Appendix C

Early Coordination

INDIANA DEPARTMENT OF TRANSPORTATION

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

Eric Holcomb, Governor
Michael Smith, Commissioner

SAMPLE LETTER

March 7, 2023

Brittney Layton
Butler, Fairman and Seufert, Inc.
8450 Westfield Boulevard, Suite 300
Indianapolis, IN 46240

Re: Early Coordination Letter, Des. No.: 1800133, Bridge Project, State Road (SR) 158 over Silverville Branch, Lawrence County, IN

Dear Interested Agency:

The Indiana Department of Transportation (INDOT) Vincennes District and Federal Highway Administration (FHWA) intends to proceed with a project involving the aforementioned bridge in Lawrence 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 number and description in your reply.** We will incorporate your comments into a study of the project's environmental impacts.

This project is located on SR 158 over Silverville Branch (also known as Silverville Creek), approximately 7.94 miles west of SR 458 in Lawrence County. The United States Geological Survey (USGS) topographic map identifies this feature as Silverville Branch. This section of SR 158 is a two-lane Rural Major Collector and consists of two (2) 10-foot-wide through lanes bordered by 2-foot-wide shoulders. The existing bridge over Silverville Branch (Bridge # (158)58-47-03027) was built in 1938 and is a single-span stringer multi-beam/girder bridge. The structure is approximately 27-feet in length, with an out-to-out coping width of 31-feet 3-inches and a 45-degree skew. The bridge consists of two (2) 12-foot-wide through lanes bordered by 1-foot 6-inch-wide shoulders.

The need for this project is due to the deterioration of the deck, superstructure, and substructure, which were given condition ratings of 5 (out of 9), indicating fair condition, according to the most recent INDOT Bridge Inspection Report dated August 12, 2020. The superstructure is experiencing significant map cracking and heavy efflorescence while the substructure presents with extensive spalling. The purpose is to provide a crossing of SR 158 over Silverville Branch with a condition rating of at least 7 out of 9 (good condition).

The project proposes to remove and replace the bridge with a three-sided, flat-topped box culvert, with a length of approximately 32-feet and an out-to-out coping width of 37-feet. The culvert will carry two (2) 11-foot-wide through lanes of traffic with 3-foot-wide shoulders. Riprap will be installed (approximately 6-feet wide, 43-feet long, 4-feet-deep) in front of both vertical walls for scour prevention. Additional

guardrail and shoulder work will be performed along SR 158, approximately 175 feet east and 225 feet west of the bridge. The approximate existing right-of-way (ROW) is 10 feet on each side of the SR 158 centerline throughout the project area for a total width of 20 feet with a bump out of 24 feet north and south at the bridge for a total width of 48 feet. Approximately 0.6 acre of permanent ROW acquisition and 0.03 acre of temporary ROW acquisition will be required. Land use in the vicinity of the project is primarily forested and residential. The project will be approximately 425 feet in length. The proposed method of traffic maintenance is road closure and a detour utilizing Graded Road, Keith Road, and Williams Silverville Road. The project is anticipated to begin construction in Spring 2024.

The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to "Using the USFWS's Information for Planning and Consultation (IPaC) System for Listed Bat Consultation for INDOT Projects". Butler, Fairman, & Seufert, Inc. will perform waters and wetlands determinations and a biological assessment to identify any ecological resources that may be present. Butler, Fairman, & Seufert, Inc. will also investigate the areas of additional ROW for archaeological and historic resources for Section 106 compliance. The results of this investigation will be forwarded to the State Historic Preservation Officer (SHPO) for review and concurrence.

Should we not receive your response within thirty (30) calendar days from the date of this letter, it will be assumed that your agency feels that there will be no adverse effects incurred as a result of the proposed project. However, should you find that an extension to the response time is necessary, a reasonable amount may be granted upon request. If you have any questions regarding this matter, please feel free to contact Brittney Layton, Environmental Scientist at BLayton@bfsengr.com, or (317) 713-4615, or 8450 Westfield Blvd, Suite 300, Indianapolis, IN 46240. Alternatively, you may contact Michael J. Thomas, INDOT Project Manager, at (812) 582-2729 or mthomas1@INDOT.IN.gov. Thank you in advance for your input.

On behalf of INDOT,
Butler, Fairman, & Seufert,

Brittney Layton, M.A.
Environmental Scientist
cc.

Enclosures:
CC List
State Map
Roadway Location Map
USGS Williams Quadrangle Map
National Wetlands Inventory (NWI) Map
IDNR Floodplain Map
Soil Map & Legends
Aerial/Photo Orientation Map
Site Photographs

NOTE: Attachments have been removed for space conservation. See Appendices B & F.

CC:

Kari Carmany-George, Federal Highway Administration
Room 254, Federal Office Building
575 North Pennsylvania Street
Indianapolis, IN 46204

Ryan Falls, Environmental Section Manager
INDOT-Vincennes District
3650 South US Highway 41
Vincennes, IN 47591

Regional Environmental Coordinator
Midwest Regional Office
National Park Service
601 Riverfront Drive
Omaha, NE 68102-4226

Indiana Geological & Water Survey
611 North Walnut Grover
Bloomington, IN 47405
{https://igs.indiana.edu/eAssessment/}

Christie Stanifer, Environmental Coordinator
Indiana Department of Natural Resources
Division of Fish & Wildlife
402 West Washington Street, W-273
Indianapolis, IN 46204

Erik Sandstedt, Field Environmental Officer
Chicago Regional Office
U.S. Department of Housing & Urban Development
Metcalf Fed. Bldg.
77 W. Jackson Blvd. Room 2401
Chicago, IL 60604

Section Chief, Wetlands & Stormwater Programs
Indiana Department of Environmental Management (IDEM)
100 N. Senate Avenue
Indianapolis, IN 46204

Lawrence County Council
916 15th Street
Bedford, IN 47421

Robin McWilliams, U.S. Fish and Wildlife Service
Bloomington Field Office
620 South Walker Street
Bloomington, IN 47403

Deborah Snyder, US Army Corps of Engineers,
Louisville District, Indianapolis Regulatory Office,
Indianapolis, IN 46216

Commander, Eighth Coast Guard District
Attn: Bridge Branch
1222 Spruce Street, Rm 2.102D
St. Louis, MO 63103-2832

Mike Chaveas, Forest Supervisor
Hoosier National Forest
US Forest Service
811 Constitution Avenue
Bedford, Indiana 47421

John Allen, State Conservationist
Natural Resources Conservation Service
6013 Lakeside Boulevard
Indianapolis, IN 46278

Indiana Department of Environmental Management (IDEM) Proposed Roadway Construction Projects Letter
{http://www.in.gov/idem/5284.htm}

IDEM Wellhead Proximity Determinator
Electronic Review of Location
{http://www.in.gov/idem/cleanwater/pages/wellhead

Mike Branham, Lawrence County Sheriff
1420 I Street
Bedford, IN 47421

David Holmes, Lawrence County Highway Supervisor
Lawrence County Highway Department
1 County Complex Road
Bedford, IN 47421

Corey Allen, Lawrence County Surveyor
916 15th Street, Room #13
Bedford, IN 47421

Valerie Luchaer, Floodplain Administrator
Director of Emergency Management
Lawrence County, Indiana
916 15th Street
Bedford, IN 47421

Sandra Bowman
INDOT Ecology & Waterway Permitting
100 N. Senate Avenue, Rm N758-ES
Indianapolis, IN 46204

Lawrence County Commissioners
916 15th Street
Bedford, IN 47421

Dr. Ty Mungle, North Lawrence County School District
460 W. Street
Bedford, IN 47421

Commanding Officer Naval Support Activities
CRANE
300 Highway 361, Bldg. 3219
Crane, IN 47522

THIS IS NOT A PERMIT

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

DNR #: ER-24743 **Request Received:** May 25, 2022

Requestor:
Butler, Fairman & Seufert Inc
Brittney Layton
8450 Westfield Boulevard, Suite 300
Indianapolis, IN 46240

Project: SR 158 bridge replacements over Silverville Branch, 7.71 and 7.94 miles west of SR 458; Des #1800135 & Des #1800133, respectively

County/Site info: Lawrence

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: These proposals will require the formal approval of our agency for construction in a floodway pursuant to the Flood Control Act (IC 14-28-1), unless it qualifies for a bridge exemption (see enclosure). Please include a copy of this letter with the permit application if the project does not meet the bridge exemption criteria.

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

1) Crossing Structures & Wildlife Passage:
Maintaining or improving fish and wildlife passage at existing or proposed crossing locations is a priority for the Division of Fish & Wildlife (DFW) to reduce wildlife mortality along roadways. The DFW has outlined different requirements for different types of crossing structure impacts. For brand new crossings in areas that currently do not have a crossing, the new structure must accommodate white-tailed deer passage where appropriate. Minimum structure dimensions for white-tailed deer passage are 20 feet of width clearance (overall size of the structure span) and 8 feet of height clearance measured from the OHWM to the low chord elevation and where deer passage is provided. For crossing replacements, the new structure must include wildlife passage appropriate for the type of replacement structure being proposed. If the replacement structure is sized to accommodate white-tailed deer passage then it should be included in the design of the new structure. If white-tailed deer passage is not possible with the existing structure, deer passage still needs to be considered in the design and at minimum the bank lines must be restored within structures to allow for smaller wildlife passage above the ordinary high water mark. All wildlife passage designs must include a smooth level pathway a minimum of 1-2 feet in width composed of natural substrate (soil, sand, gravel, etc.) or compacted aggregate fill over riprap (#2, #53, #73, etc.) tied into existing elevations both upstream and downstream. The stream crossing repairs or modifications, and any bank stabilization under or around the structure, must not create conditions that are less favorable for wildlife passage when compared to existing conditions. Upgrading wildlife passage for rehabilitated/modified structures is

Attachments: A - Bridge Exemption Criteria

encouraged whenever possible to improve wildlife/vehicle safety.

There are a number of techniques and materials for incorporating wildlife passage into the design of a crossing structure. Coordination with a Regional Environmental Biologist to address wildlife passage issues before submitting a permit application (if required) is encouraged to avoid delays in the permitting process. The following links are good resources to consider in the design of stream crossing structures to maintain fish and wildlife passage: http://www.fs.fed.us/wildlifecrossings/library/, https://www.fhwa.dot.gov/clas/ctip/wildlife_crossing_structures/, https://www.fs.fed.us/biology/nsaec/fishxing/aop_pdfs.html, https://www.fhwa.dot.gov/engineering/hydraulics/pubs/11008/hif11008.pdf.

For purposes of maintaining fish and wildlife passage through a crossing structure, the Environmental Unit recommends bridges rather than culverts and bottomless culverts rather than box or pipe culverts. Wide culverts are better than narrow culverts, and culverts with shorter through lengths are better than culverts with longer through lengths. If box or pipe culverts are used, the bottoms should be buried a minimum of 6" (or 20% of the culvert height/pipe diameter, whichever is greater up to a maximum of 2') below the stream bed elevation to allow a natural streambed to form within or under the crossing structure. Crossings should: span the entire channel width (a minimum of 1.2 times the OHWM width); maintain the natural stream substrate within the structure; and have stream depth, channel width, and water velocities during low-flow conditions that are approximate to those in the natural stream channel. Banklines should be restored within box and pipe structures to allow for wildlife passage above the ordinary highwater mark.

2) Riparian Habitat:
We recommend a mitigation plan be developed (and submitted with the permit application, if required) for any unavoidable habitat impacts that will occur. The DNR's 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 mitigation site should be located in the floodway, downstream of the one (1) square mile drainage area of that stream (or another stream within the 8-digit HUC, preferably as close to the impact site as possible) and adjacent to existing forested riparian habitat.

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

Attachments: A - Bridge Exemption Criteria

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 inchannel disturbance and the clearing of trees and brush.
3. Do not work in the waterway from April 1 through June 30 without the prior written approval of the Division of Fish and wildlife.
4. Do not cut any trees suitable for Indiana bat or Northern Long-eared bat roosting (greater than 5 inches dbh, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30.
5. Do not excavate in the low flow area except for the placement of piers, foundations, and riprap, or removal of the old structure.
6. Do not construct any temporary runarounds, access bridges, causeways, cofferdams, diversions, or pumparounds.
7. Use minimum average 6 inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids.
8. 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.
9. 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.
10. Do not deposit or allow construction/demolition materials or debris to fall or otherwise enter the waterway.

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:** June 24, 2022

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

Attachments: A - Bridge Exemption Criteria

United States Department of Agriculture

Farm Production and Conservation

Natural Resources Conservation Service

Indiana State Office
6013 Lakeside Boulevard
Indianapolis, Indiana 46278
317-295-5800

May 26, 2022

Brittney Layton
8450 Westfield, Blvd., Suite 300
Indianapolis, Indiana 46240-8302

Dear Ms. Layton:

The proposed bridge project in Lawrence County, Indiana (Des. No. 1800133), as referred to in your letter received May 25, 2022, will cause a conversion of prime farmland.

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

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

Sincerely,

JOHN ALLEN Digitally signed by JOHN ALLEN
Date: 2022.05.27 08:07:01 -04'00'

JOHN ALLEN
State Soil Scientist

Enclosures

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*		Date Of Land Evaluation Request May 25, 2022	
Name of Project DES1800133_SR158 over Silverville Bra		Federal Agency Involved FHWA	
Proposed Land Use		County and State Lawrence County, Indiana	
PART II *(To be completed by NRCS)*		Date Request Received By NRCS 5/25/2022	Person Completing Form: JRA
Does the site contain Prime, Unique, Statewide or Local Important Farmland? *(If no, the FPPA does not apply - do not complete additional parts of this form)*	YES ☑ NO ☐	Acres Irrigated	Average Farm Size 175 ac
Major Crop(s) Corn	Farmable Land In Govt. Jurisdiction Acres: 200607 % 69	Amount of Farmland As Defined in FPPA Acres: 74044 % 26	
Name of Land Evaluation System Used LESA	Name of State or Local Site Assessment System	Date Land Evaluation Returned by NRCS 5/26/2022	

PART III *(To be completed by Federal Agency)*	Alternative Site Rating			
	Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	0.01			
B. Total Acres To Be Converted Indirectly	0			
C. Total Acres In Site	1.13			
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	0.60			
B. Total Acres Statewide Important or Local Important Farmland	0.00			
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	<0.001			
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	71			
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)	64			

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)*	**Maximum Points**	Site A	Site B	Site C	Site D
1. Area In Non-urban Use	(15)	15			
2. Perimeter In Non-urban Use	(10)	10			
3. Percent Of Site Being Farmed	(20)	5			
4. Protection Provided By State and Local Government	(20)	0			
5. Distance From Urban Built-up Area	(15)	15			
6. Distance To Urban Support Services	(15)	5			
7. Size Of Present Farm Unit Compared To Average	(10)	0			
8. Creation Of Non-farmable Farmland	(10)	1			
9. Availability Of Farm Support Services	(5)	5			
10. On-Farm Investments	(20)	10			
11. Effects Of Conversion On Farm Support Services	(10)	0			
12. Compatibility With Existing Agricultural Use	(10)	0			
TOTAL SITE ASSESSMENT POINTS	160	66	0	0	0
PART VII ***(To be completed by Federal Agency)***					
Relative Value Of Farmland *(From Part V)*	100	64	0	0	0
Total Site Assessment *(From Part VI above or local site assessment)*	160	66	0	0	0
TOTAL POINTS ***(Total of above 2 lines)***	260	130	0	0	0

Site Selected: A	Date Of Selection September 9, 2022	Was A Local Site Assessment Used? YES ☐ NO ☑

Reason For Selection:

Name of Federal agency representative completing this form: Brittney Layton | Date: 9/9/2022

(See Instructions on reverse side) **Form AD-1006 (03-02)**

Response Received from Lawrence County Surveyor

Brittney Layton

From: Corey Allen <callen@lawrencecounty.in.gov>
Sent: Wednesday, May 25, 2022 3:22 PM
To: Brittney Layton
Subject: Re: Early Coordination, Des 1800133, SR 158 over Silverville Branch, Lawrence Co., IN

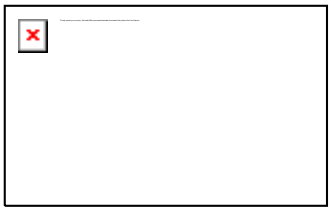
I don't see any conflict with county section corners.

Lawrence County does not have a Drainage Board, so no Coordination is necessary for that.

Thank you for reaching out.

On Wed, May 25, 2022 at 2:31 PM Brittney Layton <BLayton@bfsengr.com> wrote:

> Good afternoon,
>
> Butler, Fairman, & Seufert is conducting Early Coordination as part of the requirements for the environmental process for the proposed Bridge Project with Des. No. 1800133 on SR 158 over Silverville Branch in Lawrence County, Indiana.
>
> We respectfully request your review of the attached Early Coordination Packet within 30 days. Feel free to reach out with any questions or concerns.
>
> Thank you,
>
> **Brittney Layton, M.A.**
> **Environmental Scientist**
>
> Butler, Fairman & Seufert, Inc.
> 8450 Westfield Blvd., Suite 300 | Indianapolis, IN 46240-8302 |
> p 317-713-4615 | f 317-713-4616
> BLayton@bfsengr.com | www.BFSEngr.com



Response Received from US Coast Guard

Brittney Layton

From: Washburn, Eric A CIV USCG D8 (USA) <Eric.Washburn@uscg.mil>
Sent: Tuesday, May 31, 2022 1:36 PM
To: Brittney Layton
Subject: RE: Early Coordination, Des 1800133, SR 158 over Silverville Branch, Lawrence Co., IN

Good afternoon. No action required by my office.

Tks.

Respectfully,

Eric Washburn
USCG D8 Bridge Supervisor, Western Rivers
STL
314-269-2378

From: Brittney Layton <BLayton@bfsengr.com>
Sent: Wednesday, May 25, 2022 1:30 PM
Subject: [URL Verdict: Neutral][Non-DoD Source] Early Coordination, Des 1800133, SR 158 over Silverville Branch, Lawrence Co., IN

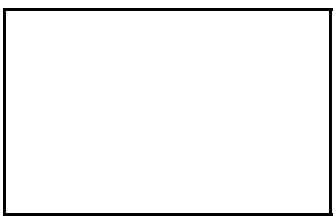
Good afternoon,

Butler, Fairman, & Seufert is conducting Early Coordination as part of the requirements for the environmental process for the proposed Bridge Project with Des. No. 1800133 on SR 158 over Silverville Branch in Lawrence County, Indiana.

We respectfully request your review of the attached Early Coordination Packet within 30 days. Feel free to reach out with any questions or concerns.

Thank you,
Brittney Layton, M.A.
Environmental Scientist

Butler, Fairman & Seufert, Inc.
8450 Westfield Blvd., Suite 300 | Indianapolis, IN 46240-8302 |
p 317-713-4615 | f 317-713-4616
BLayton@bfsengr.com | www.BFSEngr.com



INDIANA
GEOLOGICAL SURVEY

Organization and Project Information

Project ID:	6415.0204
Des. ID:	1800133
Project Title:	SR 158 over Silverville Branch
Name of Organization:	Butler, Fairman, & Seufert, Inc.
Requested by:	Brittney Layton

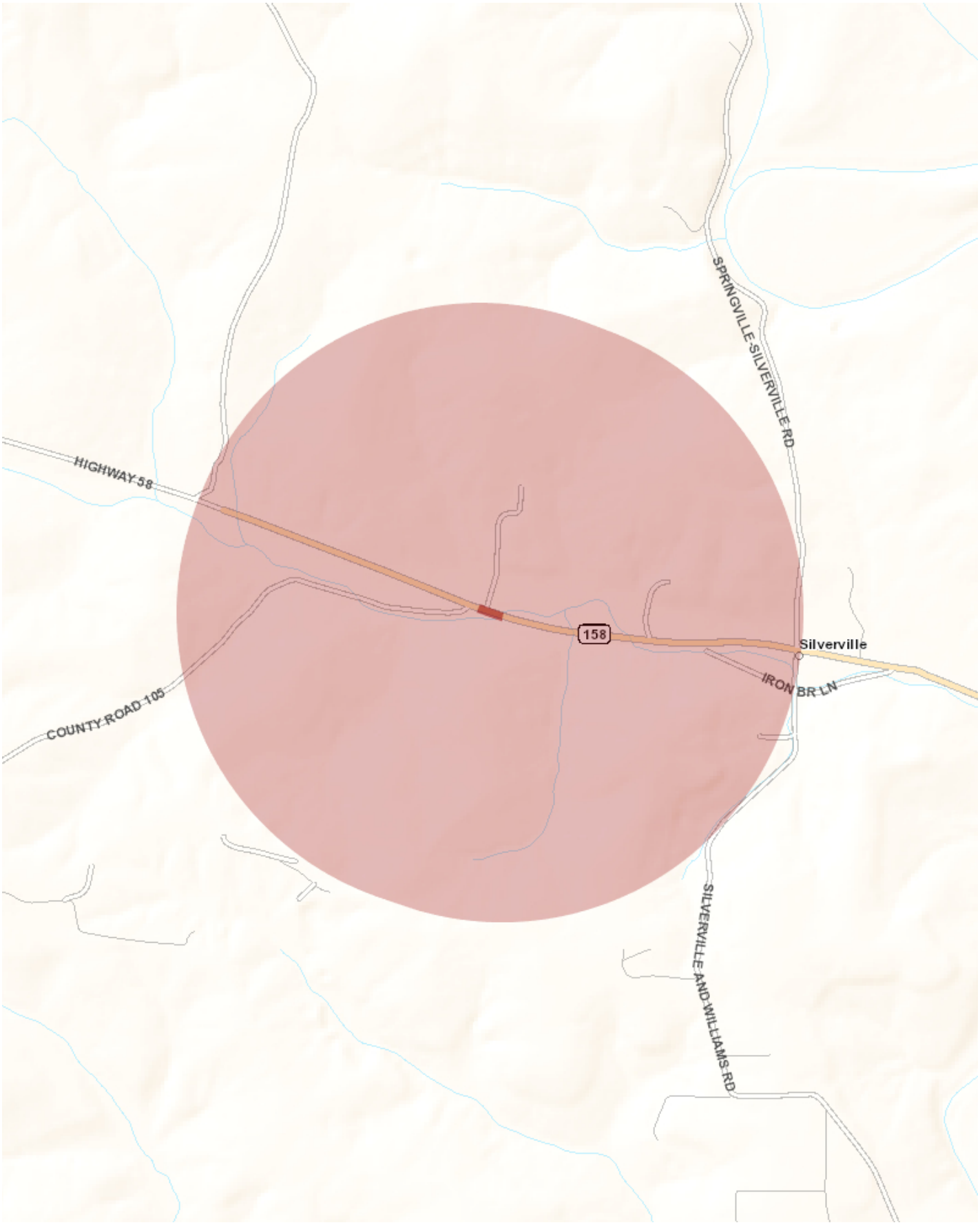
Environmental Assessment Report

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:
   - None documented in the area

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

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

Date: July 21, 2022



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Indiana Ecological Services Field Office
620 South Walker Street
Bloomington, IN 47403-2121
Phone: (812) 334-4261 Fax: (812) 334-4273
http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html

In Reply Refer To: December 28, 2021
Consultation Code: 03E12000-2022-SLI-0155
Event Code: 03E12000-2022-E-02935
Project Name: Des 1800133 SR 158 over Silverville Creek, Bridge Replacement, Lawrence County, IN

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

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

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

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

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

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

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

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

Indiana Ecological Services Field Office
620 South Walker Street
Bloomington, IN 47403-2121
(812) 334-4261

Project Summary

Consultation Code: 03E12000-2022-SLI-0155
Event Code: Some(03E12000-2022-E-02935)
Project Name: Des 1800133 SR 158 over Silverville Creek, Bridge Replacement, Lawrence County, IN
Project Type: TRANSPORTATION
Project Description: Indiana Department of Transportation (INDOT), with funding from Federal Highway Administration (FHWA), intends to proceed with a Bridge Replacement project of the bridge Structure (158)58-47-03027 (National Bridge Inventory #028000), which conveys SR 158 over Silverville Creek, approximately 7.94 miles west of SR 458 in Lawrence County, Indiana, Des. No. 1800133. The proposed work involves removing and replacing the bridge over Silverville Creek. It is anticipated that the project will not require the acquisition of permanent nor temporary right-of-way. The preferred method of traffic maintenance will be a road closure utilizing a detour. Utilities run parallel to the western/ southern side of the roadway through the project area. No permanent lighting will be installed or modified from the existing. Temporary lighting may be required for this project. Suitable summer habitat is located within the project vicinity. Approximately 6 trees, or 0.54 acre, will be removed due to the bridge removal, which includes American sycamore (Platanus occidentalis), Black walnut (Juglans nigra), Tuliptree (Liriodendron tulipifera), Black maple (Acer nigrum), Sugar maple (Acer saccharum), Ohio buckeye (Aesculus glabra). These trees will be removed during the inactive season. During Butler, Fairman, & Seufert's field investigation of (158)58-47-03027 (NBI#028000) on July 1, 2021, no presence of endangered bats was identified. The letting date for this project is scheduled to be January 18, 2024 with construction anticipated to occur spring of 2024. A review of the USFWS database on July 6, 2021did not indicate the presence of endangered bat species in or within 0.5 mile of the project area.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.8585591,-86.67482613731707,14z

NOTE: The 0.54 acre amount of tree removal was based on 0.09 acre per tree. This area has been narrowed to approximately 0.45 acre of forested/wooded area as the project design has been refined.

Counties: Lawrence 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 Fisheries[1], 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.

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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 *Myotis sodalis* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: ▪ 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 *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

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

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Indiana Ecological Services Field Office
620 South Walker Street
Bloomington, IN 47403-2121
Phone: (812) 334-4261 Fax: (812) 334-4273
http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html

In Reply Refer To: December 28, 2021
Consultation code: 03E12000-2022-I-0155
Event Code: 03E12000-2022-E-02937
Project Name: Des 1800133 SR 158 over Silverville Creek, Bridge Replacement, Lawrence County, IN

Subject: Concurrence verification letter for the 'Des 1800133 SR 158 over Silverville Creek, Bridge Replacement, Lawrence County, IN' project under the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

To whom it may concern:

The U.S. Fish and Wildlife Service (Service) has received your request to verify that the **Des 1800133 SR 158 over Silverville Creek, Bridge Replacement, Lawrence County, IN** (Proposed Action) may rely on the concurrence provided in the February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C 1531 *et seq.*).

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

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

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

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

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

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 1800133 SR 158 over Silverville Creek, Bridge Replacement, Lawrence County, IN

Description

Indiana Department of Transportation (INDOT), with funding from Federal Highway Administration (FHWA), intends to proceed with a Bridge Replacement project of the bridge Structure (158)58-47-03027 (National Bridge Inventory #028000), which conveys SR 158 over Silverville Creek, approximately 7.94 miles west of SR 458 in Lawrence County, Indiana, Des. No. 1800133. The proposed work involves removing and replacing the bridge over Silverville Creek. It is anticipated that the project will not require the acquisition of permanent nor temporary right-of-way. The preferred method of traffic maintenance will be a road closure utilizing a detour. Utilities run parallel to the western/southern side of the roadway through the project area. No permanent lighting will be installed or modified from the existing. Temporary lighting may be required for this project. Suitable summer habitat is located within the project vicinity. Approximately 6 trees, or 0.54 acre, will be removed due to the bridge removal, which includes American sycamore (Platanus occidentalis), Black walnut (Juglans nigra), Tuliptree (Liriodendron tulipifera), Black maple (Acer nigrum), Sugar maple (Acer saccharum), Ohio buckeye (Aesculus glabra). These trees will be removed during the inactive season. During Butler, Fairman, & Seufert's field investigation of (158)58-47-03027 (NBI#028000) on July 1, 2021, no presence of endangered bats was identified. The letting date for this project is scheduled to be January 18, 2024 with construction anticipated to occur spring of 2024. A review of the USFWS database on July 6, 2021did not indicate the presence of endangered bat species in or within 0.5 mile of the project area.

NOTE: The 0.54 acre amount of tree removal was based on 0.09 acre per tree. This area has been narrowed to approximately 0.45 acre of forested/wooded area as the project design has been refined.

Determination Key Result

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

Qualification Interview

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

   [1] See Indiana bat species profile

   Automatically answered
   Yes

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

   [1] See Northern long-eared bat species profile

   Automatically answered
   Yes

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

   A) Federal Highway Administration (FHWA)

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

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

   No

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

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

   No

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

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

   No

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

   Yes

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

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

   No

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

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

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

   Yes

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

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

    Yes

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

    No

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

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

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

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

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

    No

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

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

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

    No

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

    Yes

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

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

    B) During the inactive season

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

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

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

    No

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

    Yes

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

    B) During the inactive season

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

    Yes

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

    No

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

    Yes

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

    No

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

    No

24. Does the project include slash pile burning?

    No

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

    Yes

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

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

    Yes

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

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

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

    Yes

    SUBMITTED DOCUMENTS

    - *Des 1800133 Bridge Inspection.pdf https://ecos.fws.gov/ipac/project/VNXPRXJ5EVFKDODJFRSBTXHESE/projectDocuments/108359435*

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.

    Yes

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 use percussives (not including tree removal/trimming or bridge/structure work) and/or increase noise levels above existing traffic/background levels consistent with a No Effect 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 inactive season

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 biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

    Yes

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.

   0.54

4. Please describe the proposed bridge work:

   bridge replacement

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

   spring 2024

6. Please enter the date of the bridge assessment:

   7.1.2021

Avoidance And Minimization Measures (AMMs)

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

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.

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.

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

This key was last updated in IPaC on April 22, 2021. 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.

INDOT IPaC Concurrence Response

Brittney Layton

From: Falls, Ryan G <RFalls@indot.IN.gov>
Sent: Tuesday, December 28, 2021 3:03 PM
To: Brittney Layton; Wright, Kristy
Subject: RE: NLAA: IPaC, Des 1800133, SR 158 over Silverville Creek, Lawrence County, IN

The document's finding of May Effect, NLAA-With AMMs for DES 1800133 has been deemed sufficient. It has been verified and submitted to USFWS. The Service has 14 days after the "Not Likely to Adversely Affect" determination letter is generated. They will review that information once it is received; if you do not receive a response within 14 days, they have no additional comments for the two bats covered under the programmatic. The NEPA document submittal may not occur until this review period has ended. The Official Species List, Consistency Letter, and Concurrence Verification Letter are all now immediately available for your use. It is suggested that these documents be downloaded at this time. This concludes the IPaC phase of coordination with the Vincennes environmental 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
855-463-6848

From: Brittney Layton <BLayton@bfsengr.com>
Sent: Tuesday, December 28, 2021 2:46 PM
To: Falls, Ryan G <RFalls@indot.IN.gov>; Wright, Kristy <KWright@indot.IN.gov>
Subject: RE: IPaC, Des 1800133, SR 158 over Silverville Creek, Lawrence County, IN & 1st Comments

Let's see if that takes care of everything. NBI numbers updated, structure numbers updated, acreage amounts added, questions in the determination key were corrected, etc. I've gone through our myriad of emails and I hope I caught everything that needed to be updated!

Brittney Layton, M.A.
Environmental Scientist

Butler, Fairman & Seufert, Inc.
8450 Westfield Blvd., Suite 300 | Indianapolis, IN 46240-8302 |
p 317-713-4615 | f 317-713-4616
BLayton@bfsengr.com | www.BFSEngr.com

Date & Time of Assessment	DOT Project Number	Route/Facility Carried	County
7/1/2021 12:45 p.m.	1800133	SR 158 over Silverville Creek	Lawrence
Federal Structure ID National Bridge Inventory #028000 (158)58-47-03027	**Structure Coordinates** (latitude and longitude) 38.85856, -86.67483	**Structure Height** (approximate) 8.5 ft.	**Structure Length** 27.0 ft.

Structure Type (check one)

Bridge Construction Style

○ Cast-in-place		○ Pre-stressed Girder	
○ Flat Slab/Box		○ Steel I-beam	
○ Truss		○ Covered	
○ Parallel Box Beam		○ Other: Stringer/Multi-Beam	

Culvert Type

- ○ Box
- ○ Pipe/Round
- ○ Other:

Other Structure

- ○

Structure Material (check all that apply)

Deck Material	*Beam Material*	*End/Back Wall Material*
☐ Metal	☐ None	☒ Concrete
☒ Concrete	☒ Concrete	☐ Timber
☐ Timber	☐ Steel	☐ Stone/Masonry
☐ Open grid	☐ Timber	☐ Other:
☐ Other:	☐ Other:	

Culvert Material

- ☐ Metal
- ☐ Concrete
- ☐ Plastic
- ☐ Stone/Masonry
- ☐ Other:

Creosote Evidence

○ Yes ○ No ○ Unknown

Notes:

Crossings Traversed (check all that apply)

☐ Bare ground	☐ Open vegetation
☐ Rip-rap	☐ Closed vegetation
☐ Flowing water	☐ Railroad
☐ Standing water	☐ Road/trail - Type:
☒ Seasonal water	☐ Other:

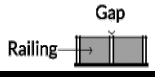
Surrounding Habitat (check all that apply)

☐ Agricultural	☐ Grassland
☐ Commercial	☐ Ranching
☐ Residential-urban	☐ Riparian/wetland
☒ Residential-rural	☐ Mixed use
☒ Woodland/forested	☐ Other:

Areas Assessed (check all that apply)

Check all areas that apply. If an area is not present in the structure, check the "not present" box.

Document all bat indicators observed during the assessment. Include the species present, if known, and provide photo documentation as indicated.

Area (check if assessed)	Assessment Notes	Evidence of Bats (include photos if present)
☒ All crevices and cracks: **Bridges/culverts:** rough surfaces or imperfections in concrete **Other structures:** soffits, rafters, attic areas	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ Concrete surfaces (open roosting on concrete)	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ Spaces between concrete end walls and the bridge deck	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ Crack between concrete railings on top of the bridge deck 	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ Vertical surfaces on concrete I-beams	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ Spaces between walls, ceiling joists	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ Weep holes, scupper drains, and inlets/pipes	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ All guiderails	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ All expansion joints	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species

Name: Neal Bennett

Signature: 

Response received from INDOT Ecology & Waterway Permitting

Brittney Layton

From: Bowman, Sandra A <SBowman@indot.IN.gov>
Sent: Tuesday, November 15, 2022 12:35 PM
To: Brittney Layton
Subject: RE: Des 1800133, Concerns of Birds' Nests, SR 158 over Silverville Branch

Brittney,

I would include the Migratory Bird RSP. It will require them to check the bridge before the nesting season starts. By the lack of water on the surface I don't think the bridge would be a desirable location for swallows or Eastern Phoebes, but this will cover us.

Sandy

Sandra Bowman
Mgr, Ecology and Waterway Permitting

sbowman@indot.in.gov
Off Cell – 317-416-2509

From: Brittney Layton <BLayton@bfsengr.com>
Sent: Tuesday, November 15, 2022 11:18 AM
To: Bowman, Sandra A <SBowman@indot.IN.gov>
Subject: Des 1800133, Concerns of Birds' Nests, SR 158 over Silverville Branch

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Good morning Sandy,
I hope this finds you well. I have a bridge replacement project located in Vincennes District, Lawrence County (see attached). The INDOT Bridge Inspection Report states that there was evidence of empty birds nests; however, there are no photos showing nests and our bridge inspection and WOTUS site visits did not identify any empty nests. How would you recommend we proceed with bird commitments for this project?

Respectfully,

Brittney Layton, M.A.
Environmental Scientist

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Response Received from INDOT Ecology & Waterway Permitting

Brittney Layton

From: Bowman, Sandra A <SBowman@indot.IN.gov>
Sent: Tuesday, December 27, 2022 12:15 PM
To: Brittney Layton
Cc: Curry, Jennifer; Rehder, Crystal
Subject: RE: Des No's 1800133, 18001135, 2000651, SR 158 over Branch of Silverville/Indian Creek

Brittany,

I apologize for the delay. I had a large project to finish for our MS4 implementation plan.

2000651 – based on project type I have no concerns

1800133 and 135 – I do not have a concern from the karst perspective, but when you are going from a bridge to a culvert you need to ensure that we maintain the ability of wildlife to use the structure for passage. This includes sufficient height for a deer to pass through and the bottom needs to be finished appropriately. The NEPA document needs to say that there will be wildlife impacts based on this design change and the options evaluated accordingly. Please coordinate with the appropriate Team Lead and Permit Specialist regarding your findings.

Sandy

Sandra Bowman
Mgr, Ecology and Waterway Permitting

sbowman@indot.in.gov
Off Cell – 317-416-2509

From: Brittney Layton <BLayton@bfsengr.com>
Sent: Monday, December 19, 2022 12:39 PM
To: Bowman, Sandra A <SBowman@indot.IN.gov>
Subject: RE: Des No's 1800133, 18001135, 2000651, SR 158 over Branch of Silverville/Indian Creek

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Good afternoon Sandy,
I'm sorry to bother you. Can you please confirm that no additional karst investigation is necessary for the below three projects? (See email sent on December 1, 2022 about this.) If it'd be easier to have a phone call or Team's Meeting, please let me know. This issue came up during our internal QAQC and I wanted to be thorough.

Thank you,

Brittney Layton, M.A.
Environmental Scientist

Butler, Fairman & Seufert, Inc.
p 317-713-4615
BLayton@bfsengr.com | www.bfsengr.com

8450 Westfield Blvd., Suite 300, Indianapolis, IN 46240-8302

Bridge/Structure Bat Assessment Form

Date & Time of Assessment	DOT Project Number	Route/Facility Carried	County
12/21/2022 (10:00 AM)	1800133	Private Drive Adjacent to SR 158	Lawrence
Federal Structure ID	**Structure Coordinates (latitude and longitude)**	**Structure Height (approximate)**	**Structure Length**
N/A	38.858652, -86.674885	48 inches	42 feet

Structure Type (check one)

Bridge Construction Style

- ○ Cast-in-place
- ○ Flat Slab/Box
- ○ Truss
- ○ Parallel Box Beam
- ○ Pre-stressed Girder
- ○ Steel I-beam
- ○ Covered
- ○ Other:

Culvert Type

- ○ Box
- ◉ Pipe/Round
- ○ Other:

Other Structure

- ○

Structure Material (check all that apply)

Deck Material	*Beam Material*	*End/Back Wall Material*
☐ Metal	☒ None	☐ Concrete
☐ Concrete	☐ Concrete	☐ Timber
☐ Timber	☐ Steel	☐ Stone/Masonry
☐ Open grid	☐ Timber	☐ Other:
☒ Other: Earth/Gravel	☐ Other:	

Creosote Evidence

- ○ Yes ◉ No
- ○ Unknown

Culvert Material

- ☒ Metal
- ☐ Concrete
- ☐ Plastic
- ☐ Stone/Masonry
- ☐ Other:

Notes:

Crossings Traversed (check all that apply)

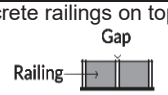
☐ Bare ground	☐ Open vegetation
☐ Rip-rap	☐ Closed vegetation
☐ Flowing water	☐ Railroad
☐ Standing water	☐ Road/trail - Type:
☒ Seasonal water	☐ Other:

Surrounding Habitat (check all that apply)

☐ Agricultural	☒ Grassland
☐ Commercial	☐ Ranching
☐ Residential-urban	☐ Riparian/wetland
☒ Residential-rural	☐ Mixed use
☒ Woodland/forested	☐ Other:

Areas Assessed (check all that apply)

Check all areas that apply. If an area is not present in the structure, check the "not present" box.
Document all bat indicators observed during the assessment. Include the species present, if known, and provide photo documentation as indicated.

Area (check if assessed)	Assessment Notes	Evidence of Bats (include photos if present)
☒ All crevices and cracks: **Bridges/culverts:** rough surfaces or imperfections in concrete **Other structures:** soffits, rafters, attic areas	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Concrete surfaces (open roosting on concrete)	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Spaces between concrete end walls and the bridge deck	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Crack between concrete railings on top of the bridge deck 	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Vertical surfaces on concrete I-beams	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Spaces between walls, ceiling joists	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Weep holes, scupper drains, and inlets/pipes	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ All guiderails	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ All expansion joints	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species

Name: Ryan Scott (BF&S, Inc.)

Signature:

Bridge/Structure Bat Assessment Form

Date & Time of Assessment	DOT Project Number	Route/Facility Carried	County
12/21/2022 (10:05AM)	1800133	Graded Road	Lawerence
Federal Structure ID	**Structure Coordinates (latitude and longitude)**	**Structure Height (approximate)**	**Structure Length**
N/A	38.858707, -86.675478	30 inches	52 feet

Structure Type (check one)

Bridge Construction Style

○ Cast-in-place		○ Pre-stressed Girder	
○ Flat Slab/Box		○ Steel I-beam	
○ Truss		○ Covered	
○ Parallel Box Beam		○ Other:	

Culvert Type

- ○ Box
- ◉ Pipe/Round
- ○ Other:

Other Structure

- ○

Structure Material (check all that apply)

Deck Material	*Beam Material*	*End/Back Wall Material*
☐ Metal	☒ None	☐ Concrete
☐ Concrete	☐ Concrete	☐ Timber
☐ Timber	☐ Steel	☐ Stone/Masonry
☐ Open grid	☐ Timber	☐ Other:
☒ Other: earth/asphalt	☐ Other:	

Creosote Evidence

- ○ Yes ◉ No
- ○ Unknown

Culvert Material

- ☒ Metal
- ☐ Concrete
- ☐ Plastic
- ☐ Stone/Masonry
- ☐ Other:

Notes:

Crossings Traversed (check all that apply)

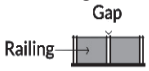
☐ Bare ground	☐ Open vegetation
☐ Rip-rap	☐ Closed vegetation
☐ Flowing water	☐ Railroad
☐ Standing water	☐ Road/trail - Type:
☒ Seasonal water	☐ Other:

Surrounding Habitat (check all that apply)

☐ Agricultural	☒ Grassland
☐ Commercial	☐ Ranching
☐ Residential-urban	☐ Riparian/wetland
☒ Residential-rural	☐ Mixed use
☒ Woodland/forested	☐ Other:

Areas Assessed (check all that apply)

Check all areas that apply. If an area is not present in the structure, check the "not present" box.
Document all bat indicators observed during the assessment. Include the species present, if known, and provide photo documentation as indicated.

Area (check if assessed)	Assessment Notes	Evidence of Bats (include photos if present)
☒ All crevices and cracks: **Bridges/culverts:** rough surfaces or imperfections in concrete **Other structures:** soffits, rafters, attic areas	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Concrete surfaces (open roosting on concrete)	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Spaces between concrete end walls and the bridge deck	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Crack between concrete railings on top of the bridge deck 	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Vertical surfaces on concrete I-beams	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Spaces between walls, ceiling joists	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Weep holes, scupper drains, and inlets/pipes	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ All guiderails	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ All expansion joints	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species

Name: Ryan Scott

Signature: 

Appendix D

Section 106 of the National Historic Preservation Act (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)

Original Submission Date: September 6, 2022 **Amended Submission Date:**

Submitted By (Provide Name and Firm/Organization):

Elizabet Biggio
Butler, Fairman, & Seufert, Inc.
8450 Westfield Boulevard, Suite 300
Indianapolis, IN 46240
ebiggio@bfsengr.com

Project Designation Number: 1800133

Route Number: State Road (SR) 158

Feature crossed (if applicable): Silverville Creek

City/Township: Silverville/Indian Creek **County:** Lawrence

Project Description: Bridge Replacement, 7.94 miles west of SR 458

The Indiana Department of Transportation (INDOT)-Vincennes District proposes a bridge replacement on Structure # (158)58-47-03027 (National Bridge Inventory (NBI) #028000) carrying SR 158 over Silverville Creek. This project is located approximately 7.94 miles west of SR 458, in Lawrence County, Indiana. This section of SR 158 consists of two 12-foot-wide through lanes bordered by 1.5-foot-wide shoulders.

The existing structure was built in 1938 and is a single span concrete stringer/multi-beam bridge. The existing structure is approximately 27 feet in length and has an out-to-out coping width of 31.3 feet and on a 45-degree skew. The bridge consists of two 12-foot-wide through lanes bordered by 1-foot 6-inch-wide shoulders.

The need for this project is due to the deterioration of the deck and substructure, which were given condition ratings of 5 out of 9, indicating fair condition, according to the most recent INDOT Bridge Inspection Report dated August 12, 2020. The superstructure is experiencing significant map cracking and heavy efflorescence and the substructure extensive spalling. The purpose is to provide a crossing of SR 158 over Indiana Creek with a condition rating of at least 7 out of 9 (good condition).

The proposed project will replace the bridge with a three-sided, flat-topped box culvert, with a length of approximately 32 feet and an out-to-out coping width of 37 feet. The bridge will carry two (2) 11-foot lanes of traffic with 3-foot shoulders. Riprap will be installed (approximately 6-feet wide, 43-feet long, 4-feet deep) in front of both vertical walls for scour prevention. Additional guardrail and shoulder work will be performed along SR 158, approximately 175 feet east and 225 feet west of the bridge.

The existing right-of-way is 10 feet wide on either side of the SR 158 centerline. At the bridge, the existing right-of-way is 24 feet either side of the bridge centerline. Approximately 0.48 acre of permanent and 0.04 acre of

temporary right-of-way acquisition is expected. The project will be approximately 425 feet in length. Land use in the vicinity of the project is primarily agricultural, residential, and forested.

The proposed method of traffic maintenance will require a road closure and a detour. 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

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

Silverville Creek
Structure # (158)58-47-03027
National Bridge Inventory (NBI) #028000
Single span concrete stringer/multi-beam bridge

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 #___680_____

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: Approximately 0.48 acre of permanent and 0.04 acre of temporary right-of-way acquisition is expected.

Is there *any* potential for additional temporary right-of-way to be needed later for purposes such as access, staging, etc.?
☒ Yes ☒ No

Archaeology (check one):

- ☐ **All proposed activities are presumed to occur in previously disturbed soils***
  **INDOT-CRO will notify you if project area incudes 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-9. Installation, replacement, repair, lining, or extension of culverts and other drainage structures under the conditions listed below ***[BOTH Condition A, which pertains to Archaeological Resources, and Condition B, which pertains to Above-Ground Resources, must be satisfied]***:

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

i. Work occurs in previously disturbed soils; *OR*

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

Condition B (Above-Ground Resources)
One of the conditions below must be met *(EITHER Condition i or Condition ii must be satisfied)*:

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

ii. Work involves the installation of a new culvert and other drainage structures AND/OR there may be impacts to unusual features, including historic brick or stone sidewalks, curbs, or curb ramps, stepped or elevated sidewalks and retaining walls, under the following conditions *(BOTH Condition a and Condition b must be satisfied)*:
   a. Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource; *AND*
   b. The subject structure exhibits one of the characteristics described below *(Condition 1, Condition 2 or Condition 3 must be satisfied)*.
      1. The structure exhibits no wood, stone, or brick structures or parts therein; *OR*

2. The structure exhibits only modern wood, stone, or brick structures or parts therein; *OR*

3. The structure exhibits non-modern wood, stone, or brick structures or parts therein but lacks sufficient integrity and/or a context that suggests it might have engineering or historical significance. Under this condition, a qualified professional (meeting the Secretary of Interior's Professional Qualification standards [48 Federal Register (FR) 44716]) must prepare an analysis and justification that the structure lacks sufficient integrity and/or a context that suggests it might have engineering or historical significance. This documentation must be reviewed and approved by INDOT Cultural Resources Office.

B-12. Replacement, widening, or raising the elevation of the superstructure on existing bridges, and bridge replacement projects (when both the superstructure and substructure are removed), 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)

The conditions listed below must be met ***(BOTH Condition i and Condition ii must be satisfied)***

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

ii. With regard to the subject bridge, at least one of the conditions listed below is satisfied *(AT LEAST one of the conditions a, b or c, must be fulfilled)*:

a. The latest Historic Bridge Inventory identified the bridge as non-historic (see http://www.in.gov/indot/2531.htm);

b. The bridge was built after 1945, and is a common type as defined in Section V. of the *Program Comment Issued for Streamlining Section 106 Review for Actions Affecting Post-1945 Concrete and Steel Bridges* issued by the Advisory Council on Historic Preservation on November 2, 2012 for so long as that Program Comment remains in effect AND the considerations listed in Section IV of the Program Comment do not apply;

c. The bridge is part of the Interstate system and was determined not eligible for the National Register under the Section 106 Exemption Regarding Effects to the Interstate Highway System adopted by the Advisory Council on Historic Preservation on March 10, 2005, for so long as that Exemption remains in effect.

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

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):
Project information, photos, and maps provided by Butler, Fairman & Seufert, Inc. on September 7, 2022, and on file at INDOT-CRO.

Connolly, Jocelyn
2022 Phase Ia Archaeological Reconnaissance Survey for the SR 158 Silverville Creek Bridge Replacement 7.94 Miles West of SR 458 in Lawrence County, Indiana (INDOT Des. No. 1800133). Report on file, Indiana Department of Transportation, Cultural Resources Office, Indianapolis, IN.

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:

<u>Above-ground Resources</u>

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 Lawrence County. No listed resources are located within 0.25 mile of the project area, a distance that serves as an adequate area of potential effects given the project scope and setting.

The Indiana Historic Sites and Structures Inventory (IHSSI) and National Register information for Lawrence County is available in the Indiana State Historic Architectural and Archaeological Research Database (SHAARD) and the Indiana Historic Buildings, Bridges, and Cemeteries Map (IHBBCM). The *Lawrence County Interim Report* (1992; Indian Creek Township) of the Indiana Historic Sites and Structures Inventory (IHSSI) was also consulted. All sites were reviewed through the IHBBCM, which contains the most recently updated SHAARD information. No IHSSI documented resources are located within 0.25 mile of the project area.

According to the IHSSI rating system, generally properties rated "Contributing" do not possess the level of historical or architectural significance necessary to be considered individually National Register-eligible, although

they would contribute to a historic district. If they retain material integrity, properties rated "Notable" might possess the necessary level of significance after further research. Properties rated "Outstanding" usually possess the necessary level of significance to be considered National Register eligible if they retain material integrity.

The INDOT-CRO historian reviewed structures adjacent to the project area utilizing online aerial, street-view photography, district-provided photographs, and the Lawrence County GIS website. The project area is located in a rural wooded setting with rolling hills; the adjacent building stock consists primarily of early-twentieth to early twenty-first century residential buildings. None of the structures appear to possess the historic significance or material integrity required to be considered NRHP-eligible.

The most-recent inspection report (J. Besing;08/09/2022) was accessed via the INDOT Bridge Inspection Application System (BIAS). The subject structure (Bridge No. (158)58-47-03027; NBI No. 028000) carries SR 158 over Silverville Creek and is a single-span, concrete stringer/multi-beam bridge. The bridge was built in 1938. The 2009 INDOT-sponsored Indiana Historic Bridge Inventory (HBI) (M & H Architecture, Inc., 2009) lists the bridge as "Non-Historic" (Vol. 2; Section 2, pg. 680); therefore, the bridge is not eligible for inclusion in the National Register of Historic Places.

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, reviewed the Phase Ia archaeological reconnaissance submitted by Gray & Pape, Inc. on behalf of Butler, Fairman & Seufert, Inc. on September 7, 2022.

A 1.12-acre survey area was examined through a combination of systematic shovel probing (n=5) and visual inspection of disturbed areas. The area encompassing SR 158 was disturbed from the construction of the state road, road grade and fill, existing bridge with associated drainage ditch, artificial embankments, above ground power lines, and buried utilities. As a result, areas of previous disturbance and water inundation were visually inspected. Five shovel probes were excavated in undisturbed soils of the survey area and were all found to be negative. No archaeological sites were previously recorded within or adjacent to the survey area. No archaeological sites were documented as a result of the survey and no further investigation is recommended (Connolly 2022).

There are no archaeological concerns as long as 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, Matthew Coon, and KayLee Blum

INDOT Approval Date: 12/12/2022

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.*

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.*

INDIANA ARCHAEOLOGICAL SHORT REPORT

State Form 54566 (R2 / 11-20)

INDIANA DEPARTMENT OF NATURAL RESOURCES
DIVISION OF HISTORIC PRESERVATION AND ARCHAEOLOGY
402 West Washington Street, Room W274
Indianapolis, Indiana 46204-2739
Telephone Number: (317) 232-1646
Fax Number: (317) 232-0693
E-mail: dhpa@dnr.IN.gov

Where applicable, the use of this form is recommended but not required by the Division of Historic Preservation and Archaeology (DHPA).

Name(s) of author(s)	Date *(month, day, year)*
Jocelyn Connolly	12/9/2022

Title of project
Phase Ia Archaeological Reconnaissance Survey for the SR-158 over Silverville Creek Bridge Replacement 7.94 Miles West of SR 458 in Lawrence County, Indiana (INDOT Des. No. 1800133)

This document is being used to report on the results of:
☐ Records check only ☒ Records check and Phase Ia archaeological reconnaissance
☐ An addendum to a previous archaeological report. *For an addendum, provide the following information.*

Name(s) of author(s) of previous report

Title of previous report

Date of previous report *(month, day, year)*	DHPA number

PROJECT OVERVIEW

Description of project
The Indiana Department of Transportation (INDOT)-Vincennes District proposes a bridge replacement on Structure # (158)58-47-03027 (National Bridge Inventory #028000) carrying SR 158 over Silverville Creek. This project is located approximately 7.94 miles west of SR 458, in Lawrence County, Indiana. This section of SR 158 consists of two 12-foot-wide through lanes bordered by 1.5-foot-wide shoulders.

The existing structure was built in 1938 and is a single span concrete stringer/multi-beam bridge. The bridge is listed in the Indiana Historic Bridge Inventory (IHBI) as “Not eligible” and is therefore considered not historic. The existing structure is approximately 27 feet in length and has an out-to-out coping width of 31.3 feet and on a 45 degree skew. The bridge consists of two through lanes 12-feet-wide, bordered by 1-foot 6-inch-wide shoulders.

The need for this project is due to the deterioration of the deck and substructure, which were given condition ratings of 5 out of 9, indicating fair condition, according to the most recent INDOT Bridge Inspection Report dated August 12, 2020. The superstructure is experiencing significant map cracking and heavy efflorescence and the substructure extensive spalling. The purpose is to provide a crossing of SR 158 over Silverville Creek with a condition rating of at least 7 out of 9 (good condition).

The proposed project will replace the bridge with a three-sided, flat-topped box culvert, with a length of approximately 32 feet and an out-to-out coping width of 37 feet. The bridge will carry two (2) 11-foot lanes of traffic with 3-foot shoulders. Riprap will be installed (approximately 6-feet wide, 43-feet long, 4-feet deep) in front of both vertical walls for scour prevention. Additional guardrail and shoulder work will be performed along SR 158, approximately 175 feet east and 225 feet west of the bridge.

Approximately 0.6 acre of permanent and 0.03 acre of temporary right-of-way acquisition is expected. The project will be approximately 425 feet in length. Land use in the vicinity of the project is primarily agricultural, residential, and forested. The proposed method of traffic maintenance will require a road closure and a detour. The project is anticipated to begin construction in Spring 2024.

INDOT designation number(s)	Project number	DHPA number	DHPA plan number
1800133	22-89003.001		

Prepared for: *(Company / Institution / Agency)*
Butler, Fairman & Seufert, Inc.

Name of contact
Elizabet Biggio

Address *(number and street, city, state, and ZIP code)*
8450 Westfield Blvd. Suite 300 Indianapolis, Indiana 46240

Telephone number	E-mail address
(317)713-4615	EBiggio@bfsengr.com

Name of principal investigator
David Moffatt

Name of company / institution Gray & Pape, Inc.		
Address *(number and street, city, state, and ZIP code)* 5807 North Post Road Indianapolis, Indiana		
Telephone number (317)417-3843	E-mail address dmoffatt@graypape.com	
Signature of principal investigator *(Required)*		Date *(month, day, year)* 12/9/2022

RECOMMENDATIONS

Records check *(Check all that apply.)*

- ☐ No archaeological investigation is recommended before the project is allowed to proceed because the records check has determined that the project area does not have the potential to contain archaeological resources.
- ☐ A Phase Ia archaeological reconnaissance is recommended.
- ☐ A cemetery development plan may be required under Indiana Code 14-21-1-26.5 because project ground disturbance will be within 100 feet of a cemetery.

Phase Ia archaeological reconnaissance *(Check all that apply.)*

- ☒ It is recommended that the project be allowed to proceed as planned because the Phase Ia archaeological reconnaissance has located no archaeological sites within the project area and/or previously recorded sites that were investigated warrant no additional investigation.
- ☐ It is recommended that Phase Ic archaeological subsurface reconnaissance be conducted before the project is allowed to proceed. The Phase Ia archaeological reconnaissance has determined that the project area includes landforms which have the potential to contain buried archaeological deposits.

Other recommendations / commitments

Based upon shovel test profiles, there does not seem to be potential for the presence of intact deeply buried archaeological deposits. Results of this survey suggest no potential for undisturbed buried sites at this location.

Pursuant to IC-14-21-1, if any archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and 29) requires that the discovery must be reported to the Department of Natural Resources within two (2) business days. In that event, please call (317) 232-1646.

REQUIRED ATTACHMENTS

- ☒ Figure showing project location within Indiana
- ☒ USGS topographic map showing the project area *(1:24,000 scale)*
- ☒ Aerial photograph showing the project area, land use and survey methods
- ☒ Photographs of the project area, including, if applicable, photographs documenting disturbances
- ☐ Project plans *(if available)*

NOTE: Attachments have been removed for space conservation. See Appendix B.

Other attachments

References cited *(See short report instructions for required references to be consulted.)*

Barnhart, John D., and Dorothy L. Riker
1971 Indiana to 1816: The Colonial Period. Indiana Historical Bureau and Indiana Historical Society, Indianapolis.

Burkett, Frank M., and Ronald Hicks
1986 Archaeological Investigations of the Upper Big Blue River Glacial Sluiceway. Reports of Investigation 21. Archaeological Resources Management Service, Ball State University, Muncie, Indiana.

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2022 Wayback Aerial Imagery. Accessed July 2022.

Griffing, B. N.
2017 [1879] An atlas of Lawrence County, Indiana, on Indiana Memory. https://indianamemory.contentdm.oclc.org/digital/collection/p15078coll8/id/2642. Originally published 1879 by D .J. Lake and Co., Philadelphia, Pennsylvania. Indiana State Library, Indianapolis. Accessed July 2022.

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2022 Guidebook for Indiana Historic Sites and Structures Inventory – Archaeological Sites, https://www.in.gov/dnr/historic/files/hp-archaeology_guidebook.pdf. Accessed July 2022.

2022 Archaeological Site Records. Accessed July 2022.

Indiana Department of Transportation, Cultural Resources Office
2018 Indiana Cultural Resources Manual. Electronic document. http://www.in.gov/indot/crm/. Accessed July 2022.

McCullough, Robert G.
2003 Cultural Interaction Along the West Fork of the White River during the Late Prehistoric Period. In Facing the Final Millennia: Studies in the Late Prehistory of Indiana, A.D. 700–1700. Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology, Indianapolis, Indiana.

McCullough, Robert G., Andrew A. White, Michael R. Strezewski, and Dorothea McCullough
2004 Frontier Interaction during the Late Prehistoric Period: A Case Study from Central Indiana. Reports of Investigations 401. IPFW Archeological Survey, Indiana University-Purdue University at Fort Wayne, Indiana.

Meadows, William C. and Charles E. Bair
2000 An Archaeological Survey of High Probability Water Course Development Areas In the East Fork White River Watershed in South Central Indiana. Draft on file at the Department of Natural Resources, Division of Historic Preservation and Archaeology, Indianapolis, Indiana.

Smith, E. E.
1984 Indian and Early Archaic Settlement Patterns in Southcentral Indiana. Prepared for the Indiana Department of Natural Resources. Glenn A. Black Laboratory of Archaeology, Indiana University, Bloomington, Indiana.

Stafford, C. Russell

Appendix E

Red Flag Investigation

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: May 12, 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: Brittney Layton, M.A.
Butler, Fairman, and Seufert, Inc.
8450 Westfield Boulevard, Suite 300
Indianapolis, IN 46240
BLayton@bfsengr.com

Re: RED FLAG INVESTIGATION
DES #1800133, State Project
Bridge Replacement
State Road (SR) 158 over Silverville Creek*, 7.94 Miles West of SR 458
Lawrence County, Indiana

*Note: While RFI refers to Silverville Creek, this is the same feature identified in the CE as Silverville Branch.

PROJECT DESCRIPTION

Brief Description of Project:

INDOT-Vincennes District has identified the need to address the deteriorated condition of the bridge #(158)58-47-03027 (National Bridge Inventory (NBI) #028000) over Silverville Creek. The project is located along SR 158, 7.94 miles west of SR 458 in Lawrence County, Indiana. The project intends to remove and replace the existing bridge, which is a single span concrete stringer/multi-beam bridge. The existing structure, built 1938, is approximately 24 feet in length and an out-to-out width of 31.3 feet, and a height of 8.4 feet. The replacement bridge will be a three-sided, flat-topped box culvert, with a length of approximately 32-feet, an out-to-out width of 52-feet-6 inches, and a height of 9-feet 11-inches. Riprap will be installed (6-feet wide, 52-feet-6 inches long, 4-feet deep) in front of both vertical walls for scour prevention. Additional guardrail and shoulder work will be performed along SR 158, but the exact amount has yet to be determined. The overall project length will be approximately 500 feet.

Bridge Work Included in Project: Yes ☒ No ☐ Structure #(s) (158)58-47-03027__
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) _____
Proposed right of way: Temporary ☐ # Acres _____ Permanent ☐ # Acres _____, Not Applicable ☒

Type and proposed depth of excavation: Excavation is anticipated to be a maximum depth of 18 feet due to the removal of the existing bridge and installation of the new structure.
Maintenance of traffic (MOT): The MOT will require closing the structure and utilizing a detour. The specific route will be determined as the project progresses.
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	**2***	Recreational Facilities	**N/A**
Airports[1]	**N/A**	Pipelines	**N/A**
Cemeteries	**3**	Railroads	**N/A**
Hospitals	**N/A**	Trails	**N/A**
Schools	**N/A**	Managed Lands	**1**

[1]In 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*: Two (2) religious facilities, one (1) mapped and one (1) unmapped, are located within the 0.5 mile search radius. The nearest facility, Silverville Missionary Baptist Church, is located approximately 0.32 mile east of the project area. No impact is expected.

Cemeteries: Three (3) cemeteries are located within the 0.5 mile search radius. The nearest cemetery, Silverville Baptist Cemetery, is located approximately 0.32 mile east of the project area. No impact is expected.

Managed Lands: One (1) managed land is located within the 0.5 mile search radius. The Crane Naval Weapons Support Center is located approximately 0.28 mile northwest of the project area. Coordination with the U.S. Department of Defense is recommended.

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	**2**	Canal Routes - Historic	**N/A**
Karst Springs	**1**	NWI - Wetlands	**10**
Canal Structures – Historic	**N/A**	Lakes	**2**
NPS NRI Listed	**N/A**	Floodplain - DFIRM	**N/A**
NWI-Lines	**2**	Cave Entrance Density	**4**
IDEM 303d Listed Streams and Lakes (Impaired)	**N/A**	Sinkhole Areas	**N/A**
Rivers and Streams	**5**	Sinking-Stream Basins	**N/A**

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-Points: Two (2) NWI-Points are located within the 0.5 mile search radius. The nearest NWI-Point is located approximately 0.35 mile west of the project area. No impact is expected.

Karst Springs: One (1) karst spring is located within the 0.5 mile search radius. The karst spring is located approximately 0.31 mile east of the project area. No impact is expected.

NWI-Wetlands: Ten (10) wetlands are located within the 0.5 mile search radius. One (1) wetland is located within the project area. A Waters of the U.S. Report is recommended based on mapped features, and coordination with INDOT ESD Ecology and Waterway Permitting will occur.

Lakes: Two (2) lakes are located within the 0.5 mile search radius. The nearest lake is located approximately 0.22 mile northeast of the project area. No impact is expected.

NWI-Lines: Two (2) NWI-Line segments are located within the 0.5 mile search radius. One (1) NWI-Line segment intersects the project area. A Waters of the U.S. Report is recommended based on mapped features, and coordination with INDOT ESD Ecology and Waterway Permitting will occur.

Cave Entrance Density: Four (4) Cave Entrance Density polygons are located within the 0.5 mile search radius. The project area is located within one (1) of the cave entrance density polygons. Coordination with INDOT ESD Ecology and Waterway Permitting will occur.

Rivers and Streams: Five (5) river and stream segments are located within the 0.5 mile search radius. Silverville Creek is located within the project area. A Waters of the U.S. Report is recommended based on mapped features, and coordination with INDOT ESD Ecology and Waterway Permitting will occur.

MINING AND MINERAL EXPLORATION TABLE AND SUMMARY

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

Explanation: No mining or mineral resources were identified within the 0.5 mile search radius.

HAZARDOUS MATERIAL CONCERNS TABLE AND SUMMARY

Hazardous Material Concerns Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Superfund	**N/A**	Manufactured Gas Plant Sites	**N/A**
RCRA Generator/ TSD	**N/A**	Open Dump Waste Sites	**N/A**
RCRA Corrective Action Sites	**N/A**	Restricted Waste Sites	**N/A**
State Cleanup Sites	**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	**N/A**
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).

Explanation: No hazardous material concerns were identified within the 0.5 mile search radius.

ECOLOGICAL INFORMATION SUMMARY

The Lawrence County listing of the Indiana Natural Heritage Data Center information on endangered, threatened, or rare (ETR) species and high quality natural communities is provided at https://www.in.gov/dnr/nature-preserves/files/np_lawrence.pdf. A preliminary review of the Indiana Natural Heritage Database by INDOT ESD did nor indicate the presence of ETR species within the 0.5 mile search radius. Coordination with IDNR and USFWS will occur.

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The project area is located in a rural area surrounded by forested and agricultural areas. The August 12, 2020 inspection report for Bridge (158)58-47-03027 states that no evidence of bats was seen or heard under the bridge. Additional coordination with INDOT District Environmental personal will be necessary, and the range-wide programmatic consultation for the Indiana Bat and Northern Long eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

RECOMMENDATIONS SECTION

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

INFRASTRUCTURE:

Managed Lands: One (1) managed land, Crane Naval Weapons Support Center, is located approximately 0.28 mile northwest of the project area. Coordination with the U.S. Department of Defense is recommended.

WATER RESOURCES:

A Waters of the U.S. Report is recommended based on the presence of mapped features, and coordination with INDOT ESD Ecology and Waterway Permitting will occur for the following features:

- One (1) wetland is located within the project area.
- One (1) NWI-Line segment intersects the project area.
- Silverville Creek is located within the project area.
- The project area is located within one (1) of the cave entrance density polygons. (Coordination only.)

MINING/MINERAL EXPLORATION: N/A

HAZARDOUS MATERIAL CONCERNS: N/A

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

INDOT ESD concurrence: Chad Pitcher, CHMM Digitally signed by Chad Pitcher, CHMM Date: 2022.05.24 09:10:57 -04'00'

Prepared by:
Brittney Layton, M.A.
NEPA Specialist
Butler, Fairman, & Seufert, Inc.

_____(Signature)

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 NOTE: Site Map removed for space conservation. See Appendix B.

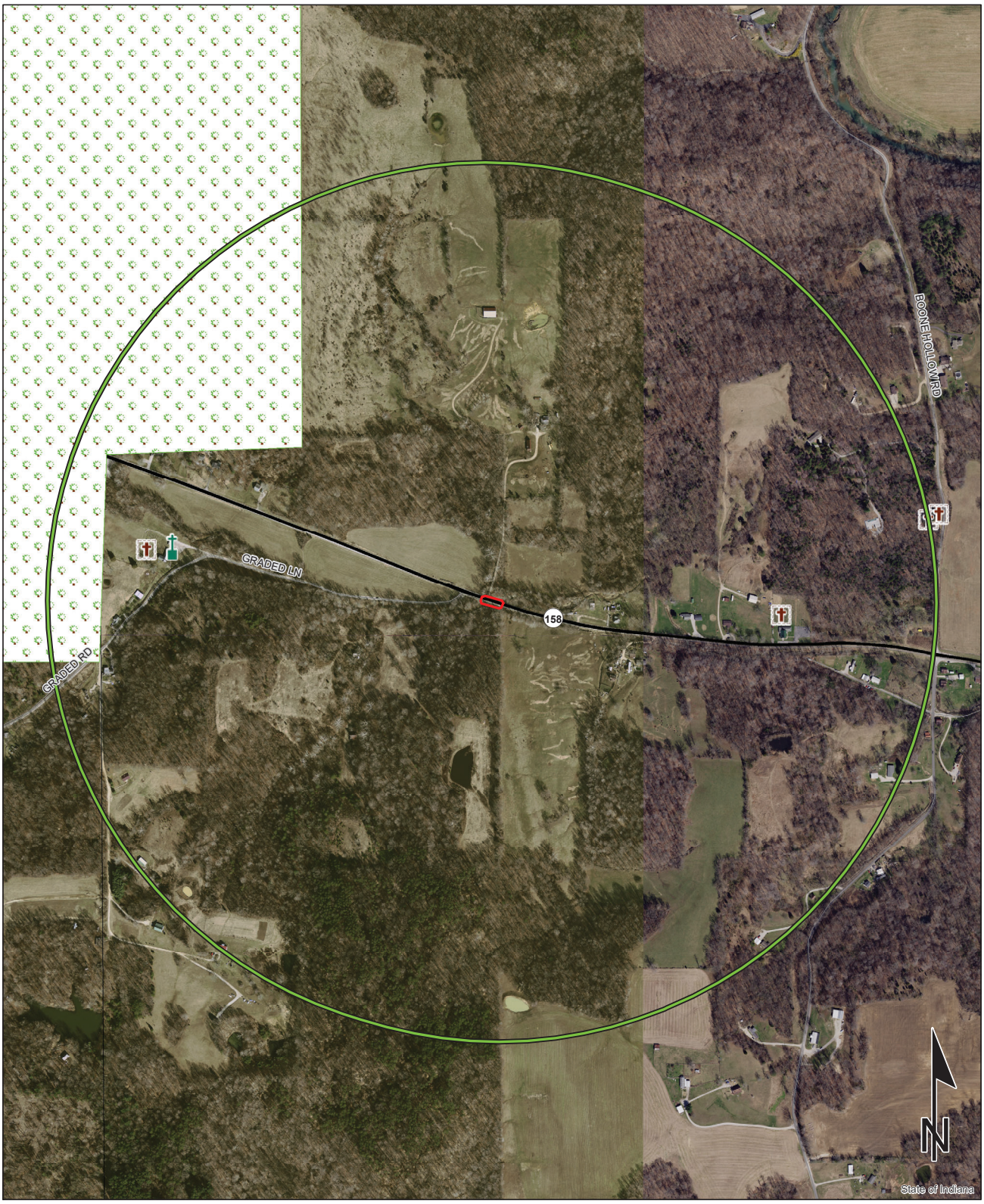
INFRASTRUCTURE: YES

WATER RESOURCES: YES

MINING/MINERAL EXPLORATION: N/A

HAZARDOUS MATERIAL CONCERNS: N/A

Red Flag Investigation - Infrastructure
SR 158 over Silver Creek, 7.94 Miles West of SR 458
Des. No.1800133, Bridge Replacement
Lawrence County, Indiana



0.1 0.05 0 0.1 Miles

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

Red Flag Investigation - Water Resources
SR 158 over Silver Creek, 7.94 Miles West of SR 458
Des. No.1800133, Bridge Replacement
Lawrence County, Indiana

0.1 0.05 0 0.1 Miles

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.

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

Appendix F

Ecological and Water Resources

"WATERS OF THE U.S." DETERMINATION REPORT
SR 158 over Silverville Branch, Lawrence County
Bridge Replacement Project
Des. No. 1800133
Asset ID: (158) 58-47-03027

Prepared By: Neal Bennett, PWS #2425
Contact Information:
nbennett@bfsengr.com / 317-713-4615
Butler, Fairman, & Seufert, Inc.
Completed Date: June 22, 2022

Approved on 7.1.2022
Sandra Bowman

Date(s) of Field Investigation:
A field investigation was completed on June 14, 2021, by BF&S to evaluate the presence of *Waters of the United States* for the proposed replacement of Bridge (158) 58-47-03027 carrying State Road (SR) 158 over Silverville Branch in Lawrence County, Indiana.

Project Location:
Section 19, Township 5 North, Range 2 West on the United States Geological Survey (USGS) Williams, Indiana Quadrangle Map (see Attachment 2).

Center Coordinates: LAT. 38.85856; LONG. -86.674827

Project Description:
INDOT-Vincennes District has identified the need to address the deteriorated condition of Bridge (158) 58-47-03027 (National Bridge Inventory (NBI) #028000) over Silverville Branch. The project is located along SR 158, approximately 7.94 miles west of SR 458 in Lawrence County, Indiana. The project intends to remove and replace the existing bridge, which is a single span concrete stringer/multi-beam bridge. The existing structure, built in 1938, is approximately 24 feet in length and has an out-to-out width of 31.3 feet, and a height of 8.4 feet. The replacement bridge will be a three-sided, flat-topped box culvert, with a length of approximately 32-feet, an out-to-out width of 52-feet-6 inches, and a height of 9-feet 11-inches. Riprap will be installed (6-feet wide, 52-feet-6 inches long, 4-feet deep) in front of both vertical walls for scour prevention. Additional guardrail and shoulder work will be performed along SR 158. The overall project length will be approximately 500 feet.

The site is in a portion of Lawrence County that formed in the Mississippian age within the West Baden Group, which is subsurface geology consisting of shale, sandstone, and micritic and skeletal limestone. The area is also within the Shawnee Hills Natural Region and Crawford Upland Section, Southern Hills and Lowlands physiography. This makes it some of the hilliest terrain in the state with sandstone outcroppings and deeply incised cuts through the sandstone, exposing the underlying limestone. This exposure can cause the formation of caves, dolines and other karst topographical features (see Attachment 10).

Desktop Reconnaissance:

Site(s) Background
Prior to the field investigation, several reference materials were consulted to gain information about the site. The USGS Williams, IN quadrangle map was used to determine contours of the site and locate any water bodies in the area, as well as to provide a legal description of the area (see Attachment 2). The Natural Resources Conservation Service's (NRCS) Web Soil Survey website was consulted to determine if the project area contained any soils listed in either the

Hydric Soils of the United States manual or the Indiana State list of hydric soils along with a description of characteristics displayed by the mapped soil types of the area (see Attachments 6 – 8). The U.S. Fish and Wildlife Service (USFWS) NWI Map was used to find and classify any previously catalogued wetlands in the project area (see Attachment 4). The Indiana Department of Natural Resources' (DNR) floodplain map was consulted to gain an understanding of historic flood locations and frequency that may impact the study area (see Attachment 5). The USGS National Hydrologic Dataset was used to find any mapped waterway features in or near the project area (see Attachment 9). Known karst features map was also examined (see Attachment 10). All this information provided a background for the hydrologic regime of the area.

National Wetlands Inventory (NWI) Map:

The following is a list of mapped wetlands located either within or near the proposed project limits (see Attachment 4).

- Silverville Branch is mapped as a 2.01-acre palustrine, forested, broad-leaved deciduous, temporarily flooded (PFO1A) wetland. However, approximately 0.35-mile upstream and approximately 0.49 mile downstream, Silverville Branch is mapped as a riverine, lower perennial, unconsolidated bottom, permanently flooded (R2UBH) waterway, which is the correct classification. The PFO1A classification is incorrectly mapped. The misclassification is likely due to the dense tree canopy in the area causing the 1 meter or less digital, color infrared imagery used by the USFWS for NWI mapping to be obscured and not showing a defined channel in this reach of Silverville Branch. Therefore, this should be classified as R2UBH throughout the study area.

Soil Map Data:

According to the NRCS Web Soil Survey website for Lawrence County, Indiana (see Attachments 6-8), the following table summarizes the soil type(s) found in the investigation area:

Soil Unit Name	Symbol	NRCS Flooding Frequency	NRCS Drainage Class	NRCS Hydric Soil Category	SSURGO Hydric Rating
Gatchel loam	GacAW	Rare, Occasional	Somewhat excessively drained	Not hydric	0%

Table 1: Soil Survey Summary Table

USGS National Hydrography Dataset (NHD):

According to the USGS NHD map, there are two features, both mapped as stream/river in the study area (see Attachment 9). The streams are Silverville Branch and Unnamed Tributary (UNT) to Silverville Branch, which passes southwest to northeast through the study area. The unnamed tributary is a feature beginning northwest of the bridge and flows south along the west side of a private drive where it terminates at a driveway pipe that immediately outlets into Silverville Branch in the northwest quadrant of the study area.

USGS 12-digit Hydrologic Unit Code (HUC-12):

051202080904, Silverville Branch – Indian Creek

Attached Documentation:

- Maps of the study area (state, road, quad, NWI, floodplain, soil, karst, data point)
- Photographs of the study area with orientation map
- Wetland Data Sheets
- Preliminary Jurisdictional Determination (PJD) Form

NOTE: State, Road, and Quad Maps removed for space conservation. See Appendix B.

Field Reconnaissance:

The general area consisted of residential properties with grassland and a forested corridor along Silverville Branch. The study area limits extend 500 feet along SR 158 and 50 feet from the centerline in all quadrants around the bridge to investigate the entire forested riparian areas along Silverville Branch and to evaluate for the presence of any wetlands or streams. The area was investigated by walking transects northwest to southeast within the study limits for the project and looking for any visual evidence of waterway or wetland characteristics. Any wetland boundaries and sampling point locations were recorded in the field using a handheld Global Positioning System (GPS) unit with submeter accuracy. Based on the daily rainfall data obtained from CoCoRaHS - Community Collaborative Rain, Hail & Snow Network, the project location received approximately 1.01 inches of rainfall in the seven days preceding the site visit. Ordinary high-water mark (OHWM) and bankfull measurements were taken when present at a water feature and dominant substrate material was identified by conducting a pebble count. If present, roadside ditches were examined for possible jurisdictional status. Any areas that exhibited wetland characteristics (hydrophytic vegetation, hydrology, and hydric soils) were investigated to determine if the area should be classified as wetland. Field data collection was completed based on the methodologies presented in the *1987 U.S. Army Corps of Engineers Wetland Delineation Manual* ('87 Manual) and the *Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Midwest Region Version 2.0* (Regional Supplement). Field methods did not deviate from the standard methods found in the '87 Manual or the Regional Supplement.

A field visit to the project area was conducted on June 14, 2021, to investigate for potential features that may classify as *"Waters of the U.S."* or *"Waters of the State"* within the study limits. Jurisdictional wetland and stream determinations were based on the Pre-2015 "*Waters of the U.S."* regulatory guidance as outlined in the Clean Water Act following the *Rapanos v. United States* Supreme Court Decision (1986).

Waterway(s):

Silverville Branch

One (1) mapped waterway was observed within the study area. This waterway is known as Silverville Branch and is identified as a perennial USGS blue line stream that flows northeast through the project area, and discharges into Indian Creek approximately 2.0 miles downstream of the study location. Silverville Branch has a drainage area upstream of the study limits of approximately 1.815 square miles (as calculated using the web-tools on the USGS *Indiana StreamStats* website[1]). Silverville Branch is classified as a PFO1A wetland but is actually a R2UBH waterway. It is of poor quality due to entrenchment with a high width/depth ratio, making it difficult to support aquatic organisms. The substrate is primarily silt and various sizes of gravel, which supports the unconsolidated bottom classification. The creek has an approximate average 31-foot bankfull width and approximate average 2-foot bankfull depth. The OHWM depth is approximately 1.5 feet and width is approximately 28 feet. All stream measurements were taken at LAT. 38.85856; LONG. -86.674827. During the site visit conducted on June 14, 2021, Silverville Branch did not contain flowing water. Silverville Branch is determined to be a *"Waters of the U.S."* because it is a blue-line feature with a defined bed and banks and the presence of an OHWM (see Attachment 13 for photos of the stream).

[1] https://streamstats.usgs.gov/ss/

UNT to Silverville Branch

The NHD-mapped feature along the northwest side of the bridge was identified in the field. This UNT to Silverville Branch is classified an intermittent stream and flows south into the project area. The UNT to Silverville Branch has a drainage area upstream of the study limits of approximately 0.09 square mile. The stream is of average quality due to the lack of entrenchment. The creek has an approximate average 5 foot bankfull width and approximate average 1 foot bankfull depth. The OHWM is approximately 4 feet in width and 0.67 feet (8 inches) in depth. All stream measurements were taken at LAT. 38.513137; LONG. -86.402980. The UNT to Silverville Branch did not contain flowing water. The UNT to Silverville Branch is determined to be a "Waters of the U.S." because it has a defined channel and OHWM.

Stream Name	Photos	Lat/Long	OHWM width	OHWM Depth	USGS	Presence of Riffles/ Pools	Substrate	Quality	Likely Water of the U.S.	Linear feet within Study Area
Silverville Branch	5-8	38.85856; -86.674827	28 ft	1.5 ft	Perennial (solid blue line)	No	Silt/Gravel	Poor	Yes	100 feet
UNT to Silverville Branch	9-11	38.513137; -86.402980	4 ft	0.67 ft	Intermittent (dashed blue line)	No	Gravel	Poor	Yes	75 feet

Table 2: Stream Summary Table

Wetlands:

Two potential wetland areas were investigated during the site visit. Data points (DP) were collected in the potential wetland areas where wetland conditions were most likely.

DP1 was collected in the southwest quadrant of the study area near the outlet of a pipe culvert. No indicators of hydrology were found, so the wetland hydrology criterion was not met. The soil was found to be non-hydric, so the hydric soil criterion was not met. Vegetation identified at DP1 included American elm (*Ulmus americana*-FACW), eastern redbud (*Cercis canadensis*-FACU), and orchard grass (*Dactylis glomerata*-FACU). The vegetation failed to pass the rapid test, dominance test and prevalence index, so the hydrophytic vegetation criterion was not met. Therefore, DP1 is not located within a wetland (see Attachments 18 – 19).

DP2 was collected in the northeast quadrant of the study area on the east bank of Silverville Branch. No indicators of hydrology were found, so the wetland hydrology criterion was not met. The soil was found to be non-hydric, so the hydric soil criterion was not met. Vegetation identified at DP2 included, black maple (*Acer nigrum*-FACU), black walnut (*Juglans nigra*-FACU), and orchard grass (*Dactylis glomerata*-FACU). The vegetation failed to pass the rapid test, dominance test and prevalence index, so the hydrophytic vegetation criterion was not met. DP2 is not located within a wetland (see Attachments 20 – 21).

Data Point ID	Photo #	Lat/Long (UTM NAD 83)	Hydrophytic Vegetation Present	Hydric Soils Present	Wetland Hydrology Present	Is the Sampled Area within a Wetland
DP1	12-14	38.85856; -86.674827	No	No	No	No
DP2	15-17	38.513088; -86.40285	No	No	No	No

Table 4: Wetland Data Summary Table

Floodplains:
The project is located within the regulated floodplain (Zone A) along Silverville Branch (Indiana Floodplain Information Portal) (Attachment 5).

Open Water:
No open water areas were observed in the investigated area.

Roadside Ditches:
Three roadside ditches were identified during the site visit, distributed in the northwest, southeast, and southwest quadrants of the study area.

One roadside ditch was identified in the northeast quadrant. Roadside ditch 1 (RSD1) drains east to west and terminates into Silverville Branch. RSD1 was a shallow, vegetated swale with a defined bed but lacking an OHWM. Vegetation was dominated by orchard grass (*Dactylis glomerata*), silky wild rye (*Elymus villosus*), and smooth brome (*Bromus inermis*). RSD1 does not meet the definition for a jurisdictional stream. RSD1 does not replace a natural channel, is not excavated through wetlands, does not have defined banks, and only carries ephemeral, not relatively permanent or seasonal, flow.

One roadside ditch was identified in the southeast quadrant of the study area. Roadside ditch 2 (RSD2) drains east to west and terminates into Silverville Branch. RSD2 was a shallow, vegetated ditch with a defined bed but lacking an OHWM. Vegetation was dominated by orchard grass (*Dactylis glomerata*), garlic mustard (*Alliaria petiolata*), and orange touch-me-not (*Impatiens capensis*). RSD2 does not meet the definition for a jurisdictional stream. RSD2 does not replace a natural channel, is not excavated through wetlands, does not have defined banks, and only carries ephemeral, not relatively permanent or seasonal, flow.

One roadside ditch was identified in the southwest quadrant of the study area. Roadside ditch 3 (RSD3) drains west to east and terminates into Silverville Branch. RSD3 was a shallow, grassy swale with no defined bed and banks. Vegetation was dominated by orchard grass (*Dactylis glomerata*) and smooth brome (*Bromus inermis*). RSD3 does not meet the definition for a jurisdictional stream. RSD3 does not replace a natural channel, is not excavated through wetlands, does not have defined banks, and only carries ephemeral, not relatively permanent or seasonal, flow.

Name	Photo #	Lat/Long	Substrate	Likely a Water of the U.S.	Linear ft. in Study Area
RSD1	22	38.858528; -86.674468	Non-aquatic vegetation	No	50 feet
RSD2	20-21	38.858464; -86.674688	Non-aquatic vegetation	No	50 feet
RSD3	18-19	38.858630; -86.675270	Non-aquatic vegetation	No	50 feet

Table 3: Roadside Ditch Summary Table

Conclusions:
A field investigation was conducted on June 14, 2021, by BF&S to evaluate the presence of *Waters of the U.S*. for the replacement of Bridge (158) 58-47-03027 carrying SR 158 over Silverville Branch in Lawrence County, Indiana. Desktop reconnaissance and field observations

identified two streams, one mapped as Silverville Branch, the other named UNT to Silverville Branch, for purposes of this report, within the study area. No wetlands were observed.

Based on their contribution of flow into Indian Creek, the blue-line perennial stream located approximately 2.0 miles downstream, both waterways (Silverville Branch and UNT to Silverville Branch) would likely be considered *Waters of the U.S*. Silverville Branch and UNT to Silverville Branch are the only jurisdictional features identified in the investigation.

Every effort should be taken to avoid and minimize impacts to these features. If impacts are necessary, then mitigation may be required. INDOT Environmental Services should be contacted immediately if impacts occur. The final determination of jurisdictional waters is ultimately made by the USACE. This report is our best judgement based on the guidelines set forth by the Corps.

Acknowledgement:

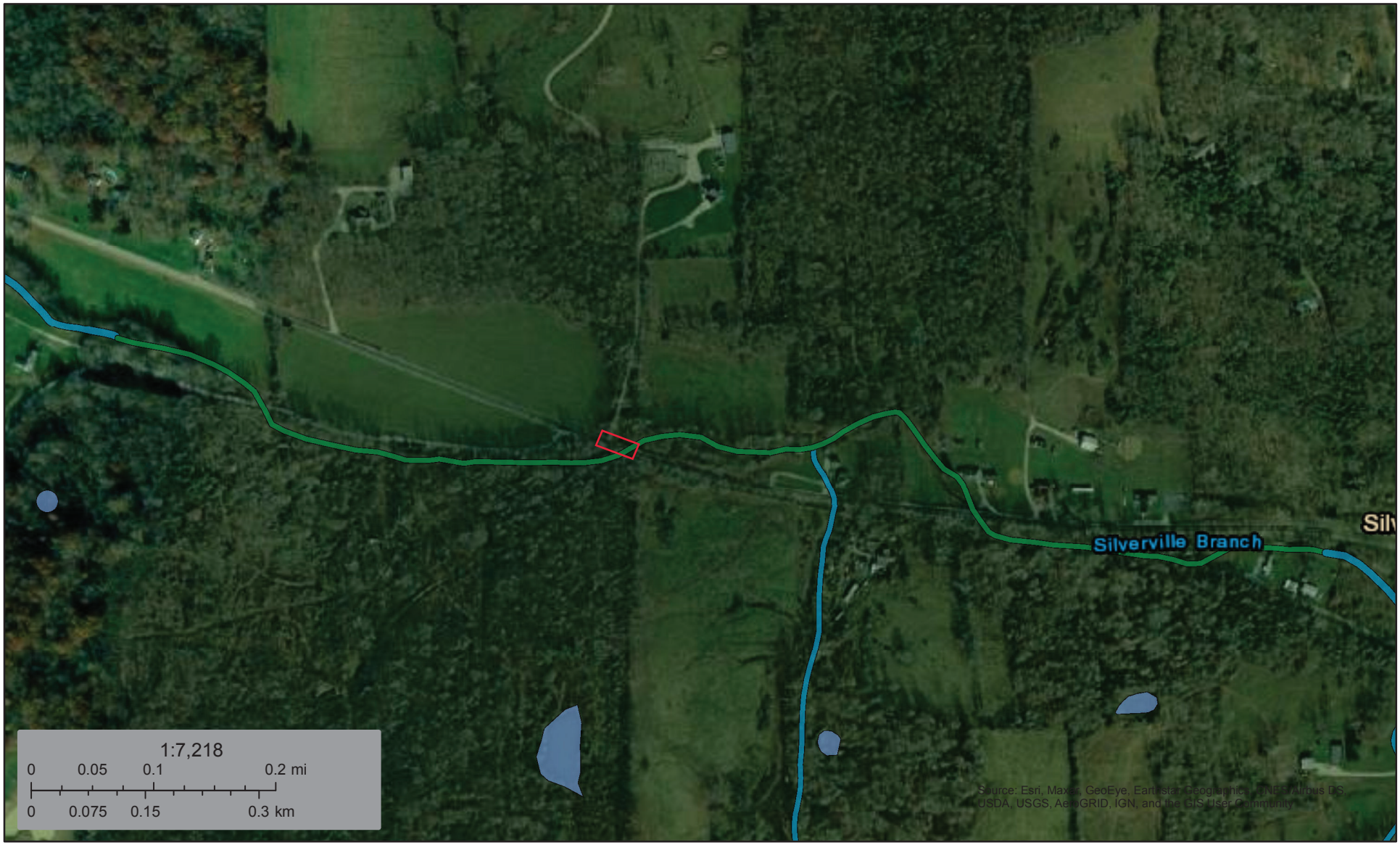
This waters determination has been prepared based on the best available information, interpreted in the light of the investigator's training, experience, and professional judgement in conformance with the 1987 *Corps of Engineers Wetlands Delineation Manual*, the appropriate regional supplement, the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

June 22, 2022
Neal Bennett, PWS
Ecologist
BF&S Environmental Services
nbennett@bfsengr.com

U.S. Fish and Wildlife Service

National Wetlands Inventory

Des No. 1800133



February 8, 2022

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine
- Study Area

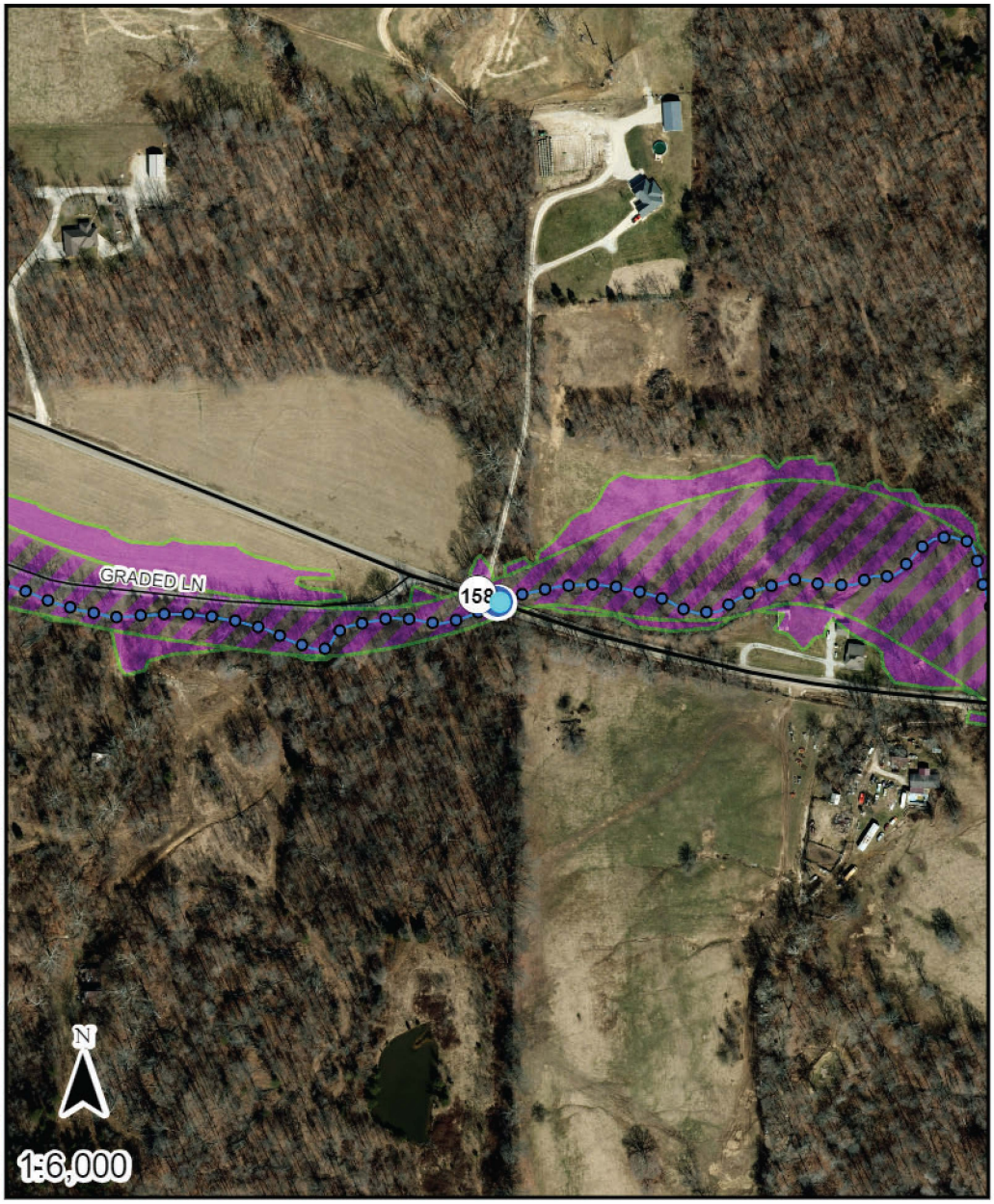
N

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

DNR Indiana Department of Natural Resources

Floodplain Analysis & Regulatory Assessment (FARA)



Point of Interest

Base Flood Elevation Point

Flood Elevation Points

STUDIED STREAM

Rivers and Streams at least 1 square mile

Drainage Area (sq. miles)

1 - 10

DNR Approximate Floodway

DNR Approximate Fringe

Point of Interest Coordinates (WGS84)

Long: **-86.6748078354**

Lat: **38.8585779382**

The information provided below is based on the point of interest shown in the map above.

County: **Lawrence**

Stream Name: **Silverville Branch**

Approximate Ground Elevation: **549.2 feet (NAVD88)**

Base Flood Elevation: **544.8 feet (NAVD88)**

Drainage Area: **Not available**

Best Available Flood Hazard Zone: **DNR Approximate Floodway**

National Flood Hazard Zone: **Not Mapped**

Date Generated: 2/16/2022

Is a Flood Control Act permit from the DNR needed for this location? **yes**

Is a local floodplain permit needed for this location? **yes-**

Floodplain Administrator: **Valerie Luchauer**

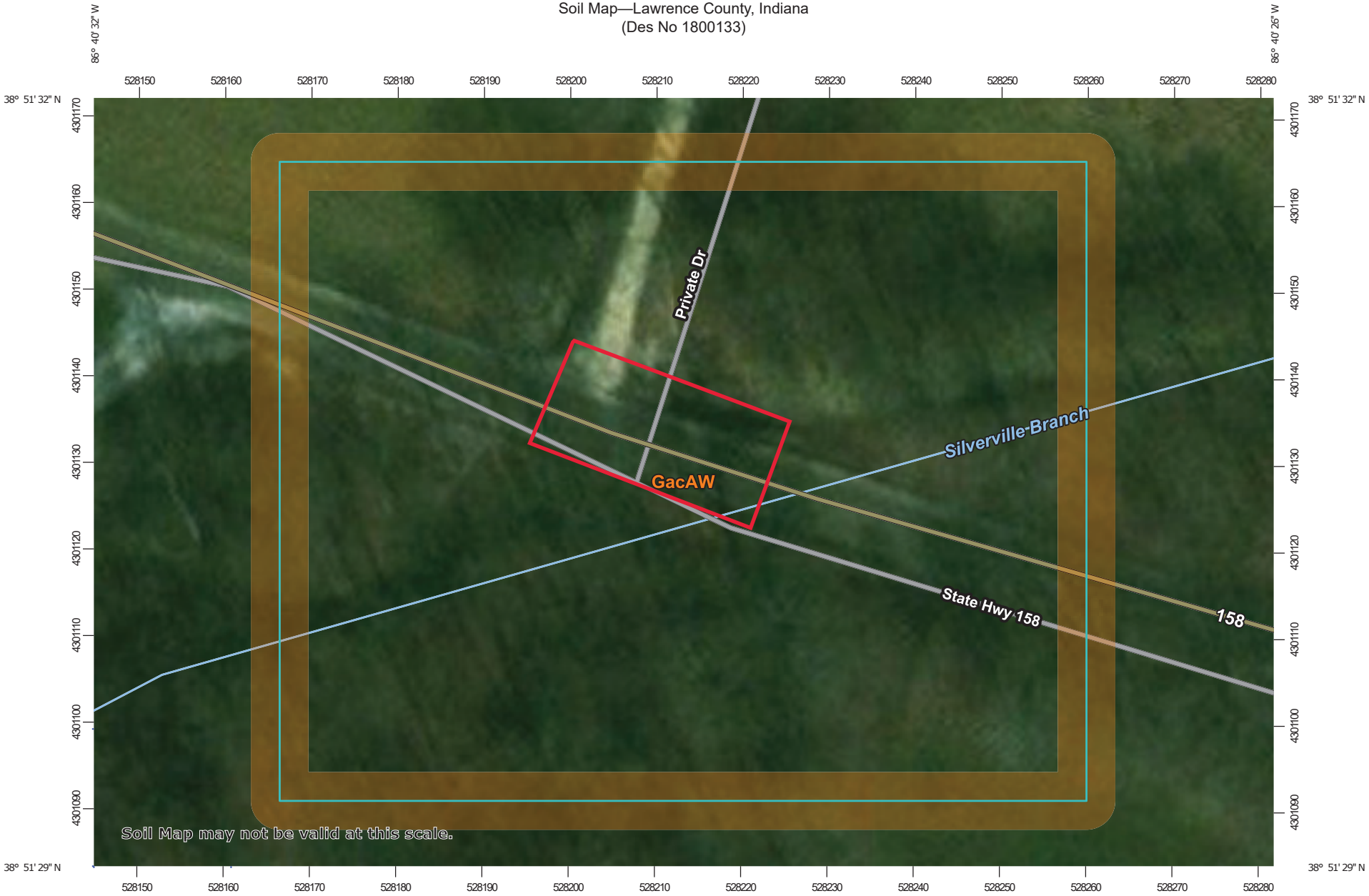
Community Jurisdiction: **Lawrence County, County proper**

Phone: **(812) 277-9680**

Email: **lcema47421@gmail.com**

US Army Corps of Engineers District: **Louisville**

Soil Map—Lawrence County, Indiana
(Des No 1800133)



Map Scale: 1:626 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 5 10 20 30

Feet
0 30 60 120 180

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

Study Area

2/8/2022

USDA **Natural Resources Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Lawrence County, Indiana
Survey Area Data: Version 27, Sep 8, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

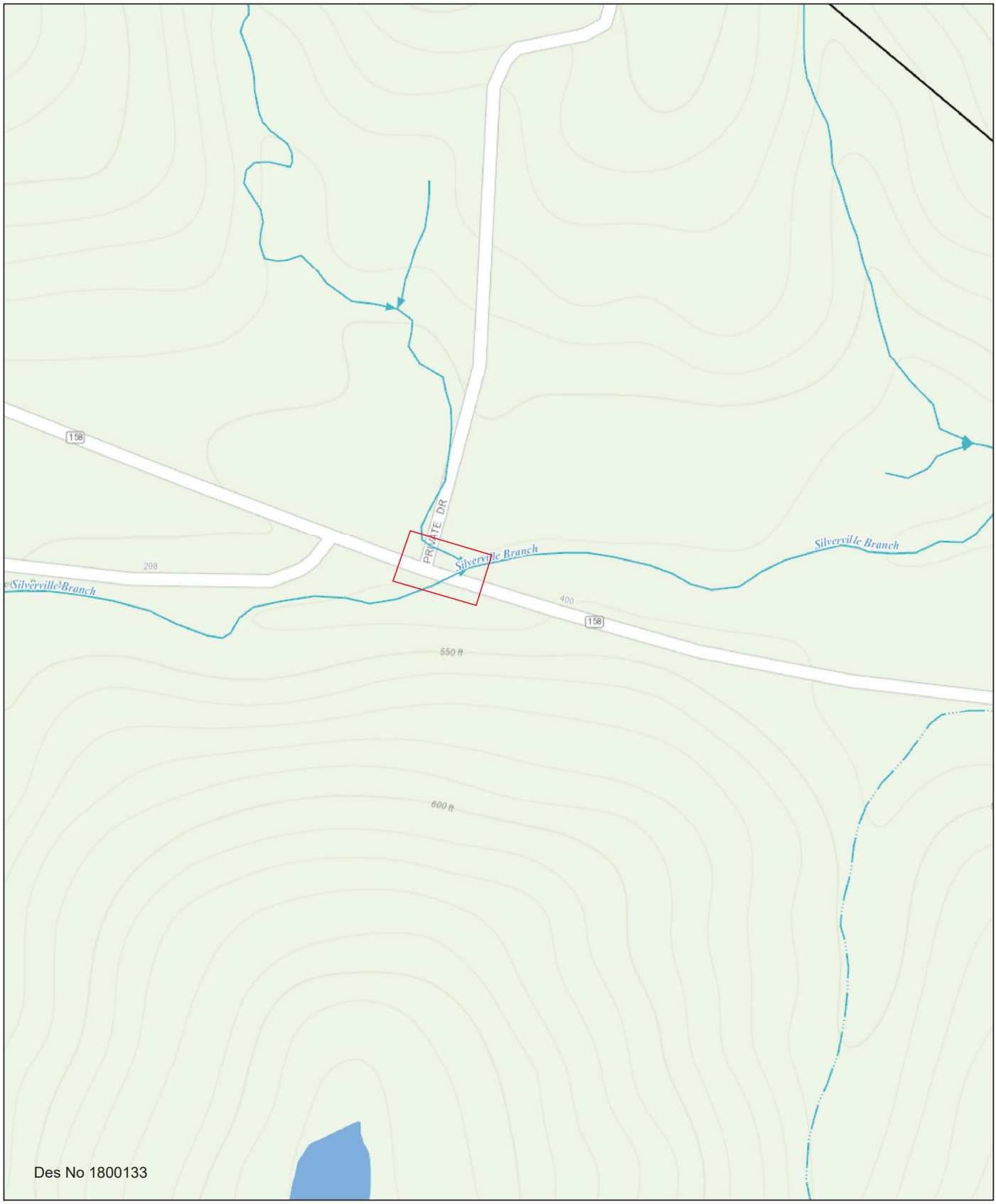
Date(s) aerial images were photographed: Apr 25, 2014—Mar 20, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
GacAW	Gatchel loam, 1 to 3 percent slopes, occasionally flooded, very brief duration	1.7	100.0%
Totals for Area of Interest		**1.7**	**100.0%**

USGS National Hydrography Dataset



6/9/2022, 11:31:22 AM

Waterbody - Large Scale
- Estuary
- Ice Mass
- Lake Pond
- Playa
- Reservoir
- Swamp Marsh

Area - Large Scale
- Area of Complex Channels
- Area to be Submerged
- BayInlet
- Bridge
- CanalDitch
- DamWeir
- Flume
- Foreshore
- Hazard Zone
- Inundation Area
- Lock Chamber
- Rapids
- SeaOcean
- Special Use Zone
- Spillway
- StreamRiver
- Submerged Stream
- Wash
- Water IntakeOutflow

Flowline - Large Scale
- Perennial
- Intermittent
- Ephemeral
- Artificial Path
- Canal Ditch
- Coastline
- Connector
- Pipeline
- Study Area

N

1:2,257

0 0.02 0.04 0.08 mi

0 0.03 0.07 0.13 km

USGS TNM – National Hydrography Dataset. Data Refreshed April, 2022., Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

USGS

Bridge over Silverville Branch Replacement Project
Lawrence County, Indiana
Des. No. 1800133
Aerial Investigation Map

Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USGS TNM – National Hydrography Dataset., Indiana Geological Survey

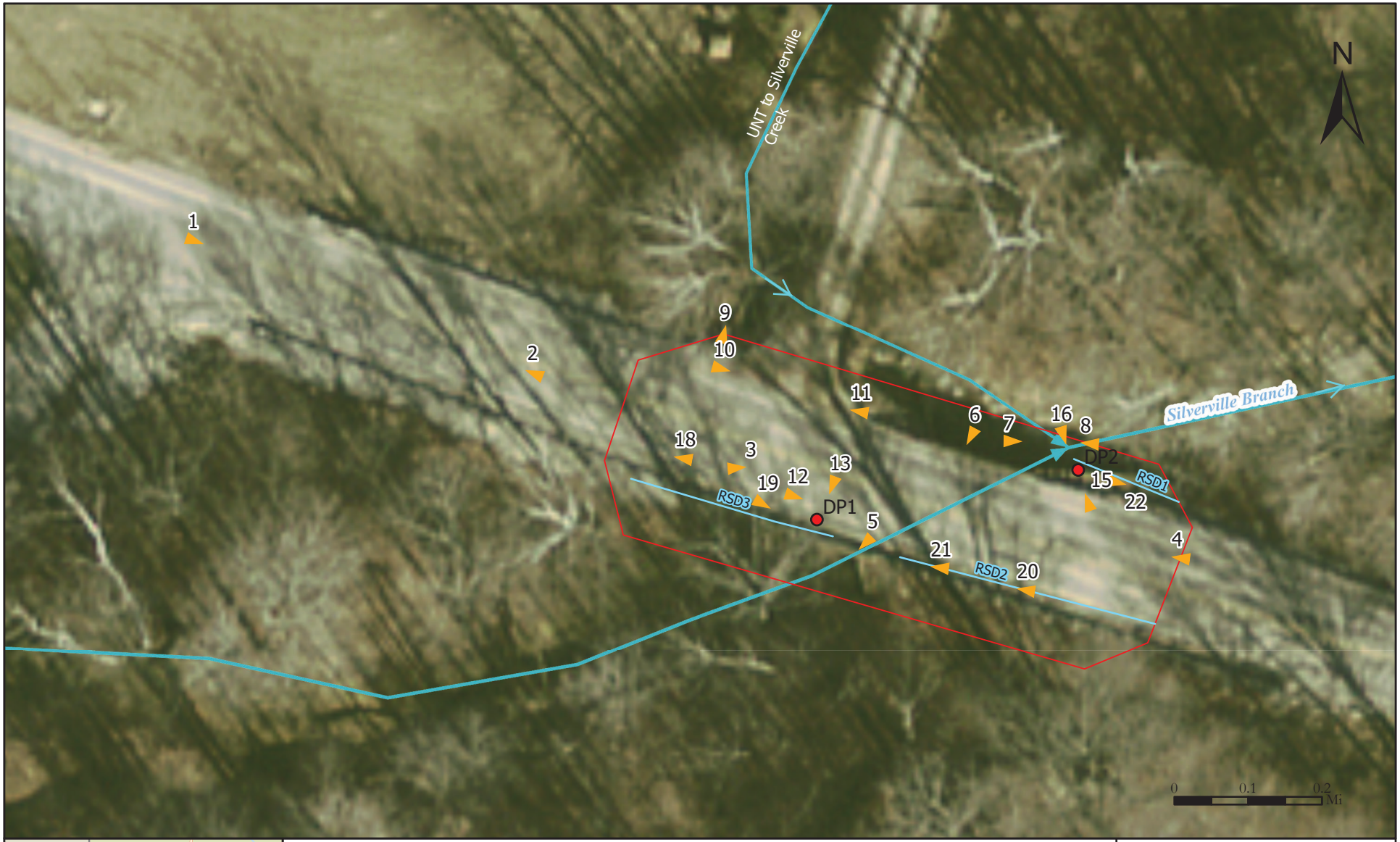
Coordinate System: NAD 1983 UTM Zone 16N

Study Area
Des. 1800133

Karst Springs
Karst Springs

Sinkhole Areas and Sinking-Stream Basins
Sinkhole Area
Sinking Stream Basin

Cave Entrance Density
0 - 1
2 - 5
6 - 10
11 - 15



Bridge over Silverville Branch Replacement Project
Lawrence County, Indiana
Des. No. 1800133
Aerial Investigation Map

Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USGS TNM – National Hydrography Dataset.

Coordinate System: NAD 1983 UTM Zone 16N

- NEGATIVE
- Photo Location
- RSD
- Study Area
- Perennial

Photo 1. Overview of Project location, looking southeast along SR 158. 6/14/2021

Photo 2. Overview of Project location, looking northwest along SR 158. 6/14/2021

Photo 3. Overview of Project location, looking northeast along SR 158. 6/14/2021

Photo 4. Overview of Project location, looking northwest along SR 158. 6/14/2021.