

APPENDIX C

Early Coordination



INDIANA DEPARTMENT OF TRANSPORTATION

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

PHONE: (317) 232-5113
(317) INDOT4U

Eric Holcomb, Governor
Michael Smith, Commissioner

October 28, 2022

«Name»
«Title»
«Organization»
«Street»
«City», «State» «Zip»

Re: Early Coordination Letter, Des. No. 2100161, Guardrail Improvement Project on State Road (SR) 445, from 0.39 Mile East of SR 54 to 0.62 Mile East of SR 54, Greene County, Indiana

Dear «Name»:

The Indiana Department of Transportation (INDOT), with federal and state funding, intends to proceed with a project involving the aforementioned guardrail improvement in Greene County. This letter is part of the early coordination phase of the environmental review process. We are requesting comments from your area of expertise regarding any possible environmental effects associated with this project. **Please use the above designation numbers and description in your reply.** We will incorporate your comments into a study of the project's environmental impacts.

The proposed project is located on SR 445, from 0.39 mile east of SR 54 to 0.62 mile east of SR 54 in Greene County, Indiana. This section of SR 445 is a two-lane *Major Collector*. The existing SR 445 facility consists of two 12-foot (ft.) travel lanes and approximately 2 ft. outside shoulders. The existing culvert over Unnamed Tributary (UNT) to Beech Creek is a 100 ft. long, 5 ft. by 5 ft. reinforced concrete box (RCB) with wingwalls. The draft need is due to the crash history within the area. The draft purpose is to reduce the potential for severe roadway runoff crashes related to the small shoulder and steep slopes.

The proposed project is anticipated to install guardrail along the SR 445 roadway. This is expected to include widening of the paved shoulders to minimum of 4 ft. and grading of the embankment to accommodate the guardrail. The slopes of the roadside will range from 2:1 to 4:1 slope with riprap placed for slope stabilization. Additionally, the existing culvert over UNT to Beech Creek will be extended by 24 ft. north and 14 ft. south of the existing structure to accommodate the guardrail installation. The proposed maintenance of traffic is anticipated to require a full closure utilizing SR 45 and SR 54 as a detour route. The project requires the acquisition of 1.8 acres of permanent right-of-way. Tree clearing is anticipated as part of this project. The project is anticipated to begin construction in Spring 2024.

Land use in the vicinity of the project is primarily forested with some rural residencies. Hanson Professional Services Inc. (Hanson) will perform waters and wetlands determinations to identify water resources that may be present and coordinate findings with the INDOT Ecology and Waterway Permitting Office (EWPO). The

project is anticipated to qualify for the Rangewide Programmatic Agreement for the Indiana Bat and Northern Long-eared Bat by completing the Information for Planning and Consultation (IPaC). Coordination will occur with INDOT Cultural Resources Office (CRO) to evaluate the project area for archaeological and historic resources and for Section 106 compliance. The results of this investigation will be forwarded to the State Historic Preservation Officer (SHPO) for review and concurrence as appropriate.

Please provide your response within thirty (30) calendar days from the date of this letter. However, should you find that an extension to the response is necessary, a reasonable amount may be granted upon request. If you have any questions regarding this matter please feel free to contact Tamra L. Reece, Senior Environmental Scientist, Hanson, treece@hanson-inc.com, (260) 610-2660, or, Michael Thomas, INDOT Project Manager, mthomas1@indot.in.gov, (812) 895-7358. Thank you in advance for your input.

Sincerely,



Tamra L. Reece
Senior Environmental Scientist
Hanson Professional Services Inc.

Attachments –
Maps/Graphics (Location, Topographic, Aerial Photo Map, Photo Log)

Duplicate pages removed, see Appendix B

The following agencies received early coordination letters:

<p>Kari Carmany-George Federal Highway Administration Federal Office Building, Room 254 575 North Pennsylvania Street Indianapolis, Indiana 46204 k.carmanygeorge@dot.gov</p>	<p>Michael Thomas Project Manager INDOT – Vincennes District 3650 S. US 41 Vincennes, IN 47591 mthomas1@indot.in.gov</p>
<p>Indiana Geological and Water Survey 611 N. Walnut Grove Bloomington, IN 47405 https://igs.indiana.edu/eAssessment</p>	<p>Ms. Deborah Snyder USACE Louisville District, Indianapolis Regulatory Office Indianapolis, IN 46216 RegulatoryApplicationsLRL@usace.army.mil</p>
<p>Environmental Coordinator Indiana Department of Natural Resources Division of Fish and Wildlife 402 W. Washington St., Rm. W273 Indianapolis, IN 46204 environmentalreview@dnr.in.gov</p>	<p>Erik Sandstedt Field Environmental Officer Chicago Regional Office US Department of Housing & Urban Development Metcalf Fed. Bldg. 77 W. Jackson Blvd., Room 2401 Chicago, IL 60604 erik.r.sandstedt@hud.gov</p>
<p>Edward Michael District 1 Greene County Commissioners 1 E. Main St. Bloomfield, IN 47424 ed.michael@co.greene.in.us</p>	<p>Ryan Falls Environmental Section Manager INDOT – Vincennes District 3650 S. US 41 Vincennes, IN 47591 RFalls@indot.in.gov</p>
<p>Greene County Historical Society 27 S. Washington St., P.O. Box 301 Bloomfield, IN 47424 greenecountyhistoricalsociety@yahoo.com</p>	<p>Kerri Roberts Greene County Health Department 217 E. Spring St., Suite 1 Bloomfield, IN 47424 kerri.roberts@co.greene.in.us</p>
<p>Robin McWilliams Field Supervisor US Fish and Wildlife Service Bloomington Indiana Field Office 620 S. Walker St. Bloomington, IN 47403 robin_mcwilliams@fws.gov</p>	<p>Roger Axe Director Greene County Emergency Management P.O. Box 222 Bloomfield, IN 47424 green-jeans@sbcglobal.net</p>
<p>John Allen State Conservationist Natural Resources Conservation Service 6013 Lakeside Blvd. Indianapolis, IN 46278 john.allen@usda.gov</p>	<p>Roger Hamilton Superintendent Greene County Highway Department 847 N. 800 W. Switz City, IN 47465 roger.hamilton@co.greene.in.us</p>
<p>Edward Strong Surveyor Greene County Surveyor's Office 1 E. Main St. Bloomfield, IN 47424 edward.strong@co.greene.in.us</p>	<p>Trent Provo Superintendent Eastern Greene Schools 1471 N. SR 43 Bloomfield, IN 47424 tprovo@egreene.k12.in.us</p>

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

DNR #: ER-24921

Request Received: August 8, 2022

Requestor: Hanson Professional Services, Inc
Tamra Reece
6510 Telecom Drive, Suite 210
Indianapolis, IN 46278

Project: SR 445 guardrail improvement, from 0.39 mile to 0.62 mile east of SR 54; Des #2100161

County/Site info: Greene

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

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

Regulatory Assessment: Formal approval by the Department of Natural Resources under the regulatory programs administered by the Division of Water is not required for this project.

Natural Heritage Database: The Natural Heritage Program's data have been checked. To date, no plant or animal species listed as state or federally threatened, endangered, or rare have been reported to occur in the project vicinity.

Fish & Wildlife Comments: We recommend a mitigation plan be developed for any unavoidable habitat impacts that will occur. The DNR's Habitat Mitigation Guidelines (and plant lists) can be found online at: <http://iac.iga.in.gov/iac/20200527-IR-312200284NRA.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, 1 inch to 2 inches in diameter-at-breast height (dbh), for each tree which is removed that is 10" dbh or greater (5:1 mitigation based on the number of large trees) or by using the 1:1 replacement ratio based on area depending on the type of habitat impacted (individual canopy tree removal in an urban streetscape or park-like environment versus removal of habitat supporting a tree canopy, woody understory, and herbaceous layer). Impacts under 0.10 acre in an 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.

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 with a mixture of native grasses, sedges, wildflowers, and also native hardwood trees and shrubs if any woody plants are disturbed during construction as soon as possible upon completion. Do not use any varieties of Tall Fescue or other non-native plants, including prohibited invasive species (see 312 IAC 18-3-25).
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,

THIS IS NOT A PERMIT

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

- crevices, or cavities) from April 1 through September 30.
4. Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the waterbody or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.
 5. Seed and protect all disturbed streambanks and slopes not protected by other methods that are 3:1 or steeper with erosion control blankets that are heavy-duty, biodegradable, and net free or that use loose-woven / Leno-woven netting to minimize the entrapment and snaring of small-bodied wildlife such as snakes and turtles (follow manufacturer's recommendations for selection and installation); seed and apply mulch on all other disturbed areas.

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

Date: September 7, 2022

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

August 10, 2022

Lane Page
6510 Telecom Dr. Ste. 210
Indianapolis, Indiana 46118

Dear Mr. Page:

The proposed SR 445 Guardrail Improvement project in Greene County, Indiana, (Des. No. 2100161) as referred to in your letter received August 8, 2022, will not cause a conversion of prime farmland.

If you need additional information, please contact John Allen at 317-295-5859 or john.allen@usda.gov.

Sincerely,

JOHN ALLEN
State Soil Scientist

Enclosures

Organization and Project Information

Project ID: 20H0008ZB
Des. ID: 2100161
Project Title: SR 445 Guardrail Improvement Project
Name of Organization: Hanson Professional Services Inc.
Requested by: Lane Page

Environmental Assessment Report

1. Geological Hazards:
 - Potential Karst
2. Mineral Resources:
 - Bedrock Resource: Moderate Potential
 - Sand and Gravel Resource: None documented in the area
3. Active or abandoned mineral resources extraction sites:
 - Petroleum Exploration Wells

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

DISCLAIMER:

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

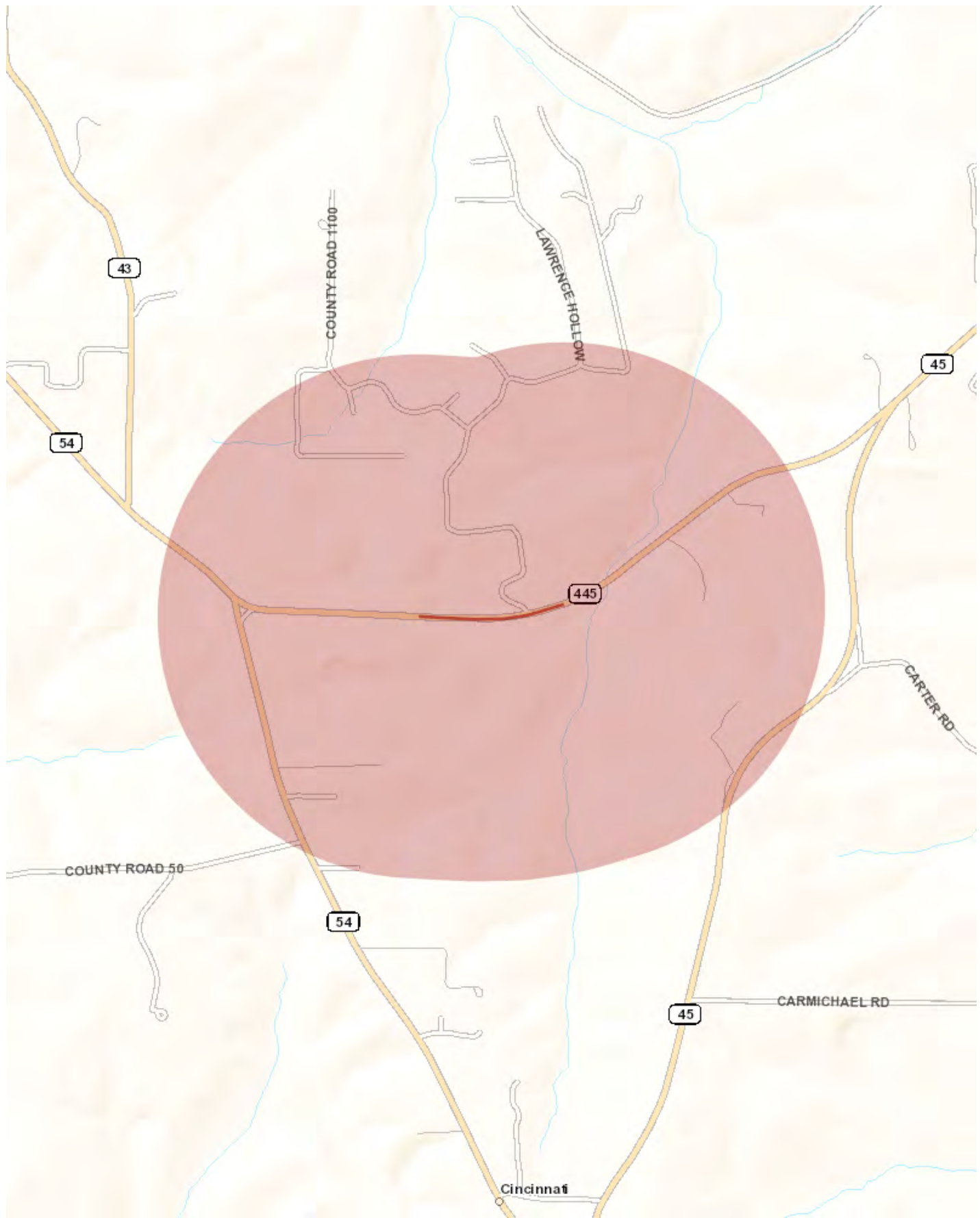
This information was furnished by Indiana Geological Survey

Address: 1001 E. 10th St., Bloomington, IN 47405

Email: IGSEnvir@indiana.edu

Phone: 812 855-7428

Date: August 08, 2022



Metadata:

- https://maps.indiana.edu/metadata/Hydrology/Karst_Sinkhole_Areas.html
- https://maps.indiana.edu/metadata/Geology/Petroleum_Wells.html
- https://maps.indiana.edu/metadata/Geology/Bedrock_Geology.html

Lane Page

From: Thomas, Michael J <MThomas1@indot.IN.gov>
Sent: Monday, August 8, 2022 1:03 PM
To: Lane Page
Subject: RE: Des 2100161 SR 445 Guardrail Improvement Project, Greene Co. - ECL

EXTERNAL SENDER STOP.THINK.QUESTION If this is unexpected, verify before you click links or open attachments.

Lane,

This looks good, thank you!

Michael J. Thomas

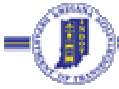
Project Manager

3650 South U.S. Highway 41

Vincennes, IN 47591

Phone: (812) 582-2729

Email: mthomas1@indot.in.gov



From: Lane Page <LPage@hanson-inc.com>
Sent: Monday, August 8, 2022 12:56 PM
To: Thomas, Michael J <MThomas1@indot.IN.gov>
Cc: Tamra Reece <TReece@hanson-inc.com>
Subject: Des 2100161 SR 445 Guardrail Improvement Project, Greene Co. - ECL

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Good afternoon,

Hanson Professional Services Inc. is working on the INDOT Project Des. 2100161, SR 445 Guardrail Improvement Project. Please take a moment to review the enclosed early coordination documents.

Thank you,



Lane Page, M.S. | *Environmental Consultant*
[Hanson Professional Services Inc.](#) | 6510 Telecom Dr. Ste. 210 | Indianapolis, IN 46278
w 317-293-9024 | c 224-355-6127 | [Facebook](#) | [Twitter](#) | [LinkedIn](#)

Subject: RE: Des 2100161 SR 445 Guardrail Improvement Project, Greene Co. - ECL
 Date: 8/8/2022 2:55 PM
 From: "Falls, Ryan G" <RFalls@indot.IN.gov>
 To: "Lane Page" <LPage@hanson-inc.com>
 Cc: "Tamra Reece" <TReece@hanson-inc.com>

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Lane Page,

For projects with the large amount of r/w purchase, I always like to double check that it is not considered on new terrain. If not (which I could definitely see since it is a guardrail project) please disregard. If the r/w purchase is on new terrain, please coordinate with IDEM Wetlands and Stormwater Programs.

Thank you for the opportunity to respond to early coordination.

Ryan Falls

Capital Program Management-Senior Environmental Manager Supervisor

Indiana Department of Transportation

3650 South US Highway 41

Vincennes, IN 47591

Email: rfalls@indot.IN.gov

Cell: 812-582-1387



From: Lane Page <LPage@hanson-inc.com>
Sent: Monday, August 8, 2022 12:56 PM
To: Falls, Ryan G <RFalls@indot.IN.gov>
Cc: Tamra Reece <TReece@hanson-inc.com>
Subject: Des 2100161 SR 445 Guardrail Improvement Project, Greene Co. - ECL

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Good afternoon,

Hanson Professional Services Inc. is working on the INDOT Project Des. 2100161, SR 445 Guardrail Improvement Project. Please take a moment to review the enclosed early coordination documents.

Thank you,

Lane Page, M.S. | *Environmental Consultant*
[Hanson Professional Services Inc.](http://www.hansonps.com) | 6510 Telecom Dr. Ste. 210 | Indianapolis, IN 46278
 w 317-293-9024 | c 224-355-6127 | [Facebook](https://www.facebook.com/hansonps) | [Twitter](https://twitter.com/hansonps) | [LinkedIn](https://www.linkedin.com/company/hansonps)

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From: Rehder, Crystal <CREhder@indot.IN.gov>
Sent: Thursday, October 20, 2022 1:32 PM
To: Tamra Reece
Cc: Rachel Henry; Jeff Bushur; Moffett, Mary; Thomas, Michael J
Subject: RE: Des 2100161 SR 445 Guardrail Improvement - Karst Survey
Attachments: USP DISCOVERY OF KARST FEATURES.pdf



Hi Tammy,

I don't need to sign off for anything going into the CE. Just make sure the attached Karst MOU is included in the letting documents and permit application.

Thanks!

Crystal Rehder
(317) 499-3274

From: Tamra Reece <TReece@hanson-inc.com>
Sent: Wednesday, October 19, 2022 12:22 PM
To: Rehder, Crystal <CREhder@indot.IN.gov>
Cc: Rachel Henry <rhenry@hmbpe.com>; Jeff Bushur <JBushur@hanson-inc.com>
Subject: FW: Des 2100161 SR 445 Guardrail Improvement - Karst Survey

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Crystal,

Please see Rachels summary below based on construction limits and current photos. Please let me know if you need to sign off on this or if you need any additional information from us that can be included in our CE documentation. Thanks for all your help.

Thanks
Tammy

Tamra L. Reece | *Senior Environmental Scientist*
[Hanson Professional Services Inc.](#) | 6510 Telecom Drive, Suite 210 | Indianapolis, IN 46278
c 260-610-2600 | [Facebook](#) | [Twitter](#) | [LinkedIn](#)
TRUSTED PARTNERS. PROVEN RESULTS.

From: Rachel Henry <rhenry@hmbpe.com>
Sent: Wednesday, October 5, 2022 1:33 PM
To: Payton Fischer <pfischer@hanson-inc.com>; Tamra Reece <TReece@hanson-inc.com>
Subject: RE: Des 2100161 SR 445 Guardrail Improvement - Karst Survey

Lane Page

From: McWilliams, Robin <robin_mcwilliams@fws.gov>
Sent: Monday, August 22, 2022 11:44 AM
To: Lane Page
Subject: Re: [EXTERNAL] Des 2100161 SR 445 Guardrail Improvement Project, Greene Co. - INDOT Project

EXTERNAL SENDER STOP.THINK.QUESTION If this is unexpected, verify before you click links or open attachments.

Dear Lane,

This responds to your recent letter requesting our comments on the aforementioned project.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et. seq.) and are consistent with the intent of the National Environmental Policy Act of 1969, the Endangered Species Act of 1973, and the U. S. Fish and Wildlife Service's Mitigation Policy.

The project is within the range of the Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*) and should follow the new Indiana bat/northern long-eared bat programmatic consultation process, if applicable (*i.e.* a federal transportation nexus is established). The Service has 14 days after a "Not Likely to Adversely Affect" determination letter is generated to review the project and provide additional comments or request additional information; if you do not receive a response from us within 14 days, we have no additional comments. Please note the area is within the 10 miles Critical Habitat buffer for the Indiana bat so tree-clearing should be done between November 15 and March 30th.

The project is within an area of known karst topography. If any karst features are encountered or affected, please recoordinate with our office.

Wetland and stream impacts may require permits from the U.S. Army Corps of Engineers, the Indiana Department of Environmental Management's Water Quality Certification program, and the Indiana Department of Natural Resources. Wetland impacts should be avoided, and any unavoidable impacts should be compensated for in accordance with agency mitigation guidelines.

Based on a review of the information you provided, the U.S. Fish and Wildlife Service has no other comments on the project as currently proposed. However, should new information arise pertaining to project plans or a revised species list be published, it will be necessary for the Federal agency to reinitiate consultation. Standard recommendations are provided below.

We appreciate the opportunity to comment at this early stage of project planning. If you have any questions about our recommendations, please contact me at robin_mcwilliams@fws.gov or you may call 812-334-4261 x. 207.

Sincerely,
Robin McWilliams Munson

Standard Recommendations:

1. Do not clear trees or understory vegetation outside the construction zone boundaries. **(This restriction is not related to the “tree clearing” restriction for potential Indiana Bat habitat.)**
2. Restrict below low-water work in streams to placement of culverts, piers, pilings and/or footings, shaping of the spill slopes around the bridge abutments, and placement of riprap. Culverts should span the active stream channel, should be either embedded or a 3-sided or open-arch culvert, and be installed where practicable on an essentially flat slope. When an open-bottom culvert or arch is used in a stream, which has a good natural bottom substrate, such as gravel, cobbles and boulders, the existing substrate should be left undisturbed beneath the culvert to provide natural habitat for the aquatic community.
3. Restrict channel work and vegetation clearing to the minimum necessary for installation of the stream crossing structure.
4. Minimize the extent of hard armor (riprap) in bank stabilization by using bioengineering techniques whenever possible. If riprap is utilized for bank stabilization, extend it below low-water elevation to provide aquatic habitat.
5. Implement temporary erosion and sediment control methods within areas of disturbed soil. All disturbed soil areas upon project completion will be vegetated following INDOT’s standard specifications.
6. Avoid all work within the inundated part of the stream channel (in perennial streams and larger intermittent streams) during the fish spawning season (April 1 through June 30), except for work within sealed structures such as caissons or cofferdams that were installed prior to the spawning season. No equipment shall be operated below Ordinary High-Water Mark during this time unless the machinery is within the caissons or on the cofferdams.
7. Evaluate wildlife crossings under bridge/culverts projects in appropriate situations. Suitable crossings include flat areas below bridge abutments with suitable ground cover, high water shelves in culverts, amphibian tunnels and diversion fencing

Robin McWilliams Munson
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
620 South Walker Street
Bloomington, IN 47403
812-334-4261

Mon-Tues 8-3:30p
Wed-Thurs 8:30-3p Telework

From: Lane Page <LPage@hanson-inc.com>
Sent: Monday, August 8, 2022 12:57 PM
To: McWilliams, Robin <robin_mcwilliams@fws.gov>
Cc: Tamra Reece <TRece@hanson-inc.com>
Subject: [EXTERNAL] Des 2100161 SR 445 Guardrail Improvement Project, Greene Co. - INDOT Project

Payton Fischer

From: Falls, Ryan G <RFalls@indot.IN.gov>
Sent: Monday, November 14, 2022 11:28 AM
To: Tamra Reece
Cc: Payton Fischer; Jeff Bushur
Subject: DES 2100161: USFWS GIS (Negative); MYSO Hib Buffer (Yes); MYSO CH Determination (NLAA)

Tamra Reece,

I have conducted a check of the USFWS confidential bat database for Des No. 2100161, and the results are stated below.

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; however, the project is located within the 10-mile MYSO hibernacula buffer. Tree removal dates for projects located within the hibernacula buffer are from November 15 to March 31 (instead of the standard October 1 to March 31) to allow for the conclusion of fall swarming around the hibernacula. The Rangewide Programmatic Consultation for the Indiana bat and northern long-eared bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects," which is located on the INDOT Environmental Policy website. Note, this does not qualify as documented habitat or a hibernaculum.

Additionally, this project is mapped within Indiana Bat Critical Habitat. INDOT on behalf of FHWA, has determined that this project may affect, but will not likely adversely affect the Indiana Bat Critical Habitat. This was concurred with by USFWS on 11/14/2022.

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.

Ryan Falls

Capital Program Management-Senior Environmental Manager Supervisor

Indiana Department of Transportation
3650 South US Highway 41
Vincennes, IN 47591

Email: rfalls@indot.IN.gov

Cell: 812-582-1387



From: McWilliams, Robin <robin_mcwilliams@fws.gov>
Sent: Monday, November 14, 2022 11:19 AM
To: Falls, Ryan G <RFalls@indot.IN.gov>
Cc: Payton Fischer <pfischer@hanson-inc.com>; Jeff Bushur <JBushur@hanson-inc.com>; Tamra Reece <TReece@hanson-inc.com>
Subject: Re: [EXTERNAL] RE: Des 2100161 SR 445 Guardrail Improvement - MYSO CH Determination - NLAA

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Dear Ryan,

This responds to your recent letter requesting our comments on the aforementioned project.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et. seq.) and are consistent with the intent of the National Environmental Policy Act of 1969, the Endangered Species Act of 1973, and the U. S. Fish and Wildlife Service's Mitigation Policy.

The project is within the range of the Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*) and should follow the Indiana bat/northern long-eared bat Federal Highway Administration, Federal Rail Administration, and Federal Transit Administration's programmatic consultation process, if applicable (*i.e.* a federal transportation nexus is established). The Service has 14 days after a “not likely to adversely affect” determination letter is generated to review the project and provide additional comments or request additional information; if you do not receive a response from us within 14 days, we have no additional comments.

As mentioned in your letter, the project is also within the 10 mile buffer of Indiana bat Critical Habitat. Based on the information you have provide including location, amount of clearing, and seasonal tree clearing restrictions, we concur with your determination that the project is not likely to adversely affect the Critical Habitat.

Notice of Proposed ESA Listing Changes

Northern Long-eared Bat

In March 2022, the Service proposed to “uplist” the NLEB from its current status as federally threatened to federally endangered. The NLEB original listing and current uplisting proposal are due to sharp population declines associated with white-nose syndrome (WNS), a deadly fungal disease affecting hibernating bats such as the NLEB. Assuming that this proposed uplisting action is finalized (likely to go into effect in Dec. 2022), the current 4(d) rule for the NLEB would no longer apply as such rules are only applicable to threatened species (not endangered ones). If no form of take of NLEBs is anticipated for this project (*i.e.* the project is determined to be "no effect" or "may affect, not likely to adversely affect"), no reinitiation of this consultation will be necessary should the species’ proposed status change be finalized and go into effect.

Tricolored Bat

On September 14, 2022, the Service published a proposal in the Federal Register to list the tricolored bat (*Perimyotis subflavus*; TCB) as endangered under the Endangered Species Act (ESA). The Service has up to 12 months from the date the proposal was published to make a final determination, either to list the tricolored bat under the Act or to withdraw the proposal. The Service determined the bat faces extinction primarily due to the range-wide impacts of WNS. Because TCB populations have been greatly reduced due to WNS, surviving bat populations are now more vulnerable to other stressors such as human disturbance and habitat loss. Species proposed for listing are not afforded protection under the Act; however, as soon as a listing becomes effective (typically 30 days after publication of the final rule in the Federal Register), the prohibitions against jeopardizing its continued existence and “take” will apply. Therefore, if this project or other future or existing projects have the potential to adversely affect the TCB after the potential new listing goes into effect, we recommend that the effects of the project on TCBs and their habitat be analyzed to determine whether authorization under ESA section 7 or 10 is necessary. Projects or programs with an existing section 7 biological opinion may require reinitiation of consultation, and projects with an existing section 10 incidental take permit may require an amendment to provide uninterrupted authorization for covered activities. Contact your local U.S. Fish and Wildlife Service Ecological Services Office for assistance.

The ESA {section 7(a)(4)} requires federal agencies to consider whether their actions may jeopardize a species proposed for federal listing (*i.e.*, conduct a jeopardy analysis). If a proposed action is deemed likely to jeopardize a proposed species (or adversely modify proposed critical habitat)(none has been proposed for TCB), then the federal action agency is required to confer with the Service, but the prohibition against carrying out such an action (*i.e.*, a project that would jeopardize the species) does not go into effect until the listing itself is finalized and effective.

The following is an excerpt from the Service’s Section 7 Handbook...

Conference - a process of early interagency cooperation involving informal or formal discussions between a Federal agency and the Services pursuant to section 7(a)(4) of the Act regarding the likely impact of an action on proposed species or proposed critical habitat. **Conferences are: (1) required for proposed Federal actions likely to jeopardize proposed species, or destroy or adversely modify proposed critical habitat;**

The Service has not yet developed any guidelines regarding what level of impact may jeopardize the TCB at the species level. Therefore, in the interim, the Indiana Field Office recommends that any project that does not result in adverse impacts to Indiana bat and/or NLEB (*i.e.*, "no effect" or "may affect, not likely to adversely affect" determinations) would not rise to the level of jeopardy for TCB. The INFO also recommends that action

agencies include a written jeopardy analysis (including a conceptual logic path) for the TCB in their administrative record for each project that may affect the species.

The TCB is a small insectivorous bat that typically overwinters in caves, abandoned mines and tunnels, and road-associated culverts (southern portion of the range) and spends the rest of the year in forested habitats, typically roosting among live and dead leaf clusters in tree branches. For more information on TCB and the proposed rule, please see: <https://www.fws.gov/species/tricolored-bat-perimyotis-subflavus> and for more information on WNS, please see: <https://www.whitenosesyndrome.org/>

Wetland and stream impacts may require permits from the U.S. Army Corps of Engineers, the Indiana Department of Environmental Management's Water Quality Certification program, and the Indiana Department of Natural Resources. Wetland impacts should be avoided, and any unavoidable impacts should be compensated for in accordance with agency mitigation guidelines.

Based on a review of the information you provided, the U.S. Fish and Wildlife Service has no other comments on the project as currently proposed. Should new information arise pertaining to project plans or a revised species list be published, it will be necessary for the Federal agency to reinitiate consultation. Standard recommendations are provided below.

We appreciate the opportunity to comment at this early stage of project planning. If you have any questions about our recommendations, please contact me at robin_mcwilliams@fws.gov or you may call 812-334-4261 x. 207.

Sincerely,

Robin McWilliams Munson

Standard Recommendations:

1. Do not clear trees or understory vegetation outside the construction zone boundaries. **(This restriction is not related to the "tree clearing" restriction for potential Indiana Bat habitat.)**
2. Restrict below low-water work in streams to placement of culverts, piers, pilings and/or footings, shaping of the spill slopes around the bridge abutments, and placement of riprap.

Culverts should span the active stream channel, should be either embedded or a 3-sided or open-arch culvert, and be installed where practicable on an essentially flat slope. When an open-bottom culvert or arch is used in a stream, which has a good natural bottom substrate, such as gravel, cobbles and boulders, the existing substrate should be left undisturbed beneath the culvert to provide natural habitat for the aquatic community.

3. Restrict channel work and vegetation clearing to the minimum necessary for installation of the stream crossing structure.
4. Minimize the extent of hard armor (riprap) in bank stabilization by using bioengineering techniques whenever possible. If riprap is utilized for bank stabilization, extend it below low-water elevation to provide aquatic habitat.
5. Implement temporary erosion and sediment control methods within areas of disturbed soil. All disturbed soil areas upon project completion will be vegetated following INDOT's standard specifications.
6. Avoid all work within the inundated part of the stream channel (in perennial streams and larger intermittent streams) during the fish spawning season (April 1 through June 30), except for work within sealed structures such as caissons or cofferdams that were installed prior to the spawning season. No equipment shall be operated below Ordinary High-Water Mark during this time unless the machinery is within the caissons or on the cofferdams.
7. Evaluate wildlife crossings under bridge/culverts projects in appropriate situations. Suitable crossings include flat areas below bridge abutments with suitable ground cover, high water shelves in culverts, amphibian tunnels and diversion fencing

Robin McWilliams Munson
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
620 South Walker Street
Bloomington, IN 47403
812-334-4261

Mon-Tues 8-3:30p
Wed-Thurs 8:30-3p Telework

From: Falls, Ryan G <RFalls@indot.IN.gov>
Sent: Monday, November 14, 2022 11:04 AM
To: McWilliams, Robin <robin_mcwilliams@fws.gov>
Cc: Payton Fischer <pfischer@hanson-inc.com>; Jeff Bushur <JBushur@hanson-inc.com>; Tamra Reece <TReece@hanson-inc.com>
Subject: [EXTERNAL] RE: Des 2100161 SR 445 Guardrail Improvement - MYSO CH Determination - NLAA

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Robin,

Please see the correspondence below for this project. This is a guardrail improvement project with box culvert work and tree clearing in MYSO Critical Habitat. Please see attachment for more details. This project is also located within a MYSO Hibernacula Buffer.

With the impact data below for streams/wetlands/terrestrial habitat-tree clearing, restrictive dates for tree clearing being updated to November 15-March 30, and tree clearing AMMs that will be provided by IPaC upon completion, INDOT on behalf of FHWA, has determined that this project may affect, but will not likely adversely affect the Indiana Bat Critical Habitat.

INDOT is asking for your concurrence with this finding.

If any more information is needed, please feel free to reach out to me or Tamra Reece.

Thank you,

Ryan Falls

Capital Program Management-Senior Environmental Manager Supervisor

Indiana Department of Transportation

3650 South US Highway 41

Vincennes, IN 47591

Email: rfalls@indot.IN.gov

Cell: 812-582-1387



855-463-6848

From: Tamra Reece <TReece@hanson-inc.com>

Sent: Monday, November 7, 2022 10:55 AM

To: Falls, Ryan G <RFalls@indot.IN.gov>

Cc: Payton Fischer <pfischer@hanson-inc.com>; Jeff Bushur <JBushur@hanson-inc.com>

Subject: RE: Des 2100161 SR 445 Guardrail Improvement - USFWS Bay Layer Review Request

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

Hello Ryan,

I hope you are having a great day. Please see the questions below, answers are in red for the project listed in the subject line of this email. Sorry, this took so long to get back to you.

Thanks

Tammy



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Indiana Ecological Services Field Office
620 South Walker Street
Bloomington, IN 47403-2121
Phone: (812) 334-4261 Fax: (812) 334-4273

In Reply Refer To:

November 17, 2022

Project Code: 2023-0015680

Project Name: Des. 2100161 SR 445 Guardrail Improvement Project, Greene County, Indiana

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

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

determine if your project will have an adverse effect on listed species and will help lead you through the Section 7 process. For all **wind energy projects and projects that include installing towers that use guy wires or are over 200 feet in height**, please contact this field office directly for assistance, even if no federally listed plants, animals or critical habitat are present within your proposed project or may be affected by your proposed project.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of

Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. **Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.**

Attachment(s):

- Official Species List
- Migratory Birds
- Wetlands

Official Species List

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

This species list is provided by:

Indiana Ecological Services Field Office

620 South Walker Street
Bloomington, IN 47403-2121
(812) 334-4261

Project Summary

Project Code: 2023-0015680
Project Name: Des. 2100161 SR 445 Guardrail Improvement Project, Greene County, Indiana
Project Type: Road/Hwy - Maintenance/Modification
Project Description: The proposed project is located on State Road (SR) 445, from 0.39 mile east of SR 54 to 0.62 mile east of SR 54, Sections 15 and 22, Township 7 North, Range 3 West, in Center Township, Greene County, Indiana.

This section of SR 445 is a two-lane rural major collector. Proposed work under Des. No. 2100161 includes increasing the shoulders to a minimum of 4 ft. and widening the roadside embankment to accommodate the guardrail. The roadside embankment will range from a 2:1 slope to a 4:1 slope with riprap placed for slope stabilization along SR 445. Four structures (Str.) within the project limits will have work done to incorporate them into the new roadside embankment.

Structure 4 , CV-445-28-000.52, is a 100-foot (ft.) long, 5-ft. by 5-ft. reinforced concrete box (RCB). The inlet will be extended 24 ft. and the outlet will be extended 14 ft. Structure 3, CLV-67652, is a 50-ft long, 18-inch (in.) reinforced concrete pipe (RCP) that will be abandoned in place with flowable fill. Structure 2 is a 20-ft long, 15-in RCP that will be removed entirely. Structure 1, CLV-67648 will remain in place and will have riprap placed at the outlet for scour protection.

This project is anticipated to require 3.328 acres of permanent right-of-way (ROW). No temporary ROW is anticipated. All work will occur within 65 feet of the existing roadway. There is suitable summer habitat within the project action area. Temporary lighting may be used but is not anticipated; should temporary lighting be required; lighting will be directed away from suitable summer habitat during the active season. No permanent lighting will be added or altered.

Field surveys were conducted on May 13, 2022. The project will require approximately 0.43 acre of tree removal. Tree removal will occur during the inactive season. Species of trees to be removed include tuliptree (*Liriodendron tulipifera*), American sycamore (*Platanus occidentalis*), Bradford pear (*Pyrus calleryana*), Eastern redbud (*Cercis canadensis*), Eastern red cedar (*Juniperus virginiana*), red maple (*Acer rubrum*), Eastern black walnut (*Juglans nigra*), Eastern cottonwood (*Populus deltoides*), and black cherry (*Prunus serotina*). Estimated timing of work is scheduled to begin in March 2024, with a standard 8-hour work schedule.

A review of the USFWS database by the Indiana Department of Transportation Environmental Services Division (INDOT ESD) on November 14, 2022, did not indicate the presence of endangered bat species in or within the 0.5 mile radius of the project area. It did indicate that the project is within critical habitat for the endangered Indiana bat. Correspondence with INDOT and the USFWS indicated that this project is not likely to adversely affect the Indiana bat Critical Habitat. The project is located within the 10-mile MYSO hibernacula buffer. Tree removal dates for projects located within the hibernacula buffer are from November 15 to March 31 (instead of the standard October 1 to March 31) to allow for the conclusion of fall swarming around the hibernacula.

Drainage structure inspections were conducted on May 13, 2022. No evidence of bats was found during the inspection. Evidence of birds was found in Structure 4, CV 445-28-000.52.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@39.036265400000005,-86.72818216139032,14z>



Counties: Greene County, Indiana

Endangered Species Act Species

There is a total of 3 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 overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <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

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Indiana Bat <i>Myotis sodalis</i> https://ecos.fws.gov/ecp/species/5949#crithab	Final

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

-
1. The [Migratory Birds Treaty Act](#) of 1918.
 2. The [Bald and Golden Eagle Protection Act](#) of 1940.
 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern \(BCC\) list](#) or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Cerulean Warbler <i>Dendroica cerulea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/2974	Breeds Apr 23 to Jul 20
Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
Field Sparrow <i>Spizella pusilla</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 1 to Aug 15

NAME	BREEDING SEASON
Kentucky Warbler <i>Oporornis formosus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 20
Prairie Warbler <i>Dendroica discolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

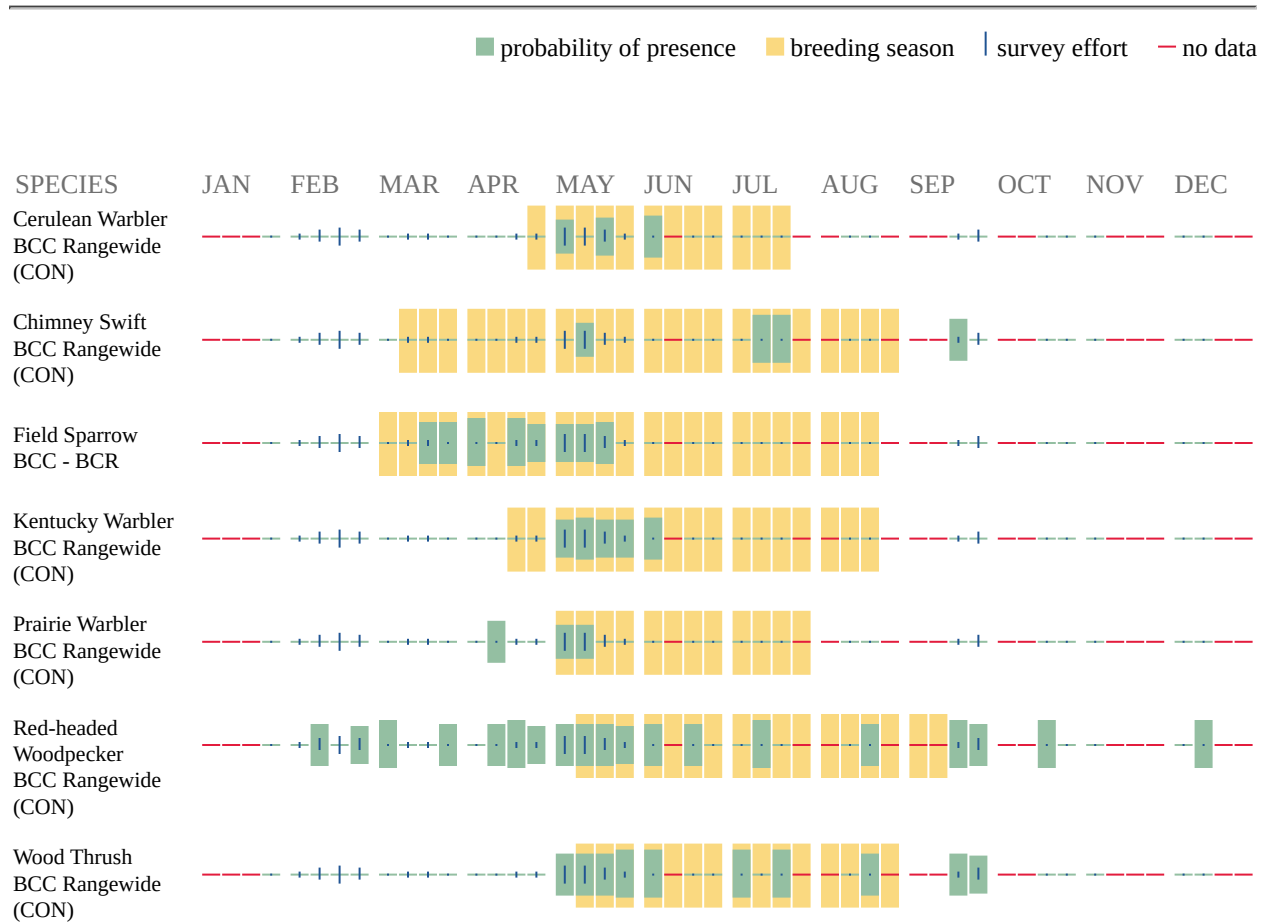
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (-)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>

- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

IPaC User Contact Information

Agency: Hanson Professional Services Inc.
Name: Payton Fischer
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Lead Agency Contact Information

Lead Agency: Federal Highway Administration



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Indiana Ecological Services Field Office
620 South Walker Street
Bloomington, IN 47403-2121
Phone: (812) 334-4261 Fax: (812) 334-4273

In Reply Refer To:

November 21, 2022

Project code: 2023-0015680

Project Name: Des. 2100161 SR 445 Guardrail Improvement Project, Greene County, Indiana

Subject: Concurrence verification letter for the 'Des. 2100161 SR 445 Guardrail Improvement Project, Greene County, Indiana' 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 dated November 21, 2022 to verify that the **Des. 2100161 SR 445 Guardrail Improvement Project, Greene County, Indiana** (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*). Consultation with the 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.

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

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

For Proposed Actions that include bridge/culvert or structure removal, replacement, and/or maintenance activities: If your initial bridge/culvert or structure assessments failed to detect Indiana bats, but you later detect bats prior to, or during construction, please submit the Post Assessment Discovery of Bats at Bridge/Culvert or Structure Form (User Guide Appendix E) to this Service Office. 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.

The following species may occur in your project area and **are not** covered by this determination:

- Monarch Butterfly *Danaus plexippus* Candidate

Project Description

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

Name

Des. 2100161 SR 445 Guardrail Improvement Project, Greene County, Indiana

Description

The proposed project is located on State Road (SR) 445, from 0.39 mile east of SR 54 to 0.62 mile east of SR 54, Sections 15 and 22, Township 7 North, Range 3 West, in Center Township, Greene County, Indiana.

This section of SR 445 is a two-lane rural major collector. Proposed work under Des. No. 2100161 includes increasing the shoulders to a minimum of 4 ft. and widening the roadside embankment to accommodate the guardrail. The roadside embankment will range from a 2:1 slope to a 4:1 slope with riprap placed for slope stabilization along SR 445. Four structures (Str.) within the project limits will have work done to incorporate them into the new roadside embankment.

Structure 4 , CV-445-28-000.52, is a 100-foot (ft.) long, 5-ft. by 5-ft. reinforced concrete box (RCB). The inlet will be extended 24 ft. and the outlet will be extended 14 ft. Structure 3, CLV-67652, is a 50-ft long, 18-inch (in.) reinforced concrete pipe (RCP) that will be abandoned in place with flowable fill. Structure 2 is a 20-ft long, 15-in RCP that will be removed entirely. Structure 1, CLV-67648 will remain in place and will have riprap placed at the outlet for scour protection.

This project is anticipated to require 3.328 acres of permanent right-of-way (ROW). No temporary ROW is anticipated. All work will occur within 65 feet of the existing roadway. There is suitable summer habitat within the project action area. Temporary lighting may be used but is not anticipated; should temporary lighting be required; lighting will be directed away from suitable summer habitat during the active season. No permanent lighting will be added or altered.

Field surveys were conducted on May 13, 2022. The project will require approximately 0.43 acre of tree removal. Tree removal will occur during the inactive season. Species of trees to be removed include tuliptree (*Liriodendron tulipifera*), American sycamore (*Platanus occidentalis*), Bradford pear (*Pyrus calleryana*), Eastern redbud (*Cercis canadensis*), Eastern red cedar (*Juniperus virginiana*), red maple (*Acer rubrum*), Eastern black walnut (*Juglans nigra*), Eastern cottonwood (*Populus deltoides*), and black cherry (*Prunus serotina*). Estimated timing of work is scheduled to begin in March 2024, with a standard 8-hour work schedule.

A review of the USFWS database by the Indiana Department of Transportation Environmental Services Division (INDOT ESD) on November 14, 2022, did not indicate the

presence of endangered bat species in or within the 0.5 mile radius of the project area. It did indicate that the project is within critical habitat for the endangered Indiana bat.

Correspondence with INDOT and the USFWS indicated that this project is not likely to adversely affect the Indiana bat Critical Habitat. The project is located within the 10-mile MYSO hibernacula buffer. Tree removal dates for projects located within the hibernacula buffer are from November 15 to March 31 (instead of the standard October 1 to March 31) to allow for the conclusion of fall swarming around the hibernacula.

Drainage structure inspections were conducted on May 13, 2022. No evidence of bats was found during the inspection. Evidence of birds was found in Structure 4, CV 445-28-000.52.

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 [User's Guide for the Range-wide Programmatic Consultation for Indiana Bat and Northern Long-eared Bat](#).

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

- *INDOT_InspectionReport_2022.pdf* <https://ipac.ecosphere.fws.gov/project/NXQFCRYTVFAD5MRQMLUD47VSBI/projectDocuments/119233603>
- *Bat_InspectionReports_20220519.pdf* <https://ipac.ecosphere.fws.gov/project/NXQFCRYTVFAD5MRQMLUD47VSBI/projectDocuments/119233604>

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?

Yes

35. Will the activities that use percussives (**not including tree removal/trimming or bridge/structure work**) and/or increase noise levels above existing traffic/background levels be conducted *during* the active season^[1]?

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

Yes

36. Will *any* activities that use percussives (**not including tree removal/trimming or bridge/structure work**) and/or increase noise levels above existing traffic/background levels be conducted *during* the inactive season^[1]?

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

No

37. 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

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

No

39. Are the project activities that use percussives (not including tree removal/trimming or bridge/structure work) consistent with a Not Likely to Adversely Affect determination in this key?

Automatically answered

Yes, because the activities are within 300 feet of the existing road/rail surface, greater than 0.5 miles from a hibernacula, and conducted during the active season within undocumented habitat.

40. 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

41. 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.

42. 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.

43. 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

44. **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

45. **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

46. **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

47. **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

48. **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

49. **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 triangulation/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

50. **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.

0.43

4. Please describe the proposed bridge work:

Structure 4 , CV-445-28-000.52, is a 100-foot (ft.) long, 5-ft. by 5-ft. reinforced concrete box (RCB). The inlet will be extended 24 ft. and the outlet will be extended 14 ft. Structure 3, CLV-67652, is a 50-ft long, 18-inch (in.) reinforced concrete pipe (RCP) that will be abandoned in place with flowable fill. Structure 2 is a 20-ft long, 15-in corrugated metal pipe (CMP) that will be removed entirely. Structure 1, CLV-67648, will remain in place and will have riprap placed at the outlet for scour protection.

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

March 2024

6. Please enter the date of the bridge assessment:

May 13, 2022

Avoidance And Minimization Measures (AMMs)

This determination key result includes the commitment to implement the following Avoidance and Minimization Measures (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.

TREE REMOVAL AMM 1

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

LIGHTING AMM 1

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

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.

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.

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

This key was last updated in IPaC on October 11, 2022. 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.

IPaC User Contact Information

Agency: Indiana Department of Transportation

Name: Ryan Falls

Address: 3650 South U.S. Highway 41

City: Vincennes

State: IN

Zip: 47591

Email: rfalls@indot.in.gov

Phone: 8125821387

Lead Agency Contact Information

Lead Agency: Federal Highway Administration




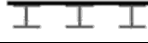



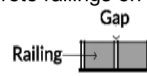

Bridge/Structure Bat Assessment Form

Date & Time of Assessment: 5/13/2022 10am	DOT Project Number: 2100161	Route/Facility Carried: SR 445	County: Greene
Federal Structure ID: CLV-67648	Structure Coordinates (latitude and longitude): 39.036161, -86.731433	Structure Height (approximate): 15 in.	Structure Length: 67 ft.
Structure Type (check one)		Structure Material (check all that apply)	
<i>Bridge Construction Style</i>		<i>Deck Material</i>	<i>Beam Material</i> <i>End/Back Wall Material</i>
<input type="radio"/> Cast-in-place	<input type="radio"/> Pre-stressed Girder	<input type="checkbox"/> Metal	<input type="checkbox"/> None <input type="checkbox"/> Concrete
<input type="radio"/> Flat Slab/Box	<input type="radio"/> Steel I-beam	<input type="checkbox"/> Concrete	<input type="checkbox"/> Concrete
<input type="radio"/> Truss	<input type="radio"/> Covered	<input type="checkbox"/> Timber	<input type="checkbox"/> Steel
<input type="radio"/> Parallel Box Beam	<input type="radio"/> Other:	<input type="checkbox"/> Open grid	<input type="checkbox"/> Timber
		<input type="checkbox"/> Other:	<input type="checkbox"/> Other:
<i>Culvert Type</i>		<i>Culvert Material</i>	
<input type="radio"/> Box	<input type="radio"/> Other Structure	<input checked="" type="checkbox"/> Metal	<input type="radio"/> Yes <input type="radio"/> No
<input checked="" type="radio"/> Pipe/Round		<input type="checkbox"/> Concrete	<input type="radio"/> Unknown
<input type="radio"/> Other:		<input type="checkbox"/> Plastic	<i>Notes:</i>
		<input type="checkbox"/> Stone/Masonry	
		<input type="checkbox"/> Other:	
Crossings Traversed (check all that apply)		Surrounding Habitat (check all that apply)	
<input type="checkbox"/> Bare ground	<input type="checkbox"/> Open vegetation	<input type="checkbox"/> Agricultural	<input type="checkbox"/> Grassland
<input type="checkbox"/> Rip-rap	<input type="checkbox"/> Closed vegetation	<input type="checkbox"/> Commercial	<input type="checkbox"/> Ranching
<input type="checkbox"/> Flowing water	<input type="checkbox"/> Railroad	<input type="checkbox"/> Residential-urban	<input checked="" type="checkbox"/> Riparian/wetland
<input type="checkbox"/> Standing water	<input type="checkbox"/> Road/trail - Type:	<input checked="" type="checkbox"/> Residential-rural	<input type="checkbox"/> Mixed use
<input checked="" type="checkbox"/> Seasonal water	<input type="checkbox"/> Other:	<input checked="" type="checkbox"/> Woodland/forested	<input type="checkbox"/> Other:
Areas Assessed (check all that apply)			
Check all areas that apply. If an area is not present in the structure, check the "not present" box. Document all bat indicators observed during the assessment. Include the species present, if known, and provide photo documentation as indicated.			
Area (check if assessed)	Assessment Notes	Evidence of Bats (include photos if present)	
<input checked="" type="checkbox"/> All crevices and cracks: Bridges/culverts: rough surfaces or imperfections in concrete Other structures: soffits, rafters, attic areas	<input type="checkbox"/> Not present No evidence of bats observed.	<input type="checkbox"/> Visual - live # dead #	<input type="checkbox"/> Audible <input type="checkbox"/> Species
		<input type="checkbox"/> Guano	<input type="checkbox"/> Odor
		<input type="checkbox"/> Staining	<input type="checkbox"/> Photos
<input type="checkbox"/> Concrete surfaces (open roosting on concrete)	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Visual - live # dead #	<input type="checkbox"/> Audible <input type="checkbox"/> Species
		<input type="checkbox"/> Guano	<input type="checkbox"/> Odor
		<input type="checkbox"/> Staining	<input type="checkbox"/> Photos
<input type="checkbox"/> Spaces between concrete end walls and the bridge deck	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Visual - live # dead #	<input type="checkbox"/> Audible <input type="checkbox"/> Species
		<input type="checkbox"/> Guano	<input type="checkbox"/> Odor
		<input type="checkbox"/> Staining	<input type="checkbox"/> Photos
<input type="checkbox"/> Crack between concrete railings on top of the bridge deck	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Visual - live # dead #	<input type="checkbox"/> Audible <input type="checkbox"/> Species
		<input type="checkbox"/> Guano	<input type="checkbox"/> Odor
		<input type="checkbox"/> Staining	<input type="checkbox"/> Photos
<input type="checkbox"/> Vertical surfaces on concrete I-beams	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Visual - live # dead #	<input type="checkbox"/> Audible <input type="checkbox"/> Species
		<input type="checkbox"/> Guano	<input type="checkbox"/> Odor
		<input type="checkbox"/> Staining	<input type="checkbox"/> Photos
<input type="checkbox"/> Spaces between walls, ceiling joists	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Visual - live # dead #	<input type="checkbox"/> Audible <input type="checkbox"/> Species
		<input type="checkbox"/> Guano	<input type="checkbox"/> Odor
		<input type="checkbox"/> Staining	<input type="checkbox"/> Photos
<input type="checkbox"/> Weep holes, scupper drains, and inlets/pipes	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Visual - live # dead #	<input type="checkbox"/> Audible <input type="checkbox"/> Species
		<input type="checkbox"/> Guano	<input type="checkbox"/> Odor
		<input type="checkbox"/> Staining	<input type="checkbox"/> Photos
<input type="checkbox"/> All guiderails	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Visual - live # dead #	<input type="checkbox"/> Audible <input type="checkbox"/> Species
		<input type="checkbox"/> Guano	<input type="checkbox"/> Odor
		<input type="checkbox"/> Staining	<input type="checkbox"/> Photos
<input type="checkbox"/> All expansion joints	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Visual - live # dead #	<input type="checkbox"/> Audible <input type="checkbox"/> Species
		<input type="checkbox"/> Guano	<input type="checkbox"/> Odor
		<input type="checkbox"/> Staining	<input type="checkbox"/> Photos
Name: Payton Fischer		Signature:	

Bridge/Structure Bat Assessment Form

Date & Time of Assessment: 5/13/2022 10am	DOT Project Number: 2100161	Route/Facility Carried: N/A (field entrance)	County: Greene
Federal Structure ID: N/A Str. 2	Structure Coordinates (latitude and longitude): 39.036057, -86.730405	Structure Height (approximate): 15 in.	Structure Length: 20 ft.
Structure Type (check one)		Structure Material (check all that apply)	
<i>Bridge Construction Style</i>		<i>Deck Material</i>	<i>Beam Material</i> <i>End/Back Wall Material</i>
<input type="radio"/> Cast-in-place	<input type="radio"/> Pre-stressed Girder	<input type="checkbox"/> Metal	<input type="checkbox"/> None <input type="checkbox"/> Concrete
<input type="radio"/> Flat Slab/Box	<input type="radio"/> Steel I-beam	<input type="checkbox"/> Concrete	<input type="checkbox"/> Concrete
<input type="radio"/> Truss	<input type="radio"/> Covered	<input type="checkbox"/> Timber	<input type="checkbox"/> Steel
<input type="radio"/> Parallel Box Beam	<input type="radio"/> Other:	<input type="checkbox"/> Open grid	<input type="checkbox"/> Timber
		<input type="checkbox"/> Other:	<input type="checkbox"/> Other:
<i>Culvert Type</i>		<i>Culvert Material</i>	
<input type="radio"/> Box	<input type="radio"/> Other Structure	<input type="checkbox"/> Metal	<input type="radio"/> Yes <input type="radio"/> No
<input checked="" type="radio"/> Pipe/Round		<input checked="" type="checkbox"/> Concrete	<input type="radio"/> Unknown
<input type="radio"/> Other:		<input type="checkbox"/> Plastic	<i>Notes:</i>
		<input type="checkbox"/> Stone/Masonry	
		<input type="checkbox"/> Other:	
Crossings Traversed (check all that apply)		Surrounding Habitat (check all that apply)	
<input type="checkbox"/> Bare ground	<input type="checkbox"/> Open vegetation	<input type="checkbox"/> Agricultural	<input type="checkbox"/> Grassland
<input type="checkbox"/> Rip-rap	<input type="checkbox"/> Closed vegetation	<input type="checkbox"/> Commercial	<input type="checkbox"/> Ranching
<input type="checkbox"/> Flowing water	<input type="checkbox"/> Railroad	<input type="checkbox"/> Residential-urban	<input type="checkbox"/> Riparian/wetland
<input type="checkbox"/> Standing water	<input type="checkbox"/> Road/trail - Type:	<input type="checkbox"/> Residential-rural	<input type="checkbox"/> Mixed use
<input checked="" type="checkbox"/> Seasonal water	<input type="checkbox"/> Other:	<input type="checkbox"/> Woodland/forested	<input type="checkbox"/> Other:
Areas Assessed (check all that apply)			
Check all areas that apply. If an area is not present in the structure, check the "not present" box. Document all bat indicators observed during the assessment. Include the species present, if known, and provide photo documentation as indicated.			
Area (check if assessed)	Assessment Notes	Evidence of Bats (include photos if present)	
<input checked="" type="checkbox"/> All crevices and cracks: Bridges/culverts: rough surfaces or imperfections in concrete Other structures: soffits, rafters, attic areas	<input type="checkbox"/> Not present No evidence of bats observed.	<input type="checkbox"/> Visual - live # dead #	<input type="checkbox"/> Audible <input type="checkbox"/> Species
<input type="checkbox"/> Concrete surfaces (open roosting on concrete)	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Guano	<input type="checkbox"/> Odor
<input type="checkbox"/> Spaces between concrete end walls and the bridge deck	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Staining	<input type="checkbox"/> Photos
<input type="checkbox"/> Crack between concrete railings on top of the bridge deck	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Visual - live # dead #	<input type="checkbox"/> Audible <input type="checkbox"/> Species
<input type="checkbox"/> Vertical surfaces on concrete I-beams	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Guano	<input type="checkbox"/> Odor
<input type="checkbox"/> Spaces between walls, ceiling joists	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Staining	<input type="checkbox"/> Photos
<input type="checkbox"/> Weep holes, scupper drains, and inlets/pipes	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Visual - live # dead #	<input type="checkbox"/> Audible <input type="checkbox"/> Species
<input type="checkbox"/> All guiderails	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Guano	<input type="checkbox"/> Odor
<input type="checkbox"/> All expansion joints	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Staining	<input type="checkbox"/> Photos
Name: Payton Fischer		Signature:	

Bridge/Structure Bat Assessment Form

Date & Time of Assessment: 5/13/2022 10am	DOT Project Number: 2100161	Route/Facility Carried: SR 445	County: Greene	
Federal Structure ID: CLV-67652	Structure Coordinates: 39.036121, (latitude and longitude) -86.729857	Structure Height (approximate): 18 in.	Structure Length: 50 ft.	
Structure Type (check one)		Structure Material (check all that apply)		
<i>Bridge Construction Style</i>		<i>Deck Material</i>	<i>Beam Material</i> <i>End/Back Wall Material</i>	
<input type="radio"/> Cast-in-place 	<input type="radio"/> Pre-stressed Girder 	<input type="checkbox"/> Metal	<input type="checkbox"/> None <input type="checkbox"/> Concrete	
<input type="radio"/> Flat Slab/Box 	<input type="radio"/> Steel I-beam 	<input type="checkbox"/> Concrete	<input type="checkbox"/> Concrete <input type="checkbox"/> Timber	
<input type="radio"/> Truss 	<input type="radio"/> Covered 	<input type="checkbox"/> Timber	<input type="checkbox"/> Steel <input type="checkbox"/> Stone/Masonry	
<input type="radio"/> Parallel Box Beam 	<input type="radio"/> Other:	<input type="checkbox"/> Open grid	<input type="checkbox"/> Timber <input type="checkbox"/> Other:	
<i>Culvert Type</i>		<i>Culvert Material</i>		
<input type="radio"/> Box	<input type="radio"/> Other Structure	<input type="checkbox"/> Metal	<input type="radio"/> Yes <input type="radio"/> No	
<input checked="" type="radio"/> Pipe/Round		<input checked="" type="checkbox"/> Concrete	<input type="radio"/> Unknown	
<input type="radio"/> Other:		<input type="checkbox"/> Plastic	<i>Notes:</i>	
Crossings Traversed (check all that apply)		Surrounding Habitat (check all that apply)		
<input type="checkbox"/> Bare ground	<input type="checkbox"/> Open vegetation	<input type="checkbox"/> Agricultural		<input type="checkbox"/> Grassland
<input type="checkbox"/> Rip-rap	<input type="checkbox"/> Closed vegetation	<input type="checkbox"/> Commercial		<input type="checkbox"/> Ranching
<input type="checkbox"/> Flowing water	<input type="checkbox"/> Railroad	<input type="checkbox"/> Residential-urban	<input checked="" type="checkbox"/> Riparian/wetland	
<input type="checkbox"/> Standing water	<input type="checkbox"/> Road/trail - Type:	<input checked="" type="checkbox"/> Residential-rural	<input type="checkbox"/> Mixed use	
<input checked="" type="checkbox"/> Seasonal water	<input type="checkbox"/> Other:	<input checked="" type="checkbox"/> Woodland/forested	<input type="checkbox"/> Other:	
Areas Assessed (check all that apply)				
Check all areas that apply. If an area is not present in the structure, check the "not present" box. Document all bat indicators observed during the assessment. Include the species present, if known, and provide photo documentation as indicated.				
Area (check if assessed)	Assessment Notes	Evidence of Bats (include photos if present)		
<input checked="" type="checkbox"/> All crevices and cracks: Bridges/culverts: rough surfaces or imperfections in concrete Other structures: soffits, rafters, attic areas	<input type="checkbox"/> Not present No evidence of bats observed.	<input type="checkbox"/> Visual - live # dead #	<input type="checkbox"/> Audible <input type="checkbox"/> Species	
<input type="checkbox"/> Concrete surfaces (open roosting on concrete)	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Guano	<input type="checkbox"/> Odor	
<input type="checkbox"/> Spaces between concrete end walls and the bridge deck	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Staining	<input type="checkbox"/> Photos	
<input type="checkbox"/> Crack between concrete railings on top of the bridge deck 	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Visual - live # dead #	<input type="checkbox"/> Audible <input type="checkbox"/> Species	
<input type="checkbox"/> Vertical surfaces on concrete I-beams	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Guano	<input type="checkbox"/> Odor	
<input type="checkbox"/> Spaces between walls, ceiling joists	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Staining	<input type="checkbox"/> Photos	
<input type="checkbox"/> Weep holes, scupper drains, and inlets/pipes	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Visual - live # dead #	<input type="checkbox"/> Audible <input type="checkbox"/> Species	
<input type="checkbox"/> All guiderails	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Guano	<input type="checkbox"/> Odor	
<input type="checkbox"/> All expansion joints	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Staining	<input type="checkbox"/> Photos	
Name: Payton Fischer		Signature: 		

Bridge/Structure Bat Assessment Form

Date & Time of Assessment 5/13/2022 10am	DOT Project Number 2100161	Route/Facility Carried SR 445	County Greene
Federal Structure ID CV 445-28-000.52	Structure Coordinates (latitude and longitude) 39.036197, -86.728302	Structure Height (approximate) 5 ft.	Structure Length 100 ft.
Structure Type (check one)		Structure Material (check all that apply)	
<i>Bridge Construction Style</i>		<i>Deck Material</i>	<i>Beam Material</i> <i>End/Back Wall Material</i>
<input type="radio"/> Cast-in-place	<input type="radio"/> Pre-stressed Girder	<input type="checkbox"/> Metal	<input type="checkbox"/> None <input type="checkbox"/> Concrete
<input type="radio"/> Flat Slab/Box	<input type="radio"/> Steel I-beam	<input type="checkbox"/> Concrete	<input type="checkbox"/> Concrete
<input type="radio"/> Truss	<input type="radio"/> Covered	<input type="checkbox"/> Timber	<input type="checkbox"/> Steel
<input type="radio"/> Parallel Box Beam	<input type="radio"/> Other:	<input type="checkbox"/> Open grid	<input type="checkbox"/> Timber
		<input type="checkbox"/> Other:	<input type="checkbox"/> Other:
<i>Culvert Type</i>		<i>Culvert Material</i>	
<input checked="" type="radio"/> Box	<input type="radio"/> Other Structure	<input type="checkbox"/> Metal	<input type="radio"/> Yes <input type="radio"/> No
<input type="radio"/> Pipe/Round		<input checked="" type="checkbox"/> Concrete	<input type="radio"/> Unknown
<input type="radio"/> Other:		<input type="checkbox"/> Plastic	<i>Notes:</i>
		<input type="checkbox"/> Stone/Masonry	
		<input type="checkbox"/> Other:	
Crossings Traversed (check all that apply)		Surrounding Habitat (check all that apply)	
<input type="checkbox"/> Bare ground	<input type="checkbox"/> Open vegetation	<input type="checkbox"/> Agricultural	<input type="checkbox"/> Grassland
<input type="checkbox"/> Rip-rap	<input type="checkbox"/> Closed vegetation	<input type="checkbox"/> Commercial	<input type="checkbox"/> Ranching
<input checked="" type="checkbox"/> Flowing water	<input type="checkbox"/> Railroad	<input type="checkbox"/> Residential-urban	<input checked="" type="checkbox"/> Riparian/wetland
<input type="checkbox"/> Standing water	<input type="checkbox"/> Road/trail - Type:	<input checked="" type="checkbox"/> Residential-rural	<input type="checkbox"/> Mixed use
<input type="checkbox"/> Seasonal water	<input type="checkbox"/> Other:	<input checked="" type="checkbox"/> Woodland/forested	<input type="checkbox"/> Other:
Areas Assessed (check all that apply)			
Check all areas that apply. If an area is not present in the structure, check the "not present" box. Document all bat indicators observed during the assessment. Include the species present, if known, and provide photo documentation as indicated.			
Area (check if assessed)	Assessment Notes	Evidence of Bats (include photos if present)	
<input checked="" type="checkbox"/> All crevices and cracks: Bridges/culverts: rough surfaces or imperfections in concrete Other structures: soffits, rafters, attic areas	<input type="checkbox"/> Not present No evidence of bats observed.	<input type="checkbox"/> Visual - live # dead #	<input type="checkbox"/> Audible <input type="checkbox"/> Species
		<input type="checkbox"/> Guano	<input type="checkbox"/> Odor
		<input type="checkbox"/> Staining	<input type="checkbox"/> Photos
<input type="checkbox"/> Concrete surfaces (open roosting on concrete)	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Visual - live # dead #	<input type="checkbox"/> Audible <input type="checkbox"/> Species
		<input type="checkbox"/> Guano	<input type="checkbox"/> Odor
		<input type="checkbox"/> Staining	<input type="checkbox"/> Photos
<input type="checkbox"/> Spaces between concrete end walls and the bridge deck	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Visual - live # dead #	<input type="checkbox"/> Audible <input type="checkbox"/> Species
		<input type="checkbox"/> Guano	<input type="checkbox"/> Odor
		<input type="checkbox"/> Staining	<input type="checkbox"/> Photos
<input type="checkbox"/> Crack between concrete railings on top of the bridge deck	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Visual - live # dead #	<input type="checkbox"/> Audible <input type="checkbox"/> Species
		<input type="checkbox"/> Guano	<input type="checkbox"/> Odor
		<input type="checkbox"/> Staining	<input type="checkbox"/> Photos
<input type="checkbox"/> Vertical surfaces on concrete I-beams	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Visual - live # dead #	<input type="checkbox"/> Audible <input type="checkbox"/> Species
		<input type="checkbox"/> Guano	<input type="checkbox"/> Odor
		<input type="checkbox"/> Staining	<input type="checkbox"/> Photos
<input type="checkbox"/> Spaces between walls, ceiling joists	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Visual - live # dead #	<input type="checkbox"/> Audible <input type="checkbox"/> Species
		<input type="checkbox"/> Guano	<input type="checkbox"/> Odor
		<input type="checkbox"/> Staining	<input type="checkbox"/> Photos
<input type="checkbox"/> Weep holes, scupper drains, and inlets/pipes	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Visual - live # dead #	<input type="checkbox"/> Audible <input type="checkbox"/> Species
		<input type="checkbox"/> Guano	<input type="checkbox"/> Odor
		<input type="checkbox"/> Staining	<input type="checkbox"/> Photos
<input type="checkbox"/> All guiderails	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Visual - live # dead #	<input type="checkbox"/> Audible <input type="checkbox"/> Species
		<input type="checkbox"/> Guano	<input type="checkbox"/> Odor
		<input type="checkbox"/> Staining	<input type="checkbox"/> Photos
<input type="checkbox"/> All expansion joints	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Visual - live # dead #	<input type="checkbox"/> Audible <input type="checkbox"/> Species
		<input type="checkbox"/> Guano	<input type="checkbox"/> Odor
		<input type="checkbox"/> Staining	<input type="checkbox"/> Photos
Name: Payton Fischer		Signature:	



Photo 1. Inlet of CLV-67648, viewing north, 5/13/2022



Photo 2. Looking through CLV-67648 at inlet, viewing north, 5/13/2022



Photo 3. Outlet of CLV-67648, viewing south, 5/13/2022



Photo 4. Looking through CLV-67648 at outlet, viewing south, 5/13/2022



Photo 5. Inlet of Structure 2, viewing southeast, 5/13/2022



Photo 6. Looking through Structure 2 at inlet, viewing east, 5/13/2022



Photo 7. Outlet of Structure 2, viewing southwest, 5/13/2022



Photo 8. Looking through Structure 2 at outlet, viewing west, 5/13/2022



Photo 9. Inlet of CLV-67652, viewing north, 5/13/2022



Photo 10. Looking through CLV-67652 at inlet, viewing north, 5/13/2022



Photo 11. Outlet of CLV-67652, viewing south, 5/13/2022



Photo 12. Looking through CLV-67652 at outlet, viewing south, 5/13/2022



Photo 13. Inlet of CV 455-28-000.52, viewing southeast, 5/13/2022



Photo 14. Looking through CV 455-28-000.52 at inlet, viewing southeast, 5/13/2022



Photo 15. Outlet of CV 445-28-000.52, viewing west, 5/13/2022



Photo 16. Looking through CV 445-28-000.52 at outlet, viewing northwest, 5/13/2022

APPENDIX D

Section 106 of the NHPA

Minor Projects PA Project Submittal and Assessment Form

SECTION 1

Submittal of this form is only required for projects where Category B applies. Projects qualifying under Category A do not require submittal of this form. SECTION 2 (for Conditions of Category B.1 for curb/sidewalk) or SECTION 3 (for Conditions of Category B.9 for drainage structures) may be required as determined by INDOT-Cultural Resources Office (INDOT-CRO) review. INDOT-CRO will notify applicant if the Minor Projects PA does not apply.

Part 1: Project Information-Completed by Applicant (Consultant/PM/Project Sponsor/INDOT District Staff)*

**A qualified professional historian (QP) is not required to complete Part I INDOT-Cultural Resources Office (INDOT-CRO) staff will be responsible for completion of Part II.*

Original Submission Date: July 8, 2022

Amended Submission Date*:

**Consult with INDOT-CRO to determine whether an amendment is required. For revisions/updates to original form, please detail in applicable sections below. Please use red font to distinguish the revisions/updates.*

Submitted By (Provide Name and Firm/Organization):

Tamra L. Reece
Hanson Professional Services Inc.
6510 Telecom Dr., Suite 210
Indianapolis, IN 46278

Project Designation Number: 2100161

Route Number: State Road (SR) 445

Feature crossed (if applicable): Unnamed Tributary (UNT) to Beech Creek

City/Township: Center Township

County: Greene County

Project Description: Guardrail Improvement Project, from 0.39 mile east of SR 54 to 0.62 mile east of SR 54. The proposed project is located on SR 445, from 0.39 Mile East of SR 54 to 0.62 Mile East of SR 54 in Greene County. This section of SR 445 is a two-lane Major Collector. The landscape outside of the shoulders has a steep slope. The existing culvert is a 100-foot (ft.) long, 5 by 5 ft. reinforced concrete box (RCB) with wingwalls. Three other small structures that are 18 inches or smaller will be evaluated. (See information below for details on the small structures). The need is due to the crash history within the area. The purpose is to reduce the potential for severe roadway runoff crashes related to the steep slopes.

The proposed project is anticipated to install guardrail along the SR 445 roadway. This is expected to include a minimum paved shoulder of 4 ft. and widening of the embankment to accommodate the guardrail. The slopes of the roadside will be a 2.5 to 1 slope with riprap placed along the slope. Additionally, the existing box culvert will have the end sections lengthened due to the shoulder widening. The proposed maintenance of traffic is anticipated to require a full closure utilizing SR 45 as a detour route. Tree clearing is anticipated as part of this project. The project is anticipated to begin construction in Spring 2024.

If the project includes any curb, curb ramp, or sidewalk work, please specify the location(s) of such work:

N/A

Minor Projects PA Project Submittal and Assessment Form

For bridge or small structure projects, please list feature crossed, structure number, NBI number, and structure type:

Structure ID	Structure Number	Feature Crossed	Structure Type	Proposed Work
1	N/A	N/A	15-inch (in) corrugated metal pipe (CMP)	Riprap at outlet
2	N/A	N/A	15 in. CMP	Remove
3	N/A	N/A	18 in. CMP	Abandon in place
4	CV 445-28-000.52	UNT to Beech Creek	5 by 5 ft. RCB	Extend northern end 24 ft., extend southern end 14 ft., riprap placement at inlet and outlet, lengthen wingwalls

For bridge projects, is the bridge included in INDOT's Historic Bridge Inventory (<https://www.in.gov/indot/2531.htm>)?

Yes No

If yes, did the inventory determine the bridge eligible for or listed in the National Register of Historic Places? Please provide page # of entry in Historic Bridge Inventory.

Yes No
Inventory Page # _____

Will there be right-of-way acquisition as part of this project?

Yes No

If yes was checked above, please check all that apply:

Permanent Temporary Reacquisition

If applicable, identify right-of-way acquisition locations in text below and in attached mapping. Please specify how much (both temporary and permanent) and indicate what activities are included in the proposed right-of-way:

Total anticipated right-of-way (ROW) is expected to be approximately 3.328 acres. Approximately 1.812 acres will be acquired as new permanent ROW and approximately 1.516 will be reacquired permanent ROW. The ROW required for this project approximately 66 feet on the north side and 61 feet on the south side of SR 445.

Is there any potential for additional temporary right-of-way to be needed later for purposes such as access, staging, etc.?

Yes No

Minor Projects PA Project Submittal and Assessment Form

Archaeology (check one):

- All proposed activities are presumed to occur in previously disturbed soils***
**INDOT-CRO will notify you if project area includes undisturbed soils and requires an archaeological reconnaissance.*
- Project takes place in undisturbed soils and the archaeology report is included in submission or will be forthcoming***
** If an archaeology report is required, the Minor Projects PA Form will not be finalized until the report is reviewed and approved by INDOT-CRO. For INDOT-sponsored projects, INDOT-CRO may be able to complete the archaeological investigation. If you would like to request that INDOT-CRO complete an archaeological investigation, please contact the INDOT-CRO archaeology team lead. See CRM Pt. 1 Ch. 3 for current contact information.*

Please specify all applicable categories and condition(s) (highlight applicable conditions in yellow)*:

**Include full category text, including any conditions. INDOT-CRO will finalize categories upon their review.*

- B-4.** Installation of new safety appurtenances, including but not limited to, guardrails, barriers, glare screens, and crash attenuators, 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.

Minor Projects PA Project Submittal and Assessment Form

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.

Check if SECTION 2: Minor Projects PA Category B-1, Condition B-ii Submission is included

Check if SECTION 3: Minor Projects PA Category B-9, Condition B-i-c-2 or B-ii-b-3 Submission is included

Minor Projects PA Project Submittal and Assessment Form

Part II: Completed by INDOT-CRO

Amendments will be shown in red font.

Information reviewed (please check all that apply):

- General project location map USGS map Aerial photograph Soil survey data
General project area photos Archaeology Reports Historic Property Reports
Indiana Historic Buildings, Bridges, and Cemeteries Map/Interim Report
Bridge inspection information/BIAS Historic Bridge Inventory Database
SHAARD SHAARD GIS Street-view Imagery County GIS Data/Property Cards

Other (please specify): Stage 2 road plans on file at INDOT

Are there any commitments associated with this project? If yes, please explain and include in the Additional Comments Section below. yes no

Does the project result in a de minimis impact to a Section 4(f) protected historic resource? If yes, please explain in the Additional Comments Section below. yes no

Additional Comments:

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 Greene County. No listed resources are located immediately adjacent to the project area, a distance that serves as an adequate potential area of effects given the setting and scope of work.

The Indiana Historic Sites and Structures Inventory (IHSSI) and National Register information for Greene 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 *Greene County Interim Report* (2000; Center Township) was also referenced. All sites were reviewed through the IHBBCM, which contains the most recently updated SHAARD information. No IHSSI documented properties are 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 project area was evaluated through aerial photography, online street-view imagery, and the Greene County GIS website. The project area is located within a rural, dense wooded area. The adjacent building stock consist of mid-twentieth to early twenty-first century residential properties. None of the adjacent structures appear to possess the

Minor Projects PA Project Submittal and Assessment Form

significance or integrity necessary to be considered National Register-eligible. No unique features were noted adjacent to the proposed small structure replacements.

The most recent inspection report (B. Chawn; 03/24/2022) from the Bridge Inspection Application System (BIAS) was referenced to review the bridge. The subject structure (CV 445-028-00.53) carries SR 445 over an UNT to Beech Creek and is a 100-foot long 5ft. by 5ft. reinforced concrete box culvert. The date of construction is unknown. Online street view photography and BIAS show that the structure does not exhibit non-modern wood, stone, or brick structures or parts therein, or a context that suggests it might have engineering or historical significance.

With regard to Structure No. 1, this structure was not identified in a review of the IHBBCM. The structure was reviewed through photographs provided by the consultant that demonstrate that the structure is a 15-inch CMP with concrete headwalls. The structure is not included in BIAS due to the small size of the pipe. Photographs confirm the structure does not exhibit any wood, stone, or brick structures or parts therein. Additionally, it does not appear to possess any historical or engineering significance.

With regard to Structure No. 2, this structure was not identified in a review of the IHBBCM. The structure was reviewed through photographs provided by the consultant that demonstrate that the structure is a 15-inch CMP. The structure is not included in BIAS due to the small size of the pipe. Photographs confirm the structure does not exhibit any wood, stone, or brick structures or parts therein. Additionally, it does not appear to possess any historical or engineering significance.

With regard to Structure No. 3, this structure was not identified in a review of the IHBBCM. The structure was reviewed through photographs provided by the consultant that demonstrate that the structure is an 18-inch CMP with concrete headwalls. The structure is not included in BIAS due to the small size of the pipe. Photographs confirm the structure does not exhibit any wood, stone, or brick structures or parts therein. Additionally, it does not appear to possess any historical or engineering significance.

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

Archaeological Resources

An INDOT-CRO archaeologist who meets the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61 conducted a desktop review of the project area and determined that no archaeological sites have been recorded within or adjacent to it.

The existing and proposed R/W consist of a combination of road cuts, road fill embankments, and natural steep slopes. A buried telephone cable runs through the only relatively level portions of the project R/W. Due to the sloping and disturbed nature of the existing and proposed R/W, there are no archaeological concerns provided the project scope does not change.

Accidental Discovery: If any archaeological artifacts or human remains are uncovered during construction, demolition, or earth moving activities, construction within 100 feet of the discovery will be stopped, and INDOT-CRO and the Division of Natural Resources-Division of Historic Preservation and Archaeology (DNR-DHPA) will be notified immediately.

INDOT-CRO staff reviewer(s): Clint Kelly and Matt Coon

INDOT Approval Date: October 7, 2022

Amendment Approval Date (if applicable):

****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.*

Minor Projects PA Project Submittal and Assessment Form

Please attach the following to this form:

- **General Location Map.** This map should allow the INDOT-CRO reviewer to quickly locate the project.
- **Aerial photography map(s) of project area.** This map must include project limits. It may also include SHAARD data, but SHAARD data is not required.
- **If bridge or small structure project, please attach photographs of bridge or small structure.** Photographs can be found in inspection reports located in INDOT's Bridge Inspection Application System (BIAS), as well as other project documents, such as engineering assessments or mini-scopes.

Map depicting potential temporary and/or permanent right-of-way acquisitions. In the email submission to INDOT-CRO, please also include:

- **A GIS polygon shapefile or KMZ file of the project area** (shapefiles are preferred). Shapefiles should use "NAD_1983_UTM" projected coordinate system. In addition, these files should contain the following *text* attribute field: DES_NO. The project designation number should be entered in this field.
- **If the project takes place in undisturbed soils, attach the results of the archaeological investigation, if completed.** *Note: The MPPA Submission Form may be submitted before the archaeology report. INDOT-CRO staff will process the above-ground portion of the form in advance of the archaeological portion of the form. However, a completed determination form will not be returned to the applicant until after the archaeology report has been reviewed and approved by INDOT-CRO.*

APPENDIX E

Red Flag and Hazardous Materials



INDIANA DEPARTMENT OF TRANSPORTATION

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

PHONE: (855) 463-6848
(855) INDOT4U

Eric Holcomb, Governor
Michael Smith, Commissioner

Date: November 7, 2022

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

From: Tamra L. Reece
Hanson Professional Services Inc.
6510 Telecom Dr., Suite 210
Indianapolis, IN 46278
treece@hanson-inc.com

Re: RED FLAG INVESTIGATION
DES # 2100161, State Project
Guardrail Improvement
SR 445, from 0.39 Mile East of SR 54 to 0.62 Mile East of SR 54
Greene County, Indiana

PROJECT DESCRIPTION

Brief Description of Project: The proposed project is located on SR 445 from 0.39 mile east of SR 54 to 0.62 mile east of SR 54 in Center Township, Greene County, Indiana. The proposed work includes installation of guardrail along SR 445 and will include widening of the paved shoulders to 4 feet and grading of the embankment to accommodate the guardrail. The slopes of the roadside will be a maximum 2 to 1 slope with riprap placed along the slope. The existing 5 ft. by 5 ft. reinforced concrete box (RCB) culvert will be extended 24 ft. north and 14 ft. south of SR 445 to accommodate the guardrail installation.

Bridge Work Included in Project: Yes No Structure #(s) _____

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

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

Culvert Work Included in Project: Yes No Structure #(s) CV 445-028-00.53

Proposed right of way: Temporary # Acres _____ Permanent # Acres 1.8, Not Applicable

Type and proposed depth of excavation: Maximum depth of excavation for installation of the RCB extension and placement of riprap will be 24 inches below grade surface.

Maintenance of traffic (MOT): Preferred MOT for the project includes full roadway closure with a state detour.

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

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

Explanation:

Religious Facilities*: One (1) religious facility is mapped within the 0.5 mile search radius. Although the icon associated with Little Cincinnati Trinity Pentecost Church is mapped approximately 0.49 mile southwest of the project area, the facility is actually located approximately 0.51 mile southwest of the project area. No impact is expected.

Schools*: Although not mapped on the GIS layer, one (1) school was identified within the 0.5 mile search radius. Eastern Greene High School is located approximately 0.42 miles southwest 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	11
Canal Structures – Historic	N/A	Lakes	11
NPS NRI Listed	N/A	Floodplain - DFIRM	N/A
NWI-Lines	2	Cave Entrance Density	N/A
IDEM 303d Listed Streams and Lakes (Impaired)	N/A	Sinkhole Areas	N/A
Rivers and Streams	3	Sinking-Stream Basins	1

If unmapped water features are identified that might impact the project area, direct coordination with INDOT ESD Ecology and Waterway Permitting will occur.

Explanation:

NWI-Lines: Two (2) NWI-Line segments are located within the 0.5 mile search radius. The nearest NWI-Line segment is located approximately 0.06 miles east of the project area. No impact is expected.

Rivers and Streams: Three (3) river/stream segments are located within the 0.5 mile search radius. The nearest river/stream segment is located approximately 0.06 mile southeast of the project area. No impact is expected.

NWI-Wetlands: Eleven (11) wetland polygons are located within the 0.5 mile search radius. One (1) wetland is located adjacent to the project area. A Waters of the US Report is recommended based on mapped features, and coordination with INDOT ESD Ecology and Waterway Permitting will occur.

Lakes: Eleven (11) lakes are located within the 0.5 mile search radius. One (1) lake is located within the project area. A Waters of the US Report is recommended based on mapped features, and coordination with INDOT ESD Ecology and Waterway Permitting will occur.

Sinking-Stream Basins: One (1) sinking-stream basin is located within the 0.5 mile search radius. The sinking-stream basin is located approximately 0.39 miles west of the project area. No impact is expected.

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	2	Mineral Resources	N/A
Mines – Surface	N/A	Mines – Underground	N/A

Explanation:

Petroleum Wells: Two (2) petroleum wells are located within the 0.5 mile search radius. The nearest well is located approximately 0.29 miles south of the project area. No impact is expected.

HAZARDOUS MATERIAL CONCERNS TABLE AND SUMMARY

Hazardous Material Concerns			
Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Superfund	N/A	Manufactured Gas Plant Sites	N/A
RCRA Generator/ TSD	N/A	Open Dump Waste Sites	N/A
RCRA Corrective Action Sites	N/A	Restricted Waste Sites	N/A
State Cleanup Sites	N/A	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	N/A
Construction Demolition Waste	N/A	Institutional Controls	N/A
Solid Waste Landfill	N/A	NPDES Facilities	3
Infectious/Medical Waste Sites	N/A	NPDES Pipe Locations	N/A
Leaking Underground Storage (LUST) Sites	N/A	Notice of Contamination Sites	N/A

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

Graphics:

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

SITE LOCATION: YES

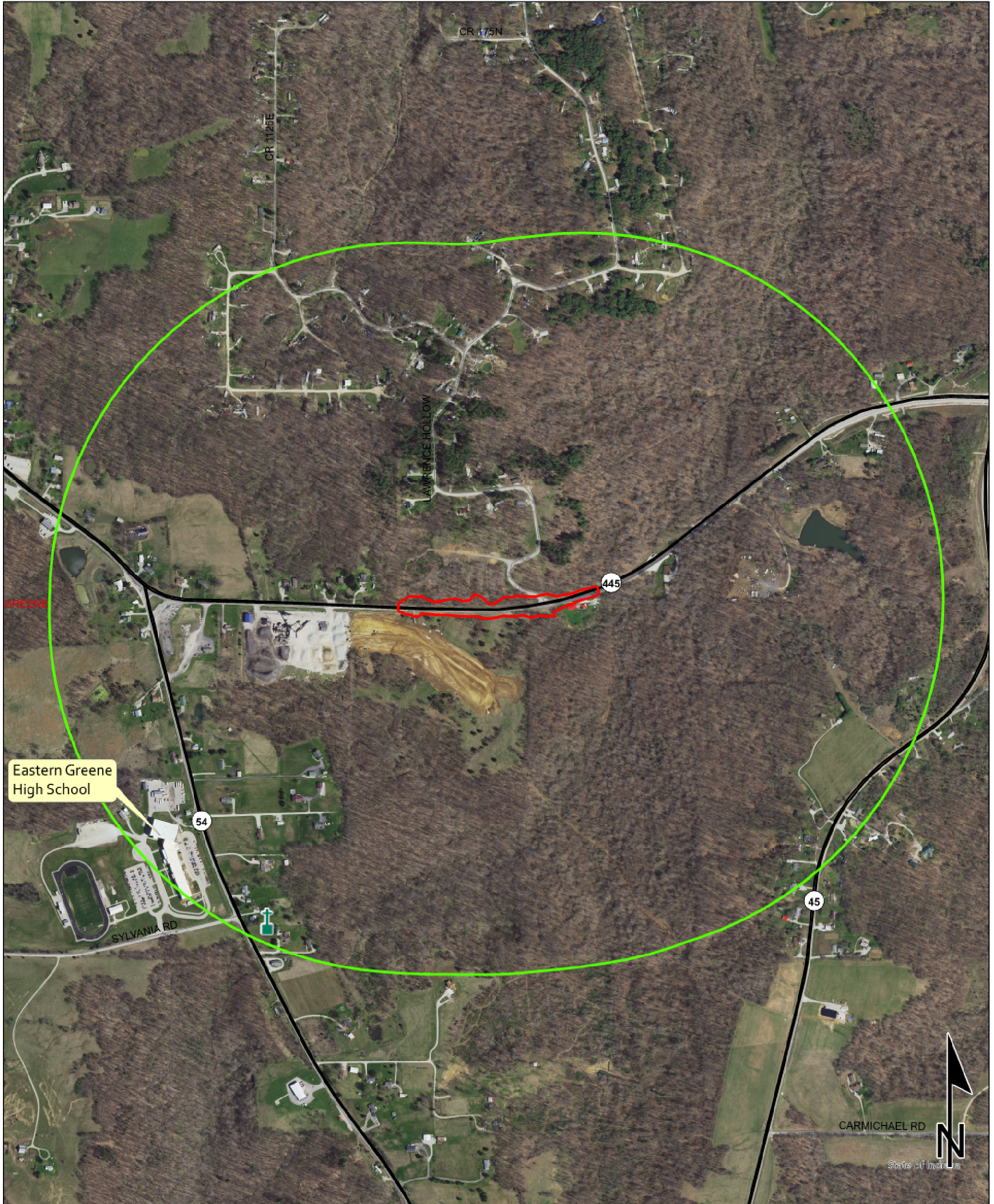
INFRASTRUCTURE: YES

WATER RESOURCES: YES

MINING/MINERAL EXPLORATION: YES

HAZARDOUS MATERIAL CONCERNS: YES

Red Flag Investigation - Infrastructure
 SR 445, from 0.39 Mile East of SR 54 to 0.62 Mile East of SR 54
 Des. No. 2100161, Guardrail Improvement
 Greene 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.



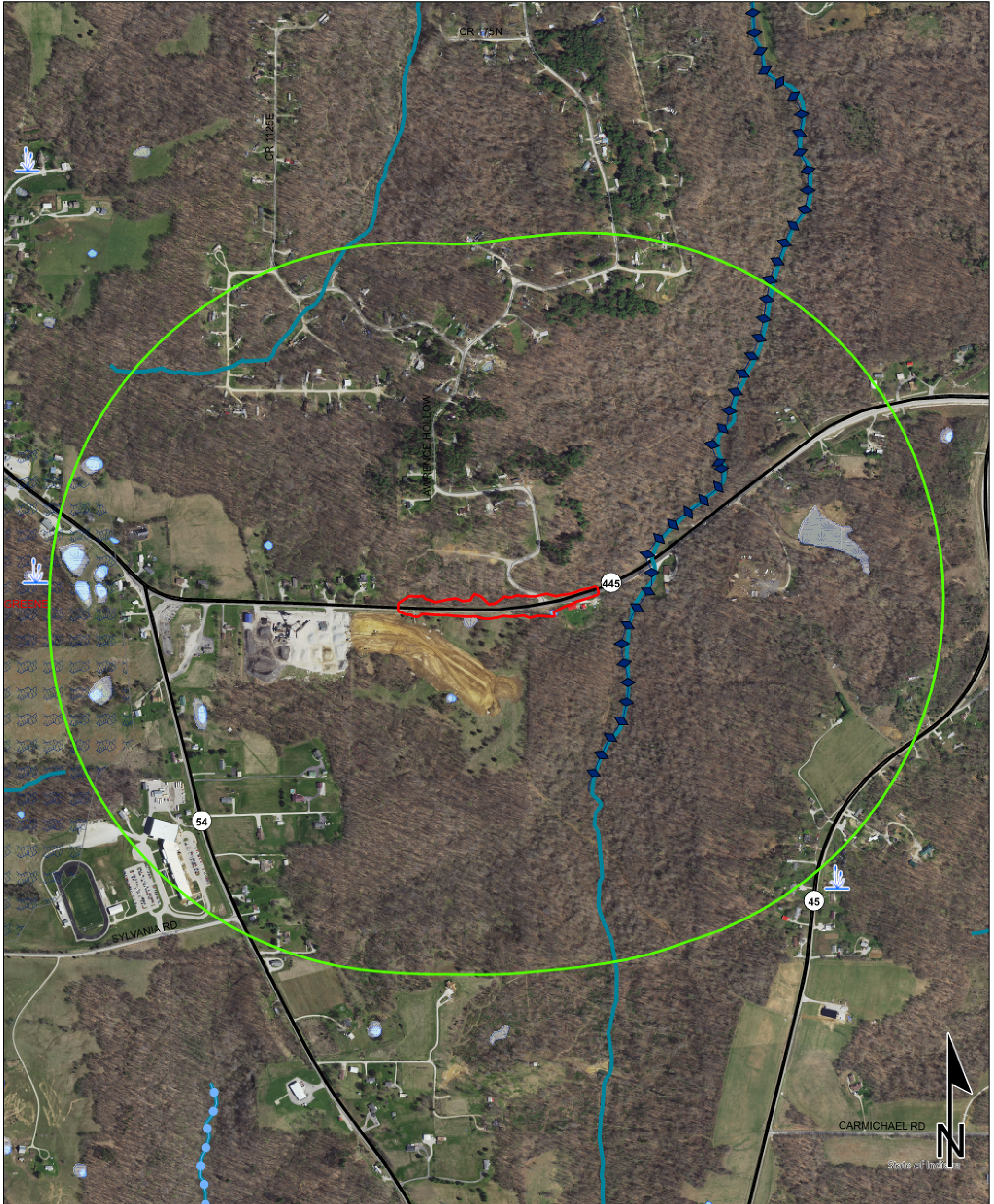
	Religious Facility		Recreation Facility		Project Area
	Airport		Pipeline		Half Mile Radius
	Cemeteries		Railroad		Toll
	Hospital		Trails		Interstate
	School		Managed Lands		State Route
			County Boundary		US Route
					Local Road

Red Flag Investigation - Water Resources

SR 445, from 0.39 Mile East of SR 54 to 0.62 Mile East of SR 54

Des. No. 2100161, Guardrail Improvement

Greene County, Indiana



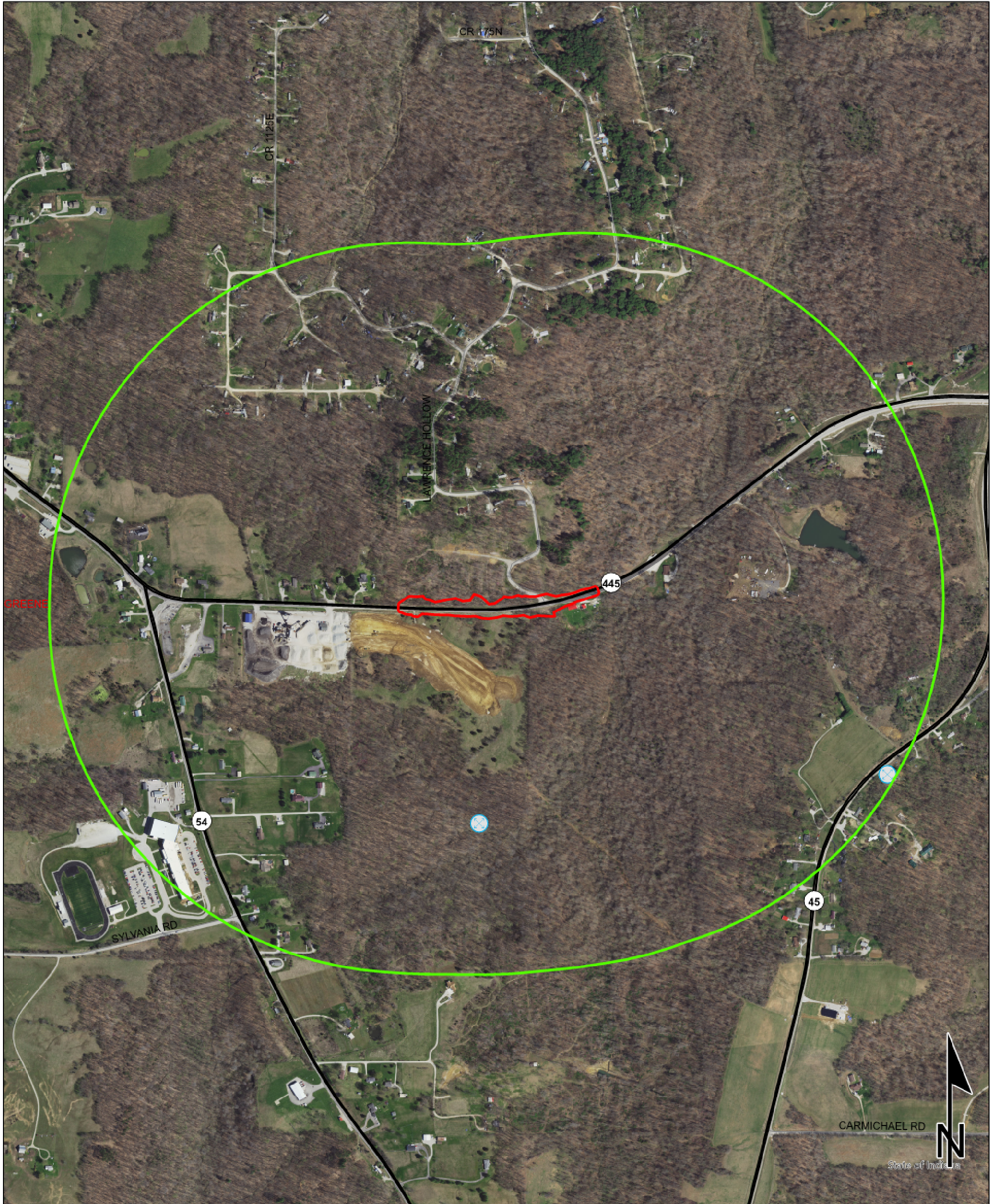
Sources:
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This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.



NWI - Point	Wetlands	Project Area
Karst Spring	Lake	Half Mile Radius
NWI - Line	Floodplain - DFIRM	Toll
Impaired_Stream_Lake	Cave Entrance Density	Interstate
NPS NRI listed	Sinkhole Area	State Route
River	Sinking-Stream Basin	US Route
Canal Structure - Historic	County Boundary	Local Road
Canal Route - Historic		

Red Flag Investigation - Mining and Mineral Exploration
 SR 445, from 0.39 Mile East of SR 54 to 0.62 Mile East of SR 54
 Des. No. 2100161, Guardrail Improvement
 Greene 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.

Oil and Gas Wells	County Boundary	Toll
Mineral Resources	Project Area	Interstate
Mine - Surface	Half Mile Radius	State Route
Mine - Underground		US Route
		Local Road