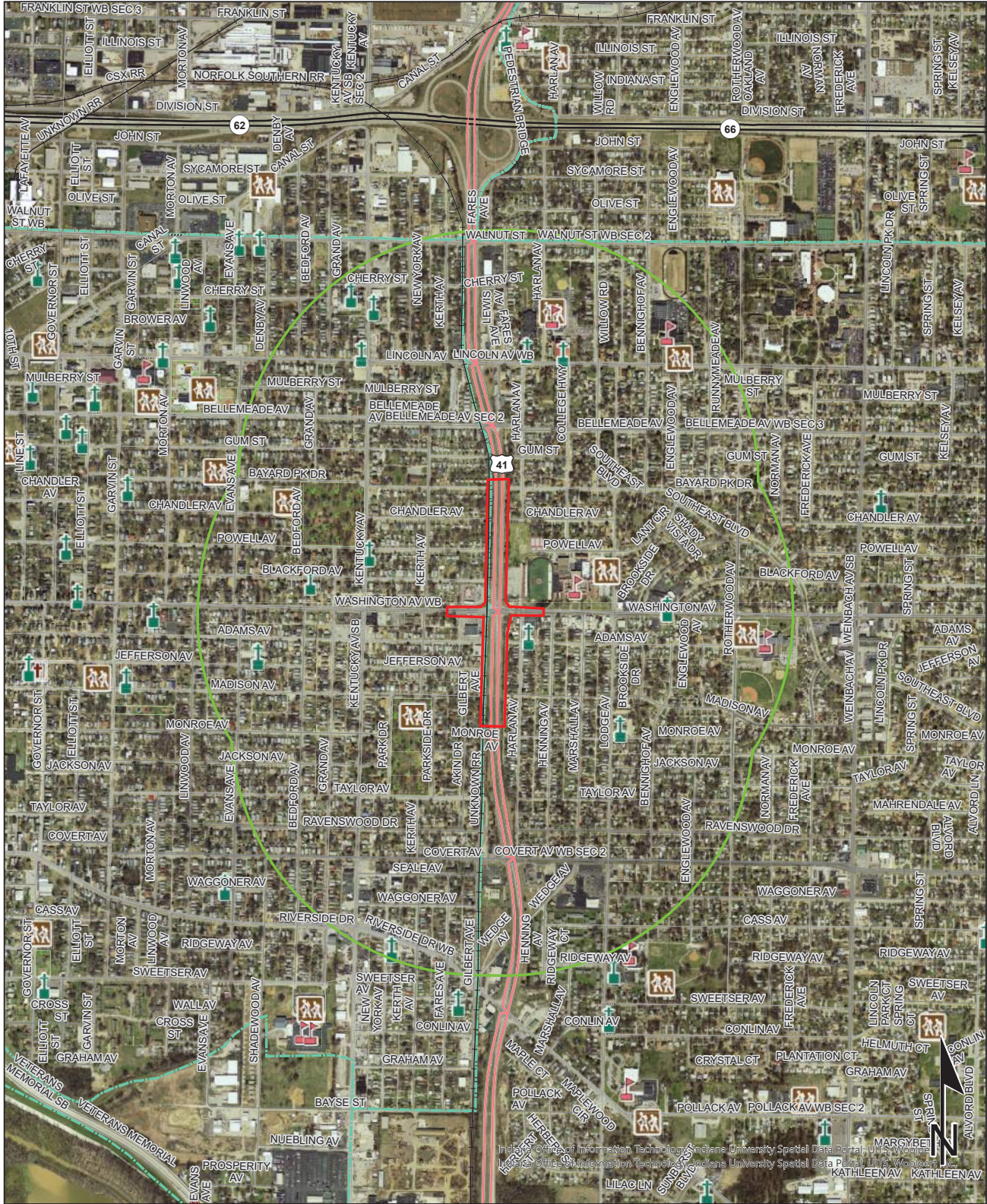
**EVANSVILLE SOUTH
 QUADRANGLE INDIANA
 7.5 MINUTE SERIES
 (TOPOGRAPHIC)**

Red Flag Investigation - Infrastructure

US 41 at Washington Avenue

Des. No. 200186, Median U-Turn

Vanderburgh County, Indiana



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

This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.
 Des. No. 200186

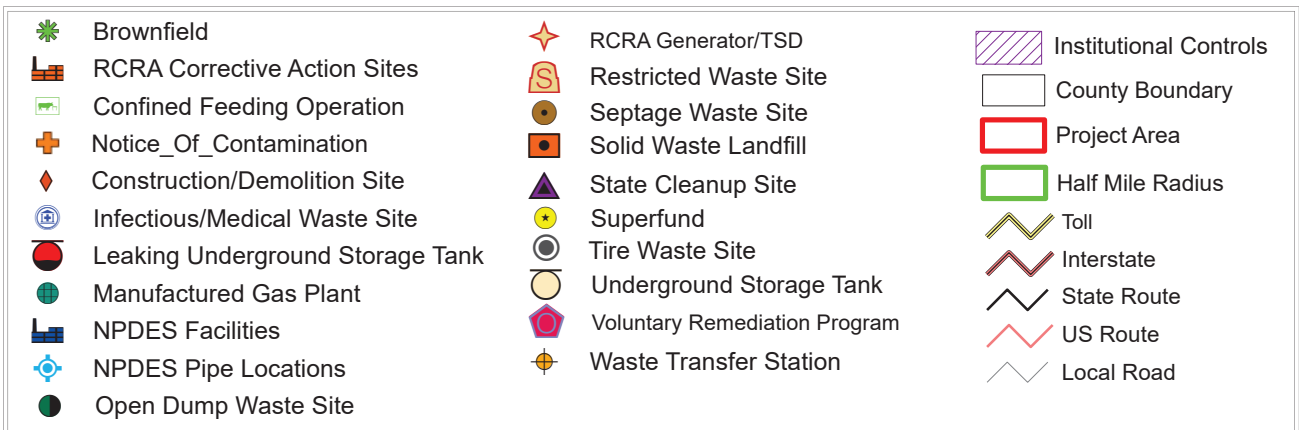
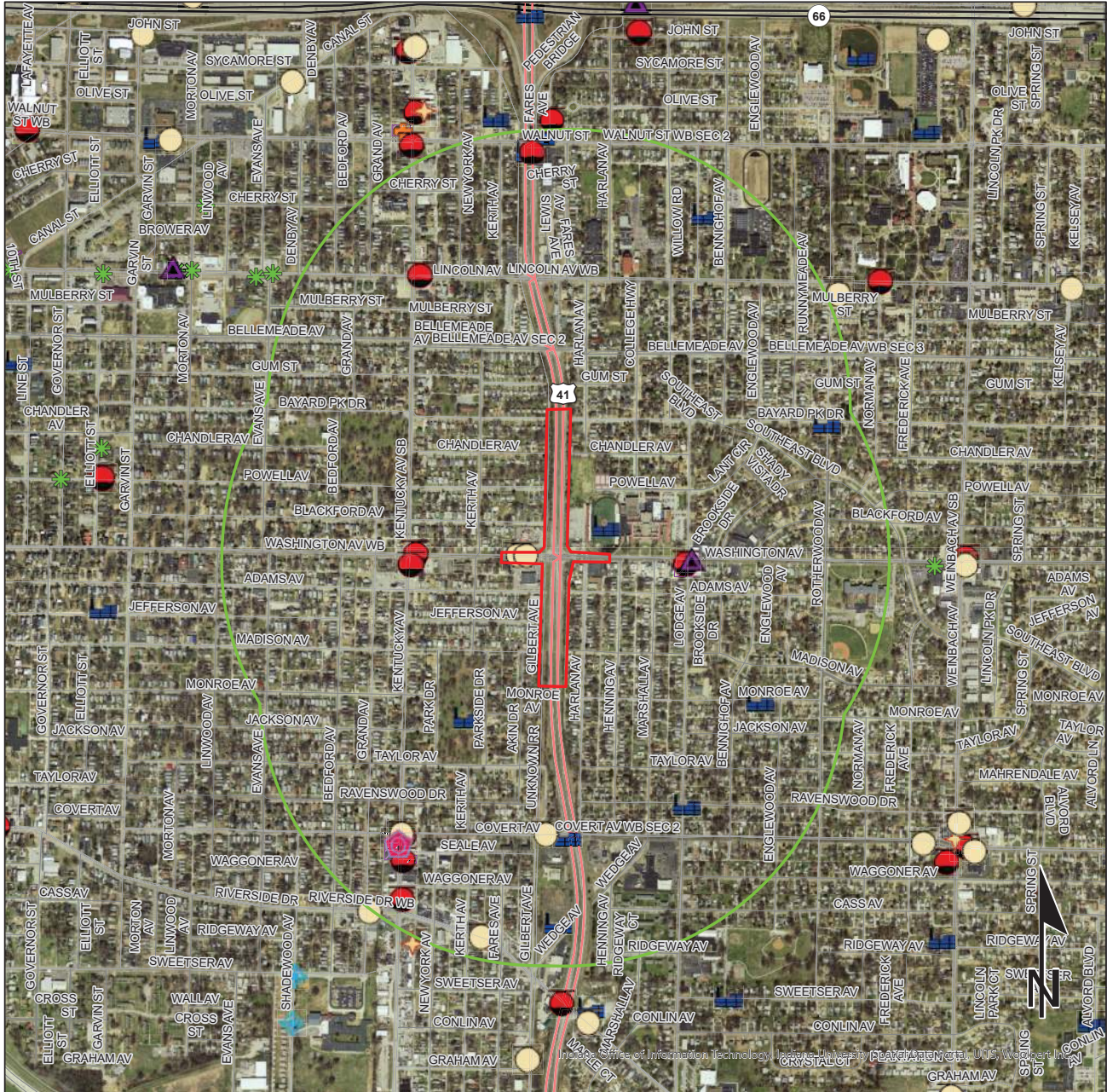
	Religious Facility		Recreation Facility		Project Area
	Airport		Pipeline		Half Mile Radius
	Cemeteries		Railroad		Toll
	Hospital		Trails		Interstate
	School		Managed Lands		State Route
			County Boundary		US Route
					Local Road

Red Flag Investigation - Hazardous Material Concerns

US 41 at Washington Avenue

Des. No. 200186, Median U-Turn

Vanderburgh County, Indiana



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

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

APPENDIX F: WATERS RESOURCES

From: [Engstrom, Maryssa H](#)
To: [Christine Meador](#)
Cc: [Falls, Ryan G](#); [Arnold, Troy](#); [Tabitha Enyart](#); [Dan Thatcher](#); [Rehder, Crystal](#)
Subject: RE: US 41 RCI - Des. 2000186 No WOTUS Concurrence
Date: Wednesday, November 3, 2021 4:10:26 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)

Hello Chris,

Thanks again for being available to discuss this project briefly on the phone. The photos sent with the 10/27/2021 email are attached above for reference.

The small roadside ditch feature that can be seen in Photo 9 above looking towards the area I expressed concerns over does not have a channelization. This RSD is also not likely to develop into a waterway feature due to draining into a storm drain-like system north of the photo. Because of this documentation, I concur no Waters Report or Environmental Permits are needed for this project. This email and all provided documentation can be found [in ProjectWise here](#) and has been updated in our systems, thank you.

*We are providing **preliminary** permit determinations based on the information presented at the time of the request. **If scope and plans change the designer should contact us for a revised determination.** A final permit determination will be done at the time of permit application submittal and/or any changes to the scope of the project.*

Thanks again,

Maryssa H. Engstrom

Vincennes District Specialist, Ecology and Waterway Permitting Office
INDOT Environmental Services – Central Office

100 N Senate Ave, Room 758-ES

Indianapolis, IN 46204

Phone: 317.694.3038

Hours: M-F 9:00 AM-5:00PM EST

From: Christine Meador <CMeador@HNTB.com>
Sent: Wednesday, October 27, 2021 9:11 PM
To: Engstrom, Maryssa H <MEngstrom@indot.IN.gov>
Cc: Falls, Ryan G <RFalls@indot.IN.gov>; Arnold, Troy <TArnold1@indot.IN.gov>; tenyart <tenyart@HNTB.com>; Dan Thatcher <DThatcher@HNTB.com>; Rehder, Crystal <CRehder@indot.IN.gov>
Subject: RE: US 41 RCI - Des. 2000186

****** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ******

Maryssa –

I have a lot of photos of the site – I have been down there multiple times. I will pull together some mapping and a photolog for your reference but have attached a few for your reference now. The

ditch on the east side of the road is a fully vegetated V-Ditch in that area.

We are in the middle of the last minute crunch for field work and wrapping things up so it will likely be the second week in November before I can finalize the maps and the photolog for you.

Thank you have a great day.
Chris

Christine Meador

Senior Project Manager
Environmental Planning

Cell (317) 459-3629 Direct (317) 917-5338 Email: cmeador@hntb.com

From: Engstrom, Maryssa H <MEngstrom@indot.IN.gov>

Sent: Wednesday, October 20, 2021 12:43 PM

To: Christine Meador <CMeador@HNTB.com>

Cc: Falls, Ryan G <RFalls@indot.IN.gov>; Arnold, Troy <TArnold1@indot.IN.gov>; Tabitha Enyart <tenyart@HNTB.com>; Dan Thatcher <DThatcher@HNTB.com>; Rehder, Crystal <CRehder@indot.IN.gov>

Subject: RE: US 41 RCI - Des. 2000186

Hello Chris,

I see 0.5 acres of ROW acquisition may be proposed, does this mean equipment will be leaving the pavement? If so, what is the expected extent?

I did see some areas near the school in the northwestern portion of the project area that may have some ponding and a possible channel, see screen shots above. These spots occur near (37.963302, -87.542781) where IN Maps also shows a nearby local-NHD line. Can this area be documented?

Otherwise, I agree the area is mostly well drained, often mowed residential lawns with sidewalk borders that would make spontaneous wetland development improbable. Also, there is a storm drain within the ROW off of SB US 41 near Madison Ave showing a storm drain in the roadside ditch. If we are able to determine either no equipment will be leaving the pavement or the features mentioned above are not jurisdictional, no WOTUS concurrence can be given. Please send me your responses.

Thank you and reach out with any questions,

Maryssa H. Engstrom

Vincennes District Specialist, Ecology and Waterway Permitting Office
INDOT Environmental Services – Central Office

100 N Senate Ave, Room 758-ES
Indianapolis, IN 46204

Phone: 317.694.3038

Hours: M-F 9:00 AM-5:00PM EST

From: Christine Meador <CMeador@HNTB.com>
Sent: Tuesday, October 19, 2021 8:58 AM
To: Rehder, Crystal <CREhder@indot.IN.gov>
Cc: Engstrom, Maryssa H <MEngstrom@indot.IN.gov>; Falls, Ryan G <RFalls@indot.IN.gov>; Arnold, Troy <TArnold1@indot.IN.gov>; tenyart <tenyart@HNTB.com>; Dan Thatcher <DThatcher@HNTB.com>
Subject: US 41 RCI - Des. 2000186

****** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ******

Crystal –

I hope you are doing well.

I completed a field visit for the above Reduced Conflict Intersection this month. The project area is highly urbanized and the project limits are confined to the existing right-of-way or immediately adjacent to the existing right-of-way which includes a trail, a high school, and residential or commercial areas. I have attached a copy of the early coordination letter that includes more details and mapping of the project area.

There were several pipes and stormwater inlets but no natural areas, wetlands or waterways and I did not collect any data points.

Do I need to prepare a Waters Report or is documenting in the CE that a site visit was completed and it was confirmed no wetlands were present sufficient.

Thank you for your assistance and have a great day.
Chris

Christine Meador

Senior Project Manager
Environmental Planning

Tel (317) 636-4682 Direct (317) 917-5338 Email cmeador@hntb.com

HNTB CORPORATION – CELEBRATING 80 YEARS IN INDIANA

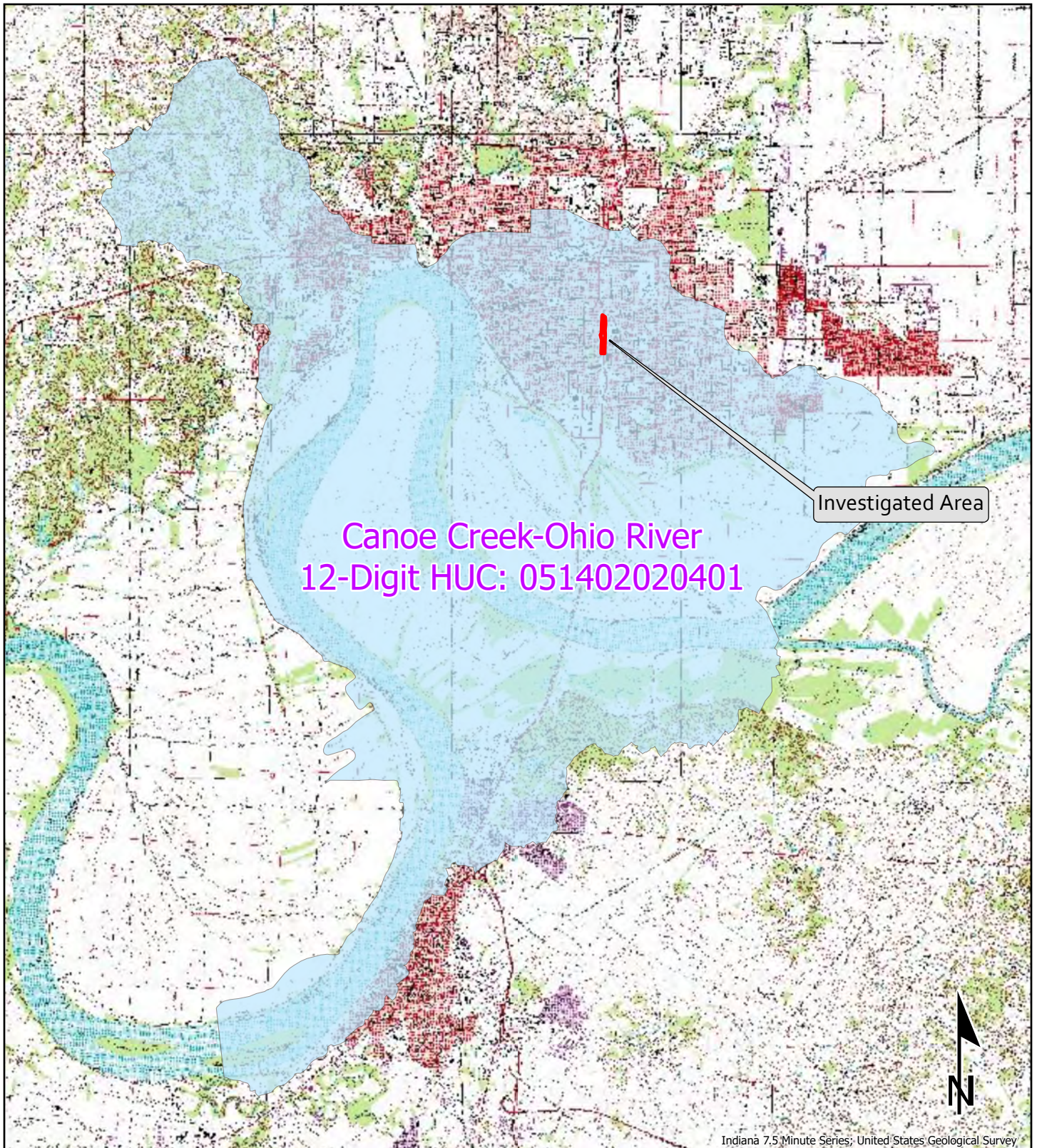
111 Monument Circle, Suite 1200, Indianapolis, IN 46204 | www.hntb.com



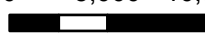
 **100+ YEARS OF INFRASTRUCTURE SOLUTIONS**

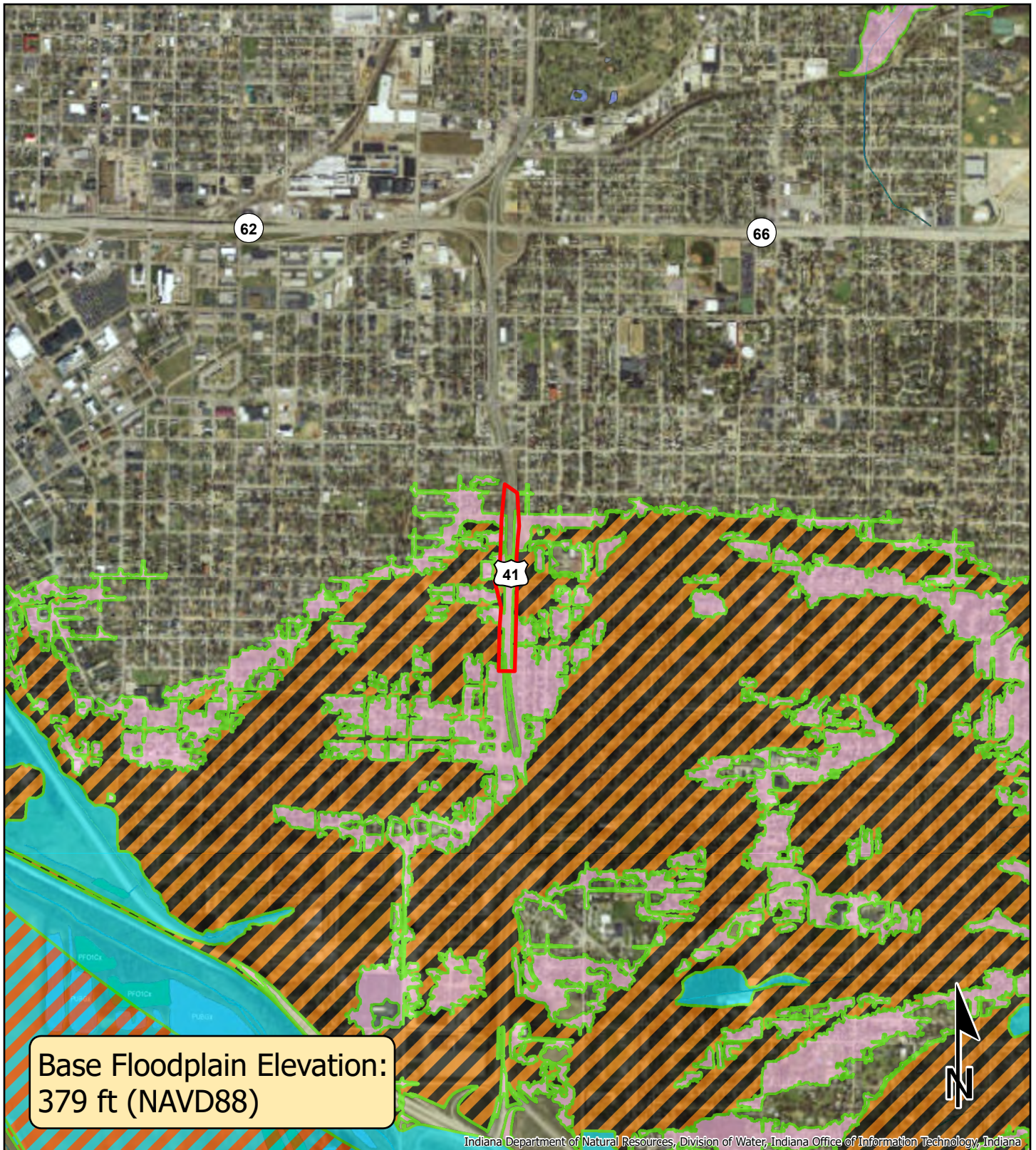


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This e-mail and any files transmitted with it are confidential and are intended solely for the use of the



<p> Investigated Area</p> <p> Watershed</p>	<p align="center">Watershed Map</p> <p align="center">US 41 at Washington Avenue Intersection Improvement Vanderburgh County, Indiana</p>	
<p>0 5,000 10,000</p> <p align="center"> Feet</p>	<p>Des. No. 2000186</p>	<p align="center">HNTB</p> <p align="center">Graphics created by HNTB Corporation (2021)</p>
	<p>1 inch = 9,795 ft</p>	

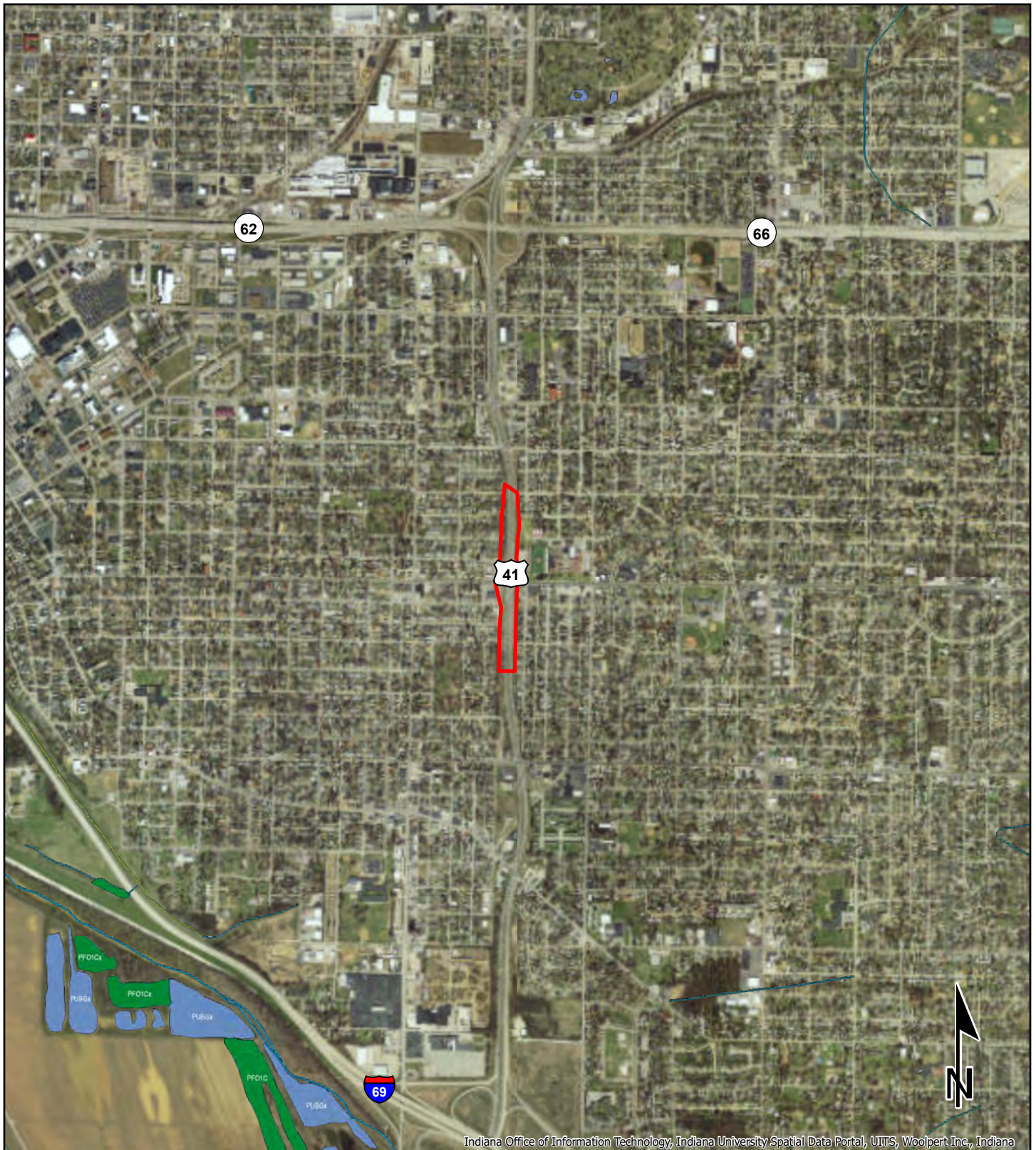


Indiana Department of Natural Resources, Division of Water, Indiana Office of Information Technology, Indiana

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

0 2000 4000
 Feet

<h3>IDNR Floodplain Map</h3> <p>US 41 at Washington Avenue Intersection Improvement Vanderburgh County, Indiana</p>	
Des. No. 2000186	<p>Graphics created by HNTB Corporation (2021)</p>
1 inch = 2,000 ft	

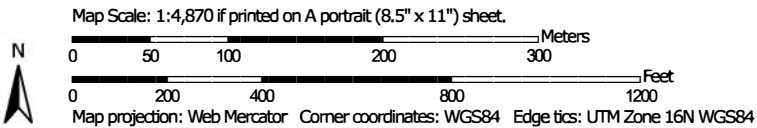


<p>Wetlands</p> <ul style="list-style-type: none"> Estuarine and Marine Deepwater Estuarine and Marine Wetland Freshwater Emergent Wetland Freshwater Forested/Shrub Wetland Freshwater Pond Lake Other Riverine 	<p> Investigated Area</p>	<p>National Wetlands Inventory Map US 41 at Washington Avenue Intersection Improvement Vanderburgh County, Indiana</p>
<p style="text-align: center;">0 185 370 Feet</p>		<p>Des. No. 2000186</p> <p>1 inch = 2,000 ft</p>
		<p style="font-size: x-small;">Graphics created by HNTB Corporation (2021)</p>

Soil Map—Vanderburgh County, Indiana
(Des. 2000186)



Soil Map may not be valid at this scale.



Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Wb	Weinbach silt loam	15.1	100.0%
Totals for Area of Interest		15.1	100.0%

Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Wb	Weinbach silt loam	3	15.1	100.0%
Totals for Area of Interest			15.1	100.0%

Report—Hydric Soil List - All Components

Hydric Soil List - All Components--IN163-Vanderburgh County, Indiana					
Map symbol and map unit name	Component/Local Phase	Comp. pct.	Landform	Hydric status	Hydric criteria met (code)
Wb: Weinbach silt loam	Weinbach	97	Stream terraces	No	—
	Ginat	3	Depressions	Yes	2

Data Source Information

Soil Survey Area: Vanderburgh County, Indiana
 Survey Area Data: Version 21, Sep 9, 2021

APPENDIX G: PUBLIC INVOLVEMENT

July 13, 2020

Re: Vanderburgh County Tax Parcel –

NOTICE OF SURVEY

Dear Property Owner:

HNTB, on behalf of The Indiana Department of Transportation (INDOT), will perform a survey for the improvement of the intersection of US 41 near Washington Avenue, located 1.00 mile south of the intersection of US 41 and SR 66/SR 62, located in Vanderburgh County, Indiana, Des No. 2000186. A portion of this survey work may be performed on your property in order to provide design engineers information for project design. The survey work will include mapping the location of features such as trees, buildings, fences, drives, ground elevations, etc. The survey is needed for the proper planning and design of this highway project.

At this stage we generally do not know what effect, if any, our project may eventually have on your property. If we determine later that your property is involved, we will contact you with additional information.

Indiana Code 8-23-7-26 allows HNTB, as the authorized employees of INDOT, *Right of Entry* to the project site (including private property) upon proper notification. A copy of a Notice of Survey discussion sheet, as found on INDOT's website (<http://www.in.gov/indot/2888.htm>), is attached to this letter. Pursuant to Indiana Code 8-23-7-27, this letter serves as written notification that we will be performing the above noted survey in the vicinity of your property on or after July 10, 2021.

HNTB employees will show you their identification, if you are available, before coming onto your property.

If you own but are not the tenant of this property (i.e. rental, sharecrop), please inform us so that we may also contact the actual tenant of the property prior to commencement of our work. If you have any questions or concerns regarding our proposed survey work or schedule, please contact the HNTB Project Manager. This contact information is as follows:

William Jones
111 Monument Circle, Suite 1200
Indianapolis, IN 46204
(317) 903-4852

Under Indiana Code 8-23-7-28, you have a right to compensation for any damage that occurs to your land or water as a result of the entry or work performed during the entry. To obtain such compensation, you should contact the Indiana Department of Transportation Central Office; contact information is below. Once you fill out this form, you can return it to the Indiana Department of Transportation Central Office for consideration. If you are not satisfied with the compensation that INDOT determines is owed to you, Indiana Code 8-23-7-28 provides the following:

The amount of damages shall be assessed by the county agricultural extension educator of the county in which the land or water is located and two (2) disinterested residents of the county, one (1) appointed by the aggrieved party and one (1) appointed by the department. A written report of the assessment of damages shall be mailed to the aggrieved party and the department by first class United States mail. If either the department or the aggrieved party is not satisfied with the assessment of damages, either or both may file a petition, not later than fifteen (15) days after receiving the report, in the circuit or superior court of the county in which the land or water is located.

If you have questions regarding the rights and procedures outlined in this letter, please contact the Indiana Department of Transportation Central Office. This contact information is as follows:

1-855-INDOT4U (463-6848)
www.INDOT4U.com

Thank you in advance for your cooperation in this matter.

Sincerely,
HNTB Corporation

A handwritten signature in blue ink that reads "William M. Jones". The signature is written in a cursive style with a large, looping "J" at the end.

William M. Jones
Supervisory Survey Technician

To be published in the Evansville Courier on Monday, June 13, and Tuesday, June 21, 2022

DES# 1902709

LEGAL NOTICE OF PUBLIC HEARING AND OPPORTUNITY FOR COMMENT ON THE PROPOSED DE MINIMIS SECTION 4(F) USE DETERMINATION
Pedestrian Bridge at the intersection of US 41 and Washington Avenue

The Indiana Department of Transportation (INDOT) will hold an in-person public hearing on Wednesday, June 29, 2022, at Benjamin Bosse High School, 1300 Washington Avenue, Evansville IN 47714. Doors will open at 4:30 p.m. (CDT) to allow participants time to view project displays and speak with project representatives before the formal presentation begins at 6 p.m. (CDT). To accommodate those unable to attend in person, the public hearing presentation and comment session will also be broadcast live on the INDOT Southwest Facebook page: <https://www.facebook.com/INDOTVincennesDistrict/>.

This public hearing will include appropriate COVID-19 safety measures. Masks and sanitation stations will be made available for attendees.

The purpose of the public hearing is to offer all interested persons an opportunity to comment on the environmental document and preliminary design plans for the pedestrian crossing at US 41 and Washington Avenue. The project intends to improve safety for pedestrians attempting to cross US 41.

The project is located on US 41 at the intersection of Washington Avenue in Knight Township, Vanderburgh County, within the INDOT Vincennes District. The Hi-Rail Pedestrian Trail runs along the west side of US 41 within the project limits and connects to the sidewalks on the north and south sides of Washington Avenue. Benjamin Bosse High School is located in the northeast corner of this intersection. A grade-separated crossing is warranted at this location based on safety concerns for pedestrian and bicycle traffic.

The project requires the reacquisition of 0.129 acre of permanent right-of-way and 0.098 acre of temporary right-of-way.

Traffic on US 41 is anticipated to be maintained in both directions during construction except for a single temporary closure of US 41 to erect the new prefabricated bridge. The majority of construction is anticipated to occur outside of the travel lanes. Washington Avenue will remain open during construction. A detour for pedestrian traffic on the Hi-Rail trail through the bridge construction area will utilize E Blackford Avenue, S Kerth Avenue, and Washington Avenue. Pedestrians will be detoured around the Washington Avenue curb ramp construction in phase 2

via Washington Avenue, S Kerth Avenue, and Jefferson Avenue. The closures/lane restrictions will pose a temporary inconvenience to traveling motorists (including school buses and emergency services); however, no significant delays are anticipated. All disruptions and delays will cease upon project completion.

Local, state, and federal funds are available for project construction. A Categorical Exclusion Level 4 document will be prepared to fully evaluate project impacts.

Project materials including the DRAFT Categorical Exclusion Level 4 document are available to view online at <https://www.in.gov/indot/about-indot/central-office/welcome-to-the-vincennes-district/us-41-pedestrian-crossing-in-evansville/>. The DRAFT Categorical Exclusion Level 4 is available for viewing in person at both the Evansville Vanderburgh Public Library Central (200 SE Martin Luther King Jr. Blvd., Evansville, IN 47713) and the Evansville Vanderburgh Public Library East (840 E. Chandler Ave., Evansville, IN 47713), or upon request.

As part of the environmental evaluation of the community and natural resource impacts of the proposed project, any potential public recreation areas must be identified and evaluated for protection under Section 4(f) of the Department of Transportation Act of 1966, 49 USC 303(c). As a publicly-owned and/or managed trail that is open to the public, the Hi-Rail Trail, located on the west side of US 41 extending from Riverside Drive to Walnut Street, is considered to be a Section 4(f) resource. This trail is a multi-use asphalt path with occasional park benches and amenities. Due to the construction of this project, 0.086 acre of temporary right-of-way from the Hi-Rail Trail and 0.118 acre of permanent right-of-way from the trail itself will be necessary. Permanent and temporary right-of-way is required for the relocation of 200 linear feet of the trail around the pedestrian bridge and ramp. The Hi-Rail Trail will be straightened and relocated to be adjacent to the existing right-of-way fence north of Washington Avenue. The Hi-Rail Trail will pass under the new pedestrian bridge between the right-of-way fence and the ramp to the pedestrian bridge. The pedestrian ramp connection to the trail will be at the south end of the ramp. The trail crossing at Washington Avenue will be straightened and upgraded on both sides of Washington Avenue to comply with current American with Disability Act (ADA) design standards. In addition, the trail will be temporarily closed during construction. The temporary closure will not be required for the duration of the project construction. These impacts will result in a Section 4(f) use of the trail.

The purpose of the public notice for the Section 4(f) *de minimis* use determination is to offer all interested persons an opportunity to comment on the Section 4(f) use of the Hi-Rail Trail and to provide comments to the project team and the official with jurisdiction regarding the Section 4(f) use determination.

The project is anticipated to be a *de minimis* impact on the trail. A *de minimis* impact is one that, after taking into account any measure to minimize harm (such as avoidance, minimization, mitigation, or enhancement measures), will not adversely affect the activities, features, or attributes qualifying a park, recreation area, or refuge for protection under Section 4(f). A *de minimis* impact determination requires public involvement and concurrence from the official

with jurisdiction. The official with jurisdiction for the trail is the City of Evansville. The City of Evansville Parks Department have expressed no concerns with the trail relocation.

Information on this proposed action and its impacts, avoidance, minimization, mitigation, or enhancement measures at the Hi-Rail Trail is available in the Categorical Exclusion Level 4 document. INDOT respectfully requests that comments on the Section 4(f) *de minimis* use determination be submitted by Monday, July 18, 2022. Comments will become part of the official record and will be considered when making future project-related decisions.

Project information can be mailed to interested persons by contacting Christine Meador at cmeador@HNTB.com or 317-917-5338. Written requests can also be mailed to her attention c/o HNTB, 111 Monument Circle, Suite 1200, Indianapolis, IN 46204.

Public statements will be recorded as part of this public hearing on both the Section 4(f) *de minimis* use determination and the Categorical Exclusion Level 4. All verbal statements recorded during the public hearing, and all written comments submitted before, during, and for approximately two (2) weeks following the hearing date, will be evaluated, considered, and addressed in subsequent environmental documentation.

Comments written on the Facebook livestream video or other social channels will not be entered into public record and will not be considered.

Written comments should be sent to Christine Meador at cmeador@HNTB.com or mailed to Christine Meador, HNTB, 111 Monument Circle, Suite 1200, Indianapolis, IN 46204 OR to the INDOT Project Manager, Troy Arnold at tarnold1@indot.in.gov or mailed to Troy Arnold, INDOT Vincennes District, 3650 S US Highway 41, Vincennes, IN 47591. INDOT respectfully requests that comments on both the Section 4(f) *de minimis* use determination and the Categorical Exclusion Level 4 be submitted by **Monday, July 18, 2022**.

In accordance with the Americans with Disabilities Act (ADA), and Title VI of the Civil Rights Act of 1964, persons and/or groups who require project information in alternative languages or formats should contact Christine Meador at 111 Monument Circle, Suite 1200, Indianapolis, IN 46204, or by calling 317-917-5338.

This notice is published in compliance with: 1) Code of Federal Regulations, Title 23, Section 771 (CFR 771.111(h)(1) stating, "Each State must have procedures approved by the FHWA to carry out a public involvement/public hearing program."; 2) 23 CFR 450.210(a)(1)(ix) stating, "Provide for the periodic review of the effectiveness of the public involvement process to ensure that the process provides full and open access to all interested parties and revise the process, as appropriate."; and 3) The INDOT Public Involvement Policies and Procedures approved by the Federal Highway Administration on August 16, 2012.

DES# 2000186
LEGAL NOTICE OF PUBLIC OPEN HOUSE
Intersection Improvement at US 41 at Washington Avenue

The Indiana Department of Transportation (INDOT) will hold a public open house in conjunction with the public hearing for the US 41 and Washington Avenue Pedestrian Bridge on Wednesday, June 29, 2022, at Benjamin Bosse High School, 1300 Washington Avenue, Evansville IN 47714. Doors will be open from 4:30 p.m. to 7:30 p.m. (CDT) to allow participants time to view project displays and speak with project representatives. No formal presentation on the intersection improvement will be given.

Local, state, and federal funds are available for project construction. A Categorical Exclusion document will be prepared to fully evaluate the project impacts.

Project materials, including display boards and other information provided at this open house, will be available to view on the INDOT Vincennes District website after the open house or upon request. Persons with limited internet access can request that project information be mailed to them. For more information, contact Christine Meador at HNTB, 111 Monument Circle, Suite 1200, Indianapolis, IN 46204; or at cmeador@HNTB.com or 317-636-4682.

The purpose of the public open house is to introduce the public to the preliminary project design for the intersection improvement at the intersection of US 41 and Washington Avenue and to offer all interested persons an opportunity to comment.

The need for the project is based on the existing crash rates and safety concerns at this intersection. Between 2016 and 2018, there were 15 Fatal and/or Incapacitating Crashes, 15 Non-Incapacitating and Possibly Injury Crashes and 85 Property Damage Only Crashes; which make this intersection a "high crash" location. The purpose of this project is to improve the safety and mobility of the intersection.

The project is located on US 41 at the intersection of Washington Avenue in Knight Township, Vanderburgh County, within the INDOT Vincennes District. The High-Rail Pedestrian Trail runs along the west side of US 41 within the project limits and connects to the sidewalks on the north and south sides of Washington Avenue. Benjamin Bosse High School is located in the northeast corner of this intersection. Currently, the intersection of US 41 and Washington Avenue consists of two northbound and two southbound lanes on US 41 with a left-turn lane for each direction separated by a grassy median. Washington Avenue consists of one westbound and one eastbound lane with a right turn lane and a left-turn lane in each direction.

A Boulevard Left intersection will be constructed at the intersection of US 41 and Washington Avenue. The Boulevard Left intersection relocates left turns from all legs of the main intersection to signalized median U-turns located approximately 800 feet north and south of Washington Avenue. This intersection type retains east-west connectivity on Washington Avenue. The Boulevard Left intersection has fewer signal phases than other types of intersection

improvements and provides better mobility to eastbound-westbound traffic on Washington Avenue, which is a minor arterial. The project will also include directional signage, maintenance of drainage within the project extents, replacement of traffic signals at the main intersection, and the installation of new traffic signals at the median U-turn locations. There is no permanent or temporary right-of-way acquisition anticipated for this project.

Traffic on US 41 is anticipated to be maintained in both directions during construction. To allow movements to remain open during construction, any median crossing work will be constructed before the intersection is closed. US 41 will be reduced to one lane in each direction during construction. Pedestrian maintenance of traffic will be required. The intersection improvement will be constructed in conjunction with the US 41 pedestrian bridge to minimize construction impacts on the public.

Public statements will not be recorded as part of this public open house. Written comments submitted before, during, and for approximately two (2) weeks following the open house, will be evaluated, considered, and addressed in subsequent environmental documentation. Written comments should be sent to Christine Meador at cmeador@HNTB.com or mailed to Christine Meador, HNTB, 111 Monument Circle, Suite 1200, Indianapolis, IN 46204 OR to the INDOT Project Manager, Troy Arnold at tarnold1@indot.in.gov or mailed to Troy Arnold, INDOT Vincennes District, 3650 S US Highway 41, Vincennes, IN 47591. INDOT respectfully requests that comments be submitted by **Monday, July 18, 2022**.

In accordance with the “Americans with Disabilities Act”, if you have a disability or need assistance with accessibility such as document viewing, interpreters, or readers, please contact Christine Meador, HNTB, 111 Monument Circle, Suite 1200, Indianapolis, IN 46204 or cmeador@HNTB.com or 317-636-4682 regarding accommodations.

Courier & Press

PART OF THE USA TODAY NETWORK

Affidavit of Publication

PROOF OF PUBLICATION OF LEGAL ADVERTISEMENT

Account Number:
1672059

STATE OF WISCONSIN
BROWN COUNTY

HNTB CORP LGL
111 MONUMENT CIR # 1200

INDIANAPOLIS IN 46204-5404

RE: HNTB CORP LGL
AD: 0005294526-01
Publication Cost: 305.32

of Affidavits 1

This is not an invoice

I, being sworn, am an employee of the **Evansville Courier Company**, publisher of **The Evansville Courier**, a daily newspaper published in the city of Evansville, in said county and state and that the legal advertisement, of which the attached is a true copy was printed in its issues of:

EC-Evansville Courier & Press

The issues dated: 06/13/2022

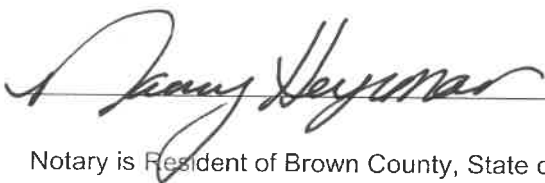
The issues dated: 06/21/2022



6-21-2022

Signed

Date



Notary Public

Notary is Resident of Brown County, State of Wisconsin

My Commission expires: 5-15-23

NANCY HEYRMAN
Notary Public
State of Wisconsin

To: **Evansville Courier & Press**

(Governmental Unit)

County, Indiana

Evansville, IN

PUBLISHER'S CLAIM

434 lines, 1 columns wide equals 434 equivalent lines at \$0.35 per line @ 2 days, \$305.32

Website Publication \$0

Acct #: 1672059
Ad #: 0005294526

Charge for proof(s) of publication \$0.00

DATA FOR COMPUTING COST

Width of single column 9.5 ems
Number of insertions 2
Size of type 7 point

TOTAL AMOUNT OF CLAIM \$305.32

Pursuant to the provisions and penalties of IC 5-11-10-1, I here by certify that the foregoing account is just and correct, that the amount claimed is legally due, after allowing all just credits, and that no part of the same has been paid

Claim No. _____ Warrant No. _____

IN FAVOR OF

Evansville Courier & Press

Evansville, IN

Vanderburgh County, IN

PO Box 268, Evansville IN 47702

I have examined the within claim and hereby certify as follows:

That it is in proper form.

This it is duly authenticated as required by law.

That it is based upon statutory authority.

That it is apparently (correct)
(incorrect)

\$ _____

On Account of Appropriation For

FED. ID

#06-1032273

Allowed _____, 20_____

In the sum of \$ _____

I certify that the within claim is true and correct; that the services there-in itemized and for which charge is made were ordered by me and were necessary to the public business.

DES# 1902709

LEGAL NOTICE OF PUBLIC HEARING
AND OPPORTUNITY FOR COMMENT
ON THE PROPOSED DE MINIMIS
SECTION 4(F) USE DETERMINATION

Pedestrian Bridge at the intersection
of US 41 and Washington Avenue

The Indiana Department of Transportation (INDOT) will hold an in-person public hearing on Wednesday, June 29, 2022, at Benjamin Bosse High School, 1300 Washington Avenue, Evansville IN 47714. Doors will open at 4:30 p.m. (CDT) to allow participants time to view project displays and speak with project representatives before the formal presentation begins at 6 p.m. (CDT). To accommodate those unable to attend in person, the public hearing presentation and comment session will also be broadcast live on the INDOT Southwest Facebook page: <https://www.facebook.com/INDOTVincennesDistrict/>.

This public hearing will include appropriate COVID-19 safety measures. Masks and sanitation stations will be made available for attendees.

The purpose of the public hearing is to offer all interested persons an opportunity to comment on the environmental document and preliminary design plans for the pedestrian crossing at US 41 and Washington Avenue. The project intends to improve safety for pedestrians attempting to cross US 41.

The project is located on US 41 at the intersection of Washington Avenue in Knight Township, Vanderburgh County, within the INDOT Vincennes District. The Hi-Rail Pedestrian Trail runs along the west side of US 41 within the project limits and connects to the sidewalks on the north and south sides of Washington Avenue. Benjamin Bosse High School is located in the northeast corner of this intersection. A grade-separated crossing is warranted at this location based on safety concerns for pedestrian and bicycle traffic.

The project requires the reacquisition of 0.129 acre of permanent right-of-way and 0.098 acre of temporary right-of-way.

Traffic on US 41 is anticipated to be maintained in both directions during construction except for a single temporary closure of US 41 to erect the new prefabricated bridge. The majority of construction is anticipated to occur outside of the travel lanes. Washington Avenue will remain open during construction. A detour for pedestrian traffic on the Hi-Rail trail through the bridge construction area will utilize E Blackford Avenue, S Kerth Avenue, and Washington Avenue. Pedestrians will be detoured around the Washington Avenue curb ramp construction in phase 2 via Washington Avenue, S Kerth Avenue, and Jefferson Avenue. The

closures/lane restrictions will pose a temporary inconvenience to traveling motorists (including school buses and emergency services); however, no significant delays are anticipated. All disruptions and delays will cease upon project completion.

Local, state, and federal funds are available for project construction. A Categorical Exclusion Level 4 document will be prepared to fully evaluate project impacts.

Project materials including the DRAFT Categorical Exclusion Level 4 document are available to view online at <https://www.in.gov/indot/about-indot/central-office/welcome-to-the-vincennes-district/us-41-pedestrian-crossing-in-evansville/>. The DRAFT Categorical Exclusion Level 4 is available for viewing in person at both the Evansville Vanderburgh Public Library Central (200 SE Martin Luther King Jr. Blvd., Evansville, IN 47713) and the Evansville Vanderburgh Public Library East (840 E. Chandler Ave., Evansville, IN 47713), or upon request.

As part of the environmental evaluation of the community and natural resource impacts of the proposed project, any potential public recreation areas must be identified and evaluated for protection under Section 4(f) of the Department of Transportation Act of 1966, 49 USC 303(c). As a publicly-owned and/or managed trail that is open to the public, the Hi-Rail Trail, located on the west side of US 41 extending from Riverside Drive to Walnut Street, is considered to be a Section 4(f) resource. This trail is a multi-use asphalt path with occasional park benches and amenities. Due to the construction of this project, 0.086 acre of temporary right-of-way from the Hi-Rail Trail and 0.118 acre of permanent right-of-way from the trail itself will be necessary. Permanent and temporary right-of-way is required for the relocation of 200 linear feet of the trail around the pedestrian bridge and ramp. The Hi-Rail Trail will be straightened and relocated to be adjacent to the existing right-of-way fence north of Washington Avenue. The Hi-Rail Trail will pass under the new pedestrian bridge between the right-of-way fence and the ramp to the pedestrian bridge. The pedestrian ramp connection to the trail will be at the south end of the ramp. The trail crossing at Washington Avenue will be straightened and upgraded on both sides of Washington Avenue to comply with current American with Disability Act (ADA) design standards. In addition, the trail will be temporarily closed during construction. The temporary closure will not be required for the duration of the project construction. These impacts will result in a Section 4(f) use of the trail.

The purpose of the public notice for the Section 4(f) de minimis use determination is to offer all interested persons an opportunity to

comment on the Section 4(f) use of the Hi-Rail Trail and to provide comments to the project team and the official with jurisdiction regarding the Section 4(f) use determination.

The project is anticipated to be a de minimis impact on the trail. A de minimis impact is one that, after taking into account any measure to minimize harm (such as avoidance, minimization, mitigation, or enhancement measures), will not adversely affect the activities, features, or attributes qualifying a park, recreation area, or refuge for protection under Section 4(f). A de minimis impact determination requires public involvement and concurrence from the official with jurisdiction. The official with jurisdiction for the trail is the City of Evansville. The City of Evansville Parks Department have expressed no concerns with the trail relocation.

Information on this proposed action and its impacts, avoidance, minimization, mitigation, or enhancement measures at the Hi-Rail Trail is available in the Categorical Exclusion Level 4 document. INDOT respectfully requests that comments on the Section 4(f) de minimis use determination be submitted by Monday, July 18, 2022. Comments will become part of the official record and will be considered when making future project-related decisions.

Project information can be mailed to interested persons by contacting Christine Meador at cmeador@HNTB.com or 317-917-5338. Written requests can also be mailed to her attention c/o HNTB, 111 Monument Circle, Suite 1200, Indianapolis, IN 46204.

Public statements will be recorded as part of this public hearing on both the Section 4(f) de minimis use determination and the Categorical Exclusion Level 4. All verbal statements recorded during the public hearing, and all written comments submitted before, during, and for approximately two (2) weeks following the hearing date, will be evaluated, considered, and addressed in subsequent environmental documentation.

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Written comments should be sent to Christine Meador at cmeador@HNTB.com or mailed to Christine Meador, HNTB, 111 Monument Circle, Suite 1200, Indianapolis, IN 46204 OR to the INDOT Project Manager, Troy Arnold at tarnold1@indot.in.gov or mailed to Troy Arnold, INDOT Vincennes District, 3650 S US Highway 41, Vincennes, IN 47591. INDOT respectfully requests that comments on both the Section 4(f) de minimis use determination and the Categorical Exclusion Level 4 be submitted by Monday, July 18, 2022.

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DES# 2000186
LEGAL NOTICE OF PUBLIC OPEN HOUSE
Intersection Improvement at US 41
at Washington Avenue

The Indiana Department of Transportation (INDOT) will hold a public open house in conjunction with the public hearing for the US 41 and Washington Avenue Pedestrian Bridge on Wednesday, June 29, 2022, at Benjamin Bosse High School, 1300 Washington Avenue, Evansville IN 47714. Doors will be open from 4:30 p.m. to 7:30 p.m. (CDT) to allow participants time to view project displays and speak with project representatives. No formal presentation on the intersection improvement will be given.

Local, state, and federal funds are available for project construction. A Categorical Exclusion document will be prepared to fully evaluate the project impacts.

Project materials, including display boards and other information provided at this open house, will be available to view on the INDOT Vincennes District website after the open house or upon request. Persons with limited internet access can request that project information be mailed to them. For more information, contact Christine Meador at HNTB, 111 Monument Circle, Suite 1200, Indianapolis, IN 46204; or at cmeador@HNTB.com or 317-636-4682.

The purpose of the public open house is to introduce the public to the preliminary project design for the intersection improvement at the intersection of US 41 and Washington Avenue and to offer all interested persons an opportunity to comment.

The need for the project is based on the existing crash rates and safety concerns at this intersection.

Between 2016 and 2018, there were 15 Fatal and/or Incapacitating Crashes, 15 Non-Incapacitating and Possibly Injury Crashes and 85 Property Damage Only Crashes; which make this intersection a "high crash" location. The purpose of this project is to improve the safety and mobility of the intersection.

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Traffic on US 41 is anticipated to be maintained in both directions during construction. To allow movements to remain open during construction, any median crossing work will be constructed before the intersection is closed. US 41 will be reduced to one lane in each direction during construction. Pedestrian maintenance of traffic will be required. The intersection improvement will be constructed in conjunction with the US 41 pedestrian bridge to minimize construction impacts on the public.

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tation. Written comments should be sent to Christine Meador at cmeador@HNTB.com or mailed to Christine Meador, HNTB, 111 Monument Circle, Suite 1200, Indianapolis, IN 46204 OR to the INDOT Project Manager, Troy Arnold at tarnold1@indot.in.gov or mailed to Troy Arnold, INDOT Vincennes District, 3650 S US Highway 41, Vincennes, IN 47591. INDOT respectfully requests that comments be submitted by Monday, July 18, 2022.

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Couri&Press, June 13&21,2022
hspaxlp

MEETING PARTICIPANT SIGN-IN SHEET

	First Name	Last Name	Home Address (optional)	Telephone (optional)	Email Address (optional)	Check box to be added to project mail & email list
1.	Alex	Burton	1724 S. Bedford Ave			
2.	Ann	Ennis	10626 Orchard Ln			
3.	Lori Sherman	Sherman	516 Monroe Ave			
4.	BRENT	JACKSON	1401 HFW INVAUE			
5.	DAN	ENGELBRECHT	1201 SOUTHFIELD RD			
6.	Duke	RHEADS	1627 Brookside Dr			
7.	John	CARTER	2625 Beechgrove			
8.	MAMIE	Van Lear	1044 E Black Forest			
9.	SHAUNA	HUFF	1706 N. THOMAS AVE			
10.	Kenneth	JACKSON	1706 N. THOMAS AVE			

June 29, 2022

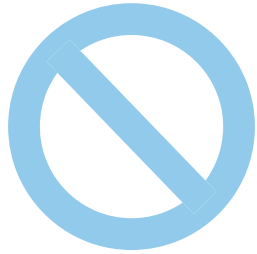
MEETING PARTICIPANT SIGN-IN SHEET

	First Name	Last Name	Home Address (optional)	Telephone (optional)	Email Address (optional)	Check box to be added to project mail & email list
1.	James	Mosley	1419 Judson			
2.	ELAINE MITTLEMAN	MITTLEMAN	300 MAIN ST ST LA			X
3.	Mark Mury	Evansville Watch				X
4.	Sarah BA	Loesch				X
5.	Alhamisi	Griffin	808 Covert Ave			✓
6.	Manuel	Sone	616 College Hwy			✓
7.	Mike	Duckworth	8309 LARCH LN.			✓
8.	Gwen	Mason	601 College Hwy.			✓
9.	Terry	Brooks	1401 East Park Dr.			
10.						

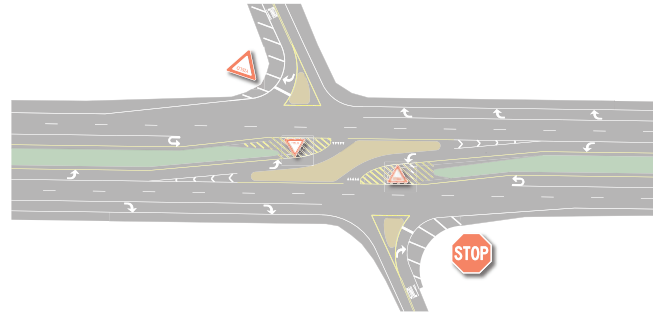
MEETING PARTICIPANT SIGN-IN SHEET

	First Name	Last Name	Home Address (optional)	Telephone (optional)	Email Address (optional)	Check box to be added to project mail & email list
1.	Marianne	Wilson	822 Adams Ave			
2.	Lorie	Van Hook	1820 Mt. Auburn Rd			✓
3.	Angel	Brooks				✓
4.	Johanne	Vick	855 E. Paul			✓
5.	Mitch	Luman	1644 E Blackford Ave			✓
6.	Amanda	Miller				
7.						
8.						
9.						
10.						

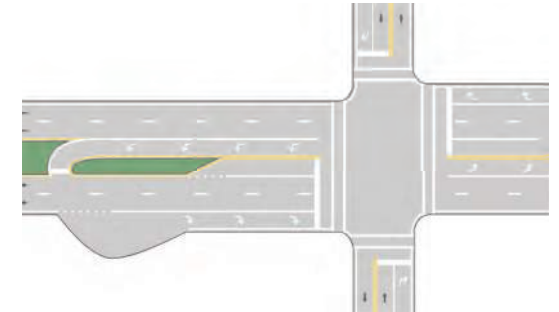
Alternatives Considered



NO BUILD



J-TURN / RCUT

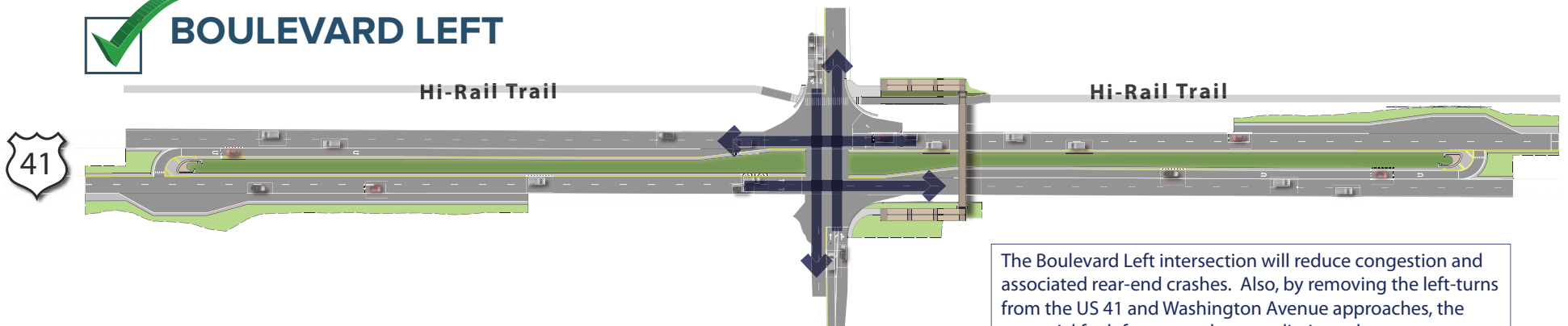


BOULEVARD LEFT

Selected Alternative



BOULEVARD LEFT



The Boulevard Left intersection will reduce congestion and associated rear-end crashes. Also, by removing the left-turns from the US 41 and Washington Avenue approaches, the potential for left turn crashes are eliminated.



US 41 & Washington Avenue - Improved Intersection • Public Open House
Project Alternatives



Why a Boulevard Left?

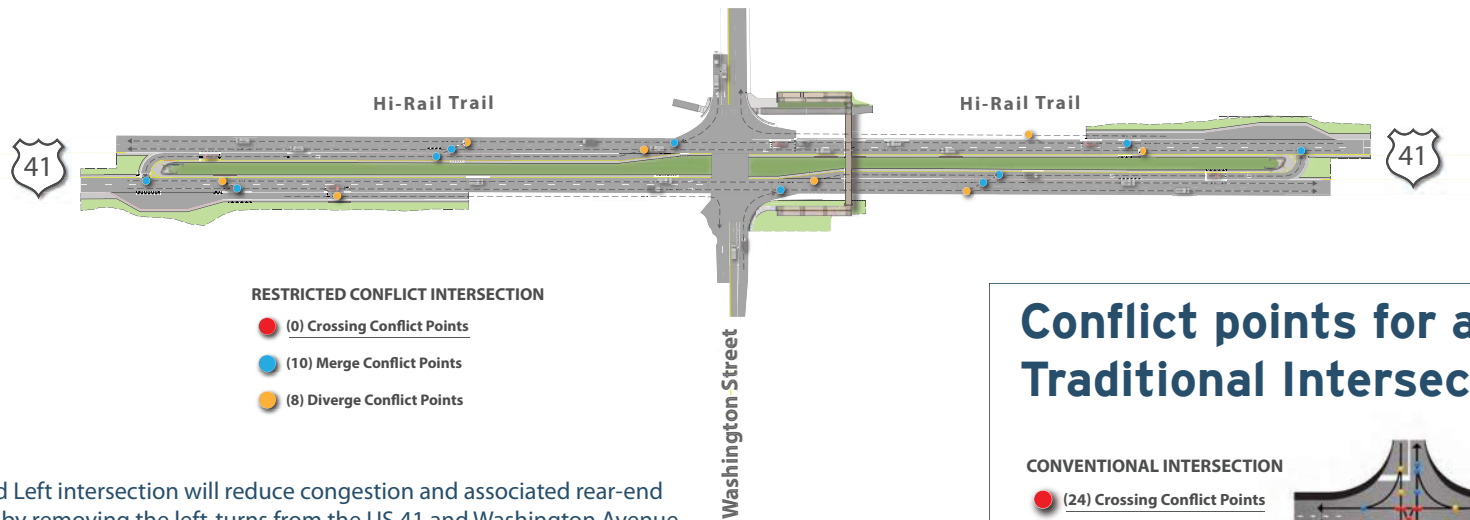
NEED:

- High Crash Rates at the US 41 and Washington Avenue intersection.

PURPOSE:

- Reduce the severity of crashes

Conflict points for a Boulevard Left:

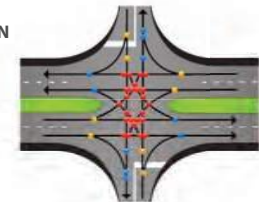


The Boulevard Left intersection will reduce congestion and associated rear-end crashes. Also, by removing the left-turns from the US 41 and Washington Avenue approaches, the potential for left turn crashes are eliminated therefore meeting the project need to reduce crashes at this intersection.

Conflict points for a Traditional Intersection:

CONVENTIONAL INTERSECTION

- (24) Crossing Conflict Points
- (10) Merge Conflict Points
- (8) Diverge Conflict Points



US 41 & Washington Avenue - Improved Intersection - Public Open House Purpose and Need





US 41 & Washington Avenue - Improved Intersection • Public Open House
Location Plan - Proposed Roadway Improvements



Westbound Washington Street to southbound US 41



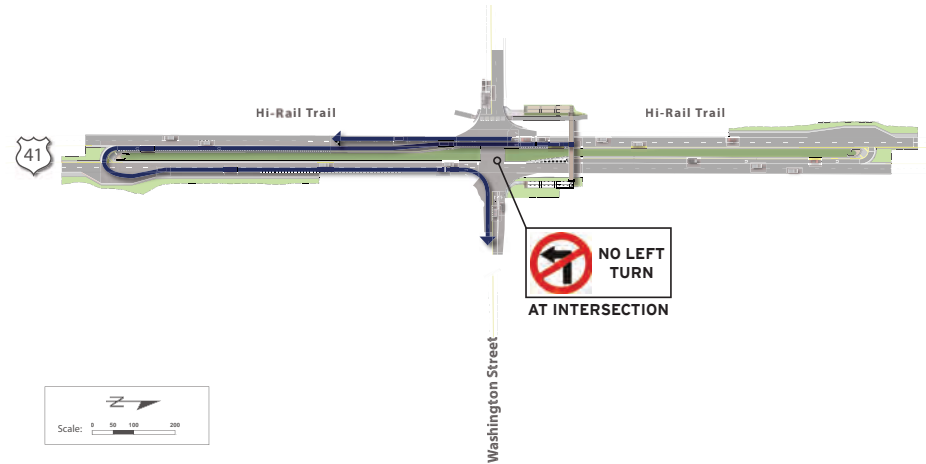
Eastbound Washington Street to northbound US 41



Northbound US 41 to westbound Washington Street



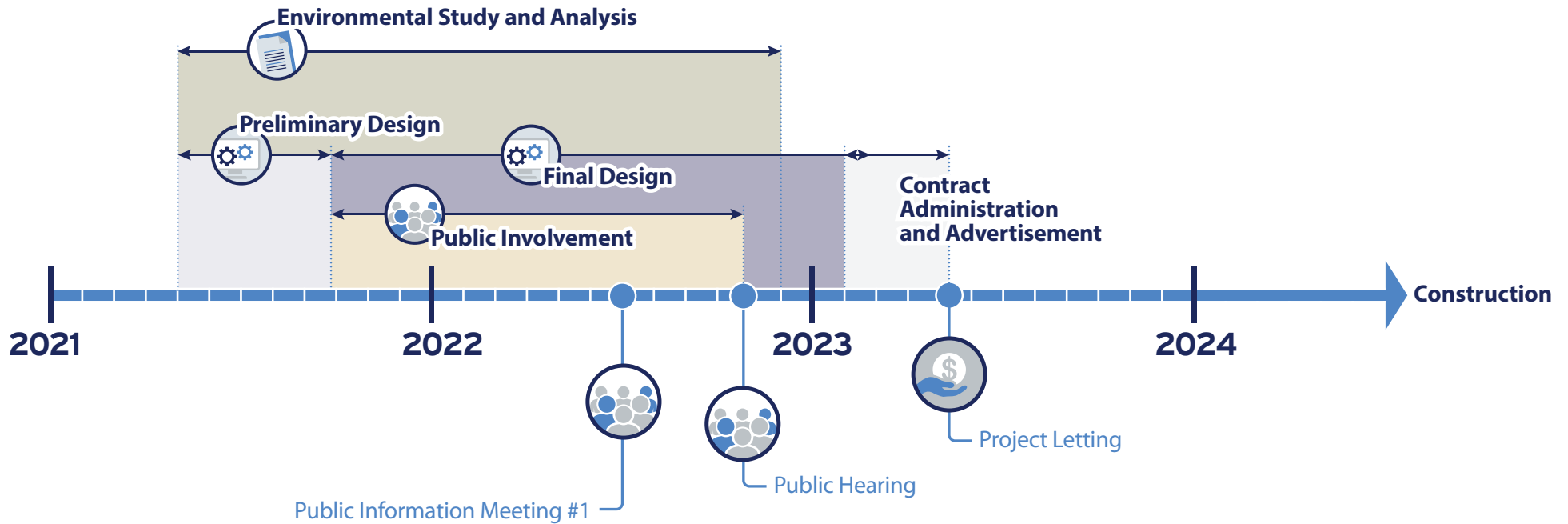
Southbound US 41 to eastbound Washington Street



US 41 & Washington Avenue - Improved Intersection - Public Open House Intersection Turning Movements



Project Schedule

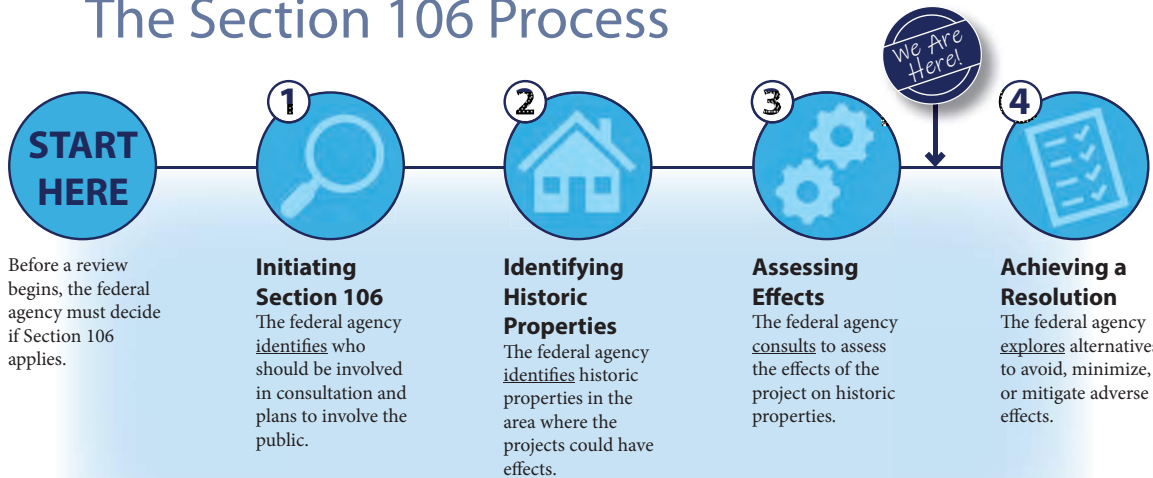


US 41 & Washington Avenue - Improved Intersection - Public Open House Project Timeline



Historic Resource Review

The Section 106 Process



Our Timeline

1. Initiating Section 106

Early coordination sent in August 2, 2021 with invitation to be a Consulting Party to local, state and tribal parties. Identified the State Historic Preservation Officer, the Evansville Historic Preservation Officer, and Indiana Landmarks accepted consulting party status.

2. Identifying Historic Properties:

Below Ground – Project reviewed by an archaeologist and found to be disturbed

Above Ground - Historic Property Report identified one property listed in the NRHP, the Lincolnshire Historic District which contains both Enlow Field and Benjamin Bosse High School.

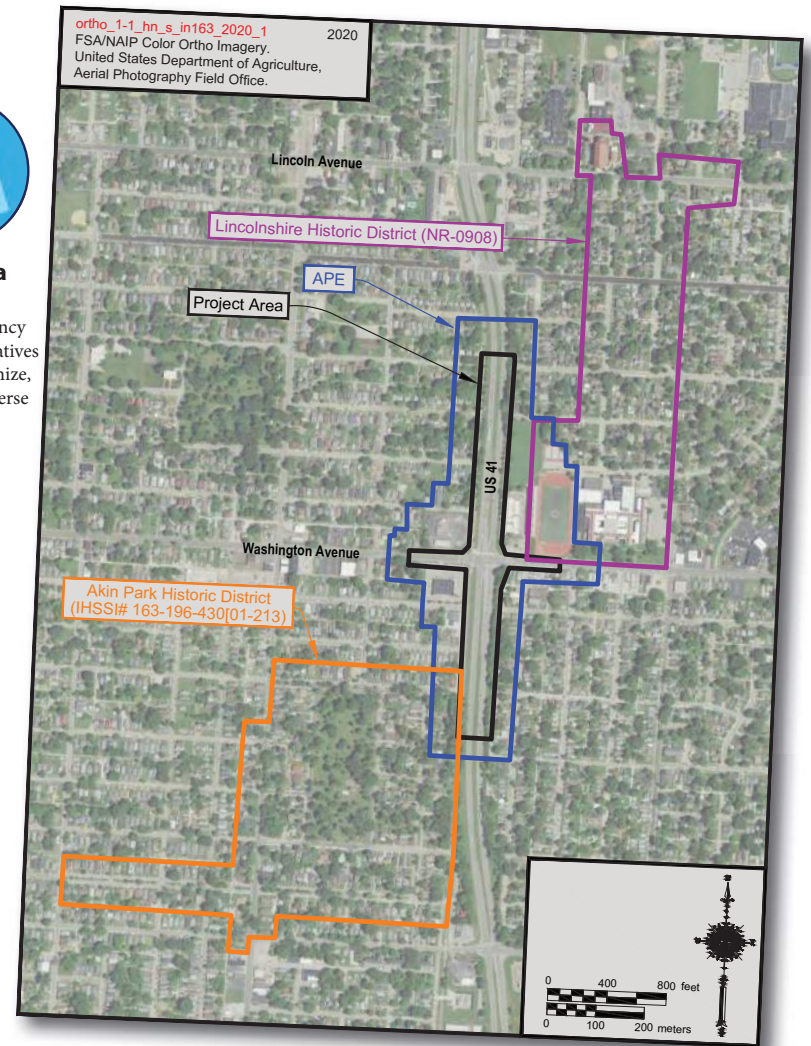
Akin Park Historic District – The Akin Park Historic District is an excellent example of community planning and development in Evansville during the early to mid-twentieth century.

3. Assess Effects:

Prepare Effects Letter and Section 800.11 to document effects. Anticipate No Adverse Effect.

4. Achieve Resolution:

Consulting Parties concurrence with No Adverse Effect and Aesthetic Treatments.



US 41 & Washington Avenue - Improved Intersection - Public Open House





COMMENT SHEET

RE: DES NUMBER: 2000186
US 41 & Washington Avenue - Improved Intersection
Public Open House

TO: INDOT Project Team
Attn: Christine Meador
C/O HNTB Corporation
111 Monument Circle, Suite 1200
Indianapolis IN, 42204
cmeador@hntb.com
317-636-4682

FROM: Name ANN ENNIS

Address

Phone (&

Organization/Agency (if relevant) EVSC-Trustee (Optional)

COMMENTS: (INDOT respectfully requests that comments be submitted by Monday, July 18, 2022.
Comments can be submitted to Christine Meador at the address above.)

Comments

Love that this is happening. It
is so very needed. I had no idea.

The aesthetic w/ boulevard still grass
is a plus.

The traffic flow will be improved
with these 'boulevard lefts' - like a
huge rectangular roundabout -
an 'oblong about'

Thanks to INDOT for thinking
outside the box - & building
better!

AE

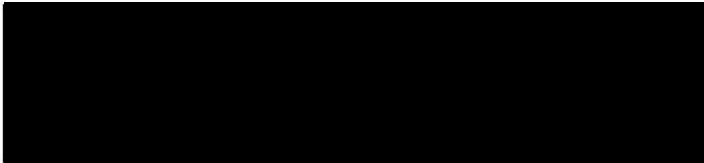


INDIANA DEPARTMENT OF TRANSPORTATION

COMMENT SHEET

RE: DES NUMBER: 2000186
US 41 & Washington Avenue - Improved Intersection
Public Open House

TO: INDOT Project Team
Attn: Christine Meador
C/O HNTB Corporation
111 Monument Circle, Suite 1200
Indianapolis IN, 42204
cmeador@hntb.com
317-636-4682



FROM: Name ELAINE MITTLEMAN
Address 300 MAIN ST ST LA
Phone [REDACTED] Email [REDACTED] (Optional)
Organization/Agency (if relevant) [REDACTED] (Optional)

COMMENTS: (INDOT respectfully requests that comments be submitted by **Monday, July 18, 2022**.
Comments can be submitted to Christine Meador at the address above.)

Comments

*I am in favor of safe intersection,
Please contact me.*

*I was involved in a collision several
years ago at this intersection.*

APPENDIX H: AIR QUALITY



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N758-Executive Office
Indianapolis, Indiana 46204

PHONE: (855) 463-6848

Eric Holcomb, Governor
Michael Smith, Commissioner

April 26, 2022

Mr. Jermaine R. Hannon, Division Administrator
FHWA Indiana Division
575 North Pennsylvania St., Room 254
Indianapolis, IN 46204

Ms. Kelley Brookins, Regional Administrator
FTA Region 5
200 West Adams St.
Suite 320
Chicago, IL 60606-5253

Dear Mr. Hannon /Ms. Brookins:

The Indiana Department of Transportation is pleased to submit its Draft FY 2022-2026 Statewide Transportation Improvement Program (STIP) for review and comment by your offices.

Included in the final submitted document is a listing of the state’s expansion/preservation and local small urban and rural and rural transit projects. The following Metropolitan Planning Organization TIP’s will be included in the FY 2022-2026 STIP by reference, pending FHWA approval in May 2022.

Area Plan Commission of Tippecanoe County (APCTC)	FY 2022-2026
• <i>Version 3/10/2022</i>	
Bloomington-Monroe County Metropolitan Planning Organization (BMCMPPO)	FY 2022-2026
• <i>Version 3/11/2022</i>	
Columbus Area Metropolitan Planning Organization (CAMPO)	FY 2022-2026
• <i>Version 3/22/2021</i>	
Delaware-Muncie Metropolitan Plan Commission (DMMPC)	FY 2022-2025
• <i>Version 12/15/2021</i>	
Evansville Metropolitan Planning Organization (EMPO)	FY 2022-2026
• <i>Version 3/10/2022</i>	
Kokomo-Howard County Governmental Coordinating Council (KHCGCC)	FY 2022-2026
• <i>Version 3/10/2022</i>	
Kentuckiana Regional Planning and Development Agency (KIPDA)	FY 2020-2025
• <i>Version 3/29/2022</i>	
Indianapolis Metropolitan Planning Organization (IMPO)	FY 2022-2025
• <i>Version 8/18/2021</i>	
Michiana Area Council of Governments (MACOG)	FY 2022-2026
• <i>Version 3/09/2022</i>	

Madison County Council of Governments (MCCOG)	FY 2022-2026
• <i>Version 7/13/2021</i>	
Northeastern Indiana Regional Coordinating Council (NIRCC)	FY 2022-2026
• <i>Version 3/28/2022</i>	
Northwestern Indiana Regional Planning Commission (NIRPC)	FY 2022-2026
• <i>Version 3/17/2022</i>	
Ohio-Kentucky-Indiana Regional Council of Governments (OKI)	FY 2020-2023
• <i>Version 03/10/2022</i>	
Terre Haute Area Metropolitan Planning Organization (THAMPO)	FY 2020-2024
• <i>Version 08/26/2021</i>	

In addition, INDOT has expanded our public involvement process by taking advantage of virtual meeting techniques and allowing accessibility to online documents, materials, virtual meeting registration, recorded virtual meetings, and comment forms. INDOT also leveraged our planning partner contacts (MPOs, RPOs, LTAP), social media, and notifications sent to local libraries, housing authorities, senior aging centers, and local newspapers across the state.

We greatly appreciate FHWA/FTA support in the development of the STIP 2022-2026 and look forward to working together to achieve our mutual goals. Should you have any questions pertaining to this amendment, please contact Michael McNeil, STIP Specialist at 317-232-0223 or at mmcneil@indot.in.gov.

Sincerely,



Michael Smith, Commissioner
Indiana Department of Transportation

cc: (w/enclosure): FTA
Michelle Allen, FHWA
Jeffrey Brooks, INDOT
Kristin Brier, INDOT
Kathy Eaton-McKalip, INDOT
Louis Feagans, INDOT
Roy Nunnally, INDOT
Larry Buckel, INDOT
Jay Mitchell, INDOT
Jason Casteel, INDOT
Michael McNeil, INDOT



Federal Transit Administration
Region V
200 West Adams St., Suite 320
Chicago, IL 60606-5253

U.S. Department
of Transportation

Federal Highway Administration
Indiana Division
575 N. Pennsylvania St., Rm 254
Indianapolis, IN 46204-1576

June 17, 2022

Mr. Michael Smith
Commissioner
Indiana Department of Transportation
100 N Senate Ave. N955
Indianapolis, IN 46204

SUBJECT: Indiana FY2022-2026 STIP Approval and Associated Federal Planning Finding

Dear Mr. Smith:

The Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) have completed our review of the FY2022-2026 Indiana Statewide Transportation Improvement Program (INSTIP), which was submitted by the INDOT request letter dated April 27, 2022.

Based on our review of the information provided, certifications of the Statewide and Metropolitan transportation planning processes for and within the state of Indiana, and our participation in those transportation planning processes (including planning certification reviews conducted in Transportation Management Areas), FHWA and FTA are jointly approving the FY2022-2026 STIP, including the Metropolitan Planning Organization (MPO) Transportation Improvement Programs (TIPs) directly incorporated into the STIP, subject to the corrective actions identified in the attached Federal Planning Finding (FPF) report. FHWA and FTA consider the projects in the 5th year for informational purposes only, and our approval does not exceed four years per 23 CFR 450.220(c).

FHWA and FTA are required under 23 CFR 450.220(b) to document and issue an FPF in conjunction with the approval of the FY2022-2026 STIP. At a minimum, the FPF verifies that the development of the STIP is consistent with the provisions of both the Statewide and Metropolitan transportation planning requirements. FHWA and FTA find that the Indiana FY2022-2026 STIP substantially meets the transportation planning requirements and are approving the STIP subject to the corrective actions outlined in the FPF. This approval is effective June 17, 2022, and is given with the understanding that an eligibility determination of individual projects for funding must be met, and INDOT must ensure the satisfaction of all administrative and statutory requirements, as well as address the corrective actions outlined in the attached report. FHWA and FTA will continue to partner with INDOT to ensure the previously developed action plan (attached) is implemented to address the corrective actions. If progress is not made in addressing the corrective actions, future amendments to the FY2022-2026 STIP, or adoption of the FY2024-2028 STIP, may not be approved by USDOT.

If you have questions or need additional information concerning our approval and the FPF, please contact Ms. Michelle Allen of the FHWA Indiana Division at (317) 226-7344, or by email at michelle.allen@dot.gov, or Mr. Jason Ciavarella of the FTA Region 5 Office at (312) 353-1653, or by email at jason.ciavarella@dot.gov.

Sincerely,

**KELLEY
BROOKINS** Digitally signed by
KELLEY BROOKINS
Date: 2022.06.13
10:08:34 -05'00'

Kelley Brookins
Regional Administrator
FTA Region V

Sincerely,

**JERMAINE
R HANNON** Digitally signed by
JERMAINE R
HANNON
Date: 2022.06.13
15:57:46 -04'00'

Jermaine R. Hannon
Division Administrator
FHWA Indiana Division

cc: (transmitted by e-mail)
Louis Feagans, INDOT
Roy Nunnally, INDOT
Karen Hicks, INDOT

Attachments have been removed for the purposes of this NEPA document.

Transportation Improvement Program 2022-2026 for the Evansville-Henderson Urbanized Area

Evansville MPO Policy Committee Adoption: March 11, 2021
Indiana Governor's Approval: April 26, 2022
Kentucky Governor's Approval: May 13, 2021

Evansville Metropolitan Planning Organization
1 NW Martin Luther King, Jr. Blvd.
Room 316 - Civic Center Complex
Evansville IN, 47708

Phone: 812.436.7833
www.evansvillempo.com

The preparation of this report has been financed in part through grant[s] from the Federal Highway Administration and Federal Transit Administration, U.S. Department of Transportation, under the State Planning and Research Program, Section 505 [or Metropolitan Planning Program, Section 104(f)] of the Title 23, U.S. Code. The contents of this report do not necessarily reflect the official views of policy of the U.S. Department of Transportation.

**Table 4.4:
TIP Projects Listing Cont.**

Sponsor: Indiana Department of Transportation												
Route Des# Length: Description:	Project Limits Planning Reference Federal Funding Category	Amendment/ Modification Date	Phase	All amounts in thousands					Planning/ Cost to Complete	Federal Share	State Share	
				2022	2023	2024	2025	2026				
2022-2026 Estimates												
Vanderburgh County												
US 41 1400005 0.105 mi. Contract 37845; Intersection improvement project	Intersection with Hillsdale Rd., 2.04 mi. N of SR 57 NHPP, STBG, HSIP 9/9/21, 2/1/22		PE RW CN			\$2,432				\$ - \$ - \$ 2,189 Project Total * \$2,864	\$ - \$ - \$ 243	
US 41 1601011 n/a Contract 39923; Intersection improvement with turn lanes	Intersection with Lynch Rd., 1.0 mi. N of SR 66 NHPP 10/21/2021		PE RW CN					\$1,337		\$ - \$ - \$ 1,070 Project Total * \$1,540	\$ - \$ - \$ 267	
US 41 1601066 2.0 mi. Contract 41410; Pavement Replacement;	From SR 66/SR 62 (Lloyd) to 0.02 mi S of N Jct SR 66 (Diamond) NHPP, ARPA (100% State) 10/21/21, 1/13/22		PE RW CN		\$950	\$28,117				\$ - \$ - \$ 13,372 Project Total * \$30,504	\$ - \$ - \$ 15,696	
US 41 2000638 n/a Contract 44156; Bridge Deck Overlay; includes Des# 1900782, 1901940	Over Pigeon Creek, 0.37 mi N of SR 66 STBG 1/13/2022		PE RW CN	\$560	\$3,195					\$ - \$ - \$ 3,004 Project Total * \$4,010	\$ - \$ - \$ 751	
US 41 1900273 n/a Contract 42185; Small Structure Replacement; includes Des# 1900275	1.80 mi N Jct SR-57 NHPP 10/21/2021		PE RW CN		\$80	\$2,516				\$ - \$ - \$ 2,077 Project Total * \$2,596	\$ - \$ - \$ 519	
US 41 2000186 n/a Contract 43254; Intersection improvement, Median U-turn	0.87 mi S of SR 62/SR 66 (Washington Ave) NHPP 10/21/2021		PE RW CN	Combined with Contract B-42876 (INDOT/City of Evansville Project)							\$ - \$ - \$ - Project Total * -	\$ - \$ - \$ -
US 41 1900609 & 1900610 n/a Contract N/A; Inspection of northbound and southbound Ohio River bridges	Vietnam Gold Star Bridge over Ohio River NHPP		PE RW CN		\$150					\$ - \$ - \$ - Project Total * \$150	\$ - \$ - \$ -	
US 41 1902704 & 1902705 n/a Contract N/A; Bridge Painting of northbound and southbound Ohio River bridges	Vietnam Gold Star Bridge over Ohio River NHPP		PE RW CN				\$10,600			\$ - \$ - \$ 8,480 Project Total * \$10,600	\$ - \$ - \$ 2,120	
SR 57 2001114 n/a Contract 42787; Pavement project	From S Jct. of I-69 to 0.8 mi N of S Jct. of I-69 NHPP		PE RW CN			\$340				\$ - \$ - \$ 272 Project Total * \$340	\$ - \$ - \$ 68	
SR 62 1900308 1.85 mi. Contract 42287; Road Reconstruction & Intersection Improvements at Schutte, Rosenberger, St Joe, Wabash, Vann, Stockwell, Burkhardt, & Cross Point; Bridge Replacements at CSX Railroad, Carpenter Creek & Tekoppel Ave, and the pedestrian bridge over SR 62 at St Joe. Includes Des# 1500041, 1600060, 1602258, 1702066, 1900263, 1900264, 1900268, 1900292, 1900317, 1900262, 2000187, 2000217, 2001917, 2100041	From 4.59 mi W (Rosenberger) to 2.72 mi W of S Jct US-41 (Wabash) NHPP 7/30/21, 10/21/21		PE RW CN	\$6,222	\$64	\$300	\$510	\$76,799	\$46,172	\$ 4,978 \$ 699 \$ 98,377 Project Total * \$139,338	\$ 1,244 \$ 175 \$ 24,594	
SR 62 2000701 n/a Contract 42725; Bridge Rehabilitation	Barker Ave. bridge over SR 62, 3.6 mi. W of US 41 NHPP 2/1/22, 3/2/22		PE RW CN	\$0	\$515					\$ - \$ - \$ 412 Project Total * \$638	\$ - \$ - \$ 103	
SR 62 2001917 5 mi. Contract 43197; Road Reconstruction and Intersection Improvements at Schutte Rd, Stockwell Rd, and Wabash Ave; Includes Des# 1900262, 2000187, 2000217	From Posey / Vand. Co. Line to Rosenberger Rd NHPP 10/21/2021		PE RW CN	Combined with Contract R-42287							\$ - \$ - \$ - Project Total * -	\$ - \$ - \$ -
SR 62 1900258 n/a Contract 43199; Intersection Improvement; Includes Des# 1900260	At Boehne Camp Rd and at Red Bank Rd NHPP		PE RW CN	\$1,030		\$20	\$7,168			\$ 824 \$ 16 \$ 5,734 Project Total * \$8,218	\$ 206 \$ 4 \$ 1,434	
I-64 1900099 n/a Contract 42187; Bridge Deck Replacement; Includes Des# 1900100, 2000767	Over Abandoned N & S Railroad, 0.82 mi E SR-65 NHPP		PE RW CN		\$20	\$3,485				\$ - \$ - \$ 3,155 Project Total * \$3,505	\$ - \$ - \$ 351	
SR 65 1800142 n/a Contract 41457; Bridge Replacement, Concrete	Over I-64 EB/WB lanes, 2.61 mi S of SR 68 STBG		PE RW CN		\$4,271					\$ - \$ - \$ 3,417 Project Total * \$4,217	\$ - \$ - \$ 854	
SR 66 & SR 237 1900300 n/a Contract 42199; Slide correction; Includes Des# 1900287, 1900291, 1900294, 1900295, 1900296, 2000129, 2001057	Various locations in the Vincennes District STBG 9/9/2021		PE RW CN	\$437	\$51		\$12,790			\$ 350 \$ 41 \$ 10,232 Project Total * \$14,476	\$ 87 \$ 10 \$ 2,558	

**Table 4.4:
TIP Projects Listing Cont.**

Sponsor: City of Evansville										
Route Des# Length: Description:	Project Limits Planning Reference Federal Funding Category Amendment/ Modification Date	Phase	All amounts in thousands					Planning/ Cost to Complete	Federal Share	Local Share
			2022	2023	2024	2025	2026			
City Engineer										
Second St. 1801725 n/a Contract 41602; Intersection and safety improvements.	Intersection of Parrett St./Jefferson Ave. STBG-U/CMAQ	PE RW CN						\$110 \$73 \$1,588	\$ - \$ - \$ -	\$ - \$ - \$ -
								Project Total		\$1,771
Walnut St. 1801727 0.95 mi. Contract 41598; Road diet reconstruction and multimodal corridor	Weinbach Ave. to Vann Ave. - Phase 2 MTP 2045: 25-5 (Exempt) STBG-U/CMAQ	PE RW CN	\$4,970						\$ - \$ - \$ 3,976	\$ - \$ - \$ 994
								Project Total		\$5,845
Walnut St. 1801726 1.3 mi. Contract 41599; Road diet reconstruction and multimodal corridor	Martin Luther King Jr. Blvd. to US 41 - Phase 3 MTP 2045: 25-5 (Exempt) STBG-U/CMAQ/CRRSAA	PE RW CN		\$300	\$11,323				\$ - \$ 3 \$ 8,032	\$ - \$ 297 \$ 3,291
								Project Total		\$11,924
Department of Transportation & Services										
Various Locations 1802795 n/a Contract 41797; Replace 8" signal heads with 12" signal heads in the Evansville signal system	City of Evansville STBG-U/ HSIP	PE RW CN		\$477					\$ - \$ - \$ 345	\$ - \$ - \$ 132
								Project Total		\$544
			PE	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
			RW	\$ 300	\$ -	\$ -	\$ -	\$ -	\$ 3	\$ 297
			CN	\$ 5,447	\$ 11,323	\$ -	\$ -	\$ -	\$ 12,353	\$ 4,417
			Total	\$ 5,747	\$ 11,323	\$ -	\$ -	\$ -	\$ 12,356	\$ 4,714
			Federal	\$ 4,324	\$ 8,032	\$ -	\$ -	\$ -	\$ 12,356	\$ 4,714
			Local	\$ 1,423	\$ 3,291	\$ -	\$ -	\$ -	\$ -	\$ 4,714

Sponsor: Indiana Department of Transportation/City of Evansville											
Route Des# Length: Description:	Project Limits Planning Reference Federal Funding Source Amendment/ Modification Date	Phase	All amounts in thousands					Planning/ Cost to Complete	Federal Share	State Share	Local Share
			2022	2023	2024	2025	2026				
US 41 1902709 n/a Contract 42876; Pedestrian walk, joint project between INDOT and the City of Evansville. Includes Des# 2000186, intersection improvement, median U-turn.	Washington Ave Intersection STBG/ NHPP	PE RW CN		\$254	\$2,081	\$3,346			\$ - \$ 203 \$ 4,210	\$ - \$ 51 \$ 253	\$ - \$ - \$ 999
								Project Total *		\$7,067	
			Total	\$ 35	\$ 2,335	\$ 3,346	\$ -	\$ -	\$ 4,413	\$ 304	\$ 999
			Federal	\$ 35	\$ 1,785	\$ 2,594	\$ -	\$ -	\$ 4,413	\$ -	\$ -
			State	\$ -	\$ 51	\$ 253	\$ -	\$ -	\$ -	\$ 304	\$ -
			Local	\$ -	\$ 499	\$ 499	\$ -	\$ -	\$ -	\$ -	\$ 999

* Project Total estimates provided by INDOT

APPENDIX I: ADDITIONAL STUDIES



NOTE TO REVIEWER

No changes have been made to the AER since the project approach was agreed upon by INDOT.

Abbreviated Engineer's Report

The Abbreviated Engineer's Report / Mini Scope was prepared by the District. HNTB prepared a scoping document to verify the alternative selection for the intersection.



September 10, 2021

TO: Troy Arnold
INDOT Project Manager, Vincennes District

FROM: Tabitha Enyart, PE
HNTB Project Manager

SUBJECT: Technical Memorandum
Intersection Improvement Concepts Evaluation
Des. No.: 2000186
US 41 at Washington Avenue Intersection Improvement

Transmitted, herewith, is the discussion of the recommended preferred intersection improvement at US 41 at Washington Avenue. The enclosed memo was developed to present the results of evaluating a Median U-turn (MUT) intersection.

If you have any questions or require additional information, please contact us.

Sincerely,

Tabitha Enyart, P.E.

cc: File

Intersection Improvement Concepts Evaluation

PROJECT HISTORY

WSP was hired by INDOT to study several high-crash locations throughout the state, identify existing safety issues, and recommend improvements to remedy those deficiencies. The intersection of US 41 and Washington Avenue in Evansville, Indiana was identified to be one of these high-crash locations.

EXISTING CONDITIONS

Within the study area, US 41 is classified as an Other Principal Arterial and Washington Avenue is classified as a Minor Arterial. US 41 consist of a 4-lane divided highway with a slotted left-turn and right-turn lane at the intersection. Washington Avenue consist of one left turn, one through, and one shared through/right-turn lane. The intersection is signalized with pedestrian crossings present.

Crash data provided by INDOT for 2014 to 2018 were evaluated. There were 137 crashes at the study intersection, 44 of which resulted in injury (13 of those were incapacitating injury crashes). 46% of the 137 crashes were rear end, 23% were left turn, and 14% were same direction sideswipe. The identified need/project intent is to reduce the number of crashes at the intersection.

RECOMMENDATION

The recommend preferred alternative is a Median U-turn (MUT) intersection, specifically a Boulevard Left. This improvement will reconfigure the intersection of US 41 and Washington Avenue by eliminating left-turns and forcing motorists to utilize signalized U-turn access points on US 41, located approximately 800 ft from the main intersection.

CONCLUSION

The Boulevard Left intersection will reduce congestion and associated rear-end crashes. Also, by removing the left-turns from the US 41 and Washington Avenue approaches, the potential for left turn crashes is eliminated therefore meeting the project need to reduce crashes at this intersection.

Sincerely,



Tabitha Enyart, P.E.

ATTACHMENTS

- Intersection Analysis
- Abbreviated Engineering Report
- Intersection Scoping Meeting Minutes

ATTACHMENT: Intersection Analysis



US 41 Intersection Analysis

Evansville, IN
US 41 at Washington Ave
DES No 2000186

September 2021

PREPARED FOR

INDOT Seymour District
185 Agrico Lane
Seymour, IN 47274

PREPARED BY

HNTB Corporation
111 Monument Circle
Suite 1200
Indianapolis, IN 46204

Phone: (317) 636 - 4682
Contact: Sarah Baty, PE, PTOE
Tabitha Enyart, PE



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Introduction	1
Crash History	1
Traffic Forecasts	2
Intersection Type Initial Screening Analysis.....	2
Traffic Operations	4
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Appendices

- A. Traffic Forecast Report
- B. CAP-X Results
- C. Traffic Operations Analysis

Introduction

The intersection at US 41 and Washington Avenue is a signalized intersection. US 41 is a four-lane divided highway running northbound/southbound that carries 28,000 vehicles per day. Washington Avenue carries 6,300 vehicles per day and is crossed by the High-Rail Trail west of US 41. A pedestrian grade separation for the High-Rail Trail will be constructed under Des 1902709.

An Abbreviated Engineering Review was prepared in 2019. The recommendations included converting the intersection at US 41 and Washington Avenue to a median U-turn type intersection. The purpose of this memo is to evaluate and recommend an intersection type that is compatible with the future pedestrian bridge, and addresses current safety and mobility concerns at the intersection.

Crash History

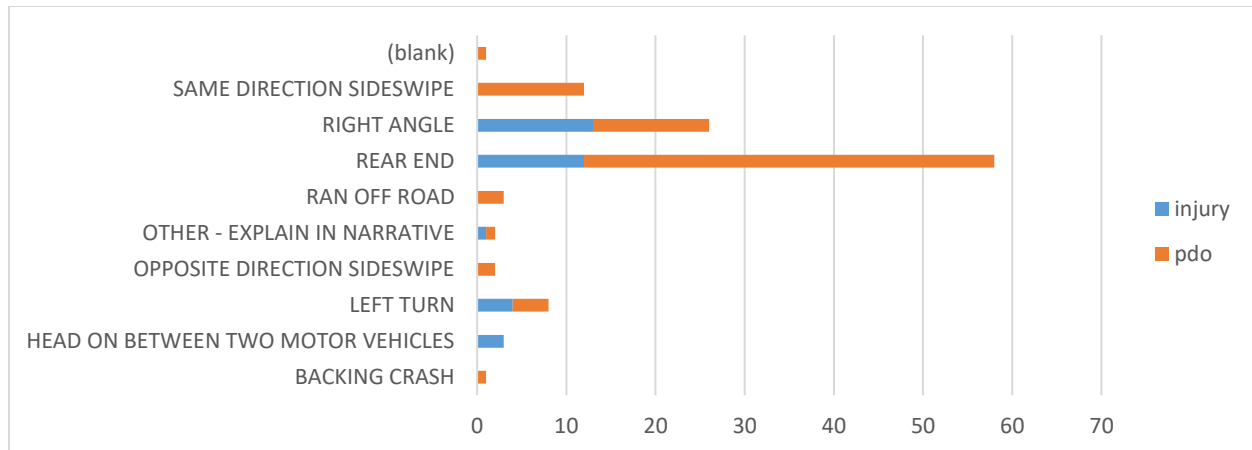
Crash data from November 2016 to November 2020 was analyzed. The crashes are identified by the type of crash (e.g. rear end, ran off road) and severity. As shown in **Table 1** and **Figure 1**, 28% (33 crashes) resulted in personal injury and 72% (83 crashes) were property damage only (PDO). There were no fatal crashes recorded at the intersection.

Half of the crashes are rear end crashes and a majority of them occurred on US 41. The crashes with the most injuries are right angle/left turn crashes and rear end crashes. Right angle crashes occur between vehicles on US 41 and Washington Avenue, but there was not a clear trend of more crashes occurring with northbound vs. southbound traffic. Note that some of the right angle crashes involved left turns. Most of the left turn crashes occurred on US 41 but there were several on Washington Avenue. These findings align with the analysis included in the Abbreviated Engineering Review for Traffic Safety completed in 2019.

Table 1 Crash History

Manner of Collision	Injury	PDO	Total	Percentage
Backing Crash	-	1	1	0.9%
Head on Between Two Motor Vehicles	3	-	3	2.6%
Left Turn	4	4	8	6.9%
Opposite Direction Sideswipe	-	2	2	1.7%
Other - Explain in Narrative	1	1	2	1.7%
Ran Off Road	-	3	3	2.6%
Rear End	12	46	58	50.0%
Right Angle	13	13	26	22.4%
Same Direction Sideswipe	-	12	12	10.3%
(Blank)	-	1	1	0.9%
Total	33	83	116	100%

Figure 1 Crash History



Traffic Forecasts

Traffic forecasts were prepared for the construction year 2023, interim years, and the design year 2043. It is anticipated that traffic on US 41 will increase to 31,000 vehicles per day and traffic growth on Washington Avenue will remain flat for the foreseeable future. Refer to **Appendix A** for the traffic forecast report provided by INDOT.

Intersection Type Initial Screening Analysis

The purpose of the initial screening is to determine if an intersection type is feasible. The initial screening is summarized in **Table 2**. The following four items were considered for each intersection type.

1. Feasible and reasonable given site characteristics, right of way, existing geometry etc.
To be considered feasible, an intersection should fit within existing right of way and be compatible with the pedestrian crossing. If an intersection type would require right of way acquisition, it would not be considered feasible.
2. Addresses the identified needs in a manner appropriate for the scale of the problem.
3. Improves or preserves the existing traffic safety and mobility performance
Traffic Safety - The issues identified at this intersection include severe rear end crashes and right-angle crashes. To be feasible, an intersection must reduce exposure for rear end and right angle/left turn crash types.
Mobility - The volume-to-capacity ratio was calculated using CAP-X and is included in **Appendix B**
4. An intersection type will be considered viable in terms of traffic operations if the volume-to-capacity ratio is less than one. It is anticipated that all intersections types analyzed would provide adequate capacity in the design year 2046, so this measure will not be used to differentiate between options. Feasible and reasonable with respect to construction cost, maintenance cost, stakeholders, project development time, continuity/uniformity, impacts, etc.

A Boulevard Left intersection and RCUT intersection were identified for further evaluation in the initial screening analysis.

Table 2 Initial Screening

Intersection Type	Feasible or Infeasible
<p>Conventional intersection The existing configuration is a conventional intersection. The existing intersection could achieve better mobility with improvements (added left turn lanes) that would extend beyond existing right of way.</p>	Infeasible
<p>Boulevard left A boulevard left turn intersection will be further analyzed because it could address traffic operations and safety needs at the intersection and can be constructed with little or no right of way.</p>	Feasible
<p>J-Turn/RCUT An RCUT intersection will be further analyzed because it could address traffic operations and safety needs at the intersection and can be constructed with little or no right of way.</p>	Feasible
<p>Roundabout intersection A roundabout intersection would not provide adequate capacity for the traffic on US 41. There would also be significant right of way impacts if a roundabout were constructed.</p>	Infeasible
<p>Displaced left turn intersection/Jug-handle intersection/Quadrant roadway intersection A displaced left turn, jug-handle intersection, or quadrant roadway intersection would have significant right of way impacts.</p>	Infeasible
<p>Offset "T" intersection An offset "T" intersection is not feasible at this intersection because there would be significant right of way impacts.</p>	Infeasible
<p>Green "T" intersection A green "T" intersection is not appropriate for an intersection with four approaches; therefore, it will not be considered.</p>	Infeasible
<p>Grade separation A grade separation is not appropriate for this project. This would conflict with the planned pedestrian grade separation. The cost and impacts of a grade separation would be high.</p>	Infeasible

Traffic Operations

The traffic operations of the Boulevard Left intersection and RCUT intersection were analyzed with Synchro software. It is assumed that the signalized U-turn intersections are approximately 800 feet away from the intersection with Washington Avenue for both alternatives. The results of the analyses are summarized in **Table 3**. Refer to **Appendix C** for the traffic analysis reports.

The RCUT intersection maintains left turns from US 41 to Washington Avenue. Traffic from Washington Street is not able to cross the median. Left turns and through traffic on Washington Avenue would turn right and be routed to a U-turn to complete the maneuver. An additional right turn lane was included on the Washington Street approaches due to the high volume of left turns.

The Boulevard Left intersection eliminates left turns from all legs of the intersection and retains the east-west connectivity on Washington Street. Though the LOS for the RCUT and Boulevard Left are comparable, the Boulevard Left intersection has fewer signal phases, which is a clear advantage in terms of traffic operations. The Boulevard Left also provides better mobility to eastbound-westbound traffic on Washington Avenue, which is a minor arterial.

Table 3 Year 2046 Intersection LOS

Scenario	EB Washington Ave	WB Washington Ave	NB US 41	SB US 41	NB US 41 at NB U-Turn	SB US 41 at NB U-Turn	SB US 41 at SB U-Turn	NB US 41 at SB U-Turn
Existing Conditions/No Build								
Lanes	↶ ↷	↶ ↷	↶ ↷ ↸	↶ ↷ ↸	--	--	--	--
AM /PM LOS	C/C	C/C	C/C	C/D	--	--	--	--
RCUT Intersection								
Lanes	↶ ↷	↶ ↷	↶ ↷ ↸	↶ ↷ ↸	↶ ↷	↷	↶ ↷	↷
AM /PM LOS	A/C	B/B	A/A	A/B	A/A	A/A	A/A	A/A
Boulevard Left Intersection								
Lanes	↶ ↷	↶ ↷	↷ ↸	↷ ↸	↶ ↷	↷	↶ ↷	↷
AM /PM LOS	B/C	B/C	B/A	A/B	A/A	A/A	A/A	A/A

Recommendation

The Boulevard Left intersection would do the most to reduce congestion and associated rear crashes. Left turns are removed from the US 41 and Washington Avenue approaches, which simplifies the traffic signal operations and eliminates the potential for left turn crashes.

ATTACHMENT: Abbreviated Engineering Report

Roadway Project Application

Application Date	1/9/2020	Des	2000186
Proposed FY	2025	Work Type	Intersection Improvement

Project Information				Proposed Treatment			
Project ID	US 41 and Washington Ave.			Median U-Turn Score = 90			
Route	US 41						
Limits	At 0.87 mi S of SR62/66 (Washington Ave)						
From RP + Offset	2.67	From SL	0.00				
To RP + Offset	2.94	To SL	0.00				
Beg Lat	37.9628	Beg Long	-87.5429	Map it	Additional Location Desc.:		
End Lat	37.9628	End Long	-87.5429	Map it			

Existing Roadway Information	
AADT	27902
AADTT	5580
AADT Year	2019
Project Length (miles)	0.00
# Thru Lanes	4
# Lane Miles	0.00
Pavement Area (sys)	0
Pavement Type	0
County 1	Vanderburgh
County 2	-
Subdistrict	Evansville
Functional Class	Other Principal Arterial
On NHS?	Yes

Purpose/ Need of Project
Based on traffic data collected at the intersection of US 41 and Washington Avenue, this intersection is considered to be a high crash location. The purpose of this project is to reduce the crash rate at the intersection.

History/Current Condition
Between 2016 and 2018, there were 15 Fatal and/or Incapacitating Crashes, 15 Non-Incapacitating and Possibly Injury Crash, and 85 PDO Crashes; this results in an lcc value of 4.15 and lcf value of 2.95, which make this intersection a "high crash" location.

Additional Features to be Included	Recommended Alternative
RPMs	No
Centerline Rumble Stripes	No
Edgeline Rumble Stripes	No
Shoulder Corrugations	No
Curb Ramps	Yes

Project Cost	
Right of Way Purchase (RW):	\$ 234,000.00
Preliminary Engineering (PE):	\$ [REDACTED]
Environmental (Already Included in PE)	\$ -
Railroad (RR):	\$ -
Utilities CN (UT):	\$ 50,000.00
Construction (CN):	\$ 1,075,000.00
Construction Engineering (CE):	Included in CN Cost
Relinquishment Payment (RQP):	
Total Roadway Costs:	\$ [REDACTED]

What are we buying?		
Lane-mile Years	Small Culvert Condition Points	Other (Safety, Geometric, etc.)
	-	-

Secondary Considerations

Utility Information

Numerous utilities are present within the project limits and a significant amount of conflicts are anticipated. Utility coordination will be an important part of this project and shall be started early on in the development stage.

R/W Information

INDOT does appear to have valid R/W within the limits of this project. However, some R/W acquisition is anticipated to be required to complete the work.

Environmental Document Requirements

A CE 1 document with public involvement is anticipated for this project. However, based on the location of this project, it could easily develop into a higher level environmental document. As the project progresses, the environmental document requirements shall be continuously monitored to ensure the correct level environmental document is developed.

MOT

It is anticipated that lanes adjacent to the roadwork will require closure and the work area protected with traffic barrier. At least one lane of thru traffic shall remain open in both directions. MOT phasing will be an important aspect of this project.

Additional Notes

An "ABBREVIATED ENGINEERING REVIEW FOR TRAFFIC SAFETY" is attached and has additional information relevant to this location.

Supporting Documentation

File Name	Description

Additional Asset Improvements

Asset Group	Des	Work Type	Total Cost
Total Cost for Additional Asset Improvements			\$0

Report Prepared By and Approved By

	Name	Title	Signature
Prepared by:	Duane Decker	Scoping Manager	<i>Duane Decker</i>
Reviewed by:	David Reamer	Safety Asset Engineer	<i>David Reamer</i>
Approved by:	Terry Bough	Traffic Engineer	<i>Terry Bough</i>
Approved by:	Khalil Dughhaish	System Asset Manager	<i>Khalil Dughhaish</i>



**TSAM Team
Safety Project Scoring Sheet**

DES:	1900260	Date:	2/10/2020
Analyst:	David Reamer	Total Project Cost (today's dollars):	\$1,513,000
District:	Vincennes	City:	Evansville
Route:	US 41	County:	Vanderburgh
Location:	@ Washington Avenue		
Treatment:	Median U-Turn		
LAT, LONG:	37.96277	-87.5429	Final Score:
Notes and CRF Source Information:	http://www.cmfclearinghouse.org/detail.cfm?facid=9985		90

Core Safety Factors	Rating (Type Number)	Score Received	Points Possible	Comments
#1 Crash Severity (I_{cc} -based)	4.15	40.00	40	<i>RoadHAT output PDF is required. Enter w/ two decimal places.</i>
#2 Crash Frequency (I_{cf} -based)	2.95	10.00	10	<i>RoadHAT output PDF is required. Enter w/ two decimal places.</i>
#3 Benefit-Cost Ratio (Imported from Factor 3 Tab)	5.08	35.00	35	<i>CRF source must be cited above. Enter Data into Factor 3 Tab.</i>
Core Safety Factors Subtotal:		85	85	<i>Scores are rounded to the nearest integer.</i>

Supplemental Factors	Rating (Choose From Menu)	Score Received	Points Possible	Comments
#4 Mobility Improvement	2 Points: Neutral Effect on Mobility	2	5	<i>See business rules for more information. Must be documented with analysis: inputs and outputs. Design year is 20 years from construction. Growth rate is 1% by default.</i>
#5 Public and Other Interests	1 Point: No documented public concern, and no support of project	1	5	<i>Documentation from Elected Officials or Public is required.</i>
#6 Route Continuity and Corridor Completion	2 Points: Neutral Effect on Uniformity	2	5	<i>See business rules for more information.</i>
#7 Earmarks & External Contributions	0 Points: No Earmarks or External Contributions	0	25	<i>See business rules for more information. Must be documented. Benefit/Cost Ratio must still be calculated using total project cost.</i>
Supplemental Factors Subtotal:		5	15	
Final Score:		90	100	<i>Scores greater than 100 will be lowered to 100.</i>

Score Justifications:

Factor #4: During RSA analysis, no drop in LOS was reported
Factor #5: Type justification for selection here with all necessary background information. If points were received in this category, justification is required.
Factor #6: Another median U-turn is being proposed on the north side of Evansville
Factor #7: Type justification for selection here with all necessary background information. If points were received in this category, justification is required.
Other Notes: Provide other information in this space as needed.

Index of Crash Frequency and Cost - Form F1		Page 1/2
Location	US 41 - Washington Ave	
GIS		
Post		
Analyst	David Reamer	
Date	12/19/2019	
INPUT		
Road Facility Type	Signalized Urban State-State Intersection	
Major Road AADT (veh/day)	27902	
Minor Road AADT (veh/day)	12463	
T-intersection Indicator (1 if present, 0 otherwise)	0	
First Year with Crash Data (yyyy)	2016	
Last Year with Crash Data (yyyy)	2018	
Number of Crashes (crash/period)		
Fatal and Incapacitating Injury Crashes	15	
Non-Incapacitating and Possible Injury Crashes	15	
Property Damage Only Crashes	85	
Route or Road Type	Signalized Urban State-Local Intersection	
Average Crash Costs (\$)		
Fatal and Incapacitating Injury Crashes	219500	
Non-Incapacitating and Possible Injury Crashes	31300	
Property Damage Only Crashes	7100	
Crash Cost Year (yyyy)	2013	
OUTPUT		
Expected Crash Frequency (crash/year)		
Fatal and Incapacitating Injury Crashes	0.219	
Non-Incapacitating and Possible Injury Crashes	2.22	
Property Damage Only Crashes	9.77	
All Crashes	12.21	
Index of Crash Frequency	2.95	
Index of Crash Cost	4.15	

Index of Crash Frequency and Cost - Form F1		Page 2/2
Location	US 41 - Washington Ave	
GIS		
Post		
Analyst	David Reamer	
Date	12/19/2019	
Comments:		

ABBREVIATED ENGINEERING REVIEW FOR TRAFFIC SAFETY

* Revised by INDOT Office of Traffic Safety (January 10, 2013)

Date:	7/31/2019
Des. No.:	n/a

Reviewer Information:

Primary Author: Ericka Miller, PE, PTOE	Agency: for INDOT Office of Traffic Safety
Phone Numbers: 317-972-4519	Email Address: Ericka.Miller@wsp.com

Purpose of Review:

WSP was hired by INDOT to study several high-crash locations throughout the state, identify existing safety issues, and recommend improvements to remedy those deficiencies. Improvements might range from lower-cost maintenance items, such as signage and pavement markings, to higher-cost capital improvements, such as reconstruction or added travel lanes, where necessary. This form is suitable for Level 1 review. Of the three available levels of engineering review, this represents the least refined, lowest intensity degree of analysis, development of essential project intent (outline of certified course of action), scoring and process documentation.

Project Location:

Intersection: US 41 & Washington	District: Vincennes	City: Evansville	County: Vanderburgh
RP Start:	RP End:	Lat & Long: 37.962770° -87.542922°	Inside Urban Area Boundary: <input checked="" type="radio"/> Yes or No

MPO: Evansville MPO Project Type:

Location: US 41 & Washington Avenue
 The intersection is located along US 41 in Evansville, IN, approximately 1.0 mi south of the intersection of US 41 & SR 66 / SR 62 (the Lloyd Expressway). See attached Site Location Map, Page 3.

Existing Conditions:

See attached Collision Diagram on Page 7 with aerial image. Within the study area, US 41 is classified as an Other Principal Arterial, and Washington Avenue is classified as a Minor Arterial. At the signalized study intersection, the northbound and southbound approaches of US 41 each consist of one left-turn lane (slotted), two through lanes, and one right-turn lane; directional traffic on the northbound and southbound approaches is separated by grass medians of varying width. The eastbound and westbound approaches of Washington Avenue each consist of one left-turn lane, one through lane, and one shared through/right-turn lane (no medians). Northbound and southbound left-turns at the intersection are permitted/protected with flashing yellow arrow (FYA) signal heads, and eastbound and westbound left-turns at the intersection are permitted only. There are existing signal backplates on all signal heads at the intersection, and street lighting is present. Continental crosswalks are present across the north and west legs, with a pedestrian refuge island on the north leg. The posted speed limit along US 41 is 40mph (30mph school zone), and the posted speed limit along Washington Avenue is 30mph (20mph school zone on the east leg). Land uses at the intersection are primarily commercial, with a gas station and McDonald's on the northwest corner, a dentistry office on the northeast corner, and a CVS on the southwest corner. The southeast corner is residential. It should be noted that Bosse High School is located northeast of the study intersection. During the field check on 05/01/19, the following issues were identified:

- Northbound and southbound rear end crash patterns; northbound, southbound, and eastbound left-turn crash patterns
- Long pedestrian crossing across the north leg (long exposure time)
 - 195 pedestrians crossed the north leg in 24-hr count (Monday, February 4th to Tuesday, February 5th, 2019)
 - 1 bicyclist crash and 0 pedestrian crashes during 5-year study period
 - Existing turning radii allow for eastbound left-turn and westbound right-turn high speed turns across pedestrian crossing
 - Public concern about pedestrian safety and near misses
- Faded and non-standard pavement markings on the eastbound and westbound approaches
- Missing lane designation arrow in southbound right-turn lane
- Slight rutting in pavement on northbound approach

Traffic Operations:

a) Mobility/Congestion Performance: According to available traffic count data on INDOT's Traffic Count Database System (TCDS), the 2018 AADT along US 41 north of the study intersection was 27,902, and the 2018 AADT along Washington Avenue east of the study intersection was 12,463. Using 2019 turn count data and signal timings provided by the INDOT Vincennes District, a capacity analysis was conducted for the intersection using Synchro software. The analysis shows that the intersection operates at LOS C during both the AM and PM peak hours. During the AM peak hour, all movements operate at LOS D or better, excluding the eastbound left-turn, which operates at LOS F. During the PM peak hour, all movements operate at LOS D or better, excluding the eastbound and westbound left-turns, which operate at LOS E. During the AM peak hour, the 95% queue for the eastbound left-turn (131') exceeds available storage of 125'. During the PM peak hour, the 95% queue for the westbound left-turn (82') exceeds available storage of 65'.

b) Safety Performance: According to available crash data, there were 137 crashes at the study intersection from Jan-1 2014 to Dec-31 2018, 44 of which resulted in injury (thirteen of those were incapacitating injury crashes). Of the 137 crashes, approximately 46% were 'rear end', approximately 23% were 'left turn', and approximately 14% were 'same direction sideswipe'. Using HAT 3.0 software, the Index of Crash Frequency (I_{CF}) for the study intersection was found to be 2.49, and the Index of Crash Cost (I_{CC}) for the study intersection was found to be 4.20. According to The Hazard Elimination Program-Manual on Improving Safety of Indiana Road Intersections and Sections, if the I_{CF} and I_{CC} values for a location are both greater than 2, the location is a "high crash" location. Therefore, based on the available crash data, the study intersection is considered a "high crash" location. See attached Crash Summary, Pages 8-10.

Alternatives and Recommendations

The "do-nothing" alternative was considered and rejected, as it does not improve safety at the study location. Based on the data summarized herein, and the current conditions at the study location, the following improvements are recommended:

Short-Term (Protected Pedestrian Phase Across North Leg)

- Install flashing yellow arrow (FYA) signal heads for eastbound and westbound left-turns
 - Implement protected/permitted phasing for eastbound/westbound left-turns
 - Program the signal so that the permitted phase for the eastbound left-turn is eliminated when there is a pedestrian activation
- Install 5-section signal heads for the southbound, eastbound and northbound right-turns to provide right-turn overlap
- Re-stripe westbound approach so that it consists of 1 left-turn lane, 1 through lane, and 1 right-turn lane
 - The westbound right-turn lane is necessary to create a dedicated westbound right-turn phase to eliminate conflicts with pedestrians crossing the north leg
- Install a 3-section signal head for westbound right-turns to provide protected only right-turn phasing
 - When there is a pedestrian activation, the westbound right-turn would be restricted; otherwise, the westbound right-turn would run concurrently with the westbound through and southbound left-turn (overlap)
- Re-time pedestrian flashing-don't-walk phase to provide full width crossing of 43 seconds
- Install signage prohibiting right-turn on red for the southbound right-turn, to eliminate the conflict for pedestrians crossing the north leg
 - See attached phase diagrams on Page 11 that show concurrent conflicting movements (existing and proposed)

Long-Term Option – Convert to Median U-Turn (MUT) Intersection

- Reconfigure intersection as a Median U-Turn (MUT) intersection; this will eliminate left-turns at the intersection and force motorists to utilize signalized U-turn access points on US 41 (see attached schematic on Page 12)
 - Decrease turning radii on the northeast and northwest corners, as much as possible while meeting INDOT standards
 - Construct pedestrian refuge islands in larger medians
 - Paint/install continental crosswalks across all legs
 - Consider a corridor-wide treatment at similar signalized intersections between I-69 to the south and the Lloyd Expressway to the north

Long-Term Option – Pedestrian Tunnel or Bridge

Construct pedestrian tunnel or bridge across US 41 north of Washington Avenue. Potential alignments should consider the fact that Bosse High School students access the school from the north. This option would include:

- Removal of pedestrian infrastructure that facilitates crossing US 41
- Installation of FYA signal heads for east/west left-turns to allow for protected/permitted phasing
- Installation of 5-section heads for right-turns in all directions to provide right-turn overlap phasing
- Refresh striping, stop bars and pavement markings as needed

Costs Estimate(s) for Proposed Safety Improvement Project

	Short-Term	Long-Term (MUT)	Pedestrian Overpass	Pedestrian Underpass
Preliminary Engineering	\$ 16,000.00	\$ 194,000.00	\$ 784,000.00	\$ 833,000.00
Site Preparation	\$ -	\$ -	\$ 55,000.00	\$ 55,000.00
Construction	\$ 52,000.00	\$ 1,075,000.00	\$ 3,916,000.00	\$ 4,161,000.00
Total	\$ 68,000.00	\$ 1,269,000.00	\$ 4,755,000.00	\$ 5,049,000.00

Project Score: (for INDOT use)

	0	Safety Program Score = <input type="text" value="#REF!"/>
	0	
	0	
	0	
	0	
	0	

Miscellaneous Notes:

A field check was conducted for this location on 05/01/19; the following people were present - Chris Gentry, Jared Peterson, Troy Arnold, Khalil Dughaiash & David Reamer (INDOT Vincennes District), Tom Ford (INDOT Central Office), Steve Schaefer & Brent Schmitt (City of Evansville), and Ericka Miller, Matt Duffy & Amir Mafarjeh (WSP). An input meeting was held at the Evansville Public Library on 06/26/19; the following people were present - Rusty Fowler, Jared Peterson, Troy Arnold, Duane Decker, Khalil Dughaiash, Terry Bough, David Reamer, & William Dong (INDOT Vincennes District), Tom Ford & Mike Holowaty (INDOT Central Office), Brent Schmitt (City of Evansville), Paul Kirby & Jacob Taylor (Evansville PD), Gregory Fleck (EVSC PD), Aaron Huff (EVSC Bosse Principal), Steven Scheller (EVSC), Laura Lamb (EMPO), Todd Ringle (ISP), and Ericka Miller, Matt Duffy & Amir Mafarjeh (WSP).

Attachments:

Site Location Map, Page 3	MUT Schematic, Page 12
Photographs, Pages 4-6	Cost Estimates, Pages 13-16
Collision Diagram, Page 7	
Crash Summary, Pages 8-10	
Phase Diagrams, Page 11	

Photographs



Washington Ave Looking East, West of US 41



Washington Ave Looking West, West of US 41



Pavement Markings in Northbound Right-Turn Lane



Northbound US 41 Looking South, North of Washington Ave



Southbound US 41 Looking North, South of Washington Ave



Southbound US 41 Looking South, North of Washington Ave

Photographs, continued



Washington Ave Looking East, East of US 41



Westbound Washington Ave Looking West, East of US 41



North Leg Crosswalk Looking East



North Leg Crosswalk Looking West



Pavement Markings in Southbound Left-Turn Lane



Multi-Use Path Along the West Side of US 41, Looking South

Photographs, continued



Crosswalk Across the West Leg



Northbound US 41 Looking North, South of Washington Ave



Fallen Pedestrian Crossing Sign on the SE Corner



Pedestrians Crossing North Leg Crosswalk



Multi-Use Path Along the West Side of US 41, Looking North

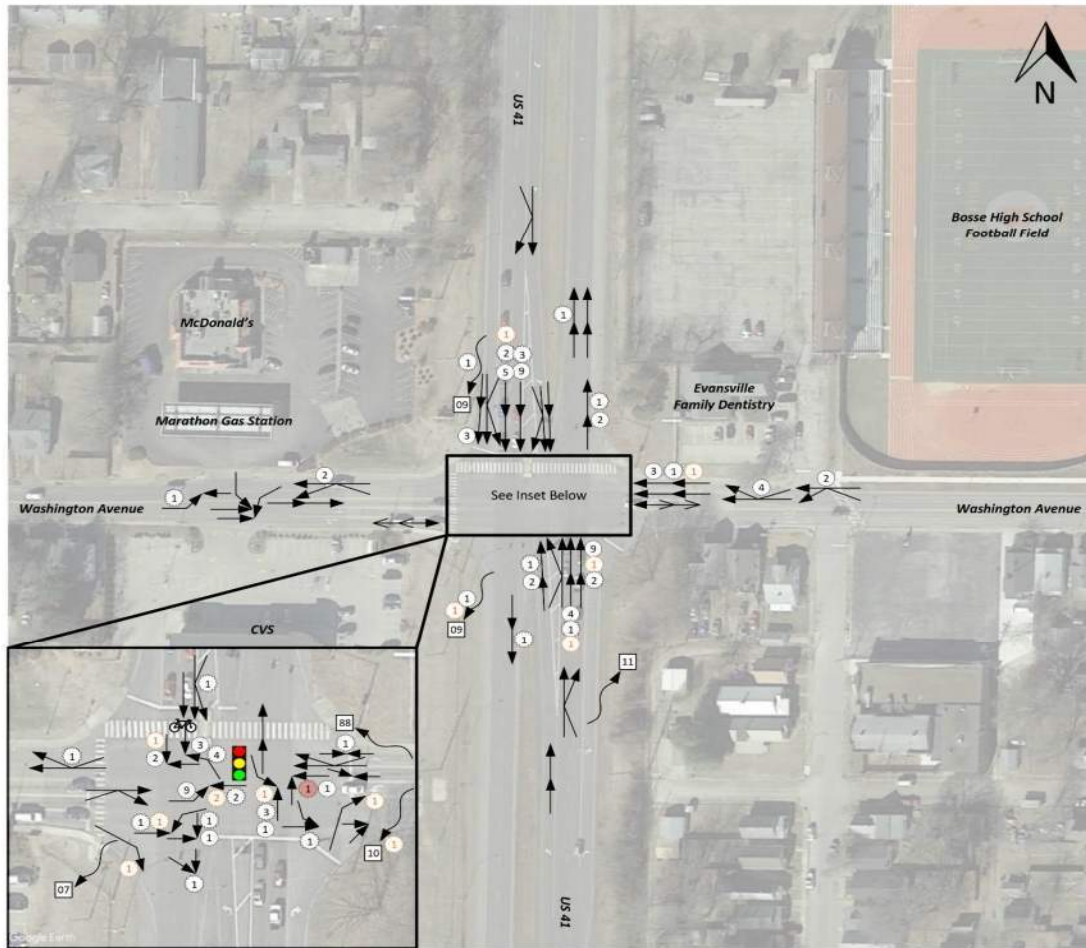


Westbound Washington Ave R3-5L, East of US 41

DIAGRAM OF COLLISION REPORTS

Washington Avenue & US 41

Study Period: 1/1/2014 to 12/31/2018 Location: 3
 District: Vincennes County: Vanderburgh City/Town: Evansville
 Analyst: ARM QC: MJD Date: 04/10/2019



Aerial imagery provided by Google Earth

YEAR	REPORTS
2014	25
2015	20
2016	27
2017	26
2018	33
TOTAL	131

NOTES
 1) Crashes with determinable location are shown in diagram. Crash total may not match ARIES database.
 2) Crashes on diagram do not represent exact crash locations; they are approximated based on available information.
 3) Diagram not to scale.

- Object Symbols**
- MOVING VEHICLE
 - ↪ TURNING VEHICLE
 - ↩ BACKING VEHICLE
 - ↪↩ OUT OF CONTROL
 - ▭ PARKED VEHICLE
 - 🚶 PEDESTRIAN
 - 🚲 BICYCLE
 - 🐾 ANIMAL
 - 🗑️ DEBRIS IN ROADWAY
 - 🚦 SIGNALIZED INTERSECTION
 - 📦 FIXED OBJECT (See table for # codes)
 - 🔴 FATAL CRASH
 - 🟡 INJURY CRASH – INCAPACITATING
 - 🟠 INJURY CRASH – NONINCAPACITATING
 - 🟢 PDO CRASHES (IF > 1)

- Collision Symbols**
- ↔ REAR END
 - ↔ HEAD ON
 - ↔ OVERTAKING / CUT-OFF
 - ↔ SIDESWIPE – SAME
 - ↔ SIDESWIPE – OPPOSITE
 - ↔ RIGHT ANGLE
 - ↔ LEFT TURN
 - ↔ OVERTURNED

- Fixed Object Codes**
- 01 – BRIDGE or OVERPASS
 - 02 – BUILDING
 - 03 – CULVERT or DITCH
 - 04 – CURB
 - 05 – GUARDRAIL or BARRIER
 - 06 – EMBANKMENT
 - 07 – FENCE
 - 08 – TRAFFIC POLE
 - 09 – UTILITY POLE
 - 10 – SIGN
 - 11 – TREE / SHRUB
 - 12 – CONSTRUCTION BARRIER
 - 13 – CRASH ATTENUATOR
 - 88 – OTHER
 - 99 – UNKNOWN

Crash Summary

Summary below based on crash data from ARIES 2014-2018.

Overall Summary	
Total Number of Crashes	137
Number of People Killed	2
Number of People Injured	80
Number of Property Damage Only Crashes	92
Number of Fatal Crashes	1
Number of Incapacitating Injury Crashes	13
Number of Non-Incapacitating Injury Crashes	31

Summary of Manner of Collision		
Crash Type	Number of Crashes	Percentage
Rear End	63	46%
Right Angle	8	6%
Left Turn	31	23%
Same Direction Sideswipe	19	14%
Ran Off Road	7	5%
Right Turn	4	3%
Other	1	1%
Backing Crash	2	1%
Head On	2	1%
Grand Total	137	100%

Summary of Injury Crashes		
Crash Type	Number of Injury Crashes	Number of People Injured
Rear End	17	35
Right Angle	3	4
Left Turn	16	30
Same Direction Sideswipe	2	2
Ran Off Road	3	3
Right Turn	3	5
Other	0	0
Backing Crash	0	0
Head On	1	1
Grand Total	45	80

Summary of Light Conditions		
Time of Day	Number of Crashes	Percentage
DARK (LIGHTED)	39	28%
DAYLIGHT	98	72%
Grand Total	137	100%

Crash Summary

Summary below based on crash data from ARIES 2014-2018.

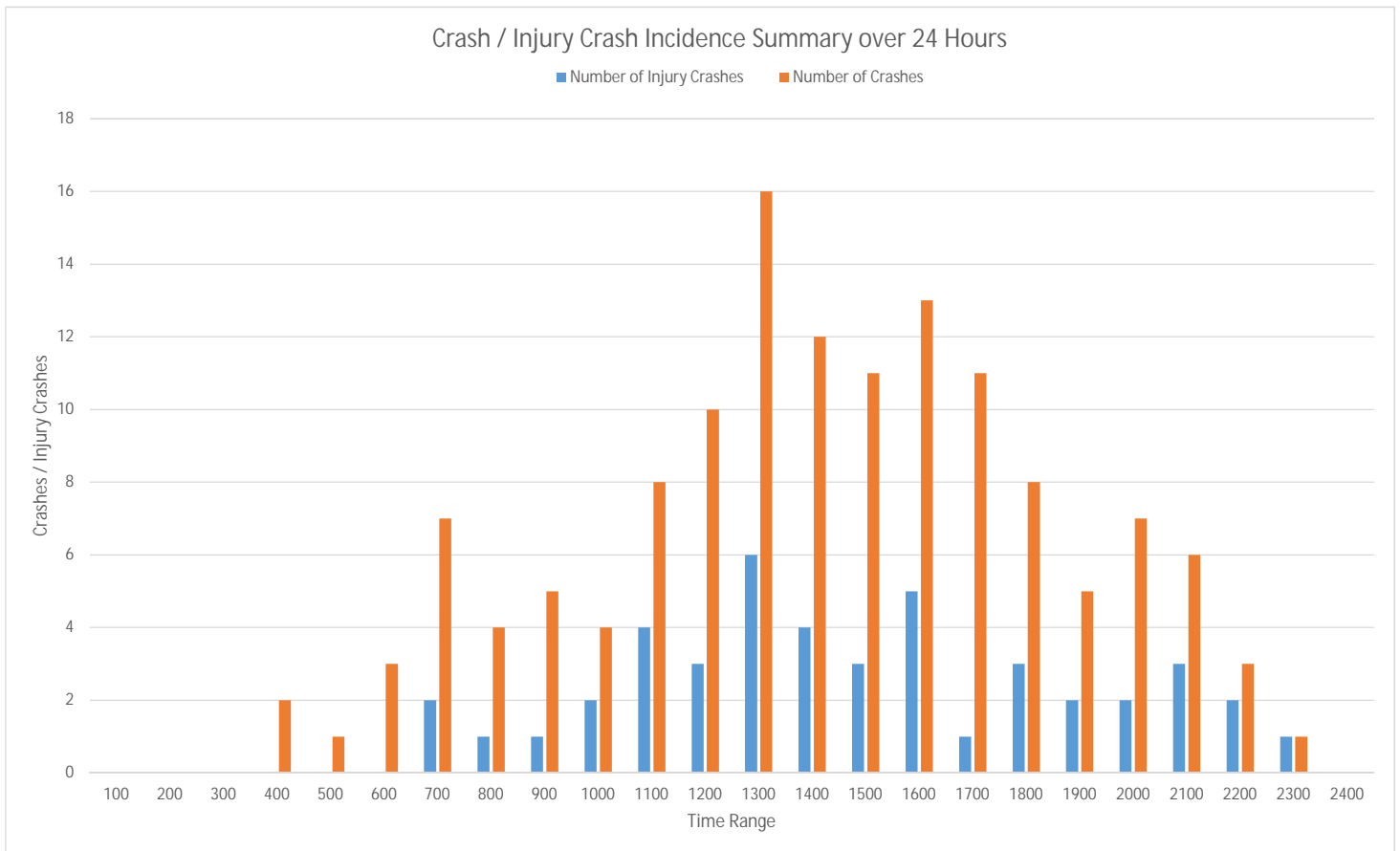
Summary of Primary Factors		
Primary Factor	Number of Crashes	Percentage
FAILURE TO YIELD RIGHT OF WAY	34	25%
FOLLOWING TOO CLOSELY	59	43%
IMPROPER LANE USAGE	12	9%
DISREGARD SIGNAL/REG SIGN	7	5%
OTHER (DRIVER) - EXPLAIN IN NARRATIVE	6	4%
DRIVER DISTRACTED - EXPLAIN IN NARRATIVE	2	1%
RAN OFF ROAD RIGHT	4	3%
UNSAFE SPEED	3	2%
IMPROPER TURNING	3	2%
UNSAFE BACKING	2	1%
LEFT OF CENTER	2	1%
SPEED TOO FAST FOR WEATHER CONDITIONS	1	1%
OVERCORRECTING/OVERSTEERING	2	1%
Grand Total	137	100%

Summary of Weather Condition				
Type of Collision	CLEAR	CLOUDY	RAIN	Grand Total
Rear End	42	12	9	63
Right Angle	7	1		8
Same Direction Sideswipe	14	3	2	19
Left Turn	26	2	3	31
Ran Off Road	3	2	2	7
Other	1			1
Backing Crash	2			2
Right Turn	2	1	1	4
Head On	1	1		2
Grand Total	98	22	17	137

Summary of Pavement Condition			
Type of Collision	DRY	WET	Grand Total
Rear End	51	12	63
Right Angle	8		8
Same Direction Sideswipe	17	2	19
Left Turn	27	4	31
Ran Off Road	5	2	7
Other	1		1
Backing Crash	2		2
Right Turn	3	1	4
Head On	2		2
Grand Total	116	21	137

Crash Summary
Summary below based on crash data from ARIES 2014-2018.

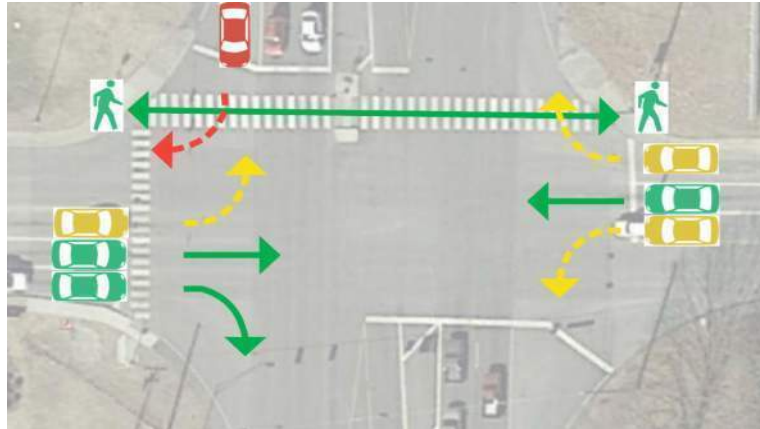
Summary of Time of Day		
Time of Day	Number of Crashes	Percentage
AM PEAK	11	8%
OFF PEAK	102	74%
PM PEAK	24	18%
Grand Total	137	100%



Phase Diagrams, Short-Term Recommendation

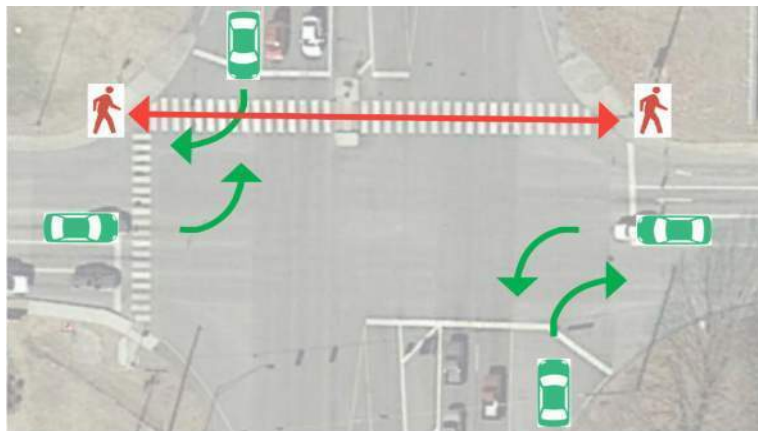
Existing

Phase 2 - eastbound/westbound left-turn, through, right turn, southbound right-turn-on-red; pedestrian phase across US 41

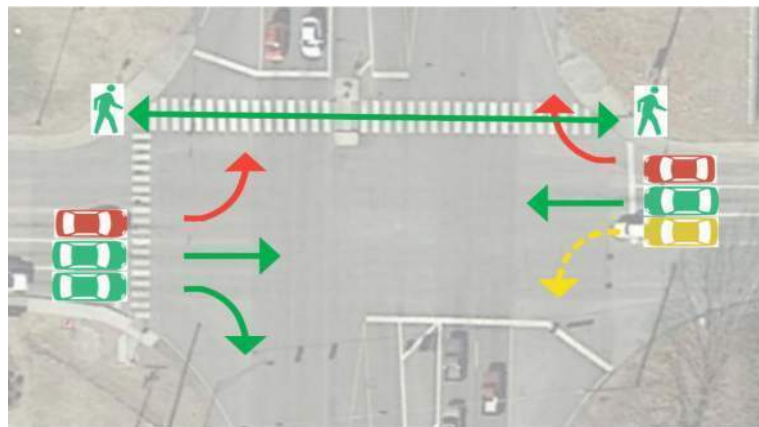


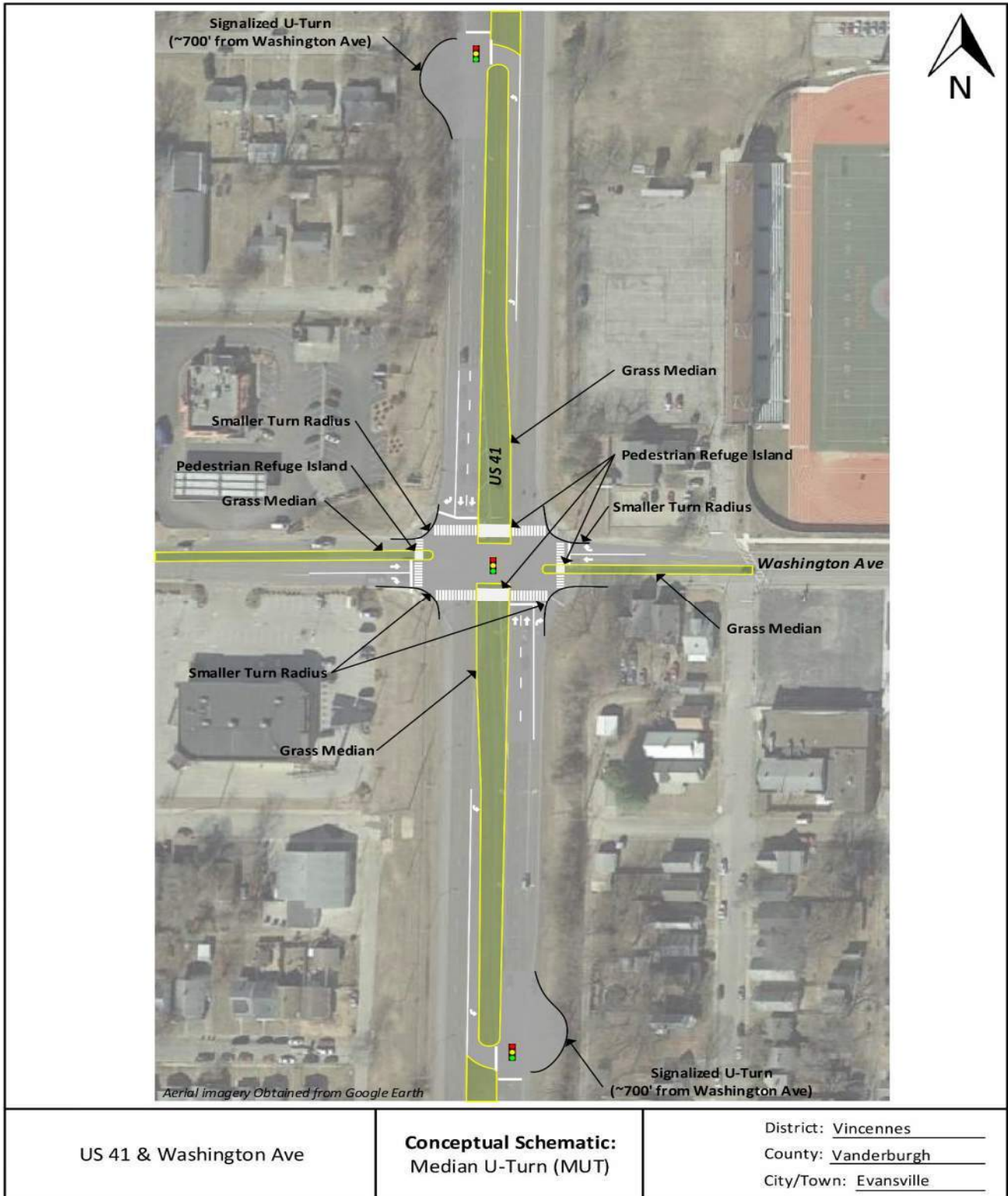
Proposed

Phase 1 - eastbound/westbound left-turns run simultaneously with northbound/southbound right-turns



Phase 2 - eastbound/westbound through, eastbound left-turn and westbound right-turn are restricted; pedestrian phase across US 41





Land and Water Conservation Fund (LWCF) County Property List for Indiana (Last Updated March 2022)

ProjectNumber	SubProjectCode	County	Property
1800013	1800013	Vanderburgh	Garvin Park
1800086	1800086	Vanderburgh	Wesselman Park and Par 3 Golf Course
1800093	1800093A	Vanderburgh	Howell Park
1800093	1800093B	Vanderburgh	Price Park
1800093	1800093C	Vanderburgh	Sunrise Park
1800093.4	1800093.4	Vanderburgh	Fourth and Main Park
1800094	1800094	Vanderburgh	Pigeon Creek Greenway, Stream Valley Park
1800100	1800100	Vanderburgh	Anthony C. Oates Park and Pool
1800109	1800109	Vanderburgh	Golfmoor Park & Lakeview Tennis Courts
1800224	1800224	Vanderburgh	Pigeon Creek Greenway, Stream Valley Park
1800224.2	1800224.2	Vanderburgh	Tepe Park
1800288	1800288	Vanderburgh	Burdette Park
1800333	1800333	Vanderburgh	Kleymeyer Park
1800334	1800334C	Vanderburgh	Stockwell Park
1800390	1800390	Vanderburgh	William J. Moutoux Park
1800496	1800496	Vanderburgh	Pigeon Creek Greenway, Stream Valley Park

*Park names may have changed. If acquisition of publically owned land or impacts to publically owned land is anticipated, coordination with IDNR, Division of Outdoor Recreation, should occur.