FHWA-Indiana Environmental Document

CATEGORICAL EXCLUSION / ENVIRONMENTAL ASSESSMENT FORM

GENERAL PROJECT INFORMATION

Road No./County:	Freedom Trail / Lake County
Designation Number(s):	1802920
Project Description/Termini:	Multi-use Trail/Beginning at the terminus of an existing trail within Freedom Park and ending at the intersection of West Main Street and North Liberty Street

	Categorical Exclusion, Level 2 – Required Signatories: INDOT DE and/or INDOT ESD
X	**Categorical Exclusion, Level 3** – Required Signatories: INDOT ESD
	Categorical Exclusion, Level 4 – Required Signatories: INDOT ESD and FHWA
	Environmental Assessment (EA) – Required Signatories: INDOT ESD and FHWA
	Additional Investigation (AI) – The proposed action included a design change from the original approved environmental document. Required Signatories must include the appropriate environmental approval authority

Approval

INDOT DE Signature and Date

INDOT ESD Signature and Date

FHWA Signature and Date

Release for Public Involvement

N/A
INDOT DE Initials and Date

ADWP February 16, 2023
INDOT ESD Initials and Date

Certification of Public Involvement

INDOT Consultant Services Signature and Date

INDOT DE/ESD Reviewer Signature and Date:

Name and Organization of CE/EA Preparer: Tamara Miller, Cardno

County Lake County Route Freedom Trail Des. No. 1802920

Note: Refer to the most current INDOT CE Manual, guidance language, and other ESD resources for further guidance regarding any section of this form.

Part I – Public Involvement

Every Federal action requires some level of public involvement, providing for early and continuous opportunities throughout the project development process. **The level of public involvement should be commensurate with the proposed action.**

	Yes	No
Does the project have a historic bridge processed under the Historic Bridges PA*?		X
If No, then:		
Opportunity for a Public Hearing Required?	X	

**A public hearing is required for all historic bridges processed under the Historic Bridges Programmatic Agreement between INDOT, FHWA, SHPO, and the ACHP.*

Discuss what public involvement activities (legal notices, letters to affected property owners and residents (i.e. notice of entry), meetings, special purpose meetings, newspaper articles, etc.) have occurred for this project.

Notice of Entry letters were mailed to potentially affected property owners near the project area on September 9th, 2020, notifying them about the project and that individuals responsible for land surveying and field activities may be seen in the area. A sample copy of the Notice of Entry letter is included in Appendix G, page G-1.

The project will meet the minimum requirements described in the current Indiana Department of Transportation (INDOT) Public Involvement Manual, which requires the project sponsor to offer the public an opportunity to submit comments and/or request a public hearing. Therefore, a legal notice will appear in a local publication contingent upon the release of this document for public involvement. This document will be revised after the public involvement requirements are fulfilled.

Public Controversy on Environmental Grounds

Discuss public controversy concerning community and/or natural resource impacts, including what is being done during the project to minimize impacts.

At this time, there is no substantial public controversy concerning impacts to the community or to natural resources.

Part II - General Project Identification, Description, and Design Information

Sponsor of the Project: Town of Lowell INDOT District: LaPorte

Local Name of the Facility: Freedom Trail

Funding Source (*mark all that apply*): Federal [ ] State [X] Local [X] Other* [ ]

*If other is selected, please identify the funding source: _____

PURPOSE AND NEED:

The need should describe the specific transportation problem or deficiency that the project will address. The purpose should describe the goal or objective of the project. The solution to the traffic problem should NOT be discussed in this section.

Need

The Town of Lowell Comprehensive Plan (March 2009) includes a goal to improve parks and trails in Lowell and provide more recreational opportunities. One strategy to achieve this goal is to develop pedestrian infrastructure throughout Lowell to encourage use and provide improved access to all parks. There is no direct, non-motorized, vehicle separated connection between Freedom Park and Liberty Park. Freedom Park is in the northwest corner of Lowell's town limits. This 114-acre property includes parking, playground, sports fields, and picnic shelters. Freedom Park has little connectivity except by vehicle. There are limited sidewalks connecting surrounding residential areas to the park. Liberty Park is located on a four-acre parcel in the downtown area. Recreation

facilities located within this park include basketball and tennis courts, playground equipment, a hill for sledding, and picnic shelters.

Purpose
The purpose of this project is to provide a direct, non-motorized link for pedestrians and bicycles between Liberty Park and Freedom Park.

PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Lake Municipality: Town of Lowell

Limits of Proposed Work: Beginning at the intersection of West Main Street and North Liberty Street and ending at an existing path in Freedom Park

Total Work Length: 1.2 Mile(s) Total Work Area: 3.0 Acre(s)

	Yes[1]	No
Is an Interstate Access Document (IAD)[1] required?		X
If yes, when did the FHWA provide a Determination of Engineering and Operational Acceptability?	Date:	

[1] *If an IAD is required; a copy of the approved CE/EA document must be submitted to the FHWA with a request for final approval of the IAD.*

Describe location of project including township, range, city, county, roads, etc. Existing conditions should include current conditions, current deficiencies, roadway description, surrounding features, etc. Preferred alternative should include the scope of work, anticipated impacts, and how the project will meet the Purpose and Need. Logical termini and independent utility also need discussed.

The Town of Lowell with funding from the Federal Highway Administration (FHWA) intends to proceed with a project to construct a multi-use trail between Liberty Park and Freedom Park.

Location
The project is located within Section 24 Township 33 North, Range 9 West, beginning at the intersection of West Main Street and Liberty Park and ending at the southern terminus of an existing trail in Freedom Park, in Lowell, Cedar Creek Township, Lake County, Indiana (Appendix B, page B-1).

Existing Conditions
Land use within and adjacent to the proposed project area includes residential homes, local streets, municipal parks, forest, wetlands, and agricultural fields. There are sidewalks along the local roadways, but the central portion of the project does not contain any pedestrian facilities or recreational opportunities. The southern edge of the project area is located adjacent to Liberty Park and in the southeastern quadrant of North Liberty Street and West Main Street, where there is an existing sidewalk. The project also includes North Liberty Street where there are no pedestrian facilities. The middle section of the project area includes a forested area and wetlands. This natural area is surrounded by residential subdivisions but there are no pedestrian or bicycle facilities. The northern portion of the project area includes Timber Springs Road and Redbud Lane. Both roadways are residential streets that are 30 ft wide with 2 ft shoulders and 5 ft sidewalks on both sides of the road. The project area also includes continues an agricultural field and a narrow band of shrub scrub forest. The northern edge of the project is within Freedom Park, which includes a mowed grass and an existing 5-ft wide trail. There are no bicycle facilities, including pavement markings, trails, or signage throughout the project area.

Preferred Alternative
The proposed project will construct an Americans with Disability Act (ADA)-compliant, multi-use trail connecting Liberty Park to Freedom Park in the Town of Lowell. This trail will be comprised of both off-road and on-road segments. Where feasible, existing dedicated rights-of-way, as well as open spaces will be utilized. Trail surfaces will vary based on location. Through subdivisions, the trail will be concrete to match existing sidewalks and, in some areas, will replace the existing sidewalk, in off-road areas, the trail will be asphalt. The entire trail will be 10-ft to 12-ft wide with 2-ft shoulders. Two boardwalk sections will be constructed to minimize impacts to Wetland 03, the large wetland in the center of the project. One section of boardwalk will be 100-ft long and the other section will be 450-ft long. The topography in the project area requires retaining walls in one location to limit the construction footprint to avoid impacts to environmental resources. The approximate length of the proposed project will be 1.2 miles. Plans are provided in Appendix B, beginning on page B-6.

The proposed trail alignment will cross two wetlands and avoid an open water wetland and one stream. One wetland is located immediately south of Freedom Park and will be filled by construction of the trail. The second wetland that will be impacted is a large wetland located in the center of the project area. A 100-ft long and a 450-foot long boardwalk section will be constructed through the wettest area of this wetland to minimize impacts. Two additional trail alignments that follow the higher ground to the west were considered to cross this wetland at its narrowest point; however, the steep topography would not allow for ADA-compliance. The placement of the trail in steeper terrain would require significant use of retaining walls as well as increase the risk of erosion. The project will clear approximately 0.64 acres of trees to construct the trail. Tree clearing will be restricted to the minimum needed to construct the trail and impacts will be mitigated as directed by U.S. Fish and Wildlife (USFWS), U.S. Army Corps of Engineers (USACE), and Indiana Department of Environmental Management (IDEM).

Much of the project will be constructed in Town of Lowell (Town) rights-of-way. Proposed right-of-way widths along the trail will be 20 ft. from centerline. The section of the trail through the center portion of the project is currently through private land and will require the acquisition of approximately 1 acre of new right-of-way. Grading and driveway improvements along Timber Springs Road, Redbud Lane, and North Liberty Street will require the acquisition of approximately 0.5 acres of temporary right-of-way. No road closures or detours are anticipated for this project. There will be temporary sidewalk closures along the existing sidewalks, but there are sidewalks on both sides of the roads to allow for pedestrian traffic. Construction is anticipated to begin in January 2024, ending in July 2024.

Logical Termini/Independent Utility

The project begins at the intersection of West Main Street and North Liberty Street at the entrance of Liberty Park and ends at an existing path within Freedom Park, which make these locations the logical termini for the project. The project has independent utility as it does not rely on other future trail projects or infrastructure improvements to be constructed and utilized. The project meets the purpose and need of the project by providing a direct bicycle and pedestrian connection from Liberty Park to Freedom Park.

OTHER ALTERNATIVES CONSIDERED:

Provide a header for each alternative. Describe all discarded alternatives, including the No Build Alternative. Explain why each discarded alternative was not selected. Make sure to state how each alternative meets or does not meet the Purpose and Need and why.

No Build

Under the No Build alternative, the trail would not be constructed. This alternative does not meet the purpose and need of the project because it does not provide a direct, non-motorized link for pedestrians and bicycles between Liberty Park and Freedom Park. Therefore, this alternative was dismissed from further consideration.

Alternative Alignments

Two alternative alignments through the southern portion of the project were considered to avoid wetland impacts (Appendix B, Page B-5). Both routes followed a similar alignment which travelled west from the open water to traverse the steeper area and cross the large wetland (Wetland 03) at its most narrow point. This alignment would have impacted less of the forested wetland. The placement of the trail in steeper terrain would require significant use of retaining walls as well as increase the risk of erosion. These alignments were not feasible because the steep topography to the west would not allow the trail to be ADA-compliant. Therefore, this alternative was dismissed from further consideration.

The No Build Alternative is not feasible, prudent or practicable because (*Mark all that apply*)

It would not correct existing capacity deficiencies;	
It would not correct existing safety hazards;	
It would not correct the existing roadway geometric deficiencies;	
It would not correct existing deteriorated conditions and maintenance problems; or	
It would result in serious impacts to the motoring public and general welfare of the economy.	
Other (Would not meet the purpose and need of the project):	**X**

ROADWAY CHARACTER:

If the proposed action includes multiple roadways, complete and duplicate for each roadway.

Name of Roadway	West Main Street				
Functional Classification:	Major Collector				
Current ADT:	2,000	VPD (2021)	Design Year ADT:	N/A	VPD (20--)
Design Hour Volume (DHV):	N/A	Truck Percentage (%)	10		

Indiana Department of Transportation

County Lake County Route Freedom Trail Des. No. 1802920

Designed Speed (mph): N/A Legal Speed (mph): 20 mph

	Existing		Proposed	
Number of Lanes:	Two		N/A	
Type of Lanes:	One Travel Lane Each Direction		N/A	
Pavement Width:	22	ft.	N/A	ft.
Shoulder Width:	1	ft.	N/A	ft.
Median Width:	0	ft.	N/A	ft.
Sidewalk Width:	5	ft.	N/A	ft.

Setting:		Urban	X	Suburban		Rural
Topography:	X	Level		Rolling		Hilly

Name of Roadway North Liberty
Functional Classification: Local
Current ADT: 20 VPD (2021) Design Year ADT: N/A VPD (20--)
Design Hour Volume (DHV): N/A Truck Percentage (%) 0
Designed Speed (mph): N/A Legal Speed (mph): 15 mph

	Existing		Proposed	
Number of Lanes:	One		N/A	
Type of Lanes:	One Travel Lane		N/A	
Pavement Width:	12	ft.	N/A	ft.
Shoulder Width:	0	ft.	N/A	ft.
Median Width:	0	ft.	N/A	ft.
Sidewalk Width:	0	ft.	N/A	ft.

Setting:		Urban	X	Suburban		Rural
Topography:	X	Level		Rolling		Hilly

Name of Roadway Timber Springs Road
Functional Classification: Local
Current ADT: 100 VPD (2021) Design Year ADT: N/A VPD (20--)
Design Hour Volume (DHV): N/A Truck Percentage (%) 0
Designed Speed (mph): 20 mph Legal Speed (mph): 20 mph

	Existing		Proposed	
Number of Lanes:	2		N/A	
Type of Lanes:	1 Travel Lane Each Direction		N/A	
Pavement Width:	30	ft.	N/A	ft.
Shoulder Width:	0	ft.	N/A	ft.
Median Width:	0	ft.	N/A	ft.
Sidewalk Width:	5	ft.	N/A	ft.

Setting:		Urban	X	Suburban		Rural
Topography:	X	Level		Rolling		Hilly

Name of Roadway Redbud Lane
Functional Classification: Local
Current ADT: 100 VPD (2021) Design Year ADT: N/A VPD (20--)
Design Hour Volume (DHV): N/A Truck Percentage (%) 10
Designed Speed (mph): 20 mph Legal Speed (mph): 20 mph

County Lake County Route Freedom Trail Des. No. 1802920

	Existing		Proposed	
Number of Lanes:	2		N/A	
Type of Lanes:	One Travel Lane Each Direction		N/A	
Pavement Width:	30	ft.	N/A	ft.
Shoulder Width:	0	ft.	N/A	ft.
Median Width:	0	ft.	N/A	ft.
Sidewalk Width:	5	ft.	N/A	ft.

Setting:		Urban	X	Suburban		Rural
Topography:	X	Level		Rolling		Hilly

BRIDGES AND/OR SMALL STRUCTURE(S):

If the proposed action includes multiple structures, complete and duplicate for each bridge and/or small structure. Include both existing and proposed bridge(s) and/or small structure(s) in this section.

Structure/NBI Number(s): N/A Sufficiency Rating: N/A
(Rating, Source of Information)

	Existing		Proposed	
Bridge/Structure Type:	N/A		N/A	
Number of Spans:	N/A		N/A	
Weight Restrictions:	N/A	ton	N/A	ton
Height Restrictions:	N/A	ft.	N/A	ft.
Curb to Curb Width:	N/A	ft.	N/A	ft.
Outside to Outside Width:	N/A	ft.	N/A	ft.
Shoulder Width:	N/A	ft.	N/A	ft.

Describe impacts and work involving bridge(s), culvert(s), pipe(s), and small structure(s). Provide details for small structure(s): structure number, type, size (length and dia.), location and impacts to water. Use a table if the number of small structures becomes large. If the table exceeds a complete page, put it in the appendix and summarize the information below with a citation to the table.

No bridges or small structures are located within the project area.

MAINTENANCE OF TRAFFIC (MOT) DURING CONSTRUCTION:

	Yes	No
Is a temporary bridge proposed?		X
Is a temporary roadway proposed?		X
Will the project involve the use of a detour or require a ramp closure? (describe below)		X
Provisions will be made for access by local traffic and so posted.		
Provisions will be made for through-traffic dependent businesses.		
Provisions will be made to accommodate any local special events or festivals.		
Will the proposed MOT substantially change the environmental consequences of the action?		X
Is there substantial controversy associated with the proposed method for MOT?		X
Will the project require a sidewalk, curb ramp, and/or bicycle lane closure? (describe below)	X	
Provisions will be made for access by pedestrians and/or bicyclist and so posted (describe below).	X	

Discuss closures, detours, and/or facilities (if any) that will be provided for maintenance of traffic. Any known impacts from these temporary measures should be quantified to the extent possible, particularly with respect to properties such as Section 4(f) resources and wetlands. Discuss any pedestrian/bicycle closures. Any local concerns about access and traffic flow should be detailed as well.

The project will require the closure of the sidewalks along the southside of Timber Lake Drive and on the east side of Redbud Lane to convert them to the multi-use trail. The project will also require the closure of the existing sidewalk in the southeast corner of the intersection of West Main Street and North Liberty Street. The Town will utilize signage to direct pedestrians to the opposite side of the roadway. Work within roadways is not anticipated and disruption of traffic is not anticipated. The sidewalk closures will pose a temporary inconvenience to traveling pedestrians; however, no significant delays are anticipated, and all inconveniences and delays will cease upon project completion.

ESTIMATED PROJECT COST AND SCHEDULE:

Engineering: $ 183,625 (2020) Right-of-Way: $ 108,500 (2023) Construction: $ 1,872,975 (2024)

Anticipated Start Date of Construction: January 2024

RIGHT OF WAY:

	Amount (acres)	
Land Use Impacts	Permanent	Temporary
Residential	0.00	0.50
Commercial	0.00	0.00
Agricultural	0.00	0.00
Forest	0.58	0.00
Wetlands	0.33	0.00
Other: Turf/Lawn	0.09	0.00
Other:	0.00	0.00
TOTAL	1.00	0.50

Describe both Permanent and Temporary right-of-way and describe their current use. Typical and Maximum right-of-way widths (existing and proposed) should also be discussed. Any advance acquisition, reacquisition or easements, either known or suspected, and their impacts on the environmental analysis should be discussed.

The existing ROW width along the roadways within the project area is 60 ft and consists of roadside vegetation/grass, sidewalks, In addition to ROW along the roadways, the Town owns the land within Freedom Park and Liberty Park.

The project requires the acquisition of approximately 1.0 acre of permanent ROW and 0.5 acre of temporary ROW to construct the trail. The new, permanent ROW is located within the southern section of the trail that travels through the undeveloped portion of the project. This land includes forested areas and wetland. The project also requires the acquisition of approximately 0.5 acres of temporary ROW within Timber Springs Subdivision for the purposes of grading and driveway replacement. This temporary ROW consists of residential lawn and driveways.

If the scope of work or permanent or temporary right-of-way amounts change, the INDOT Environmental Services Division (ESD) and the INDOT District Environmental Section will be contacted immediately.

Part III – Identification and Evaluation of Impacts of the Proposed Action

SECTION A - EARLY COORDINATION:

List the date(s) coordination was sent and all resource agencies that were contacted as a part of the development of this Environmental Study. Also, include the date of their response or indicate that no response was received.

Early coordination letters were sent on July 8th, 2021, and January 28, 2022 (Appendix C, page C-1).

Coordination with agencies was completed early in project development to obtain input prior to determining the preferred alignment and final right-of-way requirements. The project study area submitted to agencies was much larger than the construction footprint to allow for shifts in the alignment and impacts to resources were estimated based on this larger study area. The alignment has been adjusted over the course of project development to work within existing town right-of-way, minimize wetland impacts, and meet standard geometric and safety design criteria of the Indiana Design Manual. The final adjustments in the trail's construction footprint were made after early coordination was completed with agencies. Once the construction footprint was narrowed to the actual width of disturbance, permanent right-of-way limits decreased from 7 acres to 1 acre, tree clearing limits decreased from 1.49 acres to 0.64 acres and wetland impacts decreased from 1.34 acres to 0.36 acre. Since construction impacts and ROW requirements were reduced and the proposed alignment is contained within the original study area, coordination was not reinitiated with agencies.

Agency	Division	Date Sent	Date Response Received	Appendix
Indiana Department of Natural Resources	Division of Fish and Wildlife	July 8, 2021	August 6, 2021	Appendix C, page C-18
Federal Highway Administration		July 8, 2021	No Response	N/A
Natural Resources Conservation Service		July 8, 2021	July 29, 2021	Appendix C, page C-16
US Department of Housing and Urban Development	Chicago Regional Office	July 8, 2021	No Response	N/A
U.S. Army Corps of Engineers	Chicago District	July 8, 2021	No Response	N/A
U.S. Army Corps of Engineers-Chicago District	Planning, Programs and Project Management Division, Planning Branch	July 8, 2021	July 8, 2021	Appendix C, page C-15
National Park Service	Midwest Regional Office	July 8, 2021	No Response	N/A
Indiana Department of Transportation	LaPorte District	July 8, 2021	July 16, 2021	Appendix C, page C-14
Town of Lowell	MS4 Stormwater	July 8, 2021	No Response	N/A
Town of Lowell	Lowell Parks and Recreation	July 8, 2021	No Response	N/A
Town of Lowell	Town Manager	July 8, 2021	No Response	N/A
Town of Lowell	Street Department	July 8, 2021	No Response	N/A
Town of Lowell	Town Council	July 8, 2021	No Response	N/A
Town of Lowell	Street Department	July 8, 2021	No Response	N/A
Northwest Indiana Regional Planning Commission		July 8, 2021	No Response	N/A
Indiana Department of Environmental Management	Wetlands and Stormwater Programs	January 28, 2022	No Response	N/A
Indiana Department of Environmental Management	Online Environmental Review	December 9, 2021	December 9, 2021	Appendix C, page C-7
Indiana Geological & Water Survey (IGWS)	Online Environmental Assessment Report	June 28, 2021	June 28, 2021	Appendix C, page C-4

All applicable recommendations are included in the Environmental Commitments section of this CE document

SECTION B – ECOLOGICAL RESOURCES:

	Presence	Impacts Yes	Impacts No
Streams, Rivers, Watercourses & Other Jurisdictional Features	X		X
Federal Wild and Scenic Rivers			
State Natural, Scenic or Recreational Rivers			
Nationwide Rivers Inventory (NRI) listed			
Outstanding Rivers List for Indiana			
Navigable Waterways			

Total stream(s) in project area: 335 Linear feet Total impacted stream(s): 0 Linear feet

Stream Name	Classification	Total Size in Project Area (linear feet)	Impacted linear feet	Comments (i.e. location, flow direction, likely Water of the US, appendix reference)
Unnamed Tributary 01	Ephemeral	335 linear feet	0	Flows south from Wetland 02 into Wetland 03, along proposed trail alignment.

Describe all streams, rivers, watercourses and other jurisdictional features adjacent or within the project area. Include whether or not impacts (both permanent and temporary) will occur to the features identified. Include if the streams or rivers are listed on any federal or state lists for Indiana. Include if features are likely subject to federal or state jurisdiction. Discuss measures to avoid, minimize, and mitigate if impacts will occur.

Based on the desktop review, the aerial map of the project area, and the RFI (Appendix E, page E-1) there are nine streams, rivers, watercourse or other jurisdictional features within the 0.5-mile search radius. This number was updated to one stream within the project area, based on the site visit conducted on October 15, 2020, by Cardno.

Waters Report

A Wetland Delineation Report was completed for the project on October 15, 2020 (Appendix F, page F-2). One unnamed tributary (UNT) was identified within the project area by Cardno during field investigations. This feature, identified as UNT01 in the wetland delineation report, is a small ephemeral waterway, which connects two wetlands located within the project area. These wetlands are hydrologically connected to Cedar Creek. Cedar Creek is a named waterway with connection to the Kankakee River, a Traditional Navigable Waterway (TNW). This connection most likely makes Cedar Creek a "waters of the U.S." (WOTUS). Therefore, this also likely makes UNT01 a WOTUS. The USACE makes all final determinations regarding jurisdiction.

UNT01

UNT01 is a small, ephemeral stream leading from the outlet of an excavated open-water wetland (Wetland 02) toward a large forested/emergent wetland complex (Wetland 03). The stream is approximately two feet in width at the ordinary high water mark (OHWM) and six inches in depth. The stream was dry at the time of the survey but showed signs of flowing water earlier in the year. The substrate of the stream is silt and clay with some sand and gravel riffles. The riparian corridor of UNT01 is mature forest dominated by hickory (*Carya* spp.) species and American basswood (*Tilia americana*). This stream flows along the proposed alignment and direct or indirect impacts from construction are not anticipated. UNT01 will be labeled in the project plans as "Do Not Disturb". This measure is included in the Commitments section of this CE Document.

Early Coordination

Indiana Department of Natural Resources (IDNR) Division Fish and Wildlife (DFW) responded on August 6, 2021, with recommendations to minimize impacts of the construction of trails in the vicinity of streams by avoiding unnecessary stream crossings, utilizing bridge crossings, and aligning the trail outside the riparian buffer and off the top of bank (Appendix C, page C-18). All applicable recommendations are included in the Environmental Commitments section of this CE document.

Open Water Feature(s)	Presence	Impacts Yes	Impacts No
Reservoirs			
Lakes			
Farm Ponds			
Retention/Detention Basin			
Storm Water Management Facilities			
Other: Impoundment	X		X

Describe all open water feature(s) identified adjacent or within the project area. Include whether or not impacts (both permanent and temporary) will occur to the features identified. Include if features are likely subject to federal or state jurisdiction. Discuss measures to avoid, minimize, and mitigate if impacts will occur.

Based on the desktop review, the aerial map of the project area, and the RFI (Appendix E, page E-1) there seven open water features within the 0.5-mile search radius. That number was updated to one open water feature present within the project area by the site visit conducted on October 15, 2020, by Cardno.

Waters Report

A Wetland Delineation Report was completed for the project on October 15, 2020 (Appendix F, page F-2). Cardno recorded one open water feature was recorded within the project area during the field investigation. This feature, identified as Wetland 02 in the wetland delineation report, is a small open water feature, which is connected to Wetland 03 via an unnamed tributary. This wetland is hydrologically connected to Cedar Creek, a likely WOTUS. This connection likely makes Wetland 02 a "waters of the U.S.". The USACE makes all final determinations regarding jurisdiction.

Wetland 02

Wetland 02 is a small open-water feature located south of Timber Springs Road, west of Timber Lake Drive, and east of Timberwood Lane. This open water feature is situated in a low depression between residential housing and may be an impoundment of an original stream. Wetland 02 feeds water into UNT01 to the south from a 12-inch outlet culvert outside of the Study Area. This open water feature had little to no vegetation growing within its boundaries except for Sandbar Willow (*Salix interior*) and Eastern Cottonwood (*Populus deltoides*). The proposed alignment is adjacent to this feature and direct or indirect impacts from construction are not anticipated. Wetland 02 will be labeled in the project plans as "Do Not Disturb". This measure is included in the Commitments section of this CE Document.

	Presence	Impacts Yes	Impacts No
Wetlands	X	X	

Total wetland area: 1.25 Acre(s) Total wetland area impacted: 0.36 Acre(s)

(If a determination has not been made for non-isolated/isolated wetlands, fill in the total wetland area impacted above.)

Wetland No.	Classification	Total Size (Acres)	Impacted Acres	Comments (i.e., location, likely Water of the US, appendix reference)
Wetland 01	Scrub-shrub	0.18 acres	0.03 acres	likely "waters of the U.S."
Wetland 03	Forested	1.07 acres	0.33 acres	likely "waters of the U.S."

Wetlands (*Mark all that apply*)	Documentation	ESD Approval Dates
Wetland Determination		
Wetland Delineation	X	N/A
USACE Isolated Waters Determination		

Improvements that will not result in any wetland impacts are not practicable because such avoidance would result in (Mark all that apply and explain):

Substantial adverse impacts to adjacent homes, business or other improved properties;	
Substantially increased project costs;	X
Unique engineering, traffic, maintenance, or safety problems;	X
Substantial adverse social, economic, or environmental impacts, or	
The project not meeting the identified needs.	X

Describe all wetlands identified adjacent or within the project area. Include whether or not impacts (both permanent and temporary) will occur to the features identified. Include if features are likely subject to federal or state jurisdiction. Discuss measures to avoid, minimize, and mitigate if impacts will occur.

Based on the desktop review, the aerial map of the project area, and the RFI (Appendix E, page E-1) there are 32 wetlands within the 0.5-mile search radius. That number was updated to three wetlands within the project area by the site visit completed on October 15, 2020, by Cardno.

Waters Report

A Wetland Delineation Report was completed for the project on October 15, 2020 (Appendix F, page F-2). Cardno documented two wetlands within the project area during the field investigation. These wetlands are hydrologically connected to Cedar Creek, a likely WOTUS. As such these wetlands are likely "waters of the U.S." and are subject to regulation under Sections 401 and 404 of the Clean Water Act (CWA). The USACE makes all final determinations regarding jurisdiction.

Wetland 01

Wetland 01 is a scrub shrub wetland located south of Freedom Park and north of Redbud Lane. The wetland is in a small valley between the park and residential housing where the wetland slopes gradually to the south boundary of the wetland. Vegetation in Wetland 01 consists mostly of gray dogwood (*Cornus racemosa*) and a mix of native herbaceous species. The proposed trail alignment bisects this wetland. Permanent impacts to Wetland 01 total 0.03 acre, as this area will be filled to construct the trail (Appendix B, page B-28). Temporary impacts from access are not anticipated. The Compliance with Section 401 and 404 CWA permitting will be required. Mitigation for impacts to this wetland likely be required and will be determined during permitting.

Wetland 03

Wetland 03 is a forested wetland located north of West Main Street at Liberty Park and west of Grant Street. This large wetland consists of dense canopy at its boundaries, gradually opening to an open area with standing water in its center and extends past the surveyed project limits. This wetland receives water from UNT01. The center of the wetland is mucky with large hummocks of vegetation, consistent with permanent surface water. The canopy trees of Wetland 03 are mostly silver maple (*Acer saccharinum*), cottonwood, and black willow (*Salix nigra*) with an understory of willows, dogwoods, and rambler rose (*Rosa* sp.). The herbaceous layer dominant species include blue joint grass (*Calamagrostis canadensis*), lake sedge (*Carex lacustris*) and bur reed (*Sparganium eurycarpum*). The proposed trail alignment will cross this wetland. Permanent impacts to Wetland 03 total of 0.33 acres, as this area will be cleared and filled to construct the proposed trail (Appendix B. page B-23 and B-24). Two boardwalk sections, one 100-ft long and a second 450-ft section will be constructed through the wettest area of this wetland to minimize impacts. Temporary impacts from access are not anticipated. Two additional trail alignments were considered to cross this wetland at its narrowest point; however, the steep topography to the west would not allow for ADA-compliance. The placement of the trail in steeper terrain would also require significant use of retaining walls, significantly increasing the cost of the project, as well as increasing the risk of erosion. Compliance with Section 401 and 404 CWA permitting will be required. Mitigation for impacts to this wetland likely be required and will be determined during permitting.

Early Coordination

IDNR - DFW responded on August 6, 2021, with standard recommendations to minimize impacts to wetlands by applying the appropriate mitigation ratio, utilizing raised boardwalk with composite decking, avoiding natural areas, and avoiding the placement of fill in riparian wetlands (Appendix C, page C-18). USFWS responded to information coordination that it will be necessary to mitigate for wetland impacts with the standard 4:1 ratio for forested wetlands (Appendix C, page C-33). All applicable recommendations are included in the Environmental Commitments section of this CE document.

	Presence	Impacts Yes	Impacts NO
Terrestrial Habitat	X	X	

Total terrestrial habitat in project area: 1.45 acres Acre(s) Total tree clearing: 0.64 Acre(s)

Describe types of terrestrial habitat (i.e., forested, grassland, farmland, lawn, etc.) adjacent or within the project area. Include whether or not impacts will occur to habitat identified. Include total terrestrial habitat impacted and total tree clearing that will occur. Discuss measure to avoid, minimize, and mitigate if impacts will occur.

Based on a desktop review, a site visit on October 15, 2020, by Cardno, and the aerial map of the project area (Appendix B, page B-2), terrestrial habitat within the project area includes maintained turf within residential yards and parks, agriculture, upland forest, wetland forest, and emergent wetland. The upland forest tree species consist of American basswood, shingle oak (*Quercus imbricaria*), shag-bark hickory (*Carya ovata*), and green ash (*Fraxinus pennsylvanica*) with a midstory of morrow's honeysuckle (*Lonicera morrowii*) and common red raspberry (*Rubus idaeus*). The project will require approximately 0.64 acres of tree removal (Appendix B, page B-35). This total includes 0.33 acres of forested wetland impacts. The proposed alignment was selected based on matching the safety and design constraints with the topography, while minimizing impacts to environmental resources.

Other terrestrial habitat impacts include the conversion of the following habitat to paved trail:

- Agriculture – 0.16 acres; and
- Turf and roadside vegetation – 0.65 acres.

These land uses offer minimal habitat due to their proximity to roads and lack of vegetative diversity and coverage.

Early Coordination

IDNR - DFW responded on August 6, 2021, with standard recommendations to minimize impacts to terrestrial habitat including developing a mitigation plan, utilizing existing ROW for the trail alignment, constructing the shoulders from unconsolidated materials, revegetating disturbed areas with native seed mixes, planting a buffer of native vegetation along natural areas, and minimizing the width of the trail as much as possible (Appendix C, page C-18). All applicable recommendations are included in the Environmental Commitments section of this CE document.

Protected Species

Federally Listed Bats	Yes	No
Information for Planning and Consultation (IPaC) determination key completed		X
Section 7 informal consultation completed (IPaC cannot be completed)	X	
Section 7 formal consultation Biological Assessment (BA) required		X

Determination Received for Listed Bats from USFWS: NE [ ] NLAA [X] LAA [ ]

Other Species not included in IPaC	Yes	No
Additional federal species found in project area (based on IPaC species list)	X	
State species (not bird) found in project area (based upon consultation with IDNR)	X	

Migratory Birds	Yes	No
Known usage or presence of birds (i.e. nests)		X
State bird species based upon coordination with IDNR		X

Discuss IDNR coordination and species identified. Describe USFWS Section 7 consultation and determination received for Indiana bat and northern long-eared bat impacts. Discuss if other federally listed species were identified. If so, include consultation that has occurred and the determination that was received. Discuss if migratory birds have been observed and any impacts.

Based on a desktop review and the RFI report (Appendix E, page E-1) completed by Cardno on November 5, 2020, the IDNR Lake County Endangered, Threatened and Rare (ETR) Species List has been checked. According to the IDNR-DFW early coordination response letter dated August 6, 2021 (Appendix C, page C-18), the Natural Heritage Program's Database has been checked and the American badger (*Taxidea taxus*), a state species of special concern, has been documented within 0.5 mile of the project area. Badgers are a wide-ranging species that prefer an open, prairie-type habitat, with Indiana being at the eastern edge of their natural range. Impacts to the American badger or its preferred habitat are unlikely as a result of this project. IDNR - DFW also included standard recommendations to minimize impacts to wildlife and protected species by minimizing the use of lighting and implementing tree clearing time of year restrictions. An INDOT 0.5-mile bat review occurred on October 14, 2020, and no records of

bat captures, roosts, or hibernacula were found.

Indiana Bat and Northern Long-Eared Bat

Project information was submitted through the USFWS's Information for Planning and Consultation (IPaC) portal, and an official species list was generated (Appendix C, page C-22). The project is within range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (NLEB) (*Myotis septentrionalis*).

Based on tree clearing occurring greater than 300-ft from a roadway, this project does not qualify for the Rangewide Programmatic Informal Consultation for the Indiana bat and northern long-eared bat (NLEB). A standard coordination letter was prepared and submitted for INDOT review on November 23, 2021. INDOT reviewed the standard coordination letter and submitted to USFWS for review on December 1, 2021. On December 14, 2021, USFWS issued a concurrence letter with the "not likely to adversely affect" finding (Appendix C, page C-33). The determination is contingent upon avoidance and minimization measures (AMMs) that include notifying contractors of restrictions and commitments, avoiding tree removal more than what is required, applying time of year restrictions for tree removal, and clear marking of tree clearing limits on plans and in the field. These AMMs and/or commitments are included as firm commitments in the Environmental Commitments section of this document.

Additionally, a "Reinitiation Notice" is required if: more than 1.49 acres of suitable habitat is to be cleared; new information about listed species is encountered; the project is modified in a manner that causes an effect to the listed species; or a new species or critical habitat is listed that the project may affect. These requirements, and the AMMs from the informal coordination with USFWS, are included as firm commitments for this project.

INDOT shall satisfy the compensatory mitigation requirements of the informal consultation with USFWS through one of the conservation options outlined on page 41 of the May 20, 2016, Programmatic Biological Opinion for Transportation Projects in the Range of the Indiana bat and NLEB. The amount to be paid to the Range-wide In-lieu Fee Program, to be administered by The Conservation Fund, shall be $7,857.36. This amount was determined by the Habitat Block Method. The area of suitable habitat to be cleared (between 100-300 ft from the road), multiplied by the mitigation ratio for inactive season tree clearing for Lake County, and the compensatory price per acre; 0.48 acre X 1.75 X $9,354.

Other Federally Listed Species

The official species list generated from IPaC indicated one other species, the Monarch butterfly (*Danaus plexippus*), present within the project area. The project qualifies for the most current INDOT/USFWS agreement. USFWS responded on December 14, 2021, that although the Monarch butterfly is a candidate species and is not afforded legal protection, it would be helpful to plant milkweed and nectar plants at appropriate locations along the trail. Further coordination with USFWS is not needed.

This precludes the need for further consultation on this project as required under Section 7 of the Endangered Species Act, as amended. If new information on endangered species at the site becomes available, or if project plans are changed, USFWS will be contacted for consultation.

Geological and Mineral Resources	**Yes**	**No**
Project located within the Indiana Karst Region		X
Karst features identified within or adjacent to the project area		X
Oil/gas or exploration/abandoned wells identified in the project area		X

Date Karst Evaluation reviewed by INDOT EWPO (if applicable): N/A

Discuss if project is located in the Indiana Karst Region and if any karst features have been identified in the project area (from RFI). Discuss response received from IGWS coordination. Discuss if any mines, oil/gas, or exploration/abandoned wells were identified and if impacts will occur. Include discussion of karst study/report was completed and results. (Karst investigation must comply with the current Protection of Karst Features during Planning and Construction guidance and coordinated and reviewed by INDOT EWPO)

Based on a desktop review, the project is located outside the designated karst region of Indiana as outlined in the October 13, 1993, Karst Memorandum of Understanding (MOU). According to the topo map of the project area (Appendix B, page B-1) and the RFI report (Appendix E, page E-1) there are no karst features identified within or adjacent to the project area. The early coordination response from the Indiana Geological and Water Survey (IGWS) did not indicate that karst features exist in the project area (Appendix C, page C-4) The IGWS report identified the following features within the 0.5-mile search radius:

- Geological Hazards - moderate liquefaction potential; and
- Mineral Resources - high potential bedrock resources.

The response from IGWS was communicated to the designer on May 10, 2022. The designer is aware of the potential for geological

and mineral resources within the project area, and no impacts are expected.

SECTION C – OTHER RESOURCES

Drinking Water Resources	Presence	Impacts Yes	Impacts No
Wellhead Protection Area(s)			
Source Water Protection Area(s)			
Water Well(s)	X		X
Urbanized Area Boundary	X		X
Public Water System(s)	X		X

	Yes	No
Is the project located in the St. Joseph Sole Source Aquifer (SSA):		X
If Yes, is the FHWA/EPA SSA MOU Applicable?		
If Yes, is a Groundwater Assessment Required?		

Check the appropriate boxes and discuss each topic below. Provide details about impacts and summarize resource-specific coordination responses and any mitigation commitments. Reference responses in the Appendix.

Sole Source Aquifer
The project is in Lake County, which is not located within the area of the St. Joseph Sole Source Aquifer, the only legally designated sole source aquifer in the state of Indiana. Therefore, the FHWA/EPA Sole Source Aquifer Memorandum of Understanding (MOU) is not applicable to this project, a detailed groundwater assessment is not needed, and no impacts are expected.

Wellhead Protection Area and Source Water Area
The Indiana Department of Environmental Management's Wellhead Proximity Determinator website (http://www.in.gov/idem/cleanwater/pages/wellhead/) was accessed on December 14, 2021, by Cardno. This project is not located within a Wellhead Protection Area or Source Water Area. No impacts are expected.

Water Wells
The Indiana Department of Natural Resources Water Well Record Database website (https://www.in.gov/dnr/water/3595.htm) was accessed on December 14, 2021, by Cardno. The nearest well is in Liberty Park and is owned by the Town of Lowell. This well will not be affected because it is outside the construction footprint and no discharges into the groundwater are anticipated. Therefore, no impacts are expected. Should it be determined during the right-of-way phase that this well will be affected, a cost to cure will likely be included in the appraisal to restore the wells.

Urban Area Boundary
Based on a desktop review of INDOT Municipal Separate Storm Sewer System (MS4) website (https://entapps.indot.in.gov/MS4/) by Cardno on July 6, 2021, this project is in an Urban Area Boundary (UAB). An early coordination letter was sent on July 8, 2021, to the Town of Lowell Stormwater Management Department MS4 Coordinator. The MS4 coordinator did not respond within the 30-day time frame. No Impacts are expected.

Public Water System
Based on a desktop review, a site visit completed by Cardno on October 15, 2021 and the aerial map of the project area (Appendix B, page B-2), this project is located where there is a public water system. The project engineer, Short Elliot Hendrickson, Inc., has completed initial utility coordination and there are no conflicts. Utility coordination is ongoing.

Floodplains	Presence	Impacts Yes	Impacts No
Project located within a regulated floodplain			
Longitudinal encroachment			
Transverse encroachment			
Homes located in floodplain within 1000' up/downstream from project			

If applicable, indicate the Floodplain Level?

Level 1 ☐ Level 2 ☐ Level 3 ☐ Level 4 ☐ Level 5 ☐

Use the IDNR Floodway Information Portal to help determine potential impacts. Include floodplain map in appendix. Discuss impacts according to the classification system. If encroachment on a flood plain will occur, coordinate with the Local Flood Plain Administrator during design to insure consistency with the local flood plain planning.

The Indiana Department of Natural Resources Indiana Floodway Information Portal website (http://dnrmaps.dnr.in.gov/appsphp/fdms/) was accessed on December 14, 2021, by Cardno. This project is not located in a regulatory floodplain as determined from approved IDNR floodplain maps (Appendix F, page F-1). Therefore, it does not fall within the guidelines for the implementation of 23 CFR 650, 23 CFR 771, and 44 CFR. No impacts are expected.

	Presence	Impacts	
Farmland		**Yes**	**No**
Agricultural Lands	X	X	
Prime Farmland (per NRCS)	X	X	

Total Points (from Section VII of CPA-106/AD-1006*) **93**

**If 160 or greater, see CE Manual for guidance.*

Discuss existing farmland resources in the project area, impacts that will occur to farmland, and mitigation and minimization measures considered.

Based on a desktop review, a site visit on October 15, 2020 by Cardno, the aerial map of the project area (Appendix B, page B-2), and the Web Soil Survey (https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx), the project will convert approximately 0.7 acres of farmland as defined by the Farmland Protection Policy Act. An early coordination letter was sent on July 8, 2021, to Natural Resources Conservation Services (NRCS). Coordination with NRCS resulted in a score of 93 on the NRCS-CPA-106 Form (Appendix C, page C-17). NRCS's threshold score for significant impacts to farmland that result in the consideration of alternatives is 160. Since this project score is less than the threshold, no significant loss of prime, unique, statewide, or local important farmland will result from this project. No alternatives other than those previously discussed in this document will be investigated without reevaluating impacts to prime farmland.

SECTION D – CULTURAL RESOURCES

	Category(ies) and Type(s)	INDOT Approval Date(s)	N/A
Minor Projects PA	B-8	December 9, 2020	

Full 106 Effect Finding

No Historic Properties Affected ☐ No Adverse Effect ☐ Adverse Effect ☐

Eligible and/or Listed Resources Present

NRHP Building/Site/District(s) ☐ Archaeology ☐ NRHP Bridge(s) ☐

County Lake County Route Freedom Trail Des. No. 1802920

Documentation Prepared (mark all that apply)		**ESD Approval Date(s)**	**SHPO Approval Date(s)**
APE, Eligibility and Effect Determination			
800.11 Documentation			
Historic Properties Report or Short Report			
Archaeological Records Check and Assessment	X	December 9, 2020	N/A
Archaeological Phase Ia Survey Report	X	December 9, 2020	N/A
Archaeological Phase Ic Survey Report			
Other:			

		MOA Signature Dates (List all signatories)
Memorandum of Agreement (MOA)		

If the project falls under the MPPA, describe the category(ies) that the project falls under and any approval dates. If the project requires full Section 106, use the headings provided. The completion of the Section 106 process requires that a Legal Notice be published in local newspapers. Please indicate the publication date, name of the paper(s) and the comment period deadline. Include any further Section 106 work which must be completed at a later date, such as mitigation from a MOA or avoidance commitments.

Minor Project PA Category B

On December 9, 2020, the INDOT Cultural Resource Office (CRO) determined that this project falls within the guidelines of Category B, Type 8 under the Minor Projects Programmatic Agreement, (Appendix D, page D-1). Category B-8 includes construction of pedestrian facilities including trails, multi-use paths, greenways, and associated minor activities, under the following conditions:

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

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

Above-ground Resources

An INDOT CRO historian, who meets the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61, performed a desktop review, checking the Indiana Register of Historic Sites and Structures (State Register) and National Register of Historic Places (National Register) lists for Lake County. The project area is not located adjacent to or within any listed resources. There are no National Register-listed resources present adjacent to the project area. Only on IHSSI surveyed Lowell Scattered Site, IHSSI # 089-370-93026 (c. 1930's Bungalow, rated "Contributing") is located adjacent to the southern edge of the project area, just north of Liberty Park on the north side of Main Street. This resource is not a part of a historic district, and it lacks integrity and level of historical or architectural significance necessary to be considered individually eligible for the National Register.

Archeological Resources

An archaeological records check and Phase Ia reconnaissance survey of the project area were conducted by Cardno (Appendix D, page D-6). A review of SHAARD and SHAARD GIS indicated that no sites have been recorded within or adjacent to the survey area and that the project area has not been previously investigated. No evidence for archaeological deposits was identified by the field reconnaissance.

No further consultation is required. This completes the Section 106 process and the responsibilities of the FHWA under Section 106 have been fulfilled.

SECTION E – SECTION 4(f) RESOURCES/ SECTION 6(f) RESOURCES

	Presence	Use	
Parks and Other Recreational Land		Yes	No
Publicly owned park	X		X
Publicly owned recreation area			
Other (school, state/national forest, bikeway, etc.)			
Wildlife and Waterfowl Refuges			
National Wildlife Refuge			
National Natural Landmark			
State Wildlife Area			
State Nature Preserve			
Historic Properties			
Site eligible and/or listed on the NRHP			

	Evaluations Prepared
Programmatic Section 4(f)	
"De minimis" Impact	
Individual Section 4(f)	
Any exception included in 23 CFR 774.13	X

Discuss Programmatic Section 4(f) and "de minimis" Section 4(f) impacts in the discussion below. Individual Section 4(f) documentation must be included in the appendix and summarized below. Discuss proposed alternatives that satisfy the requirements of Section 4(f). FHWA has identified various exceptions to the requirement for Section 4(f) approval. Refer to 23 CFR § 774.13 - Exceptions.

Section 4(f) of the U.S. Department of Transportation Act of 1966 prohibits the use of certain public and historic lands for federally funded transportation facilities unless there is no feasible and prudent alternative. The law applies to significant publicly owned parks, recreation areas, wildlife / waterfowl refuges, and NRHP eligible or listed historic properties regardless of ownership. Lands subject to this law are considered Section 4(f) resources.

Based on a desktop review, the aerial map of the project area (Appendix B, page B-2), and the RFI (Appendix E, page E-1), there are 12 potential 4(f) resources located within the 0.5-mile search radius. According to additional research and by the site visit on October 15, 2022 by Cardno, there are two 4(f) resources located within or adjacent to the project area. The project will start at the entrance to Liberty Park and ends at the terminus of an existing path within Freedom Park.

Liberty Park

Liberty Park is located on a four-acre parcel in downtown Lowell. Recreation facilities located within this park include basketball and tennis courts, playground equipment, a hill for sledding, and picnic shelters. The proposed trail begins at an existing sidewalk at the intersection of North Liberty Street and West Main Street, outside of the park boundary. As the project is outside the park boundary and is within existing Town ROW at this location, no ROW will be acquired from the park. Access to the park will not be impacted by construction. No impacts are anticipated.

Freedom Park

Freedom Park is located in the northwest corner of Lowell's town limits and is owned by the Town of Lowell. This 114-acre property includes parking, playground, sports fields and picnic shelters. The proposed project will tie-in to the southern terminus of an existing gravel path within Freedom Park. Freedom Park is managed by the Town of Lowell Parks and Recreation Department, the official with jurisdiction (OWJ) for this park. As the Town of Lowell Parks and Recreation Department is part of the Town government, the Town Council President has the authority over decisions regarding the park. No ROW will be acquired from Freedom Park and no road or pedestrian facility closures or detours are anticipated for this project as the project ends at the terminus of an existing trail. The proposed trail extends 170-feet into Freedom Park and would convert approximately 0.04 acre of maintained grass to multi-use trail but would not require the acquisition of ROW or change in use as the trail is intended for recreational use. Based on FWHA guidance documents, the Town has determined that impacts meet the conditions of an Enhancement Exception and will not constitute a Section 4(f) use. Transportation enhancement projects must meet the following conditions of 23 CFR 774.13(g):

1. The use of the Section 4(f) property is solely for the purpose of preserving or enhancing an activity, feature, or attribute that

qualifies the property for Section 4(f) protection.
Freedom Park and Liberty Park are public use parks that provide recreational activities to the community. The addition of a multi-use trail enhances the properties of each of these parks by providing a new connection between the parks increasing the recreational opportunities within the Town. The project will also increase the utilization of Freedom Park by improving non-motorized access to the newly developed subdivisions to the south of the park.

2. There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.

On February 15, 2022, the Town Council President concurred that the project meets the conditions of an Enhancement Exception and the proposed trail project will not constitute a Section 4(f) use (Appendix I, page I-4).

The project will not use these resources by taking permanent ROW and will not alter the environment in such a way as to constitute constructive use of these resource. Therefore, no use of these Section 4(f) resources is expected.

Section 6(f) Involvement	Presence	Use	
		Yes	No
Section 6(f) Property	X		X

Discuss Section 6(f) resources present or not present. Discuss if any conversion would occur as a result of this project. If conversion will occur, discuss the conversion approval.

The U.S. Land and Water Conservation Fund Act of 1965 established the Land and Water Conservation Fund (LWCF), which was created to preserve, develop, and assure accessibility to outdoor recreation resources. Section 6(f) of this Act prohibits conversion of lands purchased with LWCF monies to a non-recreation use.

A review of 6(f) properties on the INDOT ESD website revealed a total of 57 properties in Lake County (Appendix I, page I-5). Liberty Park and Freedom Park (Freedom Sports Park) have received LWCF monies. No ROW acquisition will occur within these parks and neither of these parks will be converted to non-recreation use as a result of the proposed project. Therefore, there will be no impacts to 6(f) resources.

SECTION F – Air Quality

STIP/TIP and Conformity Status of the Project	Yes	No
Is the project in the most current STIP/TIP?	X	
Is the project located in an MPO Area?	X	
Is the project in an air quality non-attainment or maintenance area?	X	
If Yes, then:		
Is the project in the most current MPO TIP?	X	
Is the project exempt from conformity?	X	
If No, then:		
Is the project in the Transportation Plan (TP)?		
Is a hot spot analysis required (CO/PM)?		

Location in STIP: FY 2022-2026, page 53

Name of MPO (if applicable): Northwestern Indiana Regional Planning Commission (NIRPC)

Location in TIP (if applicable): Northwestern Indiana Regional Planning Commission (NIRPC)

Level of MSAT Analysis required?

Level 1a [X] Level 1b [ ] Level 2 [ ] Level 3 [ ] Level 4 [ ] Level 5 [ ]

Describe if the project is listed in the STIP and if it is in a TIP. Describe the attainment status of the county(ies) where the project is located. Indicate whether the project is exempt from a conformity determination. If the project is not exempt, include information about the TP and TIP. Describe if a hot spot analysis is required and the MSAT Level.

STIP/TIP
This project is included in the Fiscal Year (FY) 2022-2026 Northwestern Indiana Regional Planning Commission (NIRPC) Metropolitan Planning Organization (MPO) Transportation Improvement Program (TIP) (Appendix H, page H-1) and is directly incorporated into the FY 2022-2026 Statewide Transportation Improvement Program (STIP). See Appendix H, pages H-2 through H-6 for INDOT and FHWA STIP Approval Letters.

Attainment Status
This project is in Lake County, which is currently a nonattainment area for 8-hour Ozone (2008) according to the U.S. Environmental Protection Agency Nonattainment Areas for Criteria Pollutants (Greenbook) website (https://www3.epa.gov/airquality/greenbook/anayo_in.html). This project has been identified as being exempt from air quality analysis in accordance with 40 CFR Part 93.126 and this project is not a project of air quality concern (40 CFR Part 93.123). Therefore, the project will have no significant impact on air quality.

MSAT
This project is of a type qualifying as a categorical exclusion (Group 1) under 23 CFR 771.117(c), or exempt under the Clean Air Act conformity rule under 40 CFR 93.126, and as such, a Mobile Source Air Toxics analysis is not required.

SECTION G - NOISE

Noise	Yes	No
Is a noise analysis required in accordance with FHWA regulations and INDOT's traffic noise policy?		X

Date Noise Analysis was approved/technically sufficient by INDOT ESD: _____

Describe if the project is a Type I or Type III project. If it is a Type I project, describe the studies completed to date and if noise impacts were identified. If noise impacts were identified, describe if abatement is feasible and reasonable and include a statement of likelihood.

This project is a Type III project. In accordance with 23 CFR 772 and the current Indiana Department of Transportation Traffic Noise Analysis Procedure, this action does not require a formal noise analysis.

SECTION H – COMMUNITY IMPACTS

Regional, Community & Neighborhood Factors	Yes	No
Will the proposed action comply with the local/regional development patterns for the area?	X	
Will the proposed action result in substantial impacts to community cohesion?		X
Will the proposed action result in substantial impacts to local tax base or property values?		X
Will construction activities impact community events (festivals, fairs, etc.)?		X
Does the community have an approved transition plan?	X	
If No, are steps being made to advance the community's transition plan?		
Does the project comply with the transition plan? (explain in the discussion below)	X	

Discuss how the project complies with the area's local/regional development patterns; whether the project will impact community cohesion; and impact community events. Discuss how the project conforms with the ADA Transition Plan.

The project will provide a non-motorized connection between Liberty Park and Freedom Park. The trail system benefits the community by enhancing livability, providing opportunities for outdoor recreation and non-motorized transportation, and encouraging physical activity and healthy lifestyles.

Local Land Use Policies
The Town of Lowell developed a comprehensive plan on March 10, 2007 (https://www.lowell.net/egov/documents/1621999429_08455.pdf). This plan was prepared with the aim of guiding growth and development and informing the decisions behind the public action that will shape the future of the Lowell area. The plan includes a goal to improve existing parks and trails in Lowell and provide more parks and recreational opportunities. One of the strategies listed is to develop pedestrian infrastructure to encourage use and provide access to all parks. The proposed project would connect two existing parks, which will provide additional recreational opportunities as well as improve access.

Transition Plan
The Town of Lowell adopted the ADA Transition Plan for Public Rights-of-Way August 23, 2013, (https://www.lowell.net/egov/documents/1621863606_58637.pdf). The trail and sidewalk connections are designed to be ADA-compliant.

No substantial economic or community impacts are expected to develop as a result of this project.

Public Facilities and Services
Discuss what public facilities and services are present in the project area and impacts (such as MOT) that will occur to them. Include how the impacts have been minimized and what coordination has occurred. Some examples of public facilities and services include health facilities, educational facilities, public and private utilities, emergency services, religious institutions, airports, transportation or public pedestrian and bicycle facilities.

Based on a desktop review, the aerial map of the project area (Appendix B, page B-2) and the RFI report (Appendix E, page E-1), there are five religious facilities, three schools, nine recreational facilities, one trail, and two managed lands located within the 0.5 mile of the project. There are two public facilities, Liberty and Freedom Park, within or adjacent to the project area. That number was confirmed by the site visit October 15, 2020, by Cardno. Access to these parks will be maintained throughout construction of the trail. Impacts to these parks are discussed in detail in the Section 4(f) section of this document. In addition to these recreational facilities, a portion of the trail is located within a residential area that has sidewalks on both sides of the road. The trail will convert the sidewalk on one side of the road to the multi-use trail. This sidewalk through the Timber Springs neighborhood will be closed to complete the conversion to the multi-use trail. Pedestrians will be directed to the sidewalk on the opposite side of the street. The Town will notify the neighborhood prior to construction and will confirm that traffic will not be disrupted. Impacts to this neighborhood will be temporary and connectivity will be improved by providing a non-motorized route from this community to Liberty Park and Freedom Park.

It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction that would block or limit access.

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

Indicate if EJ issues were identified during project development. If an EJ analysis was not required, discuss why. If an EJ analysis was required, describe how the EJ population was identified. Include if the project has a disproportionately high or adverse effect on EJ populations and explain your reasoning. If yes, describe actions to avoid, minimize and mitigate these effects.

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 the acquisition of 1.0 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 Cedar Creek Township. The community that overlaps the project area is called the affected community (AC). In this project, the AC is Census Tract 434.03. 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 5 Year Estimates (2015-2020) was obtained from the United States Census Bureau on July 12, 2022, by Cardno (https://data.census.gov/cedsci/).

The data collected for minority and low-income populations within the AC are summarized in the below table.

Table: Minority and Low-Income Data (American Community Survey 5 Year Estimates 2020)

	COC – Cedar Creek Township	AC - Census Tract 434.03
Percent Minority	7.9%	9.1%
125% of COC	9.9%	AC > 125% COC
EJ Population of Concern		No
Percent Low-Income	6.31%	10.59%
125% of COC	7.89%	AC > 125% COC
EJ Population of Concern		Yes

AC, Census Tract 434.03 has a percent minority of 9.1%, which is below 50% and is below the 125% COC threshold. Therefore, the AC does not contain minority populations of EJ concern.

AC, Census Tract 434.03 has a percent low-income of 10.59%, which is below 50% and is above the 125% COC threshold. Therefore, the AC has a low-income population of EJ concern.

Conclusion

The census data sheets, map, and calculations can be found in Appendix I. Based on the above analysis, the AC does not contain minority populations of EJ concern but does contain a low-income population of EJ concern. The project is a trail project that will require the acquisition of approximately 1 acre of right-of-way, but no relocations. The trail will either be installed along the existing roadway or will bisect undeveloped forest and will provide a non-motorized connection between two existing Town parks. The project will require the closure of the sidewalks along the southside of Timber Lake Drive and on the east side of Rudbud Lane to convert them to the multi-use trail. The project will also require the closure of the existing sidewalk in the southeast corner of the intersection of West Main Street and North Liberty Street. The Town will utilize signage to direct pedestrians to the opposite side of the roadway. Work within roadways is not anticipated and disruption of traffic is not anticipated. The sidewalk closures will pose a temporary inconvenience to traveling pedestrians; however, no significant delays are anticipated, and all inconveniences and delays will cease upon project completion. Since this project will connect communities, does not require relocations, and will not permanently inconvenience pedestrian mobility, disproportionately high and adverse impact to low income populations are not anticipated. No further environmental justice analysis is warranted.

Relocation of People, Businesses or Farms	**Yes**	**No**
Will the proposed action result in the relocation of people, businesses or farms?		X
Is a BIS or CSRS required?		X

Number of relocations: Residences: 0 Businesses: 0 Farms: 0 Other: 0

Discuss any relocations that will occur due to the project. If a BIS or CSRS is required, discuss the results in the discussion below.

No relocations of people, businesses, or farms will take place as a result of this project.

SECTION I – HAZARDOUS MATERIALS & REGULATED SUBSTANCES

Hazardous Materials & Regulated Substances (Mark all that apply)	**Documentation**
Red Flag Investigation (RFI)	X
Phase I Environmental Site Assessment (Phase I ESA)	
Phase II Environmental Site Assessment (Phase II ESA)	
Design/Specifications for Remediation required?	

Date RFI concurrence by INDOT SAM (if applicable): February 23, 2021

Include a summary of the potential hazardous material concerns found during review. Discuss in depth sites found within, directly adjacent to, or ones that could impact the project area. Refer to current INDOT SAM guidance. If additional documentation (special provisions, pay quantities, etc.) will be needed, include in discussion. Include applicable commitments.

Based on a review of INDOT Geographic Information System (GIS) mapping and available public records, the RFI was completed on November 5, 2020, by Cardno and INDOT Site Assessment & Management (SAM) provided their concurrence on February 23, 2021 (Appendix E, Page E-5). Seven Resource Conservation and Recovery Act (RCRA) generator facilities, one State Cleanup Site, one Underground Storage Tank (UST), three Leaking Underground Storage Tank (LUST), one Brownfield, six National Pollutant Discharge Elimination System (NPDES) facilities, and one NPDES pipe location are located within 0.5 mile of the project area. None of the hazardous material sites identified are within or adjacent to the project and therefore will not impact the project. Further investigation for hazardous material concerns is not required at this time.

Part IV – Permits and Commitments

PERMITS CHECKLIST

Permits (mark all that apply)	**Likely Required**
Army Corps of Engineers (404/Section10 Permit)	
Nationwide Permit (NWP)	
Regional General Permit (RGP)	X
Individual Permit (IP)	
Other	
IN Department of Environmental Management (401/Rule 5)	
Nationwide Permit (NWP)	
Regional General Permit (RGP)	
Individual Permit (IP)	X
Isolated Wetlands	
Rule 5	
Other	
IN Department of Natural Resources	
Construction in a Floodway	
Navigable Waterway Permit	
Other	
Mitigation Required	X
US Coast Guard Section 9 Bridge Permit	
Others (Please discuss in the discussion below)	

List the permits likely required for the project and summarize why the permits are needed, including permits designated as "Other."

Clean Water Act, Section 404/401 (USACE/IDEM)
The project will impact more than 0.1 acre and less than 1 acre of wetland. There will be no impacts to streams. Fill within the wetlands will require 404 Regional Permit Authorization and 401 Individual Water Quality Certification. Mitigation for wetland impacts is anticipated.

Stormwater Permitting (IDEM)
The project will disturb one acre of soil; therefore, compliance with the Indiana Construction Stormwater General Permit is anticipated.

Applicable recommendations provided by resource agencies are included in the Environmental Commitments section of this document. If permits are found to be necessary, the conditions of the permit will be requirements of the project and will supersede these recommendations.

It is the responsibility of the project sponsor to identify and obtain all required permits.

ENVIRONMENTAL COMMITMENTS

List all commitments and include the name of agency/organization requesting/requiring the commitment(s). Listed commitments should be numbered.

Firm

1. If the scope of work or permanent or temporary right-of-way amounts change, the INDOT ESD and the INDOT District Environmental Section will be contacted immediately. (INDOT ESD and INDOT District)
2. It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction that would block or limit access. (INDOT ESD)
3. Any work in a wetland area within right-of-way or in borrow/waste areas is prohibited unless specifically allowed in the U.S. Army Corps of Engineers permit. (INDOT ESD)
4. UNT 01 and Wetland 02 will be labeled on the plans as “Do Not Disturb” (INDOT ESD)
5. The Town of Lowell will notify the Timber Springs Neighborhood prior to construction of the trail. (Town of Lowell)
6. Per General AMM 1, the project sponsor must ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (transportation agencies) environmental commitments, including all applicable AMMs. (USFWS)
7. Per Tree Removal AMM 1, all phases/aspects of the project (e.g., temporary work areas, alignments) must be modified to avoid tree removal. (USFWS)
8. Per Tree Removal AMM 2. Apply time of year (TOY) restrictions for tree removal when bats are not likely to be present, or Limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/rail surface and outside of documented roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed. (USFWS, IDNR-DFW)
9. Per Tree Removal AMM 3, the project sponsor must ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits). (USFWS)
10. A “Reinitiation Notice” is required if: more than 1.49 acres of trees (suitable habitat) are to be cleared between 100 and 300 feet from the edge of pavement; the Project takes more than 5 Indiana bats resulting from work on the bridge/structure; the amount or extent of incidental take of Indiana bat and/or northern long-eared bat is exceeded; new information about listed species is encountered; a new species is listed or critical habitat designated that the project may affect; the project is modified in a manner that causes an effect to the listed species; or, new information reveals that the project may affect listed species or critical habitat in a manner not considered in the BO or the project information. (USFWS)
11. Contractors must take care when handling dead or injured bats (regardless of species), and any other federally listed species that are found at the Project site in order to preserve biological material in the best possible condition and protect the handler from exposure to diseases, such as rabies. Project personnel are responsible for ensuring that any evidence about determining the cause of death or injury is not unnecessarily disturbed. Reporting the discovery of dead or injured listed species is required in all cases to enable the Service to determine whether the level of incidental take exempted by the BO is exceeded, and to ensure that the terms and conditions are appropriate and effective. Parties finding a dead, injured, or sick specimen of any bat (regardless of species), or other endangered or threatened species, must promptly notify the USFWS Bloomington Field Office at (812) 334-4261. (USFWS)
12. The INDOT Project Manager will ensure that $7,857.36 of Preliminary Engineering funds will be allocated to the Rangewide In-Lieu Fee Program, administered by The Conservation Fund (TCF), to resolve formal consultation under the Rangewide Programmatic (0.48 acre x 1.75 x $9,354). Payment shall be in process for RFC date. At the time of payment, the INDOT or designated non-federal representative shall notify the Service of compliance with the compensatory mitigation requirements as described above. (USFWS)
13. It will be necessary to mitigate for the wetland impacts. The forested wetlands will require a mitigation ratio of 4:1, replaced as close as possible to the impact area. This wetland mitigation requirement is unrelated to any requirements for mitigation

of lost bat habitat. (USFWS)

For Further Consideration

14. We recommend a mitigation plan be developed for any unavoidable habitat impacts that will occur. The DNR's Habitat Mitigation guidelines (and plant lists) can be found online at: http://www.in.gov/legislative/iac/20190130-IR-312190041NRA.xml.pdf. Impacts to non-wetland forest of one (1) acre or more should be mitigated at a minimum 2:1 ratio. If less than one acre of non-wetland forest is removed in a rural setting, replacement should be at a 1:1 ratio based on area. Impacts to non-wetland forest under one (1) acre in an urban setting should be mitigated by planting five trees, at least 2 inches in diameter-at-breast height (dbh), for each tree which is removed that is 10" dbh or greater (5:1 mitigation based on the number of large trees) or by using the 1:1 replacement ratio based on area depending on the type of habitat impacted (individual canopy tree removal in an urban streetscape or park-like environment versus removal of habitat supporting a tree canopy, woody understory, and herbaceous layer). Impacts under 0.10 acre in an urban area may still involve the replacement of large diameter trees but typically do not require any additional mitigation or additional plantings beyond seeding and stabilizing disturbed areas. (IDNR – DFW)

15. Due to the presence or potential presence of wetland habitat on site, we recommend contacting and coordinating with the IDEM 401 program and also the USACE 404 program. Impacts to wetland habitat should be mitigated at the appropriate ratio according to the 1991 INDOT/IDNR/USFWS Memorandum of Understanding. (IDNR – DFW)

16. Place the trail in or adjacent to existing ROWs where possible to minimize significant impacts to natural resource habitat. Also, previously disturbed or degraded areas must be used. The trail must be aligned along or near existing man-made edges or areas that have the potential to be restored or enhanced by trail construction (i.e. railroad corridors), rather than routing the trail through previously undisturbed areas. (IDNR – DFW)

17. When designing or constructing a trail, as narrow an area as possible should be disturbed to help minimize negative impacts. Where significant impacts to fish, wildlife or botanical resources are likely due to the trail's width, the trail width should be reduced to help avoid those impacts. ADA accessibility standards allow departures from the standards under certain conditions, including substantial harm to natural features, habitat, or vegetation (http://www.access-board.gov/attachments/article/1500/outdoor-rule.pdf, Accessibility Guidelines for Outdoor Developed Areas). (IDNR – DFW)

18. Do not focus only on the direct impact of the trail's width; also consider the trail's impact to the surrounding habitat. Trails can fragment larger habitat areas and reduce the overall usefulness of the site to fish, wildlife, or botanical resources (1 large habitat block is better than 2 small habitat blocks). Trails can cause significant impacts to forested areas, riparian forested corridors along creeks and rivers, and wetland areas. They also may cause sediment and erosion issues or introduce human disturbance into fairly isolated areas containing wildlife habitat. (IDNR – DFW)

19. Avoid unnecessary stream crossings. Instead, make use of or modify existing stream crossings or avoid crossing the stream altogether. Where stream crossings are unavoidable, pedestrian bridges with supports/abutments placed no less than 10 ft landward from the tops of the banks on each side of the waterway are recommended. Alternatively, a three-sided culvert may be used. Three-sided culverts should be oversized to allow terrestrial wildlife movement along the creek on unsubmerged dry land at normal water levels. Box-culvert or pipe-culvert crossings are not recommended. (IDNR – DFW)

20. Trails designed to follow a stream's course must be placed outside the stream's forested riparian buffer. Also, do not place the trail along the tops of the banks of a forested creek. Avoid perpendicular fragmentation of riparian areas (streamside habitat). Where the stream has little or no forested riparian buffer, the trail should be no closer than 15 ft from the tops of the banks. (IDNR – DFW)

21. Avoid elements identified in the Natural Heritage Database; trails may negatively affect species that require specific natural conditions (e.g., vegetation, light levels, moisture) that are altered as a result of trail construction. Rare and high quality habitats, and wildlife habitats that possess high wildlife abundance and diversity, should be avoided by placing the trail around the habitat and screening it from the trail and trail users with a buffer of native vegetation or another method as discussed below. Wetlands and karst features are but two examples of areas to avoid. (IDNR – DFW)

22. Raised boardwalks should be constructed in wet areas or near wetlands (trails through wetlands are not recommended). A material such as composite decking should be used rather than treated wood which can leach elements toxic to aquatic life. (IDNR – DFW)

23. Vegetation, topography, and fences can help reduce the impact of noise and line of site disturbances of trail users on wildlife. Walls can create wildlife movement barriers and potential impacts must be considered. Native grass buffers (2 to 3

ft tall) are recommended along the edge of trails near habitat such as wetlands. (IDNR – DFW)

24. Lighting should only be used when absolutely necessary. Lighting in forested areas and along creeks, streams, and rivers should be the lowest intensity feasible and shielded to cast light on the trail and not diffused into the surroundings to avoid disturbing wildlife circadian rhythms and disorienting night-migrating birds. (IDNR – DFW)

25. Any plantings in the riparian areas should be locally native species, not exotic species or horticultural varieties (e.g., "Autumn Blaze" Red Maple). (IDNR – DFW)

26. Asphalt is not recommended as a trail surface in the floodway. The conventional maintenance for aging asphalt is to seal it with a blacktop or asphalt sealer. If asphalt is used then asphalt sealer should not be used for long-term maintenance and repair of the asphalt trail surface. In previously disturbed areas, concrete is an acceptable surface material, and porous concrete is preferred wherever it can be used. (IDNR – DFW)

27. Shoulders should be constructed using unconsolidated materials where possible. In some situations, solid shoulders are necessary. In those cases, shoulders should be constructed using porous concrete. (IDNR – DFW)

28. Trails that highlight natural resources should skirt the resource and use "pulloffs" at specific sites instead of letting the entire trail and traffic disturb the resource. (IDNR – DFW)

29. Do not cut any trees suitable for Indiana bat or northern long-eared bat roosting (greater than 5 inches dbh, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30. (IDNR – DFW and USFWS)

APPENDICES

Appendix A

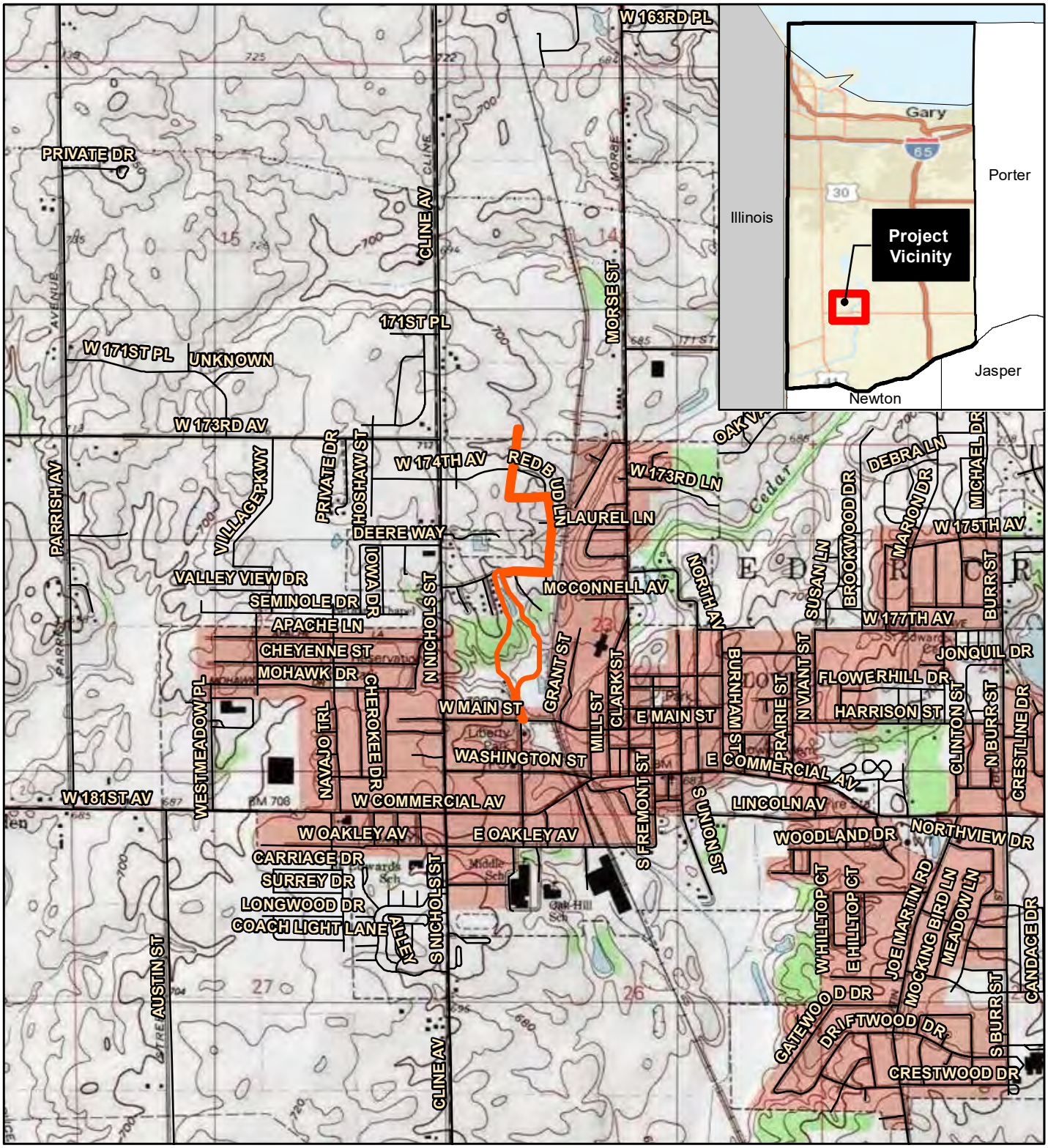
Supporting Documentation

Categorical Exclusion Level Thresholds

	PCE	Level 1	Level 2	Level 3	Level 4[1]
Section 106	Falls within guidelines of Minor Projects PA	"No Historic Properties Affected"	"No Adverse Effect"	-	"Adverse Effect" Or Historic Bridge involvement[2]
Stream Impacts[3]	No construction in waterways or water bodies	< 300 linear feet of stream impacts	≥ 300 linear feet of stream impacts	-	USACE Individual 404 Permit[4]
Wetland Impacts[3]	No adverse impacts to wetlands	< 0.1 acre	-	< 1.0 acre	≥ 1.0 acre
Right-of-way[5]	Property acquisition for preservation only or none	< 0.5 acre	≥ 0.5 acre	-	-
Relocations[6]	None	-	-	< 5	≥ 5
Threatened/Endangered Species (Species Specific Programmatic for Indiana bat & northern long eared bat)*	"No Effect", "Not likely to Adversely Affect" (With select AMMs[7])	"Not likely to Adversely Affect" (With any AMMs or commitments)	-	"Likely to Adversely Affect"	Project does not fall under Species Specific Programmatic[8]
Threatened/Endangered Species (Any other species)*	Falls within guidelines of USFWS 2013 Interim Policy or "No Effect"	"Not likely to Adversely Affect"	-	-	"Likely to Adversely Affect"
Environmental Justice	No disproportionately high and adverse impacts	-	-	-	Potential[9]
Sole Source Aquifer	No Detailed Groundwater Assessment	-	-	-	Detailed Groundwater Assessment
Floodplain	No Substantial Impacts	-	-	-	Substantial Impacts
Section 4(f) Impacts	None	-	-	-	Any[10]
Section 6(f) Impacts	None	-	-	-	Any
Permanent Traffic Alteration	None	-	-	-	Any
Noise Analysis Required	No	-	-	-	Yes
Air Quality Analysis Required	No	-	-	-	Yes[11]
Approval Level • **District Env. (DE)** • **Env. Serv. Div. (ESD)** • **FHWA**	Concurrence by DE or ESD	DE or ESD	DE or ESD	DE and/or ESD	DE and/or ESD; and FHWA

[1] Coordinate with INDOT Environmental Services Division. INDOT will then coordinate with the appropriate FHWA Environmental Specialist.
[2] Any involvement with a bridge processed under the Historic Bridge Programmatic Agreement.
[3] Total permanent impacts to streams (linear feet) and wetlands (acres).
[4] US Army Corps of Engineers Individual 404 Permit
[5] Total permanent and temporary right-of-way. This does not include reacquisition of existing apparent right-of-way.
[6] If any relocations are within an area with a known or suspected Environmental Justice (EJ) or disadvantaged population, or has greater than 5 relocations, a conversation with FHWA, through INDOT ESD, is needed to confirm NEPA classification and outreach plan for the project.
[7] Avoidance and Mitigation Measures (AMMs) determined by the IPAC determination key to be required that are not tree AMMs, bridge AMMs, or structure AMMs.
[8] Projects that do not fall under a Species Specific Programmatic and results in a "Likely to Adversely Affect". Other findings can be processed as a lower-level CE.
[9] Potential for causing a disproportionately high and adverse impact.
[10] Section 4(f) use resulting in an Individual, Programmatic, or *de minimis* evaluation. The only exception is a *de minimis* evaluation for historic properties (Effective January 2, 2020). If a historic property *de minimis* and no other use, mark the *None* column.
[11] Hot Spot Analysis and/or MSAT Quantitative Emission Analysis.
***** Includes the threatened/endangered species critical habitat
Note: Substantial public or agency controversy may require a higher-level NEPA document.

Appendix B
Graphics



0 1,000 2,000 Feet

0 300 600 Meters

Study Area

N W E S

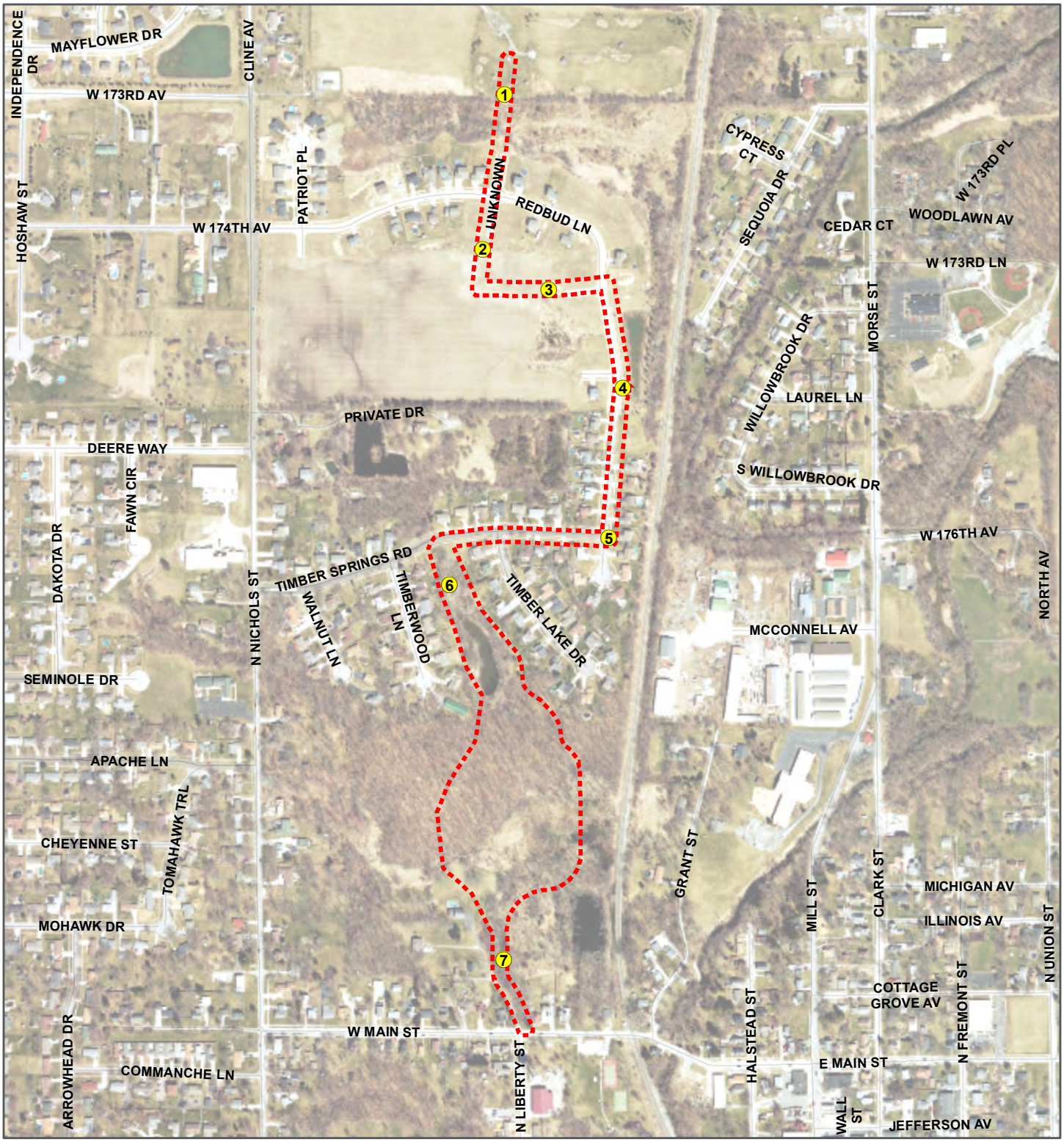
This map and all data contained within are supplied as is with no warranty. Cardno, Inc. expressly disclaims responsibility for damages or liability from any claims that may arise out of the use or misuse of this map. It is the sole responsibility of the user to determine if the data on this map meets the user's needs. This map was not created as survey data, nor should it be used as such. It is the user's responsibility to obtain proper survey data, prepared by a licensed surveyor, where required by law.

Figure 1. Project Location

Lowell Freedom Trail
NEPA Documentation
INDOT Des No, 1802920
Porter County, Indiana

Cardno
3901 Industrial Blvd., Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1986
www.cardno.com

Date: 7/8/2021 File Path: D:\GIS\GIS\SEH\FreedomTrail\F1_Location.mxd Saved By: Tamara.Miller



1 inch = 600 feet

0 155 310 620 Feet

Photo Station

Study Area

N

W E

S

Township 33 North
Range 9 West
Sections 14, 23
Project No.
J19Z524300

Figure 2. Aerial View and Photo Locations
Lowell Freedom Trail
INDOT Des No. 1802920
Lake County, Indiana

Cardno
708 Roosevelt Road, Walkerton, IN 46574
Phone (+1) 574-586-3400 Fax (+1) 574-586-3446
www.cardno.com

Date: 7/7/2021 File Path: R:\Projects\19\19Z\19Z524300_SEH_LowellFreedomTrail_PhaseI_CE\GIS\MXD\Delineation_October2020\20210707_ECL_FIGUREL.mxd Saved By: Christine.Dittmar

Basemap: Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

Photo 01: Photo station 01, facing south from existing trail at northern project extent. 10/15/2020.

Photo 02: Photo station 02, facing north towards Redbud Lane. 10/15/2020.

Photo 03: Photo station 03, facing east towards Redbud Lane. 10/15/2020.

Photo 04: Photo station 03, facing west towards farm field on proposed trail path. 10/15/2020.

Site Photographs
Lowell Freedom Trail
Town of Lowell
Lowell, IN

Project Number:
J19Z524300

Cardno
708 Roosevelt Road, Walkerton, IN 46574 USA
Phone (+1) 574-586-3400 Fax (+1) 574-586-3446
www.cardno.com

Photo 05: Photo station 04, facing north along the east side of Redbud Lane along the proposed trail path. 10/15/2020.

Photo 06: Photo station 05, facing north at the corner of Timber Springs Rd. and Redbud Ln. 10/15/2020.

Photo 07: Photo station 06, facing north along the proposed trail path. 10/15/2020.

Photo 08: Photo station 07, facing northwest across W Main St. at the southern project extent. 10/15/2020.

Site Photographs
Lowell Freedom Trail
Town of Lowell
Lowell, IN

Project Number:
J19Z524300

Cardno
708 Roosevelt Road, Walkerton, IN 46574 USA
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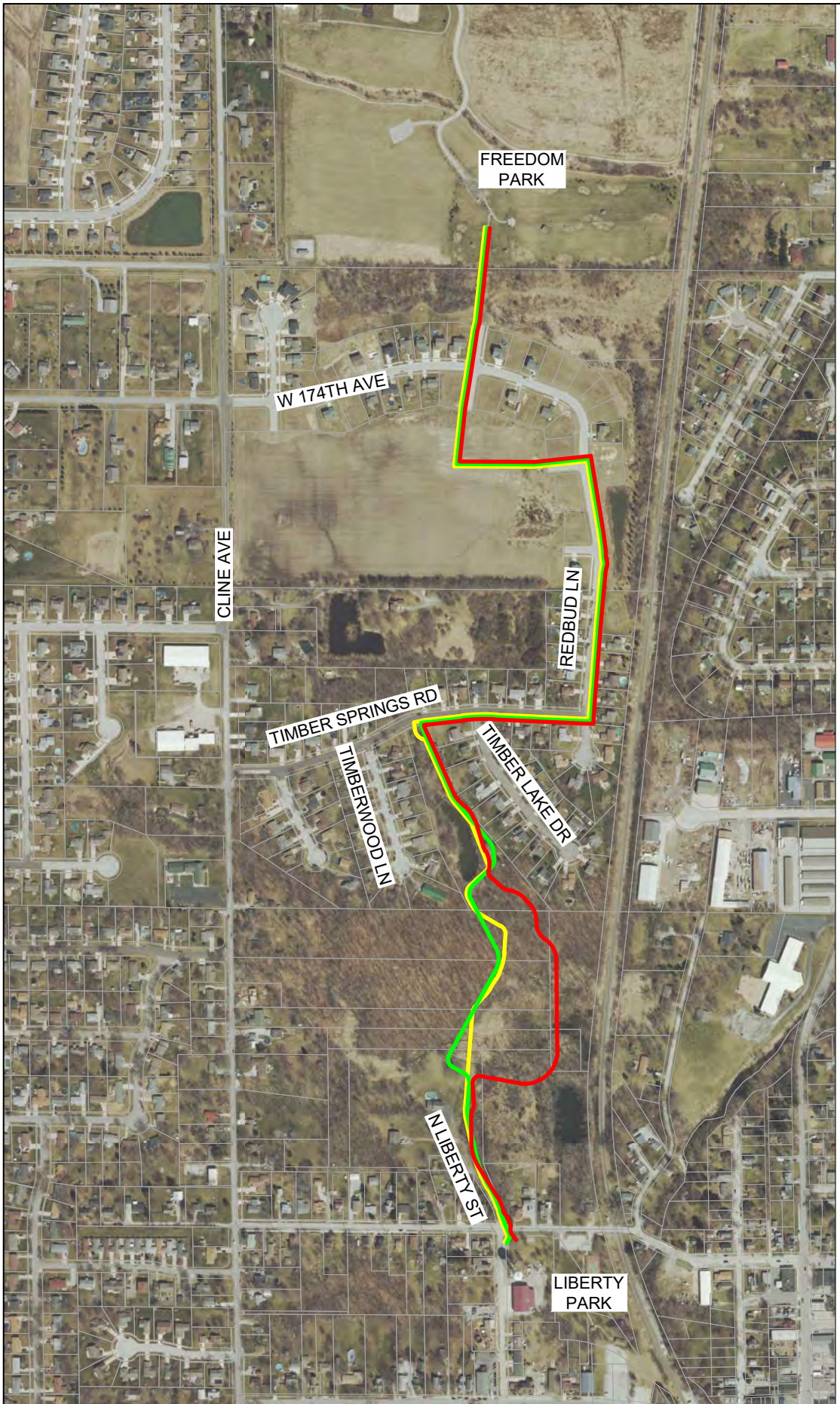


SEH

FILE NO. 154504

DATE: 05/04/2022

ALTERNATE ALIGNMENTS
FREEDOM TRAIL
DES NO. 1802920

EXHIBIT NO. 1

Save: 5/4/2022 2:40 PM rpugh Plot: 5/4/2022 2:43 PM X:\KO\LOWEL\154504\5-final-dsgn\51-drawings\10-Civil\cad\dwg\exhibit\154504 - ALTERNATE ALIGNMENTS.dwg

PROJECT	DESIGNATION
154504	1802920
CONTRACT	BRIDGE FILE
1802920	- - -

INDIANA DEPARTMENT OF TRANSPORTATION

SHARED-USE PATH PLANS
FREEDOM TRAIL
LOWELL, IN

TRAFFIC DATA	
A.A.D.T. (2010)	N/A
A.A.D.T. (PROJECTED 2022)	N/A
D.H.V. (2022)	N/A
DIRECTIONAL DISTRIBUTION	N/A
TRUCKS	N/A
DESIGN DATA	
DESIGN SPEED	15 M.P.H.
PROJECT DESIGN CRITERIA	SHARED-USE PATH
FUNCTIONAL CLASSIFICATION	SHARED-USE PATH
RURAL/URBAN	URBAN
TERRAIN	LEVEL
ACCESS CONTROL	NONE

PROJECT DESCRIPTION:

DESIGN OF TRAIL IN THE TOWN OF LOWELL
STARTING FROM LIBERTY PARK HEADING SOUTH TO W. MAIN STREET
IN SECTION 24, TOWNSHIP 33, N RANGE 9 W, CEDAR CREEK TOWNSHIP, LAKE COUNTY, INDIANA.

PROJECT LOCATION SHOWN BY

GROSS PROJECT LENGTH:	XX.XX LF
NET PROJECT LENGTH:	XX.XX LF
MAXIMUM ELEVATION:	XX.XX
MINIMUM ELEVATION:	XX.XX
MAXIMUM GRADE:	5.00%
MINIMUM GRADE:	0.40%
LATITUDE:	41°17'36" N
LONGITUDE:	87°24'24" W

TOWN OF LOWELL
TOWN CONCIL

ERIC HULL, RESIDENT — DATE

BRAD ENSLEN, VICE PRESIDENT — DATE

TONI BIANCARDI — DATE

RAY POPARAD — DATE

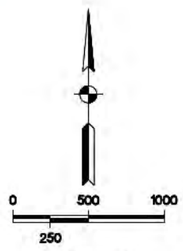
NICK LOVING — DATE

LOWELL TOWN COUNCIL

MICHAEL GRUSZKA, WARD 1
MATT FELDER, WARD 2
WILL FARRELLBEGG, VICE PRESIDENT, WARD 3
CHRIS SALATAS, PRESIDENT, WARD 4
EDGAR CORNS, WARD 5

JUDY WALTERS, CLERK-TREASURER
D. JEFFREY SHERIDAN, TOWN MANAGER
KEVIN GRAY, DIRECTOR OF PUBLIC WORKS

LOCATION MAP



SCALE 1:500

STAGE 1

1/8/21

INDIANA DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS DATED 2020 TO
BE USED WITH THIS SET OF PLANS

SEH of Indiana
9200 Calumet Avenue, Suite N300
Munster, Indiana 46321
Phone: 219.513.2500

PREPARED BY: SHORT ELLIOTT HENDRICKSON, INC. (219) 513-2500 PHONE

CERTIFIED BY: 1/8/21 DATE

APPROVED FOR LETTING: DATE

BRIDGE FILE	
- - -	
DESIGNATION	
1802920	

SURVEY BOOK	SHEETS
- - -	1 of 30
CONTRACT	PROJECT
1802920	154504

GENERAL NOTES:

1. THE CONTRACTOR SHALL PROVIDE FULL DEPTH SAW CUTS WHERE EXISTING PAVEMENT, CONCRETE OR ASPHALT IS TO BE REMOVED. THE CONTRACTOR SHALL PROVIDE ADEQUATE COMPACTED MATERIAL/GRAVEL AT SAWCUT EDGE TO SHORE UP AND PREVENT THE DEGRADATION OF THE EXISTING PAVEMENT TO REMAIN. DAMAGE TO EXISTING PAVEMENT WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
2. THE CONTRACTOR SHALL PLACE AND MAINTAIN A 6" GRAVEL BASE AT ALL PROPOSED ENTRANCES TO THE CONSTRUCTION SITE, PRIOR TO DEMOLITION.
3. EROSION CONTROL PROVISIONS SHALL BE IN PLACE PRIOR TO ALL OPERATIONS. THE CONTRACTOR SHALL FOLLOW THE TOWN'S REQUIREMENTS FOR THE PROJECT AND PRACTICES OUTLINED IN THE "INDIANA HANDBOOK FOR EROSION CONTROL IN DEVELOPING AREAS" REQUIRED FOR THE PREVENTION OF SOIL EROSION AND SEDIMENTATION WITHIN AND DOWNSTREAM OF THE CONSTRUCTION SITE. SAID PRACTICES AND REQUIREMENTS SHALL REMAIN IN PLACE FOR THE DURATION OF THE PROJECT.
4. CONTRACTOR SHALL COORDINATE WITH INDOT, THE TOWN OF LOWELL, AND STATE PARK OFFICIALS RELATIVE TO ALL WORK TO BE PERFORMED WITHIN THE PUBLIC RIGHT OF WAY. CONTRACTOR SHALL PROVIDE ALL NECESSARY TRAFFIC CONTROL MEASURES WITHIN PUBLIC RIGHT OF WAYAS REQUIRED.
5. ALL SIGNS AND PAVEMENT MARKINGS SHALL CONFORM TO INDIANA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (IMUTCD), LATEST EDITION. AND INDIANA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AND STANDARD DRAWINGS, LATEST EDITION. ANY SIGNS DAMAGED BY CONSTRUCTION SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.
6. UTILITIES SHOWN ON PLANS ARE APPROXIMATE IN LOCATION AND ARE FOR INFORMATIONAL PURPOSES ONLY AND MAY NOT BE ALL INCLUSIVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL UTILITY COMPANIES WHETHER IDENTIFIED BELOW AND LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE DESIGN ENGINEER.
7. THE CONTRACTOR SHALL CONFORM TO INDIANA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION YEAR 2012, FOR ALL WORK TO BE PERFORMED, UNLESS OTHERWISE SPECIFIED OR NOTED.
8. MAINTENANCE OF TRAFFIC DURING CONSTRUCTION SHALL BE PROVIDED FOR ALL PUBLIC RIGHT-OF-WAYS IN ACCORDANCE WITH INDOT STANDARD DRAWINGS AND SPECIFICATIONS. REFER TO STANDARD DRAWING NO. E 801-TCTL-07, E 801-TCLC-12, E 801-TCSN-0I, E 801 TCSN-02, E 801-TCSN-01, E 801-TCSN-05, E 801-TCSN-11, E 801-TCSN-I2, E 801-TCSN-13. E 801-TCDV-01 AND E 801-TCDV-02 FOR DETAILS.
9. TACK COAT SHALL BE APPLIED TO ALL HMA OR CONCRETE PAVEMENT BEFORE PLACEMENT OF ANY HMA MIXTURES IN ACCORDANCE WITH INDOT STANDARD SPECIFICATION SECTION 406.
10. CONTRACTOR SHALL RESTORE ALL DRIVES AND PAVEMENT TRUE TO HORIZONTAL AND VERTICAL LINES. THE SECTION REMOVED SHALL BE REPLACED TO ITS ORIGINAL CONDITION WHERE INDICATED ON THE PLANS OR BETTER OR AS STATED BY THESE PLANS AND SPECIFICATIONS. ANY DRIVE OR PAVING OUTSIDE THE CONSTRUCTION AREA DAMAGED BY CONSTRUCTION PRACTICES SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE OWNER.
11. WHEN EXCAVATING NEAR UTILITIES, CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPORTING, BRACING OR SHORING AS REQUIRED TO PREVENT DAMAGE TO THE UTILITIES.
12. CONTRACTOR SHALL RESTORE ALL AFFECTED SITE CONDITIONS TO THEIR ORIGINAL CONDITION OR BETTER AFTER COMPLETION OF THE WORK. GRASS REQUIRING REPLACEMENT THROUGHOUT THE PROJECT SHALL BE SEEDED PER THE SPECIFICATIONS. ANY DITCH AFFECTED BY THE CONSTRUCTION SHALL BE RE-ESTABLISHED TO ITS ORIGINAL LINE AND GRADE.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DEWATERING. WATER REMOVED BY DEWATERING EQUIPMENT SHALL NOT BE DISPOSED OF INTO SANITARY OR STORM SEWERS WITHOUT WRITTEN APPROVAL BY THE TOWN OF LOWELL, BOARD OF PUBLIC WORKS.
14. WHERE SANITARY MANHOLES ARE LOCATED OUTSIDE OF PAVED AREAS, CONTRACTOR SHALL GRADE AROUND EACH CASTING SO THAT SURFACE WATER SHALL NOT DRAIN INTO OR OVER THE STRUCTURE.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE HEALTH AND SAFETY OF HIS EMPLOYEES AND THE SUBCONTRACTORS PER OSHA REGULATIONS AND ANY OTHER ORGANIZATION HAVING JURISDICTION.
16. CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING A BID FOR WORK. BY SUBMITTING A BID, THE CONTRACTOR INDICATES THAT HE HAS VISITED THE SITE AND IS AWARE OF ALL EXISTING CONDITIONS.
17. NO OPEN TRENCHES WILL BE ALLOWED IN THE EVENING AFTER DAILY CONSTRUCTION OPERATIONS HAVE FINISHED, EXCEPT IN THE AREA OF THE TRENCHING BOX. CONTRACTOR TO PROVIDE CONSTRUCTION FENCING AND NECESSARY WARNING SIGNAGE AROUND TRENCHING BOXAREA FOR PUBLIC SAFETY.
18. CONTRACTOR SHALL NOTIFY THE TOWN OF LOWELL ENGINEER'S OFFICE AND PUBLIC WORKS OFFICE 48 HOURS PRIOR TO THE INSTALLATION OF THE CONNECTION TO THE EXISTING STRUCTURE/PIPING.
19. THE CONTRACTOR SHALL CLEAR AND GRUB ALL NON-PAVEMENT AREAS LOCATED WITHIN THE CONSTRUCTION LIMITS IN ACCORDANCE WITH THE SPECIFICATIONS INCLUDING THE REMOVAL OF ALL TREES OF ALL DIAMETERS, SHRUBS, BUSHES AND MISCELLANEOUS DEBRIS NOT CALLED OUT TO BE PROTECTED ON THE PLANS.
20. CONTACT THE TOWN OF LOWELL ENGINEER'S OFFICE OR PUBLIC WORKS OFFICE FOR SANITARY SEWER, ROADWAY LIGHTING, TRAFFIC SIGNAL AND STORM SEWER INFORMATION.
21. CONTRACTOR SHALL MAINTAIN ALL ROADWAY LIGHTING AND TRAFFIC SIGNALS INSTALLED UNDER THIS CONTRACT UNTIL FINAL ACCEPTANCE. RESPONSE TO MAINTENANCE CALLS SHALL BE MADE WITHIN TWO HOURS OR LESS, SEVEN DAYS A WEEK, TWENTY-FOUR HOURS PER DAY.
22. CONTRACTOR SHALL PERFORM ALL WORK WITHIN REASONABLE WORK HOURS (7:00 AM TO 7:00 PM) MONDAY THROUGH SATURDAY. CONTRACTOR SHALL NOT WORK ON HOLIDAYS IDENTIFIED IN INDOT SPECIFICATION SECTION 101.23. DEVIATIONS IN WORK SCHEDULE SHALL BE APPROVED IN WRITING BY THE TOWN ENGINEER, OR PUBLIC WORKS DIRECTOR
23. ALL EXISTING LIGHTING SHALL REMAIN OPERABLE UNTIL NEW LIGHTING IS INSTALLED AND OPERABLE.
24. MAINTAIN ROADWAY SIGNAGE DURING CONSTRUCTION.
25. ACCESS TO ALL RESIDENCES AND COMMERCIAL FACILITIES SHALL BE MAINTAINED AT ALL TIMES.
26. MAINTAIN TRAFFIC CONTROL AND MAINTENANCE OF TRAFFIC MEASURES AT ALL TIMES.
27. ALL RADII DIMENSIONS ARE FROM EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
28. CONTRACTOR SHALL VERIFY ALL BENCHMARK ELEVATIONS WITH A CLOSED LEVEL CIRCUIT PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL COORDINATE SURVEY CONTROL WITH ENGINEER PRIOR TO LAYOUT.
29. CONTRACTOR SHALL PROVIDE TO THE OWNER, AS-BUILT DRAWINGS SHOWING ALL DEVIATIONS FROM PLAN INCLUDING BUT NOT LIMITED TO LOCATION, ELEVATION, COLOR OR TYPE. IF A PARTICULAR SHEET OR PLAN HAS NO DEVIATION, CONTRACTOR SHALL SUBMIT THE PLAN AND LABEL "NO DEVIATION FROM PLAN." ALL AS-BUILTS SHALL BE SIGNED AND STAMPED BY THE CONTRACTOR'S NAME AND LOGO.
30. ENGINEER WILL SUPPLY CONTRACTOR BENCHMARK AND HORIZONTAL AND VERTICAL CONTROL IN CAD FORMAT FOR LAYOUT PURPOSES.

LEGEND

- (K) HMA FOR SIDEWALKS CONSISTING OF: 140 #/SYS HMA SURFACE, TYPE A ON 220 #/SYS HMA INTERMEDIATE, TYPE A ON 6" COMPACTED AGGREGATE IN NO. 53, BASE, ON SUBGRADE TREATMENT TYPE III
- (27) 4" TOPSOIL & SEEDING (REESTABLISH DISTURBED AREAS)
- (RT) RETAINING WALL
- (BW) BOARDWALK
- (CR) CONCRETE CURB RAMP

SHEET INDEX

30 TOTAL SHEETS IN THIS PLAN SET

REVISIONS

SHEET NO.	DATE	RVISED

UTILITIES

GAS & ELECTRIC
Northern Indiana Public Service
801 East 86th Avenue
Merrillville, IN 46410
(219) 647.4299

WASTE WATER
LA PORTE Sanitation Department
1240 N. Boo Rd
LA PORTE, IN 46304
(219) 787.1165

WATER
Indiana American Water
1119 Lake St
La Porte, IN 46350
(219) 326.9540

CABLE TV
Comcast North
16 West 84th Drive
Merrillville, IN 46410
(630) 288.7261

TELEPHONE
Frontier Communications
8001 West Jefferson Blvd
Fort Wayne, IN 46804
(260) 428.8582

COMMUNICATIONS
ACME Communications
618 Franklin Street
Michigan City, IN 46360
(219) 809.0066

SEH of Indiana
9200 Calumet Avenue, Suite N300
Munster, Indiana 46321
Phone: 219.513.2500

RECOMMENDED FOR APPROVAL _____ 1/8/21
DESIGN ENGINEER DATE

DESIGNED: JLS DRAWN: RSP
CHECKED: JPG CHECKED: XXX

INDIANA DEPARTMENT OF TRANSPORTATION

INDEX & GENERAL NOTES
FREEDOM TRAIL

HORIZONTAL SCALE	BRIDGE FILE
---	---
VERTICAL SCALE	DESIGNATION
---	1802920
SURVEY BOOK	SHEETS
---	2 of 30
CONTRACT	PROJECT
1802920	154504

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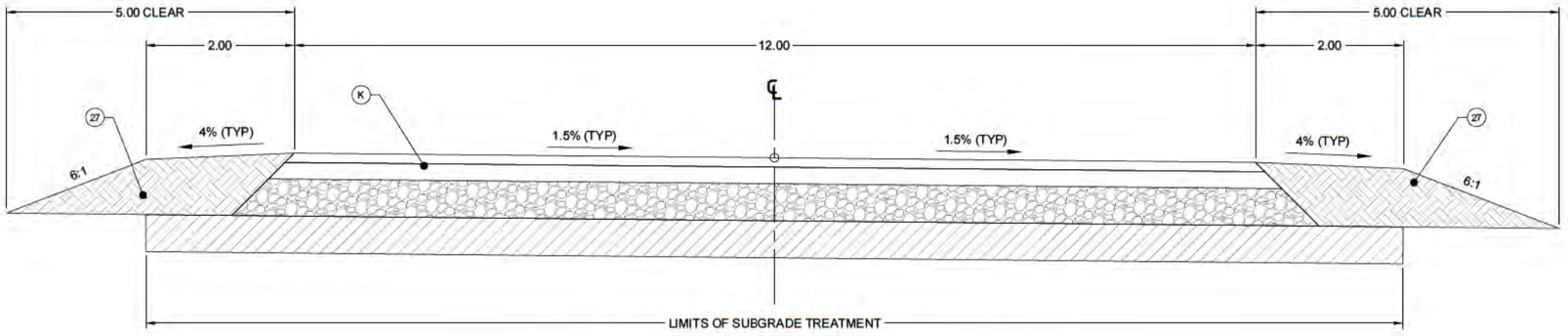
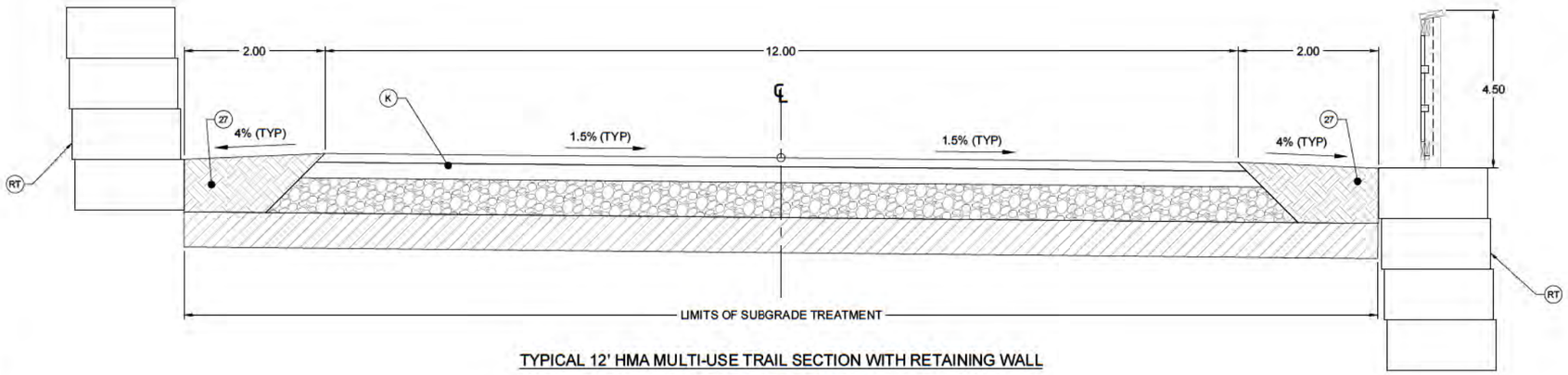


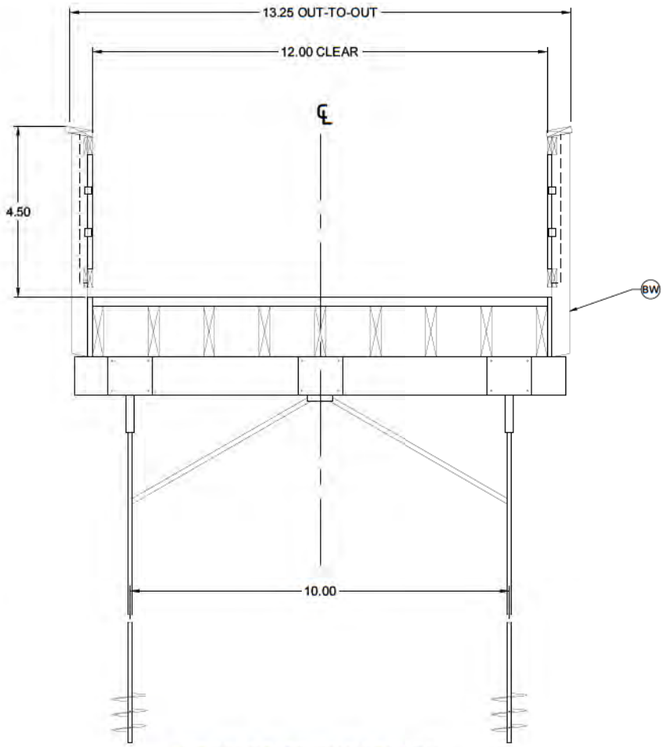
TYPICAL 12' HMA MULTI-USE TRAIL SECTION

STA 100+00.00 TO STA 102+00.00
STA 104+75.00 TO STA 113+50.00



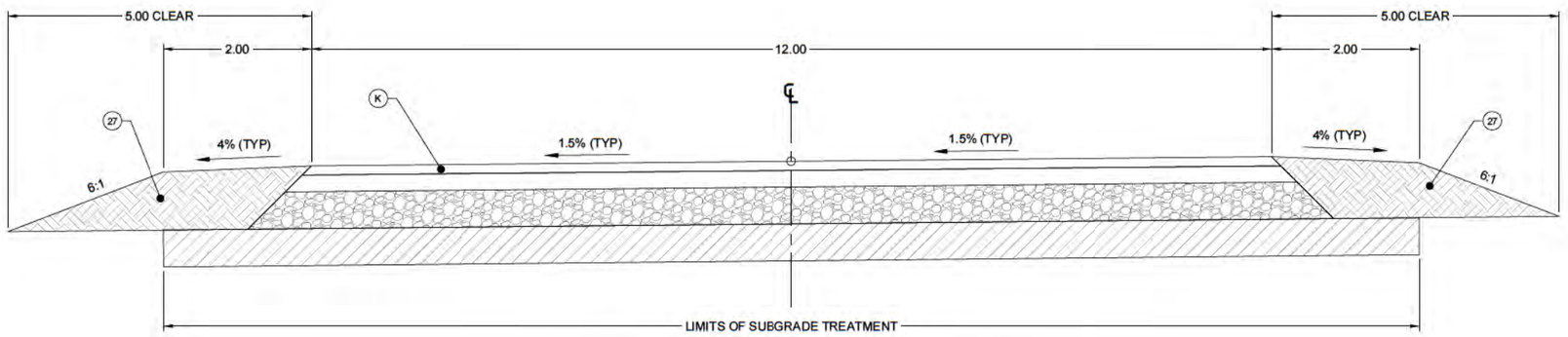
TYPICAL 12' HMA MULTI-USE TRAIL SECTION WITH RETAINING WALL

STA 102+00.00 TO STA 103+75.00



TYPICAL BOARDWALK SECTION

STA 103+75.00 TO STA 104+75.00
STA 120+00.00 TO STA 124+50.00



TYPICAL 12' HMA MULTI-USE TRAIL SECTION

STA 113+50.00 TO STA 120+00.00
STA 124+50.00 TO STA 125+34.87

(K) HMA FOR SIDEWALKS CONSISTING OF:
140 #/SYS HMA SURFACE, TYPE A OR
220 #/SYS HMA INTERMEDIATE, TYPE A OR
6" COMPACTED AGGREGATE IN NO. 53, BASE, ON
SUBGRADE TREATMENT TYPE III

(27) 4" TOPSOIL & SEEDING (REESTABLISH DISTURBED AREAS)
(RT) RETAINING WALL
(BW) BOARDWALK
(CR) CONCRETE CURB RAMP

SEH of Indiana
9200 Calumet Avenue, Suite N300
Munster, Indiana 46321
Phone: 219.513.2500

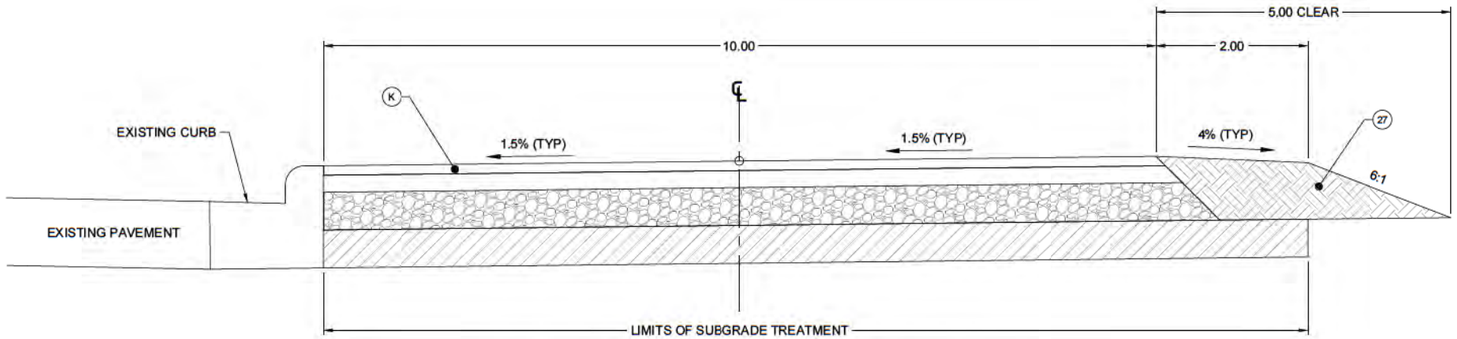
RECOMMENDED FOR APPROVAL _____ 1/8/21
DESIGN ENGINEER DATE

DESIGNED: JLS DRAWN: RSP
CHECKED: JPG CHECKED: XXX

INDIANA DEPARTMENT OF TRANSPORTATION

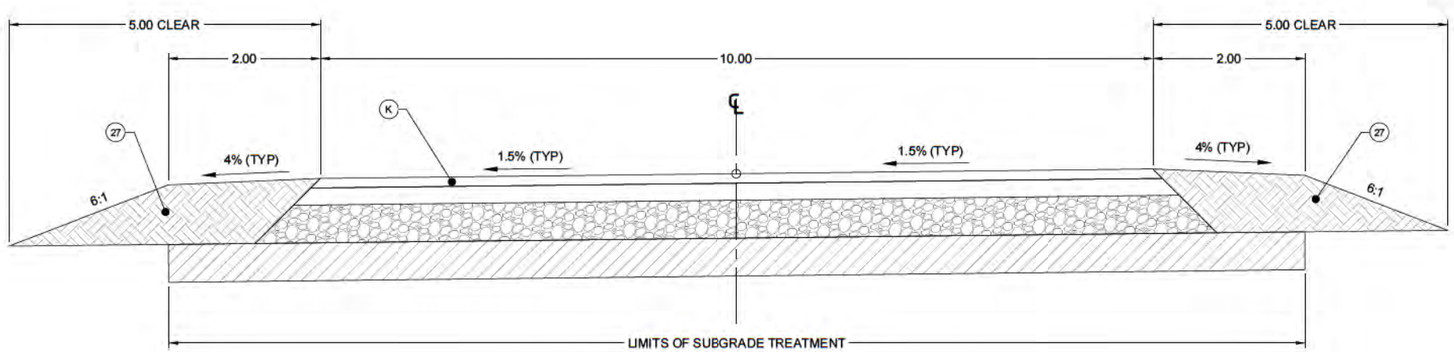
TYPICAL SECTIONS
FREEDOM TRAIL

HORIZONTAL SCALE	BRIDGE FILE
---	---
VERTICAL SCALE	DESIGNATION
---	1802920
SURVEY BOOK	SHEETS
---	3 of 30
CONTRACT	PROJECT
1802920	154504



TYPICAL 10' HMA MULTI-USE TRAIL SECTION AT CURB AREAS

STA 125+34.87 TO STA 145+15.00



TYPICAL 10' HMA MULTI-USE TRAIL SECTION

STA 145+15.00 TO STA 148+84.91

(K) HMA FOR SIDEWALKS CONSISTING OF:
140 #/SYS HMA SURFACE, TYPE A ON
220 #/SYS HMA INTERMEDIATE, TYPE A ON
6" COMPACTED AGGREGATE IN NO. 53, BASE, ON
SUBGRADE TREATMENT TYPE III

(27) 4" TOPSOIL & SEEDING (REESTABLISH DISTURBED AREAS)
(RT) RETAINING WALL
(BW) BOARDWALK
(CR) CONCRETE CURB RAMP

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INDIANA DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS
FREEDOM TRAIL

HORIZONTAL SCALE	BRIDGE FILE
---	---
VERTICAL SCALE	DESIGNATION
---	1802920
SURVEY BOOK	SHEETS
---	4 of 30
CONTRACT	PROJECT
1802920	154504

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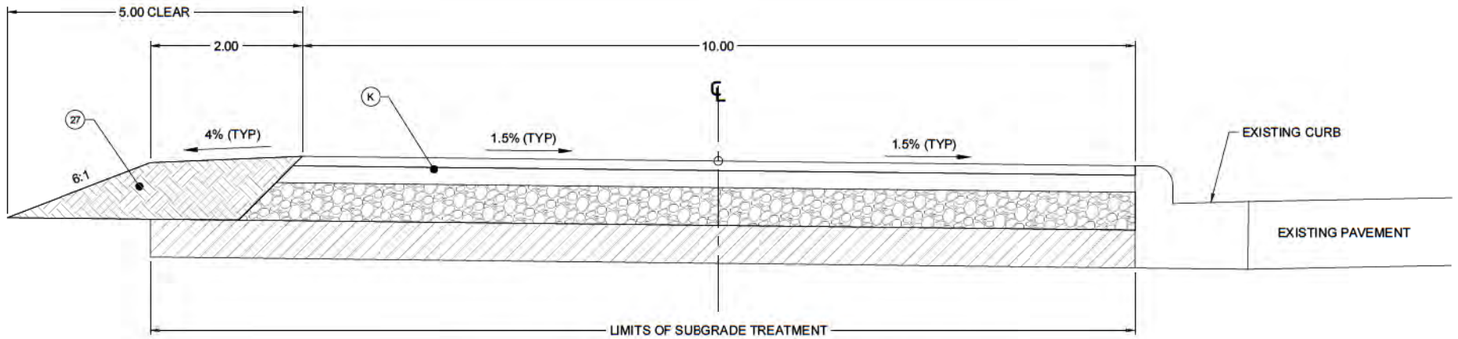
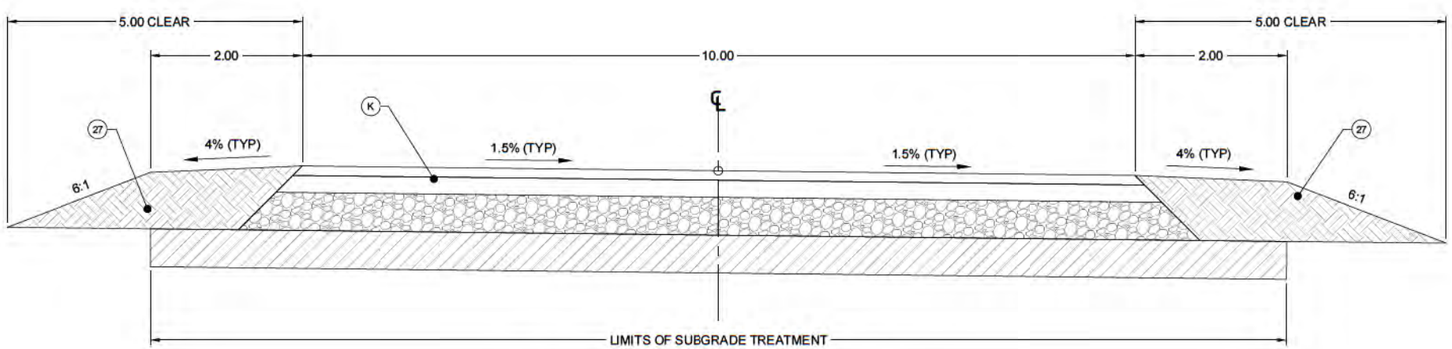


TYPICAL 10' HMA MULTI-USE TRAIL SECTION AT CURB AREAS

STA 151+17.00 TO STA 154+75.00



TYPICAL 10' HMA MULTI-USE TRAIL SECTION

STA 148+84.91 TO STA 151+17.00
STA154+75.00 TO STA 158+72.33

(K) HMA FOR SIDEWALKS CONSISTING OF:
140 #/SYS HMA SURFACE, TYPE A ON
220 #/SYS HMA INTERMEDIATE, TYPE A ON
6" COMPACTED AGGREGATE IN NO. 53, BASE, ON
SUBGRADE TREATMENT TYPE III

(27) 4" TOPSOIL & SEEDING (REESTABLISH DISTURBED AREAS)
(RT) RETAINING WALL
(BW) BOARDWALK
(CR) CONCRETE CURB RAMP

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DESIGN ENGINEER DATE

DESIGNED: JLS DRAWN: RSP
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INDIANA DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS
FREEDOM TRAIL

HORIZONTAL SCALE	BRIDGE FILE
---	---
VERTICAL SCALE	DESIGNATION
---	1802920
SURVEY BOOK	SHEETS
---	5 of 30
CONTRACT	PROJECT
1802920	154504

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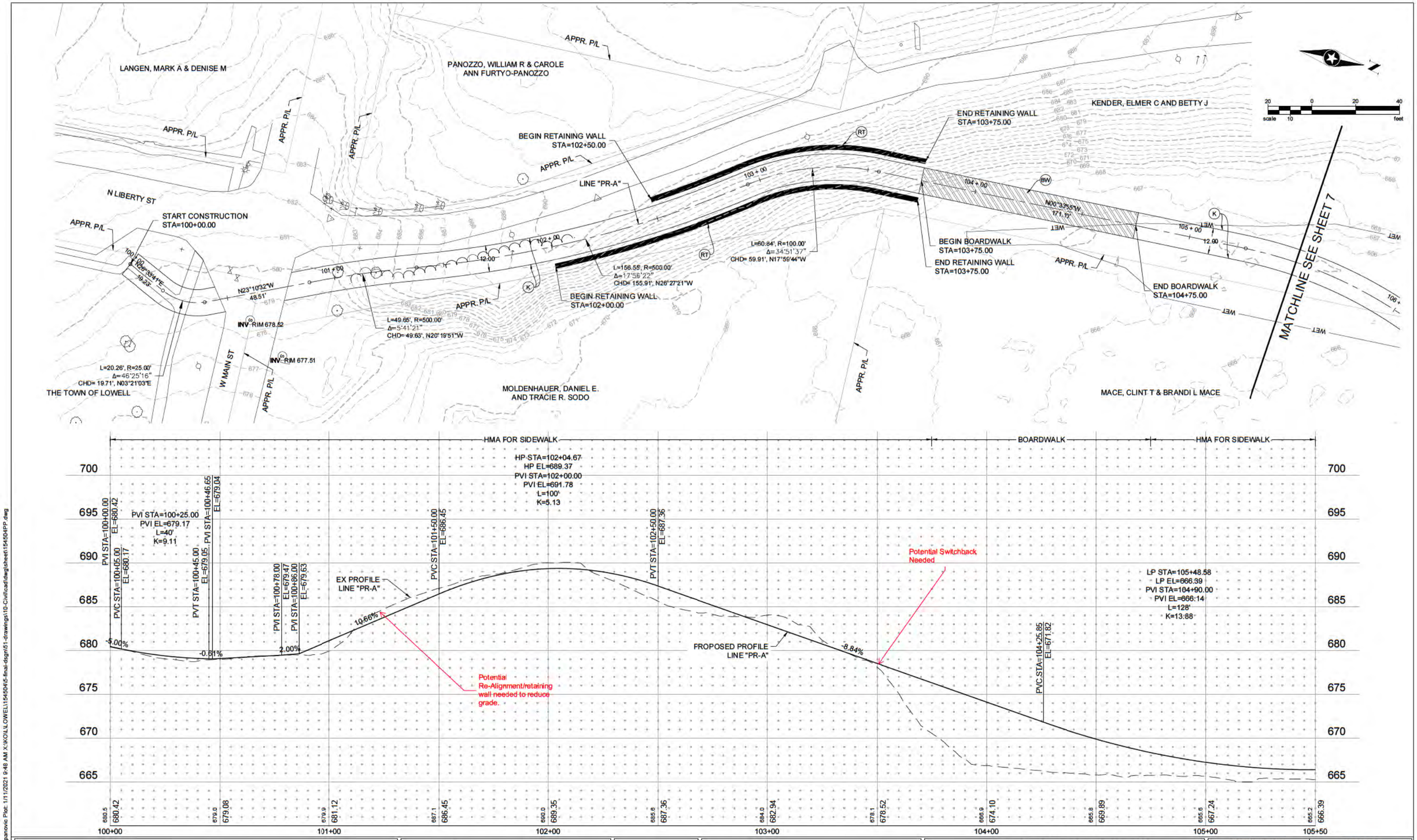

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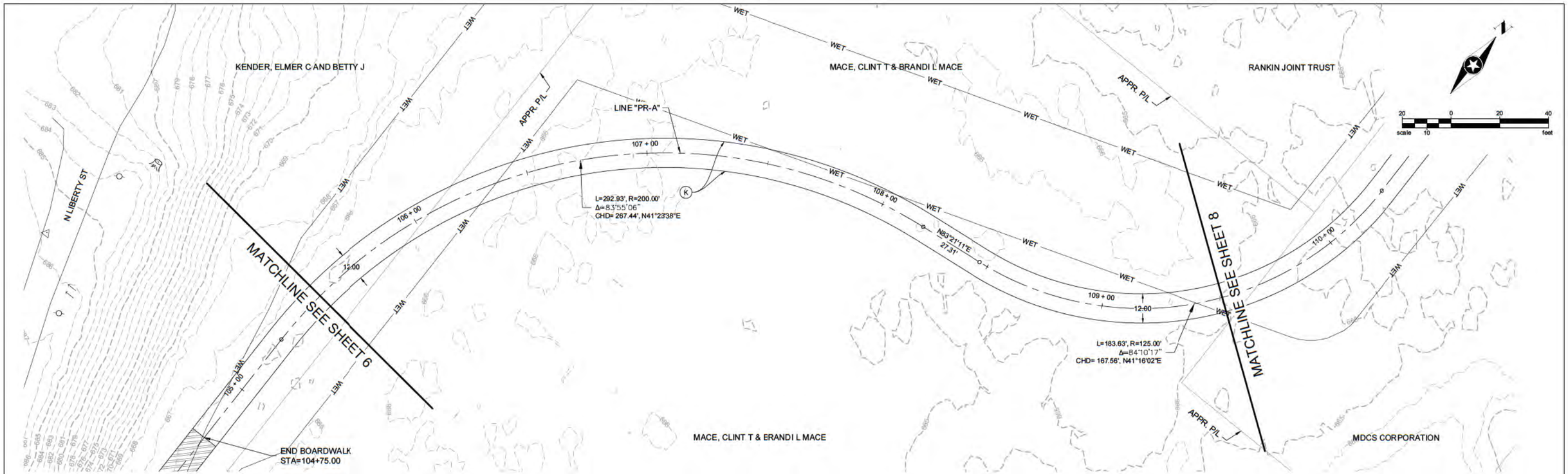
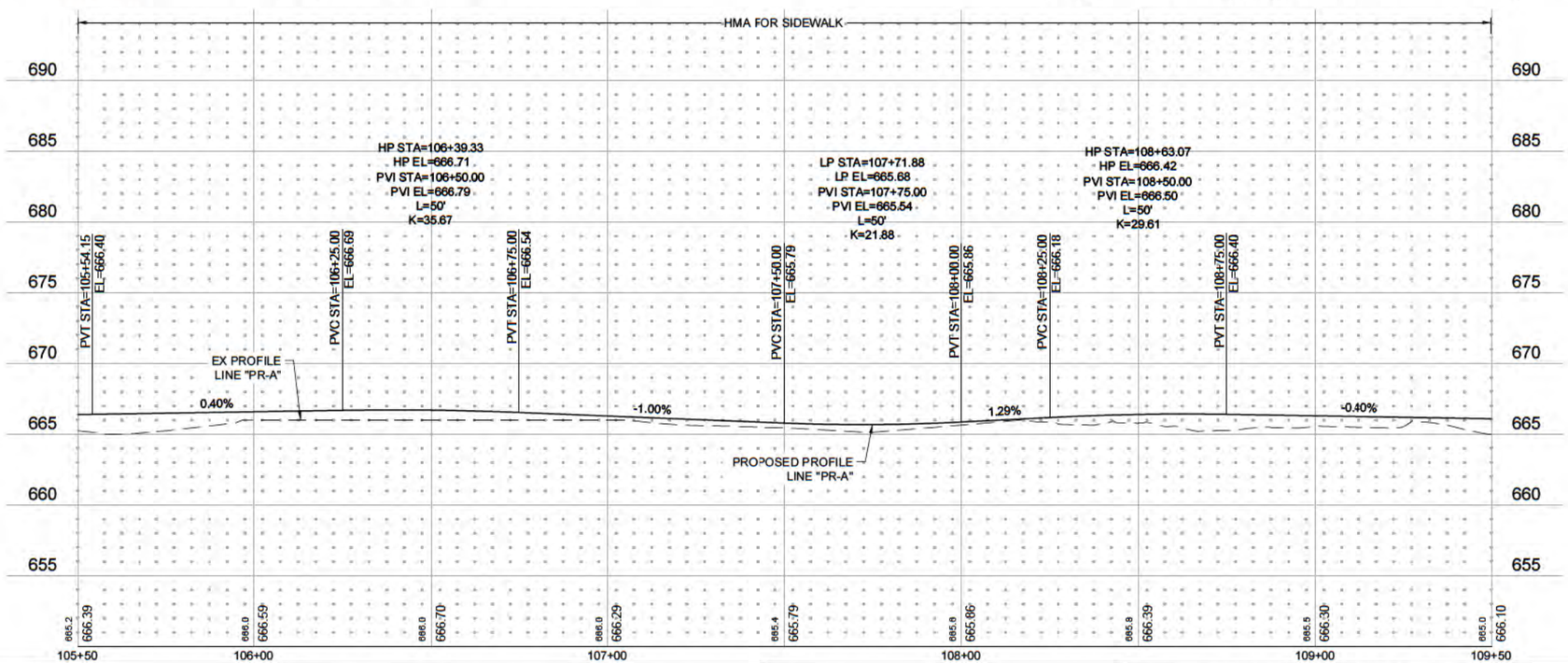
INDIANA DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE
FREEDOM TRAIL

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	---
VERTICAL SCALE	DESIGNATION
1"=5'	1802920

SURVEY BOOK	SHEETS
---	6 of 30
CONTRACT	PROJECT
1802920	154504





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INDIANA DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE
FREEDOM TRAIL

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	---
VERTICAL SCALE	DESIGNATION
1"=5'	1802920
SURVEY BOOK	SHEETS
---	7 of 30
CONTRACT	PROJECT
1802920	154504

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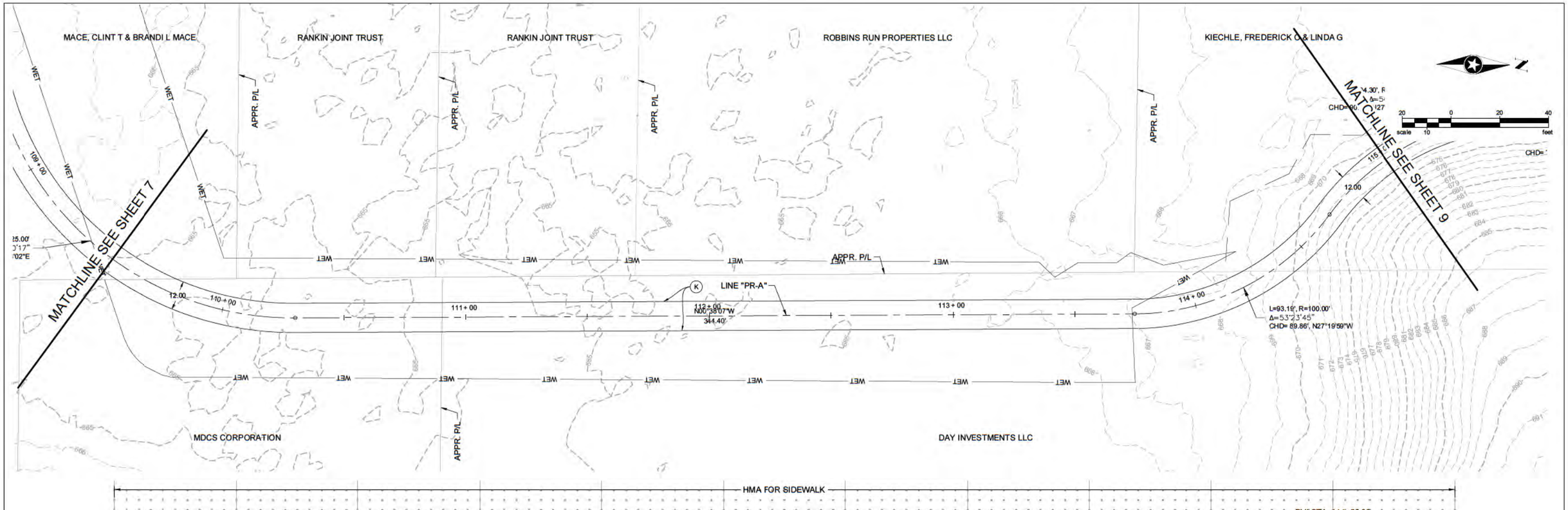

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INDIANA DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE
FREEDOM TRAIL

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1"=20'	---
VERTICAL SCALE	DESIGNATION
1"=5'	1802920
SURVEY BOOK	SHEETS
---	8 of 30
CONTRACT	PROJECT
1802920	154504

KIECHLE, FREDERICK O & LINDA G

SANDOR, CHARLES TRUSTEE

MATCHLINE SEE SHEET 8

MATCHLINE SEE SHEET 10

L=94.30', R=100.00'
Δ=54°01'52"
CHD= 90.85', N27°00'56"W

L=74.06', R=100.00'
Δ=42°25'57"
CHD= 72.38', N20°59'30"W

N42°12'29"W
66.65'

L=39.97', R=100.00'
Δ=22°53'56"
CHD= 39.70', N53°39'28"W

LINE "PR-A"

L=102.36', R=100.00'
Δ=58°38'53"
CHD= 97.95', N35°47'00"W

N06°27'33"W
75.93'

L=43.40', R=75.00'
Δ=33°09'05"
CHD= 42.79', N23°02'06"W

N39°36'37"W
80.09'

N39°36'37"W
63.11'

BEGIN BOARDWALK
STA=120+00.00

APPR. P/L

WET

BW

DAY INVESTMENTS LLC

PRUIM, KARI

NAPIWOCKI, WALLACE & JOAN

BORST, DAVID

BROWN, DANIEL & STACY R BROWN

LOITZ, LINDA M

STONEBRAKER, ADAM S & MATTIE L

scale 20 0 20 40 10 feet

HMA FOR SIDEWALK

BOARDWALK

PVI STA=119+30.00
PVI EL=691.61
L=135'
K=17.69

HP STA=120+07.40
HP EL=691.90
PVI STA=120+50.00
PVI EL=692.09
L=100'
K=18.49

PVC STA=118+62.50
EL=686.19

PVT STA=119+97.50
EL=691.88

PVC STA=120+00.00
EL=691.89

PVI STA=117+00.00
PVI EL=673.14
L=150'
K=19.77

PVT STA=115+00.00
EL=672.25

PVC STA=116+25.00
EL=672.80

PVT STA=117+75.00
EL=679.16

0.45%

8.03%

0.40%

PROPOSED PROFILE
LINE "PR-A"

EX PROFILE
LINE "PR-A"

705 700 695 690 685 680 675 670

671.8 672.25 | 671.3 672.47 | 672.3 672.69 | 672.4 673.07 | 673.0 674.56 | 675.4 677.31 | 678.0 681.17 | 687.0 685.16 | 689.4 688.80 | 692.5 691.05 | 690.9 691.89 | 688.5 691.41

115+00 116+00 117+00 118+00 119+00 120+00 120+50

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CHECKED: JPG CHECKED: XXX

INDIANA DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE
FREEDOM TRAIL

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	---
VERTICAL SCALE	DESIGNATION
1"=5'	1802920

SURVEY BOOK	SHEETS
---	9 of 30
CONTRACT	PROJECT
1802920	154504

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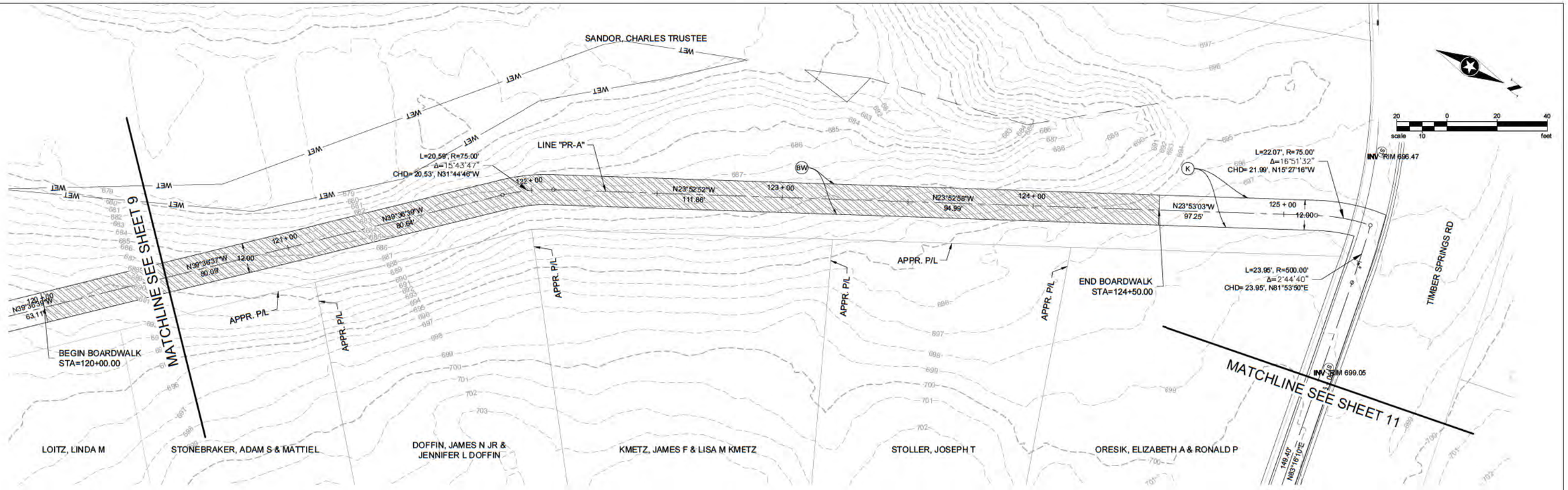

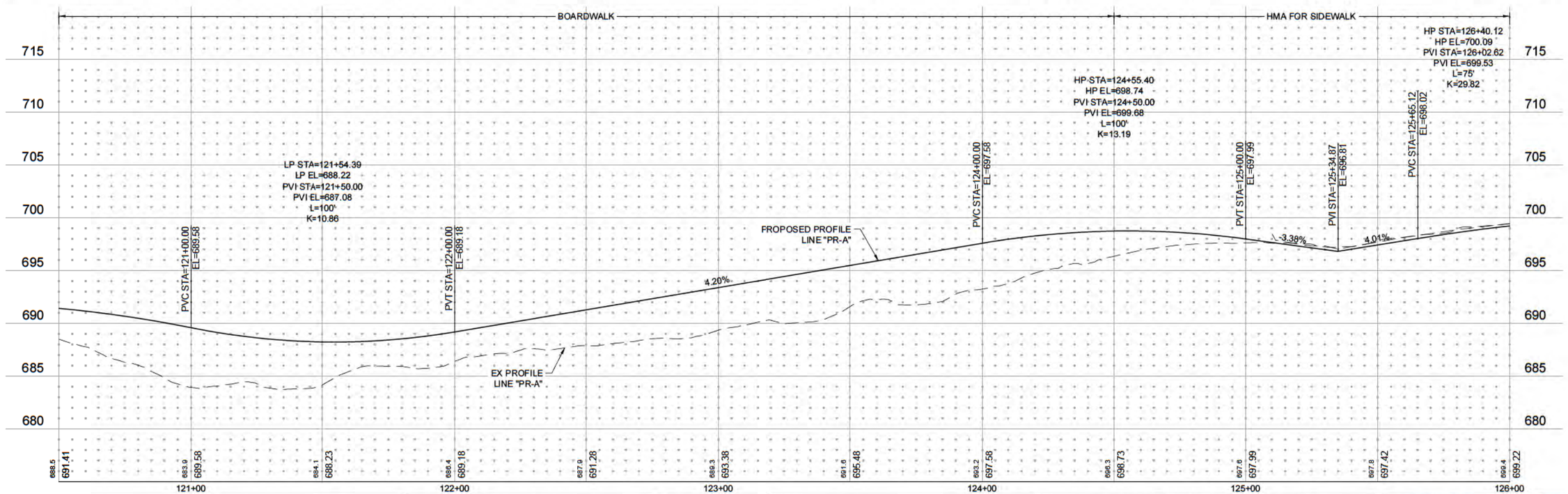

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 1/8/21 DATE		INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE 1"=20' / BRIDGE FILE ---
DESIGNED: JLS	DRAWN: RSP	PLAN & PROFILE FREEDOM TRAIL	VERTICAL SCALE 1"=5' / DESIGNATION 1802920
CHECKED: JPG	CHECKED: XXX		SURVEY BOOK --- / SHEETS 10 of 30
			CONTRACT 1802920 / PROJECT 154504

SEH of Indiana
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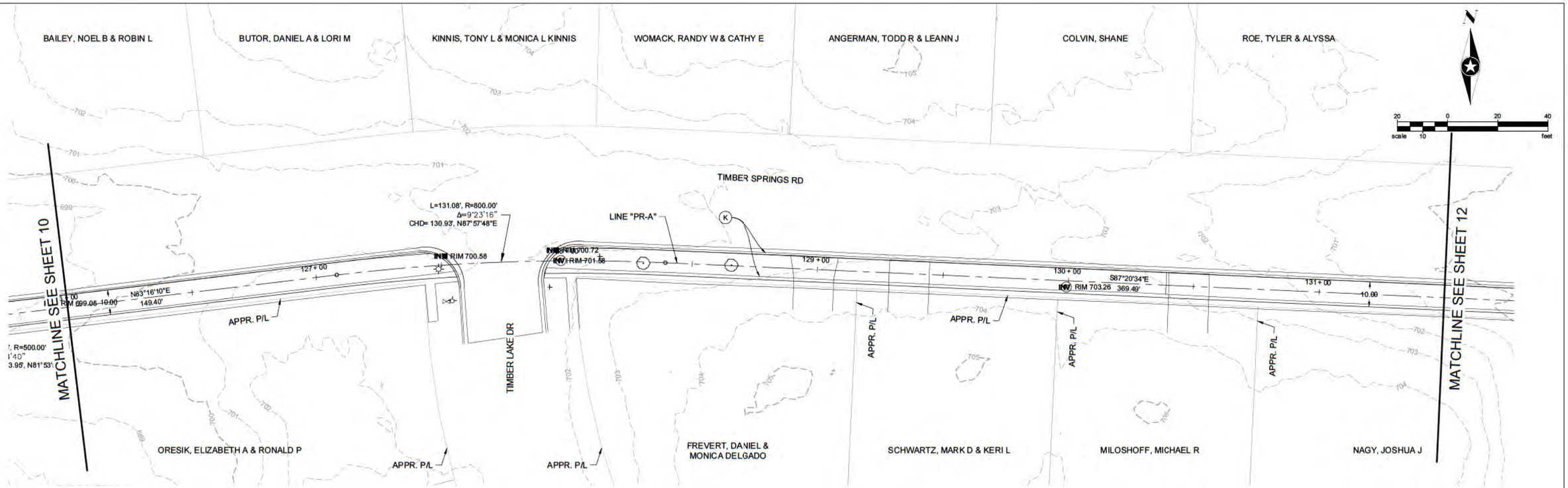
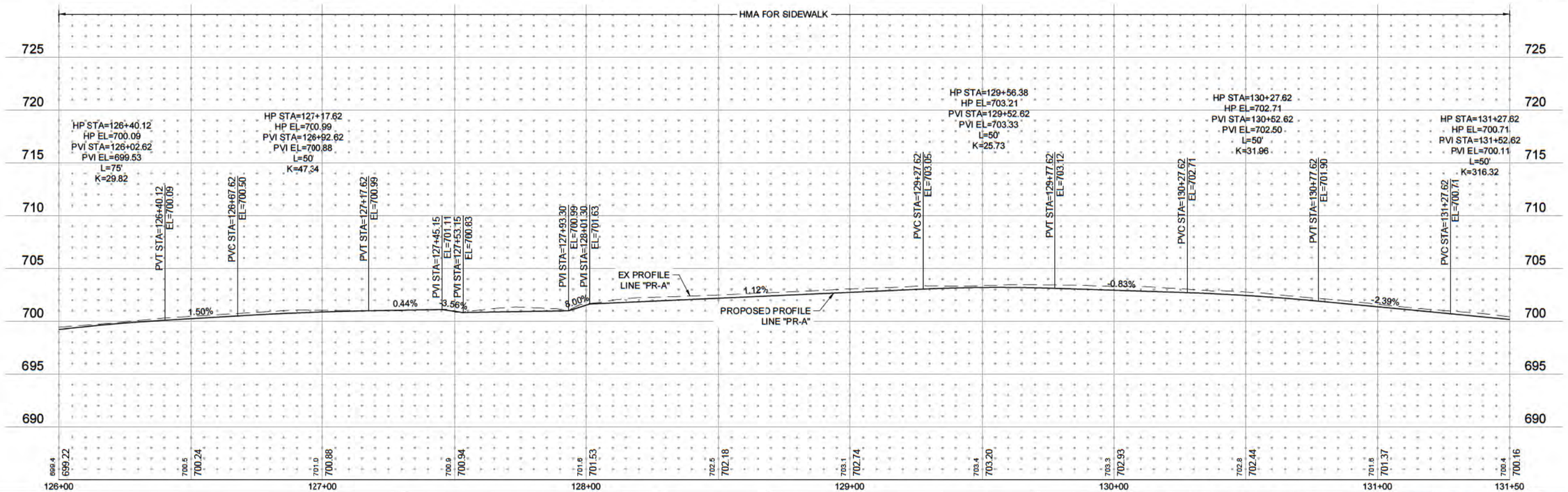
Phone: 219.513.2500

Save: 1/8/2021 6:37 PM pstepanovic Plot: 1/11/2021 9:49 AM X:\KOIL\LOWELL\154504\5-final-dsgn\51-drawings\10-Civil\cad\dwg\sheet\154504PP.dwg

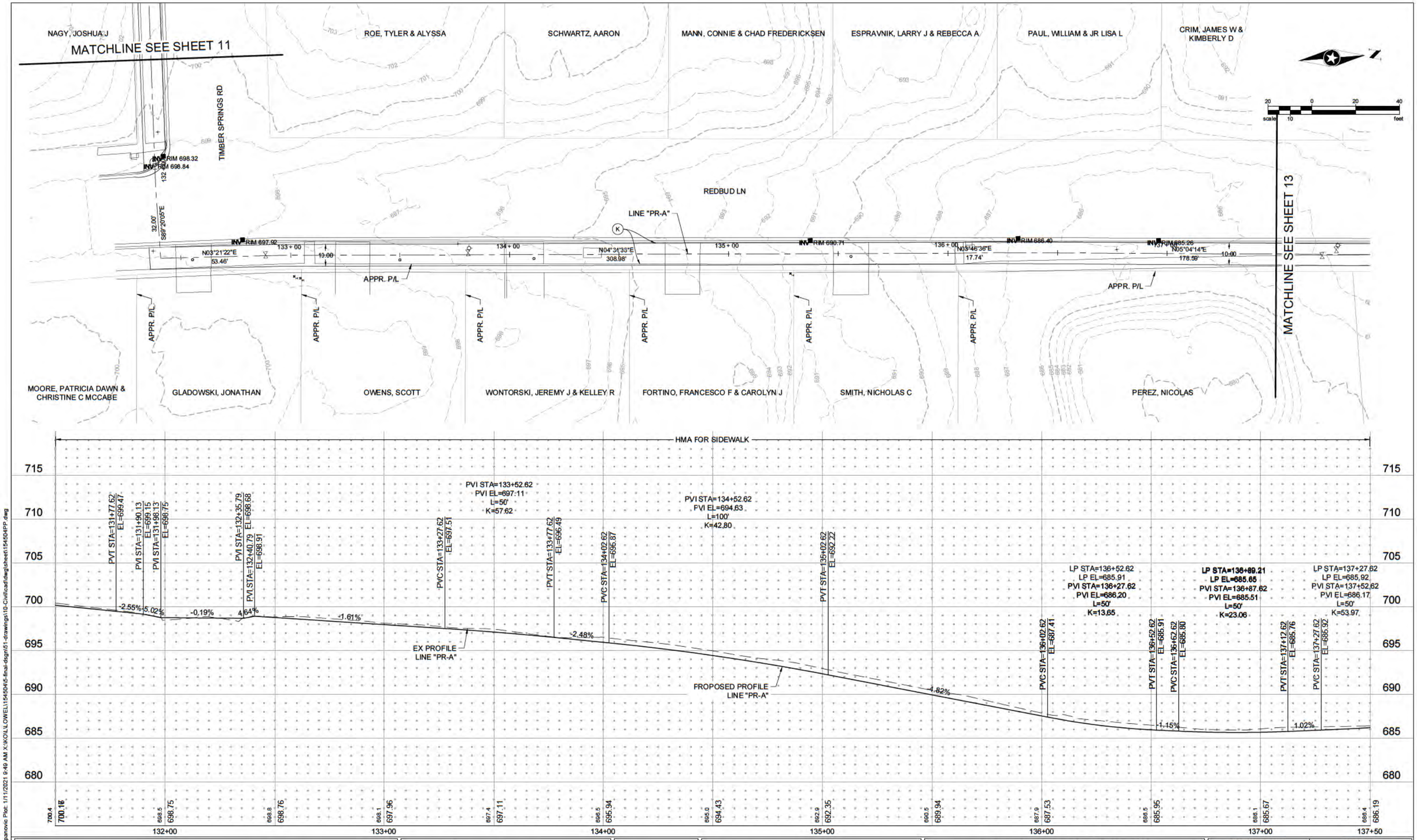




RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 1/8/21 DATE		INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE 1"=20' / BRIDGE FILE ---
DESIGNED: JLS	DRAWN: RSP	PLAN & PROFILE FREEDOM TRAIL	VERTICAL SCALE 1"=5' / DESIGNATION 1802920
CHECKED: JPG	CHECKED: XXX		SURVEY BOOK --- / SHEETS 11 of 30
			CONTRACT 1802920 / PROJECT 154504

SEH of Indiana
9200 Calumet Avenue, Suite N300
Munster, Indiana 46321
Phone: 219.513.2500

Save: 1/8/2021 5:37 PM pstepanovic Plot: 1/11/2021 9:49 AM X:\KOL\LOWEL\1154504\5-final-dsgn\51-drawings\10-Civil\cad\dwg\sheet\1545004PP.dwg



	SEH of Indiana 9200 Calumet Avenue, Suite N300 Munster, Indiana 46321 Phone: 219.513.2500		RECOMMENDED FOR APPROVAL _____ 1/8/21 DESIGN ENGINEER DATE DESIGNED: JLS DRAWN: RSP CHECKED: JPG CHECKED: XXX

INDIANA DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE
FREEDOM TRAIL

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	---
VERTICAL SCALE	DESIGNATION
1"=5'	1802920
SURVEY BOOK	SHEETS
---	12 of 30
CONTRACT	PROJECT
1802920	154504

Save: 1/8/2021 5:37 PM pstepanovic Plot: 1/11/2021 9:49 AM X:\KO\LLOWELL\154504\5-final-dsgn\51-drawings\10-Civil\cad\dwg\sheet\154504PP.dwg

CRIM, JAMES W & KIMBERLY D

GUTTERMAN, JOHN

ACCENT HOMES, INC.

THOMPSON, CHRISTOPHER M

INDEPENDENCE LN

REDBUD LN

MATCHLINE SEE SHEET 12

MATCHLINE SEE SHEET 14

PEREZ, NICOLAS

ACCENT HOMES, INC.

ACCENT HOMES, INC.

LINE "PR-A"

APPR. P/L

APPR. P/L

APPR. P/L

APPR. P/L

INV RIM 687.58

INV RIM 688.00

INV RIM 688.54

INV RIM 687.90

N05°01'28"E
50.08'

N02°13'42"W
10.48'

N00°42'02"E
13.21'

N07°47'17"W
77.54'

N09°22'31"W
309.97'

10.00

10.00

139 + 00

140 + 00

141 + 00

142 + 00

143 + 00

L=34.76', R=200.00'
Δ=9°57'34"
CHD= 34.72', N10°00'15"E

L=28.35', R=50.00'
Δ=32°29'16"
CHD= 27.97', N01°15'36"W

L=13.33', R=50.00'
Δ=15°16'32"
CHD= 13.29', N09°51'58"W

scale 20 0 20 40 feet
10

HMA FOR SIDEWALK

HP STA=138+87.24
HP EL=688.40
PVI STA=138+72.62
PVI EL=688.50
L=50'
K=20.40

LP STA=141+14.92
LP EL=687.30
PVI STA=141+52.62
PVI EL=687.08
L=100'
K=24.17

PVT STA=137+77.62
EL=686.66

PVC STA=138+47.62
EL=688.01

PVT STA=138+97.62
EL=688.37

PVC STA=141+02.62
EL=687.33

PVT STA=142+02.62
EL=688.89

FROPOSED PROFILE
LINE "PR-A"

EX PROFILE
LINE "PR-A"

1.94%

-0.51%

3.63%

715 710 705 700 695 690 685 680

686.7 686.19 687.9 687.09 688.2 688.06 688.1 688.36 688.2 688.11 687.4 687.85 686.9 687.60 686.7 687.34 687.1 687.55 688.9 688.80 690.5 690.61 692.5 692.42

137+50 138+00 139+00 140+00 141+00 142+00 143+00

SEH of Indiana
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Phone: 219.513.2500

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 1/8/21 DATE

DESIGNED: JLS DRAWN: RSP

CHECKED: JPG CHECKED: XXX

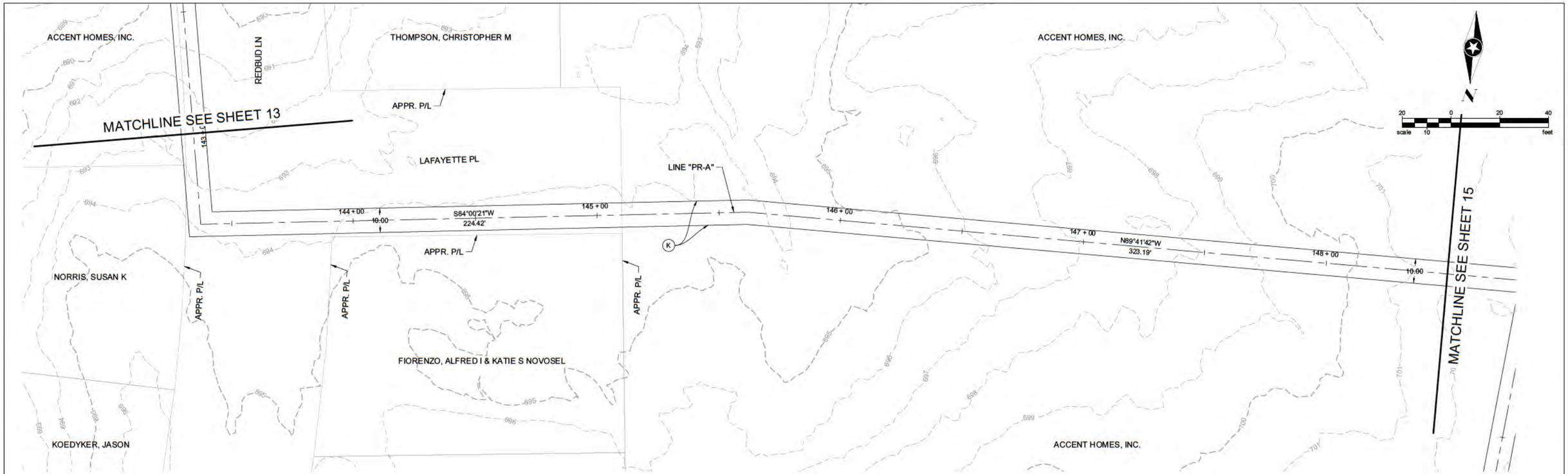
INDIANA DEPARTMENT OF TRANSPORTATION

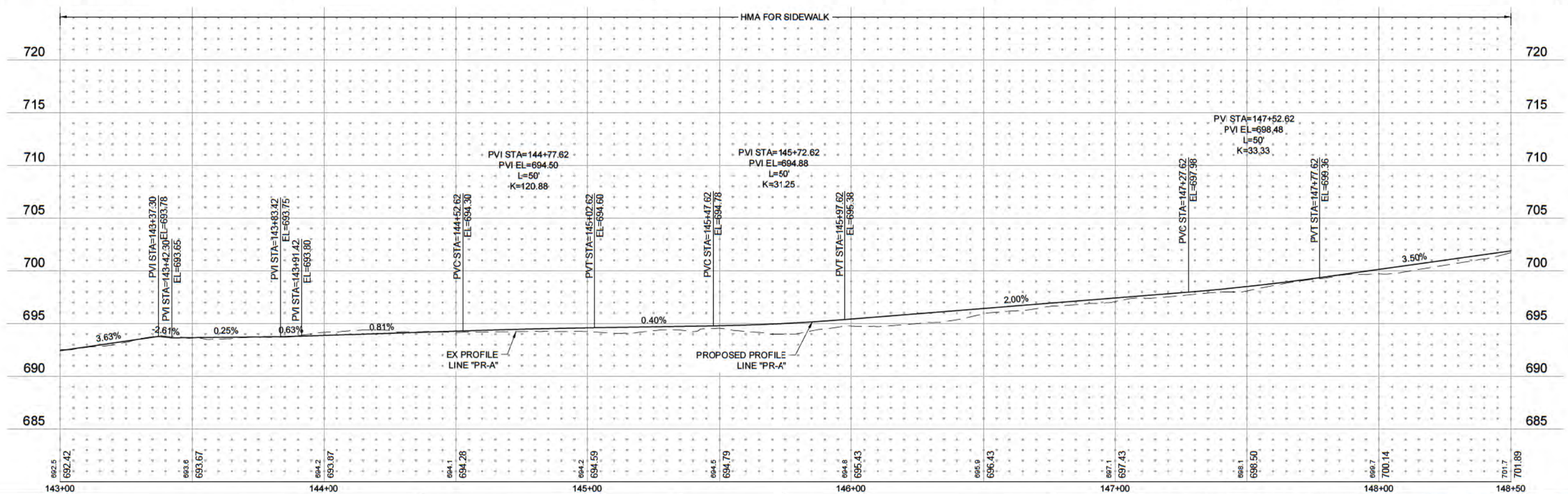
PLAN & PROFILE
FREEDOM TRAIL

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	---
VERTICAL SCALE	DESIGNATION
1"=5'	1802920

SURVEY BOOK	SHEETS
---	13 of 30
CONTRACT	PROJECT
1802920	154504

Save: 1/8/2021 5:37 PM pstepanovic Plot: 1/11/2021 9:49 AM X:\IKO\LL\OWEL\154504\5-final-dsgn\51-drawings\10-Civilcad\dwg\sheet\154504PP.dwg





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RECOMMENDED FOR APPROVAL _____ 1/8/21
DESIGN ENGINEER DATE

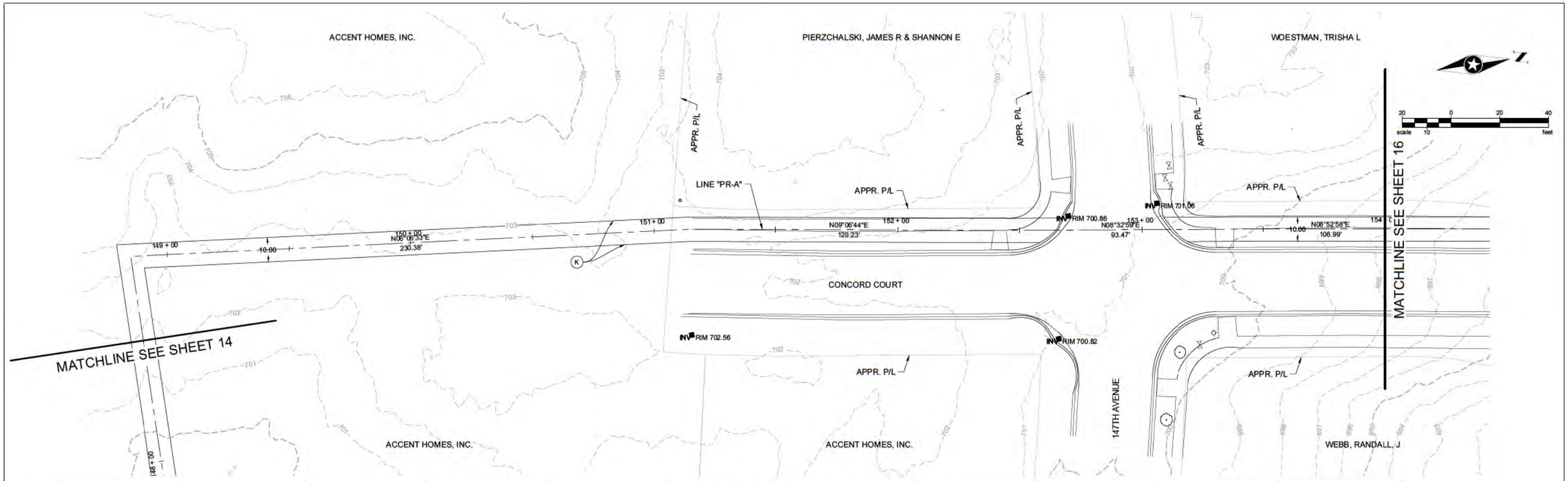
DESIGNED: JLS DRAWN: RSP
CHECKED: JPG CHECKED: XXX

INDIANA DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE
FREEDOM TRAIL

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	---
VERTICAL SCALE	DESIGNATION
1"=5'	1802920
SURVEY BOOK	SHEETS
---	14 of 30
CONTRACT	PROJECT
1802920	154504

Save: 1/8/2021 5:37 PM pstepanovic Plot: 1/11/2021 9:50 AM X:\KOIL\LOWELL\154504\5-final-dsgn\51-drawings\10-Civil\cad\dwg\sheet\154504PP.dwg



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Phone: 219.513.2500

RECOMMENDED FOR APPROVAL _____ 1/8/21
DESIGN ENGINEER DATE

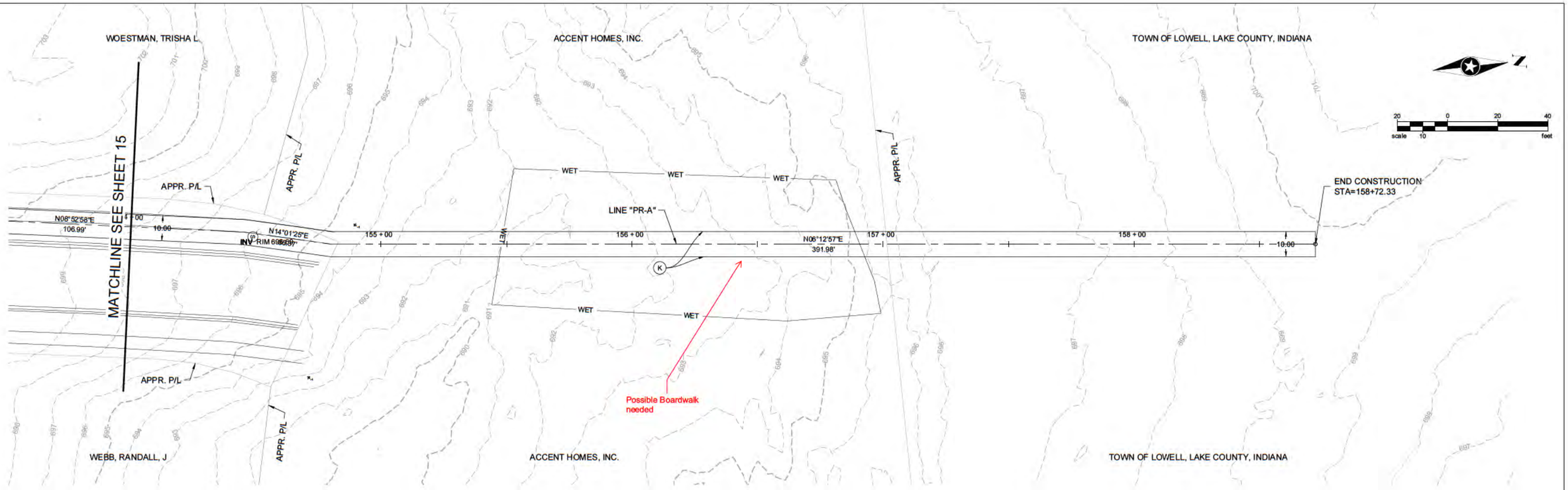
DESIGNED: JLS DRAWN: RSP
CHECKED: JPG CHECKED: XXX

INDIANA DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE
FREEDOM TRAIL

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	---
VERTICAL SCALE	DESIGNATION
1"=5'	1802920
SURVEY BOOK	SHEETS
---	15 of 30
CONTRACT	PROJECT
1802920	154504

Save: 1/8/2021 5:37 PM pstepanovic Plot: 1/1/1/2021 9:50 AM X:\KOL\LOWEL\1154504\5-final-dsgn\51-drawings\10-Civil\cad\dwg\sheet\1545004PP.dwg



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RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 1/8/21 DATE

DESIGNED: JLS | DRAWN: RSP

CHECKED: JPG | CHECKED: XXX

INDIANA DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE
FREEDOM TRAIL

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	---
VERTICAL SCALE	DESIGNATION
1"=5'	1802920
SURVEY BOOK	SHEETS
---	16 of 30
CONTRACT	PROJECT
1802920	154504

Legend:

- Proposed Alignment
- Proposed RW
- Existing Property Lines

N

100 0 100 200
scale 50 feet

SEH

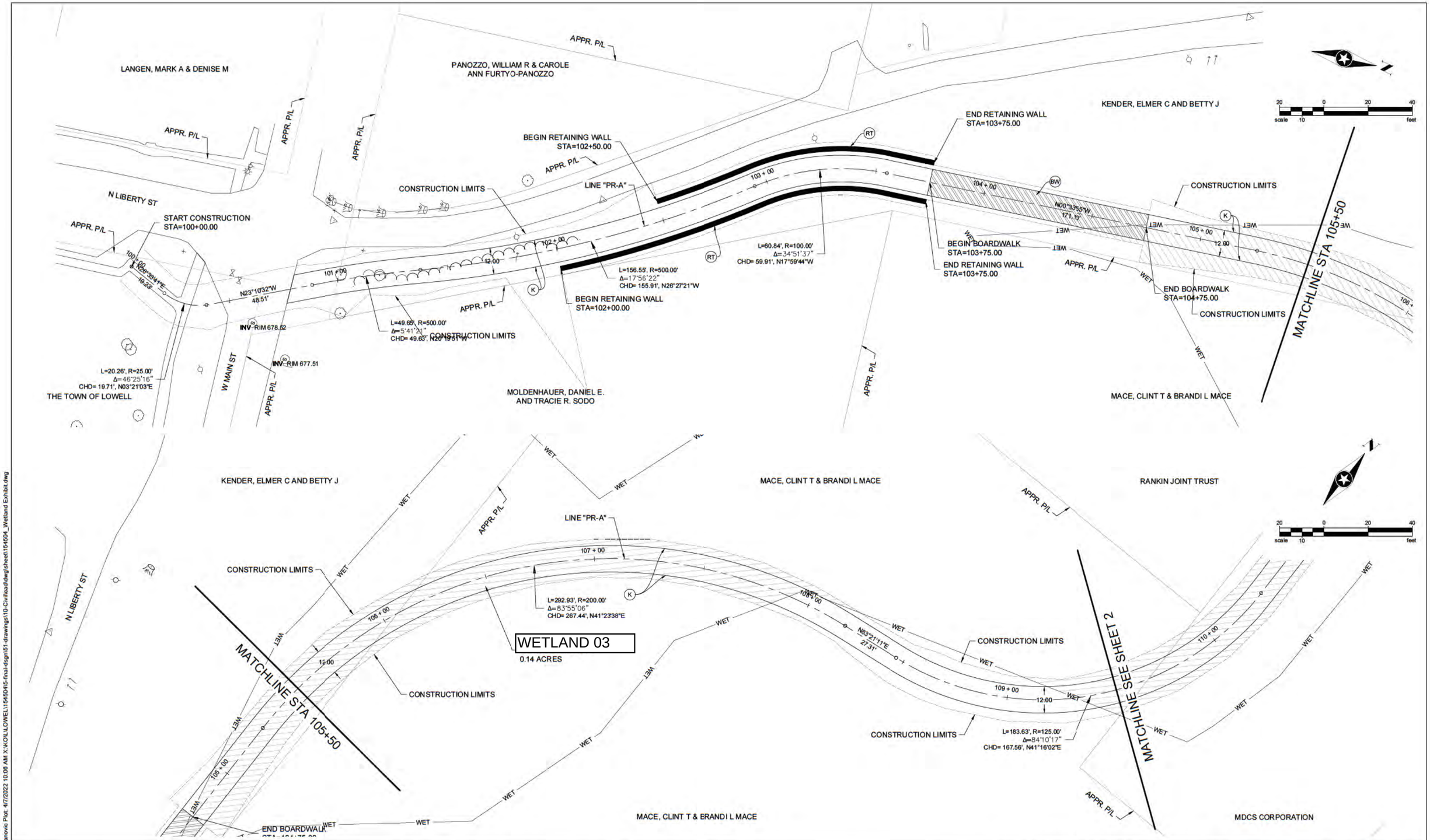
FILE NO.
154504

DATE:
05/04/2022

PROPOSED RW
FREEDOM TRAIL
DES NO. 1802920

EXHIBIT
NO. 2

Save: 5/4/2022 4:43 PM rpugh Plot: 5/4/2022 4:43 PM X:\KO\LLOWELL\154504\5-final-dsgn\51-drawings\10-Civil\cad\dwg\exhibit\154504 - RW Exhibit.dwg



LEGEND

EXISTING WETLAND LIMITS

WETLAND IMPACT AREA

SEH of Indiana
9200 Calumet Avenue, Suite N300
Munster, Indiana 46321
Phone: 219.513.2500

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 1/8/21 DATE

DESIGNED: JLS DRAWN: RSP

CHECKED: JPG CHECKED: XXX

INDIANA DEPARTMENT OF TRANSPORTATION

WETLAND IMPACT EXHIBIT
FREEDOM TRAIL

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	---
VERTICAL SCALE	DESIGNATION
1"=5'	1802920
SURVEY BOOK	SHEETS
---	1 of 6
CONTRACT	PROJECT
1802920	154504

Save: 4/7/2022 10:04 AM pstepanovic Plot: 4/7/2022 10:06 AM X:\KOK\LOWELL\154504\5-final-dsgn\51-drawings\10-Civil\cad\dwg\sheet\154504_Wetland Exhibit.dwg

MACE, CLINT T & BRANDI L MACE

RANKIN JOINT TRUST

RANKIN JOINT TRUST

ROBBINS RUN PROPERTIES LLC

KIECHLE, FREDERICK O & LINDA G

MATCHLINE SEE SHEET 1

MATCHLINE STA 115+00

WETLAND 03

0.19 ACRES

CONSTRUCTION LIMITS

CONSTRUCTION LIMITS

CONSTRUCTION LIMITS

CONSTRUCTION LIMITS

APPR. P/L

LINE "PR-A"

L=93.19', R=100.00'
Δ=53°23'45"
CHD= 89.86', N27°19'59"W

N00°38'07"W
344.40'

MDCS CORPORATION

DAY INVESTMENTS LLC

KIECHLE, FREDERICK O & LINDA G

SANDOR, CHARLES TRUSTEE

WETLAND 02

UNT01

MATCHLINE STA 115+00

MATCHLINE SEE SHEET 3

L=94.30', R=100.00'
Δ=54°01'52"
CHD= 90.85', N27°00'56"W

L=74.06', R=100.00'
Δ=42°25'57"
CHD= 72.38', N20°59'30"W

L=39.97', R=100.00'
Δ=22°53'56"
CHD= 39.70', N53°39'28"W

N42°12'29"W
66.65'

L=102.36', R=100.00'
Δ=58°38'53"
CHD= 97.95', N35°47'00"W

N06°27'33"W
75.93'

L=43.40', R=75.00'
Δ=33°09'05"
CHD= 42.79', N23°02'06"W

N39°36'37"W
63.11'

N39°36'37"W
80.09'

BEGIN BOARDWALK
STA=120+00.00

DAY INVESTMENTS LLC

PRUIM, KARI

NAPIWOCKI, WALLACE & JOAN

BORST, DAVID

BROWN, DANIEL & STACY R BROWN

LOITZ, LINDA M

STONEBRAKER, ADAM S & MATTIE L

LEGEND

WET EXISTING WETLAND LIMITS

WETLAND IMPACT AREA

SEH of Indiana
9200 Calumet Avenue, Suite N300
Munster, Indiana 46321
Phone: 219.513.2500

RECOMMENDED FOR APPROVAL _____ 1/8/21
DESIGN ENGINEER DATE

DESIGNED: JLS DRAWN: RSP

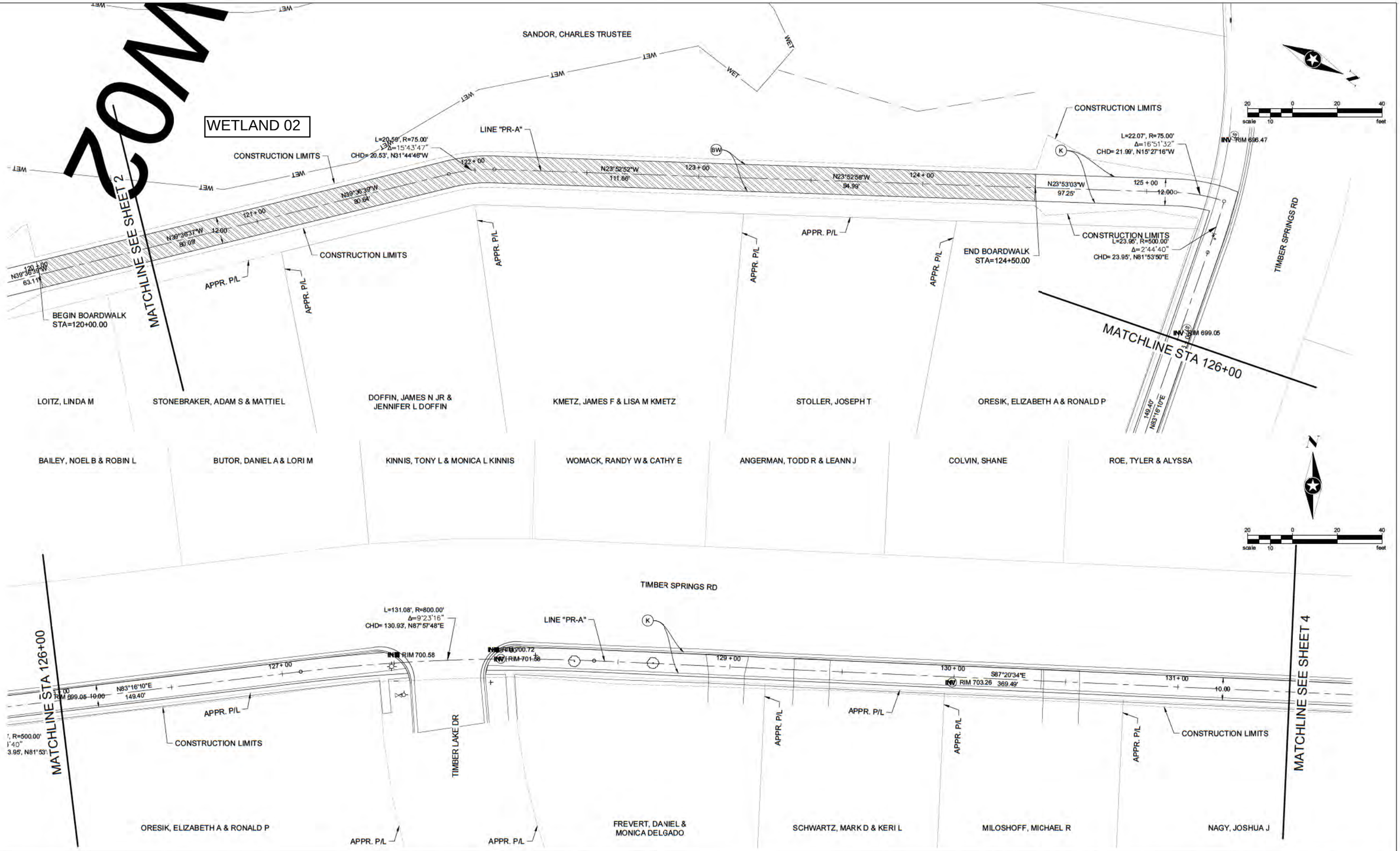
CHECKED: JPG CHECKED: XXX

INDIANA DEPARTMENT OF TRANSPORTATION

WETLAND IMPACT EXHIBIT
FREEDOM TRAIL

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	---
VERTICAL SCALE	DESIGNATION
1"=5'	1802920
SURVEY BOOK	SHEETS
---	2 of 6
CONTRACT	PROJECT
1802920	154504

Save: 4/7/2022 10:04 AM pstepanovic Plot: 4/7/2022 10:06 AM X:\KY\LOUWEL\154504\5-final-dsgn\51-drawings\10-Civil\cad\dwg\sheet\154504_Wetland Exhibit.dwg



LEGEND

WET EXISTING WETLAND LIMITS

WETLAND IMPACT AREA

SEH of Indiana
9200 Calumet Avenue, Suite N300
Munster, Indiana 46321
Phone: 219.513.2500

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 1/8/21 DATE

DESIGNED: JLS DRAWN: RSP

CHECKED: JPG CHECKED: XXX

INDIANA DEPARTMENT OF TRANSPORTATION

WETLAND IMPACT EXHIBIT
FREEDOM TRAIL

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	---
VERTICAL SCALE	DESIGNATION
1"=5'	1802920
SURVEY BOOK	SHEETS
---	3 of 6
CONTRACT	PROJECT
1802920	154504

Save: 4/7/2022 10:04 AM pstepanovic Plot: 4/7/2022 10:08 AM X:\KOL\LOWELL\154504\5-final-dsgn\51-drawings\10-Civil\cad\dwg\sheet\154504_Wetland Exhibit.dwg

NAGY, JOSHUA J

MATCHLINE SEE SHEET 3

ROE, TYLER & ALYSSA

SCHWARTZ, AARON

MANN, CONNIE & CHAD FREDERICKSEN

ESPRAVNIK, LARRY J & REBECCA A

PAUL, WILLIAM & JR LISA L

CRIM, JAMES W & KIMBERLY D

TIMBER SPRINGS RD

INV RIM 698.32

INV RIM 698.84

132

32.00'

S89°20'05"E

REDBUD LN

LINE "PR-A"

INV RIM 697.92

133 + 00

N03°21'22"E

53.46'

10.00

134 + 00

N04°34'33"E

308.98'

135 + 00

INV RIM 690.71

136 + 00

N03°46'36"E

17.74'

INV RIM 686.40

137 + 00

N05°04'14"E

178.59'

10.00

APPR. P/L

CONSTRUCTION LIMITS

APPR. P/L

APPR. P/L

APPR. P/L

APPR. P/L

APPR. P/L

APPR. P/L

CONSTRUCTION LIMITS

MATCHLINE STA 137+50

MOORE, PATRICIA DAWN & CHRISTINE C MCCABE

GLADOWSKI, JONATHAN

OWENS, SCOTT

WONTORSKI, JEREMY J & KELLEY R

FORTINO, FRANCESCO F & CAROLYN J

SMITH, NICHOLAS C

PEREZ, NICOLAS

20 0 20 40

scale 10 feet

CRIM, JAMES W & KIMBERLY D

GUTTERMAN, JOHN

INDEPENDENCE LN

ACCENT HOMES, INC.

THOMPSON, CHRISTOPHER M

MATCHLINE STA 137+50

26

4'14"E

59'

10.00

INV RIM 687.58

INV RIM 687.90

INV RIM 688.64

N05°01'26"E

50.08'

APPR. P/L

CONSTRUCTION LIMITS

APPR. P/L

139 + 00

INV RIM 686.00

N02°13'42"W

10.48'

N00°42'02"E

13.21'

140 + 00

N07°47'17"W

77.54'

141 + 00

N09°22'31"W

309.97'

142 + 00

143 + 00

10.00

APPR. P/L

CONSTRUCTION LIMITS

APPR. P/L

MATCHLINE SEE SHEET 5

L=34.76', R=200.00'
Δ=9°57'34"
CHD= 34.72', N10°00'15"E

L=28.35', R=50.00'
Δ=32°29'16"
CHD= 27.97', N01°15'36"W

L=13.33', R=50.00'
Δ=15°16'32"
CHD= 13.29', N09°51'58"W

PEREZ, NICOLAS

ACCENT HOMES INC.

ACCENT HOMES, INC.

20 0 20 40

scale 10 feet

LEGEND

EXISTING WETLAND LIMITS

WETLAND IMPACT AREA

SEH of Indiana
9200 Calumet Avenue, Suite N300
Munster, Indiana 46321
Phone: 219.513.2500

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 1/8/21 DATE

DESIGNED: JLS DRAWN: RSP

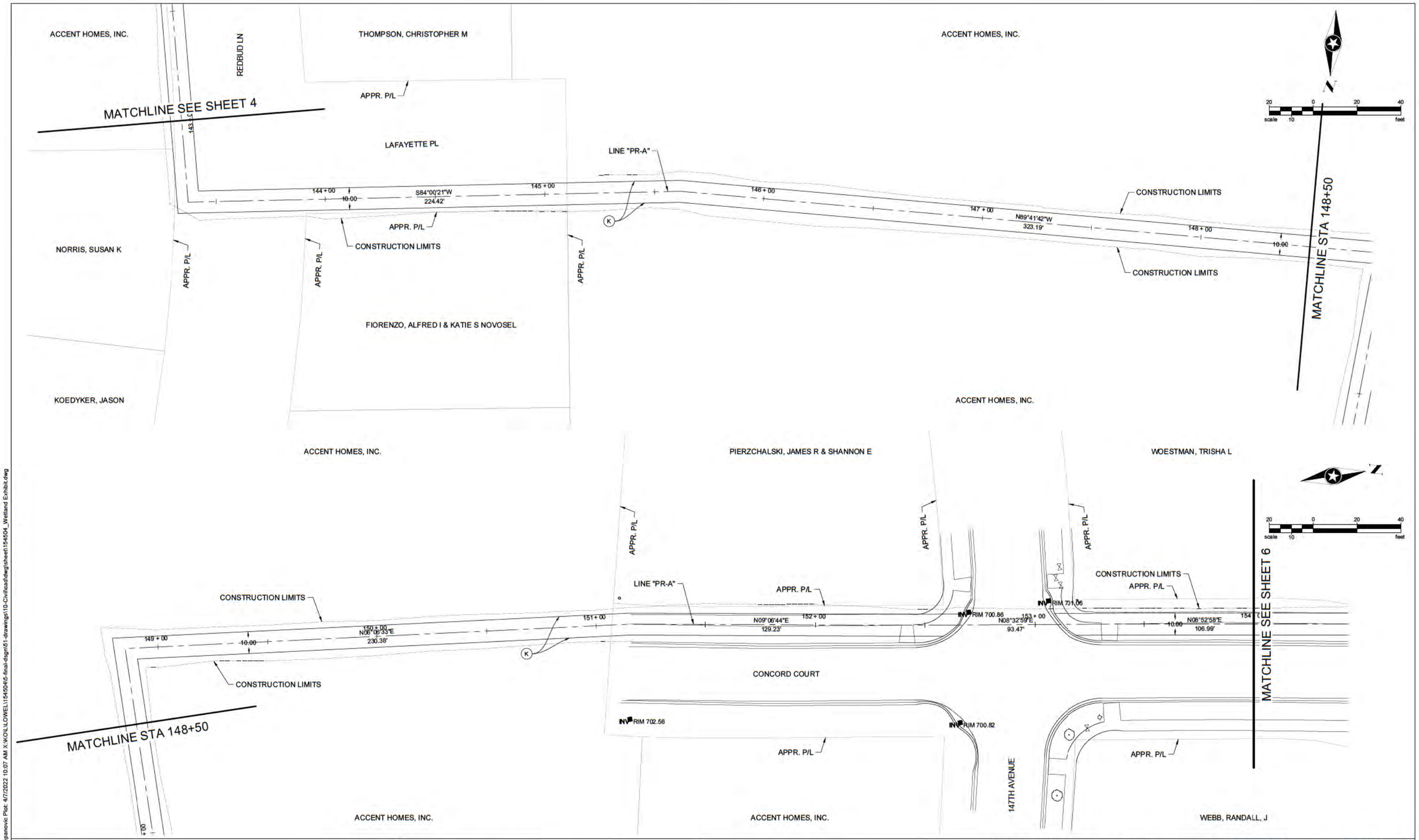
CHECKED: JPG CHECKED: XXX

INDIANA DEPARTMENT OF TRANSPORTATION

WETLAND IMPACT EXHIBIT
FREEDOM TRAIL

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	- - -
VERTICAL SCALE	DESIGNATION
1"=5'	1802920
SURVEY BOOK	SHEETS
- - -	4 of 6
CONTRACT	PROJECT
1802920	154504

Save: 4/7/2022 10:04 AM pstepanovic Plot: 4/7/2022 10:06 AM X:\KOVLOWEL\154504\5-final-dsgn\51-drawings\110-Civil\cad\dwg\sheet\154504_Wetland Exhibit.dwg



LEGEND

EXISTING WETLAND LIMITS — WET —

WETLAND IMPACT AREA

SEH of Indiana
9200 Calumet Avenue, Suite N300
Munster, Indiana 46321
Phone: 219.513.2500

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER — 1/8/21 DATE

DESIGNED: JLS | DRAWN: RSP

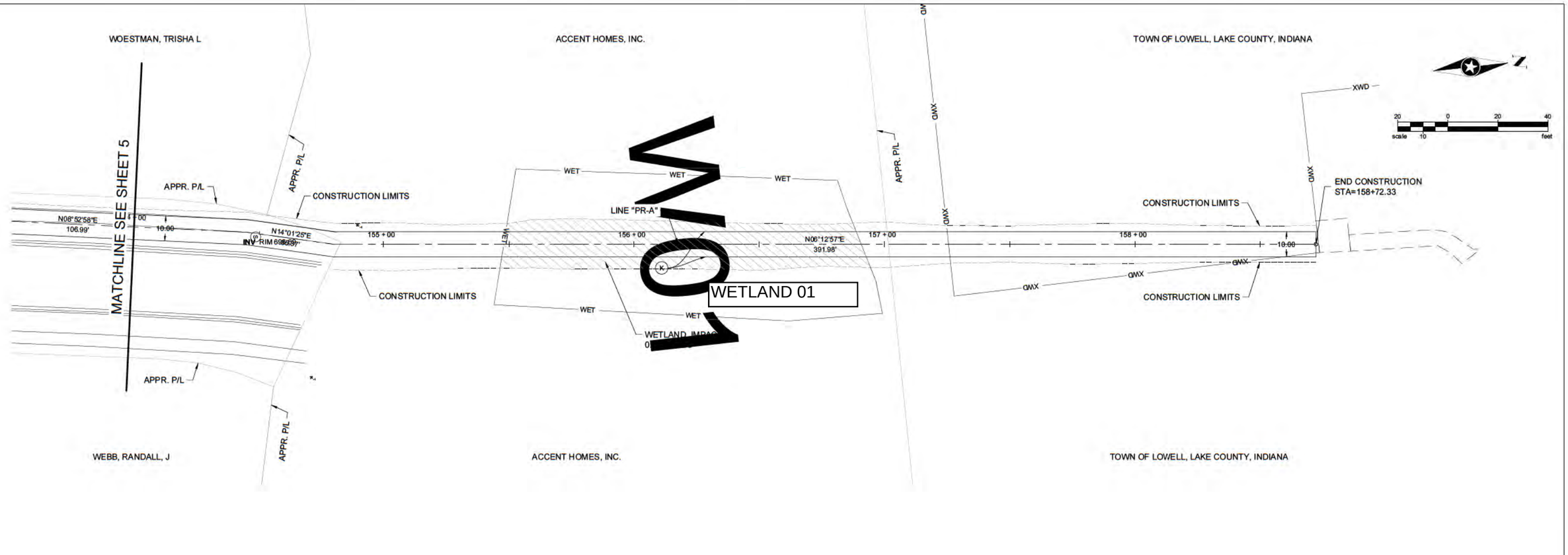
CHECKED: JPG | CHECKED: XXX

INDIANA DEPARTMENT OF TRANSPORTATION

WETLAND IMPACT EXHIBIT
FREEDOM TRAIL

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	---
VERTICAL SCALE	DESIGNATION
1"=5'	1802920
SURVEY BOOK	SHEETS
---	5 of 6
CONTRACT	PROJECT
1802920	154504

Save: 4/7/2022 10:04 AM pstepanovic Plot: 4/7/2022 10:07 AM X:\KOK\LOWELL\1545045-final-dsgn\51-drawings\10-Civil\cad\dwg\sheet\154504_Wetland Exhibit.dwg



LEGEND

WET EXISTING WETLAND LIMITS

WETLAND IMPACT AREA

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Munster, Indiana 46321
Phone: 219.513.2500

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 1/8/21 DATE

DESIGNED: JLS DRAWN: RSP

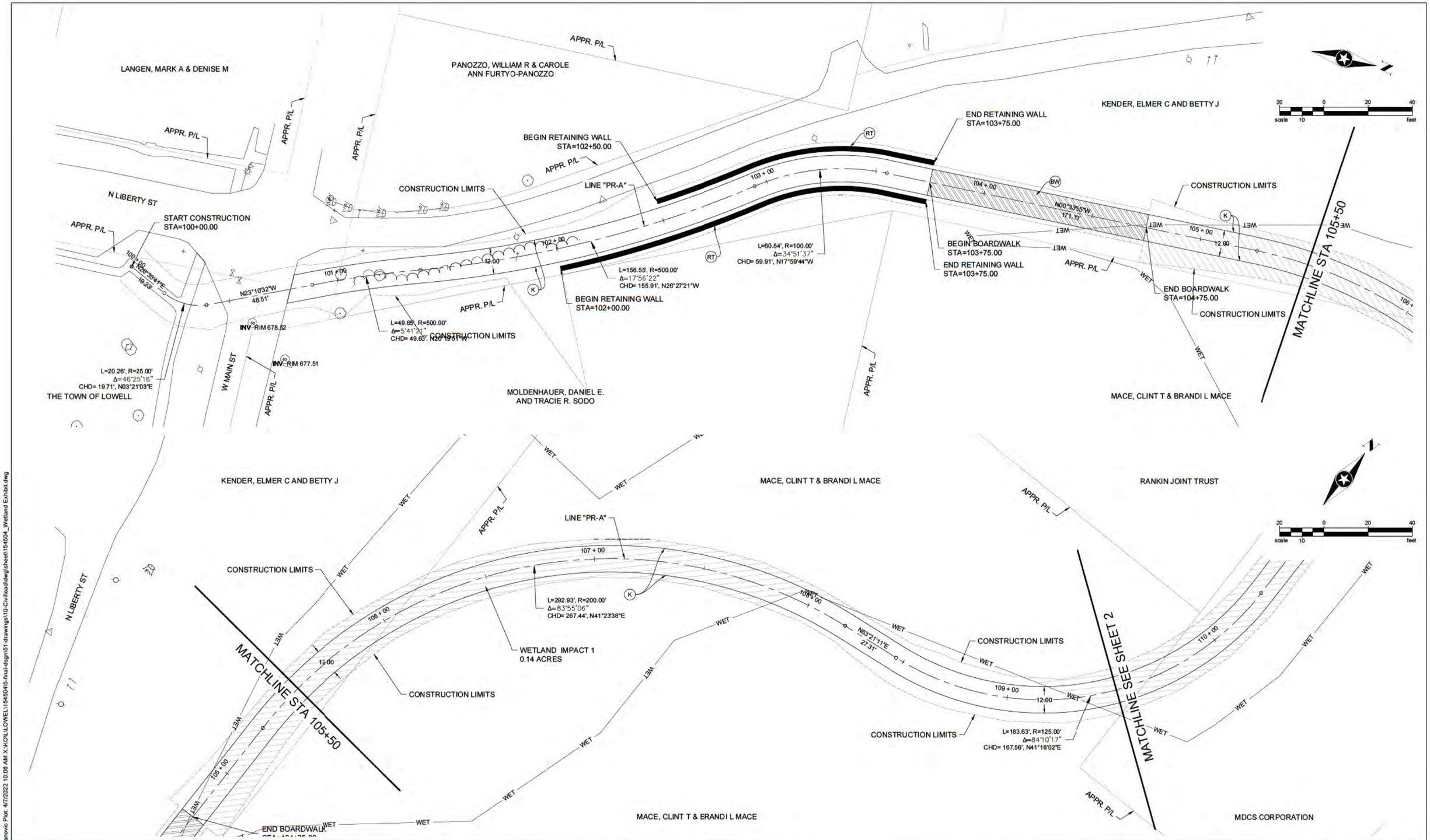
CHECKED: JPG CHECKED: XXX

INDIANA DEPARTMENT OF TRANSPORTATION

WETLAND IMPACT EXHIBIT
FREEDOM TRAIL

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	- - -
VERTICAL SCALE	DESIGNATION
1"=5'	1802920
SURVEY BOOK	SHEETS
- - -	6 of 6
CONTRACT	PROJECT
1802920	154504

Save: 4/7/2022 10:04 AM pstepanovic Plot: 4/7/2022 10:07 AM X:\KOVL\LOWEL\154504\5-final-dsgn\51-drawings\10-Civil\cad\dwg\sheet\154504_Wetland Exhibit.dwg



LEGEND

WET EXISTING WETLAND LIMITS

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WETLAND IMPACT EXHIBIT
FREEDOM TRAIL

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	---
VERTICAL SCALE	DESIGNATION
1"=5'	1802920
SURVEY BOOK	SHEETS
---	1 of 6
CONTRACT	PROJECT
1802920	154504

Save: 4/7/2022 10:04 AM pstepanovic Plot: 4/7/2022 10:06 AM X:\KOK\LOWELL\154504\5-final-dsgn\51-drawings\10-Civil\cad\dwg\sheet\154504_Wetland Exhibit.dwg

MACE, CLINT T & BRANDI L MACE

RANKIN JOINT TRUST

RANKIN JOINT TRUST

ROBBINS RUN PROPERTIES LLC

KIECHLE, FREDERICK O & LINDA G

MATCHLINE SEE SHEET 1

MATCHLINE STA 115+00

APPR. P/L

WET

CONSTRUCTION LIMITS

WETLAND IMPACT 2
0.19 ACRES

LINE "PR-A"

N00°38'07"W
344.40'

L=93.19', R=100.00'
Δ=53°23'45"
CHD= 89.86', N27°19'59"W

12.00

109 + 00

110 + 00

111 + 00

112 + 00

113 + 00

114 + 00

115 + 00

MDCS CORPORATION

DAY INVESTMENTS LLC

KIECHLE, FREDERICK O & LINDA G

SANDOR, CHARLES TRUSTEE

MATCHLINE STA 115+00

MATCHLINE SEE SHEET 3

L=94.30', R=100.00'
Δ=54°01'52"
CHD= 90.85', N27°00'56"W

L=74.06', R=100.00'
Δ=42°25'57"
CHD= 72.38', N20°59'30"W

L=39.97', R=100.00'
Δ=22°53'56"
CHD= 39.70', N53°39'28"W

L=102.36', R=100.00'
Δ=58°38'53"
CHD= 97.95', N35°47'00"W

L=43.40', R=75.00'
Δ=33°09'05"
CHD= 42.79', N23°02'06"W

N42°12'29"W
66.65'

N06°27'33"W
75.93'

N39°36'37"W
63.11'

N39°36'37"W
80.09'

116 + 00

117 + 00

118 + 00

119 + 00

120 + 00

BW

BEGIN BOARDWALK
STA=120+00.00

UNT01

DAY INVESTMENTS LLC

PRUIM, KARI

NAPIWOCKI, WALLACE & JOAN

BORST, DAVID

BROWN, DANIEL & STACY R BROWN

LOITZ, LINDA M

STONEBRAKER, ADAM S & MATTIE L

20 0 20 40
scale 10 feet

LEGEND

WET — EXISTING WETLAND LIMITS

WETLAND IMPACT AREA

SEH of Indiana
9200 Calumet Avenue, Suite N300
Munster, Indiana 46321
Phone: 219.513.2500

RECOMMENDED FOR APPROVAL _____ 1/8/21
DESIGN ENGINEER DATE

DESIGNED: JLS DRAWN: RSP

CHECKED: JPG CHECKED: XXX

INDIANA DEPARTMENT OF TRANSPORTATION

WETLAND IMPACT EXHIBIT
FREEDOM TRAIL

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	---
VERTICAL SCALE	DESIGNATION
1"=5'	1802920
SURVEY BOOK	SHEETS
---	2 of 6
CONTRACT	PROJECT
1802920	154504

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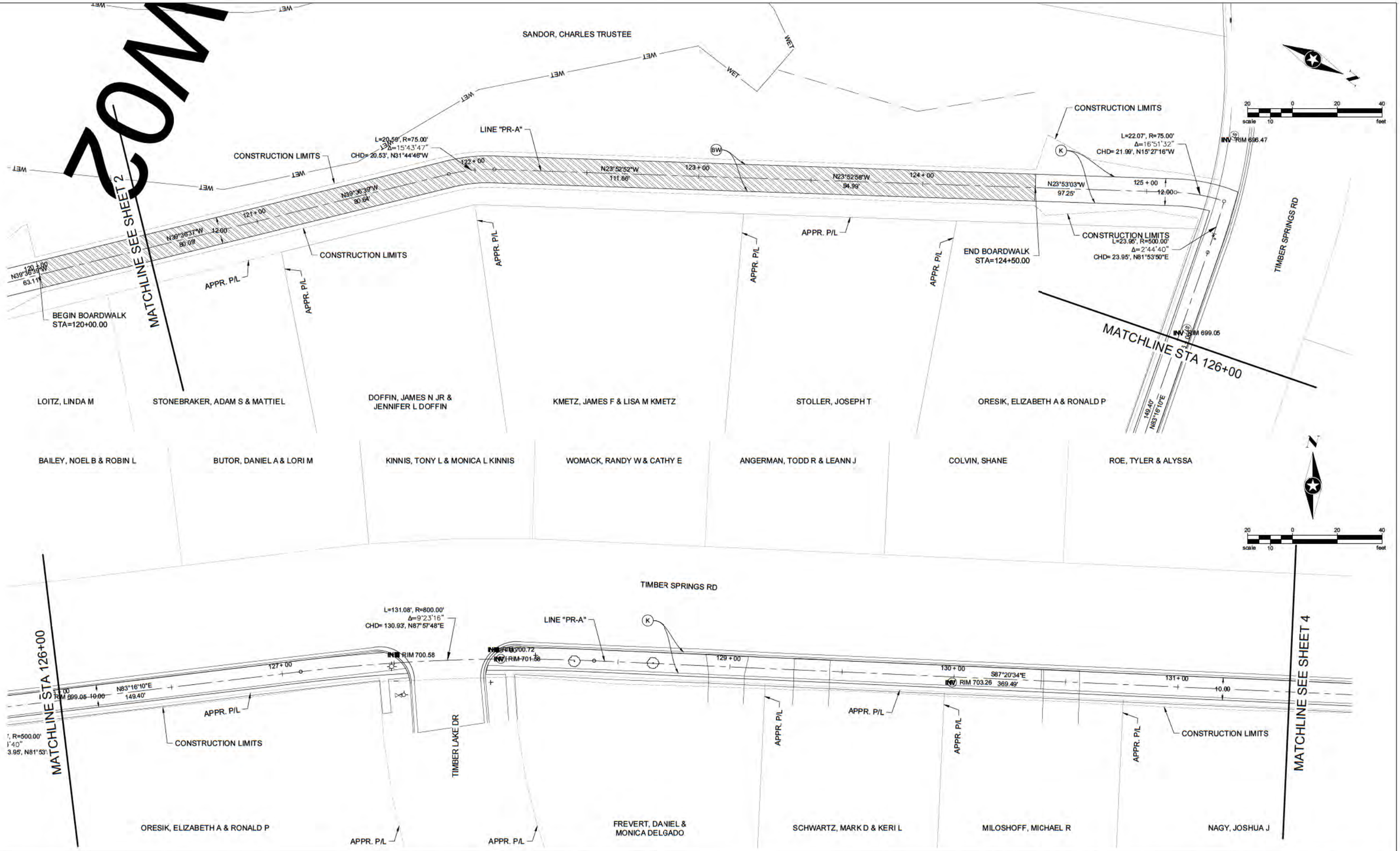

LEGEND

WET — EXISTING WETLAND LIMITS

WETLAND IMPACT AREA

SEH of Indiana
9200 Calumet Avenue, Suite N300
Munster, Indiana 46321
Phone: 219.513.2500

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 1/8/21 DATE

DESIGNED: JLS DRAWN: RSP

CHECKED: JPG CHECKED: XXX

INDIANA DEPARTMENT OF TRANSPORTATION

WETLAND IMPACT EXHIBIT
FREEDOM TRAIL

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	---
VERTICAL SCALE	DESIGNATION
1"=5'	1802920
SURVEY BOOK	SHEETS
---	3 of 6
CONTRACT	PROJECT
1802920	154504

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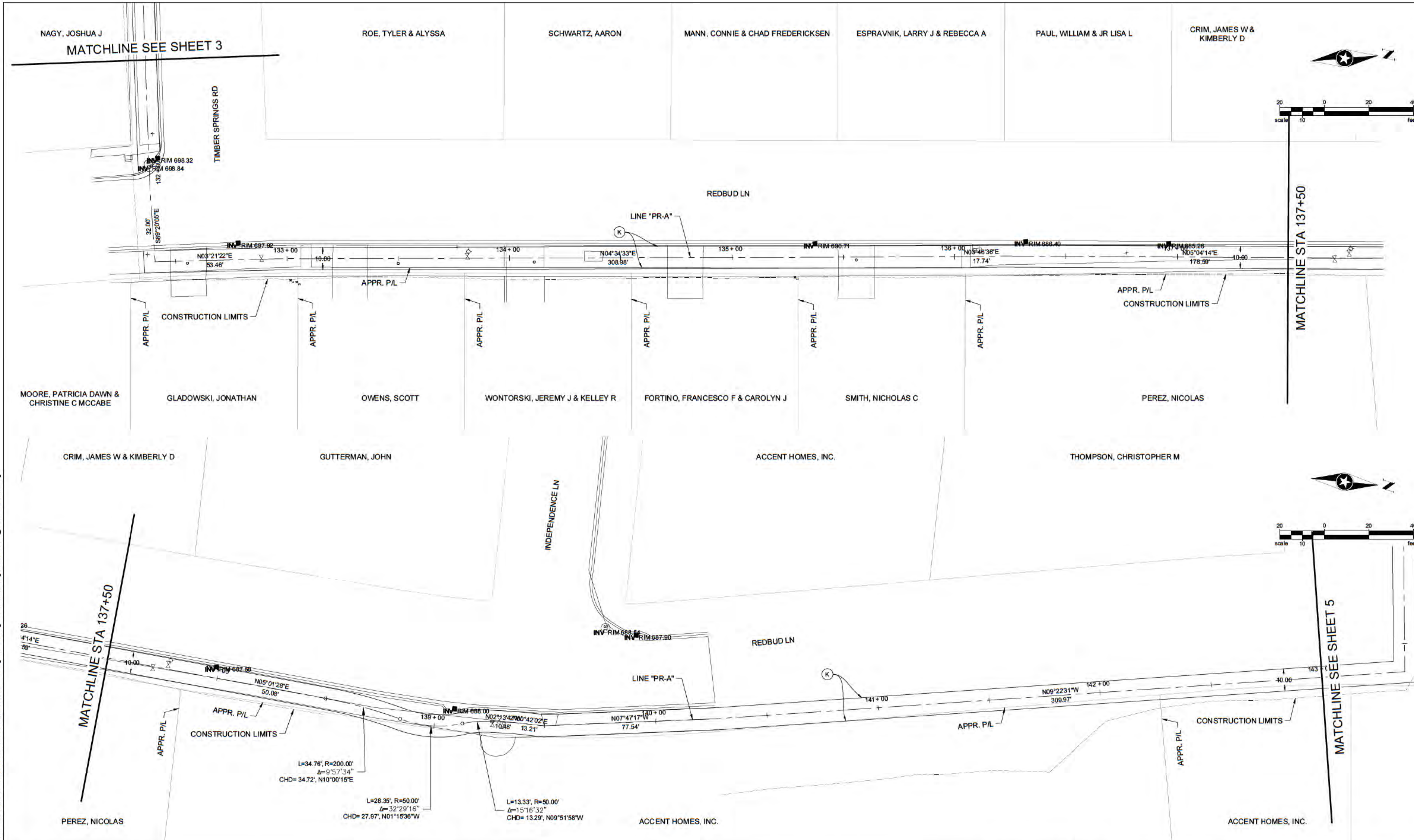

LEGEND

EXISTING WETLAND LIMITS

WETLAND IMPACT AREA

SEH of Indiana
9200 Calumet Avenue, Suite N300
Munster, Indiana 46321
Phone: 219.513.2500

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — DATE 1/8/21

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CHECKED:	JPG	CHECKED:	XXX

INDIANA DEPARTMENT OF TRANSPORTATION

WETLAND IMPACT EXHIBIT
FREEDOM TRAIL

HORIZONTAL SCALE	BRIDGE FILE
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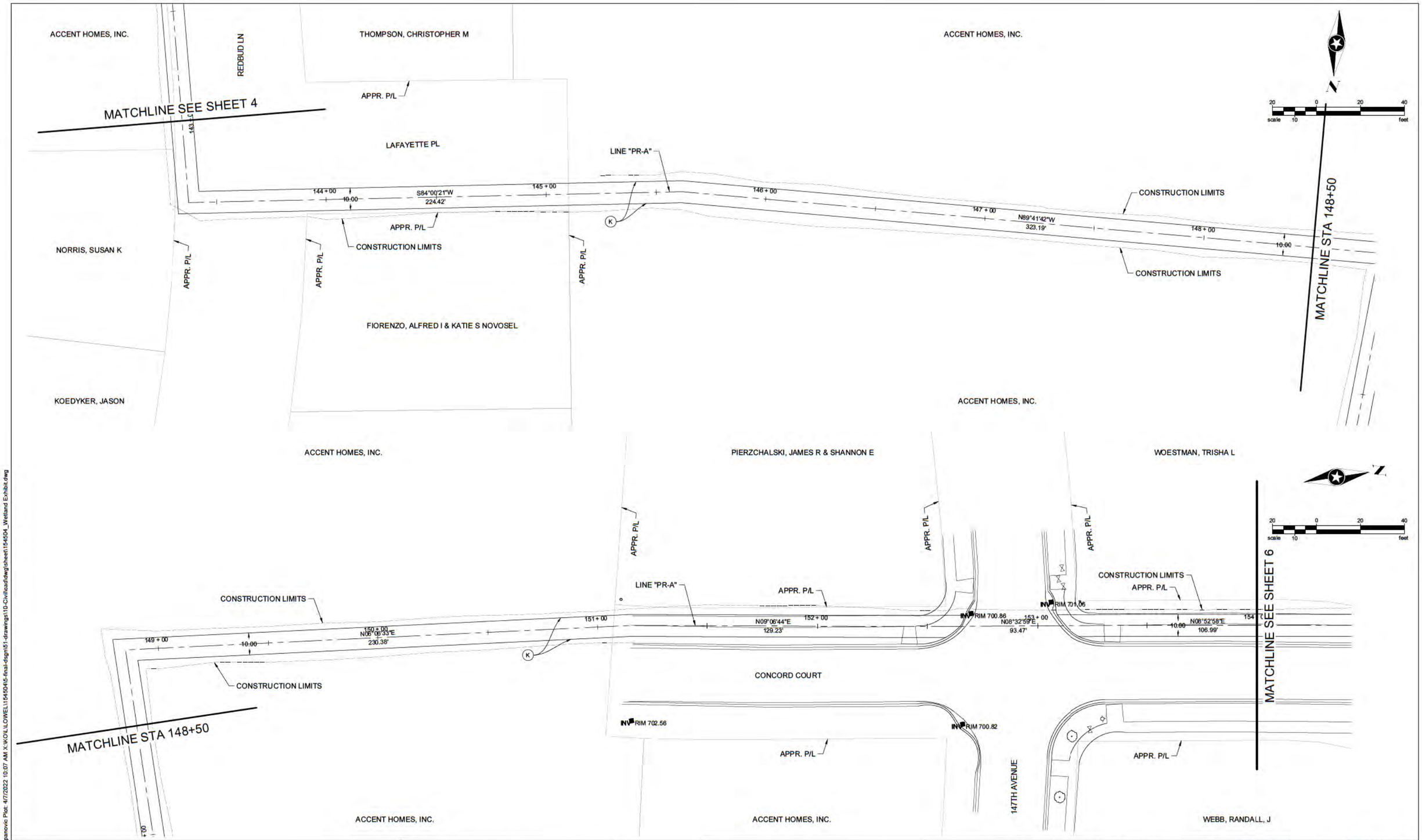
VERTICAL SCALE	DESIGNATION
1"=5'	1802920
SURVEY BOOK	SHEETS
- - -	4 of 6
CONTRACT	PROJECT
1802920	154504



LEGEND

EXISTING WETLAND LIMITS — WET —

WETLAND IMPACT AREA

SEH of Indiana
9200 Calumet Avenue, Suite N300
Munster, Indiana 46321
Phone: 219.513.2500

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER — 1/8/21 DATE

DESIGNED: JLS | DRAWN: RSP

CHECKED: JPG | CHECKED: XXX

INDIANA DEPARTMENT OF TRANSPORTATION

WETLAND IMPACT EXHIBIT
FREEDOM TRAIL

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	- - -
VERTICAL SCALE	DESIGNATION
1"=5'	1802920
SURVEY BOOK	SHEETS
- - -	5 of 6
CONTRACT	PROJECT
1802920	154504

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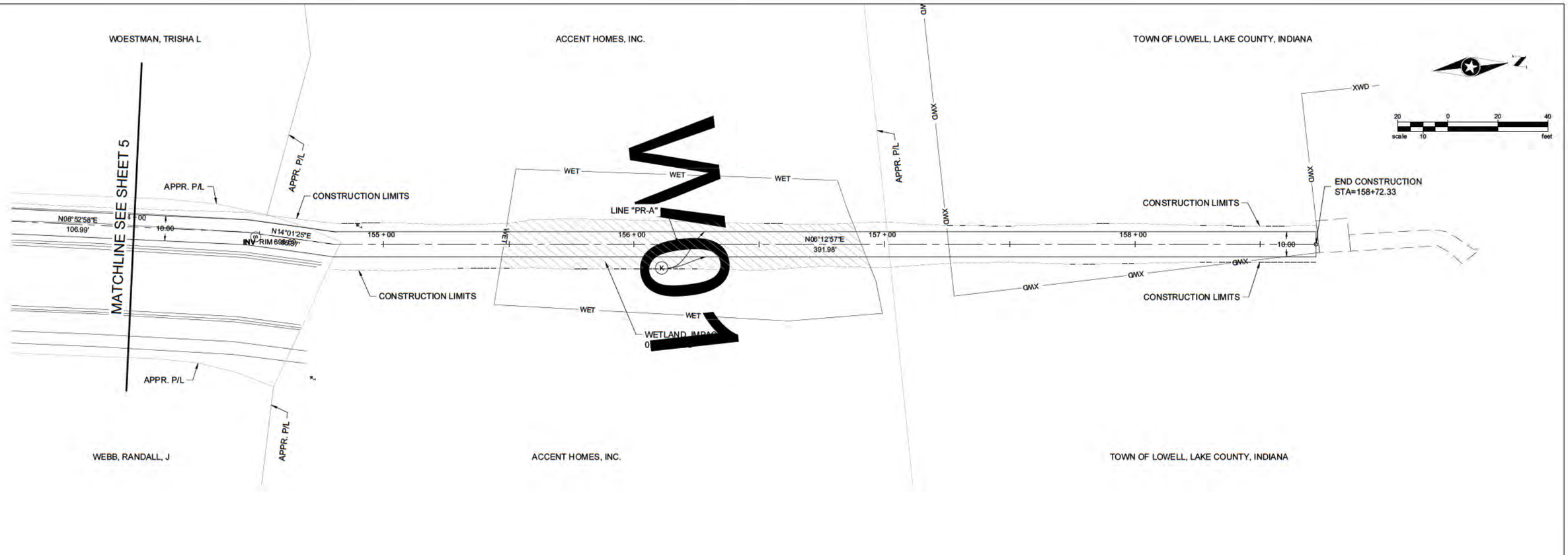

LEGEND

WET EXISTING WETLAND LIMITS

WETLAND IMPACT AREA

SEH of Indiana
9200 Calumet Avenue, Suite N300
Munster, Indiana 46321
Phone: 219.513.2500

RECOMMENDED FOR APPROVAL _____ 1/8/21
DESIGN ENGINEER DATE

DESIGNED: JLS DRAWN: RSP

CHECKED: JPG CHECKED: XXX

INDIANA DEPARTMENT OF TRANSPORTATION

WETLAND IMPACT EXHIBIT
FREEDOM TRAIL

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	- - -
VERTICAL SCALE	DESIGNATION
1"=5'	1802920
SURVEY BOOK	SHEETS
- - -	6 of 6
CONTRACT	PROJECT
1802920	154504

Save: 4/7/2022 10:04 AM pstepanovic Plot: 4/7/2022 10:07 AM X:\KOVL\LOWEL\154504\5-final-dsgn\51-drawings\10-Civil\cad\dwg\sheet\154504_Wetland Exhibit.dwg

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This map and all data contained within are supplied as is with no warranty. Cardno, Inc. expressly disclaims responsibility for damages or liability from any claims that may arise out of the use or misuse of this map. It is the sole responsibility of the user to determine if the data on this map meets the user's needs. This map was not created as survey data, nor should it be used as such. It is the user's responsibility to obtain proper survey data, prepared by a licensed surveyor, where required by law.

Tree Clearing within Construction Footprint

Lowell Freedom Trail
Environmental Documentation
Town of Lowell
Lake County, Indiana

Cardno
now
Stantec
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1986
www.cardno.com

Date: 5/26/2022
Basemap:
File Path: R:\Projects\19\19Z\19Z524300_SEH_LowellFreedomTrail_Phasel_CE\GIS\MXD\Misc\Stephen.mxd
Saved By: Tamara.Miller

Appendix C
Early Coordination

Example Letter Sent

July 8, 2021

Cardno

3901 Industrial Boulevard
Indianapolis, IN 46254
USA

Phone: +1 317 388 1982
Fax: +1 317 388 1986

www.cardno.com

Ms. Kari Carmany-George
Federal Highway Administration
Federal Office Building, Room 254
Indianapolis, IN 46204

RE: Des. Nos.: 1802920, Pedestrian/Bicycle Trail Project, Lowell Freedom Trail: from Freedom Park to Main Street, Lake County

Dear Ms. Carmany-George,

The Town of Lowell (Town) in cooperation with Indiana Department of Transportation (INDOT) and Federal Highway Administration (FHWA) intends to proceed with a project involving the construction of a new multi-use trail in Lake County. This letter is part of the early coordination phase of the environmental review process. We are requesting comments from your area of expertise regarding any possible environmental effects associated with this project. **Please use the above designation numbers and description in your reply**. We will incorporate your comments into a study of the project's environmental impacts.

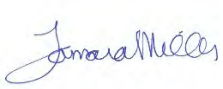
The project is located within Sections 14 and 23, Township 33 North, Range 9 West in Lowell, Lake County, IN. The proposed trail will begin at the terminus of a concrete trail near the south side of Liberty Park (41°18'17.79"N, -87°25'34.95"W), and end at West Main Street across from the northwest corner of Freedom Park (41°17'36.86"N, -87°25'33.6"W).

The proposed project would construct a 12-foot (ft.) wide multi-use trail connecting Freedom Park to Liberty Park in the Town of Lowell. This trail would be comprised of both off-road and on-road segments. Existing dedicated rights-of-way, as well as open spaces would be utilized. Trail surfaces would vary based on location. Through subdivisions, the trail would be concrete to match existing sidewalks, in off-road areas, the trail would be asphalt, and boardwalks may be utilized to cross wetlands. The project would require the acquisition of approximately seven (7) acres of permanent and two (2) acres of temporary right-of-way. Proposed right-of-way widths along the trail would be 20 ft. from centerline. The approximate length of the proposed project would be 1.2 miles. No road or pedestrian facility closures or detours are anticipated for this project. Construction is anticipated to begin in January 2024, ending in July 2024.

Land use in the vicinity of the project includes residential, agricultural, forest, wetlands, and public park land. Cardno will perform waters and wetlands determinations and a biological assessment to identify any ecological resources that may be present. This project qualifies for the application of the USFWS range-wide programmatic informal consultation for the Indiana bat and northern long-eared bat and project information will be submitted through USFWS's Information for Planning and Consultation (IPaC) separately. Coordination will occur with INDOT Cultural Resources Office (CRO) to evaluate the project area for archaeological and historic resources and for Section 106 compliance. The results of this investigation will be forwarded to the State Historic Preservation Officer (SHPO) for review and concurrence as appropriate.

Please provide your response within thirty (30) calendar days from the date of this letter. However, should you find that an extension to the response time is necessary, a reasonable amount may be granted upon request. If you have any questions regarding this matter, please feel free to contact Tamara Miller (Environmental Preparer, Cardno, 317-388-1982, tamara.miller@cardno.com) or Josh Grabijas, PE (Project Manager, SEH of Indiana, LLC, 219.513.250, jgrabijas@sehinc.com). Thank you in advance for your input.

Sincerely,



Tamara Miller
Project Scientist
Cardno

Enc: Project Location Map
Aerial View of Project
Photographs

Graphics Provided in Appendix B

The following agencies received early coordination letters:

Environmental Coordinator
Indiana Department of Natural Resources
Division of Fish and Wildlife
Room W264, IGC South
Indianapolis, IN 46204
(Electronic Coordination)

Environmental Specialist
Federal Highway Administration
Federal Office Building, Room 254
Indianapolis, IN 46204
(Electronic Coordination)

State Conservationist
Natural Resources Conservation Service
6013 Lakeside Boulevard
Indianapolis, IN 46278
(Electronic Coordination)

Field Environmental Officer
US Department of Housing and Urban Development
Chicago Regional Office
Metcalf Federal Building
Chicago, IL 60604
(Electronic Coordination)

Section 408 Coordinator
U.S. Army Corps of Engineers
Chicago District
231 South LaSalle St., Ste 1500
Chicago, IL 60604
(Electronic Coordination)

Chief
U.S. Army Corps of Engineers
Chicago District - Environmental Resources
232 South LaSalle St., Ste 1500
Chicago, IL 60604
(Electronic Coordination)

Regional Environmental Coordinator
National Park Service
Midwest Regional Office
601 Riverfront Drive
Omaha, NE 68102
(Electronic Coordination)

Environmental Section Manager
Indiana Department of Transportation
LaPorte District
315 E. Boyd Blvd.
LaPorte, IN 46350
(Electronic Coordination)

MS 4 Coordinator
Town of Lowell
MS4 Stormwater
501 East Main Street
Lowell, IN 46356
(Electronic Coordination)

Director
Town of Lowell
Lowell Parks and Recreation
501 East Main Street
Lowell, IN 46356
(Electronic Coordination)

Town Manager
Town of Lowell
501 East Main Street
Lowell, IN 46356
(Electronic Coordination)

Director of Public Works
Town of Lowell
Street Department
598 South Union Street
Lowell, IN 46356
(Electronic Coordination)

Ward 2
Town of Lowell
Town Council
598 South Union Street
Lowell, IN 46356
(Electronic Coordination)

Superintendent
Town of Lowell
Street Department
598 South Union Street
Lowell, IN 46356
(Electronic Coordination)

Director
Northwest Indiana Regional Planning Commission
6100 Southport Road
Portage, IN 46368
(Electronic Coordination)

U.S. Fish and Wildlife Service
Northern Indiana Suboffice
P.O. Box 2616
Chesterton, IN 46304
(Electronic Coordination)

Indiana Department of Environmental Management
(Electronic Coordination)

INDIANA
GEOLOGICAL SURVEY

Organization and Project Information

Project ID:
Des. ID: 1802920
Project Title: Lowell Freedom Trail Phase 1
Name of Organization: Cardno, Inc.
Requested by: Cody Banks

Environmental Assessment Report

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

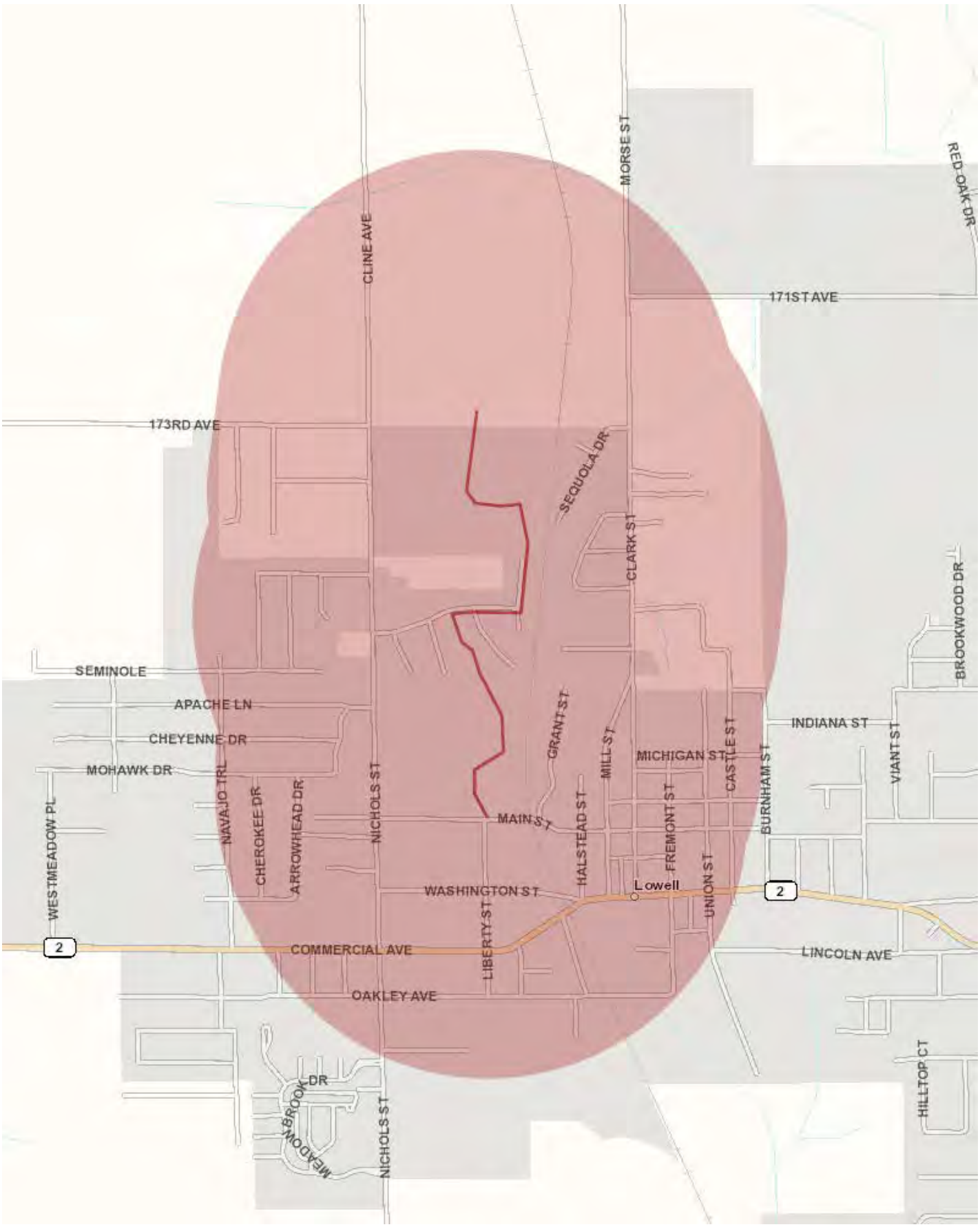
*All map layers from Indiana Map (maps.indiana.edu)

DISCLAIMER:

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

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

Date: June 28, 2021



Metadata:

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

Indiana Department of Environmental Management

We Protect Hoosiers and Our Environment.

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

Town of Lowell
Craig Hendrix
501 East Main St.
Lowell , IN 46356

Short Elliot Hendrickson
Jason Spain
9200 Calumet Ave.
Suite N300
Munster , IN 46321

Date

Dear Grant Administrator or Other Finance Approval Authority:

RE: The Town of Lowell, in cooperation with Indiana Department of Transportation, and Federal Highway Administration intends to proceed with a project involving the construction of a new multi-use trail in Lake County. The current proposed project would construct a 12-foot wide multi-use trail connecting Freedom Park to Liberty Park in the Town of Lowell. The approximate length of the proposed project is 1.2 miles. There are no road closures anticipated for this project. Construction is anticipated to begin in January 2024, ending in July 2024. This project will be funded with $433,020 of local funds and $1,732,080 of Local Transportation Alternatives funding.

The Indiana Department of Environmental Management (IDEM) is aware that many local government or not-for-profit entities are seeking grant monies, a bond issuance, or another public funding mechanism to cover some portion of the cost of a public works, infrastructure, or community development project. IDEM also is aware that in order to be eligible for such funding assistance, applicants are required to first evaluate the potential impacts that their particular project may have on the environment. In order to assist applicants seeking such financial assistance and to ensure that such projects do not have an adverse impact on the environment, IDEM has prepared the following list of environmental issues that each applicant must consider in order to minimize environmental impacts in compliance with all relevant state laws.

IDEM recommends that each applicant consider the following issues when moving forward with their project. IDEM also requests that, in addition to submitting the information requested above, each applicant also sign the attached certification, attesting to the fact that they have read the letter in its entirety, agree to abide by the recommendations of the letter, and to apply for any permits required from IDEM for the completion of their project.

IDEM recommends that any person(s) intending to complete a public works, infrastructure, or community development project using any public funding consider each of the following applicable recommendations and requirements:

WATER AND BIOTIC QUALITY

1. Section 404 of the Clean Water Act requires that you obtain a permit from the U.S. Army Corps of Engineers (USACE) before discharging dredged or fill materials into any wetlands or other waters, such as rivers, lakes, streams, and ditches. Other activities regulated include the relocation, channelization, widening, or other such alteration of a stream, and the mechanical clearing (use of heavy construction equipment) of

wetlands. Thus, as a project owner or sponsor, it is your responsibility to ensure that no wetlands are disturbed without the proper permit. Although you may initially refer to the U.S. Fish and Wildlife Service National Wetland Inventory maps as a means of identifying potential areas of concern, please be mindful that those maps do not depict jurisdictional wetlands regulated by the USACE or the Department of Environmental Management. A valid jurisdictional wetlands determination can only be made by the USACE, using the 1987 Wetland Delineation Manual.

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

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

Additional information on contacting these U.S. Army Corps of Engineers (USACE) District Offices, government agencies with jurisdiction over wetlands, and other water quality issues, can be found at http://www.in.gov/idem/4396.htm (http://www.in.gov/idem/4396.htm). IDEM recommends that impacts to wetlands and other water resources be avoided to the fullest extent.

2. In the event a Section 404 wetlands permit is required from the USACE, you also must obtain a Section 401 Water Quality Certification from the IDEM Office of Water Quality. To learn more about the water quality certification program, visit: http://www.in.gov/idem/4384.htm (http://www.in.gov/idem/4384.htm).

3. If the USACE determines that a wetland or other body of water is isolated and not subject to Clean Water Act regulation, it is still regulated by the state of Indiana . A state isolated wetland permit from IDEM's Office of Water Quality is required for any activity that results in the discharge of dredged or fill materials into isolated wetlands. To learn more about isolated wetlands, contact the Office of Water Quality at 317-233-8488.

4. If your project will impact more than 0.5 acres of wetland, stream relocation, or other large-scale alterations to bodies of water such as the creation of a dam or a water diversion, you should seek additional input from the Office of Water Quality, Wetlands staff at 317-233-8488.

5. Work within the one-hundred year floodway of a given body of water is regulated by the Department of Natural Resources, Division of Water. Contact this agency at 317-232-4160 for further information.

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

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

   To obtain, and operate under, a Rule 5 permit you will first need to develop a Construction Plan (http://www.in.gov/idem/4917.htm#constreq (http://www.in.gov/idem/4917.htm#constreq)), and as described in 327 IAC 15-5-6.5 (http://www.in.gov/legislative/iac/T03270/A00150 [PDF] (http://www.in.gov/legislative/iac/T03270/A00150.PDF), pages 16 through 19). Before you may apply for a Rule 5 Permit, or begin construction, you must submit your Construction Plan to your county Soil and Water Conservation District (SWCD) (http://www.in.gov/isda/soil/contacts/map.html (http://www.in.gov/isda/soil/contacts/map.html)).

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

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

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

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

8. For projects involving impacts to fish and botanical resources, contact the Department of Natural Resources - Division of Fish and Wildlife (317-232-4080) for additional project input.

9. For projects involving water main construction, water main extensions, and new public water supplies, contact the Office of Water Quality - Drinking Water Branch (317-308-3299) regarding the need for permits.

10. For projects involving effluent discharges to waters of the State of Indiana , contact the Office of Water Quality - Permits Branch (317-233-0468) regarding the need for a National Pollutant Discharge Elimination System (NPDES) permit.

11. For projects involving the construction of wastewater facilities and sewer lines, contact the Office of Water Quality - Permits Branch (317-232-8675) regarding the need for permits.

AIR QUALITY

The above-noted project (see page 1) should be designed to minimize any impact on ambient air quality in, or near, the project area. The project must comply with all federal and state air pollution regulations. Consideration should be given to the following:

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

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

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

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

3. The U.S. EPA and the U.S. Surgeon General recommend that people not have long-term exposure to radon at levels above 4 pCi/L. For a county-by-county map of predicted radon levels in Indiana , visit http://www.in.gov/idem/4267.htm (http://www.in.gov/idem/4267.htm).

   The U.S. EPA further recommends that all homes and apartments (within three stories of ground level) be tested for radon. If in-home radon levels are determined to be 4 pCi/L or higher, then U.S. EPA recommends a follow-up test. If the second test confirms that radon levels are 4 pCi/L or higher, then U.S. EPA recommends the installation of radon-reduction measures. For a list of qualified radon testers and radon mitigation (or reduction) specialists, visit http://www.in.gov/isdh/regsvcs/radhealth/pdfs/radon_testers_mitigators_list.pdf (http://www.in.gov/isdh/regsvcs/radhealth/pdfs/radon_testers_mitigators_list.pdf). Also, is recommended that radon reduction measures be built into all new homes, particularly in areas like Indiana that have moderate to high predicted radon levels.

   To learn more about radon, radon risks, and ways to reduce exposure, visit http://www.in.gov/isdh/regsvcs/radhealth/radon.htm (http://www.in.gov/isdh/regsvcs/radhealth/radon.htm),

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

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

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

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

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

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

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

5. With respect to lead-based paint removal, IDEM encourages all efforts to minimize human exposure to lead-based paint chips and dust. IDEM is particularly concerned that young children exposed to lead can suffer from learning disabilities. Although lead-based paint abatement efforts are not mandatory, any abatement that is conducted within housing built before January 1, 1978 , or a child-occupied facility is required to comply with all lead-based paint work practice standards, licensing and notification requirements. For more information about lead-based paint removal, visit http://www.in.gov/idem/permits/guide/waste/leadabatement.html (http://www.in.gov/idem/permits/guide/waste/leadabatement.html).

6. Ensure that asphalt paving plants are permitted and operate properly. The use of cutback asphalt, or asphalt emulsion containing more than seven percent (7%) oil distillate, is prohibited during the months of April through October. See 326 IAC 8-5-2 , Asphalt Paving Rule (http://www.ai.org/legislative/iac/T03260/A00080.PDF (http://www.ai.org/legislative/iac/T03260/A00080.PDF)).

7. If your project involves the construction of a new source of air emissions or the modification of an existing source of air emissions or air pollution control equipment, it will need to be reviewed by the IDEM Office of Air Quality (OAQ). A registration or permit may be required under 326 IAC 2 (www.ai.org/legislative/iac/t03260/a00020.pdf (http://www.ai.org/legislative/iac/t03260/a00020.pdf).). New

sources that use or emit hazardous air pollutants may be subject to Section 112 of the Clean Air Act and corresponding state air regulations governing hazardous air pollutants.

8. For more information on air permits, visit http://www.in.gov/idem/4223.htm (http://www.in.gov/idem/4223.htm), or to initiate the IDEM air permitting process, please contact the Office of Air Quality Permit Reviewer of the Day at (317) 233-0178 or oamprod at idem.in.gov.

LAND QUALITY

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

1. If the site is found to contain any areas used to dispose of solid or hazardous waste, you need to contact the Office of Land Quality (OLQ) at 317-308-3103.

2. All solid wastes generated by the project, or removed from the project site, need to be taken to a properly permitted solid waste processing or disposal facility. For more information, visit http://www.in.gov/idem/4998.htm (http://www.in.gov/idem/4998.htm).

3. If any contaminated soils are discovered during this project, they may be subject to disposal as hazardous waste. Please contact the OLQ at 317-308-3103 to obtain information on proper disposal procedures.

4. If Polychlorinated Biphenyls (PCBs) are found at this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding management of any PCB wastes from this site.

5. If there are any asbestos disposal issues related to this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding the management of asbestos wastes. (Asbestos removal is addressed above, under Air Quality.)

6. If the project involves the installation or removal of an underground storage tank, or involves contamination from an underground storage tank, you must contact the IDEM Underground Storage Tank program at 317-308-3039(http://www.in.gov/idem/4999.htm (http://www.in.gov/idem/4999.htm)).

FINAL REMARKS

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

Please note that this letter does not constitutes a permit, license, endorsement, or any other form of approval on the part of either the Indiana Department of Environmental Management or any other Indiana state agency.

Should you have any questions relating to the content or recommendations of this letter, or if you have additional questions about whether a more complete environmental review of your project should be conducted, please feel free to contact Steve Howell at (317) 232-8587, snhowell@idem.in.gov.

Signature(s) of the Applicant

I acknowledge that I am seeking grant monies, a bond issuance, or other public funding mechanism to cover some portion of the cost of the public works, infrastructure, or community development project as described herein, which I am working (possibly with others) to complete.

Project Description

The Town of Lowell, in cooperation with Indiana Department of Transportation, and Federal Highway Administration intends to proceed with a project involving the construction of a new multi-use trail in Lake County. The current proposed project would construct a 12-foot wide multi-use trail connecting Freedom Park to Liberty Park in the Town of Lowell. The approximate length of the proposed project is 1.2 miles. There are no road closures anticipated for this project. Construction is anticipated to begin in January 2024, ending in July 2024. This project will be funded with $433,020 of local funds and $1,732,080 of Local Transportation Alternatives funding.

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

Dated Signature of the Public Owner Contact/Responsible Elected Official _____

Craig Hendrix

Dated Signature of the Project Planner/Consultant Contact Person _____

Jason Spain

From: Michels, Stewart
To: Tammy Miller
Subject: RE: Early Coordination Letter DesNo 1802920 Lowell Freedom Trail, LPA Project
Date: Friday, July 16, 2021 1:02:06 PM
Attachments: image002.png
image003.png
image004.png
image005.png

Tammy,

Thank you for providing a copy of the early coordination letter for Des. No. 1802920 to the LaPorte District Environmental Services. We do not have any comment at this time. Thank you, again, for contacting us.

Regards,

Stew

From: Tammy Miller <Tamara.Miller@cardno.com>
Sent: Thursday, July 8, 2021 2:54 PM
To: Michels, Stewart <SMichels@indot.IN.gov>
Subject: Early Coordination Letter DesNo 1802920 Lowell Freedom Trail, LPA Project

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Attached to this email is the early coordination letter for the above referenced Town of Lowell Multi-use Trail project in Lake County. Please let me know if you have any questions or comments regarding this project.

Thank you,

Tammy Miller
PROJECT SCIENTIST
CARDNO

Mobile +1 317 526 3027
Address 3901 Industrial Blvd Indianapolis IN 46254
Email tamara.miller@cardno.com Web www.cardno.com

CONNECT WITH CARDNO

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, CHICAGO DISTRICT
231 SOUTH LA SALLE STREET, SUITE 1500
CHICAGO IL 60604

08 July 2021

Planning, Programs, and Project
Management Division, Planning Branch

Ms. Tamara Miller
Cardno
3901 Industrial Boulevard
Indianapolis, IN 46254

Regarding: Des. No. 1802920, Pedestrian/Bicycle Train Project, Lowell Freedom Trail: from Freedom Park to Main Street, Lake County

Dear Ms. Miller:

This letter is in response to a request concerning early coordination regarding any potential environmental effects of proposed project Des. No. 1802920, the construction of a multi-use trail in Lowell, Indiana.

The U.S. Army Corps of Engineers Chicago District does not have any current or planned civil works projects at this property location. Additionally, we do not anticipate an adverse environmental impact to a resource within our area of expertise. However, we will keep a record of this project for future reference.

This review does not eliminate the need for reviews local jurisdictions or state and federal resources agencies. If there are any additional questions please feel free to contact me at 312-846-5580 or at susanne.j.davis@usace.army.mil.

Sincerely,

Susanne J. Davis

Susanne J. Davis, P.E.
Chief, Planning Branch

USDA
United States Department of Agriculture

Natural Resources Conservation Service
Indiana State Office
6013 Lakeside Boulevard
Indianapolis, IN 46278
317-290-3200

July 29, 2021

Tamara Miller
Cardno
3901 Industrial Boulevard
Indianapolis, Indiana 46254

Dear Ms. Miller:

The proposed project to proceed with the new construction of a multi-use trail from Freedom Park to Main Street in Lake County, Indiana (Des. No 1802920), as referred to in your letter received July 8, 2021, will cause a conversion of prime farmland.

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

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

Sincerely,

RICHARD NEILSON
Digitally signed by RICHARD NEILSON
Date: 2021.07.29 15:44:56 -04'00'

RICK NEILSON
State Soil Scientist

Enclosures

U.S. DEPARTMENT OF AGRICULTURE
Natural Resources Conservation Service

NRCS-CPA-106
(Rev. 1-91)

FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS

PART I *(To be completed by Federal Agency)*	3. Date of Land Evaluation Request **7/8/21**	4. Sheet 1 of **of**
1. Name of Project **DES1802920_Lowell Freedom Trail**	5. Federal Agency Involved	
2. Type of Project **Multi-Use Trail**	6. County and State **Lake County, Indiana**	

PART II *(To be completed by NRCS)*	1. Date Request Received by NRCS **7/8/21**	2. Person Completing Form **JRA**
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES ☑ NO ☐		4. Acres Irrigated | Average Farm Size **293 Ac**
5. Major Crop(s) **Corn**	6. Farmable Land in Government Jurisdiction Acres: **266,576** % **82**	7. Amount of Farmland As Defined in FPPA Acres: **231,037** % **71**
8. Name Of Land Evaluation System Used **LESA**	9. Name of Local Site Assessment System	10. Date Land Evaluation Returned by NRCS **7/29/21**

PART III *(To be completed by Federal Agency)*	Alternative Corridor For Segment : Corridor 1	Corridor 2	Corridor 3	Corridor 4
A. Total Acres To Be Converted Directly	**0.70**			
B. Total Acres To Be Converted Indirectly, Or To Receive Services	**0.00**			
C. Total Acres In Corridor	**0.70**	**0.00**	**0.00**	**0.00**
PART IV *(To be completed by NRCS) Land Evaluation Information*				
A. Total Acres Prime And Unique Farmland	**0.70**			
B. Total Acres Statewide And Local Important Farmland	**0.00**			
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	**<0.001**			
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	**58.0**			
PART V *(To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)*	**76**			
PART VI *(To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))* — Maximum Points				
1. Area in Nonurban Use — 15	**7**			
2. Perimeter in Nonurban Use — 10	**4**			
3. Percent Of Corridor Being Farmed — 20	**0**			
4. Protection Provided By State And Local Government — 20	**0**			
5. Size of Present Farm Unit Compared To Average — 10	**0**			
6. Creation Of Nonfarmable Farmland — 25	**0**			
7. Availablility Of Farm Support Services — 5	**3**			
8. On-Farm Investments — 20	**3**			
9. Effects Of Conversion On Farm Support Services — 25	**0**			
10. Compatibility With Existing Agricultural Use — 10	**0**			
TOTAL CORRIDOR ASSESSMENT POINTS — 160	**17**	**0**	**0**	**0**
PART VII *(To be completed by Federal Agency)*				
Relative Value Of Farmland (From Part V) — 100	**76**			
Total Corridor Assessment (From Part VI above or a local site assessment) — 160	**17**	**0**	**0**	**0**
TOTAL POINTS *(Total of above 2 lines)* — 260	**93**	**0**	**0**	**0**

1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used?
Corridor A	**0.7**		YES ☐ NO ☑

5. Reason For Selection:

Signature of Person Completing this Part: *Tammy Miller* DATE **7/8/21**

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

Clear Form

THIS IS NOT A PERMIT

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

DNR #: ER-23882 **Request Received:** July 8, 2021

Requestor:
Cardno, Inc
Tamara Miller
3901 Industrial Boulevard
Indianapolis, IN 46254

Project: Town of Lowell Freedom Trail; construction of a 12' wide multi-use trail connecting Freedom Park to Liberty Park; Des #1802920

County/Site info: Lake

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

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

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

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

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

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

A) Forested Habitat:
We recommend a mitigation plan be developed for any unavoidable habitat impacts that will occur. The DNR's Habitat Mitigation guidelines (and plant lists) can be found online at: http://www.in.gov/legislative/iac/20190130-IR-312190041NRA.xml.pdf.

Impacts to non-wetland forest of one (1) acre or more should be mitigated at a minimum 2:1 ratio. If less than one acre of non-wetland forest is removed in a rural setting, replacement should be at a 1:1 ratio based on area.? Impacts to non-wetland forest under one (1) acre in an urban setting should be mitigated by planting five trees, at least 2 inches in diameter-at-breast height (dbh), for each tree which is removed that is 10" dbh or greater (5:1 mitigation based on the number of large trees) or by using the 1:1 replacement ratio based on area depending on the type of habitat impacted (individual canopy tree removal in an urban streetscape or park-like environment versus removal of habitat supporting a tree canopy, woody understory, and herbaceous layer). Impacts under 0.10 acre in an urban area may still involve the replacement of large diameter trees but typically do not require any additional mitigation or additional plantings beyond seeding and stabilizing disturbed areas. There are exceptions for high quality habitat

sites however.

B) Wetland Habitat:
Due to the presence or potential presence of wetland habitat on site, we recommend contacting and coordinating with the Indiana Department of Environmental Management (IDEM) 401 program and also the US Army Corps of Engineers (USACE) 404 program. Impacts to wetland habitat should be mitigated at the appropriate ratio according to the 1991 INDOT/IDNR/USFWS Memorandum of Understanding.

C) Trail Guidelines:
The following is a basic list of recommendations from IDNR Division of Fish & Wildlife to consider when planning trails to minimize impacts to fish, wildlife, and botanical resources.

1. Place the trail in or adjacent to existing right-of-ways where possible to minimize significant impacts to natural resource habitat. Also, utilize previously disturbed or degraded areas. Align the trail along or near existing man-made edges or areas that have the potential to be restored or enhanced by trail construction (i.e. railroad corridors), rather than routing the trail through previously undisturbed areas.
2. When designing or constructing a trail, disturb as narrow an area as possible to help minimize negative impacts. Where significant impacts to fish, wildlife or botanical resources are likely due to the trail's width, reduce the width to help avoid those impacts. ADA accessibility standards allow departures from the standards under certain conditions, including substantial harm to natural features, habitat, or vegetation (see https://www.access-board.gov/attachments/article/1637/outdoor-guide.pdf, Outdoor developed areas: a summary of accessibility standards for Federal outdoor developed areas).
3. Do not focus only on the direct impact of the trail's width; also consider the trail's impact to the surrounding habitat. Trails can fragment larger habitat areas and reduce the overall usefulness of the site to fish, wildlife, or botanical resources (1 large habitat block is better than 2 small habitat blocks). Trails can cause significant impacts to forested areas, riparian forested corridors along creeks and rivers, and wetland areas. They also may cause sediment and erosion issues or introduce human disturbance into fairly isolated areas containing wildlife habitat.
4. Avoid unnecessary stream crossings. Instead, make use of or modify existing stream crossings or avoid crossing the stream altogether. Where stream crossings are unavoidable, pedestrian bridges with supports/abutments placed no less than 10 feet landward from the tops of the banks on each side of the waterway are recommended. Alternatively, a three-sided culvert may be used. Three-sided culverts should be oversized to allow terrestrial wildlife movement along the creek on unsubmerged dry land at normal water levels. Box-culvert or pipe-culvert crossings are not recommended.
5. Trails designed to follow a stream's course must be placed outside the stream's forested riparian buffer. Also, do not place the trail along the tops of the banks of a forested creek. Avoid perpendicular fragmentation of riparian areas (streamside habitat). Where the stream has little or no forested riparian buffer, the trail should be no closer than 15 feet from the tops of the banks.
6. Avoid elements identified in the Natural Heritage Database; trails may negatively affect species that require specific natural conditions (vegetation, light levels, moisture, etc.) that are altered as a result of trail construction. Rare and high quality habitats, and wildlife habitats that possess high wildlife abundance and diversity, should be avoided by placing the trail around the habitat and screening it from the trail and trail users with a buffer of native vegetation or another method as discussed below. Wetlands and karst features are but two examples of areas to avoid.
7. Raised boardwalks should be constructed in wet areas or near wetlands (trails through wetlands are not recommended). A material such as composite decking should

be used rather than treated wood which can leach elements toxic to aquatic life.
8. Screen wildlife habitat from the trail corridor. Vegetation, topography, and fences can help reduce the impact of noise and line of site disturbances of trail users on wildlife. Walls can create wildlife movement barriers and potential impacts must be considered. Native grass buffers (2 to 3 feet tall) are recommended along the edge of trails near habitat such as wetlands.
9. Lighting should only be used when absolutely necessary. Lighting in forested areas and along creeks, streams, and rivers should be the lowest intensity feasible and shielded to cast light on the path and not diffused into the surroundings to avoid disturbing wildlife circadian rhythms and disorienting night-migrating birds.
10. Any plantings in the riparian areas should be locally native species, not exotic species or horticultural varieties (e.g. "Autumn Blaze" Red Maple). A list of appropriate native woody and herbaceous vegetation can be provided upon request.
11. Trail surfaces can have negative effects on surrounding natural areas and deter movement of some species across the trail. Some surface materials are more environmentally acceptable than others, such as mulch and mown grass which should be considered as the first options. Asphalt is not recommended as a trail surface in the floodway. The conventional maintenance for aging asphalt is to seal it with a blacktop or asphalt sealer. Research has shown that as these sealers break down over time, they move into the aquatic environment and are highly toxic to aquatic life. If asphalt is used then asphalt sealer should not be used for long-term maintenance and repair of the asphalt trail surface. In previously disturbed areas, concrete is an acceptable surface material, and porous concrete is preferred wherever it can be used.
12. Shoulders should be constructed using unconsolidated materials where possible. In some situations, solid shoulders are necessary. In those cases, shoulders should be constructed using porous concrete.
13. Trails that highlight natural resources should skirt the resource and utilize "pulloffs" at specific sites instead of letting the entire trail and traffic disturb the resource.

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

THIS IS NOT A PERMIT

State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Fish and Wildlife

Early Coordination/Environmental Assessment

Contact Staff: Christie L. Stanifer, Environ. Coordinator, Fish & Wildlife

Our agency appreciates this opportunity to be of service. Please contact the above staff member at (317) 232-4080 if we can be of further assistance.

Christie L. Stanifer **Date:** August 6, 2021

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

United States Department of the Interior

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

In Reply Refer To: November 17, 2021
Consultation Code: 03E12000-2022-SLI-0381
Event Code: 03E12000-2022-E-01625
Project Name: Lowell Freedom Trail Des No. 1802920 Trail Project

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

To Whom It May Concern:

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

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

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

Please use the species list provided and visit the U.S. Fish and Wildlife Service's Region 3 Section 7 Technical Assistance website at - http://www.fws.gov/midwest/endangered/section7/s7process/index.html. This website contains step-by-step instructions which will help you determine if your project will have an adverse effect on listed species and will help lead you through the Section 7 process.

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

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

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

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

Project Summary

Consultation Code: 03E12000-2022-SLI-0381
Event Code: Some(03E12000-2022-E-01625)
Project Name: Lowell Freedom Trail Des No. 1802920 Trail Project
Project Type: TRANSPORTATION
Project Description: The Town of Lowell (Town) in cooperation with Indiana Department of Transportation (INDOT) and Federal Highway Administration (FHWA) intend to proceed with a project involving the construction of a new multi-use trail in Lake County. The project is located within Sections 14 and 23, Township 33 North, Range 9 West in Lowell, Lake County, IN. The proposed trail will begin at the terminus of a concrete trail near the south side of Liberty Park (41°18'17.79"N, -87°25'34.95"W), and end at West Main Street across from the northwest corner of Freedom Park (41°17'36.86"N, -87°25'33.6"W).

The proposed project would construct a 12-foot (ft.) wide multi-use trail connecting Freedom Park to Liberty Park in the Town of Lowell. This trail would be comprised of both off-road and on-road segments. Existing dedicated rights-of-way, as well as open spaces would be utilized. Trail surfaces would vary based on location. Through subdivisions, the trail would be concrete to match existing sidewalks. In off-road areas, the trail would be asphalt and boardwalks may be utilized to cross wetlands. The project would require the acquisition of approximately 7.0 acres of permanent and 2.0 acres of temporary right-of-way. Proposed right-of-way widths along the trail would be 20 ft. from centerline. The approximate length of the proposed project would be 1.2 miles. No road or pedestrian facility closures or detours are anticipated for this project. Construction is anticipated to begin in January 2024, ending in July 2024.

Land use in the vicinity of the project includes residential, agricultural, forest, wetlands, and public park land. Suitable summer habitat within the project area includes both upland forest, emergent wetland with intermittent streams, and early successional shrubs. The upland forest tree species consist of American Basswood (Tilia americana), Shingle Oak (Quercus imbricaria), Shag-Bark Hickory (Carya ovata), and Green Ash (Fraxinus pennsylvanica) with a midstory of Morrow's Honeysuckle (Lonicera morrowii) and Common Red Raspberry (Rubus idaeus). The wetland forest includes Shingle Oak (Quercus imbricara) and Pignut Hickory (Carya glabra) with a midstory of Gray Dogwood (Cornus racemosa) and Rambler Rose (Rosa multiflora). The project will require clearing 1.49 acres of potential summer roosting habitat. The amount of tree clearing broken down by distance from road or rail is as follows:
• 0-100 ft. = 0.31 acres
• 100-300 ft. = 1.11 acres

• Greater than 300 ft. = 0.07 acres
Tree clearing will occur outside active summer bat roosting season. No temporary or permanent lighting will be utilized for the project.

A review of the USFWS database by INDOT - LaPorte District completed on October 14, 2020 did not indicate the presence of endangered bat species in or within 0.5 mile of the project area.
Mitigation for tree clearing greater than 100 ft. from the road is anticipated. The amount to be paid to the Range-wide In-lieu Fee Program, to be administered by The Conservation Fund, shall be $19,316.01. The area of suitable habitat to be cleared, multiplied by the mitigation ratio for inactive season tree clearing for Lake County, and the compensatory price per acre; 1.18 acre X 1.75 X $9,354.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@41.299259649999996,-87.4271541663527,14z

Counties: Lake County, Indiana

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

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

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

---

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

Mammals

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: ▪ Incidental take of the NLEB is not prohibited here. Federal agencies may consult using the 4(d) rule streamlined process. Transportation projects may consult using the programmatic process. See www.fws.gov/midwest/endangered/mammals/nleb/index.html Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Insects

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

Critical habitats

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

INDIANA DEPARTMENT OF TRANSPORTATION

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

PHONE: (855) 463-6848

Eric Holcomb, Governor
Joe McGuinness, Commissioner

December 1, 2021

Elizabeth McCloskey
U.S. Fish and Wildlife Service
Northern IN Field Office
Chesterton, Indiana 46304

Re: Standard Informal Consultation for the Indiana Bat and Northern Long-Eared Bat
Des. No. 1802920
Sections 14 and 23, Township 33 North, Range 9 West, Lowell, Lake County, Indiana
Construction of a multiuse trail from Liberty Park to Freedom Park

Dear Ms. McCloskey:

The Indiana Department of Transportation (INDOT), is acting on behalf of Federal Highway Administration (FHWA), and submitting this letter for standard informal consultation for the Indiana bat (*Myotis sodalis*) and Northern long-eared bat (*Myotis septentrionalis*) (NLEB). Based on the project description and aerial map (Attachment A, Figure 2), the project is not within the scope of the *Programmatic Biological Opinion for Transportation Projects in the Range of the Indiana Bat and NLEB* due to the removal of habitat (0.07 acre) outside of 300 feet from existing road/rail surfaces without a valid Presence/Probable Absence survey indicating that bats are not present.

Existing Project Conditions

The project begins at the southern terminus of a concrete trail located within Liberty Park and traverses through residential neighborhoods, agricultural fields, the forest and wetland described below, and ends in a residential areas at the intersection of West Main Street and North Liberty Street.

Proposed Improvements

The proposed trail will begin at the terminus of a concrete trail near the south side of Liberty Park (41°18'17.79"N, -87°25'34.95"W), and end at West Main Street across from the northwest corner of Freedom Park (41°17'36.86"N, -87°25'33.6"W) (Attachment A, Figure 1).

The proposed project would construct a 12-foot (ft.) wide multi-use trail connecting Freedom Park to Liberty Park in the Town of Lowell. This trail would be comprised of both off-road and on-road segments. Existing dedicated rights-of-way, as well as open spaces would be utilized. Trail surfaces would vary based on location. Through subdivisions, the trail would be concrete to match existing sidewalks. In off-road areas, the trail would be asphalt and boardwalks may be utilized to cross wetlands. Tree clearing will occur outside active summer bat roosting season. No temporary or permanent lighting will be utilized for the project. Tree clearing will occur outside active summer bat roosting season. No temporary or permanent lighting will be utilized for the project.

Right-of-Way
The project would require the acquisition of approximately 7.0 acres of permanent and 2.0 acres of temporary right-of-way. Proposed right-of-way widths along the trail would be 20 ft. from centerline.

Construction Schedule and Maintenance of Traffic
Construction is anticipated to begin in January 2024, ending in July 2024 and will be completed in one construction season. No road or pedestrian facility closures or detours are anticipated for this project.

Coordination Completed
Project information was submitted through the USFWS's Information for Planning and Consultation (IPaC) portal, and an official species list was generated on November 17, 2021 (Attachment B). The project is within range of the federally endangered Indiana bat and the federally threatened northern long-eared bat (NLEB). The monarch butterfly (*Danaus plexippus*), a candidate species, has the potential to occur within the project area.

Indiana Department of Natural Resources – Division of Fish and Wildlife responded to early coordination request on August 6, 2021 that the American badger (*Taxidea taxus*) has been documented within 0.5 mile of the project area; however, no impacts are anticipated (Attachment C). Standard recommendations for avoiding, minimizing, and mitigating impacts to forest and wetland habitat as well as minimizing impacts from trail construction were provided.

Existing Bat Habitat
A review of the USFWS database by INDOT - LaPorte District completed on October 14, 2020 did not indicate the presence of endangered bat species in or within 0.5 mile of the project area.

Assessment of Potential Suitable Summer Habitat
Land use in the vicinity of the project includes residential, agricultural, forest, wetlands, and public park land. Suitable summer habitat within the project area includes both upland forest, emergent wetland with intermittent streams, and early successional shrubs. The upland forest tree species consist of American Basswood (*Tilia americana*), Shingle Oak (*Quercus imbricaria*), Shag-Bark Hickory (*Carya ovata*), and Green Ash (*Fraxinus pennsylvanica*) with a midstory of Morrow's Honeysuckle (*Lonicera morrowii*) and Common Red Raspberry (*Rubus idaeus*). The wetland forest includes Shingle Oak (*Quercus imbricara*) and Pignut Hickory (*Carya glabra*) with a midstory of Gray Dogwood (*Cornus racemosa*) and Rambler Rose (*Rosa multiflora*).

The project will require clearing 1.49 acres of potential summer roosting habitat. The amount of tree clearing broken down by distance from road or rail is as follows:

- 0-100 ft. = 0.31 acres
- 100-300 ft. = 1.11 acres
- Greater than 300 ft. = 0.07 acres

Water Resources and Wetlands Present
A Wetland Delineation Report was completed for the project on October 21, 2020. Three wetlands and one ephemeral stream were identified during this investigation. Wetlands included one scrub-shrub wetland (0.18 ac), one open-water wetland (0.09 ac), and one forested wetland (1.07 ac) for a total of 1.34 acres of wetland. The locations of these features is shown on Figure 2 and are described below (Attachment A).

Wetland 01 was a scrub shrub wetland located south of Freedom Park and north of Redbud Lane. The wetland was located in a small valley between the park and residential houses where the wetland sloped gradually to the south boundary of the wetland. Apparent manipulation of the wetland occurred in previous years with tracks from motorized vehicles. Vegetation in Wetland 01 consisted mostly of Gray Dogwood and a mix of native herbaceous species.

Wetland 02 was a small open-water wetland located south of Timber Springs Road, west of Timber Lake Drive, and east of Timberwood Lane. This wetland was situated in a low depression between residential houses. This wetland had little to no vegetation growing within its boundaries except for Sandbar Willow (*Salix interior*) and Eastern Cottonwood (*Populus deltoides*) growing at its margins.

Wetland 03 was a forested wetland located north of West Main Street at Liberty Park and west of Grant Street. This large wetland consisted of dense canopy at its boundaries, gradually opening to an open area with standing water in its center. The canopy trees of Wetland 03 were mostly Silver Maple (*Acer saccharinum*), Cottonwood, and Black Willow (*Salix nigra*) with an understory of willows, dogwoods, and Rambler Rose. The herbaceous layer consisted mostly of Blue Joint Grass (*Calamagrostis canadensis*), Lake Sedge (*Carex lacustris*) and Bur Reed (*Sparganium eurycarpum*).

Unnamed tributary 1 (UNT) was a small ephemeral stream leading from the outlet of an excavated open-water wetland (Wetland 02) toward a large forested/emergent wetland complex (Wetland 03). The stream was dry at the time of the survey but showed signs of flowing water earlier in the year. The riparian corridor of UNT01 was mature forest dominated by Hickory (Carya spp.) species and American Basswood.

Impacts

The proposed project would clear approximately 1.49 acres of upland and wetland forest. A raised boardwalk will be utilized within the emergent wetland to minimize impacts to this resource. The project will not cross UNT 1 and no impacts are anticipated. No temporary or permanent lighting is proposed for this project. The proposed tree clearing is shown on the aerial photograph on Figure 3 (Attachment A) and are summarized below.

Table 1. Tree Clearing Summary

Acres of trees to be cleared within 100 feet of existing road/rail	Acres of trees to be cleared more than 100 feet, but less than 300 feet from existing road/rail	Acres of trees to be cleared more than 300 feet from existing road/rail	Total Acres of Trees
0.31 ac	1.11 ac	0.31 ac	1.49 ac

Commitments

The following commitments are proposed as Avoidance and Minimization Measures (AMMs) to reduce potential impacts to the Indiana Bat and NLEB.

General AMM 1. Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs.

Tree Removal AMM 1. Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to the extent practicable to avoid tree removal in excess of what is required to implement the project safely.

Tree Removal AMM 2. Apply time of year (TOY) restrictions for tree removal when bats are not likely to be present, or Limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/rail surface and outside of documented roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed.

Tree Removal AMM 3. The project sponsor must ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits).

Conclusion

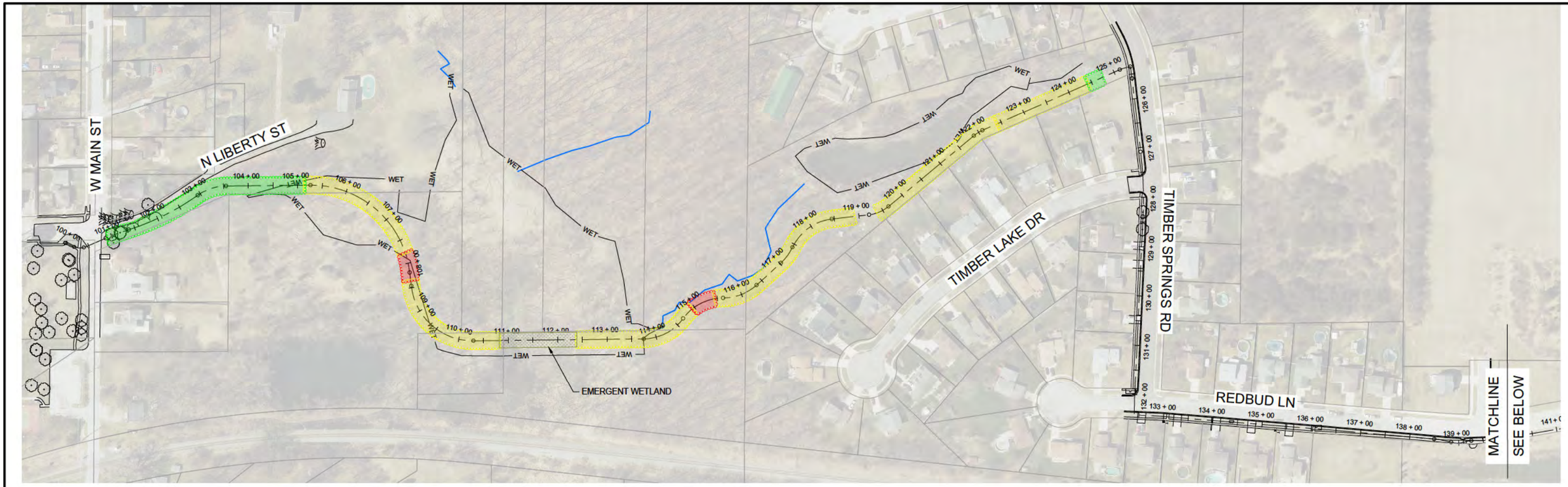
In consultation with USFWS, it was determined that the Proposed Action is not within the scope of the *Programmatic Biological Opinion for Transportation Projects in the Range of the Indiana Bat and NLEB* and will be processed as standard informal consultation.

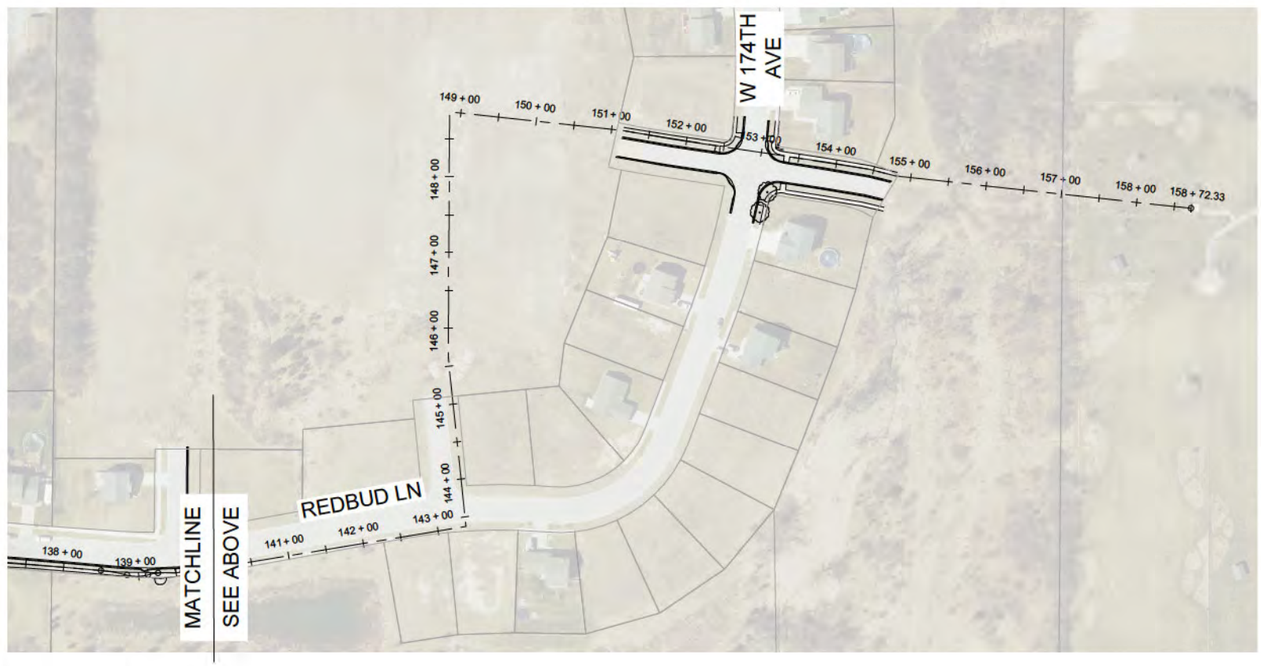
Based on the scope of the project described above, the Proposed Action is within the scope and adheres to the criteria of the Programmatic Biological Opinion for Transportation Projects, including the adoption of applicable AMMs, and as such, the FHWA has determined the proposed project has an effect finding of "May Affect, Not Likely to Adversely Affect - with AMMs" for the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (*Myotis septentrionalis*).

The FHWA is requesting USFWS concurrence with this project "May Affect, Not Likely to Adversely Affect - with AMMs" determination.

Please contact Tamara Miller (Environmental Preparer, Cardno, 317-388-1982, tamara.miller@cardno.com) or Jason Spain, PE (Project Manager, SEH of Indiana, LLC, 219-513-2500, jspain@sehinc.com) if you have any questions or require additional information. We appreciate your attention to this project.

Attachment A – Graphics ← Graphics Provided in Appendix B
Attachment B – IPaC Official Species List ← see Page C-x
Attachment C – IDNR Early Coordination Response ← see Page C-x





Approximate Tree Clearing Distance:

	0 - 100 Feet	0.31 Acres
	100 - 300 Feet	1.11 Acres
	More than 300 Feet	0.07 Acres

THESE LIMITS HAVE BEEN REDUCED SINCE COORDINATION- SEE APPENDIX B, PAGE B-35

N

scale 50 0 100 200 feet

SEH

FILE NO. 154504

DATE: 11/16/2021

FIGURE 3
FREEDOM TRAIL
TREE CLEARING AREA

United States Department of the Interior
Fish and Wildlife Service

Indiana Field Office (ES)
620 South Walker Street
Bloomington, IN 47403-2121
Phone: (812) 334-4261 Fax: (812) 334-4273

December 14, 2021

Ms. Sandra Bowman
INDOT
100 North Senate Avenue, Room N758-ES
Indianapolis, Indiana 46204

Project No.: Des. 1802920
Project: Freedom Park/Liberty Park Multiuse Trail
Location: Lowell, Lake County

Dear Ms. Bowman:

This responds to your letter dated December 1, 2021, requesting our comments on the aforementioned project's likely impacts on Federal listed bat species.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (l6 U.S.C. 661 et. seq.) and are consistent with the intent of the National Environmental Policy Act of l969, the Endangered Species Act of l973, and the U. S. Fish and Wildlife Service's Mitigation Policy.

The proposed project consists of the construction of a 12-foot wide multiuse trail between an existing trail in Liberty Park and Freedom Park within Lowell. The trail would include both on-road and off-road segments, with part of the trail essentially being sidewalks within residential areas, and part being across undeveloped lands. The project would require the acquisition of about 7.0 acres of permanent and 2.0 acres of temporary right-of-way. There would be a total of 1.49 acres of tree clearing and 1.34 acres of wetland impact, primarily to forested wetlands (1.07 acres).

It will be necessary to mitigate for the wetland impacts. The forested wetlands will require a mitigation ratio of 4:1, replaced as close as possible to the impact area. This wetland mitigation requirement is unrelated to any requirements for mitigation of lost bat habitat.

ENDANGERED SPECIES

The proposed project is within the range of the Federally endangered Indiana bat (Myotis sodalis) and the threatened northern long-eared bat (Myotis septentrionalis). The project does not qualify for the Range-wide Programmatic Consultation process for these species. We have reviewed the information provided in the letter and the proposed Avoidance and Minimization Measures; we believe the proposed AMMs will adequately protect these species. Therefore, we concur with the determination that the proposed project is not likely to adversely affect these endangered and threatened species.

The project is also within the range of the candidate Monarch butterfly (Danaus plexippus). However, candidate species are not afforded legal protection under the Endangered Species Act, but it is listed within IPaC to generally inform project proponents about concerns for this butterfly. It would be helpful to plant milkweed and nectar plants at appropriate locations along the trail.

This precludes the need for further consultation on this project for these species as required under Section 7 of the Endangered Species Act of l973, as amended. However, should new information arise pertaining to project plans or a revised species list be published, it will be necessary for the Federal agency to reinitiate consultation.

We appreciate the opportunity to again comment on this proposed project. For further discussion, please contact Elizabeth McCloskey at elizabeth_mccloskey@fws.gov.

Sincerely yours,

/s/ *Elizabeth S. McCloskey*

for Scott E. Pruitt
Supervisor

Sent via email December 14, 2021; no hard copy to follow.

Appendix D
Section 106 of the NHPA

Minor Projects PA Project Assessment Form

Date: 12/9/2020

Project Designation Number: 1802920

Route Number: N/A

Project Description: Lowell Freedom Trail Project.

The project consists of a linear corridor that would be utilized for the construction of a pedestrian trail between Freedom Park located on Nichols Street and Liberty Park located on Main Street in Lowell, Cedar Creek Township, Lake County, Indiana. The trail would begin at Freedom Park and travel south through both off-road and on-road segments. Existing dedicated rights-of-way, as well as open spaces will be utilized. Trail surfaces will vary based on location – through subdivisions the trail will be concrete to match existing sidewalks; in off-road areas, the trail will be asphalt, and boardwalks may be utilized to cross wetlands. The survey corridor is approximately 1,770 meters (m) (5,807 feet [ft]) in length and 12 m (40 ft) in width. The anticipated depth of excavation is 18 inches.

Feature crossed (if applicable): N/A

City/Township: Lowell/Cedar Creek Township **County:** Lake County

Information reviewed (please check all that apply):

☑ General project location map ☑ USGS map ☑ Aerial photograph ☐ Interim Report

☑ Written description of project area ☑ General project area photos ☑ Soil survey data

☐ Previously completed historic property reports ☑ Previously completed archaeology reports

☐ Bridge Inspection Information ☑ SHAARD ☑ SHAARD GIS ☑ Streetview Imagery

Other (please specify): Project information, photos and map provided by Short Elliott Hendrickson, Inc. (SEH) on 11/9/2020 on file at INDOT, CRO.

Hipskind, Scott and Veronia Parsell
2020 Phase Ia Archaeological Reconnaissance for the Proposed Freedom Trail in Lowell, Cedar Creek Township, Lake County, Indiana. Report on file, Indiana Department of Transportation, Cultural Resources Office, Indianapolis, In.

Please specify all applicable categories and condition(s) (conditions that are applicable are highlighted):

B-8. Construction of pedestrian facilities including trails, multi-use paths, greenways, and associated minor activities defined below, under the following conditions ***[BOTH Condition A, which pertains to Archaeological Resources, and Condition B, which pertains to Above-Ground Resources, must be satisfied]***:

Condition A (Archaeological Resources)

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

i. Work occurs within areas previously disturbed by vertical and horizontal construction activities, including existing roadway, sidewalk, or rail bed, and is not on, within or adjacent to a National Register listed or eligible site; *OR*

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

directly into the SHAARD by the applicant. The archaeological reports will also be available for viewing (by Tribes only) on INSCOPE**.**

Condition B (Above-Ground Resources)

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

Activities associated with this category include the following:

- Pavement surface installation, replacement, rehabilitation, resurfacing, and reconstruction work, including widening, laying down of crushed stone or gravel, shoulder treatments, pavement repair, seal coating, pavement grinding, pavement marking, etc.;
- Installation of new signals, signage, and other traffic control devices;
- Installation of new safety appurtenances such as guardrails and barriers;
- Installation of plant materials and hardscape landscaping elements, including, but not limited to bike racks, benches, trash cans, lighting, and other amenities;
- Trail heads and parking lots;
- Installation of pipes, culverts, and pedestrian bridges.

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

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

Additional Comments:

Above-ground Resources

With regard to above-ground resources, an INDOT Cultural Resources historian who meets the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61 performed a desktop review, checking the Indiana Register of Historic Sites and Structures (State Register) and National Register of Historic Places (National Register) lists for Dearborn County. The project area is not located adjacent to or within any listed resources.

The *Lake County Interim Report* (1994; Lowell Scattered Sites) of the Indiana Historic Sites and Structures Inventory (IHSSI) was also consulted. The National Register of Historic Places (National Register) & IHSSI information is available in the Indiana State Historic Architectural and Archaeological Research Database (SHAARD), and the Indiana Historic Buildings, Bridges, and Cemeteries Map (IHBBCM). The SHAARD and IHBBCM information was checked against the Interim Report hard copy maps.

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

There are no National Register-listed resources present adjacent to the project area. Only on IHSSI surveyed Lowell Scattered Site, IHSSI # 089-370-93026 (c. 1930's Bungalow, rated "Contributing") is located adjacent to the southern edge of the project area, just north of Liberty Park on the north side of Main Street. This bungalow has been significantly altered since the time of the survey undertaken in 1994 with the addition of a walk out basement opening to a covered porch and a deck on top. This resource is not a part of a historic district and it lacks integrity and level of historical or architectural significance necessary to be considered individually eligible for the National Register.

The trail, for the most part, will be constructed on new terrain, through wooded areas, wetlands and agricultural fields. However, it does run through two subdivisions - Timber Springs and North Meadows. Per Lake County Assessors website, houses adjacent to the proposed trail within the Timber Springs subdivision were all constructed between the early 1980's and late 1990s, while the houses within the North Meadows subdivision are more recent having been built between 2000s and the present. These subdivisions, therefore, have not reached the threshold of 50 years to be evaluated for National Register eligibility. In other words, they are not eligible for inclusion in the National Register at the present time.

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

Archaeological Resources

Summary of Archaeology Investigation Results:

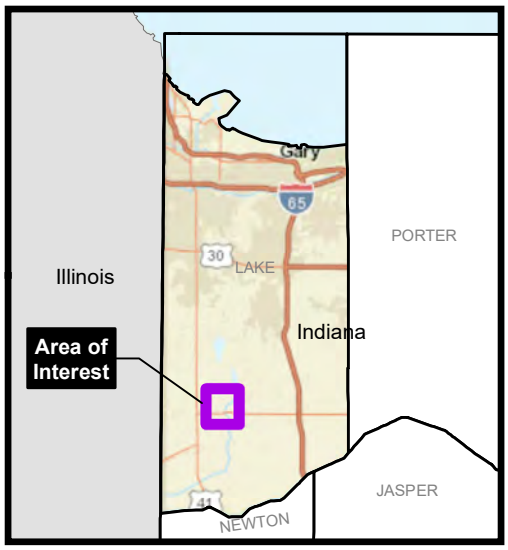
An INDOT Cultural Resources Office (CRO) archaeologist, who met the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61, reviewed the archaeology report submitted by Veronica Parsell of Cardno, on behalf of Short Elliott Hendrickson, Inc. (SEH), December 8, 2020.

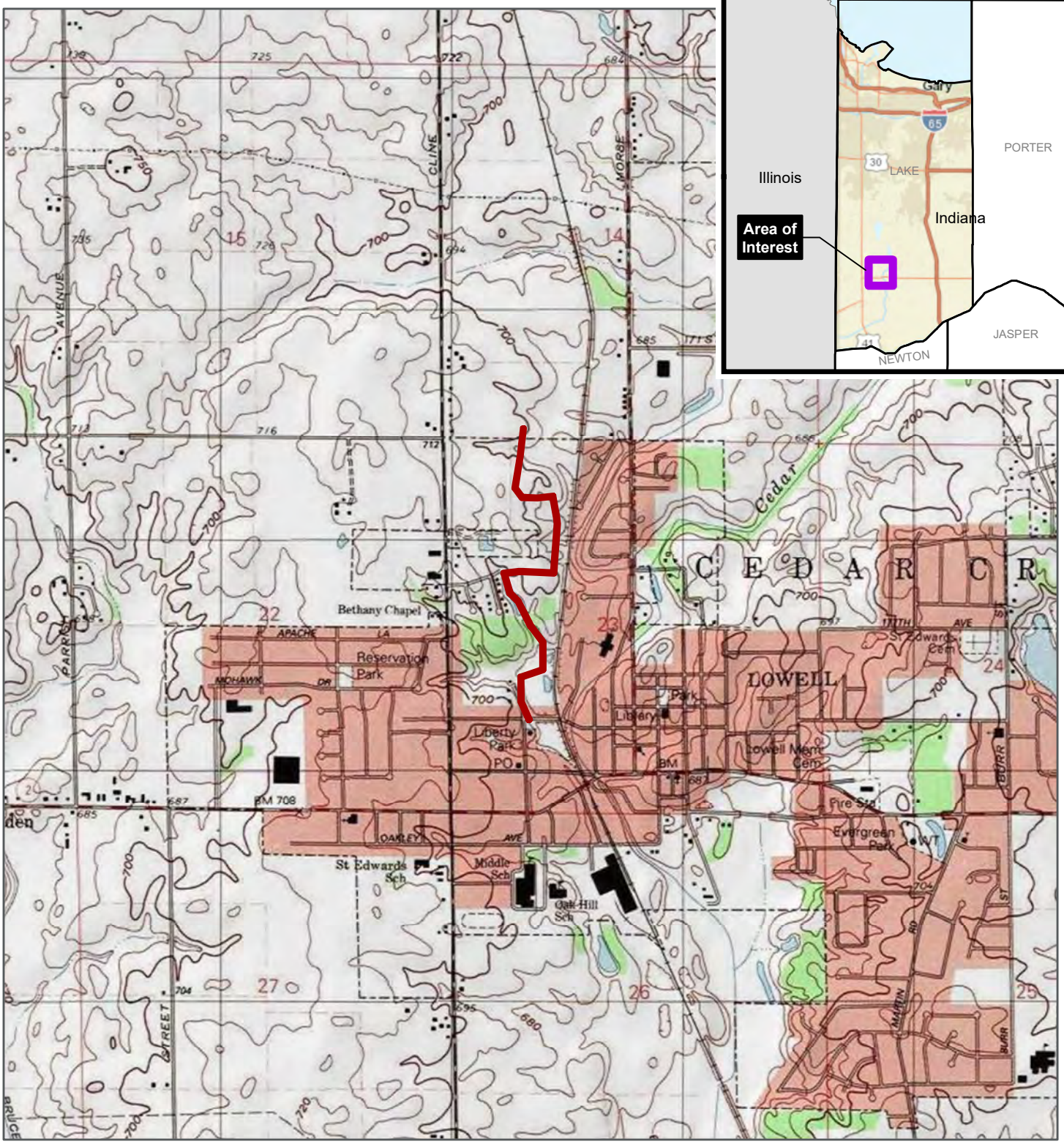
An archaeological records check and Phase Ia reconnaissance survey of the project area were conducted by Cardno (Parsell and Hipskind 2020). A review of SHAARD and SHAARD GIS indicated that no sites have been recorded within or adjacent to the survey area and that the project area has not been previously investigated. A 6.5 acre survey area was examined through the excavation of 96 shovel probes, pedestrian survey of the agriculture field and visual inspection of sloped, disturbed and wetland areas. No evidence for archaeological deposits was identified by the field reconnaissance and it was recommended that the project be allowed to proceed as planned. It is our opinion that the report is acceptable, and we concur with the evaluations and recommendations made by Cardno (Parsell and Hipskind 2020). Therefore, there are no archaeological concerns.

Accidental Discovery: If any archaeological artifacts or human remains are uncovered during construction, demolition, or earth moving activities, construction within 100 feet of the find will be stopped, and the INDOT Cultural Resources Office and the Division of Historic Preservation and Archaeology will be notified immediately.

INDOT Cultural Resources staff reviewer(s): Patricia Jo Korzeniewski and Anuradha Kumar

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





0 500 1,000 2,000 Feet

0 100 200 300 400 500 600 Meters

Project Location

N
W E
S

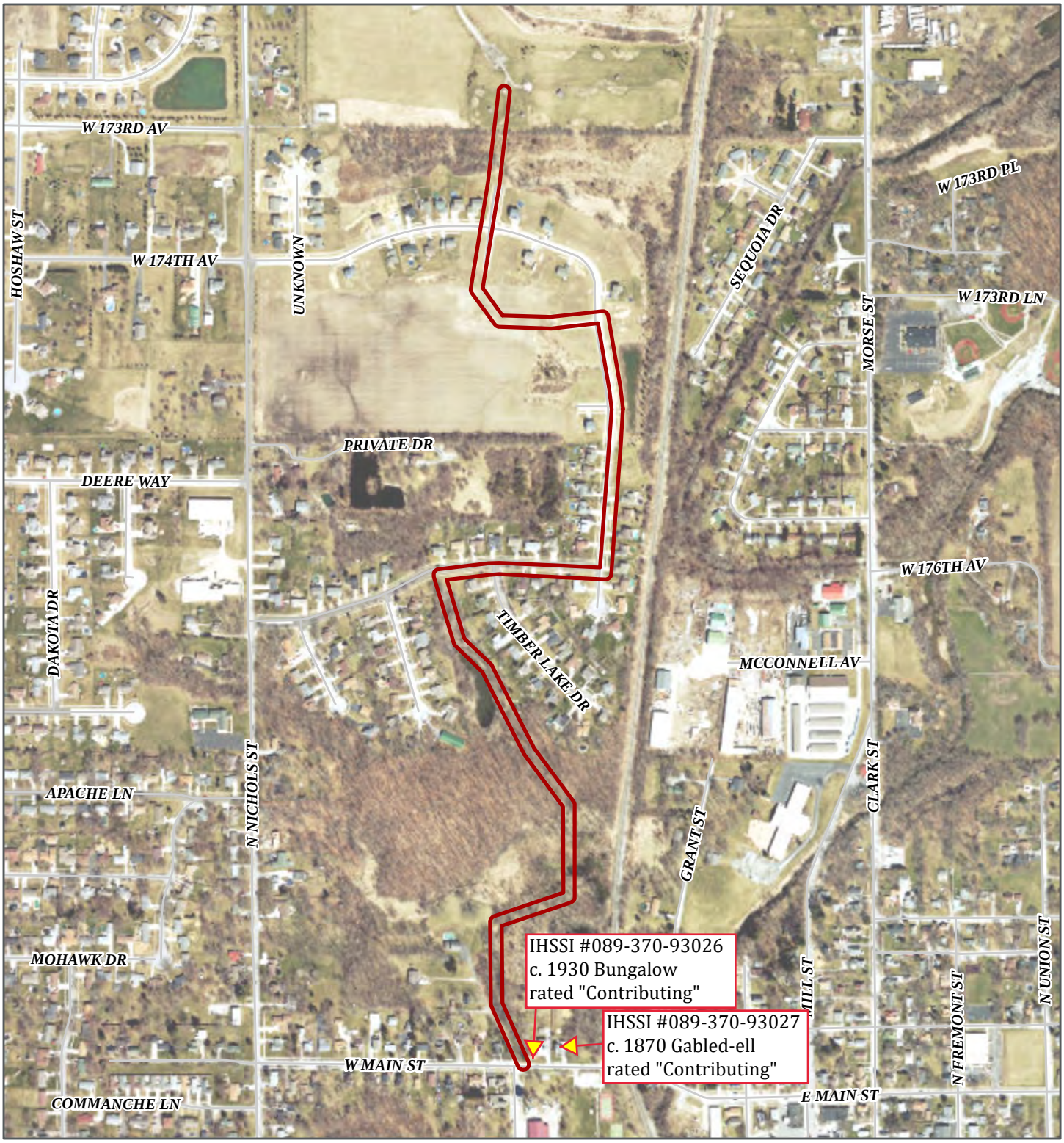
7.5' Quadrangle:
LOWELL
T33n R9w Sec23
Project No.
j19z524300

This map and all data contained within are supplied as is with no warranty. Cardno, Inc. expressly disclaims responsibility for damages or liability from any claims that may arise out of the use or misuse of this map. It is the sole responsibility of the user to determine if the data on this map meets the user's needs. This map was not created as survey data, nor should it be used as such. It is the user's responsibility to obtain proper survey data, prepared by a licensed surveyor, where required by law.

Figure 1: Project Location
MPPA Submittal
For the Proposed Freedom Trail in Lowell
Short Elliott Hendrickson, Inc.
Lake County, Indiana

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1986
www.cardno.com

Date: 10/30/2020 File Path: R:\Projects\19\19Z\19Z524300_SEH_LowellFreedomTrail_PhaseI_CE\GIS\MXD\MPPA\MPPA1_ProjectLocation.mxd Saved By: Stephen.LaFon



0 300 600 Feet
0 60 120 180 Meters

Project Area

N W E S

7.5' Quadrangle:
LOWELL
T33n R9w Sec23
Project No.
j19z524300

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Figure 2: Project Area
(2018 Aerial)
MPPA Submittal
For the Proposed Freedom Trail in Lowell
Short Elliott Hendrickson, Inc.
Lake County, Indiana

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1986
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Date: 10/30/2020 File Path: R:\Projects\19\19Z\19Z524300_SEH_LowellFreedomTrail_PhaseI_CE\GIS\MXD\MPPA\MPPA2_ProjectAreaAerial.mxd Saved By: Stephen.LaFon
Basemap: Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

PARTIAL REPORT

Document Information

Prepared for	Short Elliott Hendrickson, Inc. (SEH)
Project Name	Phase Ia Archaeological Reconnaissance for the Proposed Freedom Trail in Lowell, Cedar Creek Township, Lake County, Indiana
INDOT Des No	1802920
Cardno PN	J19z524300
Cardno PM	Tammy Miller
Date	December 8, 2020

Prepared and Submitted By Scott Hipskind

Principal Investigator 
Veronica Parsell

Prepared for:

Short Elliott Hendrickson, Inc.
9200 Calumet Avenue, Suite N300, Munster, Indiana, 46321

Prepared by:

Cardno
39010 Industrial Boulevard, Indianapolis, Indiana, 46254

INDIANA ARCHAEOLOGICAL SHORT REPORT

State Form 54566 (1-11)

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

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

Author: Scott Hipskind

Date *(month, day, year):* December 8, 2020

Project Title: Phase Ia Archaeological Reconnaissance for the Proposed Freedom Trail in Lowell, Cedar Creek Township, Lake County, Indiana.

PROJECT OVERVIEW

Project Description: The Project consists of a linear corridor that would be utilized for the construction of a pedestrian trail between Freedom Park and Liberty Park in Lowell, Cedar Creek Township, Lake County, Indiana (Figure 1). The trail would begin at Freedom Park and travel south through both off-road and on-road segments. Existing dedicated rights-of-way, as well as open spaces, will be utilized. The trail surfaces will vary based on location. Through subdivisions the trail will be concrete to match existing side walks; in off-road areas, the trail will be asphalt, and boardwalks may be utilized to cross wetlands. The anticipated depth of excavation in 18 in (45.72 cm). The corridor is approximately 1,770 meters (m) (5,807 feet [ft]) in length and 12 m (40 ft) in width.

INDOT Designation Number/ Contract Number: 1802920 Project Number:

DHPA Number: Approved DHPA Plan Number:

Prepared For: Short Elliott Hendrickson, Inc. (SEH)

Contact Person: Josh Grabijas

Address: 9200 Calumet Avenue, Suite N300

City: Munster State: IN ZIP Code: 46321

Telephone Number: 219.513.2500 x2596 E-mail Address: jgrabijas@sehinc.com

Principal Investigator: Veronica Parsell

Signature: Veronica Parsell

Company/Institution: Cardno

Address: 3901 Industrial Blvd

City: Indianapolis State: IN ZIP Code: 46254

Telephone Number: 317-388-1982 E-mail Address: Veronica.Parsell@cardno.com

PROJECT LOCATION

County: Lake County

USGS 7.5' series Topographic Quadrangle: Lowell

Civil Township: Cedar Creek Township

Legal Location:

	1/4,	SE	1/4,	SW	1/4,	SW	1/4, Section:	14	Township:	33 N	Range:	9 W
	1/4,	E	1/4,	NW	1/4,	NW	1/4, Section:	23	Township:	33 N	Range:	9 W
	1/4,	E	1/4,	SW	1/4,	NW	1/4, Section:	23	Township:	33 N	Range:	9 W
	1/4,	E	1/4,	NW	1/4,	SW	1/4, Section:	23	Township:	33 N	Range:	9 W

Topographic Map Datum: NAD 1983 Grid Alignment: SW

Comments:

Property Owner: There are 35 separate property owners along the proposed project corridor. Table 1 contains a list of these owners.

PROJECT AREA DETAILS

Length meters: 1,770 feet: 5,807 Width meters: 15 feet: 49 hectares: 2.65 acres: 6.5

Natural Region: Valparaiso Moraine Section

Topography: Flat, low terraces

Soil Association: The project area is located within the Morely-Blount-Pewamo soil association, which consists of "steep to nearly level, moderately well drained to poorly drained soils that formed in moderately fine textured glacial till" (USDA/SCS 1972).

Soils: Soils within the project area consists of Ozaukee silt loam (OzaB) 2 to 6 percent slopes, Ozaukee silt loam (OzaC2) 6 to 12 percent slopes, Ozaukee silty clay loam (OzlC3) 6 to 12 percent slopes, Milford silt loam (Mo), Pewamo silty clay loam (Pc), and Milford silty clay loam (Mr) 0 to 2 percent slopes (USDA/SCS 2016) (Figure 2).

Drainage: The project area is located within the Kankakee River River Watershed. Cedar Creek is located approximately 94 m (307 ft) east of the project area.

Current Land Use: The project area consists of a housing addition, a small portion of an agricultural field, a small portion of parkland, fallow drainage ways with new growth forests and thick underbrush, and marshes. Earthmoving related to urban developent resulted in heavy disturbance within the housing addition, where the A horizon was stripped away and replaced with new, graded lansdscaping. Disturbances related to modern refuse dumping were also identified in the area near the homes on the southern end of the project area.

Comments:

farmsteads or other residential sites, municipal buildings such as schools or churches, commercial structures such as mills, or historic dump and debris discard areas (SHAARD 2020).

Lake County was formally organized in 1837 (Ball 1873). In 1839, Crown Point was named the county seat (Howat 1915). By 1847 there were seven post offices, five sawmills, two grist mills, about fifty frame houses, five churches, and two stores in Lake County (Howat 1915).

Lake County's proximity to Chicago lead to an abundance of railroad lines traversing the county. Beginning in the 1850s, the Michigan Central and Michigan Southern Railroads established lines through the county (Howat 1915). By 1874, the Baltimore & Ohio Railroad had completed a line through the county, near the lake shore. By the 1880s, multiple railroad lines traversed Lake County, reflecting increased industrialization, especially in the northwest corner of the county (Howat 1915).

During the final decade of the nineteenth century, industrialization and manufacturing in the region was firmly established, and the region around Hammond was recognized as Chicago's most important manufacturing territory (Howat 1915). In addition, fresh foods were being shipped from Lake County to support the urbanization and increasing populations of Gary and Chicago (Howat 1915).

Cedar Creek Township was created in 1839; however, European settlers started occupying the area four years earlier (HFLI 1996). The first Euroamerican settler, Melvin Halsted, settled in the central portion of Cedar Creek Township in 1848. He soon platted the town of Lowell, named after Lowell, Massachusetts. The number of farmsteads in Cedar Creek Township signifies its reliance on an agricultural-based economy. The draining of the swamps and marshes in the southern portion of the township along with the introduction of the railroad caused the economy to boom in the late 1800s and early 1900s (HFLI 1996).

FIELD INVESTIGATION: *(check all that apply)*

Field Investigation Date(s) *(month, day, year):* October 10, 2020

Field Supervisor: Scott Hipskind

Field Crew: Brianna Baker, Kristin Doshier, John Flood, Kastyn Matheny, Josh Myers, and Ciarra Rinehart

Surface Visibility: The project area contained 0-80 percent surface visibility. The majority of the project area consisted of either grass yards in housing additions or young growth woods, scrub, and wetlands. A small portion of the northern end of the project area traversed an agricutlural field with standing corn and 80 percent surface visibility.

Factors Affecting Visibility: Most of the project area consisted of grass yards, park land, new growth trees, scrub vegetation, and wetlands.

Visual Walkover ☒ Pedestrian Survey ☒ Shovel Test ☒ Screened ☒ Mesh Size 1/4 inch

Interval 5 m ☐ 10 m ☒ 15 m ☒ Other *(describe below)* ☐

Number of Shovel Test Units Excavated: A total of 96 shovel tests were excavated along the project corridor.

Describe Methods**:** The majority of the project area was surveyed through the excavation of shovel test probes, though a small area on the north end of the proposed trail route was located in an agricultural field and subjected to pedestrian survey (Figure 5 series). Shovel test probes were excavated due to the lack of surface visibility along most of the proposed trail route.

Pursuant to IDNR-DHPA Guidelines (DHPA 2019), shovel tests were 30 centimeters (cm) (12 inches [in]) in diameter and extended into undisturbed soils or to a maximum depth of 50 cm (20 in) below surface. The linear trail route was subjected to shovel test probes at 15 m (49 ft) intervals (Figure 5 series). When disturbed shovel tests were encountered, shovel test probes were excavated to a maximum depth of 50 cm (20 in) in an attempt to identify buried

deposits or an intact A horizon. In the small portion of the project area that was pedestrian surveyed, the project corridor was visually inspected in two transects spaced 10 m (33 ft) apart.

Soils within the undisturbed portions of the project area primarily consisted of 7 to 43 cm (3 to 17 in) of 10YR 3/2 to 10YR 3/4 silt loam over 10YR 5/4 to 10YR 6/6 silt loam or silty clay loam. Intact shovel test probes in the vicinity of the wetlands frequently became inundated with water. Shovel test pits near the wetlands that did not fill with water contained hydric soils and consisted of 27 to 50 cm (10.6 to 19.7 in) of 10YR 2/1 silt loam over 10YR 3/2 silt loam.

Two small portions of the proposed trail near the southern end of the project area were not surveyed due to the presence of wetlands with standing water. Another section of the project area near the southern end of the proposed trail route was not surveyed due to slope in excess of 20 percent.

Attach photographs documenting disturbances below

Describe Disturbances:

At the northern end of the project area, the housing addition consisted primarily of disturbed soils. The original A horizon in this area was stripped for home construction, then new soil was brought in, graded, and compacted to create landscaping around the houses. A thin, newly developed A horizon was present over either subsoil or compacted fill dirt in the probes near the homes, road, and sidewalk (Figure 5 series).

Disturbance observed in probes between the two wetlands in the southern portion of the project area consisted of dumped shingles mixed with additional, modern refuse. This dumped debris appeared to have been leveled and graded. Dumping in this area was likely done to raise the elevation of the ground surface and drain the northern end of the parcel.

The disturbed probes adjacent to North Liberty Street at the southern end of the project area exhibited graded soils that were then further disturbed by dumped asphalt and brick fragments along the slope edge next to the road. This material was likely deposited to help slow erosion of the slope along the North Liberty Street. In one probe, modern trash and plastics was recovered and visible in the soil profile down to the transition between the A horizon and the sterile subsoil.

Comments:

RESULTS

☐ Archaeological records check has determined that the project area does not have the potential to contain archaeological resources.

☐ Archaeological records check has determined that the project area has the potential to contain archaeological resources.

☒ Phase Ia reconnaissance has located no archaeological resources in the project area.

☐ Phase Ia reconnaissance has identified landforms conducive to buried archaeological deposits.

Actual Area Surveyed hectares: 2.65 acres: 6.5

Comments:

RECOMMENDATION

☐ The archaeological records check has determined that the project area has the potential to contain archaeologic resources and a Phase Ia archaeological reconnaissance is recommended.

☐ The archaeological records check has determined that the project area does not have the potential to contain archaeological resources and no further work is recommended before the project is allowed to proceed.

☒ The Phase Ia archaeological reconnaissance has located no archaeological sites within the project area and it is recommended that the project be allowed to proceed as planned.

☐ The Phase Ia archaeological reconnaissance has determined that the project area includes landforms which have the potential to contain buried archaeological deposits. It is recommended that Phase Ic archaeological subsurface reconnaissance be conducted before the project is allowed to proceed.

☐ The Phase Ia archaeological reconnaissance has determined that the project area is within 100 feet of a cemetery and a Cemetery Development Plan is required per IC-14-21-1-26.5.

Cemetery Name:	
Other Recommendations/Commitments:	No archaeological sites were encountered as a result of the Phase Ia investigation. Based on these findings, the proposed project will have no adverse impacts to archaeological resources. No further testing of the project area is recommended. If the project footprint should change, additional investigation may be required.

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

Attachments

☒ Figure showing project location within Indiana.

☒ USGS topographic map showing the project area *(1:24,000scale).*

☒ Aerial photograph showing the project area, land use and survey methods.

☒ Photographs of the project area.

☐ Project plans *(if available)*

Other Attachments:	Table 1: List of property owners within the Project Area Table 2: IHSSI, Historic Structures and Cultural Resources within 1.6 km (1 mi) of the Project Area

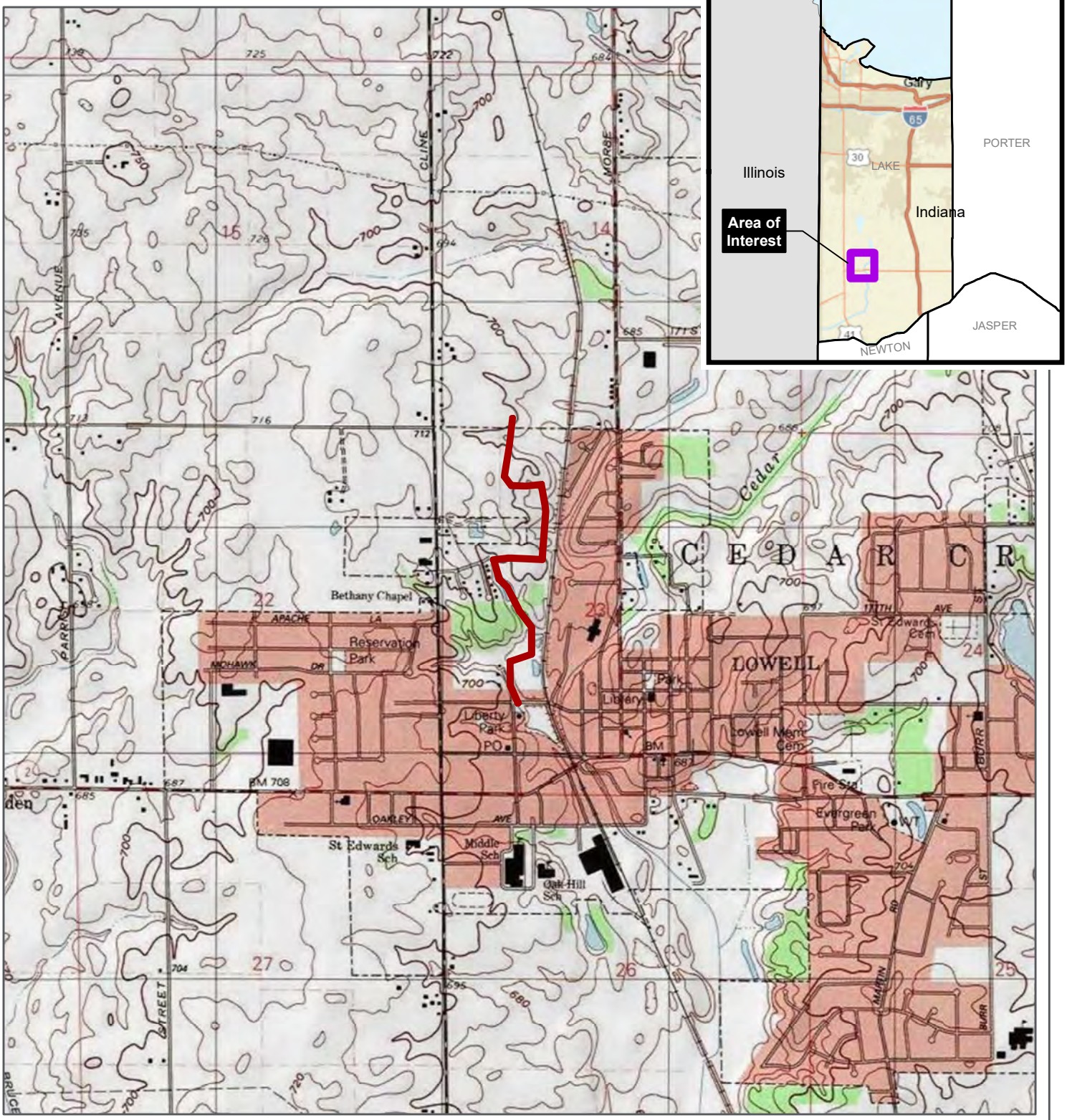
References Cited:

Andreas, Alfred T.
1876 Illustrated Historical Atlas of the State of Indiana. Baskin, Forster, and Company. Chicago, Illinois.

Ball, T.H.
1873 Map of Lake County, Indiana from 1834 to 1872. J.W. Goodspeed Printer and Publisher. Chicago, Illinois.

Cochran, Blake
2003 Creekside of Meadowbrook Apartment Complex, Lake County, Indiana; Archaeological Field Reconnaissance. ARMS at Ball State University, ARMS Project #03FR003. Prepared for Lake County Realty, Inc. Copy on file at the Indiana Department of Natural Resources-Division of Historic Preservation and Archaeology.
2006 Archaeological Field Reconnaissance, Lowell Water Lines, Lake County, Indiana. ARMS at Ball State University, ARMS Project #06FR7. Prepared for Butler, Fairman and Seutert, Inc. Copy on file at the Indiana Department of Natural Resources-Division of Historic Preservation and Archaeology.

EBI Consulting
2019 Archaeological Sensitivity Assessment, Post Office Water Tower/CH54XC980, 248 North Liberty Avenue, Lowell, Lake County, Indiana. Copy on file at the Indiana Department of Natural Resources-Division of Historic Preservation and Archaeology.



N
W E
S

7.5' Quadrangle:
LOWELL
T33n R9w Sec23
Project No.
j19z524300

Figure 1: Project Location
MPPA Submittal
For the Proposed Freedom Trail in Lowell
Short Elliott Hendrickson, Inc.
Lake County, Indiana

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0 300 600 Feet

0 60 120 180 Meters

Project Area

N W E S

7.5' Quadrangle:
LOWELL
T33n R9w Sec23
Project No.
j19z524300

This map and all data contained within are supplied as is with no warranty. Cardno, Inc. expressly disclaims responsibility for damages or liability from any claims that may arise out of the use or misuse of this map. It is the sole responsibility of the user to determine if the data on this map meets the user's needs. This map was not created as survey data, nor should it be used as such. It is the user's responsibility to obtain proper survey data, prepared by a licensed surveyor, where required by law.

Figure 2: Project Area
(2018 Aerial)
MPPA Submittal
For the Proposed Freedom Trail in Lowell
Short Elliott Hendrickson, Inc.
Lake County, Indiana

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Date: 10/30/2020 File Path: R:\Projects\19\19Z\19Z524300_SEH_LowellFreedomTrail_PhaseI_CE\GIS\MXD\MPPA\MPPA2_ProjectAreaAerial.mxd Saved By: Stephen.LaFon

Basemap: Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

Photo 1: Overview photograph of the north end of the Project Area. Facing south in Freedom Park.

Photo 2: Overview photograph of the north end of the Project Area. Facing north from W 174 Avenue/Redbud Lane.

Photo 3: Overview photograph of the north end of the Project Area. Facing south from W 174 Avenue/Redbud Lane.

Photo 4: Surface visibility of agricultural field subject to pedestrian survey. Facing down.

Photo 5: Overview photograph of the north end of the Project Area. Facing west from Redbud Lane.

Photo 6: Overview photograph of the north-central portion of the Project Area. Facing south along Redbud Lane.

Photo 7: Overview photograph of the north-central portion of the Project Area and retention ponds. Facing north along Redbud Lane.

Photo 8: Overview photograph of the north-central portion of the Project Area. Facing north from intersection of Redbud Lane and Timber Springs Road.

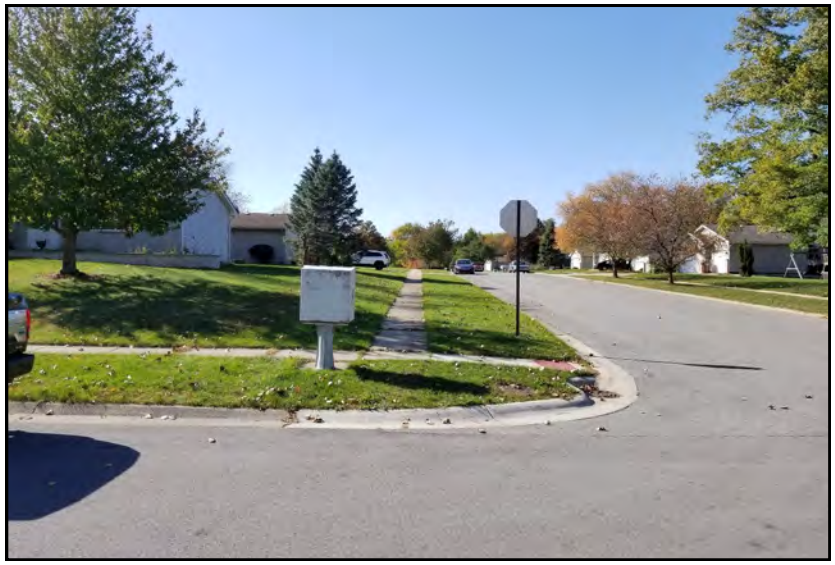

Photo 9: Overview photograph of the north-central portion of the Project Area. Facing west from intersection of Redbud Lane and Timber Springs Road.

Photo 10: Overview photograph of the central wooded portion of the Project Area. Facing south from Timber Springs Road.

Photo 11: Overview photograph of the central wooded portion of the Project Area and drainage. Facing southwest.

Photo 12: Overview photograph of the south-central portion of the Project area and northern-most wetland. Facing south.

Project Number:
J19z524300

Project Photographs
Phase Ia Archaeological Reconnaissance
For the Proposed Freedom Trail in Lowell
Short Elliott Hendrickson, Inc.
Lake County, Indiana

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Photo 13: Overview photograph of the south end of the Project Area exhibiting slope greater than 20 percent. Facing north along N Liberty Street.

Photo 14: Overview photograph of the southern portion of the Project Area and deposited asphalt on slope. Facing west.

Photo 15: Overview photograph of the south end of the Project Area. Facing north.

Photo 16: Overview photograph of home construction in progress. Facing north-northeast.

Photo 17: Representative undisturbed shovel test probe excavated in the northern portion of the Project Area, north of the housing addition.

Photo 18: Representative disturbed shovel test probe excavated in the portion of the Project Area within the housing addition.

Photo 19: Representative undisturbed shovel test probe excavated within the wooded portion of the Project Area.

Photo 20: Representative disturbed shovel test probe excavated in the southern portion of the Project Area along N Liberty Street.

Project Number:
J19z524300

Project Photographs
Phase Ia Archaeological Reconnaissance
For the Proposed Freedom Trail in Lowell
Short Elliott Hendrickson, Inc.
Lake County, Indiana

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Appendix E
Hazardous Materials

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Date: November 5, 2020

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

From: Tamara Miller
Cardno
3901 Industrial Boulevard
Indianapolis, IN 46254
Tamara.Miller@cardno.com

Re: RED FLAG INVESTIGATION
DES # 1802920, Local Project
Pedestrian/Bicycle Trail Project
Lowell Freedom Trail, from Freedom Park to Main Street
Lake County, Indiana

PROJECT DESCRIPTION

Brief Description of Project: The Town of Lowell in cooperation with Indiana Department of Transportation and Federal Highway Administration, intend to proceed with a project to construct a 12-foot wide multi-use trail, which would connect Freedom Park to Liberty Park. This section of the trail is comprised of both off-road and on-road segments. Existing dedicated rights-of-way, as well as open spaces will be utilized. Trail surfaces will vary based on location – through subdivisions the trail will be concrete to match existing sidewalks, in off-road areas, the trail will be asphalt, and boardwalks may be utilized to cross wetlands.

Bridge and/or Culvert Project: Yes ☐ No ☒ Structure # _____

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

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

Proposed right of way: Temporary ☒ # Acres __1.0___ Permanent ☒ # Acres __3.0__, Not Applicable ☐

Type and proposed depth of excavation: Maximum depth of excavation is 18-inches along the length of the trail.

Maintenance of traffic (MOT): No detour or road closure required.

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	5	Recreational Facilities	9
Airports[1]	N/A	Pipelines	3
Cemeteries	N/A	Railroads	1
Hospitals	N/A	Trails	1
Schools	3	Managed Lands	2

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

Explanation:
Religious Facilities: Five (5) religious facilities are located within the 0.5 mile search radius. The nearest facility is 0.16 mile east of the project area. No impact is expected.

Schools: Three (3) schools are located within the 0.5 mile search radius. The nearest facility is 0.29 mile south of the project area. No impact is expected.

Recreational Facilities: Nine (9) recreational facilities are located within the 0.5 mile search radius. The project begins at Freedom Park and ends at Liberty Park, both owned by Lowell Parks Department. Coordination with Lowell Parks Department will occur.

Pipelines: Three (3) pipeline segments are located within the 0.5 mile search radius. The nearest pipeline segment is located 0.16 mile east of the project area. No impact is expected.

Railroads: One (1) railroad segment is located within the 0.5 mile search radius. The nearest segment is located 0.03 mile east of the project area. No impact is expected.

Trails: One (1) trail segment is located within the 0.5 mile search radius. The nearest segment is located 0.22 mile north of the project area. No impact is expected.

Managed Lands: Two (2) managed lands are located within the 0.5 mile search radius. The project begins at Freedom Park and ends at Liberty Park, both owned by Lowell Parks Department. Coordination with Lowell Parks Department will occur.

WATER RESOURCES TABLE AND SUMMARY

Water Resources Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
NWI - Points	N/A	Canal Routes - Historic	N/A
Karst Springs	N/A	NWI - Wetlands	32
Canal Structures – Historic	N/A	Lakes	7
NPS NRI Listed	N/A	Floodplain - DFIRM	3
NWI-Lines	1	Cave Entrance Density	N/A

IDEM 303d Listed Streams and Lakes (Impaired)	2	Sinkhole Areas	N/A
Rivers and Streams	6	Sinking-Stream Basins	N/A

Explanation:
NWI Lines: One (1) NWI line is located within the 0.5 search radius. This NWI line is located 0.01 mile west of the project area. No impact is expected.

IDEM 303d Listed Rivers and Streams: Two (2) 303d Listed rivers and stream segments are located within the 0.5 mile search radius. Cedar Creek, listed for impair biotic communities, is located 0.11 mile east of the project area. No impact is expected.

Rivers and Streams: Six (6) river and stream segments are located within the 0.5 mile search radius. The nearest stream segment is located 0.04 mile east of the project area. No impact is expected.

NWI –Wetlands: Thirty-two (32) NWI-wetlands are located within the 0.5 mile search radius. Three wetlands are located within the project area. A Waters of the US Report is recommended and coordination with the appropriate agency, if applicable, will occur.

Lake: Seven (7) lakes are located within the 0.5 mile search radius. One lake is located within the project area. A Waters of the US Report is recommended and coordination with the appropriate agency, if applicable, will occur.

Floodplain – DFIRM: Three (3) floodplain polygons are located within the 0.5 mile search radius. The nearest floodplain is located 0.04 mile east of the project area. No impact is expected.

MINING AND MINERAL EXPLORATION TABLE AND SUMMARY

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

Explanation: No Mining/Mineral Exploration resources were identified within the 0.5 mile search radius.

HAZARDOUS MATERIAL CONCERNS TABLE AND SUMMARY

Hazardous Material Concerns Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Superfund	N/A	Manufactured Gas Plant Sites	N/A
RCRA Generator/ TSD	7	Open Dump Waste Sites	N/A
RCRA Corrective Action Sites	N/A	Restricted Waste Sites	N/A
State Cleanup Sites	1	Waste Transfer Stations	N/A
Septage Waste Sites	N/A	Tire Waste Sites	N/A
Underground Storage Tank (UST) Sites	1	Confined Feeding Operations (CFO)	N/A
Voluntary Remediation Program	N/A	Brownfields	1
Construction Demolition Waste	N/A	Institutional Controls	N/A
Solid Waste Landfill	N/A	NPDES Facilities	6
Infectious/Medical Waste Sites	N/A	NPDES Pipe Locations	1
Leaking Underground Storage (LUST) Sites	3	Notice of Contamination Sites	N/A

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

Explanation:
RCRA Generator/TSD: Seven (7) RCRA Generator facilities are located within the 0.5 mile search radius. The nearest facility, Town of Lowell (248 N Liberty St), is located 0.1 mile south of the project area. No impact is expected.

State Cleanup Site: One (1) State Cleanup Site is located within the 0.5 mile search radius. Tri-creek School Corporation (195 West Oakley Ave) is located 0.42 mile southwest of the project area. No impact is expected.

Underground Storage Tank (UST): One (1) UST facility is located within the 0.5 mile search radius. Rieter Automotive Incorporated (101 West Oakley Ave) is located 0.4 mile southwest of the project area. No impact is expected.

Leaking Underground Storage Tank (LUST): Three (3) LUST facilities are located within the 0.5 mile search radius. The nearest facility, Lowell Water Department (248 N Liberty St), is located 0.12 mile south of the project area. No impact is expected.

Brownfields: One (1) Brownfield facility is located within the 0.5 mile search radius. The Former Lowell Elementary School (525 E Main St) is located 0.37 mile east of the project area. No impact is expected.

NPDES Facility: Six (6) NPDES facilities are located within the 0.5 mile search radius. The nearest facility, Family Express 67 (140 Mill St), is located 0.26 mile southeast of the project area. No impact is expected.

NPDES Pipe Location: One (1) NPDES Pipe is located within the 0.5 mile search radius. Family Express 67 (140 Mill St), is located 0.26 mile southeast of the project area. No impact is expected.

ECOLOGICAL INFORMATION SUMMARY

The Lake 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 ESD did not indicate the presence of ETR species within the 0.5 mile search radius. Coordination with IDNR will occur.

A review of the USFWS database by INDOT - LaPorte District completed on October 14, 2020 did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

RECOMMENDATIONS SECTION

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

INFRASTRUCTURE:
Recreational Facilities and Managed Lands: Two (2) recreational facilities/managed lands are located within the project area. The project begins at Freedom Park and ends at Liberty Park, both owned by Lowell Parks Department. Coordination with Lowell Parks Department will occur.

WATER RESOURCES:
A Waters of the US Report is recommended and coordination with the appropriate agency, if applicable, will occur for the following features:

- Three (3) wetlands are located within the project area. Coordination with the appropriate agency will occur.
- One (1) lake is located within the project area. Coordination with the appropriate agency will occur.

MINING/MINERAL EXPLORATION: N/A

HAZARDOUS MATERIAL CONCERNS: N/A

ECOLOGICAL INFORMATION: Coordination with 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 INDOT Projects".

INDOT ESD concurrence: Nicole Fohey-Breting Digitally signed by Nicole Fohey-Breting Date: 2021.02.23 12:46:13 -05'00' (Signature)

Tamara Miller
Project Scientist
Cardno

Graphics:

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

SITE LOCATION: YES

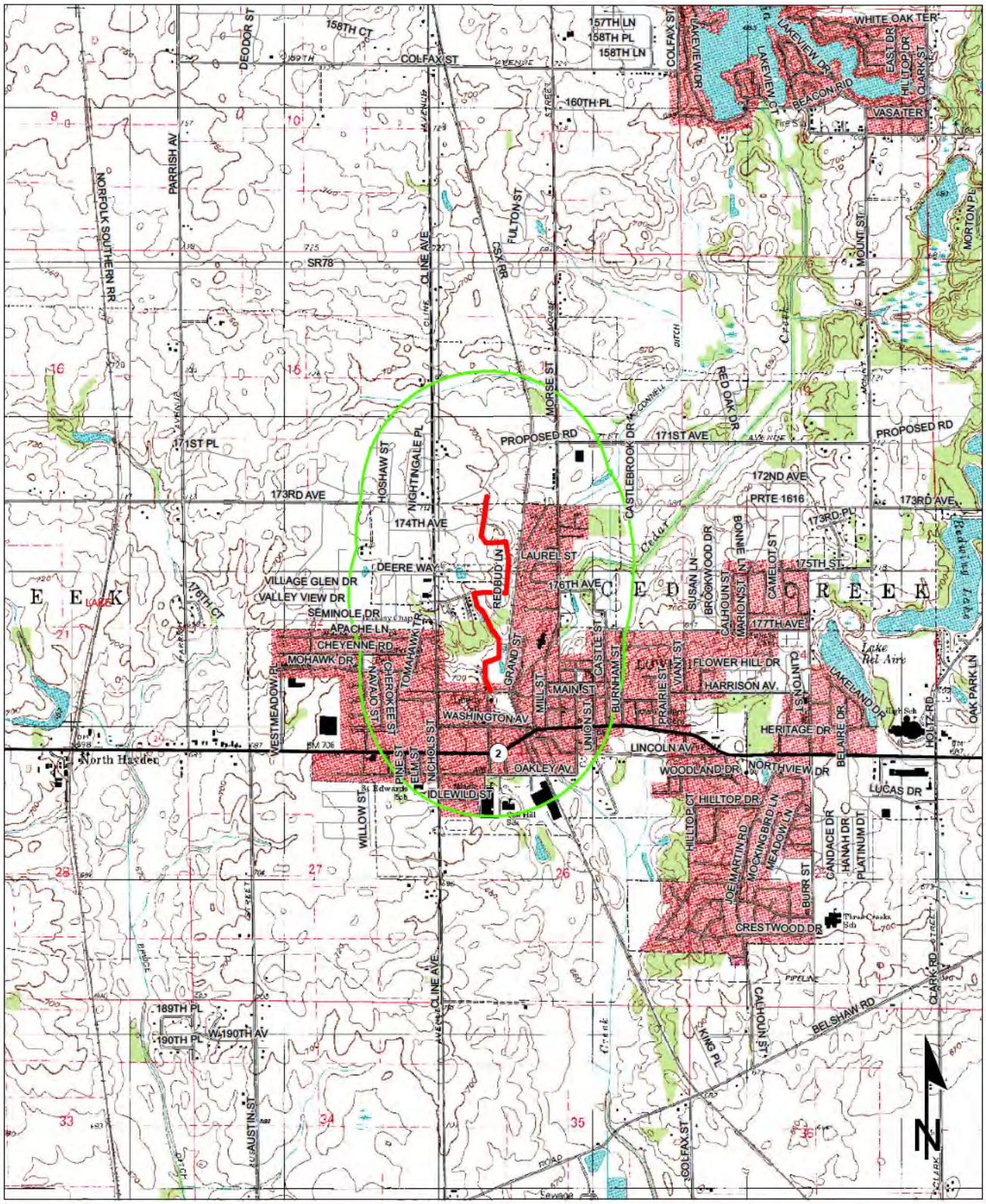
INFRASTRUCTURE: YES

WATER RESOURCES: YES

MINING/MINERAL EXPLORATION: N/A

HAZARDOUS MATERIAL CONCERNS: YES

Red Flag Investigation - Site Location
Lowell Freedom Trail, from Lowell Sports Park to Main Street
Des. No.1802920, Pedestrian/BicycleTrail Project
Lake County, Indiana



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

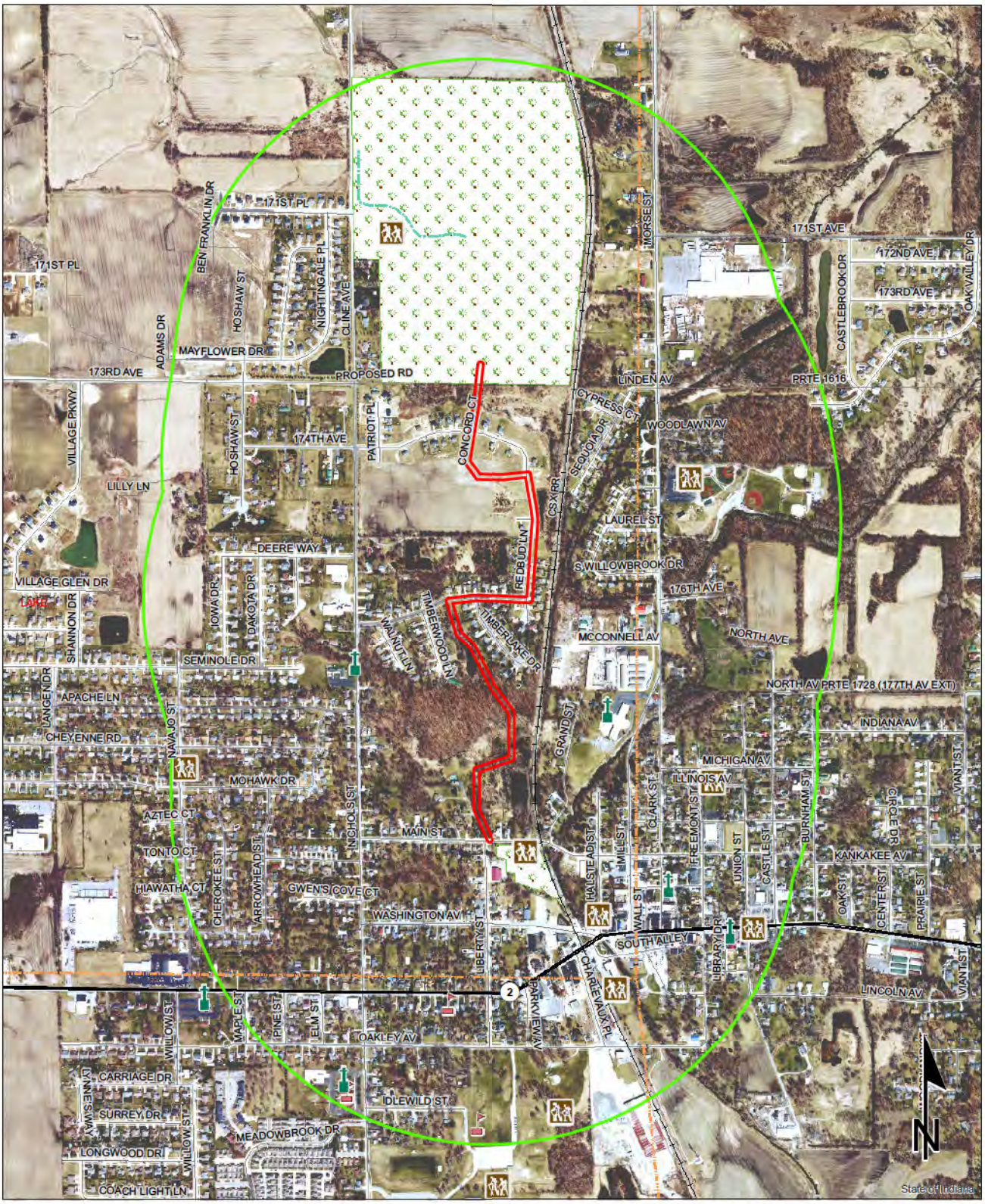
0.5 0.25 0 0.5 Miles

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

LOWELL QUADRANGLE
INDIANA
7.5 MINUTE SERIES (TOPOGRAPHIC)

Project Area Half Mile Radius

Red Flag Investigation - Infrastructure
Lowell Freedom Trail, from Lowell Sports Park to Main Street
Des. No.1802920, Pedestrian/BicycleTrail Project
Lake County, Indiana



0.2 0.1 0 0.2 Miles

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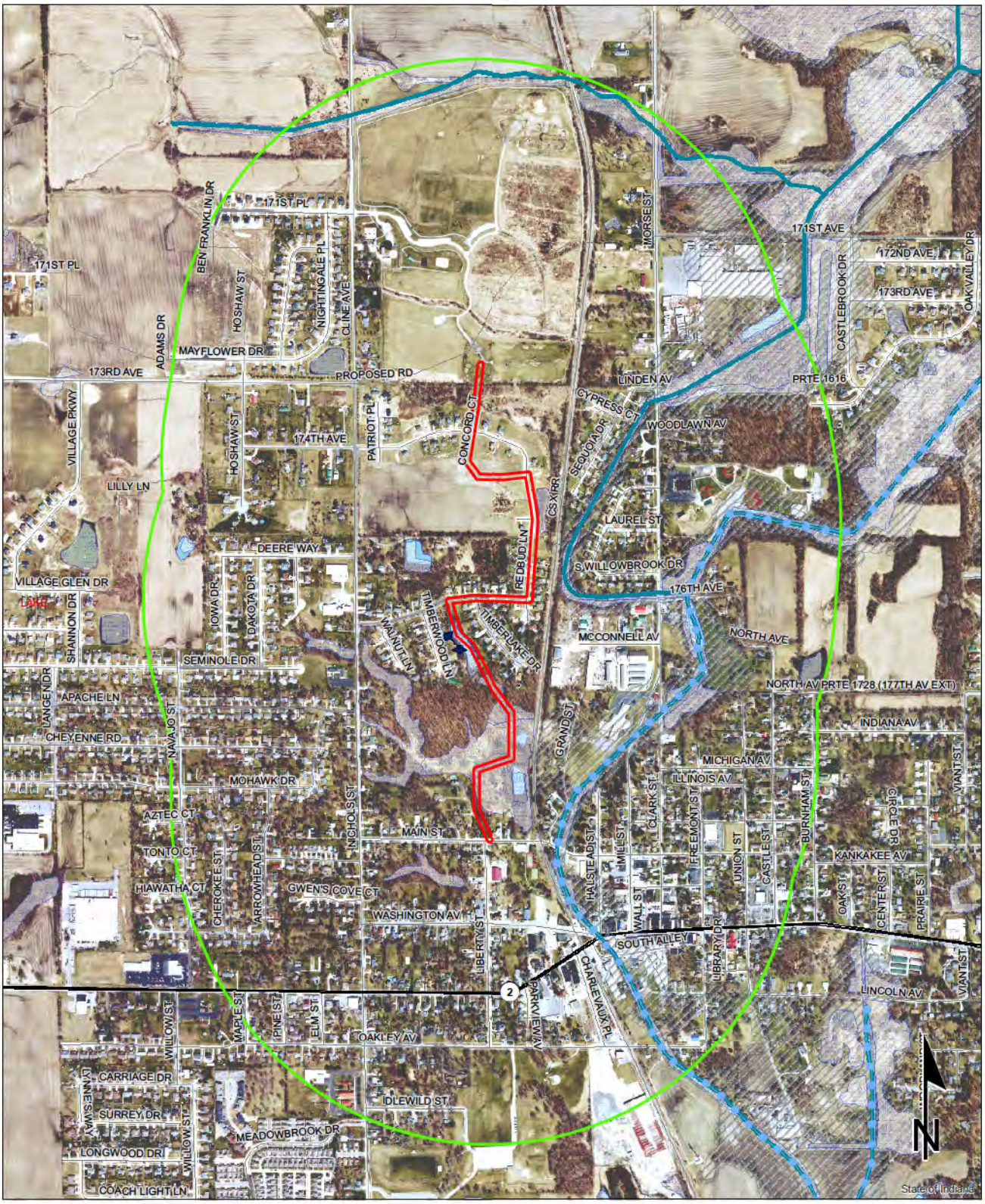
- Religious Facility
- Airport
- Cemeteries
- Hospital
- School
- Recreation Facility
- Pipeline
- Railroad
- Trails
- Managed Lands
- County Boundary
- Project Area
- Half Mile Radius
- Toll
- Interstate
- State Route
- US Route
- Local Road

Red Flag Investigation - Water Resources
Lowell Freedom Trail, from Lowell Sports Park to Main Street
Des. No.1802920, Pedestrian/BicycleTrail Project
Lake County, Indiana



0.2 0.1 0 0.2 Miles

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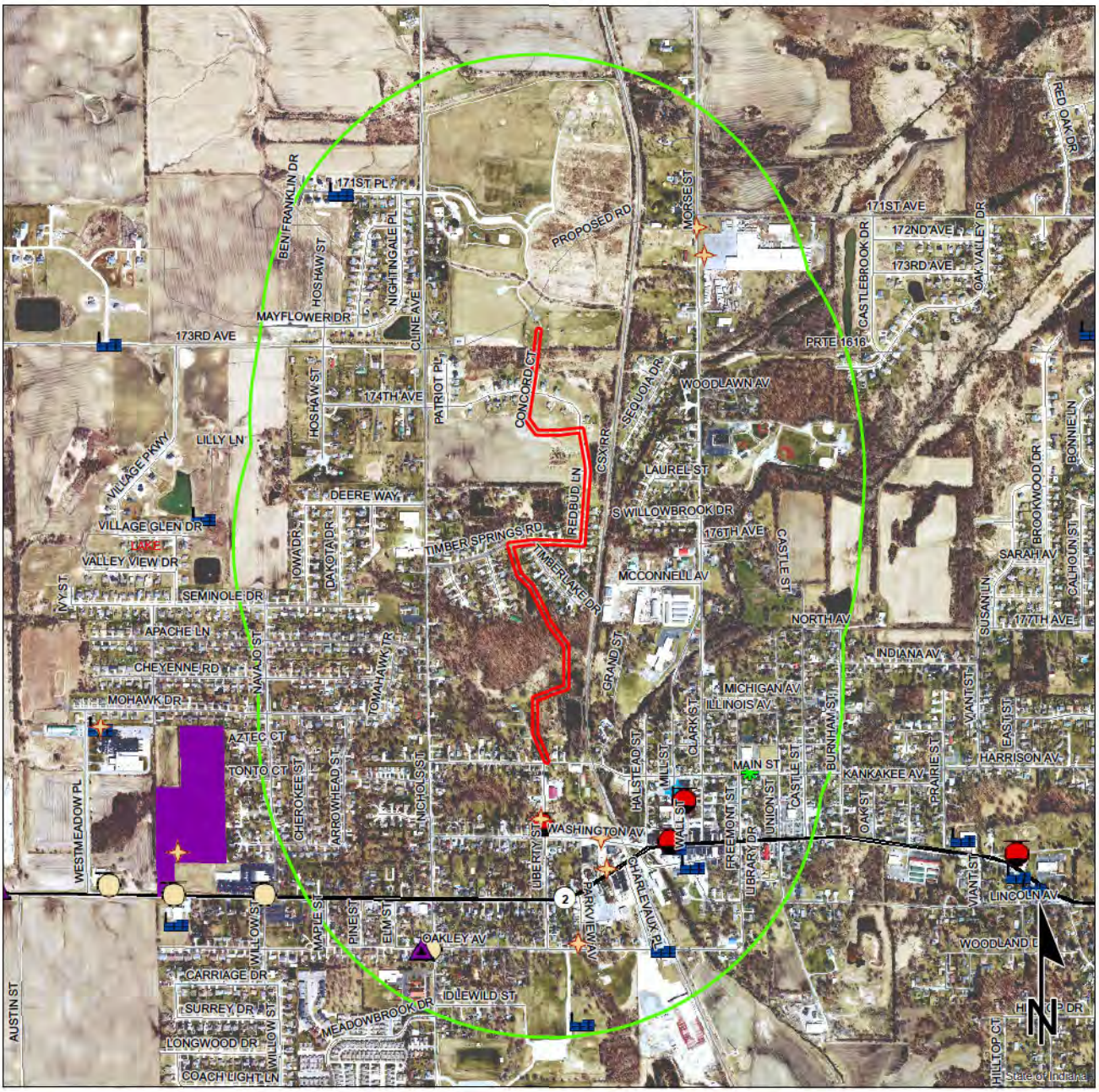
- NWI - Point
- Karst Spring
- NWI- Line
- Impaired_Stream_Lake
- NPS NRI listed
- River
- Canal Structure - Historic
- Canal Route - Historic
- Wetlands
- Lake
- Floodplain - DFIRM
- Cave Entrance Density
- Sinkhole Area
- Sinking-Stream Basin
- County Boundary
- Project Area
- Half Mile Radius
- Toll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

Red Flag Investigation - Hazardous Material Concerns
Lowell Freedom Trail, from Lowell Sports Park to Main Street
Des. No.1802920, Pedestrian/BicycleTrail Project
Lake 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
- Underground Storage Tank
- Voluntary Remediation Program
- Waste Transfer Station
- Institutional Controls
- County Boundary
- Project Area
- Half Mile Radius
- Toll
- Interstate
- State Route
- US Route
- Local Road

0.25 0.125 0 0.25 Miles

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Indiana County Endangered, Threatened and Rare Species List

County: Lake

DNR Indiana Department of Natural Resources

Species Name	Common Name	FED	STATE	GRANK	SRANK
Mollusk: Bivalvia (Mussels)					
Plethobasus cyphyus	Sheepnose	LE	SE	G3	S1
Venustaconcha ellipsiformis	Ellipse			G4	S2
Insect: Coleoptera (Beetles)					
Nicrophorus americanus	American Burying Beetle	LE	SX	G3	SX
Insect: Homoptera					
Bruchomorpha dorsata			SR	GNR	S2
Bruchomorpha extensa	The Long-nosed Elephant Hopper		SR	GNR	S2S3
Bruchomorpha oculata			SR	GNR	SNR
Chlorotettix fallax	Deceptive Chlorotettix Leafhopper		SR	GNR	S1S2
Cicadula straminea	Straw-colored Sedge Leafhopper		ST	GNR	S1S2
Cosmotettix bilineatus	Two-lined cosmotettix		SR	GNR	S1S2
Dorydiella kansana	Kansas Spikerush Leafhopper		SR	GNR	S2S3
Flexamia pyrops	The Long-nose Three-awn Leafhopper		ST	GNR	S1
Flexamia reflexus	Indiangrass Flexamia		SR	GNR	S1S2
Graminella mohri	Mohr's Switchgrass Leafhopper		SE	GNR	S1
Laevicephalus acus	Pointed Fen Laevicephalus		SR	GNR	S1S2
Limotettix divaricatus			ST	GNR	SNR
Mesamia nigridorsum	Black-banded Sunflower Leafhopper		WL	GNR	S2S3
Paraphilaenus parallelus	A Spittle Bug		ST	GNR	S1
Paraphlepsius lobatus	Lobed Paraphlepsius Leafhopper		SR	GNR	S2
Paraphlepsius maculosus	Peppered Paraphlepsius Leafhopper		ST	GNR	S1S2
Philaenarcys killa	Great Lakes dune spittlebug		SR	GNR	S2S3
Polyamia caperata	Little Bluestem Polyamia		SR	GNR	S2
Polyamia herbida	The Prairie Panic Grass Leafhopper		ST	GNR	S2
Prairiana kansana	The Kansas Prairie Leafhopper		SE	GNR	S1
Prosapia ignipectus	Red-legged Spittle Bug		SR	G4	S2
Insect: Hymenoptera					
Bombus affinis	Rusty-patched Bumble Bee	LE	SE	G2	S1
Dolichoderus plagiatus				G5	S2
Formica glacialis				G5	S2
Lasius flavus				G5	S2
Lasius minutus				GNR	S1
Lasius speculiventris				GNR	S1
Myrmica lobifrons				G5	S1
Solenopsis texana texana				GNRTNR	S1

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Indiana County Endangered, Threatened and Rare Species List

County: Lake

Indiana Department of Natural Resources

Species Name	Common Name	FED	STATE	GRANK	SRANK
Insect: Lepidoptera (Butterflies & Moths)					
Acleris semipurpurana	Oak Leaftier Moth		SR	GNR	SNR
Acronicta dactylina	Fingered Dagger Moth		SR	G5	SNR
Acronicta funeralis	Funerary Dagger Moth		SR	G5	SNR
Aethes patricia			SE	G3G4	S1
Agrotis stigmosa	Spotted Dart Moth		ST	G4	S1S2
Agrotis vetusta	Old Man Dart		SR	G5	S2
Ancylis semiovana			SR	GNR	S2S3
Apamea burgessi	A Noctuid Moth		ST	G4	S1
Apamea indocilis	The Spastic Apamea		ST	G5	S1S3
Apamea nigrior	Black-dashed Apamea		SR	G5	S2S3
Apantesis virguncula	Little Virgin Tiger Moth		SR	G5	S1S2
Atrytonopsis hianna	Dusted Skipper		ST	G4G5	S2S3
Boloria selene myrina	Silver-bordered Fritillary		ST	G5T5	S2S3
Capis curvata	Curved Halter Moth		ST	G5	S2S3
Capsula laeta	Red Sedge Borer		ST	G4	S1S2
Caradrina meralis	The Rare Sand Quaker		ST	G5	S2
Catocala antinympha	The Sweet Fern Underwing		SE	G5	S1
Catocala gracilis	Graceful Underwing		SR	G5	S2S3
Catocala praeclara	Praeclara Underwing		SR	G5	S2S3
Coenochroa illibella	Dune Panic Grass Moth		SR	GNR	S2S3
Crambus bidens	Forked Grass-veneer		SR	GNR	SNR
Cyclophora pendulinaria	Sweetfern Geometer		SR	G5	SNR
Cycnia collaris			ST	G4	S2S3
Danaus plexippus	Monarch	C	WL	G4	S4S5B
Dargida rubripennis	The Pink Streak		ST	G3G4	S1
Dichagyris acclivis	A Noctuid Moth		ST	G4G5	S2
Dichagyris grotei	Grote's Black-tipped Quaker		ST	G4	S2
Dichomeris aleatrix	Aleatrix dichomeris			GNR	S1S2
Digrammia eremiata	The Goat's Rue Looper		SR	G4	S2S3
Digrammia mellistrigata	A Geometrid Moth		SR	G5	SNR
Erynnis lucilius	Columbine Duskywing		SE	G2G3	SH
Erynnis martialis	Mottled Duskywing		WL	G3	S3
Erynnis persius persius	Persius Duskywing		SE	G5T1T3	S1
Euchloe olympia	Olympia Marble		ST	G5	S2S3
Eucoptocnemis fimbriaris	Fringed Dart		ST	G4	S1
Eucosma bilineana			SR	GNR	S1S2
Eucosma bipunctella	A Moth		SR	GNR	S1S2
Eucosma giganteana	Giant Eucosma		SR	GNR	S1S2
Eucosma ochroterminana	Buff-tipped Eucosma		SR	GNR	SNR

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Indiana County Endangered, Threatened and Rare Species List

County: Lake

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Eucosma olivaceana	Olivaceous Eucosma		SR	GNR	S1S2
Eucosma striatana	Striated Eucosma		SR	G5	SNR
Eucosma umbrastriana			SR	GNR	SNR
Euphyes bimacula	Two-spotted Skipper		ST	G4	S1S2
Fagitana littera	The Marsh Fern Moth		ST	G4	S1S2
Feltia manifesta	The Record Keeper Moth		SR	G4	S3S4
Gabara subnivosella	A Noctuid Moth		SR	G4	S1S2
Glaucopsyche lygdamus couperi	Silvery Blue		SE	G5T5	SH
Grammia figurata	The Figured Grammia		SR	G5	S2S3
Grammia phyllira	The Sand Barrens Grammia		SR	G4	S2S3
Hadena capsularis	The Starry Campion Capsule Moth		SR	G5	S1S2
Hadena ectypa	The Starry Campion Moth		ST	G3G4	S1S3
Hemaris gracilis	The Blueberry Clearwing Sphinx		SR	G3G4	S1S2
Hesperia leonardus	Leonard's Skipper		ST	G4	S2S3
Hesperia ottoe	Ottoe Skipper		SE	G3	S1
Hypenodes caducus	Large Hypenodes		SR	GNR	SNR
Hyperaeschra georgica	A Prominent Moth		ST	G5	S2
Hypocoena inquinata	Tufted Sedge Moth		ST	G5	S1S2
Iodopepla u-album	White-eyed Borer Moth		SR	G5	S2
Lemmeria digitalis	Fingered Lemmeria		SR	G4	S1S2
Lesmone detrahens	Detracted Owlet		SR	G5	S2
Lethe eurydice eurydice	Eyed Brown		WL	G5T5	S3
Leucania amygdalina	Salt Marsh Wainscot		SR	GNR	S2
Leucania inermis	Unarmed Wainscot		SR	G5	S2S3
Leucania multilinea	Many-lined Wainscot		SR	G5	S1S2
Lycaeides melissa samuelis	Karner Blue	LE	SE	G2	S1
Lycaena dione	Gray Copper		SX	G5	SX
Lycaena helloides	Purplish Copper		ST	G5	S2S3
Macaria multilineata	Many-lined Angle		SR	G4	SNR
Macrochilo absorptalis	Slant-lined Owlet		SR	G4G5	S2S3
Macrochilo hypocritalis	Twin-dotted Macrochilo		SR	G4	S2
Macrochilo louisiana	Louisiana Macrochilo		ST	G4	S1S2
Melanomma auricinctaria	Huckleberry Eye-spot Moth		SR	G4	S2S3
Melipotis jucunda	Merry Melipotis Moth		SR	G5	S1S3
Meropleon ambifusca	Newman's Brocade		ST	G3G4	S1S2
Meropleon diversicolor	Multicolored Sedgeminer		SR	G5	S2S3
Metanema determinata	Dark Metanema		SR	G5	SNR
Metanema inatomaria	Pale Metanema		SR	G5	SNR
Metarranthis apiciaria	Barrens Metarranthis Moth		SE	G1G3	SH

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Indiana County Endangered, Threatened and Rare Species List

County: Lake

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Neodactria murellus	Prairie Sedge Moth		ST	GNR	S1
Nola cilicoides	Blurry-patched Nola Moth		SR	G5	SNR
Notodonta scitipennis	Finned-willow Prominent		ST	G5	S1S2
Odontosia elegans	Elegant Prominent		SR	G5	S1S2
Oligia obtusa	A Noctuid Moth		SE	G4	S1
Pangrapta decoralis	The Multicolored Huckleberry Moth		ST	G5	S2
Papaipema beeriana	Beer's Blazing Star Borer Moth		ST	G2G3	S1S3
Papaipema cerina	Golden Borer Moth		ST	G2G4	S1
Papaipema leucostigma	Columbine Borer		ST	G4G5	S1S2
Papaipema lysimachiae	The St. John's Wort Borer Moth		SR	G4G5	S1S3
Papaipema maritima	The Giant Sunflower Borer Moth		ST	G3	S2
Papaipema pterisii	Bracken Borer Moth		WL	G5	SNR
Papaipema rigida	Rigid Sunflower Borer Moth		SR	G4G5	S2S3
Papaipema sciata	The Culver's Root Borer		ST	G3	S1S2
Papaipema silphii	Silphium Borer Moth		ST	G3G4	S2
Papaipema speciosissima	The Royal Fern Borer Moth		ST	G4	S2S3
Parasa indetermina	Stinging Rose Caterpillar Moth		SR	G4	S1S2
Peoria gemmatella	Gemmed Cordgrass Borer		SE	GNR	S1
Peoria tetradella			SR	GNR	SNR
Photedes enervata	The Many-lined Cordgrass Moth		ST	G4	S1
Photedes includens	The Included Cordgrass Borer		ST	G4	S1
Photedes inops	Spartina Borer Moth		SR	G3G4	S2S3
Photedes panatela	Northern Cordgrass Borer		ST	GNR	S1
Phytometra ernestinana	Ernestine's Moth		SE	G4	S1
Poanes massasoit	Mulberry Wing Skipper			G4	S3S4
Poanes viator viator	Big Broad-winged Skipper		ST	G5T4	S2
Polites mystic	Long Dash Skipper			G5	S3S4
Polygonia progne	Gray Comma		ST	G5	S2S3
Ponometia binocula	Prairie Tarachidia			GNR	S1S2
Problema byssus	Bunchgrass Skipper		ST	G4	S1S2
Protorthodes incincta	Saturn quaker		SR	GNR	S2
Pygarctia spraguei	Sprague's Pygartic		SR	G5	S1S2
Pyrausta laticlavia	The Southern Purple Mint Moth		SR	GNR	S1S2
Pyrrhia aurantiago	False-foxglove Sun Moth		ST	G3G4	S1S2
Resapamea stipata	The Four-lined Cordgrass Borer		SE	G4	S1
Schinia indiana	Phlox Moth		SE	G2G4	S1
Schinia sanguinea	Bleeding Flower Moth			G4	S2S3
Schinia septentrionalis	Northern Flower Moth		SR	G3G4	S2S3
Scirpophaga perstrialis	Reed-boring Crambid Moth		SR	GNR	SNR

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Indiana County Endangered, Threatened and Rare Species List

County: Lake

DNR Indiana Department of Natural Resources

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Sitochroa dasconalis	Pearly Indigo Borer		ST	GNR	S1S2
Sonia fulminana	a tortricid moth		SR	GNR	S1S2
Speyeria idalia	Regal Fritillary	C	SE	G3?	S1S2
Sphinx luscitiosa	The Luscious Willow Sphinx		SR	G4G5	S1S2
Spilosoma latipennis	The Red-legged Tussock Moth		SR	G4	S2S3
Sympistis riparia	The Dune Oncocnemis Moth		ST	G4	S1S2
Tricholita notata	Marked Noctuid		ST	G5	S1S2
Zomaria interruptolineana	Broken-lined Zomaria		SR	GNR	SNR
Insect: Odonata (Dragonflies & Damselflies)					
Somatochlora hineana	Hine's Emerald	LE	SX	G2G3	SX
Sympetrum semicinctum	Band-winged Meadowhawk		SR	G5	S2S3
Insect: Orthoptera					
Chloealtis conspersa	Sprinkled Locust		SR	G5	S2S3
Conocephalus saltans	Prairie Meadow Katydid		SR	G5	S1S2
Hesperotettix viridis pratensis	Snakeweed Grasshopper		SR	G5T5	S1S2
Melanoplus fasciatus	Huckleberry Spur-throat Grasshopper		SR	G5	S2
Melanoplus keeleri luridus	Keeler's Spur-throated Grasshopper		SR	G5T5	S3S4
Neoconocephalus nebrascensis	Nebraska Conehead		SR	GNR	S1S2
Orphulella pelidna	Spotted-wing Grasshopper		SE	G5	S1
Pardalophora phoenicoptera	Orange-winged Grasshopper		SR	G5	S1S2
Paroxya atlantica	Atlantic Spastic Grasshopper		ST	GU	S2
Phoetaliotes nebrascensis	Large-headed Grasshopper		ST	G5	S1S2
Psinidia fenestralis	Sand Locust		SR	G5	S2
Trimerotropis maritima	Seaside Grasshopper		ST	G5	S1S2
Fish					
Acipenser fulvescens	Lake Sturgeon		SE	G3G4	S1
Ichthyomyzon fossor	Northern Brook Lamprey		SE	G4	S1
Rhinichthys cataractae	Longnose Dace		SSC	G5	S2
Amphibian					
Acris blanchardi	Blanchard's Cricket Frog		SSC	G5	S4
Ambystoma laterale	Blue-spotted Salamander		SSC	G5	S2
Necturus maculosus	Common mudpuppy		SSC	G5	S2
Reptile					
Clemmys guttata	Spotted Turtle	C	SE	G5	S2
Clonophis kirtlandii	Kirtland's Snake		SE	G2	S2
Emydoidea blandingii	Blanding's Turtle	C	SE	G4	S2
Opheodrys vernalis	Smooth Green Snake		SE	G5	S2
Sistrurus catenatus	Eastern Massasauga	LT	SE	G3	S2

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Indiana County Endangered, Threatened and Rare Species List

County: Lake

Species Name	Common Name	FED	STATE	GRANK	SRANK
Terrapene carolina carolina	Eastern Box Turtle		SSC	G5T5	S3
Terrapene ornata ornata	Ornate Box Turtle		SE	G5T5	S1
Thamnophis proximus proximus	Western Ribbon Snake		SSC	G5T5	S3
Thamnophis radix	Plains Garter Snake		SSC	G5	S4
Bird					
Ammodramus henslowii	Henslow's Sparrow		SE	G4	S3B
Anas clypeata	Northern Shoveler			G5	SHB
Ardea alba	Great Egret		SSC	G5	S1B
Bartramia longicauda	Upland Sandpiper		SE	G5	S3B
Botaurus lentiginosus	American Bittern		SE	G5	S2B
Buteo platypterus	Broad-winged Hawk		SSC	G5	S3B
Certhia americana	Brown Creeper			G5	S2B
Charadrius melodus	Piping Plover	LE	SE	G3	SXB
Chlidonias niger	Black Tern		SE	G4G5	S1B
Chordeiles minor	Common Nighthawk		SSC	G5	S4B
Cistothorus palustris	Marsh Wren		SE	G5	S3B
Cistothorus platensis	Sedge Wren		SE	G5	S3B
Cygnus buccinator	Trumpeter Swan		SE	G4	S1B
Euphagus cyanocephalus	Brewer's Blackbird			G5	SHB,S1N
Falco peregrinus	Peregrine Falcon		SSC	G4	S2B
Gallinula galeata	Common gallinule		SE	G5	S3B
Grus canadensis	Sandhill Crane		SSC	G5	S2B,S1N
Haliaeetus leucocephalus	Bald Eagle		SSC	G5	S2
Hydroprogne caspia	Caspian Tern			G5	S1B
Ixobrychus exilis	Least Bittern		SE	G4G5	S3B
Lanius ludovicianus	Loggerhead Shrike		SE	G4	S3B
Laterallus jamaicensis	Black Rail		SE	G3G4	SHB
Mniotilta varia	Black-and-white Warbler		SSC	G5	S1S2B
Nyctanassa violacea	Yellow-crowned Night-heron		SE	G5	S2B
Nycticorax nycticorax	Black-crowned Night-heron		SE	G5	S1B
Pandion haliaetus	Osprey		SSC	G5	S1B
Phalaropus tricolor	Wilson's Phalarope		SSC	G5	SHB
Rallus elegans	King Rail		SE	G4	S1B
Rallus limicola	Virginia Rail		SE	G5	S3B
Scolopax minor	American Woodcock		SSC	G5	S4B
Tringa melanoleuca	Greater Yellowlegs		SSC	G5	S3M
Tringa solitaria	Solitary Sandpiper		SSC	G5	S3M
Tyto alba	Barn Owl		SE	G5	S2
Xanthocephalus xanthocephalus	Yellow-headed Blackbird		SE	G5	S1B
Mammal					

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Indiana County Endangered, Threatened and Rare Species List

County: Lake

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Lasiurus borealis	Eastern Red Bat		SSC	G3G4	S4
Lasiurus cinereus	Hoary Bat		SSC	G3G4	S4
Myotis lucifugus	Little Brown Bat	C	SE	G3	S2
Myotis septentrionalis	Northern Long Eared Bat	LT	SE	G1G2	S2S3
Reithrodontomys megalotis	Western Harvest Mouse			G5	S2
Spermophilus franklinii	Franklin's Ground Squirrel		SE	G5	S2
Taxidea taxus	American Badger		SSC	G5	S2
Vascular Plant					
Agalinis auriculata	earleaf foxglove		ST	G3	S2
Agalinis gattingeri	roundstem foxglove		ST	G4	S3
Agalinis skinneriana	pale false foxglove		ST	G3G4	S2
Alnus incana ssp. rugosa	speckled alder		WL	G5T5	S3
Amelanchier humilis	running serviceberry		SE	G5	S1
Androsace occidentalis	western rockjasmine		ST	G5	S2
Aralia hispida	bristly sarsaparilla		SE	G5	S1
Arctostaphylos uva-ursi	bearberry		ST	G5	S3
Arethusa bulbosa	swamp-pink		SX	G5	SX
Aristida longespica var. geniculata	slim-spike three-awn grass		WL	G5T5?	S3
Aristida tuberculosa	seabeach needlegrass		ST	G5	S3
Asclepias meadii	Mead's milkweed	LT	SRE	G2	SX
Aureolaria grandiflora var. pulchra	large-flower false-foxglove		SX	G4G5T4T5	SX
Baptisia bracteata var. leucophaea	cream wild-indigo		WL	G4G5T4T5	S3
Baptisia tinctoria	yellow wild-indigo		WL	G5	S3
Betula papyrifera	paper birch		ST	G5	S3
Betula populifolia	gray birch		WL	G5	S1
Bidens beckii	Beck's water-marigold		SE	G5	S1
Botrychium matricariifolium	chamomile grape-fern		ST	G5	S3
Botrychium simplex	least grape-fern		SE	G5	S1
Buchnera americana	bluehearts		SE	G5?	S1
Calopogon oklahomensis	Oklahoma grass-pink		SX	G3	SX
Carex aurea	golden-fruited sedge		ST	G5	S3
Carex bebbii	Bebb's sedge		ST	G5	S3
Carex brunnescens	brownish sedge		ST	G5	S2
Carex conoidea	prairie gray sedge		ST	G5	S2
Carex crawei	Crawe's sedge		ST	G5	S2
Carex cumulata	clustered sedge		SE	G4G5	S1
Carex eburnea	ebony sedge		ST	G5	S3
Carex echinata	little prickly sedge		SE	G5	S1
Carex garberi	elk sedge		SE	G5	S1
Carex limosa	mud sedge		SE	G5	S1

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Carex projecta	necklace sedge		SE	G5	SU
Carex richardsonii	Richardson's sedge		ST	G5	S2
Carex seorsa	weak stellate sedge		ST	G5	S3
Carex straminea	straw sedge		ST	G5	S2
Carex trichocarpa	hairy-fruit sedge		WL	G4	S3
Catalpa speciosa	northern catalpa		ST	G4?	S3
Ceanothus herbaceus	prairie redroot		SE	G5	S1
Chamaenerion angustifolium	fireweed		SE	G5	S1
Chimaphila maculata	spotted wintergreen		WL	G5	S3
Cirsium hillii	Hill's thistle		SE	G3	S1
Cirsium pitcheri	dune thistle	LT	SE	G2G3	S1
Clinopodium arkansanum	calamint		ST	G5	S2
Clintonia borealis	Clinton's lily		SE	G5	S1
Comptonia peregrina	sweet fern		WL	G5	S3
Cornus amomum ssp. amomum	silky dogwood		SE	G5	S1
Cornus canadensis	bunchberry		SE	G5	S1
Cornus rugosa	roundleaf dogwood		ST	G5	S3
Corydalis sempervirens	pale corydalis		SE	G5	S1
Cyperus dentatus	toothed sedge		SE	G4	S1
Cypripedium candidum	small white lady's-slipper		ST	G4	S3
Cypripedium parviflorum var. makasin	small yellow lady's-slipper		ST	G5T4T5	S3
Cypripedium parviflorum var. pubescens	large yellow lady's-slipper		WL	G5T5	S3
Cypripedium reginae	showy lady's-slipper		ST	G4G5	S3
Dactylorhiza viridis	long-bract green orchid		SE	G5	S1
Dichanthelium boreale	northern witchgrass		ST	G5	S3
Dichanthelium deamii	Deam's panic-grass		SE	GNR	SU
Dichanthelium leibergii	Leiberg's witchgrass		ST	G4	S2
Diervilla lonicera	northern bush-honeysuckle		WL	G5	S3
Drosera intermedia	spoon-leaved sundew		ST	G5	S3
Drymocallis arguta	tall cinquefoil		WL	G5	SU
Eleocharis geniculata	capitate spike-rush		ST	G5	S2
Eleocharis melanocarpa	black-fruited spike-rush		ST	G4	S2
Eleocharis wolfii	Wolf's spikerush		ST	G3G5	S2
Epigaea repens	trailing arbutus		ST	G5	S3
Equisetum variegatum var. variegatum	variegated horsetail		SE	G5T5	S1
Eriophorum angustifolium	narrow-leaved cotton-grass		ST	G5	S3
Eriophorum gracile	slender cotton-grass		ST	G5	S2
Eurybia furcata	forked aster		ST	G3	S3
Fimbristylis puberula	Carolina fimbry		SE	G5	S1
Gentiana alba	yellow gentian		ST	G4	S3

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Indiana County Endangered, Threatened and Rare Species List

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Gentiana puberulenta	downy gentian		SE	G4G5	S1
Geranium bicknellii	Bicknell's northern cranesbill		SE	G5	S1
Glyceria borealis	small floating manna-grass		SE	G5	S1
Hudsonia tomentosa	sand-heather		ST	G5	S2
Hydrastis canadensis	golden seal		WL	G3G4	S3
Hypericum adpressum	creeping St. John's-wort		SE	G3	S1
Hypericum kalmianum	Kalm's St. John's-wort		WL	G4	S3
Juglans cinerea	butternut		ST	G3	S2
Juncus articulatus	jointed rush		SE	G5	S1
Juncus balticus var. littoralis	Baltic rush		WL	G5T5	S3
Juncus pelocarpus	brown-fruited rush		SE	G5	S1
Juncus scirpoides	scirpus-like rush		ST	G5	S2
Juniperus communis var. depressa	ground juniper		ST	G5T5	S3
Juniperus horizontalis	creeping juniper		SX	G5	SX
Lathyrus japonicus	beach peavine		SE	G5	S1
Lathyrus venosus	smooth veiny pea		SE	G5	S1
Lechea stricta	upright pinweed		SX	G4?	SX
Liatris pycnostachya	cattail gay-feather		SE	G5	S1
Lilium philadelphicum	wood lily		WL	G5	SU
Linnaea borealis	twinflower		SX	G5	SX
Linum sulcatum	grooved yellow flax		ST	G5	S3
Liparis loeselii	Loesel's twayblade		WL	G5	S3
Lipocarpha drummondii	Drummond's hemicarpha		SE	G4G5	S1
Ludwigia sphaerocarpa	globe-fruited false-loosestrife		SE	G5	S1
Lycopodiella inundata	northern bog clubmoss		ST	G5	S2
Lycopodiella subappressa	northern appressed bog clubmoss		SE	G2	S1
Malaxis unifolia	green adder's-mouth orchid		SE	G5	S1
Matteuccia struthiopteris	ostrich fern		ST	G5	S3
Melampyrum lineare	American cow-wheat		SE	G5	S1
Mikania scandens	climbing hempweed		SE	G5	S1
Minuartia michauxii var. michauxii	Michaux's stitchwort		ST	G5T5	S2
Myosotis laxa	smaller forget-me-not		ST	G5	S2
Myriophyllum verticillatum	whorled water-milfoil		ST	G5	S3
Oenothera perennis	small sundrops		ST	G5	S3
Oligoneuron album	prairie goldenrod		ST	G5	S3
Orobanche fasciculata	clustered broomrape		SE	G4G5	S1
Orthilia secunda	one-sided wintergreen		SX	G5	SX
Panax quinquefolius	American ginseng		WL	G3G4	S3
Perideridia americana	eastern eulophus		SE	G4	S1
Persicaria careyi	Carey's smartweed		ST	G4	S2

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Indiana County Endangered, Threatened and Rare Species List

County: Lake

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Phemeranthus rugospermus	prairie fame-flower		SE	G3G4	S1
Pinus banksiana	jack pine		ST	G5	S3
Pinus strobus	eastern white pine		ST	G5	S3
Plantago cordata	heart-leaved plantain		SE	G4	S1
Platanthera aquilonis	leafy northern green orchid		ST	G5	S2
Platanthera ciliaris	yellow-fringe orchid		SE	G5	S1
Platanthera flava var. herbiola	pale green orchid		WL	G4?T4Q	S3
Platanthera hookeri	Hooker's Orchid		SX	G4	SX
Platanthera lacera	green-fringe orchid		WL	G5	S3
Platanthera leucophaea	prairie white-fringed orchid	LT	SE	G2G3	S1
Platanthera psycodes	small purple-fringe orchid		ST	G5	S3
Pogonia ophioglossoides	rose pogonia		ST	G5	S3
Polygonum articulatum	eastern jointweed		ST	G5	S3
Polytaenia nuttallii	prairie parsley		SE	G5	S1
Populus balsamifera	balsam poplar		SE	G5	S1
Potamogeton pulcher	spotted pondweed		ST	G5	S2
Potamogeton pusillus	slender pondweed		WL	G5	S2
Potamogeton richardsonii	redheadgrass		ST	G5	S3
Potamogeton robbinsii	flatleaf pondweed		ST	G5	S3
Potamogeton strictifolius	straight-leaf pondweed		ST	G5	S2
Potentilla anserina	silverweed		ST	G5	S2
Prenanthes aspera	rough rattlesnake-root		ST	G4?	S3
Prunus pensylvanica	fire cherry		ST	G5	S3
Pyrola americana	American wintergreen		ST	G5	S2
Rhus aromatica var. arenaria	beach sumac		ST	G5T3Q	S3
Rhynchospora macrostachya	tall beaked-rush		ST	G4	S3
Rhynchospora recognita	globe beaked-rush		SE	G5?	S1
Rhynchospora scirpoides	long-beaked baldrush		ST	G4	S3
Rorippa aquatica	lake cress		SE	G4?	S1
Rubus setosus	small bristleberry		SE	G5	S1
Salix cordata	heartleaf willow		SE	G4	S1
Sceptridium rugulosum	ternate grapefern		SX	G3	SX
Schoenoplectiella hallii	Hall's bulrush	C	SE	G2G3	S1
Schoenoplectiella smithii	Smith's Bulrush		ST	G5?	S2
Schoenoplectus subterminalis	water bulrush		ST	G5	S3
Schoenoplectus torreyi	Torrey's Bulrush		SE	G5?	S1
Scleria reticularis	reticulated nutrush		ST	G4	S2
Selaginella apoda	meadow spike-moss		WL	G5	S1
Selaginella rupestris	ledge spike-moss		SE	G5	S1
Shepherdia canadensis	Canada buffalo-berry		SX	G5	SX

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Sisyrinchium montanum	strict blue-eyed-grass		SE	G5	S1
Solidago simplex var. gillmanii	sticky goldenrod		ST	G5T3?	S2
Sparganium androcladum	branching bur-reed		ST	G4G5	S2
Sparganium natans			SX	G5	SX
Spiranthes lucida	shining ladies'-tresses		ST	G4	S3
Spiranthes magnicamporum	Great Plains ladies'-tresses		SE	G3G4	S1
Strophostyles leiosperma	slick-seed wild-bean		WL	G5	S3
Styrax americanus	American snowbell		ST	G5	S3
Symphyotrichum boreale	rushlike aster		ST	G5	S2
Symphyotrichum sericeum	western silvery aster		ST	G5	S2
Thuja occidentalis	northern white cedar		SE	G5	S1
Triantha glutinosa	false asphodel		ST	G5	S2
Trichostema dichotomum	forked bluecurl		WL	G5	S3
Triglochin palustris	marsh arrow-grass		ST	G5	S2
Utricularia cornuta	horned bladderwort		SE	G5	S1
Utricularia intermedia	flatleaf bladderwort		WL	G5	S3
Utricularia minor	lesser bladderwort		ST	G5	S1
Utricularia purpurea	purple bladderwort		ST	G5	S3
Utricularia resupinata	northeastern bladderwort		SE	G4	S1
Utricularia subulata	zigzag bladderwort		ST	G5	S2
Vaccinium myrtilloides	velvetleaf blueberry		SE	G5	S1
Valerianella chenopodiifolia	goose-foot corn-salad		WL	G4	S3
Viburnum opulus var. americanum	highbush-cranberry		SE	G5T5	S1
Viola pedatifida	prairie violet		ST	G5	S2
High Quality Natural Community					
Forest - floodplain wet	Wet Floodplain Forest		SG	G3?	S3
Forest - floodplain wet-mesic	Wet-mesic Floodplain Forest		SG	G3?	S3
Forest - upland dry Northwestern Morainal	Northwestern Morainal Dry Upland Forest		SG	GNR	S1
Forest - upland dry-mesic Northwestern Morainal	Northwestern Morainal Dry-mesic Upland Forest		SG	GNR	S1
Forest - upland mesic Northwestern Morainal	Northwestern Morainal Mesic Upland Forest		SG	GNR	S1
Lake - pond	Pond		SG	GNR	SNR
Prairie - dry-mesic	Dry-mesic Prairie		SG	G3	S2
Prairie - mesic	Mesic Prairie		SG	G2	S2
Prairie - sand dry	Dry Sand Prairie		SG	G3	S2
Prairie - sand dry-mesic	Dry-mesic Sand Prairie		SG	G3	S3
Prairie - sand mesic	Mesic Sand Prairie		SG	GNR	SNR
Prairie - sand wet	Wet Sand Prairie		SG	G3	S3
Prairie - sand wet-mesic	Wet-mesic Sand Prairie		SG	G1?	S2

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Prairie - wet	Wet Prairie		SG	G3	S1
Primary - dune lake	Foredune		SG	G3	S1
Savanna - mesic	Mesic Savanna		SG	GNR	SNR
Savanna - sand dry	Dry Sand Savanna		SG	G2?	S2
Savanna - sand dry-mesic	Dry-mesic Sand Savanna		SG	G2?	S2S3
Savanna - sand mesic	Mesic Sand Savanna		SG	GNR	SNR
Wetland - fen	Fen		SG	G3	S3
Wetland - marsh	Marsh		SG	GU	S4
Wetland - meadow sedge	Sedge Meadow		SG	G3?	S1
Wetland - panne	Panne		SG	G2	S1
Wetland - swamp shrub	Shrub Swamp		SG	GU	S2
Other Significant Feature					
Migratory Bird Concentration Area	Migratory Bird Concentration Site		SG	G3	SNR

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Fed: LE = Endangered; LT = Threatened; C = candidate; PDL = proposed for delisting

State: SE = state endangered; ST = state threatened; SR = state rare; SSC = state species of special concern; SX = state extirpated; SG = state significant; WL = watch list

GRANK: Global Heritage Rank: G1 = critically imperiled globally; G2 = imperiled globally; G3 = rare or uncommon globally; G4 = widespread and abundant globally but with long-term concerns; G5 = widespread and abundant globally; G? = unranked; GX = extinct; Q = uncertain rank; T = taxonomic subunit rank

SRANK: State Heritage Rank: S1 = critically imperiled in state; S2 = imperiled in state; S3 = rare or uncommon in state; G4 = widespread and abundant in state but with long-term concern; SG = state significant; SH = historical in state; SX = state extirpated; B = breeding status; S? = unranked; SNR = unranked; SNA = nonbreeding status unranked

Appendix F
Water Resources

INdiana Floodplain Information Portal

Indiana Department of Natural Resources DNR

Find an address

Example: 300 Michigan Avenue, Auburn, IN, 46706

Go To Address

- or -

Jump to a county

Select your county from below

Adams

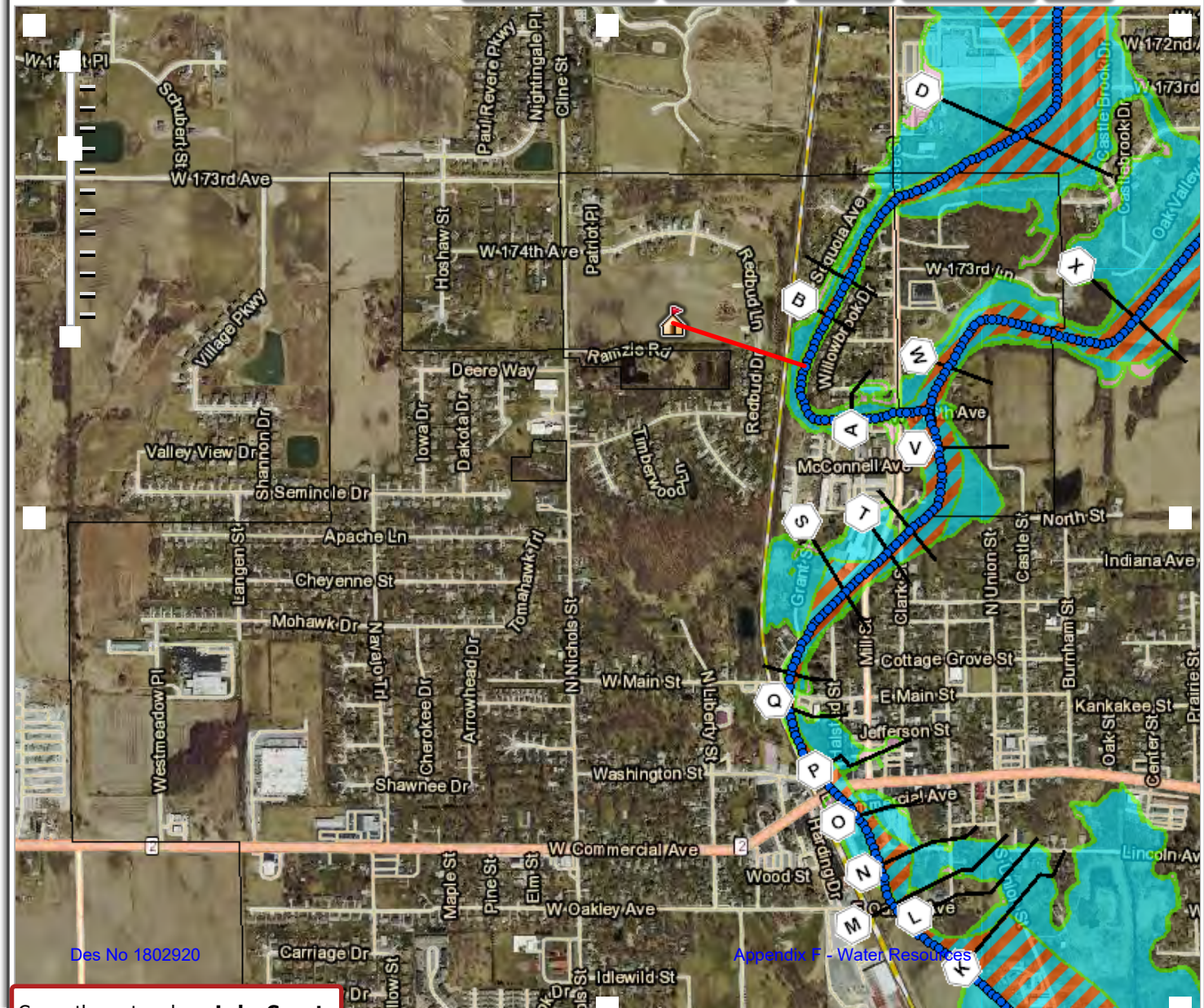
Want to use the eFARA Wizard to submit a floodplain information request to the State of Indiana, IDNR, Division of Water?

< Previous Tips | Next Tips >

Minimize

Map | FEMA Flood Insurance Study | Floodplain Layers | Frequently Asked Questions

Profile Charter | Layers | Legend | Options | Help



Follow instructions under "How to navigate the map" to select a Point of Interest.

Click to return to the Point of Interest

What does INFIP do?

- select a Point of Interest (i.e. residence or tract of land) to view floodplain mapping and the Base Flood Elevations (BFE)
- print a floodplain map for a Point of Interest
- submit a request for a Floodplain Analysis / Regulatory Assessment (FARA) from the Division of Water using the eFARA (electronic Floodplain Analysis / Regulatory Assessment) Wizard
- view general information and Frequency Asked Questions (FAQ) concerning floodplains, flood risk, flood insurance, and state floodway construction permitting
- obtain contact information to your local floodplain agency
- link to FEMA flood insurance studies

If a FEMA flood insurance study (FIS) is

Click to learn how to navigate the map

Click to learn how to submit eFARA

Click to learn about Special Flood Hazard Areas (SFHA) and Base Flood Elevations (BFE)

Click to learn about flood insurance

Click to learn about local community floodplain ordinance

Download Report

Flood Zone Type: Best Available

Regulated Waters Delineation Report

Freedom Trail Phase I
Lowell, Indiana

October 21, 2020

Cardno®

Document Information

Prepared for	Short Elliott Hendrickson, Inc.
Client Contact	Glen Peterson
Project Name	Regulated Waters Delineation Report Freedom Trail Phase I Lowell, Indiana
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Table of Contents

Appendices

Tables

Figures (Appendix A)

Acronyms

APA	Administrative Procedure Act
BF	Bank Full
CFR	Code of Federal Regulations
CWA	Clean Water Act
DBH	Diameter at Breast Height
DNP	Division of Nature Preserves
DP	Data Point
EPA	U.S. Environmental Protection Agency
ETR	Endangered, Threatened, and Rare
FAC	Facultative Plant
FACU	Facultative Upland Plant
FACW	Facultative Wetland Plant
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FQA	Floristic Quality Assessment
GIS	Geographical Information System
IC	Indiana Code
IDEM	Indiana Department of Environmental Management
IDNR	Indiana Department of Natural Resources
INT	Intermittent (Stream Type)
MS4	Municipal Separate Storm Water Sewer Systems
NHD	National Hydrography Dataset
NPDES	National Pollutant Discharge Elimination System

Acronyms (continued)

NRCS	U.S. Department of Agriculture Natural Resources Conservation Service
NWI	National Wetland Inventory
NWP	Nationwide Permit
NWPL	National Wetland Plant List
OBL	Obligate Wetland Plant
OHWM	Ordinary High Water Mark
PEM	Palustrine Emergent Wetland
PER	Perennial (Stream Type)
PFO	Palustrine Forested Wetland
PSS	Palustrine Shrub Scrub Wetland
RGP	Regional General Permit
SWANCC	Solid Waste Agency of Northern Cook County
TNW	Traditional Navigable Water
UPL	Upland Plant
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
WOTUS	Waters of the United States
WQC	Water Quality Certification

1 Introduction

Cardno was contracted to perform a regulated waters delineation of the Phase I Freedom Trail project corridor from Freedom Park to Liberty Park in Lowell, Lake County, Indiana (Figure 1, Appendix A):

- Sections 14 and 23, Township 33 North, Range 9 West

The Study Area was a 50 feet wide corridor extending one mile, from Freedom Park, south to Redbud Lane where it followed Redbud Lane to Timber Springs Road, turning south toward W Main Street and to Liberty Park. The Study Area traverses a mixture of residential, agricultural, and undeveloped lands.

This report identifies the jurisdictional status of the Study Area based on Cardno's best professional understanding and interpretation of the Corps of Engineers' Wetland Delineation Manual (Environmental Laboratory, 1987) and U.S. Army Corps of Engineers' (USACE) guidance documents and regulations. Jurisdictional determinations for other "waters of the U.S." were made based on definitions and guidance found in 33 CFR 328.3, USACE Regulatory Guidance Letters, and the wetland delineation manual. The USACE administers Section 404 of the Clean Water Act (CWA), which regulates the discharge of fill or dredged material into all "waters of the U.S.," and is the regulatory authority that must make the final determination as to the jurisdictional status of the Study Area.

2 Regulatory Definitions

2.1 Waters of the United States

"Waters of the U.S." are within the jurisdiction of the USACE under the CWA. "Waters of the U.S." is a broad term, which includes waters that are used or could be used for interstate commerce. This includes wetlands, ponds, lakes, territorial seas, rivers, tributary streams including any definable intermittent waterways, and some ditches below the ordinary high water mark (OHWM). Also included are manmade water bodies such as quarries and ponds, which are no longer actively being mined or constructed and are connected to other "waters". Wetlands, mudflats, vegetated shallows, riffle and pool complexes, coral reefs, sanctuaries, and refuges are all considered special aquatic sites which involve more rigorous regulatory permitting requirements. A specific, detailed definition of "waters of the U.S." can be found in the Federal Register (33 CFR 328.3).

On January 9, 2001, the U.S. Supreme Court issued a decision, Solid Waste Agency of Northern Cook County (SWANCC) v. U.S. Army Corps of Engineers (No. 99-1178). The decision reduced the regulation of isolated wetlands under Section 404 of the CWA, which assigned the USACE authority to issue permits for the discharge of dredge or fill material into "waters of the U.S.". Prior to the SWANCC decision, the USACE had adopted a regulatory definition of "waters of the U.S." that afforded federal protection for almost all of the nation's wetlands. The Supreme Court decision interpreted that the USACE's jurisdiction was restricted to navigable waters, their tributaries, and wetlands that are adjacent to these navigable waterways and tributaries. The decision leaves the majority of "isolated" wetlands unregulated by the CWA. Therefore, most wetlands that are not adjacent to, or contiguous with, any other "waters of the U.S." via a surface drain such as a swale, ditch, or stream are considered isolated and thus no longer jurisdictional by the USACE.

On June 19, 2006, the U.S. Supreme Court issued decisions in regards to John A. Rapanos v. United States (No. 04-1034) and June Carabell v. United States (04-1384), et al. The plurality decision created two 'tests' for determining CWA jurisdiction: the permanent flow of water test (set out by Justice Scalia) and the "significant nexus" test (set out by Justice Kennedy). On June 5, 2007 the USACE and U.S. Environmental Protection Agency (EPA) issued joint guidance on how to interpret and apply the Court's ruling. According to this guidance, the USACE will assert jurisdiction over traditionally navigable waters, adjacent wetlands, and non-navigable tributaries of traditionally navigable waters that have "relatively permanent" flow, and wetlands that border these waters, regardless of whether or not they are separated by roads, berms, and similar barriers. In addition, the USACE will use a case-by-case "significant nexus" analysis to determine whether waters and their adjacent wetlands are jurisdictional. A "significant nexus" can be found where waters, including adjacent wetlands, alter the physical, biological, or chemical integrity of the traditionally navigable water based on consideration of several factors.

In January 2015 an EPA sponsored publication, *Connectivity of Streams & Wetlands to Downstream Waters: A Review & Synthesis of the Scientific Evidence* (EPA, 2015), emphasized how streams, non-tidal wetlands, and open waters in and outside of riparian areas and floodplains affect downstream waters such as rivers, lakes, estuaries, and oceans.

On May 27, 2015 the EPA released a statement that a new Clean Water Rule typically referred to as, “The Waters of the United States (WOTUS) Rule” was finalized and that it would “not create any new permitting requirements and maintains all previous exemptions and exclusions” (epa.gov). The Rule would only protect waters that have historically been covered by the CWA. The intent was to clearly define: jurisdictional limits of tributaries of navigable waterways; set boundaries on covering nearby waters; identify specific national water treasures by name (prairie potholes, etc.); clearly define when a ditch is jurisdictional, and when it is not; maintain status that waters within Municipal Separate Storm Water Sewer Systems (MS4) are not jurisdictional; and reduce the use of case-specific analysis of waters.

Also on May 27, 2015 a publication, *Technical Support Document for the Clean Water Rule: Definition of Waters of the United States* (EPA 2015), was released discussing in detail why the significant nexus (SNE) between one water and another is important. It specifically ties distances to the various types of waters mentioned within the Code of Federal Regulations [33 CFR 328.3(a)(1) through (a)(8)]. For example, the document states “Waters located within the 100-year floodplain of a Traditional Navigable Water (TNW), interstate water, or the territorial seas and waters located more than 1,500 feet and less than 4,000 feet from the lateral limit of an (a)(1) or (a)(3) water may still be determined to have a significant nexus on a case-specific basis under paragraph (a)(8) of the Rule and, thus, be a ‘water of the United States’ (EPA 2015).”

On June 29, 2015 the new Clean Water Rule was entered into the Federal Register (40 CFR Parts 110, 112, 116, et al. Clean Water Rule: Definition of ‘‘waters of the United States’’; Final Rule). This report will refer to this Rule as “June 29, 2015 WOTUS Rule”. This Rule includes exact distances mentioned in the May 27, 2015 Technical Support Document as it relates to adjacent waters, including the following: waters within 100 ft. of jurisdictional waters; waters within the 100-year floodplain to a maximum of 1,500 feet from the OHWM; waters within the 100-year floodplain with a SNE to the TNW; and waters with a SNE within 4,000 ft. of jurisdictional waters.

On October 9, 2015 the U.S. Court of Appeals for the Sixth Circuit (Court) issued a nationwide stay against the enforcement of the June 29, 2015 WOTUS Rule. The Court stated, “…we conclude that…Justice Kennedy’s opinion in *Rapanos* represents the best instruction on the permissible parameters of “waters of the United States” as used in the CWA, it is far from clear that the new Rule’s distance limitations are harmonious with the instruction.

Moreover, the Court stated that the rulemaking process by which the distance limitations were adopted is facially suspect. Petitioners contend the proposed rule that was published, on which interested persons were invited to comment, did not include any proposed distance limitations in its use of terms like “adjacent waters” and “significant nexus.” Consequently, petitioners contend, the Final Rule cannot be considered a “logical outgrowth” of the rule proposed, as required to satisfy the notice-and-comment requirements of the APA, 5 U.S.C. § 553. As a further consequence of this defect, petitioners contend, the record compiled by respondents is devoid of specific scientific support for the distance limitations that were included in the Final Rule. They contend the Rule is therefore not the product of reasoned decision-making and is vulnerable to attack as impermissibly “arbitrary or capricious” under the APA, 5 U.S.C. § 706(2).”

On February 28, 2017, President Donald Trump signed Executive Order #13778 titled “Restoring the Rule of Law, Federalism, and Economic Growth by Reviewing the ‘Waters of the United States’ Rule”. Section 1(a) states that the EPA “shall review the final rule entitled ‘Clean Water

Rule: Definition of 'Waters of the United States,'' 80 Fed. Reg. 37054; and '….shall…publish… proposed rules rescinding or revising, those issuances, as appropriate' [Section 2(b)]."

Until further notice, the June 29, 2015 WOTUS Rule is not in effect. Furthermore, this report does not attempt to include a professional opinion as it relates to the June 29, 2015 WOTUS Rule.

2.2 Waters of the State

"Waters of the state" are within the jurisdiction of the Indiana Department of Environmental Management (IDEM). They are generally defined as surface and underground water bodies, which extend through or exist wholly in the state of Indiana, which includes, but is not limited to, streams and both isolated and non-isolated wetlands. Private ponds, or any pond, reservoir, or facility built for reduction of pollutants prior to discharge are not included in this definition. In addition to "waters of the U.S.", IDEM also regulates and issues permits for isolated wetland impacts. Isolated wetlands are defined by state law as those wetlands that are not subject to regulation under Section 404(a) of the Federal CWA. Since 2004, IDEM has regulated isolated wetlands under Indiana's State Isolated Wetlands Law (IC 13-18-22). Indiana's State Isolated Wetlands Law establishes a classification system for wetlands and a set of general permits, exemption criteria, and individual permitting authority for IDEM to regulate the placement of dredged or fill material into non-exempt isolated wetlands. Indiana's isolated wetlands are defined as being a Class I, Class II, or Class III wetland; these definitions are listed in Indiana Code 13-11-2-25.8. In general, Class I wetlands have been significantly disturbed by human activity or development and Class III wetlands have been undisturbed or minimally disturbed by human activity and supports diverse flora and fauna.

IDEM relies on the USACE decision regarding wetland determinations and delineations including whether or not a wetland is isolated or non-isolated.

2.3 Wetlands

Wetlands are a category of "waters of the U.S." for which a specific identification methodology has been developed. As described in detail in the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987), wetland boundaries are delineated using three criteria: hydrophytic vegetation, hydric soils, and wetland hydrology. In addition to the criteria defined in the 1987 Manual, the procedures described in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region* (Environmental Laboratory, 2010) were used to evaluate the Study Area for the presence of wetlands.

2.3.1 Hydrophytic Vegetation

On June 1, 2012, the National Wetland Plant List (NWPL), formerly called the National List of Plant Species that Occur in Wetlands (Reed 1988), went into effect after being released by the USACE as part of an interagency effort with the U.S. Fish and Wildlife Service (USFWS), the U.S. EPA, and the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) (Lichvar and Kartesz, 2009). The NWPL, along with the information implied by its wetland plant species status ratings, provides general botanical information about wetland plants and is used extensively in wetland delineation, restoration, and mitigation efforts. The NWPL consists of a comprehensive list of wetland plant species that occur within the United States along with their respective wetland indicator statuses by region. An indicator status reflects the likelihood

that a particular plant species occurs in a wetland or upland (Lichvar et al. 2012). Definitions of the five indicator categories are presented below.

OBL (Obligate Wetland Plants): almost always occur in wetlands. With few exceptions, these plants (herbaceous or woody) are found in standing water or seasonally saturated soils (14 or more consecutive days) near the surface. These plants are of four types: submerged, floating, floating-leaved, and emergent.

FACW (Facultative Wetland Plants): usually occur in wetlands, but may occur in non-wetlands. These plants predominately occur with hydric soils, often in geomorphic settings where water saturates the soils or floods the soil surface at least seasonally.

FAC (Facultative Plants): occur in wetlands and non-wetlands. These plants can grow in hydric, mesic, or xeric habitats. The occurrence of these plants in different habitats represents responses to a variety of environmental variables other than just hydrology, such as shade tolerance, soil pH, and elevation, and they have a wide tolerance of soil moisture conditions.

FACU (Facultative Upland Plants): usually occur in non-wetlands, but may occur in wetlands. These plants predominately occur on drier or more mesic sites in geomorphic settings where water rarely saturates the soils or floods the soil surface seasonally.

UPL (Upland Plants): almost never occur in wetlands. These plants occupy mesic to xeric non-wetland habitats. They almost never occur in standing water or saturated soils. Typical growth forms include herbaceous, shrubs, woody vines, and trees.

According to the USACE's Midwest Regional Supplement, plants that are rated as FAC, FACW, or OBL are classified as wetland plant species. The percentage of dominant wetland species in each of the four vegetation strata (tree, shrub/sapling, herbaceous, and woody vine) in the sample area determines the hydrophytic (wetland) status of the plant community. Dominant species are chosen independently from each stratum of the community. In general, dominants are the most abundant species that individually or collectively account for more than 50 percent of the total coverage of vegetation in the stratum, plus any other species that, by itself, accounts for at least 20 percent of the total.

For the purposes of determining dominant plant species, the four vegetation strata are defined. Trees consist of woody species 3 inches or greater in diameter at breast height (DBH). Shrubs and saplings are woody species that are over 1 meter in height and less than 3 inches DBH. Herbaceous species consist of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants less than 1 meter tall. Woody vines consist of vine species greater than 1 meter in height, such as wild grapes.

2.3.2 Hydric Soils

Hydric soils are defined as soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part. In general, hydric soils are flooded, ponded, or saturated for a week or more during the growing season when soil temperatures are above 32 degrees Fahrenheit. The anaerobic conditions created by repeated or prolonged saturation or flooding result in permanent changes in soil color and chemistry, which are used to differentiate hydric from non-hydric soils.

In this report, soil colors are described using the Munsell notation system. This method of describing soil color consists of separate notations for hue, value, and chroma that are combined

in that order to form the color designation. The hue notation of a color indicates its relation to red, yellow, green, blue, and purple; the value notation indicates its lightness, and the chroma notation indicates its strength or departure from a neutral of the same lightness.

The symbol for hue consists of a number from 1 to 10, followed by the letter abbreviation of the color. Within each letter range, the hue becomes more yellow and less red as the numbers increase. The notation for value consists of numbers from 0 for absolute black, to 10 for absolute white. The notation for chroma consists of numbers beginning with /0 for neutral grays and increasing at equal intervals. A soil described as 10YR 3/1 soil is more gray than a soil designated 10YR 3/6.

2.3.3 Wetland Hydrology

Wetland hydrology is defined as the presence of water for a significant period of time at or near the surface (within the root zone) during the growing season. Wetland hydrology is present only seasonally in many cases, and is often inferred by indirect evidence. Hydrology is controlled by such factors as seasonal and long-term rainfall patterns, local geology and topography, soil type, local water table conditions, and drainage. Primary indicators of hydrology are inundation, soil saturation in the upper 12 inches of the soil, watermarks, sediment deposits, and drainage patterns. Secondary indicators such as oxidized root channels in the upper 12 inches of the soil, water-stained leaves, local soil survey data, and the FAC-neutral vegetation test are sometimes used to identify hydrology. A primary indicator or two or more secondary indicators are required to establish a positive indication of hydrology.

2.3.4 Wetland Definition Summary

In general, an area must meet all three criteria to be classified as a wetland. In certain problem areas such as seasonal wetlands, which are not wet at all times, or in recently disturbed (atypical) situations, areas may be considered a wetland if only two criteria are met. In special situations, an area that meets the wetland definition may not be within the USACE's jurisdiction due to a specific regulatory exemption.

3 Background Information

3.1 Existing Maps

Several sources of information were consulted to identify potential wetlands and wetland soil units on the site. These include the USFWS's *National Wetland Inventory* (NWI), the USGS's *National Hydrography Dataset* (NHD), and the NRCS *Soil Survey* for this county. These maps identify potential wetlands and wetland soil units on the site. The NHD maps are used to portray surface water. The NWI maps were prepared from high altitude photography and in most cases were not field checked. Because of this, wetlands are sometimes erroneously identified, missed, or misidentified. Additionally, the criteria used in identifying these wetlands were different from those currently used by the USACE. The county soil maps, on the other hand, were developed from actual field investigations. However, they address only one of the three required wetland criteria and may reflect historical conditions rather than current site conditions. The resolution of the soil maps limits their accuracy as well. The mapping units are often generalized based on topography and many mapping units contain inclusions of other soil types for up to 15 percent of the area of the unit. The USACE does not accept the use of either of these maps to make wetland determinations.

3.1.1 National Wetland Inventory

The NWI map of the area (Figure 2) identified several features within the project boundary including an open-water wetland (PUBGx) toward the middle of the project extent and a large forested wetland complex toward the southern portion of the project extent.

3.1.2 National Hydrography Dataset

The NHD map of the area (Figure 2) identified three un-named surface water features within the Study Area.

3.1.3 Soil Survey

The NRCS Soil Survey of Lake County identified seven soil series within the Study Area (Figure 3). The following table identifies the soil unit symbol, soil unit name, and whether or not the soil type contains components that meet the hydric soil criteria.

Table 3-1 Soil Types Within the Freedom Trail Study Area

Symbol	Description	Hydric
El	Elliott silt loam, 0 to 2 percent slopes	No
Mo	Milford silt loam, overwash	Yes
Mr	Milford silty clay loam, 0 to 2 percent slopes	Yes
MuB	Morley silt loam, 2 to 6 percent slopes	No
MuC2	Morley silt loam, 6 to 12 percent slopes, eroded	No
MvC3	Morley silty clay loam, 6 to 12 percent slopes, severely eroded	No
Pc	Pewamo silty clay loam	Yes

4 Methodology and Description

4.1 Regulated Waters Investigation

Wetland and waters boundaries within the Study Area were marked with GPS and flagged in the field with pin flags (Figure 4). Marked wetland boundaries were not investigated outside of the Study Area extent but may continue beyond the surveyed area.

The delineation of regulated waterways within the Study Area was based on the methodology described in the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region* (Environmental Laboratory, 2010) as required by current USACE policy.

4.1.1 Site Photographs

Photographs of the site are located in Appendix B. These photographs serve as visual documentation of site conditions at the time of inspection. The photographs are intended to provide representative visual samples of the waterway's condition and features found on the site. Photo locations are shown on Figure 4 as photo stations and numbered to correspond with each photo.

4.1.2 Delineated Waterways

4.1.2.1 UNT01 – Ephemeral 335 feet

Un-named tributary 1 was a small ephemeral stream leading from the outlet of an excavated open-water wetland (Wetland 02) toward a large forested/emergent wetland complex (Wetland 03). The stream was approximately two feet in width at the Ordinary High Water Mark (OHWM) and six inches in depth. The stream was dry at the time of the survey but showed signs of flowing water earlier in the year. The substrate of the stream was mostly of silt and clay with some sand and gravel riffles. The riparian corridor of UNT01 was mature forest dominated by hickory (*Carya* spp.) species and basswood (*Tilia americana*).

4.1.3 Delineated Wetlands

4.1.3.1 Wetland 01 – PSS 0.18 acres

Wetland 01 was a scrub shrub wetland located south of Freedom Park and north of Redbud Lane. The wetland was located in a small valley between the park and residential housing where the wetland sloped gradually to the south boundary of the wetland. Apparent manipulation of the wetland occurred in previous years with tracks from motorized vehicles. The south edge of Wetland 01 also appeared to have an area where water flowed from west to east but had not yet formed a defined channel in the Study Area boundary. Wetland 01 is likely an isolated feature, regulated by IDEM.

Vegetation in Wetland 01 consisted mostly of gray dogwood (*Cornus racemosa*) and a mix of native herbaceous species. Wetland 01 had a native mean-C of 3.0 and a native FQI of 11.6 with 19 total species in the Study Area.

Data Point 01 (DP01) Wetland Data Point

Dominant vegetation in the vicinity of DP01 included Gray Dogwood (*Cornus racemosa*, FAC), Rambler Rose (*Rosa multiflora*, FACU), Tall Goldenrod (*Solidago altissima*, FACU), Dark-Green Bulrush (*Scirpus atrovirens*, OBL), and Devil's-Pitchfork (*Bidens frondosa*, FACW). In addition, non-dominant vegetation observed included Russian-Olive (*Elaeagnus angustifolia*, FACU), Highbush-Cranberry (*Viburnum opulus*, FAC), and Blunt Broom Sedge (*Carex tribuloides*, OBL). The plants at this data point qualified as hydrophytic vegetation. The soil from 0 to 6 inches had a matrix soil color of 10YR 3/1 with concentrations in the pore linings at 5 percent, and a texture of Clay Loam. The soil from 6 to 20 inches had a matrix soil color of 10YR 6/1 with concentrations in the matrix at 20 percent, and a texture of Clay. The soil at the data point was mapped as MvC3: Morley silty clay loam, 6 to 12 percent slopes, severely eroded, and met the Depleted Below Dark Surface (A11), Depleted Matrix (F3), Redox Dark Surface (F6), and Redox Depressions (F8) hydric soil criteria. Secondary indicators of hydrology observed included Drainage Patterns (B10), and Geomorphic Position (D2). This data point qualified as a wetland.

Data Point 02 (DP02) Upland Data Point

Dominant vegetation in the vicinity of DP02 included White Mulberry (*Morus alba*, FAC), Russian-Olive (*Elaeagnus angustifolia*, FACU), Gray Dogwood (*Cornus racemosa*, FAC), and Groundivy (*Glechoma hederacea*, FACU). In addition, non-dominant vegetation observed included White Avens (*Geum canadense*, FAC). The plants at this data point did not qualify as hydrophytic vegetation. The soil from 0 to 20 inches had a matrix soil color of 10YR 4/1 with a texture of Clay. The soil at the data point was mapped as MuB: Morley silt loam, 2 to 6 percent slopes, and did not meet any hydric soil criteria. No indicators of hydrology were observed. This data point did not meet wetland criteria.

4.1.3.2 Wetland 02 – PUB 0.09 acres

Wetland 02 was a small open-water wetland located south of Timber Springs Road, west of Timber Lake Drive, and east of Timberwood Lane. This wetland was situated in a low depression between residential housing. The water source for Wetland 02 came from two 12 inch clay culverts from underneath Timber Springs Road that emptied into a deeply cut channel full of debris. The channel (Stormwater Ditch) then emptied into Wetland 02. Wetland 02 also feeds water into UNT01 to the south from a 12 inch outlet culvert outside of the Study Area. Water levels in Wetland 02 were down approximately three feet from normal water levels. Wetland 02 is likely connected to navigable features and regulated by the USACE.

This wetland had little to no vegetation growing within its boundaries except for Sandbar Willow (*Salix interior*) and Cottonwood (*Populus deltoides*) growing at its margins. The native mean-C for Wetland 02 was 0.8 and the native FQI was 1.8 with 7 total species.

Data Point 03 (DP03) Wetland Data Point

Dominant vegetation in the vicinity of DP03 included Sandbar Willow (*Salix interior*, FACW), and Large Barnyard Grass (*Echinochloa crus-galli*, FACW). The plants at this data point qualified as hydrophytic vegetation. The soil from 0 to 6 inches had a matrix soil color of 10YR 3/1 with concentrations in the pore linings at 5 percent, and a texture of Clay. The soil from 6 to 20 inches

had a mixed matrix of 2.5Y 6/1 at 60 percent and 10YR 5/4 at 30%, and concentrations in the pore linings of 10R 3/4 at 10 percent with a soil texture of Sandy Clay. The soil at the data point was mapped as Mr: Milford silty clay loam, 0 to 2 percent slopes, and met the Depleted Below Dark Surface (A11), Depleted Matrix (F3), Redox Dark Surface (F6), and Redox Depressions (F8) hydric soil criteria. Primary indicators of hydrology included Sediment Deposits (B2), Algal Mat or Crust (B4), Inundation Visible on Aerial Imagery (B7), Sparsely Vegetated Concave Surface (B8), Water-Stained Leaves (B9), and secondary indicators of hydrology observed included Surface Soil Cracks (B6), Dry-Season Water Table (C2), Stunted or Stressed Plants (D1), Geomorphic Position (D2), and the FAC-Neutral Test (D5). This data point qualified as a wetland.

4.1.3.3 Wetland 03 – PFO 1.07 acres

Wetland 03 is a forested wetland located north of W Main Street at Liberty Park and west of Grant Street. This large wetland consisted of dense canopy at its boundaries, gradually opening to an open area with standing water in its center. This wetland received water from UNT01 and had a high water table with saturated soils throughout. The center of the wetland was mucky with large hummocks of vegetation indicating consistent high water levels. Wetland 03 is likely connected to navigable features and regulated by the USACE.

The canopy trees of Wetland 03 were mostly Silver Maple (*Acer saccharinum*), Cottonwood, and Black Willow (*Salix nigra*) with an understory of willows, dogwoods, and Rambler Rose. The herbaceous layer consisted mostly of Blue Joint Grass (*Calamagrostis canadensis*), Lake Sedge (*Carex lacustris*) and Bur Reed (*Sparganium eurycarpum*). Wetland 03 had a native mean-C of 3.4 and a native FQI of 15.2 with 24 total species.

Data Point 04 (DP04) Wetland Data Point

Dominant vegetation in the vicinity of DP04 included Shingle Oak (*Quercus imbricaria*, FACU), Gray Dogwood (*Cornus racemosa*, FAC), Rambler Rose (*Rosa multiflora*, FACU), and Reed Canary Grass (*Phalaris arundinacea*, FACW). In addition, non-dominant vegetation observed included Pignut Hickory (*Carya glabra*, FACU), American Hog-Peanut (*Amphicarpaea bracteata*, FAC), Canadian Clearweed (*Pilea pumila*, FACW), Dock-Leaf Smartweed (*Persicaria lapathifolia*, FACW), and Farewell-Summer (*Symphyotrichum lateriflorum*, FACW). The plants at this data point qualified as hydrophytic vegetation. The soil from 0 to 6 inches had a matrix soil color of 10YR 3/1 with concentrations in the matrix and pore linings at 15 percent, and a texture of Clay Loam. The soil from 6 to 20 inches had a mixed matrix of 10YR 3/1 at 40 percent and 10YR 2/1 at 50%, and concentrations in the pore linings of 10YR 5/8 at 10 percent with a soil texture of Clay Loam. The soil at the data point was mapped as Mr: Milford silty clay loam, 0 to 2 percent slopes, and met the Redox Dark Surface (F6), and Redox Depressions (F8) hydric soil criteria. Secondary indicators of hydrology observed included Dry-Season Water Table (C2), and Geomorphic Position (D2). This data point qualified as a wetland.

Data Point 05 (DP05) Upland Data Point

Dominant vegetation in the vicinity of DP05 included American Basswood (*Tilia americana*, FACU) in multiple strata, Morrow's Honeysuckle (*Lonicera morrowii*, FACU), White Snakeroot (*Ageratina altissima*, FACU), and Common Red Raspberry (*Rubus idaeus*, FACU). In addition, non-dominant vegetation observed included Shingle Oak (*Quercus imbricaria*, FACU), Shag-Bark Hickory (*Carya ovata*, FACU), Green Ash (*Fraxinus pennsylvanica*, FACW), White Avens (*Geum*

canadense, FAC), Eastern Woodland Sedge (*Carex blanda*, FAC), Beggar's-Lice (*Hackelia virginiana*, FACU), and American Germander (*Teucrium canadense*, FACW). The plants at this data point did not qualify as hydrophytic vegetation. The soil from 0 to 4 inches had a matrix soil color of 10YR 2/1 with a texture of Silty Clay Loam. The soil from 4 to 20 inches had a mixed matrix of 10YR 2/1 at 60 percent and 7.5YR 3/3 at 40 percent with a soil texture of Loam. The soil at the data point was mapped as Mr: Milford silty clay loam, 0 to 2 percent slopes, and did not meet any hydric soil criteria. No indicators of hydrology were observed. This data point did not meet wetland criteria.

5 Jurisdictional Analysis

5.1 U.S. Army Corps of Engineers and the Indiana Department of Environmental Management

The USACE has authority over the discharge of fill or dredged material into “waters of the U.S.”. This includes authority over any filling, mechanical land clearing, or construction activities that occur within the boundaries of any “waters of the U.S.”. A permit must be obtained from the USACE under Section 404 of the CWA before any of these activities occur. Permits can be divided into three general categories: Individual Permits, Nationwide Permits (NWP), and the Regional General Permits for Indiana.

Individual Permits are required for projects that do not fall into one of the specific NWP or the Regional General Permit (RGP) or are deemed to have significant environmental impacts. These permits are much more difficult to obtain and receive a much higher level of regulatory agency and public scrutiny and may require several months to more than a year for processing.

NWP have been developed for projects which meet specific criteria and are deemed to have minimal impact on the aquatic environment. In Indiana, however, most NWP's have been rescinded and replaced by the RGP.

The RGP for Indiana authorizes activities associated with the construction or installation of new facilities or structures as well as for agriculture or mining. Proposed wetland impacts must be less than 1 acre and meet specific criteria in order to qualify for these permits. Section 401 WQC must be obtained from IDEM before the USACE will perform their permit review.

IDEM is responsible for issuing CWA Section 401 WQCs in conjunction with the USACE Section 404 permits. IDEM requires notification for all non-isolated wetland impacts less than 0.10 acre, which entails a brief notification form that must be signed by the applicant. However, for non-isolated wetland impacts greater than 0.10 acre, an application for WQC must be submitted concurrently with a wetland mitigation plan. IDEM will not initiate their review process until both the application and wetland mitigation plan have been submitted.

Applicants proposing an impact to an “isolated wetland,” which is a wetland that the USACE has determined to be a non-federally jurisdictional wetland, are required to apply for and obtain Isolated Wetland Permits from IDEM. Isolated wetland permits are required under Indiana’s State Isolated Wetland Law (Indiana Code 13-18-22 and 327 Indiana Administrative Code 17).

5.2 Other Agencies

Indiana Department of Natural Resources (IDNR) has jurisdiction over the floodway of ditches and streams with a watershed greater than one (1) square mile. If impacts are proposed to jurisdictional floodways, a Construction-In-A-Floodway Permit may be required from IDNR.

6 Summary and Conclusion

6.1 Summary

Cardno investigated a Study Area approximately 50 feet wide extending from Freedom Park to Liberty Park in Lowell, Lake County, Indiana. Three wetland features and one tributary were mapped within the Study Area boundaries. Wetlands included one scrub-shrub wetland (0.18 ac), one open-water wetland (0.09 ac), and one forested wetland (1.07 ac) for a total of 1.34 acres of wetland. In addition, one ephemeral tributary (UNT01) 335 feet in length was found. Wetland 01 was likely an isolated wetland feature and would fall under regulation of IDEM. Wetland 02 and Wetland 03 are connected to Cedar Creek to the south of the Study Area and are therefore likely regulated by the USACE Chicago District.

Wetland Summary Table 6-1
Freedom Trail
Lake County, Indiana

Name	Location	Type	Quality	Likely WOTUS?
Wetland 01	41.304209, -87.426356	PSS	Moderate	No
Wetland 02	41.298157, -87.426685	PUB	Poor	Yes
Wetland 03	41.295997, -87.425534	PFO	Moderate	Yes

Waterway Summary Table 6-2
Freedom Trail
Lake County, Indiana

Name	Location	Type	OHWM Width (ft)	OHWM Depth (ft)	Length in Study Area	Quality	Substrate	Likely WOTUS
UNT01	41.297167, -87.425773	Ephemeral	2.0	0.5	335	Moderate	Clay/silt	No

6.2 Conclusion

Impacts to the listed resources in this report may require consultation and permitting with USACE and IDEM. To confirm the jurisdictional nature of these features, at minimum, a preliminary jurisdictional determination should be requested from the USACE Chicago District.

While this report represents our best professional judgment based on our knowledge and experience, it is important to note that the Chicago District of the U.S. Army Corps of Engineers has final discretionary authority over all jurisdictional determinations of 'waters of the U.S.' including wetlands under Section 404 of the CWA in this region. It is therefore, recommended that a copy of this report be furnished to the Chicago District of the U.S. Army Corps of Engineers to confirm the results of our findings.

7 References

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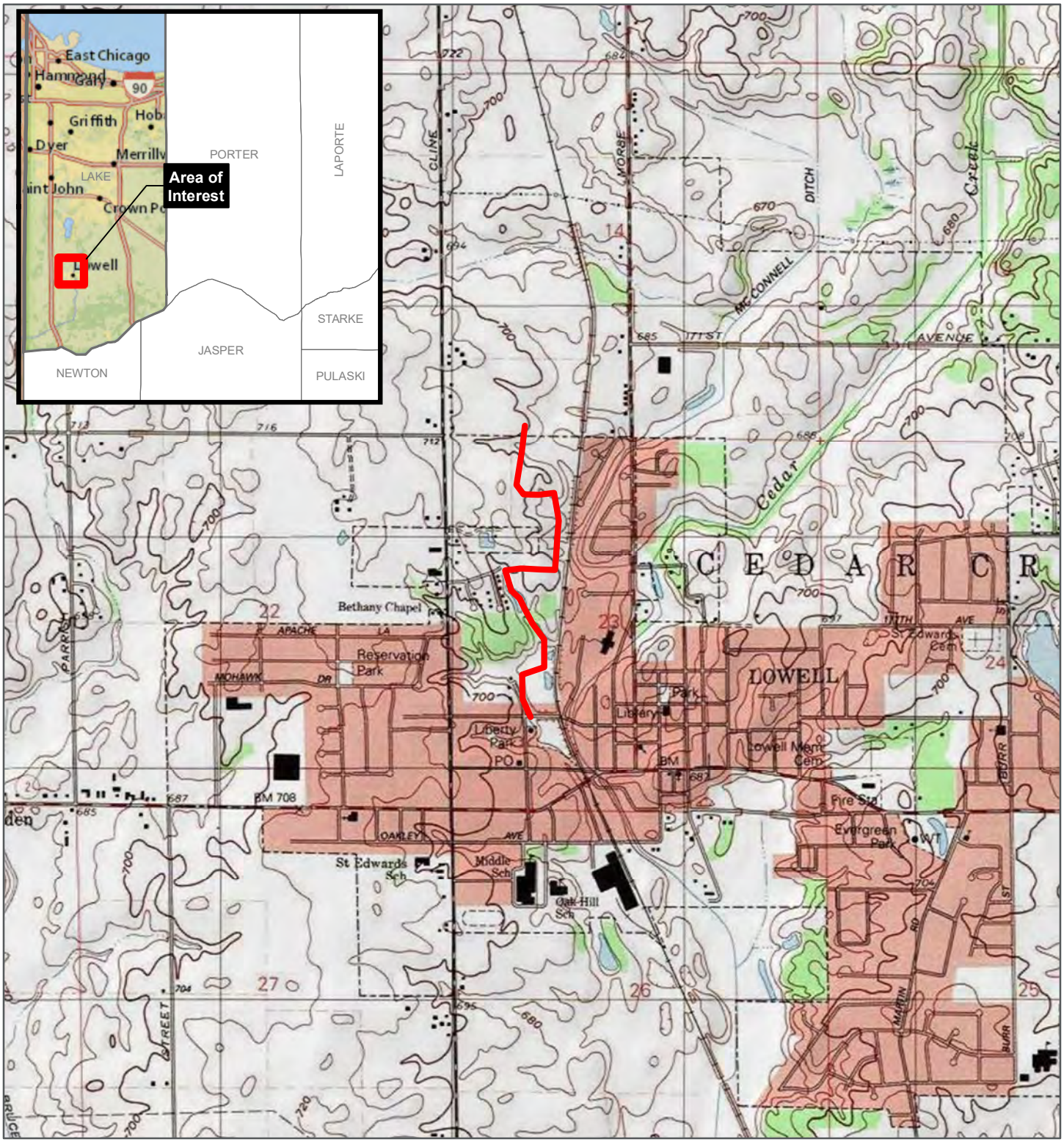
Freedom Trail Phase I Lowell, Indiana

APPENDIX A

FIGURES



1 inch = 2,000 feet

0 1,000 2,000 4,000 Feet

Freedom Trail

N
W E
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Township 33 North
Range 9 West
Sections 14, 23
Project No.
J19Z524300

Figure 1. Project Location
Lowell Freedom Trail
SEH, Inc.
Lake County, Indiana

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www.cardno.com

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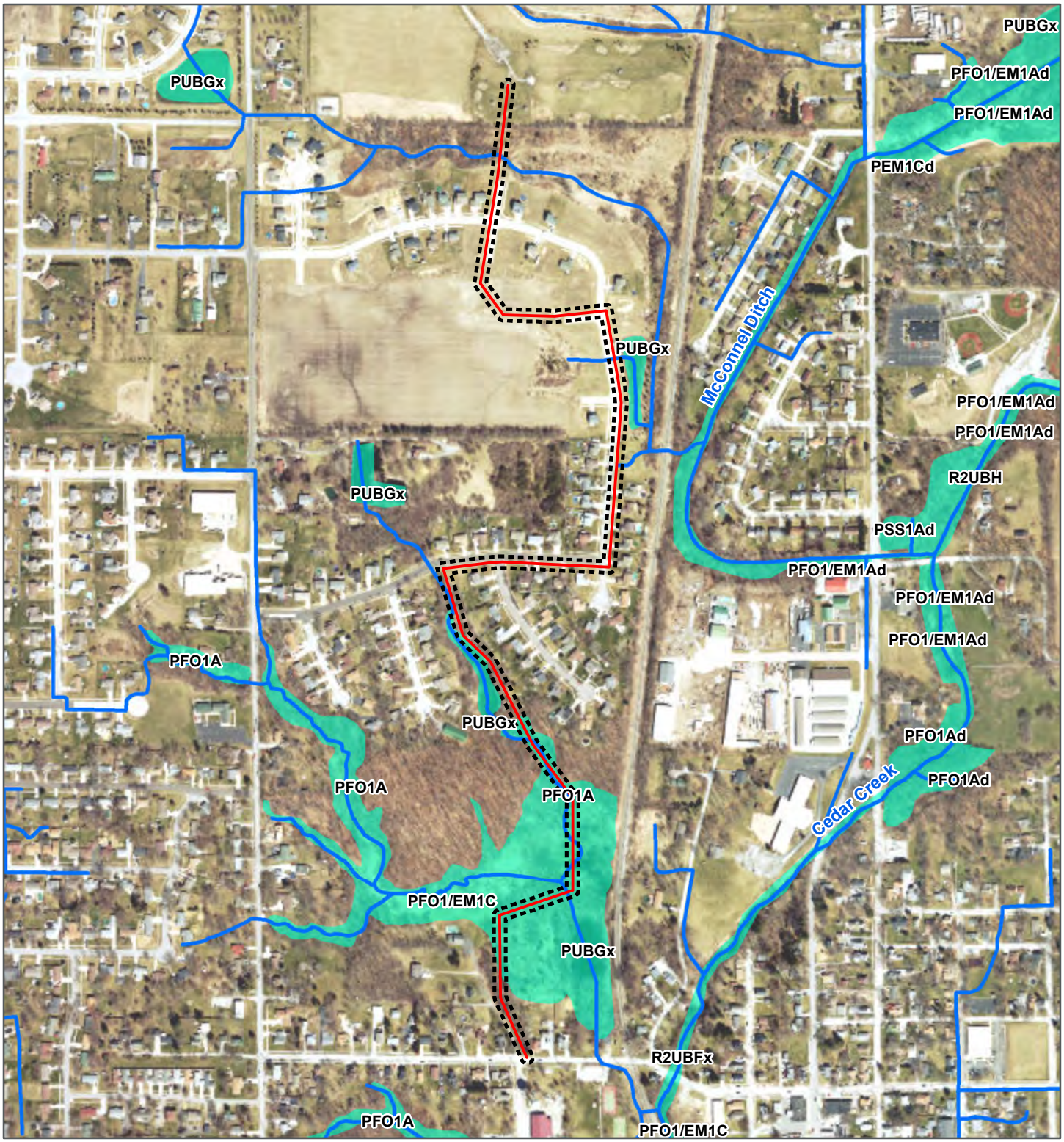

1 inch = 600 feet

0 300 600 1,200 Feet

Freedom Trail
Study Area
NWI Wetlands
NHD Flowline

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Township 33 North
Range 9 West
Sections 14, 23
Project No.
J19Z524300

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Figure 2. National Wetland Inventory
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Lake County, Indiana

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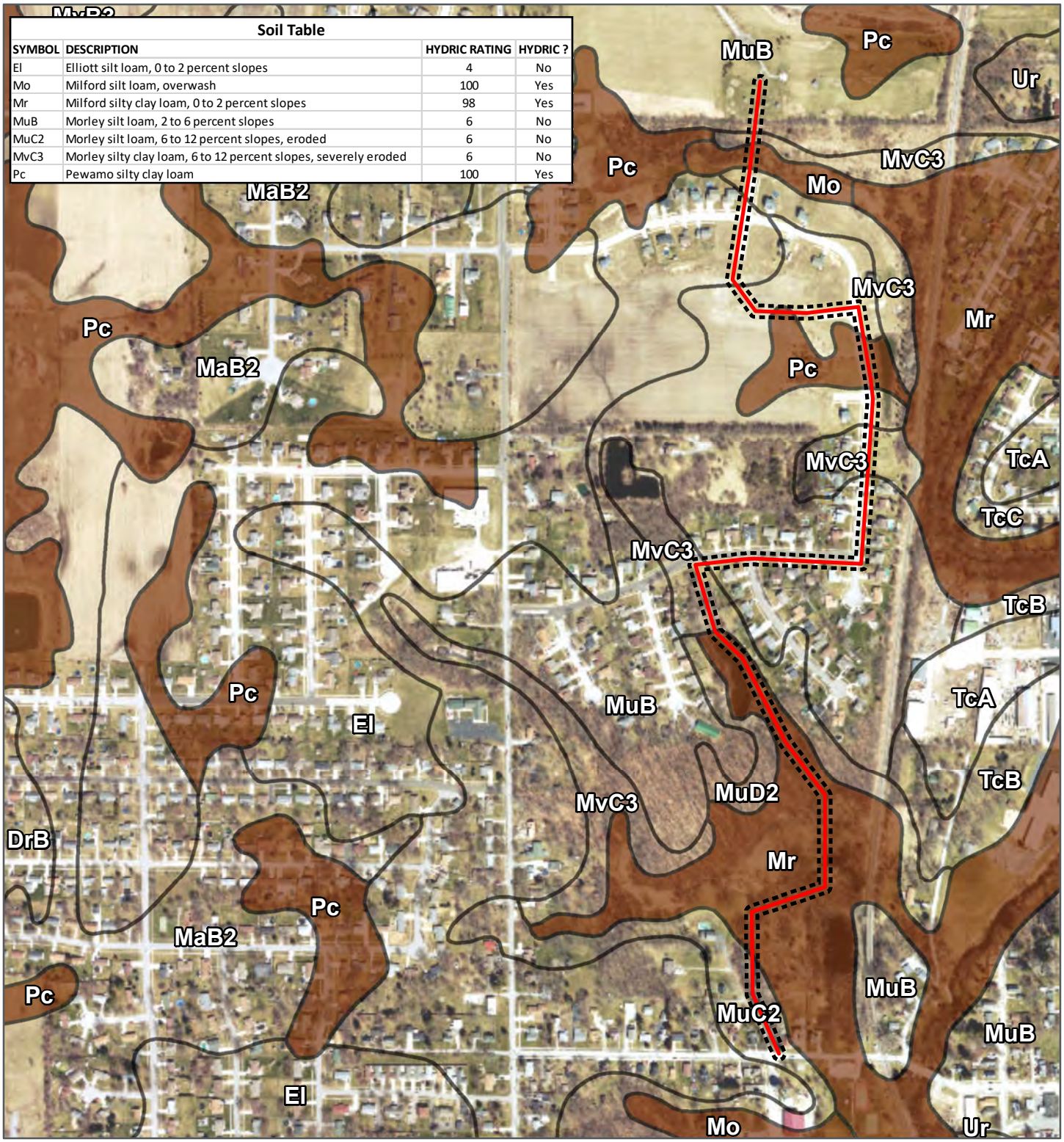
Basemap: Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.



Soil Table			
SYMBOL	DESCRIPTION	HYDRIC RATING	HYDRIC ?
El	Elliott silt loam, 0 to 2 percent slopes	4	No
Mo	Milford silt loam, overwash	100	Yes
Mr	Milford silty clay loam, 0 to 2 percent slopes	98	Yes
MuB	Morley silt loam, 2 to 6 percent slopes	6	No
MuC2	Morley silt loam, 6 to 12 percent slopes, eroded	6	No
MvC3	Morley silty clay loam, 6 to 12 percent slopes, severely eroded	6	No
Pc	Pewamo silty clay loam	100	Yes

1 inch = 600 feet

0 300 600 1,200 Feet

Freedom Trail
Study Area
Soil Unit
Soil Unit - Hydric

N
W E
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Township 33 North
Range 9 West
Sections 14, 23
Project No.
J19Z524300

Figure 3. Soil Map
Lowell Freedom Trail
SEH, Inc.
Lake County, Indiana

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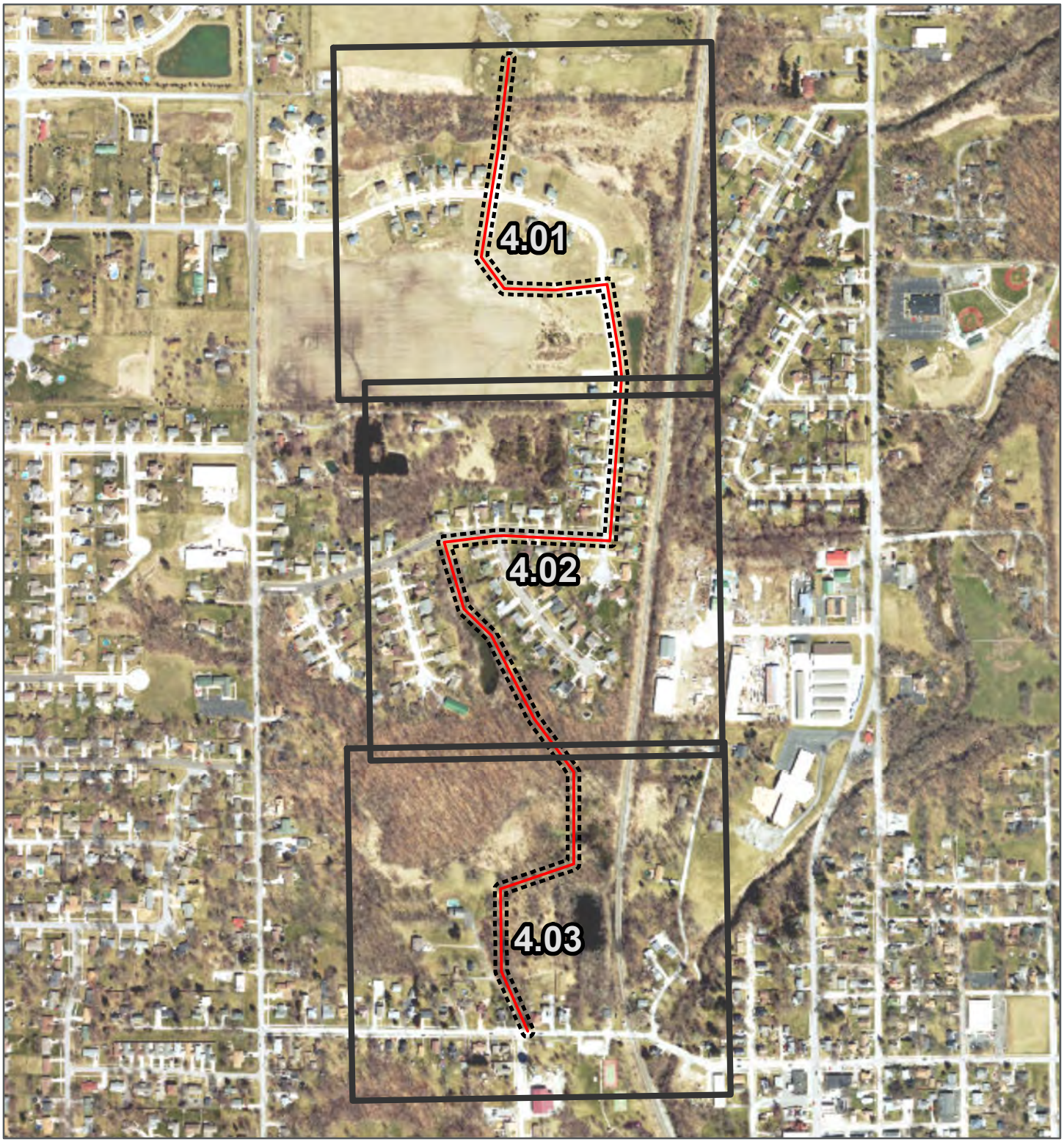

1 inch = 600 feet

0 150 300 600 Feet

Freedom Trail
Study Area
Sheet Grid

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Township 33 North
Range 9 West
Sections 14, 23
Project No.
J19Z524300

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Figure 4. Wetland Delineation Key Map
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Lake County, Indiana

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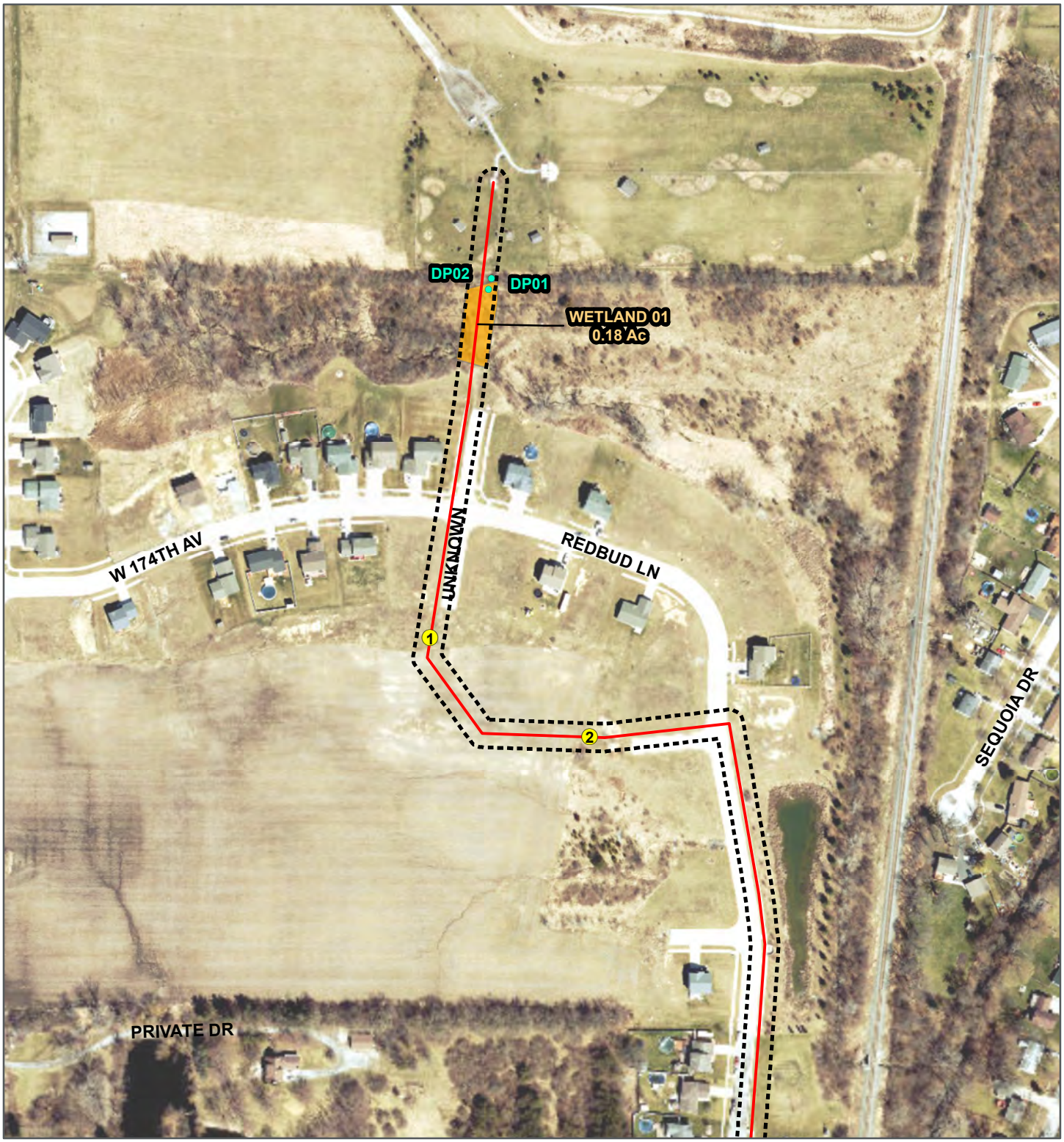
Basemap: Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.



1 inch = 250 feet

0 62.5 125 250 Feet

Existing Wetland
Data Point
Waterway
Study Area
Photo Station
Ditch
Freedom Trail

N
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Township 33 North
Range 9 West
Sections 14, 23
Project No.
J19Z524300

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Figure 4.01 Wetland Delineation
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Lake County, Indiana

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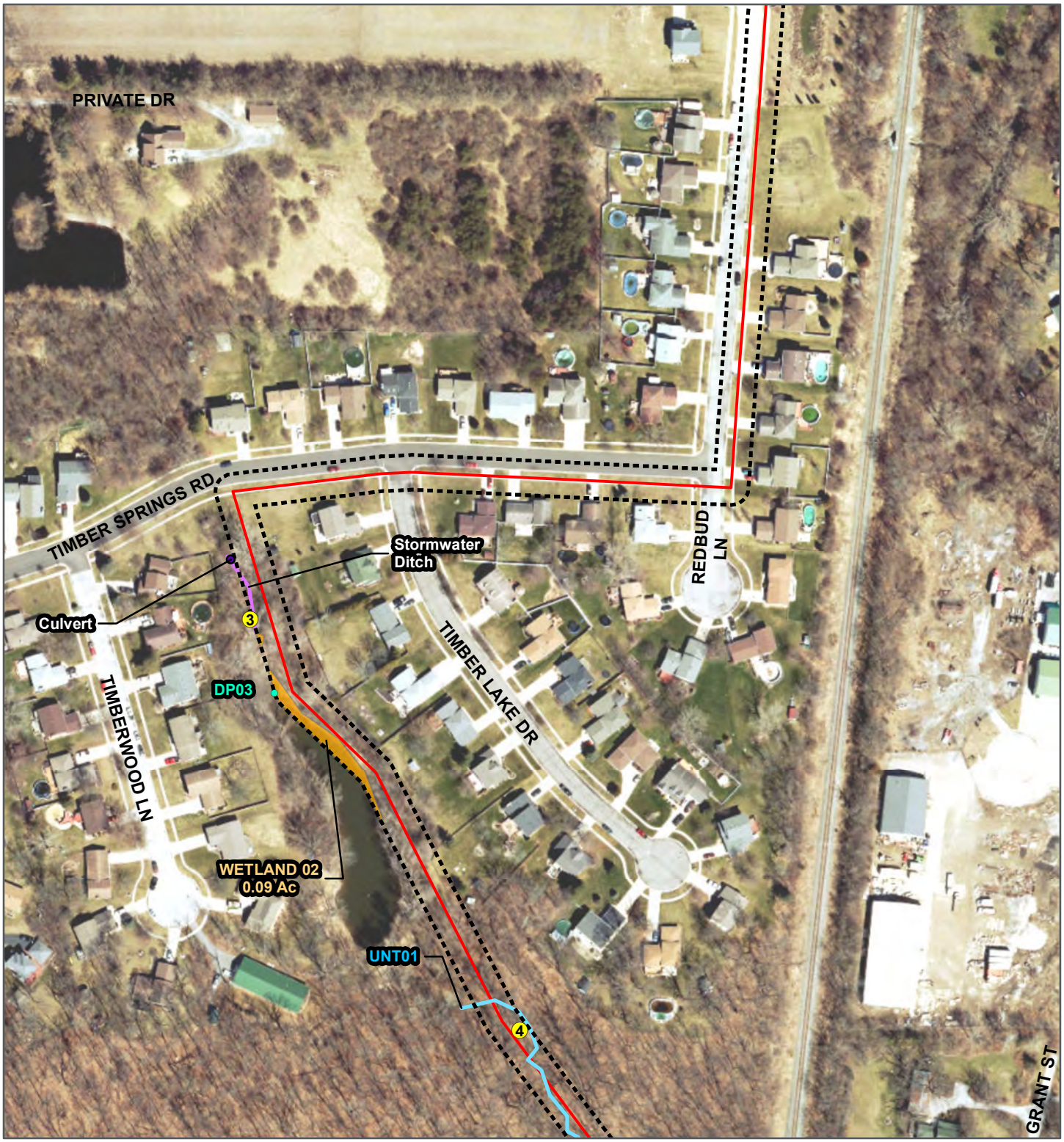
Basemap: Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.



1 inch = 200 feet

0 50 100 200 Feet

Existing Wetland
Data Point
Waterway
Study Area
Photo Station
Ditch
Freedom Trail

N
W E
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Township 33 North
Range 9 West
Sections 14, 23
Project No.
J19Z524300

Figure 4.02 Wetland Delineation
Lowell Freedom Trail
SEH, Inc.
Lake County, Indiana

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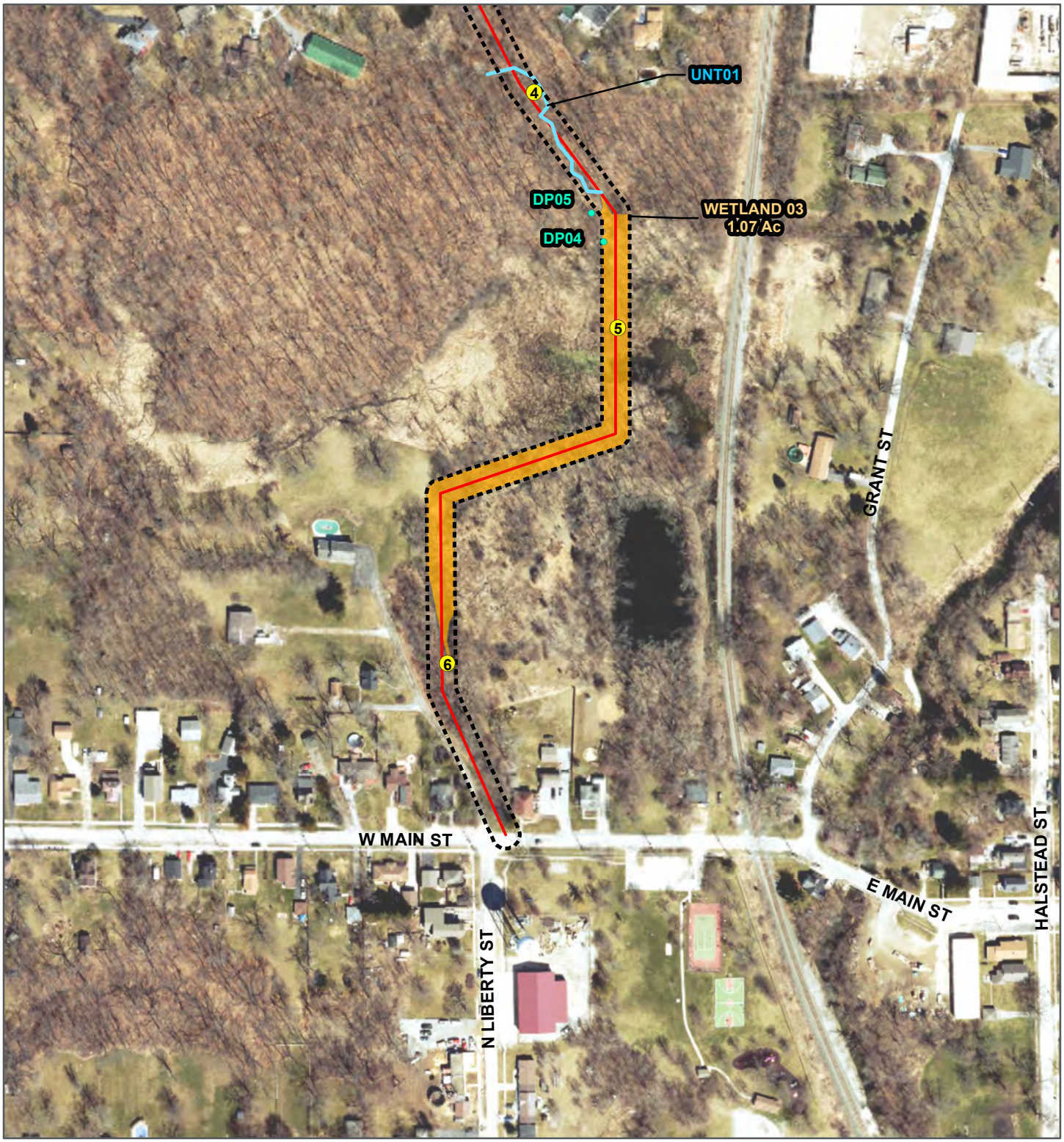
Basemap: Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.



1 inch = 250 feet

0 62.5 125 250 Feet

Existing Wetland
Data Point
Waterway
Study Area
Photo Station
Ditch
Freedom Trail

N
W E
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Township 33 North
Range 9 West
Sections 14, 23
Project No.
J19Z524300

Figure 4.03 Wetland Delineation
Lowell Freedom Trail
SEH, Inc.
Lake County, Indiana

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Basemap: Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

1 inch = 600 feet

0 150 300 600 Feet

Freedom Trail
Study Area
National Flood Hazard - FIRM Panels
FEMA Mapped 100-year Floodplain
Regulated Floodway

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Township 33 North
Range 9 West
Sections 14, 23
Project No.
J19Z524300

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Figure 5. Floodplain/ Floodway Map
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Lake County, Indiana

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Basemap: Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

Freedom Trail Phase I Lowell, Indiana

APPENDIX B

SITE PHOTOGRAPHS

Photo 1: Photo Station 1 Facing North

Photo 2: Photo Station 1 Facing South

Photo 3: Photo Station 2 Facing East

Photo 4: Photo Station 2 Facing West

Project Number:
J19Z524300

Site Photographs 10/15/2020

Regulated Waters Delineation Photos
Freedom Trail
Lowell, Indiana

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Photo 5: Photo Station 4 Facing North

Photo 6: Photo Station 4 Facing East

Photo 7: Photo Station 4 Facing South

Photo 8: Photo Station 4 Facing West

Project Number:
J19Z524300

Site Photographs 10/15/2020

Regulated Waters Delineation Photos
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Photo 9: Photo Station 5 Facing North

Photo 10: Photo Station 5 Facing East

Photo 11: Photo Station 5 Facing South

Photo 12: Photo Station 5 Facing West

Project Number:
J19Z524300

Site Photographs 10/15/2020

Regulated Waters Delineation Photos
Freedom Trail
Lowell, Indiana

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Photo 13: Photo Station 6 Facing North

Photo 14: Photo Station 6 Facing East

Photo 15: Photo Station 6 Facing South

Photo 16: Photo Station 6 Facing West

Project Number:
J19Z524300

Site Photographs 10/15/2020

Regulated Waters Delineation Photos
Freedom Trail
Lowell, Indiana

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Photo 17: DP01 Facing North

Photo 18: DP01 Facing East

Photo 19: DP01 Facing South

Photo 20: DP01 Facing West

Project Number:
J19Z524300

Site Photographs 10/15/2020

Regulated Waters Delineation Photos
Freedom Trail
Lowell, Indiana

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Photo 21: Data Point 02 Facing North

Photo 22: Data Point 02 Facing East

Photo 23: Data Point 02 Facing South

Photo 24: Data Point 02 Facing West

Project Number:
J19Z524300

Site Photographs 10/15/2020

Regulated Waters Delineation Photos
Freedom Trail
Lowell, Indiana

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Photo 23: Data Point 03 Facing North

Photo 24: Data Point 03 Facing East

Photo 25: Data Point 03 Facing South

Photo 26: Data Point 03 Facing West

Project Number:
J19Z524300

Site Photographs 10/15/2020

Regulated Waters Delineation Photos
Freedom Trail
Lowell, Indiana

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708 Roosevelt Road, Walkerton, IN 46574
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Photo 27: Data Point 04 Facing North

Photo 28: Data Point 04 Facing East

Photo 29: Data Point 04 Facing South

Photo 30: Data Point 04 Facing West

Project Number:
J19Z524300

Site Photographs 10/15/2020

Regulated Waters Delineation Photos
Freedom Trail
Lowell, Indiana

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708 Roosevelt Road, Walkerton, IN 46574
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Photo 31: Data Point 05 Facing North

Photo 32: Data Point 05 Facing East

Photo 33: Data Point 05 Facing South

Photo 34: Data Point 05 Facing West

Project Number:
J19Z524300

Site Photographs 10/15/2020

Regulated Waters Delineation Photos
Freedom Trail
Lowell, Indiana

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Photo 35: Photo Station 3 Facing North toward culvert outlet

Photo 36: Data Point 01 soils

Photo 37: Data Point 02 soils

Photo 38: Data Point 03 soils

Project Number:
J19Z524300

Site Photographs 10/15/2020

Regulated Waters Delineation Photos
Freedom Trail
Lowell, Indiana

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Office (574-586-3400)
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Photo 39: Data Point 04 soils

Photo 40: Data Point 05 soils

Project Number:
J19Z524300

Site Photographs 10/15/2020

Regulated Waters Delineation Photos
Freedom Trail
Lowell, Indiana

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Freedom Trail Phase I Lowell, Indiana

APPENDIX C

ROUTINE WETLAND DATA SHEETS

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Freedom Trail | City/County: Lowell/Lake | Sampling Date: 10/15/2020

Applicant/Owner: Short Elliott Hendrickson, Inc. | State: IN | Sampling Point: DP01

Investigator(s): Brock Struecker, Cody Banks | Section, Township, Range: Section 14, Township 33 N, Range 9 W

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

Slope (%): 2% | Lat: 41.304421 | Long: -87.426368 | Datum: NAD83 UTM16N

Soil Map Unit Name: MvC3: Morley silty clay loam, 6 to 12 percent slopes, severely eroded | NWI classification: none

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

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation N, Soil N, or Hydrology N 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 X	No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X	No ____		
Wetland Hydrology Present?	Yes X	No ____		

Remarks:

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Cornus racemosa*	30%	Yes	FAC
2. *Rosa multiflora*	20%	Yes	FACU
3. *Elaeagnus angustifolia*	10%	No	FACU
4. *Viburnum opulus*	5%	No	FAC
5.			
	65%	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. *Solidago altissima*	35%	Yes	FACU
2. *Scirpus atrovirens*	30%	Yes	OBL
3. *Bidens frondosa*	20%	Yes	FACW
4. *Carex tribuloides*	15%	No	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	100%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species	45%	x1 =	0.45
FACW species	20%	x2 =	0.40
FAC species	35%	x3 =	1.05
FACU species	65%	x4 =	2.60
UPL species		x5 =	
Column Totals:	165% (A)		4.50 (B)

Prevalence Index = B/A = 2.73

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation

X 2-Dominance Test is >50%

X 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 X No ____

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

SOIL

Sampling Point: DP01

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6"	10YR 3/1	95	10YR 5/8	5	C	PL	Clay Loam	
6-20"	10YR 6/1	80	10YR 5/8	20	C	M	Clay	

[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[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States* , Version 8.0, 2016.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** X **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)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	N/A
Water Table Present?	Yes ___ No X	Depth (inches):	>18"
Saturation Present? (includes capillary fringe)	Yes ___ No X	Depth (inches):	>18"

Wetland Hydrology Present? **Yes** X **No** ___

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Freedom Trail | City/County: Lowell/Lake | Sampling Date: 10/15/2020

Applicant/Owner: Short Elliott Hendrickson, Inc. | State: IN | Sampling Point: DP02

Investigator(s): Brock Struecker, Cody Banks | Section, Township, Range: Section 14, Township 33 N, Range 9 W

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

Slope (%): 1% | Lat: 41.304488 | Long: -87.426345 | Datum: NAD83 UTM16N

Soil Map Unit Name: MuB: Morley silt loam, 2 to 6 percent slopes | NWI classification: none

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

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation N, Soil N, or Hydrology N 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 X	**Is the Sampled Area**	
Hydric Soil Present?	Yes ____	No X	**within a Wetland?**	Yes ____ No X
Wetland Hydrology Present?	Yes ____	No X		

Remarks:

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Morus alba*	50%	Yes	FAC
2. *Elaeagnus angustifolia*	30%	Yes	FACU
3.			
4.			
5.			
	80%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Cornus racemosa*	75%	Yes	FAC
2.			
3.			
4.			
5.			
	75%	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. *Glechoma hederacea*	60%	Yes	FACU
2. *Geum canadense*	10%	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	70%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species		x2 =	
FAC species	135%	x3 =	4.05
FACU species	90%	x4 =	3.60
UPL species		x5 =	
Column Totals:	225% (A)		7.65 (B)

Prevalence Index = B/A = 3.40

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 X

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

SOIL

Sampling Point: DP02

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20"	10YR 4/1	100					Clay	

[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[3]:

- ___ 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 Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States* , Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

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 X	Depth (inches):	N/A
Water Table Present?	Yes ___ No X	Depth (inches):	>18"
Saturation Present? (includes capillary fringe)	Yes ___ No X	Depth (inches):	>18"

Wetland Hydrology Present? **Yes** ___ **No** X

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Freedom Trail | City/County: Lowell/Lake | Sampling Date: 10/15/2020

Applicant/Owner: Short Elliott Hendrickson, Inc. | State: IN | Sampling Point: DP03

Investigator(s): Brock Struecker, Cody Banks | Section, Township, Range: Section 14, Township 33 N, Range 9 W

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

Slope (%): 1% | Lat: 41.298509 | Long: -87.427119 | Datum: NAD83 UTM16N

Soil Map Unit Name: Mr: Milford silty clay loam, 0 to 2 percent slopes | NWI classification: PUBGx

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

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation N, Soil N, or Hydrology N 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Salix interior*	10%	Yes	FACW
2.			
3.			
4.			
5.			
	10% = Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Echinochloa crus-galli*	10%	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	10% = Total Cover		

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
That Are OBL, FACW, or FAC:		A/B
OBL species	x1 =	
FACW species 20%	x2 = 0.40	
FAC species	x3 =	
FACU species	x4 =	
UPL species	x5 =	
Column Totals: 20% (A)	0.40 (B)	

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

- X 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is >50%
- X 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 X No ____

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

SOIL

Sampling Point: DP03

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6"	10YR 3/1	95	10YR 5/8	5	C	PL	Clay	
6-20"	2.5Y 6/1	60	10R 3/4	10	C	PL	Sandy Clay	
	10YR 5/4	30						

[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[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States* , Version 8.0, 2016.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** X **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)
- X Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- X Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- X Inundation Visible on Aerial Imagery (B7)
- X Sparsely Vegetated Concave Surface (B8)
- X 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)

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

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	N/A
Water Table Present?	Yes X No ___	Depth (inches):	20"
Saturation Present? (includes capillary fringe)	Yes X No ___	Depth (inches):	18"

Wetland Hydrology Present? **Yes** X **No** ___

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Freedom Trail | City/County: Lowell/Lake | Sampling Date: 10/15/2020

Applicant/Owner: Short Elliott Hendrickson, Inc. | State: IN | Sampling Point: DP04

Investigator(s): Brock Struecker, Cody Banks | Section, Township, Range: Section 23, Township 33 N, Range 9 W

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

Slope (%): 0% | Lat: 41.296528 | Long: -87.425393 | Datum: NAD83 UTM16N

Soil Map Unit Name: Mr: Milford silty clay loam, 0 to 2 percent slopes | NWI classification: PFO1A

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

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation N, Soil N, or Hydrology N 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 X	No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X	No ____		
Wetland Hydrology Present?	Yes X	No ____		

Remarks:

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus imbricaria*	40%	Yes	FACU
2. *Carya glabra*	2%	No	FACU
3.			
4.			
5.			
	42%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Cornus racemosa*	15%	Yes	FAC
2. *Rosa multiflora*	15%	Yes	FACU
3.			
4.			
5.			
	30%	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. *Phalaris arundinacea*	70%	Yes	FACW
2. *Amphicarpaea bracteata*	10%	No	FAC
3. *Pilea pumila*	10%	No	FACW
4. *Persicaria lapathifolia*	5%	No	FACW
5. *Symphyotrichum lateriflorum*	5%	No	FACW
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	100%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species	90%	x2 =	1.80
FAC species	25%	x3 =	0.75
FACU species	57%	x4 =	2.28
UPL species		x5 =	
Column Totals:	172% (A)		4.83 (B)

Prevalence Index = B/A = 2.81

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation

____ 2-Dominance Test is >50%

X 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 X No ____

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

SOIL

Sampling Point: DP04

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6"	10YR 3/1	85	10R 3/6	15	C	M&PL	Clay Loam	
6-20"	10YR 3/1	40	10YR 5/8	10	C	PL	Clay Loam	
	10YR 2/1	50						

[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[3]:

- ___ 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 Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States* , Version 8.0, 2016.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** X **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)
- X Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	N/A
Water Table Present?	Yes X No ___	Depth (inches):	18"
Saturation Present? (includes capillary fringe)	Yes X No ___	Depth (inches):	12"

Wetland Hydrology Present? **Yes** X **No** ___

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Freedom Trail | City/County: Lowell/Lake | Sampling Date: 10/15/2020

Applicant/Owner: Short Elliott Hendrickson, Inc. | State: IN | Sampling Point: DP05

Investigator(s): Brock Struecker, Cody Banks | Section, Township, Range: Section 23, Township 33 N, Range 9 W

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

Slope (%): 1% | Lat: 41.296701 | Long: -87.425515 | Datum: NAD83 UTM16N

Soil Map Unit Name: Mr: Milford silty clay loam, 0 to 2 percent slopes | NWI classification: PFO1A

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

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation N, Soil N, or Hydrology N 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____	No X		
Wetland Hydrology Present?	Yes ____	No X		

Remarks:

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Tilia americana*	60%	Yes	FACU
2. *Quercus imbricaria*	15%	No	FACU
3. *Carya ovata*	5%	No	FACU
4.			
5.			
	80%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Tilia americana*	30%	Yes	FACU
2. *Lonicera morrowii*	10%	Yes	FACU
3. *Fraxinus pennsylvanica*	5%	No	FACW
4.			
5.			
	45%	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. *Ageratina altissima*	20%	Yes	FACU
2. *Rubus idaeus*	20%	Yes	FACU
3. *Geum canadense*	5%	No	FAC
4. *Carex blanda*	5%	No	FAC
5. *Hackelia virginiana*	3%	No	FACU
6. *Teucrium canadense*	3%	No	FACW
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	56%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= 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: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species	8%	x2 =	0.16
FAC species	10%	x3 =	0.30
FACU species	163%	x4 =	6.52
UPL species		x5 =	
Column Totals:	181% (A)		6.98 (B)

Prevalence Index = B/A = 3.86

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 X

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

SOIL

Sampling Point: DP05

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4"	10YR 2/1	100					Silty Clay Loam	
4-20"	10YR 2/1	60					Loam	
	7.5YR 3/3	40						

[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[3]:

- ___ 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 Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States* , Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

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 X	Depth (inches):	N/A
Water Table Present?	Yes ___ No X	Depth (inches):	>18"
Saturation Present? (includes capillary fringe)	Yes ___ No X	Depth (inches):	>18"

Wetland Hydrology Present? **Yes** ___ **No** X

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

Remarks:

Freedom Trail Phase I Lowell, Indiana

APPENDIX D

FLORISTIC QUALITY ANALYSIS

Wetland 01 FQA

Date: 10/15/2020
FQA DB Region: Flora of the Chicago Region
FQA DB Publication Year: 2017
FQA DB Description: Flora of the Chicago Region UFQA Database. 2018. Kenneth Johnson. [As per Flora of the Chicago Region: A Floristic and Ecological Synthesis. 2017. Gerould Wilhelm and Laura Rericha. Indiana Academy of Science. Indianapolis, IN.]

Conservatism-Based Metrics:

Total Mean C:	2.4
Native Mean C:	3
Total FQI:	10.5
Native FQI:	11.6
Adjusted FQI:	26.7
% C value 0:	31.6
% C value 1-3:	21.1
% C value 4-6:	42.1
% C value 7-10:	5.3
Native Tree Mean C:	3
Native Shrub Mean C:	1
Native Herbaceous Mean C:	3.2

Species Richness:

Total Species:	19	
Native Species:	15	78.90%
Non-native Species:	4	21.10%

Species Wetness:

Mean Wetness:	-0.2
Native Mean Wetness:	-0.5

Physiognomy Metrics:

Tree:	3	15.80%
Shrub:	3	15.80%
Vine:	0	0%
Forb:	9	47.40%
Grass:	1	5.30%
Sedge:	3	15.80%
Rush:	0	0%
Fern:	0	0%
Bryophyte:	0	0%

Duration Metrics:

Annual:	2	10.50%
Perennial:	16	84.20%
Biennial:	1	5.30%
Native Annual:	2	10.50%
Native Perennial:	13	68.40%
Native Biennial:	0	0%

Species:

Scientific Name	Family	Acronym	Native?	C	W	Physiognomy	Duration	Common Name
Agrimonia parviflora	Rosaceae	AGRPAR	native	4	-1	forb	perennial	swamp agrimony
Bidens frondosa	Asteraceae	BIDFRO	native	1	-1	forb	annual	common beggars ticks
Carex tribuloides	Cyperaceae	CXTRIB	native	7	-2	sedge	perennial	awl-fruited oval sedge
Carex vulpinoidea	Cyperaceae	CXVULP	native	2	-1	sedge	perennial	brown fox sedge
Cornus racemosa	Cornaceae	CORRAC	native	1	0	shrub	perennial	gray dogwood
Daucus carota	Apiaceae	DAUCAR	non-native	0	2	forb	biennial	queen annes lace
Helianthus grosseserratus	Asteraceae	HELGRO	native	4	0	forb	perennial	sawtooth sunflower
Impatiens capensis	Balsaminaceae	IMPCAP	native	4	-1	forb	annual	spotted touch-me-not

Lycopus americanus	Lamiaceae	LYCAME	native	4	-2	forb	perennial	common water horehound
Oxalis stricta	Oxalidaceae	OXASTR	native	0	1	forb	perennial	tall wood sorrel
Poa pratensis	Poaceae	POAPRA	non-native	0	1	grass	perennial	kentucky bluegrass
Populus deltoides	Salicaceae	POPDEL	native	0	0	tree	perennial	eastern cottonwood
Quercus imbricaria	Fagaceae	QUEIMB	native	4	2	tree	perennial	shingle oak
Rosa multiflora	Rosaceae	ROSMUL	non-native	0	1	shrub	perennial	multiflora rose
Salix nigra	Salicaceae	SALNIG	native	5	-2	tree	perennial	black willow
Scirpus atrovirens	Cyperaceae	SCIATR	native	4	-2	sedge	perennial	dark green rush
Solidago altissima	Asteraceae	SOLALT	native	1	1	forb	perennial	tall goldenrod
Symphyotrichum lateriflorum	Asteraceae	SYMLAT	native	4	1	forb	perennial	calico aster
Viburnum opulus	Adoxaceae	VIBOPU	non-native	0	0	shrub	perennial	european cranberry bush

Wetland 02 FQA

Date: 10/15/2020
FQA DB Region: Flora of the Chicago Region
FQA DB Publication Year: 2017
FQA DB Description: Flora of the Chicago Region UFQA Database. 2018. Kenneth Johnson. [As per Flora of the Chicago Region: A Floristic and Ecological Synthesis. 2017. Gerould Wilhelm and Laura Rericha. Indiana Academy of Science. Indianapolis, IN.]

Conservatism-Based Metrics:

Total Mean C:	0.6
Native Mean C:	0.8
Total FQI:	1.6
Native FQI:	1.8
Adjusted FQI:	6.8
% C value 0:	71.4
% C value 1-3:	28.6
% C value 4-6:	0
% C value 7-10:	0
Native Tree Mean C:	0
Native Shrub Mean C:	2
Native Herbaceous Mean C:	0.7

Species Richness:

Total Species:	7	
Native Species:	5	71.40%
Non-native Species:	2	28.60%

Species Wetness:

Mean Wetness:	-0.1
Native Mean Wetness:	-0.2

Physiognomy Metrics:

Tree:	1	14.30%
Shrub:	1	14.30%
Vine:	0	0%
Forb:	3	42.90%
Grass:	2	28.60%
Sedge:	0	0%
Rush:	0	0%
Fern:	0	0%
Bryophyte:	0	0%

Duration Metrics:

Annual:	5	71.40%
Perennial:	2	28.60%
Biennial:	0	0%
Native Annual:	3	42.90%
Native Perennial:	2	28.60%
Native Biennial:	0	0%

Species:

Scientific Name	Family	Acronym	Native?	C	W	Physiognomy	Duration	Common Name
Acalypha rhomboidea	Euphorbiaceae	ACARHO	native	0	1	forb	annual	three-seeded mercury
Echinochloa crus-galli	Poaceae	ECHCRU	non-native	0	0	grass	annual	barnyard grass
Persicaria lapathifolia	Polygonaceae	PERLAP	native	0	0	forb	annual	pale pinkweed

Pilea pumila	Urticaceae	PILPUM	native	2	-1	forb	annual	clearweed
Populus deltoides	Salicaceae	POPDEL	native	0	0	tree	perennial	eastern cottonwood
Salix interior	Salicaceae	SALINT	native	2	-1	shrub	perennial	sandbar willow
Setaria pumila	Poaceae	SETPUM	non-native	0	0	grass	annual	yellow foxtail

Wetland 03 FQA

Date: 10/15/2020
FQA DB Region: Flora of the Chicago Region
FQA DB Publication Year: 2017
FQA DB Description: Flora of the Chicago Region UFQA Database. 2018. Kenneth Johnson. [As per Flora of the Chicago Region: A Floristic and Ecological Synthesis. 2017. Gerould Wilhelm and Laura Rericha. Indiana Academy of Science. Indianapolis, IN.]

Conservatism-Based Metrics:

Total Mean C:	2.8
Native Mean C:	3.4
Total FQI:	13.7
Native FQI:	15.2
Adjusted FQI:	31
% C value 0:	25
% C value 1-3:	25
% C value 4-6:	50
% C value 7-10:	0
Native Tree Mean C:	2.5
Native Shrub Mean C:	1
Native Herbaceous Mean C:	3.7

Species Richness:

Total Species:	24	
Native Species:	20	83.30%
Non-native Species:	4	16.70%

Species Wetness:

Mean Wetness:	-1
Native Mean Wetness:	-1.1

Physiognomy Metrics:

Tree:	4	16.70%
Shrub:	2	8.30%
Vine:	1	4.20%
Forb:	13	54.20%
Grass:	3	12.50%
Sedge:	1	4.20%
Rush:	0	0%
Fern:	0	0%
Bryophyte:	0	0%

Duration Metrics:

Annual:	5	20.80%
Perennial:	19	79.20%
Biennial:	0	0%
Native Annual:	4	16.70%
Native Perennial:	16	66.70%
Native Biennial:	0	0%

Species:

Scientific Name	Family	Acronym	Native?	C	W	Physiognomy	Duration	Common Name
Acalypha rhomboidea	Euphorbiaceae	ACARHO	native	0	1	forb	annual	three-seeded mercury
Acer saccharinum	Sapindaceae	ACESAI	native	1	-1	tree	perennial	silver maple
Amphicarpaea bracteata var. comosa	Fabaceae	AMPBRC	native	5	-1	vine	perennial	lowland hog peanut
Boehmeria cylindrica	Urticaceae	BOECYC	native	5	-2	forb	perennial	swamp false nettle
Bolboschoenus fluviatilis	Cyperaceae	BOLFLU	native	3	-2	sedge	perennial	river bulrush
Calamagrostis canadensis	Poaceae	CALCAN	native	6	-2	grass	perennial	blue joint grass
Cornus racemosa	Cornaceae	CORRAC	native	1	0	shrub	perennial	gray dogwood
Eupatorium perfoliatum	Asteraceae	EUPPER	native	4	-2	forb	perennial	common boneset

Eutrochium maculatum	Asteraceae	EUTMAC	native	5	-2	forb	perennial	spotted joe pye weed
Impatiens capensis	Balsaminaceae	IMPCAP	native	4	-1	forb	annual	spotted touch-me-not
Leersia oryzoides	Poaceae	LEEORY	native	3	-2	grass	perennial	rice cut grass
Lemna turionifera	Lemnaceae	LEMTUR	native	2	-2	forb	annual	red duckweed
Persicaria amphibia var. stipulacea	Polygonaceae	PERAMS	native	4	-2	forb	perennial	marsh smartweed
Persicaria maculosa	Polygonaceae	PERMAC	non-native	0	0	forb	annual	ladys thumb
Phalaris arundinacea	Poaceae	PHAARA	non-native	0	-1	grass	perennial	reed canary grass
Pilea pumila	Urticaceae	PILPUM	native	2	-1	forb	annual	clearweed
Populus deltoides	Salicaceae	POPDEL	native	0	0	tree	perennial	eastern cottonwood
Quercus imbricaria	Fagaceae	QUEIMB	native	4	2	tree	perennial	shingle oak
Rosa multiflora	Rosaceae	ROSMUL	non-native	0	1	shrub	perennial	multiflora rose
Salix nigra	Salicaceae	SALNIG	native	5	-2	tree	perennial	black willow
Solidago gigantea	Asteraceae	SOLGIG	native	4	-1	forb	perennial	late goldenrod
Sparganium eurycarpum	Sparganiaceae	SPAEUR	native	5	-2	forb	perennial	common bur reed
Symphyotrichum lateriflorum	Asteraceae	SYMLAT	native	4	1	forb	perennial	calico aster
Typha x glauca	Typhaceae	TYPGLA	non-native	0	-2	forb	perennial	hybrid cattail

Appendix G
PUBLIC INVOLVEMENT

Building a Better World for All of Us®

September 9, 2020

RE: Indiana Department of Transportation
Preliminary Engineering for Freedom Trail,
DES No. 1802920
SEH No. LOWEL 154504

This letter is to advise you that it may be necessary for us, as consultants of the Indiana Department of Transportation (Town of Lowell), to enter upon your property in order to conduct an investigation and/or survey in connection with the proposed Freedom Trail. This inspection and/or survey is authorized by Indiana Code 8-23-7-26 and, if needed, would be conducted on the subject property on or after April 30, 2020.

The survey and investigation activities that Indiana Code 8-23-7-28 authorizes TOWN OF LOWELL to perform by "manual or mechanical means" on your property include: "(1) inspecting, (2) measuring, (3) leveling, (4) boring, (5) trenching, (6) sample-taking, (7) archeological digging, (8) investigating soil and foundation, (9) transporting equipment, (10) and any other work necessary to carry out the survey or investigation."

Please be advised that, pursuant to Indiana Code 8-23-7-28, you have the right to be compensated for damage that occurs to your property as a result of the entry upon, over or under the subject property or work performed during the entry. For more information about obtaining such compensation, please contact Craig Hendrix, TOWN OF LOWELL Town Manager at 219.696.7794. Mr. Hendrix can provide you with a form to request compensation for damages. If you are not satisfied with the compensation that TOWN OF LOWELL determines is owed to you, Indiana Code 8-23-7-28 provides that:

> The amount of damages shall be assessed by the county agricultural extension educator of the county in which the land or water is located and two (2) disinterested residents of the county, one (1) appointed by the aggrieved party and one (1) appointed by TOWN OF LOWELL. A written report of the assessment of damages shall be mailed to the aggrieved party and TOWN OF LOWELL by first class United States mail. If either TOWN OF LOWELL 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. TOWN OF LOWELL shall pay any compensation awarded to an aggrieved party under this section: (1) not more than sixty (60) days after the date on which the parties agree to the amount of compensation; or (2) as ordered by the circuit or superior court.

This letter is intended to provide advance notice of any investigation and survey to be performed upon, over or under the subject property. If you are available, our field employees will show identification before coming onto your property.

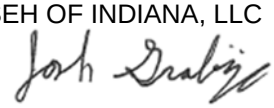
While such surveys and investigations are permitted, it is TOWN OF LOWELL's sincere desire to cause you as little inconvenience as possible during this survey and/or investigation. If you own but are not currently the occupant of the subject property, please promptly contact me at 517.304.9164 with the

name of the current occupant of the subject property so that he or she may be also notified about this inspection and/or survey.

Thank you for your cooperation in this matter.

Sincerely,

SEH OF INDIANA, LLC



Josh Grabijas, PE
Project Manager

JG

Enclosure

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
Lake County																	
Indiana Department of Transportation	40380 / 1500090	M 09	US 12	Intersect. Improv. W/ Added Turn Lanes	LaPorte	.056	NHPP		Toll Lease Amendment Proceeds	PE	$23,680.00	$5,920.00	$13,000.00	$16,600.00			
									Toll Lease Amendment Proceeds	CN	$2,284,673.20	$571,168.30	$9,367.59	$2,846,473.91			
									Road Construction	CN	$84,653.21	$21,163.30		$105,816.52			
Performance Measure Impacted: Safety																	
Location: US 12(Columbus Dr) with Railroad Ave & McShane Ave 0.25mi E of US 20 (Indy Blvd)																	
Comments:Project was originally in NIRPC TIP for FY 22 which is included in the initial STIP. Project went to letting and wasn't awarded. Finance withdrew the federal authorization. It is now being let and CN needs to be moved from FY 22 to FY 23. NIRPC TIP admend mod 22-24 approved 10-07-22.																	
Lowell	42065 / 1802920	M 01	ST 3035	Bike/Pedestrian Facilities	LaPorte	1	STBG		Local Transportation Alternatives	RW	$86,800.00	$0.00		$86,800.00			
									Local Funds	RW	$0.00	$21,700.00		$21,700.00			
Performance Measure Impacted: Reliability and Freight Reliability																	
Location: Freedom Park located on Nichols St.and ends at Liberty Park on St.																	
Comments:Moving RW from FY 22 to FY 23. NIRPC MPO																	
Gary	42184 / 1802975	M 01	IR 1007	Road Rehabilitation (3R/4R Standards)	LaPorte	3	NHPP		Northwest Indiana MPO	CN	$716,800.00	$0.00		$716,800.00			
									Local Funds	CN	$0.00	$179,200.00		$179,200.00			
Location: Airport Road Phase IV Street Enhancement																	
Comments:Moving RW from FY 22 to FY 23. NIRPC MPO																	
Winfield	42314 / 1901947	M 01	IR 1025	Bike/Pedestrian Facilities	LaPorte	.61	STBG		Northwest Indiana MPO	CN	$391,040.00	$0.00		$391,040.00			
									Local Funds	CN	$0.00	$97,760.00		$97,760.00			
Performance Measure Impacted: Reliability and Freight Reliability																	
Location: Sidewalk along Randolph St from 120th Ave to Jerry Ross School and 117th Ave GroveSub to Randolph St																	
Comments:The description of the project is changing																	
Indiana Department of Transportation	44264 / 1703011	M 01	SR 912	Bridge Removal	LaPorte	0	NHPP		Bridge Construction	CN	$5,375,249.60	$1,343,812.40			$6,719,062.00		
									Toll Lease Amendment Proceeds	PE	$74,656.00	$18,664.00	$93,320.00				
									Road Construction	CN	$24,126,700.00	$6,031,675.00			$30,158,375.00		

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

TIP ID	Work Type	Project Title	Lead Agency	Funding Type	FED	STATE	LOC	PE	RW	CN	CE	Funding in Prior Years	2022	2023	2024	2025	2026	Total Project Costs	Air Quality Exempt
1382598	Roadway Reconstruction/Rehabilitation	Roadway Improvement Program at County Line Rd	Hobart	STBG Chicago UZA	$7,129,800	$0	$1,782,450	$0	$316,000	$8,596,250	$0	$0	$316,000	$0	$0	$0	$0	$8,912,250	No
1401034	Intersection or Intersection Groups	Roadway Improvement Program at Colorado St	Hobart	HSIP Chicago UZA	$3,243,171	$0	$360,352	$391,190	$879,000	$2,333,333	$0	$1,270,190	$2,333,333	$0	$0	$0	$0	$3,603,523	No
1902675	Bike/Pedestrian Facilities	Veteran's Memorial Trail (P1)	Lake County	STBG Chicago UZA	$1,074,203	$0	$268,551	$0	$0	$1,212,810	$129,944	$0	$0	$0	$1,342,754	$0	$0	$1,342,754	Yes
1902676	New Bridge	Veteran's Memorial Parkway Trail Bridge	Lake County	STBG Chicago UZA	$1,571,717	$0	$747,293	$0	$0	$2,094,590	$224,420	$0	$0	$0	$2,319,010	$0	$0	$2,319,010	Yes
2101129	Bridge Replacement	Bridge Replacement Colorado St over Deep River	Lake County	STBG Chicago UZA	$836,000	$0	$605,501	$0	$0	$1,441,501	$0	$0	$0	$0	$0	$1,441,501	$0	$1,441,501	Yes
1702831	Bridge Replacement	Lake County Bridge	Lake County	Local Bridge	$0	$0	$1,765,000	$305,000	$80,000	$1,200,000	$180,000	$385,000	$1,380,000	$0	$0	$0	$0	$1,765,000	Yes
1702830	Bridge Replacement	Lake County Bridge	Lake County	Local Bridge	$0	$0	$1,766,600	$306,600	$80,000	$1,380,000	$0	$306,600	$80,000	$1,380,000	$0	$0	$0	$1,766,600	Yes
1902819	Bridge Replacement	Bridge #45 Bridge Replacement	Lake County	Local Bridge	$0	$0	$5,770,550	$535,550	$60,000	$4,500,000	$675,000	$485,550	$0	$110,000	$0	$5,175,000	$0	$5,770,550	Yes
9980080	Existing Roadway Capacity Improvement	Added Travel Lanes at 45th Ave	Lake County	DEMO; STBG Chicago UZA	$8,873,142	$0	$3,205,786	$0	$2,496,928	$9,582,000	$0	$2,496,928	$9,582,000	$0	$0	$0	$0	$12,078,928	No
1173429	Pavement Reconstruction/Rehabilitation	Road reconstruction Central Ave & Fairview	Lake Station	STBG Chicago UZA	$750,000	$61,875	$344,301	$68,750	$0	$1,087,426	$0	$0	$0	$68,750	$0	$0	$1,087,426	$1,156,176	Yes
1802924	Bike/Pedestrian Facilities	ADA ramps & sidewalk installation/repair	Lowell	STBG Group III	$2,321,839	$0	$580,459	$735,410	$440,000	$1,501,642	$225,246	$735,410	$440,000	$0	$1,726,888	$0	$0	$2,902,298	Yes
1802920	Bike/Pedestrian Facilities	Freedom Trail	Lowell	STBG Group III	$0	$1,732,080	$433,020	$183,625	$108,500	$1,689,350	$183,625	$183,625	$108,500	$0	$1,872,975	$0	$0	$2,165,100	Yes
2100031	Intersection or Intersection Groups	Roundabouts at Mississippi & 79th-FUTURE PROJECT	Merrillville	STBG Chicago UZA	$3,927,129	$0	$981,782	$0	$0	$4,908,911	$0	$0	$0	$0	$0	$0	$4,908,911	$4,908,911	Yes
2100030	Intersection or Intersection Groups	Roundabout at Mississippi & 69th	Merrillville	STBG Chicago UZA	$100,000	$0	$25,000	$0	$125,000	$0	$0	$0	$0	$0	$125,000	$0	$0	$125,000	Yes

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

U.S. Department
of Transportation

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

June 17, 2022

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

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

Dear Mr. Smith:

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

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

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

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

Sincerely,

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

Kelley Brookins
Regional Administrator
FTA Region V

Sincerely,

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

Jermaine R. Hannon
Division Administrator
FHWA Indiana Division

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

April 26, 2022

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

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

Dear Mr. Hannon /Ms. Brookins:

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

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

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

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

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

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

Sincerely,

Michael Smith, Commissioner
Indiana Department of Transportation

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

INDIANA DEPARTMENT OF TRANSPORTATION
PLANNING PROCESS CERTIFICATION

The Indiana Department of Transportation hereby certifies that the transportation planning process is being carried out in accordance with all applicable requirements of:

(1) 23 U.S.C. 134 and 135, 49 U.S.C. 5303 and 5304, and this part;

(2) Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d-1) and 49 CFR part 21;

(3) 49 U.S.C. 5332, prohibiting discrimination on the basis of race, color, creed, national origin, sex, or age in employment or business opportunity;

(4) Section 1101(b) of the FAST Act (Pub. L.114-357) and 49 CFR part26 regarding the involvement of disadvantaged business enterprises in DOT funded projects;

(5) 23 CFR part 230, regarding implementation of an equal employment opportunity program on Federal and Federal-aid highway construction contracts;

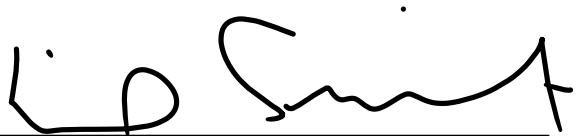
(6) The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) and 49 CFR parts 27, 37, and 38;

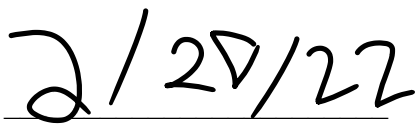
(7) In States containing nonattainment and maintenance areas, sections 174 and 176(c) and (d) of the Clean Air Act, as amended (42 U.S.C. 7504, 7506(c) and (d)) and 40 CFR part 93;

(8) The Older Americans Act, as amended (42 U.S.C. 6101), prohibiting discrimination on the basis of age in programs or activities receiving Federal financial assistance;

(9) 23 U.S.C. 324, regarding the prohibition of discrimination based on gender; and

(10) Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and 49 CFR part 27 regarding discrimination against individuals with disabilities.





Michael Smith, Commissioner
Indiana Department of Transportation

Date

Appendix I
Additional Studies

Section 4(f)

Section 6(f)

Environmental Justice

N
W E
S

PLSS:
T33N R9W S14,23
Project No.
J19Z524300

Figure 2. Project Aerial

Lowell Freedom Trail
Environmental Documentation
INDOT Des No. 1802920
Lake County, Indiana

Cardno
3901 Industrial Blvd.,Indianapolis, IN 46254
Phone (+1) 317-388-1982 Fax (+1) 317-388-1986
www.cardno.com

Date: 1/26/2022 File Path: D:\GIS\GIS\SEH\FreedomTrail\F1_Location.mxd Saved By: Tamara.Miller

Basemap: National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial Data Portal , Indiana Department of Natural Reources, Indiana Natural Heritage Database, Indiana State Land Office

TOWN OF LOWELL
CULTIVATING COMMUNITY

January 27, 2021

Mr. Todd Angerman
Lowell Town Council President
501 East Main Street
Lowell, IN 46356

Subject: Section 4(f) Net Benefit finding for Multi-use Trail Project, Freedom Trail, INDOT Des No. 1802920

Dear Mr. Angerman:

The Town of Lowell (Town) has received Federal Highway Administration (FHWA) funds for a project involving construction of a multi-use trail to connect Freedom Sports Park to Liberty Park in Lowell, IN. Existing dedicated rights-of-way, as well as open spaces would be utilized to complete the connection of the two parks.

On behalf of the Town, Cardno is preparing a Categorical Exclusion (CE) for the proposed trail project, including determinations regarding Section 4(f) resources located within the project area. Section 4(f) of the U.S. Department of Transportation Act of 1966 prohibits the use of certain public and historic lands for federally funded transportation facilities unless there is no feasible and prudent alternative. The law applies to significant publicly owned parks, recreation areas, and wildlife/ waterfowl refuges, and National Register eligible or listed historic properties. The trail will begin at an existing sidewalk at the entrance of Liberty Park and will end at an existing gravel path within the boundary of Freedom Park. Approximately 170 feet of the trail is located within Freedom Park. Both parks are publicly owned parks, and therefore, Section 4(f) resources. As the Town manages both parks, you are being contacted as the official with jurisdiction (OWJ) over these resources. The purpose of this letter is to officially update the Town of Lowell of the construction of the trail between Liberty Park and Freedom Park as well as notify you of the proposed Section 4(f) finding.

The Town is proposing to construct approximately 1.2 miles of multi-use trail. This American with Disability Act (ADA) compliant, non-motorized (bike/pedestrian) trail is anticipated to be a 12-ft wide, asphalt trail with 2-ft shoulders on either side and 6:1 side slopes for a total width of 22-ft. This trail would be comprised of both off-road and on-road segments. Through subdivisions, the trail would be concrete to match existing sidewalks, in off-road areas, the trail would be asphalt, and boardwalks will be utilized to cross wetlands. The project would require the acquisition of approximately seven (7) acres of permanent and two (2) acres of temporary right-of-way. Right-of-way will not be acquired to construct the portions of the trail within

501 East Main Street • Lowell, Indiana 46356 • P: 219-696-7794 • Fax: 219-696-7796

Freedom Park. No road or pedestrian facility closures or detours are anticipated for this project. Construction is anticipated to begin in January 2024. The trail project would convert approximately 0.04 acre of Freedom Park from maintained grass to multi-use trail. Based on FHWA guidance documents, the Town has determined that impacts meet the conditions of an Enhancement Exemption and will not constitute a Section 4(f) use.

Transportation enhancement projects must meet the following conditions of 23 CFR 774.13(g):

1. The use of the Section 4(f) property is solely for the purpose of preserving or enhancing an activity, feature, or attribute that qualifies the property for Section 4(f) protection.

Freedom Park and Liberty Park are public use parks that provide recreational activities to the community. The addition of a multi-use trail enhances the properties of each of these parks by providing a new connection between the parks increasing the recreational opportunities within the Town. The project will also increase the utilization of Freedom Sports Park by improving non-motorized access to the newly developed subdivisions to the south of the park.

2. There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.

Please see below for a comment and signature line that will serve as your concurrence that these conditions have been met.

Please contact me if you have any question or concerns regarding this determination or would like additional information. Thank you for your cooperation with this project.

Sincerely,

Craig Hendrix, PE
Town Manager

Attachments:

1. Project Location Overview
2. Trail Alignment – Plan and Profile

☒ I concur that the project meets the above conditions for an Enhancement Exemption and the proposed trail project will not constitute a Section 4(f) use.

☐ Impacts to Freedom Sports Park and Liberty Park are anticipated due to the following reasons:

Signature	Title	Date
	Town Council President	2/15/2022

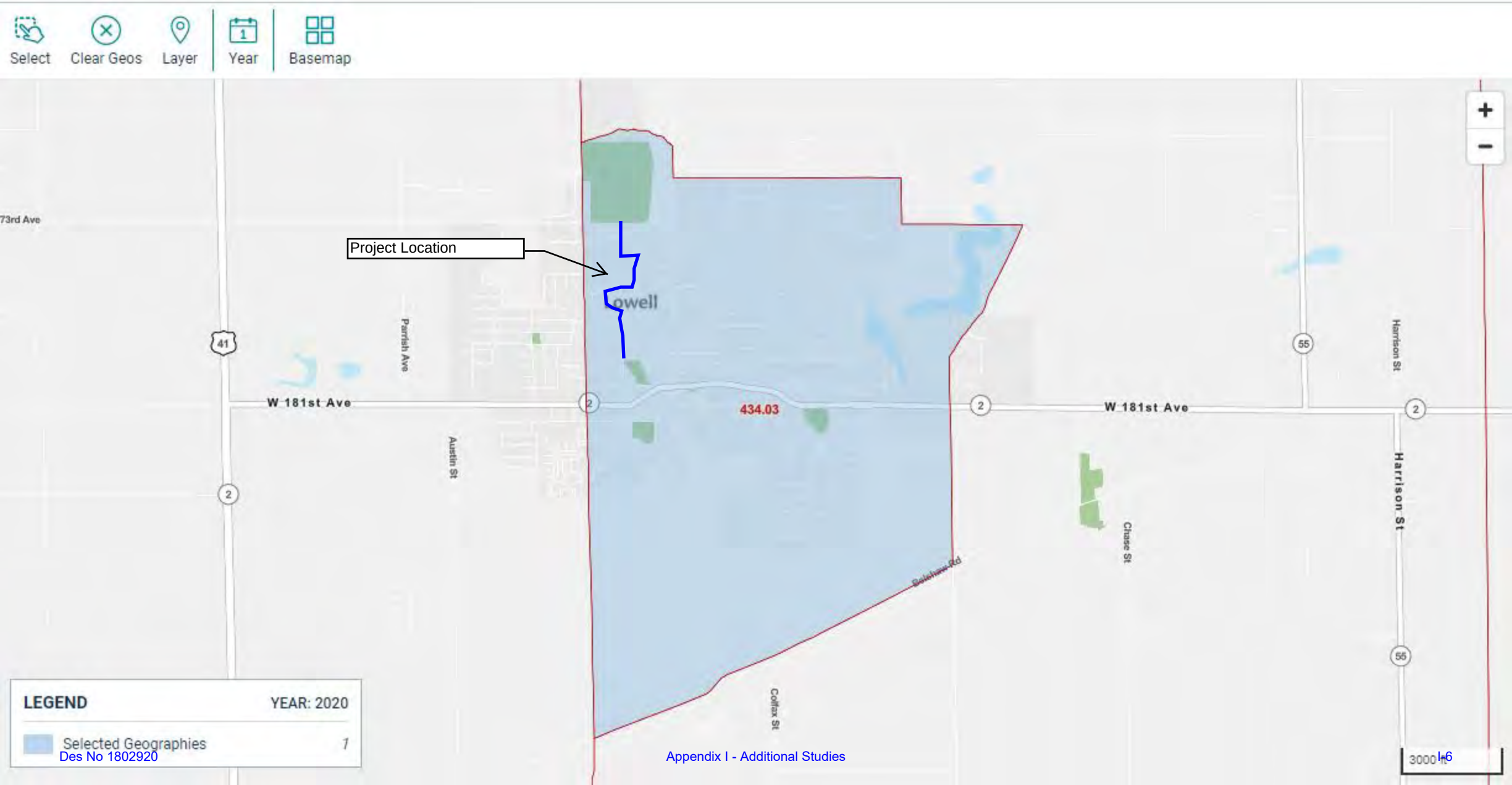
Land and Water Conservation Fund (LWCF) County Property List for Indiana (Last Updated March 2022)

ProjectNumber	SubProjectCode	County	Property
1800005	1800005	Lake	Dowling Park
1800011	1800011	Lake	Tolleston Park
1800012	1800012	Lake	Washington Park
1800040	1800040	Lake	Homestead Park
1800055	1800055	Lake	Sheppard Memorial Park
1800059	1800059	Lake	Cheever Park
1800062	1800062	Lake	Leroy Township Park
1800063	1800063	Lake	Markley Memorial ParkEllendale Park
1800071	1800071	Lake	Cheever Park
1800087	1800087	Lake	Sheppard Memorial Park
1800102	1800102	Lake	Grand Boulevard Lake Recreation Area
1800108	1800108	Lake	Riverview Park
1800137	1800137	Lake	Northgate Park
1800150	1800150	Lake	Meadows Park
1800168	1800168	Lake	Sunnyside Park
1800170	1800170	Lake	Howe Park
1800189	1800189	Lake	Dowling Park
1800193	1800193	Lake	Harrison Park
1800194	1800194	Lake	Martin Luther King Jr. Park (Formerly Maywood Park
1800199	1800199	Lake	Ridgeway Park
1800202	1800202	Lake	Hatcher Park
1800206	1800206	Lake	Meadows Park
1800226	1800226	Lake	Hoosier Prairie Nature Preserve
1800227	1800227	Lake	Liberty Park
1800231	1800231	Lake	Pheasant Hills Community Park & Cherry Hill Tot-Lot
1800237	1800237	Lake	Wolf Lake Park (N & S)
1800239	1800239	Lake	Bluebird Park
1800253	1800253	Lake	Centennial Park
1800272	1800272	Lake	Wolf Lake Park (N & S)
1800273	1800273	Lake	Grand Kankakee Marsh County Park
1800302	1800302	Lake	Munster Community Park
1800329	1800329	Lake	Jackson Park
1800369	1800369H	Lake	Harrison Park
1800369	1800369D	Lake	Lemon Lake County Park
1800377	1800377	Lake	Main Square Park
1800386	1800386	Lake	Gibson Woods Nature Preserve & Tolleston Ridges Nature Preserve
1800405	1800405G	Lake	Clark and Pine Dune Swale Nature Preserve
1800414	1800414	Lake	Wolf Lake Park (N & S)
1800417	1800417	Lake	Centennial (Dan Rabin) Plaza & Trail
1800424	1800424	Lake	Lake Etta County Park
1800455	1800455	Lake	Deep River - Woods Mill County Park
1800464	1800464	Lake	Festival Park & Lakefront Park
1800473	1800473	Lake	Oak Ridge Prairie Co. Park
1800488	1800488	Lake	Marquette Park
1800489	1800489	Lake	Festival Park & Lakefront Park
1800522	1800522	Lake	Pavese Park
1800523	1800523	Lake	Lakewood Park
1800523.5	1800523.5	Lake	River Drive Park
1800528	1800528	Lake	Lowell Sports Park
1800533	1800533	Lake	Hobart City Ball Park
1800555	1800555	Lake	Scherwood Golf Course
1800580	1800580	Lake	Oak Ridge Park
1800586	1800586	Lake	Teibel Nature Park
1800586.1	1800586.1	Lake	Teibel Nature Park
1800590	1800590	Lake	Deep River County Park
1800622	1800622	Lake	Fireman's Park
1800636	1800636	Lake	Parrish Avenue Park

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

Selection Map

AC- CENSUS TRACT 434.03



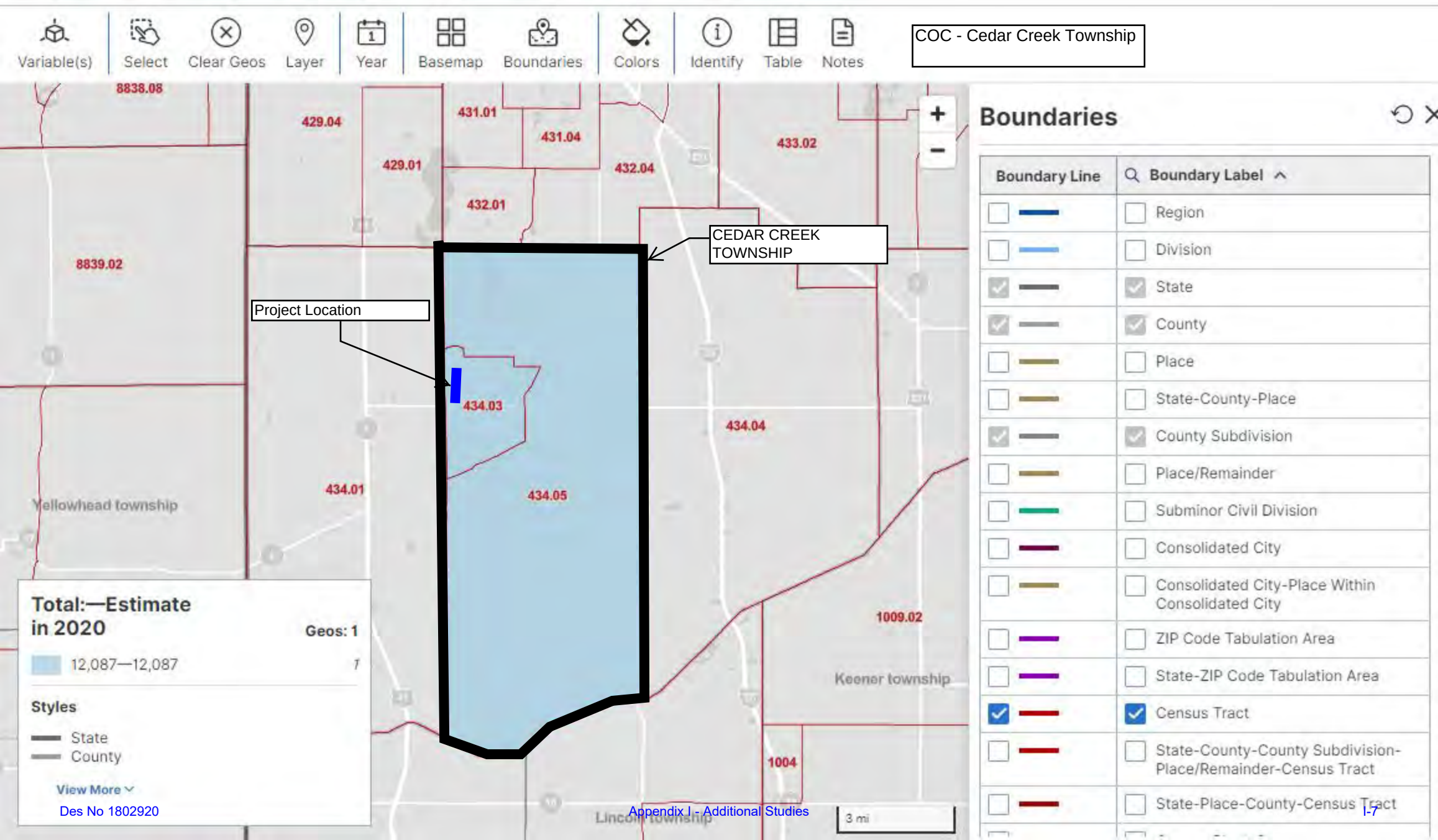

Variable(s)
Select
Clear Geos
Layer
Year
Basemap
Boundaries
Colors
Identify
Table
Notes
COC - Cedar Creek Township
8838.08
429.04
431.01
431.04
433.02
429.01
432.04
432.01
8839.02
CEDAR CREEK TOWNSHIP
Project Location
434.03
434.04
434.01
434.05
Yellowhead township
1009.02
Keener township
1004
Lincoln township
3 mi
Total:—Estimate in 2020
Geos: 1
12,087—12,087
1
Styles
State
County
View More
Boundaries
Boundary Line
Boundary Label
Region
Division
State
County
Place
State-County-Place
County Subdivision
Place/Remainder
Subminor Civil Division
Consolidated City
Consolidated City-Place Within Consolidated City
ZIP Code Tabulation Area
State-ZIP Code Tabulation Area
Census Tract
State-County-County Subdivision-Place/Remainder-Census Tract
State-Place-County-Census Tract

Table: ACSDT5Y2020.B03002

HISPANIC OR LATINO ORIGIN BY RACE

United States® Census Bureau

Note: The table shown may have been modified by user selections. Some information may be missing.

DATA NOTES	
TABLE ID:	B03002
SURVEY/PROGRAM:	American Community Survey
VINTAGE:	2020
DATASET:	ACSDT5Y2020
PRODUCT:	ACS 5-Year Estimates Detailed Tables
UNIVERSE:	Total population
FTP URL:	None
API URL:	https://api.census.gov/data/2020/acs/acs5
USER SELECTIONS	
GEOS	Census Tract 434.03, Lake County, Indiana; Cedar Creek township, Lake County, Indiana
EXCLUDED COLUMNS	None
APPLIED FILTERS	None
APPLIED SORTS	None
PIVOT & GROUPING	None
WEB ADDRESS	https://data.census.gov/cedsci/table?text=B03002&g=0600000US1808911026_1500000US180890434031&tid=ACSDT5Y2020.B03002
TABLE NOTES	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.
	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.
	Source: U.S. Census Bureau, 2016-2020 American Community Survey 5-Year Estimates
	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 Hispanic origin and race codes were updated in 2020. For more information on the Hispanic origin and race code changes, please visit the American Community Survey Technical Documentation website.
	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.
	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.
COLUMN NOTES	None

Table: ACSDT5Y2020.B03002

	Cedar Creek township, Lake County, Indiana		Census Tract 434.03, Lake County, Indiana	
Label	**Estimate**	**Margin of Error**	**Estimate**	**Margin of Error**
Total:	12,296	±24	6,716	±314
Not Hispanic or Latino:	11,415	±374	6,196	±425
White alone	11,327	±376	6,108	±426
Black or African American alone	19	±21	19	±21
American Indian and Alaska Native alone	0	±19	0	±17
Asian alone	0	±19	0	±17
Native Hawaiian and Other Pacific Islander alone	0	±19	0	±17
Some other race alone	0	±19	0	±17
Two or more races:	69	±49	69	±49
Two races including Some other race	0	±19	0	±17
Two races excluding Some other race, and three or more races	69	±49	69	±49
Hispanic or Latino:	881	±375	520	±247
White alone	244	±166	159	±144
Black or African American alone	0	±19	0	±17
American Indian and Alaska Native alone	5	±10	5	±10
Asian alone	0	±19	0	±17
Native Hawaiian and Other Pacific Islander alone	0	±19	0	±17
Some other race alone	409	±281	133	±120
Two or more races:	223	±173	223	±173
Two races including Some other race	223	±173	223	±173
Two races excluding Some other race, and three or more races	0	±19	0	±17

MINORITY	Township	Census Tract
Total:	12,296	6,716
White alone	11,327	6,108
Number non-white/minority	969.0	608.0
Percent non-white/minority	7.9%	9.1%
125 percent of COC	9.9%	AC<125% COC
Potential Minority EJ Impact?		**No**

POVERTY STATUS IN THE PAST 12 MONTHS BY SEX BY AGE

United States® Census Bureau

Note: The table shown may have been modified by user selections. Some information may be missing.

DATA NOTES	
TABLE ID:	B17001
SURVEY/PROGRAM:	American Community Survey
VINTAGE:	2020
DATASET:	ACSDT5Y2020
PRODUCT:	ACS 5-Year Estimates Detailed Tables
UNIVERSE:	Population for whom poverty status is determined
FTP URL:	None
API URL:	https://api.census.gov/data/2020/acs/acs5
USER SELECTIONS	
GEOS	Cedar Creek township, Lake County, Indiana; Census Tract 425.03, Lake County, Indiana
EXCLUDED COLUMNS	None
APPLIED FILTERS	None
APPLIED SORTS	None
PIVOT & GROUPING	None
WEB ADDRESS	https://data.census.gov/cedsci/table?text=B17001&g=0600000US1808911026_1400000US18089042503&tid=ACSDT5Y2020.B17001
TABLE NOTES	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.
	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.
	Source: U.S. Census Bureau, 2016-2020 American Community Survey 5-Year Estimates
	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.
	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.
COLUMN NOTES	None

Table: ACSDT5Y2020.B17001

	Cedar Creek township, Lake County, Indiana		Census Tract 425.03, Lake County, Indiana	
Label	**Estimate**	**Margin of Error**	**Estimate**	**Margin of Error**
Total:	12,087	±139	3,183	±703
Income in the past 12 months below poverty level:	763	±515	337	±152
Male:	337	±245	137	±96
Under 5 years	25	±28	30	±43
5 years	0	±19	0	±12
6 to 11 years	79	±104	9	±15
12 to 14 years	46	±56	0	±12
15 years	20	±31	0	±12
16 and 17 years	70	±65	35	±51
18 to 24 years	0	±19	0	±12
25 to 34 years	3	±7	2	±4
35 to 44 years	26	±30	20	±22
45 to 54 years	51	±85	1	±2
55 to 64 years	17	±28	18	±24
65 to 74 years	0	±19	10	±16
75 years and over	0	±19	12	±14
Female:	426	±290	200	±81
Under 5 years	0	±19	0	±12
5 years	0	±19	0	±12
6 to 11 years	90	±105	8	±12
12 to 14 years	0	±19	4	±16
15 years	0	±19	0	±12
16 and 17 years	0	±19	9	±14
18 to 24 years	89	±107	6	±19
25 to 34 years	32	±38	6	±19
35 to 44 years	107	±93	61	±54
45 to 54 years	45	±64	10	±15
55 to 64 years	6	±11	11	±14
65 to 74 years	35	±36	44	±33
75 years and over	22	±26	41	±34
Income in the past 12 months at or above poverty level:	11,324	±566	2,846	±713
Male:	5,744	±402	1,131	±360
Under 5 years	278	±132	58	±61
5 years	113	±101	0	±12
6 to 11 years	416	±169	16	±21
12 to 14 years	292	±162	28	±25
15 years	79	±72	40	±60
16 and 17 years	124	±100	50	±61
18 to 24 years	567	±253	201	±143
25 to 34 years	792	±238	72	±43
35 to 44 years	673	±137	193	±100
45 to 54 years	629	±171	148	±69
55 to 64 years	740	±201	97	±46
65 to 74 years	892	±224	182	±79
75 years and over	149	±67	46	±31
Female:	5,580	±439	1,715	±416
Under 5 years	272	±145	102	±84
5 years	116	±83	0	±12
6 to 11 years	331	±135	25	±25
12 to 14 years	292	±156	101	±98
15 years	68	±65	22	±23
16 and 17 years	224	±120	51	±68
18 to 24 years	322	±160	191	±169
25 to 34 years	626	±207	170	±104
35 to 44 years	754	±169	228	±107
45 to 54 years	648	±158	208	±88
55 to 64 years	983	±269	157	±64
65 to 74 years	694	±243	187	±106
75 years and over	250	±95	273	±90

LOW-INCOME	Township (COC)	Census Tract (AC)
Population for whom poverty status is determined: Total	12,087	3,183
Population for whom poverty status is determined: Income in past 12 months below poverty level	763	337
Percent Low-income	6.31%	10.59%
125 Percent of COC	7.89%	AC<125% COC
Potential Low-income EJ Impact?		**Yes**