Appendix E

Red Flag and Hazardous Materials

INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204

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

Eric Holcomb, Governor
Joe McGuinness, Commissioner

Preliminary Red Flag Investigation, for information purposes only

Date: June 16, 2022

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

From: Mackenzie Knotts
CHA Consulting, Inc.
300 S. Meridian Street
Indianapolis, IN 46225
mknotts@chacompanies.com

Re: RED FLAG INVESTIGATION
INDOT Des. No. 1900192, State Project
HMA Overlay, Minor Structural
US 52: SR 244 to SR 229 JCT
Franklin County, Indiana

PROJECT DESCRIPTION

Brief Description of Project:
The project begins along US 52 at the SR 244 junction (RP 137+0.158) and extends to the SR 229 Junction (RP 145+0.728). The pavement along this route is deteriorating with common pavement deficiencies. The pavement will be milled 4.0" and overlaid with a 1.5" surface Hot Mixed Asphalt (HMA) layer on top of a 2.5" intermediate layer. The locations of pavement failure should be excavated 10" below the milled surface and be patched using HMA Patching. Driveways and approaches are to be milled and finished with either HMA or Portland Cement Concrete Pavement (PCCP) depending on existing pavement type. Full depth patching, 16"; 10" of pavement over 6" of stone, will occur in areas of more pronounced HMA pavement failure. End terminal and damaged guardrails will be replaced throughout the length of the project. Additionally, five small structures will be replaced.

Bridge and Street /or Culvert Project: Yes ☐ No ☒ Structure # _____ ___
If this is a bridge project, is the bridge Historical? Yes ☐ No ☐ , Select ☐ Non-Select ☐
(Note: If the project involves a historical bridge, please include the bridge information in the Recommendations Section of the report).
Proposed right of way: Temporary ☐ # Acres n/a , Permanent ☐ # Acres n/a , Not Applicable ☒
Type of excavation: Excavation is planned to be 2-4 feet. The type of excavation is unknown at this time.
Maintenance of traffic: Traffic will be maintained through partial lane closure.
Work in waterway: Yes ☐ No ☒; Below ordinary high water mark: Yes ☐ No ☐
State Project: ☒ LPA: ☐
Any other factors influencing recommendations: N/A

INFRASTRUCTURE TABLE AND SUMMARY

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

Explanation:

Cemeteries:
Four (4) cemeteries are located within the 0.5 mile investigation radius. The nearest cemetery, Old Brick Cemetery, is located 0.2 mile north-northeast of the project area. No impact is expected.

Railroads:
One (1) railroad is located within the 0.5 mile investigation radius. One (1) railroad segment, associated with Whitewater Valley Railroad, is located 0.26 mile east of the project area. No impact is expected.

Trails:
Two (2) trail segments are located within the 0.5 mile investigation radius. One (1) planned trail segment, Whitewater Canal Trail, is located 0.26 mile east of the project area. No impact is expected.

Managed Lands:
One (1) managed land area is located within the 0.5 mile investigation radius. The nearest managed land, Whitewater Canal State Historic Site, is located 0.25 mile east of the project area. No impact is expected.

WATER RESOURCES TABLE AND SUMMARY

Water Resources Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
NWI-Points	**3**	NWI - Wetlands	**103**
Karst Springs	**N/A**	IDEM 303d Listed Lakes	**N/A**
Canal Structures	**N/A**	Lakes	**58**
NWI - Lines	**52**	Floodplain - DFIRM	**6**
IDEM 303d Listed Rivers and Streams (Impaired)	**5**	Cave Entrance Density	**N/A**
Rivers and Streams	**112**	Sinkhole Areas	**N/A**
Canal Routes-Historic	**1**	Sinking-Stream Basins	**N/A**

NWI-Points:
Three (3) National Wetland Inventory (NWI)-Points are located within the 0.5 mile investigation radius. Two (2) NWI-points are located adjacent to the project area. A Waters of the US Report will be prepared and coordination with INDOT ES Ecology and Waterway Permitting will occur.

NWI – Lines:
Fifty-two (52) NWI-lines segments are located within the 0.5 mile investigation radius. One NWI-line segment, associated with Little Salt Creek, is located within the project area. A Waters of the US Report will be prepared and coordination with INDOT ES Ecology and Waterway Permitting will occur.

IDEM 303d Listed Rivers and Streams (Impaired):
Five (5) IDEM 303d listed rivers and streams (impaired) are located within the 0.5 mile investigation radius. The nearest 303d listed river or stream (impaired), Whitewater River, is located 0.15 mile east of the south-southeast end of the project extent. No impact is expected.

Rivers and Streams:
One hundred and twelve (112) river and stream segments are located within the 0.5 mile investigation radius. One (1) stream, Little River Creek, is located within the project area. A Waters of the US Report will be prepared and coordination with INDOT ES Ecology and Waterway Permitting will occur.

Canal Routes-Historic:
One (1) canal routes-historic is located within the 0.5 mile investigation radius. One (1) canal route is located 0.26 mile east of the south-southeast extent of the project area. No impact is expected.

NWI-Wetland:
One hundred and three (103) wetlands are located within the 0.5 mile investigation radius. Twelve wetlands are located adjacent the project area. A Waters of the US Report will be prepared and coordination with INDOT ES Ecology and Waterway Permitting will occur.

Lakes:
Fifty-eight (58) lakes are located within the 0.5 mile investigation radius. Thirteen lakes are located adjacent the project area. A Waters of the US Report will be prepared and coordination with INDOT ES Ecology and Waterway Permitting will occur.

Floodplains – DFIRM:
Six (6) floodplain polygons are located within the 0.5 mile investigation radius. The project area is located within three of the floodplain polygons. Coordination with INDOT Ecology and Waterway Permitting will occur.

MINING/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	**1**	Petroleum Fields	**N/A**
Mines - Surface	**3**	Mines - Underground	**N/A**

Petroleum Wells:
One (1) well is located within the 0.5 mile investigation radius. The nearest petroleum well is located 0.20 mile northeast of the project area. No Impact is expected.

Mines-Surface:
Three (3) mines-surface were identified within the 0.5 mile investigation radius. The nearest mine is located 0.29 mile north-northeast of the project area. Due to the proposed MOT, which is anticipated to be a partial lane closure with a flagger to allow traffic in each direction, disruption to the mine will be minimized.

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 Street	**N/A**	Manufactured Gas Plant Sites	**N/A**
RCRA Generator/ TSD	**N/A**	Open Dump Waste Sites	**1**
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	**2**	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 Land Street fill	**N/A**	NPDES Facilities	**1**
Infectious/Medical Waste Sites	**N/A**	NPDES Pipe Locations	**1**
Leaking Underground Storage (LUST) Sites	**N/A**	Notice of Contamination Sites	**N/A**

Underground Storage Tank (UST):
Two (2) USTs are located within the 0.5 mile investigation radius.

- One (1) UST, James McQueen (27042 US-52, AI No. 32169) is located adjacent to the north-northwest end of the project area. IDEM conducted an Underground Storage Tank Inspection on January 16, 2008, and the facility was found to be in compliance with equipment, operating, and maintenance requirements set forth in Indiana's UST Rule 329 IAC 9. A Request for Closure Report was rejected on

July 30, 2008 due to the result of the excavation zone assessment not being submitted to IDEM; however, documentation reviewed does not indicate that a release occurred. No impact is expected.

- One (1) UST, Pavey's Grocery (27093 US 52, AI No. 60858) is located 0.27 mile north-northeast of the project area. IDEM conducted an Underground Storage Tank Inspection on June 27, 2017, and the facility was found to be out of compliance with equipment, operating, and maintenance requirements set forth in Indiana's UST Rule 329 IAC 9; however, documentation reviewed does not indicate that a release occurred. No impact is expected.

Open Dump Waste Sites:
One (1) open dump waste site was identified within the 0.5 mile investigation radius. One (1) open dump waste Site, R&B Tire Pit Area (Reference post 138+70; Regulatory Program ID: 24001117A), is located adjacent to the project area. No files were available in the IDEM Virtual File Cabinet (VFC) regarding this Open Dump Waste Site when this investigation was conducted. Coordination with IDEM Office Land Quality will occur.

NPDES Facilities:
One (1) NPDES facility was identified within the 0.5 mile investigation radius. One (1) NPDES facility, Metamora RSD WWTP (US HWY 52 and Whitewater Canal; Permit No. IN0062391), is located 0.16 mile east of the project area. No impact is expected.

NPDES Pipe Location:
One (1) NPDES pipe location was identified within the 0.5 mile investigation radius. The NPDES pipe (Whitewater River External Outfall; ID: IN0062391) is located adjacent to the south-southeast extent of the project area. No impact is expected.

ECOLOGICAL INFORMATION SUMMARY

The Franklin County listing of the Indiana Natural Heritage Data Center information on endangered, threatened, or rare (ETR) species and high quality natural communities is attached with ETR species highlighted. A preliminary review of the Indiana Natural Heritage Database by INDOT Environmental Services did/did not indicate the presence of endangered species. Coordination with USFWS and IDNR will occur.

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. Additional investigation to confirm the presence or absence of bats in or on any culverts, bridges or structures affected by the project will be necessary. 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".

An inquiry using the USFWS Information for Planning and Consultation (IPaC) website did not indicate the presence of the federally endangered species, the Rusty Patch Bumble Bee, in or within 0.5 mile of the project area. No impact is expected.

Indiana County Endangered, Threatened and Rare Species List

County: Franklin

Indiana Department of Natural Resources

Species Name	Common Name	FED	STATE	GRANK	SRANK
Mollusk: Bivalvia (Mussels)					
Ptychobranchus fasciolaris	Kidneyshell		SSC	G4G5	S2
Insect: Coleoptera (Beetles)					
Cicindela marginipennis	Cobblestone Tiger Beetle		SE	G3	S1
Insect: Lepidoptera (Butterflies & Moths)					
Polygonia progne	gray comma		SR	G5	S2S3
Fish					
Clinostomus elongatus	Redside Dace		SE	G3G4	S1
Etheostoma variatum	Variegate Darter		SE	G5	S1
Amphibian					
Ambystoma barbouri	streamside salamander	C	SSC	G4	S3
Cryptobranchus alleganiensis alleganiensis	hellbender	C	SE	G3T2	S1
Reptile					
Terrapene carolina carolina	woodland box turtle		SSC	G5T5	S3
Bird					
Haliaeetus leucocephalus	bald eagle			G5	S3
Pandion haliaetus	Osprey		SSC	G5	S1B
Peucaea aestivalis	Bachman's Sparrow			G3	SXB
Setophaga magnolia	Magnolia Warbler			G5	SNA
Mammal					
Taxidea taxus	American Badger		SSC	G5	S2
Vascular Plant					
Cypripedium parviflorum var. makasin	small yellow lady's-slipper		ST	G5T4T5	S3
Eurybia schreberi	Schreber's aster		SE	G4	S1
Gentiana alba	yellow gentian		ST	G4	S3
Geum fragarioides	barren strawberry		ST	G5	S3
Lilium canadense	Canada lily		ST	G5	S3
Lithospermum parviflorum	shaggy false-gromwell		SE	G4G5T4	S1
Scutellaria parvula var. parvula	small skullcap		SE	G4T4	S1
Viburnum molle	softleaf arrow-wood		ST	G5	S3
High Quality Natural Community					
Barrens - bedrock limestone	Limestone Glade		SG	G4	S2S3
Forest - upland mesic Bluegrass	Bluegrass Mesic Upland Forest		SG	GNR	S3

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

Fed: E = Endangered; T = Threatened; C = candidate; PDL = proposed for delisting
State: SE = state endangered; ST = state threatened; SR = state rare; SSC = state species of special concern; SX = state extirpated; SG = state significant
GRANK: Global Heritage Rank: G1 = critically imperiled globally; G2 = imperiled globally; G3 = rare or uncommon globally; G4 = widespread and abundant globally but with long-term concerns; G5 = widespread and abundant globally; G? = unranked; GX = extinct; Q = uncertain rank; T = taxonomic subunit rank
SRANK: State Heritage Rank: S1 = critically imperiled in state; S2 = imperiled in state; S3 = rare or uncommon in state; S4 = widespread and abundant in state but with long-term concern; SG = state significant; SH = historical in state; SX = state extirpated; B = breeding status; S? = unranked; SNR = unranked; SNA = nonbreeding status unranked

RECOMMENDATIONS SECTION

INFRASTRUCTURE: N/A

WATER RESOURCES:

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

Two (2) NWI-points are located adjacent to the project area.

One (1) NWI-line is located within the project area.

One (1) stream, Little River Creek, is located within the project area.

Twelve (12) wetlands were identified adjacent the project area.

Thirteen (13) lakes were identified adjacent to the project area.

The project area is located within three of the floodplain polygons. Coordination with INDOT Ecology and Waterway Permitting will occur.

URBANIZED AREA BOUNDARY: N/A

MINING/MINERAL EXPLORATION: N/A

HAZMAT CONCERNS:
Open Dump Waste Sites:
One (1) Open Dump Waste Site was identified within the 0.5 mile investigation radius. One (1) Open Dump Waste Site, R&B Tire Pit Area (Reference post 138+70; Regulatory Program ID: 24001117A), is located adjacent to the project area. No files were available in the IDEM Virtual File Cabinet (VFC) regarding this Open Dump Waste Site when this investigation was conducted. Coordination with IDEM Office Land Quality will occur.

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

INDOT Environmental Services concurrence: _____(Signature)

Prepared by:
CHA Consulting, Inc.

Mackenzie Knotts, Environmental Scientist

Graphics:

SITE LOCATION: YES

INFRASTRUCTURE: YES

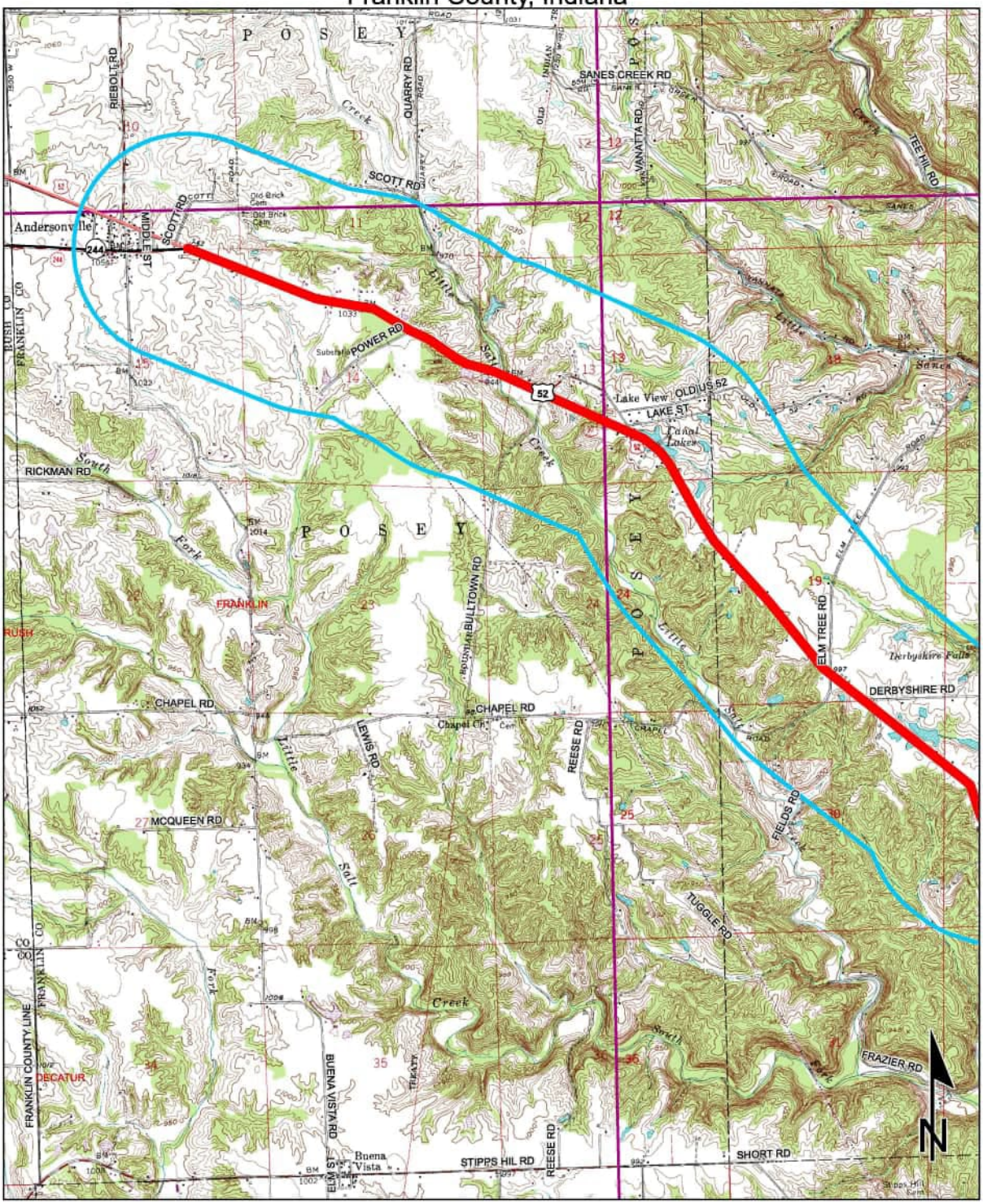
WATER RESOURCES: YES

URBANIZED AREA BOUNDARY: N/A

MINING/MINERAL EXPLORATION: YES

HAZMAT CONCERNS: YES

Red Flag Investigation - Site Location
Page 1 of 2
US 52 , HMA Overlay, Minor Structural
Des. No. 1900192
Franklin County, Indiana



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Sources:
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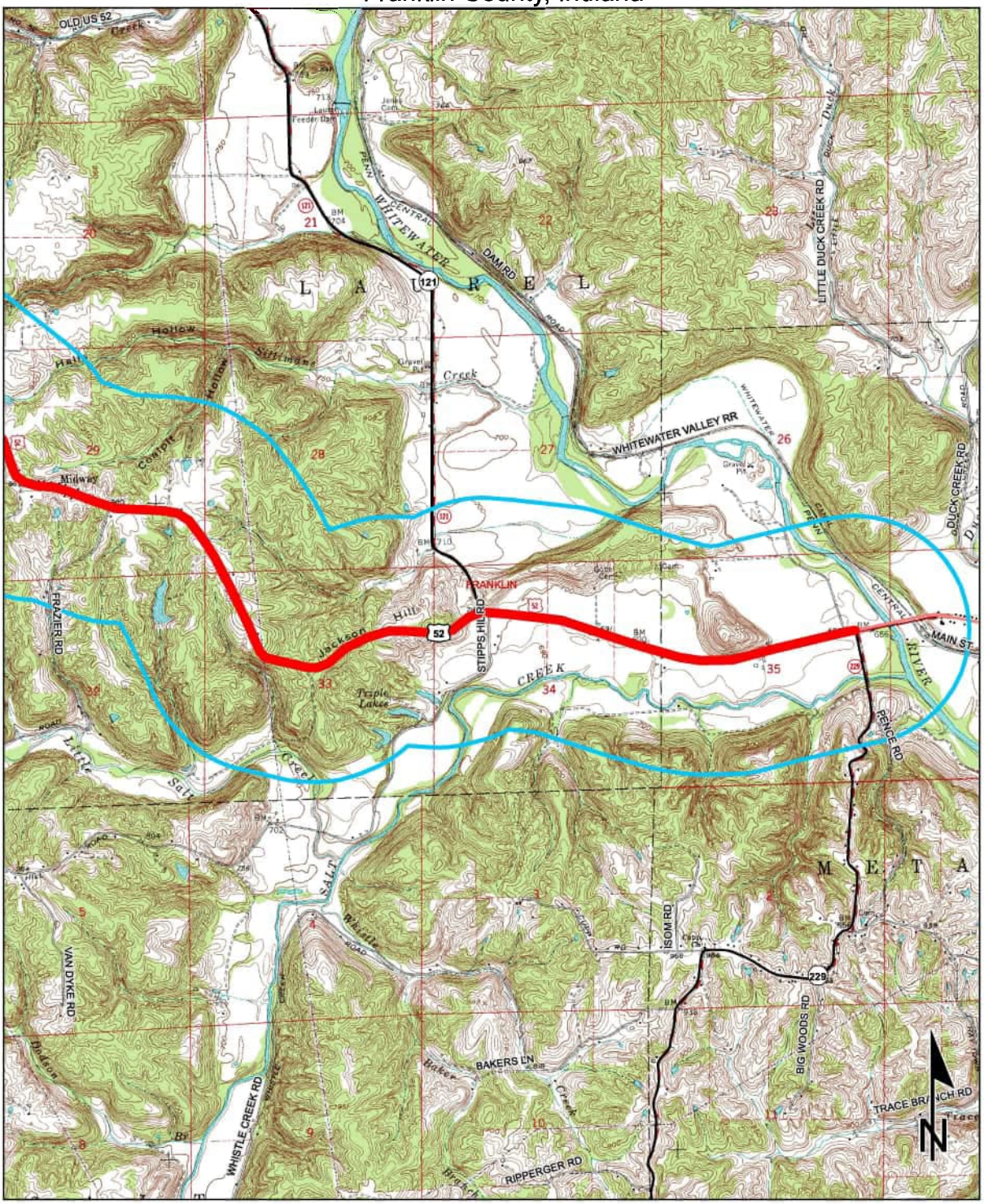
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

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

ALPINE, CLARKSBURG, METAMORE & NEW SALEM QUADRANGLES
INDIANA
7.5 MINUTE SERIES (TOPOGRAPHIC)

Red Flag Investigation - Site Location
Page 2 of 2
US 52 , HMA Overlay, Minor Structural
Des. No. 1900192
Franklin County, Indiana



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0.55 0.275 0 0.55 Miles

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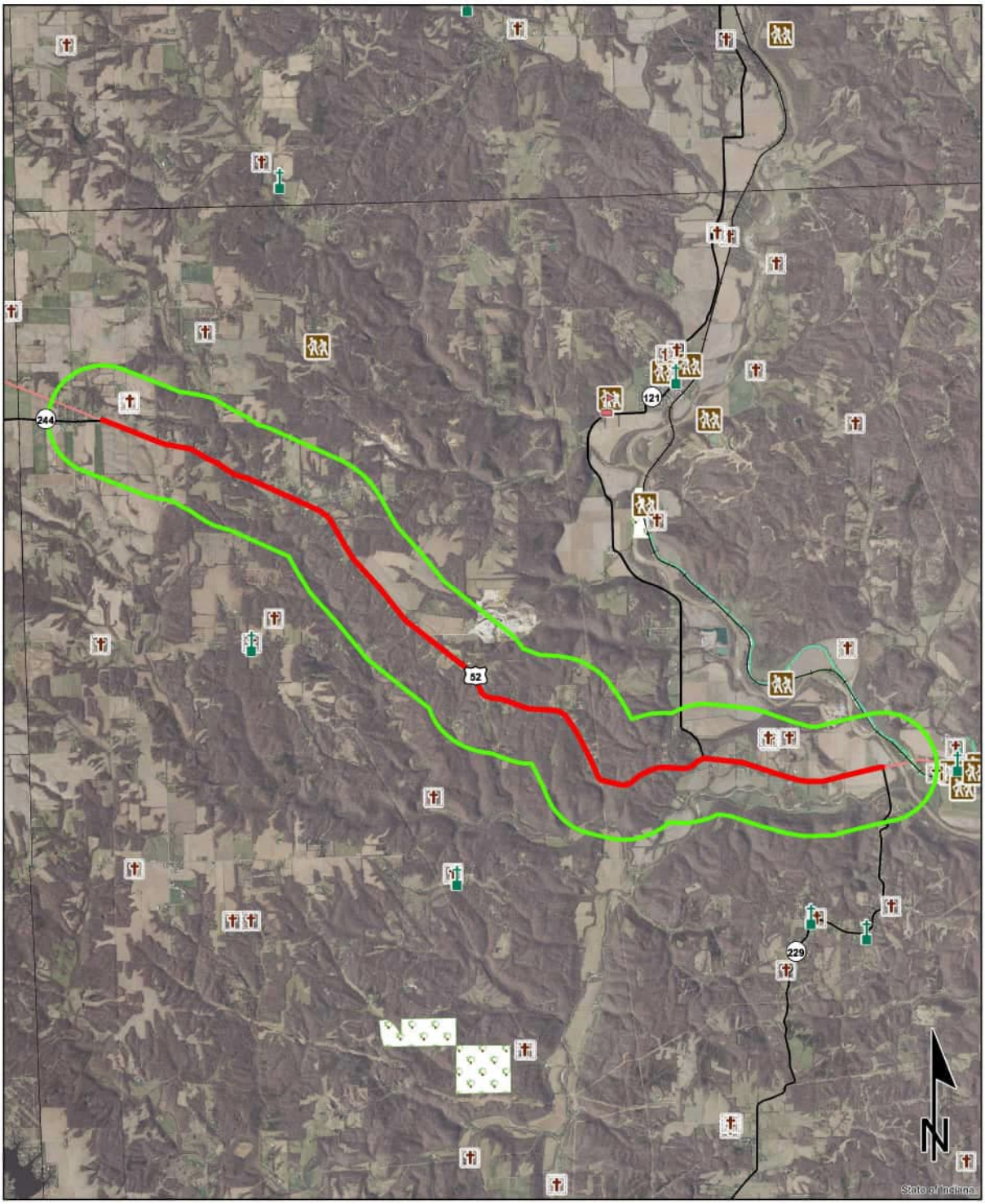
ALPINE, CLARKSBURG, METAMORE & NEW SALEM QUADRANGLES
INDIANA
7.5 MINUTE SERIES (TOPOGRAPHIC)

Red Flag Investigation - Infrastructure
US 52 , HMA Overlay, Minor Structural
Des. No. 1900192
Franklin County, Indiana



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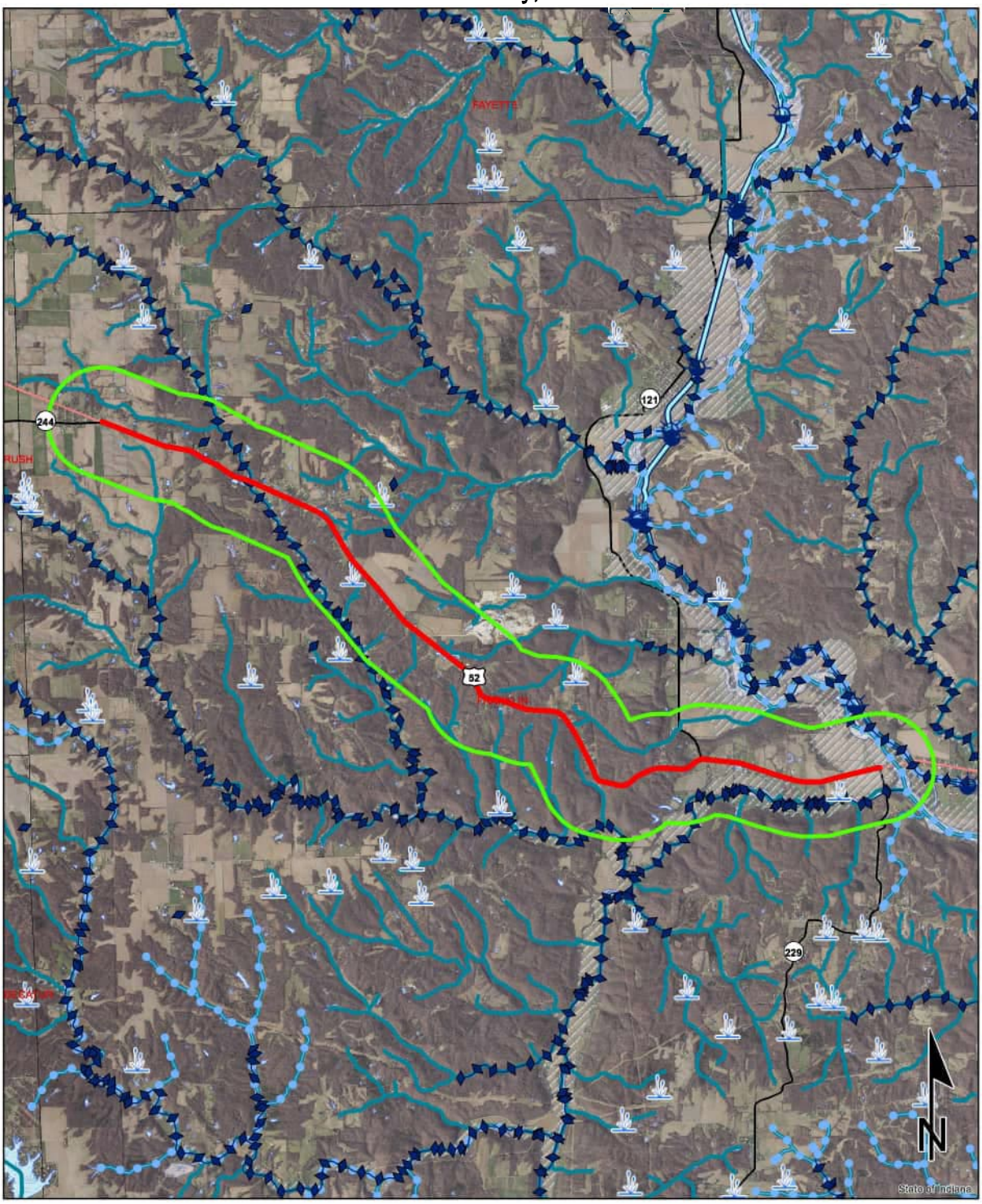
- Religious Facility
- Airport
- Cemeteries
- Hospital
- School
- Recreation Facility
- Pipeline
- Railroad
- Trails
- Managed Lands
- County Boundary
- Project Area
- Half Mile Radius
- Toll
- Interstate
- State Route
- US Route
- Local Road

Red Flag Investigation - Water Resources
US 52 , HMA Overlay, Minor Structural
Des. No. 1900192
Franklin County, Indiana



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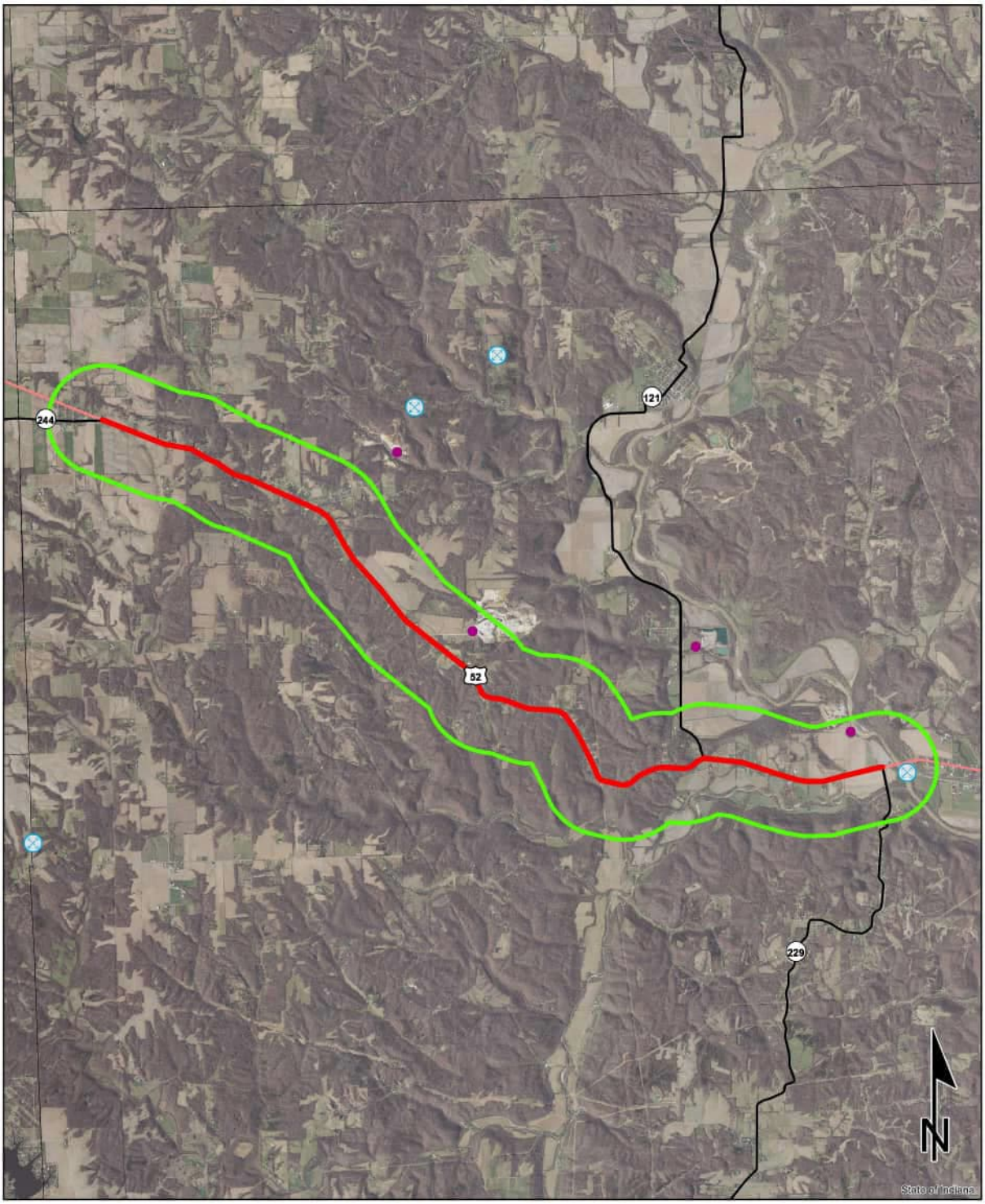
- NWI - Point
- Karst Spring
- NWI- Line
- Impaired_Stream_Lake
- NPS NRI listed
- River
- Canal Structure - Historic
- Canal Route - Historic
- Wetlands
- Lake
- Floodplain - DFIRM
- Cave Entrance Density
- Sinkhole Area
- Sinking-Stream Basin
- County Boundary
- Project Area
- Half Mile Radius
- Toll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

Red Flag Investigation - Mining/Mineral Exploration
US 52 , HMA Overlay, Minor Structural
Des. No. 1900192
Franklin County, Indiana



1 0.5 0 1 Miles

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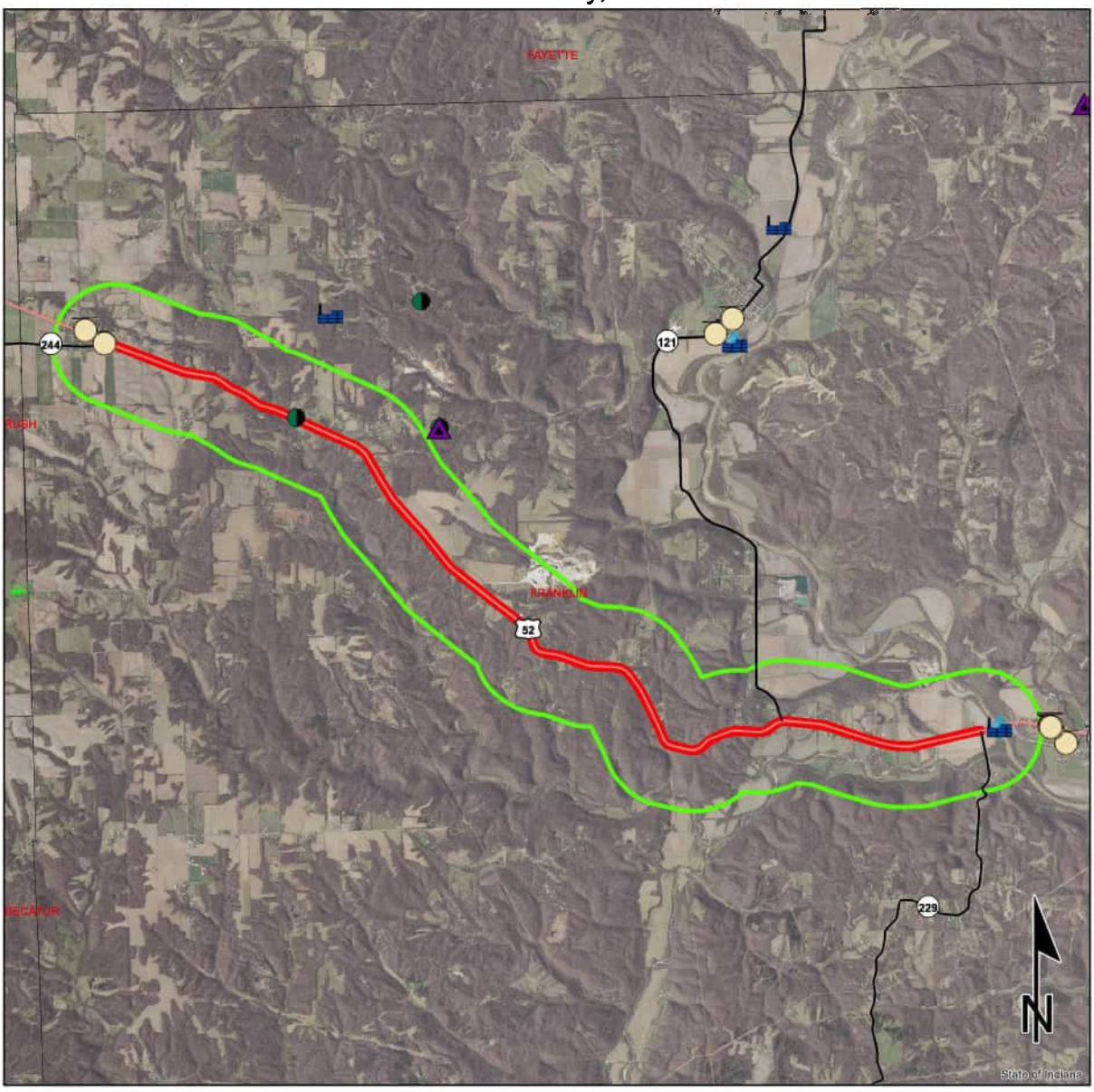
- Oil and Gas Wells
- Mineral Resources
- Mine - Surface
- Mine - Underground
- County Boundary
- Project Area
- Half Mile Radius
- Toll
- Interstate
- State Route
- US Route
- Local Road

Red Flag Investigation - Hazardous Material Concerns
US 52 , HMA Overlay, Minor Structural
Des. No. 1900192
Franklin County, Indiana



- Brownfield
- RCRA Corrective Action Sites
- Confined Feeding Operation
- Notice_Of_Contamination
- Construction/Demolition Site
- Infectious/Medical Waste Site
- Leaking Underground Storage Tank
- Manufactured Gas Plant
- NPDES Facilites
- NPDES Pipe Locations
- Open Dump Waste Site
- RCRA Generator/TSD
- Restricted Waste Site
- Septage Waste Site
- Solid Waste Landfill
- State Cleanup Site
- Superfund
- Tire Waste Site
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- US Route
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1 0.5 0 1 Miles

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Map Projection: UTM Zone 16 N **Map Datum:** NAD83

Etzkorn, Kaitlyn

From: INDOT esd.sam <esd.sam@indot.IN.gov>
Sent: Wednesday, October 13, 2021 6:15 PM
To: Etzkorn, Kaitlyn
Cc: Elmore, Summer
Subject: [--EXTERNAL--]: RE: DES 1900192 - Linear HMA Overlay and Small Structure Replacement

Greetings Kaitlyn –

If the structures are all maintenance pipes and are not listed in BIAS, then an RFI is not warranted. Coordination with INDOT ESD EWPO should occur to determine if a WOTUS is warranted; however, an RFI is not needed. If the project scope should change or if a structure that is mapped in BIAS is included, then please re-coordinate with SAM.

Thanks,
Nicole

Nicole Fohey-Breting
Major Projects / LPA Review Liaison
100 North Senate Avenue N758-ES
Indianapolis, Indiana 46204
Office: (317) 416-7084
Email: NFoheyBreting@indot.in.gov
Office Hours: 8 to 4 PM

The Site Assessment and Management (SAM) Manual can be found at https://www.in.gov/indot/engineering/environmental-services/environmental-policy/site-assessment-and-management/

Be sure to refer to the updated information in the SAM Manual for document preparation and submission.

From: Etzkorn, Kaitlyn <KEtzkorn@chacompanies.com>
Sent: Wednesday, October 13, 2021 7:38 AM
To: INDOT esd.sam <esd.sam@indot.IN.gov>
Cc: Elmore, Summer <SElmore@chacompanies.com>
Subject: DES 1900192 - Linear HMA Overlay and Small Structure Replacement

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

Hello INDOT SAM,

I wanted to confirm that for an 8.6 mile linear HMA Overlay project with 5 small structure replacement/restoration I should be doing a half mile radius search from each small structure, since this is where the excavation will take place. These 5 structures are CLV-052-024-114.58, CLV-052-024-116.6, CLV-052-024-116.27, CLV-052-024-117.47, CLV-052-024-117.88. These structures are maintenance pipes and not listed in BIAS. I have attached a state location map for reference.

Thank you for your time,

Kaitlyn Etzkorn
Environmental Scientist II
CHA
Office: (317) 780-7214
Cell: (317) 473-2273
ketzkorn@chacompanies.com
www.chacompanies.com

Responsibly Improving the World We Live In

Appendix F

Water Resources

Jacob Burskey
Approved 7/27/2022

Waters of the US Report

US 52-HMA Overlay, Minor Structural

Franklin County, Indiana
Des. No. 1900192

Field Investigation: October 13, 2021
Report Completed: July 21, 2022

Prepared for:

Indiana Department of Transportation
185 Agrico Lane
Seymour, IN 47274
Phone: 855-463-6848

Submitted by:

CHA Consulting, Inc.
201 N Illinois Street, Suite 800
Indianapolis, IN 46204
Phone: 317-786-0461

Table of Contents

List of Tables

List of Appendices

Waters of the US Report
US 52-HMA Overlay, Minor Structural
Franklin County, Indiana
Des. No. 1900192

Field Investigation: October 13, 2021
Report Completed: July 21, 2022

I. Introduction

The Indiana Department of Transportation (INDOT), with funding from the Federal Highway Administration (FHWA), is proposing to proceed with roadway improvements and five small structure replacements along US 52 located between State Road (SR) 244 junction (JCT) to the SR 229 JCT, in Posey, Metamora, and Laurel Township, Franklin County, Indiana. Project activities will include HMA overlay, pavement resurfacing, and structure replacement. The purpose of this investigation was to identify wetlands and waterways within and adjacent to the study area. A routine wetland determination, per the 1987 Corps of Engineers Wetland Delineation Manual (Y-87-1) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) was conducted. This report details the findings of the investigation.

The project is along US 52, with investigations occurring at five small structures located between SR 244 JCT in Andersonville, IN and SR 229 JCT in Metamora, IN (Attachment A, State Location Map). The remaining portion of the project area occurs within existing pavement, therefore no investigations occurred. The center of the project is located at 39.470033 and -85.23230, the west end is at 39.497547 and -85.283895, and the east end is at 39.449571 and -85.150260. Table 1 provides the location of each small structure replacement. Lastly, the study area is located within the Greensburg, Indiana United States Geological Survey (USGS) 7.5 Minute Quadrangles (Attachment A, USGS Project Location Map).

Table 1. Structure Locations

Structure Number	Latitude	Longitude	Section	Township	Range
CLV 052-024-114.58	39.484236	-85.245536	13	12 N	11 E
CLV 052-024-116.27	39.465603	-85.225392	30	12 N	12 E
CLV 052-024-116.59	39.462541	-85.220756	29	12 N	12 E
CLV 052-024-117.47	39.457820	-85.206920	29	12 N	12 E
CLV 052-024-117.88	39.453270	-85.202490	33	12 N	12 E

II. Existing Data

7.5 Minute USGS Quadrangle Maps and Watershed

The USGS map was reviewed to determine the topography and drainage patterns within the study area. The map indicates that the study area is characterized by rolling terrain with the adjacent land having many stream valleys with the elevation ranging from approximately 900 to 1017 feet. Drainage patterns lead towards the streams along the study area including three perennial blue line streams, Little Sanes Creek, Sillimans Creek, and Little Salt Creek. No blue line streams are within the study area. No USGS National Hydrography Dataset (NHD) streams are within the study area.

Drainage basins are divided into hydrologic units by the USGS based on major river systems. The entire study area is within the 8-digit Hydrologic Unit Code (HUC); 05080003, Whitewater Watershed. Furthermore, the study area is within three 12-digit HUCs; 050800030407, and 050800030408, 050800030504, Little Salt Creek, Sanes Creek, Bear Creek-Whitewater River, and Fremont Branch-Salt Creek Watersheds. Table 2 provides the 12-digit HUC for each structure.

Table 2. Structure HUC

Structure Number	12-Digit HUC
CLV 052-024-114.58	050800030407
CLV 052-024-116.27	050800030408
CLV 052-024-116.59	050800030504
CLV 052-024-117.47	050800030504
CLV 052-024-117.88	050800030504

National Wetland Inventory (NWI) Map

The NWI map was evaluated for the presence of potential jurisdictional wetlands within the study area (Attachment A, NWI Wetlands Map). Seven freshwater ponds (PUBGh) are mapped directly adjacent to the study area. (Table 2). Three ponds are mapped near CLV 052-024-114.58 and two ponds are mapped adjacent to CLV 052-024-116.27.

Table 3. NWI Wetlands Summary

Code	System	Class	Subclass	Water Regime	Modifiers
PUBGh	Palustrine	Unconsolidated Bottom (UB)	none	Intermittently Exposed (G)	Diked/ Impounded (h)

County Soil Survey Map

The Natural Resources Conservation Service (NRCS) Web Soil Survey was reviewed to determine soil classification within the study area (Attachment A, NRCS Soils Map). Five soil types were identified within the study area with one soil type identified as predominantly non-hydric (Table 3).

Table 4. Soil Summary

Soil Type	Symbol	Drainage Class	Hydrology	Hydric Rating	Hydric
Avonburg silt loam, 0-2% slopes	AvA	Somewhat poorly drained	None	10	Predominantly non-hydric
Cincinnati salt loam, 6-12% slopes, severely eroded	CkC3	Well drained	None	0	No
Rossmoyne silt loam, 2-6% slopes, eroded	RsB2	Moderately Well drained	None	0	No
Cincinnati silt loam, 2-6% slopes, eroded	CkB2	Well drained	None	0	No
Rossmoyne silt loam, 0-2% slopes	RsA	Moderately well drained	None	0	No

Flood Map

The Indiana Department of Natural Resources (IDNR) Best Available Floodzone Mapping was reviewed for the presence of the Special Flood Hazard Areas (Appendix A, IDNR Floodplain Map). The study area is not located within any floodplains.

III. Methodology

Waters of the U.S.

Streams that may be considered Waters of the US are documented with supporting evidence of potential jurisdiction. If a stream contains an ordinary high-water mark (OHWM), typically defined as a defined bed and bank, then additional characterization is completed. Identified streams are listed by the name provided on the USGS map, or if not named, is listed as an unnamed tributary (UNT). Connections to the nearest Traditional Navigable Waterway (TNW) are then identified. The USACE makes the final determination of jurisdiction for resources present.

IV. Field Reconnaissance

CHA staff conducted a field investigation on October 13, 2021 to determine the presence of wetlands, Waters of the U.S., and Waters of the State within the study area. Locations of data points, wetlands and streams are provided in Attachment A on the Water Resources Map. Photographs of the study area and Wetland Delineation Data Forms are included in Attachments B and C, respectively. The following provides a brief description of the findings of the field investigation.

Streams

Five streams were identified within the study area; four ephemeral and one intermittent. No evidence of bats or bird nests were observed within or under the structures along the streams. Two non-jurisdictional roadside ditches were observed within the study area. The coordinates of the ordinary high water mark (OHWM) measurements are provided in Table 4 below.

UNT 1 to Little Sanes Creek
UNT 1 to Little Sanes Creek is an ephemeral stream that flows north away from US 52. UNT 1 was identified as ephemeral due to water flow from precipitation events. However, the stream is not mapped as a USGS blue-line stream. The stream has an OHWM 3.0 feet wide and 0.5 feet deep with a substrate consisting mostly of silt and gravel. The stream has a narrow riparian buffer with surrounding residential, agricultural, and forested land use. The stream is considered poor quality due to flow being diked. The OHWM starts at the outlet of structure CLV 052-024-114.58, flows into a pond, and continues east until it outlets to Little Sanes Creek, a perennial mapped stream. UNT 1 is likely a Waters of the US with 69 feet within the investigation area.

UNT 2 to Sillimans Creek
UNT 2 to Sillimans Creek is an intermittent stream that flows north away from US 52. UNT 2 was identified as intermittent due to seasonal water flow from groundwater and precipitation indicated by steady water flow and depth during the fall field visit. However, the stream is not mapped as a USGS blue-line stream. The stream has an OHWM 4.0 feet wide and 0.5 feet deep with a substrate consisting of mostly of silt. The stream has a very narrow riparian buffer with the surrounding area dominated by forest and agricultural land. The stream is considered poor quality due to flow being diked. The OHWM starts at the inlet of structure CLV 052-024-116.27, flows into a pond, and continues east as Sillimans Creek, a perennial mapped stream. UNT 2 is likely a Waters of the US with 71 feet within the investigation area.

UNT 3 to Little Salt Creek
UNT 3 to Little Salt Creek is an ephemeral stream that flows south away from US 52. UNT 3 was identified as ephemeral due to water flow from precipitation events. However, the stream is not mapped as a USGS blue-line stream. This stream has with an OHWM 2.0 feet wide and 0.5-foot deep with a substrate consisting of mostly of silt and riprap. The stream has a very narrow riparian buffer with the surrounding area dominated by forest with some residential property. The stream is considered poor quality due to limited stream flow. The stream is currently impacted by the deterioration of the culvert, with several collapses observed. For this

reason, the OHWM was not showing active scour and the bed and bank definition were faint. The OHWM starts at the outlet of structure CLV 052-024-116.59 and continues southwest until it outlets to Little Salt Creek, a perennial mapped stream. UNT 3 is likely a Waters of the US with 83.5 feet within the investigation area.

UNT 4 to Little Salt Creek

UNT 4 to Little Salt Creek is an ephemeral stream that flows south away from US 52. UNT 4 was identified as ephemeral due to water flow from precipitation events. However, the stream is not mapped as a USGS blue-line stream. This stream has an OHWM 2.5 feet wide and 0.5-foot deep with a substrate consisting of mostly of silt. The stream has a moderate riparian buffer with the surrounding area dominated by forest with some residential property. The stream is considered poor quality due to significant erosion within the channel. The OHWM starts at the outlet of structure CLV 052-024-117.47, continues south until it outlets to Little Salt Creek, a perennial mapped stream. UNT 4 is likely a Waters of the US with 76 feet within the investigation area.

UNT 5 to Little Salt Creek

UNT 5 to Little Salt Creek is an ephemeral stream that flows south away from US 52. UNT 5 was identified ephemeral due to water flow from precipitation events. However, the stream is not mapped as a USGS blue-line stream. The stream has an OHWM 1.0 foot wide and 0.1 foot deep with a substrate consisting of mostly of silt. The stream has a wide riparian buffer with the surrounding area dominated by forest. The stream is considered poor quality due to the limited stream flow. The OHWM starts at the outlet of structure CLV 052-024-117.88 and continues south until it outlets to Little Salt Creek, a perennial mapped stream. UNT 5 is likely a Waters of the US with 69 feet within the investigation area.

Non-Jurisdictional Roadside Ditches (RSD)

Two roadside ditches were observed within the study area. RSD 1 is located at structure CLV 052-024-114.58 along the south side of US 52 and totals 0.0042 acre (184 linear feet by 1 foot wide). RSD 2 is located at structure CLV 052-024-117.88 along the north side of US 52 and totals 0.0037 acre (160 linear feet by 1 foot wide). These features were designed along the roadway to convey storm water, were excavated within upland areas, drain upland water, and did not contain hydrophytic vegetation. Due to these reasons, these features are likely not considered Waters of the U.S.

Wetlands

Wetland A

Six of the seven NWI mapped ponds were verified to be present outside of the investigation area. One NWI mapped pond was identified as Wetland A. Wetland A is an emergent wetland totaling 0.083 acres within the study area. Based on its impaired hydrologic function, soil disturbance from diking, and mowed vegetation, the wetland is considered poor quality. Wetland A directly abuts UNT 2 to Sillimans Creek, a jurisdictional stream. Due to this connection, the wetland is also considered Waters of the U.S. and will be under the jurisdiction of the USACE.

> *Data Point 1* was located within Wetland A where *Typha angustifolia* (narrowleaf cattail, OBL), *Carex comosa* (longhair sedge, OBL), *Juncus effusus* (common rush, OBL), *Impatiens capensis* (orange jewelweed, FACW), and *Eupatorium perfoliatum* (common boneset, OBL) were the dominant species. This data point passed the Rapid Test and Dominance Test, meeting the hydrophytic vegetation criterion. Depleted Matrix (F3) was the observed hydric soil indicator with a Munsell soil color of 10YR 4/1 (85%) and redox concentrations of 10YR 4/6 (15%) with a silt loam texture. Saturation, Oxidized Rhizospheres on Living Roots, and the FAC-Neutral Test were the hydrology indicators observed at this point.
>
> *Data Point 2* was in an upland area adjacent to Wetland A along US 52. With *Festuca arundinacea* (tall fescue, FACU) and *Setaria viridis* (green foxtail, UPL), as the dominant species observed at this

data point, the hydrophytic vegetation criterion was not met. Depleted Matrix (F3) was observed, meeting the hydric soil indicator. No hydrology indicators were observed.

Data Points

Two data points were taken along the study area. DP-1 was located within Wetland A and DP-2 was in an upland area adjacent to Wetland A. Table 5 provides a summary of these data points.

Table 5. Summary of Data Points

Data Point	Photos	Latitude/ Longitude	Wetland Indicators Observed			Wetland/ Upland
			Hydrophytic Vegetation	Hydric Soils	Hydrology	
DP-1	DP-1	39.465600 -85.225467	Yes	Yes	Yes	Wetland
DP-2	DP-2	39.465694 -85.225622	No	Yes	No	Upland

V. Conclusion

Five streams were identified within the study area; four ephemeral and one intermittent (Table 6). One emergent wetland was identified within the study area (Table 7). All the streams and wetlands are considered Waters of the U.S. Two non-jurisdictional RSDs were also identified within the study area.

Table 6. Summary of Streams

Stream Name	Photo Points	Latitude/ Longitude*	OHWM Width/ Depth	USGS Blue Line, Type	Pools/ Riffles	Substrate	Stream Quality	Waters of the U.S.	Steam Type
UNT 1	2, 3	39.484263, -85.245468	3'/0.5'	No	No	Silt and gravel	Poor	Yes	Ephemeral
UNT 2	6, 7	39.465690, -85.225208	4'/0.5'	No	No	Silt	Poor	Yes	Intermittent
UNT 3	11, 12	39.462548, -85.220805	2'/0.5'	No	No	Silt and Riprap	Poor	Yes	Ephemeral
UNT 4	18-20	39.457749, -85.207150	2.5'/0.5'	No	No	Silt	Poor	Yes	Ephemeral
UNT 5	26, 27	39.453240, -85.202661	1'/0.1'	No	No	Silt	Poor	Yes	Ephemeral

Table 7. Summary of Wetlands

Wetland Name	Photos	Latitude/ Longitude	Wetland Type	Acres	Wetland Quality	Waters of the U.S.
Wetland A	DP-1, DP-2	39.465600 -85.225467	PEM	0.083	Poor	Yes

A preliminary jurisdictional determination form is included in Attachment D outlining the water resources described in this report. Every effort should be taken to avoid and minimize impacts to these water resources. If impacts are necessary, then mitigation may be required. The final determination of jurisdictional waters is ultimately made by the USACE. This report is our best judgment based on the guidelines set forth by the USACE.

VI. 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 Wetland Delineation Manual, the appropriate regional supplement, the USACE Jurisdictional Determination Form Instructional Guidebook, and other appropriate agency guidelines.

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7/21/2022

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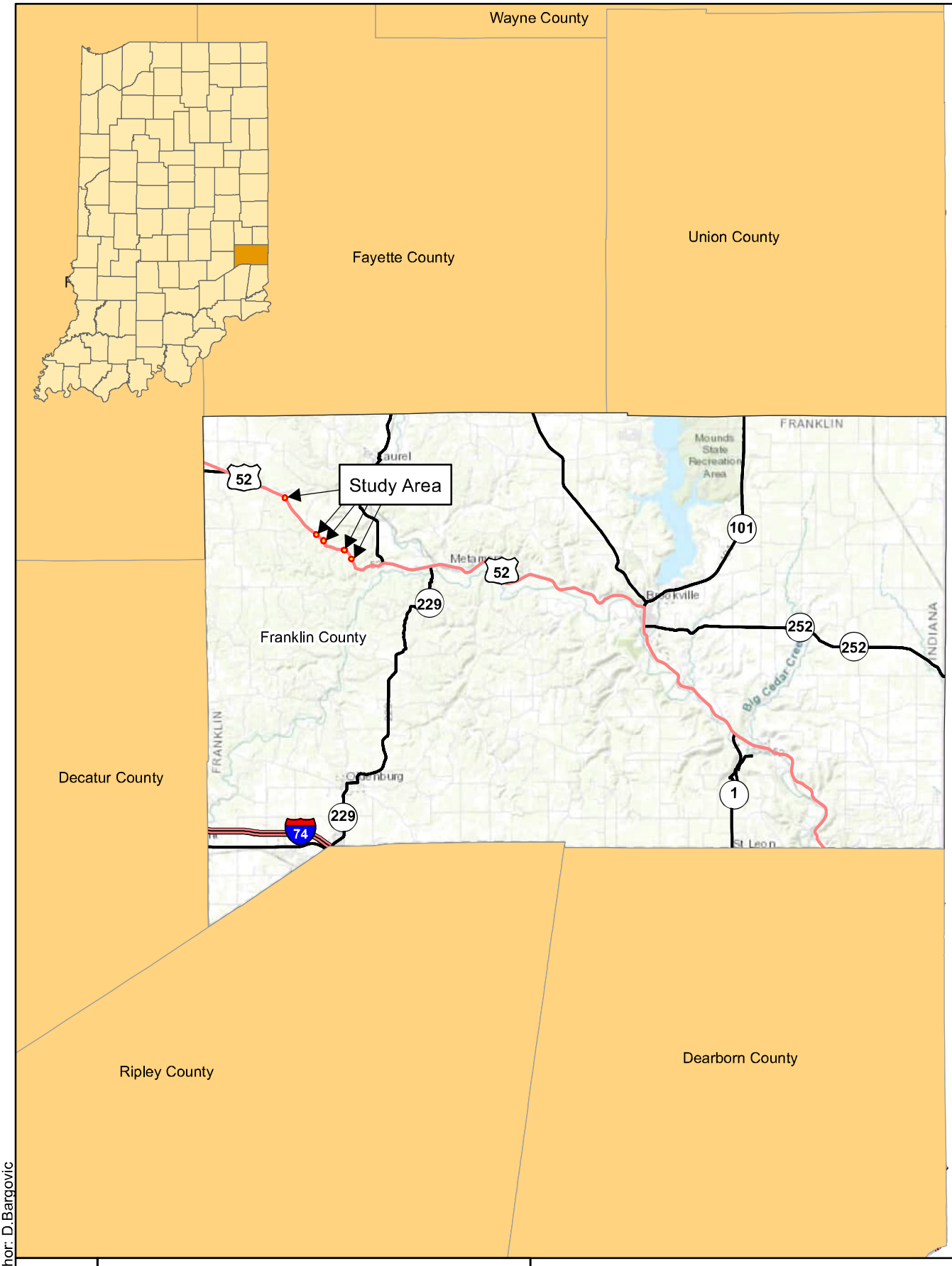

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State Location Map

US 52 HMA Overlay, Minor Structural
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Franklin County, Indiana

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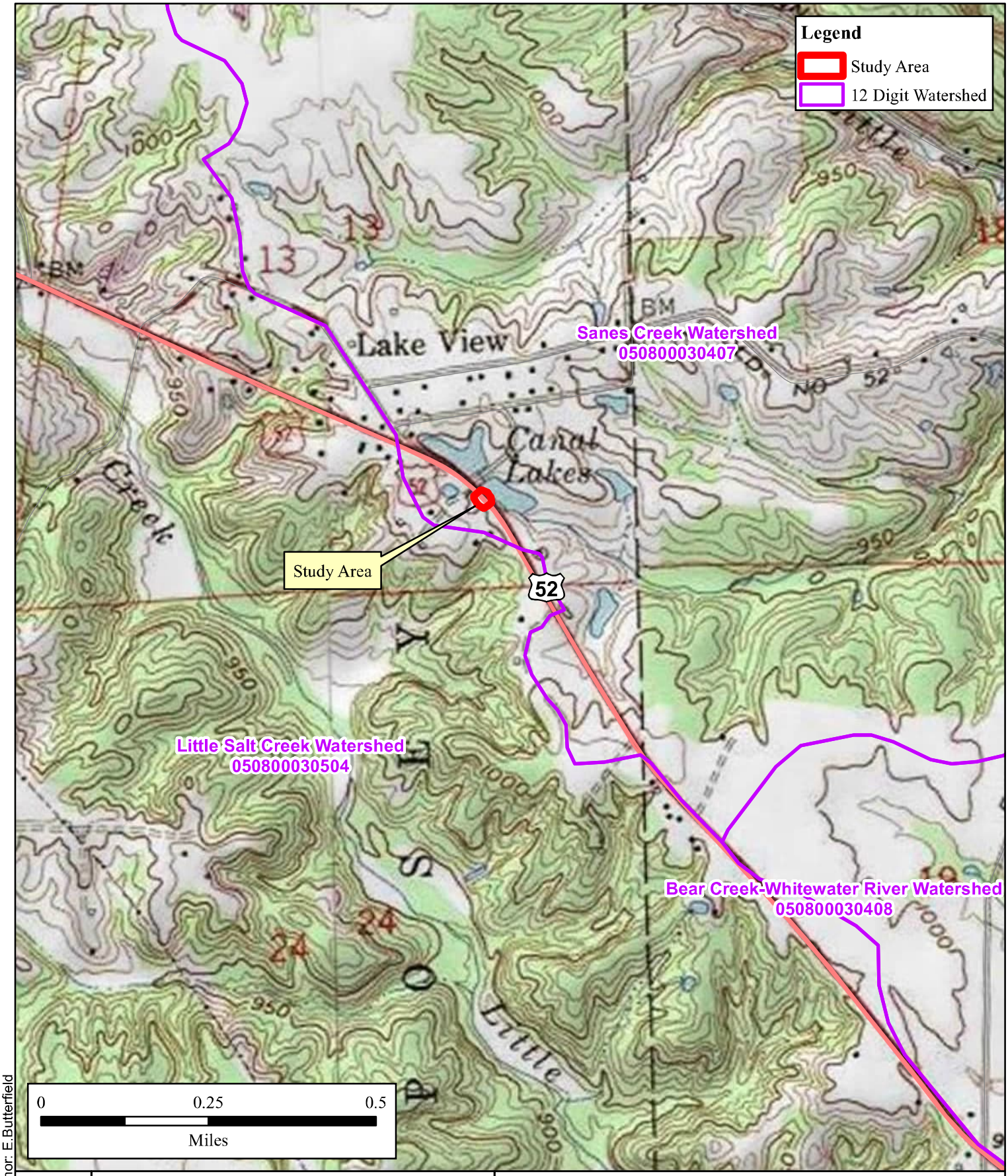
County boundaries and transportation network courtesy of the Indiana Spatial Data Portal



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USGS Project Location Map

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Franklin County, Indiana

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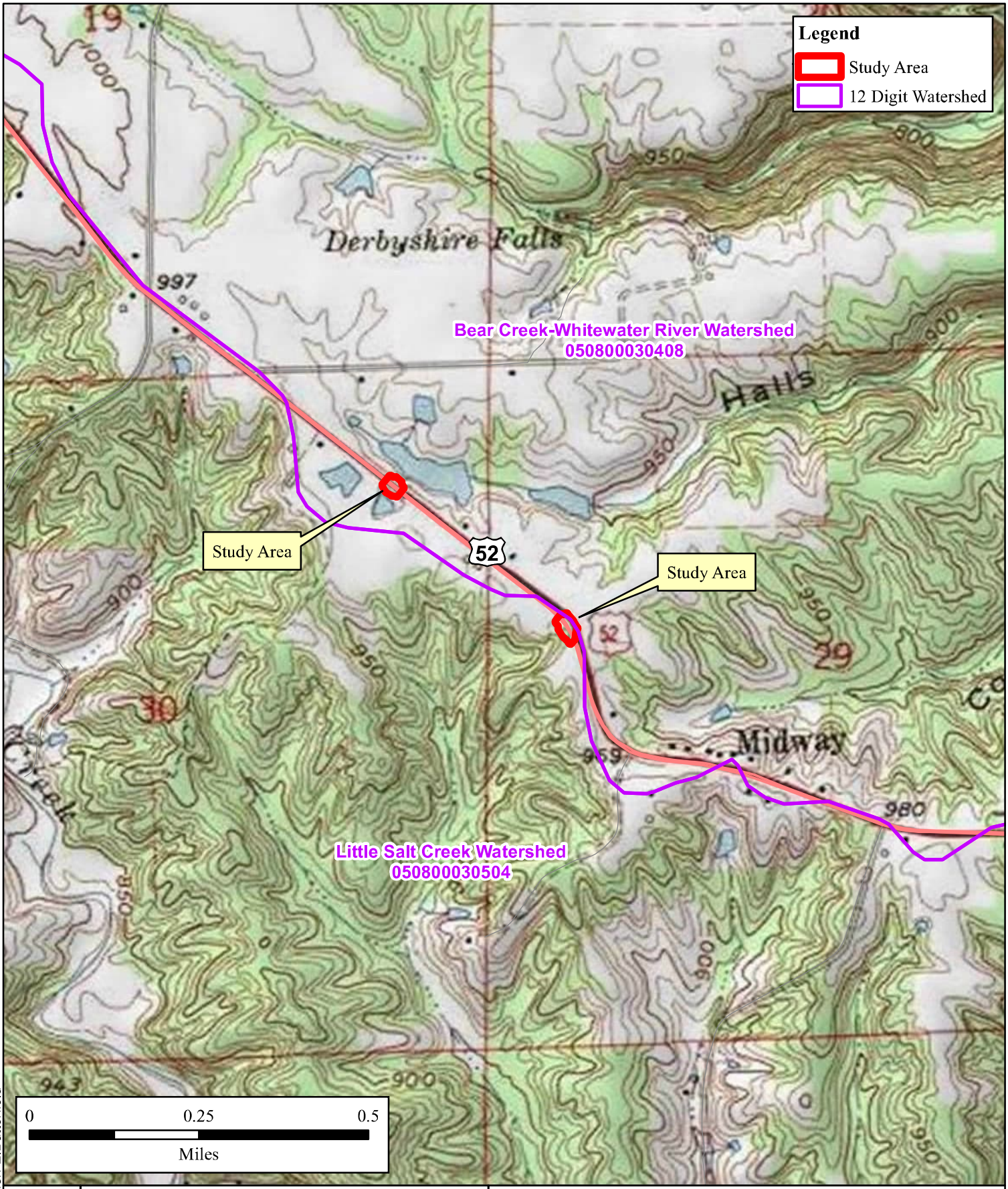

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USGS Project Location Map

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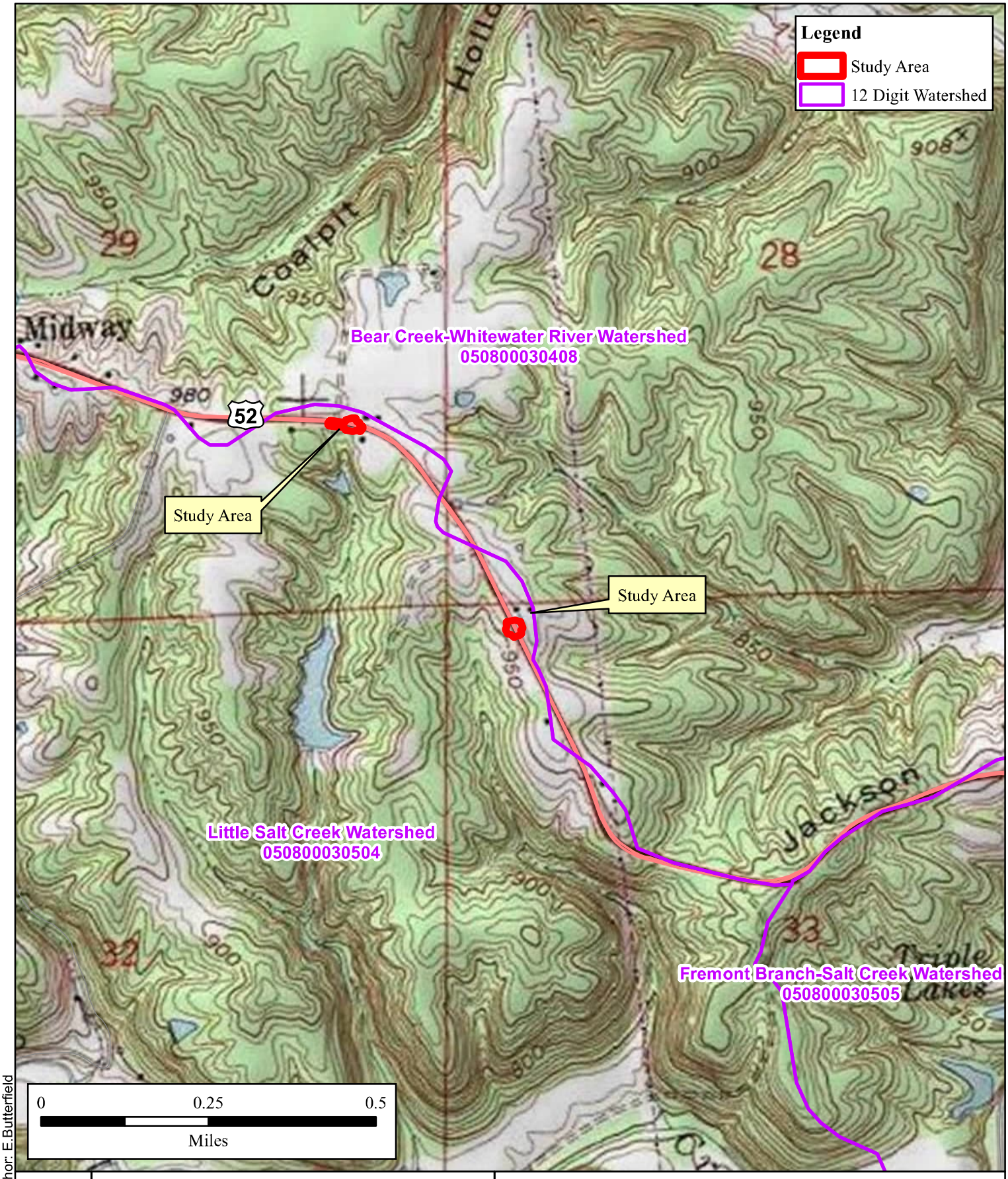

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USGS Project Location Map

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NWI Wetlands Map

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Franklin County, Indiana

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NWI Wetland data courtsey of the National Wetlands Inventory produced by the U.S. Fish and Wildlife Service

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NWI Wetlands Map

US 52 HMA Overlay, Minor Structural
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NWI Wetlands Map

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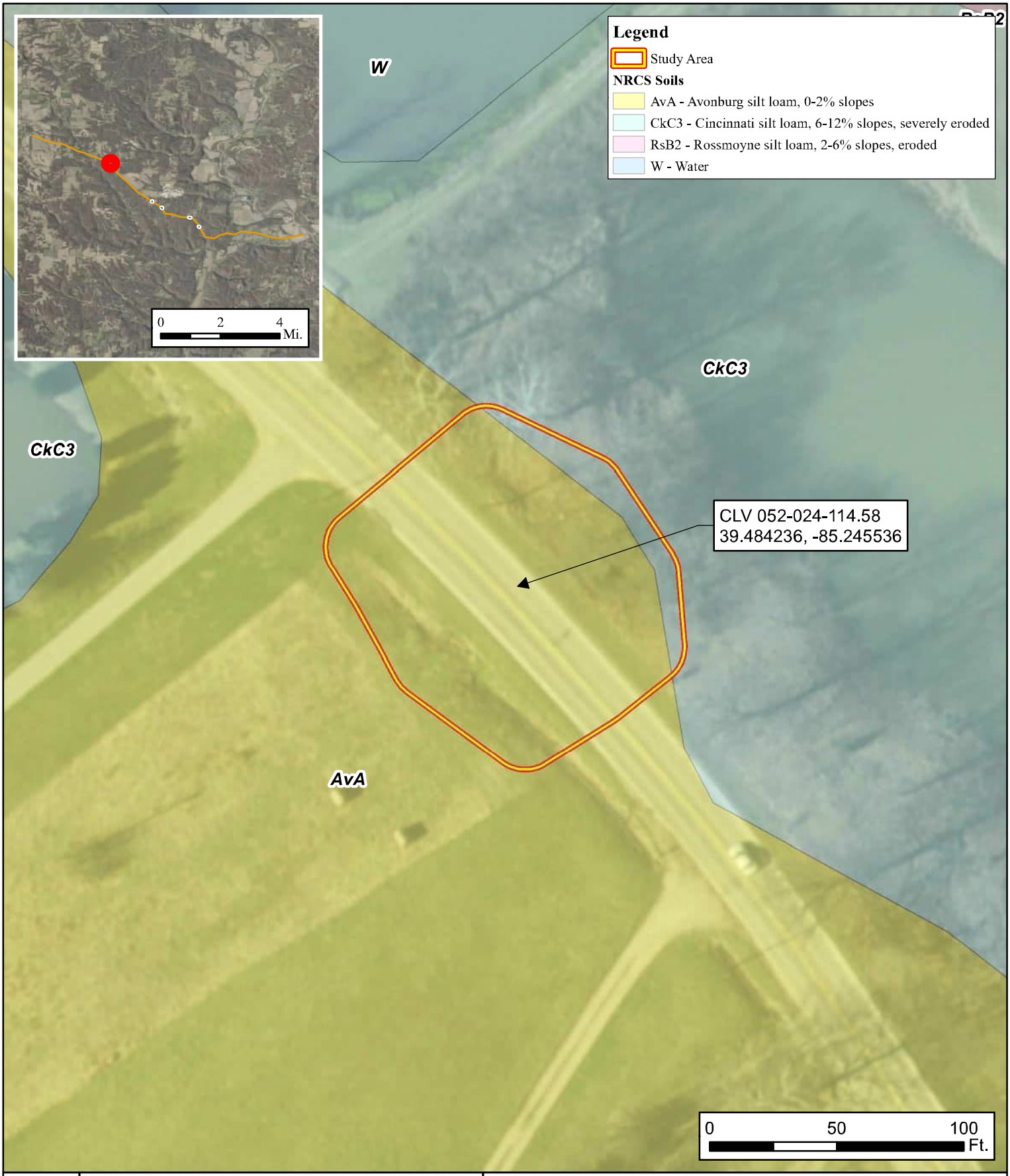

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NRCS Soils Map

US 52 HMA Overlay, Minor Structural
From US 52 and SR 244 Jct to US 52 and SR 229 Jct
Franklin County, Indiana

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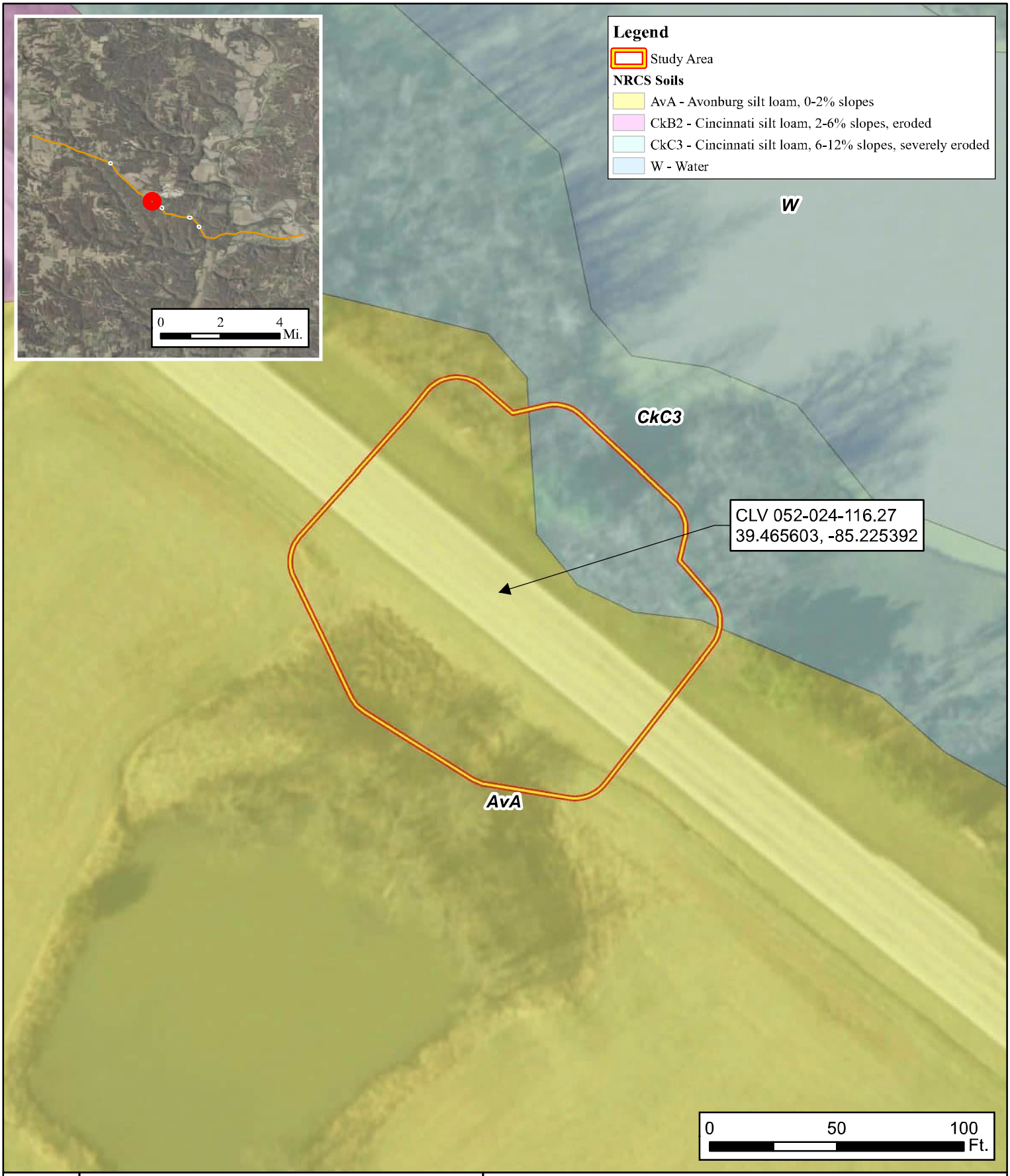

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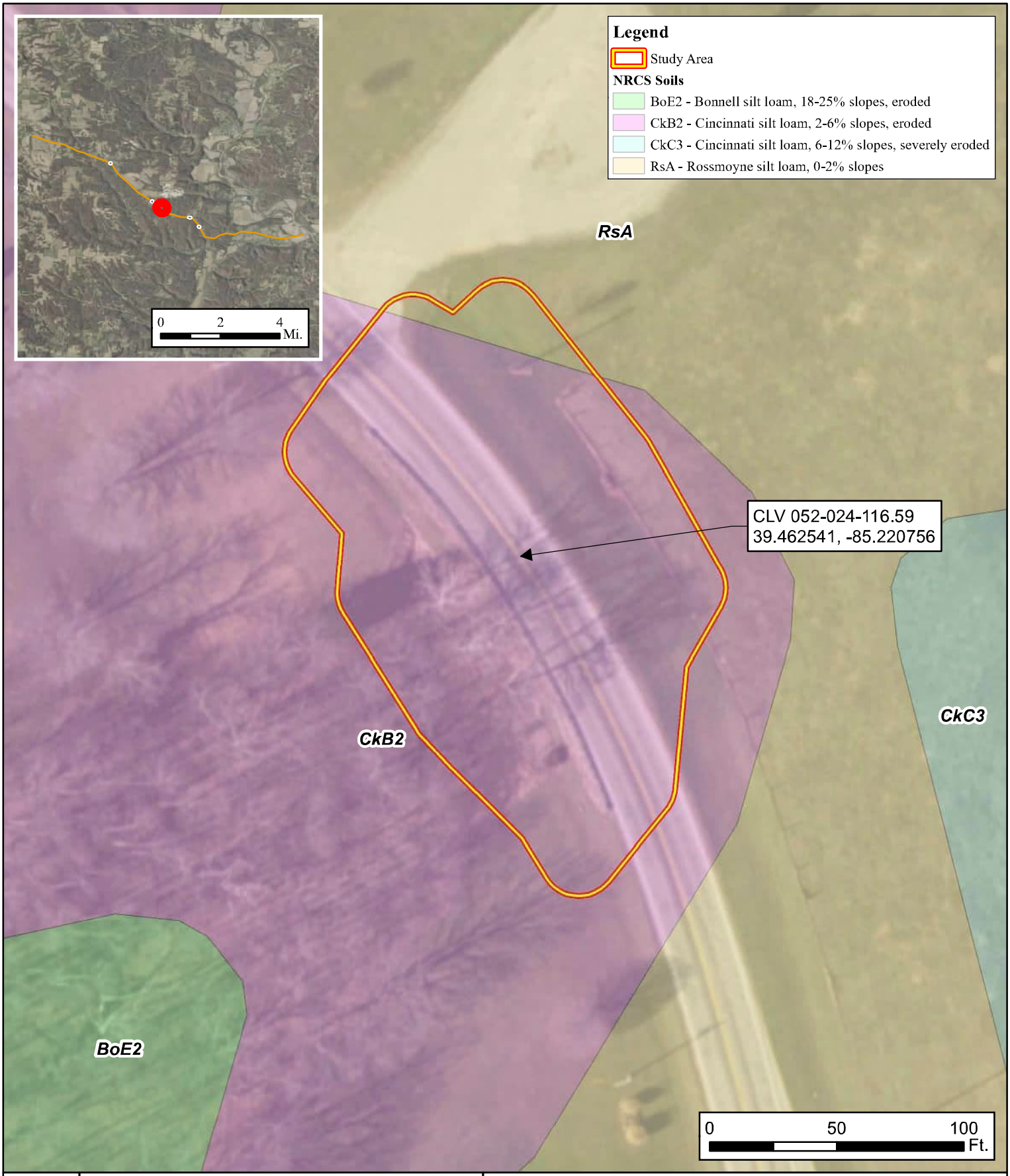

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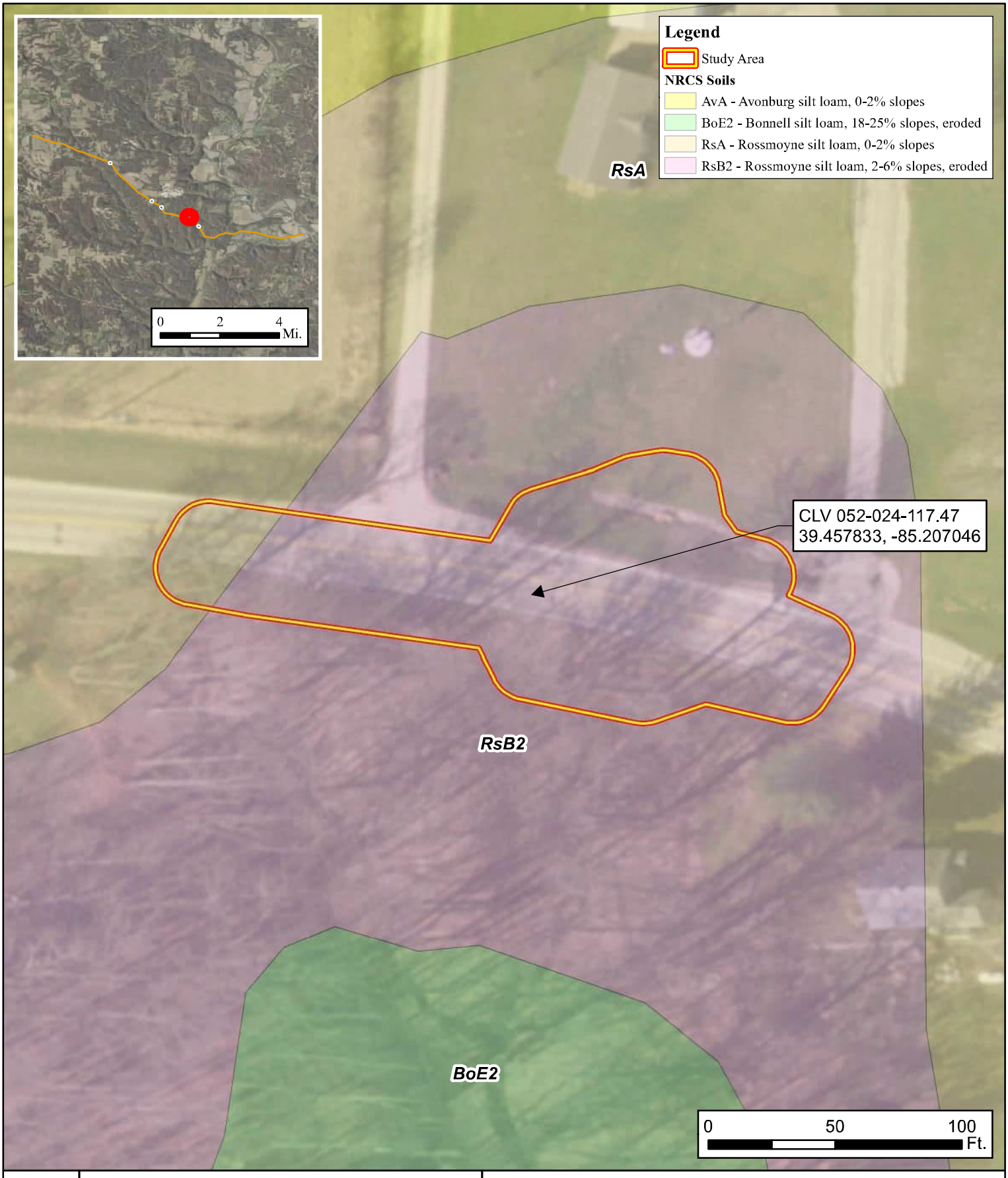

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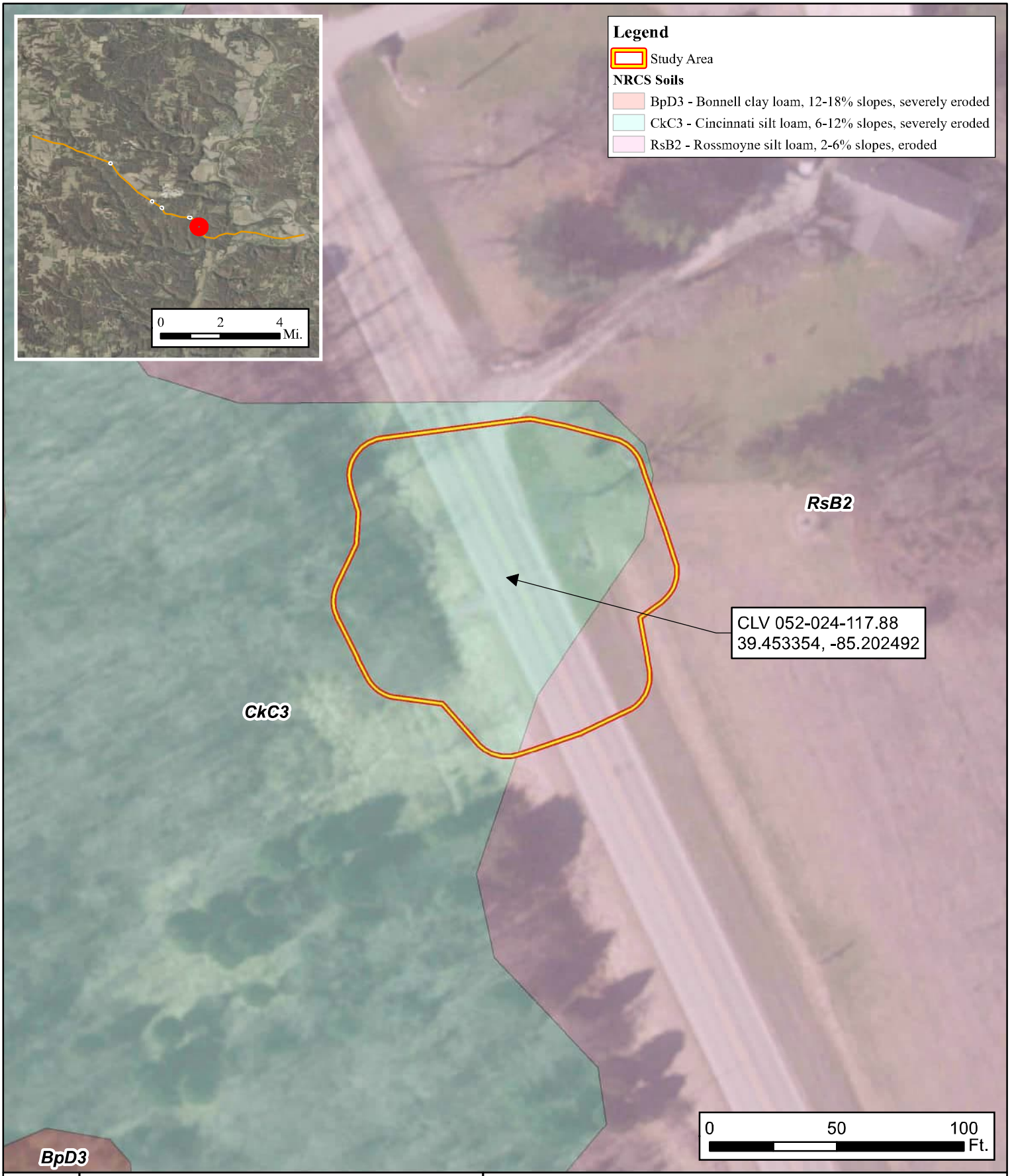

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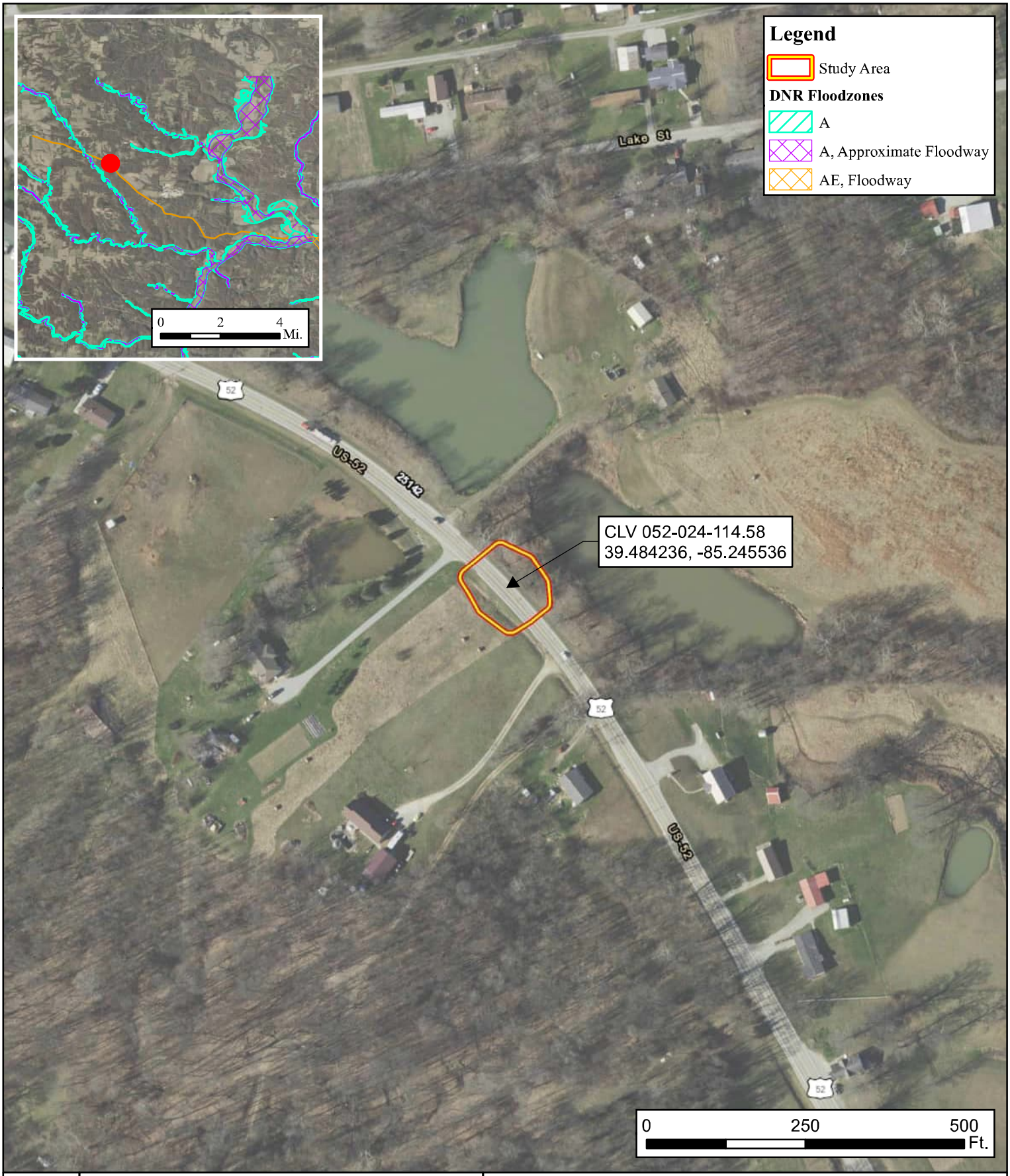

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IDNR Floodzones Map

US 52 HMA Overlay, Minor Structural
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Franklin County, Indiana

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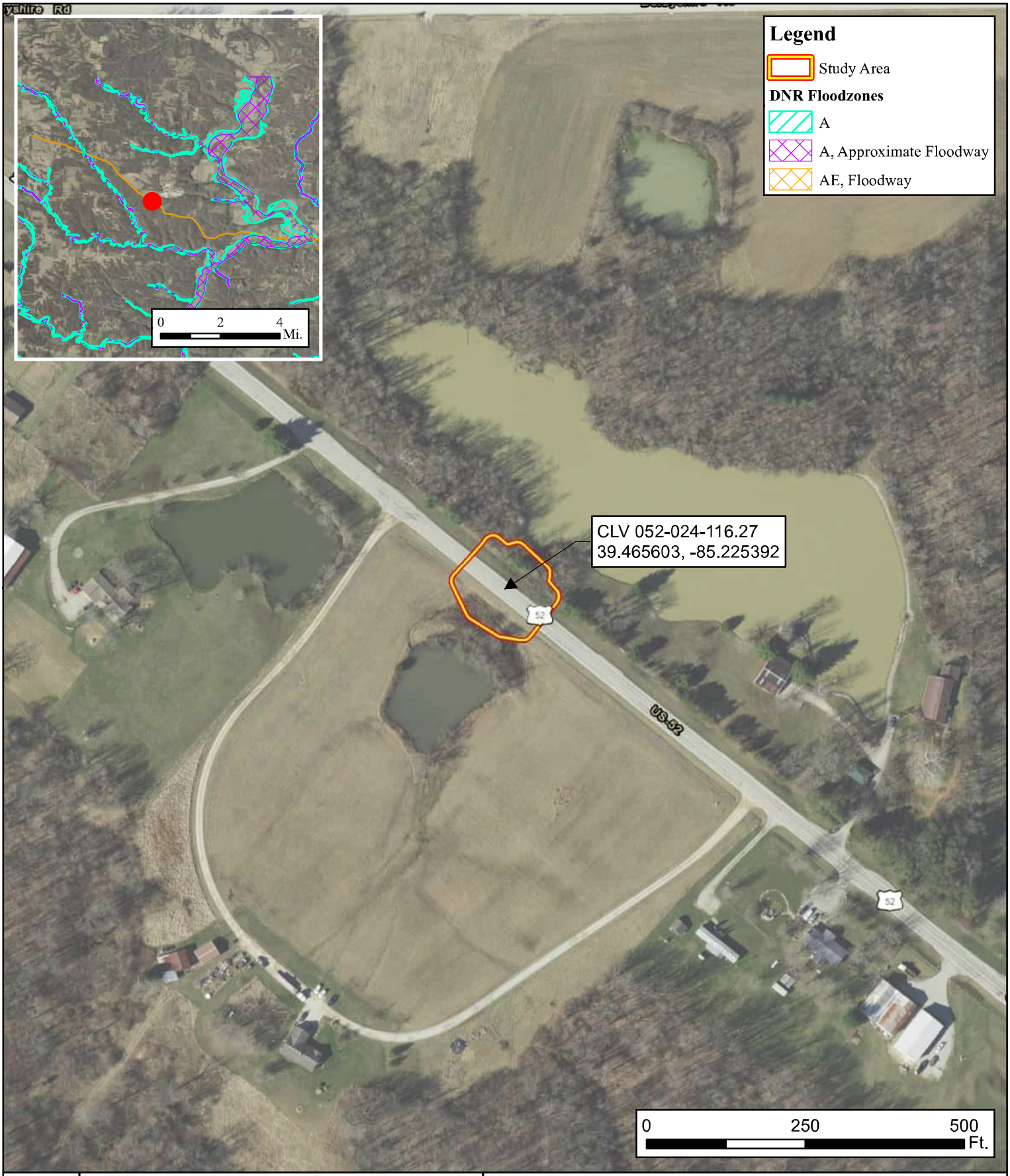

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IDNR Floodzones Map

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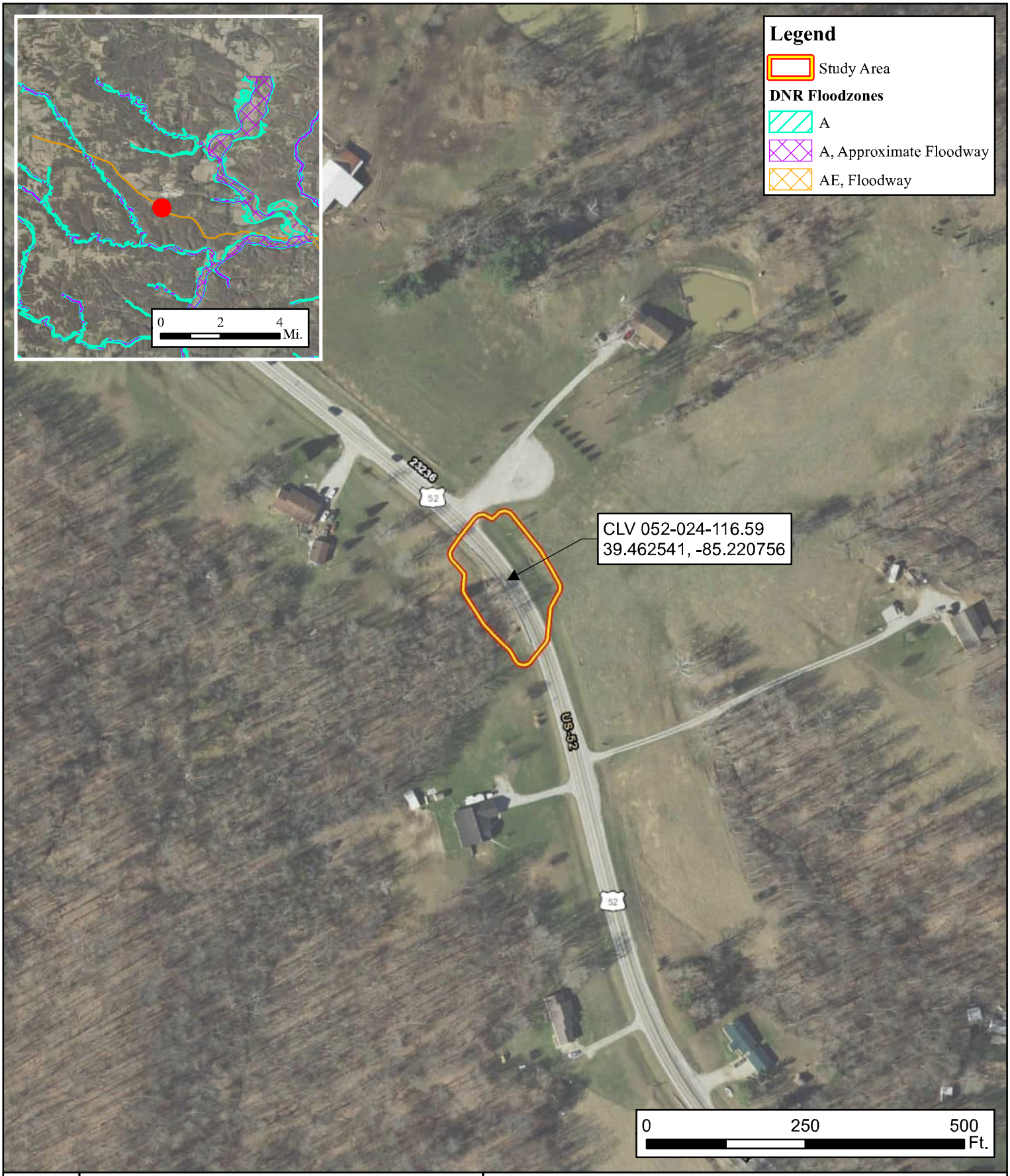

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IDNR Floodzones Map

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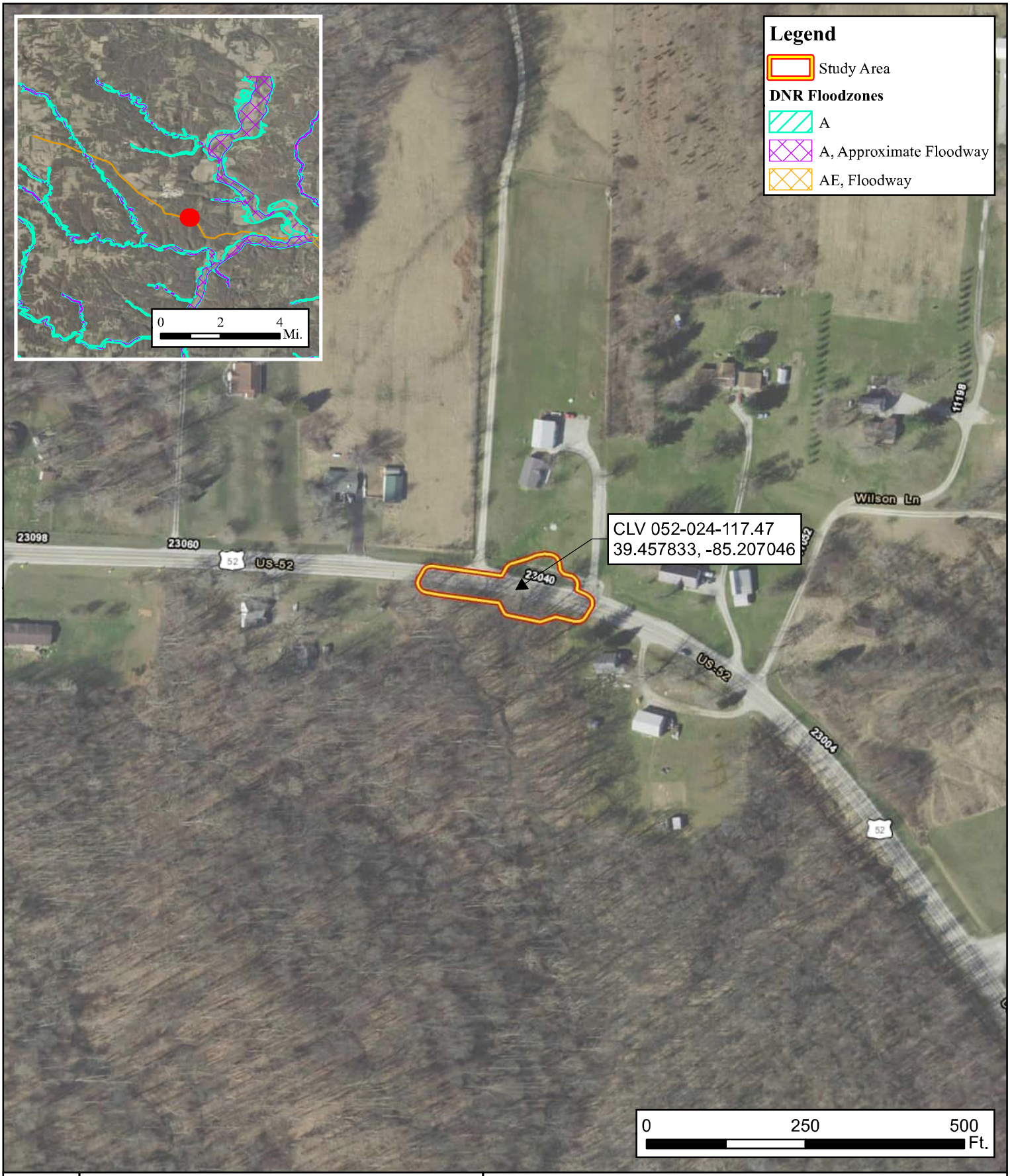


N

Indiana Department of Transportation

CHA

IDNR Floodzones Map

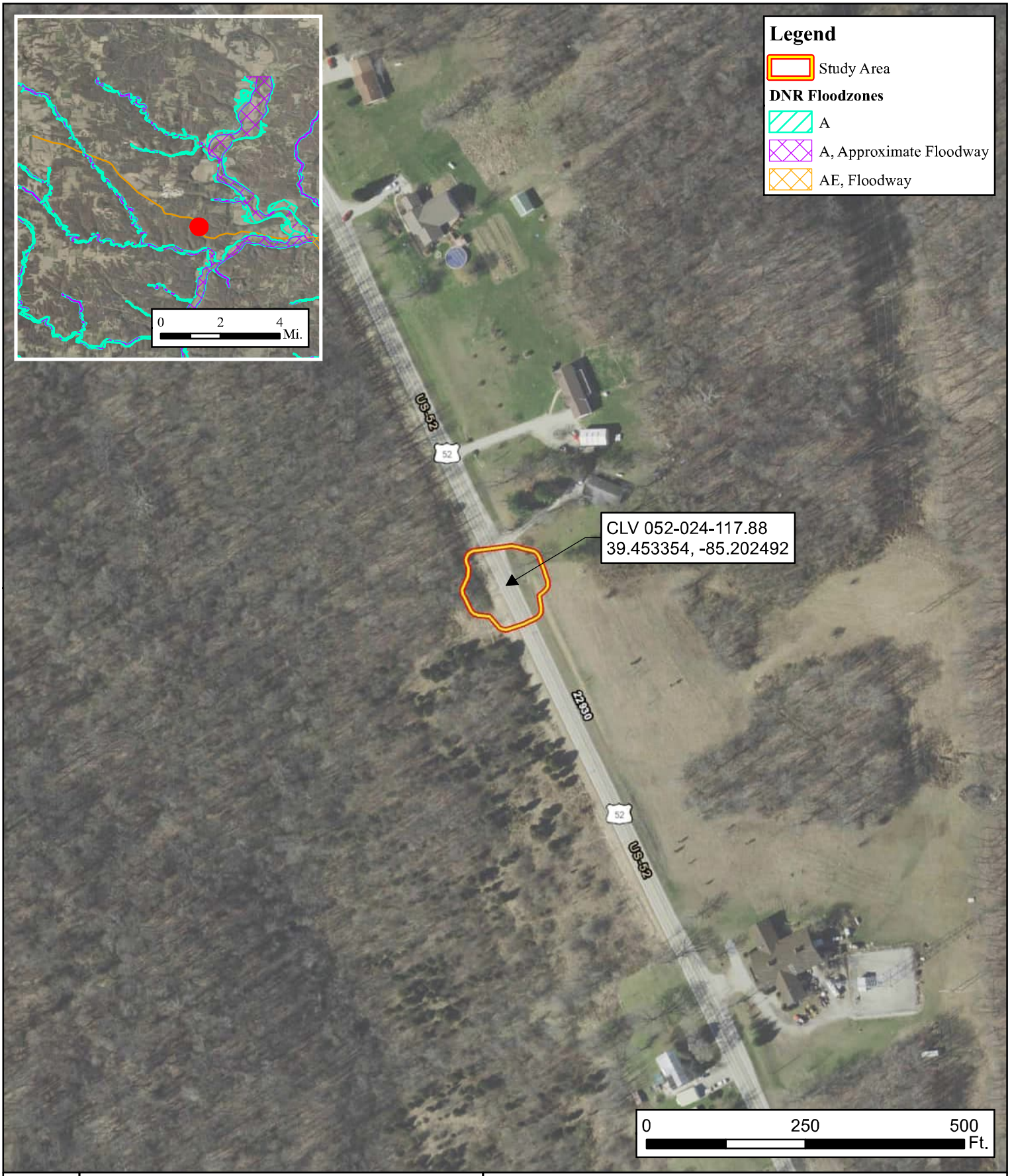
US 52 HMA Overlay, Minor Structural
From US 52 and SR 244 Jct to US 52 and SR 229 Jct
Franklin County, Indiana

Scale 1" = 200'
Page 4 of 5

INDOT Des. No..
1900192

Image Courtesy of the IndianaMap • Photo Date: 2017
Floodzones Courtesy of the Indiana Department of Natural Resources

Date Saved: 6/9/2022 • Author: E.Butterfield



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IDNR Floodzones Map

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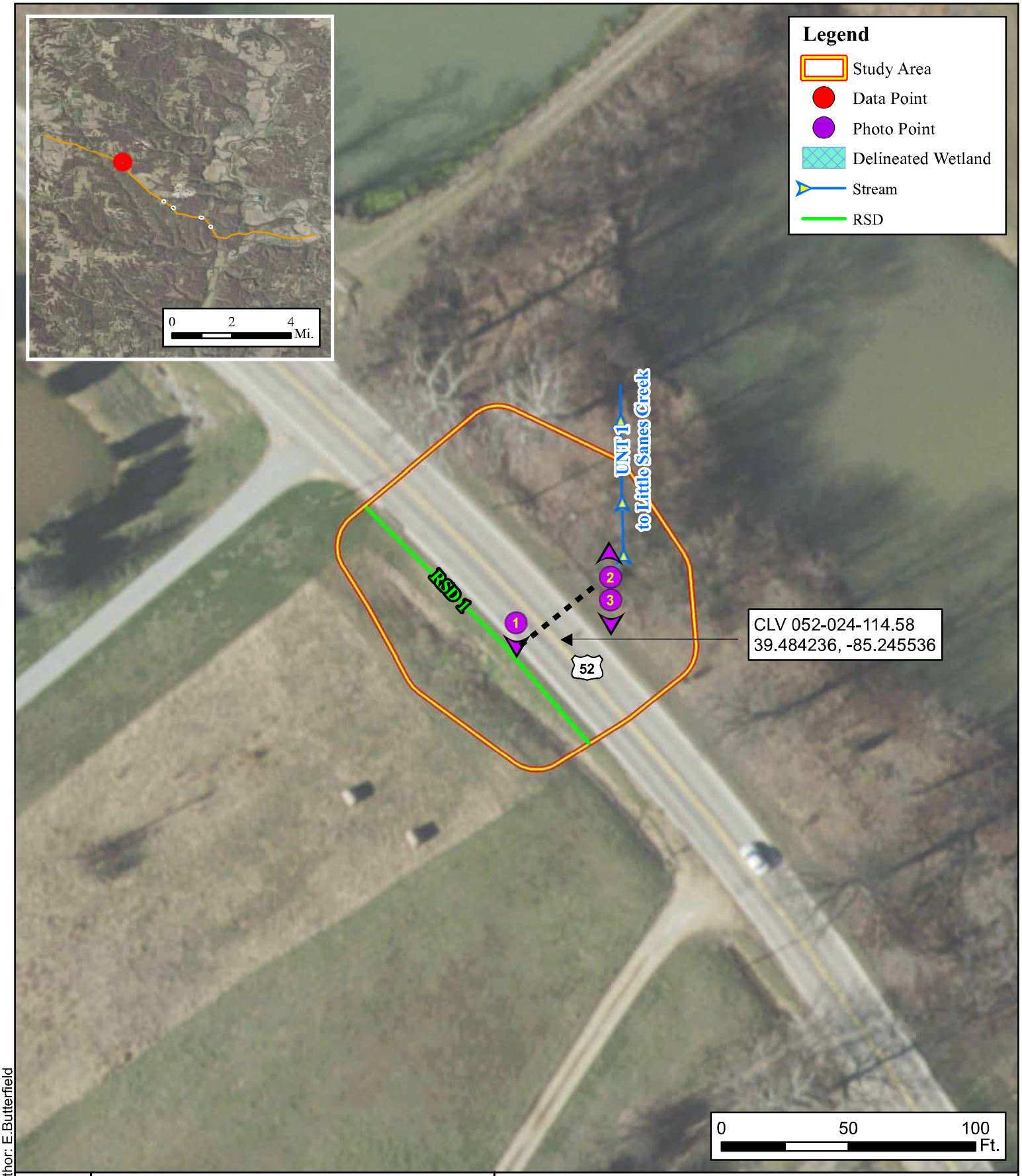


N

Indiana Department of Transportation

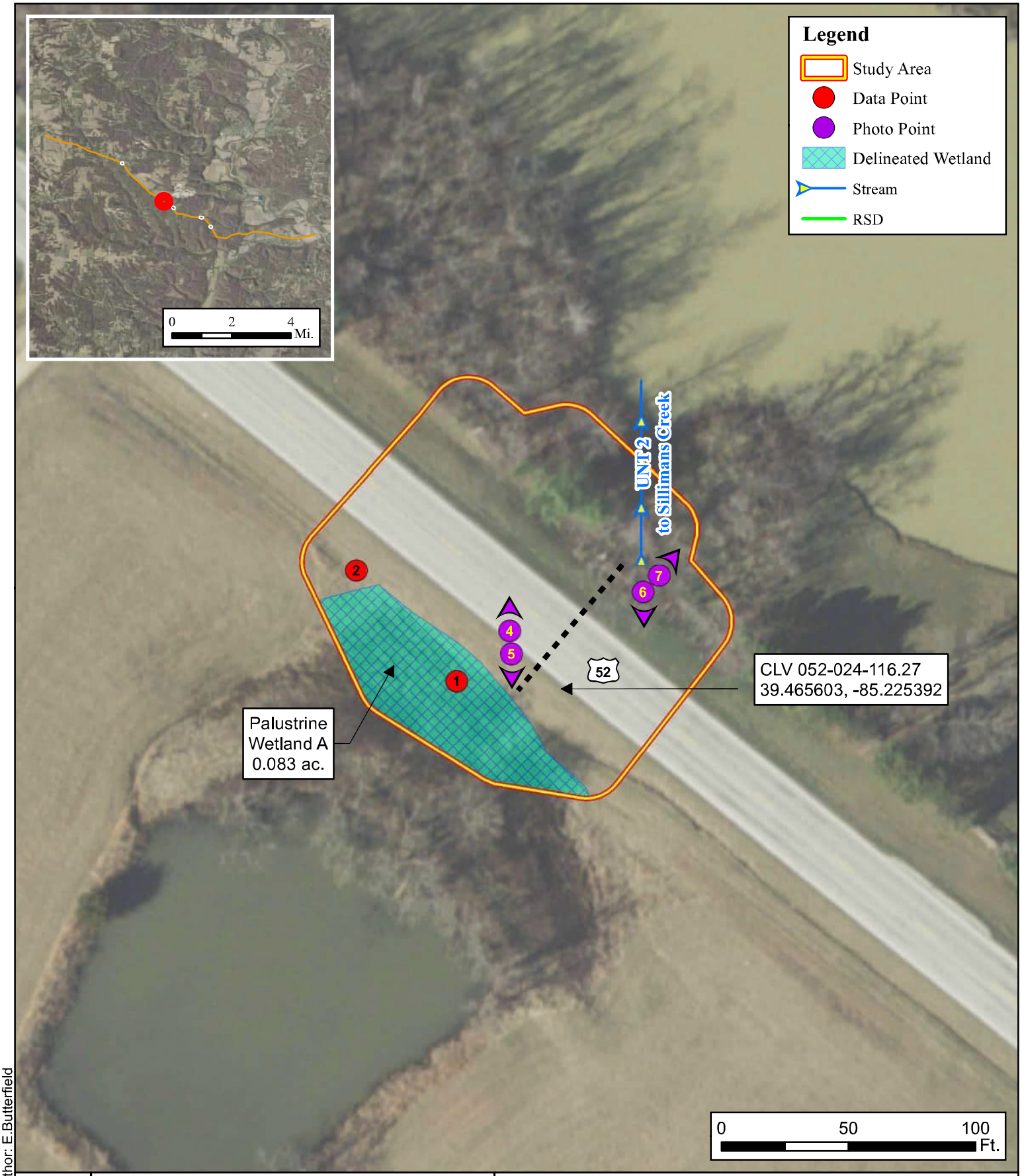
CHA

Water Resources Map

US 52 HMA Overlay, Minor Structural
From US 52 and SR 244 Jct to US 52 and SR 229 Jct
Franklin County, Indiana

Scale 1" = 50'	INDOT Des. No.	*Image Courtesy of the IndianaMap*
Page 1 of 5	1900192	*Photo Date: 2017*

Date Saved: 6/14/2022 • Author: E.Butterfield



N

Indiana Department of Transportation

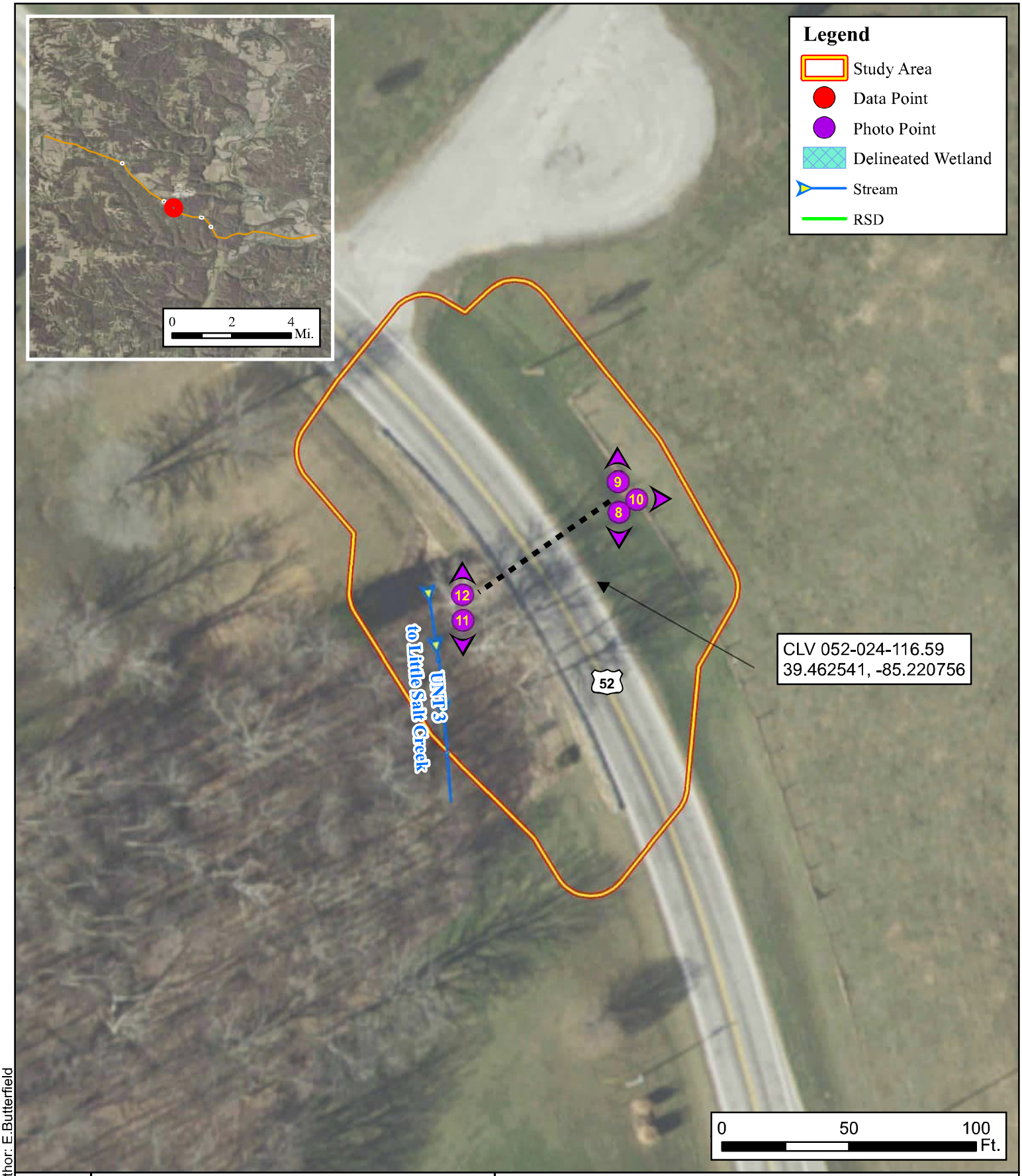
CHA

Water Resources Map

US 52 HMA Overlay, Minor Structural
From US 52 and SR 244 Jct to US 52 and SR 229 Jct
Franklin County, Indiana

Scale 1" = 50'	INDOT Des. No.	*Image Courtesy of the IndianaMap*
Page 2 of 5	1900192	*Photo Date: 2017*

Date Saved: 6/14/2022 • Author: E.Butterfield



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Indiana Department of Transportation

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Water Resources Map

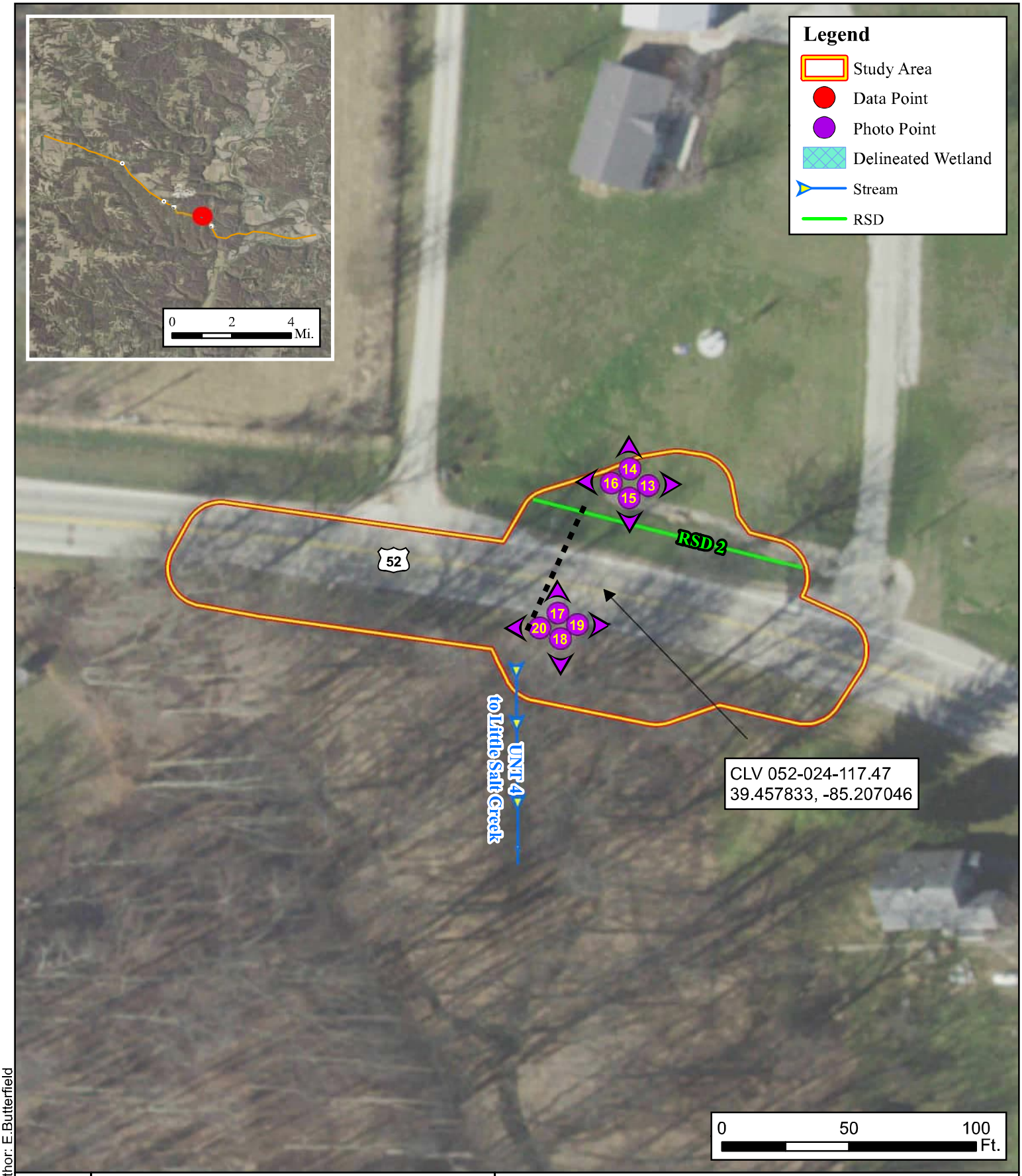
US 52 HMA Overlay, Minor Structural
From US 52 and SR 244 Jct to US 52 and SR 229 Jct
Franklin County, Indiana

Scale 1" = 50'
Page 3 of 5

INDOT Des. No.
1900192

Image Courtesy of the IndianaMap
Photo Date: 2017

Date Saved: 6/14/2022 • Author: E.Butterfield



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Indiana Department of Transportation

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Water Resources Map

US 52 HMA Overlay, Minor Structural
From US 52 and SR 244 Jct to US 52 and SR 229 Jct
Franklin County, Indiana

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Page 4 of 5

INDOT Des. No.
1900192

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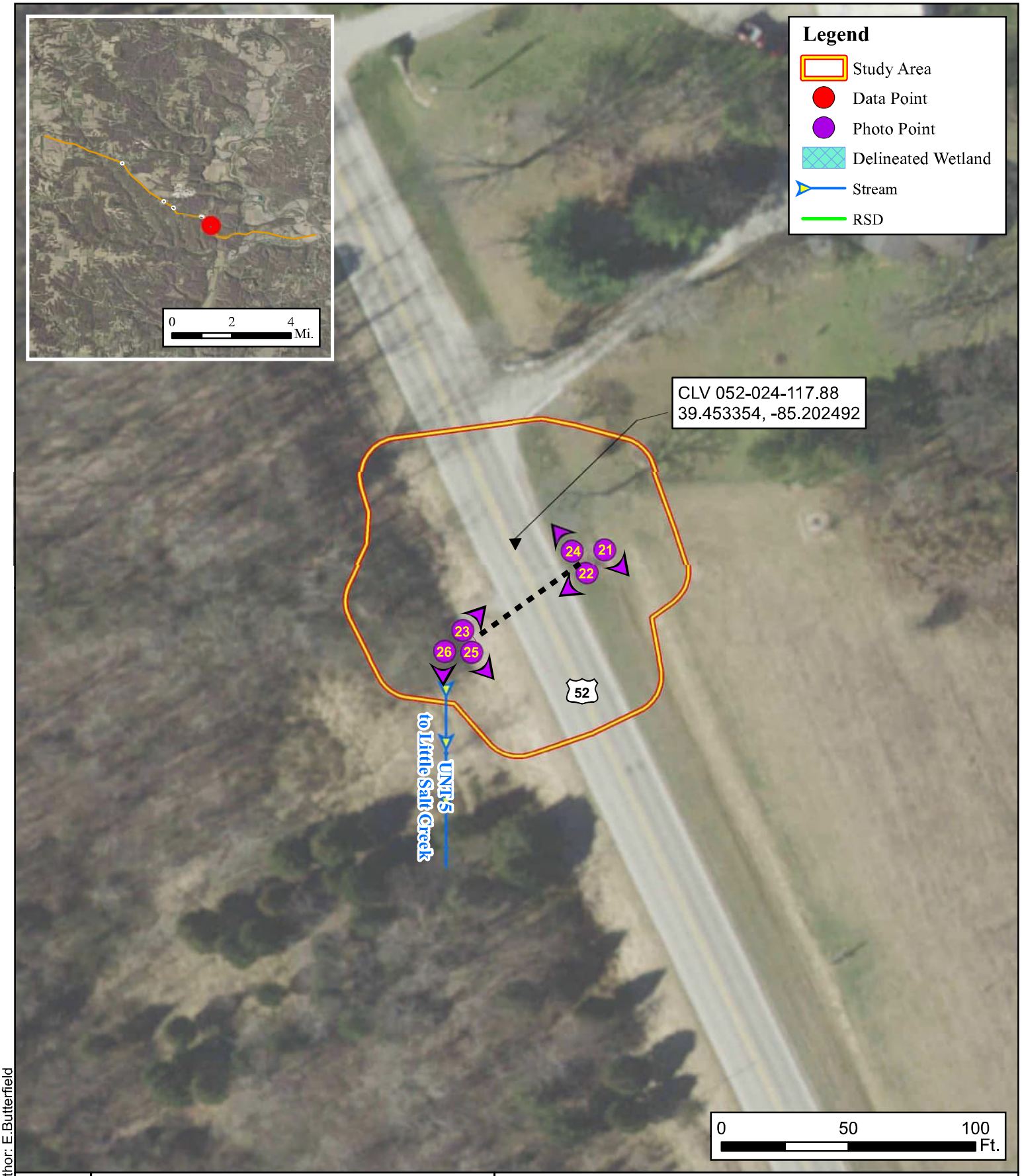
Photo Date: 2017

Date Saved: 6/14/2022 • Author: E.Butterfield



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Indiana Department of Transportation

CHA

Water Resources Map

US 52 HMA Overlay, Minor Structural
From US 52 and SR 244 Jct to US 52 and SR 229 Jct
Franklin County, Indiana

Scale 1" = 50' **Page 5 of 5**	**INDOT Des. No.** **1900192**

Image Courtesy of the IndianaMap
Photo Date: 2017

Date Saved: 6/14/2022 • Author: E.Butterfield

PP-1: Looking south at RSD 1 (2021-10-13)

PP-2: Looking south at the outlet of structure CLV-052-024-114.58 and start of UNT 1 to Little Sanes Creek (2021-10-13)

PP-3: Looking north from structure CLV-052-024-114.58, downstream at UNT 1 to Little Sanes Creek (2021-10-13). OHWM at 39.484263, -85.245468, dimensions 3.0ft/0.5ft

PP-4: Looking northeast at the inlet to structure CLV-052-024-116.27, near Wetland A (2021-10-13)

PP-5: Looking south toward structure CLV-052-024-116.27 (inlet) and Wetland A (2021-10-13)

PP-6: Looking southwest at the outlet of structure CLV-052-024-116.27 and UNT 2 to Sillimans Creek (2021-10-13)

PP-7: Looking northeast from structure CLV-052-024-116.27 downstream at UNT 2 to Sillimans Creek (2021-10-13) OHWM at 39.465690, -85.225208, dimensions 4.0ft/0.5ft

DP-1: Looking northwest toward Data Point 1 at Wetland A (2021-10-13)

DP-1: Looking southeast toward Datapoint 1 at Wetland A (2021-10-13)

DP-1: Looking down at the wetland soil profile at Data Point 1 (2021-10-13)

DP-2: Looking southeast toward Data Point 2 adjacent to Wetland A (2021-10-13)

DP-2: Looking northwest toward Datapoint 2 adjacent to Wetland A (2021-10-13)

DP-2: Looking down at the upland soil profile at Data Point 2 adjacent to Wetland A (2021-10-13)

PP-8: Looking south at the inlet to structure CLV-052-024-116.59 (2021-10-13)

PP-9: Looking north toward structure CLV-052-024-116.59 (inlet) (2021-10-13)

PP-10: Looking southeast at the project area near CLV-052-024-116.59 (2021-10-13)

PP-11: Looking south from CLV-052-024-116.59, downstream at UNT 3 (2021-10-13). OHWM at 39.462548, -85.220805, dimensions 2.0ft/0.5ft.

PP-12: Looking north at the outlet of structure CLV-052-024-116.59, upstream of UNT 3 to Little Salt Creek (2021-10-13)

PP-13: Looking east at the project area near structure CLV-052-024-117.47 along RSD 2 (2021-10-13)

PP-14: Looking north toward the inlet of structure CLV-052-024-117.47 (2021-10-13)

PP-15: Looking south at the inlet of structure CLV-052-024-117.47 (2021-10-13)

PP-16: Looking west at the project area near structure CLV-052-0240-117.47 along RSD 2 (2021-10-13)

PP-17: Looking north at the outlet of structure CLV-052-024-117.47, upstream of UNT 4 (2021-10-13)

PP-18: Looking south from structure CLV-052-024-117.47 downstream at UNT 4 to Little Salt Creek (2021-11-7). OHWM at 39.457749, -85.207150, dimensions 2.5ft/0.5ft

PP-19: Looking east at the project area near structure CLV-052-024-117.47 next to UNT 4 (2021-10-13)

PP-20: Looking west at the project area near structure CLV-052-024-117.47 next to UNT 4 (2021-10-13)

PP-21: Looking southeast at the project area near structure CLV-052-024-117.88 (2021-10-13)

PP-22: Looking southwest at the inlet of structure CLV-052-024-117.88 (2021-10-13)

PP-23: Looking northeast at the outlet of structure CLV-052-024-117.88 (2021-10-13)

PP-24: Looking northwest at the project area near structure CLV-052-024-117.88 (2021-10-13)

PP-25: Looking southeast at the project area near structure CLV-052-024-117.88 next to UNT 5 (2021-10-13)

PP-26: Looking south downstream at UNT 5 and the outlet of structure CLV-052-024-117.88 (2021-11-7). OHWM at 39.453240, -85.202661, dimensions 1.0ft/0.5ft

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: US 52-HMA Overlay, Minor Structural Des. No. 1900192 City/County: Franklin County Sampling Date: 13-Oct-21

Applicant/Owner: Indiana Department of Transportation (INDOT) State: IN Sampling Point: **DP-1**

Investigator(s): S. Elmore and K. Etzkorn Section, Township, Range: S 30 T 12 R 12E

Landform (hillslope, terrace, etc.): Local relief (concave, convex, none):

Slope: / ° Lat.: 39.465600 Long.: -85.225467 Datum: NAD 1983

Soil Map Unit Name: AvA - Avonburg silt loam, 0-2% slopes NWI classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ◉ No ○ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ○

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ◉ No ○	**Is the Sampled Area within a Wetland?** Yes ◉ No ○
Hydric Soil Present?	Yes ◉ No ○	
Wetland Hydrology Present?	Yes ◉ No ○	

Remarks:

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot size:)			
1.	0	☐ 0.0%	
2.	0	☐ 0.0%	
3.	0	☐ 0.0%	
4.	0	☐ 0.0%	
5.	0	☐ 0.0%	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1.	0	☐ 0.0%	
2.	0	☐ 0.0%	
3.	0	☐ 0.0%	
4.	0	☐ 0.0%	
5.	0	☐ 0.0%	
	0	= Total Cover	
Herb Stratum (Plot size: 5 feet)			
1. Typha angustifolia	20	☑ 20.0%	OBL
2. Carex comosa	20	☑ 20.0%	OBL
3. Juncus effusus	20	☑ 20.0%	OBL
4. Impatiens capensis	20	☑ 20.0%	FACW
5. Eupatorium perfoliatum	20	☑ 20.0%	OBL
6.	0	☐ 0.0%	
7.	0	☐ 0.0%	
8.	0	☐ 0.0%	
9.	0	☐ 0.0%	
10.	0	☐ 0.0%	
	100	= Total Cover	
Woody Vine Stratum (Plot size:)			
1.	0	☐ 0.0%	
2.	0	☐ 0.0%	
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	80	x 1 =	80
FACW species	20	x 2 =	40
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		120 (B)

Prevalence Index = B/A = 1.200

Hydrophytic Vegetation Indicators:

- ☑ **1 - Rapid Test for Hydrophytic Vegetation**
- ☑ **2 - Dominance Test is > 50%**
- ☐ **3 - Prevalence Index is ≤3.0** [1]
- ☐ **4 - Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

[1] **Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.**

Hydrophytic Vegetation Present? Yes ◉ No ○

Remarks: (Include photo numbers here or on a separate sheet.)

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: DP-1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type [1]	Loc [2]	Texture	Remarks
0-16	10YR 4/1	85	10YR 4/6	15	C	PL	Silt Loam	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining. M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils [3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ◉ No ○

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches): _____

Water Table Present? Yes ○ No ◉ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ◉ No ○ Depth (inches): 0

Wetland Hydrology Present? Yes ◉ No ○

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: US 52-HMA Overlay, Minor Structural Des. No. 1900192 City/County: Franklin County Sampling Date: 13-Oct-21

Applicant/Owner: Indiana Department of Transportation (INDOT) State: IN Sampling Point: **DP-2**

Investigator(s): S. Elmore and K. Etzkorn Section, Township, Range: S 30 T 12N R 12E

Landform (hillslope, terrace, etc.): Local relief (concave, convex, none):

Slope: / ° Lat.: 39.465694 Long.: -85.225622 Datum: NAD 1983

Soil Map Unit Name: AvA - Avonburg silt loam, 0-2% slopes NWI classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ◉ No ○ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ○

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ○ No ◉	**Is the Sampled Area within a Wetland?** Yes ○ No ◉
Hydric Soil Present?	Yes ◉ No ○	
Wetland Hydrology Present?	Yes ○ No ◉	

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	0	☐ 0.0%	
2.	0	☐ 0.0%	
3.	0	☐ 0.0%	
4.	0	☐ 0.0%	
5.	0	☐ 0.0%	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1.	0	☐ 0.0%	
2.	0	☐ 0.0%	
3.	0	☐ 0.0%	
4.	0	☐ 0.0%	
5.	0	☐ 0.0%	
	0	= Total Cover	
Herb Stratum (Plot size: 5 feet)			
1. Festuca arundinacea	70	☑ 70.0%	FACU
2. Setaria viridis	30	☑ 30.0%	UPL
3.	0	☐ 0.0%	
4.	0	☐ 0.0%	
5.	0	☐ 0.0%	
6.	0	☐ 0.0%	
7.	0	☐ 0.0%	
8.	0	☐ 0.0%	
9.	0	☐ 0.0%	
10.	0	☐ 0.0%	
	100	= Total Cover	
Woody Vine Stratum (Plot size:)			
1.	0	☐ 0.0%	
2.	0	☐ 0.0%	
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	70	x 4 =	280
UPL species	30	x 5 =	150
Column Totals:	100 (A)		430 (B)

Prevalence Index = B/A = 4.300

Hydrophytic Vegetation Indicators:

- ☐ **1 - Rapid Test for Hydrophytic Vegetation**
- ☐ **2 - Dominance Test is > 50%**
- ☐ **3 - Prevalence Index is ≤3.0** [1]
- ☐ **4 - Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

[1] **Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.**

Hydrophytic Vegetation Present? Yes ○ No ◉

Remarks: (Include photo numbers here or on a separate sheet.)

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: DP-2

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc [2]	Texture	Remarks
0-8	10YR	4/2	85	10YR	3/6	15	C	PL	Silt Loam	
8-20	10YR	4/1	85	10YR	3/6	15	C	PL	Silt Loam	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining. M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils [3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ◉ No ○

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches): _____

Water Table Present? Yes ○ No ◉ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ○ No ◉ Depth (inches): _____

Wetland Hydrology Present? Yes ○ No ◉

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

Remarks:

no hydrology indicators observed

US 52 HMA Overlay, Minor Structural, Des. No.1900192

PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD: July 21, 2022

B. NAME AND ADDRESS OF PERSON REQUESTING PJD:

Aaron Stroude, CHA Consulting Inc., 201 N Illinois Street, Suite 800, Indianapolis, IN 46204 for Indiana Department of Transportation

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

_____

_____

_____

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:

The Indiana Department of Transportation (INDOT), with funding from the Federal Highway Administration (FHWA), is proposing to proceed with roadway improvements and small structure replacements to US 52 from the SR 244 JCT to the SR 229 JCT, in Posey, Metamora, and Laurel Township, Franklin County, Indiana (Des. No. 1900192). The project is located along US 52 between SR 244 JCT and SR 229 JCT. The study area is centered on 39.470033 North and -85.232296 West. Specifically, the project is located within Sections 13, 14, 15, 24, Township 12 North, Range 11 East and Sections 19, 28, 29, 30, 33, 34, and 35, Township 12 North, Range 12 East as shown on the attached 7.5 minute Clarksburg and Metamora, Indiana, United States Geological Survey (USGS) quadrangle map.

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

State: Indiana County: Franklin City: Andersonville, IN and Metamora, IN

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

Lat.: 39.470033 Long.: -85.232296

Universal Transverse Mercator: 652055.37, 4370430.08 Zone 16S

Name of nearest waterbody: Little Salt Creek

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

☐ Office (Desk) Determination. Date(s): _____

☐ Date: Field Determination. Date(s): _____

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

US 52 HMA Overlay, Minor Structural, Des. No.1900192

Resource Name	Latitude	Longitude	Amount of Aquatic Resource in Review Area	Type of Aquatic Resource	Geographic authority to which the aquatic resource "may be" subject
UNT 1 to Little Sanes Creek	39.484263	-85.245468	69 linear feet	Ephemeral, Non-Wetland Waters	Section 404
UNT 2 to Sillimans Creek	39.465690	-85.225208	71 linear feet	Intermittent, Non-Wetland Waters	Section 404
UNT 3 to Little Salt Creek	39.462548	-85.220805	83.5 linear feet	Ephemeral, Non-Wetland Waters	Section 404
UNT 4 to Little Salt Creek	39.457749	-85.207150	76 linear feet	Ephemeral, Non-Wetland Waters	Section 404
UNT 5 to Little Salt Creek	39.453240	-85.202661	69 linear feet	Ephemeral, Non-Wetland Waters	Section 404
Wetland A	39.465600	-85.225467	0.083 acres	PEM	Section 404

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

US 52 HMA Overlay, Minor Structural, Des. No.1900192

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

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

- ■ Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:
  Map:_____.
- ■ Data sheets prepared/submitted by or on behalf of the PJD requestor.
  - ☐ Office concurs with data sheets/delineation report.
  - ☐ Office does not concur with data sheets/delineation report. Rationale:_____.
- ☐ Data sheets prepared by the Corps:_____.
- ☐ Corps navigable waters' study:_____.
- ☐ U.S. Geological Survey Hydrologic Atlas:_____.
  - ☐ USGS NHD data.
  - ☐ USGS 8 and 12 digit HUC maps.
- ■ U.S. Geological Survey map(s). Cite scale & quad name: 1:24,000 Clarksburg & Metamora.
- ■ Natural Resources Conservation Service Soil Survey. Citation: NRCS Web Soil Survey.
- ■ National wetlands inventory map(s). Cite name: USFWS NWI Mapper.
- ☐ State/local wetland inventory map(s):_____.
- ■ FEMA/FIRM maps: IDNR Best Available Flood Hazard.
- ☐ 100-year Floodplain Elevation is:_____.(National Geodetic Vertical Datum of 1929)
- ■ Photographs: ■ Aerial (Name & Date): IndianaMap 2018.
  or ■ Other (Name & Date): Site Photos October 13, 2021, Nov. 7, 2021.
- ☐ Previous determination(s). File no. and date of response letter:_____.
- ☐ Other information (please specify):_____.

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

_____	Aaron Stronde 7/19/2022
Signature and date of Regulatory staff member completing PJD	Signature and date of person requesting PJD (REQUIRED, unless obtaining the signature is impracticable)[1]

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

Appendix G

Public Involvement

INDIANA DEPARTMENT OF TRANSPORTATION
Driving Indiana's Economic Growth

Land & Aerial Survey Office
Division of Materials & Tests Building
120 South Shortridge Road
Indianapolis, Indiana 46219-6705

PHONE: (317) 610-7251
FAX: (317) 356-9351

Eric J. Holcomb, Governor
Joe McGuinness, Commissioner

06/08/2021

Cracker Ridge III, LLC
1216 Ridgeview Ct
Avon, IN 46123

NOTICE OF SURVEY

Dear Property Owner:

The Indiana Department of Transportation (INDOT) has selected USI Consultants Inc., to perform a survey for the proposed Culvert Replacement project on US 52, Des No. 1900192, in Franklin County, Indiana. A portion of this survey work may be performed on your property in order to provide design engineers information for project design. The survey work will include mapping the location of features such as trees, buildings, fences, drives, ground elevations, etc. The survey is needed for the proper planning and design of this highway project.

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

Indiana Code 8-23-7-26 allows the USI Consultants Inc., as the authorized employees of INDOT, *Right of Entry* to the project site (including private property) upon proper notification. A copy of a Notice of Survey discussion sheet, as found on INDOT's website (http://www.in.gov/indot/2888.htm), is attached to this letter. Pursuant to Indiana Code 8-23-7-27, this letter serves as written notification that we will be performing the above noted survey in the vicinity of your property after 6/8/2021.

USI Consultants will show you their identification, if you are available, before coming onto your property.

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

Mark Schepers, PLS
Survey Operations Manager
8415 E. 56th St. Suite A
Indianapolis, IN 46216
mschepers@usiconsultants.com
317-522-2486

INDIANA DEPARTMENT OF TRANSPORTATION
Driving Indiana's Economic Growth

Land & Aerial Survey Office
Division of Materials & Tests Building
120 South Shortridge Road
Indianapolis, Indiana 46219-6705

PHONE: (317) 610-7251
FAX: (317) 356-9351

Eric J. Holcomb, Governor
Joe McGuinness, Commissioner

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

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

If you have questions regarding the rights and procedures outlined in this letter, please contact the Seymour District Real Estate Manager.

Thank you in advance for your cooperation in this matter.

Sincerely,

Mark Schepers, PLS
Survey Operations Manager

Appendix H

Air Quality

Indiana Department of Transportation (INDOT)

State Preservation and Local Initiated Projects FY 2022 - 2026

SPONSOR	CONTRACT # / LEAD DES	STIP NAME	ROUTE	WORK TYPE	DISTRICT	MILES	FEDERAL CATEGORY	Total Cost of Project*	PROGRAM	PHASE	FEDERAL	MATCH	2022	2023	2024	2025	2026
Indiana Department of Transportation	42528 / 1803000	Init.	US 52	Bridge Replacement	Seymour	0	STBG	$6,930,557.00	Bridge Construction	CN	$3,972,941.60	$993,235.40		$140,000.00	$4,826,177.00		
									Bridge Consulting	PE	$74,720.00	$18,680.00	$26,500.00	$3,900.00	$63,000.00		
									Bridge ROW	RW	$68,000.00	$17,000.00	$85,000.00				
Performance Measure Impacted: Bridge Condition																	
Location: 03.03 miles W of SR 1 @ Yellow Bank Creek																	
~~Comments:Include DES 1301012, 1301065, 2000010, 2000060, 1900060~~																	
Indiana Department of Transportation	42630 / 1900192	Init.	US 52	HMA Overlay Minor Structural	Seymour	8.64	STBG	$6,967,592.00	Road Construction	CN	$5,036,137.60	$1,259,034.40			$6,295,172.00		
Performance Measure Impacted: Pavement Condition																	
Location: SR 244 to SR 229																	
Comments:Include DES 1900192																	
Batesville	42801 / 1902774	Init.	ST 2867	Bike/Pedestrian Facilities	Seymour	1.09	STBG	$2,524,524.22	Local Funds	RW	$0.00	$20,000.00			$20,000.00		
									Local Funds	CN	$0.00	$402,883.00				$402,883.00	
									Local Transportation Alternatives	RW	$80,000.00	$0.00			$80,000.00		
									Local Transportation Alternatives	CN	$1,611,532.00	$0.00				$1,611,532.00	
Performance Measure Impacted: Reliability and Freight Reliability																	
Location: Along SR 229 from Franklin Street to Six Pine Ranch Road																	
Comments:Include DES 1902774																	
Indiana Department of Transportation	42885 / 2000464	Init.	SR 1	HMA Overlay, Preventive Maintenance	Seymour	5.8	STBG	$5,606,376.00	Road Construction	CN	$4,413,100.80	$1,103,275.20			$5,516,376.00		
Performance Measure Impacted: Pavement Condition																	
Location: SR 46 to US 52																	
Comments:Include DES 2000474, 2000475, 2000476, 2000464																	
Indiana Department of Transportation	43365 / 2000087	Init.	SR 252	Slide Correction	Seymour	0	STBG	$4,899,502.00	Road ROW	RW	$24,000.00	$6,000.00			$30,000.00		
									Road Consulting	PE	$520,000.00	$130,000.00	$650,000.00				
									Road Construction	CN	$3,375,601.60	$843,900.40				$4,219,502.00	
Performance Measure Impacted: Safety																	
Location: 0.9 miles East of the intersection with US 52																	

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

Appendix I

Additional Studies

Land and Water Conservation Fund Summary Report

Indiana; Franklin County

(**Unofficial report**; contact us to learn where to find official information: https://lwcf.tplgis.org/contact)

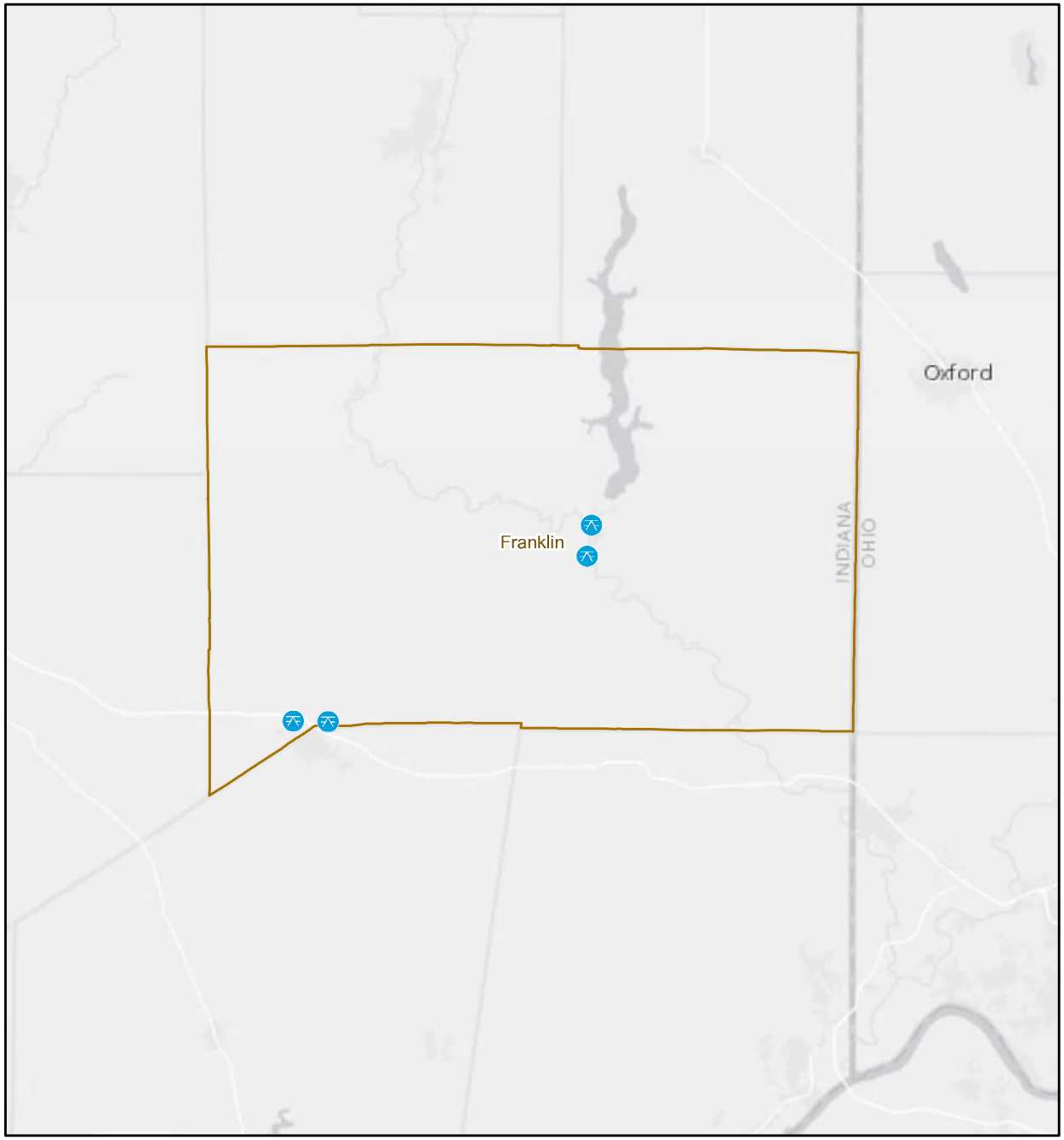
June 22, 2022

Number of projects funded:
4
Year range of funding:
1967 - 2017
Total funding received (estimate):
$530,000

Legend

Project funded by LWCF

State and Local Assistance Program (4)



US 52 HMA Overlay, Minor Structural
EJ Analysis
DES 1900192

Environmental Justice (EJ) (Presidential EO 12898)	Yes	No
During the development of the project were EJ issues identified?	X	
Does the project require an EJ analysis?	X	
If YES, then:		
Are any EJ populations located within the project area?	X	
Will the project result in adversely high and disproportionate impacts to EJ populations?		X

Under FHWA Order 6640.23A, FHWA and the project sponsor, as a recipient of funding from FHWA, are responsible to ensure that their programs, policies, and activities do not have a disproportionately high and adverse effect on minority or low-income populations. Per the current INDOT Categorical Exclusion Manual, an Environmental Justice (EJ) Analysis is required for any project that has two or more relocations or 0.5 acre of additional permanent right-of-way. The project will require 0.78 acres of ROW. Therefore, an EJ Analysis is required.

Potential EJ impacts are detected by locating minority and low-income populations relative to a reference population to determine if populations of EJ concern exist and whether there could be disproportionately high and adverse impacts to them. The reference population may be a county, city or town and is called the community of comparison (COC). In this project, the COC is Franklin County, Indiana. The community that overlaps the project area is called the affected community (AC). In this project, the AC's are Laurel Township (AC-1), Metamora Township (AC-2), and Posey Township (AC-3). An AC has a population of concern for EJ if the population is more than 50% minority or low-income or if the low-income or minority population is 125% of the COC. Data from the American Community Survey 2020 was obtained from the https://factfinder.census.gov/ on June 9, 2022, by CHA Consulting, Inc. The data collected for minority and low-income populations within the AC are summarized below.

	Community of Comparison (COC)	**Affected Community (AC-1)**	**Affected Community (AC-2)**	**Affected Community (AC-3)**
	Franklin County, Indiana	**Laurel Township, Franklin County, Indiana**	**Metamora Township, Franklin County, Indiana**	**Posey Township, Franklin County, Indiana**
Race				
Total population for the purpose of surveying race:	22,750	1,910	1,606	1,075
Total population non-hispanic/latino; white alone:	21,988	1,704	1,606	1,075
Number of Minorities:	**762**	**206**	**0**	**0**
Percent minority:	**3.35%**	**10.79%**	**0.00%**	**0.00%**
125 Percent of COC	***4.19%***			
Potential Minority EJ Concern:		**Yes**	**No**	**No**

	Community of Comparison (COC)	**Affected Community (AC-1)**	**Affected Community (AC-2)**	**Affected Community (AC-3)**
	Franklin County, Indiana	**Laurel Township, Franklin County, Indiana**	**Metamora Township, Franklin County, Indiana**	**Posey Township, Franklin County, Indiana**
Income				
Total population for the purpose of surveying poverty income:	22,661	1,910	1,606	1,075
Population with income in the past 12 months below poverty level:	1,810	467	140	78
Percent low income:	**7.99%**	**24.45%**	**8.72%**	**7.26%**
125 % of COC	***9.98%***			
Potential Low-income EJ Concern:		**Yes**	**No**	**No**

AC-1, Laurel Township has a percent minority of 10.79% which is below 50%; however, is above the 125% COC threshold. AC-2, Metamora Township has a percent minority of 0% which is below 50% and below the 125% COC

threshold. AC-3, Posey Township has a percent minority of 0% which is below 50% and below the 125% COC threshold. Therefore, AC-1 has a minority population of EJ concern.

AC-1, Laurel Township has a percent low-income of 24.45% which is below 50%; however, above the 125% COC threshold. AC-2, Metamora Township has a percent low-income of 8.72% which is below 50% and below the 125% COC threshold. AC-3, Posey Township has a percent low-income of 7.26% which is below 50% and is below the 125% COC threshold. Therefore, AC-1 is a low-income population of EJ concern.

Approximately 0.67 acres of permanent (no temporary) right-of-way will be acquired from an EJ population (Laurel Township) versus approximately 0.11 acre of permanent (no temporary) right-of-way from the non-EJ populations (Posey and Metamora Township). Though right-of-way will occur primarily from the EJ population, the majority of the acquisition will occur in undeveloped forested land and maintained turf grass. The right-of-way is limited to only what is absolutely necessary for the small structure replacements. Additionally, this project will not require any relocations. The project will improve US 52, increasing the lifespan of the road, as well as replace the deteriorating structures and improve the superelevation of two curves and the guardrail end treatments to meet the standard. As the majority of the project occurs within the EJ population (Laurel Township), the EJ population will benefit from the roadway improvement, structure replacement, and superelevation and guardrail end cap upgrades. Traffic will be maintained throughout the construction of the project through single lane closures and the use of a flagger. Access is being maintained throughout the project area to all properties. Therefore, the project will not disproportionately impact the EJ population.

Environmental Justice (EJ) Analysis

US 52-HMA Overlay, Minor Structural Project
Franklin County, Indiana
Des. No. 1900192

	Community of Comparison (COC)	Affected Community (AC-1)	Affected Community (AC-2)	Affected Community (AC-3)
	Franklin County, Indiana	Laurel Township, Franklin County, Indiana	Metamora Township, Franklin County, Indiana	Posey Township, Franklin County, Indiana
Race				
Total population for the purpose of surveying race:	22,750	1,910	1,606	1,075
Total population non-hispanic/latino; white alone:	21,988	1,704	1,606	1,075
Number of Minorities:	**762**	**206**	**0**	**0**
Percent minority:	**3.35%**	**10.79%**	**0.00%**	**0.00%**
125 Percent of COC	***4.19%***			
Potential Minority EJ Concern:		**Yes**	**No**	**No**

	Community of Comparison (COC)	Affected Community (AC-1)	Affected Community (AC-2)	Affected Community (AC-3)
	Franklin County, Indiana	Laurel Township, Franklin County, Indiana	Metamora Township, Franklin County, Indiana	Posey Township, Franklin County, Indiana
Income				
Total population for the purpose of surveying poverty income:	22,661	1,910	1,606	1,075
Population with income in the past 12 months below poverty level:	1,810	467	140	78
Percent low income:	**7.99%**	**24.45%**	**8.72%**	**7.26%**
125 % of COC	***9.98%***			
Potential Low-income EJ Concern:		**Yes**	**No**	**No**

B03002: HISPANIC OR LATINO ORIGIN BY RACE -
2020 American Community Survey 5-Year Estimates
Note: The table shown may have been modified by user selections. Some information may be missing.

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

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

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, for 2020, the 2020 Census provides the official counts of the population and housing units for the nation, states, counties, cities, and towns. For 2016 to 2019, the Population Estimates Program provides estimates of the population for the nation, states, counties, cities, and towns and intercensal housing unit estimates for the nation, states, and counties.

	Community of Comparison (COC) Franklin County, Indiana		AC-1 Laurel township, Franklin County, Indiana		AC-2 Metamora township, Franklin County, Indiana		AC-3 Posey township, Franklin County, Indiana	
Label	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Total:	22,750	*****	1,910	±475	1,606	±527	1,075	±334
Not Hispanic or Latino:	22,483	*****	1,854	±478	1,606	±527	1,075	±334
White alone	21,988	±66	1,704	±445	1,606	±527	1,075	±334
Black or African	32	±41	32	±41	0	±12	0	±12
American Indian	0	±23	0	±12	0	±12	0	±12
Asian alone	87	±119	0	±12	0	±12	0	±12
Native Hawaiian	0	±23	0	±12	0	±12	0	±12
Some other race	0	±23	0	±12	0	±12	0	±12
Two or more	376	±127	118	±130	0	±12	0	±12
Two races	44	±66	0	±12	0	±12	0	±12
Two races	332	±110	118	±130	0	±12	0	±12
Hispanic or Latino:	267	*****	56	±71	0	±12	0	±12
White alone	123	±72	56	±71	0	±12	0	±12
Black or African	0	±23	0	±12	0	±12	0	±12
American Indian	2	±5	0	±12	0	±12	0	±12
Asian alone	0	±23	0	±12	0	±12	0	±12
Native Hawaiian	0	±23	0	±12	0	±12	0	±12
Some other race	47	±53	0	±12	0	±12	0	±12
Two or more	95	±46	0	±12	0	±12	0	±12
Two races	65	±54	0	±12	0	±12	0	±12
Two races	30	±64	0	±12	0	±12	0	±12

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

The 2016-2020 American Community Survey (ACS) data generally reflect the September 2018 Office of Management and Budget (OMB) delineations of metropolitan and micropolitan statistical areas. In certain instances, the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB delineation lists due to differences in the effective dates of the geographic entities.
Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Source: U.S. Census Bureau, 2016-2020 American Community Survey 5-Year Estimates
Explanation of Symbols:- The estimate could not be computed because there were an insufficient number of sample observations. For a ratio of medians estimate, one or both of the median estimates falls in the lowest interval or highest interval of an open-ended distribution.N The estimate or margin of error cannot be displayed because there were an insufficient number of sample cases in the selected geographic area. (X) The estimate or margin of error is not applicable or not available.median- The median falls in the lowest interval of an open-ended distribution (for example "2,500-")median+ The median falls in the highest interval of an open-ended distribution (for example "250,000+").** The margin of error could not be computed because there were an insufficient number of sample observations.*** The margin of error could not be computed because the median falls in the lowest interval or highest interval of an open-ended distribution.***** A margin of error is not appropriate because the corresponding estimate is controlled to an independent population or housing estimate. Effectively, the corresponding estimate has no sampling error and the margin of error may be treated as zero.

B17001: POVERTY STATUS IN THE PAST
2020 American Community Survey 5-Year
Note: The table shown may have been modified by user selections. Some information may be

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

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

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, for 2020, the 2020 Census provides the official counts of the population and housing units for the nation, states, counties, cities, and towns. For 2016 to 2019, the Population Estimates Program provides

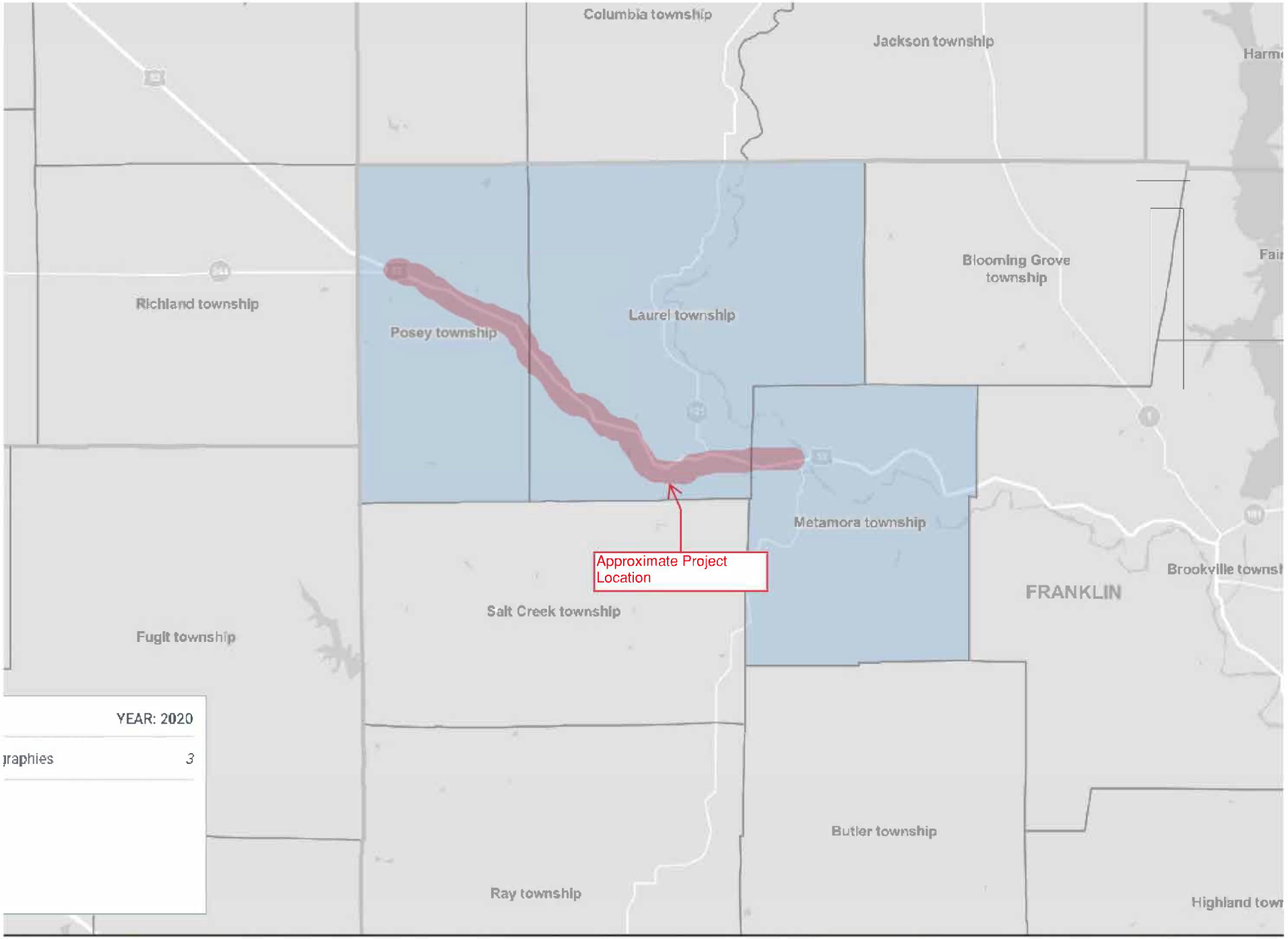
	COC Franklin County, Indiana		AC-1 Laurel township, Franklin County, Indiana		AC-2 Metamora township, Franklin County, Indiana		AC-3 Posey township, Franklin County, Indiana	
Label		Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Total:	22,661	±36	1,910	±475	1,606	±527	1,075	±334
Income in the past 12 months below poverty level:	1,810	±403	467	±236	140	±108	78	±51
Male:	739	±199	184	±104	58	±58	50	±36
Under 5 years	90	±61	37	±39	14	±21	9	±13
5 years	24	±32	22	±31	0	±12	0	±12
6 to 11 years	104	±79	0	±12	11	±24	0	±12
12 to 14 years	57	±52	0	±12	0	±12	0	±12
15 years	6	±12	0	±12	3	±8	0	±12
years	37	±37	10	±15	0	±12	0	±12
18 to 24 years	39	±31	19	±22	0	±12	8	±14
25 to 34 years	58	±45	38	±41	0	±12	0	±12
35 to 44 years	83	±47	11	±16	12	±18	0	±12
45 to 54 years	70	±50	10	±10	0	±12	23	±25
55 to 64 years	32	±27	10	±8	0	±12	0	±12
65 to 74 years	67	±46	21	±20	18	±30	10	±15
over	72	±71	6	±9	0	±12	0	±12
Female:	1,071	±273	283	±177	82	±66	28	±24
Under 5 years	113	±101	81	±95	0	±12	0	±12
5 years	32	±28	5	±8	0	±12	0	±12
6 to 11 years	69	±41	12	±21	13	±17	0	±12
12 to 14 years	32	±32	9	±14	0	±12	0	±12
15 years	6	±9	0	±12	0	±12	0	±12
years	36	±37	0	±12	4	±10	0	±12
18 to 24 years	98	±58	52	±46	0	±12	7	±12
25 to 34 years	169	±87	65	±70	10	±15	0	±12
35 to 44 years	72	±39	14	±17	3	±7	0	±12
45 to 54 years	128	±65	11	±14	26	±42	9	±15
55 to 64 years	121	±53	18	±19	0	±12	0	±12
65 to 74 years	62	±46	16	±21	0	±12	12	±18
over	133	±87	0	±12	26	±28	0	±12
12 months at or	20,851	±400	1,443	±348	1,466	±531	997	±329
Male:	10,505	±227	781	±199	788	±285	502	±176
Under 5 years	542	±61	11	±11	43	±53	33	±45
5 years	189	±122	7	±9	41	±65	0	±12
6 to 11 years	747	±150	45	±32	124	±92	21	±22
12 to 14 years	337	±125	18	±19	27	±33	0	±12
15 years	153	±66	0	±12	6	±12	0	±12
years	321	±70	7	±6	0	±12	104	±57
18 to 24 years	882	±57	121	±74	73	±70	0	±12
25 to 34 years	1,122	±66	149	±99	108	±73	50	±38
35 to 44 years	1,252	±64	97	±70	65	±72	87	±77
45 to 54 years	1,521	±70	115	±72	150	±110	60	±52
55 to 64 years	1,704	±67	171	±104	33	±34	55	±49
65 to 74 years	1,132	±46	18	±17	95	±69	29	±26
75 years and	603	±80	22	±23	23	±37	63	±76
Female:	10,346	±282	662	±211	678	±269	495	±191
Under 5 years	609	±38	30	±21	8	±17	40	±39
5 years	91	±45	4	±5	0	±12	35	±39
6 to 11 years	767	±264	63	±53	46	±64	50	±42
12 to 14 years	608	±228	55	±39	34	±53	34	±35
15 years	115	±64	3	±5	21	±34	0	±12
16 and 17	301	±76	15	±15	71	±78	0	±12
18 to 24 years	751	±42	34	±28	69	±83	75	±61
25 to 34 years	954	±87	118	±54	66	±56	56	±52
35 to 44 years	1,212	±39	59	±56	57	±58	77	±61
45 to 54 years	1,382	±70	121	±72	154	±118	26	±38
55 to 64 years	1,546	±75	55	±37	32	±36	56	±40
65 to 74 years	1,136	±43	41	±26	89	±57	34	±27
over	874	±90	64	±64	31	±31	12	±17

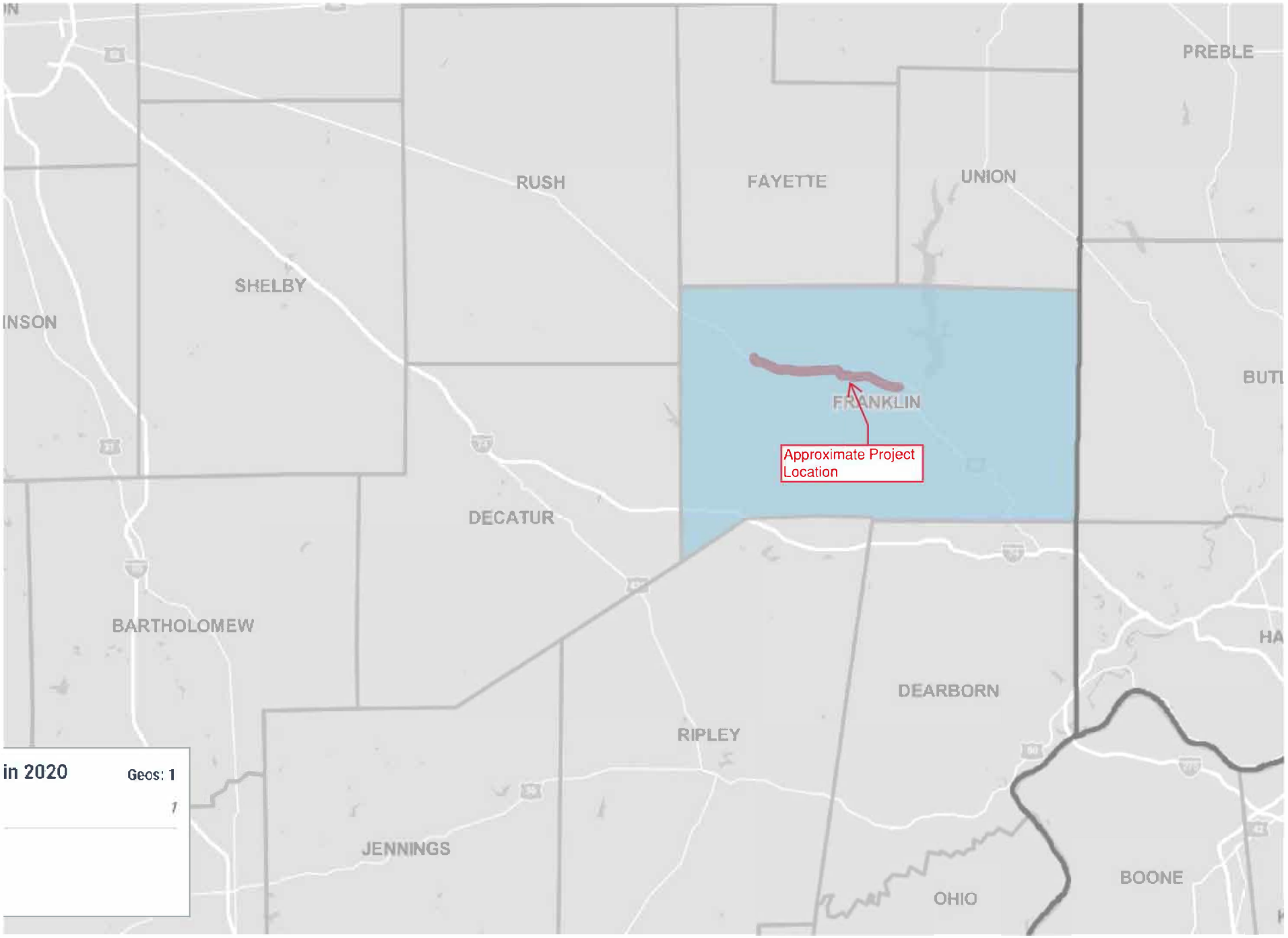
Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as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

The 2016-2020 American Community Survey (ACS) data generally reflect the September 2018 Office of Management and Budget (OMB) delineations of metropolitan and micropolitan statistical areas. In certain instances, the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB delineation lists due to differences in the effective dates of the geographic entities.

Source: U.S. Census Bureau, 2016-2020 American Community Survey 5-Year Estimates

Explanation of Symbols:- The estimate could not be computed because there were an insufficient number of sample observations. For a ratio of medians estimate, one or both of the median estimates falls in the lowest interval or highest interval of an open-ended distribution.N The estimate or margin of error cannot be displayed because there were an insufficient number of sample cases in the selected geographic area. (X) The estimate or margin of error is not applicable or not available.median- The median falls in the lowest interval of an open-ended distribution (for example "2,500-")median+ The median falls in the highest interval of an open-ended distribution (for example "250,000+").** The margin of error could not be computed because there were an insufficient number of sample observations.*** The margin of error could not be computed because the median falls in the lowest interval or highest interval of an open-ended distribution.***** A margin of error is not appropriate because the corresponding estimate is controlled to an independent population or housing estimate. Effectively, the corresponding estimate has no sampling error and the margin of error may be treated as zero.


Columbia township
Jackson township
Richland township
Posey township
Laurel township
Blooming Grove township
Metamora township
Approximate Project Location
FRANKLIN
Salt Creek township
Fugit township
Butler township
Ray township
YEAR: 2020
3


PREBLE
RUSH
FAYETTE
UNION
SHELBY
FRANKLIN
Approximate Project Location
DECATUR
BARTHOLOMEW
DEARBORN
RIPLEY
JENNINGS
OHIO
BOONE
in 2020
Geos: 1

Environmental Justice (EJ) Analysis

US 52 HMA Overlay, Minor Structural
Franklin County, Indiana
Des. No. 1900192

	Affected Community (AC-1) EJ Population	**Affected Community (AC-2) Non-EJ Population**	**Affected Community (AC-3) Non-EJ Population**
	Laurel Township, Franklin County, Indiana	Metamora Township, Franklin County, Indiana	Posey Township, Franklin County, Indiana
Right-of-Way			
Permanent Acquisition (acres)	0.67	0.00	0.11
Temporary Acquisition (acres)	0.00	0.00	0.00

Stroude, Aaron

From:	Elmore, Summer
Sent:	Monday, July 25, 2022 4:37 PM
To:	Stroude, Aaron
Subject:	FW: [--EXTERNAL--]: RE: EJ Coordination US 52 HMA Overlay, Minor Structural - Franklin County - Des 1900192
Attachments:	1900192_EJ_INDOT Coord_7-12.pdf

Hi Aaron,
We received concurrence on the attached US 52 environmental justice analysis. Could you pdf this email to the project folder and update the CE with the text Mackenzie left highlighted for us please?
Thank you!

Summer Elmore, PWS
CHA

From: Fair, Terri <TFair@indot.IN.gov>
Sent: Monday, July 25, 2022 2:16 PM
To: Elmore, Summer <SElmore@chacompanies.com>
Cc: Ross, Anthony <ARoss3@indot.IN.gov>
Subject: FW: [--EXTERNAL--]: RE: EJ Coordination US 52 HMA Overlay, Minor Structural - Franklin County - Des 1900192

INDOT-Environmental Services Division (ESD) has reviewed the project information along with the Environmental Justice (EJ) Analysis for the above referenced project. With the information provided, the project may require minimal right-of-way, require no relocations, and would not disrupt community cohesion or create a physical barrier. With the information provided, INDOT-ESD would not consider the impacts associated with this project as causing a disproportionately high and adverse effect on minority and/or low-income populations of EJ concern relative to non-EJ populations in accordance with the provisions of Executive Order 12898 and FHWA Order 6640.23a. No further EJ Analysis is required.

ENGINEER'S REPORT

HMA Overlay, Minor Structural

US 52
US 52: SR 244 JCT to SR 229 JCT

Des. No. 1900192

Seymour District

Aurora Sub-District

Franklin County, Indiana

October 7, 2020

Prepared by:

Brad Kalucki

CHA Consulting, Inc.

Indiana Department of Transportation

Seymour District
185 Agrico Lane Seymour IN 47274

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Table of Contents

Appendices

1.0 Purpose of Report

The purpose of this report is to document the engineering assessment phase of project development, including all coordination that has been completed in preparation for this project. This document outlines the proposal and is intended to serve as a guide for subsequent survey, design, environmental, right of way and other project activities leading to construction. The preferred alternative identified in this document is considered pre-decisional.

2.0 Project Location

This project begins on US 52 at the SR 244 junction (RP 137+17) and extends easterly to an end point at the SR 229 junction (RP 145+73) for a total of 8.64 miles. These limits begin in the city of Andersonville and extend easterly to an end point in the city of Metamora. See Appendices A and B for Project Location Maps.

	RP	Coordinates
Begin Project	137+17	39°29'51.4"N 85°17'02.4"W
End Project	145+73	39°26'57.9"N 85°09'04.5"W

3.0 Purpose and Need

The need for this project is that the pavement along this section of roadway is deteriorating, with common deficiencies, such as longitudinal wheel path cracking, block cracking, and alligator cracking on the shoulders throughout the length of the project. There are also visible signs of stripping in the pavement, guardrail end treatments that need updated and superelevation that need corrected on multiple curves. The purpose of this project is to remove stripping in the top layers of the pavement structure, delay further deterioration of the existing asphalt pavement and to extend the service life of the roadway for another twelve to fifteen years.

This report includes relevant background data, analyses, conclusions and recommendations at the preliminary level. The recommended alternative contained herein is intended to serve as an initial basis for design. However, detailed analysis conducted by the designer may result in changes to certain facets of this scoping report. Any changes to the recommended alternative should be coordinated with the Seymour District System Asset Owner and Project Manager.

4.0 Existing Conditions and Roadway History

Roadway

The project, located along US 52 in Franklin County, begins at the SR 244 junction and ends at the SR 229 junction. According to a site visit, US 52 is a two-lane, 26-foot wide roadway, with a typical section consisting of one 12-foot wide travel lane and a 1-foot wide paved shoulder in each direction.

US 52 is functionally classified as a Minor Arterial. See Attachment I – Roadway Functional Classification for more information. This section is not part of the National Highway System (NHS) but it is part of the National Truck Network (NTN). The roadway has a posted speed limit of 55 miles per hour with no access control. The terrain is flat, and the adjacent land usage is generally agricultural within the project limits. See Attachment B – Location Map for additional information.

The existing pavement was originally constructed in sections starting in 1922 and continuing in 1927 and 1931. It has since been widened and overlaid with HMA. The project included extensive partial and full depth patching to correct underlying pavement failures. The project was expected to extend the life of the pavement 9-10 years.

The construction of this road is HMA pavement, with segments of it consisting of concrete under asphalt. The evident modes of failure are block and traverse cracking. The shoulders are also showing moderate to severe alligator and edge cracking. See Appendix F – Site Photos for visual details.

Right-of-Way

INDOT's Research and Archives unit was contacted about the existing R/W along US 52. Upon investigation, R/W plans indicated that there is a minimum of approximately 45' and maximum of approximately 120' of R/W on each side of the centerline of US 52. See Attachment J – Right-of-Way Information/Previous Plans for further details. It is anticipated that there will be no R/W acquisition required for this project.

Utilities and Railroads

There are no rail crossings within the project limits on US 52.

The Utility section reports the following providers along this portion of US 52:

- Duke Energy
- Frontier
- Hoosier Hills Regional Water District
- Metamora Regional Sewer District
- RSE Propane, LLC
- Rush Shelby Energy
- Wanrack, LLC

The providers are located overhead and below this portion of roadway. See Appendix E – Utility Information for additional details. There are no anticipated utility relocations resulting from this project, as the construction will be limited to the existing roadway, public road approaches and private drives.

Traffic

The INDOT Traffic Count Database System (TCDS) was used to provide current and past traffic data along US 52 from the SR 244 JCT to the SR 229 JCT. Listed below is a summary of the results. AADT data for 2024 and 2034 has been estimated based on a growth factor of 0.5%.

Year	AADT	DHV-30	K %	D %	PA	BC	Src
2034	*1,732*		10	64	1,507 (87%)	225 (13%)	
2024	*1,648*		10	64	1,434 (87%)	214 (13%)	
2018	1,599		10	64	1,385 (87%)	213 (13%)	Grown from 2017
2017	1,593	165	10	64	1,380 (87%)	212 (13%)	
2016	1,804		10	61	1,611 (89%)	192 (11%)	Grown from 2015
2015	1,774		10	61	1,584 (89%)	189 (11%)	Grown from 2014
2014	1,741	168	10	61	1,555 (89%)	185 (11%)	

Crash Information

Crash data was requested from the Seymour district. The 2016-2019 crash information along US 52 was analyzed to determine if any of the crashes were a result of the roadway design. After field examination, it was determined that the superelevations on multiple curves varied between the two lanes by a large enough factor to prohibit a driver from correcting their vehicle after traveling left of center. One curve in question, located around RP 140.50, is pictured on top of Page F.3 in Appendix F. This curve has an inconsistent superelevation making it more difficult for vehicles to navigate the curve, this may have been a contributing factor in a crash where a vehicle ran into a property fence and utility pole after traveling left of center. Another concern is the curve shown on the bottom of page F.3 in Appendix F and the reverse curve that immediately follows; located around RP 143.00. The superelevations vary between the lanes by greater than 6%, which could have contributed to multiple fatal crashes near these curves. Most other crashes were caused by animals, weather or human factors. See Appendix J for US 52 crash data.

The crash data in Appendix I shows 14 crashes referencing the intersections of Stipps Hill Road and SR 121 with US 52. Of these 14 accidents only one was caused by the intersection. This was a rear end collision of a left turning vehicle onto SR 121. The other 13 accidents were not affected by the intersection:

- Five were accidents with animals
- Five accidents were from curves nearly 1 mile west of the intersection
- One DUI accident
- One accident from a possible curve 0.5 miles west
- One accident east of intersection of an east bound vehicle “running off road”

5.0 Design Considerations

Design standards for this project shall be Partial 3R as follows:

Table 1

Design Data	US 52
Contract Number	RS-42630
Functional Classification	Minor Arterial
District	Seymour
Sub-District	Aurora
Beginning Reference Post	137+17
Ending Reference Post	145+73
Work Type	HMA Overlay, Minor Structural
Net Length (Miles)	8.64
Project Design Criteria	Rural, Partial 3R
Design Year	2034 (10 Years)
AADT (2034)	1,732
% Trucks, AADT	13% Trucks, 225
Posted Speed (MPH)	55
Access Control	Non-Access Controlled
Existing Pavement Type	Composite
No. Lanes	2
Lane Width	12’0”
Shoulder Width	1’0”
Proposed Pavement Section	Partial Depth HMA Pavement (Two-Lift Overlay)

Miscellaneous

Due to this being a minor structural overlay and a non-NHS Route, Partial 3R design standards shall be used. Existing damaged guardrail will be replaced with in kind guardrail, all other guardrail will not be replaced as part of this project. All existing guardrail end treatments will be updated to meet current MASH standards, however, due to not purchasing right of way and the steep slopes the

grading will be modified for each location. This will consist of 40 guardrail end treatments and 9 curved guardrail terminal end sections.

All small structures within the project limits were examined. This includes multiple culverts and two buried structures with headwalls. The primary factor in the crashes within proximity to these structures was due to "running off road" and were not related to the structures.

Maintenance of Traffic

The Maintenance of Traffic (MOT) for this project is guided by the HMA Minor Structural construction operation. Since US 52 is comprised of a single lane in both directions, it is anticipated that there will be flaggers and signage present for the directing of traffic during paving operations. Portable signals should be used if PCCP is used for full depth patching on composite pavement sections. The preliminary MOT recommendation is to maintain traffic on the existing roadway during construction. The MOT plan will be further refined during the design process. Driveway accesses are to remain open during construction.

ADA Compliance

There are no pedestrian facilities within the project limits on US 52, therefore no assessment of ADA compliance is required.

Adjacent INDOT Project(s)

Des #	Work Type	Location	Route	RP	RP	County	Letting Date
1900248	HMA Overlay Minor Structural	US 52 from SR 3 S to SR 244	US 52	126+002	137+001	Franklin/Rush	7/12/2023

Environmental and Historic Considerations

A cursory review for potential red flags was completed for the project area by our team using IndianaMAP, Indiana StreamStats, National Park Service data and the Indiana Historic Buildings, Bridges, and Cemeteries Map (IHBBCM). Environmental Red Flag Maps created as a part of this review are found in Appendix G. According to the project work type (HMA overlay, minor structural) a Programmatic CE (PCE) is warranted.

The following notable features were identified in or adjacent to the project area:

- The Whitewater Canal Historic District (NR-0241) is located adjacent to the south-southeast extent of the project area and is a potential Section 4(f) resource.
- The Whitewater Canal Historic Site and Whitewater Canal Trail are located to the east of the south-southeast extent of the project area and are potential Section 4(f) resources.
- Open Dump Waste Site, R&B Tire Pit Area (Regulatory Program ID: 24001117A) was mapped adjacent to the proposed project, near RP 138+72. No files were available in the IDEM Virtual File Cabinet (VFC) regarding this site.

- Little Salt Creek and its associated floodplain and Whitewater River floodplain are located within the project area.

  If the scope of work extends beyond the existing roadway or the road surface elevation is raised greater than a net 3 inches, these resources should be investigated and a CE Level 1 or greater may be warranted.

  Red Flag Map has been included in Appendix "G".

6.0 Analysis and Alternatives

If completed, this project will offer vastly improved pavement surfaces along US 52. Locations of more pronounced HMA pavement failure will receive full depth patching, potentially with PCCP based on the condition of the underneath concrete surface. After the full depth patching, the road will be milled and overlaid in accordance with the most current INDOT Standards and Specifications.

Overlay, Minor Structural Alternative (Preferred)

The mainline pavement is anticipated to be milled 3.5" to 4.0" and overlaid with a 1.5" surface HMA layer on top of a 2.5" intermediate layer. The locations of pavement failure should be full depth using HMA Type B Patching. This treatment will extend the pavement life an additional 12-15 years. Driveways and approaches are to be milled and finished with either HMA or PCCP depending on existing pavement type.

Overlay, Preventative Maintenance Alternative

The single lift alternative was considered and ultimately rejected. The improvements outlined above would elevate this segment of US 52 to satisfactory conditions. The single lift alternative does not address the purpose of extending the pavement life by 12-15 years; therefore, it is not considered an acceptable option.

Reconstruction Alternative

The complete rebuild alternative was also considered and ultimately rejected. This would elevate this segment of US 52 to brand new condition. The complete rebuild alternative addresses the Purpose and Need but is not feasible due to the high cost and moderate traffic volumes of US 52. Therefore, it is not considered an acceptable option.

Do Nothing Alternative

The do-nothing alternative was considered and ultimately rejected. The improvements outlined above would elevate this segment of US 52 to satisfactory conditions. The do-nothing alternative does not address the Purpose and Need; therefore, it is not considered an acceptable option.

7.0 Conclusions

Alternative 1 is the preferred alternative.

Cost Estimate – Alternative 1 (Preferred)

	Year 2024
Preliminary Total Cost – Construction Only	$5,465,777.00

Additionally, the superelevation of the roadway in at curves (RP 141.40 and RP 143.00) that do not meet current design standards will be corrected. This is important because both curves have had a history of crashes where cars veered off the roadway and were not able to adequately correct in time. Additionally, new centerline rumble strips would increase driver alertness and as a result safety along the roadway.

8.0 Changes to Proposal

The Seymour District System Asset Owner and Project Manager should be contacted if alterations from this document are deemed necessary during a later phase of project development. Any changes should be justified and estimated.

9.0 Concurrence

Douglas R. Dagley Date: 6/16/2020

Doug Dagley, P.E.
CHA Consulting, Inc.

Robert F. Tally Jr. Date: 10/19/2020

Robert F. Tally, Jr.
INDOT, Seymour District System Asset Manager

Nicole Carter Date: 10/22/2020

Nicole Carter

INDOT, Seymour District Project Manager