Appendix H

Waters of the U.S. Report and Determination

APPROVED I-65 DES 1400071 WOTUS Report

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Tue 3/20/2018 12:08 PM

To:Kirk Roth <kroth@CORRADINO.com>;

Cc:Todd, Kristi (INDOT) <KTodd1@indot.IN.gov>; Walls, Steven <SWalls@indot.IN.gov>;

Hi Kirk,

Thank you for submitting the waters report for I-65 over Etter Ditch and UNT to Etter Ditch, interchane modifications in Boone County, Designation 1400071. The approved report can be found on Projectwise through this link: I-65 Des#1400071 Waters Report - Final.pdf. *It is the responsibility of the Project Manager to forward a copy of this report to the Project Designer.*

The information in this report should be used by the Project Designer to determine if waters of the U.S. will be impacted by the project. Avoidance and minimization of impacts must occur *before* mitigation will be considered. If mitigation is required, the Project Manager or Project Designer must coordinate with the Ecology and Waterway Permitting Office to discuss how adequate compensatory mitigation will be provided.

The Project Manager should notify the Ecology and Waterway Permitting Office if there is any change to the project footprint presented in this report. Such changes may require additional fieldwork and submittal of an updated waters report covering areas not previously investigated. *This report is only valid for a period of five years from the date of earliest fieldwork.* If the report expires prior to waterway permit application submittal, additional fieldwork and a revised waters report will be required.

It will not be sent to the United States Army Corps of Engineers (USACE) or the Indiana Department of Environmental Management (IDEM) until the waterways permit applications are submitted to these agencies.

Jenni Curry
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Waters of the U.S. Determination

Designation Numbers 1400071 and 1702147

- Interchange Modification at I-65 and SR 267
- New Interchange at I-65 and CR 550
- Minor Ramp Improvements – I-65 at Whitestown Parkway and I-65 at I-865

Boone County, Indiana

Prepared for:

Indiana Department of Transportation

Prepared by:

Corradino LLC
Kirk Roth

March 20, 2018

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1. Introduction

Field Work Dates:

Field work for this report was conducted by Corradino, LLC on:

- October 14 and 21, 2016,
- October 17 and November 13, 2017
- January 11, 2018

Contributors: Kirk Roth, Environmental Scientist

Project Location:

Fayette and Zionsville Quadrangles
SR 267 - Township 18 North, Range 1 East, Sections 22, 23, 26, 27,
CR 550S – Township 18 North, Range 1 East, Sections 35 and 36
Whitestown Parkway – Township 17 North, Range 2 East, Section 6
I-865 – Township 17 North, Range 2 East, Section 7
Boone County, Indiana
8-digit Hydrologic Unit - 05120201

Project Description:

This project is being developed by the Indiana Department of Transportation (INDOT) Crawfordsville District to improve overall traffic operations in this high-growth area. The project is located in Boone County, and includes four interchanges, beginning approximately 4.5 miles northwest of the I-465/I-865 interchange on the northwest side of Indianapolis, Indiana, and extending southeast to the I-465/I-865 interchange. The project includes the following:

- the modification of the existing I-65 interchange with SR 267
- the addition of a new I-65 interchange at Boone County Road 550 South (CR 550S)
- a ramp revision at Whitestown Parkway
- a ramp revision at the I-865 interchange

The project is federally funded, and new right-of-way will be required. Several interchange alternatives are being investigated at the SR 267 and CR 550S locations as part of the Interchange Access Document (IAD) process, which requires Federal Highway Administration review and approval. Selection of the preferred interchange type at each location will occur as part of the National Environmental Policy Act document development process and the IAD approval process.

Note that all distances below are referenced to one of four reference points. For the purposes of this Waters Report, the modifications will be referred to as SR 267, CR 550S, Whitestown Parkway, and I-865. The reference point for SR 267 is located at the intersecting centerlines of I-65 and SR 267. The reference point for CR 550S is located at the intersecting centerlines of I-65 and CR 550S. The reference point for Whitestown Parkway is on the northbound I-65 to Whitestown Parkway exit ramp, in the southeast quadrant of the

interchange. The reference point for I-865 is along southbound I-65, between the exit to eastbound I-865 and the I-856 ramp bridge over I-65, within the interchange area.

At SR 267, INDOT proposes to reconstruct the existing diamond interchange with a more efficient, higher capacity urban interchange. Additional thru lanes will be provided along SR 267. The "kink" formed by the intersection of existing Perry Worth Road, CR400E, and Albert White Boulevard intersection, east of the interchange, will be straightened out with an east-west roadway segment. Approximately 12.7 acres of new permanent right-of-way will be acquired.

At CR 550S, INDOT proposes to construct a new urban interchange. The interchange will provide an adequate number of CR 550S travel lanes to operate at an adequate level in the 2040 design year. Etter Ditch flows from northeast to southwest through the northwest quadrant of the proposed interchange and will likely require some relocation to accommodate the future southbound I-65 exit ramp to CR 550S.

INDOT proposes to construct minor pavement widening and restriping at the existing southbound I-65 to eastbound I-865 exit and at the existing northbound I-65 to Whitestown Parkway exit to improve traffic operations at these exits. Improvements at the I-865 exit are anticipated to fit within the existing right-of-way. Minor right-of-way purchase may be required for the Whitestown Parkway improvements.

2. Project Site Background

Methodology

Prior to site reconnaissance, an office evaluation was done. This evaluation included review of topographic maps (Appendix A-2 to A-5), soil data (Appendix C-1 to C-4), and National Wetland Inventory (NWI) maps Appendix B-1 to B-4), as described in further detail below. The project is located within the Upper White River Watershed, HUC 05120201.

Additionally, the Indiana Maps website (http://maps.indiana.edu/) was used to investigate aerial photographs and from 1998, 2008, and 2013, including Flood Rate Insurance Map (FIRM) data to investigate floodplains and potential hydrologic features. LiDAR Mapping mapping was also used to investigate topography and drainage (Appendix A10 to A13).

Topographic Data

SR 267

The Fayette Indiana USGS 7.5 Topographic Maps (Appendix A-2) indicate that Fishback Creek, a USGS blue-line tributary, occurs approximately 0.3 mile northeast of the SR 267 Interchange. Fishback Creek flows southeast, eventually encountering Eagle Creek. Fishback Creek is not expected to be impacted by construction at the SR 267 interchange. The land use surrounding the investigation area is primarily agricultural and commercial (Appendix A-2).

CR 550S

The Zionsville Indiana USGS 7.5 Topographic Maps (Appendix A-3) indicate that Etter Ditch, a blue line tributary, may be impacted by the project southwest of I-65. The upstream drainage area was investigated using the USGS StreamStats website (https://streamstats.usgs.gov/ss/). The upstream drainage is at or near 1.0 square mile at the structure location with a disclaimer that "estimates were extrapolated with unknown errors." More investigation will be required to determine whether a Construction in a Floodway permit is warranted. Etter Ditch flows south, eventually encountering the jurisdictional White Lick Creek. Etter Ditch may be impacted by interchange construction. The land use surrounding the investigation area is primarily agricultural (Appendix A-3).

WHITESTOWN PARKWAY

The Zionsville Indiana USGS 7.5 Topographic Maps (Appendix A-4) indicate that Green Ditch is a USGS blue-line tributary which occurs 0.2 mile northwest of the project area. Green Ditch flows southwest to Etter Ditch, which leads to the jurisdictional White Lick Creek. Green Ditch Creek is not expected to be impacted by construction at the Whitestown Parkway interchange. The land use surrounding the investigation area is primarily agricultural and commercial (Appendix A-4).

I-865

The Zionsville Indiana USGS 7.5 Topographic Maps (Appendix A-5) indicate that an unnamed tributary (UNT) to Fishback Creek occurs approximately 0.18 mile east of the project area. This UNT flows east into Fishback Creek, which eventually encounters the navigable Eagle Creek. This UNT is not expected to be impacted by construction at the I-865 interchange. The land use surrounding the investigation area is primarily roadside and residential (Appendix A-5).

Soil Data

SR 267

The Natural Resources Conservation Service (NRCS) – Boone County Soil Survey identifies most of the project area as Treaty Silty Clay Loam (Appendix C-1). Treaty is 70-100% hydric soil. The project area also has small incursions of non-hydric Crosby Silt Loam and non-hydric Fincastle Silt Loam.

CR 550S

The NRCS – Boone County Soil Survey identifies most of the project area as Treaty Silty Clay Loam and Crosby Silt Loam (Appendix C-2). Treaty is 70-100% hydric soil and Crosby Silt Loam is non-hydric. The project area also has small incursions of non-hydric Fincastle Silt Loam.

WHITESTOWN PARKWAY

The NRCS – Boone County Soil Survey identifies most of the project area as Urban Land – Fincastle Complex (Appendix C-3). The urban land soil types are not given a hydric rating by NRCS, but the components of Urban Land – Fincastle Complex include 0-10% hydric soil. The south end of the project area may encounter Urban Land - Cyclone Complex, which is 30-65% hydric.

I-865

The NRCS – Boone County Soil Survey identifies most of the project area as Urban Land – Fincastle Complex and Urban Land – Cyclone Complex (Appendix C-4). The urban land soil types are not given a hydric rating by NRCS, but the components of Urban Land – Fincastle Complex include 0-10% hydric soil and the components of Urban Land – Cyclone Complex include 30-65% hydric components.

National Wetland Inventory Map and FIRM Data

SR 267

The NWI map (Appendix B-1) identifies two wetlands encountering the project area. There is a 0.25 acre palustrine emergent seasonally flooded marsh (PEM1C) approximately 400 feet northeast of the interchange and a 2.77 acre intermittently exposed palustrine pond with unconsolidated bottom (PUBGx) approximately 700 feet east of the interchange.

The project area is not within the designated FEMA 100-year floodplain (Appendix B-1). The floodplain of Fishback Creek extends to approximately 130 feet from Boone's Pond. Karst features were not shown at this location in IndianaMap nor were they observed at the site location.

CR550S

The NWI map (Appendix B-2) identifies a wetland and a wetland line in the project area. The wetland is a 2.57 acre palustrine emergent semipermanently flooded marsh (PEM1F) located immediately west of I-65. The project is being designed to avoid this wetland. The wetland line is Etter Ditch, a 5.59 acre excavated riverine intermittent seasonally flooded streambed (R4SBCx) which occurs immediately west of the PEM1F wetland.

FIRM mapping shows the FEMA 100-year floodplain ending at Indianapolis Road and extending south (Appendix B-2). The project area may encounter this floodplain. Karst features were not shown at this location in IndianaMap nor were they observed at the site location.

WHITESTOWN PARKWAY

The NWI map (Appendix B-3) identifies no wetlands within the project area. The nearest wetland is a 1.26 acre impounded palustrine intermittently exposed pond with unconsolidated bottom (PUBGh) approximately 0.08 mile southeast of the project area.

The project area is not within the designated FEMA 100-year floodplain (Appendix B-3). Karst features were not shown at this location in IndianaMap nor were they observed at the site location.

I-865

The NWI map (Appendix B-4) identifies no wetlands within the project area. The nearest wetland is a 0.69 acre seasonally flooded intermittent streambed (R4SBC) approximately 0.16 mile northeast of the project area.

The project area is not within the designated FEMA 100-year floodplain (Appendix B-4). Karst features were not shown at this location in IndianaMap nor were they observed at the site location.

3. Site Reconnaissance

Site reconnaissance was conducted on October 14 and 21, 2016, and October 17, November 13, 2017 and January 11, 2018 by Corradino, LLC. Photos and associated mapping from site reconnaissance are attached in Appendix D.

Stream Analysis

No streams, tributaries, or features with Ordinary High Water Marks (OHWM) were observed within the SR 267, Whitestown Parkway, and I-865 project areas.

CR 550S (Appendix A-7)

Etter Ditch

Etter Ditch was identified as a blue-line tributary during topographic review (Appendix A-3). Two small structures occur within the project area. The "550S Bridge" is at the same latitude as County Road 550S, although it is east of the road itself. The "Indianapolis Road Bridge" is where Indianapolis Road and Etter Ditch intersect. During the site inspection, aquatic vegetation was present in Etter Ditch north of the 550S Bridge. The majority of the area north of the 550S Bridge was filled with *Typha* sp. with a small area just north of the bridge dominated by *Potamogeton crispus* and other aquatic and semiaquatic plants. The change in plant community from aquatic vegetation to upland is an OHWM characteristic.

A Wetland Data Point was taken for the area of Etter Ditch north of the 550S Bridge (Appendix E – 59-61). This area was dominated by *Typha x glauca*. The low areas exhibited hydric soil characteristics (depleted dark surface) and several hydrology indicators, especially including surface water, saturation, water marks, sediment deposits, and water-stained leaves. The adjacent hillslope and mowed grassy areas did not exhibit apparent hydric soil or characteristics of wetland hydrology. One wetland and one upland data point were taken for Etter Ditch; see Photo Key Map (Appendix D; 202-205 for data points).

Etter Ditch shows an OHWM approximately 8 feet wide and 1 foot deep on average. According to the USGS StreamStats website, Etter Ditch has a drainage area of approximately 1.001 acre. Etter Ditch is likely a Waters of the U.S. due to its apparent connectivity with White Lick Creek which itself encounters the navigable White River, presence of an OHWM, and identification as a blue line stream on topographic maps. Etter Ditch is considered average quality for wildlife habitat due to the shallow water with few shelter features such as large pools. It appears to be an intermittent tributary within the project area. Less than 1577 linear feet of Etter Ditch are expected to be impacted by this project.

UNT to Etter Ditch

At the same approximate latitude as CR 550S, Etter Ditch became an outlet to a wooded ditch which had shallow water in the immediate area and extended to a dry area with OHWM to the east. This OWHM extended almost to I-65 where the ditch abruptly became filled with upland vegetation. For the purposes of

this report, the ditch with OHWM characteristics will be referred to as an Unnamed Tributary (UNT) to Etter Ditch. At the junction, Etter Ditch intersects Wetland 4 to the north (see Wetland Analysis) and UNT to Etter Ditch to the east. At the west end of UNT to Etter Ditch, a wetland delineation was initiated but when the OHWM was noticed it was decided that designation as a tributary was more appropriate. This OHWM was approximately 6 feet wide and 0.75 foot deep on average within the project area. The UNT to Etter Ditch flows west to Etter Ditch, eventually encountering White Lick Creek which itself encounters the White River. Within the project area, UNT to Etter Ditch drains the surrounding agricultural areas. The UNT to Etter Ditch is likely a Waters of the U.S. due to its apparent connectivity with a navigable water and presence of an OHWM. UNT to Etter Ditch is considered poor quality for wildlife habitat due to the shallow water without shelter features such as large pools or riffles. It appears to be an ephemeral tributary within the project area, and perhaps intermittent in the immediate area near Etter Ditch. Less than 975 linear feet of UNT to Etter Ditch is expected to be impacted by this project.

Wetland Analysis

SR 267 (Appendix A-6)

Fishback Creek is the major connector to navigable waters in this area. Any waters which have significant nexus with Fishback Creek are likely to be jurisdictional Waters of the U.S.

Wetland 1 – Data Points 1A, 1B

Wetland 1 was a small depression dominated by *Phalaris arundinacea* and *Populus deltoides* with patches of other wetland species such as *Typha*. The low areas exhibited hydric soil characteristics (redox dark surface, depleted dark surface, and hydrogen sulfide odor) and several hydrology indicators, especially including a sparsely vegetated surface, hydrogen sulfide odor, and water-stained leaves. The adjacent hillslope areas did not exhibit apparent hydric soil or characteristics of wetland hydrology. Wetland characteristics only extended within a short basin area near a pipe outflow and did not connect with nearby Boone Pond to the north. One wetland and one upland data point were taken for Wetland 1; see Photo Key Map (Appendix D; 33-36 for data points). Wetland 1 is approximately 0.1 mile southeast of Boone's Pond and may have hydrologic connectivity to it through the woodland which borders both water bodies. Due to its likely association with the jurisdictional Fishback Creek, Wetland 1 is a likely Waters of the U.S. It is anticipated that approximately 0.01 acre or less of Wetland 1 will be impacted by this project.

Wetland 2 – Data Points 2A, 2B, 2C

Wetland 2 was a flattened shallow marsh with two distinct vegetation regimes. The inner portion of the marsh was dominated by *Typha x glauca*. This area was surrounded by a sedge marsh dominated by *Carex lupulina*. Both areas exhibited hydric soil characteristics (depleted matrix and redox dark surface). The *Typha* area had several hydrology indicators, especially including sediment deposits, oxidized rhizospheres, and water-stained leaves. The *Carex* area exhibited only a lowered geomorphic position and FAC-Neutral Test to indicate wetland hydrology. The adjacent field areas did not exhibit apparent hydric soil or characteristics of wetland hydrology. Two wetland and one upland data point were taken for Wetland 2; see Photo Key Map (Appendix D; 39-44 for data points). Wetland 2 is connected to Wetland 1 via a pipe. Wetland 1 may have hydrologic connectivity Fishback Creek via Boone's Pond. Due to its likely association with the jurisdictional Fishback

Creek, Wetland 2 is a likely Waters of the U.S. It is anticipated that approximately 0.73 acre or less of Wetland 2 will be impacted by this project.

Wetland 3 – Data Points 3A, 3B

Wetland 3 was a marshy ditch dominated by *Typha x glauca,* and *Echinochloa crus-galli*. It exhibited hydric soil characteristics (depleted matrix, redox dark surface, and depleted dark surface) and several hydrology indicators, including a sparsely vegetated surface, lowered geomorphic position, and FAC-Neutral Test. The adjacent hillslope areas did not exhibit apparent hydric soil or characteristics of wetland hydrology. One wetland and one upland data point were taken for Wetland 3; see Photo Key Map (Appendix D; 51-54 for data points). Wetland 3 continues southeast until it merges with RSD 1, which has primarily upland characteristics. Wetland 3 appears to show hydrological connectivity with Wetland 11 and a retention pond to the east. Due to the proximity to the Fishback Creek floodplain and the complex of associated wetlands in the area, Wetland 3 is likely to have a significant nexus to Fishback Creek and is a likely Water of the U.S. It is anticipated that approximately 0.08 acre and 1068 linear feet of Wetland 3 will be impacted by this project.

Wetland 4 – Data Points 4A, 4B, 4C, 4D

Wetland 4 was a marshy ditch with various vegetation types. The wetland forks in an area outside the project area and encounters the project in two spots. The northmost spot was dominated by *Typha x glauca* and *Echinocloa crus-galli*. The southern spot was dominated by *Echinochloa crus-galli* and two obligate *Cyperus* species. Both areas exhibited hydric soil characteristics (redox dark surface) and several hydrology indicators, especially including surface water and saturation. The adjacent mowed grass areas did not exhibit apparent hydric soil or characteristics of wetland hydrology. Two wetland and two upland data points were taken for Wetland 4; see Photo Key Map (Appendix D; 59-62 for data points). Wetland 4 drains the roadside into a retaining pond to the east, which itself has potential connectivity to other retention ponds to the south and east. Due to the proximity to the Fishback Creek floodplain and the complex of associated wetlands in the area, Wetland 4 is likely to have a significant nexus to Fishback Creek and is a likely Water of the U.S. It is anticipated that approximately 0.01 acre or less of Wetland 4 will be impacted by this project.

Wetland 5 – Data Points 5A, 5B

Wetland 5 was a depression dominated by *Typha x glauca* and *Phalaris arundinacea*. The low areas exhibited hydric soil characteristics (depleted matrix) and several hydrology indicators, especially including surface water, saturation, and water-stained leaves. The adjacent hillslope areas did not exhibit apparent hydric soil or characteristics of wetland hydrology. Wetland characteristics occurred in the corner of a hillslope to the SR 267 interchange, but not far from the corner area. One wetland and one upland data point were taken for Wetland 5; see Photo Key Map (Appendix D; 69-72 for data points). Storm water from the adjacent entrance ramp appears to either settle in Wetland 5 or continue south to a retaining pond. Due to the proximity to the Fishback Creek floodplain and the complex of associated wetlands in the area, Wetland 5 is likely to have a significant nexus to Fishback Creek and is a likely Water of the U.S. It is anticipated that approximately 0.02 acre or less of Wetland 5 will be impacted by this project.

Wetland 6 – Data Points 6A, 6B, 6C

Wetland 6 was a marshy ditch dominated by *Typha x glauca*. The low areas exhibited hydric soil characteristics (depleted matrix, redox dark surface) and several hydrology indicators, especially including surface water, saturation, and sediment deposits. The adjacent hillslope areas did not exhibit apparent hydric soil or characteristics of wetland hydrology. Two wetland and one upland data point were taken for Wetland 6; see Photo Key Map (Appendix D; 77-82 for data points). Wetland 6 encounters a pipe which crosses I-65 in an area approximately 800 feet northwest of Wetland 2, which is believed to have connectivity to Fishback Creek. Due to its likely association with the jurisdictional Fishback Creek, Wetland 6 is a likely Waters of the U.S. It is anticipated that approximately 0.18 acre and 1176 linear feet of Wetland 6 will be impacted by this project.

Wetland 7 – Data Points 7A, 7B

Wetland 7 was a depression dominated by *Typha x glauca* and *Schoenoplectus tabermontani*. The low areas exhibited hydric soil characteristics (depleted matrix) and several hydrology indicators, especially including surface water, saturation, and sediment deposits. The adjacent mowed grassy areas did not exhibit apparent hydric soil or characteristics of wetland hydrology. One wetland and one upland data point were taken for Wetland 7; see Photo Key Map (Appendix D; 85-88 for data points). A pipe drains into Wetland 7 from the I-65 median, and this area is approximately 140 feet from Wetland 9, which itself is connected to Wetland 2. Due to the likely hydrologic connectivity of Wetland 2 to Fishback Creek, Wetland 7 is a likely Water of the U.S. It is anticipated that approximately 0.03 acre or less of Wetland 7 will be impacted by this project.

Wetland 8 – Data Points 8A, 8B

Wetland 8 was a depression dominated by *Phragmites australis* and *Typha x glauca*. The low areas exhibited hydric soil characteristics (redox dark surface) and several hydrology indicators, especially including a surface water, saturation, drift deposits and sediment deposits. The adjacent mowed grassy areas did not exhibit apparent hydric soil or characteristics of wetland hydrology. One wetland and one upland data point were taken for Wetland 8; see Photo Key Map (Appendix D; 91-94 for data points). Wetland 8 is a depression where storm water from the south quadrant of the interchange settles. Due to the proximity to the Fishback Creek floodplain and the complex of associated wetlands in the area, Wetland 8 is likely to have a significant nexus to Fishback Creek and is a likely Water of the U.S. It is anticipated that approximately 0.08 acre or less of Wetland 8 will be impacted by this project.

Wetland 9 – Data Points 9A, 9B

Wetland 9 was a small depression dominated by *Typha x glauca* and *Schoenoplectus tabermontanei*. The low areas exhibited hydric soil characteristics (redox dark surface) and several hydrology indicators, especially including surface water, saturation, and sediment deposits. The adjacent mowed grassy areas did not exhibit apparent hydric soil or characteristics of wetland hydrology. One wetland and one upland data point were taken for Wetland 9; see Photo Key Map (Appendix D; 97-100 for data points). Wetland 9 is connected to Wetland 2 via a pipe. Due to the likely hydrologic connectivity of Wetland 2 to Fishback Creek, Wetland 9 is a likely Water of the U.S. It is anticipated that approximately 0.005 acre or less of Wetland 9 will be impacted by this project.

Wetland 10 – Data Points 10A, 10B

Wetland 10 was a depression dominated by *Typha x glauca*. At the time of wetland delineation, the depression had been mowed. The low areas exhibited hydric soil characteristics (redox dark surface, and depleted dark surface) and several hydrology indicators, especially including surface water, saturation, and algal mat. The adjacent mowed grassy areas did not exhibit apparent hydric soil or characteristics of wetland hydrology. One wetland and one upland data point were taken for Wetland 10; see Photo Key Map (Appendix D; 103-106 for data points). Wetland 10 is a depression which receives storm water from the east quadrant of the interchange and water from Wetland 11 via a pipe. Due to the proximity to the Fishback Creek floodplain and the complex of associated wetlands in the area, Wetland 10 is likely to have a significant nexus to Fishback Creek and is a likely Water of the U.S. It is anticipated that approximately 0.30 acre or less of Wetland 10 will be impacted by this project.

Wetland 11 – Data Points 11A, 11B, 11C, 11D, 11E

Wetland 11 was a cattail marsh dominated by *Typha x glauca* and had significant infiltration of *Solidago canadensis* into some of the wetland area. The low areas exhibited hydric soil characteristics (redox dark surface, depleted dark surface) and several hydrology indicators, especially including surface water, saturation, drift deposits, and water-stained leaves. The adjacent hillslope and field areas did not exhibit apparent hydric soil or characteristics of wetland hydrology. Three wetland and two upland data point were taken for Wetland 11; see Photo Key Map (Appendix D; 113-122 for data points). Wetland 11 is a depression which receives storm water from the east quadrant of the interchange, Perry Worth Road, and water from Wetland 10 via a pipe. Due to the proximity to the Fishback Creek floodplain and the complex of associated wetlands in the area, Wetland 10 is likely to have a significant nexus to Fishback Creek and is a likely Water of the U.S. It is anticipated that approximately 1.54 acre or less of Wetland 11 will be impacted by this project.

Wetland 18

A ditch line extends south from Wetland 11 and exhibits the same characteristics as that wetland. This ditch area with wetland characteristics is referred to in this report as Wetland 18. Although no data points were taken within this ditch area, it is assumed that Wetland 18 shares the same wetland characteristics as Wetland 11, to which it is joined. Wetland 18 is a ditch dominated by *Typha x glauca*. Several hydrology indicators were observed during field visits on October 14 and 21, 2016 and October 17, 2017, including surface water, drift deposits, and water-stained leaves. The adjacent hillslope was dominated by upland grasses such as fescue (*Schedonorus* sp.) and showed no apparent wetland hydrology indicators. Due to its direct connection with Wetland 11, a likely Water of the U.S., Wetland 18 is also a likely Water of the U.S. It is anticipated that approximately 0.12 acre and 1677 linear feet of Wetland 18 will be impacted by this project.

CR 550S (Appendix A-7)

Etter Ditch is the major connector to navigable waters in this area. Any waters which have significant nexus with Etter Ditch are likely to be jurisdictional Waters of the U.S.

Wetland 13 – Data Points 13A, 13B

Wetland 13 was an NWI wetland dominated by *Echinochloa crus-galli, Eleocharis obtusa*, and *Typha x glauca*. The low areas exhibited hydric soil characteristics (loamy mucky mineral, redox dark surface, and depleted dark surface) and several hydrology indicators, especially including drift deposits and sediment deposits. The adjacent hillslope and mowed grassy areas did not exhibit apparent hydric soil or characteristics of wetland hydrology. One wetland and one upland data point were taken for Wetland 13; see Photo Key Map (Appendix D; 206-209 for data points). Wetland 13 may be considered an average quality wetland due to a relatively large size and apparent plant diversity. Due to its proximity to the jurisdictional UNT to Etter Ditch, Wetland 13 is a likely Waters of the U.S. It is anticipated that Wetland 13 will not be impacted by this project.

Wetland 14 – Data Points 14A, 14B

Wetland 14 was a portion of a ditch dominated by *Typha x glauca* and *Echinochloa crus-galli*. The low areas exhibited hydric soil characteristics (loamy mucky mineral, redox dark surface) and several hydrology indicators, especially including surface water, water marks, sediment deposits, and water-stained leaves. The adjacent hillslope and mowed grassy areas did not exhibit apparent hydric soil or characteristics of wetland hydrology. One wetland and one upland data point were taken for Wetland 14; see Photo Key Map (Appendix D; 214-217 for data points). Due to its proximity to the jurisdictional Etter Ditch, Wetland 14 is a likely Waters of the U.S. It is anticipated that approximately 0.003 acre or less of Wetland 14 will be impacted by this project.

Wetland 15 – Data Points 15A, 15B

Wetland 15 was a portion of a ditch dominated by *Typha x glauca* and *Eleocharis erythropoda*. The low areas exhibited hydric soil characteristics (redox dark surface) and several hydrology indicators, especially including saturation and water-stained leaves. The adjacent hillslope and mowed grassy areas did not exhibit apparent hydric soil or characteristics of wetland hydrology. One wetland and one upland data point were taken for Wetland 15; see Photo Key Map (Appendix D; 210-213 for data points). Due to its proximity to the jurisdictional Etter Ditch, Wetland 15 is a likely Waters of the U.S. It is anticipated that approximately 0.005 acre or less of Wetland 15 will be impacted by this project.

Small Jurisdictional Aquatic Resources (JAR)

The roadside ditches (RSDs) east of I-65 contain seven small areas with wetland characteristics which do not exceed the boundaries of the ditches. All of these are depression areas within the ditches, associated with pipe outlets. All JARs are dominated by *Typha* sp. and *Echinochloa crus-galli* which is surrounded by upland vegetation, especially *Schedonorus sp*. These areas show hydrologic connectivity with Eller Ditch via ditchlines and pipes associated with the ditches adjacent to Wetlands 14 and 15. These are considered Jurisdictional Aquatic Resources and Waters of the U.S. See Appendix A-7 for JAR locations.

JAR #1 – associated with RSD 4, directly east of Perry Worth Road. Affected area is 25 linear feet and 0.002 acre.

JAR #2 - associated with RSD 4, directly east of Perry Worth Road. Affected area is 32 linear feet and 0.001 acre.

JAR #3 – associated with RSD 5, directly east of I-65. Affected area is 10 linear feet and 0.0005 acre.

JAR #4– associated with RSD 5, directly east of I-65. Affected area is 15 linear feet and 0.0007 acre.

JAR #5– associated with RSD 5, directly east of I-65. Affected area is 12 linear feet and 0.0008 acre.

JAR #6– associated with RSD 5, directly east of I-65. Affected area is 6 linear feet and 0.0004 acre.

JAR #7– associated with RSD 5, directly east of I-65. Affected area is 16 linear feet and 0.001 acre.

JAR #8 - At the northwest corner of CR 550S and Indianapolis Road, another apparent JAR occurs (JAR #8). It showed a sparsely vegetated area with facultative *Barbarea vulgaris* and various non-fescue grasses on January 11, 2018. While the date is after the recommended time period for wetland delineations, observations indicate that this area would be likely to have wetland characteristics and is treated as such in this report. JAR #8 acts as a small basin which receives water from RSD 7 (via a culvert) and RSD 8. JAR #8 does not exceed the boundary of RSD 8. JAR #8 is considered a Jurisdictional Aquatic Resource and Water of the U.S. The affected area is 22 linear feet and 0.002 acre.

Total small JAR impact in the CR 550S area is 138 linear feet and 0.0084 acre.

WHITESTOWN PARKWAY (Appendix A-8)

Green Ditch is the major connector to navigable waters in this area. Any waters which have significant nexus with Green Ditch are likely to be jurisdictional Waters of the U.S.

Wetland 16

Wetland 16 was a portion of a ditch dominated by *Typha x glauca* and *Phragmites australis*. The low areas exhibited hydric soil characteristics (hydrogen sulfide odor and loamy gleyed matrix) and several hydrology indicators, especially including surface water, saturation, hydrogen sulfide odor, and water-stained leaves. The adjacent hillslope and mowed grassy areas did not exhibit apparent hydric soil or characteristics of wetland hydrology. One wetland and one upland data point were taken for Wetland 16; see Photo Key Map (Appendix D; 288-291 for data points).

Wetland characteristics were restricted entirely to the ditch area, which apparently retains water (as evidenced by pipe outlets directing into the ditch and wetland characteristics ending at north and south ends within the ditch. Hydrologic connectivity may occur to retention ponds to the east. From the pipe on its south end Wetland 16 drains ditches west of I-65, which show likely significant nexus to Green Ditch. Therefore, Wetland 16 is a likely Water of the U.S. It is anticipated that approximately 1094 linear feet and 0.10 acre or less of Wetland 16 will be impacted by this project.

I-865 (Appendix A-9)

Fishback Creek is the major connector to navigable waters in this area. Any waters which have significant nexus with Fishback Creek are likely to be jurisdictional Waters of the U.S.

Wetland 17

Wetland 17 was a ditch dominated by *Typha x glauca*. The low areas exhibited hydric soil characteristics (depleted dark surface) and several hydrology indicators, especially including surface water, drift deposits, sediment deposits, oxidized rhizospheres, and water-stained leaves. The adjacent hillslope and mowed grassy areas did not exhibit apparent hydric soil or characteristics of wetland hydrology. One wetland and one upland data point were taken for Wetland 17; see Photo Key Map (Appendix D; 337-340 for data points). There is a scoured area approximately 50 feet long toward the south end of Wetland 17 (See Appendix D; 309-310). This area appeared eroded although some fescue grass (*Schedonorus* sp.) was growing in small patches within the scour.

Wetland characteristics were restricted entirely to the ditch area, which apparently retains water; as evidenced by pipe outlets directing into the ditch, wetland characteristics ending at north and south ends within the ditch, and its apparent drainage into a basin entirely contained within the I-865 interchange. The large pipe on the south end of Wetland 17 connects with a ditch that follows I-865 to Fishback Creek and shows likely significant nexus with that jurisdictional waterway, therefore Wetland 17 is a likely Water of the U.S. It is anticipated that approximately 2076 linear feet and 0.19 acre or less of Wetland 17 will be impacted by this project.

Roadside Ditch Analysis

SR 267 (Appendix A-6)

RSD 1

A non-wetland roadside ditch occurs east of Perry Worth Road on the south end of the project area and is named RSD 1 for the purposes of this report. It appears to drain into Wetland 3. See Appendix A-6 for mapping of the roadside ditches. Within the project area, RSD 1 does not exhibit an OHWM or signs of wetland hydrology and is dominated by the upland grass *Schedonorus sp*. Due to the lack of an OHWM, RSD 1 does not exhibit the characteristics of a tributary. Because RSD 1 is not a wetland or tributary, it is not likely a Water of the U.S.

CR 550S (Appendix A-7)

RSD 2

A non-wetland roadside ditch occurs west of I-65 and south of CR 550S within the project area and is named RSD 2 for the purposes of this report. It appears to drain into the UNT to Etter Ditch via pipes. This ditch is very flat in most areas and may drain by sheet flow for major portions. See Appendix A-7 for mapping of the roadside ditches. The roadside ditch was dry during the site visit. RSD 2 does not exhibit an OHWM or signs of wetland hydrology and is dominated by upland or facultative upland species such as *Setaria faberi, Solidago canadensis, Conyza canadensis*, and *Schedonorus sp*. Due to the lack of an OHWM, RSD 2 does not exhibit the characteristics of a tributary. Because RSD 2 is not a wetland or tributary, it is not likely a Water of the U.S.

RSD 3

A non-wetland roadside ditch occurs west of I-65 and north of CR 550S within the project area and is named RSD 3 for the purposes of this report. It appears to drain into Etter Ditch via pipes and contains Wetlands 14 and 15. Wetland 14 consists of *Typha* marsh approximately 25 feet long and 5 feet wide within the slopes of RSD 3. Wetland 14 is located near the northern end of the sinuosity of Etter Ditch (See Appendix A-7). Wetland 15 is another *Typha* marsh approximately 6 feet wide within the slopes of RSD 3 and extends north outside of the project area. While the steeper slopes of RSD3 contain these wetlands, the ditch is very flat in most areas and may drain by sheet flow for major portions. See Appendix A-7 for mapping of the roadside ditches. RSD 3 does not exhibit an OHWM or signs of wetland hydrology and is dominated by the upland grass *Schedonorus sp*. Due to the lack of an OHWM, RSD 3 does not exhibit the characteristics of a tributary. Because RSD 3 is not a wetland or tributary, it is not likely a Water of the U.S.

RSD 4

A non-wetland roadside ditch occurs east of Perry Worth Road within the project area and is named RSD 4 for the purposes of this report. This ditch is very flat in most areas and may drain by sheet flow for major portions. See Appendix A-7 for mapping of the roadside ditches. RSD 4 does not exhibit an OHWM or signs of wetland hydrology and is dominated by the upland grass *Schedonorus sp,* with the exception of JARs # 1 and 2 (see Wetland Analysis). JAR 1 is a *Typha* marsh approximately 25 feet long and 3 feet wide within the slopes of RSD 4 and adjacent to an agricultural field and fence line. JAR 2 is a *Typha* marsh approximately 32 feet long and 2 feet wide within the slopes of RSD 4. JAR 2 is on either side of a driveway. Due to the lack of an OHWM, RSD 4 does not exhibit the characteristics of a tributary. Because RSD 4 is not a wetland or tributary, it is not likely a Water of the U.S.

RSD 5

A non-wetland roadside ditch occurs between Perry Worth Road and I-65 within the project area and is named RSD 5 for the purposes of this report. This ditch is flat in some areas and sloped in others. See Appendix A-7 for mapping of the roadside ditches. RSD 5 does not exhibit an OHWM or signs of wetland hydrology and is dominated by the upland grass *Schedonorus sp* with the exception of JARs #3-7. Due to the lack of an OHWM, RSD 5 does not exhibit the characteristics of a tributary. Because RSD 5 is not a wetland or tributary, it is not likely a Water of the U.S.

RSD 6

A non-wetland roadside ditch occurs east of Indianapolis Road southeast of Etter Ditch and is named RSD 6 for the purposes of this report. See Appendix A-7 for mapping of the roadside ditches. RSD 6 does not exhibit an OHWM or signs of wetland hydrology and is dominated by the upland grass *Schedonorus sp*. Due to the lack of an OHWM, RSD 6 does not exhibit the characteristics of a tributary. Because RSD 6 is not a wetland or tributary, it is not likely a Water of the U.S.

RSD 7

A non-wetland roadside ditch occurs west of Indianapolis Road south of CR 550S and curving west along the south side of CR 550S and is named RSD 7 for the purposes of this report. See Appendix A-7 for mapping of

the roadside ditches. RSD 6 does not exhibit an OHWM or signs of wetland hydrology and is dominated by the upland grass *Schedonorus sp*. Due to the lack of an OHWM, RSD 7 does not exhibit the characteristics of a tributary. Because RSD 7 is not a wetland or tributary, it is not likely a Water of the U.S.

RSD 8

A non-wetland roadside ditch occurs north CR 550S west of Indianapolis Road and is named RSD 8 for the purposes of this report. See Appendix A-7 for mapping of the roadside ditches. RSD 8 does not exhibit an OHWM or signs of wetland hydrology and is dominated by the upland grass *Schedonorus sp*. Due to the lack of an OHWM, RSD 8 does not exhibit the characteristics of a tributary. Because RSD 8 is not a wetland or tributary, it is not likely a Water of the U.S.

WHITESTOWN PARKWAY (Appendix A-8)

No non-wetland ditches were observed within the project area at the Whitestown Parkway exit.

I-865 (Appendix A-9)

RSD 9

A non-wetland roadside ditch occurs east of I-65 within the project area and is named RSD 9 for the purposes of this report. It appears to drain into Wetland I-865. This ditch is very flat in most areas and may drain by sheet flow for major portions. See Appendix A-9 for mapping of the roadside ditches. The roadside ditch was dry during the site visit, despite surface water in Wetland 17. Within the project area, RSD 9 does not exhibit an OHWM or signs of wetland hydrology and is dominated by the upland grass *Schedonorus sp*. Due to the lack of an OHWM, RSD 9 does not exhibit the characteristics of a tributary. Because RSD 9 is not a wetland or tributary, it is not likely a Water of the U.S.

4. Summary and Conclusions

In this area, the Louisville District of the U.S. Army Corps of Engineers has final discretionary authority over all federal jurisdictional determinations and the Indiana Department of Environmental Management has final discretionary authority of state waters jurisdiction.

SR 267

Fishback Creek is the major connector to navigable waters at the SR 267 project area. Wetlands 1, 2, 6, 7, and 9 showed some connection with Fishback Creek, via Boone's Pond north of the project area. These wetlands, all northwest of SR 267, displayed connectivity to Fishback Creek via pipes and/or proximity to Boone's Pond. Wetlands 3, 4, 5, 8, 10, and 11 exhibit likely significant nexus with Wetlands 1, 2, 6, 7, and 9. These wetlands are also all likely Waters of the U.S.

CR 550

As a running waterway traceable to White River, Etter Ditch and UNT to Etter Ditch within the project area are jurisdictional Waters of the U.S. The associated Wetlands 13, 14, and 15 are also apparent Waters of the

U.S. The Jurisdictional Aquatic Resources 1, 2, 3, 4, 5, 6, 7, and 8 showed likely significant nexus with Wetlands 14 and 15 and are likely Waters of the U.S.

WHITESTOWN PARKWAY

Wetland 16 shows likely significant nexus with the jurisdictional Green Ditch to the northwest. Wetland 16 is a likely Water of the U.S.

I-865

Wetland 17 shows likely significant nexus with the jurisdictional Fishback Creek to the east. Wetland 17 is a likely Water of the U.S.

Table 1: Stream Summary
I-65
Boone County, Indiana
Designation Number: 1702147

Stream Name	Photo Number	Lat/Long	OHW Width (feet)	OHW Depth (feet)	USGS Blue-line?	Riffles? Pools?	Substrate	Quality	Likely Water of U.S.?
Etter Ditch	130;133-142;147-148; 166-167; 175-176; 179-180; 182; 202-203	39.959846 -86.374607	8.0	1.0	Yes	Yes	Silt, Gravel, Cobbles	Average	Yes
UNT to Etter Ditch	131-132; 149-150; 168-174	39.960480 -86.373096	6.0	0.75	No	No	Silt	Poor	Yes

Table 2: Wetland Summary
I-65
Boone County, Indiana
Designation Number: 1400071 and 1702147

Wetland Name	Photo Number	Lat/Lon	Cowardin Type	Quality	Total Acreage	Acreage Impacted	Linear Feet Impacted	Likely Water of U.S.?
1	31-34; 36	39.982724 -86.394085	PEM	Poor	0.01	0.01	N/A	Yes
2	37-42	39.982298 -86.394384	PEM	Poor	0.73	0.73	N/A	Yes

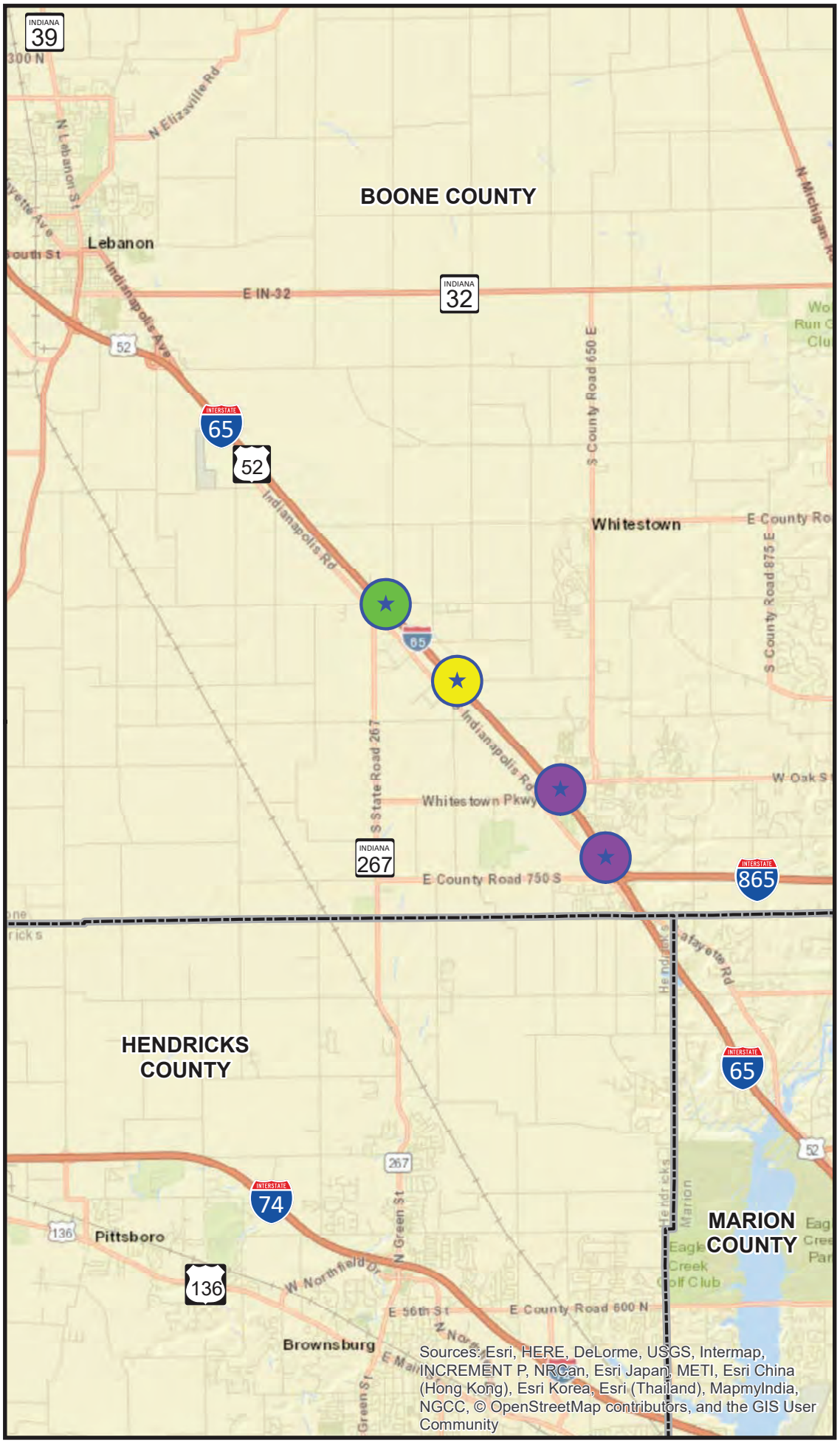
3	45-48; 51-52; 110	39.981228 -83.393020	PEM	Poor	0.08	0.08	1068	Yes
4	55-60; 63-64	39.978745 -86.397906	PEM	Poor	0.11	0.01	N/A	Yes
5	67-70	39.980280 -86.396155	PEM	Poor	0.02	0.02	N/A	Yes
6	73-78; 81-82	39.980502 -86.396556	PEM	Poor	0.36	0.18	1176	Yes
7	83-84; 87-88	39.981168 - 86.395886	PEM	Poor	0.03	0.03	N/A	Yes
8	89-92	39.980382 -86.394897	PEM	Poor	0.08	0.08	N/A	Yes
9	95-98	39.981490 -86.395346	PEM	Poor	0.005	0.005	N/A	Yes
10	101-104	39.980444 -86.394078	PEM	Poor	0.30	0.30	N/A	Yes
11	107-114; 117-118; 121-122	39.980531 -86.393645	PEM	Poor	1.54	1.54	N/A	Yes
13	143-146; 206-207	39.963195 -86.374300	PEM	Average	2.18	0	N/A	Yes
14	161-162; 210-211	39.962043 -86.372316	PEM	Poor	0.003	0.003	N/A	Yes
15	165; 214-215	39.964487 -86.375320	PEM	Poor	0.005	0.005	N/A	Yes
JAR#1	225-226	39.958320 -86.366566	PEM	Poor	0.002	0.002	75	Yes
JAR#2	228-231	39.959293 -86.367808	PEM	Poor	0.001	0.001	64	Yes
JAR#3	240-242	39.963277 -86.372992	PEM	Poor	0.0005	0.0005	20	Yes
JAR#4	246-248	39.962537 -86.372061	PEM	Poor	0.0007	0.0007	30	Yes
JAR#5	253-254	39.959667 -86.368527	PEM	Poor	0.0008	0.0008	36	Yes
JAR#6	256-257	39.959206 -86.367976	PEM	Poor	0.0004	0.0004	18	Yes
JAR#7	258-260	39.958919 -86.367614	PEM	Poor	0.001	0.001	48	Yes
JAR#8	189-191	39.960573 -86.375660	PEM	Poor	0.002	0.002	66	Yes
16	272; 276-285; 287-289	39.945028 -86.350874	PEM	Poor	0.18	0.10	1094	Yes
17	303-312; 337-338	39.935792 -86.343566	PEM	Poor	0.19	0.19	2076	Yes

18	111-112	39.978176 -86.391287	PEM	Poor	0.12	0.12	1677	Yes
RSD 1	49-50; 112	39.978343 -86.391213	N/A	N/A			11	No
RSD 2	151-156	39.960034 -86.370078	N/A	N/A			2152	No
RSD 3	158-165	39.960844 -86.370945	N/A	N/A			2008	No
RSD 4	222; 224-237	39.960609 -86.369426	N/A	N/A			4139	No
RSD 5	238-259; 261-264	39.960106 -86.369055	N/A	N/A			4109	No
RSD 6	180	39.959841 -86.374381	N/A	N/A			324	No
RSD 7	184-188; 195-196; 200-201	39.960450 -86.375366	N/A	N/A			898	No
RSD 8	189; 191-192; 197-199	39.960556 -86.375948	N/A	N/A			503	No
RSD 9	314-336	39.935865 -86.343284	N/A	N/A			2766	No

Table 3: Wetland Plot Summary
I-65
Boone County, Indiana
Designation Number: 1400071

Plot Name	Photo Number	Hydrophytic Vegetation	Hydric Soils	Wetland Hydrology	Within A Wetland
Wetland 1-A	33-34	Yes	Yes	Yes	Yes
Wetland 1-B	35-36	No	No	No	No
Wetland 2-A	39-40	Yes	Yes	Yes	Yes
Wetland 2-B	43-44	No	No	No	No
Wetland 2-C	41-42	Yes	Yes	Yes	Yes
Wetland 3-A	51-52	Yes	Yes	Yes	Yes
Wetland 3-B	53-54	No	No	No	No
Wetland 4-A	59-60	Yes	Yes	Yes	Yes
Wetland 4-B	61-62	No	No	No	No
Wetland 4-C	63-64	Yes	Yes	Yes	Yes
Wetland 4-D	65-66	No	No	No	No
Wetland 5-A	69-70	Yes	Yes	Yes	Yes
Wetland 5-B	71-72	No	No	No	No
Wetland 6-A	77-78	Yes	Yes	Yes	Yes
Wetland 6-B	79-80	No	No	No	No
Wetland 6-C	81-82	Yes	Yes	Yes	Yes
Wetland 7-A	87-88	Yes	Yes	Yes	Yes
Wetland 7-B	85-86	No	No	No	No

Wetland 8-A	91-92	Yes	Yes	Yes	Yes
Wetland 8-B	93-94	No	No	No	No
Wetland 9-A	97-98	Yes	Yes	Yes	Yes
Wetland 9-B	99-100	No	No	No	No
Wetland 10-A	103-104	Yes	Yes	Yes	Yes
Wetland 10-B	105-106	No	No	No	No
Wetland 11-A	113-114	Yes	Yes	Yes	Yes
Wetland 11-B	115-116	No	No	No	No
Wetland 11-C	117-118	Yes	Yes	Yes	Yes
Wetland 11-D	119-120	Yes	No	No	No
Wetland 11-E	121-122	Yes	Yes	Yes	Yes
Etter Ditch-A	202-203	Yes	Yes	Yes	Yes
Etter Ditch-B	204-205	No	No	No	No
Wetland 13-A	206-207	Yes	Yes	Yes	Yes
Wetland 13-B	208-209	No	No	No	No
Wetland 14-A	210-211	Yes	Yes	Yes	Yes
Wetland 14-B	212-213	No	No	No	No
Wetland 15-A	214-215	Yes	Yes	Yes	Yes
Wetland 15-B	216-217	No	No	No	No
UNT to Etter Ditch	168	No	N/A	Yes	No
Wetland 16-A	288-289	Yes	Yes	Yes	Yes
Wetland 16-B	290-291	No	No	No	No
Wetland 17-A	337-338	Yes	Yes	Yes	Yes
Wetland 17-B	339-340	No	No	No	No



Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

PROJECT LOCATION MAP

I-65 INTERCHANGE MODIFICATION & NEW INTERCHANGE

Legend

- Interchange Modification I-65 at SR 267
- New Interchange Construction I-65 at CR 550 S
- Ramp Modification I-65 at Whitestown Parkway and I-65 at I-865

N

0 0.75 1.5 3 Miles

Boone County

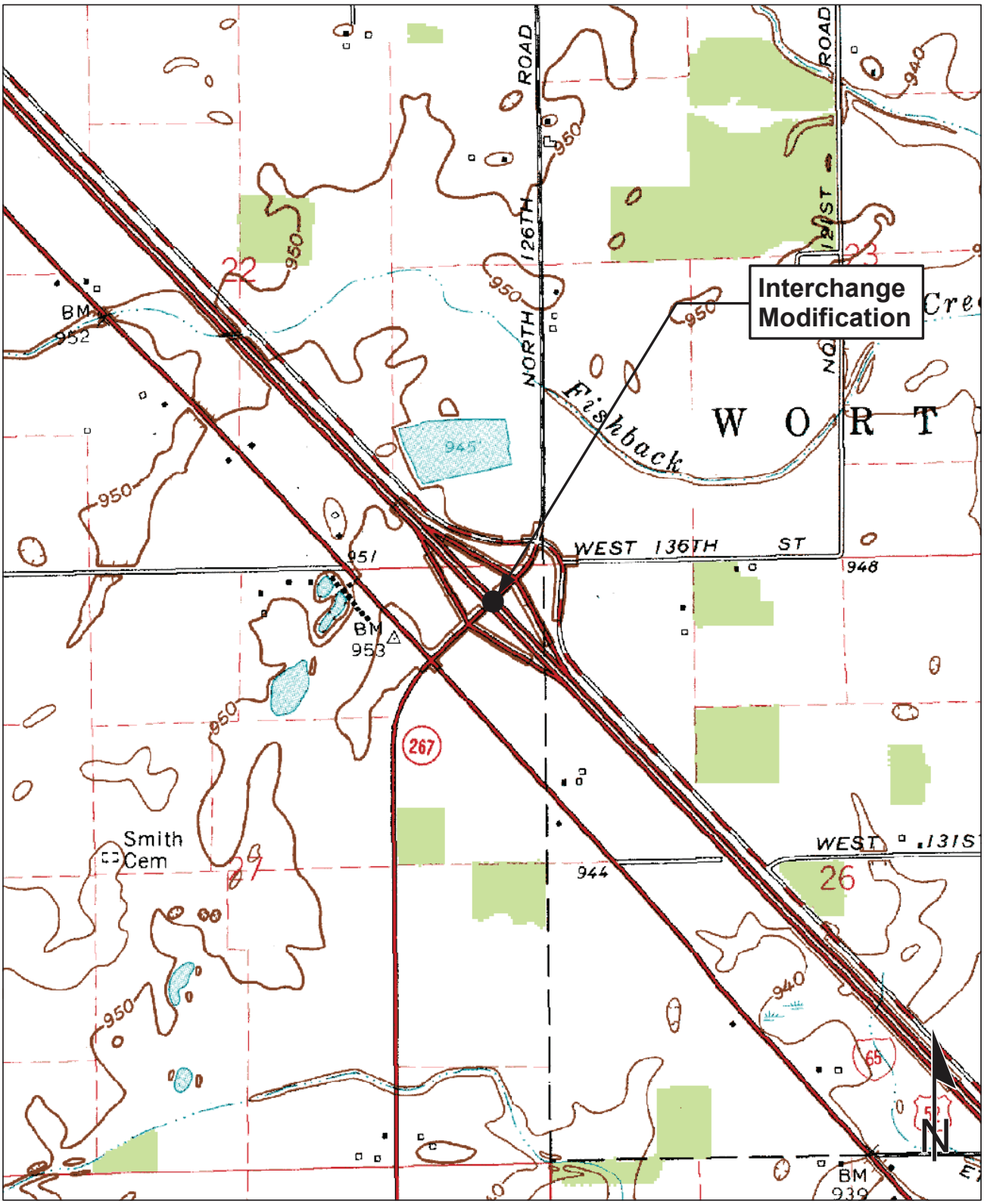
LOCATION MAP

I-65 / SR 267 Interchange Modification, new I-65 Interchange at CR 550 S, Ramp Modifications at Whitestown Parkway and I-865
Boone County, Indiana

N

Not to Scale

USGS Topo Map (SR 267)
Des. No. 1400071, I-65 and SR 267 / I-65 and CR 550 S
Existing Interchange Modification / New Interchange Construction
Boone County County, Indiana



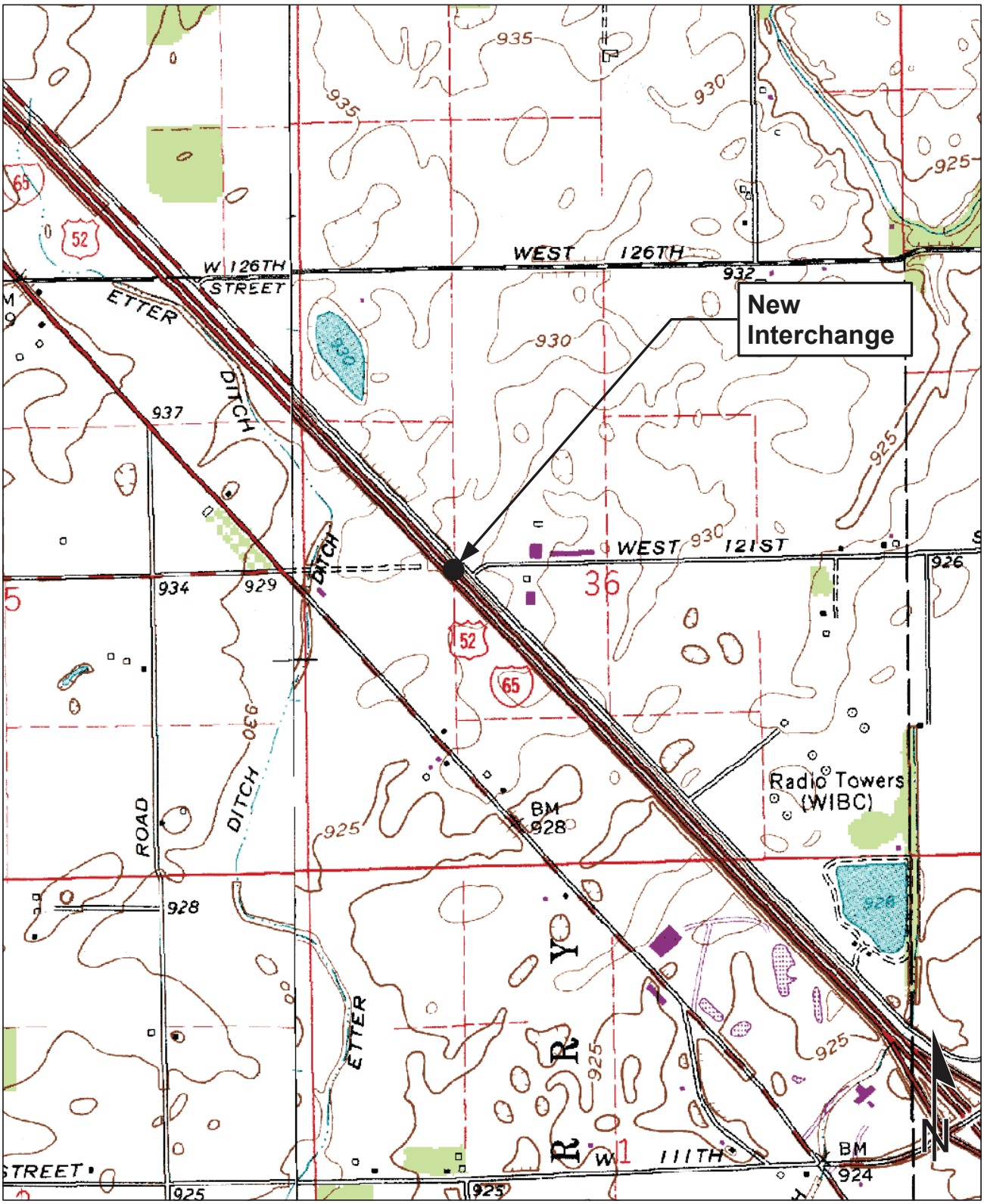
0.2 0.1 0 0.2 Miles

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

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

ZIONSVILLE/FAYETTE
QUADRANGLE
INDIANA
7.5 MINUTE SERIES

USGS Topo Map (CR 550 S)
Des. No. 1400071, I-65 and SR 267 / I-65 and CR 550 S
Existing Interchange Modification / New Interchange Construction
Boone County County, Indiana



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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

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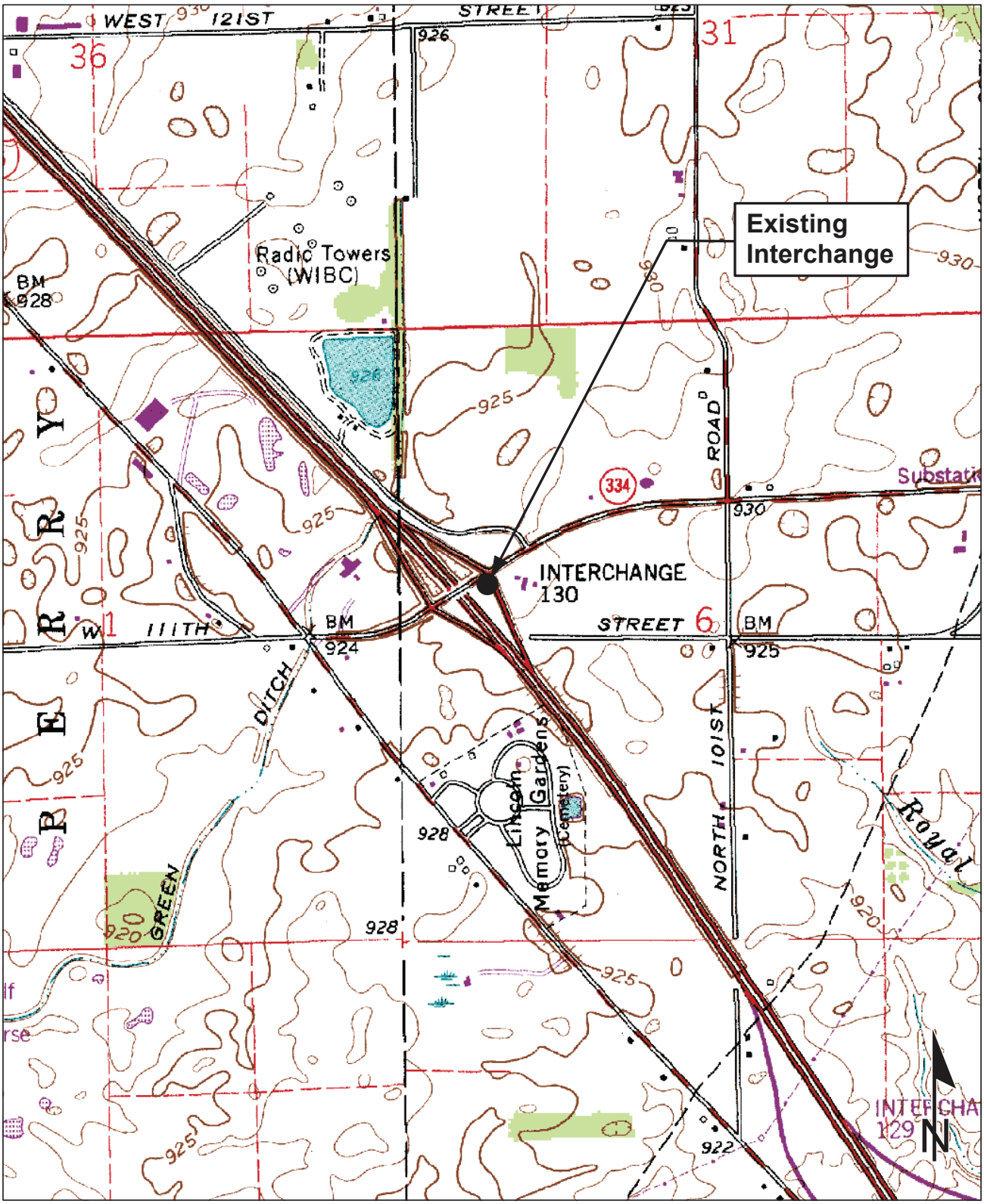
ZIONSVILLE/FAYETTE
QUADRANGLE
INDIANA
7.5 MINUTE SERIES

USGS Topo Map (Whitestown Pkwy.)
Des. No. 1400071, I-65 and SR 267 / I-65 and CR 550 S
Existing Interchange Modification / New Interchange Construction
Boone County County, Indiana



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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

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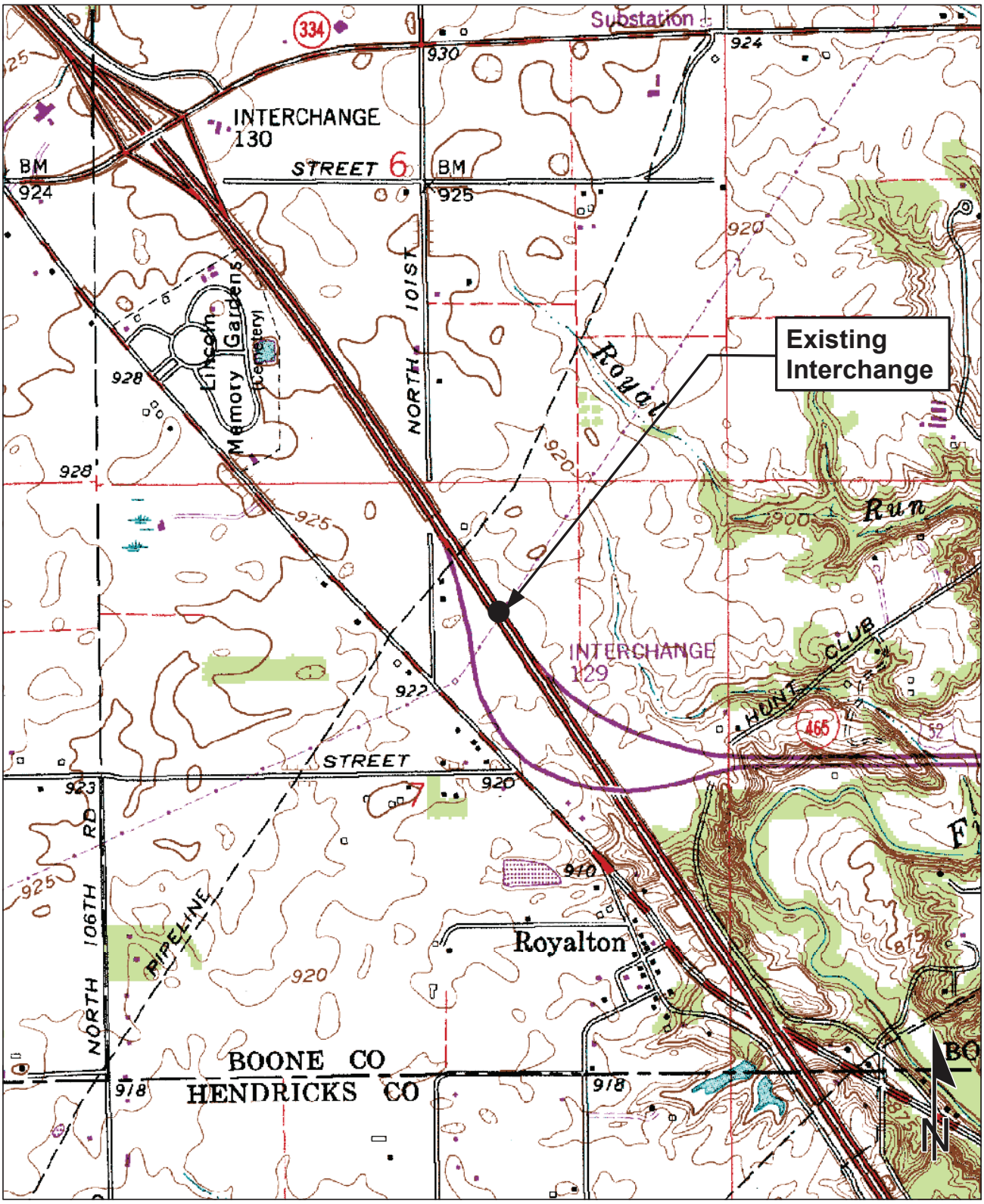
ZIONSVILLE/FAYETTE
QUADRANGLE
INDIANA
7.5 MINUTE SERIES

USGS Topo Map (I-865)
Des. No. 1400071, I-65 and SR 267 / I-65 and CR 550 S
Existing Interchange Modification / New Interchange Construction
Boone County County, Indiana



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

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

ZIONSVILLE/FAYETTE
QUADRANGLE
INDIANA
7.5 MINUTE SERIES

Aerial Photo of the Project Area (SR 267)
Des. No. 1400071, I-65 and SR 267 / I-65 and CR 550 S
Existing Interchange Modification / New Interchange Construction
Boone County County, Indiana

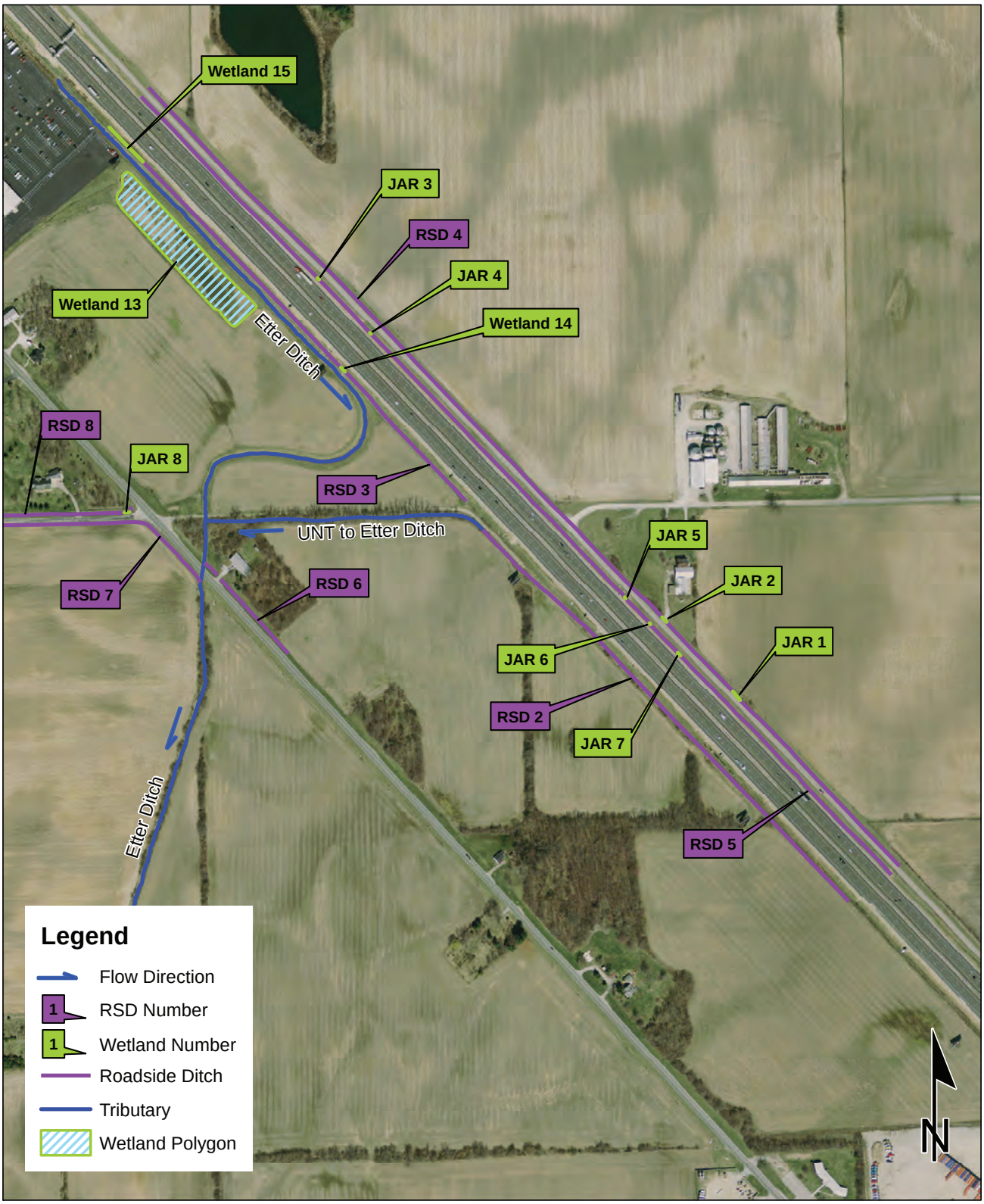
0.095 0.0475 0 0.095 Miles

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

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

INDIANA STATEWIDE AERIAL IMAGERY FLOWN IN 2011

Aerial Photo of the Project Area (CR 550 S)
Des. No. 1400071, I-65 and SR 267 / I-65 and CR 550 S
Existing Interchange Modification / New Interchange Construction
Boone County County, Indiana



0.095 0.0475 0 0.095 Miles

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

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

INDIANA STATEWIDE AERIAL IMAGERY FLOWN IN 2011

Aerial Photo of the Project Area (Whitestown Parkway)
Des. No. 1400071, I-65 and SR 267 / I-65 and CR 550 S
Existing Interchange Modification / New Interchange Construction
Boone County County, Indiana

0.095 0.0475 0 0.095 Miles

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

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

INDIANA STATEWIDE
AERIAL IMAGERY
FLOWN IN 2011

Aerial Photo of the Project Area (I-865)
Des. No. 1400071, I-65 and SR 267 / I-65 and CR 550 S
Existing Interchange Modification / New Interchange Construction
Boone County County, Indiana

0.095 0.0475 0 0.095 Miles

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

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

INDIANA STATEWIDE AERIAL IMAGERY FLOWN IN 2011

LiDAR Map (SR 267)
Des. No. 1400071, I-65 and SR 267 / I-65 and CR 550 S
Existing Interchange Modification / New Interchange Construction
Boone County County, Indiana

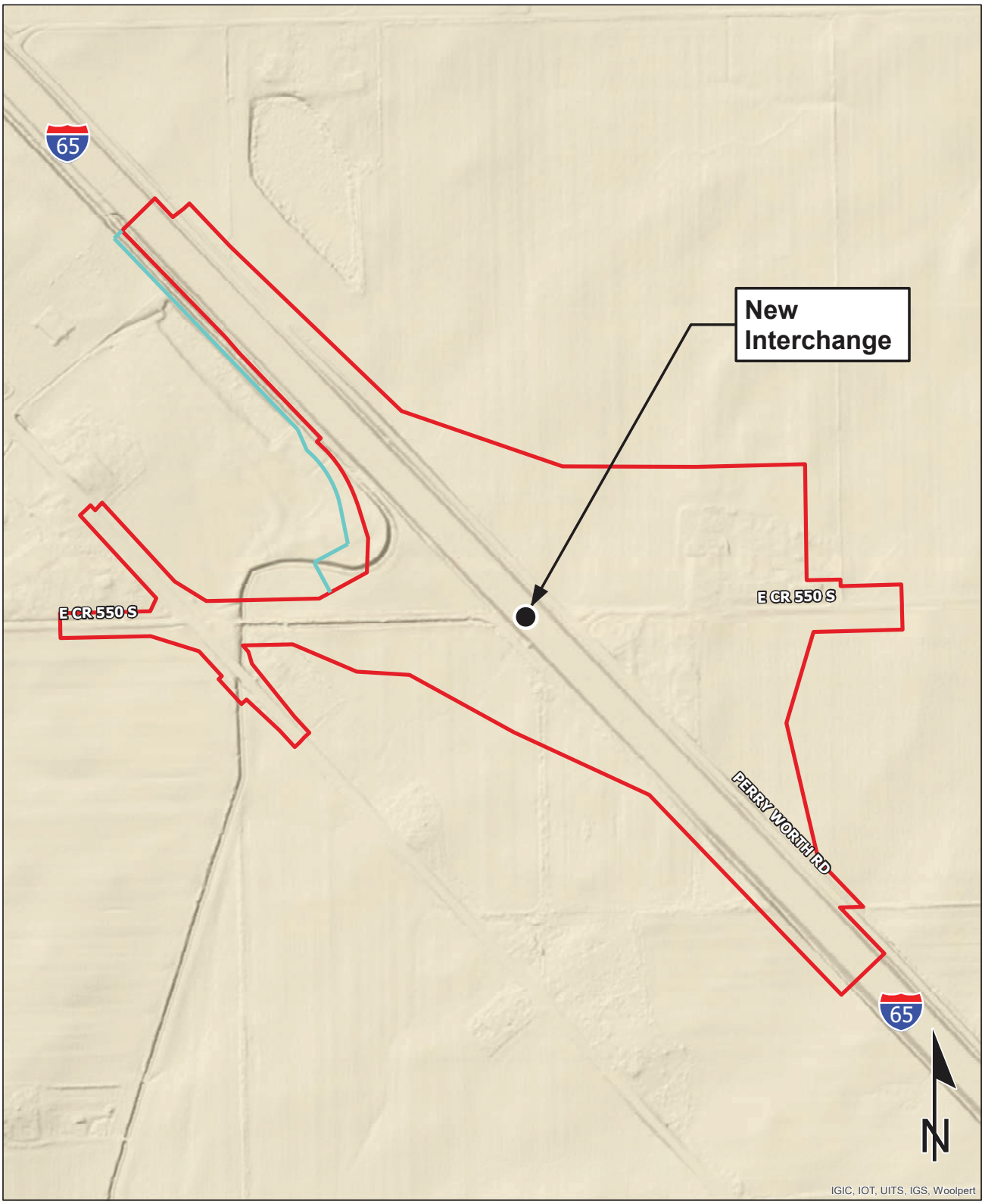
0.1 0.05 0 0.1 Miles

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

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

INDIANA STATEWIDE AERIAL IMAGERY FLOWN IN 2011

LiDAR Map (CR 550 S)
Des. No. 1400071, I-65 and SR 267 / I-65 and CR 550 S
Existing Interchange Modification / New Interchange Construction
Boone County County, Indiana



0.1 0.05 0 0.1 Miles

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

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

INDIANA STATEWIDE AERIAL IMAGERY FLOWN IN 2011

LiDAR Map (Whitestown Pkwy.)
Des. No. 1400071, I-65 and SR 267 / I-65 and CR 550 S
Existing Interchange Modification / New Interchange Construction
Boone County County, Indiana

0.1 0.05 0 0.1 Miles

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

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INDIANA STATEWIDE AERIAL IMAGERY FLOWN IN 2011

LiDAR Map (I-865)
Des. No. 1400071, I-65 and SR 267 / I-65 and CR 550 S
Existing Interchange Modification / New Interchange Construction
Boone County County, Indiana

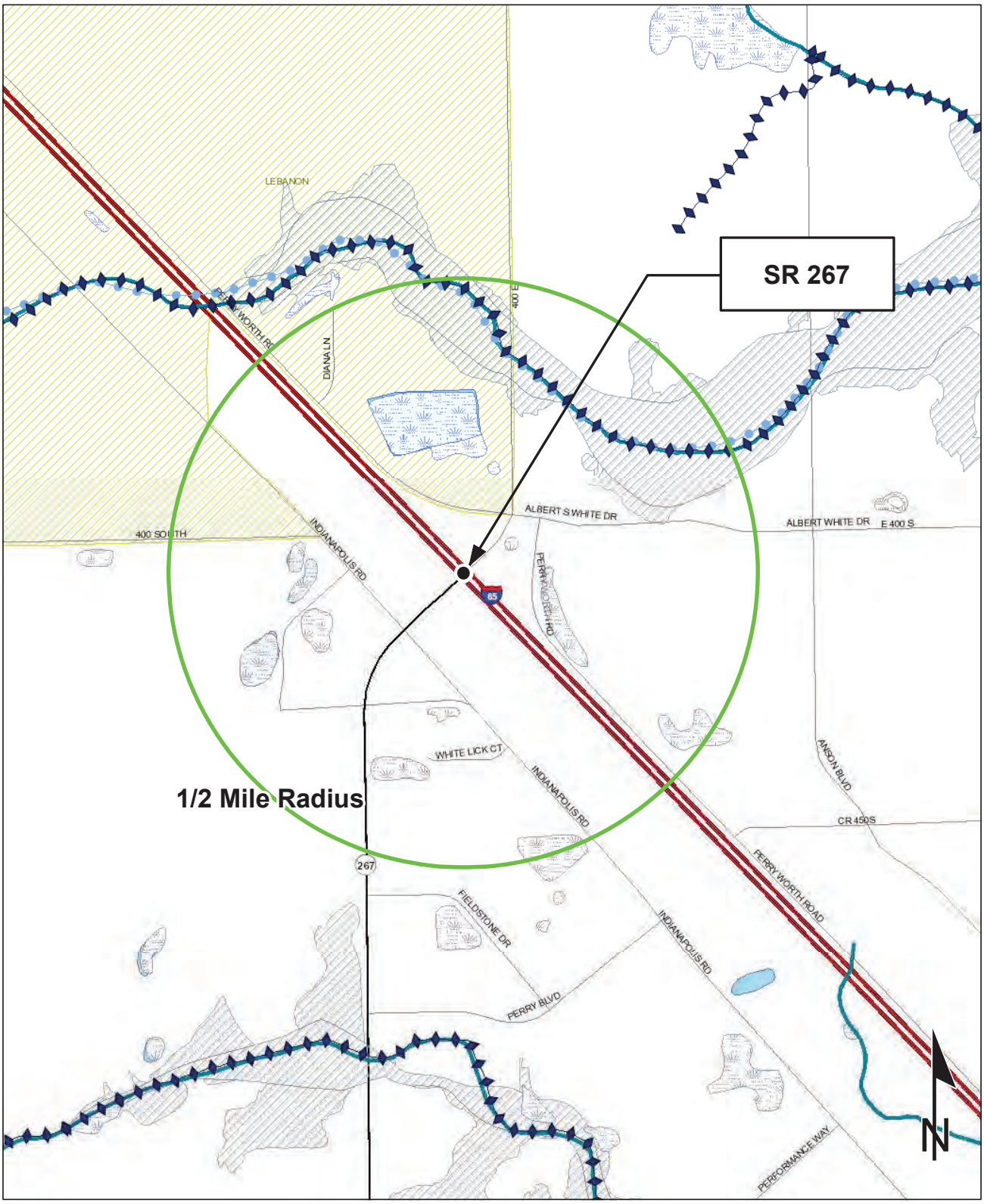
0.1 0.05 0 0.1 Miles

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

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

INDIANA STATEWIDE AERIAL IMAGERY FLOWN IN 2011

Water Resources (SR 267)
Des. No. 1400071, I-65 and SR 267 / I-65 and CR 550 S
Existing Interchange Modification / New Interchange Construction
Boone County County, Indiana



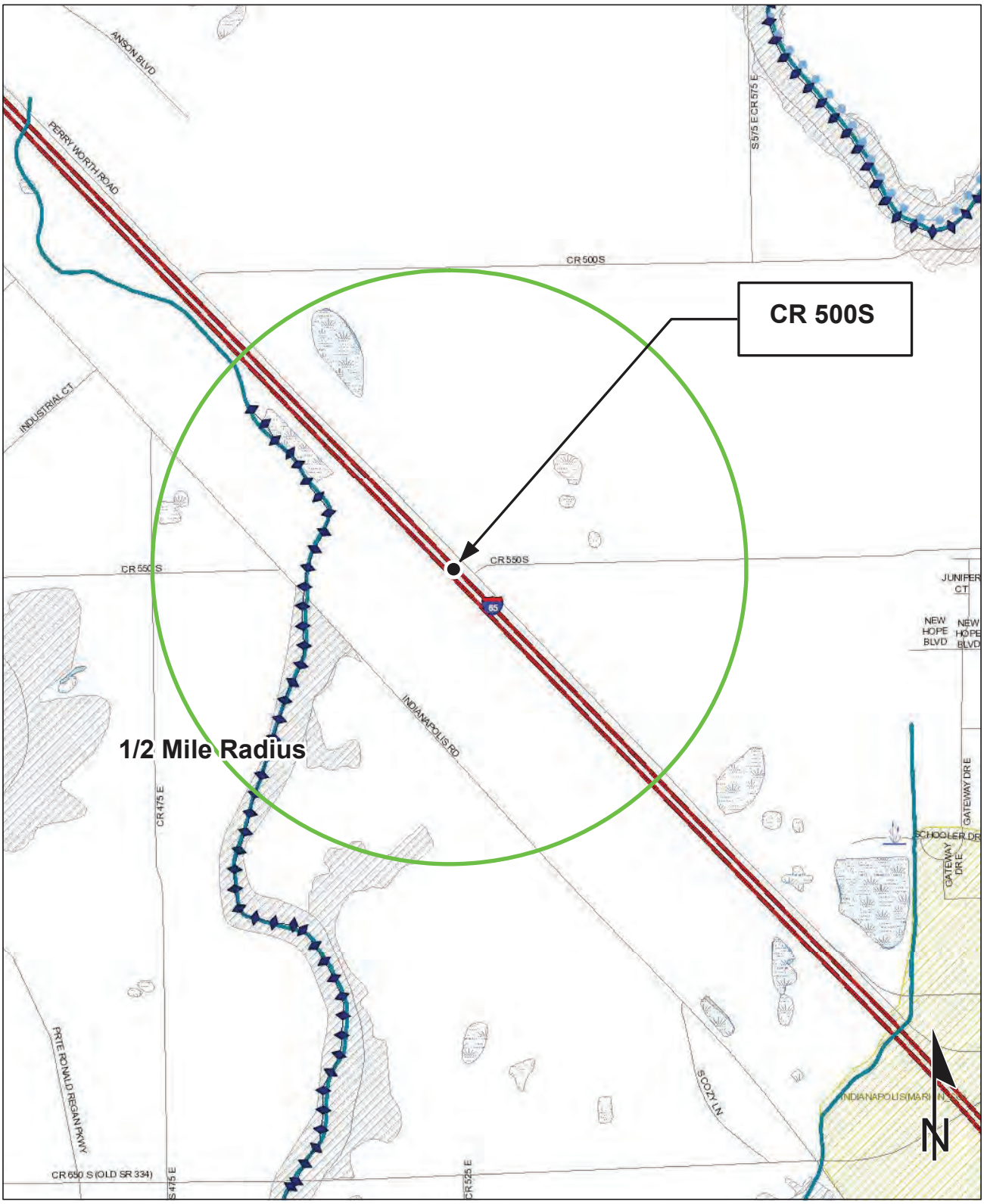
Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

0.2 0.1 0 0.2 Miles

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

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

Water Resources (CR 550 S)
Des. No. 1400071, I-65 and SR 267 / I-65 and CR 550 S
Existing Interchange Modification / New Interchange Construction
Boone County 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

0.2 0.1 0 0.2 Miles

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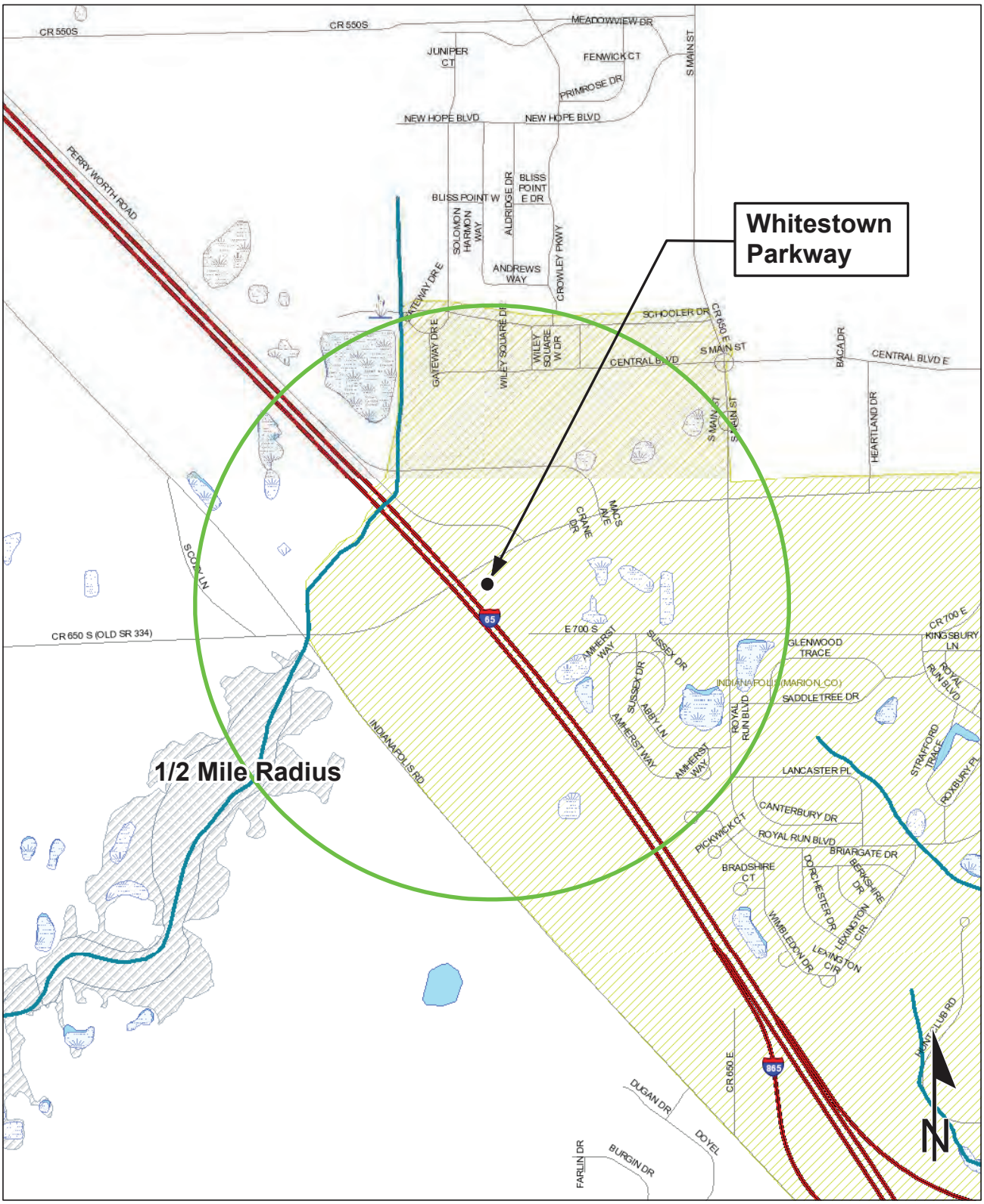
- Canal Route - Historic
- Wetlands
- Lake - Impaired
- Lake
- Floodplain - DFIRM
- Cave Entrance Density
- Sinkhole Area
- Sinking-Stream Basin
- Half Mile Radius
- Interstate
- State Route
- US Route
- Local Road
- Urban Area

Water Resources (Whitestown Pkwy.)
Des. No. 1400071, I-65 and SR 267 / I-65 and CR 550 S Existing Interchange Modification / New Interchange Construction Boone County 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

0.2 0.1 0 0.2 Miles

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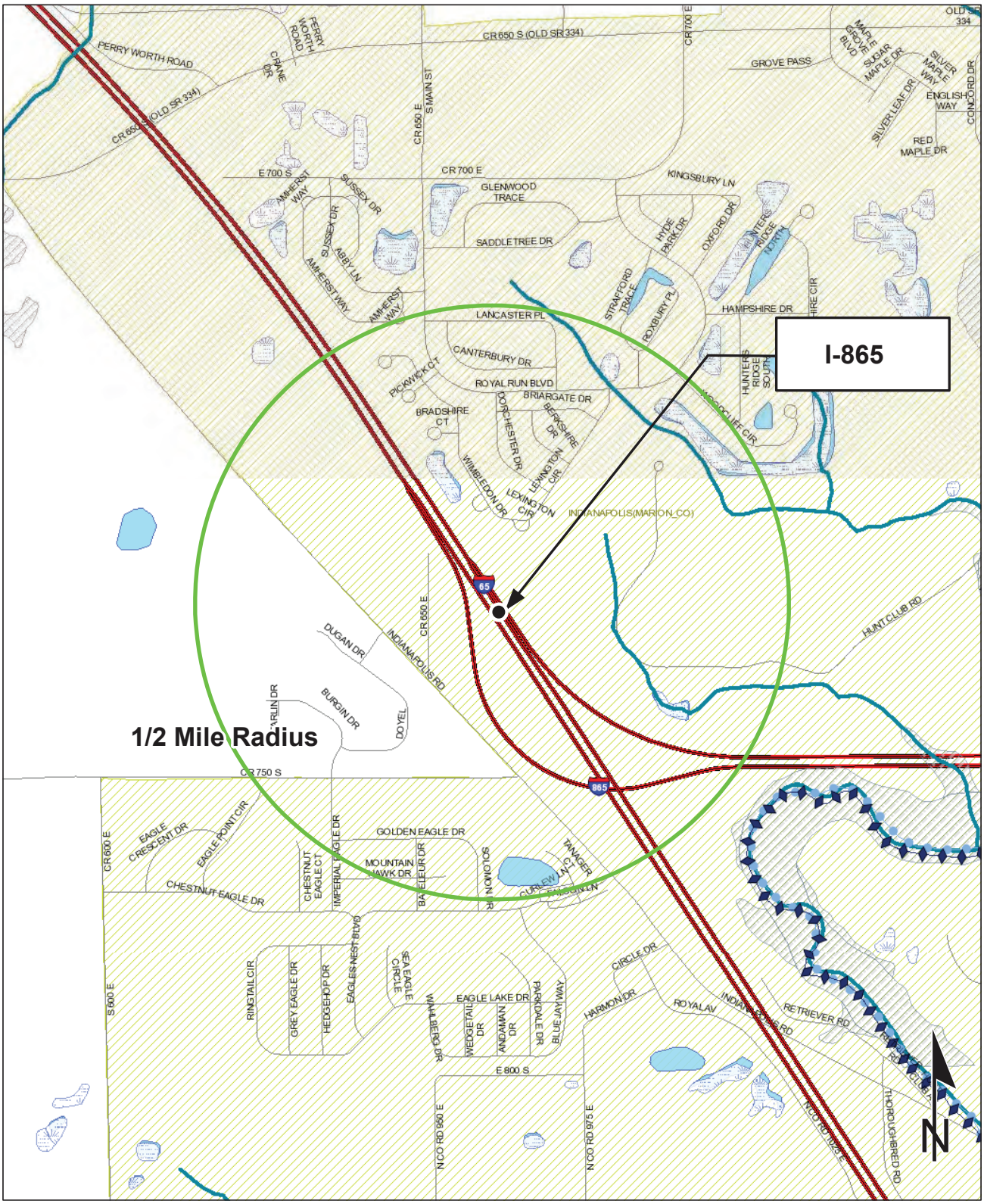
- Lake
- Floodplain - DFIRM
- Cave Entrance Density
- Sinkhole Area
- Sinking-Stream Basin
- Half Mile Radius
- Interstate
- State Route
- US Route
- Local Road
- Urban Area

Water Resources (I-865)
Des. No. 1400071, I-65 and SR 267 / I-65 and CR 550 S
Existing Interchange Modification / New Interchange Construction
Boone County County, Indiana



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

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- Sinkhole Area
- Sinking-Stream Basin
- Half Mile Radius
- Interstate
- State Route
- US Route
- Local Road
- Urban Area

Soils Map (SR 267)
Des. No. 1400071, I-65 and SR 267 / I-65 and CR 550 S
Existing Interchange Modification / New Interchange Construction
Boone County County, Indiana

0.1 0.05 0 0.1 Miles

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

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

NRCS SOILS DATA

Legend
ThrA = Treaty Silty Clay Loam (70 - 100% hydric)
CudA = Crosby Silt Loam (Not hydric)
FdbA = Fincastle Silt Loam (Not hydric)

Soils Map (CR 550 S)
Des. No. 1400071, I-65 and SR 267 / I-65 and CR 550 S
Existing Interchange Modification / New Interchange Construction
Boone County County, Indiana

0.1 0.05 0 0.1 Miles

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

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NRCS SOILS DATA

Legend
ThrA = Treaty Silty Clay Loam (70 - 100% hydric)
CudA = Crosby Silt Loam (Not hydric)
FdbA = Fincastle Silt Loam (Not hydric)

Soils Map (Whitestown Pkwy.)
Des. No. 1400071, I-65 and SR 267 / I-65 and CR 550 S
Existing Interchange Modification / New Interchange Construction
Boone County County, Indiana

0.1 0.05 0 0.1 Miles

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

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

NRCS SOILS DATA

Legend
UfxA = Urban land-Fincastle Complex (0 - 10% hydric)
CxdA = Cyclone Silty Clay Loam (83 - 100% hydric)

Soils Map (I-865)
Des. No. 1400071, I-65 and SR 267 / I-65 and CR 550 S
Existing Interchange Modification / New Interchange Construction
Boone County County, Indiana

0.1 0.05 0 0.1 Miles

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

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NRCS SOILS DATA

Legend
UfxA = Urban land-Fincastle Complex (0 - 10% hydric)
UfoA = Urban land-Cyclone Complex (30 - 65% hydric)

Photo Key Map (SR 267)
Des. No. 1400071, I-65 and SR 267 / I-65 and CR 550 S
Existing Interchange Modification / New Interchange Construction
Boone County County, Indiana

0.075 0.0375 0 0.075 Miles

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

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

INDIANA STATEWIDE AERIAL IMAGERY FLOWN IN 2011

Legend

- Wetland Point
- Upland Point
- Roadside Ditch
- Tributary
- Wetland Polygon
- Property Line

Photo Key Map (SR 267)
Des. No. 1400071, I-65 and SR 267 / I-65 and CR 550 S
Existing Interchange Modification / New Interchange Construction
Boone County County, Indiana

0.075 0.0375 0 0.075 Miles

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

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INDIANA STATEWIDE AERIAL IMAGERY FLOWN IN 2011

Legend

- Wetland Point
- Upland Point
- Roadside Ditch
- Tributary
- Wetland Polygon
- Property Line

Photo Key Map (CR 550 S)
Des. No. 1400071, I-65 and SR 267 / I-65 and CR 550 S
Existing Interchange Modification / New Interchange Construction
Boone County County, Indiana

0.04 0.02 0 0.04 Miles

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

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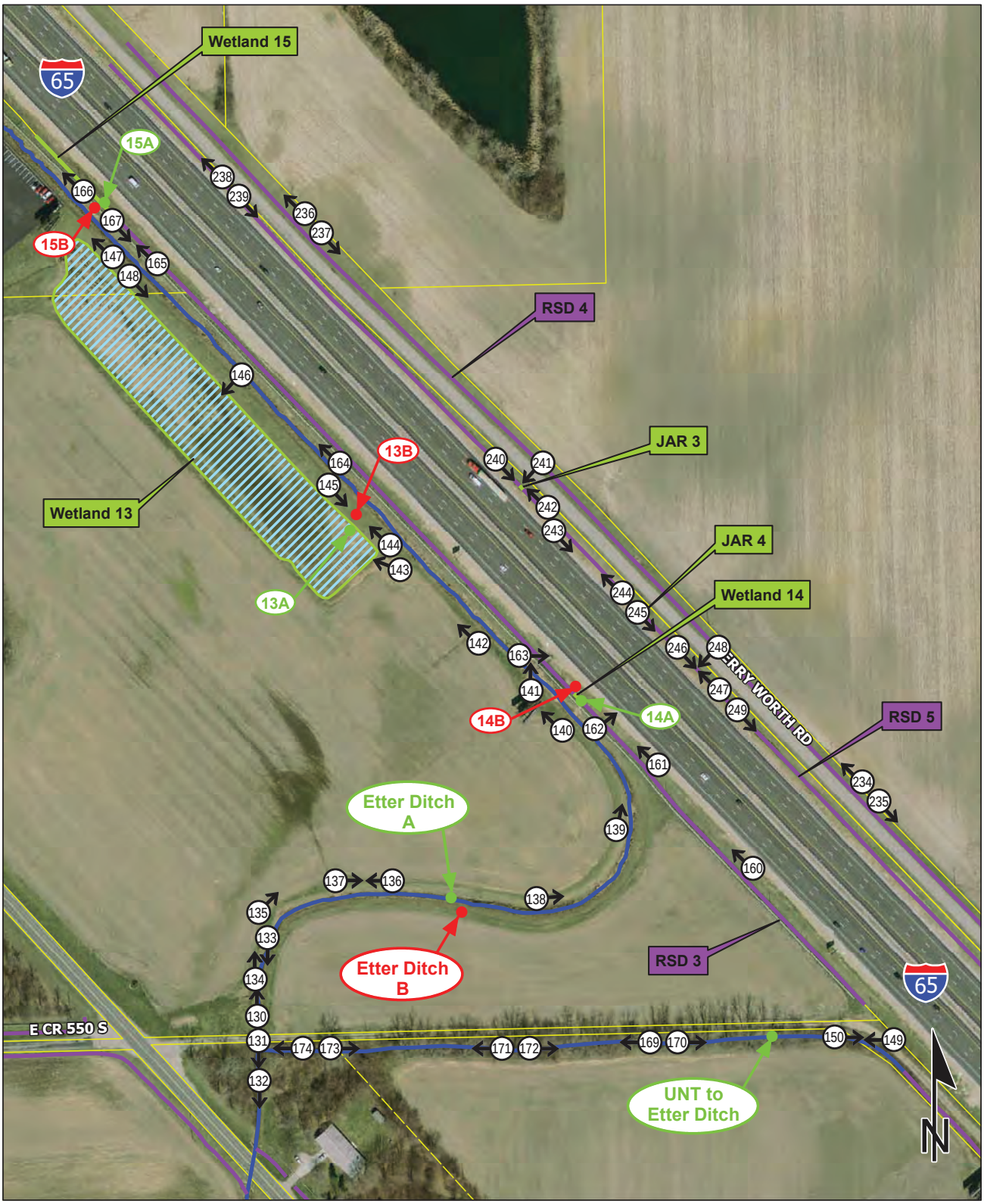
INDIANA STATEWIDE AERIAL IMAGERY FLOWN IN 2011

Legend

- Wetland Point
- Upland Point
- Roadside Ditch
- Tributary
- Wetland Polygon
- Property Line

Photo Key Map (CR 550 S)
Des. No. 1400071, I-65 and SR 267 / I-65 and CR 550 S
Existing Interchange Modification / New Interchange Construction
Boone County County, Indiana



0.04 0.02 0 0.04 Miles

Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
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INDIANA STATEWIDE AERIAL IMAGERY FLOWN IN 2011

Legend

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- Upland Point
- Roadside Ditch
- Tributary
- Wetland Polygon
- Property Line

Photo Key Map (CR 550 S)
Des. No. 1400071, I-65 and SR 267 / I-65 and CR 550 S
Existing Interchange Modification / New Interchange Construction
Boone County County, Indiana

0.04 0.02 0 0.04 Miles

Sources:
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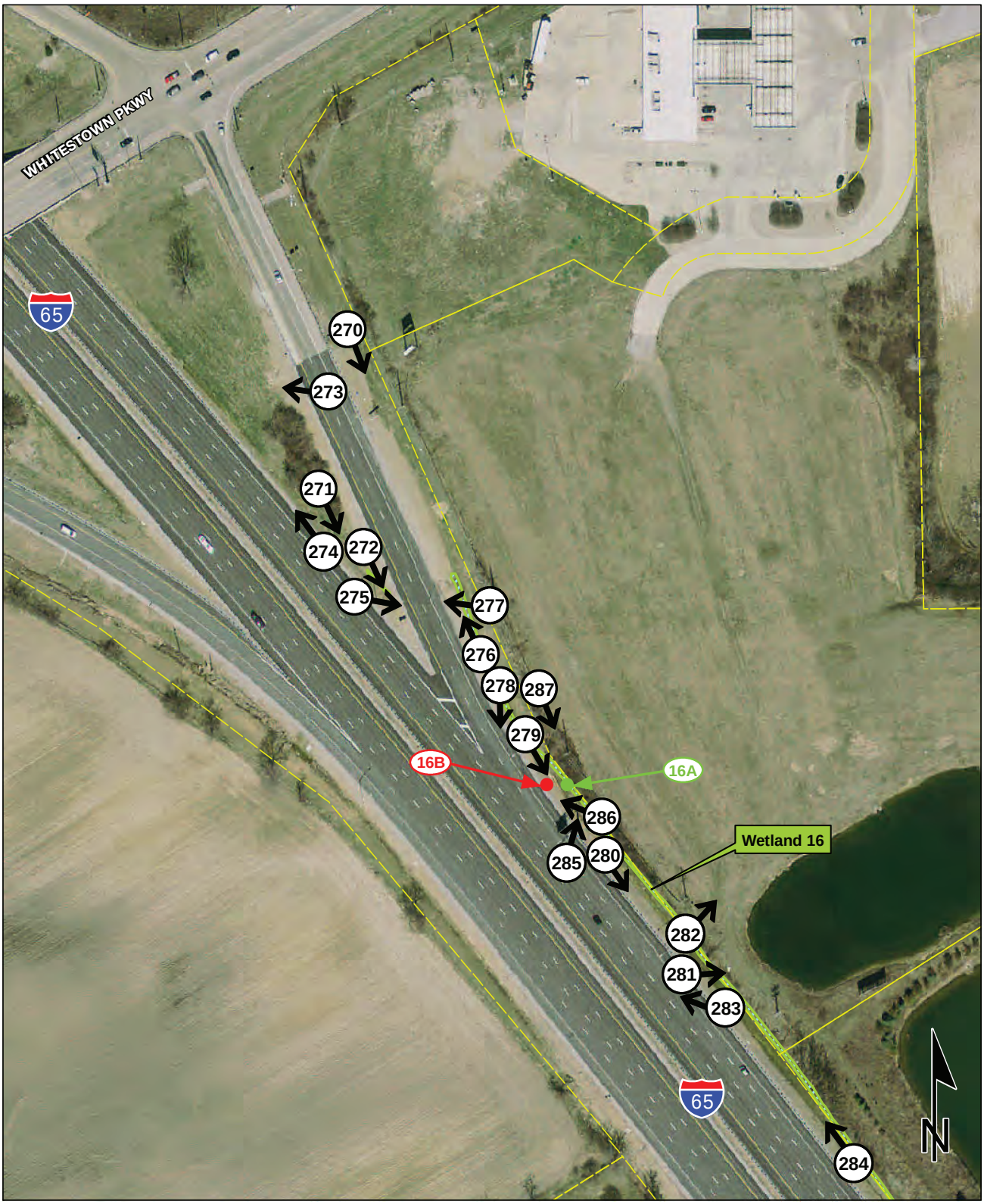
INDIANA STATEWIDE AERIAL IMAGERY FLOWN IN 2011

Legend

- Wetland Point
- Upland Point
- Roadside Ditch
- Tributary
- Wetland Polygon
- Property Line

Photo Key Map (Whitestown Pkwy.)
Des. No. 1400071, I-65 and SR 267 / I-65 and CR 550 S
Existing Interchange Modification / New Interchange Construction
Boone County County, Indiana



0.025 0.0125 0 0.025 Miles

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

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INDIANA STATEWIDE AERIAL IMAGERY FLOWN IN 2011

Legend

- Wetland Point
- Upland Point
- Roadside Ditch
- Tributary
- Wetland Polygon
- Property Line

Photo Key Map (I-865)
Des. No. 1400071, I-65 and SR 267 / I-65 and CR 550 S
Existing Interchange Modification / New Interchange Construction
Boone County County, Indiana

0.08 0.04 0 0.08 Miles

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

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INDIANA STATEWIDE AERIAL IMAGERY FLOWN IN 2011

Legend

- Wetland Point
- Upland Point
- Roadside Ditch
- Tributary
- Wetland Polygon
- Property Line

D-7

ATTACHMENT

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD): 3/20/18

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:
Kirk Roth, Corradino, LLC
200 S. Meridian Street
Indianapolis, IN 46225

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:

This project, DES 1400071 and DES 1702147, is being developed by the Indiana Department of Transportation (INDOT) with federal aid. The project is located in Boone County, and includes four interchanges, beginning approximately 4.5 miles northwest of the I-465/I-865 interchange on the northwest side of Indianapolis, Indiana, and extending southeast to the I-465/I-865 interchange. The project includes the following:

- the modification of the existing I-65 interchange with SR 267
- the addition of a new I-65 interchange at Boone County Road 550 South (CR 550S)
- a ramp revision at Whitestown Parkway
- a ramp revision at the I-865 interchange

At SR 267, INDOT proposes to reconstruct the existing diamond interchange with a more efficient, higher capacity urban interchange. Additional thru lanes will be provided along SR 267. The “kink” formed by the intersection of existing Perry Worth Road, CR400E, and Albert White Boulevard intersection, east of the interchange, will be straightened out with an east-west roadway segment. Approximately 12.7 acres of new permanent right-of-way will be acquired.

At CR 550S, INDOT proposes to construct a new urban interchange. The interchange will provide an adequate number of CR 550S travel lanes to operate at an adequate level in the 2040 design year. Etter Ditch flows from northeast to southwest through the northwest quadrant of the proposed interchange and will

likely require some relocation to accommodate the future southbound I-65 exit ramp to CR 550S.

INDOT proposes to construct minor pavement widening and restriping at the existing southbound I-65 to eastbound I-865 exit and at the existing northbound I-65 to Whitestown Parkway exit to improve traffic operations at these exits. Improvements at the I-865 exit are anticipated to fit within the existing right-of-way. Minor right-of-way purchase may be required for the Whitestown Parkway improvements.

(USE THE ATTACHED TABLE TO DOCUMENT MULTIPLE WATERBODIES AT DIFFERENT SITES)

State: Indiana County: Boone City: Lebanon, Whitestown
Center coordinates of site (lat/long in degree decimal format):
Lat. 39.952908°, Long. -86.360667°

Name of nearest waterbody: Fishback Creek, Etter Ditch, Green Ditch

Identify (estimate) amount of waters in the review area:
Non-wetland waters: 1577 linear feet at 8.0 ft. width and 975 linear feet at 6.0 ft. width (2552 linear feet total)
Cowardin Class: R4SBCx
Stream Flow: Intermittent
Wetlands: 2.733 acres and 7448 linear feet
Cowardin Class: PEM

Name of any water bodies on the site that have been identified as Section 10 waters:
Tidal:
Non-Tidal:

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

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

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring

"pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable. This preliminary JD finds that there *"may be"* waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below):

X Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: **Corradino, LLC**.

X Data sheets prepared/submitted by or on behalf of the applicant/consultant.

☐ Office concurs with data sheets/delineation report.

☐ Office does not concur with data sheets/delineation report.

☐ Data sheets prepared by the Corps: .

☐ Corps navigable waters' study: .
☐ U.S. Geological Survey Hydrologic Atlas: .
☐ USGS NHD data.
☐ USGS 8 and 12 digit HUC maps.
X U.S. Geological Survey map(s). Cite scale & quad name: 1:20,000 Zionsville/Fayette.
X USDA Natural Resources Conservation Service Soil Survey. Citation: NRCS Soil Survey – Boone County, Indiana.
X National wetlands inventory map(s). Cite name: Water Resources Des. No. 1400071, I-65 and SR 267 / I-65 and CR 550 S Existing Interchange Modification / New Interchange Construction Boone County County, Indiana.
☐ State/Local wetland inventory map(s): .
X FEMA/FIRM maps: Clinton Co, Indiana.
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
X Photographs: X Aerial (Name & Date): Indiana Statewide Aerial Imagery 2011.
or X Other (Name & Date): October 14 and 21, 2016; October 17, November 13, 2017; January 11, 2018, Corradino, LLC

☐ Previous determination(s). File no. and date of response letter: .
☐ Other information (please specify): .

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

_____ March 20, 2018_____

Signature and date of Regulatory Project Manager (REQUIRED)

Signature and date of person requesting preliminary JD (REQUIRED, unless obtaining the signature is impracticable)

Site Number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (Acreage)	Estimated amount of aquatic resource in review area (Linear Feet)	Type of aquatic resource	Geographic authority to which the aquatic resource "may be" subject
Etter Ditch	39.959846	-86.374607	N/A	1577	Non-wetland	Section 404
UNT to Etter Ditch	39.960480	-86.373096	N/A	975	Non-wetland	Section 404
1	39.982724	-86.394085	0.01	N/A	Wetland	Section 404
2	39.982298	-86.394384	0.73	N/A	Wetland	Section 404
3	39.981228	-83.393020	N/A	1068	Wetland	Section 404
4	39.978745	-86.397906	0.01	N/A	Wetland	Section 404
5	39.980280	-86.396155	0.02	N/A	Wetland	Section 404
6	39.980502	-86.396556	N/A	1176	Wetland	Section 404
7	39.981168	-86.395886	0.03	N/A	Wetland	Section 404
8	39.980382	-86.394897	0.08	N/A	Wetland	Section 404
9	39.981490	-86.395346	0.005	N/A	Wetland	Section 404
10	39.980444	-86.394078	0.30	N/A	Wetland	Section 404
11	39.980531	-86.393645	1.54	N/A	Wetland	Section 404
13	39.963195	-86.371300	0.0 (no impact)	N/A	Wetland	Section 404
14	39.962043	-86.372316	0.003	N/A	Wetland	Section 404
15	39.964487	-86.375320	0.005	N/A	Wetland	Section 404
JAR#1	39.958320	-86.366566	N/A	75	Wetland	Section 404
JAR#2	39.959293	-86.367808	N/A	64	Wetland	Section 404
JAR#3	39.963277	-86.372992	N/A	20	Wetland	Section 404
JAR#4	39.962537	-86.372061	N/A	30	Wetland	Section 404
JAR#5	39.959667	-86.368527	N/A	36	Wetland	Section 404

JAR#6	39.959206	-86.367976	N/A	18	Wetland	Section 404
JAR#7	39.958919	-86.367614	N/A	48	Wetland	Section 404
JAR#8	39.960573	-86.375660	N/A	66	Wetland	Section 404
16	39.945028	-86.350874	N/A	1094	Wetland	Section 404
17	39.935792	-86.343566	N/A	2076	Wetland	Section 404
18	39.978176	-86.391287	N/A	1677	Wetland	Section 404


Lebanon
W 170th St
W County Road 200 S
Whitestown
E County Road 300 S
W 146th St
W 131st St
W 116th St
Zionsville
W Oak St
W 106th St
W 96th St
W 86th St
Boone
Hendricks
Lizton
Pittsboro
Brownsburg
W 71st St
W 62nd St
W 56th St
Meridian Hills
Eagle Creek Park
W 30th St
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), Mapmyindia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Appendix I

Noise Report

David Cleveland

From: Miller, Brandon <BraMiller1@indot.IN.gov>
Sent: Monday, May 07, 2018 10:24 AM
To: Richard Connolly
Cc: Bales, Ronald; Hinkle, Meghan; David Cleveland; Joshua Cook (jlcook@HNTB.com); Walls, Steven
Subject: Des No 1400071 and 1702147, I-65/SR 267 Interchange Modification and I-65/CR 550 New Interchange, Boone County, Indiana (Noise Report)

A traffic noise analysis report was completed by HNTB Corporation in May 2018 to evaluate potential traffic noise impacts for the proposed I-65/SR 267 interchange modification and I-65/CR 550 new interchange project in Boone County, Indiana. Traffic noise was evaluated at all receptors within 500 feet of edge of pavement within the study area. Traffic noise levels were evaluated for the existing (2016) and projected (2040) traffic volumes for the build alternative.

This report evaluated potential noise impacts for the proposed improvements for the I-65/SR 267 interchange modification and the I-65/CR 550 new interchange project in compliance with the Federal Highway Administration's (FHWA) Procedures for Abatement of Highway Traffic Noise and Construction Noise as presented in the Code of Federal Regulations, Title 23 Part 772 (23 CFR 772) and the Indiana Department of Transportation (INDOT) *Traffic Noise Analysis Procedure* (2017).

Existing modeled (2016) peak hour noise levels ranged from 56.5 to 72.7 dBA. Predicted design year (2040) noise levels would approach or exceed the Noise Abatement Criteria (NAC) at three (3) receptors resulting in the need to evaluate noise abatement. Noise abatement was analyzed, however no noise barrier met both the feasibility and reasonableness criterion established by the INDOT *Traffic Noise Analysis Procedure* (2017).

Based on the studies thus far accomplished, the State of Indiana has not identified any location where noise abatement is likely. A re-evaluation of the noise analysis will occur during final design. If during final design it has been determined that conditions have changed such that noise abatement is feasible and reasonable, the abatement measures might be provided. The final decision on the installation of any abatement measure(s) will be made upon the completion of the project's final design and the public involvement process.

This email will serve as INDOT's approval of the traffic noise analysis report for the proposed I-65/SR 267 interchange modification and I-65/CR 550 new interchange project (Des 1400071 and 1702147).

Brandon Miller
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TRAFFIC NOISE ANALYSIS

I-65/SR 267 Interchange Modification and I-65/CR 550 New Interchange

Project Numbers: 1400071 and 1702147

Boone County, Indiana

Prepared by:

HNTB

111 Monument Circle, Suite 1200
Indianapolis, IN 46204

May 2018

EXECUTIVE SUMMARY

This report evaluates the potential noise impacts of the proposed improvements within the I-65/SR 267 Interchange Modification (Des. 1400071) and I-65/CR 550 New Interchange Project (Des. 1702147) in conformance with corresponding Federal regulations and guidance, and the National Environmental Policy Act (NEPA). The noise analysis presents the existing and future acoustical environment at various receptors located near both interchanges.

Existing noise level measurements were conducted on December 19, 2017 at five representative sites in the project corridor. A 20-minute measurement was taken at each site. The measurements were made in accordance with FHWA and INDOT guidelines using an integrating sound level analyzer meeting American National Standard Institute (ANSI) and International Electrotechnical Commission (IEC) Type 1 specifications. Traffic counts were taken concurrently with the noise measurements.

The latest version of the FHWA's Traffic Noise Model, TNM®2.5[1], was used to model existing (2016) and design year (2040) worst hourly traffic noise levels within the I-65/SR 267 and I-65/CR 550 study areas. Twenty-three (23) noise receivers representing the 23 receptors were modeled in the Existing and No Build conditions. Due to anticipated displacements of Receivers 18 and 19, twenty-one (21) receivers (21 receptors) were modeled in the Build condition.

Existing peak hour (2016) noise levels ranged from 56.5 to 72.7 dBA L_{eq}(1h). Residential noise levels ranged from 56.5 to 67.7 dBA L_{eq}(1h).

Predicted future design year (2040) noise levels adjacent to the proposed project would approach or exceed the NAC at three receiver locations representing three receptors consisting of three residences. The noise levels at these three receptors would range from 66.6 to 67.0 dBA L_{eq}(1h).

One noise barrier (Noise Barrier 1) was modeled in the study area. While Noise Barrier 1 would be considered a feasible abatement measure, in order for Noise Barrier 1 to achieve INDOT's design goal of 7.0 dB(A) reduction for a majority of benefitted first row receivers, it would exceed the maximum allowable cost of $25,000 per benefitted receptor. Noise Barrier 1 would be approximately 1,641 feet in length and would range from 22-24 feet in height. The estimated cost of Noise Barrier 1 would be approximately $1,171,643, or approximately $390,547 per benefitted receptor. The cost per benefitted receptor exceeds the maximum allowable cost of $25,000 per benefitted receptor, therefore this noise barrier would not be reasonable. No other impacts were identified in the study area; therefore, no other noise barriers were evaluated.

Based on the studies thus far accomplished, the State of Indiana has not identified any locations where noise abatement is likely. Noise abatement at the location identified in Table 5 is based upon preliminary design costs and design criteria. Noise abatement has been found to be feasible, but not reasonable as the cost exceeded the cost threshold of $25,000 per benefited receptor established by the INDOT Traffic Noise policy. A re-evaluation of the noise analysis will occur during final design. If during final design it has been determined that conditions have changed such that noise abatement is feasible and reasonable, the abatement measures might be provided. The final decision on the installation of any

[1] M.C. Lau, C.S.Y. Lee, J.L. Rochat, E.R. Boeker, and G.C. Fleming. FHWA Traffic Noise Model® Users Guide (Version 2.5 Addendum). Federal Highway Administration, April 2004

abatement measure(s) will be made upon the completion of the project's final design and the public involvement processes.

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Noise Analysis Report

1.0 INTRODUCTION

The Indiana Department of Transportation (INDOT) is proposing to improve the I-65 and SR 267 Interchange and construct a new interchange at I-65 and CR 550 in Boone County Indiana. At I-65 and SR 267, improvements would include reconfiguring the interchange geometry to provide free flow traffic for all movements within the interchange. This would include a new bridge at I-65 and SR 267 to accommodate the new lane configuration.

The proposed project would reconfigure the existing interchange. This reconfiguration would include the construction or modification of the eight ramps listed below:

- I-65 northbound to SR 267 (modification of existing ramp)
- I-65 southbound to SR 267 (modification of existing ramp)
- SR 267 to I-65 northbound (modification of existing ramp)
- SR 267 to I-65 southbound (modification of existing ramp)
- I-65 northbound to CR 550 (new ramp)
- I-65 southbound to CR 550 (new ramp)
- CR 550 to I-65 southbound (new ramp)
- CR 550 to I-65 northbound (new ramp)

Two future restriping projects are also planned to the south of the proposed new interchange at I-65 and CR 550. The first project would modify the I-65 NB off-ramp at Whitestown Parkway to increase the radius of the shared through-right exit to Whitestown Parkway. This will move the existing lanes slightly further from the through traffic lanes. The second project would modify I-65 SB at the I-865 interchange such that the existing four lane configuration would be restriped from the existing two-through, two-off configuration to a two-through, one-shared, and one-off configuration. The shared lane would extend just prior to the I-865 bridge over I-65, where two through-lanes would continue. Per coordination with INDOT ES, these two projects are not Type 1 projects and therefore do not require analysis.

The project area consists primarily of mowed and maintained interstate right-of-way, roadside ditches as well as agricultural and residential land uses. The proposed project area is located on the southern edge of the city of Lebanon, unincorporated Boone County and within the town limits of Whitestown, Indiana.

The project location is shown on Figure 1.

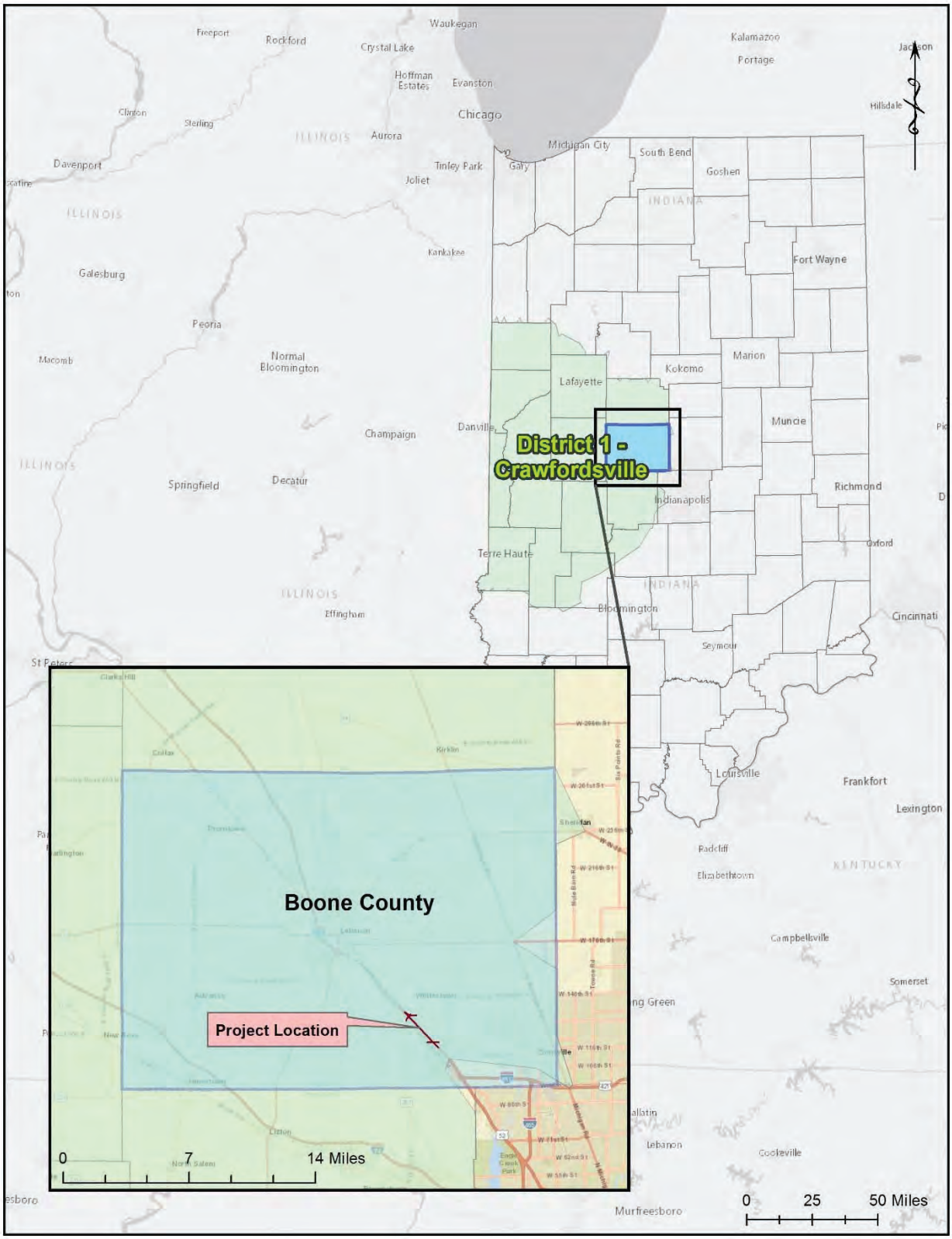


Figure 1. Project Location Map

2.0 NOISE ANALYSIS OVERVIEW

This report evaluates the potential noise impacts of the proposed improvements within the existing I-65/SR 267 interchange and the new I-65/CR 550 interchange preferred alternatives in conformance with corresponding Federal regulations and guidance, and the National Environmental Policy Act (NEPA). The noise analysis presents the existing and future acoustical environment at various receptors located within the study area.

The determination of noise abatement measures and locations is in compliance with the Federal Highway Administration's (FHWA) Procedures for Abatement of Highway Traffic Noise and Construction Noise as presented in the Code of Federal Regulations, Title 23 Part 772 (23 CFR 772) and the INDOT's "Traffic Noise Analysis Procedure".

Basic Noise Information

Noise is defined as unwanted and disruptive sound. The ear is sensitive to this pressure variation and perceives it as sound. The intensity of these pressure variations causes the ear to discern different levels of loudness. These pressure differences are most commonly measured in decibels (dB).

The dB is the unit of measurement for sound. The decibel scale audible to humans spans approximately 140 dB. A level of zero dB corresponds to the lower limit of audibility, while 140 dB produces a sensation more akin to pain than sound. The dB scale is a logarithmic representation of the actual sound pressure variations. Therefore, a 26 percent change in the energy level only changes the sound level one-dB. The human ear would not detect this change except in an acoustical laboratory. A doubling of the energy level would result in a three-dB increase, which would be barely perceptible in the natural environment. A tripling in energy sound level would result in a clearly noticeable change of five-dB in the sound level. A change of ten times the energy level would result in a ten-dB change in the sound level. This would be perceived as a doubling (or halving) of the apparent loudness.

The human ear has a non-linear sensitivity to noise. To account for this in noise measurements, electronic weighting scales are used to define the relative loudness of different frequencies. The "A" weighting scale is widely used in environmental work because it closely resembles the non-linearity of human hearing. Therefore, the unit of measurement for an A-weighted noise level is dBA.

Traffic noise is not constant. It varies as each vehicle passes through a certain location. The time-varying characteristics of environmental noise are analyzed statistically to determine the duration and intensity of noise exposure. In an urban environment, noise is made up of two distinct parts. One is ambient or background noise. Wind noise and distant traffic noise make up the acoustical environment surrounding the project. These sounds are not readily recognized, but combine to produce a non-irritating ambient sound level. This background sound level varies throughout the day, being lowest at night and highest during the day. The other component of urban noise is intermittent and louder than the background noise. Transportation noise and local industrial noise are examples of this type of noise. It is for these reasons that environmental noise is analyzed statistically.

The statistical descriptor used for traffic noise is L_{eq}. L_{eq} is the constant, average sound level, which over a period of time contains the same amount of sound energy as the varying levels of the traffic noise. The L_{eq} correlates reasonably well with the effects of noise on people. It is also easily measurable with integrating sound level meters. The time period for traffic noise is 1-hour. Therefore, the unit of measure for traffic noise is L_{eq}(1h) dBA.

Highway noise sources have been divided into five types of vehicles; automobiles, medium trucks, heavy trucks, Buses and Motorcycles. Each vehicle type is defined as follows[2]:

- Automobiles – all vehicles with two axles and four tires, includes passenger vehicles and light trucks, less than 10,000 pounds.
- Medium trucks – all vehicles having two axles and six tires, vehicle weight between 10,000 and 26,000 pounds.
- Heavy trucks – all vehicles having three or more axles, vehicle weight greater than 26,000 pounds.
- Buses – all vehicles designed to carry more than nine passengers.
- Motorcycles – all vehicles with two or three tires and an open-air driver/passenger compartment.

Noise levels produced by highway vehicles can be attributed to three major categories:

- Running gear and accessories (tires, drive train, fan and other auxiliary equipment)
- Engine (intake and exhaust noise, radiation from engine casing)
- Aerodynamic and body noise

Tire sound levels increase with vehicle speed but also depend upon road surface, vehicle weight, tread design and wear. Change in any of these can vary noise levels. At lower speeds, especially in trucks and buses, the dominant noise source is the engine and related accessories.

Noise Model and Analysis

The FHWA's Procedures for Abatement of Highway Traffic Noise and Construction Noise is presented in the Code of Federal Regulations, Title 23 Part 772 (23 CFR 772). This regulation, plus other guidance documents written to explain the regulation, sets forth the process for performing a traffic noise analysis. The process includes the following:

- Identify existing and proposed land uses in the study area;
- Determine existing noise levels:
    - through modeling, and
    - noise measurements with concurrent classification counts of vehicles passing the noise monitoring site;
- Validate predicted noise levels through comparison between measured and predicted levels;
- Model future design year traffic noise levels which will yield the worst hourly traffic noise on a regular basis (design hour noise levels);

[2] G.S. Anderson, C.S.Y. Lee, G.G. Fleming and C. Menge, "FHWA Traffic Noise Model®, Version 1.0 User's Guide", Federal Highway Administration, January 1998, p.60.

- Identify locations that would be exposed to a noise impact based upon the Noise Abatement Criteria (NAC) as presented in Table 1;
- Model noise abatement measures to mitigate the predicted design year traffic noise impacts; and
- Modeling must be performed with FHWA's most recent version of the Traffic Noise Model® (TNM).

INDOT's Noise Policy is the state's tool for implementing 23 CFR 772. The NAC, which is presented in 23 CFR 772, establishes the noise abatement criteria for various land uses. The noise level descriptor used is the equivalent sound level, L_{eq}, defined as the steady state sound level which, in a stated time period (usually one hour), contains the same sound energy as the actual time-varying sound.

Noise abatement measures will be considered when the predicted noise levels approach or exceed those values shown for the appropriate activity category in Table 1, or when the predicted traffic noise levels substantially exceed the existing noise levels. INDOT has defined the approach value to be within 1.0 dBA of the appropriate NAC[3] as shown in Table 1. INDOT has defined an increase in noise levels for which the future noise levels exceed the existing noise by 15.0 dBA as substantial.

TNM® is FHWA's "computer program for highway traffic noise prediction and analysis."[4] The following parameters are used in this model to calculate an hourly $L_{eq}(1h)$ at a specific receiver location:

- Distance between roadway and receiver;
- Relative elevations of roadway and receiver;
- Hourly traffic volume in light-duty (two axles, four tires), medium-duty (two axles, six tires), and heavy-duty (three or more axles) vehicles;
- Vehicle speed;
- Ground absorption; and
- Topographic features, including retaining walls and berms.

The I-65/SR 267 and I-65/CR 550 study area consists of residential, commercial, and agricultural, land uses. The criteria stated in Table 1 will help to determine whether or not the proposed project will produce noise levels that approach or exceed the NAC throughout the corridor.

[3] "Traffic Noise Analysis Procedure", Indiana Department of Transportation, 2017, Page 3 of 10.
[4] "FHWA Traffic Noise Model®, Version 1.0 Users Guide", Report Documentation Page.

Table 1: Noise Abatement Criteria (NAC)
Hourly A-Weighted Sound Level-Decibels (dBA)

Activity Category	Activity Criteria L_{eq}(1h)	Evaluation Location	Activity Description
A	57	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67	Exterior	Residential
C	67	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, daycare centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52	Interior	Auditoriums, daycare centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F.
F	N/A	N/A	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	N/A	N/A	Undeveloped lands that are not permitted.

Source: "Traffic Noise Analysis Procedure", Indiana Department of Transportation, 2017.

3.0 NOISE MEASUREMENTS

Existing noise level measurements were conducted on December 19, 2017 at five representative sites in the project corridor. A 20-minute measurement was taken at each site. The measurements were made in accordance with FHWA and INDOT guidelines using a Larson Davis LXT integrating sound level analyzer meeting ANSI and IEC Type 1 specifications. Traffic classification counts were taken concurrently with the noise measurements. The data collected at the five sites is presented in Table 2. The noise measurement sites, M-1 through M-5 are shown on Figure 2 in Appendix A. The field data sheets are presented in Appendix B and the sound level analyzer laboratory calibration certificates are presented in Appendix C of this report.

Table 2: Measured Existing Noise Levels
I-267 at I-65 and CR 550 at I-65
Boone County, IN

Field Site #	Figure #	Site Description	Date	Start Time	Duration	Traffic[1)*]							Noise Level, dBA L_{eq}(1h)
						Roadway	A[a]	MT[b]	HT[c]	MC[d]	Buses[e]	Speed mph	
M-1		Approximately 30' east of Perry Worth Road along the east side of I-65	12/19/2017	12:22pm	20:00	I-65 SB	792	66	594	0	0	70	75.1
						I-65 NB	1,230	87	558	0	0	70	
M-2		Approximately 61' east of Perry Worth Road along the east side of I-65	12/19/2017	11:32am	20:00	I-65 SB	1,272	72	495	0	0	70	74.9
						I-65 NB	1,080	99	630	0	0	70	
M-3		Approximately 21' west of ROW fence along the wast side of I-65	12/19/2017	10:49am	20:00	I-65 SB	1,230	87	444	0	0	70	69.1
						I-65 NB	1,158	75	585	0	0	70	
M-4		Approximately 53' west of I-65 adjacent to proposed development	12/19/2017	10:07am	20:00	I-65 SB	1,197	93	420	0	0	70	70.5
						I-65 NB	1,071	69	540	0	0	70	
M-5		Approximately 29' east of Perry Worth Road along the east side of I-65, north of SR 267	12/19/2017	9:10am	20:00	I-65 SB	1,188	66	585	0	0	70	68.7
						I-65 NB	1,380	63	336	0	0	70	

1) Vehicle counts classified as follows:
   a. Autos (A) defined as vehicles with 2-axles and 4-tires.
   b. Medium trucks (MT) defined as vehicles with 2-axles and 6-tires.
   c. Heavy trucks (HT) defined as vehicles with 3 or more axles.
   d. Motorcycle (MC) defined as vehicles with two or three-wheeled motorized vehicles.
   e. Buses defined as vehicles carrying more than 9 passengers.

*Aggregate segment volumes were distributed evenly across multiple lanes (3 lanes per direction). Side street volumes (Perry Worth Rd) were negligible

Source: HNTB Corporation, December 2017

Measured vs. Modeled

TNM® 2.5 was used to validate the predicted noise levels through comparison with the measured and predicted noise levels. Traffic was counted and classified concurrently during the noise measurement by vehicle type: cars, medium trucks, heavy trucks, and buses. During the field measurements the skies were overcast, the temperatures ranged from 37 to 44 degrees F and the winds were from the W to WSW at 8 to 11 mph. The traffic data from these five sites were used in the model. All five field sites modeled data compared within 3 dBA of the measured levels. The model is considered to be validated since all of the field measurements were within 3 dBA of the predicted value.

Table 3: Comparison of Measured and Modeled Noise Levels
SR 267 at I-65 and CR 550 at I-65
Boone County, IN

Field Site	Figure #	Noise Level, dBA L_{eq}(1h)		Difference in Noise Level, dBA L_{eq}(1h) (Modeled Minus Measured)
		Measured	Modeled	
M-1	2D	75.1	76.1	1.0
M-2	2C	74.9	76.4	2.5
M-3	2B	69.1	71.6	2.5
M-4	2A	70.5	73.1	2.6
M-5	2A	68.7	69.0	0.3

Source: HNTB Corporation, December 2017

4.0 NOISE MODELING

The latest version of the FHWA's Traffic Noise Model, TNM®2.5[5], was used to model existing (2016) and design year (2040) worst hourly traffic noise levels within the I-65/SR 267 and I-65/CR 550 study areas. Modeling limits were determined by the construction limits of the project. Modeled roadway segments were constrained to the project limits. Receivers were modeled where these limits would produce meaningful results, following FHWA's 8:1 (roadway length: receiver distance from edge of pavement) recommendation. Roadway segments were modeled to match these extents.[5] Upon establishing these modeling limits, receivers were placed where accurate modeling results could be obtained. Twenty-three (23) noise receivers representing the 23 receptors within 500 feet of the edge of the outside travel lane of the project, numbered 1 through 23, as shown in Appendix A, were modeled in the Existing and No Build conditions.

One recreational land use (Receiver 23), Boone's Pond Public Fishing Area, was identified within the project area. For this park, a separate algorithm was used to translate usage data into an appropriate number of receptors, based on converting total usage to equivalent residential units. The Indiana Department of Natural Resources (IDNR) was contacted on January 11, 2018 to determine usage data for this facility. A conservative yearlong average estimate of 4 users per day was used to determine number of receptors to assign to this receiver (receptor) in the noise model. The algorithm used to determine number of receivers (receptors) is as follows; 4 (daily number of users per day) / 2.52 (people on average per household) X 0.60 (percent of property within 500 feet) = 1 (number of receptors rounded up).

Due to relocations of Receivers 18 and 19, 21 receivers (21 receptors) were modeled in the Build condition. The results of the computer modeling are presented in Table 4.

Table 4: Design Hour Noise Levels, dBA L_{eq}(1h)
I-65/SR 267 and I-65/CR 550
Boone County, IN

Receiver ID	Noise Abatement Criteria (NAC)			Receptors	Noise Level		Increase (Future - Existing)	Impact
	Description	Category**	Criteria, L_{eq}(1h)		Existing L_{eq}(1h)	Future L_{eq}(1h)		
1	Residential	B	66	1	65.3	66.6	1.3	Y
2	Residential	B	66	1	65.3	66.8	1.5	Y
3	Residential	B	66	1	65.2	67.0	1.8	Y
4	Commercial	F	-	1	72.7	74.5	1.8	N
5	Commercial	F	-	1	67.6	69.9	2.3	N
6	Commercial	F	-	1	64.6	67.4	2.8	N
7	Commercial	F	-	1	72.2	73.7	1.5	N

[5] https://www.fhwa.dot.gov/environment/noise/traffic_noise_model/tnm_faqs/faq07.cfm#mibarriers1

Table 4: Design Hour Noise Levels, dBA L_{eq}(1h)
I-65/SR 267 and I-65/CR 550
Boone County, IN

8	Commercial	F	-	1	66.1	67.8	1.7	N
9	Commercial	F	-	1	63.8	65.4	1.6	N
10	Commercial	F	-	1	68.9	70.9	2.0	N
11	Commercial	F	-	1	69.0	70.6	1.6	N
12	Commercial	F	-	1	72.2	73.7	1.5	N
13	Commercial	F	-	1	64.9	66.4	1.5	N
14	Commercial	F	-	1	64.9	66.4	1.5	N
15	Commercial	F	-	1	65.4	66.9	1.5	N
16	Commercial	F	-	1	64.7	66.2	1.5	N
17	Commercial	F	-	1	64.8	66.5	1.7	N
18*	Commercial	F	-	1	64.9		--	N
19*	Residential	B	66	1	67.7		--	N
20	Residential	B	66	1	61.6	64.9	3.3	N
21	Residential	B	66	1	56.5	59.1	2.6	N
22	Commercial	F	-	1	56.5	58.7	2.2	N
23	Recreational	C	66	1	63.9	64.9	1.0	N

*Anticipated to be relocated as a result of the project
** NAC Category F results are disclosed for informational purposes only

5.0 IMPACT ASSESSMENT

Existing peak hour (2016) noise levels range from 56.5 to 72.7 dBA L_{eq}(1h). Residential noise levels ranged from 56.5 to 67.7 dBA L_{eq}(1h).

Predicted future design year (2040) noise levels adjacent to the proposed project would approach or exceed the NAC at three of the noise sensitive receptors. Noise levels at residential receivers not relocated by the project would range from 59.1 to 67.0 dBA L_{eq}(1h).

Predicted future noise levels increase over existing noise levels range from 1.5 to 3.3 dBA. Therefore, none of the predicted future noise levels would substantially exceed existing noise levels.

6.0 NOISE ABATEMENT MEASURES

A noise analysis identifies "where noise abatement is feasible and reasonable, and locations with impacts that have no feasible or reasonable noise abatement alternatives."[6]

Factors to be considered in determining noise abatement feasibility:

> "Acoustic Feasibility: INDOT requires that noise barriers achieve a 5dB(A) reduction at a majority (greater than 50%) of the impacted receptors. If a barrier cannot achieve this acoustic goal, abatement is considered to not be acoustically feasible.
>
> "Engineering Feasibility: INDOT requires noise abatement measures to be based on sound engineering practices and standards and requires that any measures be evaluated at the optimum location. For instances in which the roadway is located on fill and is at a higher location than nearby receptors, a barrier will be evaluated near the shoulder. For instances in which the roadway is located below the nearby receptors, a barrier will be evaluated near the edge of the right-of-way near the receptors. In addition, noise barriers require long, uninterrupted segments of barrier to be feasible. As such, if there are existing access points and/or driveways, it is not feasible to construct effective noise barriers for the roadway.
>
> "Engineering feasibility also takes into account topography, drainage, safety, barrier height, utilities, and access/maintenance needs (which may include right-of-way considerations). In situations where engineering considerations make noise barriers not feasible, the noise analysis will explicitly state the reasons (topography, drainage, safety, etc.). To be feasible, a mitigation measure must be acoustically feasible and must meet engineering requirements for constructability."[7]

Factors to be considered in determining reasonableness:

[6] "Traffic Noise Analysis Procedure", Indiana Department of Transportation, 2017, Page 8 of 10.

> "To determine cost effectiveness, the estimated cost of constructing a noise barrier (including installation and additional necessary construction such as foundations or guardrails) will be divided by the number of benefited receptors (those who would receive a reduction of at least 5 dB(A)). A base material and design cost of $25,000 or less per benefited receiver is currently considered to be cost-effective. Development in which a majority (more than 50%) of the receptors was in place prior to the initial construction of the roadway in its current state (functional classification) will receive additional consideration for noise abatement. The cost-effectiveness criteria used for these cases will be 20% greater (currently $30,000 per benefited receptor)." The estimated construction costs of a noise barrier are based on a unit cost of $30.00 per square foot.
>
> "INDOT's goal for substantial noise reduction is to provide at least a 7.0 dB(A) reduction for benefited first row receptors in the design year. However, conflicts with adjacent lands may make it impossible to achieve substantial noise reduction at all impacted first row receptors. Therefore, the noise reduction design goal for Indiana is 7dB(A) for a majority (greater than 50%) of the impacted first row receptors.."
>
> "Consideration and Obtaining Views of Residents and Property Owners." "A survey will be mailed to each benefited resident. If the property owner is different from the current resident, both the resident and the property owners are surveyed. The concerns and opinions of the property owner and the unit occupants will be balanced with other considerations in determining whether a barrier is appropriate for a given location."

Since impacts to three receivers were identified, one noise barrier (Noise Barrier 1) was modeled in the study area. While Noise Barrier 1 would be considered a feasible abatement measure, in order for Noise Barrier 1 to achieve INDOT's design goal of 7.0 dB(A) reduction for a majority of benefitted first row receivers, it would exceed the maximum allowable cost of $25,000 per benefitted receptor. Noise Barrier 1 would be approximately 1,641 feet in length and would range from 22-24 feet in height. The estimated cost of Noise Barrier 1 would be approximately $1,171,643, or approximately $390,547 per benefitted receptor. The cost per benefitted receptor exceeds the maximum allowable cost of $25,000 per benefitted receptor, therefore this noise barrier would not be reasonable. No other impacts were identified in the study area; therefore, no other noise barriers were evaluated.

Table 5: Noise Barrier Summary
SR 267 at I-65 and CR 550 at I-65
Boone County, IN

Noise Barrier	Receivers	Feasible	Meets Design Goal	Benefitted Receptors	Length (ft)	Height (ft)	Square Footage (Sq ft)	Estimated Barrier Cost	Cost per Benefitted Receptor	Reasonable
Noise Barrier 1	1, 2, 3	Yes	Yes	3	1,641	22-24	39,055	$1,171,643	$390,547	No

7.0 UNDEVELOPED LANDS

The distances to 66 dB(A) L_{eq}(1h), which vary along the study area, were developed to assist local planning authorities in developing land use control over the remaining undeveloped lands within the study area to prevent development of incompatible land use. The data in Table 6 below provides information to aid local officials with jurisdiction over properties in proximity to the project. Large undeveloped lands without permitted/anticipated future development along the project corridor were modeled at 50-feet (from the nearest edge of pavement), 100 feet, and then 100 foot intervals. Sites were selected for this analysis at each location along the corridor where noise conditions are anticipated to change. Study Area 1 represents vacant land located adjacent to I-65. Study Area 2 represents vacant land adjacent to the I-65/CR 550 interchange, with distances expressed from edge of pavement (EOP). Study Area 3 represents vacant land adjacent to the I-65/SR 267 interchange. It is recommended that any future development proposed around the project be modeled with accurate survey data to avoid creating incompatible land uses adjacent to the project.

Table 6: Estimated Noise for Undeveloped Lands
I-65/SR 267 and I-65/CR 550
Boone County, IN

Study Area	50 feet	100 feet	200 feet	300 feet	400 feet	500 feet	600 feet	700 feet	800 feet
1	77.4	75.2	72.0	69.3	67.4	66.1	65.0	63.9	62.8
2	68.4	67.3	66.2	65.6	64.9	64.3	63.4	62.6	61.1
3	66.0	65.1	64.2	63.9	63.4	62.9	61.7	61.3	59.8

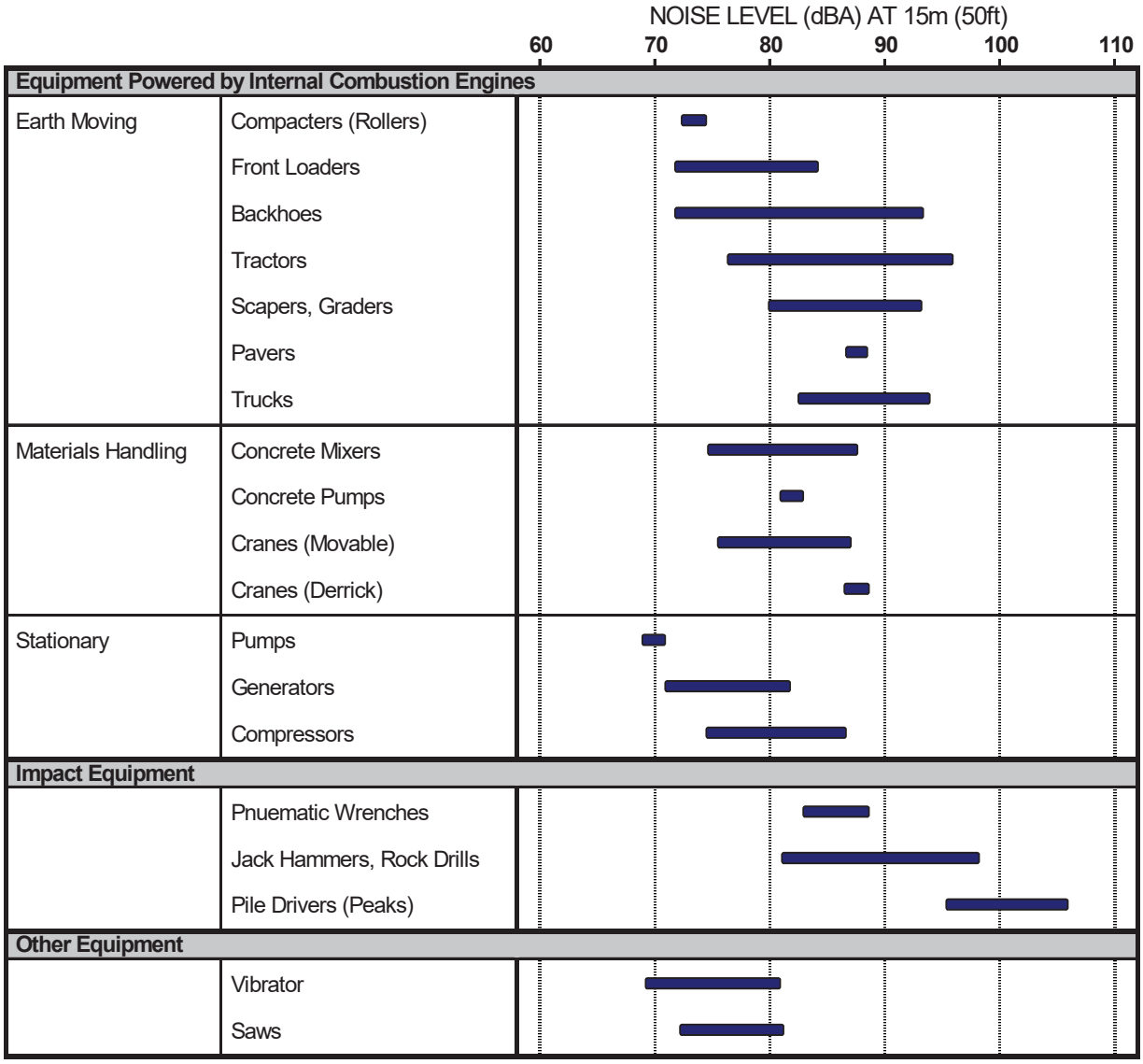
8.0 CONSTRUCTION NOISE

In addition to noise from traffic, construction activities themselves can produce increased noise of a temporary nature. INDOT will be sensitive to local needs and may make adjustments to work practices in order to reduce inconvenience to the public.

The major construction elements of this project are expected to be demolition, hauling, grading, paving, and bridge construction. Construction of the proposed improvements will result in a temporary increase in the ambient noise level within the study area. General construction noise impacts for passerby and those individuals living or working near the

project can be expected particularly from demolition, earth moving, pile driving, and paving operations. Equipment associated with construction generally includes backhoes, graders, pavers, concrete trucks, compressors, and other miscellaneous heavy equipment. Table 7 lists some typical peak operating noise levels at a distance of 15 m (50 feet), grouping construction equipment according to mobility and operating characteristics. Considering the relatively short-term nature of construction noise, impacts are not expected to be substantial. The transmission loss characteristics of nearby structures are believed to be sufficient to moderate the effects of intrusive construction noise.

Table 7: Construction Equipment Sound Levels



Equipment Powered by Internal Combustion Engines		
Earth Moving	Compacters (Rollers)	
	Front Loaders	
	Backhoes	
	Tractors	
	Scapers, Graders	
	Pavers	
	Trucks	
Materials Handling	Concrete Mixers	
	Concrete Pumps	
	Cranes (Movable)	
	Cranes (Derrick)	
Stationary	Pumps	
	Generators	
	Compressors	
Impact Equipment		
	Pnuematic Wrenches	
	Jack Hammers, Rock Drills	
	Pile Drivers (Peaks)	
Other Equipment		
	Vibrator	
	Saws	

SOURCE: U.S. Report to the President and Congress on Noise, February, 1972.

9.0 CONCLUSION

Based on the studies thus far accomplished, the State of Indiana has not identified any locations where noise abatement is likely. Noise abatement measures that were studied at the location evaluated were based upon preliminary design costs and design criteria. Noise abatement has been found to be feasible, but not reasonable as the cost exceeded the cost threshold of $25,000 per benefited receptor established by the INDOT Traffic Noise policy. A re-evaluation of the noise analysis will occur during final design. If during final design it has been determined that conditions have changed such that noise abatement is feasible and reasonable, the abatement measures might be provided. The final decision on the installation of any abatement measure(s) will be made upon the completion of the project's final design and the public involvement processes.

The viewpoints of the benefited residents and property owners are a major consideration in determining the reasonableness of highway traffic noise abatement measures for proposed highway construction projects. These viewpoints have been determined and addressed during the environmental phase of project development. The will and desires of the public are an important factor in dealing with the overall problems of highway traffic noise. INDOT will incorporate highway traffic noise consideration in on-going activities for public involvement in the highway program, i.e., and will reexamine the residents' and property owners' views on the desirability and acceptability of abatement during project development.

10.0 REFERENCES

Anderson, G. S., C.S.Y. Lee, G.G. Fleming and C. Menge, “FHWA Traffic Noise Model®, Version 1.0 User’s Guide”, Federal Highway Administration, January 1998, p. 60.

Lau, Michael C., Cynthia S. Y. Lee, Gregg G. Judith L. Rochat, Eric R. Boeker, and Gregg C. Fleming. FHWA Traffic Noise Model® Users Guide (Version 2.5 Addendum). Federal Highway Administration, April 2004.

“Traffic Noise Analysis Procedure”, Indiana Department of Transportation’s, 2017. http://www.in.gov/indot/files/2017%20INDOT%20Noise%20Policy.pdf

APPENDIX A
Modeling and Measurement Locations

Figure 2A. Receiver Locations

I-65/SR 267 Interchange Modification and I-65/CR 550 New Interchange
Project Numbers 1400071 and 1702147, Boone County, Indiana

Appendix I-25

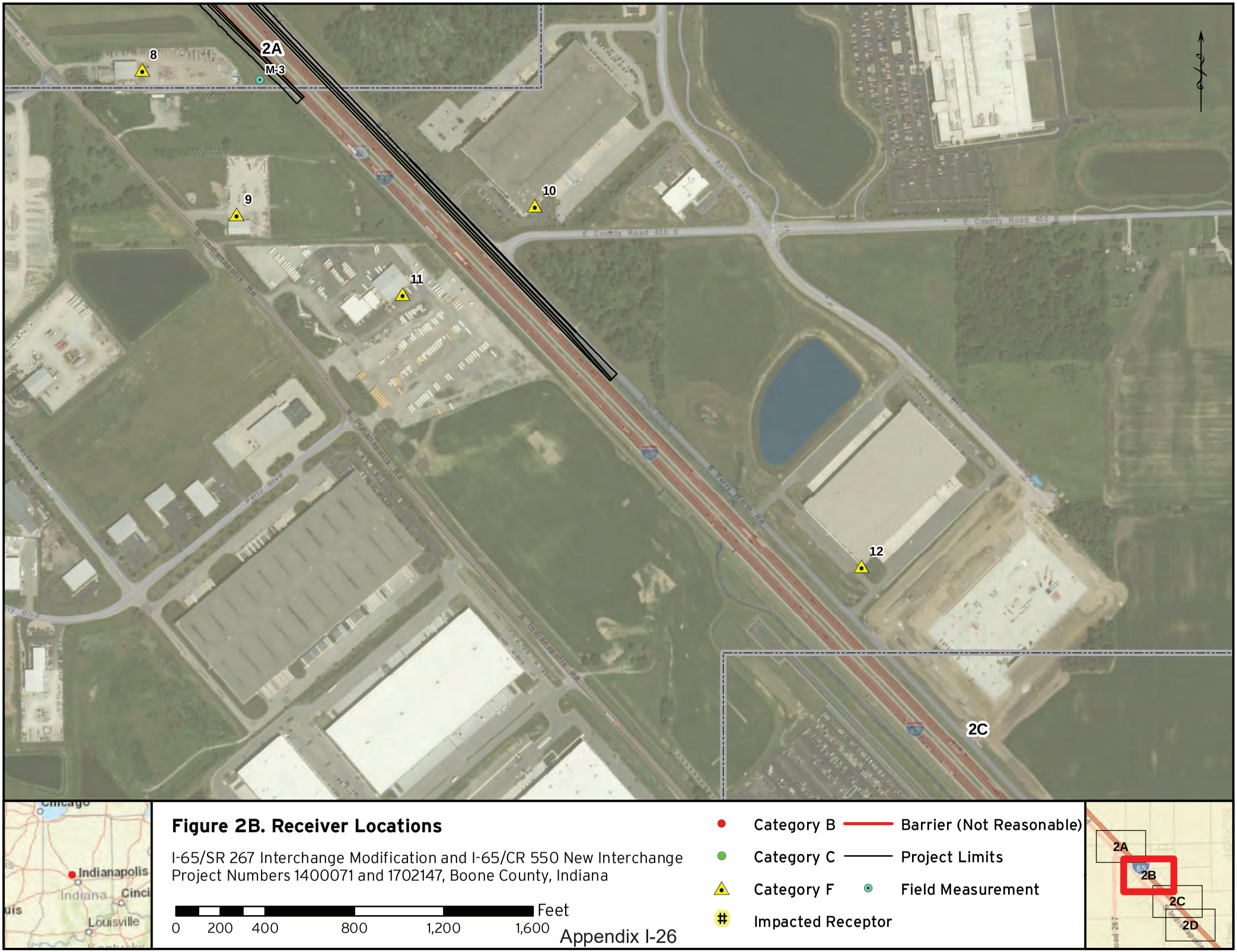


Figure 2B. Receiver Locations

I-65/SR 267 Interchange Modification and I-65/CR 550 New Interchange
Project Numbers 1400071 and 1702147, Boone County, Indiana

Appendix I-26

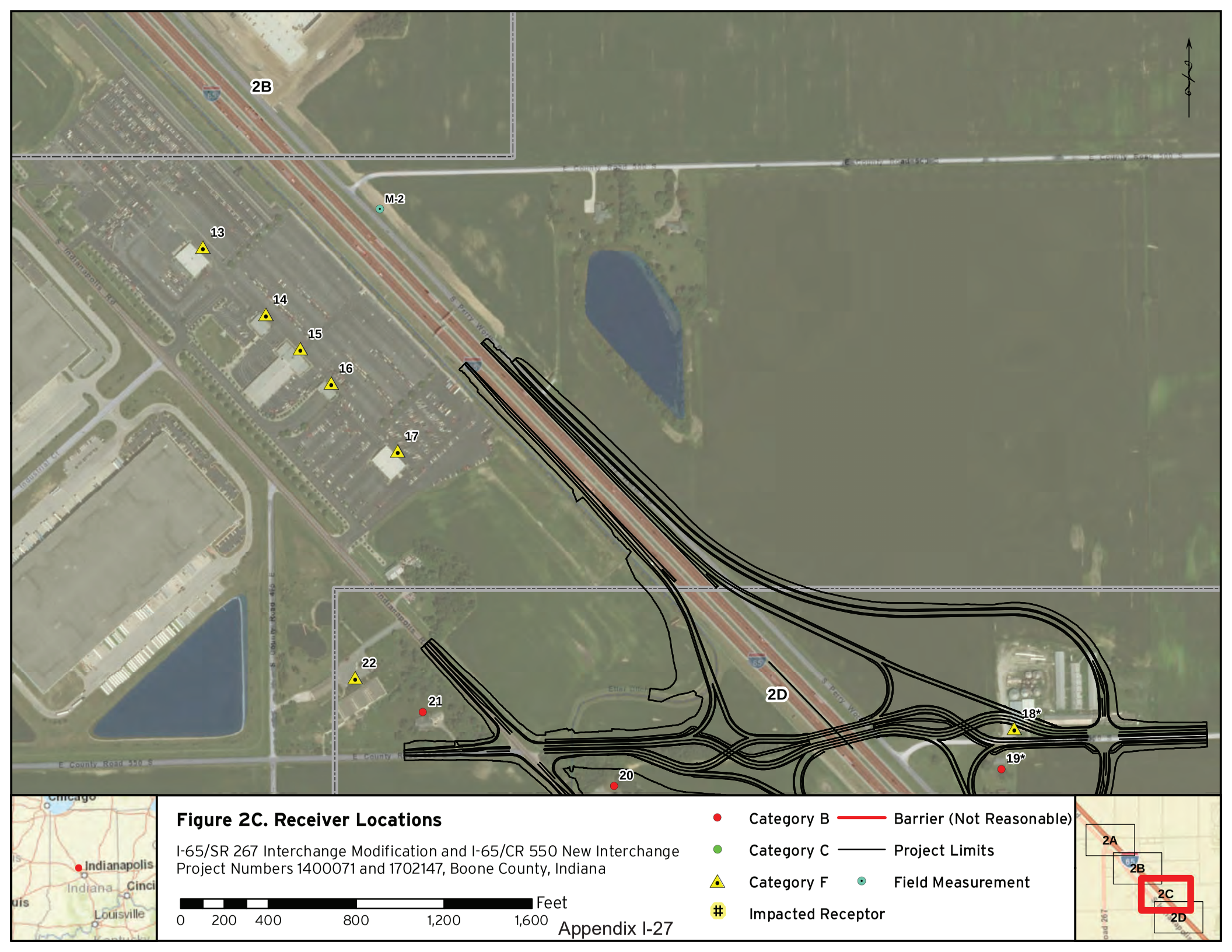


Figure 2C. Receiver Locations

I-65/SR 267 Interchange Modification and I-65/CR 550 New Interchange
Project Numbers 1400071 and 1702147, Boone County, Indiana

Feet
0 200 400 800 1,200 1,600

Category B — Barrier (Not Reasonable)
Category C — Project Limits
Category F — Field Measurement
Impacted Receptor

Appendix I-27

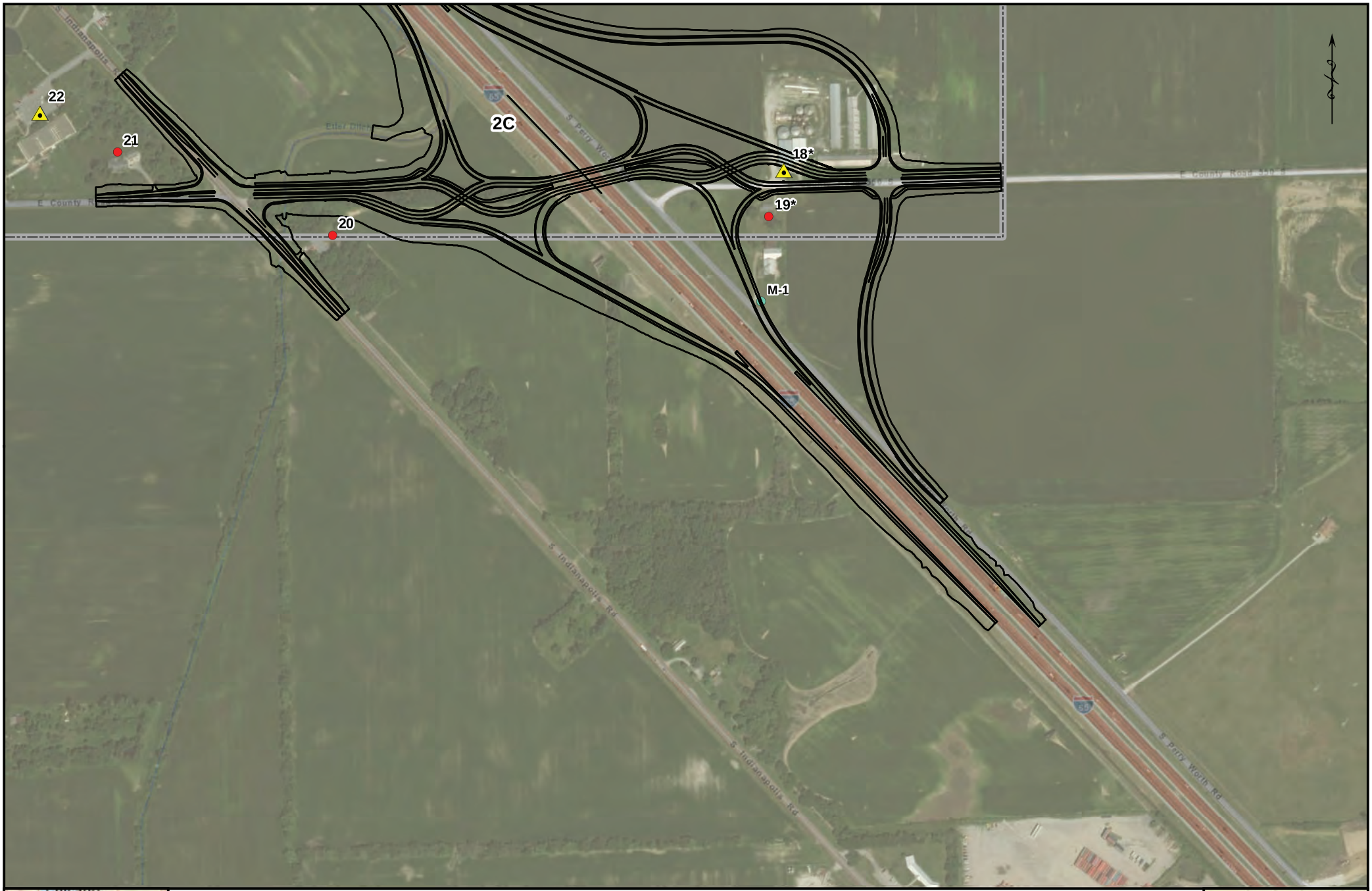
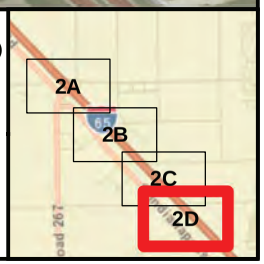


Figure 2D. Receiver Locations

I-65/SR 267 Interchange Modification and I-65/CR 550 New Interchange
Project Numbers 1400071 and 1702147, Boone County, Indiana

0 200 400 800 1,200 1,600 Feet

Category B — Barrier (Not Reasonable)
Category C — Project Limits
Category F — Field Measurement
Impacted Receptor



APPENDIX B
Field Measurement Data Sheets

HNTB

NOISE MEASUREMENT DATA SHEET

PROJECT: I-65/SR 267/CR550 JOB #: 65882 BY: RJC

SITE: M-1 DATE: 12-19-2017 TIME: 12:22 - 12:42

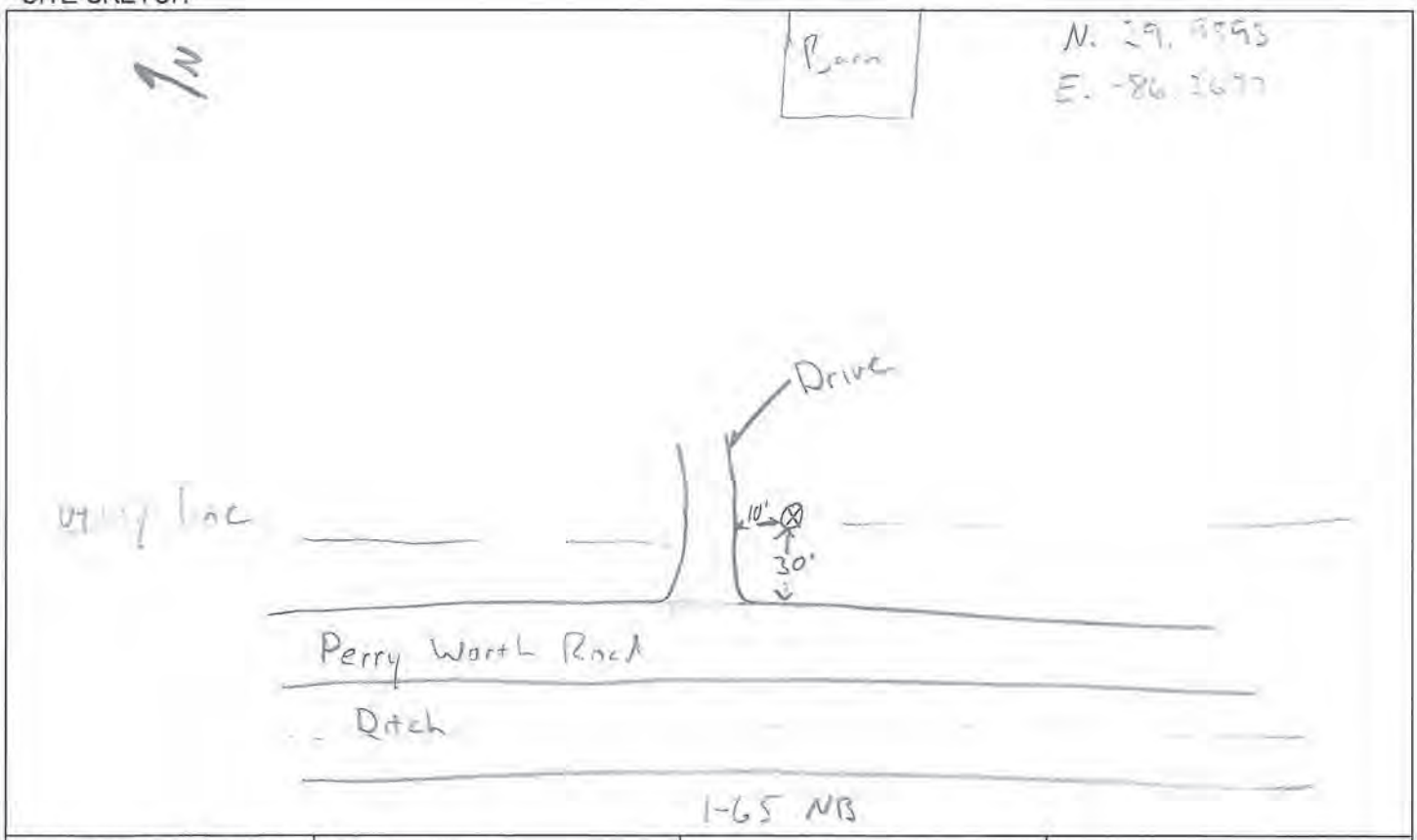
CALIBRATION: 113.8 at 1k Hz dB.

RESPONSE: FAST / SLOW WEIGHTING: A / C / LIN.

TRAFFIC DATA 20 min		
ROAD (Name/Dir)	I-65 SB	I-65 NB
AUTOS	264	410
MED TRKS	22	29
HVY TRKS	148	186
BUS		
MOTORCYCLE		
SPEED		

EQUIPMENT	
INSTRUMENT	
SLM MANUFACTURER	Larson Davis
SLM MODEL	LxT
SLM	S / N 0004527
PREAMPLIFIER – Type 1206	S / N 46631
MICROPHONE – Type 1225	S / N 166046
CALIBRATOR – Type 1251	S / N 12435

SITE SKETCH



MEASUREMENT DATA	Duration 20 min	Leq 75.1	

WEATHER DATA WIND SPEED (MPH) Calm DIR. W TEMP. 44 HUMIDITY 62 CLOUD COVER Overcast

BACKGROUND NOISE N/A

MAJOR SOURCES I-65

UNUSUAL EVENTS 32 cars on Perry Worth Road I-65 dominant source

OTHER NOTES

HNTB

NOISE MEASUREMENT DATA SHEET

PROJECT: I-65/SR 267/CR550 JOB #: 65882 BY: RJC

SITE: ML-02 DATE: 12-19-2017 TIME: 11:32 - 11:52

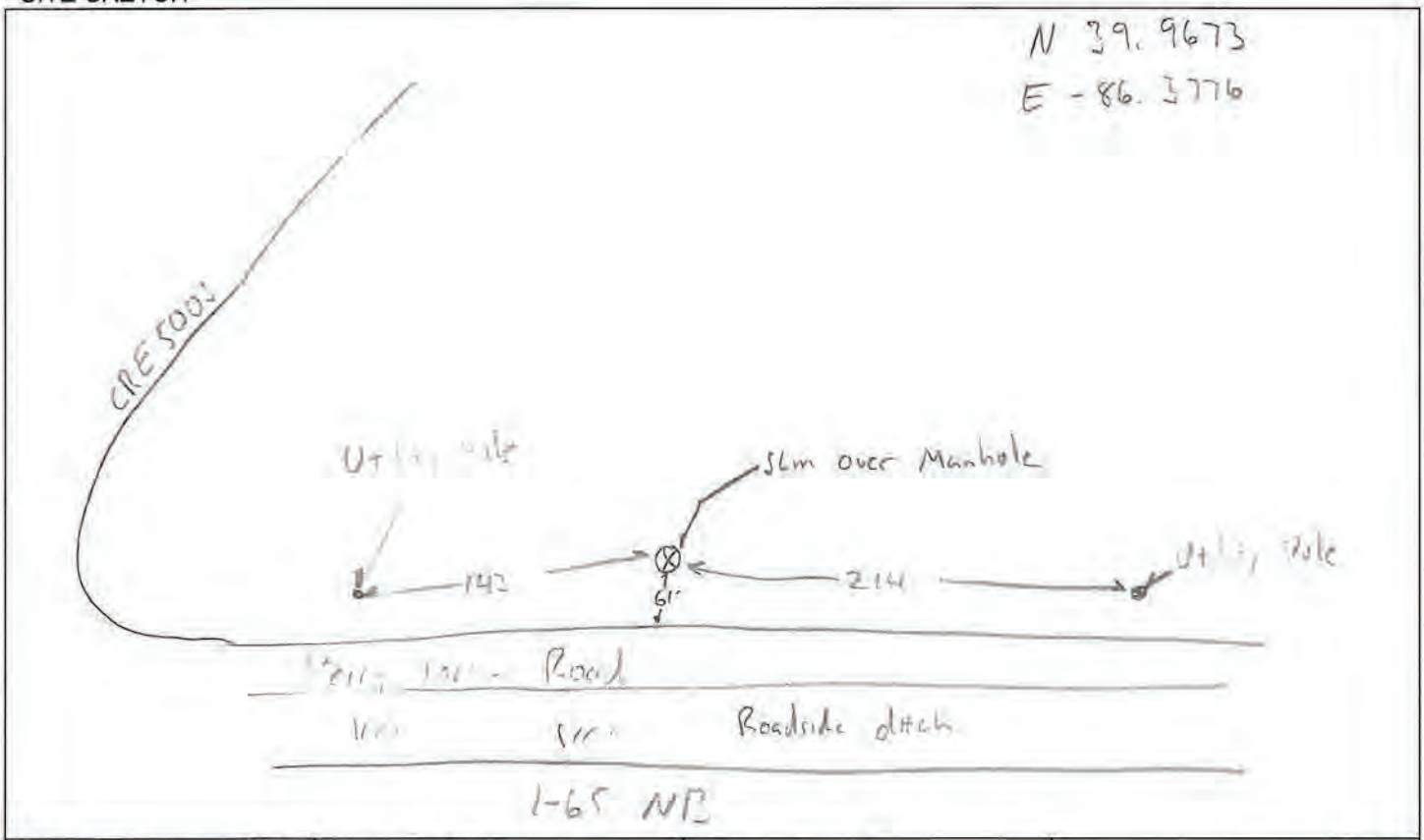
CALIBRATION: 113.8 at 1k Hz dB.

RESPONSE: FAST / SLOW WEIGHTING: A / C / LIN.

TRAFFIC DATA 20 min		
ROAD (Name/Dir)	I-65 SB	I-65 NB
AUTOS	424	360
MED TRKS	24	33
HVY TRKS	167	210
BUS		
MOTORCYCLE		
SPEED		

EQUIPMENT	
INSTRUMENT	
SLM MANUFACTURER	Larson Davis
SLM MODEL	LxT
SLM	S / N 0004527
PREAMPLIFIER – Type 1206	S / N 46631
MICROPHONE – Type 1225	S / N 166046
CALIBRATOR – Type 1251	S / N 12435

SITE SKETCH



MEASUREMENT DATA	Duration 20 min	Leq 74.9	

WEATHER DATA WIND SPEED (MPH) [illegible] DIR. [illegible] TEMP. [illegible] HUMIDITY 71 CLOUD COVER Overcast

BACKGROUND NOISE None / I-65

MAJOR SOURCES I-65 NB

UNUSUAL EVENTS None

OTHER NOTES 22 Autos 8 trucks on Perryworth I-65 was dominant throughout noise measurement

HNTB

NOISE MEASUREMENT DATA SHEET

PROJECT: I-65/SR 267/CR550 JOB #: 65882 BY: RJC

SITE: M-3 DATE: 12-19-2017 TIME: 10:49 - 11:09

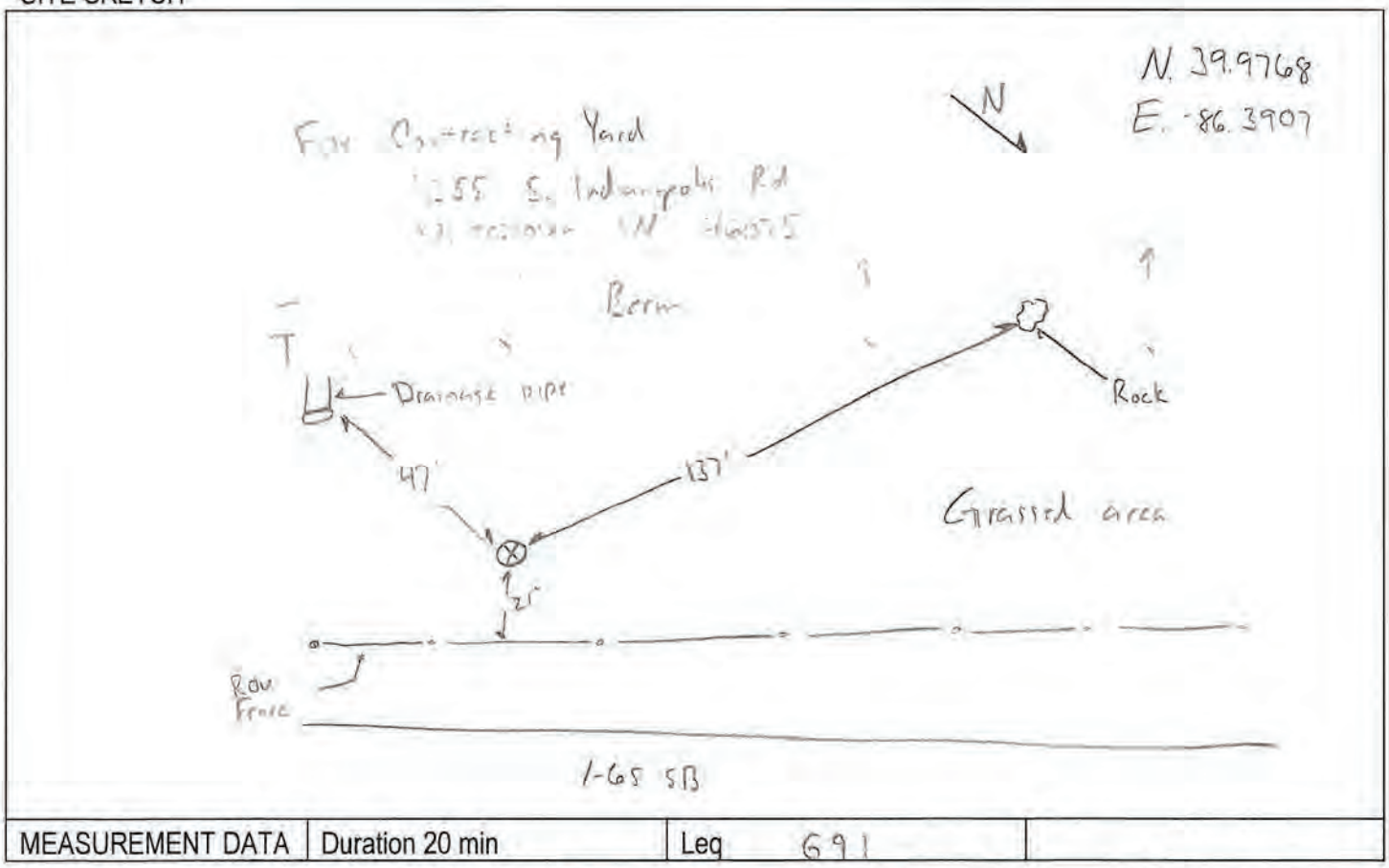
CALIBRATION: 113.8 at 1k Hz dB.

RESPONSE: FAST / SLOW WEIGHTING: A / C / LIN.

TRAFFIC DATA 20 min		
ROAD (Name/Dir)	I-65 SB	I-65 NB
AUTOS	410	386
MED TRKS	29	25
HVY TRKS	148	195
BUS		
MOTORCYCLE		
SPEED		

EQUIPMENT	
INSTRUMENT	
SLM MANUFACTURER	Larson Davis
SLM MODEL	LxT
SLM	S / N 0004527
PREAMPLIFIER – Type 1206	S / N 46631
MICROPHONE – Type 1225	S / N 166046
CALIBRATOR – Type 1251	S / N 12435

SITE SKETCH



MEASUREMENT DATA	Duration 20 min	Leq 69.1	

WEATHER DATA WIND SPEED (MPH) 8 DIR. W TEMP. 37 HUMIDITY 62 CLOUD COVER overcast

BACKGROUND NOISE None

MAJOR SOURCES I-65 SB

UNUSUAL EVENTS None

OTHER NOTES None

HNTB

NOISE MEASUREMENT DATA SHEET

PROJECT: I-65/SR 267/CR550 JOB #: 65882 BY: RJC

SITE: M-4 DATE: 12-19-2017 TIME: 10:07 - 10:27

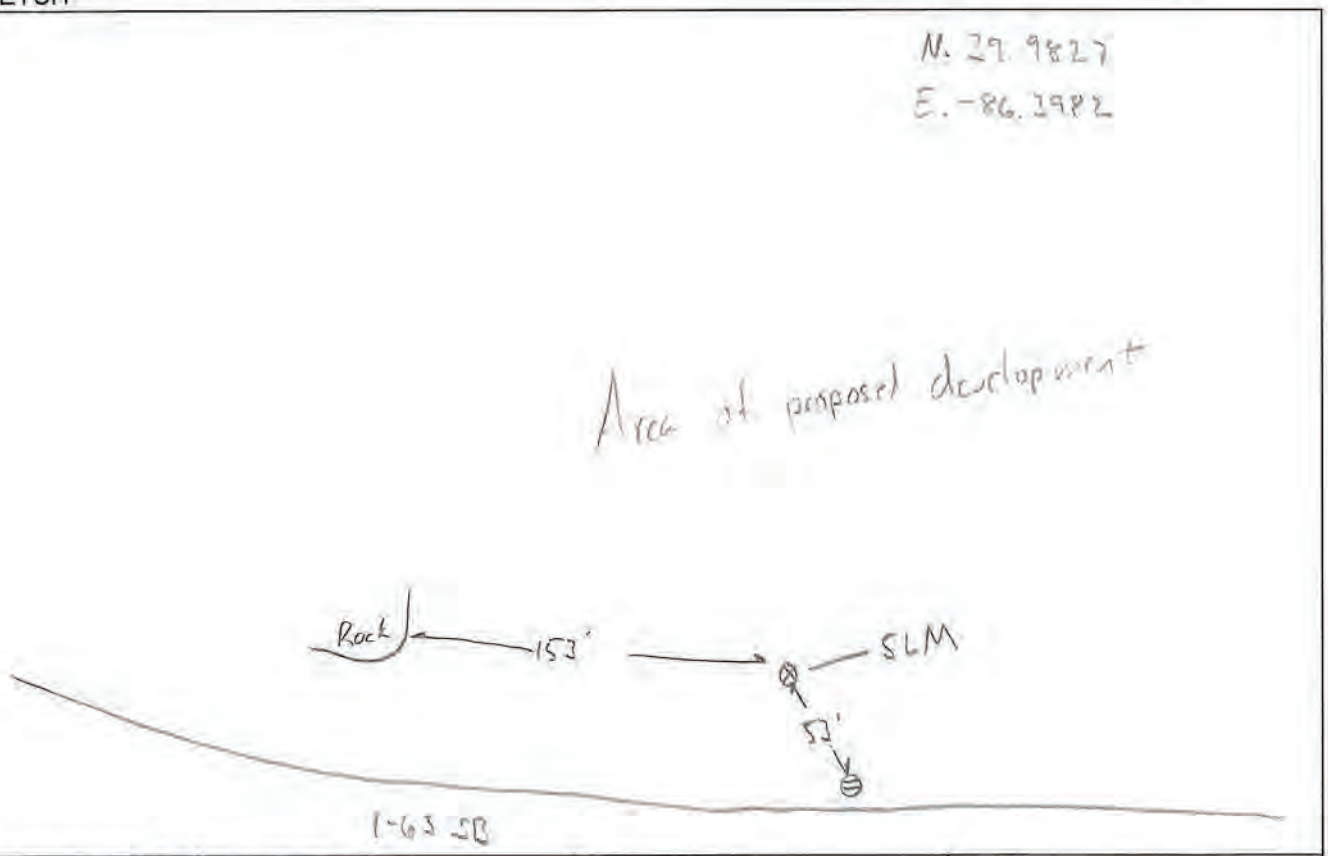
CALIBRATION: 113.8 at 1k Hz dB.

RESPONSE: FAST / SLOW WEIGHTING: A / C / LIN.

TRAFFIC DATA - 20 min		
ROAD (Name/Dir)	I-65 SB	I-65 NB
AUTOS	399	357
MED TRKS	31	23
HVY TRKS	140	180
BUS		
MOTORCYCLE		
SPEED		

EQUIPMENT	
INSTRUMENT	
SLM MANUFACTURER	Larson Davis
SLM MODEL	LxT
SLM	S / N 0004527
PREAMPLIFIER – Type 1206	S / N 46631
MICROPHONE – Type 1225	S / N 166046
CALIBRATOR – Type 1251	S / N 12435

SITE SKETCH



MEASUREMENT DATA	Duration 20 min	Leq 70.5	

WEATHER DATA WIND SPEED (MPH) 11 DIR. W TEMP. 38 HUMIDITY 75 CLOUD COVER Overcast

BACKGROUND NOISE I-65

MAJOR SOURCES I-65 SB

UNUSUAL EVENTS None

OTHER NOTES None

HNTB

NOISE MEASUREMENT DATA SHEET

PROJECT: I-65/SR 267/CR550 JOB #: 65882 BY: RJC

SITE: M-5 DATE: 12-19-2017 TIME: 9:10 - 9:30

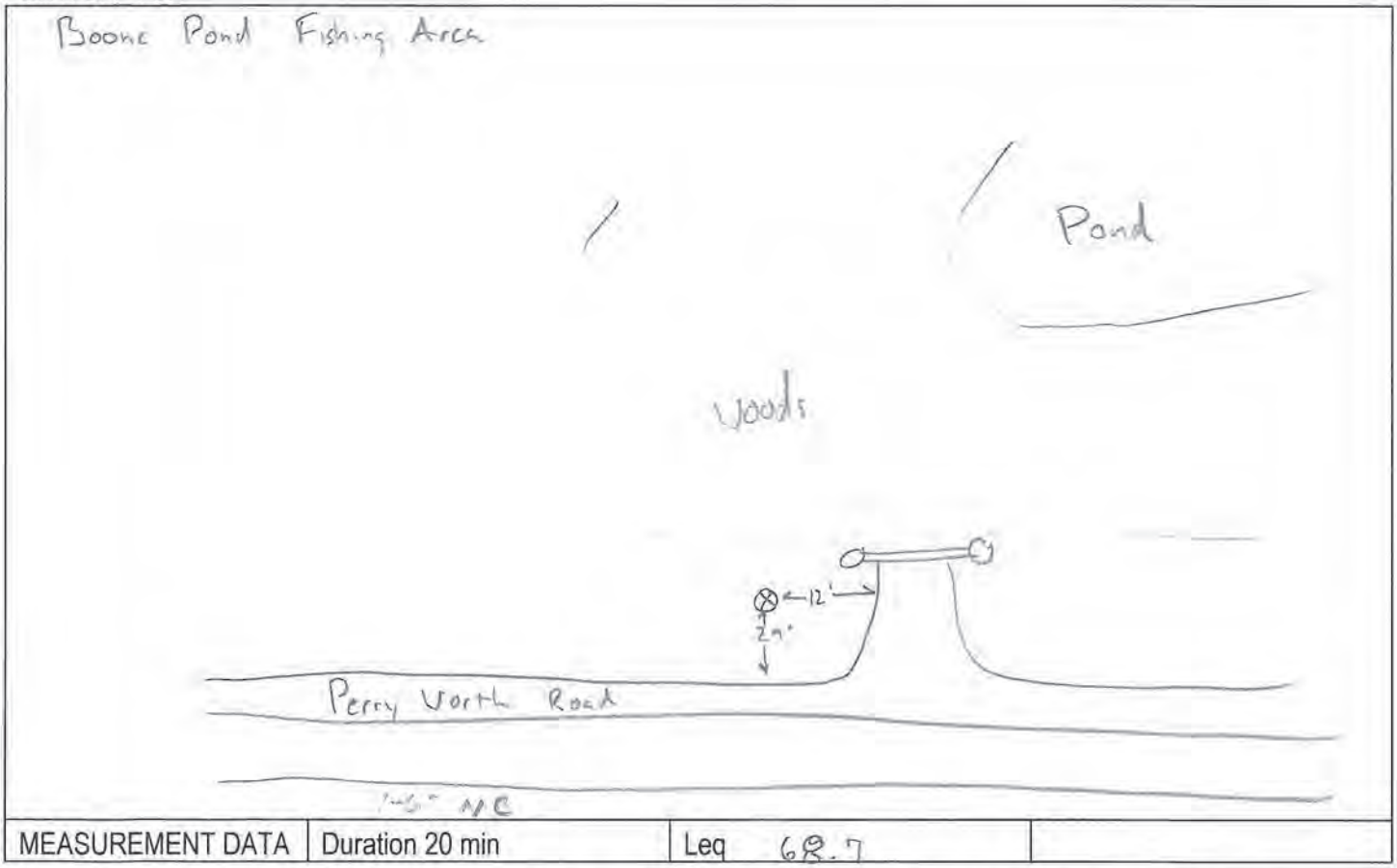
CALIBRATION: 113.8 at 1k Hz dB.

RESPONSE: FAST / SLOW WEIGHTING: A / C / LIN.

TRAFFIC DATA ~20 min		
ROAD (Name/Dir)	I-65 SB	I-65 NB
AUTOS	396	460
MED TRKS	22	21
HVY TRKS	195	112
BUS		
MOTORCYCLE		
SPEED		

EQUIPMENT	
INSTRUMENT	
SLM MANUFACTURER	Larson Davis
SLM MODEL	LxT
SLM	S / N 0004527
PREAMPLIFIER – Type 1206	S / N 46631
MICROPHONE – Type 1225	S / N 166046
CALIBRATOR – Type 1251	S / N 12435

SITE SKETCH



MEASUREMENT DATA	Duration 20 min	Leq 68.7	

WEATHER DATA WIND SPEED (MPH) 8 DIR. WSW TEMP. 37 HUMIDITY 65 CLOUD COVER Overcast

BACKGROUND NOISE I-65 NB

MAJOR SOURCES I-65 NB

UNUSUAL EVENTS Some Construction at nearest residence to the North Not Dominant

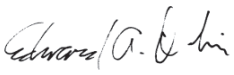
OTHER NOTES 15 Autos on Perry Worth

Appendix C
Certificates of Calibration

THE MODAL SHOP INC
A PCB GROUP CO.

3149 East Kemper Rd.
Cincinnati, OH 45241
Ph : 513-351-9919
Fax: 513-458-2172
www.modalshop.com

~Calibration Certificate~

Manufacturer:	Larson Davis	Asset ID:	
Model:	CAL200	Calibration Date:	Dec 14, 2017 11:52:58
Serial Number:	11047	Due Date:	
Description:	Acoustic Calibrator	Technician:	Ed Devlin
Customer:	Ellison Group	Approval:	

Calibration Results:

	Temperature:	22 °C (72 °F)
Measured SPL : 94.01 dB re. 20µPa	Humidity:	22.10%
Measured Frequency : 1,000.00 Hz	Pressure:	996.3 mbar

Upon receipt for calibration, the instrument was found to be:
WITHIN the stated tolerance of the manufacturer's specification.

Note: **As Found / As Left: In Tolerance.**

Measurement uncertainty at 95% confidence level: 0.30 dB

The subject instrument was calibrated to the indicated specification using standards stated below or to accepted values of natural physical constants. This document certifies that the instrument met the following specification

This calibration is traceable through : A1633

Notes:
The calibration was performed under operating procedures intended to implement the requirements of ISO 9001, ISO 17025 and ANSI Z540. Unless otherwise noted, the reported value is both "as found" and "as left" data. Calibration results relate only to the items calibrated. This certificate may not be reproduced, except in full, without written permission.

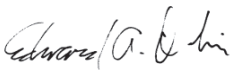
Reference Equipment Used:

Manuf.	*Model*	*Serial*	*Cal. Date*	*Due Date*
GRAS	40AG	9542	2/16/2017	2/16/2018

THE MODAL SHOP INC
A PCB GROUP CO.

3149 East Kemper Rd.
Cincinnati, OH 45241
Ph : 513-351-9919
Fax: 513-458-2172
www.modalshop.com

~Calibration Certificate~

Manufacturer:	Larson Davis	Asset ID:	
Model:	CAL200	Calibration Date:	Dec 14, 2017 11:55:02
Serial Number:	11047	Due Date:	
Description:	Acoustic Calibrator	Technician:	Ed Devlin
Customer:	Ellison Group	Approval:	

Calibration Results:

	Temperature:	22 °C (72 °F)
Measured SPL : 114.03 dB re. 20µPa	Humidity:	22.10%
Measured Frequency : 1,000.00 Hz	Pressure:	996.3 mbar

Upon receipt for calibration, the instrument was found to be:
WITHIN the stated tolerance of the manufacturer's specification.

Note: **As Found / As Left: In Tolerance.**

Measurement uncertainty at 95% confidence level: 0.30 dB

The subject instrument was calibrated to the indicated specification using standards stated below or to accepted values of natural physical constants. This document certifies that the instrument met the following specification

This calibration is traceable through : A1633

Notes:
The calibration was performed under operating procedures intended to implement the requirements of ISO 9001, ISO 17025 and ANSI Z540. Unless otherwise noted, the reported value is both "as found" and "as left" data. Calibration results relate only to the items calibrated. This certificate may not be reproduced, except in full, without written permission.

Reference Equipment Used:

Manuf.	*Model*	*Serial*	*Cal. Date*	*Due Date*
GRAS	40AG	9542	2/16/2017	2/16/2018

Certificate of Calibration and Conformance

This document certifies that the instrument referenced below meets published specifications per Procedure PRD-P263; ANSI S1.4-1983 (R 2006) Type 1; S1.4A-1985; S1.43-1997 Type 1; S1.11-2004 Octave Band Class 0; S1.25-1991; IEC 61672-2002 Class 1; 60651-2001 Type 1; 60804-2000 Type 1; 61260-2001 Class 0; 61252-2002.

Manufacturer:	Larson Davis	Temperature:	74.2	°F
Model Number:	LxT1		23.44	°C
Serial Number:	4988	Rel. Humidity:	22.1	%
Customer:	Ellison Group	Pressure:	994.7	mbars
Description:	Sound Level Meter		994.7	hPa
Note:	As Found/As Left: In Tolerance			

Upon receipt for testing, this instrument was found to be:

Within the stated tolerance of the manufacturer's specification.

Calibration Date: 12/11/2017 Calibration Due:

Calibration Standards Used:

Manufacturer	Model	Serial Number	Cal Due
Stanford Research Systems	DS360	123270	4/25/2018

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at The Modal Shop and/or Larson Davis Corporate Headquarters. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

The results documented in this certificate relate only to the item(s) calibrated or tested. Calibration interval assignment and adjustment are the responsibility of the end user. This certificate may not be reproduced, except in full, without the written approval of The Modal Shop.

Technician: Adam Magee Signature:

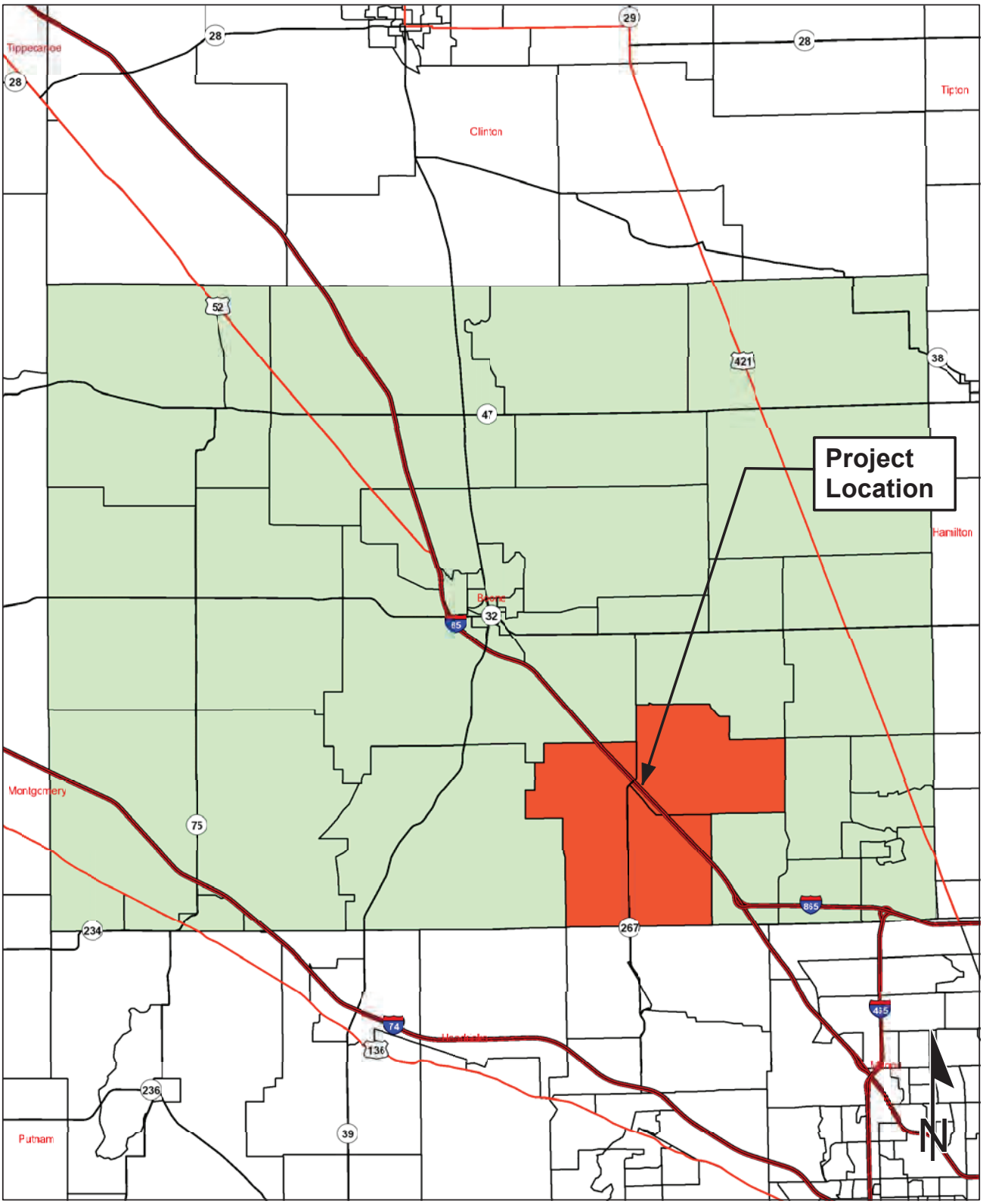
THE MODAL SHOP
A PCB GROUP CO.

3149 East Kemper Road
Cincinnati, OH. 45241
Phone: (513) 351-9919
(800) 860-4867
www.modalshop.com

Appendix J

Environmental Justice

Environmental Justice Map
I-65 and SR 267 / I-65 and CR 550
Des. No. 1400071, Existing Interchange Modification / New Interchange Construction
Boone County, Indiana



3 1.5 0 3 Miles

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

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

Census Blocks 2015

- Other Blocks
- AC
- COC

	Total; Estimate; Population for whom poverty status is determined	Below poverty level; Estimate; Population for whom poverty status is determined	Percent below poverty level; Estimate; Population for whom poverty status is determined
Boone County, Indiana	56229	4271	7.6
Perry township, Boone County, Indiana	1095	31	2.8
Worth township, Boone County, Indiana	2523	111	4.4

	Estimate; Total:	Estimate; Not Hispanic or Latino:	Estimate; Not Hispanic or Latino: - White alone	Estimate; Not Hispanic or Latino: - Black or African American alone	Estimate; Not Hispanic or Latino: - American Indian and Alaska Native alone	Estimate; Not Hispanic or Latino: - Asian alone	Estimate; Not Hispanic or Latino: - Native Hawaiian and Other Pacific Islander alone	Estimate; Not Hispanic or Latino: - Some other race alone	Estimate; Not Hispanic or Latino: - Two or more races:	Estimate; Not Hispanic or Latino: - Two or more races: - Two races including Some other race	Estimate; Not Hispanic or Latino: - Two or more races: - Two races excluding Some other race, and three or more races
Boone County, Indiana	56823	55518	53171	610	49	1018	0	41	629	43	586
Perry township, Boone County, Indiana	1095	1073	1030	0	0	18	0	25	0	0	0
Worth township, Boone County, Indiana	2523	2428	2356	18	0	13	0	0	41	0	41

		Estimate; Hispanic or Latino:	Estimate; Hispanic or Latino: - White alone	Estimate; Hispanic or Latino: - Black or African American alone	Estimate; Hispanic or Latino: - American Indian and Alaska Native alone	Estimate; Hispanic or Latino: - Asian alone	Estimate; Hispanic or Latino: - Native Hawaiian and Other Pacific Islander alone	Estimate; Hispanic or Latino: - Some other race alone	Estimate; Hispanic or Latino: - Two or more races:	Estimate; Hispanic or Latino: - Two or more races: - Two races including Some other race	Estimate; Hispanic or Latino: - Two or more races: - Two races excluding Some other race, and three or more races
Boone County, Indiana		1305	1019	0	7	5	0	238	36	17	19
Perry township, Boone County, Indiana		22	0	0	0	0	0	9	13	13	0
Worth township, Boone County, Indiana		95	91	0	0	0	0	4	0	0	0

Appendix K

TIP and STIP Amendments

2018 – 2021 Indianapolis Regional Transportation Improvement Program

Prepared by the

INDIANAPOLIS METROPOLITAN PLANNING ORGANIZATION

Adopted Date:
May 24, 2017
www.indympo.org

TABLE 10.1
Indiana Department of Transportation (INDOT)
Interstate Projects

Projects in bold are considered regionally significant for air quality purposes.

Des. No.	County	Work Type	Project Description/Length (mi.)	INDOT District	Fund Type	Phase	SFY	Total Cost	Federal Funds	State Match
1298280	Marion Co.	Bridge Deck Overlay	Bridge Deck Overlay on I-65 over Ramp I-S-N, 3.61 miles N of I-70 Dist:N/A	S	IM	CN	2018	$ 1,062,665	$ 956,399	$ 106,266
1298281	Marion Co.	Bridge Deck Overlay	Bridge Deck Overlay on I-65 over Ramp I-S-N, 3.65 miles N of I-70 Dist:N/A	G	IM	CN	2018	$ 1,185,710	$ 1,067,139	$ 118,571
1298283	Marion Co.	Bridge Deck Replacement	Bridge Deck Replacement of I-65 EB and I-65 NB over East 10th Street, 1.92 miles N of I-70 Dist:N/A	G	IM	CN	2018	$ 2,153,294	$ 1,937,965	$ 215,329
1298649	Marion Co.	Replace Superstructure	Replace Superstructure on I-65 at 0.13 mile S of I-70 over Morris and Prospect Streets Dist:N/A	G	IM	CN	2018	$ 892,216	$ 802,994	$ 89,222
1400071	**Boone Co.**	**Interchange Modification**	**I-65/SR 267 Interchange Modification, 4.5 miles north of I-865 Dist:1.41**	**C**	**NHPP**	**RW**	**2018**	**$ 143,800**	**$ 129,420**	**$ 14,380**
1400071	**Boone Co.**	**Interchange Modification**	**I-65/SR 267 Interchange Modification, 4.5 miles north of I-865 Dist:1.41**	**C**	**NHPP**	**RW**	**2019**	**$ 10,000,000**	**$ 9,000,000**	**$ 1,000,000**
1400071	**Boone Co.**	**Interchange Modification**	**I-65/SR 267 Interchange Modification, 4.5 miles north of I-865 Dist:1.41**	**C**	**NHPP**	**CE**	**2020**	**$ 4,500,000**	**$ 4,050,000**	**$ 450,000**
1400071	**Boone Co.**	**Interchange Modification**	**I-65/SR 267 Interchange Modification, 4.5 miles north of I-865 Dist:1.41**	**C**	**NHPP**	**CN**	**2020**	**$ 29,676,000**	**$ 26,708,400**	**$ 2,967,600**
1400073	**Marion Co.**	**Added Travel Lanes**	**Added Travel Lanes on I-65 from 0.20 mile N of I-465 to 0.05 mile No of I-70 in South Indianapolis Dist:4.11**	**G**	**STP-ST**	**CN**	**2019**	**$ 32,298,353**	**$ 25,838,682**	**$ 6,459,671**
1500165	Marion Co.	New Br, Precast Box Culvert	New Bridge on I-65 at 1.3 miles N of I-70 Dist:N/A	G	IM	CN	2018	$ 1,412,779	$ 1,271,501	$ 141,278
1500792	Marion Co.	Bridge Deck Overlay	Bridge Deck Overlay on I 65 over White River, Canal, Parkways; 5.94 Miles S of I-465 Dist:N/A	G	IM	CN	2018	$ 5,523,744	$ 4,971,370	$ 552,374
1592313	Marion Co.	Bridge Rehabilitation Or Repair	Bridge deck overlay on Fletcher Ave over I-65. Dist:N/A	G	NHPP	CN	2018	$ 1,505,925	$ 1,355,333	$ 150,592
1592385	**Marion Co.**	**Interchange Modification, Multi-Level**	**Interchange modification of the I-65/I-70 north split with a bridge rehabilitation project; encompassing a footprint from Central Avenue to Commerce Avenue to Vermont Street. Dist:N/A**	**G**	**IM**	**CN**	**2019**	**$ 122,227,660**	**$ 110,004,894**	**$ 12,222,766**
1592385	**Marion Co.**	**Interchange Modification, Multi-Level**	**Interchange modification of the I-65/I-70 north split with a bridge rehabilitation project; encompassing a footprint from Central Avenue to Commerce Avenue to Vermont Street. Dist:N/A**	**G**	**IM**	**PE**	**2018**	**$ 11,500,000**	**$ 10,350,000**	**$ 1,150,000**
1592385	**Marion Co.**	**Interchange Modification, Multi-Level**	**Interchange modification of the I-65/I-70 north split with a bridge rehabilitation project; encompassing a footprint from Central Avenue to Commerce Avenue to Vermont Street. Dist:N/A**	**G**	**IM**	**RW**	**2018**	**$ 1,000,000**	**$ 900,000**	**$ 100,000**
1592385	**Marion Co.**	**Interchange Modification, Multi-Level**	**Interchange modification of the I-65/I-70 north split with a bridge rehabilitation project; encompassing a footprint from Central Avenue to Commerce Avenue to Vermont Street. Dist:N/A**	**G**	**IM**	**CN**	**2020**	**$ 60,201,684**	**$ 54,181,515**	**$ 6,020,169**
1592385	**Marion Co.**	**Interchange Modification, Multi-Level**	**Interchange modification of the I-65/I-70 north split with a bridge rehabilitation project; encompassing a footprint from Central Avenue to Commerce Avenue to Vermont Street. Dist:N/A**	**G**	**IM**	**PE**	**2019**	**$ 10,000,000**	**$ 9,000,000**	**$ 1,000,000**
1592537	Marion Co.	Bridge Painting	Bridge Painting I-65 Ramp 7 SW over Morris St/Prospect St. Dist:N/A	G	NHPP	CN	2018	$ 138,368	$ 124,532	$ 13,836
1593072	Johnson Co.	Raised Pavement Markings, Refurbished	Safety project in Seymour District various locations on I-65, I-74, I-265, I-64, US 31 and I-275. Dist:N/A	S	HSIP-ST	CN	2018	$ 450,000	$ 405,000	$ 45,000
1593122	Marion Co.	Bridge Deck Overlay	Bridge Deck Overlay on I-65 over 16th Street; 3.88 miles N of I-70 Dist:N/A	G	IM	CN	2018	$ 1,802,089	$ 1,621,880	$ 180,209
1600315	Boone Co.	HMA Overlay, Preventive Maintenance	HMA Overlay, Preventive Maintenance From 1.38 mi N of I-865 to 1.66 mi S of SR 39 (pvmt transition from HMA to PCCP) Dist:7.07	C	NHPP	CN	2019	$ 12,558,000	$ 11,302,200	$ 1,255,800
1600522	Marion Co.	Auxillary Lane Construction	I 65, at Northbound Loop Entrance Ramp from Southport Road, 2.9 Miles South of I-465 Dist:N/A	G	NHPP	CN	2021	$ 1,321,184	$ 1,056,947	$ 264,237
1600662	Marion Co.	Tower Lighting	Install Tower Light near Morris/Prospect & I-65/I-70 and Virginia St & I-65/I-70 Dist:N/A	G	IM	CN	2019	$ 100,000	$ 90,000	$ 10,000

INDIANAPOLIS METROPOLITAN PLANNING ORGANIZATION

INDIANAPOLIS REGIONAL TRANSPORTATION COUNCIL
POLICY COMMITTEE

Resolution Number 17-IMPO-012

A RESOLUTION amending the 2018-2021 Indianapolis Regional Transportation Improvement Program.

WHEREAS, the 2018-2021 Indianapolis Regional Transportation Improvement Program (IRTIP) incorporates projects proposed by local governments and agencies within the Indianapolis Metropolitan Planning Area; and

WHEREAS, the projects contained in the proposed IRTIP amendment have been reviewed as to their immediate impact and importance to the continued improvement of the transportation system operating within the area; and

WHEREAS, changing conditions necessitate periodic amendments to the IRTIP; and

WHEREAS, the proposed IRTIP amendments were made available for public comment and comments received were provided to the Indianapolis Regional Transportation Council Policy Committee (IRTC); and

WHEREAS, the IRTC Policy Committee is the approval body for all transportation-related activities of the Metropolitan Planning Organization for the Indianapolis Urbanized Area under applicable U.S. Department of Transportation regulations;

NOW, THEREFORE, BE IT RESOLVED, that the IRTC hereby approves the amendment to the 2018-2021 Indianapolis Regional Transportation Improvement Program as shown on the attached Exhibit A.

The above and foregoing resolution was adopted this 25 day of October 2017 by the IRTC Policy Committee.

DATE: 10/25/17

Anna M. Gremling, Executive Director
Indianapolis MPO
For the IRTC Policy Committee Chair

	LEAD AGENCY	DES NUM	ROAD/TRAIL	PROJECT TITLE	TYPE	EXEMPT?	TOTAL	TOTAL DIFF	PHASE	SFY	FED FUNDS	LINE TOTAL	FED TOTAL	FED %	STATE TOTAL	STATE %	JUSTIFICATION	ACTION PROPOSED
NEW	INDOT	1600909	I- 65	Small Structure Pipe Lining	Pipe Lining	Exempt	$556,128	$556,128	CN	SFY 2021	NHPP	$556,128	$444,902	80%	$111,226	20%	NEW PROJECT	
NEW	INDOT	1700877	I- 65	Traders Lane over I-65 and a creek, 2.43 miles North of I-465	Bridge Replacement, Other Construction	Exempt	$4,371,881	$4,371,881	PE/PL	SFY 2018	NHPP	$190,000	$152,000	80%	$38,000	20%	NEW PROJECT	
NEW									CN	SFY 2021	NHPP	$4,181,881	$3,345,505	80%	$836,376	20%		
NEW	INDOT	1700879	I- 65	NB over Little Buck Creek, 2.61 miles South of -465	Replace Superstructure	Exempt	$2,753,519	$2,753,519	PE/PL	SFY 2018	NHPP	$120,000	$108,000	90%	$12,000	10%	NEW PROJECT	
NEW									CN	SFY 2021	NHPP	$2,633,519	$2,370,167	90%	$263,352	10%		
NEW	INDOT	1700881	I- 65	SB over Little Buck Creek, 2.61 miles South of I-465	Replace Superstructure	Exempt	$2,291,629	$2,291,629	PE/PL	SFY 2018	NHPP	$100,000	$90,000	90%	$10,000	10%	NEW PROJECT	
NEW									CN	SFY 2021	NHPP	$2,191,629	$1,975,139	90%	$216,490	10%		
NEW	INDOT	1700883	I- 65	SB ramp over Little Buck Creek, 2.61 miles South of I-465	Replace Superstructure	Exempt	$802,043	$802,043	PE/PL	SFY 2018	NHPP	$35,000	$31,500	90%	$3,500	10%	NEW PROJECT	
NEW									CN	SFY 2021	NHPP	$767,043	$690,339	90%	$76,704	10%		
NEW	INDOT	1702216	US 36	Traffic Signal Modernization	Traffic Signals Modernization	Exempt	$69,690	$69,690	CN	SFY 2018	STP-ST	$69,690	$55,912	80%	$13,778	20%	NEW PROJECT	
NEW	INDOT	1700717	SR 37	SR 37 and 186th Street Intersection Improvement	Other Intersection Improvement	Non-Ex	$1,100,509	$1,100,509	PE/PL	SFY 2018	HSIP-ST	$63,000	$56,700	90%	$6,300	10%	NEW PROJECT	
NEW									ROW	SFY 2021	HSIP-ST	$100,000	$90,000	90%	$10,000	10%		
NEW									CN	SFY 2022	HSIP-ST	$937,509	$843,758	90%	$93,751	10%		
NEW	INDOT	1702084	SR 32	SR 32 and Cumberland Rd Traffic Signal Modernization	Traffic Signals Modernization	Non-Ex	$139,239	$139,239	CN	SFY 2021	HSIP-ST	$139,239	$125,315	90%	$13,924	10%	NEW PROJECT	
NEW	INDOT	1702085	SR 32	SR 37 and 206th Street Traffic Signal Modernization	Traffic Signals Modernization	Non-Ex	$171,371	$171,371	CN	SFY 2021	HSIP-ST	$171,371	$154,234	90%	$17,137	10%	NEW PROJECT	
NEW	INDOT	1702086	SR 32	SR 32 and 19th Street Traffic Signal Modernization	Traffic Signals Modernization	Non-Ex	$107,107	$107,107	CN	SFY 2021	HSIP-ST	$107,107	$96,396	90%	$10,711	10%	NEW PROJECT	
NEW	INDOT	1701185	I- 65	Bridge Thin Deck Overlay	Bridge Deck Overlay	Exempt	$369,236	$369,236	PE/PL	SFY 2018	NHPP	$20,000	$16,000	80%	$4,000	20%	NEW PROJECT	
NEW									CN	SFY 2019	NHPP	$349,236	$314,312	90%	$34,924	10%		
NEW	INDOT	1701198	I- 65	Bridge Thin Deck Overlay	Bridge Deck Overlay	Exempt	$369,236	$369,236	PE/PL	SFY 2018	NHPP	$20,000	$16,000	80%	$4,000	20%	NEW PROJECT	
NEW									CN	SFY 2019	NHPP	$349,236	$314,312	90%	$34,924	10%		
NEW	INDOT	1701199	I- 65	Bridge Thin Deck Overlay	Bridge Deck Overlay	Exempt	$258,191	$258,191	PE/PL	SFY 2018	NHPP	$20,000	$16,000	80%	$4,000	20%	NEW PROJECT	
NEW									CN	SFY 2019	NHPP	$238,191	$214,372	90%	$23,819	10%		
NEW	INDOT	1701200	I- 65	Bridge Thin Deck Overlay	Bridge Deck Overlay	Exempt	$258,191	$258,191	PE/PL	SFY 2018	NHPP	$20,000	$16,000	80%	$4,000	20%	NEW PROJECT	
NEW									CN	SFY 2019	NHPP	$238,191	$214,372	90%	$23,819	10%		
NEW	INDOT	1702313	I- 465	Noise Abatement Repair	Noise Abatement	Exempt	$39,927	$39,927	CN	SFY 2018	IM	$39,927	$35,934	90%	$3,993	10%	NEW PROJECT	
NEW	INDOT	1702147	I- 65	New Interchange Construction	New Interchange Construction	Non-Ex	$1,510,606	$1,510,606	PE/PL	SFY 2018	NHPP	$1,510,606	$1,359,545	90%	$151,061	10%	NEW PROJECT	
NEW	INDOT	1702207	I- 65	Bridge Maintenance & Repair	Bridge Deck Patching	Exempt	$115,000	$115,000	CN	SFY 2019	IM	$115,000	$103,500	90%	$11,500	10%	NEW PROJECT	
NEW	INDOT	1702208	I- 65	Bridge Maintenance & Repair	Bridge Maintenance And Repair	Exempt	$175,000	$175,000	CN	SFY 2019	IM	$175,000	$157,500	90%	$17,500	10%	NEW PROJECT	
NEW	INDOT	1702209	I- 65	Bridge Maintenance & Repair	Bridge Maintenance And Repair	Exempt	$135,000	$135,000	CN	SFY 2019	IM	$135,000	$121,500	90%	$13,500	10%	NEW PROJECT	

INDIANAPOLIS METROPOLITAN PLANNING ORGANIZATION

INDIANAPOLIS REGIONAL TRANSPORTATION COUNCIL
POLICY COMMITTEE

Resolution Number 17-IMPO-014

A RESOLUTION amending the 2018-2021 Indianapolis Regional Transportation Improvement Program.

WHEREAS, the 2018-2021 Indianapolis Regional Transportation Improvement Program (IRTIP) incorporates projects proposed by local governments and agencies within the Indianapolis Metropolitan Planning Area; and

WHEREAS, the projects contained in the proposed IRTIP amendment have been reviewed as to their immediate impact and importance to the continued improvement of the transportation system operating within the area; and

WHEREAS, changing conditions necessitate periodic amendments to the IRTIP; and

WHEREAS, the proposed IRTIP amendments were made available for public comment and comments received were provided to the Indianapolis Regional Transportation Council Policy Committee (IRTC); and

WHEREAS, the IRTC Policy Committee is the approval body for all transportation-related activities of the Metropolitan Planning Organization for the Indianapolis Urbanized Area under applicable U.S. Department of Transportation regulations;

NOW, THEREFORE, BE IT RESOLVED, that the IRTC hereby approves the amendment to the 2018-2021 Indianapolis Regional Transportation Improvement Program as shown on the attached Exhibit A.

The above and foregoing resolution was adopted this 13 day of December 2017 by the IRTC Policy Committee.

DATE: 12/13/17

Anna M. Gremling, Executive Director
Indianapolis MPO
For the IRTC Policy Committee Chair

QUARTER Q4S, 2017 INDOT 18-03

	LEAD AGENCY	DES NUM	ROAD/TRAIL	PROJECT TITLE	TYPE	EXEMPT?	TOTAL	TOTAL DIFF	PHASE	SFY	FED FUNDS	LINE TOTAL	FED TOTAL	FED %	STATE TOTAL	STATE %	JUSTIFICATION	ACTION PROPOSED
PRIOR	INDOT	1298375	US 36	Small structure pipe lining of US 36, 1.21 miles E of Avon Ave (Old SR 267) in Hendricks County	Pipe Lining	Exempt	$52,050		-	-	-	$-	$-	-	-	-		
PROPOSED							$501,499	$449,449	CN	SFY 2019	STP-ST	$444,299	$355,439	80%	$88,860	20%	Added CN	
PRIOR									PE/PL	SFY 2016	NHS	$32,500	$26,000	80%	$6,500	20%		
PROPOSED									-	-	-	$-	$-	-	-	-		
PRIOR	INDOT	1500139	US 136	Small structure replacement on US 136	Small Structure Replacement	Exempt	$148,825		-	-	-	$-	$-	-	-	-		
PROPOSED							$2,058,868	$1,910,043	PE/PL	SFY 2018	STP-ST	$282,625	$226,100	80%	$56,525	20%	Des 1701566 is authorized & Funded for FY 22. However it is a duplicate project of Des 1500139 that was a part of 21st CCR process & shelved on 9/19/2016 by PMG. Work was already started & completed on Des 1500139 by a consultant.	
PRIOR									-	-	-	$-	$-	-	-	-		
PROPOSED									ROW	SFY 2018	STP-ST	$35,000	$28,000	80%	$7,000	20%		
PRIOR									-	-	-	$-	$-	-	-	-		
PROPOSED									CN	SFY 2020	STP-ST	$25,000	$20,000	80%	$5,000	20%		
PRIOR									-	-	-	$-	$-	-	-	-		
PROPOSED									CN	SFY 2022	STP-ST	$1,567,418	$1,253,934	80%	$313,484	20%		
PRIOR	INDOT	1400071	I- 65	I-65/SR 267 Interchange Modification	Interchange Modification	Non-Ex	$46,891,400		ROW	SFY 2018	NHPP	$143,800	$129,420	90%	$14,380	10%		
PROPOSED							$28,805,074	$-18,086,326	ROW	SFY 2018	NHPP	$242,405	$193,924	80%	$48,481	20%	Comments from approved change management: Formally authorize new Des. 1702143, 1702144, 1702146, and 1702147 that have all been programmed as pieces of the interchange project to represent the new assets being constructed. Project funding for each of the new des can be shifted from Des. 1400071, red	
PRIOR									ROW	SFY 2019	NHPP	$10,000,000	$9,000,000	90%	$1,000,000	10%		
PROPOSED									ROW	SFY 2019	NHPP	$2,850,000	$2,280,000	80%	$570,000	20%		
PRIOR									CN	SFY 2020	NHPP	$29,676,000	$26,708,400	90%	$2,967,600	10%		
PROPOSED									CN	SFY 2020	NHPP	$20,841,069	$16,672,855	80%	$4,168,214	20%		
PRIOR									CE	SFY 2020	NHPP	$4,500,000	$4,050,000	90%	$450,000	10%		

Indiana Department of Transportation (INDOT)

State Preservation and Local Initiated Projects FY 2018 - 2021

SPONSOR	CONTRACT # / LEAD DES	STIP NAME	ROUTE	WORK TYPE	LOCATION	DISTRICT	MILES	FEDERAL CATEGORY	Estimated Cost left to Complete Project*	PROGRAM	PHASE	FEDERAL	MATCH	2018	2019	2020	2021
Indiana Department of Transportation	38664 / 1500630	A 14	I 65	Small Structure Pipe Lining	1.15 mi S of SR 47	Crawfordsville	0	NHPP	$306,000.00	Bridge Construction	CN	$192,450.60	$21,383.40		$213,834.00		
Comments:No MPO; Add FY19 CN $213,834; totaling FY19 CN $305,834																	
Indiana Department of Transportation	38664 / 1600315	Init.	I 65	HMA Overlay, Preventive Maintenance	From 0.95 mi N of I-865 to 1.66 mi S of SR 39 (pvmt transition from HMA to PCCP)	Crawfordsville	1.022	NHPP		Road Construction	CN	$11,302,200.00	$1,255,800.00		$12,558,000.00		
Indiana Department of Transportation	38675 / 1500814	Init.	I 865	HMA Overlay, Preventive Maintenance	From I-65 to I-465	Greenfield	4.002	NHPP		Road Construction	CN	$1,709,676.90	$189,964.10	$1,899,641.00			
Indiana Department of Transportation	38679 / 1298094	Init.	I 865	Small Structure Pipe Lining	0.310 mile E of I-65	Greenfield	0	NHPP		Bridge Construction	CN	$324,181.80	$36,020.20	$360,202.00			
Indiana Department of Transportation	38679 / 1298102	Init.	I 865	Small Structure Pipe Lining	0.580 mile E of I-65	Greenfield	0	NHPP		Bridge Construction	CN	$316,523.70	$35,169.30	$351,693.00			
Indiana Department of Transportation	38762 / 1500141	Init.	US 421	Small Structure Replacement	1.16 mi S of SR 47	Crawfordsville	0	NHPP		Bridge ROW	RW1	$28,000.00	$7,000.00	$35,000.00			
										Bridge Consulting	PE1	$37,200.00	$9,300.00	$46,500.00			
										Bridge Construction	CN	$659,200.00	$164,800.00			$824,000.00	
Indiana Department of Transportation	38767 / 1400219	Init.	SR 75	Bridge Replacement, Other Construction	Bridge over Wells Ditch, 2.15 mi N of I-74	Crawfordsville	0	NHPP		Bridge Construction	CN	$671,200.00	$167,800.00			$839,000.00	
										Bridge Consulting	PE1	$26,528.00	$6,632.00	$33,160.00			
Indiana Department of Transportation	38770 / 1500160	Init.	US 52	Pavement Replacement	Interchange ramps at I-65	Crawfordsville	.313	NHPP		Road Construction	CN	$1,323,000.00	$147,000.00			$1,470,000.00	
										Road Consulting	PE1	$247,500.00	$27,500.00	$275,000.00			
Indiana Department of Transportation	39231 / 1400071	Init.	I 65	Interchange Modification	I-65 at SR 267 (4.5 miles N of I-865)	Crawfordsville	1.417	NHPP		Mobility Construction	CN	$26,708,400.00	$2,967,600.00			$29,676,000.00	
										Mobility ROW	RW1	$9,129,420.00	$1,014,380.00	$143,800.00	$10,000,000.00		
										Mobility Consulting	PE1	$4,050,000.00	$450,000.00			$4,500,000.00	
Indiana Department of Transportation	39231 / 1400071	M 05	I 65	Interchange Modification	I-65 at SR 267 (4.5 miles N of I-865)	Crawfordsville	1.417	NHPP	$26,233,474.00	Mobility ROW	RW1	$88,744.50	$9,860.50	$98,605.00			
Comments:add FY18 ROW $98,605.00 to reflect total $242,405.00																	
Indiana Department of Transportation	39231 / 1400071	A 11	I 65	Interchange Modification	I-65 at SR 267 (4.5 miles N of I-865)	Crawfordsville	1.417	NHPP	$26,233,474.00	Mobility ROW	RW1	-$6,435,000.00	-$715,000.00		($7,150,000.00)		
Comments:IMPO 17-IMPO-014; release $7,150,000 FY19 ROW																	

Report Created:4/30/2018 7:05:59AM

*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.

Indiana Department of Transportation (INDOT)

State Preservation and Local Initiated Projects FY 2018 - 2021

SPONSOR	CONTRACT # / LEAD DES	STIP NAME	ROUTE	WORK TYPE	LOCATION	DISTRICT	MILES	FEDERAL CATEGORY	Estimated Cost left to Complete Project*	PROGRAM	PHASE	FEDERAL	MATCH	2018	2019	2020	2021
Indiana Department of Transportation	39231 / 1702147	A 08	PR 550	New Interchange Construction	At I-65; approach CR 500 S and ramp	Crawfordsville	0	NHPP	$11,816,426.06	Mobility Consulting	PE1	$1,359,545.45	$151,060.60	$1,510,606.06			
Comments:IMPO ; Add FY18 PE $1,510,606.06																	
Indiana Department of Transportation	39320 / 1592690	Init.	SR 75	Replace Superstructure	Bridge over I-74, 1.36 mi N of SR 234	Crawfordsville	0	NHPP		Bridge Construction	CN	$3,358,800.00	$373,200.00				$3,732,000.00
										Bridge Consulting	PE1	$118,800.00	$13,200.00	$132,000.00			
Indiana Department of Transportation	39324 / 1592834	Init.	US 421	Bridge Deck Overlay	Little Eagle Creek, 03.59 N I-465	Crawfordsville	0	NHPP		Bridge Construction	CN	$592,000.00	$148,000.00		$740,000.00		
Indiana Department of Transportation	39364 / 1592764	Init.	I 74	Bridge Painting	CR 500S Bridge over I-74 EB/W B, 2.44 mi W SR 75	Crawfordsville	0	NHPP		Bridge Construction	CN	$78,300.00	$8,700.00			$87,000.00	
Indiana Department of Transportation	39369 / 1600204	A 06	I 74	Rest Area Modernization	Lizton Rest Area	Crawfordsville	0	NHPP	$2,000,000.00	Statewide Construction	CN	$1,800,000.00	$200,000.00		$2,000,000.00		
Comments:NO MPO; Add FY19 CN $2,000,000																	
Indiana Department of Transportation	39578 / 1173629	Init.	I 65	Bridge Deck Overlay	NB Bridge over Sugar Creek, 2.04 mi N of SR 47	Crawfordsville	0	NHPP		Bridge Construction	CN	$900,000.00	$100,000.00		$1,000,000.00		
Indiana Department of Transportation	39578 / 1173630	Init.	I 65	Bridge Deck Overlay	SB Bridge over Sugar Creek, 2.04 mi N of SR 47	Crawfordsville	0	NHPP		Bridge Construction	CN	$900,000.00	$100,000.00		$1,000,000.00		
Indiana Department of Transportation	39578 / 1296049	Init.	I 65	Bridge Deck Overlay	0.20 mi N of US 52, NBL over Prairie Creek	Crawfordsville	0	NHPP		Bridge Construction	CN	$1,078,200.00	$119,800.00		$1,198,000.00		
Indiana Department of Transportation	39578 / 1296050	Init.	I 65	Bridge Deck Overlay	0.20 mi N of US 52, SBL over Prairie Creek	Crawfordsville	0	NHPP		Bridge Construction	CN	$1,125,900.00	$125,100.00		$1,251,000.00		
Boone County	39599 / 1600686	Init.	ST 1028	Bridge Rehabilitation Or Repair	Sycamore Street, Br #202 over Eagle Creek, Zionsville, IN	Crawfordsville	0	STP		100% Local Funds	RW1	$0.00	$50,000.00	$50,000.00			
										Indianapolis MPO	CN	$1,219,920.00	$0.00				$1,219,920.00
										100% Local Funds	CN	$0.00	$344,080.00				$344,080.00
Boone County	39855 / 1600773	A 18	IR 1027	Bridge Replacement, Other Construction	Bridge #41 replacement 3.48 miles N of SR 47	Crawfordsville	.26	STP	$2,300,000.00	100% Local Funds	PE1	$0.00	$86,790.00		$86,790.00		
										Local Bridge Program	PE1	$347,160.00	$0.00		$347,160.00		
Comments:NO MPO please add PE funds to FY 19 in the amount of 86,790 local and 347,160 federal																	
Indiana Department of Transportation	39956 / 1600872	Init.	SR 47	Small Structure Replacement	1.30 mi N of SR 39	Crawfordsville	0	NHPP		Bridge Construction	CN	$628,000.00	$157,000.00				$785,000.00
Indiana Department of Transportation	39956 / 1600872	A 10	SR 47	Small Structure Replacement	1.30 mi E of SR 39	Crawfordsville	0	STP	$895,000.00	Bridge Consulting	PE1	$88,000.00	$22,000.00	$110,000.00			
Comments:No MPO; Add FY18 PE $110,000.00																	

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*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.