

Categorical Exclusion
Appendix C
Early Coordination

Example Letter

March 17, 2020

This letter was provided to recipients on March 17, 2020 and April 17, 2020

«Agency_1»
«Agency_2»
«Address_1»
«Address_2»
«City», «State» «Zip»

Re: Agencies Coordination
Designation (Des.) Number 1700091
Road Project
US 231, from 0.27 miles north of I-70 to 1.05 miles north of I-70
Putnam County, Indiana

Dear «Position»,

The Indiana Department of Transportation (INDOT), Crawfordsville District, and the Federal Highway Administration (FHWA) propose to proceed with an added travel lanes project in Putnam County, Indiana (Des. Number 1700091). The FHWA is providing funding for the project and is designated as the lead federal agency. This letter is part of the early coordination phase of the environmental review process; we are requesting comments from your area of expertise regarding any possible environmental effects associated with this project. **Please use the above Des. Number and project description in your reply** and we will incorporate your comments into the formal environmental study.

This project is located on United States Highway (US) 231; the project extends from approximately 0.27 mile north of Interstate (I)-70 to approximately 1.05 miles north of I-70, for a total length of 0.78 mile. The project is within Warren Township, Sections 24 and 25 of Township 13 North, and Range 4 West of the Cloverdale U.S. Geological Survey (USGS) Quadrangle. Please refer to the attached project area maps.

This section of US 231 is classified as Other Principal Arterial and is part of the National Highway System. Within the project area, US 231 consists of two travel lanes in each direction (northbound and southbound) from I-70 to CR 800 South, which then reduces to one travel lane in each direction from CR 800 South to the end of the project. The travel lanes are 12 feet wide with 8 feet wide paved shoulders. The northbound and southbound lanes are separated by an asphalt median with drainage structures and is approximately 30 feet wide. Adjacent land use consists of agricultural land and industrial properties. The existing INDOT right-of-way width varies from approximately 70 feet to 200 feet throughout the project corridor. Please refer to the attached project area photos.

The need for this project is due to the poor Level of Service (LOS) at the US 231 and CR 800 South intersection. LOS standards range from A (free flow of traffic) to F (breakdown flow of traffic). The intersection is currently functioning at a LOS of D (approaching unstable flow) due to large vehicle (trucks) queuing. The LOS at this intersection is projected to drop to a LOS of E (unstable flow) in less than 20 years due to a growth of 0.67% annually. The purpose of this project is to provide a LOS of C (stable flow, at or near free flow) or better at the US 231 and CR 800 South intersection.

The current proposed project would involve the addition of turn lanes on US 231 within the project area: one southbound left turn lane at the High Street intersection, one northbound left turn lane at the PEI Pipeline Service entrance, one northbound left turn lane at the CR 800 South intersection, and one southbound left turn lane at the CR 800 South intersection. Additionally, the project would involve the addition of one 12-foot wide travel lane with a 10-foot wide paved shoulder to both northbound and southbound lanes of US 231 from CR 800 South northward to the end of the

project. The widening associated with the added travel lanes would require an additional 4 to 6 feet of new roadway pavement south of mile marker 142 (approximately 0.21 mile south of CR 800 South), and approximately 20 feet of new roadway pavement north of mile marker 142. The widening of US 231 would primarily take place along the east side of the roadway. Due to the widening of the road, regrading of the roadside ditches and roadside slope would also occur within the project area. At the intersection of US 231 and CR 800 South, the profile grade is being changed to reduce the existing slope. This will require full depth construction on CR 800 South which extends 530 feet west of the intersection and 155 feet east of the intersection. The project would also include the installation drive culverts and cross culverts at various locations within the project area. This will require trenching the location and adding the pipe.

Currently, the maintenance of traffic (MOT) plan would utilize phased construction to keep two-way traffic flowing to and from Cloverdale and surrounding areas. CR 800 South would be closed crossing US 231 for a limited amount of time during construction. Local detours would be used to guide drivers back to US 231 in either direction. The majority of the construction is anticipated to occur within existing INDOT right-of-way; however, 2.66 acres of additional permanent right-of-way would be required. No temporary right-of-way is anticipated. Construction is anticipated to begin in fall 2021.

To identify potential environmental concerns within the project vicinity, a Red Flag Investigation was performed for a 0.5-mile radius of the project area by RQAW. The Red Flag Investigation noted that the Cloverdale Quarry is located within the project area, to the west. The following resources are mapped within the project area:

- Two National Wetlands Inventory (NWI) Line segments
- Two stream segments
- One lake is partially located within the project area
- One floodplain
- One cave entrance

Permits through the United States Army Corps of Engineers (USACE) and Indiana Department of Environmental Management (IDEM) may be necessary.


RQAW performed a site visit on September 23, 2019 to identify any additional ecological resources within or adjacent to the project area. One stream, unnamed tributary to Limestone Creek (UNT 1), flows under US 231. Four wetlands were identified within the project area. Please refer to the attached photograph key map and photographs.

The project qualifies for the application of the U.S. Fish and Wildlife (USFWS) range-wide programmatic informal consultation for the Indiana bat and northern long-eared bat. Project information is being submitted through the USFWS Information for Planning and Consultation (IPaC) separately.

RQAW is investigating the Area of Potential Effect (APE) for archaeological and historic resources for compliance with Section 106. The project is anticipated to qualify for the Minor Projects Programmatic Agreement.

If we do not receive your response within 30 calendar days from the date of this letter, it will be assumed your agency feels there will be no adverse effects incurred because of the project. However, if you feel an extension to the response time is necessary, a reasonable amount may be granted upon request. If you have any questions regarding this matter, please contact Stephanie Verhoff of the Environmental Department at RQAW, at 317.588.1798 or at sverhoff@rqaw.com, or the INDOT Project Manager, Steven Walls, at 765-361-5237 or at swalls@indot.IN.gov. Thank you in advance for your input.

Sincerely,



Stephanie Verhoff
 NEPA Specialist
 RQAW

Appendices:

- Appendix A: Graphics
- Appendix B: Preliminary Plans

- INDOT Crawfordsville District (electronic coordination)
- Federal Highway Administration (electronic coordination)
- Natural Resources Conservation Service (electronic coordination)
- Indiana Geological Survey (electronic submission)
- IDNR Division of Fish and Wildlife (electronic coordination) Sent April 17, 2020
- IDEM (electronic submission)
- IDEM Ground Water Section (electronic query)
- INDOT Office of Public Involvement (electronic coordination)
- U.S. Department of Housing and Urban Development (electronic coordination)

- National Park Service, Midwest Regional Office (U.S. Postal Service)
- Putnam County Council (U.S. Postal Service)
- Putnam County Board of Commissioners (U.S. Postal Service)
- Putnam County Surveyor's Office (U.S. Postal Service) Sent March 17, 2020
- Putnam County Highway Department (U.S. Postal Service)
- West Central Indiana Economic Development District, Inc. (U.S. Postal Service)
- Cloverdale Quarry (U.S. Postal Service)



Indiana Department of Environmental Management

We Protect Hoosiers and Our Environment.

100 North Senate Avenue - Indianapolis, IN 46204
(800) 451-6027 - (317) 232-8603 - www.idem.IN.gov

INDOT Crawfordsville

41 West 300 North
Crawfordsville , IN 47933

Date : April 17, 2020

To Engineers and Consultants Proposing Roadway Construction Projects:

RQAW

Stephanie Verhoff

8770 North St.

Ste. 110

Fishers , IN 46038

RE: The Indiana Department of Transportation (INDOT) Crawfordsville District and the Federal Highway Administration (FHWA) propose to proceed with an added travel lanes project in Putnam County, Indiana (Des. Number 1700091). This project is located on United States Highway (US) 231; the project extends from approximately 0.27 mile north of Interstate (I)-70 to approximately 1.05 miles north of I-70, for a total length of 0.78 mile. Within the project area, US 231 consists of two travel lanes in each direction (northbound and southbound) from I-70 to CR 800 South, which then reduces to one travel lane in each direction from CR 800 South to the end of the project. The travel lanes are 12 feet wide with 8 feet wide paved shoulders. The northbound and southbound lanes are separated by an asphalt median with drainage structures and is approximately 30 feet wide. Adjacent land use consists of agricultural land and industrial properties. The existing INDOT right-of-way width varies from approximately 70 feet to 200 feet throughout the project corridor. Construction is anticipated to begin in fall 2021. The current proposed project would involve the addition of turn lanes on US 231 within the project area: one southbound left turn lane at the High Street intersection, one northbound left turn lane at the PEI Pipeline Service entrance, one northbound left turn lane at the CR 800 South intersection, and one southbound left turn lane at the CR 800 South intersection. Additionally, the project would involve the addition of one 12-foot wide travel lane with a 10-foot wide paved shoulder to both northbound and southbound lanes of US 231 from CR 800 South northward to the end of the project. The widening associated with the added travel lanes would require an additional 4 to 6 feet of new roadway pavement south of mile marker 142 (approximately 0.21 mile south of CR 800 South), and approximately 20 feet of new roadway pavement north of mile marker 142. The widening of US 231 would primarily take place along the east side of the roadway. Due to the widening of the road, regrading of the roadside ditches and roadside slope would also occur within the project area. At the intersection of US 231 and CR 800 South, the profile grade is being changed to reduce the existing slope. This will require full depth construction on CR 800 South which extends 530 feet west of the intersection and 155 feet east of the intersection. The project would also include the installation drive culverts and cross culverts at various locations within the project area. This will require trenching the location and adding the pipe. The majority of the construction is anticipated to occur within existing INDOT right-of-way; however, 2.66 acres of additional permanent right-of-way would be required. No temporary right-of-way is anticipated. The maintenance of traffic (MOT) plan would utilize phased construction to keep two-way traffic flowing to and from Cloverdale and surrounding areas. CR 800 South would be closed crossing US 231 for a limited amount of time during construction. Local detours would be used to guide drivers back to US 231 in either direction. RQAW performed a site visit to identify any additional ecological resources within or adjacent to the project area. One stream, unnamed tributary to Limestone Creek (UNT 1), flows under US 231. Four wetlands were identified within the project area.

This letter from the Indiana Department of Environmental Management (IDEM) serves as a standardized response to enquiries inviting IDEM comments on roadway construction, reconstruction, or other improvement projects within existing roadway corridors when the proposed scope of the project is beneath the threshold requiring a formal National Environmental Policy Act-mandated Environmental Assessment or Environmental Impact Statement. As the letter attempts to address all roadway-related environmental topics of potential concern, it is possible that not every topic addressed in the letter will be applicable to your particular roadway project.

For additional information on specific roadway-related topics of interest, please visit the appropriate Web pages cited below, many of which provide contact information for persons within the various program areas who can answer questions not fully addressed in this letter. Also please be mindful that some environmental requirements may be subject to change and so each person intending to include a copy of this letter in their project documentation packet is advised to download the most recently revised version of the letter; found at: <http://www.in.gov/idem/5283.htm> (<http://www.in.gov/idem/5283.htm>).

To ensure that all environmentally-related issues are adequately addressed, IDEM recommends that you read this letter in its entirety, and consider each of the following issues as you move forward with the planning of your proposed roadway construction, reconstruction, or improvement project:

WATER AND BIOTIC QUALITY

1. Section 404 of the Clean Water Act requires that you obtain a permit from the U.S. Army Corps of Engineers (USACE) before discharging dredged or fill materials into any wetlands or other waters, such as rivers, lakes, streams, and ditches. Other activities regulated include the relocation, channelization, widening, or other such alteration of a stream, and the mechanical clearing (use of heavy construction equipment) of wetlands. Thus, as a project owner or sponsor, it is your responsibility to ensure that no wetlands are disturbed without the proper permit. Although you may initially refer to the U.S. Fish and Wildlife Service National Wetland Inventory maps as a means of identifying potential areas of concern, please be mindful that those maps do not depict jurisdictional wetlands regulated by the USACE or the Department of Environmental Management. A valid jurisdictional wetlands determination can only be made by the USACE, using the 1987 Wetland Delineation Manual.

USACE recommends that you have a consultant check to determine whether your project will abut, or lie within, a wetland area. To view a list of consultants that have requested to be included on a list posted by the USACE on their Web site, see USACE Permits and Public Notices (<http://www.lrl.usace.army.mil/orf/default.asp>) (<http://www.lrl.usace.army.mil/orf/default.asp>) and then click on "Information" from the menu on the right-hand side of that page. Their "Consultant List" is the fourth entry down on the "Information" page. Please note that the USACE posts all consultants that request to appear on the list, and that inclusion of any particular consultant on the list does not represent an endorsement of that consultant by the USACE, or by IDEM.

Much of northern Indiana (Newton, Lake, Porter, LaPorte, St. Joseph, Elkhart, LaGrange, Steuben, and Dekalb counties; large portions of Jasper, Starke, Marshall, Noble, Allen, and Adams counties; and lesser portions of Benton, White, Pulaski, Kosciusko, and Wells counties) is served by the USACE District Office in Detroit (313-226-6812). The central and southern portions of the state (large portions of Benton, White, Pulaski, Kosciusko, and Wells counties; smaller portions of Jasper, Starke, Marshall, Noble, Allen, and Adams counties; and all other Indiana counties located in north-central, central, and southern Indiana) are served by the USACE Louisville District Office (502-315-6733).

Additional information on contacting these U.S. Army Corps of Engineers (USACE) District Offices, government agencies with jurisdiction over wetlands, and other water quality issues, can

be found at <http://www.in.gov/idem/4396.htm> (<http://www.in.gov/idem/4396.htm>). IDEM recommends that impacts to wetlands and other water resources be avoided to the fullest extent.

2. In the event a Section 404 wetlands permit is required from the USACE, you also must obtain a Section 401 Water Quality Certification from the IDEM Office of Water Quality Wetlands Program. To learn more about the Wetlands Program, visit: <http://www.in.gov/idem/4384.htm> (<http://www.in.gov/idem/4384.htm>).
3. If the USACE determines that a wetland or other water body is isolated and not subject to Clean Water Act regulation, it is still regulated by the state of Indiana . A State Isolated Wetland permit from IDEM's Office of Water Quality (OWQ) is required for any activity that results in the discharge of dredged or fill materials into isolated wetlands. To learn more about isolated wetlands, contact the OWQ Wetlands Program at 317-233-8488.
4. If your project will involve over a 0.5 acre of wetland impact, stream relocation, or other large-scale alterations to water bodies such as the creation of a dam or a water diversion, you should seek additional input from the OWQ Wetlands Program staff. Consult the Web at: <http://www.in.gov/idem/4384.htm> (<http://www.in.gov/idem/4384.htm>) for the appropriate staff contact to further discuss your project.
5. Work within the one-hundred year floodway of a given water body is regulated by the Department of Natural Resources, Division of Water. The Division issues permits for activities regulated under the following statutes:
 - IC 14-26-2 Lakes Preservation Act 312 IAC 11
 - IC 14-26-5 Lowering of Ten Acre Lakes Act No related code
 - IC 14-28-1 Flood Control Act 310 IAC 6-1
 - IC 14-29-1 Navigable Waterways Act 312 IAC 6
 - IC 14-29-3 Sand and Gravel Permits Act 312 IAC 6
 - IC 14-29-4 Construction of Channels Act No related code

For information on these Indiana (statutory) Code and Indiana Administrative Code citations, see the DNR Web site at: <http://www.in.gov/dnr/water/9451.htm> (<http://www.in.gov/dnr/water/9451.htm>) . Contact the DNR Division of Water at 317-232-4160 for further information.

The physical disturbance of the stream and riparian vegetation, especially large trees overhanging any affected water bodies should be limited to only that which is absolutely necessary to complete the project. The shade provided by the large overhanging trees helps maintain proper stream temperatures and dissolved oxygen for aquatic life.

6. For projects involving construction activity (which includes clearing, grading, excavation and other land disturbing activities) that result in the disturbance of one (1), or more, acres of total land area, contact the Office of Water Quality – Watershed Planning Branch (317/233-1864) regarding the need for of a Rule 5 Storm Water Runoff Permit. Visit the following Web page
 - <http://www.in.gov/idem/4902.htm> (<http://www.in.gov/idem/4902.htm>)

To obtain, and operate under, a Rule 5 permit you will first need to develop a Construction Plan (<http://www.in.gov/idem/4917.htm#constreq> (<http://www.in.gov/idem/4917.htm#constreq>)), and as

described in 327 IAC 15-5-6.5 (<http://www.in.gov/legislative/iac/T03270/A00150> [PDF] (<http://www.in.gov/legislative/iac/T03270/A00150.PDF>), pages 16 through 19). Before you may apply for a Rule 5 Permit, or begin construction, you must submit your Construction Plan to your county Soil and Water Conservation District (SWCD) (<http://www.in.gov/isda/soil/contacts/map.html> (<http://www.in.gov/isda/soil/contacts/map.html>)).

Upon receipt of the construction plan, personnel of the SWCD or the Indiana Department of Environmental Management will review the plan to determine if it meets the requirements of 327 IAC 15-5. Plans that are deemed deficient will require re-submittal. If the plan is sufficient you will be notified and instructed to submit the verification to IDEM as part of the Rule 5 Notice of Intent (NOI) submittal. Once construction begins, staff of the SWCD or Indiana Department of Environmental Management will perform inspections of activities at the site for compliance with the regulation.

Please be mindful that approximately 149 Municipal Separate Storm Sewer System (MS4) areas are now being established by various local governmental entities throughout the state as part of the implementation of Phase II federal storm water requirements. All of these MS4 areas will eventually take responsibility for Construction Plan review, inspection, and enforcement. As these MS4 areas obtain program approval from IDEM, they will be added to a list of MS4 areas posted on the IDEM Website at: <http://www.in.gov/idem/4900.htm> (<http://www.in.gov/idem/4900.htm>).

If your project is located in an IDEM-approved MS4 area, please contact the local MS4 program about meeting their storm water requirements. Once the MS4 approves the plan, the NOI can be submitted to IDEM.

Regardless of the size of your project, or which agency you work with to meet storm water requirements, IDEM recommends that appropriate structures and techniques be utilized both during the construction phase, and after completion of the project, to minimize the impacts associated with storm water runoff. The use of appropriate planning and site development and appropriate storm water quality measures are recommended to prevent soil from leaving the construction site during active land disturbance and for post construction water quality concerns. Information and assistance regarding storm water related to construction activities are available from the Soil and Water Conservation District (SWCD) offices in each county or from IDEM.

7. For projects involving impacts to fish and botanical resources, contact the Department of Natural Resources - Division of Fish and Wildlife (317/232-4080) for addition project input.
8. For projects involving water main construction, water main extensions, and new public water supplies, contact the Office of Water Quality - Drinking Water Branch (317-308-3299) regarding the need for permits.
9. For projects involving effluent discharges to waters of the State of Indiana , contact the Office of Water Quality - Permits Branch (317-233-0468) regarding the need for a National Pollutant Discharge Elimination System (NPDES) permit.
10. For projects involving the construction of wastewater facilities and sewer lines, contact the Office of Water Quality - Permits Branch (317-232-8675) regarding the need for permits.

AIR QUALITY

The above-noted project should be designed to minimize any impact on ambient air quality in, or near, the project area. The project must comply with all federal and state air pollution regulations.

Consideration should be given to the following:

1. Regarding open burning, and disposing of organic debris generated by land clearing activities; some types of open burning are allowed (<http://www.in.gov/idem/4148.htm>) under specific conditions. You also can seek an open burning variance from IDEM.

However, IDEM generally recommends that you take vegetative wastes to a registered yard waste composting facility or that the waste be chipped or shredded with composting on site (you must register with IDEM if more than 2,000 pounds is to be composted; contact 317/232-0066). The finished compost can then be used as a mulch or soil amendment. You also may bury any vegetative wastes (such as leaves, twigs, branches, limbs, tree trunks and stumps) onsite, although burying large quantities of such material can lead to subsidence problems, later on.

Reasonable precautions must be taken to minimize fugitive dust emissions from construction and demolition activities. For example, wetting the area with water, constructing wind barriers, or treating dusty areas with chemical stabilizers (such as calcium chloride or several other commercial products). Dirt tracked onto paved roads from unpaved areas should be minimized.

Additionally, if construction or demolition is conducted in a wooded area where blackbirds have roosted or abandoned buildings or building sections in which pigeons or bats have roosted for 3-5 years precautionary measures should be taken to avoid an outbreak of histoplasmosis. This disease is caused by the fungus *Histoplasma capsulatum*, which stems from bird or bat droppings that have accumulated in one area for 3-5 years. The spores from this fungus become airborne when the area is disturbed and can cause infections over an entire community downwind of the site. The area should be wetted down prior to cleanup or demolition of the project site. For more detailed information on histoplasmosis prevention and control, please contact the Acute Disease Control Division of the Indiana State Department of Health at (317) 233-7272.

2. The U.S. EPA and the Surgeon General recommend that people not have long-term exposure to radon at levels above 4 pCi/L. (For a county-by-county map of predicted radon levels in Indiana, visit: <http://www.in.gov/idem/4145.htm> (<http://www.in.gov/idem/4145.htm>).

The U.S. EPA further recommends that all homes (and apartments within three stories of ground level) be tested for radon. If in-home radon levels are determined to be 4 pCi/L, or higher, EPA recommends a follow-up test. If the second test confirms that radon levels are 4 pCi/L, or higher, EPA recommends the installation of radon-reduction measures. (For a list of qualified radon testers and radon mitigation (or reduction) specialists visit:

http://www.in.gov/isdh/regsvcs/radhealth/pdfs/radon_testers_mitigators_list.pdf

(http://www.in.gov/isdh/regsvcs/radhealth/pdfs/radon_testers_mitigators_list.pdf.) It also is

recommended that radon reduction measures be built into all new homes, particularly in areas like Indiana that have moderate to high predicted radon levels.

To learn more about radon, radon risks, and ways to reduce exposure visit:

<http://www.in.gov/isdh/regsvcs/radhealth/radon.htm>

(<http://www.in.gov/isdh/regsvcs/radhealth/radon.htm>), <http://www.in.gov/idem/4145.htm>

(<http://www.in.gov/idem/4145.htm>), or <http://www.epa.gov/radon/index.html>

(<http://www.epa.gov/radon/index.html>).

3. With respect to asbestos removal: all facilities slated for renovation or demolition (except residential buildings that have (4) four or fewer dwelling units and which will not be used for commercial purposes) must be inspected by an Indiana-licensed asbestos inspector prior to the commencement of any renovation or demolition activities. If regulated asbestos-containing material (RACM) that may become airborne is found, any subsequent demolition, renovation, or asbestos removal activities must be performed in accordance with the proper notification and emission control requirements.

If no asbestos is found where a renovation activity will occur, or if the renovation involves removal of less than 260 linear feet of RACM off of pipes, less than 160 square feet of RACM off of other facility components, or less than 35 cubic feet of RACM off of all facility components, the owner or operator of the project does not need to notify IDEM before beginning the renovation activity.

For questions on asbestos demolition and renovation activities, you can also call IDEM's Lead/Asbestos section at 1-888-574-8150.

However, in all cases where a demolition activity will occur (even if no asbestos is found), the owner or operator must still notify IDEM 10 working days prior to the demolition, using the form found at <http://www.in.gov/icpr/webfile/formsdiv/44593.pdf> (<http://www.in.gov/icpr/webfile/formsdiv/44593.pdf>).

Anyone submitting a renovation/demolition notification form will be billed a notification fee based upon the amount of friable asbestos containing material to be removed or demolished. Projects that involve the removal of more than 2,600 linear feet of friable asbestos containing materials on pipes, or 1,600 square feet or 400 cubic feet of friable asbestos containing material on other facility components, will be billed a fee of \$150 per project; projects below these amounts will be billed a fee of \$50 per project. All notification remitters will be billed on a quarterly basis.

For more information about IDEM policy regarding asbestos removal and disposal, visit: <http://www.in.gov/idem/4983.htm> (<http://www.in.gov/idem/4983.htm>).

4. With respect to lead-based paint removal: IDEM encourages all efforts to minimize human exposure to lead-based paint chips and dust. IDEM is particularly concerned that young children exposed to lead can suffer from learning disabilities. Although lead-based paint abatement efforts are not mandatory, any abatement that is conducted within housing built before January 1, 1978 , or a child-occupied facility is required to comply with all lead-based paint work practice standards, licensing and notification requirements. For more information about lead-based paint removal visit: <http://www.in.gov/isdh/19131.htm> (<http://www.in.gov/isdh/19131.htm>).
5. Ensure that asphalt paving plants are permitted and operate properly. The use of cutback asphalt, or asphalt emulsion containing more than seven percent (7%) oil distillate, is prohibited

during the months April through October. See 326 IAC 8-5-2 , Asphalt Paving Rule (<http://www.ai.org/legislative/iac/T03260/A00080.PDF> (<http://www.ai.org/legislative/iac/T03260/A00080.PDF>)).

6. If your project involves the construction of a new source of air emissions or the modification of an existing source of air emissions or air pollution control equipment, it will need to be reviewed by the IDEM Office of Air Quality (OAQ). A registration or permit may be required under 326 IAC 2 (View at: www.ai.org/legislative/iac/t03260/a00020.pdf (<http://www.ai.org/legislative/iac/t03260/a00020.pdf>)). New sources that use or emit hazardous air pollutants may be subject to Section 112 of the Clean Air Act and corresponding state air regulations governing hazardous air pollutants.
7. For more information on air permits visit: <http://www.in.gov/idem/4223.htm> (<http://www.in.gov/idem/4223.htm>), or to initiate the IDEM air permitting process, please contact the Office of Air Quality Permit Reviewer of the Day at (317) 233-0178 or OAMPROD at atdem.state.in.us.

LAND QUALITY

In order to maintain compliance with all applicable laws regarding contamination and/or proper waste disposal, IDEM recommends that:

1. If the site is found to contain any areas used to dispose of solid or hazardous waste, you need to contact the Office of Land Quality (OLQ) at 317-308-3103.
2. All solid wastes generated by the project, or removed from the project site, need to be taken to a properly permitted solid waste processing or disposal facility. For more information, visit <http://www.in.gov/idem/4998.htm> (<http://www.in.gov/idem/4998.htm>).
3. If any contaminated soils are discovered during this project, they may be subject to disposal as hazardous waste. Please contact the OLQ at 317-308-3103 to obtain information on proper disposal procedures.
4. If PCBs are found at this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding management of any PCB wastes from this site.
5. If there are any asbestos disposal issues related to this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding the management of asbestos wastes (Asbestos removal is addressed above, under Air Quality).
6. If the project involves the installation or removal of an underground storage tank, or involves contamination from an underground storage tank, you must contact the IDEM Underground Storage Tank program at 317/308-3039. See: <http://www.in.gov/idem/4999.htm> (<http://www.in.gov/idem/4999.htm>).

FINAL REMARKS

Should you need to obtain any environmental permits in association with this proposed project, please be mindful that IC 13-15-8 requires that you notify all adjoining property owners and/or occupants within ten days your submittal of each permit application. However, if you are seeking multiple permits, you can still meet the notification requirement with a single notice if all required permit applications are submitted with the same ten day period.

Should the scope of the proposed project be expanded to the extent that a National Environmental Policy Act Environmental Assessment (EA) or Environmental Impact Statement (EIS) is required, IDEM will actively participate in any early interagency coordination review of the project.

Meanwhile, please note that this letter does not constitute a permit, license, endorsement or any other form of approval on the part of the Indiana Department of Environmental Management regarding any project for which a copy of this letter is used. Also note that is it the responsibility of the project engineer or consultant using this letter to ensure that the most current draft of this document, which is located at <http://www.in.gov/idem/5284.htm> (<http://www.in.gov/idem/5284.htm>), is used.

Signature(s) of the Applicant

I acknowledge that the following proposed roadway project will be financed in part, or in whole, by public monies.

Project Description

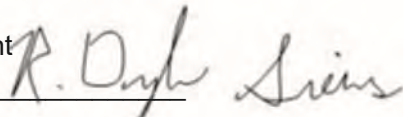
The Indiana Department of Transportation (INDOT) Crawfordsville District and the Federal Highway Administration (FHWA) propose to proceed with an added travel lanes project in Putnam County, Indiana (Des. Number 1700091). This project is located on United States Highway (US) 231; the project extends from approximately 0.27 mile north of Interstate (I)-70 to approximately 1.05 miles north of I-70, for a total length of 0.78 mile. Within the project area, US 231 consists of two travel lanes in each direction (northbound and southbound) from I-70 to CR 800 South, which then reduces to one travel lane in each direction from CR 800 South to the end of the project. The travel lanes are 12 feet wide with 8 feet wide paved shoulders. The northbound and southbound lanes are separated by an asphalt median with drainage structures and is approximately 30 feet wide. Adjacent land use consists of agricultural land and industrial properties. The existing INDOT right-of-way width varies from approximately 70 feet to 200 feet throughout the project corridor. Construction is anticipated to begin in fall 2021. The current proposed project would involve the addition of turn lanes on US 231 within the project area: one southbound left turn lane at the High Street intersection, one northbound left turn lane at the PEI Pipeline Service entrance, one northbound left turn lane at the CR 800 South intersection, and one southbound left turn lane at the CR 800 South intersection. Additionally, the project would involve the addition of one 12-foot wide travel lane with a 10-foot wide paved shoulder to both northbound and southbound lanes of US 231 from CR 800 South northward to the end of the project. The widening associated with the added travel lanes would require an additional 4 to 6 feet of new roadway pavement south of mile marker 142 (approximately 0.21 mile south of CR 800 South), and approximately 20 feet of new roadway pavement north of mile marker 142. The widening of US 231

would primarily take place along the east side of the roadway. Due to the widening of the road, regrading of the roadside ditches and roadside slope would also occur within the project area. At the intersection of US 231 and CR 800 South, the profile grade is being changed to reduce the existing slope. This will require full depth construction on CR 800 South which extends 530 feet west of the intersection and 155 feet east of the intersection. The project would also include the installation drive culverts and cross culverts at various locations within the project area. This will require trenching the location and adding the pipe. The majority of the construction is anticipated to occur within existing INDOT right-of-way; however, 2.66 acres of additional permanent right-of-way would be required. No temporary right-of-way is anticipated. The maintenance of traffic (MOT) plan would utilize phased construction to keep two-way traffic flowing to and from Cloverdale and surrounding areas. CR 800 South would be closed crossing US 231 for a limited amount of time during construction. Local detours would be used to guide drivers back to US 231 in either direction. RQAW performed a site visit to identify any additional ecological resources within or adjacent to the project area. One stream, unnamed tributary to Limestone Creek (UNT 1), flows under US 231. Four wetlands were identified within the project area.

With my signature, I do hereby affirm that I have read the letter from the Indiana Department of Environment that appears directly above. In addition, I understand that in order to complete that project in which I am interested, with a minimum of impact to the environment, I must consider all the issues addressed in the aforementioned letter, and further, that I must obtain any required permits.

Date: 4/17/2020

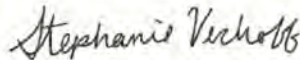
Signature of the INDOT
Project Engineer or Other Responsible Agent



Date: 4/17/2020

Dylan Sievers

Signature of the
For Hire Consultant



Stephanie Verhoff

State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Fish and Wildlife
Early Coordination/Environmental Assessment

DNR #: ER-22455

Request Received: April 17, 2020

Requestor: RQAW Environmental
Stephanie Verhoff
9770 North Street, Suite 110
Fishers, IN 46038

Project: US 231 added travel lanes, from 0.27 mile north to 1.05 miles north of I-70; Des #1700091

County/Site info: Putnam

The Indiana Department of Natural Resources has reviewed the above referenced project per your request. Our agency offers the following comments for your information and in accordance with the National Environmental Policy Act of 1969.

If our agency has regulatory jurisdiction over the project, the recommendations contained in this letter may become requirements of any permit issued. If we do not have permitting authority, all recommendations are voluntary.

Regulatory Assessment: This proposal may require the formal approval of our agency pursuant to the Flood Control Act (IC 14-28-1) for any proposal to construct, excavate, or fill in or on the floodway of a stream or other flowing waterbody which has a drainage area greater than one square mile. Please submit more detailed plans to the Division of Water's Technical Services Section if you are unsure whether or not a permit will be required.

Natural Heritage Database: The Natural Heritage Program's data have been checked. American Badger (*Taxidea taxus*), a state species of special concern, has been documented within 1/2 mile of the project area.

Fish & Wildlife Comments: Badgers are a wide ranging species that prefer an open, prairie-type habitat, with Indiana being at the eastern edge of their natural range. The range of the badger continues to expand as a result of land-use changes from forest to farmland and open pastureland. Impacts to the American badger or its preferred habitat are unlikely as a result of this project.

Avoid and minimize impacts to fish, wildlife, and botanical resources to the greatest extent possible, and compensate for impacts. The following are recommendations that address potential impacts identified in the proposed project area:

1) Riparian Habitat:

We recommend a mitigation plan be developed (and submitted with the permit application, if required) for any unavoidable habitat impacts that will occur. The DNR's Floodway Habitat Mitigation guidelines (and plant lists) can be found online at: <http://www.in.gov/legislative/iac/20190130-IR-312190041NRA.xml.pdf>.

Impacts to non-wetland forest of one (1) acre or more should be mitigated at a minimum 2:1 ratio. If less than one acre of non-wetland forest is removed in a rural setting, replacement should be at a 1:1 ratio based on area. Impacts to non-wetland forest under one (1) acre in an urban setting should be mitigated by planting five trees, at least 2 inches in diameter-at-breast height (dbh), for each tree which is removed that is 10" dbh or greater (5:1 mitigation based on the number of large trees) or by using the 1:1 replacement ratio based on area depending on the type of habitat impacted (individual canopy tree removal in an urban streetscape or park-like environment versus removal of habitat supporting a tree canopy, woody understory, and herbaceous layer). Impacts

State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Fish and Wildlife
Early Coordination/Environmental Assessment

under 0.10 acre in and urban area may still involve the replacement of large diameter trees but typically do not require any additional mitigation or additional plantings beyond seeding and stabilizing disturbed areas. There are exceptions for high quality habitat sites however.

2) Wetland Habitat:

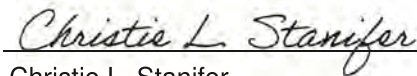
Due to the presence or potential presence of wetland habitat on site, we recommend contacting and coordinating with the Indiana Department of Environmental Management (IDEM) 401 program (<https://www.in.gov/idem/wetlands/2344.htm>) and the US Army Corps of Engineers (USACE) 404 program (<https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/Obtain-a-Permit/>). Impacts to wetland habitat should be mitigated at the appropriate ratio according to the 1991 INDOT/IDNR/USFWS Memorandum of Understanding.

The additional measures listed below should be implemented to avoid, minimize, or compensate for impacts to fish, wildlife, and botanical resources:

1. Revegetate all bare and disturbed areas that are not currently mowed and maintained with a mixture of grasses, sedges, and wildflowers native to Central Indiana as soon as possible upon completion; turf-type grasses (including low-endophyte, friendly endophyte, and endophyte free tall fescue but excluding all other varieties of tall fescue) may be used in currently mowed areas only.
2. Minimize and contain within the project limits all tree and brush clearing.
3. Do not cut any trees suitable for Indiana bat or Northern Long-eared bat roosting (greater than 5 inches dbh, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30.
4. Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the stream or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.
5. Seed and protect all disturbed streambanks and slopes not protected by other methods that are 3:1 or steeper with erosion control blankets that are heavy-duty, biodegradable, and net free or that use loose-woven / Leno-woven netting to minimize the entrapment and snaring of small-bodied wildlife such as snakes and turtles (follow manufacturer's recommendations for selection and installation); seed and apply mulch on all other disturbed areas.

Contact Staff:

Christie L. Stanifer, Environ. Coordinator, Fish & Wildlife
Our agency appreciates this opportunity to be of service. Please contact the above staff member at (317) 232-4080 if we can be of further assistance.



Christie L. Stanifer
Environ. Coordinator
Division of Fish and Wildlife

Date: May 15, 2020



May 4, 2020

Stephanie Verhoff
RQAW Corporation
8770 North Street, Suite 110
Fishers, Indiana 46038

Dear Ms. Verhoff:

The proposed project to construct turning lanes along US 231 in Putnam County, Indiana (Des No. 1700091), as referred to in your letter received on April 17, 2020, will cause a conversion of prime farmland.

The attached packet of information is for your use competing Parts VI and VII of the AD-1006. After completion, the federal funding agency needs to forward one copy to NRCS for our records.

If you need additional information, please contact John Allen at 317-295-5859.

Sincerely,

RICK NEILSON
State Soil Scientist

Enclosures

**FARMLAND CONVERSION IMPACT RATING
FOR CORRIDOR TYPE PROJECTS**

PART I (To be completed by Federal Agency)		3. Date of Land Evaluation Request 4/17/20	4. Sheet 1 of <u> </u> of <u> </u>
1. Name of Project DES1700091 US231 ATL		5. Federal Agency Involved FHWA	
2. Type of Project Road Project		6. County and State Putnam County, Indiana	
PART II (To be completed by NRCS)		1. Date Request Received by NRCS 4/17/20	2. Person Completing Form JRA
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		4. Acres Irrigated Average Farm Size 223 Ac	
5. Major Crop(s) Corn	6. Farmable Land in Government Jurisdiction Acres: 256,347 % 83	7. Amount of Farmland As Defined in FPPA Acres: 207,459 % 67	
8. Name Of Land Evaluation System Used LESA	9. Name of Local Site Assessment System	10. Date Land Evaluation Returned by NRCS 5/4/20	

PART III (To be completed by Federal Agency)	Alternative Corridor For Segment :			
	Corridor 1	Corridor 2	Corridor 3	Corridor 4
A. Total Acres To Be Converted Directly	0.00			
B. Total Acres To Be Converted Indirectly, Or To Receive Services				
C. Total Acres In Corridor	0.00	0.00	0.00	0.00

PART IV (To be completed by NRCS) Land Evaluation Information	
A. Total Acres Prime And Unique Farmland	0.20
B. Total Acres Statewide And Local Important Farmland	0.00
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	<0.001
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	101.0

PART V (To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)	
	36

PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))	Maximum Points			
1. Area in Nonurban Use	15	11		
2. Perimeter in Nonurban Use	10	7		
3. Percent Of Corridor Being Farmed	20	0		
4. Protection Provided By State And Local Government	20	0		
5. Size of Present Farm Unit Compared To Average	10	0		
6. Creation Of Nonfarmable Farmland	25	0		
7. Availability Of Farm Support Services	5	0		
8. On-Farm Investments	20	0		
9. Effects Of Conversion On Farm Support Services	25	0		
10. Compatibility With Existing Agricultural Use	10	0		
TOTAL CORRIDOR ASSESSMENT POINTS	160	18	0	0

PART VII (To be completed by Federal Agency)				
Relative Value Of Farmland (From Part V)	100	36		
Total Corridor Assessment (From Part VI above or a local site assessment)	160	18	0	0
TOTAL POINTS (Total of above 2 lines)	260	54	0	0

1. Corridor Selected: Corridor 1	2. Total Acres of Farmlands to be Converted by Project: 0	3. Date Of Selection: 8/31/20	4. Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
--	---	---	---

5. Reason For Selection:
Corridor 1 was selected because it meets the project's purpose and need

Signature of Person Completing this Part: Stephanie Kichoff DATE **8/31/20**

NOTE: Complete a form for each segment with more than one Alternate Corridor

Organization and Project Information

Project ID:
Des. ID: Des. Number 1700091
Project Title: US 231 ATL
Name of Organization: RQAW
Requested by: Stephanie Verhoff

Environmental Assessment Report

1. Geological Hazards:
 - Potential Karst
 - Moderate liquefaction potential
 - 1% Annual Chance Flood Hazard
2. Mineral Resources:
 - Bedrock Resource: High Potential
 - Sand and Gravel Resource: None documented in the area
3. Active or abandoned mineral resources extraction sites:
 - None documented in the area

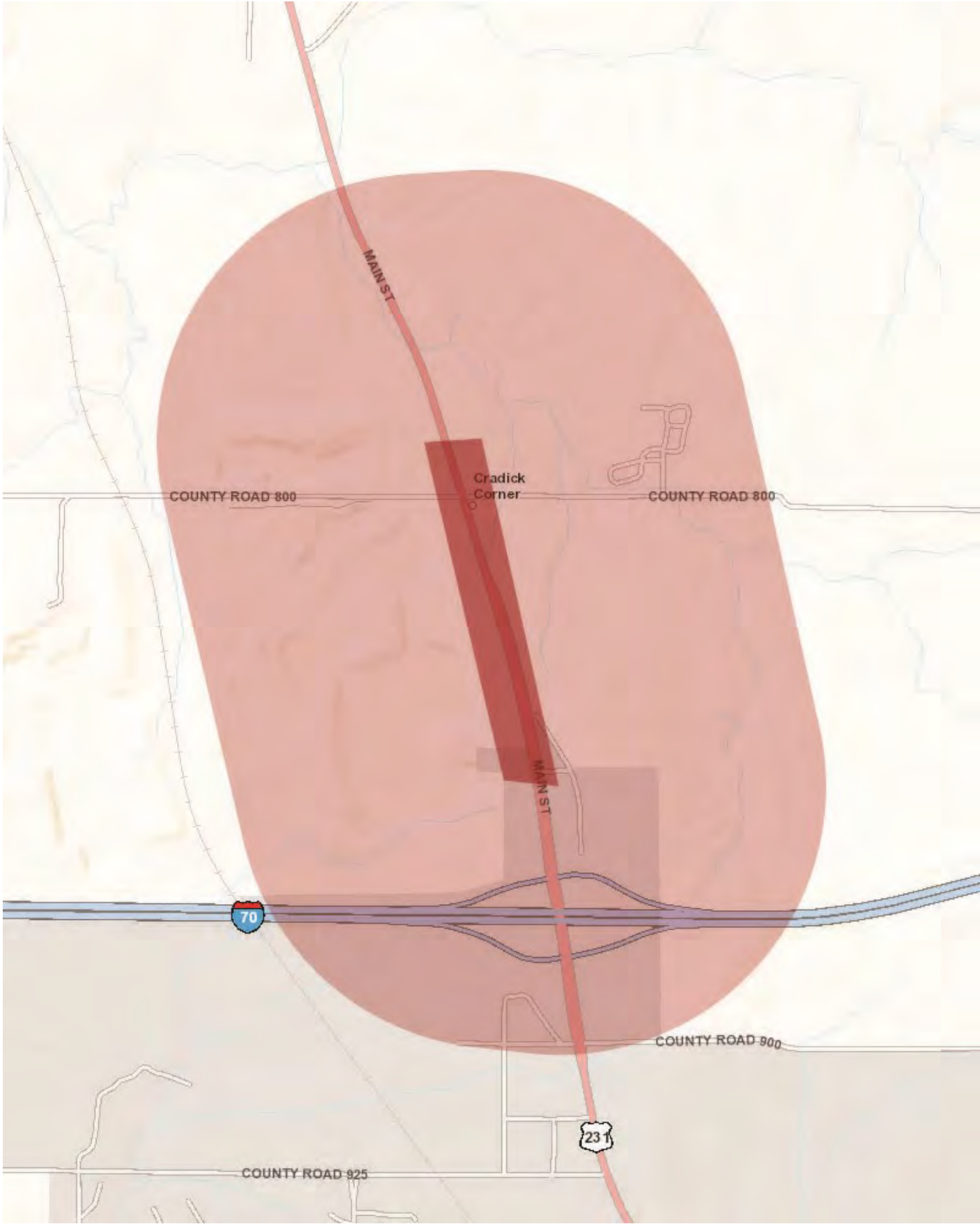
*All map layers from Indiana Map (maps.indiana.edu)

DISCLAIMER:

This document was compiled by Indiana University, Indiana Geological Survey, using data believed to be accurate; however, a degree of error is inherent in all data. This product is distributed "AS-IS" without warranties of any kind, either expressed or implied, including but not limited to warranties of suitability to a particular purpose or use. No attempt has been made in either the design or production of these data and document to define the limits or jurisdiction of any federal, state, or local government. The data used to assemble this document are intended for use only at the published scale of the source data or smaller (see the metadata links below) and are for reference purposes only. They are not to be construed as a legal document or survey instrument. A detailed on-the-ground survey and historical analysis of a single site may differ from these data and this document.

This information was furnished by Indiana Geological Survey
Address: 420 N. Walnut St., Bloomington, IN 47404
Email: IGSEnvir@indiana.edu
Phone: 812 855-7428

Date: April 17, 2020



Metadata:

- https://maps.indiana.edu/metadata/Hydrology/Karst_Cave_Density.html
- https://maps.indiana.edu/metadata/Geology/Seismic_Earthquake_Liquefaction_Potential.html
- https://maps.indiana.edu/metadata/Hydrology/Floodplains_FIRM.html
- https://maps.indiana.edu/metadata/Geology/Bedrock_Geology.html

Cameron Fraser

From: McMullen, Kenneth B <KMcmullen@indot.IN.gov>
Sent: Thursday, June 27, 2019 3:47 PM
To: Cameron Fraser
Subject: RE: Indiana and Northern Long-eared Bat Check for the US 231 Added Travel Lanes Project located in Putnam County (DES 1700091)

Cameron,
Des 1700091, based on the information provided, 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.

Site specific MYSO and/or MYSE hibernacula, capture, or roost tree location data (e.g., geographic coordinates, GIS shapefiles or maps) will not be shared, distributed, or published without prior written consent from USFWS Bloomington Field Office. This is confidential information that can be used to update your IPaC questionnaire, but this information cannot be shared or distributed or placed within any documents.

Respectfully,

Ken McMullen, MELP, CHMM
District Environmental Section Manager/Project Manager
41 West 300 North
Crawfordsville, IN 47933
Office: (765) 361-5620
Cell: (765) 427-6521
Email: KMcmullen@indot.in.gov



From: Cameron Fraser [<mailto:cfraser@rqaw.com>]
Sent: Wednesday, June 12, 2019 2:22 PM
To: McMullen, Kenneth B <KMcmullen@indot.IN.gov>
Subject: Indiana and Northern Long-eared Bat Check for the US 231 Added Travel Lanes Project located in Putnam County (DES 1700091)

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

Good Afternoon Ken,

Attached, please find a topographic and a Red Flag Investigation aerial map showing the project location for an Added Travel Lanes project on US 231 in Putnam County, Indiana (DES 1700091). We appreciate INDOT's review of the GIS layers for the Indiana and Northern Long-eared bat. Please let me know if you need additional information.

Thank you,



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Indiana Ecological Services Field Office

620 South Walker Street

Bloomington, IN 47403-2121

Phone: (812) 334-4261 Fax: (812) 334-4273

<http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html>

In Reply Refer To:

May 19, 2020

Consultation Code: 03E12000-2020-SLI-1309

Event Code: 03E12000-2020-E-06964

Project Name: US 231 Road Reconstruction Project (ATL) in Putnam County, Indiana (Des 1700091)

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The attached species list identifies any federally threatened, endangered, proposed and candidate species that may occur within the boundary of your proposed project or may be affected by your proposed project. The list also includes designated critical habitat if present within your proposed project area or affected by your project. This list is provided to you as the initial step of the consultation process required under section 7(c) of the Endangered Species Act, also referred to as Section 7 Consultation.

Section 7 of the Endangered Species Act of 1973 requires that actions authorized, funded, or carried out by Federal agencies not jeopardize federally threatened or endangered species or adversely modify designated critical habitat. To fulfill this mandate, Federal agencies (or their designated non-federal representative) must consult with the Service if they determine their project “may affect” listed species or critical habitat.

Under 50 CFR 402.12(e) (the regulations that implement Section 7 of the Endangered Species Act) the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally. You may verify the list by visiting the ECOS-IPaC website <http://ecos.fws.gov/ipac/> at regular intervals during project planning and implementation and completing the same process you used to receive the attached list. As an alternative, you may contact this Ecological Services Field Office for updates.

Please use the species list provided and visit the U.S. Fish and Wildlife Service's Region 3 Section 7 Technical Assistance website at - <http://www.fws.gov/midwest/endangered/section7/s7process/index.html>. This website contains step-by-step instructions which will help you

determine if your project will have an adverse effect on listed species and will help lead you through the Section 7 process.

For all **wind energy projects** and **projects that include installing towers that use guy wires or are over 200 feet in height**, please contact this field office directly for assistance, even if no federally listed plants, animals or critical habitat are present within your proposed project or may be affected by your proposed project.

Although no longer protected under the Endangered Species Act, be aware that bald eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*) and Migratory Bird Treaty Act (16 U.S.C. 703 *et seq.*), as are golden eagles. Projects affecting these species may require measures to avoid harming eagles or may require a permit. If your project is near an eagle nest or winter roost area, see our Eagle Permits website at <http://www.fws.gov/midwest/midwestbird/EaglePermits/index.html> to help you determine if you can avoid impacting eagles or if a permit may be necessary.

We appreciate your concern for threatened and endangered species. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Indiana Ecological Services Field Office

620 South Walker Street

Bloomington, IN 47403-2121

(812) 334-4261

Project Summary

Consultation Code: 03E12000-2020-SLI-1309

Event Code: 03E12000-2020-E-06964

Project Name: US 231 Road Reconstruction Project (ATL) in Putnam County, Indiana (Des 1700091)

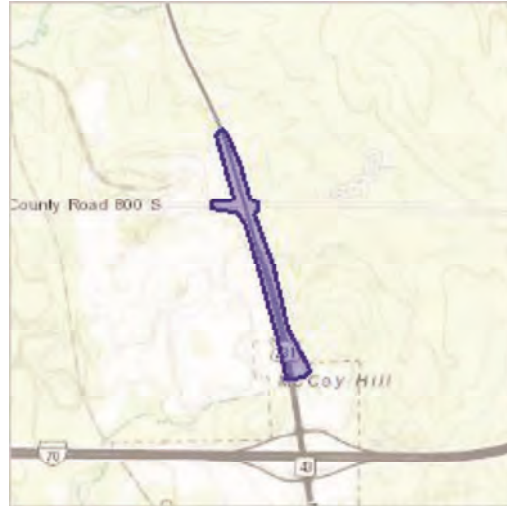
Project Type: TRANSPORTATION

Project Description: This project (Des. Number 1700091) is located on United States Highway (US) 231; the project would extend from approximately 0.27 mile north of Interstate (I)-70 to approximately 1.05 miles north of I-70, for a total length of 0.78 mile. The project would involve the addition of turn lanes on US 231 within the project area. The widening associated with the added travel lanes would primarily take place along the east side of the roadway. Due to the widening of the roadway, regrading of the roadside ditches and roadside slope would also occur. The profile grade would be changed to reduce the existing slope at the US 231/CR 800 South Intersection; this would require full depth construction on CR 800 South. The project would install and replace drive culverts and cross culverts at various locations. Throughout the project area, there are eight drainage pipes. All eight do not have assigned structure numbers. Out of the eight, five are drainage pipes for adjacent driveways. Three drainage pipes run under US 231. The project would require approximately 2.66 acres of permanent right-of-way. No temporary right-of-way is anticipated.

Suitable summer habitat is located adjacent to the project area. Approximately 0.76 acre of trees may be cleared along the southeast section of the project area. The dominant tree species within the project area consists of silver maple (*Acer saccharinum*) and black walnut (*Juglans nigra*). A review of the USFWS Database by INDOT Crawfordsville District on June 27, 2019 did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. RQAW performed a site visit on September 23, 2019 to identify any ecological resources present. No bats or evidence of bats were seen or heard during the site visit. Temporary lighting may be utilized during construction. The project will not involve the replacement or installation of permanent lighting. Construction is anticipated to begin in Spring of 2022.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/39.54191728770822N86.80521060412356W>



Counties: Putnam, IN

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Indiana Bat <i>Myotis sodalis</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/1/office/31440.pdf	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> ▪ Incidental take of the NLEB is not prohibited here. Federal agencies may consult using the 4(d) rule streamlined process. Transportation projects may consult using the programmatic process. See www.fws.gov/midwest/endangered/mammals/nleb/index.html Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Indiana Ecological Services Field Office

620 South Walker Street

Bloomington, IN 47403-2121

Phone: (812) 334-4261 Fax: (812) 334-4273

<http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html>

In Reply Refer To:

May 19, 2020

Consultation Code: 03E12000-2020-I-1309

Event Code: 03E12000-2020-E-06994

Project Name: US 231 Road Reconstruction Project (ATL) in Putnam County, Indiana (Des 1700091)

Subject: Concurrence verification letter for the 'US 231 Road Reconstruction Project (ATL) in Putnam County, Indiana (Des 1700091)' project under the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

To whom it may concern:

The U.S. Fish and Wildlife Service (Service) has received your request to verify that the **US 231 Road Reconstruction Project (ATL) in Putnam County, Indiana (Des 1700091)** (Proposed Action) may rely on the concurrence provided in the February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C 1531 *et seq.*).

Based on the information you provided (Project Description shown below), you have determined that the Proposed Action is within the scope and adheres to the criteria of the PBO, including the adoption of applicable avoidance and minimization measures, and may affect, but is not likely to adversely affect (NLAA) the endangered Indiana bat (*Myotis sodalis*) and/or the threatened Northern long-eared bat (*Myotis septentrionalis*).

The Service has 14 calendar days to notify the lead Federal action agency or designated non-federal representative if we determine that the Proposed Action does not meet the criteria for a NLAA determination under the PBO. If we do not notify the lead Federal action agency or designated non-federal representative within that timeframe, you may proceed with the Proposed Action under the terms of the NLAA concurrence provided in the PBO. This verification period allows Service Field Offices to apply local knowledge to implementation of the PBO, as we may identify a small subset of actions having impacts that were unanticipated. In such instances,

Service Field Offices may request additional information that is necessary to verify inclusion of the proposed action under the PBO.

For Proposed Actions that include bridge/structure removal, replacement, and/or maintenance activities: If your initial bridge/structure assessments failed to detect Indiana bats, but you later detect bats during construction, please submit the Post Assessment Discovery of Bats at Bridge/Structure Form (User Guide Appendix E) to this Service Office. In these instances, potential incidental take of Indiana bats may be exempted provided that the take is reported to the Service.

If the Proposed Action is modified, or new information reveals that it may affect the Indiana bat and/or Northern long-eared bat in a manner or to an extent not considered in the PBO, further review to conclude the requirements of ESA Section 7(a)(2) may be required. If the Proposed Action may affect any other federally-listed or proposed species, and/or any designated critical habitat, additional consultation between the lead Federal action agency and this Service Office is required. If the proposed action has the potential to take bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act may also be required. In either of these circumstances, please contact this Service Office.

Project Description

The following project name and description was collected in IPaC as part of the endangered species review process.

Name

US 231 Road Reconstruction Project (ATL) in Putnam County, Indiana (Des 1700091)

Description

This project (Des. Number 1700091) is located on United States Highway (US) 231; the project would extend from approximately 0.27 mile north of Interstate (I)-70 to approximately 1.05 miles north of I-70, for a total length of 0.78 mile. The project would involve the addition of turn lanes on US 231 within the project area. The widening associated with the added travel lanes would primarily take place along the east side of the roadway. Due to the widening of the roadway, regrading of the roadside ditches and roadside slope would also occur. The profile grade would be changed to reduce the existing slope at the US 231/CR 800 South Intersection; this would require full depth construction on CR 800 South. The project would install and replace drive culverts and cross culverts at various locations. Throughout the project area, there are eight drainage pipes. All eight do not have assigned structure numbers. Out of the eight, five are drainage pipes for adjacent driveways. Three drainage pipes run under US 231. The project would require approximately 2.66 acres of permanent right-of-way. No temporary right-of-way is anticipated.

Suitable summer habitat is located adjacent to the project area. Approximately 0.76 acre of trees may be cleared along the southeast section of the project area. The dominant tree species within the project area consists of silver maple (*Acer saccharinum*) and black walnut (*Juglans nigra*). A review of the USFWS Database by INDOT Crawfordsville District on June 27, 2019 did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. RQAW performed a site visit on September 23, 2019 to identify any ecological resources present. No bats or evidence of bats were seen or heard during the site visit. Temporary lighting may be utilized during construction. The project will not involve the replacement or installation of permanent lighting. Construction is anticipated to begin in Spring of 2022.

Determination Key Result

Based on your answers provided, this project(s) may affect, but is not likely to adversely affect the endangered Indiana bat and/or the threatened Northern long-eared bat, therefore, consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required. However, also based on your answers provided, this project may rely on the concurrence provided in the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

Qualification Interview

1. Is the project within the range of the Indiana bat^[1]?

[1] See [Indiana bat species profile](#)

Automatically answered

Yes

2. Is the project within the range of the Northern long-eared bat^[1]?

[1] See [Northern long-eared bat species profile](#)

Automatically answered

Yes

3. Which Federal Agency is the lead for the action?

A) Federal Highway Administration (FHWA)

4. Are *all* project activities limited to non-construction^[1] activities only? (examples of non-construction activities include: bridge/abandoned structure assessments, surveys, planning and technical studies, property inspections, and property sales)

[1] Construction refers to activities involving ground disturbance, percussive noise, and/or lighting.

No

5. Does the project include *any* activities that are **greater than** 300 feet from existing road/rail surfaces^[1]?

[1] Road surface is defined as the actively used [e.g. motorized vehicles] driving surface and shoulders [may be pavement, gravel, etc.] and rail surface is defined as the edge of the actively used rail ballast.

No

6. Does the project include *any* activities **within** 0.5 miles of a known Indiana bat and/or NLEB hibernaculum^[1]?

[1] For the purpose of this consultation, a hibernaculum is a site, most often a cave or mine, where bats hibernate during the winter (see suitable habitat), but could also include bridges and structures if bats are found to be hibernating there during the winter.

No

7. Is the project located **within** a karst area?

Yes

8. Will the project include *any* type of activity that could impact a **known** hibernaculum^[1], or impact a karst feature (e.g., sinkhole, losing stream, or spring) that could result in effects to a **known** hibernaculum?

[1] For the purpose of this consultation, a hibernaculum is a site, most often a cave or mine, where bats hibernate during the winter (see suitable habitat), but could also include bridges and structures if bats are found to be hibernating there during the winter.

No

9. Is there *any* suitable^[1] summer habitat for Indiana Bat or NLEB **within** the project action area^[2]? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

[1] See the Service's [summer survey guidance](#) for our current definitions of suitable habitat.

[2] The action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR Section 402.02). Further clarification is provided by the [national consultation FAQs](#).

Yes

10. Will the project remove *any* suitable summer habitat^[1] and/or remove/trim any existing trees **within** suitable summer habitat?

[1] See the Service's [summer survey guidance](#) for our current definitions of suitable habitat.

Yes

11. Will the project clear more than 20 acres of suitable habitat per 5-mile section of road/rail?

No

12. Have presence/probable absence (P/A) summer surveys^{[1][2]} been conducted^{[3][4]} **within** the suitable habitat located within your project action area?

[1] See the Service's [summer survey guidance](#) for our current definitions of suitable habitat.

[2] Presence/probable absence summer surveys conducted within the fall swarming/spring emergence home range of a documented Indiana bat hibernaculum (contact local Service Field Office for appropriate distance from hibernacula) that result in a negative finding requires additional consultation with the local Service Field Office to determine if clearing of forested habitat is appropriate and/or if seasonal clearing restrictions are needed to avoid and minimize potential adverse effects on fall swarming and spring emerging Indiana bats.

[3] For projects within the range of either the Indiana bat or NLEB in which suitable habitat is present, and no bat surveys have been conducted, the transportation agency will assume presence of the appropriate species. This assumption of presence should be based upon the presence of suitable habitat and the capability of bats to occupy it because of their mobility.

[4] Negative presence/probable absence survey results obtained using the [summer survey guidance](#) are valid for a minimum of two years from the completion of the survey unless new information (e.g., other nearby surveys) suggest otherwise.

No

13. Does the project include activities **within documented Indiana bat habitat**^{[1][2]}?

[1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

[2] For the purposes of this key, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) treed corridors located directly between documented roosting and foraging habitat.

No

14. Will the removal or trimming of habitat or trees occur **within** suitable but **undocumented Indiana bat** roosting/foraging habitat or travel corridors?

Yes

15. What time of year will the removal or trimming of habitat or trees **within** suitable but **undocumented Indiana bat** roosting/foraging habitat or travel corridors occur^[1]?

[1] Coordinate with the local Service Field Office for appropriate dates.

B) During the inactive season

16. Does the project include activities **within documented NLEB habitat**^{[1][2]}?

[1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

[2] For the purposes of this key, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) treed corridors located directly between documented roosting and foraging habitat.

No

17. Will the removal or trimming of habitat or trees occur **within** suitable but **undocumented NLEB** roosting/foraging habitat or travel corridors?

Yes

18. What time of year will the removal or trimming of habitat or trees **within** suitable but **undocumented NLEB** roosting/foraging habitat or travel corridors occur?

B) During the inactive season

19. Will *any* tree trimming or removal occur **within** 100 feet of existing road/rail surfaces?

Yes

20. Will *any* tree trimming or removal occur **between** 100-300 feet of existing road/rail surfaces?

No

21. Are *all* trees that are being removed clearly demarcated?

Yes

22. Will the removal of habitat or the removal/trimming of trees include installing new or replacing existing **permanent** lighting?

No

23. Does the project include wetland or stream protection activities associated with compensatory wetland mitigation?

No

24. Does the project include slash pile burning?

No

25. Does the project include *any* bridge removal, replacement, and/or maintenance activities (e.g., any bridge repair, retrofit, maintenance, and/or rehabilitation work)?

Yes

26. Is there *any* suitable habitat^[1] for Indiana bat or NLEB **within** 1,000 feet of the bridge? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

[1] See the Service's current [summer survey guidance](#) for our current definitions of suitable habitat.

Yes

27. Has a bridge assessment^[1] been conducted **within** the last 24 months^[2] to determine if the bridge is being used by bats?

[1] See [User Guide Appendix D](#) for bridge/structure assessment guidance

[2] Assessments must be completed no more than 2 years prior to conducting any work below the deck surface on all bridges that meet the physical characteristics described in the Programmatic Consultation, regardless of whether assessments have been conducted in the past. Due to the transitory nature of bat use, a negative result in one year does not guarantee that bats will not use that bridge/structure in subsequent years.

Yes

SUBMITTED DOCUMENTS

- [BridgeStructureAssessmentForm_US231ATL_.pdf](#) <https://ecos.fws.gov/ipac/project/7V55YPECHJA53AOCMECEP55EHQ/projectDocuments/21321972>

28. Did the bridge assessment detect *any* signs of Indiana bats and/or NLEBs roosting in/under the bridge (bats, guano, etc.)^[1]?

[1] If bridge assessment detects signs of *any* species of bats, coordination with the local FWS office is needed to identify potential threatened or endangered bat species. Additional studies may be undertaken to try to identify which bat species may be utilizing the bridge prior to allowing *any* work to proceed.

Note: There is a small chance bridge assessments for bat occupancy do not detect bats. Should a small number of bats be observed roosting on a bridge just prior to or during construction, such that take is likely to occur or does occur in the form of harassment, injury or death, the PBO requires the action agency to report the take. Report all unanticipated take within 2 working days of the incident to the USFWS. Construction activities may continue without delay provided the take is reported to the USFWS and is limited to 5 bats per project.

No

29. Will the bridge removal, replacement, and/or maintenance activities include installing new or replacing existing **permanent** lighting?

No

30. Does the project include the removal, replacement, and/or maintenance of *any* structure other than a bridge? (e.g., rest areas, offices, sheds, outbuildings, barns, parking garages, etc.)

No

31. Will the project involve the use of **temporary** lighting *during* the active season?

Yes

32. Is there *any* suitable habitat **within** 1,000 feet of the location(s) where **temporary** lighting will be used?

Yes

33. Will the project install new or replace existing **permanent** lighting?

No

34. Does the project include percussives or other activities (**not including tree removal/trimming or bridge/structure work**) that will increase noise levels above existing traffic/background levels?

No

35. Are *all* project activities that are **not associated with** habitat removal, tree removal/trimming, bridge and/or structure activities, temporary or permanent lighting, or use of percussives, limited to actions that DO NOT cause any additional stressors to the bat species?

Examples: lining roadways, unlighted signage , rail road crossing signals, signal lighting, and minor road repair such as asphalt fill of potholes, etc.

Yes

36. Will the project raise the road profile **above the tree canopy**?

No

37. Are the project activities that are not associated with habitat removal, tree removal/trimming, bridge and/or structure activities, temporary or permanent lighting, or use of percussives consistent with a No Effect determination in this key?

Automatically answered

Yes, other project activities are limited to actions that DO NOT cause any additional stressors to the bat species as described in the BA/BO

38. Is the habitat removal portion of this project consistent with a Not Likely to Adversely Affect determination in this key?

Automatically answered

Yes, because the tree removal/trimming that occurs outside of the Indiana bat's active season occurs greater than 0.5 miles from the nearest hibernaculum, is less than 100 feet from the existing road/rail surface, includes clear demarcation of the trees that are to be removed, and does not alter documented roosts and/or surrounding summer habitat within 0.25 miles of a documented roost.

39. Is the habitat removal portion of this project consistent with a Not Likely to Adversely Affect determination in this key?

Automatically answered

Yes, because the tree removal/trimming that occurs outside of the NLEB's active season occurs greater than 0.5 miles from the nearest hibernaculum, is less than 100 feet from the existing road/rail surface, includes clear demarcation of the trees that are to be removed, and does not alter documented roosts and/or surrounding summer habitat within 0.25 miles of a documented roost.

40. Is the bridge removal, replacement, or maintenance activities portion of this project consistent with a No Effect determination in this key?

Automatically answered

Yes, because the bridge has been assessed using the criteria documented in the BA and no signs of bats were detected

41. General AMM 1

Will the project ensure *all* operators, employees, and contractors working in areas of known or presumed bat habitat are aware of *all* FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable Avoidance and Minimization Measures?

Yes

42. Hibernacula AMM 1

Will the project ensure that on-site personnel will use best management practices^[1], secondary containment measures, or other standard spill prevention and countermeasures to avoid impacts to possible hibernacula?

[1] Coordinate with the appropriate Service Field Office on recommended best management practices for karst in your state.

Yes

43. Hibernacula AMM 1

Will the project ensure that, where practicable, a 300 foot buffer will be employed to separate fueling areas and other major containment risk activities from caves, sinkholes, losing streams, and springs in karst topography?

Yes

44. Tree Removal AMM 1

Can *all* phases/aspects of the project (e.g., temporary work areas, alignments) be modified, to the extent practicable, to avoid tree removal^[1] in excess of what is required to implement the project safely?

Note: Tree Removal AMM 1 is a minimization measure, the full implementation of which may not always be practicable. Projects may still be NLAA as long as Tree Removal AMMs 2, 3, and 4 are implemented and LAA as long as Tree Removal AMMs 3, 5, 6, and 7 are implemented.

[1] The word “trees” as used in the AMMs refers to trees that are suitable habitat for each species within their range. See the USFWS’ current summer survey guidance for our latest definitions of suitable habitat.

Yes

45. Tree Removal AMM 3

Can tree removal be limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits)?

Yes

46. Tree Removal AMM 4

Can the project avoid cutting down/removal of *all* (1) **documented**^[1] Indiana bat or NLEB roosts^[2] (that are still suitable for roosting), (2) trees **within** 0.25 miles of roosts, and (3) documented foraging habitat any time of year?

[1] The word documented means habitat where bats have actually been captured and/or tracked.

[2] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

Yes

47. Lighting AMM 1

Will *all* **temporary** lighting be directed away from suitable habitat during the active season?

Yes

Project Questionnaire

1. Have you made a No Effect determination for *all* other species indicated on the FWS IPaC generated species list?

N/A

2. Have you made a May Affect determination for *any* other species on the FWS IPaC generated species list?

N/A

3. How many acres^[1] of trees are proposed for removal between 0-100 feet of the existing road/rail surface?

[1] If described as number of trees, multiply by 0.09 to convert to acreage and enter that number.

0.76

4. Please describe the proposed bridge work:

The project would install and replace drive culverts and cross culverts at various locations. Throughout the project area, there are eight drainage pipes.

5. Please state the timing of all proposed bridge work:

Spring 2022

6. Please enter the date of the bridge assessment:

September 23, 2019

Avoidance And Minimization Measures (AMMs)

This determination key result includes the commitment to implement the following Avoidance and Minimization Measures (AMMs):

GENERAL AMM 1

Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs.

HIBERNACULA AMM 1

For projects located within karst areas, on-site personnel will use best management practices, secondary containment measures, or other standard spill prevention and countermeasures to avoid impacts to possible hibernacula. Where practicable, a 300 foot buffer will be employed to separate fueling areas and other major containment risk activities from caves, sinkholes, losing streams, and springs in karst topography.

LIGHTING AMM 1

Direct temporary lighting away from suitable habitat during the active season.

TREE REMOVAL AMM 1

Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal.

TREE REMOVAL AMM 2

Apply time of year restrictions for tree removal when bats are not likely to be present, or limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/

rail surface and **outside of documented** roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed.

TREE REMOVAL AMM 3

Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits).

TREE REMOVAL AMM 4

Do not remove **documented** Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 miles of roosts, or **documented** foraging habitat any time of year.

Determination Key Description: FHWA, FRA, FTA Programmatic Consultation For Transportation Projects Affecting NLEB Or Indiana Bat

This key was last updated in IPaC on December 02, 2019. Keys are subject to periodic revision.

This decision key is intended for projects/activities funded or authorized by the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), and/or Federal Transit Administration (FTA), which may require consultation with the U.S. Fish and Wildlife Service (Service) under Section 7 of the Endangered Species Act (ESA) for the endangered **Indiana bat** (*Myotis sodalis*) and the threatened **Northern long-eared bat** (NLEB) (*Myotis septentrionalis*).

This decision key should only be used to verify project applicability with the Service's [February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects](#). The programmatic biological opinion covers limited transportation activities that may affect either bat species, and addresses situations that are both likely and not likely to adversely affect either bat species. This decision key will assist in identifying the effect of a specific project/activity and applicability of the programmatic consultation. The programmatic biological opinion is not intended to cover all types of transportation actions. Activities outside the scope of the programmatic biological opinion, or that may affect ESA-listed species other than the Indiana bat or NLEB, or any designated critical habitat, may require additional ESA Section 7 consultation.

Categorical Exclusion
Appendix D
Cultural Resources

Minor Projects PA Project Assessment Form – Category B Projects with Archaeology Work

Date: 2/20/20

Project Designation Number: 1700091

Route Number: United States (US) 231

Project Description: Added Travel Lanes from 0.27 miles north of I-70 to 0.78 miles north of I-70

The proposed project will involve the addition of one (1) 12-foot wide travel lane with a 10-foot wide shoulder to both northbound and southbound lanes. The widening associated with the added travel lanes will require an additional 4 to 6-feet of new roadway south of mile marker 142 (approximately 0.21 mile south of CR 800 South), and approximately 20-feet of new roadway north of mile marker 142. The widening of US 231 will primarily take place to the east of the new roadway. Due to the widening of the road, regrading of the roadside ditches and roadside slope will also occur within the project area. The profile at the CR 800 South intersection will be adjusted and require reconstruction.

Four (4) turn lanes will be added within the project area; one (1) southbound (SB) left turn lane at High Street, one (1) northbound (NB) left turn lane at the PEI Pipeline Service entrance (just south of mile marker 142), one (1) NB left turn lane at the CR 800 South intersection, and one (1) SB left turn lane at the CR 800 South intersection. The project will also include the extension of drainage pipes at various locations due to road widening. A total of four (4) drainage pipes will be extended: one (1) 12-inch driveway pipe located approximately 0.43 mile south of CR 800 South, one (1) 36-inch pipe located approximately 0.20 mile south of CR 800 South, one (1) 18-inch pipe located approximately 0.12 mile south of CR 800 South, and one (1) 30-inch pipe located just south of CR 800 South. Approximately three (3) acres or less of right-of-way (ROW) acquisition is anticipated.

Feature crossed (if applicable): N/A

Township: Warren Township

City/County: Putnam County

Information reviewed (please check all that apply):

General project location map	<input checked="" type="checkbox"/>	USGS map	<input checked="" type="checkbox"/>	Aerial photograph	<input checked="" type="checkbox"/>
Written description of project area	<input checked="" type="checkbox"/>	General project area photos	<input checked="" type="checkbox"/>		
Previously completed archaeology reports	<input checked="" type="checkbox"/>	Interim Report	<input checked="" type="checkbox"/>	Soil survey data	<input checked="" type="checkbox"/>
Previously completed historic property reports	<input type="checkbox"/>	Bridge inspection information	<input type="checkbox"/>		

Other (please specify): Indiana State Historic Architectural and Archaeological Research Database (SHAARD); Indiana Historic Buildings, Bridges, and Cemeteries Map (IHBBCM) website; *Putnam County Interim Report*; Arc Map GIS; Putnam County GIS (accessed via <https://putnamin.wthgis.com>); Indiana State Library Map Collection website; online street-view imagery; MPPA application (including maps and photographs) sent by RQAW, dated February 5th, 2020 and on file at INDOT-CRO.

Andrew V. Martin, Michael J. Curran & Lisa J. Kelley
2020 A PHASE IA ARCHAEOLOGICAL RECONNAISSANCE SURVEY FOR PROPOSED ADDED TRAVEL LANES ALONG US 231, FROM 0.27 MILES NORTH TO 1.05 MILES NORTH of I-70 IN PUTNAM COUNTY, INDIANA (INDOT DES # 1700091). Report on file, Indiana Department of Transportation, Cultural Resources Office.

Results of the Records Review for Above-Ground Resources:

With regard to above-ground resources, an INDOT Cultural Resources historian who meets the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61 performed a desktop review, checking the Indiana Register of Historic Sites and Structures (State Register) and National Register of Historic Places (National Register) lists for Putnam County. No listed resources are located immediately adjacent to the project area.

The Indiana Historic Sites and Structures Inventory (IHSSI) and National Register information for Putnam County are available in the Indiana State Historic Architectural and Archaeological Research Database (SHAARD) and the Indiana Historic Buildings, Bridges, and Cemeteries Map (IHBBCM). The *Putnam County Interim Report* (1982; Warren Township) of the Indiana Historic Sites and Structures Inventory (IHSSI) was also consulted. An INDOT-CRO historian reviewed the SHAARD online map and checked it against the Interim Report hard-copy maps. No resources rated higher than "contributing" are located immediately adjacent to the project area.

According to the IHSSI rating system, generally properties rated "contributing" do not possess the level of historical or architectural significance necessary to be considered individually National Register-eligible, although they would contribute to a historic district. If they retain material integrity, properties rated "notable" might possess the necessary level of significance after further research. Properties rated "outstanding" usually possess the necessary level of significance to be considered National Register-eligible, if they retain material integrity.

The INDOT-CRO historian reviewed structures adjacent to the project area utilizing online aerial and street-view photography, as well as the Putnam County GIS website. The project area is located in a rural setting along US 231 with adjacent above-ground resources consisting of early-nineteenth to late-twentieth century residential and commercial buildings. None of the visible resources appear to possess the significance or integrity required to be considered NRHP-eligible.

With regard to the drainage structure extensions, none of the subject structures were identified in a review of SHAARD. These drainage structures were not assigned culvert asset numbers due to their small diameters and so were not included in BIAS. An online street view assessment indicates that they do not exhibit any wood, stone, or brick structures or parts therein. Additionally, they do not appear to possess any historical or engineering significance.

Based on the available information, as summarized above, no above-ground concerns exist.

Archaeology Report Author/Date:

Andrew V. Martin, Michael J. Curran & Lisa J. Kelley / February 20, 2020

Summary of Archaeology Investigation Results:

An archaeological records check and Phase Ia field reconnaissance (Curran, Kelley & Martin 2019) were conducted for the US 231 Added Travel Lanes project by CRA personnel who meet the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61. The survey area encompasses approximately 9.8 ha (24.3 acres) and was investigated in its entirety by shovel testing and visual inspection. Prior to initiating the fieldwork, a records review was conducted utilizing data from the Indiana Division of Historic Preservation and Archaeology. The records review indicated that a portion of

the current survey area had been previously surveyed. No previously recorded archaeological sites are in the current survey area.

The current reconnaissance resulted in the documentation of one previously unrecorded archaeological site (12Pm438). Site 12Pm438 is a schoolhouse/residence with a late nineteenth- through twentieth-century component. The site extends beyond the boundaries of the survey area and its National Register of Historic Places eligibility could not be fully assessed by the current investigation. Nevertheless, the portion of the site documented within the survey area demonstrated poor archaeological integrity and has little potential to yield significant data about the history of the region. Therefore, no further work is recommended for the portion of 12Pm438 located within the survey area. Archaeological clearance is recommended for the proposed project. The report was reviewed by INDOT Cultural Resources personnel who meet the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61. It is our opinion that the report is acceptable, and we concur with the evaluations and recommendations made by CRA (Curran, Kelley & Martin 2020). Therefore, there are no archaeological concerns for the project as a whole.

Does the project appear to fall under the Minor Projects PA? yes no

If yes, please specify category, number, and condition(s) (conditions that are applicable are highlighted):

B-3. Construction of added travel, turning, or auxiliary lanes (e.g., bicycle, truck climbing, acceleration and deceleration lanes) and shoulder widening under the following conditions [***BOTH Condition A, which pertains to Archaeological Resources, and Condition B, which pertains to Above-Ground Resources, must be satisfied***]:

Condition A (Archaeological Resources)

One of the two conditions listed below must be met (*EITHER Condition i or Condition ii must be satisfied*):

- i. Work occurs in previously disturbed soils; *OR*
- ii. Work occurs in undisturbed soils and an archaeological investigation conducted by the applicant and reviewed by INDOT Cultural Resources Office determines that no National Register-listed or potentially National Register-eligible archaeological resources are present within the project area. If the archaeological investigation locates National Register-listed or potentially National Register-eligible archaeological resources, then full Section 106 review will be required. Copies of any archaeological reports prepared for the project will be provided to the DHPA and any archaeological site form information will be entered directly into the SHAARD by the applicant. The archaeological reports will also be available for viewing (by Tribes only) on INSCOPE.

Condition B (Above-Ground Resources)

Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource.

B-9. Installation, replacement, repair, lining, or extension of culverts and other drainage structures under the conditions listed below [***BOTH Condition A, which pertains to Archaeological Resources, and Condition B, which pertains to Above-Ground Resources, must be satisfied***]:

Condition A (Archaeological Resources)

One of the two conditions listed below must be met (*EITHER Condition i or Condition ii must be satisfied*):

- i. Work occurs in previously disturbed soils; *OR*
- ii. Work occurs in undisturbed soils and an archaeological investigation conducted by the applicant and reviewed by INDOT Cultural Resources Office determines that no National Register-listed or potentially National Register-eligible archaeological resources are present within the project area. If the archaeological investigation locates National Register-listed or potentially National

Register-eligible archaeological resources, then full Section 106 review will be required. Copies of any archaeological reports prepared for the project will be provided to the DHPA and any archaeological site form information will be entered directly into the SHAARD by the applicant. The archaeological reports will also be available for viewing (by Tribes only) on INSCOPE.

Condition B (Above-Ground Resources)

One of the conditions below must be met (*EITHER Condition i or Condition ii must be satisfied*):

- i. Work does not involve installation of a new culvert and other drainage structure, and there are no impacts to unusual features, including but not limited to historic brick or stone sidewalks, curbs or curb ramps, stepped or elevated sidewalks and retaining walls, under one of the following conditions (*Condition a, Condition b, or Condition c must be satisfied*):
 - a. The structure exhibits no wood, stone, or brick structures or parts therein; *OR*
 - b. The structure exhibits only modern wood, stone, or brick structures or parts therein; *OR*
 - c. The structure exhibits non-modern wood, stone, or brick structures or parts therein and the following conditions are met (*BOTH Condition 1 AND Condition 2 must be met*):
 1. Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource; *AND*
 2. The structure lacks sufficient integrity and/or a context that suggests it might have engineering or historical significance. Under this condition, a qualified professional (meeting the Secretary of Interior’s Professional Qualification standards [48 Federal Register (FR) 44716]) must prepare an analysis and justification that the structure lacks sufficient integrity and/or a context that suggests it might have engineering or historical significance. This documentation must be reviewed and approved by INDOT Cultural Resources Office.
- ii. Work involves the installation of a new culvert and other drainage structures *AND/OR* there may be impacts to unusual features, including historic brick or stone sidewalks, curbs or curb ramps, stepped or elevated sidewalks and retaining walls, under the following conditions (*BOTH Condition a and Condition b must be satisfied*):
 - a. Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource; *AND*
 - b. The subject structure exhibits one of the characteristics described below (*Condition 1, Condition 2 or Condition 3 must be satisfied*).
 1. The structure exhibits no wood, stone, or brick structures or parts therein; *OR*
 2. The structure exhibits only modern wood, stone, or brick structures or parts therein; *OR*
 3. The structure exhibits non-modern wood, stone, or brick structures or parts therein but lacks sufficient integrity and/or a context that suggests it might have engineering or historical significance. Under this condition, a qualified professional (meeting the Secretary of Interior’s Professional Qualification standards [48 Federal Register (FR) 44716]) must prepare an analysis and justification that the structure lacks sufficient integrity and/or a context that suggests it might have engineering or historical significance. This documentation must be reviewed and approved by INDOT Cultural Resources Office.

Additional comments: If any archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, construction in the immediate area of the find will be stopped, and the INDOT Cultural Resources Section and the Division of Historic Preservation and Archaeology will be notified immediately.

INDOT Cultural Resources staff reviewer(s): Patricia Jo Korzeniewski & Clint Kelly

****Be sure to attach this form to the National Environmental Policy Act documentation for this project. Also, the NEPA documentation shall reference and include the description of the specific stipulation in the PA that qualifies the project as exempt from further Section 106 review.*

From: Haylee Moscato
Sent: Monday, February 24, 2020 9:29 AM
To: Korzeniewski, Patricia J
Cc: Miller, Shaun (INDOT); Kelly, Clint; Branigin, Susan; Kyle J. Boot; Joseph Dabkowski; Aaron Lawson; Cameron Fraser; Andrew Martin; Dylan Sievers
Subject: RE: US 231 Added Travel Lanes, Des 1700091, Putnam County - MPPA B-3 & 9
Attachments: US 231 ATL_Des1700091_TransmittalSHPO_2020-02-24.pdf

Patricia,

Thank you for the determination form for the above-mentioned project. The revised archaeology report has been submitted to IN SCOPE and a hard copy for DHPA will go out in the mail today, along with the transmittal letter attached to this email noting the project qualifies as a Minor Project and therefore the report is for their records only. Please let me know if there is anything else you require of me.

Thank you for your time,

Haylee Moscato
Architectural Historian
O: 317.588.1766
www.rqaw.com

From: Korzeniewski, Patricia J <PKorzeniewski@indot.IN.gov>
Sent: Monday, February 24, 2020 8:17 AM
To: Haylee Moscato <hmoscato@rqaw.com>; Kyle J. Boot <KBoot@RQAW.com>; Joseph Dabkowski <jdabkowski@RQAW.com>; Aaron Lawson <alawson@rqaw.com>; Cameron Fraser <cfraser@rqaw.com>; Dylan Sievers <dsievers@RQAW.com>; Andrew Martin <amartin@crai-ky.com>
Cc: Korzeniewski, Patricia J <PKorzeniewski@indot.IN.gov>; Miller, Shaun (INDOT) <smiller@indot.in.gov>; Kelly, Clint <ckelly1@indot.in.gov>; Branigin, Susan <SBranigin@indot.IN.gov>
Subject: RE: US 231 Added Travel Lanes, Des 1700091, Putnam County - MPPA B-3 & 9

Good Morning,

Thank you for the submittal of the revised Archaeology short report for our review. We've determined that this project falls under Category B-3 & B-9 of the Minor Projects PA, thus concluding the Section 106 process. The determination form is attached for your use in the CE document.

The revised archaeological short report has been reviewed and approved by INDOT CRO. Please forward one hard copy of the report to DHPA, indicating in the cover letter that the project qualified as a Minor Project and therefore the report is for their records only and no formal review is required under Section 106. In addition, we ask that a copy of the DHPA submittal letter be sent to INDOT CRO c/o Patricia Jo Korzeniewski during the time of submission and that the archaeological report be posted to IN SCOPE (please ensure that the uploaded file follows the IN SCOPE naming conventions).

Please keep in mind that if the scope of the project or project limits should change, our office will need to re-examine the information to determine whether the MPPA still applies. Please don't hesitate to contact us should you have any questions or need additional information.

Patricia Jo Korzeniewski

**A PHASE IA ARCHAEOLOGICAL RECONNAISSANCE
SURVEY FOR PROPOSED ADDED TRAVEL LANES
ALONG US 231 FROM 0.27 MI NORTH TO
1.05 MI NORTH OF I-70 IN PUTNAM COUNTY, INDIANA
(INDOT DES # 1700091)**

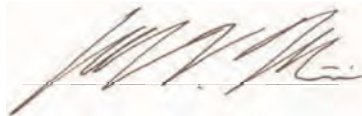
by
Michael J. Curran
With a contribution by Lisa J. Kelley

Prepared for

Joe Dabkowski
RQAW Corporation
8770 North Street, Suite 110
Fishers, Indiana 47038
Phone: (317) 588-1759
Email: Jdabkowski.com

Prepared by

Cultural Resource Analysts, Inc.
201 NW 4th Street, Suite 204
Evansville, Indiana
Phone: (812) 253-3009
Fax: (812) 253-3010
Email: amartin@crai-ky.com
CRA Project No.: I19R015



Andrew V. Martin, RPA
Principal Investigator

February 20, 2020

Lead Agency: Indiana Department of Transportation
INDOT DES #: 1700091
Indiana State Museum Accession No.: 71.19.1731

ABSTRACT

Between October 15 and 18, 2019, Cultural Resource Analysts, Inc., personnel conducted a phase Ia archaeological reconnaissance for proposed added travel lanes along US 231 in Putnam County, Indiana (Indiana Department of Transportation Des. No. 1700091). The survey was conducted at the request of RQAW Corporation. The survey area encompasses approximately 9.8 ha (24.3 acres) and was investigated in its entirety by shovel testing and visual inspection.

Prior to initiating the fieldwork, a records review was conducted utilizing data from the Indiana Division of Historic Preservation and Archaeology. The records review indicated that a portion of the current survey area had been previously surveyed. No previously recorded archaeological sites are in the current survey area.

The current reconnaissance resulted in the documentation of one previously unrecorded archaeological site (12Pm438). Site 12Pm438 is a schoolhouse/residence with a late nineteenth-through twentieth-century component. The site extends beyond the boundaries of the survey area and its National Register of Historic Places eligibility could not be fully assessed by the current investigation. Nevertheless, the portion of the site documented within the survey area demonstrated poor archaeological integrity and has little potential to yield significant data about the history of the region. Therefore, no further work is recommended for the portion of 12Pm438 located within the survey area. Archaeological clearance is recommended for the proposed project.

Categorical Exclusion
Appendix E
Red Flag Investigation



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204

PHONE: (317) 232-5113
FAX: (317) 233-4929

Eric Holcomb, Governor
Joe McGuinness, Commissioner

Date: July 17, 2019

To: Site Assessment & Management (SAM)
Environmental Policy Office - Environmental Services Division
Indiana Department of Transportation
100 N Senate Avenue, Room N642
Indianapolis, IN 46204

From: Cameron Fraser
RQAW Corporation
8770 North Street; Suite 110
Fishers, Indiana 46038
cfraser@rqaw.com

Re: RED FLAG INVESTIGATION
Des. Number 1700091, State Project
Added Travel Lanes
US 231, from 0.27 miles north to 1.05 miles north of I-70
Putnam County, Indiana

PROJECT DESCRIPTION

Brief Description of Project: The Federal Highway Administration (FHWA) and the Indiana Department of Transportation (INDOT), Crawfordsville District propose to proceed with an added travel lanes project on US 231 in Putnam County, Indiana. The project is located along US 231, beginning 0.27 mile north of I-70 at Exit 41 and extending north for approximately 0.78 mile, through the CR 800 South intersection. The proposed project will involve the addition of one (1) 12-foot wide travel lane with a 10-foot wide shoulder to both northbound and southbound lanes. The widening associated with the added travel lanes will require an additional 4 to 6-feet of new roadway south of mile marker 142 (approximately 0.21 mile south of CR 800 South) and approximately 20-feet of new roadway north of mile marker 142. The widening of US 231 will primarily take place to the east of the roadway. Due to the widening of the road, regrading of the roadside ditches and roadside slope will also occur within the project area. The profile at the CR 800 South intersection will be adjusted and require reconstruction.

Four (4) turn lanes will be added in the project area; one (1) southbound (SB) left turn lane at High Street, one (1) northbound (NB) left turn lane at the PEI Pipeline Service entrance (just south of mile marker 142), one (1) NB turn lane at the CR 800 South intersection, and one (1) SB left turn lane at the CR 800 South intersection. The project will also include the installation of storm sewers at various locations along the project area. A total of four (4) drainage pipes will be extended due to road widening; one (1) 12-inch pipe located approximately 0.43 mile south of CR 800 South, one (1) 36-inch pipe located approximately 0.20 mile south of CR 800 South, one (1) 18-inch pipe located approximately 0.12 mile south of CR 800 South, and one (1) 30-inch pipe located just south of CR 800 South. There are no known INDOT culvert numbers listed for any of the drainage pipes that will be extended.

Bridge and/or Culvert Work Included in Project: Yes No Structure #(s) _____

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

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(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 To Be Determined (TBD) Permanent # Acres TBD, Not Applicable

Type of excavation: The maximum depth of excavation for this project will not exceed 5-feet.

Maintenance of traffic: The Maintenance of traffic (MOT) plan will utilize phased construction to keep traffic flowing on US 231. CR 800 South will remain closed for most of the project construction. A Detour is expected; however, the route has not been determined at this time.

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	N/A	Recreational Facilities	1
Airports ¹	N/A	Pipelines	2
Cemeteries	N/A	Railroads	N/A
Hospitals	N/A	Trails	N/A
Schools	N/A	Managed Lands	N/A

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

Explanation:

Recreational Facilities: One (1) recreational facility is located within the 0.5 mile search radius. The recreational facility is approximately 0.23 mile east of the project area. No impact is expected.

Pipelines: Two (2) pipeline segments are located within the 0.5 mile search radius. The nearest pipeline segment, associated with Texas Gas Transmission Corp., is located approximately 0.13 mile east 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	8
Canal Structures – Historic	N/A	Lakes	11*
NPS NRI Listed	N/A	Floodplain - DFIRM	1
NWI-Lines	5	Cave Entrance Density	1
IDEM e303d Listed Streams and Lakes (Impaired)	2	Sinkhole Areas	N/A
Rivers and Streams	20	Sinking-Stream Basins	N/A

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Explanation:

National Wetlands Inventory (NWI)-Lines: Five (5) NWI-Line segments are located within the 0.5 mile search radius. Two (2) NWI-Line segments are located within the project area. A Waters of the US Report will be prepared and coordination with INDOT Environmental Services (ES) Ecology and Waterway Permitting will occur.

Indiana Department of Environmental Management (IDEM) e303d Listed Streams and Lakes (Impaired): Two (2) impaired stream segments are located within the 0.5 mile search radius. The nearest impaired stream segment is located approximately 0.07 mile southwest of the project area. No impact is expected.

Rivers and Streams: Twenty (20) river and stream segments are located within the 0.5 mile search radius. Two (2) stream segments are located within the project area. A Waters of the US Report will be prepared and coordination with INDOT ES Ecology and Waterway Permitting will occur.

NWI-Wetlands: Eight (8) NWI-Wetland polygons are located within the 0.5 mile search radius. The nearest NWI-Wetland polygon is approximately 0.05 mile west of the project area. No impact is expected.

Lakes: Eleven (11)* lake polygons, one (1) unmapped and ten (10) mapped, are located within the 0.5 mile search radius. The nearest lake polygon is located within the project area. A Waters of the US Report will be prepared and coordination with INDOT ES Ecology and Waterway Permitting will occur.

Floodplain – Digital Flood Insurance Rate Map (DFIRM): One (1) Floodplain-DFIRM polygon is located within the 0.5 mile search radius. The Floodplain-DFIRM polygon is located within the project area. Coordination with INDOT ES Ecology and Waterway Permitting will occur.

Cave Entrance Density: One (1) cave entrance density polygon is located within the 0.5 mile search radius. The cave entrance density polygon is located within the project area. Coordination with INDOT Ecology and Waterway Permitting will occur.

URBANIZED AREA BOUNDARY SUMMARY

Explanation: N/A

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	1
Mines – Surface	N/A	Mines – Underground	N/A

Explanation:

Mineral Resources: One (1) mineral resource is located within the 0.5 mile search radius. The Cloverdale Quarry is located within the project area, to the west. Coordination with the facility will occur.

HAZARDOUS MATERIAL CONCERNS TABLE AND SUMMARY

Hazardous Material Concerns			
Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Superfund	N/A	Manufactured Gas Plant Sites	N/A
RCRA Generator/ TSD	2*	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	N/A	Confined Feeding Operations (CFO)	N/A
Voluntary Remediation Program	N/A	Brownfields	2
Construction Demolition Waste	N/A	Institutional Controls	1
Solid Waste Landfill	N/A	NPDES Facilities	3
Infectious/Medical Waste Sites	N/A	NPDES Pipe Locations	1
Leaking Underground Storage (LUST) Sites	4	Notice of Contamination Sites	1

Explanation:

Resource Conservation and Recovery Act (RCRA) Generator/ Treatment, Storage, and Disposal (TSD): *Two (2) unmapped RCRA Generator sites are located within the 0.5 mile search radius. The nearest RCRA Generator site, POET Biorefining, formerly known as Altra Indiana LLC, (2265 E. County Road 800 S. Cloverdale IN 46120, AI# 61846), is located within the project area, to the west. The POET Biorefining site is not mapped as being a RCRA Generator; however, the IDEM Virtual File Cabinet (VFC) contained documents referring to the site as a Small Quantity Generator, dating back to 2008. Currently, the site generates waste water that is applied to the adjoining fields or stored on-site for future field applications. This site is also listed as a Brownfields sites. Refer to the Brownfields section for more details. No impact is expected.

INDOT Cloverdale Subdistrict, (10 High Street Cloverdale, IN 46120, AI# 59861), is located approximately 0.05 mile east of the southernmost portion of the project area. The INDOT Cloverdale Subdistrict site is not mapped as being a RCRA Generator; however, the IDEM VFC contained documents referring to the site as a Conditionally Exempt Generator, dating back to 1994. This site is also listed as a Leaking Underground Storage (LUST) site. Refer to LUST site section for more details. No impact is expected.

State Cleanup Sites: One (1) State Cleanup site, Wabash Valley Asphalt, (2000 East County Road 800 South, AI # 61837), is located within the 0.5 mile search radius. The State Cleanup site is located approximately 0.35 mile west of the project area. According to the No Further Action (NFA) Approval Determination Pursuant to Risk Integrated System of Closure (RISC) issued by IDEM on February 6, 2013, no contaminants remain on-site that exceed risk based cleanup goals. No impact is expected.

Leaking Underground Storage Tank (LUST) Sites: Four (4) LUST sites are located within the 0.5 mile search radius. The nearest LUST site, INDOT Cloverdale Subdistrict, (10 High Street Cloverdale, IN 46120, AI# 59861), is located approximately 0.05 mile east of the southernmost portion of the project area. According to the UST Closure Report dated May 18, 1998, three (3) underground storage tanks (USTs), and 75 cubic yards of soil, were removed from the site. Soil samples collected from the excavation after the tanks, and impacted soils, were removed failed to detect any

concentrations of total petroleum hydrocarbons (TPH) at or above the 100 parts per million (ppm) Closure Levels. This site is also listed as a RCRA Generator site. No impact is expected.

Brownfields: Two (2) Brownfields sites are located within the 0.5 mile search radius. The nearest site, POET Biorefining, formerly known as Altra Indiana LLC, (2265 E. County Road 800 S. Cloverdale IN 46120, AI# 61846), is mapped approximately 0.11 mile west of the project area; however, the property associated with the brownfields site is located within the project area, to the west. Currently, the site is fully operational, producing ethanol and animal feed. According to the comfort letter issued by IDEM on October 9, 2009, a release of waste water with high concentrations of ammonia occurred in 2008. The waste water was released into the on-site stormwater retention/waste water treatment pond, which subsequently released into an unnamed tributary (UNT) of Little Limestone Creek. The on-site stormwater retention/waste water treatment pond, where the release occurred, appears to be located 0.49 mile to the northwest of the project area. No impact is expected.

Midway Motel, (2007 North Main Street, AI# 100886), is incorrectly mapped approximately 0.47 mile south of the project area. Midway Motel site is actually located adjacent to the southeast corner of the project area near High Street. A Phase II Limited Subsurface Investigation report dated July 22, 2015, concluded that arsenic in soil was the only constituent detected above the Remediation Closure Guide (RCG) screening levels; however, IDEM determined that there is no direct contact exposure risk posed by the arsenic contamination detected in soil on the site. No impact is expected.

Institutional Controls: One (1) institutional control is located within the 0.5 mile search radius. Cloverdale Truck/Travel Plaza, (I-70 & US Hwy 231, FID# 4497), is located approximately 0.30 mile south of the project area. The Cloverdale Truck/Travel Plaza site was issued a site closure on September 28, 2018, by IDEM. This site is also listed as a Notice of contamination site. No impact is expected.

National Pollutant Discharge Elimination System (NPDES) Facilities: Three (3) NPDES facilities are located within the 0.5 mile search radius. The nearest facility, POET Biorefining (AI# 61846), is mapped approximately 0.06 mile west of the project area; however, the property associated with the NPDES Facility is located within the project area. Refer to Brownfields section and RCRA Generator/ TSD section for more details. No impact is expected.

NPDES Pipe Locations: One (1) NPDES pipe location is located within the 0.5 mile search radius. The nearest site, Cloverdale Travel Plaza, is located approximately 0.43 mile south of the project area. No impact is expected.

Notice of Contamination Sites: One (1) notice of contamination site is located within the 0.5 mile search radius. The nearest site, Cloverdale Truck/Travel Plaza (I-70 & US Hwy 231) is located approximately 0.30 mile south of the project area. Refer to the Institutional Controls site section for more details. No impact is expected.

ECOLOGICAL INFORMATION SUMMARY

The Putnam County listing of the Indiana Natural Heritage Data Center information on endangered, threatened, or rare (ETR) species and high quality natural communities is attached with ETR species highlighted. A preliminary review of the Indiana Natural Heritage Database by INDOT Environmental Services did not indicate the presence of ETR species within the 0.5 mile search radius. Coordination with Indiana Department of Natural Resources (IDNR) and the United States Fish and Wildlife Service (USFWS) will occur.

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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 Information for Planning and Consultation (IPaC) System for Listed Bat Consultation INDOT Projects".

An inquiry using the USFWS IPaC website did not indicate the presence of the federally endangered species, the Rusty Patched Bumble Bee, in or within 0.5 mile of the project area. No impact is expected.

RECOMMENDATIONS SECTION

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

INFRASTRUCTURE: N/A

WATER RESOURCES:

The presence of the following water resources will require the preparation of a Waters of the US Report and/or coordination with INDOT ES Ecology and Waterway Permitting:

Two (2) NWI-Line segments are located within the project area.

Two (2) stream segments are located within the project area.

One (1) lake is partially located within the project area.

One (1) Floodplain-DFIRM polygon is located within the project area (coordination only).

One (1) cave entrance density polygon is located within the project area (coordination only).

URBANIZED AREA BOUNDARY: N/A

MINING/MINERAL EXPLORATION: N/A

HAZMAT CONCERNS: N/A

ECOLOGICAL INFORMATION: Coordination with IDNR and USFWS 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 INDOT Projects".

INDOT Environmental Services concurrence:

Nicole Fohey-
Breting

Digitally signed by
Nicole Fohey-Breting
Date: 2019.09.28
16:55:44 -04'00'

(Signature)

Prepared by:



Cameron Fraser
NEPA Specialist
RQAW Corporation

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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

Removed to avoid duplication

INFRASTRUCTURE: YES

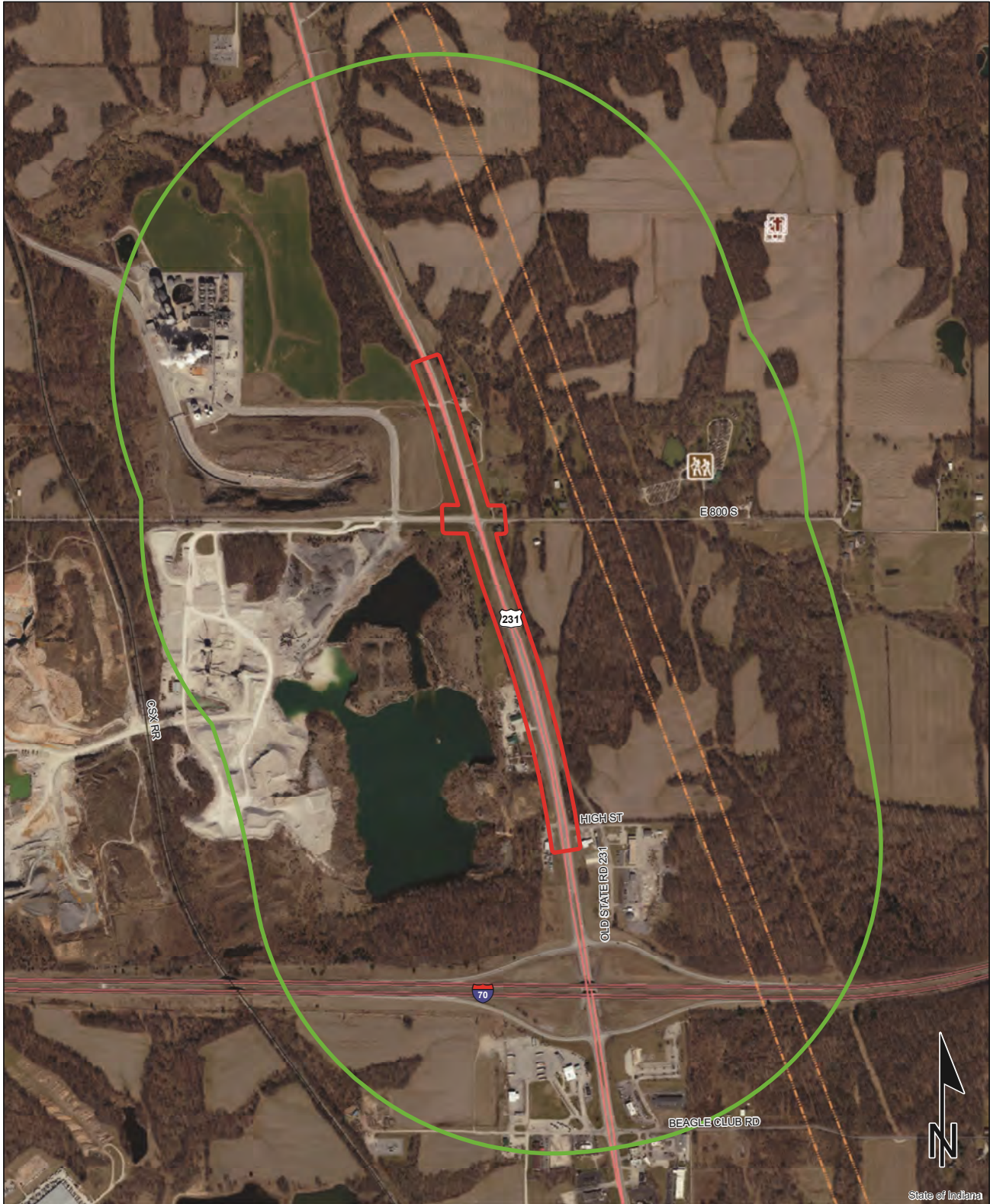
WATER RESOURCES: YES

URBANIZED AREA BOUNDARY: N/A

MINING/MINERAL EXPLORATION: YES

HAZMAT CONCERNS: YES

Red Flag Investigation - Infrastructure
 US 231, From 0.27 Mile North to 1.05 Miles North of I-70
 Des. No. 1700091, Added Travel Lanes
 Putnam County, Indiana



Sources: 0.2 0.1 0 0.2 Miles
Non Orthophotography
 Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
 Map Projection: UTM Zone 16 N Map Datum: NAD83
 This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

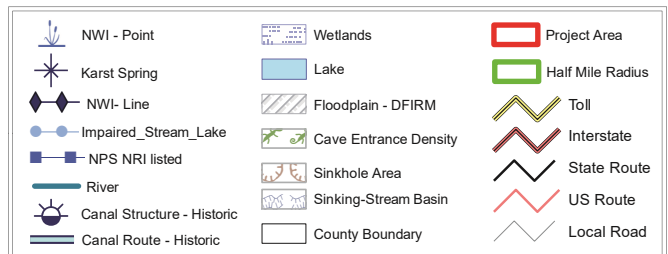
	Religious Facility		Recreation Facility		Project Area
	Airport		Pipeline		Half Mile Radius
	Cemeteries		Railroad		Toll
	Hospital		Trails		Interstate
	School		Managed Lands		State Route
			County Boundary		US Route
					Local Road

Red Flag Investigation - Water Resources
 US 231, From 0.27 Mile North to 1.05 Miles North of I-70
 Des. No. 1700091, Added Travel Lanes
 Putnam County, Indiana

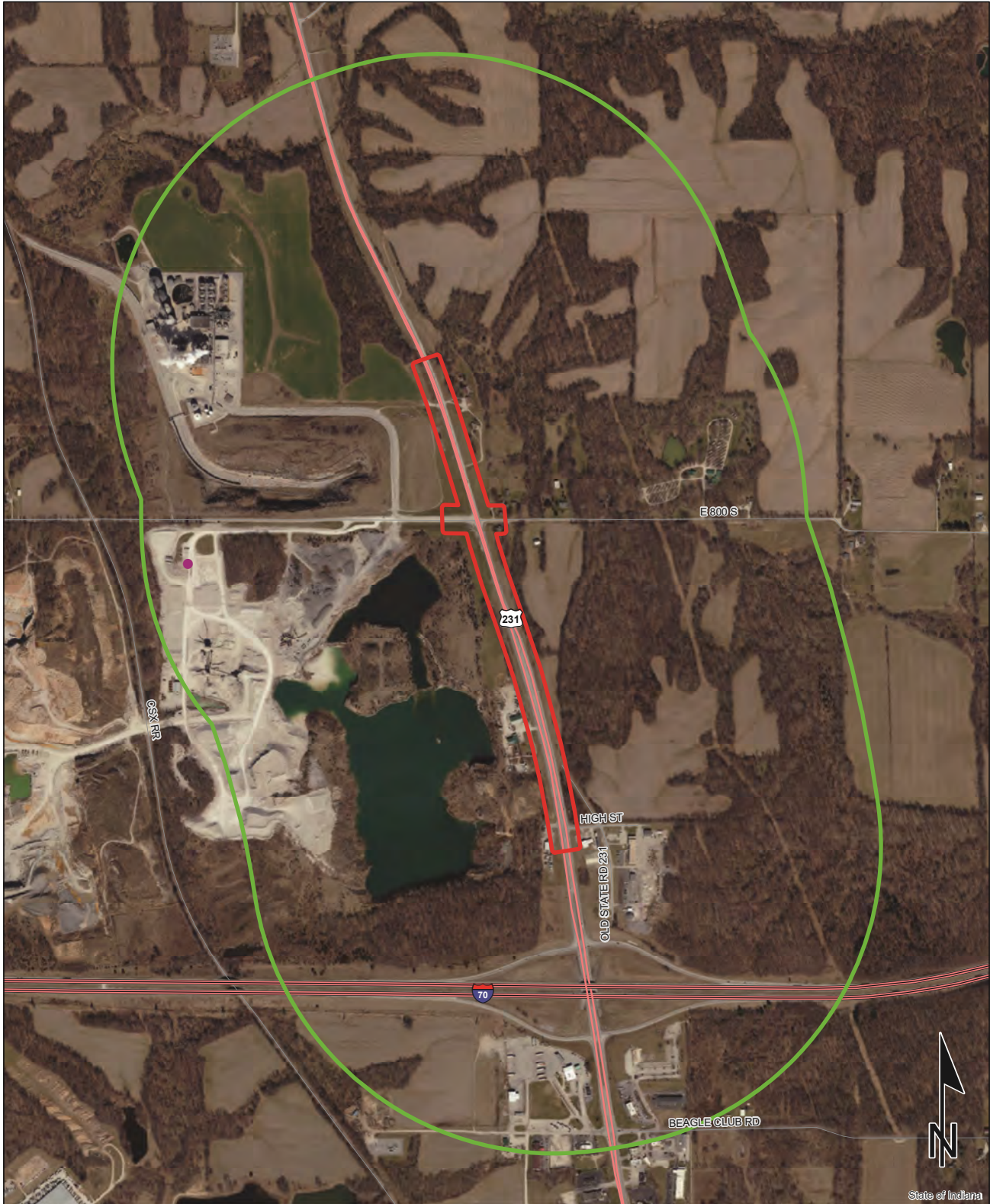


Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

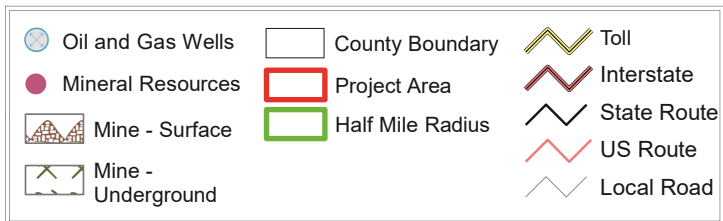
This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.



Red Flag Investigation - Mining and Mineral Exploration
 US 231, From 0.27 Mile North to 1.05 Miles North of I-70
 Des. No. 1700091, Added Travel Lanes
 Putnam County, Indiana



Sources:
 0.2 0.1 0 0.2 Miles
Non Orthophotography
Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83
 This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.



Red Flag Investigation - Hazardous Material Concerns
 US 231, From 0.27 Mile North to 1.05 Miles North of I-70
 Des. No. 1700091, Added Travel Lanes
 Putnam County, Indiana



	Brownfield		RCRA Generator/TSD		Institutional Controls
	RCRA Corrective Action Sites		Restricted Waste Site		County Boundary
	Confined Feeding Operation		Septage Waste Site		Project Area
	Notice_of_Contamination		Solid Waste Landfill		Half Mile Radius
	Construction/Demolition Site		State Cleanup Site		Toll
	Infectious/Medical Waste Site		Superfund		Interstate
	Leaking Underground Storage Tank		Tire Waste Site		State Route
	Manufactured Gas Plant		Underground Storage Tank		US Route
	NPDES Facilities		Voluntary Remediation Program		Local Road
	NPDES Pipe Locations		Waste Transfer Station		
	Open Dump Waste Site				

Indiana County Endangered, Threatened and Rare Species List

County: Putnam

Species Name	Common Name	FED	STATE	GRANK	SRANK
Mollusk: Bivalvia (Mussels)					
Epioblasma rangiana	Northern Riffleshell	LE	SE	G2	S1
Lampsilis fasciola	Wavyrayed Lampmussel		SSC	G5	S3
Obovaria subrotunda	Round Hickorynut	C	SE	G4	S1
Ptychobranthus fasciolaris	Kidneyshell		SSC	G4G5	S2
Simpsonaias ambigua	Salamander Mussel	C	SSC	G3	S2
Toxolasma lividus	Purple Lilliput	C	SSC	G3Q	S2
Villosa lienosa	Little Spectaclecase		SSC	G5	S3
Insect: Coleoptera (Beetles)					
Dryobius sexnotatus	Six-banded Longhorn Beetle		ST	GNR	S2
Insect: Hymenoptera					
Bombus affinis	Rusty-patched Bumble Bee	LE	SE	G1	S1
Insect: Lepidoptera (Butterflies & Moths)					
Eosphoropteryx thyatryoides	Pinkpatched Looper Moth		ST	G4G5	S2
Insect: Odonata (Dragonflies & Damselflies)					
Cordulegaster obliqua	Arrowhead Spiketail		SR	G4	S2S3
Enallagma divagans	Turquoise Bluet		SR	G5	S3
Amphibian					
Necturus maculosus	Common mudpuppy		SSC	G5	S2
Reptile					
Crotalus horridus	Timber Rattlesnake		SE	G4	S2
Opheodrys aestivus	Rough Green Snake		SSC	G5	S3
Bird					
Aimophila aestivalis	Bachman's Sparrow			G3	SXB
Cistothorus platensis	Sedge Wren		SE	G5	S3B
Haliaeetus leucocephalus	Bald Eagle		SSC	G5	S2
Helmintheros vermivorus	Worm-eating Warbler		SSC	G5	S3B
Lanius ludovicianus	Loggerhead Shrike		SE	G4	S3B
Mniotilta varia	Black-and-white Warbler		SSC	G5	S1S2B
Rallus elegans	King Rail		SE	G4	S1B
Setophaga cerulea	Cerulean Warbler		SE	G4	S3B
Setophaga citrina	Hooded Warbler		SSC	G5	S3B
Tyto alba	Barn Owl		SE	G5	S2
Mammal					
Mustela nivalis	Least Weasel		SSC	G5	S2?
Myotis sodalis	Indiana Bat	LE	SE	G2	S1
Taxidea taxus	American Badger		SSC	G5	S2
Vascular Plant					
Carex cephaloidea	Thinleaf Sedge		ST	G5	S2

Indiana Natural Heritage Data Center
Division of Nature Preserves
Indiana Department of Natural Resources
This data is not the result of comprehensive county surveys.

Fed: LE = Endangered; LT = Threatened; C = candidate; PDL = proposed for delisting
State: SE = state endangered; ST = state threatened; SR = state rare; SSC = state species of special concern; SX = state extirpated; SG = state significant; WL = watch list
GRANK: Global Heritage Rank: G1 = critically imperiled globally; G2 = imperiled globally; G3 = rare or uncommon globally; G4 = widespread and abundant globally but with long term concerns; G5 = widespread and abundant globally; G? = unranked; GX = extinct; Q = uncertain rank; T = taxonomic subunit rank
SRANK: State Heritage Rank: S1 = critically imperiled in state; S2 = imperiled in state; S3 = rare or uncommon in state; G4 = widespread and abundant in state but with long term concern; SG = state significant; SH = historical in state; SX = state extirpated; B = breeding status; S? = unranked; SNR = unranked; SNA = nonbreeding status unranked

Indiana County Endangered, Threatened and Rare Species List

County: Putnam

Species Name	Common Name	FED	STATE	GRANK	SRANK
Carex pedunculata	Longstalk Sedge		WL	G5	S3
Chelone obliqua var. speciosa	Rose Turtlehead		WL	G4T3	S3
Juglans cinerea	Butternut		ST	G4	S2
Panax quinquefolius	American Ginseng		WL	G3G4	S3
Poa wolfii	Wolf Bluegrass		SR	G4	S3
Taxus canadensis	American Yew		SE	G5	S1
High Quality Natural Community					
Forest - floodplain mesic	Mesic Floodplain Forest		SG	G3?	S1
Forest - floodplain wet-mesic	Wet-mesic Floodplain Forest		SG	G3?	S3
Forest - upland dry-mesic Central Till Plain	Central Till Plain Dry-mesic Upland Forest		SG	GNR	S2
Forest - upland mesic Central Till Plain	Central Till Plain Mesic Upland Forest		SG	GNR	S3
Forest - upland mesic Shawnee Hills	Shawnee Hills Mesic Upland Forest		SG	GNR	S3
Primary - cliff overhang	Sandstone Overhang		SG	G4	S2
Primary - cliff sandstone	Sandstone Cliff		SG	GU	S3
Other Significant Feature					
Geomorphic - Nonglacial Erosional Feature - Water Fall and Cascade	Water Fall and Cascade			GNR	SNR

Indiana Natural Heritage Data Center
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Fed: LE = Endangered; LT = Threatened; C = candidate; PDL = proposed for delisting
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SRANK: State Heritage Rank: S1 = critically imperiled in state; S2 = imperiled in state; S3 = rare or uncommon in state; G4 = widespread and abundant in state but with long term concern; SG = state significant; SH = historical in state; SX = state extirpated; B = breeding status; S? = unranked; SNR = unranked; SNA = nonbreeding status unranked

Categorical Exclusion
Appendix F
Water Resources

**Waters of the U.S. Determination
US 231 Added Travel Lanes Project
Putnam County, Indiana
Des. No. 1700091**

Prepared by: Ben DeMaria, RQAW Corporation
Completed Date: February 20, 2020

APPROVED

Justus McGill
2/25/20

Dates of Waters Field Investigation:

A field investigation was conducted on September 23, 2019 by RQAW Corporation to evaluate the presence of *Waters of the United States* for the US 231 Added Travel Lanes Project in Putnam County, Indiana.

Location:

US 231
Section 24 & 25, Township 13 North, Range 4 West
Cloverdale U.S. Geological Survey (USGS) Quadrangle
Putnam County, Indiana
Latitude: 39.54103° N
Longitude: -86.80487° W

National Wetlands Inventory (NWI) Wetlands:

According to the U.S. Fish and Wildlife (USFWS) National Wetlands Inventory (NWI) data available through IndianaMap (<http://www.indianamap.org/>), there are NWI polygons within the 0.5 mile radius. The closest NWI polygon (L1UBHx-Lacustrine Limnetic Unconsolidated Bottom Permanently Flooded Excavated) is located 0.05 mile west of the survey area. A map showing a half mile radius with the NWI layer turned on is provided in the attachments (page A6).

Soils:

According to the Soil Survey Geographic (SSURGO) Database for Putnam County, Indiana, the survey area contains soil areas with nationally listed hydric soils.

<u>Map Abbreviation</u>	<u>Soil Name</u>	<u>Hydric Component Range</u>	<u>Classification</u>
AIB	Alford silt loam (2 to 6% slopes)	0%	Not Hydric
AvB	Ava silt loam (1 to 4% slopes)	1-32%	Not Hydric with Hydric Components of Hoosierville
AwC2	Ava silt loam (6 to 12% slopes)	0%	Not Hydric
GrC2	Grayford silt loam (6 to 12% slopes)	0%	Not Hydric
GrE2	Grayford silt loam (18 to 25% slopes)	0%	Not Hydric
HoG	Hickory loam (25 to 70% slopes)	0%	Not Hydric
IvA	Iva silt loam (0 to 2% slopes)	1-32%	Not Hydric with Hydric Components of Hoosierville
Po	Pits, quarries	N/A	N/A

8 Digit HUC:

Patoka-White basin hydrologic unit code (HUC) 05120203

12 Digit HUC:

Attachments: Omitted to avoid duplication

Project Location Maps.....	A1 – A3
Natural Resources Conservation Service (NRCS) Soil Survey Map & Soils Report.....	A4 – A5
NWI Map, Floodplain Map & Water Resources Map.....	A6 – A11
Photograph Location Map and Photographs.....	A12 – A47
Wetland Determination Forms.....	A48 – A63
Pre-Jurisdictional Determination Form.....	A64 – A67

Project Description:

The proposed project (Des. No. 1700091) will involve the addition of one 12-foot wide travel lane with a 10-foot wide shoulder to both northbound and southbound lanes. The widening associated with the added travel lanes will require an additional 4 to 6 feet of new roadway south of mile marker 142 (approximately 0.21 mile south of CR 800) and approximately 20 feet of new roadway north of mile mark 142. The widening of US 231 will primarily take place to the east of the roadway. Due to the widening of the road, regrading of the roadside ditches and roadside slope will also occur within the project area. The profile at the CR 800 South intersection will be adjusted and require reconstruction.

Streams:

According to the hydrology data available through IndianaMap (<http://www.indianamap.org/>) and the Cloverdale USGS topographic map (1:24,000 scale), one intermittent blue-line was mapped within the survey area. During the field investigation, the presence of the stream was verified. A discussion of the unnamed tributary (UNT) is provided below.

UNT 1 flows in a northwest to southeast direction under US 231. The stream was not flowing at the time of the field investigation. A USGS StreamStats report was unable to be generated for the UNT. UNT 1 exhibited ordinary high water mark characteristics of approximately 1.75 feet in width and 6 inches in depth. OHWM measurements were taken approximately 15 feet northeast of the structure. Approximately 375 linear feet (0.015 acre) of UNT 1 is within the survey area. This stream exhibited poor quality due to its lack of size and disturbance from the roadway. The stream substrate consisted predominately of cobble and silt. The stream changes direction and eventually flows into Limestone Creek, which then flows into Deer Creek, which converges with Mill Creek and Big Walnut Creek and merges into Eel River. Eel River then flows into the Wabash River a Traditionally Navigable Waterway (TNW). Based on connectivity to the Wabash River, a TNW, UNT 1 is likely to be considered a *Waters of the United States*.

Roadside Ditches:

Seven roadside ditches (RSDs) were identified within the survey area, a discussion of roadside ditches 1-7 is provided below.

RSD 1 was identified within the survey area, it is located 0.52 mile south of CR 800 S, on the east side of US 231. RSD 1 is concrete lined and conveys storm water drainage and sheet flow from the roadway and surrounding landscape to UNT 1. RSD 1 did not exhibit OHWM characteristics and is not a captured stream. Therefore, this roadside ditch is not likely to be considered a *Waters of the United States*.

RSD 2 was identified within the survey area, it is located 0.52 mile south of CR 800 S, on the east side of US 231, adjacent to RSD 1. RSD 2 is concrete lined and conveys storm water drainage and sheet flow from the roadway and surrounding landscape to UNT 1. RSD 2 did not exhibit OHWM characteristics and is not a captured stream. Therefore, this roadside ditch is not likely to be considered a *Waters of the United States*.

RSD 3 was identified within the survey area, it is located 0.51 mile south of CR 800 S, on the west side of US 231. RSD 3 is concrete lined and conveys storm water drainage and sheet flow from the roadway and surrounding landscape to UNT 1. RSD 3 did not exhibit OHWM characteristics and is not a captured stream. Therefore, this roadside ditch is not likely to be considered a *Waters of the United States*.

RSD 4 was identified within the survey area, it is located in the southeast quadrant of the CR 800 S/US 231 intersection. RSD 4 is not concrete lined and the RSD conveys storm water drainage from the roadway and

surrounding landscape to UNT 1. RSD 4 did not exhibit OHWM characteristics and is not a captured stream. Therefore, this roadside ditch is not likely to be considered a *Waters of the United States*.

RSD 5 was identified within the survey area, it is located in the northeast quadrant of the CR 800 S/US 231 intersection. RSD 5 is not concrete lined, and the RSD conveys storm water drainage and sheet flow from the roadway and surrounding landscape away from the survey area.

RSD 6 was identified within the survey area, it begins at the northwest quadrant of the CR 800 S/US 231 intersection and extends north. RSD 6 is partially concrete lined, and the RSD conveys storm water drainage and sheet flow from the roadway and surrounding landscape away from the survey area. RSD 6 did not exhibit OHWM characteristics and is not a captured stream. Therefore, this roadside ditch is not likely to be considered a *Waters of the United States*.

RSD 7 was identified within the survey area, and the RSD begins at the southwest quadrant of the CR 800 S/US 231 intersection and extends south. RSD 7 is partially concrete lined, and the RSD conveys storm water drainage and sheet flow from the roadway and surrounding landscape to UNT 1. RSD 7 did not exhibit OHWM characteristics and is not a captured stream. Therefore, this roadside ditch is not likely to be considered a *Waters of the United States*.

Wetlands:

Four wetlands (Wetlands A-D) were identified within the survey area. Two data points were taken per wetland to determine the boundaries. A discussion of Wetlands A-D is provided below.

Wetland A is a palustrine emergent wetland (PEM) that is located on the east side of US 231, approximately 0.35 mile south of CR 800 S. Wetland A drains north into UNT 1 via RSD 2, which has connectivity to the Wabash River, a TNW. Wetland A has a length of approximately 70 linear feet (0.032 acre). Wetland A is not confined to the roadside ditch. Wetland A exhibited poor quality due to lack of biodiversity and disturbance from the roadway. Based on connectivity to the Wabash River, a TNW, Wetland A is likely to be considered a *Waters of the United States*. A discussion of data points A1 and A2 is provided below.

Data point A1 exhibited all three criteria to be considered within a wetland. The dominant vegetation observed at data point A1 was tall cattail (*Typha angustifolia*) and Kentucky bluegrass (*Poa pratensis*). Tall cattail (*Typha angustifolia*) is an obligate (OBL) plant, while Kentucky bluegrass (*Poa pratensis*) is a facultative (FAC) plant. This data point exhibited one hydric soil indicator (Depleted Matrix F3). Additionally, this data point exhibited one primary wetland hydrology indicator (Saturation A3) and one secondary wetland hydrology indicator (FAC-Neutral Test D5).

Data point A2 did not exhibit all three criteria to be considered within a wetland. The dominant vegetation observed at data point A2 was tall fescue (*Schedonorus arundinaceus*), a facultative upland (FACU) plant. This data point did not exhibit hydric soil or wetland hydrology indicators.

Wetland B is a PEM wetland that is located on the east side of US 231, approximately 0.20 mile north of CR 800 S. Wetland B drains north into Limestone Creek, which has connectivity to the Wabash River, a TNW. Wetland B has a length of approximately 20 feet (<0.01 acre). Wetland B is wholly confined in the roadside ditch. Wetland B exhibited poor quality due to lack of biodiversity and disturbance from the roadway. Based on connectivity to the Wabash River, a TNW, Wetland B is likely to be considered a *Waters of the United States*. A discussion of data points B1 and B2 is provided below.

Data point B1 exhibited all three criteria to be considered within a wetland. The dominant vegetation observed at data point B1 was tall cattail (*Typha angustifolia*) and softstem bulrush (*Schoenoplectus tabernaemontani*), both of which are obligate (OBL) plants. This data point exhibited one hydric soil indicator (Depleted Matrix F3). Additionally, this data point exhibited one primary wetland hydrology indicator (Saturation A3) and one secondary wetland hydrology indicator (FAC-Neutral Test D5).

Data point B2 did not exhibit all three criteria to be considered within a wetland. The dominant vegetation observed at data point B2 was tall fescue (*Schedonorus arundinaceus*), giant foxtail (*Setaria faberi*), and giant ragweed (*Ambrosia trifida*). Tall fescue (*Schedonorus arundinaceus*) and giant foxtail (*Setaria faberi*) are both facultative

upland (FACU) plants, while giant ragweed (*Ambrosia trifida*) is a facultative (FAC) plant. This data point did not exhibit hydric soil or wetland hydrology indicators.

Wetland C is a PEM wetland that is located on the west side of US 231, approximately 0.20 mile north of CR 800 S. Wetland C drains into UNT 1, which has connectivity to the Wabash River, a TNW. Wetland C has a length of approximately 145 linear feet (0.031 acre). Wetland C is wholly confined to the roadside ditch. Wetland C exhibited poor quality due to lack of biodiversity and disturbance from the roadway. Based on connectivity to the Wabash River, a TNW, Wetland C is likely to be considered a *Waters of the United States*. A discussion of data points C1 and C2 is provided below.

Data point C1 exhibited all three criteria to be considered within a wetland. The dominant vegetation observed at data point C1 was tall cattail (*Typha angustifolia*), an obligate (OBL) plant. This data point exhibited one hydric soil indicator (Depleted Matrix F3). Additionally, this data point exhibited one primary wetland hydrology indicator (High Water Table A2, Saturation A3) and one secondary wetland hydrology indicator (FAC-Neutral Test D5).

Data point C2 did not exhibit all three criteria to be considered within a wetland. The dominant vegetation observed at data point C2 was winged sumac (*Rhus copallinum*), tall fescue (*Schedonorus arundinaceus*), and bush honeysuckle (*Lonicera maackii*). Winged sumac (*Rhus copallinum*) and tall fescue (*Schedonorus arundinaceus*) are both facultative upland (FACU) plants while bush honeysuckle (*Lonicera maackii*) is an upland (UPL) plant. This data point did not exhibit hydric soil or wetland hydrology indicators.

Wetland D is a palustrine scrub-shrub wetland (PSS) that is located on the west side of US 231, approximately 0.13 mile south of CR 800 S. Wetland D drains into UNT 1, which has connectivity to the Wabash River, a TNW. Wetland D has a length of approximately 140 linear feet (0.096 acreIS). Wetland D is not wholly confined to the roadside ditch. Wetland D exhibited poor quality due low plant species diversity and disturbance from the roadway. Based on connectivity to the Wabash River, a TNW, Wetland D is likely to be considered a *Waters of the United States*. A discussion of data points D1 and D2 is provided below.

Data point D1 exhibited all three criteria to be considered within a wetland. The dominant vegetation observed at data point D1 was sandbar willow (*Salix interior*), Kentucky bluegrass (*Poa pratensis*), and New England aster (*Symphotrichum novae-angliae*). Sandbar willow (*Salix interior*) and New England aster (*Symphotrichum novae-angliae*) are both facultative wetland (FACW) plants while Kentucky bluegrass (*Poa pratensis*) is a facultative (FAC) plant. This data point exhibited one hydric soil indicator (Redox Dark Surface F6). Additionally, this data point exhibited one primary wetland hydrology indicator (Saturation A3) and one secondary wetland hydrology indicator (FAC-Neutral Test D5).

Data point D2 did not exhibit all three criteria to be considered within a wetland. The dominant vegetation observed at data point D2 was sandbar willow (*Salix interior*), Kentucky bluegrass (*Poa pratensis*) and tall fescue (*Schedonorus arundinaceus*). Sandbar willow (*Salix interior*) is a facultative wetland (FACW) plant while Kentucky bluegrass (*Poa pratensis*) is a facultative (FAC) plant and tall fescue (*Schedonorus arundinaceus*) is a facultative upland (FACU) plant. This data point did not exhibit hydric soil or wetland hydrology indicators.

Table 1: Stream Summary
US 231 Added Travel Lanes Project
Des. No. 1700091
Putnam County, Indiana

Stream Name	Photos	Lat/Long	OHWL Width (feet)	OHWL Depth (inches)	USGS Blue-line?	Riffles/ Pools?	Substrate	Stream	Likely Water of U.S.?
UNT 1	47-52	39.54266° N -86.80561° W	1.75	6	Yes	Yes	Cobble and Silt	Poor	Yes

Table 1: Wetland Summary
US 231 Added Travel Lanes Project
Des. No. 1700091
Putnam County, Indiana

Wetland Name	Photos	Lat/Long	Type	Wetland Quality	Total Area (acres)	Likely Waters of the U.S.?
Wetland A	9-12, 17	39.53910° N -86.80396° W	PEM	Poor	0.032 acre	Yes
Wetland B	24-27, 30-31	39.54706° N -86.80721° W	PEM	Poor	<0.01 acre	Yes
Wetland C	33-36, 38-40	39.54713° N -86.80748° W	PEM	Poor	0.031 acre	Yes
Wetland D	54-55, 57-59	39.54214° N -86.80563° W	PSS	Poor	0.096 acre	Yes

Table 3: Data Point Summary
US 231 Added Travel Lanes Project
Des. No. 1700091
Putnam County, Indiana

Data Point	Vegetation?	Hydric Soil?	Wetland Hydrology?	Wetland?
A1	Yes	Yes	Yes	Yes
A2	No	No	No	No
B1	Yes	Yes	Yes	Yes
B2	No	No	No	No
C1	Yes	Yes	Yes	Yes
C2	No	No	No	No
D1	Yes	Yes	Yes	Yes
D2	Yes	No	No	No

Conclusions:

A field investigation was conducted on September 23, 2019 by RQAW Corporation to evaluate the presence of *Waters of the United States* for the US 231 Added Travel Lanes Project in Putnam County, Indiana. Field observations identified one stream (UNT 1) and four wetlands (Wetlands A-D) within the survey area. UNT 1, Wetland A, Wetland B, Wetland C, and Wetland D all ultimately drain into the Wabash River, a TNW. Based on connectivity to the Wabash River, TNW, UNT 1 and Wetlands A-D are all likely to be considered *Waters of the United States*.

Every effort should be taken to avoid and minimize impacts to these waterways. If impacts are necessary, then mitigation may be required. The INDOT Ecology and Waterway Permitting Section should be contacted immediately if impacts will occur. The final determination of jurisdictional waters is ultimately made by the U.S. Army Corps of Engineers. This report is our best judgement based on the guidelines set forth by the Corps.

Acknowledgement:

This waters determination has been prepared based on the best available information, interpreted in the light of the investigator's training, experience and professional judgement in conformance with the 1987 Corps of Engineers Wetlands Delineation Manual, the appropriate regional supplement, the USACE Jurisdictional Determination Form Instructional Guidebook, and other appropriate agency guidelines.

Prepared by:

A handwritten signature in black ink that reads "Ben DeMaria". The signature is written in a cursive style with a large initial "B".

Ben DeMaria
Environmental Scientist
RQAW | Environmental Department
bdemaria@rqaw.com

NRCS Soils Map
 US 231 Added Travel Lanes Project
 Des. No. 1700091
 Putnam County, Indiana



Legend

- Survey Area
- NRCS Soils: Putnam County

Map Datum: NAD 83
 Map Projection: UTM Zone 16 North
 This map is intended to serve as an aid in graphic representation only.
 This information is not warranted for accuracy or other purposes.
 Data obtained from the State of Indiana GIO Library.
 Orthophotography obtained from Indiana Map Framework Data.

National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U.S. Department of Agriculture (USDA), UITS, Indiana Spatial Data Portal



NRCS Soils Map

Feet

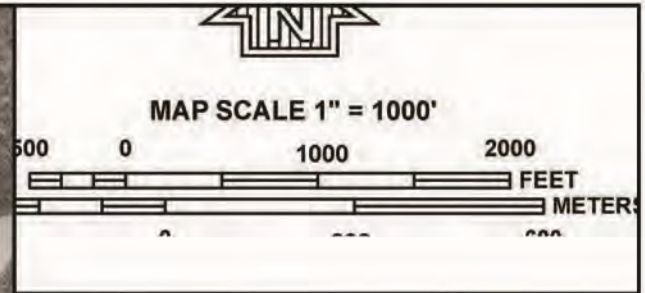
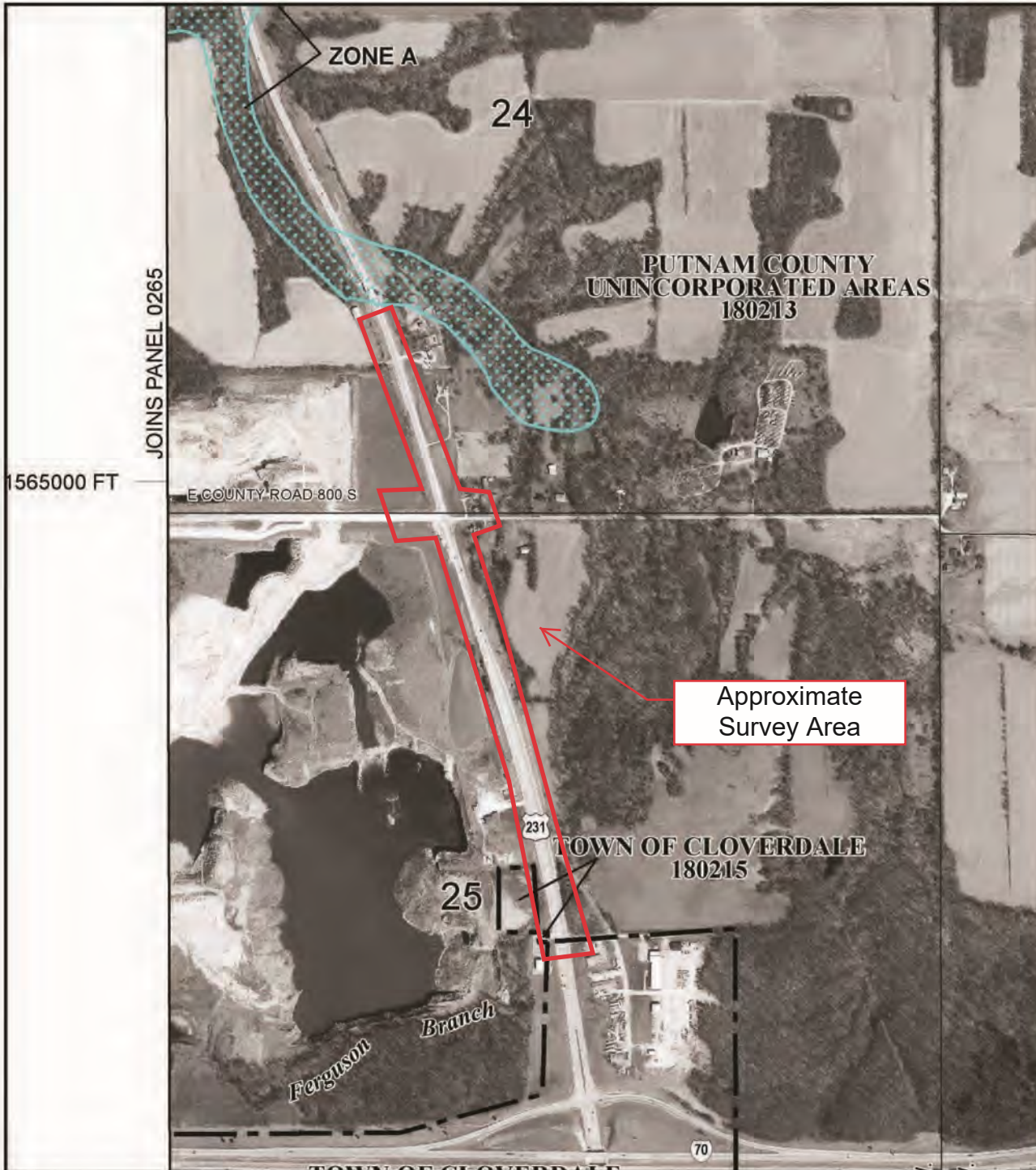
Location: US 231
 Township: Warren
 County: Putnam
 Date: 01/06/2020

Report—Hydric Soil List - All Components

Hydric Soil List - All Components--IN133-Putnam County, Indiana					
Map symbol and map unit name	Component/Local Phase	Comp. pct.	Landform	Hydric status	Hydric criteria met (code)
AIB: Alford silt loam, 2 to 6 percent slopes	Alford	100	Loess hills	No	—
AvB: Ava silt loam, 1 to 4 percent slopes	Ava	90	Till plains	No	—
	Hoosierville	3	Divides	Yes	2
AwC2: Ava silt loam, 6 to 12 percent slopes, eroded	Ava	100	Till plains	No	—
GrC2: Grayford silt loam, 6 to 12 percent slopes, eroded	Grayford	100	Till plains	No	—
GrE2: Grayford silt loam, 18 to 25 percent slopes, eroded	Grayford	100	Till plains	No	—
HoG: Hickory loam, 25 to 70 percent slopes	Hickory	100	Till plains	No	—
IvA: Iva silt loam, 0 to 2 percent slopes	Iva	85-90	Till plains	No	—
	Hoosierville- Frequently ponded	5-10	Till plains	Yes	2
	Hosmer	0-3	Till plains	No	—
	Muren	0-2	Till plains	No	—
Po: Pits, quarries	Pits	90	—	No	—
	Water	3	—	No	—

Data Source Information

Soil Survey Area: Putnam County, Indiana
 Survey Area Data: Version 21, Sep 16, 2019



NFP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0270C

FIRM
FLOOD INSURANCE RATE MAP
PUTNAM COUNTY,
INDIANA
AND INCORPORATED AREAS

PANEL 270 OF 400
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
CLOVERDALE, TOWN OF	180215	0270	C
PUTNAM COUNTY	180213	0270	C

Floodplain Map
 US 231 Added Travel Lanes Project
 Des. No. 1700091
 Putnam County, Indiana

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.



MAP NUMBER
18133C0270C
EFFECTIVE DATE
JUNE 5, 2012

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: US 231 Added Travel Lanes City/County: Putnam Sampling Date: 09/23/2019
 Applicant/Owner: INDOT State: IN Sampling Point: A1
 Investigator(s): Ben DeMaria, Julie Evans Section, Township, Range: S: 25, T: 13 N, R: 4 W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave
 Slope (%): N/A Lat: 39.53910 Long: -86.80396 Datum: NAD 83
 Soil Map Unit Name: AwC2 (Ava silt loam, 6 to 12% slopes) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: This data point met all three criteria to be considered within a wetland. (Des. No. 1700091)	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4. _____				
5. _____				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. _____				Total % Cover of: _____ Multiply by: _____
2. _____				OBL species <u>60</u> x 1 = <u>60</u>
3. _____				FACW species <u>0</u> x 2 = <u>0</u>
4. _____				FAC species <u>30</u> x 3 = <u>90</u>
5. _____				FACU species <u>0</u> x 4 = <u>0</u>
<u>0</u> = Total Cover				UPL species <u>0</u> x 5 = <u>0</u>
				Column Totals: <u>90</u> (A) <u>150</u> (B)
				Prevalence Index = B/A = <u>1.67</u>
Herb Stratum (Plot size: <u>5ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Typha angustifolia</u>	<u>60</u>	<u>Yes</u>	<u>OBL</u>	<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
2. <u>Poa pratensis</u>	<u>30</u>	<u>Yes</u>	<u>FAC</u>	<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
3. _____				<input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹
4. _____				<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
<u>90</u> = Total Cover				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: <u>30ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. _____				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____				
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) This data point exhibited a dominance of hydrophytic vegetation.				

SOIL

Sampling Point: A1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10 YR 4/1	90	10 YR 5/6	10	D	M		Silty clay loam
10-20	10 YR 5/8	95	10 YR 3/3	5	D	M		Silty clay loam
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.						² Location: PL=Pore Lining, M=Matrix.		
Hydric Soil Indicators:			Indicators for Problematic Hydric Soils³:					
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)			<input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)		
Restrictive Layer (if observed): Type: _____ Depth (Inches): _____						Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: This data point exhibited hydric soil.								

HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u>		
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: This data point exhibited wetland hydrology.		

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: US 231 Added Travel Lanes City/County: Putnam Sampling Date: 09/23/2019
 Applicant/Owner: INDOT State: IN Sampling Point: A2
 Investigator(s): Ben DeMaria, Julie Evans Section, Township, Range: S: 25, T: 13 N, R: 4 W
 Landform (hillslope, terrace, etc.): illslope Local relief (concave, convex, none): Convex
 Slope (%): 1% Lat: 39.53913 Long: -86.80399 Datum: NAD 83
 Soil Map Unit Name: AwC2 (Ava silt loam, 6 to 12% slopes) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: This data point did not meet all three criteria to be considered within a wetland. (Des. No. 1700091)	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)																
2. _____				Total Number of Dominant Species Across All Strata: <u>1</u> (B)																
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)																
4. _____																				
5. _____																				
<u>0</u> = Total Cover				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>100</u></td> <td>x 4 = <u>400</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>400</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>4.0</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>100</u>	x 4 = <u>400</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>100</u> (A)	<u>400</u> (B)	Prevalence Index = B/A = <u>4.0</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>100</u>	x 4 = <u>400</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>100</u> (A)	<u>400</u> (B)																			
Prevalence Index = B/A = <u>4.0</u>																				
Sapling/Shrub Stratum (Plot size: <u>15ft</u>)																				
1. _____																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
<u>0</u> = Total Cover																				
Herb Stratum (Plot size: <u>5ft</u>)																				
1. <u>Schedonorus arundinaceus</u>	<u>100</u>	<u>Yes</u>	<u>FACU</u>																	
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
<u>100</u> = Total Cover																				
Woody Vine Stratum (Plot size: <u>30ft</u>)																				
1. _____																				
2. _____																				
<u>0</u> = Total Cover																				
Remarks: (Include photo numbers here or on a separate sheet.) This data point did not exhibit a dominance of hydrophytic vegetation.																				
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																				

SOIL

Sampling Point: A2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10 YR 5/2	100						Silty clay loam
5-10	10 YR 3/4	90	10 YR 5/6	10	D	M		Silty clay loam
10-20	10 YR 3/4	50	10 YR 5/6	50	D	M		Silty clay loam
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.					² Location: PL=Pore Lining, M=Matrix.			
Hydric Soil Indicators:						Indicators for Problematic Hydric Soils³:		
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)			<input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)		
Restrictive Layer (if observed):								
Type: _____								
Depth (Inches): _____						Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>		
Remarks: This data point did not exhibit hydric soil.								

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		
Field Observations:			
Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Water Table Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: This data point did not exhibit wetland hydrology.			

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: US 231 Added Travel Lanes City/County: Putnam Sampling Date: 09/23/2019
 Applicant/Owner: INDOT State: IN Sampling Point: B1
 Investigator(s): Ben DeMaria, Julie Evans Section, Township, Range: S: 24, T: 13 N, R: 4 W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave
 Slope (%): N/A Lat: 39.54706 Long: -86.80721 Datum: NAD 83
 Soil Map Unit Name: o (ic ory loam, 25% to 70% slopes) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: This data point met all three criteria to be considered within a wetland. (Des. No. 1700091)	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4. _____				
5. _____				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. _____				Total % Cover of: _____ Multiply by: _____
2. _____				OBL species <u>100</u> x 1 = <u>100</u>
3. _____				FACW species <u>0</u> x 2 = <u>0</u>
4. _____				FAC species <u>0</u> x 3 = <u>0</u>
5. _____				FACU species <u>0</u> x 4 = <u>0</u>
<u>0</u> = Total Cover				UPL species <u>0</u> x 5 = <u>0</u>
				Column Totals: <u>100</u> (A) <u>100</u> (B)
				Prevalence Index = B/A = <u>1.00</u>
Herb Stratum (Plot size: <u>5ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Typha angustifolia</u>	<u>60</u>	<u>Yes</u>	<u>OBL</u>	<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
2. <u>Schoenoplectus tabernaemontani</u>	<u>40</u>	<u>Yes</u>	<u>OBL</u>	<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
3. _____				<input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹
4. _____				<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
<u>100</u> = Total Cover				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: <u>30ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. _____				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____				
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) This data point exhibited a dominance of hydrophytic vegetation.				

SOIL

Sampling Point: B1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10 YR 4/1	90	10 YR 5/6	10	D	M		Silty clay loam
10-20	10 YR 5/6	95	10 YR 3/2	5	D	M		Silty clay loam
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.						² Location: PL=Pore Lining, M=Matrix.		
Hydric Soil Indicators:			Indicators for Problematic Hydric Soils³:					
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)			<input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)		
Restrictive Layer (if observed): Type: _____ Depth (Inches): _____						Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____		
Remarks: This data point exhibited hydric soil.								

HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No _____ Depth (inches): 0 _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: This data point exhibited wetland hydrology.		

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: US 231 Added Travel Lanes City/County: Putnam Sampling Date: 09/23/2019
 Applicant/Owner: INDOT State: IN Sampling Point: B2
 Investigator(s): Ben DeMaria, Julie Evans Section, Township, Range: S: 25, T: 13 N, R: 4 W
 Landform (hillslope, terrace, etc.): illslope Local relief (concave, convex, none): Convex
 Slope (%): 2% Lat: 39.53910 Long: -86.80396 Datum: NAD 83
 Soil Map Unit Name: Alford silt loam (2 to 6% slopes) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: This data point did not meet all three criteria to be considered within a wetland. (Des. No. 1700091)	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)																
2. _____				Total Number of Dominant Species Across All Strata: <u>3</u> (B)																
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.33%</u> (A/B)																
4. _____																				
5. _____																				
<u>0</u> = Total Cover				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>30</u></td> <td>x 3 = <u>90</u></td> </tr> <tr> <td>FACU species <u>80</u></td> <td>x 4 = <u>320</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>110</u> (A)</td> <td><u>410</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.727</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>30</u>	x 3 = <u>90</u>	FACU species <u>80</u>	x 4 = <u>320</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>110</u> (A)	<u>410</u> (B)	Prevalence Index = B/A = <u>3.727</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>30</u>	x 3 = <u>90</u>																			
FACU species <u>80</u>	x 4 = <u>320</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>110</u> (A)	<u>410</u> (B)																			
Prevalence Index = B/A = <u>3.727</u>																				
Sapling/Shrub Stratum (Plot size: <u>15ft</u>)																				
1. _____																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
<u>0</u> = Total Cover																				
Herb Stratum (Plot size: <u>5ft</u>)																				
1. <u>Schedonorus arundinaceus</u>	<u>50</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Setaria faberi</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Ambrosia trifida</u>	<u>30</u>	<u>Yes</u>	<u>FAC</u>																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
<u>110</u> = Total Cover																				
Woody Vine Stratum (Plot size: <u>30ft</u>)																				
1. _____																				
2. _____																				
<u>0</u> = Total Cover																				
Remarks: (Include photo numbers here or on a separate sheet.) This data point did not exhibit a dominance of hydrophytic vegetation.																				
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																				

SOIL

Sampling Point: B2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10 YR 4/2	50	10 YR 5/6	50	D	M		Silty clay loam
6-20	10 YR 5/6	60	10 YR 3/2	40	D	M		Silty clay loam
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.						² Location: PL=Pore Lining, M=Matrix.		
Hydric Soil Indicators:						Indicators for Problematic Hydric Soils³:		
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)			<input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)		
Restrictive Layer (if observed):								
Type: _____						Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>		
Depth (Inches): _____								
Remarks: This data point did not exhibit hydric soil.								

HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____
Water Table Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____
		Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: This data point did not exhibit wetland hydrology.		

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: US 231 Added Travel Lanes City/County: Putnam Sampling Date: 09/23/2019
 Applicant/Owner: INDOT State: IN Sampling Point: C1
 Investigator(s): Ben DeMaria, Julie Evans Section, Township, Range: S: 24, T: 13 N, R: 4 W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave
 Slope (%): N/A Lat: 39.54713 Long: -86.80748 Datum: NAD 83
 Soil Map Unit Name: Alford silt loam (2 to 6% slopes) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: This data point met all three criteria to be considered within a wetland. (Des. No. 1700091)	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)														
2. _____																		
3. _____																		
4. _____																		
5. _____																		
<u>0</u> = Total Cover				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; text-align: center;">Total % Cover of:</td> <td style="width:50%; text-align: center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>100</u></td> <td>x 1 = <u>100</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>100</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>1.00</u>	Total % Cover of:	Multiply by:	OBL species <u>100</u>	x 1 = <u>100</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>100</u> (A)	<u>100</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>100</u>	x 1 = <u>100</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>100</u> (A)	<u>100</u> (B)																	
<u>0</u> = Total Cover																		
Herb Stratum (Plot size: <u>5ft</u>)																		
1. <u>Typha angustifolia</u>	<u>100</u>	<u>Yes</u>	<u>OBL</u>															
2. _____																		
3. _____																		
4. _____																		
5. _____																		
6. _____																		
7. _____																		
8. _____																		
9. _____																		
10. _____																		
<u>100</u> = Total Cover				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)														
<u>100</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30ft</u>)																		
1. _____																		
2. _____																		
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) This data point exhibited a dominance of hydrophytic vegetation.																		

SOIL

Sampling Point: C1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10 YR 4/1	80	10 YR 5/6	20	D	M		Silty clay loam
10-20	10 YR 4/2	80	10 YR 5/6	20	D	M		Silty clay loam
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.						² Location: PL=Pore Lining, M=Matrix.		
Hydric Soil Indicators:			Indicators for Problematic Hydric Soils³:					
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)			<input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)		
Restrictive Layer (if observed): Type: _____ Depth (Inches): _____						Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: This data point exhibited hydric soil.								

HYDROLOGY

Wetland Hydrology Indicators:				
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)			
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)				
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>6</u> Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u>			Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:				
Remarks: This data point exhibited wetland hydrology.				

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: US 231 Added Travel Lanes City/County: Putnam Sampling Date: 09/23/2019
 Applicant/Owner: INDOT State: IN Sampling Point: C2
 Investigator(s): Ben DeMaria, Julie Evans Section, Township, Range: S: 25, T: 13 N, R: 4 W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave
 Slope (%): N/A Lat: 39.54711 Long: -86.80751 Datum: NAD 83
 Soil Map Unit Name: Alford silt loam (2 to 6% slopes) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: This data point did not meet all three criteria to be considered within a wetland. (Des. No. 1700091)	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
4. _____				
5. _____				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>Rhus copallinum</u>	<u>10</u>	<u>Yes</u>	<u>UPL</u>	Total % Cover of: _____ Multiply by: _____
2. _____				OBL species <u>0</u> x 1 = <u>0</u>
3. _____				FACW species <u>0</u> x 2 = <u>0</u>
4. _____				FAC species <u>0</u> x 3 = <u>0</u>
5. _____				FACU species <u>50</u> x 4 = <u>200</u>
				UPL species <u>30</u> x 5 = <u>150</u>
<u>10</u> = Total Cover				Column Totals: <u>80</u> (A) <u>350</u> (B)
<u>50</u> = Total Cover				Prevalence Index = B/A = <u>4.375</u>
Herb Stratum (Plot size: <u>5ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Schedonorus arundinaceus</u>	<u>50</u>	<u>Yes</u>	<u>FACU</u>	<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
2. _____				<input type="checkbox"/> 2 - Dominance Test is >50%
3. _____				<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹
4. _____				<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
<u>50</u> = Total Cover				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: <u>30ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. <u>Lonicera maac ii</u>	<u>20</u>	<u>Yes</u>	<u>UPL</u>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
2. _____				
<u>20</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) This data point did not exhibit a dominance of hydrophytic vegetation.				

SOIL

Sampling Point: C2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10 YR 5/6	90	10 YR 3/2	10	D	M		Silty clay loam
6-20	10 YR 5/6	60	10 YR 3/2	40	D	M		Silty clay loam
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.						² Location: PL=Pore Lining, M=Matrix.		
Hydric Soil Indicators:			Indicators for Problematic Hydric Soils³:					
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)						
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Dark Surface (S7)						
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12)						
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)						
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)						
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Depleted Matrix (F3)							
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)							
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)							
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)								
Restrictive Layer (if observed):			Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
Type: _____	Depth (Inches): _____							
Remarks: This data point did not exhibit hydric soil.								

HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	
Field Observations:		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: This data point did not exhibit wetland hydrology.		

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: US 231 Added Travel Lanes City/County: Putnam Sampling Date: 09/23/2019
 Applicant/Owner: INDOT State: IN Sampling Point: D1
 Investigator(s): Ben DeMaria, Julie Evans Section, Township, Range: S: 25, T: 13 N, R: 4 W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave
 Slope (%): N/A Lat: 39.54214 Long: -86.80563 Datum: NAD 83
 Soil Map Unit Name: rE2 (rayford silt loam (18 to 25% slopes) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: This data point met all three criteria to be considered within a wetland. (Des. No. 1700091)	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4. _____				
5. _____				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>Salix interior</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>	Total % Cover of: _____ Multiply by: _____
2. _____				OBL species <u>0</u> x 1 = <u>0</u>
3. _____				FACW species <u>30</u> x 2 = <u>60</u>
4. _____				FAC species <u>20</u> x 3 = <u>60</u>
5. _____				FACU species <u>0</u> x 4 = <u>0</u>
<u>20</u> = Total Cover				UPL species <u>0</u> x 5 = <u>0</u>
				Column Totals: <u>50</u> (A) <u>120</u> (B)
				Prevalence Index = B/A = <u>2.4</u>
Herb Stratum (Plot size: <u>5ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Poa pratensis</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>	<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
2. <u>Symphotrichum novae-angliae</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>	<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
3. _____				<input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹
4. _____				<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
<u>30</u> = Total Cover				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: <u>30ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. _____				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____				
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) This data point exhibited a dominance of hydrophytic vegetation.				

SOIL

Sampling Point: D1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-20	10 YR 3/2	50	10 YR 5/6	50	D	M		Silty clay loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Type: _____	
Depth (Inches): _____	

Remarks:
This data point exhibited hydric soil.

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Geomorphic Position (D2)	
<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	

Field Observations:	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u>	

(includes capillary fringe)

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
This data point exhibited wetland hydrology.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: US 231 Added Travel Lanes City/County: Putnam Sampling Date: 09/23/2019
 Applicant/Owner: INDOT State: IN Sampling Point: D2
 Investigator(s): Ben DeMaria, Julie Evans Section, Township, Range: S: 25, T: 13 N, R: 4 W
 Landform (hillslope, terrace, etc.): illslope Local relief (concave, convex, none): Convex
 Slope (%): 5% Lat: 39.54216 Long: -86.80560 Datum: NAD 83
 Soil Map Unit Name: rE2 (rayford silt loam, 18 to 25% slopes) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: This data point did not meet all three criteria to be considered within a wetland. (Des. No. 1700091)	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66%</u> (A/B)
4. _____				
5. _____				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>Salix interior</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>	Total % Cover of: _____ Multiply by: _____
2. _____				OBL species <u>0</u> x 1 = <u>0</u>
3. _____				FACW species <u>20</u> x 2 = <u>40</u>
4. _____				FAC species <u>50</u> x 3 = <u>150</u>
5. _____				FACU species <u>65</u> x 4 = <u>260</u>
<u>10</u> = Total Cover				UPL species <u>0</u> x 5 = <u>0</u>
				Column Totals: <u>135</u> (A) <u>450</u> (B)
				Prevalence Index = B/A = <u>3.333</u>
Herb Stratum (Plot size: <u>5ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Poa pratensis</u>	<u>50</u>	<u>Yes</u>	<u>FAC</u>	<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
2. <u>Schedonorus arundinaceus</u>	<u>50</u>	<u>Yes</u>	<u>FACU</u>	<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
3. <u>Solidago altissima</u>	<u>15</u>	<u>No</u>	<u>FACU</u>	<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹
4. <u>Symphotrichum novae-angliae</u>	<u>10</u>	<u>No</u>	<u>FACW</u>	<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
<u>125</u> = Total Cover				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: <u>30ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. _____				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____				
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) This data point exhibited a dominance of hydrophytic vegetation.				

SOIL

Sampling Point: D2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10 YR 5/6	90	10 YR 3/2	10	D	M		Silty clay loam
10-20	10 YR 5/6	50	10 YR 3/2	50	D	M		Silty clay loam
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.						² Location: PL=Pore Lining, M=Matrix.		
Hydric Soil Indicators:						Indicators for Problematic Hydric Soils³:		
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)			<input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)		
Restrictive Layer (if observed):								
Type: _____								
Depth (Inches): _____						Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>		
Remarks: This data point did not exhibit hydric soil.								

HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	
Water Table Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? (includes capillary fringe) Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: This data point did not exhibit wetland hydrology.		

Appendix 2 - PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD: February 20, 2020

B. NAME AND ADDRESS OF PERSON REQUESTING PJD: Ben DeMaria, R AW Corporation,
8770 North Street, Suite 110, Fishers, IN. 46038

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

PROJECT LOCATION(S) AND BACKGROUND INFORMATION: The proposed project (Des. No. 1700091) will involve the addition of one 12-foot wide travel lane with a 10-foot wide shoulder to both northbound and southbound lanes. The widening associated with the added travel lanes will require an additional 4 to 6 feet of new roadway south of mile marker 142 (approximately 0.21 mile south of CR 800) and approximately 20 feet of new roadway north of mile marker 142. The widening of US 231 will primarily take place to the east of the roadway. Due to the widening of the road, regrading of the roadside ditches and roadside slope will also occur within the project area. The profile at the CR 800 South intersection will be adjusted and require reconstruction.

(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES)

State: Indiana County/parish/borough: Putnam City: Cloverdale, IN

Center coordinates of site (lat/long in degree decimal format):

Lat.: 39.54103° N Long.: -86.80487° W

Universal Transverse Mercator: 16S 516757 4376904

Name of nearest waterbody: Limestone Cree

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

Office (Des) Determination. Date:

Field Determination. Date(s):

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH “MAY BE” SUBJECT TO REGULATORY JURISDICTION.

Site number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resource (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource “may be” subject (i.e., Section 404 or Section 10/404)
UNT 1	39.54266° N	-86.80561° W	375 linear feet 0.015 acre	Non-wetland	Non-Section 10/ Section 404
Wetland A	39.53910° N	-86.80396° W	70 linear feet 0.032 acre	Wetland	Non-Section 10/ Section 404
Wetland B	39.54706° N	-86.80721° W	20 linear feet <0.01 acre	Wetland	Non-Section 10/ Section 404

Wetland C	39.54713° N	-86.80748° W	145 linear feet 0.031 acre	Wetland	Non-Section 10/ Section 404
Wetland D	39.54214° N	-86.80563° W	140 linear feet 0.096 acre	Wetland	Non-Section 10/ Section 404

- 1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.
- 2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring pre-construction notification (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there "may be" waters of the U.S. and/or that there "may be" navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:


SUPPORTING DATA. Data reviewed for PJD (check all that apply)

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:

- Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:
Maps: Indiana IO Library, IndianaMap, US S, NWI
- Data sheets prepared/submitted by or on behalf of the PJD requestor.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report. Rationale: _____
- Data sheets prepared by the Corps: _____
- Corps navigable waters study: _____
- U.S. Geological Survey Hydrologic Atlas: _____
 - US S N D data.
 - US S 8 and 12 digit UC maps.
- U.S. Geological Survey map(s). Cite scale and name: Cloverdale / 1:24,000
- Natural Resources Conservation Service Soil Survey. Citation: NRCS Web Soil Survey: Putnam County
- National wetlands inventory map(s). Cite name: USFWS NWI data: Putnam County
- State/local wetland inventory map(s): _____
- FEMA/FIRM maps: FEMA/FIRM Putnam County, Indiana
- 100-year Floodplain Elevation is: _____ (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name Date): Putnam County / 2013
or Other (Name Date): Photographs taken on September 23, 2019
- Previous determination(s). File no. and date of response letter: _____
- Other information (please specify): _____

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

Signature and date of
Regulatory staff member
completing PJD

 02/20/2020
Signature and date of
person requesting PJD
(REQUIRED, unless obtaining
the signature is impracticable)¹

¹ Districts may establish timeframes for requestor to return signed PJD forms. If the requestor does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

Categorical Exclusion
Appendix G
Public Involvement



Example Letter

February 25, 2019

Notice of Survey

RE: U.S. 231 from 250 ft south of High Street to 1500 ft north of CR 800 South in Putnam County, IN

Dear Property Owner,

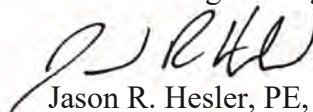
Certified Engineering, Inc., Etica Group, and RQAW Corporation have been selected by INDOT for field and environmental survey of the above referenced project. Our information indicates that you own property near the above proposed roadway project. Certified Engineering, Inc., Etica Group, and RQAW Corporation will be performing a survey of the project area in the near future. **The survey work may include the identification and mapping of wetlands and historic resources, archaeological investigations (which may involve the survey, testing, or excavation of identified archaeological sites) and various other environmental studies.** The information we obtain from these studies is necessary for the proper planning and design of this transportation project. It may be necessary for representatives from Certified Engineering, Inc., Etica Group, or RQAW Corporation to enter your property to complete this work. This is permitted by law per Indiana Code (IC) 8-23-7-26. Anyone performing this type of work has been instructed to identify him or herself, if you are available, before they enter your property. If you no longer own this property or it is currently occupied by someone else, please let us know the name of the new owner or occupant so that we can contact them about the survey.

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

The survey is needed for this roadway project. Please be assured of our sincere desire to cause you as little inconvenience as possible during this survey.

If any problems do occur, please contact Jason Hesler of Certified Engineering, Inc. at (317) 546-1599 or at 3939 Millersville Road, Indianapolis, Indiana 46205. Thank you in advance for your cooperation.

Sincerely,
Certified Engineering, Inc.



Jason R. Hesler, PE, PLS



Indiana Department of Transportation
Notice of Entry for Survey or Investigation
Indiana Department of Transportation

If you have received a “Notice of Entry for Survey or Investigation” from INDOT or an INDOT representative, you may be wondering what it means. In the early stages of a project’s development, INDOT must collect as much information as possible to ensure that sound decisions are made in designing the proposed project. Before entering onto private property to collect that data, INDOT is required to notify landowners that personnel will be in the area and may need to enter onto their property. Indiana Code, Title 8, Article 23, Chapter 7, Section 26 deals with the department’s authority to enter onto any property within Indiana.

Receipt of a Notice of Entry for Survey or Investigation does not necessarily mean that INDOT will be buying property from you. It doesn’t even necessarily mean that the project will involve your property at all. Since the Notice of Entry for Survey or Investigation is sent out in the very early stages and since we want to collect data within AND surrounding the project’s limits more landowners are contacted than will actually fall within the eventual project limits. It may also be that your property falls within the project limits but we will not need to purchase property from you to make improvements to the roadway. Another thing to keep in mind is that when you receive a Notice of Entry for Survey or Investigation, very few specifics have been worked out and actual construction of the project may be several years in the future.

Before INDOT begins a project that requires them to purchase property from landowners, they must first offer the opportunity for a public hearing. If you were on the list of people who received a Notice of Entry for Survey or Investigation, you should also receive a notice informing you of your opportunity to request a public hearing. These notices will also be published in your local newspaper so interested individuals who are not adjacent to the project will also have the opportunity to request a public hearing. If a public hearing is to be held, INDOT will publicize the date, location, and time. INDOT will present detailed project information at the public hearing, comments will be taken from the public in spoken and written form, and question and answer sessions will be offered. Based on the feedback INDOT receives from the public, a project can be modified and improved to better serve the public.

So, if you have received a “Notice of Entry for Survey or Investigation”, remember:

1. You do not need to take any action at this time. It is merely letting you know that people in orange/lime vests are going to be in your neighborhood.
2. The project is still in its very early planning stages.
3. You will be notified of your opportunity to comment on the project at a later date.

Categorical Exclusion
Appendix H
Air Quality

Indiana Department of Transportation (INDOT)

State Preservation and Local Initiated Projects FY 2020 - 2024

SPONSOR	CONTRACT # / LEAD DES	STIP NAME	ROUTE	WORK TYPE	LOCATION	DISTRICT	MILES	FEDERAL CATEGORY	Estimated Cost left to Complete Project*	PROGRAM	PHASE	FEDERAL	MATCH	2020	2021	2022	2023	2024	
Indiana Department of Transportation	2001638	A 22	I 70	Bridge Maintenance And Repair	4.51 mi W of SR 243 EB, Walnut Creek	Crawfordsville	0	NHPP	\$91,967.00	District Other Consulting	PE	\$18,000.00	\$2,000.00		\$20,000.00				
Comments:New Project, PE phase for \$20,000 FY21, CN phase for \$71,967 FY21, No MPO																			
Indiana Department of Transportation	2001639	A 22	I 70	Bridge Maintenance And Repair	4.51 mi W of SR 243 WB, Big Walnut Creek	Crawfordsville	0	NHPP	\$71,967.00	District Other Construction	CN	\$64,770.30	\$7,196.70		\$71,967.00				
Comments:New Project, CN phase for \$71,967 FY21, No MPO.																			
Indiana Department of Transportation	37788 / 1400235	Init.	I 70	Small Structure Pipe Lining	5.11 mi W of SR 243	Crawfordsville	0	NHPP		Bridge Construction	CN	\$5,578,569.00	\$619,841.00	\$6,198,410.00					
Putnam County	38267 / 1500251	Init.	VA VARI	Bridge Inspections	Countywide Bridge Inspection and Inventory Program for Cycle Years 2019-2022	Crawfordsville	0	Multiple		Local Funds	PE	\$0.00	\$37,247.19	\$10,556.12	\$23,549.64	\$3,141.43			
											Local Bridge Program	PE	\$148,988.75	\$0.00	\$42,224.46	\$94,198.56	\$12,565.73		
Indiana Department of Transportation	39259 / 1592687	Init.	US 40	HMA Overlay, Preventive Maintenance	From 0.07 mi W of US 231 to SR 75	Crawfordsville	8.593	STPBG		Road Construction	CN	\$8,108,653.60	\$2,027,163.40	\$10,135,817.00					
Indiana Department of Transportation	39259 / 1592687	A 01	US 40	HMA Overlay, Preventive Maintenance	From 0.07 mi W of US 231 to SR 75	Crawfordsville	8.593	STPBG	\$10,220,854.00	Bridge ROW	RW	\$20,000.00	\$5,000.00	\$25,000.00					
Comments:ROW phase for \$25,000 FY20, No MPO																			
Indiana Department of Transportation	39316 / 1701458	Init.	SR 243	Bridge Deck Overlay	Rocky Fork Creek, 00.41 N I-70	Crawfordsville	0	STPBG		Bridge Construction	CN	\$301,648.80	\$75,412.20	\$377,061.00					
Indiana Department of Transportation	39964 / 1601108	Init.	SR 236	HMA Overlay Minor Structural	From US 231 E Jct to 0.39 mi W of SR 75	Crawfordsville	12.96	STPBG		Road Construction	CN	\$7,686,888.80	\$1,921,722.20		\$9,608,611.00				
Indiana Department of Transportation	40571 / 1700119	Init.	US 36	HMA Overlay Minor Structural	From 0.07 mi E. of US 231 to 4.31 mi E of US 231 (Bainbridge)	Crawfordsville	4.371	STPBG		Road Construction	CN	\$1,650,574.40	\$412,643.60			\$2,063,218.00			
Indiana Department of Transportation	40571 / 1700119	A 27	US 36	HMA Overlay Minor Structural	From 0.07 mi E. of US 231 to 4.40 mi E of US 231 (Bainbridge)	Crawfordsville	4.36	STBG	\$2,091,218.00	Road Consulting	PE	\$16,000.00	\$4,000.00		\$20,000.00				
Comments:Add PE phase for \$20,000 FY21, No MPO																			
Indiana Department of Transportation	40573 / 1700121	Init.	US 231	Road Rehabilitation (3 R/4R Standards)	From 0.22 mi S of SR 240 to 1.74 mi N of SR 240 (Greencastle)	Crawfordsville	1.689	NHPP		Road Construction	CN	\$4,593,269.60	\$1,148,317.40			\$5,741,587.00			
Indiana Department of Transportation	40573 / 1700121	A 01	US 231	Road Rehabilitation (3 R/4R Standards)	From 0.03 mi S of SR 240 to 1.61 mi N of SR 240 (Greencastle)	Crawfordsville	1.63	STPBG	\$8,091,587.00	Road ROW	RW	\$360,000.00	\$90,000.00	\$450,000.00					
Comments:ROW phase for \$450,000 FY20, No MPO																			
Indiana Department of Transportation	40576 / 1701570	Init.	US 231	Small Structure Replacement	Over Unnamed Ditch/Creek on US 231, 0.10 S SR 236 W JCT	Crawfordsville	0	NHPP		Bridge Construction	CN	\$1,412,190.40	\$353,047.60			\$1,765,238.00			
											Bridge ROW	RW	\$60,000.00	\$15,000.00	\$75,000.00				
Indiana Department of Transportation	40742 / 1700091	Init.	US 231	Added Travel Lanes	From 0.27 mi N to 1.05 mi N of I-70	Crawfordsville	.756	NHPP		Mobility Construction	CN	\$2,862,437.60	\$715,609.40			\$3,578,047.00			
Indiana Department of Transportation	40742 / 1700091	A 27	US 231	Added Travel Lanes	From 0.27 mi N to 1.05 mi N of I-70	Crawfordsville	.756	STBG	\$3,778,047.00	Mobility ROW	RW	\$80,000.00	\$20,000.00		\$100,000.00				

*Estimated Costs left to Complete Project column is for costs that may extend beyond the four years of a STIP. This column is not fiscally constrained and is for information purposes.

Categorical Exclusion
Appendix I
Additional Studies

Land and Water Conservation Fund (LWCF) County Property List for Indiana (Last Updated December 2019)

ProjectNumber	SubProjectCode	County	Property
1800413	1800413A	Pulaski	Berns Meyer Nature Preserve
1800413	1800413U	Pulaski	Tippecanoe County State Park
1800434	1800434A	Pulaski	Tippecanoe River State Park
1800618	1800618	Pulaski	Winamac Town Park
1800070	1800070B	Putnam	Lieber State Recreation Area
1800118	1800118D	Putnam	Lieber State Recreation Area
1800171	1800171S	Putnam	Lieber State Recreation Area
1800263	1800263	Putnam	Robe-Ann Park
1800312	1800312F	Putnam	Lieber State Recreation Area
1800323	1800323	Putnam	Lieber State Recreation Area (Cagles Mill / Lieber
1800363	1800363O	Putnam	Lieber State Recreation Area
1800364	1800364B	Putnam	Big Walnut Nature Preserve
1800375	1800375C	Putnam	Lieber State Recreation Area
1800405	1800405D	Putnam	Big Walnut Nature Preserve
1800413	1800413E	Putnam	Lieber State Recreation Area
1800557	1800557	Putnam	Big Walnut Sports Park
1800578	1800578	Putnam	Big Walnut Community Park
1800582	1800582	Putnam	Robe-Ann Park
1800043	1800043	Randolph	Harter Park
1800081	1800081	Randolph	Harter Park
1800117	1800117	Randolph	Harter Park
1800111	1800111	Ripley	Liberty Park & Park Reservoir
1800116	1800116	Ripley	Batesville Memorial Pool
1800171	1800171Q	Ripley	Versailles State Park



PROJECT TRAFFIC FORECAST REPORT

DES No.: 1700091

US-231 From 0.27 mi N to 1.05 mi N of I-70

From RP 141+69 to RP 142+47

Putnam County

Prepared For

Steven Walls

On

06/11/2019

By

INDOT, Office of Traffic Statistics
Technical Planning Support & Programming Division
Gregory A. Katter, PE, Supervisor
100 N. Senate Ave, N955
Indianapolis, Indiana 46204
INDOTTrafficForecasts@indot.IN.gov



PROJECT TRAFFIC FORECAST REPORT

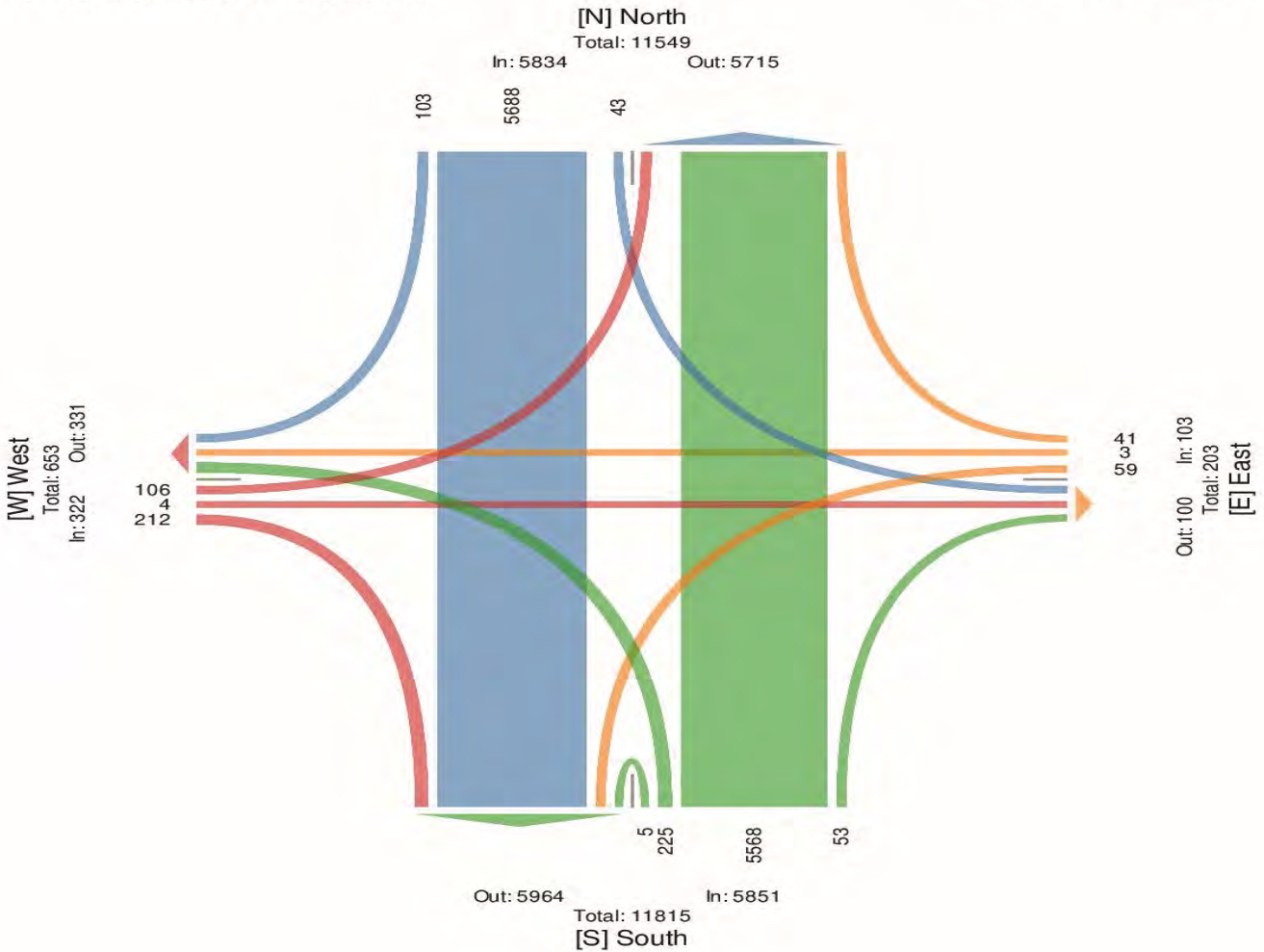
Intersection: 1

US 231 & CR 800 S Putnam - TMC

Mon Nov 25, 2019
Full Length (10 AM-10 AM (+1))
All Classes (Motorcycles, Cars, Light Goods Vehicles, Single-Unit Trucks, Articulated Trucks, Buses)
All Movements
ID: 728970, Location: 39.544134, -86.80619



Provided by: Indiana DOT
100 N. Senate Ave.,
Indianapolis, IN, 46204, US





PROJECT TRAFFIC FORECAST REPORT

Location: From 0.27 mi N to 1.05 mi N of I-70

The table below contains the projected Annual Average Daily Traffic (AADT) in each requested year for each approach and movement.

The per year growth rate used for each approach is indicated in the table below. It is applied as a straight line growth.

For the purpose of this report a commercial vehicle would fall into FHWA Scheme F Classes 4 through 13. They are identified by MioVision as either an Articulated Truck, a Bus, or a Single-Unit Truck.

Daily Movement Forecast										
Approach Road Name	Approach Direction	Movement	Total	Count Year AADT	Growth Rate	Construction Year AADT 2021	Intermediate Year 1 AADT 2031	Intermediate Year 2 AADT 2036	Design Year AADT 2041	Commercial Percentage
E 800 S	East	Right	41	41	0.00%	41	41	41	41	0.00%
E 800 S	East	Thru	3	3	0.00%	3	3	3	3	0.00%
E 800 S	East	Left	59	59	0.00%	59	59	59	59	3.39%
E 800 S	East	U-Turn	0	0	0.00%	0	0	0	0	0.00%
E 800 S	East	Total	103	103	0.00%	103	103	103	103	0.00%
US 231	North	Right	103	110	0.47%	111	117	119	122	66.02%
US 231	North	Thru	5,688	6,098	0.47%	6,155	6,441	6,584	6,727	11.85%
US 231	North	Left	43	46	0.47%	47	49	50	51	2.33%
US 231	North	U-Turn	0	0	0.47%	0	0	0	0	0.00%
US 231	North	Total	5,834	6,254	0.47%	6,313	6,606	6,753	6,899	0.00%
US 231	South	Right	53	57	0.47%	57	60	61	63	0.00%
US 231	South	Thru	5,568	5,969	0.47%	6,025	6,305	6,445	6,585	13.00%
US 231	South	Left	225	241	0.47%	243	255	260	266	55.11%
US 231	South	U-Turn	5	5	0.47%	5	6	6	6	0.00%
US 231	South	Total	5,851	6,272	0.47%	6,331	6,625	6,772	6,919	0.00%
E 800 S	West	Right	212	212	0.00%	212	212	212	212	52.83%
E 800 S	West	Thru	4	4	0.00%	4	4	4	4	25.00%
E 800 S	West	Left	106	106	0.00%	106	106	106	106	66.98%
E 800 S	West	U-Turn	0	0	0.00%	0	0	0	0	0.00%
E 800 S	West	Total	322	322	0.00%	322	322	322	322	0.00%

Growth Rate Notes



PROJECT TRAFFIC FORECAST REPORT

Location: From 0.27 mi N to 1.05 mi N of I-70

The table below contains the projected traffic volumes in each requested year for approach and movement during the morning and afternoon peak hour.

The morning and afternoon peak hours are those 60 minute periods during which the most vehicles pass through the intersection.

AM PM Peak Movement Forecast										
Approach Direction	Growth Rate	Movement	Interval	Total Vehicles	Commercial % AADT	Count Year AADT	Construction Year AADT 2021	Intermediate Year 1 AADT 2031	Intermediate Year 2 AADT 2036	Design Year AADT 2041
East	0.00%	Left	8:15 AM	2	0.00%	2	2	2	2	2
East	0.00%	Thru	8:15 AM	0	0.00%	0	0	0	0	0
East	0.00%	Right	8:15 AM	5	0.00%	5	5	5	5	5
East	0.00%	U-Turn	8:15 AM	0	0.00%	0	0	0	0	0
North	0.47%	Left	8:15 AM	1	0.00%	1	1	1	1	1
North	0.47%	Thru	8:15 AM	384	11.72%	412	416	435	445	455
North	0.47%	Right	8:15 AM	9	77.78%	10	10	11	11	11
North	0.47%	U-Turn	8:15 AM	0	0.00%	0	0	0	0	0
South	0.47%	Left	8:15 AM	21	76.19%	23	23	24	25	25
South	0.47%	Thru	8:15 AM	437	10.76%	468	472	494	505	516
South	0.47%	Right	8:15 AM	1	0.00%	1	1	1	1	1
South	0.47%	U-Turn	8:15 AM	0	0.00%	0	0	0	0	0
West	0.00%	Left	8:15 AM	6	83.33%	6	6	6	6	6
West	0.00%	Thru	8:15 AM	0	0.00%	0	0	0	0	0
West	0.00%	Right	8:15 AM	20	70.00%	20	20	20	20	20
West	0.00%	U-Turn	8:15 AM	0	0.00%	0	0	0	0	0
East	0.00%	Left	5:15 PM	1	0.00%	1	1	1	1	1
East	0.00%	Thru	5:15 PM	0	0.00%	0	0	0	0	0
East	0.00%	Right	5:15 PM	1	0.00%	1	1	1	1	1
East	0.00%	U-Turn	5:15 PM	0	0.00%	0	0	0	0	0
North	0.47%	Left	5:15 PM	5	20.00%	5	5	5	5	6
North	0.47%	Thru	5:15 PM	536	6.16%	575	580	607	621	634
North	0.47%	Right	5:15 PM	6	0.00%	6	6	6	6	7
North	0.47%	U-Turn	5:15 PM	0	0.00%	0	0	0	0	0
South	0.47%	Left	5:15 PM	8	12.50%	9	9	10	10	10
South	0.47%	Thru	5:15 PM	449	8.46%	481	486	508	519	531
South	0.47%	Right	5:15 PM	3	0.00%	3	3	3	3	3
South	0.47%	U-Turn	5:15 PM	1	0.00%	1	1	1	1	1
West	0.00%	Left	5:15 PM	7	0.00%	7	7	7	7	7
West	0.00%	Thru	5:15 PM	2	0.00%	2	2	2	2	2
West	0.00%	Right	5:15 PM	22	4.55%	22	22	22	22	22
West	0.00%	U-Turn	5:15 PM	0	0.00%	0	0	0	0	0

It should be recognized by users of this forecast that the base year AADT has an accuracy of plus or minus 10%. It should also be understood that while this report may include forecasts with up to six apparent significant figures, the accuracy should not be interpreted as being greater than two significant figures. It is the responsibility of designers to exercise professional judgement when using this data to influence decisions.

Index of Crash Frequency and Cost - Form F1		Page 1/2
Location	US 231 at Putnam 800 S	
GIS		
Post		
Analyst	Eubank	
Date	12/21/2016	
INPUT		
Road Facility Type	Unsignalized Rural State-State Intersection	
Major Road AADT (veh/day)	11550	
Minor Road AADT (veh/day)	720	
T-intersection Indicator (1 if present, 0 otherwise)	0	
First Year with Crash Data (yyyy)	2012	
Last Year with Crash Data (yyyy)	2016	
Number of Crashes (crash/period)		
Fatal and Incapacitating Injury Crashes	3	
Non-Incapacitating and Possible Injury Crashes	2	
Property Damage Only Crashes	6	
Route or Road Type	Unsignalized Rural State-State Intersection	
Average Crash Costs (\$)		
Fatal and Incapacitating Injury Crashes	525500	
Non-Incapacitating and Possible Injury Crashes	33100	
Property Damage Only Crashes	5600	
Crash Cost Year (yyyy)	2013	
OUTPUT		
Expected Crash Frequency (crash/year)		
Fatal and Incapacitating Injury Crashes	0.083	
Non-Incapacitating and Possible Injury Crashes	0.37	
Property Damage Only Crashes	1.35	
All Crashes	1.81	
Index of Crash Frequency	0.25	
Index of Crash Cost	1.35	

Index of Crash Frequency and Cost - Form F1		Page 2/2
Location	US 231 at Putnam 800 S	
GIS		
Post		

Analyst	Eubank
Date	12/21/2016
Comments:	

Category	Countermeasure	Area Type	Facility type	Crash Type	CRF	CMF	States and (reference number)
Intersection geometry	Add a left-turn lane on one major approach to a signalized intersection	Urban	Three-leg intersections	Total	7.0	0.930	IA, IL, LA, MN, NE, NC, OR, VA (18)
			Four-leg intersections	Total	10.0	0.900	
		Rural	Three-leg intersections	Total	15.0	0.850	
			Four-leg intersections	Total	18.0	0.820	
Intersection geometry	Add a left-turn lane on one major approach to an unsignalized intersection	Urban	Three-leg intersections	Total	33.0	0.670	IA, IL, LA, MN, NE, NC, OR, VA (18)
			Four-leg intersections	Total	27.0	0.730	
		Rural	Three-leg intersections	Total	44.0	0.560	
			Four-leg intersections	Total	28.0	0.720	
Intersection geometry	Add a right-turn lane on one major approach to a signalized intersection	Urban	Four-leg intersections	Total	4.0	0.960	IA, IL, LA, MN, NE, NC, OR, VA (18)
Intersection geometry	Add a right-turn lane on one major approach to an unsignalized intersection	Rural	Four-leg intersections	Total	14.0	0.860	IA, IL, LA, MN, NE, NC, OR, VA (18)
Intersection geometry	Convert diamond interchange to diverging diamond interchange (DDI)	Urban	Principal arterial, other freeways and expressways	Total	33	0.67	KY, MO, NY, TN (20)
				Injury	41	0.59	
				Angle	67	0.33	
				Rear-end	36	0.64	
				Sideswipe	-27	1.27	
				Single-vehicle	24	0.76	
Intersection geometry	Convert intersection on low-speed road to a roundabout	Urban and rural	Intersections where all approaches are low-speed (less than 45 mph)	Total	-9.9	1.099	WI (31)
				KABC	52.7	0.473	
Intersection geometry	Convert intersection on high-speed road to a roundabout	Urban and rural	Intersections where at least one approach is high-speed (45 mph or greater)	Total	34.1	0.659	WI (31)
				KABC	49.4	0.506	
Intersection geometry	Convert intersection to a single-lane roundabout	Urban and rural	Intersections with low- and high-speed approaches	Total	36.0	0.640	WI (31)
				KABC	18.2	0.818	
Intersection geometry	Convert intersection to a multilane roundabout	Urban and rural	Intersections with low- and high-speed approaches	Total	-6.2	1.062	WI (31)
				KABC	63.3	0.367	
Intersection geometry	Convert two-way stop-controlled intersection to a roundabout	Urban	Intersections on two- or four-lane roads	Total	27.0	0.73	CA, CO, CT, FL, KS, MD, ME, MI, MO, MS, NV, OR, SC, UT, VT, WA WI (31,33)
				KABC	58.1	0.419	
		Rural	Intersections on two- or four-lane roads	Total	48.2	0.518	
				KABC	61.2	0.388	

Category	Countermeasure	Area Type	Facility type	Crash Type	CRF	CMF	States and (reference number)
Roadway delineation	Install raised pavement markers	Rural	Two-lane highways with AADT 0-5000, curve radius R => 1640 ft	Nighttime	-16	1.16	IL, NJ, NY, PA (4)
			Two-lane highways with AADT 5001-15000, curve radius R => 1640 ft	Nighttime	1	0.99	
			Two-lane highways with AADT 15001-20000, curve radius R => 1640 ft	Nighttime	24	0.76	
			Two-lane highways with AADT 0-5000, curve radius R < 1640 ft	Nighttime	-43	1.43	
			Two-lane highways with AADT 5001-15000, curve radius R < 1640 ft	Nighttime	-26	1.26	
			Two-lane highways with AADT 15001-20000, curve radius R < 1640 ft	Nighttime	-3	1.03	
			Four-lane freeways with AADT <= 20000	Nighttime	-13	1.13	
		Four-lane freeways with AADT 20001-60000	Nighttime	6	0.94		
		Four-lane freeways with AADT > 60000	Nighttime	33	0.67		
		Segments	Increase in number of through lanes by 1 lane*	Urban	Multilane	PDO	61.3
KABC	66.5					0.335	
Segments	Convert two-lane roadway to four-lane divided roadway	Urban	Before: Two-lane roadway After: Four-lane divided roadway	Total	65.9	0.341	FL (1)
				PDO	64.9	0.351	
				KABC	63.3	0.367	
		Rural	Before: Two-lane roadway After: Four-lane divided roadway	Total	28.8	0.712	
				PDO	30.9	0.691	
				KABC	45.1	0.549	

Environmental Justice

Analysis of One Census Tract in Putnam County, Indiana

		COC	AC 1
		Putnam County, Indiana	Census Tract 9565, Putnam County, Indiana
LOW-INCOME			
B17001001	Population for whom poverty status is determined: Total	31,918	5,479
B17001002	Population for whom poverty status is determined: Income in past 12 months below poverty level	3,696	549
		35,308	
	Percent Low-income	11.6%	10.0%
	125 Percent of COC	14.5%	AC < 125% COC
	Potential Low-income EJ Impact?		No
MINORITY			
B03002001	Total population: Total	37543	5522
B03002002	Total population: Not Hispanic or Latino	36589	5473
B03002003	Total population: Not Hispanic or Latino; White alone	34487	5398
B03002004	Total population: Not Hispanic or Latino; Black or African American alone	1149	2
B03002005	Total population: Not Hispanic or Latino; American Indian and Alaska Native alone	73	35
B03002006	Total population: Not Hispanic or Latino; Asian alone	380	0
B03002007	Total population: Not Hispanic or Latino; Native Hawaiian and Other Pacific Islander alone	10	0
B03002008	Total population: Not Hispanic or Latino; Some other race alone	10	0
B03002009	Total population: Not Hispanic or Latino; Two or more races	480	38
B03002010	Total population: Hispanic or Latino	954	49
B03002011	Total population: Hispanic or Latino; White alone	713	34
B03002012	Total population: Hispanic or Latino; Black or African American alone	28	0
B03002013	Total population: Hispanic or Latino; American Indian and Alaska Native alone	0	0
B03002014	Total population: Hispanic or Latino; Asian alone	0	0
B03002015	Total population: Hispanic or Latino; Native Hawaiian and Other Pacific Islander alone	0	0
B03002016	Total population: Hispanic or Latino; Some other race alone	168	10
B03002017	Total population: Hispanic or Latino; Two or more races	45	5
	Number Non-white/minority (B03002001-B03002003)	3,056	124
	Percent Non-white/Minority	8.1%	2.2%
	125 Percent of COC	10.2%	AC < 125% COC
	Potential Minority EJ Impact?		No



B17001

POVERTY STATUS IN THE PAST 12 MONTHS BY SEX BY AGE

Universe: Population for whom poverty status is determined
2013-2017 American Community Survey 5-Year Estimates

Note: This is a modified view of the original table.

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

	Putnam County, Indiana		Census Tract 9565, Putnam County, Indiana	
	Estimate	Margin of Error	Estimate	Margin of Error
Total:	31,918	+/-318	5,479	+/-331
Income in the past 12 months below poverty level:	3,696	+/-668	549	+/-302
Income in the past 12 months at or above poverty level:	28,222	+/-723	4,930	+/-356

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables.

While the 2013-2017 American Community Survey (ACS) data generally reflect the February 2013 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.

Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

Explanation of Symbols:

1. An '***' entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
2. An '-' entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.
3. An '-' following a median estimate means the median falls in the lowest interval of an open-ended distribution.
4. An '+' following a median estimate means the median falls in the upper interval of an open-ended distribution.
5. An '***' entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.
6. An '*****' entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.
7. An 'N' entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.



B03002

HISPANIC OR LATINO ORIGIN BY RACE

Universe: Total population

2013-2017 American Community Survey 5-Year Estimates

Note: This is a modified view of the original table.

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

	Putnam County, Indiana		Census Tract 9565, Putnam County, Indiana	
	Estimate	Margin of Error	Estimate	Margin of Error
Total:	37,543	*****	5,522	+/-330
Not Hispanic or Latino:	36,589	+/-137	5,473	+/-327
White alone	34,487	+/-44	5,398	+/-335
Black or African American alone	1,149	+/-127	2	+/-5
American Indian and Alaska Native alone	73	+/-48	35	+/-34
Asian alone	380	+/-56	0	+/-16
Native Hawaiian and Other Pacific Islander alone	10	+/-17	0	+/-16
Some other race alone	10	+/-9	0	+/-16
Two or more races:	480	+/-162	38	+/-44
Hispanic or Latino:	954	+/-137	49	+/-46
White alone	713	+/-135	34	+/-34
Black or African American alone	28	+/-28	0	+/-16
American Indian and Alaska Native alone	0	+/-24	0	+/-16
Asian alone	0	+/-24	0	+/-16
Native Hawaiian and Other Pacific Islander alone	0	+/-24	0	+/-16
Some other race alone	168	+/-83	10	+/-18
Two or more races:	45	+/-30	5	+/-9

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables.

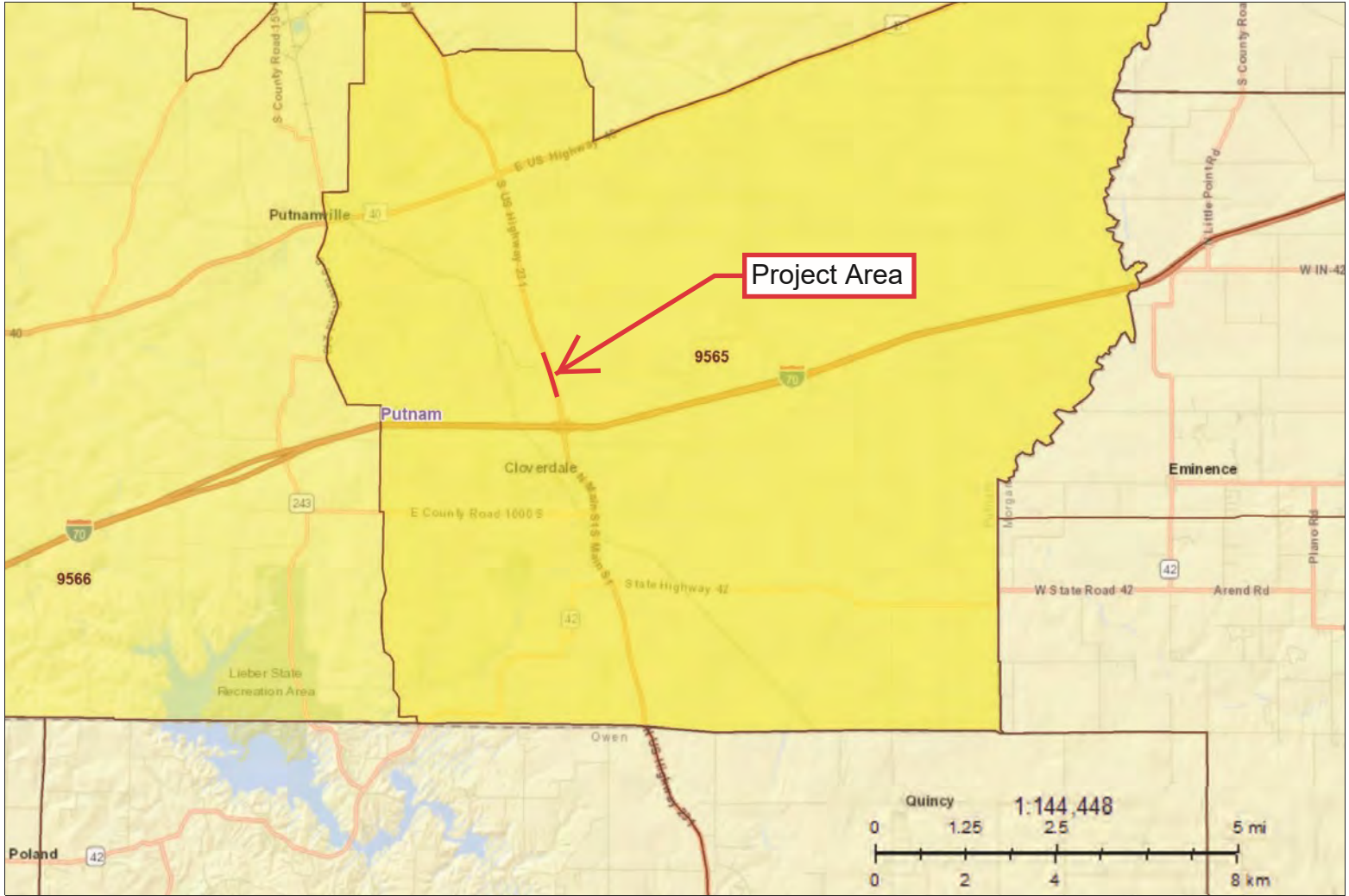
While the 2013-2017 American Community Survey (ACS) data generally reflect the February 2013 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.

Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Explanation of Symbols:

1. An '***' entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
2. An '-' entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.
3. An '-' following a median estimate means the median falls in the lowest interval of an open-ended distribution.
4. An '+' following a median estimate means the median falls in the upper interval of an open-ended distribution.
5. An '***' entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.
6. An '*****' entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.
7. An 'N' entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.
8. An '(X)' means that the estimate is not applicable or not available.

Environmental Justice



Legend

Your Selections

- 2017 boundaries were used to map 'Your Selections'

Selection Results

No Legend

2017 Boundaries

- County
- Census Tract

- Methods to be implemented to ensure notification of an emergency and the proper responses can be done to reach all populations, including those with special needs.
- The location and amenities at various shelters (both short- and long-term). Consideration is required to ensure that shelters, depending on the duration of their utilization, have the amenities required for all users. These amenities may include accessible restrooms, accessible showers or bathing facilities, facilities that can support service animals, refrigeration for medications, etc.
- Specific consideration must be given to providing necessary medical equipment at shelters, depending on the duration of its use. In particular, medical equipment such as dialysis machines, etc. and availability of prescription drugs are essential for a large percentage of the population.
- In the event that roads become unusable by motor vehicles (i.e., floods) a contingency plan for rescue of persons with special needs should be considered (boats, helicopter, etc.).
- Methods that the County will utilize throughout an event to provide information in formats that are accessible to everyone.
- All County staff should be made aware of the location of the posted emergency maps within all County facilities. These maps should also be conspicuously posted for the public within each facility.
- Emergency evacuation plans need to be developed for all County facilities, but especially the Courthouse. Include within evacuation plans for each building guidelines for the evacuation of persons with disabilities for various emergency situations. Each Department should use these guidelines to create their own emergency evacuation plans, which should:
 - Address what to do when an alarm is triggered;
 - Establish meeting places for assistance and evacuation at staircases;
 - Establish floor captains who will ensure that each floor is vacated prior to leaving themselves and ensuring that persons that need assistance are removed to safety.

3.17 Curb Ramps and Sidewalks

The Highway Department is responsible for approximately County roads, bridges, small structures (culverts with a span greater than 4 feet but less than 20 feet), and many more smaller roadway culverts. Also within the County, many portions of the ROW fall under the control of INDOT or incorporated cities and towns.

Title II of the ADA ([28 CFR Section 35.150 \(d\)](#)) requires that state and local governmental entities develop a Transition Plan specific to curb ramps or other sloped areas at locations where walkways cross curbs. A curb ramp (or sometimes referred to as a curb cut) is a short sidewalk ramp cutting through a curb or built up to it.

Curb ramps are a relatively small but important part of making sidewalks, crossings at intersections, and other pedestrian routes accessible to people with disabilities. The ADA requires state and local governments to make pedestrian crossings accessible to people with disabilities by providing curb ramps ([28 CFR 35.150 \(d\)\(2\); 35.151\(a\), \(b\), and \(i\)](#)). There is no requirement under Title II of the ADA or proposed PROWAG that sidewalks be made accessible or be provided where they are not currently provided. The law stipulates that the public entity provide curb ramps, or other sloped areas where pedestrian walks cross curbs, that are accessible. New construction or alterations would require that non-compliant sidewalks be improved to the extent possible. The County is quite rural and as such has no facilities within the ROW.

Self-Evaluation Findings:

- The County has very no pedestrian facilities located within their ROW.
- Design of roads and bridges is the responsibility of the Highway Department, subdivision developers, or consultants that they hire.

Recommended Action:

- The County should develop a curb ramp reconstruction program to correct noted deficiencies and ensure accessibility.
- The County should continue to prepare design plans and construction documents to meet or exceed state and Federal accessibility requirements.
- Provide advance notice of all street closures on informational materials and the County website.
- The County should continue to update its design standards to meet any additions or changes to ADA standards.

3.18 Employment

Title I of the ADA requires public entities not to discriminate against persons with disabilities in all parts of the recruitment and employment process (28 CFR 35.140 and 29 CFR 1630.4).

Self-Evaluation Findings:

- The Auditor’s Department performs Human Resources functions for the County and provides services to job applicants, County employees, and retirees. It is not clear if the Human Resources and Payroll Deputy in the Auditor’s Department has any formal training on Title I issues.
- The Employee Policy Manual for Putnam County (no date included on the document but there is a reference within of July 1, 2012) includes the following statement on page 6 in the sections entitled “You’re Part of Our Team”: *No one will be denied opportunities or benefits on the basis of age, sex, sexual preference, color, race, creed, national origin, religious persuasion, marital status, political belief or disability that does not prohibit performance of essential job functions; nor will anyone receive special treatment for those reasons.*
- The Employee Policy Manual includes the following text (relevant text underlined and bolded) on page 44 in the section entitled “Equal Employment”: *Employment opportunities with the County shall be open and available to all citizens. Nothing in the employment procedure shall preclude consideration of an application because of the prospective employee's race, color, age, sex, religion, national origin, **disability** or political affiliation.*

It is the policy and practice of the County to comply fully with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973 ensuring equal opportunity in employment for all qualified persons with disabilities. The County is committed to ensuring non-discrimination in all terms, conditions and privileges of employment. All employment practices and activities, whether provided or conducted by the County or another on its behalf, shall be conducted on a non-discriminatory basis.

Recruiting, advertising and job application procedures have been reviewed and provide persons with disabilities meaningful employment opportunities. Upon request, assistance in completing the application is available. Pre-employment inquires are only made regarding and applicant's ability to perform the essential functions of the position, not as to any disabling condition.

Reasonable accommodation is available to all employees and applicants requiring accommodation to perform the essential functions of their position. Work sites shall be accessible. All employment decisions are based on the ability of the applicant or employee to perform the essential functions of their position.

Employees are expected to perform the essential functions of the assigned position. Where a disability prevents an employee from (sic) performing an essential job function, the employee and Department Head/Supervisor shall engage in an interactive dialogue concerning possible reasonable accommodations that will enable the employee to perform the essential functions of the position.