Michael R. Pence, Governor
Cameron F. Clark, Director

DNR Indiana Department of Natural Resources

Division of Historic Preservation & Archaeology • 402 W. Washington Street, W274 · Indianapolis, IN 46204-2739
Phone 317-232-1646 • Fax 317-232-0693 · dhpa@dnr.IN.gov

July 11, 2014

Linda Weintraut, Ph.D.
Weintraut & Associates, Inc.
PO Box 5034
Zionsville, IN 46077

Federal Agency: Federal Highway Administration

Re: Historic property report (Weintraut, 4/2014) for the I-69 interchange modification at Campus Parkway, Exit 210 (Designation #1383489; DHPA #16356)

Dear Dr. Weintraut:

Pursuant to Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f), 36 C.F.R. Part 800, and the "Programmatic Agreement among the Federal Highway Administration, the Indiana Department of Transportation, the Advisory Council on Historic Preservation, the Indiana State Historic Preservation Officer regarding the implementation of the Federal Aid Highway Program in the State of Indiana," the staff of the Indiana State Historic Preservation Officer has conducted an analysis of the materials dated June 18, 2014 and received on June 19, 2014, for the above indicated project in Fall Creek and Wayne Townships, Hamilton County, Indiana.

Based upon the documentation available to the staff of the Indiana SHPO, we have not identified any historic buildings, structures, or districts listed in or eligible for inclusion in the National Register of Historic Places within the probable area of potential effects.

The above comments are strictly in regards to historic structures, since no information has been provided thus far regarding archaeology.

A copy of the revised 36 C.F.R. Part 800 that went into effect on August 5, 2004 may be found on the Internet at www.achp.gov for your reference. If you have questions about archaeological issues please contact Wade T. Tharp at (317) 232-1650 or wtharp1@dnr.IN.gov. If you have questions about buildings or structures please contact Ashley Thomas at (317) 234-7034 or asthomas@dnr.IN.gov. Additionally, in all future correspondence regarding the above indicated project, please refer to DHPA #16356.

Very truly yours,

Chad W. Slider

Mitchell K. Zoll
Deputy State Historic Preservation Officer

MKZ:ADT:adt

emc: Patrick Carpenter, Indiana Department of Transportation
Mary Kennedy, Indiana Department of Transportation
Shaun Miller, Indiana Department of Transportation
Melany Prather, Indiana Department of Transportation

Michael R. Pence, Governor
Cameron F. Clark, Director

DNR Indiana Department of Natural Resources

Division of Historic Preservation & Archaeology·402 W. Washington Street, W274·Indianapolis, IN 46204-2739
Phone 317-232-1646·Fax 317-232-0693·dhpa@dnr.IN.gov

October 24, 2014

Linda Weintraut, Ph.D.
Weintraut & Associates, Inc.
P. O. Box 5034
Zionsville, Indiana 46077

Federal Agency: Federal Highway Administration ("FHWA")

Re: Indiana archaeological short report (Goldbach, 09/23/2014) for the I-69 interchange modification at Campus Parkway, Exit 210 (Designation No. 1383489; DHPA No. 16356)

Dear Dr. Weintraut:

Pursuant to Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f), 36 C.F.R. Part 800, and the "Programmatic Agreement among the Federal Highway Administration, the Indiana Department of Transportation, the Advisory Council on Historic Preservation, the Indiana State Historic Preservation Officer regarding the implementation of the Federal Aid Highway Program in the State of Indiana," the staff of the Indiana State Historic Preservation Officer ("Indiana SHPO") has conducted an analysis of the materials dated September 25, 2014, and received on September 26, 2014, for the above indicated project in Fall Creek Township and Wayne Township, Hamilton County, Indiana.

Based upon the documentation available to the staff of the Indiana SHPO, we have not identified any currently known archaeological resources listed in or eligible for inclusion in the National Register of Historic Places ("NRHP") within the proposed project area.

We note that that, per the submitted report, when disturbed profiles repeatedly were encountered, the shovel testing interval was increased to 30 meters, rather than kept to 15 meter intervals, as indicated in the *Revised Policy for Shovel Test Probes in Indiana* (Glass, 03/10/2009). Additionally, we note that a known archaeological site—12-H-0661—was within the surveyed area, and that this site was resurveyed at 15 meter intervals, rather than at 5 meter intervals, as indicated for known sites in the *Revised Policy*. Please be advised that, per the current *Draft Guidebook for Indiana Historic Sites and Structures Inventory—Archaeological Sites*, the DHPA must be consulted with prior to implementation of changes in field methodology or survey techniques. Additionally, a site resurvey form for 12-H-0661 should be uploaded to the DHPA SHAARD database.

If any archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and 29) requires that the discovery must be reported to the Department of Natural Resources within two (2) business days. In that event, please call (317) 232-1646. Be advised that adherence to Indiana Code 14-21-1-27 and 29 does not obviate the need to adhere to applicable federal statutes and regulations.

As previously indicated, based upon the documentation available to the staff of the Indiana SHPO, we have not identified any historic buildings, structures, or districts listed in or eligible for inclusion in the NRHP within the probable area of potential effects.

At this time, it would be appropriate for the Indiana Department of Transportation ("INDOT"), on behalf of the FHWA, to analyze the information that has been gathered from the Indiana SHPO, the general public, and any other consulting parties and make the necessary determinations and findings. Please refer to the following comments for guidance:

1) If the INDOT believes that a determination of "no historic properties affected" accurately reflects its assessment, then it shall provide documentation of its finding as set forth in 36 C.F.R. § 800.11 to the Indiana SHPO, notify all consulting parties, and make the documentation available for public

inspection (36 C.F.R. §§ 800.4[d][1] and 800.2[d][2]).

2) If, on the other hand, the INDOT finds that an historic property may be affected, then it shall notify the Indiana SHPO, the public and all consulting parties of its finding and seek views on effects in accordance with 36 C.F.R. §§ 800.4(d)(2) and 800.2(d)(2). Thereafter, the INDOT may proceed to apply the criteria of adverse effect and determine whether the project will result in a "no adverse effect" or an "adverse effect" in accordance with 36 C.F.R. § 800.5.

Please be advised that prior to INDOT approving and issuing a finding, the 36 C.F.R. § 800.11 documentation must be submitted to INDOT for review and comment.

A copy of the revised 36 C.F.R. Part 800 that went into effect on August 5, 2004 may be found on the Internet at www.achp.gov for your reference. If you have questions about archaeological issues please contact Wade T. Tharp at (317) 232-1650 or wtharp1@dnr.IN.gov. If you have questions about buildings or structures please contact Ashley Thomas at (317) 234-7034 or asthomas@dnr.IN.gov. Additionally, in all future correspondence regarding the above indicated project, please refer to DHPA No. 16356.

Very truly yours,

Mitchell K. Zoll
Deputy State Historic Preservation Officer

MKZ:WTT:wtt

emc: Patrick Carpenter, Indiana Department of Transportation
Mary Kennedy, Indiana Department of Transportation
Shaun Miller, Indiana Department of Transportation
Melany Prather, Indiana Department of Transportation
Jason Goldbach, Weintraut & Associates, Inc.

Appendix E: Section 4(f)

	Page(s)
E-mail to Officials with Jurisdiction (September 17, 2014)….	1-3
Response from the City of Noblesville (September 17, 2014)….	4
Response (Concurrence) from the Town of Fishers (October 17, 2014)……..	5-6
Response from the City of Noblesville (October 20, 2014)….	7-8
Concurrence Letter signed by the Officials with Jurisdiction……	9-11

Miller, Daniel J

From: Miller, Daniel J
Sent: Wednesday, September 17, 2014 3:14 PM
To: 'parks@fishers.in.us'; 'bbennett@noblesville.in.us'
Subject: INDOT Des. No. 1383489; I-69 Interstate Expansion; Project 2: Interchange Modification at Exit 210 (Campus Parkway); Hamilton County; Section 4(f)
Attachments: Trails within the project limits.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Mr. Elliot and Mr. Bennett,
The Indiana Department of Transportation (INDOT) is planning an I-69 Interstate Expansion from 106th Street in Fishers to Exit 226 (SR 9 & 109 in Anderson), in Hamilton and Madison Counties. This expansion has been broken into multiple projects with independent utility and logical termini. Environmental analysis is currently being conducted for Project 2 (Des. No. 1383489), an interchange modification project at Exit 210 (Campus Parkway).

I mailed out early coordination letters and attachments last week (September 9, 2014) for this project. Would you please confirm whether or not you received these?

Per GIS review, there are two open trail segments (146th St from Pointe Blvd to I-69 and Cumberland Rd to Hamilton Towne Center) and two planned segments (I-69 South to Mud Creek and a segment of Olio Road - SR 238 south to Bee Camp Creek) that partially lie within the project area (please see the attached map). According to GIS, the 146th St from Pointe Blvd to I-69 trail is managed by the Noblesville Parks and Recreation Department, while the Cumberland Rd to Hamilton Towne Center trail and both planned segments are managed by the Town of Fishers. Would you please confirm whether or not this is correct?

Due to the safety hazards associated with construction, it is preferred to close the portion of the 146th St from Pointe Blvd to I-69 trail within the project limits (approximately 0.54 mile at the end of the 7.5 mile long trail) during construction (1 construction season). A very small portion of the Cumberland Rd to Hamilton Towne Center trail (approximately 210 feet of the 1.25 mile long trail) may also need to temporarily be closed during construction for safety purposes. It is assumed that both of the proposed trails would not be impacted by the proposed project (unless they are planned to open before construction begins?). There would be no permanent impacts to any of the trails.

The open segments of trails would likely be considered Section 4(f) Resources per the US Department of Transportation Act of 1966. If the trails are temporarily closed for one construction season (or part of one construction season), this would likely be considered "interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis", and, therefore, likely be considered a "use". Due to the minor impacts associated with temporarily closing portions of these trails for safety related purposes, it is believed that a determination of a *de minimis* impact is appropriate. Per FHWA's Section 4(f) tutorial (http://www.environment.fhwa.dot.gov/section4f/use_deminimis.aspx):

A determination of *de minimis* impact on parks, recreation areas, and wildlife and waterfowl refuges, may be made when all three of the following criteria are satisfied:

1. The transportation use of the Section 4(f) resource, together with any impact avoidance, minimization, and mitigation or enhancement measures incorporated into the project, does not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f);
2. The public has been afforded an opportunity to review and comment on the effects of the project on the protected activities, features, and attributes of the Section 4(f) resource; and
3. The official(s) with jurisdiction over the property are informed of U.S. DOT's intent to make the de minimis impact determination based on their written concurrence that the project will not adversely affect the activities, features, and attributes that qualify the property for protection under Section 4(f).

Do you concur that the project will not adversely affect the activities, features, and attributes that qualify the trails under your jurisdiction for protection under Section 4(f)?

If so, I will write up an official concurrence letter for all parties to sign. INDOT will then hold a hearing to allow the public an opportunity to review and comment on the effects of the project.

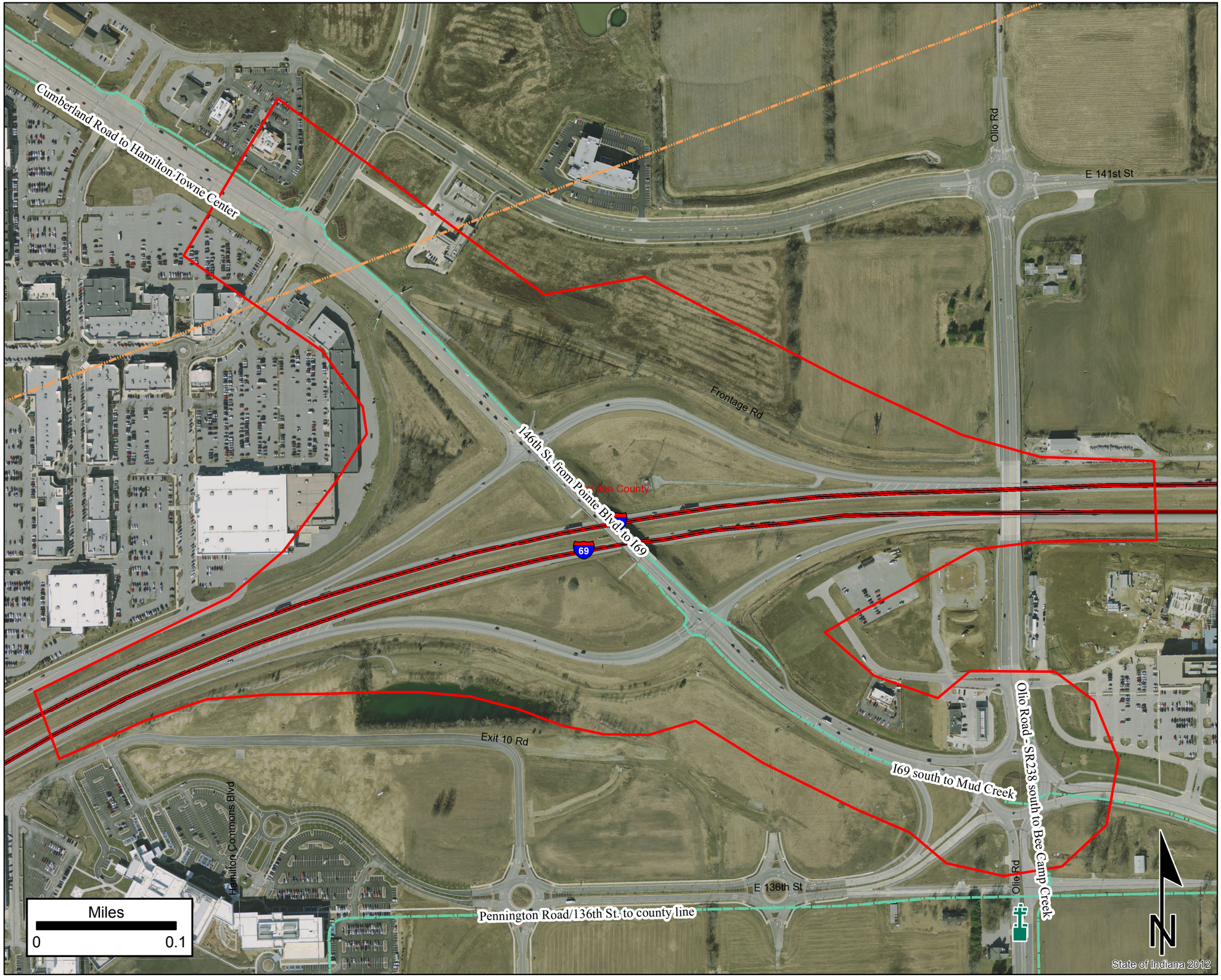
Please let me know if you have any questions or comments, or if you find it prudent to hold a meeting to discuss the project. Please feel free to contact me by e-mail or at the number below.

Thank you,
Daniel J. Miller
Senior Environmental Planner
PARSONS
101 West Ohio Street, Suite 2121
Indianapolis, IN 46204
Phone: (317)616-4663
E-mail: Daniel.J.Miller@Parsons.com
Web: www.parsons.com

 Please consider the environment before printing this email

Des. No. 1383489

I-69 Interstate Expansion
Project 2: Interchange Modification at Exit 210 (Campus Parkway); Hamilton County



Infrastructure

- Project Area
- Half Mile Radius
- Airport
- Cemetaries
- Hospital
- Railroad
- Recreation Facility
- Religious Facility
- Religious Facility Indiana Map
- School
- Trails
- Pipeline
- Managed Lands
- County Boundary
- Interstate
- State
- US
- Local

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

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

Miller, Daniel J

From: John Beery [JBeery@noblesville.in.us]
Sent: Wednesday, September 17, 2014 4:14 PM
To: Miller, Daniel J
Cc: Brandon Bennett
Subject: RE: INDOT Des. No. 1383489; I-69 Interstate Expansion; Project 2: Interchange Modification at Exit 210 (Campus Parkway); Hamilton County; Section 4(f)

Follow Up Flag: Follow up
Flag Status: Flagged

Mr. Miller,

Please just forward us the pages of the MOT that show the closure. You can copy me directly via email. I suggest only the portion east of Bergan Blvd and the easternmost entrance to the Town Center be closed.

Regards,

John Beery, PE, PTOE
City Engineer
City of Noblesville
Phone: (317) 776-6330

From: Brandon Bennett
Sent: Wednesday, September 17, 2014 3:27 PM
To: John Beery
Subject: FW: INDOT Des. No. 1383489; I-69 Interstate Expansion; Project 2: Interchange Modification at Exit 210 (Campus Parkway); Hamilton County; Section 4(f)

Can you decipher this for me please? Your input is requested. Thanks!

Brandon Bennett, CPRP ¦ *Director* ¦ *Parks & Recreation Department*
City of Noblesville
701 Cicero Road
Noblesville, IN 46060
www.noblesvilleparks.org
P: 317-776-6350
C: 317-716-2586

From: Miller, Daniel J [mailto:Daniel.J.Miller@parsons.com]
Sent: Wednesday, September 17, 2014 3:14 PM
To: parks@fishers.in.us; Brandon Bennett
Subject: INDOT Des. No. 1383489; I-69 Interstate Expansion; Project 2: Interchange Modification at Exit 210 (Campus Parkway); Hamilton County; Section 4(f)

Mr. Elliot and Mr. Bennett,
The Indiana Department of Transportation (INDOT) is planning an I-69 Interstate Expansion from 106th Street in Fishers to Exit 226 (SR 9 & 109 in Anderson), in Hamilton and Madison Counties. This expansion has been broken into multiple

Miller, Daniel J

From: Elliot, Tony [elliota@fishers.in.us]
Sent: Friday, October 17, 2014 8:59 AM
To: Miller, Daniel J
Subject: RE: Fishers Parks - I69 Expansion

Follow Up Flag: Follow up
Flag Status: Flagged

Mr. Miller,

I concur with the de minimis determination based on review of the project and discussions with Fishers Engineering Department. Please let me know if you need additional information from us.

Thank you,

Tony Elliot

Director, Parks & Recreation, Parks Department

P/F 317.595.3214 C 317.260.7112

Town of Fishers INDIANA

www.fishers.in.us

From: Miller, Daniel J [mailto:Daniel.J.Miller@parsons.com]
Sent: Monday, October 13, 2014 10:01 AM
To: Elliot, Tony
Subject: RE: Fishers Parks - I69 Expansion

Mr. Elliot,
Attached is the first set of plans for the project. This project is design build. We are working on getting the MOT together, and I will forward that as soon as it is completed.

Would you please let me know if you concur that a determination of *de minimis* is appropriate for the temporary closure of the trail? If so, I will prepare the official concurrence letter for all parties to sign.

Please let me know if you need any additional information. FYI, NEPA is on an expedited schedule for this project. If you would like to discuss anything in detail, I am available by phone (below) or can meet you at your office to discuss.

Thanks,
Daniel J. Miller
Principal Environmental Planner
PARSONS
101 West Ohio Street, Suite 2121
Indianapolis, IN 46204
Phone: (317)616-4663

E-mail: Daniel.J.Miller@Parsons.com
Web: www.parsons.com

Please consider the environment before printing this email

From: Elliot, Tony [mailto:elliota@fishers.in.us]
Sent: Thursday, September 18, 2014 7:54 AM
To: Miller, Daniel J
Subject: Fishers Parks - I69 Expansion

Mr. Miller,

This email is to confirm receipt of the letter sent on September 9, 2014 regarding the Interstate 69 Expansion in Fishers, Hamilton County.

I will aim to have responses to you by end of week.

Thank you,

Tony Elliot

Director, Parks & Recreation, Parks Department

P/F317.595.3214 C 317.260.7112

www.fishers.in.us

Miller, Daniel J

From: John Beery [JBeery@noblesville.in.us]
Sent: Monday, October 20, 2014 9:38 AM
To: Miller, Daniel J
Cc: Brandon Bennett
Subject: RE: INDOT Des. No. 1383489; I-69 Interstate Expansion; Project 2: Interchange Modification at Exit 210 (Campus Parkway); Hamilton County; Section 4(f)

Follow Up Flag: Follow up
Flag Status: Flagged

We were unable to get any attachments and did not receive any information.

I believe that the closure of trails is of no consequence.

Please use Drop Box for further submittals. I also believe that I state in past correspondence that you need only send MOT plans for the specific area, which should reduce the size of the file that you need to transmit.

Regards,

John Beery, PE, PTOE
City Engineer
City of Noblesville
Phone: (317) 776-6330

From: Miller, Daniel J [mailto:Daniel.J.Miller@parsons.com]
Sent: Monday, October 20, 2014 9:21 AM
To: John Beery
Cc: Brandon Bennett
Subject: RE: INDOT Des. No. 1383489; I-69 Interstate Expansion; Project 2: Interchange Modification at Exit 210 (Campus Parkway); Hamilton County; Section 4(f)

Mr. Berry & Mr. Bennett,
Would either of you have time this week to discuss the *de minimis* determination?

Thanks,
Daniel J. Miller
Principal Environmental Planner
PARSONS
101 West Ohio Street, Suite 2121
Indianapolis, IN 46204
Phone: (317)616-4663
E-mail: Daniel.J.Miller@Parsons.com
Web: www.parsons.com

Please consider the environment before printing this email

From: Miller, Daniel J
Sent: Monday, October 13, 2014 10:11 AM
To: 'John Beery'

Cc: 'Brandon Bennett'
Subject: RE: INDOT Des. No. 1383489; I-69 Interstate Expansion; Project 2: Interchange Modification at Exit 210 (Campus Parkway); Hamilton County; Section 4(f)

Mr. Berry & Mr. Bennett,
I tried to send you some plans (7MB), but got a response back that both of your mailboxes are full. I've dropped the attachment. Would you please contact me and let me know if you were able to receive this?

Daniel J. Miller
Principal Environmental Planner
PARSONS
101 West Ohio Street, Suite 2121
Indianapolis, IN 46204
Phone: (317)616-4663
E-mail: Daniel.J.Miller@Parsons.com
Web: www.parsons.com

Please consider the environment before printing this email

From: Miller, Daniel J
Sent: Monday, October 13, 2014 9:59 AM
To: 'John Beery'
Cc: Brandon Bennett
Subject: RE: INDOT Des. No. 1383489; I-69 Interstate Expansion; Project 2: Interchange Modification at Exit 210 (Campus Parkway); Hamilton County; Section 4(f)

Mr. Beery,
Attached is the first set of plans for the project. The trail will only be closed east of Bergan Blvd and the easternmost entrance to the Town Center. This project is design build. We are working on getting the MOT together, and I will forward that as soon as it is completed.

Would you please let me know if you concur that a determination of *de minimis* is appropriate for the temporary closure of the trail? If so, I will prepare the official concurrence letter for all parties to sign.

Please let me know if you need any additional information. FYI, NEPA is on an expedited schedule for this project. If you would like to discuss anything in detail, I am available by phone (below) or can meet you at your office to discuss.

Thanks,
Daniel J. Miller
Principal Environmental Planner
PARSONS
101 West Ohio Street, Suite 2121
Indianapolis, IN 46204
Phone: (317)616-4663
E-mail: Daniel.J.Miller@Parsons.com
Web: www.parsons.com

Please consider the environment before printing this email

From: John Beery [mailto:JBeery@noblesville.in.us]
Sent: Wednesday, September 17, 2014 4:14 PM
To: Miller, Daniel J
Cc: Brandon Bennett

INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204

Michael R. Pence, Governor
Karl B. Browning, Commissioner

December 5, 2014

Mr. Tony Elliot
Director of Parks and Recreation
Town of Fishers
Parks and Recreation
Fishers, IN 46037

Brandon Bennett
Director of Parks and Recreation
City of Noblesville
701 Cicero Road
Noblesville, IN 46060

John Beery, PE, PTOE
City Engineer
City of Noblesville
Noblesville, IN 46060

Re: Des. Nos.: 1383489
Description: I-69 Interstate Expansion
Project 2: Interchange Modification at Exit 210 (Campus Parkway)
Hamilton County, Indiana

Dear Mr. Elliot, Mr. Bennett, and Mr. Beery,
The purpose of this letter is to document the current understanding between the Indiana Department of Transportation (INDOT), the Federal Highway Administration (FHWA), the Town of Fishers' Department of Parks and Recreation, and the City of Noblesville's Department of Parks and Recreation regarding the impacts of the above-referenced project on the 146th Street from Pointe Boulevard to I-69 Trail and the Cumberland Road to Hamilton Towne Center Trail.

Use of federal funds, administered by FHWA, subjects the proposed undertaking to the requirements of Section 4(f) of the Department of Transportation (DOT) Act of 1966. This federal law protects publicly owned parks, recreation areas, wildlife and waterfowl refuges, and public or privately-owned historic sites from conversion to a transportation use. The 146th Street from Pointe Boulevard to I-69 Trail and the Cumberland Road to Hamilton Towne Center Trail meet the requirements to be considered Section 4(f) resources. The 146th Street from Pointe Boulevard to I-69 Trail is managed by the Noblesville Parks and Recreation Department, while the Cumberland Road to Hamilton Towne Center Trail is managed by the Town of Fishers.

As discussed in the early coordination letters (ECL) sent out September 9, 2014 and the September 17, 2014 follow-up e-mails, INDOT is planning an I-69 Interstate Expansion from 106th Street in Fishers to Exit 226 (SR 9 & 109 in Anderson), in Hamilton and Madison Counties. This expansion has been broken into multiple projects with independent utility and logical termini. Project 2 is an interchange modification project at Exit 210 (Southeastern Parkway/Campus Parkway).

The current interchange type is a diamond interchange with signalized ramp terminals. The bridge has one 11-foot through-lane and one 11-foot left-turn lane going eastbound, and two 11-foot through-lanes and one 11-foot left-turn lane going westbound. A 10-foot-8-inch multiuse path exists on the westbound side, which carries the 146th Street from Pointe

Boulevard to I-69 trail across the interchange. The Cumberland Road to Hamilton Towne Center Trail currently terminates approximately 210 feet south of the Hamilton Towne Center, northwest of the interchange.

The proposed project will modify the existing interchange into a double-crossover diamond (DCD) interchange. A DCD interchange, also referred to as a diverging diamond (DDI) interchange, "twists" or shifts crossroad traffic in the core of the interchange so as to eliminate turning movements at the signalized intersections. Therefore, left-turn and through movements will be relocated to the opposite side of the road on the bridge structure. The interchange will require two traffic signals, but they control opposing through movements only and are therefore two-phase signals (since no left-turn phases are needed).

The preferred alternative will provide two variable (12 to 15-foot) eastbound through-lanes, two variable (12 to 15-foot) westbound through-lanes, and 16-foot on and off-ramps. A 10-foot multiuse path will be maintained on the westbound side for the 146th Street from Pointe Boulevard to I-69 trail, and a 6-foot sidewalk will be added to the eastbound side and connected to the Cumberland Road to Hamilton Towne Center trail.

Due to the safety hazards associated with construction, the portion of the 146th Street from Pointe Boulevard to I-69 trail within the project limits (approximately 0.54 mile at the end of the 7.5 mile long trail) will be closed during construction (1 construction season). A small portion of the Cumberland Road to Hamilton Towne Center Trail (approximately 210 feet of the 1.25 mile long trail) may also need to temporarily be closed during construction for safety purposes. There would be no permanent impacts to either of the trails. The construction limits have been reduced to the greatest extent possible to minimize harm to these resources. The 146th Street from Pointe Boulevard to I-69 trail will only be closed east of Bergen Boulevard and the easternmost entrance to the Town Center to allow the remaining trail (approximately 7 miles) to be utilized during construction. As previously discussed, a 6-foot sidewalk will be added to the eastbound side and connected to the Cumberland Road to Hamilton Towne Center Trail as a mitigation measure.

After assessing the impacts the Project would have on the 146th Street from Pointe Boulevard to I-69 Trail and the Cumberland Road to Hamilton Towne Center Trail, it has been determined that the proposed Project, including the minimization and mitigation measures described above, would not adversely affect the activities, features, or attributes that make the trails eligible for Section 4(f) protection.

A determination of *de minimis* impact to Section 4(f) resources requires the concurrence of the officials with jurisdiction (OWJ) for the resource. As such, INDOT respectfully requests your concurrence with its *de minimis* finding by signing the appropriate line below and returning it to my attention. If you have any questions regarding the Project, the potential impacts on the 146th Street from Pointe Boulevard to I-69 Trail and the Cumberland Road to Hamilton Towne Center Trail, or the Section 4(f) process, please contact me at daniel.j.miller@parsons.com or at (317) 616-4663.

Sincerely,

Daniel J. Miller
Principal Environmental Planner
Parsons, on behalf of INDOT

Concurrence: _____ Date: 12/5/2014

Tony Elliot, Director
Department of Parks and Recreation, Town of Fishers

Concurrence: _____ Date: 12/9/14
Brandon Bennett, CPRP, Director
Department of Parks and Recreation, City of Noblesville

Concurrence: _____ Date: 1/13/15
John Berry, PE, PTOE, City Engineer
City of Noblesville

cc: Tony Jones, INDOT
Larry Heil, FHWA
Ken McMullen, INDOT Environmental Services

Appendix F: Section 6(f)

Page(s)
Listing from the National Park Service's Land and Water Conservation Fund Website..... 1

Land and Water Conservation Fund Grants: Indiana

The Park Service is finding out about more closures and conversions of federally protected parks than ever before. But no one knows just how many, so InvestigateWest compiled this database, which lists every LWCF grant between 1965 and 2011, as a starting point. Click a column header to re-sort the table. Click-shift to add a secondary sort.

RETURN TO THE PROJECT PAGE

Hamilton

Grant ID & Element	Grant Name	Sponsor	County	State	Grant Amount	Year Approved	Year Completed	Type
17 - XXX	FOREST PARK DEVELOPMENT	NOBLESVILLE PARK BOARD	HAMILTON	IN	$8,383.88	1969	1969	Development
58 - XXX	FOREST PARK ADDITION	NOBLESVILLE PARK BOARD	HAMILTON	IN	$45,744.50	1969	1970	Acquisition
128 - XXX	MORSE PARK	HAMILTON COUNTY PARK BOARD	HAMILTON	IN	$142,332.00	1972	1975	Combination
198 - XXX	TRI-TOWN COMMUNITY PARK	CICERO PARK BOARD	HAMILTON	IN	$34,242.81	1975	1977	Development
236 - XXX	FOREST PARK POOL	HAMILTON COUNTY PARK BOARD	HAMILTON	IN	$125,000.00	1976	1978	Development
493 - XXX	FLOWING WELL PARK	CARMEL/CLAY TWP PARK BOARD	HAMILTON	IN	$75,000.00	1993	1998	Combination
502 - XXX	COOL CREEK PARK NATURE CENTER	HAMILTON COUNTY PARK BOARD	HAMILTON	IN	$75,000.00	1994	1999	Development
519 - XXX	KOTEEWI PARK ACQUISITION & DEVELOPMENT	HAMILTON COUNTY PARK BOARD	HAMILTON	IN	$200,000.00	2000	2005	Combination
551 - XXX	D/MACGREGOR PARK	WASHINGTON TOWNSHIP PARK BOARD	HAMILTON	IN	$200,000.00	2005	2007	Combination

AN INVESTIGATEWEST DATA PROJECT

Appendix G: Waters of the US Determination Report

	Page(s)
Waters of the US Determination Report (Pages Applicable to Project 2).....	1-95
INDOT Approval (E-mail) (October 20, 2014)…….	96-98

Waters of the U.S. Report

I-69 Interstate Expansion; Projects 1, 2, and 3
Hamilton and Madison Counties, Indiana
INDOT Designation Numbers 1383332, 1383336, and 1383489

October 16, 2014

Prepared by:

PARSONS
101 West Ohio Street, Suite 2121
Indianapolis, Indiana 46204

Prepared for:
Indiana Department of Transportation
Environmental Services Division
100 North Senate Avenue, Room N642
Indianapolis, Indiana 46204

Table of Contents

I. Project Information **1**
- Fieldwork Dates 1
- Contributors 1
- Project Location 1
- Project Description 1

II. Office Evaluation **2**
- Methodology 2
- NWI Mapping 2
- USGS Mapping 2
- Mapped Soil Units 2
- Historic Drainage 3

III. Field Reconnaissance **3**
- Methodology 3
- Streams 3
- Wetlands 12
- Miscellaneous Features 31

IV. Conclusions **32**

V. References **33**

Table 1: Soil Summary Table 36
Table 2: Stream Summary Table 37
Table 3: Wetland Summary Table 38
Table 4: Wetland Data Point Summary Table 39
Table 5: Non-Jurisdictional Features Summary Table 41

Exhibit 1: Project Location Map 45
Exhibit 2: National Wetlands Inventory (NWI) Overview 47
Exhibit 3: Mapped Soil Units 55
Exhibit 4: Historic Drainage 63
Exhibit 5: Resource Maps 70
Exhibit 6: Photo-Orientation Maps 120
Photographs 161
Exhibit 7: QHEI/HHEI Assessments 220
Exhibit 8: Wetland Data Forms 259
Exhibit 9: Meeting Minutes 436
Exhibit 10: Preliminary JD Form 446

WATERS OF THE U.S. REPORT
I-69 Interstate Expansion; Projects 1, 2, and 3
Hamilton and Madison Counties, Indiana
INDOT Designation Numbers 1383332, 1383336, and 1383489
Prepared By: Thomas J. Warrner, Environmental Planner
October 16, 2014

I: Project Information

Fieldwork Dates:
Fieldwork was conducted on the following dates in 2014: May 7, May 8, May 12, June 16, June 17, June 18, June 19, June 23, June 25, June 27, July 3, July 9, July 10, and August 14.

Contributors:
Daniel J. Miller, Senior Environmental Planner
Alan Ball, Senior Environmental Planner
Thomas J. Warrner, Environmental Planner
Stephany Stamatis, Associate Environmental Planner
Wade Kimmon, GIS Specialist

Project Location:
Fishers Quadrangle:
Sections 1 and 12 of Township 17N, Range 4E
Section 6 of Township 17N, Range 5E
Section 31 of Township 18N, Range 5E

McCordsville Quadrangle:
Sections 19, 23, 24, 26, 27, 28, 31, 32, and 33 of Township 18N, Range 5E
Section 20 of Township 18N, Range 6E

Ingalls Quadrangle:
Sections 20, 21, and 22 of Township 18N, Range 6E

Hamilton and Madison Counties, Indiana

Project Description:
The Indiana Department of Transportation (INDOT) is planning an I-69 Interstate Expansion Project from 106th Street in Fishers to Exit 226 (S.R. 9 and S.R. 109 in Anderson) in Hamilton and Madison Counties. This expansion has been broken into multiple projects with independent utility and logical termini. This report pertains to Projects 1, 2, and 3.

Project 1
Project 1 (Des. 1383332) extends on I-69 from 106th Street to 0.5 mile north of the Campus Parkway in Hamilton County. This project would construct additional lanes from Exit 205 (116th Street and S.R. 37 in Fishers) to Exit 210 (Campus Parkway) in the form of median travel lanes. An outside auxiliary lane would be added on southbound I-69 from 106th Street to 116th Street. Existing pavement would be resurfaced. The cross section would have a 10-foot paved inside shoulder and a 10-foot paved outside shoulder. Double-sided guardrail would be installed. All mainline bridges would be widened in the median. There would be work on the overhead structure at Cumberland Road. The structure at Brooks School Road over I-69 would have the bridge deck replaced. The overhead structure at 126th Street would require no additional work. The interchange at Exit 210 would be modified as part of a separate project (Project 2). All small structures would be evaluated to determine if rehabilitation or replacement is necessary. Detention would likely be required at all legal drains. All detention basins would be constructed within existing right-of-way. No new right-of-way would be required for this project.

Project 2

Project 2 (Des. 1383489) is a proposed interchange modification at Exit 210 (Campus Parkway) to improve the level of service (LOS). Improvements to the existing interchange, such as added auxiliary lanes, will be considered. Transportation System Management (TSM) improvements, such as ramp metering and signal coordination, will also be considered. In addition, modification to the interchange type will be considered. While all interchange types will be considered as possible improvements, the limited right-of-way in the vicinity of the interchange will make the following interchange types most likely to be selected: partial-cloverleaf interchange, tight diamond with roundabouts at the ramp termini, single point urban interchange, and double-crossover diamond interchange. The primary factors in determining the modifications selected will be construction costs, LOS rating, traffic safety, land acquisition costs, environmental impacts, and cultural resources impacts. New permanent and/or temporary right-of-way may be required for this project depending upon the type of improvements selected for this undertaking.

Project 3

Project 3 (Des. 1383336) extends on I-69 from 0.5 mile north of Campus Parkway to 0.5 mile east of S.R. 13 in Hamilton and Madison Counties. The project would construct additional lanes from Exit 210 (Campus Parkway) to S.R. 13 in the form of median travel lanes. Existing pavement would be resurfaced. The cross section would have a 10-foot paved inside shoulder and a 10-foot paved outside shoulder. Double-sided guardrail would be installed in most areas, though not in wide median areas. All mainline bridges would be widened in the median. The overhead structures at Olio Road and Cyntheanne Road would require no additional work. The pavement on S.R. 13 under I-69 would be lowered to provide adequate bridge clearance. All small structures will be evaluated to determine if rehabilitation or replacement is necessary. Detention would likely be required at all legal drains within Hamilton County. Detention is not expected to be required in Madison County. All detention basins would be constructed within existing right-of-way. No new right-of-way would be required for this project.

A project location map is provided in Exhibit 1 (page 45) for reference.

II: Office Evaluation

Methodology

A desktop review of the project limits was conducted to identify potential waters or waters of the U.S. (streams, wetlands, ponds, etc.). This included review of historic and recent aerial photography for any areas with a water signature or a sharp change in vegetation. Any such areas were flagged for field follow-up. National Wetlands Inventory (NWI) mapping, USGS topographic mapping, mapped soil units, and historic drainage were also reviewed.

NWI Mapping:

During NWI review, two potential wetlands were identified within the project limits. Both of these were located near the Campus Parkway Interchange, with one being an open water area (based on review of aerial photography). Ten (10) NWI polygons were noted adjacent to the project limits. Eight (8) of these, however, appeared to be associated with open water areas (based on review of aerial photography). NWI maps are provided for reference in Exhibit 2 (pages 47 to 53).

USGS Mapping:

After review of USGS 7.5 minutes series topographic maps, three solid blue-line streams were identified within the project limits (Sand Creek, Mud Creek, and Thorpe Creek). One dashed blue-line stream is immediately adjacent to the project limits (Cheeney Creek). USGS maps are provided for reference in Exhibit 2 (pages 47 to 53).

Mapped Soil Units:

According to the Soil Survey Geographic (SSURGO) Database for Hamilton and Madison Counties, Indiana, the project area does contain nationally listed hydric soils. In addition, several of the non-hydric soils that are prevalent within the project limits contain hydric inclusions. The Natural Resources Conservation Service (NRCS) classifies soil types as follows: hydric (100%), predominantly hydric (66-99%), partially

hydric (33-65%), predominantly non-hydric (1-32%), and non-hydric (0%). The Soil Summary Table (Table 1, page 36) details all soil units noted within the project limits. Maps showing the location of soil types are provided in Exhibit 3 (pages 55 to 61).

Historic Drainage:
Soil surveys for both Hamilton and Madison Counties were reviewed to identify areas with historic drainage. Twenty-four (24) historic drainage features were identified within or near the project limits (Exhibit 4, pages 63 to 68). Each of these areas was flagged for field review.

III: Field Reconnaissance

Methodology
Parsons conducted fieldwork in May, June, July, and August of 2014 to determine the presence of streams, wetlands, and other water resources within the project limits. While specific areas identified via desktop review were targeted for review, the entire project was surveyed for resources. When observed, features located adjacent to, but outside of the project limits were also noted. Resource maps showing all identified features are attached for reference (Exhibit 5, pages 70 to 118).

Photographs were taken throughout the right-of-way, and specifically for each feature identified. Selected photographs are included within this report for reference (Exhibit 6, pages 120 to 218).

Each stream's ordinary high water mark (OHWM) was obtained using a measuring tape. Both a qualitative assessment of stream quality and quantitative assessment of stream quality were conducted. Qualitative assessments were only done within the project limits, while quantitative assessments often extended outside of INDOT right-of-way. Quantitative assessments were conducted based on each stream's drainage area using the guidelines for either the headwater habitat evaluation index (HHEI) (Ohio EPA, 2012) or qualitative habitat evaluation index (QHEI) (Ohio EPA, 2006). The results of these evaluations are provided in Exhibit 7 (pages 220 to 258). A hand-held GPS unit (Geoexplorer 6000 Series) was used to collect the location of each identified stream.

Vegetation, soil, and hydrology data were collected using the methods described in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)* (USACE 2010). Wetland indicator statuses for plants were obtained from the 2014 National Wetland Plant List. Wetland data forms are provided in Exhibit 8 (pages 259 to 434) for reference. A qualitative assessment of each wetland's quality and function was conducted. A hand-held GPS unit (Geoexplorer 6000 Series) was used to collect the boundary of each identified wetland, as well as its data points.

Streams
Field investigations resulted in the identification of nineteen (19) likely jurisdictional streams totaling 17,605 linear feet within the project area. These features are summarized in the Stream Summary Table (Table 2, page 37). All roadside drainage features within the project limits were evaluated for the presence or absence of an OHWM. Due to the large number of these features, only those that exhibited an OHWM are discussed in this report. ***All other roadside drainages lacked OHWMs and are therefore not likely to be considered to be waters of the U.S.***

Cheeney Creek (R.J. Craig Drain)
Cheeney Creek (page 72) crosses under I-69 approximately 1.35 miles north of the 106th Street Overpass. Historic drainage was noted for this area during the desktop evaluation (Exhibit 4, page 63). At the May 8, 2014 field check, Cheeney Creek exhibited a 10-foot wide by 22-inch deep OHWM within the project area. Approximately 400 linear feet of Cheeney Creek lies within the project limits.

Within the project limits, this stream is predominantly encapsulated under I-69. The remaining segments within the project limits lack riffles/pools as well as a wooded riparian corridor. Upstream of the project limits, the creek is encapsulated underground after a distance of less than 50 feet. Cheeney Creek is also a Hamilton County regulated drain (R.J. Craig Drain). Because of these factors, qualitatively the aquatic and

terrestrial habitat quality for this stream within the project limits was considered to be poor. An HHEI evaluation was done downstream of the project limits for Cheeney Creek since sufficient room (200 meters) was not available within INDOT right-of-way. This index scored 75 (Exhibit 7, pages 220 to 221), indicating a higher quality than the qualitative evaluation. However, based on level of encapsulation and lack of riffles/pools, the actual stream quality within the project limits is likely a combination of both (average). The primary function of this stream is conveyance of storm water with some habitat value. Cheeney Creek is not listed as a *Federal Wild and Scenic River*, a *State Natural, Scenic and Recreational River,* or on the Indiana Register's listing of *Outstanding Rivers and Streams*.

Cheeney Creek is noted as a dashed blue line stream on USGS 7.5 series topographic maps immediately downstream of the project limits (Exhibit 2, page 47). However, flowing water was observed during all field checks, including on August 14, 2014. Therefore, Cheeney Creek would likely be classified as a perennial stream. This creek is a direct tributary to the West Fork of the White River, which is a direct tributary to the Wabash River, which outlets into the Ohio River (a traditionally navigable waterway). Due to the presence of an OHWM and this connectivity, Cheeney Creek would likely be considered a water of the U.S.

Unnamed Tributary 1 to Cheeney Creek

Unnamed Tributary 1 (UNT1) to Cheeney Creek (pages 72 to 76) is located along the west side of I-69, from the S.R. 37 Interchange to Cheeney Creek. No historic drainage was noted for this area during desktop evaluation (Exhibit 4, pages 63 to 64). However, at the May 7, 2014 field check, an OHWM was observed. South of the 116th Street Interchange the OHWM was 11-feet in width by 6-inches in depth. North of the 116th Street Interchange, the OHWM was 6-feet in width by 12-inches in depth. Approximately 5,865 linear feet of UNT1 lies within the project limits. Of this length, 1,600 linear feet is lined with concrete with an additional 530 linear feet lined with riprap. The concrete lined section at the confluence with Cheeney Creek is broken, allowing the stream to flow under this lining for approximately 50 linear feet. In addition, approximately 350' of this stream contains *Typha spp.* (cattails, OBL) below the OHWM.

This stream is channelized and receives direct pollutant inputs due to its location within the roadside drainage of I-69. Significant portions of this stream are lined with concrete or riprap. It also lacks a wooded riparian corridor along both banks. Because of these factors, qualitatively the aquatic and terrestrial habitat quality for this stream was considered to be poor. UNT1 to Cheeney Creek received an HHEI score of 30 (Exhibit 7, pages 222 to 223), indicating low habitat quality and supporting the qualitative determination. The primary function of this stream is conveyance of storm water. UNT1 to Cheeney Creek is not listed as a *Federal Wild and Scenic River,* a *State Natural, Scenic and Recreational River,* or on the Indiana Register's listing of *Outstanding Rivers and Streams*.

UNT1 to Cheeney Creek is not noted as a stream on USGS 7.5 series topographic maps (Exhibit 2, page 47). UNT1, however, would likely be classified as an intermittent stream. Water was flowing during the May 7, 2014 field check, but was nearly dry during the August 14, 2014 field check. This feature discharges into Cheeney Creek, which a direct tributary to the West Fork of the White River, which is a direct tributary to the Wabash River, which outlets into the Ohio River (a traditionally navigable waterway). Due to the presence of an OHWM and this connectivity, UNT1 to Cheeney Creek would likely be considered a water of the U.S.

Unnamed Tributary 2 to Cheeney Creek

Unnamed Tributary 2 (UNT2) to Cheeney Creek is located along the east side of I-69 within the roadside drainage (page 72). This stream discharges at the southeast quadrant of the Cheeney Creek crossing under I-69. Historic drainage was noted for this area during the desktop evaluation, indicating that a stream may have been captured during I-69's construction (Exhibit 4, page 63). At the May 8, 2014 field check, UNT2 exhibited a 1-foot wide and 4-inch deep OHWM within the project area. Approximately 960 linear feet of UNT2 lies within the project limits.

This stream is channelized and receives direct pollutant inputs due to its location within the roadside drainage of I-69. Approximately 100 linear feet of the stream has been lined with concrete. It lacks a wooded riparian corridor along both banks. Because of these factors, qualitatively the aquatic and terrestrial

habitat quality for this stream was considered to be poor. UNT2 to Cheeney Creek had an HHEI score of 35 (Exhibit 7, pages 224 to 225), indicating low habitat quality and supporting the qualitative determination. The primary function of this stream is conveyance of storm water. UNT2 to Cheeney Creek is not listed as a *Federal Wild and Scenic River*, a *State Natural, Scenic and Recreational River*, or on the Indiana Register's listing of *Outstanding Rivers and Streams*.

UNT2 to Cheeney Creek is not noted as a stream on USGS 7.5 series topographic maps (Exhibit 2, page 47). UNT2, however, would likely be classified as an ephemeral stream. An OHWM was observed, but no flowing water was observed during any of the field checks. This feature discharges into Cheeney Creek, which is a direct tributary to the West Fork of the White River, which is a direct tributary to the Wabash River, which outlets into the Ohio River (a traditionally navigable waterway). Due to the presence of an OHWM and this connectivity, UNT2 to Cheeney Creek would be likely considered a water of the U.S.

Unnamed Tributary 3 to Cheeney Creek

Unnamed Tributary 3 (UNT3) to Cheeney Creek is located along the east side of I-69 within the roadside drainage (pages 72 to 73). This stream discharges at the northeast quadrant of the Cheeney Creek crossing under I-69. No historic drainage was noted for this area during desktop evaluation (Exhibit 4, page 63). At the August 14, 2014 field check, UNT3 exhibited a 1-foot wide by 4-inch deep OHWM within the project area. Approximately 1,000 linear feet of UNT3 lies within the project limits.

This stream is channelized and receives direct pollutant inputs due to its location within the roadside drainage of I-69. Approximately 120 linear feet of the stream has been lined with concrete. It also lacks a wooded riparian corridor along both banks. Because of these factors, qualitatively the aquatic and terrestrial habitat quality for this stream was considered to be poor. UNT3 to Cheeney Creek had an HHEI score of 28 (Exhibit 7, pages 226 to 227), indicating low habitat quality and supporting the qualitative determination. The primary function of this stream is conveyance of storm water. UNT3 to Cheeney Creek is not listed as a *Federal Wild and Scenic River*, a *State Natural, Scenic and Recreational River*, or on the Indiana Register's listing of *Outstanding Rivers and Streams*.

UNT3 to Cheeney Creek is not noted as a stream on USGS 7.5 series topographic maps (Exhibit 2, page 47). UNT3, however, would likely be classified as an ephemeral stream. An OHWM was observed, but no flowing water was observed after the May 8, 2014 field check. This feature discharges into Cheeney Creek, which is a direct tributary to the West Fork of the White River, which is a direct tributary to the Wabash River, which outlets into the Ohio River (a traditionally navigable waterway). Due to the presence of an OHWM and this connectivity, UNT3 to Cheeney Creek would likely be considered a water of the U.S.

Unnamed Tributary 4 to Cheeney Creek

Unnamed Tributary 4 (UNT4) to Cheeney Creek (pages 72 to 73) is located along the east side of I-69 in the roadside drainage between UNT3 to Cheeney Creek and USA Parkway. This stream discharges at the northeast quadrant of the Cheeney Creek crossing under I-69. No historic drainage was noted for this area during desktop evaluation (Exhibit 4, page 63). At the August 14, 2014 field check, UNT4 exhibited a 3-foot wide by 6-inch deep OHWM within the project area. Approximately 425 linear feet of UNT3 lies within the project limits.

This stream is channelized and lined with concrete. Despite having a narrow wooded riparian corridor (shrubs) along both banks, qualitatively the aquatic and terrestrial habitat quality for this stream was considered to be poor. UNT4 to Cheeney Creek had an HHEI score of 49 (Exhibit 7, pages 228 to 229), suggesting average aquatic habitat quality. Despite scoring high in both the bankfull width and pool depth metrics, the paved nature of the channel bottom is likely a limiting factor for aquatic habitat. Therefore, the overall quality of this stream is likely a combination of both (below average). The primary function of this stream is likely conveyance of storm water with limited habitat value. UNT4 to Cheeney Creek is not listed as a *Federal Wild and Scenic River*, a *State Natural, Scenic and Recreational River*, or on the Indiana Register's listing of *Outstanding Rivers and Streams*.

UNT4 to Cheeney Creek is not noted as a stream on USGS 7.5 series topographic maps (Exhibit 2, page 47). UNT4, however, would likely be classified as a perennial stream. Water was flowing during all field checks, including the August 14, 2014 field check. This feature discharges into Cheeney Creek, which is a direct tributary to the West Fork of the White River, which is a direct tributary to the Wabash River, which outlets to the Ohio River (a traditionally navigable waterway). Due to the presence of an OHWM and this connectivity, UNT4 to Cheeney Creek would likely be considered a water of the U.S.

Unnamed Tributary 5 to Cheeney Creek

Unnamed Tributary 5 (UNT5) to Cheeney Creek (page 71) is located in the southwest quadrant of the 106th Street Overpass over I-69. No historic drainage was noted for this area during desktop evaluation (Exhibit 4, page 63). At the August 14, 2014 field check, UNT5 exhibited a 4-foot wide by 3-inch deep OHWM within the project area. Approximately 55 linear feet of UNT5 lies within the project limits.

This stream is channelized and receives direct pollutant inputs due to its location within the roadside drainage along the 106th Street overpass. It lacks a wooded riparian corridor along both banks and is impounded immediately downstream in a commercial property's retention pond. Because of these factors, qualitatively the aquatic and terrestrial habitat quality for this stream was considered to be poor. UNT5 to Cheeney Creek had an HHEI score of 52 (Exhibit 7, pages 230 to 231), suggesting average aquatic habitat quality. Because several components of the qualitative assessment are not included in HHEI scoring, the overall quality of this stream is likely a combination of both (below average). The primary function of this stream is conveyance of storm water with limited habitat value. UNT5 to Cheeney Creek is not listed as a *Federal Wild and Scenic River*, a *State Natural, Scenic and Recreational River,* or on the Indiana Register's listing of *Outstanding Rivers and Streams*.

UNT5 to Cheeney Creek is not noted as a stream on USGS 7.5 series topographic maps (Exhibit 2, page 47). UNT5, however, would likely be classified as an ephemeral stream. Water was flowing at the May 8, 2014 field check, but not at the August 14, 2014 field check. This feature discharges into Cheeney Creek, which is a direct tributary to the West Fork of the White River, which is a direct tributary to the Wabash River, which outlets into the Ohio River (a traditionally navigable waterway). Due to the presence of an OHWM and this connectivity, UNT5 to Cheeney Creek would likely be considered a water of the U.S.

Sand Creek

Sand Creek (page 83) crosses under I-69 approximately 0.5 mile south of the 126th Street Overpass. Historic drainage was noted in this area during desktop review (Exhibit 4, page 65). At the June 16, 2014 field check, Sand Creek exhibited a 21-foot wide by 28-inch deep OHWM within the project area. Approximately 340 linear feet of Sand Creek lies within the project limits.

Immediately adjacent to the project limits, Sand Creek has a wooded riparian along each bank as well as riffles and pools. It is a Hamilton County regulated drain (Sand Creek Drain), however. Based on these qualitative observations, Sand Creek provides average aquatic and terrestrial wildlife habitat. Sand Creek had a QHEI score of 41.5 (Exhibit 7, pages 232 to 233), which supports the determination of average quality. Sand Creek is not listed as a *Federal Wild and Scenic River*, a *State Natural, Scenic and Recreational River,* or on the Indiana Register's listing of *Outstanding Rivers and Streams*.

Sand Creek is noted as a solid blue line stream on USGS 7.5 series topographic maps (Exhibit 2, page 49). Field observations in June and August confirmed the perennial flow of this stream. Sand Creek is a direct tributary to Mud Creek, which is a direct tributary to Fall Creek, which is a direct tributary to the West Fork White River, which is a direct tributary to the Wabash River, which outlets into the Ohio River (a traditionally navigable waterway). Due to the presence of an OHWM and this connectivity, Sand Creek would likely be considered a water of the U.S.

Unnamed Tributary 1 to Sand Creek

Unnamed Tributary 1 (UNT1) to Sand Creek (pages 82 to 83) is located on the south side of I-69 near the I-69 Northbound Bridge over Sand Creek. UNT1 discharges into Sand Creek approximately 430 linear feet west of this bridge. Historic drainage was noted in this area during desktop review, indicating that a stream

may have been captured in I-69's roadside drainage (Exhibit 4, pages 64 to 65). At the August 14, 2014 field check, UNT1 exhibited a 1.5-foot wide by 8-inch deep OHWM within the project area. Approximately 1,930 linear feet of UNT1 lies within the project limits. Of this, approximately 270 linear feet of the stream channel is concrete lined and 160 linear feet is riprap lined. The concrete lined portion consists of broken pavement, allowing the stream to flow underneath the lining for a distance of about 75 linear feet.

This stream is channelized and receives direct pollutant inputs due to its location within the roadside drainage of I-69. Portions of this stream are lined with concrete or riprap. UNT1 lacks a wooded riparian corridor along both banks. Because of these factors, qualitatively the aquatic and terrestrial habitat quality for this stream was considered to be poor. UNT1 to Sand Creek had an HHEI score of 20 (Exhibit 7, pages 234 to 235), supporting the qualitative assessment of quality. The primary function of this stream is conveyance of storm water. UNT1 to Sand Creek is not listed as a *Federal Wild and Scenic River*, a *State Natural, Scenic and Recreational River*, or on the Indiana Register's listing of *Outstanding Rivers and Streams*.

UNT1 to Sand Creek is not noted as a stream on USGS 7.5 series topographic maps (Exhibit 2, pages 48 to 49). This stream, however, would likely be classified as an ephemeral stream. Water was flowing during the May 12, 2014 field check, but not at the August 14, 2014 field check. This feature discharges into Sand Creek, which is a direct tributary to Mud Creek, which is a direct tributary to Fall Creek, which is a direct tributary to the West Fork White River, which is a direct tributary to the Wabash River, which outlets into the Ohio River (a traditionally navigable waterway). Due to the presence of an OHWM and this connectivity, UNT1 to Sand Creek would likely be considered a water of the U.S.

Unnamed Tributary 2 to Sand Creek

Unnamed Tributary 2 (UNT2) to Sand Creek (page 83) is located in the northwest quadrant of the I-69 Southbound Bridge over Sand Creek. Historic drainage was noted in this area during the desktop review (Exhibit 4, page 65). At the June 16, 2014 field check, UNT2 exhibited a 3-foot wide by 8-inch deep OHWM within the project area. UNT2 originates in an adjacent pasture, and approximately 135 linear feet lies within the project limits. Of this, approximately 75 linear feet of the stream channel is lined with concrete.

This stream is channelized and receives direct pollutant inputs due to its location within the roadside drainage of I-69. It also receives pollutants from the adjacent pasture in which animals have unrestricted access. Portions of this stream are lined with concrete. UNT2 does have a wooded riparian along both banks, but this does not extend beyond INDOT right-of-way. Because of these factors, qualitatively the aquatic and terrestrial habitat quality for this stream was considered to be poor. UNT2 to Sand Creek had an HHEI score of 20 (Exhibit 7, pages 236 to 237), which supports this qualitative determination. The primary function of this stream is conveyance of storm water. UNT2 to Sand Creek is not listed as a *Federal Wild and Scenic River*, a *State Natural, Scenic and Recreational River*, or on the Indiana Register's listing of *Outstanding Rivers and Streams*.

UNT2 to Sand Creek is not noted as a stream on USGS 7.5 series topographic maps (Exhibit 2, page 49). This stream, however, would likely be classified as an ephemeral stream. Water was flowing during the May 12, 2014 field check, but not at the August 14, 2014 field check. This feature discharges into Sand Creek, which is a direct tributary to Mud Creek, which is a direct tributary to Fall Creek, which is a direct tributary to the West Fork White River, which is a direct tributary to the Wabash River, which outlets into the Ohio River (a traditionally navigable waterway). Due to the presence of an OHWM and this connectivity, UNT2 to Sand Creek would likely be considered a water of the U.S.

Unnamed Tributary 3 to Sand Creek

Unnamed Tributary 3 (UNT3) to Sand Creek (page 83) is located in the southeast quadrant of the I-69 Northbound Bridge over Sand Creek. No historic drainage was noted in this area during the desktop review (Exhibit 4, page 65). At the June 16, 2014 field check, UNT3 exhibited a 1.3-foot wide by 7-inch deep OHWM within the project area. UNT3 originates from a small pipe located on the I-69 roadside slope, and approximately 100 linear feet lies within the project limits. Of this length, 90 linear feet is lined with riprap.

UNT3 is channelized within the roadside drainage along I-69. The majority of the stream has been lined with riprap. It lacks a wooded riparian corridor along both banks for the majority of its length. Because of these factors, qualitatively the aquatic and terrestrial habitat quality for this stream was considered to be poor. UNT3 to Sand Creek had an HHEI score of 10 (Exhibit 7, pages 238 to 239), supporting the qualitative determination. The primary function of this stream is conveyance of storm water. UNT3 to Sand Creek is not listed as a *Federal Wild and Scenic River*, a *State Natural, Scenic and Recreational River*, or on the Indiana Register's listing of *Outstanding Rivers and Streams*.

UNT3 to Sand Creek is not noted as a stream on USGS 7.5 series topographic maps (Exhibit 2, page 49). This stream, however, would likely be classified as an ephemeral stream. An OHWM was observed at the June 16, 2014 field check, but without flowing water. This feature discharges into Sand Creek, which is a direct tributary to Mud Creek, which is a direct tributary to Fall Creek, which is a direct tributary to the West Fork White River, which is a direct tributary to the Wabash River, which outlets into the Ohio River (a traditionally navigable waterway). Due to the presence of an OHWM and this connectivity, UNT3 to Sand Creek would likely be considered a water of the U.S.

Unnamed Tributary 4 to Sand Creek

Unnamed Tributary 4 (UNT4) to Sand Creek (page 84) is located approximately 1,000 feet north of the I-69 Bridges over Sand Creek. UNT4 discharges into Sand Creek approximately 1,700 linear feet upstream (north) of the I-69 crossing. Historic drainage was noted in this area during the desktop review (Exhibit 4, page 65). At the June 16, 2014 field check, UNT4 exhibited a 17-foot wide by 4-inch deep OHWM within the project area. Approximately 325 linear feet of UNT4 lies within the project limits. Of this, approximately 185 linear feet is encapsulated under I-69 and 30 linear feet is lined with riprap. Immediately upstream from the project limits, this stream is impounded in a residential retention pond.

This stream in largely encapsulated within INDOT right-of-way. Upstream of the project limits, the stream is impounded within a residential retention pond, and downstream the stream is channelized with a non-wooded riparian corridor. Because of these factors, qualitatively the aquatic and terrestrial habitat quality for this stream was considered to be poor. UNT4 to Sand Creek had an HHEI score of 44 (Exhibit 7, pages 240 to 241), suggesting average aquatic habitat value. Because several components of the qualitative assessment are not scored in the HHEI, the actual quality of this stream is likely a combination of both (below average). The primary function of this stream is conveyance of storm water with limited habitat value. UNT4 to Sand Creek is not listed as a *Federal Wild and Scenic River*, a *State Natural, Scenic and Recreational River*, or on the Indiana Register's listing of *Outstanding Rivers and Streams*.

UNT4 to Sand Creek is not noted as a stream on USGS 7.5 series topographic maps (Exhibit 2, page 49). This stream, however, would likely be classified as a perennial stream. Water was flowing during both the June 16, 2014 and August 14, 2014 field checks. This feature discharges into Sand Creek, which is a direct tributary to Mud Creek, which is a direct tributary to Fall Creek, which is a direct tributary to the West Fork White River, which is a direct tributary to the Wabash River, which outlets into the Ohio River (a traditionally navigable waterway). Due to the presence of an OHWM and this connectivity, UNT4 to Sand Creek would likely be considered a water of the U.S.

Unnamed Tributary 5 to Sand Creek

Unnamed Tributary 5 (UNT5) to Sand Creek (page 94) is located approximately 0.75 mile west of the Campus Parkway Interchange. UNT5 discharges to Sand Creek approximately 2 miles upstream (north) of the I-69 Bridges over Sand Creek. No historic drainage was noted for this area during desktop evaluation (Exhibit 4, page 66). At the June 17, 2014 field check, however, UNT5 exhibited a 10-foot wide by 5-inch deep OHWM within the project area. Approximately 260 linear feet of UNT5 lies within the project limits. Of this, 220 linear feet is encapsulated under I-69, and 15 linear feet is lined with riprap.

This stream in primarily encapsulated within INDOT right-of-way. Upstream of the project limits, the stream is impounded within a retention pond, and downstream the stream is channelized and has a non-wooded riparian corridor. Because of these factors, qualitatively the aquatic and terrestrial habitat quality for

this stream was considered to be poor. An HHEI evaluation was done downstream of the project limits since sufficient room (200 meters) was not available within INDOT right-of-way. UNT5 scored 50 on this index (Exhibit 7, pages 242 to 243), suggesting average aquatic habitat value. Because several components of the qualitative assessment are not scored in the HHEI, the actual quality of this stream is likely a combination of both assessments (below average). The primary function of this stream is conveyance of storm water with limited habitat value. UNT5 to Sand Creek is not listed as a *Federal Wild and Scenic River*, a *State Natural, Scenic and Recreational River*, or on the Indiana Register's listing of *Outstanding Rivers and Streams*.

UNT5 to Sand Creek is not noted as a stream on USGS 7.5 series topographic maps (Exhibit 2, page 50). UNT5, however, would likely be classified as an intermittent stream. Water was flowing during the June 17, 2014 field check, but the channel was nearly dry at the August 14, 2014 field check. This feature discharges into Sand Creek, which is a direct tributary to Mud Creek, which is a direct tributary to Fall Creek, which is a direct tributary to the West Fork White River, which is a direct tributary to the Wabash River, which outlets into the Ohio River (a traditionally navigable waterway). Due to the presence of an OHWM and this connectivity, UNT5 to Sand Creek would likely be considered a water of the U.S.

Mud Creek

Mud Creek (page 103) crosses under I-69 approximately 1.16 miles east of the Campus Parkway Interchange. Historic drainage was noted in this area during the desktop review (Exhibit 4, page 67). At the August 14, 2014 field check, Mud Creek exhibited a 27-foot wide by 54-inch deep OHWM within the project area. Approximately 430 linear feet of Mud Creek lies within the project limits.

Immediately adjacent to the project limits, Mud Creek has a wooded riparian. This stream also has riffles and pools. It is a Hamilton County regulated drain (Daniel Heiney Drain), however. Based on these observations, qualitatively the aquatic and terrestrial wildlife habitat of this stream was considered to be average. Mud Creek had a QHEI score of 47 (Exhibit 7, pages 244 to 245), supporting this assessment. Mud Creek is not listed as a *Federal Wild and Scenic River*, a *State Natural, Scenic and Recreational River*, or on the Indiana Register's listing of *Outstanding Rivers and Streams*.

Mud Creek is noted as a solid blue line stream on USGS 7.5 series topographic maps (Exhibit 2, page 51). Field observations in June and August confirmed the perennial flow of this stream. This stream is a direct tributary to Fall Creek, which is a direct tributary to the West Fork White River, which is a direct tributary to the Wabash River, which outlets into the Ohio River (a traditionally navigable waterway). Due to the presence of an OHWM and this connectivity, Mud Creek would likely be considered a water of the U.S.

Unnamed Tributary 1 to Mud Creek

Unnamed Tributary 1 (UNT1) to Mud Creek (pages 101 to 103) is located on the south side of I-69 and discharges into Mud Creek at the southwest bridge quadrant of the northbound bridge. Historic drainage was noted in this area during the desktop review indicating that a stream may have been captured during I-69's construction (Exhibit 4, page 67). At the August 14, 2014 field check, UNT1 exhibited a 0.5-foot wide by 3-inch deep OHWM within the project area. Approximately 2,920 linear feet of UNT1 lies within the project limits. Of this, approximately 2,030 linear feet of the stream channel is lined with riprap.

This stream is channelized and receives direct pollutant inputs due to its location within the roadside drainage of I-69. The majority of this tributary is riprap lined. UNT1 lacks a wooded riparian corridor along both banks for the vast majority of its length. Because of these factors, qualitatively the aquatic and terrestrial habitat quality for this stream was considered to be poor. UNT1 to Mud Creek had an HHEI score of 9 (Exhibit 7, pages 246 to 247), supporting this assessment. The primary function of this stream is conveyance of storm water. UNT1 to Mud Creek is not listed as a *Federal Wild and Scenic River*, a *State Natural, Scenic and Recreational River*, or on the Indiana Register's listing of *Outstanding Rivers and Streams*.

UNT1 to Mud Creek is not noted as a stream on USGS 7.5 series topographic maps (Exhibit 2, page 51). This stream, however, would likely be classified as an ephemeral stream. Water was flowing during the June 19, 2014 field check, but not flowing during the August 14, 2014 field check. This feature discharges into

Mud Creek, which is a direct tributary to Fall Creek, which is a direct tributary to the West Fork White River, which is a direct tributary to the Wabash River, which outlets into the Ohio River (a traditionally navigable waterway). Due to the presence of an OHWM and this connectivity, UNT1 to Mud Creek would likely be considered a water of the U.S.

Unnamed Tributary 2 to Mud Creek

Unnamed Tributary 2 (UNT2) to Mud Creek (page 103) is located on the south side of I-69 and discharges into Mud Creek at the southeast bridge quadrant of the northbound bridge. Historic drainage was noted in this area during the desktop review indicating that a stream may have been captured during I-69's construction (Exhibit 4, page 67). At the June 25, 2014 field check, UNT2 exhibited a 3-foot wide by 10-inch deep OHWM within the project area. Approximately 200 linear feet of UNT2 lies within the project limits.

This stream receives direct pollutant inputs due to its location within the roadside drainage of I-69. UNT2 does have a mature wooded riparian corridor along both banks. Because of these factors, qualitatively the aquatic and terrestrial habitat quality for this stream was considered to be average. UNT2 to Mud Creek had an HHEI score of 32 (Exhibit 7, pages 248 to 249), suggesting below average quality. Based on the riparian quality, which is not scored in the HHEI, the overall stream quality is likely average. The primary function of UNT2 is storm water conveyance with some habitat value. UNT2 to Mud Creek is not listed as a *Federal Wild and Scenic River*, a *State Natural, Scenic and Recreational River*, or on the Indiana Register's listing of *Outstanding Rivers and Streams*.

UNT2 to Mud Creek is not noted as a stream on USGS 7.5 series topographic maps (Exhibit 2, page 51). This stream, however, would likely be classified as ephemeral. Water was barely flowing during the June 25, 2014 field check, but not flowing at all during the August 14, 2014 field check. This feature discharges into Mud Creek, which is a direct tributary to Fall Creek, which is a direct tributary to the West Fork White River, which is a direct tributary to the Wabash River, which outlets into the Ohio River (a traditionally navigable waterway). Due to the presence of an OHWM and this connectivity, UNT2 to Mud Creek would likely be considered a water of the U.S.

Unnamed Tributary 3 to Mud Creek

Unnamed Tributary 3 (UNT3) to Mud Creek (page 103) is located on the north side of I-69 and discharges into Mud Creek at the northeast bridge quadrant of the I-69 Southbound Bridge. Historic drainage was noted in this area during the desktop review indicating that a stream may have been captured in I-69's roadside drainage (Exhibit 4, page 67). At the June 25, 2014 field check, UNT3 exhibited a 4-foot wide by 6-inch deep OHWM within the project area. Approximately 185 linear feet of UNT2 lies within the project limits.

This stream receives direct pollutant inputs due to its location within the roadside drainage of I-69. UNT3 only has a wooded riparian along its north bank. Because of these factors, qualitatively the aquatic and terrestrial habitat quality for this stream was considered to be poor. UNT3 to Mud Creek had an HHEI score of 26 (Exhibit 7, pages 250 to 251), supporting the qualitative determination. The primary function of UNT3 is conveyance of storm water. UNT3 to Mud Creek is not listed as a *Federal Wild and Scenic River*, a *State Natural, Scenic and Recreational River*, or on the Indiana Register's listing of *Outstanding Rivers and Streams*.

UNT3 to Mud Creek is not noted as a stream on USGS 7.5 series topographic maps (Exhibit 2, page 51). This stream, however, would likely be classified as ephemeral. Water was barely flowing during the June 25, 2014 field check, but not flowing at all during the August 14, 2014 field check. This feature discharges into Mud Creek, which is a direct tributary to Fall Creek, which is a direct tributary to the West Fork White River, which is a direct tributary to the Wabash River, which outlets into the Ohio River (a traditionally navigable waterway). Due to the presence of an OHWM and this connectivity, UNT3 to Mud Creek would likely be considered a water of the U.S.

Thorpe Creek

Thorpe Creek (page 115) crosses under I-69 approximately 0.28 mile west of the S.R. 13 Interchange. Historic drainage was noted in this area during the desktop review (Exhibit 4, page 53). At the July 9, 2014 field check, Thorpe Creek exhibited a 8.5-foot wide by 6-inch deep OHWM within the project area. Approximately 370 linear feet of Thorpe Creek lies within the project limits.

Thorpe Creek has a narrow wooded riparian both upstream and downstream of the project limits. The stream is impounded directly upstream of the project limits. It is a Madison County regulated drain (Martha A. Ford Drain), as well. Based on these qualitative observations, the aquatic and terrestrial wildlife habitat quality was considered poor. Thorpe Creek had a QHEI score of 35 (Exhibit 7, pages 252 to 253) supporting this assessment. Thorpe Creek is not listed as a *Federal Wild and Scenic River*, a *State Natural, Scenic and Recreational River*, or on the Indiana Register's listing of *Outstanding Rivers and Streams*.

Thorpe Creek is noted as a solid blue line stream on USGS 7.5 series topographic maps (Exhibit 2, page 68). Field observations in June, July, and August confirmed the perennial flow of this stream. This stream flows into Geist Reservoir, which drains into Fall Creek, which is a direct tributary to the West Fork White River, which is a direct tributary to the Wabash River, which outlets into the Ohio River (a traditionally navigable waterway). Due to the presence of an OHWM and this connectivity, Thorpe Creek would likely be considered a water of the U.S.

Unnamed Tributary 1 to Thorpe Creek (John Underwood Drain)

Unnamed Tributary 1 (UNT1) to Thorpe Creek (page 110) crosses under I-69 approximately 0.5 mile east of the Cyntheanne Road Overpass. Historic drainage was noted in this area during the desktop evaluation (Exhibit 4, page 67). At the August 14, 2014 field check, UNT1 exhibited a 2.5-foot wide by 12-inch deep OHWM within the project area. Approximately 275 linear feet of UNT1 lies within the project limits.

UNT1 is channelized. Downstream of the project limits it has a wooded riparian, but this is largely absent north of the project limits. This stream is also a Hamilton County regulated drain (John Underwood Drain). Because of these factors, qualitatively this aquatic and terrestrial wildlife habitat quality for this stream was considered poor. UNT1 to Thorpe Creek had an HHEI score of 48 (Exhibit 7, pages 254 to 255) suggesting average quality. Since there are components of the qualitative assessment not scored in the HHEI, the actual quality of this stream is likely a combination of both assessments (below average). The primary function of UNT1 is conveyance of storm water with limited habitat value. UNT1 is not listed as a *Federal Wild and Scenic River*, a *State Natural, Scenic and Recreational River*, or on the Indiana Register's listing of *Outstanding Rivers and Streams*.

UNT1 is not noted as a blue line stream on USGS 7.5 series topographic maps (Exhibit 2, page 52). This stream, however, would likely be classified as perennial. Flowing water was observed during multiple field checks, including at the August 14, 2014 field check. This stream is a direct tributary to Thorpe Creek, which flows into Geist Reservoir, which drains into Fall Creek, which is a direct tributary to the West Fork White River, which is a direct tributary to the Wabash River, which outlets into the Ohio River (a traditionally navigable waterway). Due to the presence of an OHWM and this connectivity, UNT1 to Thorpe Creek would likely be considered a water of the U.S.

Unnamed Tributary 2 to Thorpe Creek

Unnamed Tributary 2 (UNT2) to Thorpe Creek is located along the south side of I-69 (pages 110 to 111). UNT2 discharges into UNT1 to Thorpe Creek (John Underwood Drain) at the southeast quadrant of this crossing. No historic drainage was noted for this area during desktop evaluation (Exhibit 4, page 67). During the August 14, 2014 field check, however, UNT2 exhibited a 1-foot wide by 4-inch deep OHWM within the project area. Approximately 1,430 linear feet of UNT2 lies within the project limits. Of this, approximately 160 linear feet is riprap lined.

This stream is channelized and receives direct pollutant inputs due to its location within the roadside drainage of I-69. A portion of this stream is riprap lined. UNT2 lacks a wooded riparian corridor along both banks. Because of these factors, qualitatively the aquatic and terrestrial habitat quality for this stream was

considered poor. UNT2 to Thorpe Creek had an HHEI score of 16 (Exhibit 7, pages 256 to 257) supporting this assessment. The primary function of this stream is conveyance of storm water. UNT2 to Thorpe Creek is not listed as a *Federal Wild and Scenic River*, a *State Natural, Scenic and Recreational River*, or on the Indiana Register's listing of *Outstanding Rivers and Streams*.

UNT2 to Thorpe Creek is not noted as a stream on USGS 7.5 series topographic maps (Exhibit 2, page 52). This stream, however, would likely be classified as ephemeral. Water was barely flowing during the June 26, 2014 field check, but not flowing at all during the August 14, 2014 field check. This feature discharges into UNT1 to Thorpe Creek (John Underwood Drain), which is a direct tributary to Thorpe Creek, which flows into Geist Reservoir, which drains into Fall Creek, which is a direct tributary to the West Fork White River, which is a direct tributary to the Wabash River, which outlets to the Ohio River (a traditionally navigable waterway). Due to the presence of an OHWM and this connectivity, UNT2 to Thorpe Creek would likely be considered a water of the U.S.

Wetlands

A total of forty-two (42) wetlands totaling 5.62 acres were identified within the project limits. Of these, the vast majority were emergent wetlands, with four (4) forested wetland and one (1) shrub-scrub wetland observed. Twenty-two (22) wetlands are likely jurisdictional because of their connection to a likely water of the U.S. The remaining twenty (20) wetlands are likely isolated due to the absence of a detectable connection to a water of the U.S. A minimum of two data points (one within and one outside) were obtained for each wetland (Exhibit 8, pages 259 to 434). The Wetland Summary Table (Table 3, page 38) and Wetland Data Point Summary Table (Table 4, pages 39 to 40) summarize the data collected.

Wetland 01

Data Point 1 (Exhibit 8, pages 259 to 260) was dominated by *Phalaris arundinacea* (reed canary grass, FACW) and *Typha spp.* (cattail, OBL). This point passed the rapid, dominance, and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Redox Dark Surface (F6). One primary indicator (oxidized rhizospheres on living roots) and two secondary indicators (geomorphic position and FAC-neutral test) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 47), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered poor due to the low species diversity, the dominance of both *Phalaris* and *Typha*, the high prevalence of bare soil (65%), and its location within maintained INDOT right-of-way. The wetland does extend beyond the boundary of the roadside drainage at this location.

Data Point 2 (Exhibit 8, pages 261 to 262) was dominated by an unidentified grass. Identification was not possible due to recent mowing. Without an indicator for this species, the presence of a hydrophytic vegetation indicator could not be ruled out. The remaining three species that were identified at this location were all FACU, suggesting that this data point would not meet this criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3) and Redox Dark Surface (F6). No primary indicators and no secondary indicators for hydrology were observed. Since one of the three wetland criteria was not met, this point was considered to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 01. There was a distinct change in plant communities, along with a very minor topographic change, that was used in establishing this boundary.

Wetland 01 is adjacent to UNT5 to Cheeney Creek near the 106th Street Overpass (Exhibit 5, page 71). UNT5 discharges to Cheeney Creek, which is a direct tributary to the West Fork of the White River, which is a direct tributary to the Wabash River, which outlets to the Ohio River (a traditionally navigable waterway). Therefore, this feature is likely a water of the U.S.

Wetland 02

Data Point 1 (Exhibit 8, pages 263 to 264) was dominated by *Phragmites australis* (common reed, FACW). This point passed the rapid, dominance, and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). One primary

indicator (oxidized rhizospheres on living roots) and two secondary indicators (geomorphic position and FAC-neutral test) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 47), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered poor due to the low species diversity, the dominance of *Phragmites,* the high prevalence of bare soil (58%), and its location within maintained INDOT right-of-way. The wetland does extend beyond the boundary of the roadside drainage at this location.

Data Point 2 (Exhibit 8, pages 265 to 266) was dominated by *Trifolium spp.* (clover, FACU) and *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass any indicator for the hydrophytic vegetation criterion. The soil profile did not meet any indicators under the hydric soil criterion. No primary indicators and no secondary indicators for hydrology were observed. Since none of the three wetland criteria were met, this data point was determined to be upland. Data Point 2 was used to establish the wetland/upland boundary for Wetland 02. There was a distinct change in plant communities, along with a very minor topographic change, that was used in establishing this boundary.

Wetland 02 is located near the 106th Street Overpass (Exhibit 5, page 71). It drains via roadside drainage into Cheeney Creek. Cheeney Creek is a direct tributary to the West Fork of the White River, which is a direct tributary to the Wabash River, which outlets to the Ohio River (a traditional navigable waterway). Therefore, this feature is likely a water of the U.S.

Wetland 03

Data Point 1 (Exhibit 8, pages 267 to 268) was dominated by *Typha spp.* (cattail, OBL). This point passed the rapid, dominance, and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Redox Dark Surface (F6). Two primary indicators (surface water and oxidized rhizospheres on living roots) and two secondary indicators (geomorphic position and FAC-neutral test) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 47), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered poor due to the low species diversity, the dominance of *Typha,* the high prevalence of bare soil (60%), and its location within maintained INDOT right-of-way. The wetland does extend beyond the boundary of the roadside drainage at this location.

Data Point 2 (Exhibit 8, pages 269 to 270) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass indicators for the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3) and Redox Dark Surface (F6). One primary indicator (oxidized rhizospheres on living roots) of hydrology was observed. Since one of the three wetland criteria was not met at this point, this area was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 03. There was a distinct change in plant communities, along with a very minor topographic change, that was used in establishing the wetland/upland boundary.

Wetland 03 is located near the 106th Street Overpass (Exhibit 5, page 71) and is connected via roadside drainage to UNT2 to Cheeney Creek. UNT2 discharges to Cheeney Creek, which is a direct tributary to the West Fork of the White River, which is a direct tributary to the Wabash River, which outlets to the Ohio River (a traditionally navigable waterway). Therefore, this feature is likely a water of the U.S.

Wetland 04

Data Point 1 (Exhibit 8, pages 271 to 272) was dominated by *Typha spp.* (cattail, OBL). This point passed the rapid, dominance, and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). Two primary indicators (high water table and saturation) and three secondary indicators (crayfish burrows, geomorphic position, and FAC-neutral test) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 47), this area would likely

be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered poor due to the low species diversity, the dominance of *Typha*, the prevalence of bare soil (35%), and its location within maintained INDOT right-of-way. The wetland does extend beyond the boundary of the roadside drainage at this location.

Data Point 2 (Exhibit 8, pages 273 to 274) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass indictors for the hydrophytic vegetation criterion. The soil profile did not meet any hydric soil indicators. No primary indicators and no secondary indicators of hydrology were observed. Since none of the three wetland criteria were met at this point, this area was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 04. There was a distinct change in plant communities, along with a very minor topographic change, that was used in establishing the boundary.

Wetland 04 is located near the 106th Street Overpass (Exhibit 5, page 71). It is connected via roadside drainage to Cheeney Creek. Cheeney Creek is a direct tributary to the West Fork of the White River, which is a direct tributary to the Wabash River, which outlets to the Ohio River (a traditional navigable waterway). Therefore, this feature is likely a water of the U.S.

Wetland 05

Data Point 1 (Exhibit 8, pages 275 to 276) was dominated by *Typha spp.* (cattail, OBL). This point passed the rapid, dominance, and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). Two secondary indicators of hydrology were observed (geomorphic position and FAC-neutral test). Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 48), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered poor due to the low species diversity, the dominance of *Typha*, the prevalence of bare soil (40%), and its location within maintained INDOT right-of-way. The wetland does extend beyond the boundary of the roadside drainage at this location.

Data Point 2 (Exhibit 8, pages 277 to 278) was dominated by *Solidago altissima* (tall goldenrod, FACU) and *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass any indictors for the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). No primary indicators and no secondary indicators of hydrology were observed. Since two of the three wetland criteria were not met, Data Point 2 was determined to be upland. This point helped establish the wetland/upland boundary for Wetland 05. There was a distinct change in plant communities, along with a very minor topographic change, that was used in establishing this boundary.

Wetland 05 is located near the S.R. 37 Interchange (Exhibit 5, page 77). It is connected via roadside drainage to UNT1 to Cheeney Creek. UNT1 discharges to Cheeney Creek, which is a direct tributary to the West Fork of the White River, which is a direct tributary to the Wabash River, which outlets into the Ohio River (a traditionally navigable waterway). Therefore, this feature is likely a water of the U.S.

Wetland 06

Data Point 1 (Exhibit 8, pages 279 to 280) was dominated by *Juncus effusus* (common rush, OBL). This point passed the rapid, dominance, and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). One primary indicator (surface water) and two secondary indicators (geomorphic position and FAC-neutral test) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 48), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered poor due to the low species diversity and its location within maintained INDOT right-of-way. The wetland does extend beyond the boundary of the roadside drainage at this location.

Data Point 2 (Exhibit 8, pages 281 to 282) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass any indictors for the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3) and Loamy Gleyed Matrix (F2). No primary indicators and no secondary indicators of hydrology were observed. Since two of the three wetland criteria were not met at this location, this area was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 06. There was a distinct change in plant communities, along with a very minor topographic change, that was used in establishing this boundary.

Wetland 06 is located near the S.R. 37 Interchange adjacent to a large open water feature just outside of INDOT right-of-way (Exhibit 5, pages 77 and 79). No connection between this open water feature and a water of the U.S. was detected. Therefore, this wetland is likely isolated.

Wetland 07

Data Point 1 (Exhibit 8, pages 283 to 284) was dominated by *Typha spp.* (cattail, OBL). This point passed the rapid, dominance, and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). One primary indicator (hydrogen sulfide odor) and two secondary indicators (geomorphic position and FAC-neutral test) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 48), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered poor due to the low species diversity, the dominance of *Typha*, and its location within maintained INDOT right-of-way. The wetland does extend beyond the boundary of the roadside drainage at this location.

Data Point 2 (Exhibit 8, pages 285 to 286) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass any indicators for the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). No primary indicators and no secondary indicators of hydrology were observed. Since two of the three wetland indicators were not observed, this point was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 07. There was a distinct change in plant communities, along with a very minor topographic change, that was used in establishing the wetland/upland boundary.

Wetland 07 is located near the S.R. 37 Interchange (Exhibit 5, pages 77 and 79). No connection to a water of the U.S. was detected for Wetland 07. Water appears to pond in this area without any observed outlet. Therefore, this feature is likely isolated.

Wetland 08

Data Point 1 (Exhibit 8, pages 287 to 288) was dominated by *Typha spp.* (cattail, OBL). This point passed the rapid, dominance, and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). One primary indicator (oxidized rhizospheres on living roots) and two secondary indicators (geomorphic position and FAC-neutral test) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 48), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered poor due to the low species diversity, the dominance of *Typha*, and its location within maintained INDOT right-of-way. The wetland does extend beyond the boundary of the roadside drainage at this location.

Data Point 2 (Exhibit 8, pages 289 to 290) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass any indicators for the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). No primary indicators and no secondary indicators of hydrology were observed. Since two of the three wetland criteria were not met, this point was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 08. There was a distinct change in plant communities, along with a very minor topographic change, that was used in establishing this boundary.

Wetland 08 is located near the Cumberland Road Overpass (Exhibit 5, pages 79 and 80). No connection to a water of the U.S. was detected for Wetland 08. This wetland is connected via roadside drainage to Wetland 07, but no connection for this feature was observed. Therefore, this feature is likely isolated.

Wetland 09

Data Point 1 (Exhibit 8, pages 291 to 292) was dominated by *Populus deltoides* (eastern cottonwood, FAC) and *Eleocharis palustris* (common spike-rush, OBL). This point passed the dominance and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). Two secondary indicators (geomorphic position and FAC-neutral test) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 48), this area would likely be considered a temporarily flooded, palustrine, forested wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered average due to its increased species diversity (including tree and shrub stratums), the presence of *Typha*, and its location within maintained INDOT right-of-way. The wetland does extend beyond the boundary of the roadside drainage at this location.

Data Point 2 (Exhibit 8, pages 293 to 294) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass any indicators for the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). No primary indicators and no secondary indicators of hydrology were observed. Since two of the three wetland indicators were not observed, this point was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 09. There was a distinct change in plant communities, along with a very minor topographic change, that was used in establishing this boundary.

Wetland 09 is located near the Cumberland Road Overpass (Exhibit 5, page 80). It is connected via an equalizer pipe under I-69 to Wetland 10. Wetland 10 is connected to a water of the U.S. (see below). Therefore, this feature is likely a water of the U.S.

Wetland 10

Data Point 1 (Exhibit 8, pages 295 to 296) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU) and *Typha spp.* (cattail, OBL). This point passed the prevalence test, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3) and Redox Dark Surface (F6). Two secondary indicators (surface soil cracks and geomorphic position) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 48), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered poor due to its low species diversity, the dominance of *Festuca* and *Typha*, and its location within maintained INDOT right-of-way. The wetland does extend beyond the boundary of the roadside drainage at this location.

Data Point 2 (Exhibit 8, pages 297 to 298) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass any indicators for the hydrophytic vegetation criterion. The soil profile did not meet any indicators under the hydric soil criterion. No primary indicators and no secondary indicators of hydrology were observed. Since none of the three wetland criteria were met, this point was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 10. There was a distinct change in plant communities, along with a very minor topographic change, that was used in establishing this boundary.

Wetland 10 is located near the Cumberland Road Overpass (Exhibit 5, page 80). It is connected via roadside drainage to UNT1 to Sand Creek. UNT1 discharges to Sand Creek, which is a direct tributary to Mud Creek, which is a direct tributary to Fall Creek, which is a direct tributary to the West Fork White River, which is a direct tributary to the Wabash River, which outlets to the Ohio River (a traditionally navigable waterway). Therefore, this feature is likely a water of the U.S.

Wetland 11

Data Point 1 (Exhibit 8, pages 299 to 300) was dominated by *Typha spp.* (cattail, OBL). This point passed the rapid, dominance, and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). One primary indicator (saturation) and two secondary indicators (geomorphic position and FAC-neutral test) were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 48), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered poor due to the low species diversity, the dominance of *Typha*, the prevalence of bare soil (35%), and its location within maintained INDOT right-of-way. The wetland does extend beyond the boundary of the roadside drainage at this location.

Data Point 2 (Exhibit 8, pages 301 to 302) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass any indicators for the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). No primary and no secondary indicators of hydrology were observed. Since two of the three wetland criteria were not met, this point was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 11. There was a distinct change in plant communities, along with a very minor topographic change, that was used in establishing this boundary.

Wetland 11 is located near the Cumberland Road Overpass (Exhibit 5, page 80). It is connected via roadside drainage to UNT1 to Sand Creek. UNT1 discharges to Sand Creek, which is a direct tributary to Mud Creek, which is a direct tributary to Fall Creek, which is a direct tributary to the West Fork White River, which is a direct tributary to the Wabash River, which outlets to the Ohio River (a traditionally navigable waterway). Therefore, this feature is likely a water of the U.S.

Wetland 12

Data Point 1 (Exhibit 8, pages 303 to 304) was dominated by *Hordeum jubatum* (fox-tail barley, FAC) and *Carex stipata* (stalk-grain sedge, OBL). This point passed the dominance and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). Two secondary indicators (geomorphic position and FAC-neutral test) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 49), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered poor based on its low species diversity and its location within maintained INDOT right-of-way. The wetland does extend beyond the boundary of the roadside drainage at this location.

Data Point 2 (Exhibit 8, pages 305 to 306) was dominated by *Hordeum jubatum* (fox-tail barley, FAC). This point passed the dominance and prevalence test, and therefore met the hydrophytic vegetation criterion. The soil profile did not meet any hydric soil indicators. No primary indicators and no secondary indicators of hydrology were observed. Since two of the three wetland indicators were not met, this point was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 12. There was a distinct change in the soil profile associated with a minor topographic change that was used in establishing the wetland/upland boundary.

Wetland 12 is located between Sand Creek and the 126th Street Overpass (Exhibit 5, page 84). No connection to a water of the U.S. was detected for Wetland 12. Roadside drainage at this location has no outlet, and water appears to pond in this area. Therefore, this feature is likely isolated.

Wetland 13

Data Point 1 (Exhibit 8, pages 307 to 308) was dominated by *Hordeum jubatum* (fox-tail barley, FAC). This point passed the dominance and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). One primary indicator (oxidized rhizospheres on living roots) and one secondary indicator (geomorphic position) of hydrology were

observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 49), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered poor due to low species diversity and its location within maintained INDOT right-of-way. The wetland does extend beyond the boundary of the roadside drainage at this location.

Data Point 2 (Exhibit 8, pages 309 to 310) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass indicators for the hydrophytic vegetation criterion. The soil profile did not meet any of the hydric soil indicators. No primary indicators and no secondary indicators of hydrology were observed. Since none of the three wetland indicators were met, this point was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 13. There was a distinct change in plant communities, as well as a minor topographic change, that was used in establishing the wetland/upland boundary.

Wetland 13 is located near the 126th Street Overpass (Exhibit 5, page 85). No connection to a water of the U.S. was detected for Wetland 13. No outlet for the roadside drainage at this location was observed, and water appears to pond in this area. Therefore, this feature is likely isolated.

Wetland 14

Data Point 1 (Exhibit 8, pages 311 to 312) was dominated by *Typha spp.* (cattail, OBL). This point passed the rapid, dominance, and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). Two secondary indicators (geomorphic position and FAC-neutral test) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 49), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered poor due to low species diversity, high prevalence of bare soil (70%), and its location within maintained INDOT right-of-way. The wetland does extend beyond the boundary of the roadside drainage at this location.

Data Point 2 (Exhibit 8, pages 313 to 314) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass any indicators for the hydrophytic vegetation criterion. The soil profile did not meet any of the hydric soil indicators. No primary indicators and no secondary indicators of hydrology were observed. Since none of the three wetland indicators were met, this point was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 14. There was a distinct change in plant communities, as well as a minor topographic change, that was used in establishing the wetland/upland boundary.

Wetland 14 is located near the 126th Street Overpass (Exhibit 5, page 85). No connection to a water of the U.S. was detected for Wetland 14. No outlet for the roadside drainage at this location was observed, and water appears to pond in this area. Therefore, this feature is likely isolated.

Wetland 15

Data Point 1 (Exhibit 8, pages 315 to 316) was dominated by *Carex stipata* (stalk-grain sedge, OBL). This point passed the rapid, dominance, and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). Two secondary indicators (geomorphic position and FAC-neutral test) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 49), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered poor due to low species diversity and its location within maintained INDOT right-of-way.

Data Point 2 (Exhibit 8, pages 317 to 318) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass any indicators for the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3) and Redox Dark Surface (F6). No

primary indicators and no secondary indicators of hydrology were observed. Since two of the three wetland indicators were not met, this point was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 15. There was a distinct change in plant communities, as well as a minor topographic change, that was used in establishing the wetland/upland boundary.

Wetland 15 is located approximately 0.4 mile northeast of the 126th Street Overpass (Exhibit 5, page 87). No connection to a water of the U.S. was detected for Wetland 15. No outlet for the roadside drainage at this location was observed, and water appears to pond in this area. Therefore, this feature is likely isolated.

Wetland 16

Data Point 1 (Exhibit 8, pages 319 to 320) was dominated by *Typha spp.* (cattail, OBL) and *Apocynum cannabinum* (Indian-hemp, FAC). This point passed the dominance and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3) and Redox Dark Surface (F6). Two primary indicators (high water table and saturation) and two secondary indicators (geomorphic position and FAC-neutral test) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 49), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered poor due to low species diversity, the presence of *Typha* as a dominant species, and its location within maintained INDOT right-of-way.

Data Point 2 (Exhibit 8, pages 321 to 322) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass any indicators of the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it displayed Depleted Below Dark Surface (A11). Two primary indicators (high water table and saturation) of hydrology were observed. Since one of the three wetland indicators was not met, this point was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 16. There was a distinct change in plant communities, as well as a minor topographic change, that was used in establishing the wetland/upland boundary.

Wetland 16 is located approximately 0.5 mile northeast of the 126th Street Overpass and extends outside of INDOT right-of-way (Exhibit 5, page 87). No connection to a water of the U.S. was detected for Wetland 16. No outlet for the roadside drainage at this location was observed, and water appears to pond in this area. Therefore, this feature is likely isolated.

Wetland 17

Wetland 17 consisted of inundated, sparsely vegetated areas with drainage patterns that fed into a forested wetland outside of INDOT right-of-way. Data Point 1 (Exhibit 8, pages 323 to 324) was collected above an unvegetated, inundated area. The soil profile met the hydric soil criterion as it displayed a Depleted Matrix (F3) and Redox Dark Surface (F6). One primary indicator (saturation) and one secondary indicator (geomorphic position) of hydrology were observed. As previously stated, surface water was noted adjacent to this point. Data Point 1 contained only *Festuca arundinacea* (Kentucky fescue, FACU), with approximately 40% of the area being unvegetated. Although no hydrophytic vegetation was present, problematic hydrophytic vegetation was marked as an indicator because of the adjacent areas with sparse vegetation, standing water, and drainage patterns, and the fact that it was hydrologically connected to the forested wetland located outside of INDOT right-of-way. Therefore, this area was determined to be a wetland. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 49), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered poor due to the low species diversity and its location within maintained INDOT right-of-way.

Data Point 2 (Exhibit 8, pages 325 to 326) was dominated by Festuca arundinacea (Kentucky fescue, FACU). This point failed to pass any indicators of the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it displayed a Depleted Matrix (F3). One secondary indicator (geomorphic position) of hydrology was observed. Since two of the three wetland indicators were not met, this point was

determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 17. There was a minor topographic and hydrology change that was used in establishing the wetland/upland boundary.

Wetland 17 is located approximately 0.6 mile northeast of the 126th Street Overpass (Exhibit 5, page 87). No connection to a water of the U.S. was detected for Wetland 17. No outlet for the roadside drainage at this location was observed, and water appears to pond in this area. Therefore, this feature is likely isolated.

Wetland 18

Data Point 1 (Exhibit 8, pages 327 to 328) was dominated by *Quercus palustris* (pin oak, FACW), *Cornus drummondii* (rough-leaf dogwood, FAC), and *Carex grayi* (gray's sedge, FACW). This point passed the dominance and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). One primary indicator (water-stained leaves) and two secondary indicators (geomorphic position and FAC-neutral test) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 49), this area would likely be considered a temporarily flooded, palustrine, forested wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was classified average based on its species diversity, which included components in the tree stratum.

Data Point 2 (Exhibit 8, pages 329 to 330) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass any indicators for the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). No primary indicators and no secondary indicators of hydrology were observed. Since two of the three wetland indicators were not met, this point was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 18. There was a distinct change in plant communities that was used in establishing the wetland/upland boundary.

Wetland 18 is located approximately 0.7 mile northeast of the 126th Street Overpass (Exhibit 5, page 87) and extends outside of INDOT right-of-way. No connection to a water of the U.S. was detected for Wetland 18. No outlet for the roadside drainage at this location was observed, and water appears to pond in this area. Therefore, this feature is likely isolated.

Wetland 19

Data Point 1 (Exhibit 8, pages 331 to 332) was dominated by *Persicaria maculosa* (spotted ladysthumb, FACW). This point passed the rapid, dominance, and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it displayed Depleted Below Dark Surface (A11). Three secondary indicators (surface soil cracks, geomorphic position, and FAC-neutral test) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 49), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered poor due to low species diversity and its location within maintained INDOT right-of-way. The wetland does extend beyond the boundary of the roadside drainage at this location.

Data Point 2 (Exhibit 8, pages 333 to 334) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass any indicators for the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). No primary indicators and no secondary indicators of hydrology were observed. Since two of the three wetland indicators were not met, this point was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 19. There was a distinct change in plant communities, as well as a minor topographic change, that was used in establishing the wetland/upland boundary.

Wetland 19 is located approximately 0.6 mile southwest of the Brooks School Road Overpass (Exhibit 5, page 88). No connection to a water of the U.S. was detected for Wetland 19. No outlet for the roadside drainage at this location was observed, and water appears to pond in this area. Therefore, this feature is likely isolated.

Wetland 20

Data Point 1 (Exhibit 8, pages 335 to 336) was dominated by *Persicaria maculosa* (spotted ladysthumb, FACW) and *Carex stipata* (stalk-grain sedge, OBL). This point passed the rapid, dominance, and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). Three secondary indicators (surface soil cracks, geomorphic position, and FAC-neutral test) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 50), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered poor due to low species diversity and its location within maintained INDOT right-of-way. The wetland does extend beyond the boundary of the roadside drainage at this location.

Data Point 2 (Exhibit 8, pages 337 to 338) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass any indicators for the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). No primary indicators and no secondary indicators of hydrology were observed. Since two of the three wetland indicators were not met, this point was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 20. There was a distinct change in plant communities, as well as a minor topographic change, that was used in establishing the wetland/upland boundary.

Wetland 20 is located approximately 0.5 mile southwest of the Brooks School Road Overpass (Exhibit 5, page 89). No connection to a water of the U.S. was detected for Wetland 20. No outlet for the roadside drainage at this location was observed, and water appears to pond in this area. Therefore, this feature is likely isolated.

Wetland 21

Data Point 1 (Exhibit 8, pages 339 to 340) was dominated by *Typha spp.* (cattail, OBL). This point passed the rapid, dominance, and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). Three primary indicators (surface water, high water table, and saturation) and three secondary indicators (surface soil cracks, geomorphic position, and FAC-neutral test) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 50), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered poor due to low species diversity, the dominance of *Typha*, the high prevalence of bare soil (60%), and its location within maintained INDOT right-of-way. The wetland does extend beyond the boundary of the roadside drainage at this location.

Data Point 2 (Exhibit 8, pages 341 to 342) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass any indicators for the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). No primary indicators and no secondary indicators of hydrology were observed. Since two of the three wetland indicators were not met, this point was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 21. There was a distinct change in plant communities, as well as a minor topographic change, that was used in establishing the wetland/upland boundary.

Wetland 21 is located near the Brooks School Road Overpass (Exhibit 5, page 90). No connection to a water of the U.S. was detected for Wetland 21. No outlet for the roadside drainage at this location was observed, and water appears to pond in this area. Therefore, this feature is likely isolated.

Wetland 22

Data Point 1 (Exhibit 8, pages 343 to 344) was dominated by *Carex stipata* (stalk-grain sedge, OBL). This point passed the rapid, dominance, and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). Three secondary indicators (surface soil cracks, geomorphic position, and FAC-neutral test) of hydrology were

observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 50), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered poor due to low species diversity and its location within maintained INDOT right-of-way. The wetland does extend beyond the boundary of the roadside drainage at this location.

Data Point 2 (Exhibit 8, pages 345 to 346) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass any indicators for hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). No primary indicators and no secondary indicators of hydrology were observed. Since two of the three wetland indicators were not met, this point was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 22. There was a distinct change in plant communities, as well as a minor topographic change, that was used in establishing the wetland/upland boundary.

Wetland 22 is located near the Brooks School Road Overpass (Exhibit 5, page 91). No connection to a water of the U.S. was detected for Wetland 22. No outlet for the roadside drainage at this location was observed, and water appears to pond in this area. Therefore, this feature is likely isolated.

Wetland 23

Data Point 1 (Exhibit 8, pages 347 to 348) was dominated by *Carex stipata* (stalk-grain sedge, OBL) and *Typha spp.* (cattail, OBL). This point passed the rapid, dominance, and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). Three secondary indicators (surface soil cracks, geomorphic position, and FAC-neutral test) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 50) this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered poor due to low species diversity, dominance of *Typha*, high prevalence of bare soil (70%), and its location within maintained INDOT right-of-way. The wetland does extend beyond the boundary of the roadside drainage at this location.

Data Point 2 (Exhibit 8, pages 349 to 350) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass any indicators for the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). No primary indicators and no secondary indicators of hydrology were observed. Since two of the three wetland indicators were not met, this point was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 23. There was a distinct change in plant communities, as well as a minor topographic change, that was used in establishing the wetland/upland boundary.

Wetland 23 is located near the Brooks School Road Overpass (Exhibit 5, page 91). No connection to a water of the U.S. was detected for Wetland 23. No outlet for the roadside drainage at this location was observed, and water appears to pond in this area. Therefore, this feature is likely isolated.

Wetland 24

Data Point 1 (Exhibit 8, pages 351 to 352) was dominated by *Salix interior* (sandbar willow, FACW), *Typha spp.* (cattail, OBL), and *Carex vulpinoidea* (common fox sedge, FACW). This point passed the rapid, dominance, and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). Two secondary indicators (geomorphic position and FAC-neutral test) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 50), this feature would likely be considered a palustrine shrub-scrub wetland (with a palustrine emergent component) according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was classified as average due to its species diversity, which included a shrub-scrub component. However, it is located within maintained INDOT right-of-way. The wetland does extend beyond the boundary of the roadside drainage at this location.

Data Point 2 (Exhibit 8, pages 353 to 354) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass any indicators for the hydrophytic vegetation criterion. The soil profile failed to meet any indicators for hydric soil. No primary indicators and no secondary indicators of hydrology were observed. Since none of the three wetland indicators were met, this point was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 24. There was a distinct change in plant communities, as well as a minor topographic change, that was used in establishing the wetland/upland boundary.

Wetland 24 is located approximately 0.25 mile northeast of the Brooks School Road Overpass and borders UNT5 to Sand Creek (Exhibit 5, page 94). This wetland extends off INDOT right-of-way. UNT5 discharges into Sand Creek, which is a direct tributary to Mud Creek, which is a direct tributary to Fall Creek, which is a direct tributary to the West Fork White River, which is a direct tributary to the Wabash River, which outlets to the Ohio River (a traditionally navigable waterway). Therefore, this feature is likely a water of the U.S.

Wetland 25

Data Point 1 (Exhibit 8, pages 355 to 356) was dominated by *Leersia oryzoides* (rice cut grass, OBL). This point passed the rapid, dominance, and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile could not be evaluated since the roadside drainage had been riprap lined. The soil in the adjacent Data Point 2 met the hydric soil criterion, and the point met both the vegetation and hydrology criteria. Because of this, it was assumed that the soil criterion would be met for Data Point 1. One primary indicator (surface water) and two secondary indicators (geomorphic position and FAC-neutral test) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 50), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered poor because it was lined with riprap and is located within maintained INDOT right-of-way. The wetland does extend beyond the boundary of the roadside drainage at this location.

Data Point 2 (Exhibit 8, pages 357 to 358) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass any indicators for the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). No primary indicators and no secondary indicators of hydrology were observed. Since two of the three wetland indicators were not met, this point was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 25. There was a distinct change in plant communities, along with a topographic change, that was used in establishing the wetland/upland boundary.

Wetland 25 is located approximately 0.25 mile northeast of the Brooks School Road Overpass and borders UNT5 to Sand Creek (Exhibit 5, page 94). UNT5 discharges into Sand Creek, which is a direct tributary to Mud Creek, which is a direct tributary to Fall Creek, which is a direct tributary to the West Fork White River, which is a direct tributary to the Wabash River, which outlets into the Ohio River (a traditionally navigable waterway). Therefore, this feature is likely a water of the U.S.

Wetland 26

Data Point 1 (Exhibit 8, pages 359 to 360) was dominated by *Carex lacustris* (lakebank sedge, OBL) and *Carex vulpinoidea* (common fox sedge, OBL). This point passed the rapid, dominance, and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). One primary indicator (algal mat or crust) and two secondary indicators (crayfish burrows and FAC-neutral test) for hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 50), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered poor due to its low species diversity, prevalence of bare soil (30%), and the fact that it is located within frequently maintained INDOT right-of-way.

Data Point 2 (Exhibit 8, pages 361 to 362) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass any indicators for the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). No primary indicators and no secondary indicators of hydrology were observed. Since two of the three wetland indicators were not met, this point was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 26. There was a distinct change in plant communities that was used in establishing the wetland/upland boundary.

Wetland 26 is located approximately 0.4 mile northeast of the Brooks School Road Overpass (Exhibit 5, page 94). It drains via riprap lined roadside drainage to UNT5 to Sand Creek. UNT5 discharges into Sand Creek, which is a direct tributary to Mud Creek, which is a direct tributary to Fall Creek, which is a direct tributary to the West Fork White River, which is a direct tributary to the Wabash River, which outlets into the Ohio River (a traditionally navigable waterway). Therefore, this feature is likely a water of the U.S.

Wetland 27

Data Point 1 (Exhibit 8, pages 363 to 364) was dominated by *Salix interior* (sandbar willow, FACW) and *Typha spp.* (cattail, OBL). This point passed the rapid, dominance, and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). Three primary indicators (surface water, high water table, and saturation) and one secondary indicator (FAC-neutral test) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 50), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. This would likely not be considered a shrub-scrub wetland due to the low coverage of *Salix interior* (5%) and the fact that this entire area has been mowed as recently as September 2013 (as noted during desktop review using online resources). The quality of the wetland was classified poor due to low species diversity, the presence of *Typha*, and the fact that it is located within frequently maintained INDOT right-of-way.

Data Point 2 (Exhibit 8, pages 365 to 366) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass any indicators for the hydrophytic vegetation criterion. The soil profile did not meet any of the hydric soil indicators. No primary indicators and no secondary indicators of hydrology were observed. Since none of the three wetland indicators were met, this point was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 27. There was a distinct change in plant communities that was used in establishing the wetland/upland boundary.

Wetland 27 is located near the Campus Parkway Interchange (Exhibit 5, page 96). It drains under I-69 via a slip-lined pipe into Wetland 28. No connection to a water of the U.S. was detected for Wetland 28. Therefore, this feature is likely isolated.

Wetland 28

Data Point 1 (Exhibit 8, pages 367 to 368) was dominated by *Fraxinus pennsylvanica* (green ash, FACW), *Celtis occidentalis* (common hackberry, FAC), *Populus deltoides* (eastern cottonwood, FAC), *Acer negundo* (ash-leaf maple, FAC), *Morus rubra* (red mulberry, FACU), *Carex stipata* (stalk-grain sedge, OBL), *and Toxicodendron radicans* (eastern poison-ivy, FAC). This point passed the dominance and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). Two secondary indicators (geomorphic position and FAC-neutral test) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1.

Data Point 2 (Exhibit 8, pages 369 to 370) was dominated by *Fraxinus pennsylvanica* (green ash, FACW), *Acer negundo* (ash-leaf maple, FAC), and *Cephalanthus occidentalis* (common buttonbush, OBL). This point passed the dominance and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). Four primary indicators (sediment deposits, drift deposits, sparsely vegetated concave surface, and water-stained leaves) and two secondary indicators (geomorphic position and FAC-neutral test) for hydrology were observed. Therefore, all three wetland criteria were met at Data Point 2.

Data Point 3 (Exhibit 8, pages 371 to 372) was dominated by *Morus rubra* (red mulberry, FACU) and *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass any indicators for the hydrophytic vegetation criterion. The soil profile did not meet any of the hydric soil indicators. No primary indicators and no secondary indicators of hydrology were observed. Since none of the three wetland indicators were met, this point was determined to be upland. Data Point 3 helped establish the wetland/upland boundary for Wetland 28. There was a distinct change in plant communities that was used in establishing the wetland/upland boundary.

Data Point 4 (Exhibit 8, pages 373 to 374) was dominated by *Carex stipata* (stalk-grain sedge, OBL) and an unidentified grass. This point passed the prevalence test, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). One primary indicator (surface water) and one secondary indicator (geomorphic position) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 4. This plot represented the small emergent community draining into the forested wetland portion of Wetland 28.

Wetland 28 was noted as a palustrine shrub-scrub wetland on the NWI Map (Exhibit 2, page 50). Based on field observations, this feature would be considered a palustrine forested wetland (with a small palustrine emergent wetland component) according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was classified average due to its species diversity. It is negatively impacted by roadside drainage along I-69 and Campus Parkway, receiving storm water pollutants and a large amount of litter/trash.

Wetland 28 is located near the Campus Parkway Interchange (Exhibit 5, page 96). No connection to a water of the U.S. was detected for Wetland 28. No outlet for the roadside drainage at this location was observed, and water appears to pond in this area. Therefore, this feature is likely isolated.

Wetland 29

Data Point 1 (Exhibit 8, pages 375 to 376) was dominated by *Ambrosia trifida* (great ragweed, FAC), *Carex gracillima* (graceful sedge, FACU), and *Carex stipata* (stalk-grain sedge, OBL). This point passed the dominance and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it was Depleted Below Dark Surface (A11). One primary indicator (saturation) was observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 50), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered average due to species diversity and low prevalence of invasive species. However, this wetland still receives direct runoff from I-69 and its associated pollutants.

Data Point 2 (Exhibit 8, pages 377 to 378) was dominated by *Euthamia graminifolia* (flat-top goldentop, FACW) and *Ambrosia trifida* (great ragweed, FAC). This point passed the dominance and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile did not meet any of the hydric soil indicators. No primary and no secondary indicators of hydrology were observed. Since two of the three wetland indicators were not met, this point was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 29. There was a minor change topography that was used in establishing the wetland/upland boundary.

Wetland 29 is located near the Campus Parkway Interchange (Exhibit 5, page 96). It is bordered to the north by an old roadbed (and its associated slope). No connection to a water of the U.S. was detected for Wetland 29. No outlet for the roadside drainage was observed at this location, and water appears to pond in this area. Therefore, this feature is likely isolated.

Wetland 30

Data Point 1 (Exhibit 8, pages 379 to 380) was dominated by *Typha spp.* (cattail, OBL). This point passed the rapid, dominance, and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). One primary indicator (surface water) and one secondary indicator (FAC-neutral test) for hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map

(Exhibit 2, page 50), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered poor due to low species diversity, the dominance of *Typha*, and the high prevalence of bare soil (40%).

Data Point 2 (Exhibit 8, pages 381 to 382) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass any indicators for the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). No primary indicators and no secondary indicators of hydrology were observed. Since two of the three wetland indicators were not met, this point was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 30. There was a distinct change in plant communities that was used in establishing the wetland/upland boundary.

Wetland 30 is located within the Campus Parkway Interchange (Exhibit 5, page 96). It has formed on the hillslope for the I-69 southbound off-ramp. Its primary source of hydrology appears to be an underdrain. No connection to a water of the U.S. was detected for Wetland 30. The roadside drainage at the toe of this slope is not connected to a water of the U.S. Therefore, this feature is likely isolated.

Wetland 31

Data Point 1 (Exhibit 8, pages 383 to 384) was dominated by an unidentified *Carex*. The other three species could be identified, two of which were FACW and one OBL. Although the dominant species could not be confirmed, the point still passed the prevalence test. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). Three secondary indicators (surface soil cracks, crayfish burrows, and geomorphic position) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 51), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered average due to its species diversity. However, it is located within maintained INDOT right-of-way. The wetland does extend beyond the boundary of the roadside drainage at this location.

Data Point 2 (Exhibit 8, pages 385 to 386) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU) and *Cirsium arvense* (Canadian thistle, FACU). This point failed to pass any indicators for the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). No primary indicators and no secondary indicators of hydrology were observed. Since two of the three wetland indicators were not met, this point was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 31. There was a distinct change in plant communities, as well as a minor topographic change, that was used in establishing the wetland/upland boundary.

Wetland 31 is located near the Olio Road Overpass (Exhibit 5, page 100). No connection to a water of the U.S. was detected for this wetland. Water outlets from this feature via a pipe to the adjacent farm field. However, this drainage feature appears to be actively farmed and is completely consumed within the adjacent field with no connection to a water of the U.S. Therefore, this feature is likely isolated.

Wetland 32

Data Point 1 (Exhibit 8, pages 387 to 388) was dominated by *Juglans nigra* (black walnut, FACU), *Acer negundo* (ash-leaf maple, FAC), *Impatiens capensis* (spotted touch-me-not, FACW), and *Elymus virginicus* (Virginia wild rye, FACW). This point passed the dominance and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). Two secondary indicators (geomorphic position and FAC-neutral test) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 51) this area would likely be considered a temporarily flooded, palustrine, forested wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered average due species diversity, which included species in both the tree and shrub stratum. However, this wetland is located its location within INDOT right-of-way. The wetland does extend beyond the boundary of the roadside drainage at this location.

Data Point 2 (Exhibit 8, pages 389 to 390) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass any indicators for the hydrophytic vegetation criterion. The soil profile did not meet any hydric soil indicators. No primary indicators and no secondary indicators of hydrology were observed. Since none of the three wetland indicators were observed, this point was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 32. There was a distinct change in plant communities, as well as a topographic change, that was used in establishing the wetland/upland boundary.

Wetland 32 borders UNT2 to Mud Creek near the I-69 Bridges over Mud Creek (Exhibit 5, page 103). UNT2 drains into Mud Creek, which is a direct tributary to Fall Creek, which is a direct tributary to the West Fork White River, which is a direct tributary to the Wabash River, which outlets into the Ohio River (a traditionally navigable waterway). Because of this connection, this feature is likely a water of the U.S.

Wetland 33

Data Point 1 (Exhibit 8, pages 391 to 392) was dominated by *Phalaris arundinacea* (reed canary grass, FACW). This point passed the rapid, dominance, and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). Two secondary indicators (geomorphic position and FAC-neutral test) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 53), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered poor due to low species diversity, the dominance of *Phalaris*, and its location within maintained INDOT right-of-way. The wetland does extend beyond the boundary of the roadside drainage at this location.

Data Point 2 (Exhibit 8, pages 393 to 394) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass any indicators for the hydrophytic vegetation criterion. The soil profile did not meet any hydric soil indicators. No primary indicators and no secondary indicators of hydrology were observed. Since none of the wetland indicators were observed, this point was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 33. There was a distinct change in plant communities, and a minor topographic change, that was used in establishing the wetland/upland boundary.

Wetland 33 is located approximately 0.7 mile west of the I-69 Bridges over Thorpe Creek (Exhibit 5, page 112). It drains via roadside drainage to UNT1 to Thorpe Creek (John Underwood Drain). UNT1 flows into Thorpe Creek, which drains into Geist Reservoir, which drains into Fall Creek, which is a direct tributary to the West Fork White River, which is a direct tributary to the Wabash River, which outlets into the Ohio River (a traditionally navigable waterway). Therefore, this feature is likely a water of the U.S.

Wetland 34

Data Point 1 (Exhibit 8, pages 395 to 396) was dominated by *Phalaris arundinacea* (reed canary grass, FACW). This point passed the rapid, dominance, and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). Two primary indicators (high water table and saturation) and two secondary indicators (geomorphic position and FAC-neutral test) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 53), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered poor due to low species diversity and the dominance of *Phalaris*.

The surface of Data Point 2 (Exhibit 8, pages 397 to 398) was lined with riprap. This stone is associated with the Thorpe Creek bridge cone, which runs from the top of slope to the toe of slope. No vegetation was growing on top of this riprap, and surrounding vegetation at the top of slope was *Festuca arundinacea* (Kentucky fescue, FACU). This location, therefore, would likely not meet the hydrophytic vegetation criterion. Riprap at this location was greater than 12 inches in depth, preventing the collection of a soil sample. This also prohibited the investigation for subsurface hydrology indictors. No surface indicators of

hydrology were observed, and subsurface indicators would not be anticipated based on the topography (hillslope) of this area. Therefore, this point would likely be considered upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 34. The distinct change in topography and lack of a plant community was used in establishing the wetland/upland boundary.

Wetland 34 is adjacent to Thorpe Creek (Exhibit 5, page 115). Thorpe Creek flows into Geist Reservoir, which drains into Fall Creek, which is a direct tributary to the West Fork White River, which is a direct tributary to the Wabash River, which outlets into the Ohio River (a traditionally navigable waterway). Therefore, this feature is likely a water of the U.S.

Wetland 35

Data Point 1 (Exhibit 8, pages 399 to 400) was dominated by *Phalaris arundinacea* (reed canary grass, FACW). This point passed the rapid, dominance, and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). Two secondary indicators (geomorphic position and FAC-neutral test) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 53), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered poor due to low species diversity and the dominance of *Phalaris*.

The surface of Data Point 2 (Exhibit 8, pages 401 to 402) was lined with riprap. This stone is associated with the Thorpe Creek bridge cone, which runs from the top of slope to the toe of slope. No vegetation was growing on top of this riprap, and surrounding vegetation at the top of slope was *Festuca arundinacea* (Kentucky fescue, FACU). This location, therefore, would likely not meet the hydrophytic vegetation criterion. Riprap at this location was greater than 12 inches in depth, preventing the collection of a soil sample. This also prohibited the investigation for subsurface hydrology indictors. No surface indicators of hydrology were observed, and subsurface indicators would not be anticipated based on the topography (hillslope) of this area. Therefore, this point would likely be considered upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 34. The distinct change in topography and lack of a plant community was used in establishing the wetland/upland boundary.

Wetland 35 is adjacent to Thorpe Creek (Exhibit 5, page 115). Thorpe Creek flows into Geist Reservoir, which drains into Fall Creek, which is a direct tributary to the West Fork White River, which is a direct tributary to the Wabash River, which outlets into the Ohio River (a traditionally navigable waterway). Therefore, this feature is likely a water of the U.S.

Wetland 36

Data Point 1 (Exhibit 8, pages 403 to 404) was dominated by *Eleocharis palustris* (common spike-rush, OBL) and *Typha spp*. (cattail, OBL). This point passed the rapid, dominance, and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Loamy Gleyed Matrix (F2). Two primary indicators (high water table and saturation) and one secondary indicator (FAC-neutral test) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 53), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered poor due to low species diversity, the high prevalence of bare soil (45%), and the dominance of *Typha*.

Data Point 2 (Exhibit 8, pages 405 to 406) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU) and *Trifolium pratense* (red clover, FACU). This point failed to pass any indicators for the hydrophytic vegetation criterion. The soil profile did not meet any hydric soil indicators. No primary indicators and no secondary indicators of hydrology were observed. Since none of the three wetland indicators were met, this point was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 36. There was a distinct change in plant communities that was used in establishing the wetland/upland boundary.

Wetland 36 is located near the I-69 Northbound Bridge over Thorpe Creek (Exhibit 5, page 115). It is located on the I-69 northbound roadside slope and its primary source of hydrology is an underdrain. It is connected via a riprap lined ditch into Thorpe Creek. Thorpe Creek drains into Geist Reservoir, which drains into Fall Creek, which is a direct tributary to the West Fork White River, which is a direct tributary to the Wabash River, which outlets into the Ohio River (a traditionally navigable waterway). Therefore, this feature is likely a water of the U.S.

Wetland 37

Data Point 1 (Exhibit 8, pages 407 to 408) was dominated by *Typha spp.* (cattail, OBL) and *Hordeum jubatum* (fox-tail barley, FAC). This point passed the dominance and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). One primary indicator (surface water) and one secondary indicator (FAC-neutral test) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 53), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered poor due to low species diversity and the dominance of *Typha*.

Data Point 2 (Exhibit 8, pages 409 to 410) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass any indicators for the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). No primary indicators and no secondary indicators of hydrology were observed. Since two of the three wetland indicators were not met, this point was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 37. There was a distinct change in plant communities that was used in establishing the wetland/upland boundary.

Wetland 37 is located near the I-69 Southbound Bridge over Thorpe Creek (Exhibit 5, page 115). It is located on the I-69 southbound roadside slope and its primary source of hydrology is an underdrain. It is connected via a riprap lined conveyance into Thorpe Creek. Thorpe Creek flows into Geist Reservoir, which drains into Fall Creek, which is a direct tributary to the West Fork White River, which is a direct tributary to the Wabash River, which outlets into the Ohio River (a traditionally navigable waterway). Therefore, this feature is likely a water of the U.S.

Wetland 38

Data Point 1 (Exhibit 8, pages 411 to 412) was dominated by *Typha spp.* (cattail, OBL) and *Eleocharis palustris* (common spike-rush, OBL). This point passed the rapid, dominance, and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). One primary indicator (surface water) and one secondary indicator (FAC-neutral test) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 53), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered poor due to low species diversity and the dominance of *Typha*.

Data Point 2 (Exhibit 8, pages 413 to 414) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass any indicators for the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). No primary indicators and no secondary indicators of hydrology were observed. Since two of the three wetland indicators were not met, this point was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 38. There was a distinct change in plant communities that was used in establishing the wetland/upland boundary.

Wetland 38 is located within the S.R. 13 Interchange (Exhibit 5, page 116). It is located on the I-69 southbound roadside slope and its primary source of hydrology is an underdrain. It is connected, via several roadside drainages along the I-69 southbound on ramp, to Thorpe Creek. Thorpe Creek flows into Geist Reservoir, which drains into Fall Creek, which is a direct tributary to the West Fork White River, which is a

direct tributary to the Wabash River, which outlets into the Ohio River (a traditionally navigable waterway). Therefore, this feature is likely a water of the U.S.

Wetland 39

Data Point 1 (Exhibit 8, pages 415 to 416) was dominated by *Typha spp.* (cattail, OBL). This point passed the rapid, dominance, and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). One primary indicator (saturation) and one secondary indicator (FAC-neutral test) for hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 53), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was classified poor due to low species diversity and the dominance of *Typha*.

Data Point 2 (Exhibit 8, pages 417 to 418) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass any indicators for the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). No primary indicators and no secondary indicators of hydrology were observed. Since two of the three wetland indicators were not met, this point was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 39. There was a distinct change in plant communities that was used in establishing the wetland/upland boundary.

Wetland 39 is located within the S.R. 13 Interchange (Exhibit 5, page 116). It is located on the I-69 northbound roadside slope and its primary source of hydrology is an underdrain. It is connected to a roadside conveyance that flows under the I-69 northbound off-ramp into another roadside conveyance connected Thorpe Creek. Thorpe Creek drains into Geist Reservoir, which drains into Fall Creek, which is a direct tributary to the West Fork White River, which is a direct tributary to the Wabash River, which outlets into the Ohio River (a traditionally navigable waterway). Therefore, this feature is likely a water of the U.S.

Wetland 40

Data Point 1 (Exhibit 8, pages 419 to 420) was dominated by *Typha spp.* (cattail, OBL) and *Hordeum jubatum* (fox-tail barley, FAC). This point passed the dominance and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). One primary indicator (surface water) and one secondary indicator (FAC-neutral test) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 53), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered poor due to low species diversity, the dominance of *Typha*, and the high prevalence of bare soil (40%).

Data Point 2 (Exhibit 8, pages 421 to 422) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass any indicators for the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). No primary indicators and no secondary indicators of hydrology were observed. Since two of the three wetland indicators were not met, this point was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 40. There was a distinct change in plant communities that was used in establishing the wetland/upland boundary.

Wetland 40 is located within the S.R. 13 Interchange (Exhibit 5, page 116). It is located on the I-69 northbound roadside slope and its primary source of hydrology is an underdrain. It is connected via several roadside drainages into Thorpe Creek. Thorpe Creek flows into Geist Reservoir, which drains into Fall Creek, which is a direct tributary to the West Fork White River, which is a direct tributary to the Wabash River, which outlets to the Ohio River (a traditionally navigable waterway). Therefore, this feature is likely a water of the U.S.

Wetland 41

Data Point 1 (Exhibit 8, pages 423 to 424) was dominated by *Typha spp.* (cattail, OBL). This point passed the rapid, dominance, and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil

profile met the hydric soil criterion as it exhibited a Loamy Gleyed Matrix (F2). Two primary indicators (surface water and algal mat or crust) and one secondary indicator (FAC-neutral test) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 53), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered poor due to low species diversity and the dominance of *Typha*.

Data Point 2 (Exhibit 8, pages 425 to 426) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass any indicators for the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). No primary indicators and no secondary indicators of hydrology were observed. Since two of the three wetland indicators were not met, this point was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 41. There was a distinct change in plant communities that was used in establishing the wetland/upland boundary.

Wetland 41 is located within the S.R. 13 Interchange (Exhibit 5, page 116). It is located on the I-69 southbound roadside slope and its primary source of hydrology is an underdrain. It is connected via several vegetated roadside drainages Thorpe Creek. Thorpe Creek flows into Geist Reservoir, which drains into Fall Creek, which is a direct tributary to the West Fork White River, which is a direct tributary to the Wabash River, which outlets into the Ohio River (a traditionally navigable waterway). Therefore, this feature is likely a water of the U.S.

Wetland 42

Data Point 1 (Exhibit 8, pages 427 to 428) was dominated by *Lythrum salicaria* (purple loosestrife, OBL) and *Carex cristatella* (crested sedge, FACW). This point passed the rapid, dominance, and prevalence tests, and therefore met the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited a Depleted Matrix (F3). Two secondary indicators (geomorphic position and FAC-neutral test) of hydrology were observed. Therefore, all three wetland criteria were met at Data Point 1. Although not classified as a potential wetland on the NWI Map (Exhibit 2, page 53), this area would likely be considered a temporarily flooded, palustrine, emergent wetland according to the Cowardin et. al. (1979) classification scheme. The quality of the wetland was considered poor due to low species diversity, the dominance of *Lythrum*, and its location within maintained INDOT right-of-way. The wetland does extend beyond the boundary of the roadside drainage at this location.

Data Point 2 (Exhibit 8, pages 429 to 430) was dominated by *Festuca arundinacea* (Kentucky fescue, FACU). This point failed to pass any indicators for hydrophytic vegetation criterion. The soil profile met the hydric soil criterion as it exhibited at Loamy Gleyed Matrix (F2). No primary indicators and no secondary indicators of hydrology were observed. Since two of the three wetland indicators were met, this point was determined to be upland. Data Point 2 helped establish the wetland/upland boundary for Wetland 42. There was a distinct change in plant communities, and a minor topographic change, that was used in establishing the wetland/upland boundary.

Wetland 42 is located approximately 0.25 mile east of the S.R. 13 Interchange (Exhibit 5, page 117). It drains under I-69 into a roadside conveyance that eventually discharges into Thorpe Creek. Thorpe Creek flows into Geist Reservoir, which drains into Fall Creek, which is a direct tributary to the West Fork White River, which is a direct tributary to the Wabash River, which outlets into the Ohio River (a traditionally navigable waterway). Therefore, this feature is likely a water of the U.S.

Miscellaneous Features

Non-Jurisdictional Features

Parsons met with representatives from INDOT, the Indiana Department of Environmental Management (IDEM), and the United States Army Corps of Engineers (USACE) on August 13, 2014 to discuss features identified during fieldwork. A follow-up field review with these agencies was held on August 18, 2014. Combined minutes from these two meetings are provided in Exhibit 9 (pages 436 to 441). An additional conference call between Parsons and the USACE on September 17, 2014 provided further guidance, and is summarized in Exhibit 9 (pages 442 to 444), as well.

As a result of this coordination, multiple features delineated by Parsons would not be considered jurisdictional, despite meeting all three wetland criteria. Based on agency coordination, features were considered non-jurisdictional if they were entirely contained within roadside drainage. If the feature extended beyond the existing ditchline, the feature was considered a wetland. The mapped soil unit did not factor into this determination.

Based on regulatory agency feedback, ninety (90) likely non-jurisdictional features that met the three wetland criteria, but fall under the USACE roadside ditch guidance, were delineated in the field. Table 5 (pages 40 to 43) summarizes these features. Their boundaries are included on the resource maps (Exhibit 5, pages 70 to 118), and each is documented in this report with a single photograph (Exhibit 6, pages 120 to 218).

Sand Creek Point 1
A data point (Exhibit 8, pages 431 to 432) was taken on a floodplain shelf at Sand Creek due to the presence of hydrophytic vegetation. The point was dominated by *Phalaris arundinacea* (reed canary grass, FACW) and *Equisetum arvense* (field horsetail, FAC) and therefore met the dominance and prevalence test for hydrophytic vegetation. The soil profile failed to meet any hydric soil indicators. Two secondary indicators (geomorphic position and FAC-neutral test) were observed. Since one of the three wetland indicators was not met, this area is likely upland.

Mud Creek Point 1
A data point (Exhibit 8, pages 433 to 434) was taken on a floodplain shelf at Mud Creek due to the presence of hydrophytic vegetation. The point was dominated by *Phalaris arundinacea* (reed canary grass, FACW) and *Ambrosia trifida* (great ragweed, FAC) and therefore met the dominance and prevalence test for hydrophytic vegetation. The soil profile failed to meet any hydric soil indicators. Two secondary indicators (geomorphic position and FAC-neutral test) were observed. Since one of the three wetland indicators was not met, this area is likely upland.

IV: Conclusions

Based on the field review, this project has features that are likely waters of the U.S. within the project limits.

A total of nineteen (19) streams totaling 17,605 linear feet were identified within the project limits. All roadside drainage features within the project limits were evaluated for an OHWM. Due to the large number of these features, only those that exhibited an OHWM are specifically detailed in this report. ***All roadside drainages not detailed in this report lacked OHWMs and are therefore not likely waters of the U.S.***

A total of forty-two (42) wetlands totaling 5.62 acres were identified within the project limits. Of these, the vast majority were emergent wetlands with the exception of four forested wetlands and one shrub-scrub wetland. Twenty-two (22) of these are likely jurisdictional, while the remaining twenty (20) are likely isolated.

Every effort should be taken to avoid impacts to the resources outlined in this report. If impacts will occur, waterway permits will be required and mitigation may be required. Impacts must be minimized before mitigation can be considered. INDOT's Ecology and Waterway Permitting Office (EWPO) staff should be contacted immediately if impacts will occur.

The conclusions in this report are the best judgment of Parsons and based on the guidelines set forth by the USACE. ***The final determination of jurisdictional waters, however, is ultimately made by the USACE.***

A preliminary jurisdictional determination (pre-JD) form is provided in Exhibit 10 (pages 446 to 452).

V. References

Cowardin, L.M, V. Carter, F.C. Golet, and E.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States.* U.S. Department of the Interior, Fish and Wildlife Service, Washington D.C.

Ohio EPA. 2012. Field Evaluation Manual for Ohio's Primary Headwater Habitat Streams. State of Ohio Environmental Protection Agency, Division of Surface Water.

Ohio EPA. 2006. Methods for Assessing Habitat in Flowing Waters: Using the Qualitative Habitat Evaluation Index (QHEI). State of Ohio Environmental Protection Agency, Division of Surface Water.

United States Army Corps of Engineers. 2014. Midwest 2014 Regional Plant List. Cold Regions Research and Engineering Laboratory.

United States Army Corps of Engineers. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0).* U.S. Army Engineer Research and Development Center, Washington D.C.

TABLES

TABLE 1: SOIL SUMMARY TABLE

TABLE 2: STREAM SUMMARY TABLE

TABLE 3: WETLAND SUMMARY TABLE

TABLE 4: WETLAND DATA POINT SUMMARY TABLE

TABLE 5: NON-JURISDICTIONAL FEATURES SUMMARY TABLE

Table 1: Soil Summary Table I-69 Interstate Expansion Projects 1, 2, and 3 Hamilton and Madison Counties, Indiana Designation Numbers 1383332, 1383336, 1383489			
Abbreviation	**Soil Name**	**Nationally Listed Hydric Soil (Y/N)**	**Hydric Component (%)**
Br	Brookston silt loam	Yes	100
Bs	Brookston silty clay loam	Yes	100
CnB2	Celina silt loam	No	0
CrA	Crosby silt loam	No	1-32
MmA	Miami silt loam	No	0
MmB2	Miami silt loam	No	1-32
MmC2	Miami silt loam	Yes	1-32
MmD2	Miami silt loam	No	0
MoC3	Miami clay loam	No	0
MoD3	Miami clay loam	No	0
Or	Orthents	No	0
Pn	Patton silty clay loam	Yes	100
Sh	Shoals silt loam	No	0
St	Sleeth loam	No	0
W	Water	No	0

Table 2: Stream Summary Table
I-69 Interstate Expansion Projects 1, 2, and 3
Hamilton and Madison Counties, Indiana
Designation Numbers 1383332, 1383336, and 1383489

Stream Name	Photograph # (Exhibit 6)	Latitude/Longitude	Section, Township, Range	OHWM Width (ft)	OHWM Depth (in)	USGS Blue-line (Y/N)	Riffles/ Pools (Y/N)	Habitat Quality* (Qualitative)	HHEI/ QHEI Score**	Likely Waters of U.S. (Y/N)	Length in Project Limits (ft)	Stream Type
Cheeney Creek	16,17,18	39.947832 N -86.014879 W	Sec 1 T17N R4E	10	22	Yes	Yes	Average	75	Yes	400	Perennial
UNT1 to Cheeney Creek	22-27	39.953972 N -86.010587 W	Sec 1 T17N R4E	11	6	No	No	Poor	30	Yes	5,865	Intermittent
UNT2 to Cheeney Creek	14,15	39.946620 N -86.014934 W	Sec1 T17N R4E	1	4	No	No	Poor	35	Yes	960	Ephemeral
UNT3 to Cheeney Creek	18,19	39.949073 N -86.013086 W	Sec 1 T17N R4E	1	4	No	No	Poor	28	Yes	1,000	Ephemeral
UNT4 to Cheeney Creek	20,21	39.948231 N -86.013557 W	Sec 1 T17N R4E	3	6	No	No	Poor	49	Yes	425	Perennial
UNT5 to Cheeney Creek	3,4	39.941494 N -86.019577 W	Sec 12 T17N R4E	4	3	No	No	Poor	52	Yes	55	Ephemeral
Sand Creek	55-57	39.969304 N -85.975870 W	Sec 32 T18N R5E	21	28	Yes	Yes	Average	41.5	Yes	340	Perennial
UNT1 to Sand Creek	49-52	39.968671 N -85.979058 W	Sec 32 T18N R5E	1.5	8	No	No	Poor	20	Yes	1,930	Ephemeral
UNT2 to Sand Creek	53,54	39.969631 N -85.976066 W	Sec 32 T18N R5E	3	8	No	No	Poor	20	Yes	135	Ephemeral
UNT3 to Sand Creek	58,59	39.969063 N -85.975866 W	Sec 32 T18N R5E	1.3	7	No	No	Poor	10	Yes	100	Ephemeral
UNT4 to Sand Creek	60,61	39.970221 N -85.972345 W	Sec 33 T18N R5E	17	4	No	No	Poor	44	Yes	325	Perennial
UNT5 to Sand Creek	113,117	39.986532 N -85.937797 W	Sec 27 T18N R5E	10	5	No	Yes	Poor	50	Yes	260	Intermittent
Mud Creek	150-152	39.991031 N -85.902347 W	Sec 18 T18N R5E	27	54	Yes	Yes	Average	47	Yes	430	Perennial
UNT1 to Mud Creek	148,149	39.990680 N -85.903144 W	Sec 24 T18N R5E	0.5	3	No	No	Poor	9	Yes	2,920	Ephemeral
UNT2 to Mud Creek	153,154	39.990579 N -85.902138 W	Sec 24 T18N R5E	3	10	No	Yes	Average	32	Yes	200	Ephemeral
UNT3 to Mud Creek	158,159	39.990580 N -85.902244 W	Sec 24 T18N R5E	4	6	No	Yes	Poor	26	Yes	185	Ephemeral
Thorpe Creek	194-197	39.993419 N -85.848462 W	Sec 21 T18N R6E	8.5	6	Yes	Yes	Poor	35	Yes	370	Perennial
UNT1 to Thorpe Creek (John Underwood Drain)	171,172	39.991478 N -85.871661 W	Sec 20 T18N R6E	2.5	12	No	Yes	Poor	48	Yes	275	Perennial
UNT2 to Thorpe Creek	174,175	39.991175 N -85.871161 W	Sec 20 T18N R6E	1	4	No	No	Poor	16	Yes	1,430	Ephemeral
			TOTAL								**17605**	

* *Aquatic and terrestrial habitat quality within the project limits only*

** *Sample reach in some cases extended outside of the project limits*

Table 3: Wetland Summary Table
I-69 Interstate Expansion Projects 1, 2, and 3
Hamilton and Madison Counties, Indiana
Designation Numbers 1383332, 1383336, and 1383489

Wetland Name	Photograph # (Exhibit 6)	Latitude/Longitude	Wetland Type	Area (Acres)	Quality	Likely Jurisdictional/ Isolated
Wetland 01	1,2	39.941511 N -86.019662 W	Palustrine Emergent	0.0438	Poor	Jurisdictional
Wetland 02	5,6	39.942207 N -86.019095 W	Palustrine Emergent	0.0495	Poor	Jurisdictional
Wetland 03	9,10	39.942749 N -86.017783 W	Palustrine Emergent	0.1479	Poor	Jurisdictional
Wetland 04	7,8	39.942755 N -86.018625 W	Palustrine Emergent	0.0344	Poor	Jurisdictional
Wetland 05	28,29	39.963123 N -86.004264 W	Palustrine Emergent	0.0290	Poor	Jurisdictional
Wetland 06	31,32	39.965024 N -86.001207 W	Palustrine Emergent	0.4532	Poor	Isolated
Wetland 07	33,34	39.965956 N -86.000959 W	Palustrine Emergent	0.2222	Poor	Isolated
Wetland 08	37,38,39	39.967467 N -85.994772 W	Palustrine Emergent	0.7879	Poor	Isolated
Wetland 09	40,41	39.967663 N -85.993443 W	Palustrine Forested	0.0845	Average	Jurisdictional
Wetland 10	43,44	39.967081 N -85.993381 W	Palustrine Emergent	0.1198	Poor	Jurisdictional
Wetland 11	46,47	39.967321 N -85.990890 W	Palustrine Emergent	0.0556	Poor	Jurisdictional
Wetland 12	62,63	39.970826 N -85.970673 W	Palustrine Emergent	0.0216	Poor	Isolated
Wetland 13	66,67	39.972154 N -85.967835 W	Palustrine Emergent	0.1800	Poor	Isolated
Wetland 14	71	39.972774 N -85.966487 W	Palustrine Emergent	0.0084	Poor	Isolated
Wetland 15	75	39.975844 N -85.960098 W	Palustrine Emergent	0.0037	Poor	Isolated
Wetland 16	76, 77	39.976626 N -85.958684 W	Palustrine Emergent	0.1970	Poor	Isolated
Wetland 17	80,81	39.977147 N -85.957434 W	Palustrine Emergent	0.0350	Poor	Isolated
Wetland 18	82, 83	39.977592 N -85.956632 W	Palustrine Forested	0.0549	Average	Isolated
Wetland 19	89,90	39.979228 N -85.953082 W	Palustrine Emergent	0.2472	Poor	Isolated
Wetland 20	91,92	39.980530 N -85.950366 W	Palustrine Emergent	0.1946	Poor	Isolated
Wetland 21	100,101	39.983607 N -85.943890 W	Palustrine Emergent	0.0090	Poor	Isolated
Wetland 22	102,103	39.984029 N -85.943140 W	Palustrine Emergent	0.0659	Poor	Isolated
Wetland 23	105,106	39.984469 N -85.942132 W	Palustrine Emergent	0.0225	Poor	Isolated
Wetland 24	111-113	39.986690 N -85.937636 W	Palustrine Shrub-Scrub (0.1137 acre) and Palustrine Emergent (0.1583 acre)	0.2720	Average	Jurisdictional
Wetland 25	116,117	39.986188 N -85.937119 W	Palustrine Emergent	0.0072	Poor	Jurisdictional
Wetland 26	118,119	39.987122 N -85.935137 W	Palustrine Emergent	0.1881	Poor	Jurisdictional
Wetland 27	125,126	39.989670 N -85.927868 W	Palustrine Emergent	0.0592	Poor	Isolated
Wetland 28	127-130	39.991350 N -85.927043 W	Palustrine Forested (0.6932 acre) and Palustrine Emergent (0.1068 acre)	0.8000	Average	Isolated
Wetland 29	133-135	39.992603 N -85.924896 W	Palustrine Emergent	0.6763	Average	Isolated
Wetland 30	138,139	39.991734 N -85.923098 W	Palustrine Emergent	0.0110	Poor	Isolated
Wetland 31	145,146	39.991403 N -85.916568 W	Palustrine Emergent	0.0709	Average	Isolated
Wetland 32	155,156	39.990578 N -85.901911 W	Palustrine Forested	0.0947	Average	Jurisdictional
Wetland 33	180,181	39.991914 N -85.861960 W	Palustrine Emergent	0.0490	Poor	Jurisdictional
Wetland 34	192-194	39.993123 N -85.848439 W	Palustrine Emergent	0.0708	Poor	Jurisdictional
Wetland 35	194,198,199	39.993134 N -85.848327 W	Palustrine Emergent	0.0434	Poor	Jurisdictional
Wetland 36	200,201	39.993155 N -85.848169 W	Palustrine Emergent	0.0061	Poor	Jurisdictional
Wetland 37	202	39.993760 N -85.848281 W	Palustrine Emergent	0.0046	Poor	Jurisdictional
Wetland 38	205,206	39.994123 N -85.844783 W	Palustrine Emergent	0.0214	Poor	Jurisdictional
Wetland 39	207,208	39.993470 N -85.844670 W	Palustrine Emergent	0.0232	Poor	Jurisdictional
Wetland 40	216,217	39.993376 N -85.841504 W	Palustrine Emergent	0.0321	Poor	Jurisdictional
Wetland 41	214,215	39.994010 N -85.841344 W	Palustrine Emergent	0.0385	Poor	Jurisdictional
Wetland 42	218,219	39.992773 N -85.837616 W	Palustrine Emergent	0.0843	Poor	Jurisdictional
TOTAL				**5.6205**		

Table 4: Wetland Data Point Summary Table I-69 Interstate Expansion Projects 1, 2, and 3 Hamilton and Madison Counties Indiana Designation Numbers 1383332, 1383336, and 1383489						
Wetland ID	**Latitude/Longitude**	**Soil Unit**	**NWI (Y/N)**	**Quadrangle**	**Section Township Range**	**Wetland (Y/N)**
Wetland 01 Point 1	39.941511 N -86.019662 W	Brookston silt loam	No	Fishers	Section 12 T17N R4E	Yes
Wetland 01 Point 2	39.941471 N -86.019665 W	Brookston silt loam	No	Fishers	Section 12 T17N R4E	No
Wetland 02 Point 1	39.942207 N -86.019095 W	Crosby silt loam	No	Fishers	Section 1 T17N R4E	Yes
Wetland 02 Point 2	39.942266 N -86.019062 W	Crosby silt loam	No	Fishers	Section 1 T17N R4E	No
Wetland 03 Point 1	39.942749 N -86.017783 W	Brookston silt loam	No	Fishers	Section 1 T17N R4E	Yes
Wetland 03 Point 2	39.942718 N -86.017780 W	Brookston silt loam	No	Fishers	Section 1 T17N R4E	No
Wetland 04 Point 1	39.942755 N -86.018625 W	Crosby silt loam	No	Fishers	Section 1 T17N R4E	Yes
Wetland 04 Point 2	39.942745 N -86.018655 W	Crosby silt loam	No	Fishers	Section 1 T17N R4E	No
Wetland 05 Point 1	39.963232 N -86.004232 W	Crosby silt loam	No	Fishers	Section 31 T18N R5E	Yes
Wetland 05 Point 2	39.963240 N -86.004221 W	Crosby silt loam	No	Fishers	Section 31 T18N R5E	No
Wetland 06 Point 1	39.965024 N -86.001207 W	Brookston silt loam	No	Fishers	Section 31 T18N R5E	Yes
Wetland 06 Point 2	39.964980 N -86.001174 W	Brookston silt loam	No	Fishers	Section 31 T18N R5E	No
Wetland 07 Point 1	39.966391 N -86.000065 W	Brookston silt loam	No	Fishers	Section 31 T18N R5E	Yes
Wetland 07 Point 2	39.966374 N -86.000048 W	Brookston silt loam	No	Fishers	Section 31 T18N R5E	No
Wetland 08 Point 1	39.967467 N -85.994772 W	Brookston silt loam	No	McCordsville	Section 31 T18N R5E	Yes
Wetland 08 Point 2	39.967442 N -85.994754 W	Brookston silt loam	No	McCordsville	Section 31 T18N R5E	No
Wetland 09 Point 1	39.967668 N -85.993323 W	Crosby silt loam	No	McCordsville	Section 32 T18N R5E	Yes
Wetland 09 Point 2	39.967664 N -85.993294 W	Crosby silt loam	No	McCordsville	Section 32 T18N R5E	No
Wetland 10 Point 1	39.967081 N -85.993381 W	Crosby silt loam	No	McCordsville	Section 32 T18N R5E	Yes
Wetland 10 Point 2	39.967071 N -85.993455 W	Crosby silt loam	No	McCordsville	Section 32 T18N R5E	No
Wetland 11 Point 1	39.967321 N -85.990890 W	Crosby silt loam	No	McCordsville	Section 32 T18N R5E	Yes
Wetland 11 Point 2	39.967362 N -85.990869 W	Crosby silt loam	No	McCordsville	Section 32 T18N R5E	No
Wetland 12 Point 1	39.970825 N -85.970641 W	Crosby silt loam	No	McCordsville	Section 33 T18N R5E	Yes
Wetland 12 Point 2	39.970822 N -85.970611 W	Crosby silt loam	No	McCordsville	Section 33 T18N R5E	No
Wetland 13 Point 1	39.971546 N -85.969042 W	Brookston silt loam	No	McCordsville	Section 33 T18N R5E	Yes
Wetland 13 Point 2	39.971568 N -85.969061 W	Brookston silt loam	No	McCordsville	Section 33 T18N R5E	No
Wetland 14 Point 1	39.972754 N -85.966506 W	Crosby silt loam	No	McCordsville	Section 28 T18N R5E	Yes
Wetland 14 Point 2	39.972752 N -85.966528 W	Crosby silt loam	No	McCordsville	Section 28 T18N R5E	No
Wetland 15 Point 1	39.975828 N -85.960097 W	Brookston silt loam	No	McCordsville	Section 28 T18N R5E	Yes
Wetland 15 Point 2	39.975819 N -85.960093 W	Brookston silt loam	No	McCordsville	Section 28 T18N R5E	No
Wetland 16 Point 1	39.976389 N -85.958963 W	Brookston silt loam	No	McCordsville	Section 28 T18N R5E	Yes
Wetland 16 Point 2	39.976389 N -85.958944 W	Brookston silt loam	No	McCordsville	Section 28 T18N R5E	No
Wetland 17 Point 1	39.977130 N -85.957401 W	Brookston silt loam	No	McCordsville	Section 28 T18N R5E	Yes
Wetland 17 Point 2	39.977118 N -85.957386 W	Brookston silt loam	No	McCordsville	Section 28 T18N R5E	No
Wetland 18 Point 1	39.977620 N -85.956577 W	Crosby silt loam	No	McCordsville	Section 28 T18N R5E	Yes
Wetland 18 Point 2	39.977555 N -85.956590 W	Crosby silt loam	No	McCordsville	Section 28 T18N R5E	No
Wetland 19 Point 1	39.979623 N -85.952279 W	Brookston silt loam	No	McCordsville	Section 27 T18N R5E	Yes
Wetland 19 Point 2	39.979574 N -85.952250 W	Brookston silt loam	No	McCordsville	Section 27 T18N R5E	No
Wetland 20 Point 1	39.980628 N -85.950198 W	Brookston silt loam	No	McCordsville	Section 27 T18N R5E	Yes
Wetland 20 Point 2	39.980571 N -85.950147 W	Brookston silt loam	No	McCordsville	Section 27 T18N R5E	No
Wetland 21 Point 1	39.983605 N -85.943915 W	Brookston silt loam	No	McCordsville	Section 27 T18N R5E	Yes
Wetland 21 Point 2	39.983602 N -85.943926 W	Brookston silt loam	No	McCordsville	Section 27 T18N R5E	No
Wetland 22 Point 1	39.984160 N -85.942821 W	Brookston silt loam	No	McCordsville	Section 27 T18N R5E	Yes
Wetland 22 Point 2	39.984150 N -85.942804 W	Brookston silt loam	No	McCordsville	Section 27 T18N R5E	No
Wetland 23 Point 1	39.984541 N -85.941900 W	Brookston silt loam	No	McCordsville	Section 27 T18N R5E	Yes
Wetland 23 Point 2	39.984547 N -85.941908 W	Brookston silt loam	No	McCordsville	Section 27 T18N R5E	No
Wetland 24 Point 1	39.986738 N -85.937508 W	Brookston silt loam	No	McCordsville	Section 26 T18N R5E	Yes
Wetland 24 Point 2	39.986697 N -85.937473 W	Brookston silt loam	No	McCordsville	Section 26 T18N R5E	No
Wetland 25 Point 1	39.986181 N -85.937131 W	Brookston silt loam	No	McCordsville	Section 26 T18N R5E	Yes
Wetland 25 Point 2	39.986190 N -85.937143 W	Brookston silt loam	No	McCordsville	Section 26 T18N R5E	No
Wetland 26 Point 1	39.987002 N -85.935515 W	Brookston silt loam	No	McCordsville	Section 26 T18N R5E	Yes
Wetland 26 Point 2	39.987002 N -85.935526 W	Brookston silt loam	No	McCordsville	Section 26 T18N R5E	No
Wetland 27 Point 1	39.989690 N -85.927774 W	Brookston silt loam	No	McCordsville	Section 23 T18N R5E	Yes
Wetland 27 Point 2	39.989714 N -85.927693 W	Brookston silt loam	No	McCordsville	Section 23 T18N R5E	No
Wetland 28 Point 1	39.991665 N -85.927061 W	Brookston silt loam	Yes	McCordsville	Section 23 T18N R5E	Yes
Wetland 28 Point 2	39.991262 N -85.927111 W	Brookston silt loam	Yes	McCordsville	Section 23 T18N R5E	Yes
Wetland 28 Point 3	39.991753 N -85.927156 W	Brookston silt loam	No	McCordsville	Section 23 T18N R5E	No
Wetland 28 Point 4	39.991379 N -85.926600 W	Brookston silt loam	No	McCordsville	Section 23 T18N R5E	Yes

Table 4: Wetland Data Point Summary Table *(cont.)* I-69 Interstate Expansion Projects 1, 2, and 3 Hamilton and Madison Counties Indiana Designation Numbers 1383332, 1383336, and 1383489						
Wetland 29 Point 1	39.992423 N -85.925063 W	Crosby silt loam	No	McCordsville	Section 23 T18N R5E	Yes
Wetland 29 Point 2	39.992410 N -85.925076 W	Crosby silt loam	No	McCordsville	Section 23 T18N R5E	No
Wetland 30 Point 1	39.991767 N -85.923094 W	Brookston silt loam	No	McCordsville	Section 23 T18N R5E	Yes
Wetland 30 Point 2	39.991771 N -85.923110 W	Brookston silt loam	No	McCordsville	Section 23 T18N R5E	No
Wetland 31 Point 1	39.991404 N -85.916771 W	Brookston silt loam	No	McCordsville	Section 24 T18N R5E	Yes
Wetland 31 Point 2	39.991395 N -85.916780 W	Brookston silt loam	No	McCordsville	Section 24 T18N R5E	No
Wetland 32 Point 1	39.990576 N -85.901688 W	Shoals silt loam	No	McCordsville	Section 24 T18N R5E	Yes
Wetland 32 Point 2	39.990612 N -85.901690 W	Shoals silt loam	No	McCordsville	Section 24 T18N R5E	No
Wetland 33 Point 1	39.991924 N -85.862008 W	Brookston silty clay loam	No	Ingalls	Section 21 T18N R6E	Yes
Wetland 33 Point 2	39.991935 N -85.862007 W	Brookston silty clay loam	No	Ingalls	Section 21 T18N R6E	No
Wetland 34 Point 1	39.993176 N -85.848432 W	Brookston silty clay loam	No	Ingalls	Section 21 T18N R6E	Yes
Wetland 34 Point 2	39.993187 N -85.848471 W	Brookston silty clay loam	No	Ingalls	Section 21 T18N R6E	No
Wetland 35 Point 1	39.993196 N -85.848376 W	Brookston silty clay loam	No	Ingalls	Section 21 T18N R6E	Yes
Wetland 35 Point 2	39.993199 N -85.848348 W	Brookston silty clay loam	No	Ingalls	Section 21 T18N R6E	No
Wetland 36 Point 1	39.993153 N -85.848156 W	Brookston silty clay loam	No	Ingalls	Section 21 T18N R6E	Yes
Wetland 36 Point 2	39.993154 N -85.848139 W	Brookston silty clay loam	No	Ingalls	Section 21 T18N R6E	No
Wetland 37 Point 1	39.993757 N -85.848283 W	Crosby silt loam	No	Ingalls	Section 21 T18N R6E	Yes
Wetland 37 Point 2	39.993761 N -85.848250 W	Crosby silt loam	No	Ingalls	Section 21 T18N R6E	No
Wetland 38 Point 1	39.994088 N -85.844792 W	Brookston silty clay loam	No	Ingalls	Section 21 T18N R6E	Yes
Wetland 38 Point 2	39.994086 N -85.844804 W	Brookston silty clay loam	No	Ingalls	Section 21 T18N R6E	No
Wetland 39 Point 1	39.993483 N -85.844652 W	Brookston silty clay loam	No	Ingalls	Section 21 T18N R6E	Yes
Wetland 39 Point 2	39.993483 N -85.844617 W	Brookston silty clay loam	No	Ingalls	Section 21 T18N R6E	No
Wetland 40 Point 1	39.993404 N -85.841538 W	Crosby silt loam	No	Ingalls	Section 22 T18N R6E	Yes
Wetland 40 Point 2	39.993402 N -85.841563 W	Crosby silt loam	No	Ingalls	Section 22 T18N R6E	No
Wetland 41 Point 1	39.994038 N -85.841364 W	Brookston silty clay loam	No	Ingalls	Section 22 T18N R6E	Yes
Wetland 41 Point 2	39.994041 N -85.841385 W	Brookston silty clay loam	No	Ingalls	Section 22 T18N R6E	No
Wetland 42 Point 1	39.992809 N -85.837827 W	Brookston silty clay loam	No	Ingalls	Section 22 T18N R6E	Yes
Wetland 42 Point 2	39.992838 N -85.837821 W	Brookston silty clay loam	No	Ingalls	Section 22 T18N R6E	No
Sand Creek Point 1	39.969305 N -85.975931 W	Shoals silt loam	No	McCordsville	Sec 32 T18N R5E	No
Mud Creek Point 1	39.991440 N -85.902151 W	Shoals silt loam	No	McCordsville	Section 18 T18N R5E	No

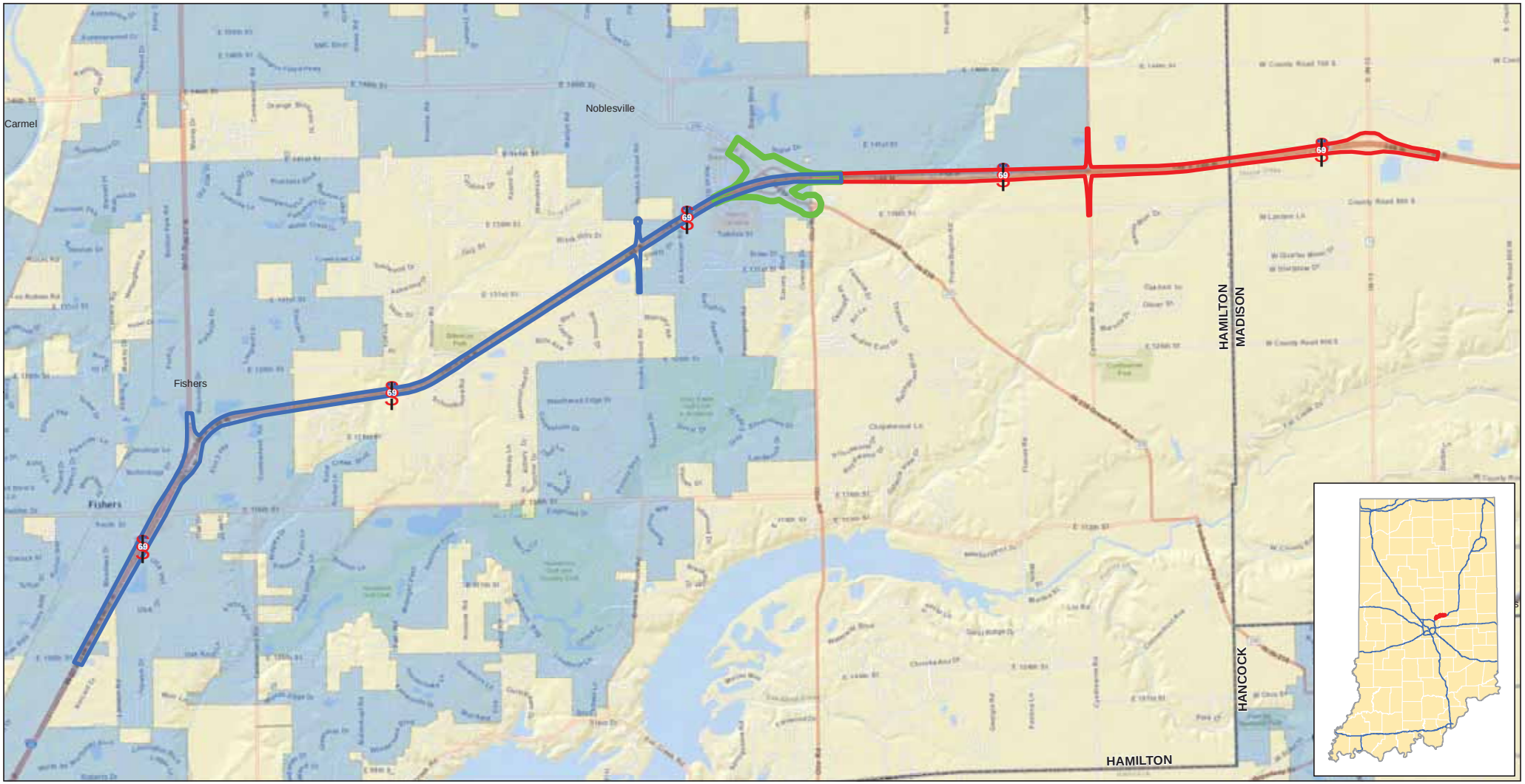
Table 5: Non-Jurisdictional Features Summary Table I-69 Interstate Expansion Projects 1, 2, and 3 Hamilton and Madison Counties, Indiana Designation Numbers 1383332, 1383336, and 1383489			
Feature Name	**Photograph # (Exhibit 6)**	**Latitude/Longitude**	**Area (Acre)**
A	11	39.943429 N -86.018083 W	0.0257
B	12	39.946415 N -86.015915 W	0.0045
C	13	39.946832 N -86.015598 W	0.0104
D	224	39.957473 N -86.006833 W	0.1922
E	30	39.963327 N -86.003191 W	0.0081
F	35	39.966185 N -85.999889 W	0.0171
G	36	39.967141 N -85.995718 W	0.0916
H	42	39.967368 N -85.993444 W	0.0054
I	45	39.967750 N -85.990081 W	0.0472
J	48	39.968009 N -85.985358 W	0.0700
K	50	39.968336 N -85.982437 W	0.0126
L	64	39.970665 N -85.970207 W	0.0080
M	65	39.970565 N -85.969881 W	0.0151
N	68	39.971418 N -85.968645 W	0.0194
O	69	39.971982 N -85.967499 W	0.0060
P	70	39.972087 N -85.966657 W	0.0132
Q	72	39.973476 N -85.964357 W	0.0053
R	73	39.973777 N -85.963769 W	0.0031
S	74	39.975041 N -85.960519 W	0.0327
T	225	39.975380 N -85.960424 W	0.0065
U	78	39.976718 N -85.957084 W	0.1190
V	79	39.976748 N -85.957563 W	0.0220
W	84	39.977259 N -85.956503 W	0.0082
X	85	39.977649 N -85.955675 W	0.0085
Y	86	39.978181 N -85.954027 W	0.0048
Z	87	39.978725 N -85.952867 W	0.0090
AA	88	39.978829 N -85.952634 W	0.0256
AB	93	39.980112 N -85.949956 W	0.0012
AC	94	39.981142 N -85.947795 W	0.0246
AD	95	39.981748 N -85.947139 W	0.0067
AE	96	39.982712 N -85.944539 W	0.0014
AF	97	39.983070 N -85.944367 W	0.0031
AG	98	39.982961 N -85.943996 W	0.0122
AH	99	39.983140 N -85.943533 W	0.0041
AI	104	39.984137 N -85.942167 W	0.0055
AJ	107	39.984811 N -85.940755 W	0.0947
AK	108	39.984830 N -85.941316 W	0.0212
AL	109	39.984508 N -85.940786 W	0.0145
AM	110	39.985246 N -85.939235 W	0.0038

Table 5: Non-Jurisdictional Features Summary Table *(cont.)* I-69 Interstate Expansion Projects 1, 2, and 3 Hamilton and Madison Counties, Indiana Designation Numbers 1383332, 1383336, and 1383489			
AN	114	39.986203 N -85.937833 W	0.0030
AO	115	39.986021 N -85.937639 W	0.0056
AP	120	39.988201 N -85.934236 W	0.0026
AQ	121	39.989106 N -85.932128 W	0.0107
AR	122	39.989480 N -85.931133 W	0.0077
AS	123	39.990264 N -85.928681 W	0.0092
AT	124	39.990155 N -85.927764 W	0.0168
AU	131	39.990703 N -85.926369 W	0.0188
AV	132	39.989597 N -85.925835 W	0.0023
AW	136	39.991630 N -85.924286 W	0.0409
AX	137	39.989392 N -85.923499 W	0.0226
AY	140	39.990333 N -85.921838 W	0.0718
AZ	141	39.991495 N -85.921342 W	0.0300
BA	142	39.990736 N -85.917909 W	0.2475
BB	143	39.991066 N -85.919746 W	0.0055
BC	144	39.991382 N -85.918095 W	0.0247
BD	147	39.991074 N -85.913806 W	0.0105
BE	157	39.991044 N -85.901869 W	0.0681
BF	163	39.990761 N -85.892170 W	0.0182
BG	164	39.991006 N -85.881459 W	0.0173
BH	165	39.991034 N -85.880925 W	0.0032
BI	166	39.991354 N -85.879614 W	0.0707
BJ	167	39.991695 N -85.879358 W	0.2621
BK	226	39.991045 N -85.879365 W	0.0092
BL	168	39.991380 N -85.878149 W	0.0556
BM	169	39.991165 N -85.872749 W	0.1869
BN	170	39.991450 N -85.873191 W	0.0141
BO	173	39.991248 N -85.870089 W	0.0765
BP	176	39.991538 N -85.869711 W	0.0207
BQ	177	39.99215 N -85.864781 W	0.0957
BR	178	39.991623 N -85.865375 W	0.0109
BS	179	39.992115 N -85.862689 W	0.0089
BT	182	39.992082 N -85.860385 W	0.0263
BU	183	39.992575 N -85.860353 W	0.0229
BV	184	39.992439 N -85.859250 W	0.0064
BW	185	39.992518 N -85.858365 W	0.0068
BX	186	39.992841 N -85.854888 W	0.0591
BY	187	39.993221 N -85.853846 W	0.0290
BZ	188	39.992921 N -85.853992 W	0.0087
CA	189	39.993722 N -85.849099 W	0.4078
CB	190	39.993055 N -85.848864 W	0.2949

Table 5: Non-Jurisdictional Features Summary Table *(cont.)* I-69 Interstate Expansion Projects 1, 2, and 3 Hamilton and Madison Counties, Indiana Designation Numbers 1383332, 1383336, and 1383489			
CC	191	39.993086 N -85.852262 W	0.0136
CD	203	39.994470 N -85.845244 W	0.3243
CE	204	39.993063 N -85.844616 W	0.3269
CF	209	39.993249 N -85.843627 W	0.0365
CG	210	39.993037 N -85.842048 W	0.2222
CH	213	39.993301 N 85.836903 W	0.9588
CI	212	39.99458 N -85.842686 W	0.0164
CJ	211	39.993232 N -85.842364 W	0.0129
CK	220	39.993088 N -85.837616 W	0.0020
CL	221	39.993013 N -85.837095 W	0.0087
CM	222	39.992602 N -85.836130 W	0.2437
CN	223	39.992545 N -85.834041 W	0.0036
TOTAL			**5.4640**

EXHIBIT 1

PROJECT LOCATION MAP



ESRI Map Projection: Indiana State Plane East Datum: NAD 1983

Legend

Project Area 1 | Project Area 3 | Indiana County Lines

Project Area 2 | Incorporated Areas

0 0.5 1 2 Miles

1 inch = 3,500 feet

Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS

Exhibit 1: Project Location Map

Des. 1383332, 1383336, 1383489

Date: 10/6/2014

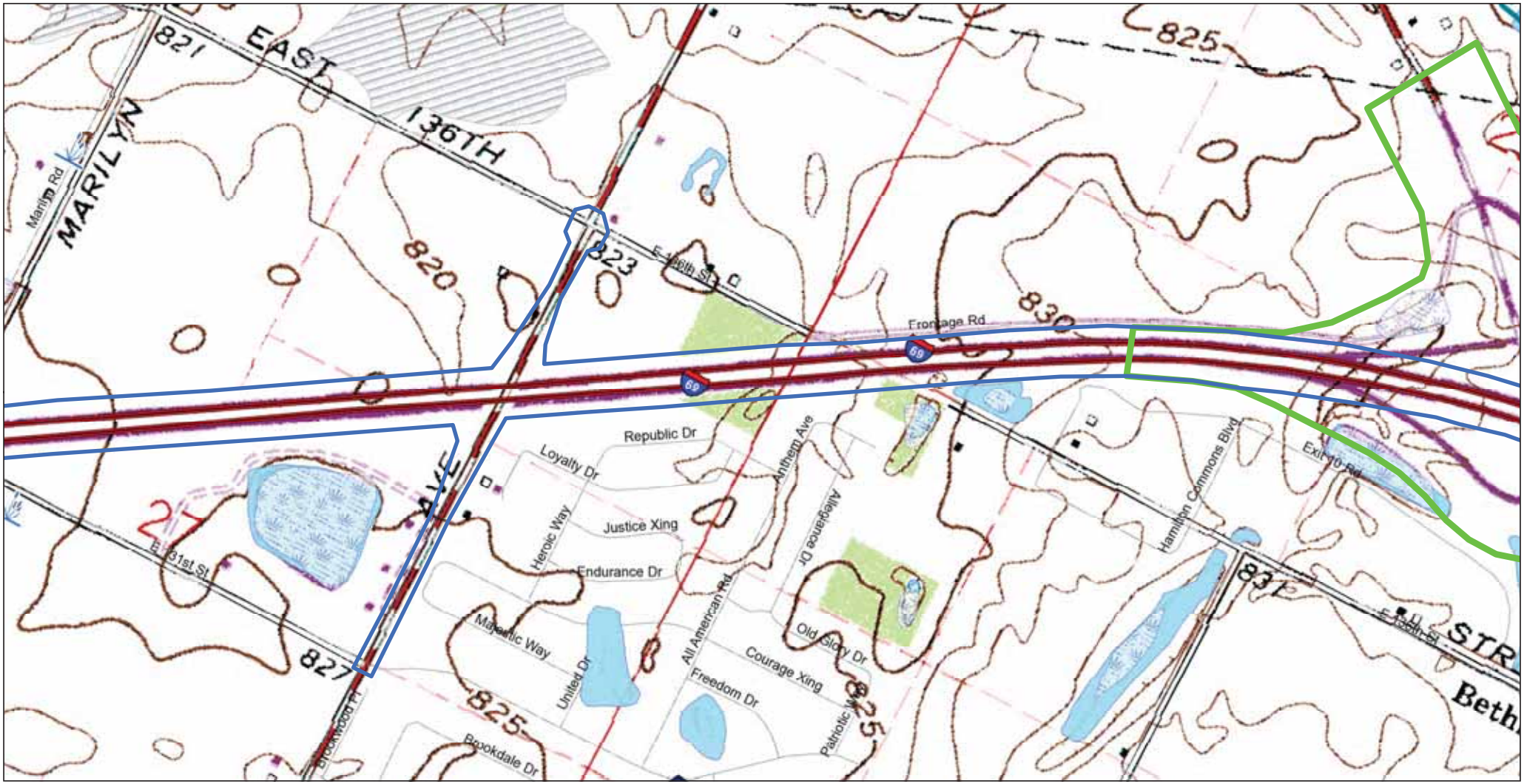
Created By: WCK

PARSONS

EXHIBIT 2

NATIONAL WETLANDS INVENTORY (NWI) OVERVIEW

Pages applicable to Project 2. All other pages have been deleted.



ESRI Map Projection: Indiana State Plane East Datum: NAD 1983

Legend

- Project Area 1
- Project Area 2
- Project Area 3
- NWI - Point
- Karst Spring
- Canal Structure - Historic
- NPS NRI listed
- NWI- Line
- Stream - Impaired
- River
- Canal Route - Historic
- Wetlands
- Lake - Impaired
- Lake
- Floodplain - DFIRM
- Cave Entrance Density
- Sinkhole Area
- Sinking-Stream Basin
- Interstates
- State Routes
- US Routes
- Local Road

0 250 500 1,000 Feet

1 inch = 500 feet

Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

Exhibit 2: National Wetlands Inventory (NWI) Overview

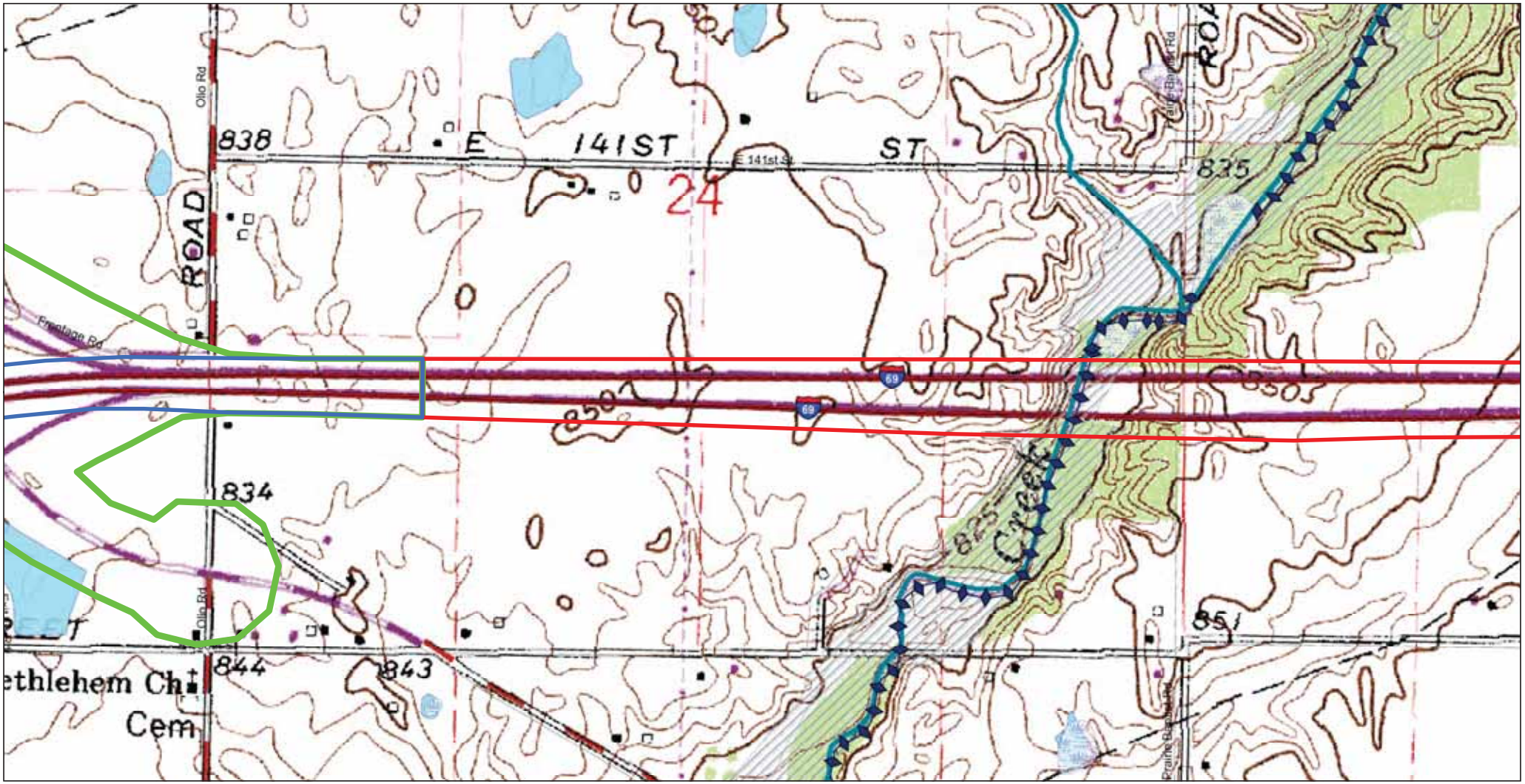
Sheet 4 of 7

Des. 1383332, 1383336, 1383489

Date: 10/2/2014

Created By: WCK

PARSONS



ESRI Map Projection: Indiana State Plane East Datum: NAD 1983

Legend

- Project Area 1
- Project Area 2
- Project Area 3
- NWI - Point
- Karst Spring
- Canal Structure - Historic
- NPS NRI listed
- NWI- Line
- Stream - Impaired
- River
- Canal Route - Historic
- Wetlands
- Lake - Impaired
- Lake
- Floodplain - DFIRM
- Cave Entrance Density
- Sinkhole Area
- Sinking-Stream Basin
- Interstates
- State Routes
- US Routes
- Local Road

0 250 500 1,000 Feet

1 inch = 500 feet

Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

Exhibit 2: National Wetlands Inventory (NWI) Overview

Sheet 5 of 7

Des. 1383332, 1383336, 1383489

Date: 10/2/2014

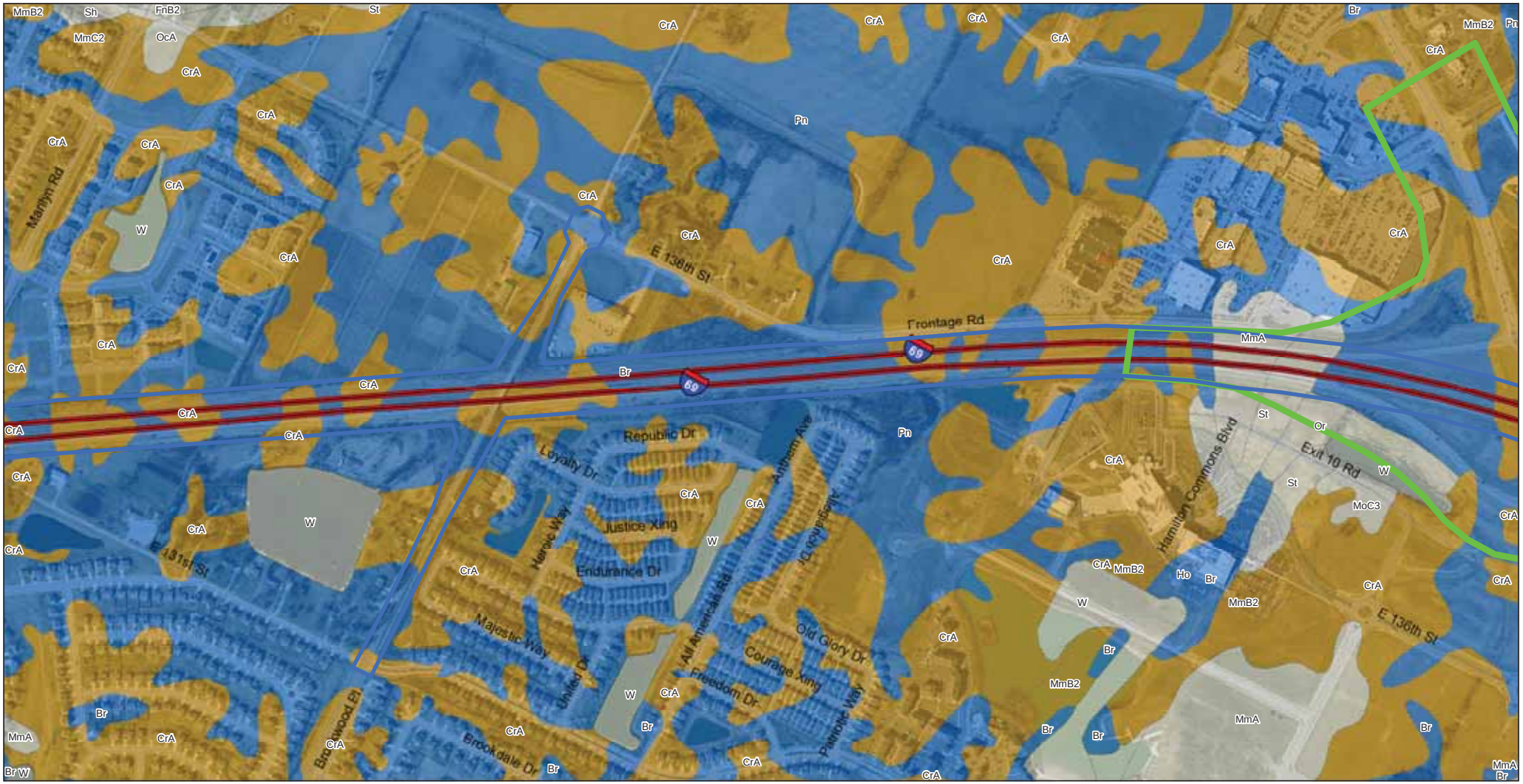
Created By: WCK

PARSONS

EXHIBIT 3

MAPPED SOIL UNITS

Pages applicable to Project 2. All other pages have been deleted.



Base Map: Indiana Spatial Data Portal, UITS, ESRI Map Projection: Indiana State Plane East Datum: NAD 1983

Legend

Project Area 1
Project Area 2
Project Area 3

Hydric Classification-Presence
- Hydric (100%)
- Predominantly Hydric (66-99%)
- Partially Hydric (33-65%)
- Predominantly Non-hydric (1-32%)
- Not Hydric (0%)

State Routes
- Interstates
- State Routes
- US Routes
- Local Road

0 375 750 1,500 Feet

1 inch = 500 feet

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Soil Survey Geographic (SSURGO) Database for Hamilton and Madison County, Indiana. Available online at http://www.arcgis.com/apps/OnePane/basicviewer/index.html?appid=a23eb436f6ec4ad6982000dbaddea5ea. Accessed [8/2014].

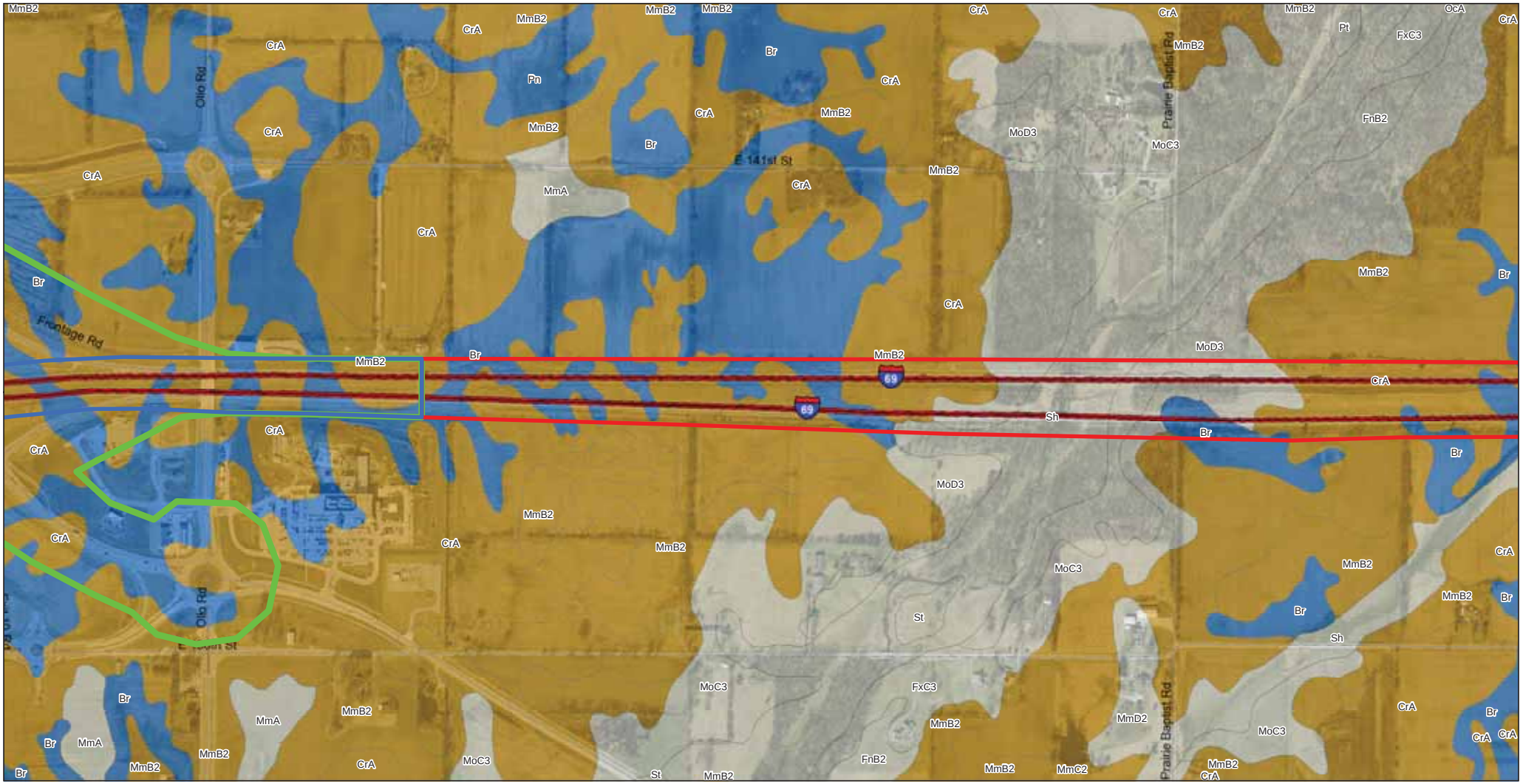
Exhibit 3: Mapped Soil Units
Sheet 4 of 7

Des. 1383332, 1383336, 1383489

Date: 9/30/2014

Created By: WCK

PARSONS



Base Map: Indiana Spatial Data Portal, UITS, ESRI Map Projection: Indiana State Plane East Datum: NAD 1983

Legend

- Project Area 1
- Project Area 2
- Project Area 3

Hydric Classification-Presence

- Hydric (100%)
- Predominantly Hydric (66-99%)
- Partially Hydric (33-65%)
- Predominantly Non-hydric (1-32%)
- Not Hydric (0%)

State Routes

- Interstates
- State Routes
- US Routes
- Local Road

0 375 750 1,500 Feet

1 inch = 500 feet

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Soil Survey Geographic (SSURGO) Database for Hamilton and Madison County, Indiana. Available online at http://www.arcgis.com/apps/OnePane/basicviewer/index.html?appid=a23eb436f6ec4ad6982000dbaddea5ea. Accessed [8/2014].

Exhibit 3: Mapped Soil Units
Sheet 5 of 7

Des. 1383332, 1383336, 1383489

Date: 9/30/2014

Created By: WCK

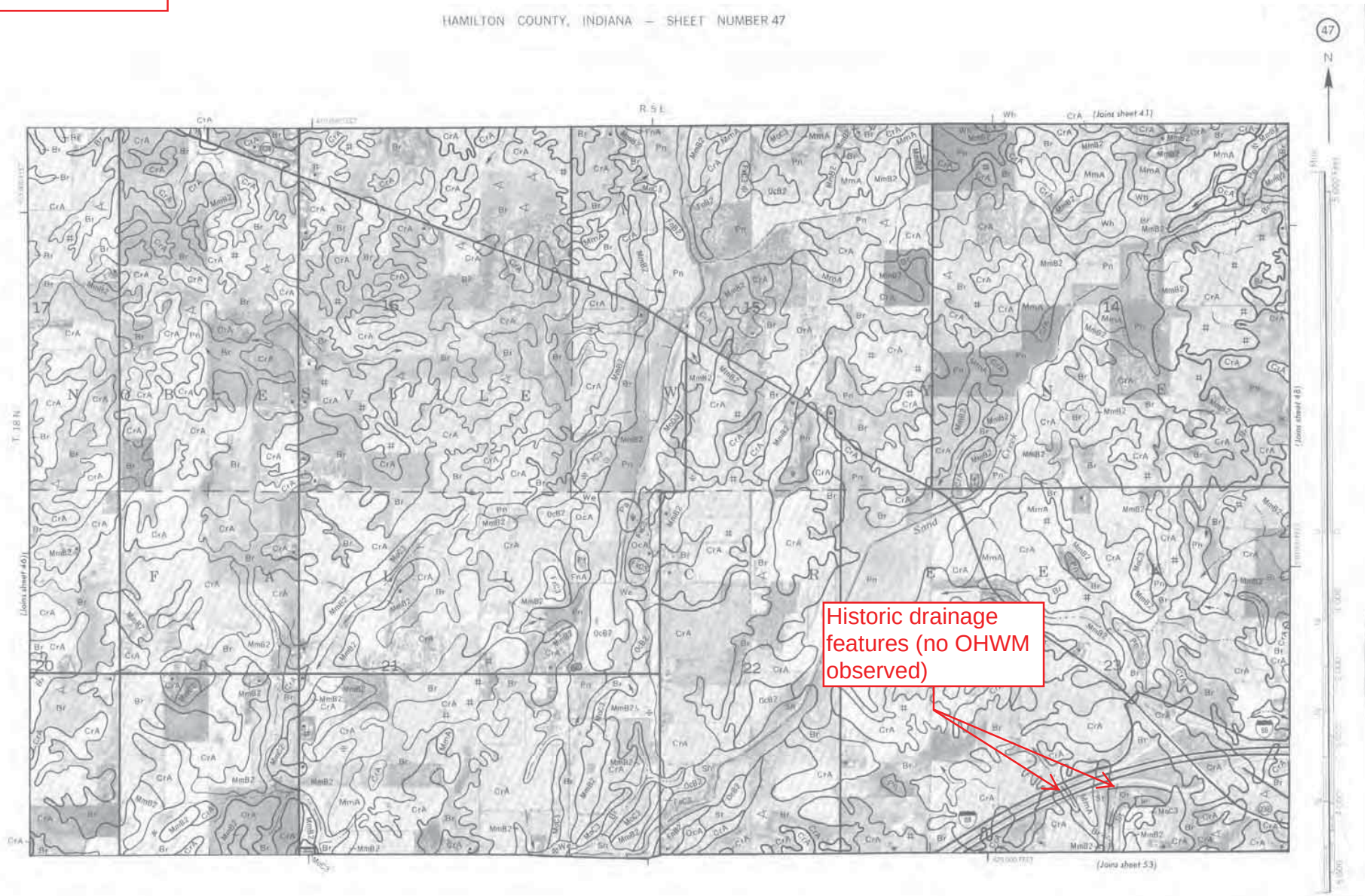
PARSONS

EXHIBIT 4

HISTORIC DRAINAGE

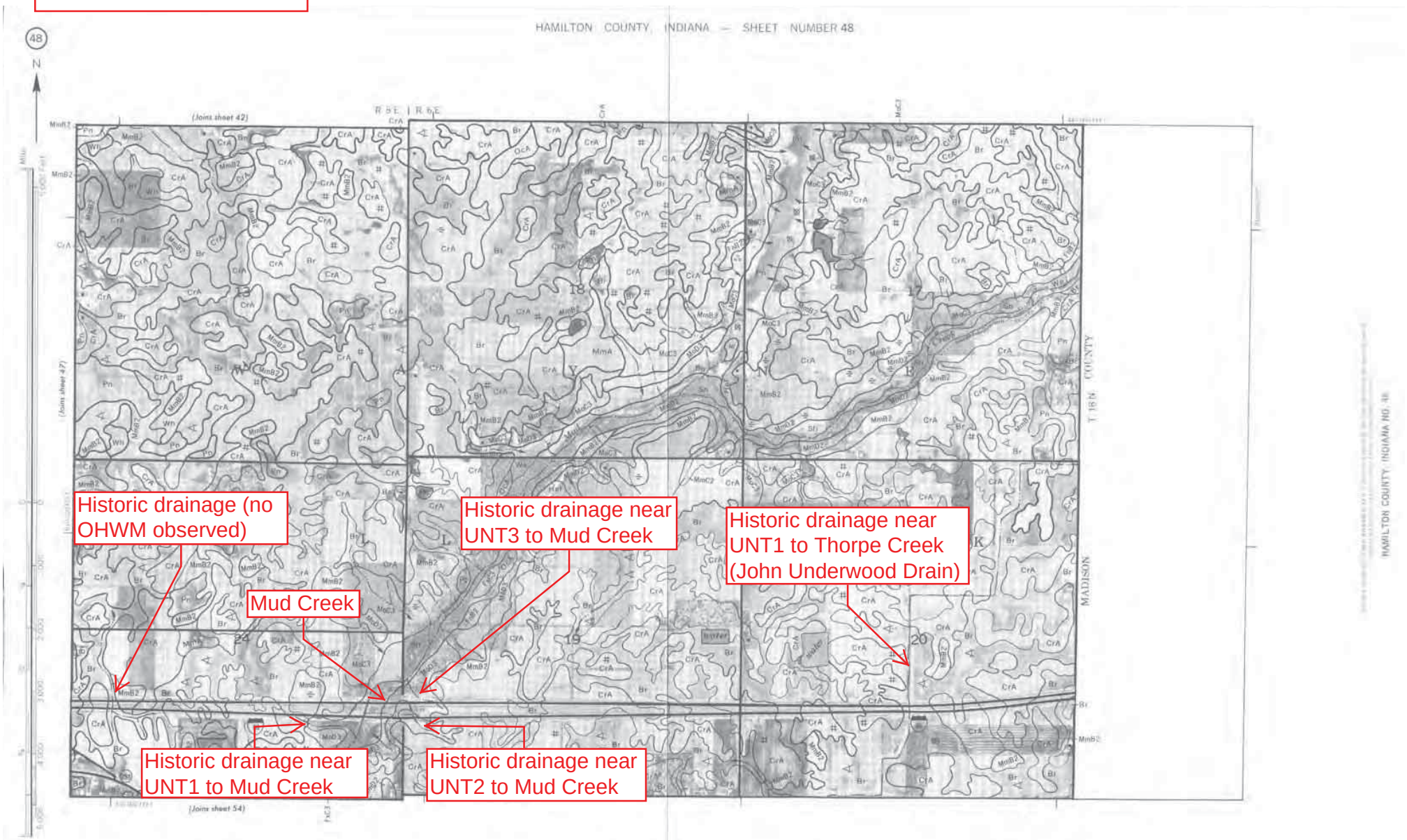
Pages applicable to Project 2. All other pages have been deleted.

Figure 4: Historic Drainage
Sheet 4 of 6



Source:
Soil Survey of Hamilton County, Indiana. United States Department of Agriculture. 1978.

Figure 4: Historic Drainage
Sheet 5 of 6



Source:
Soil Survey of Hamilton County, Indiana. United States Department of Agriculture. 1978.

EXHIBIT 5

RESOURCE MAPS

Pages applicable to Project 2. All other pages have been deleted.

ESRI Map Projection: NAD 1983 StatePlane Indiana East FIPS 1301 Feet Datum: NAD 1983

Legend

- Project Area 1
- Project Area 2
- Project Area 3
- I69ResourceMapStripMap

0 0.5 1 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)

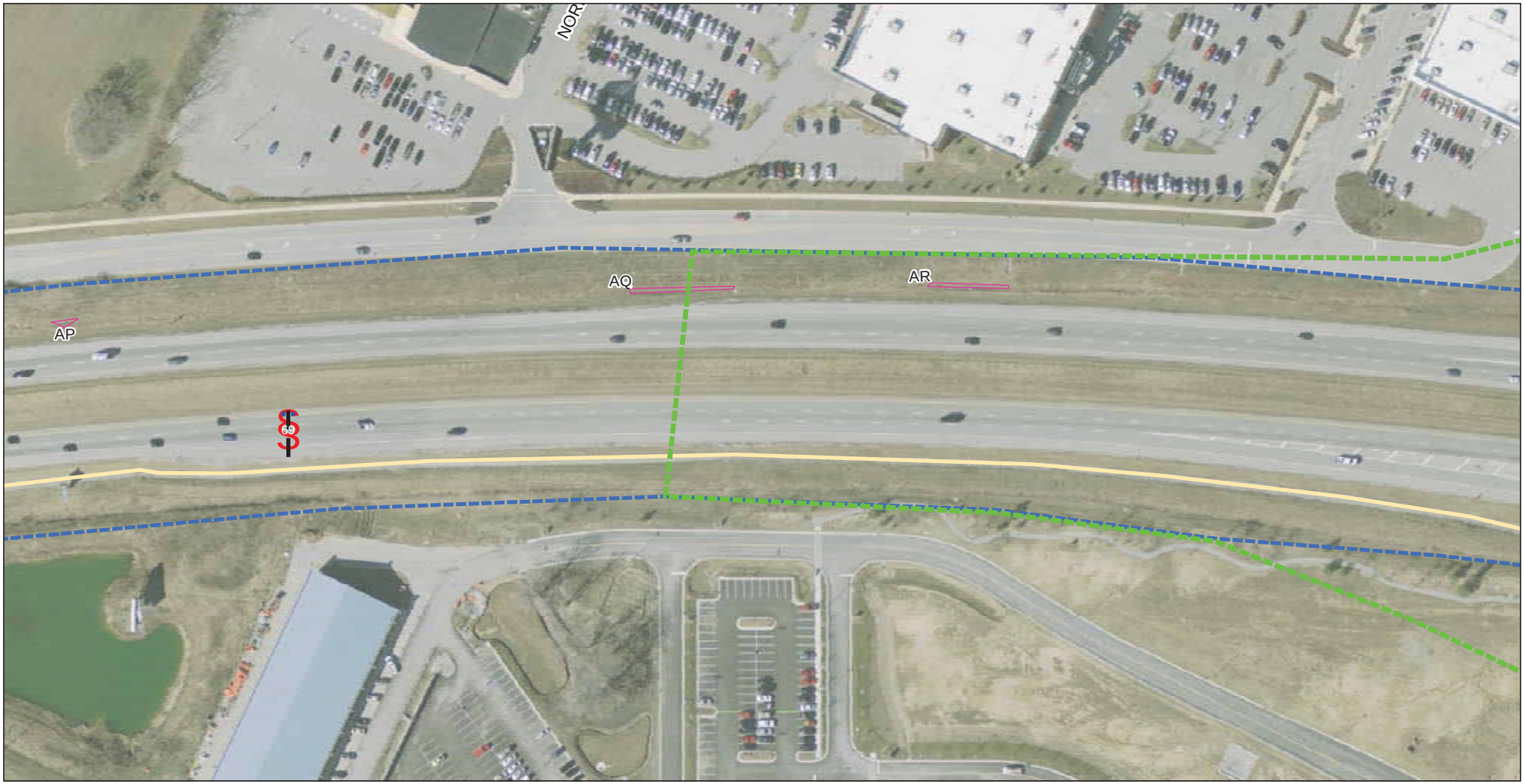
Exhibit 5: Resource Map

Des. 1383332, 1383336, 1383489

Date: 10/2/2014

Created By: WCK

PARSONS



ESRI Map Projection: NAD 1983 StatePlane Indiana East FIPS 1301 Feet Datum: NAD 1983

Legend

- Project Area 1
- Project Area 2
- Project Area 3
- Wetland Data Point (In)
- Wetland Data Point (out)
- Concrete Lined Ditch
- Riprap Lined Ditch
- Streams
- Wetlands
- Non-Jurisdictional Features

0 50 100 200 Feet

1 inch = 100 feet

Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

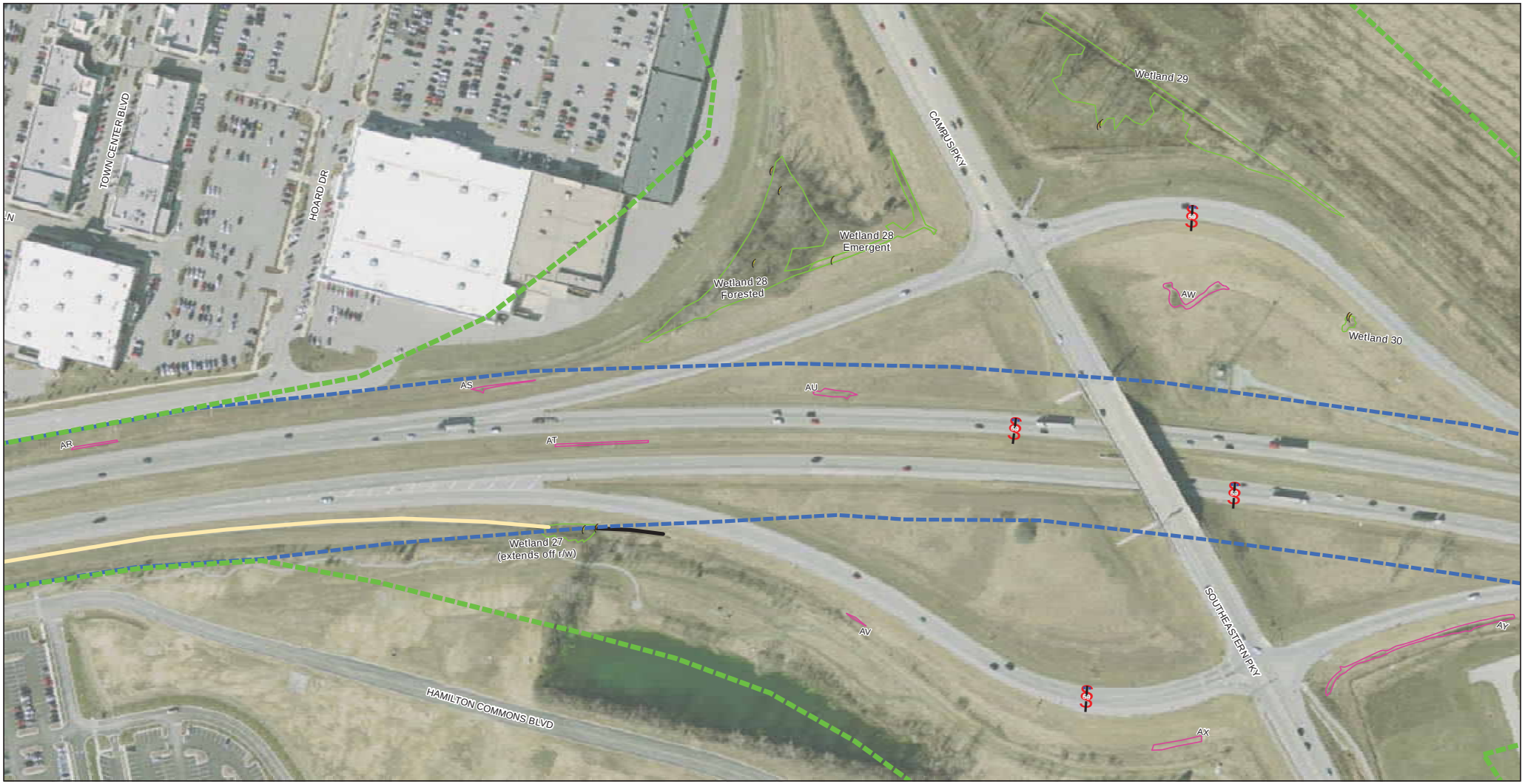
Exhibit 5: Resource Map
Sheet 25 of 48

Des. 1383332, 1383336, 1383489

Date: 10/16/2014

Created By: WCK

PARSONS



ESRI Map Projection: NAD 1983 StatePlane Indiana East FIPS 1301 Feet Datum: NAD 1983

Legend

- Project Area 1
- Project Area 2
- Project Area 3
- Wetland Data Point (In)
- Wetland Data Point (out)
- Concrete Lined Ditch
- Riprap Lined Ditch
- Streams
- Wetlands
- Non-Jurisdictional Features

0 90 180 360 Feet

1 inch = 175 feet

Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

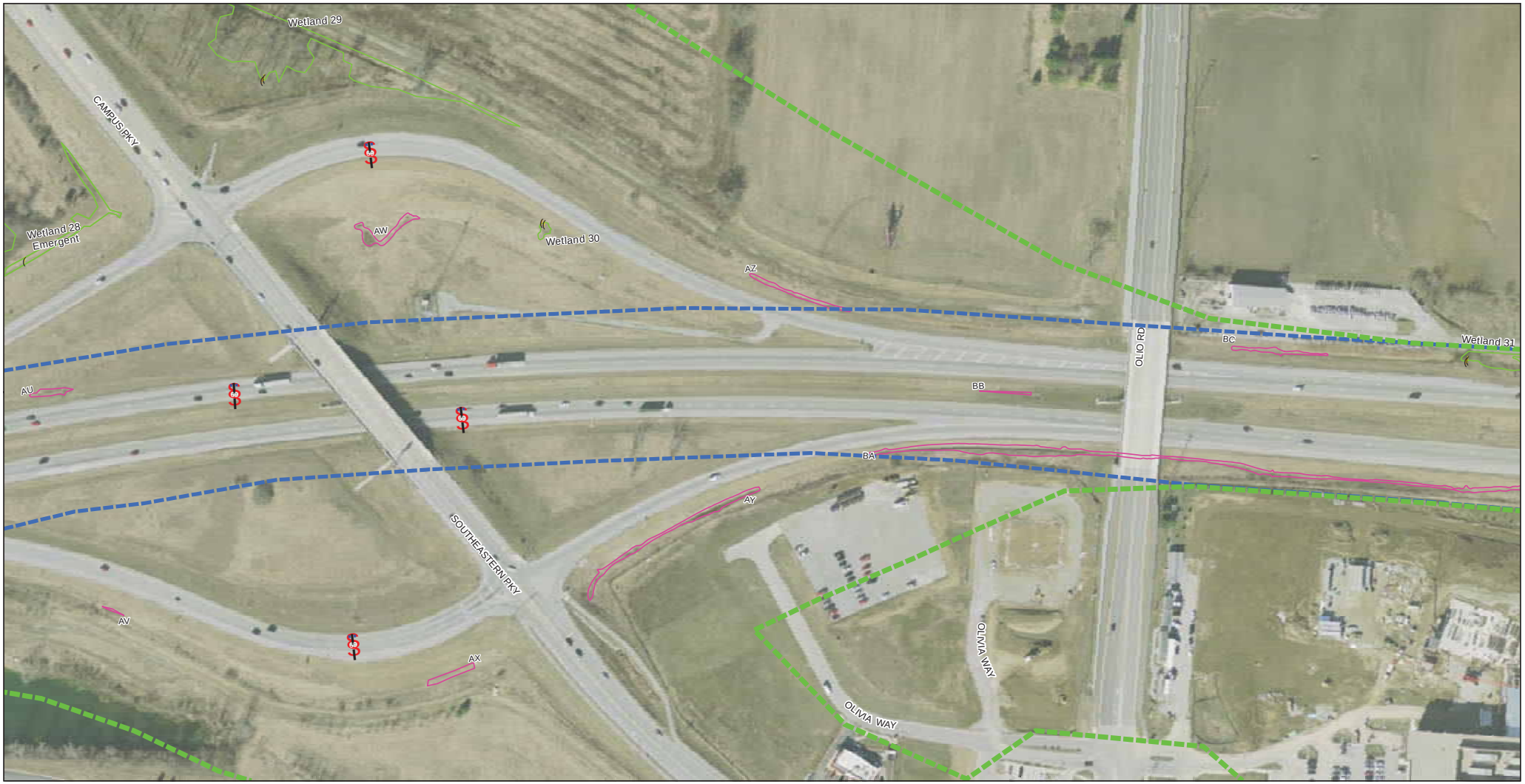
Exhibit 5: Resource Map
Sheet 26 of 48

Des. 1383332, 1383336, 1383489

Date: 10/16/2014

Created By: WCK

PARSONS



ESRI Map Projection: NAD 1983 StatePlane Indiana East FIPS 1301 Feet Datum: NAD 1983

Legend

- Project Area 1
- Project Area 2
- Project Area 3
- Wetland Data Point (In)
- Wetland Data Point (out)
- Concrete Lined Ditch
- Riprap Lined Ditch
- Streams
- Wetlands
- Non-Jurisdictional Features

0 90 180 360 Feet

1 inch = 175 feet

Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

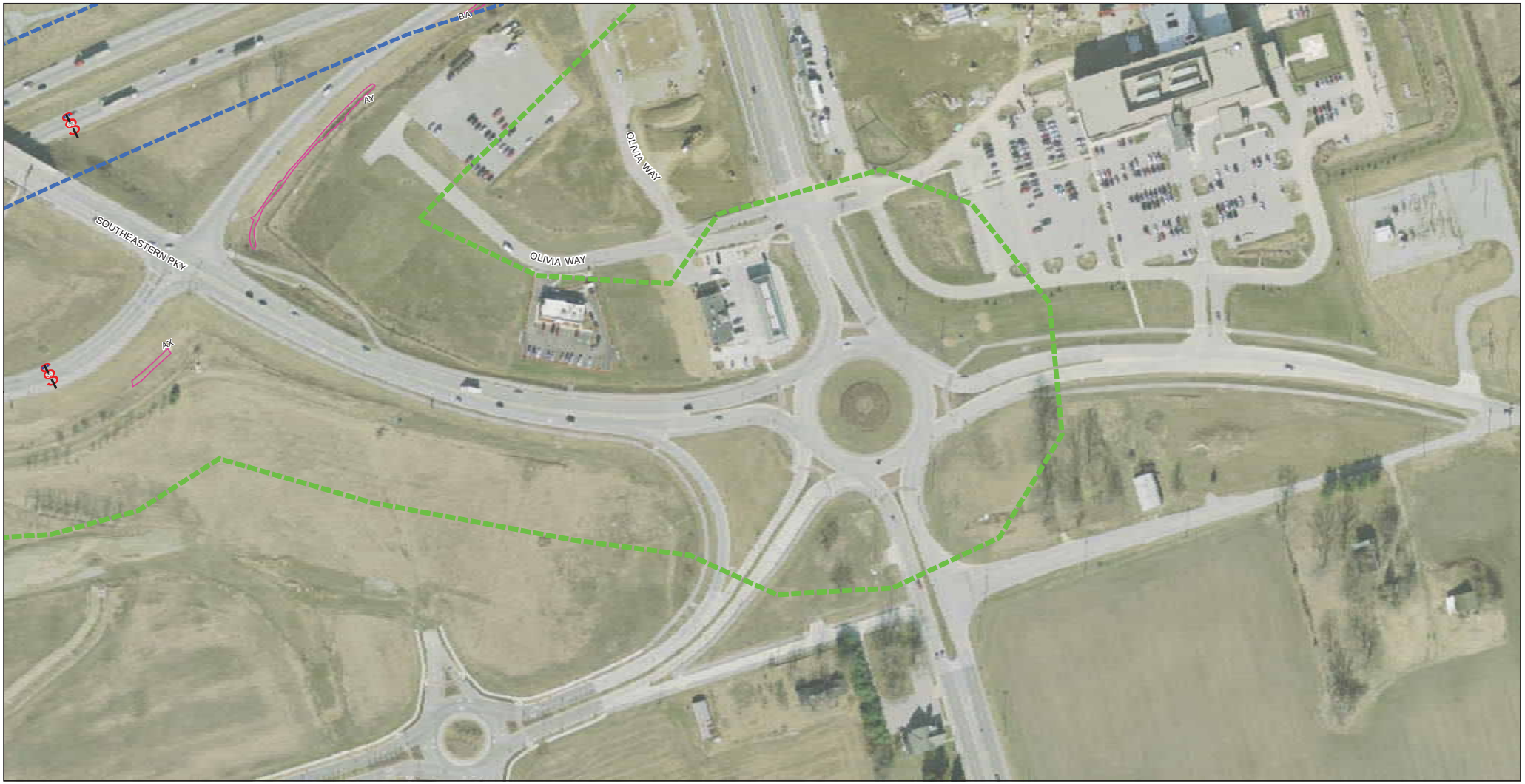
Exhibit 5: Resource Map
Sheet 27 of 48

Des. 1383332, 1383336, 1383489

Date: 10/16/2014

Created By: WCK

PARSONS



ESRI Map Projection: NAD 1983 StatePlane Indiana East FIPS 1301 Feet Datum: NAD 1983

Legend

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Exhibit 5: Resource Map
Sheet 28 of 48

Des. 1383332, 1383336, 1383489

Date: 10/16/2014

Created By: WCK

PARSONS

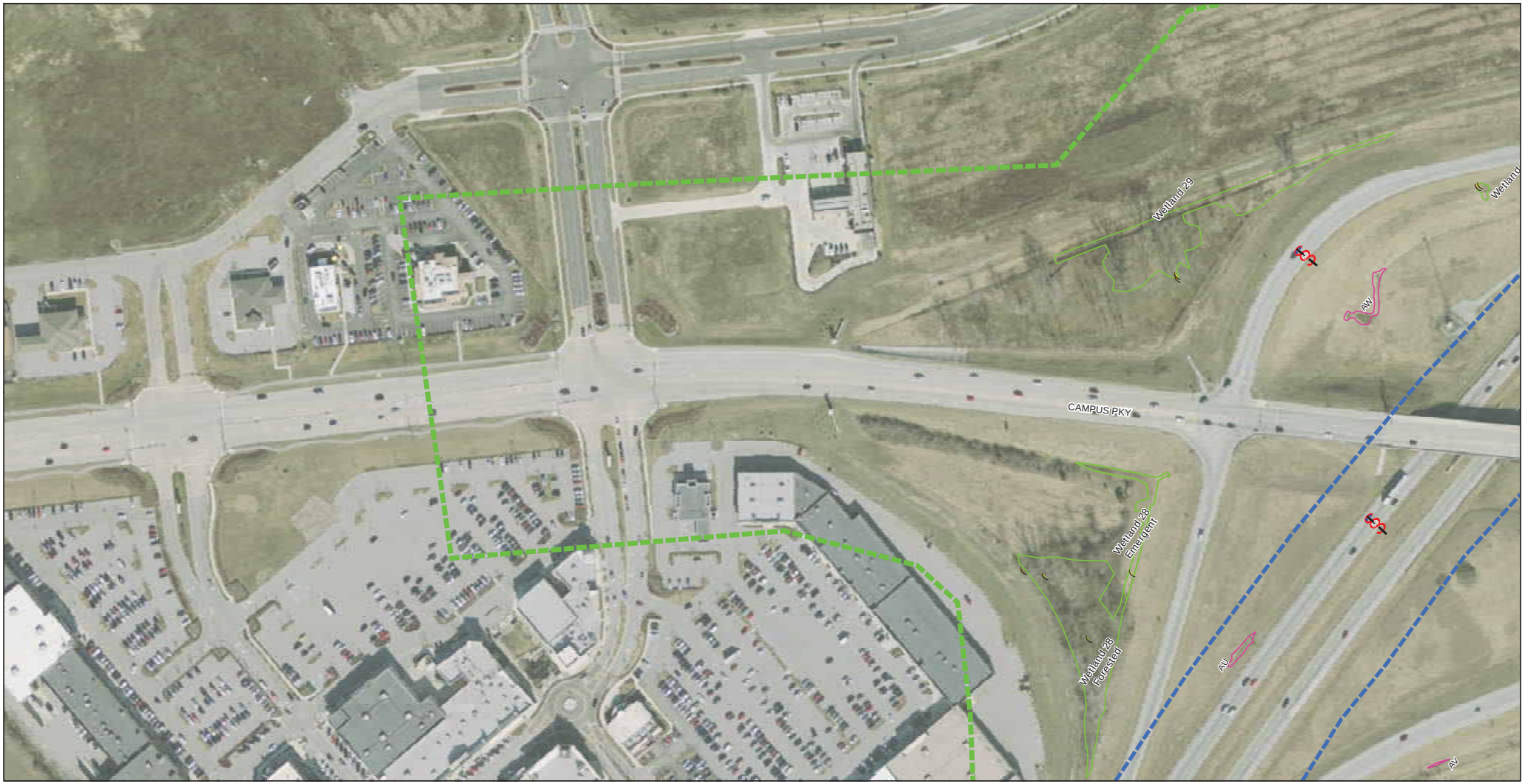

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Exhibit 5: Resource Map
Sheet 29 of 48

Des. 1383332, 1383336, 1383489

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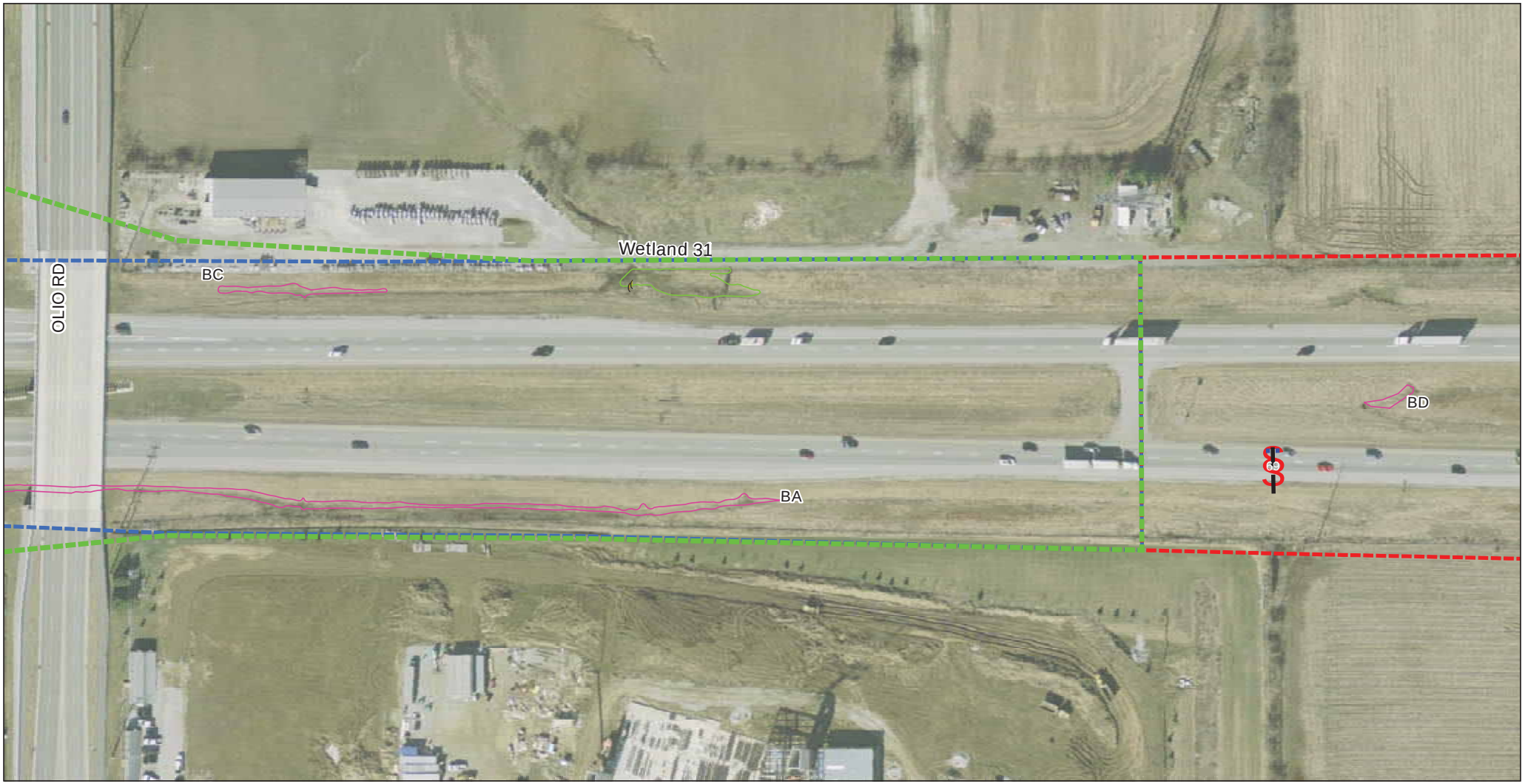
Created By: WCK

PARSONS



ESRI Map Projection: NAD 1983 StatePlane Indiana East FIPS 1301 Feet Datum: NAD 1983

Legend

- Project Area 1
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- Wetlands
- Non-Jurisdictional Features

0 50 100 200 Feet

1 inch = 100 feet

Sources:
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Exhibit 5: Resource Map
Sheet 30 of 48

Des. 1383332, 1383336, 1383489

Date: 10/16/2014

Created By: WCK

PARSONS

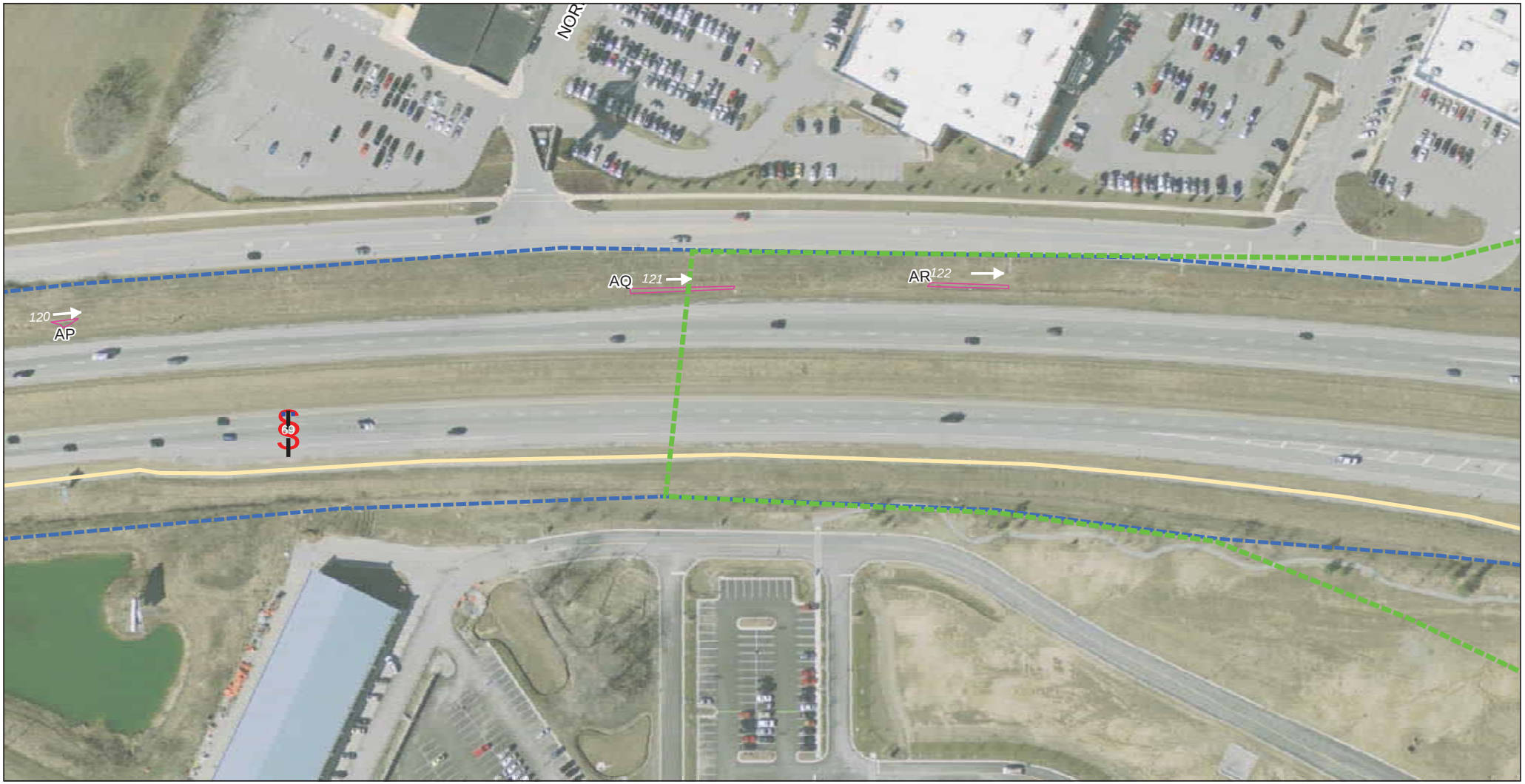
EXHIBIT 6

PHOTO-ORIENTATION MAPS

AND

PHOTOGRAPHS

Pages applicable to Project 2. All other pages have been deleted.



ESRI Map Projection: NAD 1983 StatePlane Indiana East FIPS 1301 Feet Datum: NAD 1983

Legend

- Project Area 1
- Project Area 2
- Project Area 3
- Wetlands
- Non- Jurisdictional Features
- Concrete Lined Ditch
- Riprap Lined Ditch
- Streams
- # Photograph Location
- Direction Taken

0 50 100 200 Feet

1 inch = 100 feet

Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

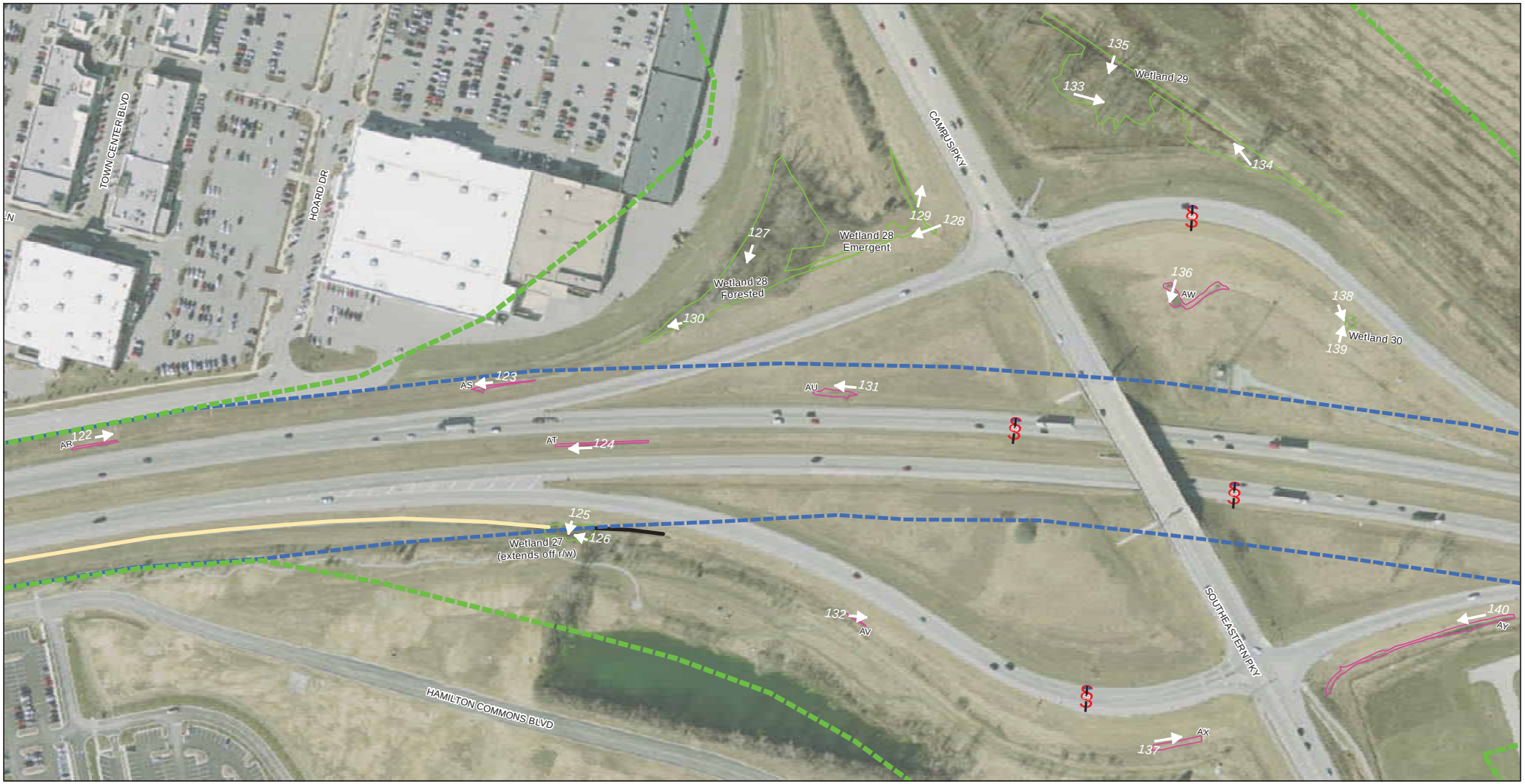
Exhibit 6: Photo Orientation
Sheet 22 of 41

Des. 1383332, 1383336, 1383489

Date: 10/16/2014

Created By: WCK

PARSONS



ESRI Map Projection: NAD 1983 StatePlane Indiana East FIPS 1301 Feet Datum: NAD 1983

Legend

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- Project Area 3
- Wetlands
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- Concrete Lined Ditch
- Riprap Lined Ditch
- Streams
- # Photograph Location
- Direction Taken

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1 inch = 175 feet

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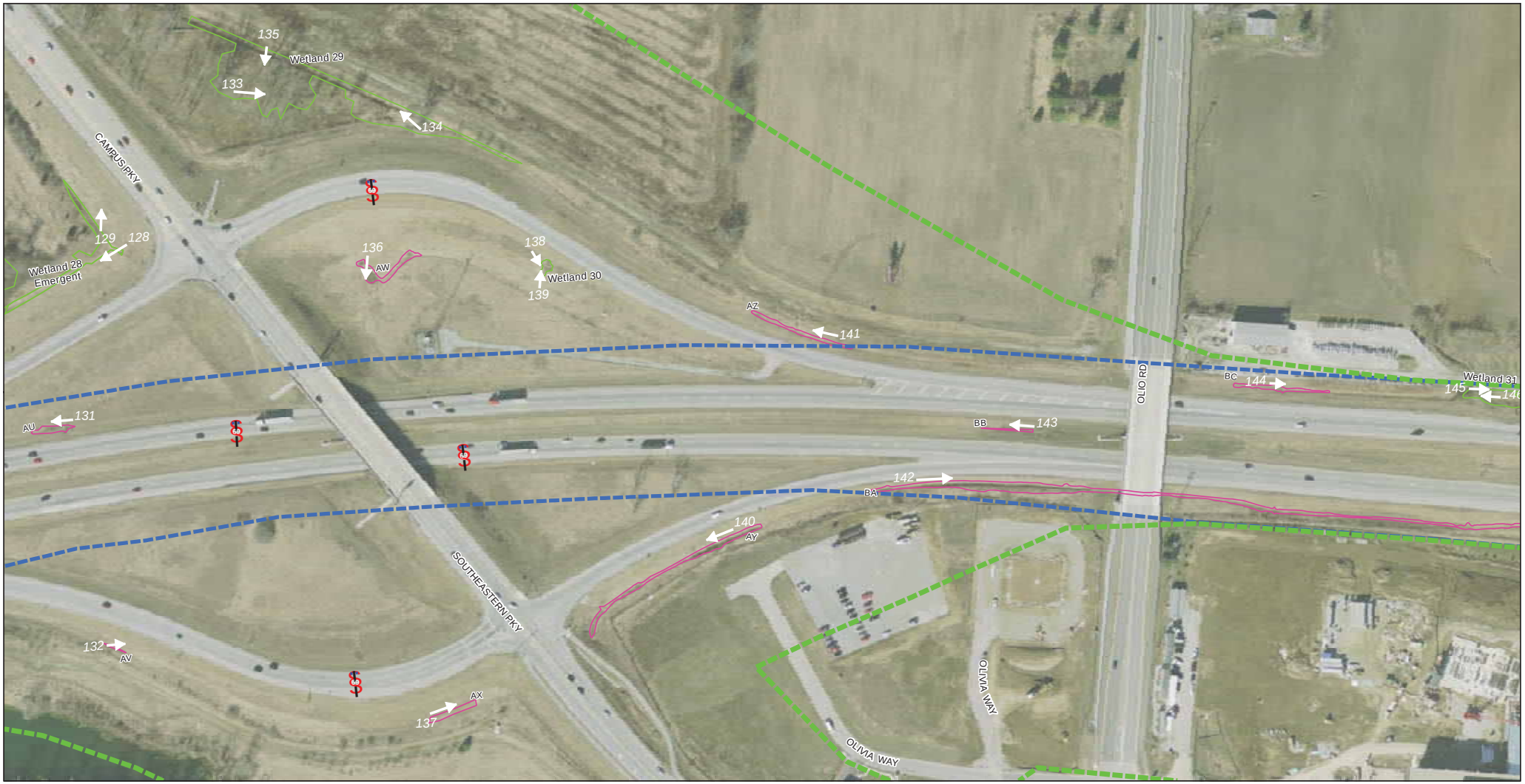
Exhibit 6: Photo Orientation
Sheet 23 of 41

Des. 1383332, 1383336, 1383489

Date: 10/16/2014

Created By: WCK

PARSONS



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Legend

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- Project Area 3
- Wetlands
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- Concrete Lined Ditch
- Riprap Lined Ditch
- Streams
- # Photograph Location
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1 inch = 175 feet

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Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

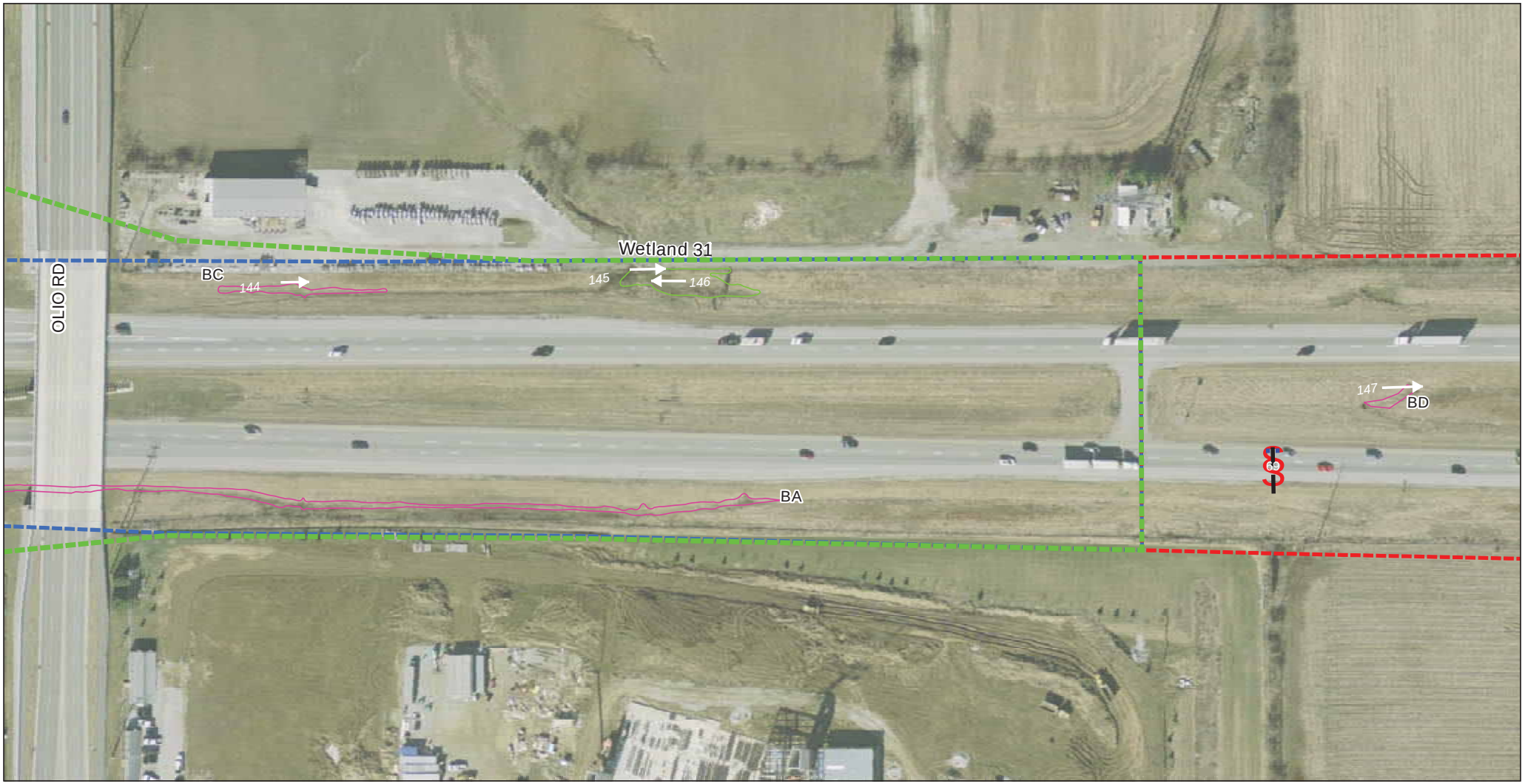
Exhibit 6: Photo Orientation
Sheet 24 of 41

Des. 1383332, 1383336, 1383489

Date: 10/16/2014

Created By: WCK

PARSONS



ESRI Map Projection: NAD 1983 StatePlane Indiana East FIPS 1301 Feet Datum: NAD 1983

Legend

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- Project Area 2
- Project Area 3
- Wetlands
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- Concrete Lined Ditch
- Riprap Lined Ditch
- Streams
- # Photograph Location
- Direction Taken

0 50 100 200 Feet

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Exhibit 6: Photo Orientation
Sheet 25 of 41

Des. 1383332, 1383336, 1383489

Date: 10/16/2014

Created By: WCK

PARSONS

Photo 121: View of non-jurisdictional feature AQ facing northeast (June 18, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 122: View of non-jurisdictional feature AR facing northeast (June 18, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 123: View of non-jurisdictional feature AS facing southwest (June 18, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 124: View of non-jurisdictional feature AT facing southwest (July 10, 2014). This feature is located entirely within the median roadside drainage along I-69.

Photo 125: View of Wetland 27 facing south (June 17, 2014). This feature extends beyond the roadside drainage along I-69.

Photo 126: View of Wetland 27 facing west (June 17, 2014).

Photo 127: View of Wetland 28 facing south (June 18, 2014). This photograph was taken within the forested portion of this wetland.

Photo 128: View of Wetland 28 from the Campus Parkway Interchange facing west (June 18, 2014). The roadside drainage along this slope contained the emergent portion of this wetland.

Photo 129: View of the emergent portion of Wetland 28 facing northwest along Campus Parkway (June 18, 2014).

Photo 130: View of the pipe draining into the forested portion of Wetland 28 facing southwest (June 18, 2014). No OHWM was observed within (or leaving) this wetland.

Photo 131: View of non-jurisdictional feature AU facing west (June 19, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 132: View of non-jurisdictional feature AV facing east (June 17, 2014). This feature was not vegetated, and is located entirely within the roadside drainage along I-69.

Photo 133: View of Wetland 29 facing east (June 23, 2013). This feature is located between the off-ramp slope and the old roadbed slope to the east.

Photo 134: View of Wetland 29 facing northwest (June 23, 2014).

Photo 135: View of Wetland 29 from the old roadbed slope, facing southwest towards the Campus Parkway Interchange (June 23, 2014).

Photo 136: View of non-jurisdictional feature AW facing south (June 23, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 137: View of non-jurisdictional feature AX facing east (June 17, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 138: View of Wetland 30 facing southeast (June 23, 2014). The primary source of hydrology for this wetland is an underdrain along the I-69 southbound off-ramp.

Photo 139: View of Wetland 30 facing north (June 23, 2014).

Photo 140: View of non-jurisdictional feature AY facing southwest (June 19, 2014). This feature is located entirely within the roadside drainage along I-69. The Campus Parkway Interchange is in the background.

Photo 141: View of non-jurisdictional feature AZ facing northwest (June 23, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 142: View of non-jurisdictional feature BA facing east (June 19, 2014). This feature is located entirely within the roadside drainage along I-69. The Olio Road Overpass is in the background.

Photo 143: View of non-jurisdictional feature BB facing west (July 10, 2014). This feature is located entirely within the median roadside drainage along I-69.

Photo 144: View of non-jurisdictional feature BC facing east (June 23, 2014). This feature is located entirely within the roadside drainage along I-69.

Photo 145: View of Wetland 31 facing east (June 23, 2014). This feature extends beyond the roadside drainage along I-69.

Photo 146: View of Wetland 31 facing west (June 23, 2014).

Photo 147: View of non-jurisdictional feature BD facing east (July 10, 2014). This feature is located entirely within the median roadside drainage along I-69.

Photo 148: View of UNT1 to Mud Creek facing east (June 19, 2014). The OHWM is 6 inches wide and 3 inches in depth.

EXHIBIT 7

QHEI/HHEI ASSESSMENTS

*The QHEI/HHEI assessments have been omitted as they are summarized in Table 2 of the report.

EXHIBIT 8

WETLAND DATA FORMS

*The Wetland Data Forms have been omitted as the results are summarized throughout the report.

EXHIBIT 9

MEETING MINUTES

PARSONS

MEETING MINUTES

DATE:	*Office:* August 13, 2014 9:00 am – 12:00 pm	*Field:* August 18, 2014 12:30 pm – 3:30 pm
PROJECT:	I-69 Interstate Expansion Madison/Hamilton Counties INDOT Des. Nos. 1383332/1383336/1383489	
LOCATION:	*Office:* Parsons 101 West Ohio Street, Suite 2121 Indianapolis, Indiana 46204	*Field:* Various locations throughout corridor
ATTENDEES:	Deb Snyder, USACE Jay Turner, IDEM Tony Jones, INDOT Lisa Herber, INDOT Ben Carnahan, Parsons (*office only*) Dan Miller, Parsons T.J. Warrner, Parsons Wade Kimmon, Parsons (*office only*)	

TOPICS:

Introductions were made. All of the meeting participants (above) were in attendance. *Note that these meeting minutes were organized using the agenda and do not necessarily reflect the order items were discussed during the meetings. Discussion items from the field meeting are included as updates to the office meeting minutes to provide all related discussion within the same document.*

Dan provided a summary of the proposed projects and their locations. Project 1 (Des. 1383332) will construct added travel lanes in the median from 106th St to 0.5 mi N of Campus Parkway. An auxiliary lane will be added on southbound I-69 between 106th Street and 116th Street. Project 2 (Des. 1383489) is an Interchange Modification at Exit 210 (Campus Parkway). Currently 4 interchange types are being considered, with 2 being focused on for the possible preferred alternative. Project 3 (Des. 1383336) will construct added travel lanes in the median from 0.5 mi N of Campus Parkway to 0.5 mi East of SR 13. Design is in early stages, as these are "design-build" projects. Deb asked if the interchange project was related to the traffic anticipated for the Cabelas store. Ben indicated that, while traffic models had been adjusted to reflect the additional traffic from Cabelas, this was part of INDOT's 2020 funded projects.

Dan detailed Parsons' waters of the U.S. survey efforts to date, which included a walking survey of the entire I-69 project corridor, including median. He also discussed the field data that was collected.

I. Results of May-July Fieldwork
   A. Wetlands
      - 36 median wetlands totaling 0.75 acre (35 isolated)
      - 96 roadside wetlands totaling 9.84 acres (41 isolated)

- 129 located in *mapped* hydric soils; 3 located in mapped non-hydric soils
- Types: 127 emergent, 1 shrub-scrub, 4 forested (all current impacts are emergent)

Dan gave an overview of the wetlands delineated in the field (both in the median and outside ditches), discussed their low quality, and noted 35 of the 36 median wetland and nearly half of the roadside ditch wetlands were isolated.

Deb noted that there have been recent meetings with INDOT regarding roadside ditch (RSD) guidance and associated wetlands (discussed in detail below). She agreed that most of these wetlands were RSDs, had low functional value, and noted that the proposed road design would potentially recreate these features within the new roadside drainage. She noted that the goal of the 404 program is to replace wetland function, and with this potential replacement function would not be lost.

Dan discussed the high prevalence of mapped nationally listed hydric soils within the project area, and noted that only 3 identified wetlands were located in mapped non-hydric soils.

Deb asked about the five non-emergent wetlands and their jurisdiction. TJ indicated that one was isolated while the rest were likely jurisdictional due to their connection to waters of the U.S. Dan noted that no forested or shrub-scrub wetlands would be impacted based on the current design.

Jay noted that Jason Randolph from IDEM had mentioned at least one higher quality wetland of concern was located along the project. Dan noted that these wetlands will not be impacted by the project.

B. Streams
- 5 streams crossed (all have historic drainage)
- 16 streams identified within I-69 roadside drainage (8 have historic drainage)

Deb asked about the age of I-69 in relation to historic drainage features. TJ indicated that the soil surveys from 1967 showed “proposed I-69”, likely indicating that this stretch of interstate was constructed in the late 1960s or early 1970s. Ben confirmed that this is correct.

II. Problematic Features

A. Updated USACE guidance on roadside ditch wetlands
- Details on new guidance
- General discussion on impact to field results

Deb referred to a recent meeting with INDOT regarding updated roadside ditch guidance. She stated that if the roadside ditch develops all three wetland indicators and does not extend outside of the RSD it is <u>not</u> jurisdictional. Additionally, the RSD must not have any historic drainage or be dug out of pre-existing wetlands. These features would not be considered wetland since “normal conditions” are not present (their “normal condition” is acting as a roadside ditch). Deb noted that the non-jurisdictional features should not be included in the pre-JD form that is included in the waters report. Dan indicated that three quarters, or more, of the wetlands were located within roadside ditches.

Lisa asked about the gray area regarding the definition of upland soils/excavated in uplands. Deb stated that the areas along the I-69 corridor have been heavily impacted by urbanization, further complicating the discussion.

Jay stated that Deb's feedback is in agreement with a recent IDEM meeting with the USACE on this topic.

UPDATE: Field Meeting: Several wetlands contained entirely within roadside drainage were reviewed in the field. These included multiple drainage features that eventually drain into Thorpe Creek at the S.R. 13 Interchange. Each of these exhibit all three wetland characteristics and are contained entirely within the roadside drainage. None of these features have historic drainage. Deb indicated that all met the updated USACE roadside ditch guidance. Because the median wetlands are all contained within roadside drainage, Deb indicated that this same guidance would apply and she did not need to specifically review these in the field.

B. Stream versus wetland conveyances (7)
   - Field observations/photographs
   - Historic drainage absent
   - Resource agency feedback

Deb indicated that the examples provided in the presentation would likely be considered roadside ditches and therefore not jurisdictional.

Tony asked if it was important to identify features that are located within right-of-way but are unlikely to be impacted by proposed construction. Ben discussed how this is a design-build project, making it important that all resources are clearly identified on the plans, should the contractor make changes once the contract is awarded. It would then be on the contractor to modify the permits and mitigate for any additional impacts.

C. Non-vegetated wetlands (6)
   - Field observations/photographs
   - No vegetation data
   - Resource agency feedback

Dan discussed how some of these features had ruts, with the top of the rut containing non-hydrophytic vegetation (K-31, thistle, etc.). Bare soil was located in the bottom of these ruts, likely where the water collected. Dan noted that these features would likely fall out based on earlier meeting discussion on roadside ditches.

D. Riprap lined wetlands
   - Field observations/photographs
   - 10 failed to meet soils indicator but had adjacent hydric soils for out point
   - Several additional met indicator despite presence of riprap close to surface
   - Resource agency feedback

Deb agreed that the out points located adjacent to these features could be used as a surrogate for the wetland soils data. Dan, however, noted that most if not all of these features will likely be removed based on earlier meeting discussion on roadside ditches. Deb noted that the function of these features will likely be replaced by the nature of the project.

E. Hillslope wetlands (6)
   - Field observations/photographs
   - Artificial hydrology

- USACE previous guidance (I-70) for similar features
- Resource agency feedback

Dan discussed previous USACE feedback on these types of features not being jurisdictional. Deb indicated that she, however, would likely take these features since they exhibit all three characteristics under "normal conditions." She will confirm with her section chief.

The jurisdictional status of these features was discussed. Even though their connections to Thorpe Creek (via roadside ditches) are not considered resources, these features exist outside of the RSDs and would still be considered jurisdictional by connection via the RSDs.

Ben indicated that the under drains feeding these wetland features could be left in place by design. Deb and Jay stated that if these areas are impacted, the only way they could be used as "restoration" would be to monitor these areas (against success criteria) for several years.

UPDATE: Fieldwork Meeting: Several of these were visited within or near the S.R. 13 Interchange and the office meeting determination was confirmed.

F. Data collection in median wetlands with safety concerns (2)
   - Field observations/photographs
   - No soil data collected (met hydrology and vegetation criteria)
   - Located in mapped hydric soils
   - Resource agency feedback

Deb agreed that soil data collection was not required for these two wetlands. Dan noted that these features will likely be removed due to earlier discussion of roadside ditches.

G. Potential jurisdictional ditches
   - Field observation/photographs
   - Concrete lined ditch draining into Cheeney Creek
   - Misc. interchange and roadside drainages without connection to waters of the US (15)

After reviewing the example roadside drainages with OHWMs but undetermined connection, Deb indicated that she would likely not take these since historic drainage was not present.

Lisa asked about making a call on features that lacked historical drainage, such as the long stream relocation area. Deb indicated that this feature would be taken due to its relatively permanent flow. A follow-up field visit was proposed to specifically evaluate several ditches.

UPDATE: Field Meeting: The concrete lined ditch draining to Cheeney Creek was visited. Its poor quality was confirmed by both IDEM and the USACE. Active construction (noise wall) was observed near the 116th Street Interchange within this UNT (non-paved portion). Both Lisa and Deb indicated they would check to see if this was previously permitted. Deb indicated she would evaluate how far upstream of Cheeney Creek she would take jurisdiction on this UNT. Both agencies indicated that there office stance on mitigation remained unchanged for this feature (see Section III Part A).

III. 404/401 Permits

A. Stream relocation

- Concrete lined ditch draining to Cheeney Creek
- Approximately 1,200' impact (most recent estimate)
- Resource agency mitigation requirements

Deb asked if an approved JD was going to be used. TJ indicated that the project schedule likely dictated the use of the preliminary JD.

Dan asked if there would be a deed restriction if the concrete lined ditch was relocated and INDOT pursued on-site mitigation. Deb and Jay both indicated this would not be required. Deb and Jay stated that this would be considered "self mitigating" and no success criteria would be tied to this relocation.

Deb indicated that she would not want to see an increase in the length of concrete-lined ditches. She also stated that if the impact threshold exceeds 1,500' a 404 Individual Permit would be required. This can take 12 months, or longer, to obtain.

Dan indicated that some of the concrete lined ditch may not be necessary following relocation, and could be constructed as a vegetated ditch instead. Per discussions with design, a small section of the concrete would have to remain due to scour. Ben stated that riprap may be a viable alternative. Deb noted that riprap or vegetation would be seen as an improvement in resource quality over concrete. Dan asked about leaving the 400' of concrete ditch (north of the relocation) in place vs. clearing this area and making it a vegetated ditch. Deb and Jay confirmed that removing this portion of the ditch and making it vegetated would be ideal. Deb stated she would look into the upcoming RGP to see if this could be allowed without pushing the project into a 404 Individual Permit.

Jay noted that a key point of this discussion was there is little need to monitor the relocated roadside channel. The post-construction condition of the roadside stream is an important part of the 401 (and 404). The 401 certification might simply refer to the mitigation plan for the design of UNT1 Cheeney Creek, or it might list success criteria. Either way, this roadside channel will not be viewed as a traditional mitigation project requiring monitoring. If success criteria are listed in the 401 certification, they would be used to describe what is to be built and planted to ensure the result is a more natural channel rather than a concrete lined channel. Example success criteria are as follows:

- "Ensure the relocated stream consists of a minimum of xxx linear feet of open channel flowing over native substrate."
- "Construct xxxx linear feet of UNT Cheeney Creek as described in the mitigation plan."
- "Plant an herbaceous wetland seed mix in and along the UNT for xxxx linear feet of the relocated channel."

B. USACE cumulative determination on impacts

- Unnamed tributaries (UNTs) draining to major creeks
- Wetlands in close proximity to each other

Deb indicted that the examples shown in the presentation would likely be considered cumulative. Dan noted that several of the wetlands in these examples would be ruled out based on earlier meeting guidance on roadside ditches.

Jay indicated that impacts along the entire corridor would be considered cumulatively per IDEM requirements.

C. Wetland impacts
   - Mitigation
   - Central Indiana Mitigation Bank
   - Resource agency update on credit status

Dan stated that approximately 0.75 acre of median wetland identified in the field would have been impacted by current design. Ben discussed that some of this was related to lowering the median near SR 13, while in other locations this was due to lane widening into the median. Dan stated that, based on earlier meeting feedback on roadside ditches, it appears that virtually all of these wetlands will be classified as non-jurisdictional.

Deb asked if any forested wetlands would be impacted. Dan indicated that none of these are impacted based on current design.

Dan thought the total wetland impacts for the corridor could potentially be less than 0.1 acre based on resource agency feedback.

Deb noted that the current RGP program expires on 12/15/2014. This could affect the 404 (and 401) application submittal which is anticipated in January.

Dan asked Deb and Jay if they would approve wetland credits from the Central Indiana Mitigation Bank, if/when made available, if the project ended up requiring mitigation. Both indicated that this would be a preferred source for credits. Jay indicated that the typical IDEM ratios would apply. Jay and Deb confirmed that credits are currently not available, but the bank is working to get these released shortly.

D. Hamilton County regulated drain permit requirements
   - Required detention
   - Figures
   - Potential conflicts with 401 permitting

Dan discussed that detention would included water storage for 24 to 48 hours and that berms would be used in some locations to help achieve detention. This could potentially inundate some waters. Jay indicated he would want to see more specifics.

Participants agreed that a field check would be useful to finalize thoughts on several identified waters in the project corridor and questions regarding relatively permanent flow for ditch to Thorpe Creek. Dan indicated he would be scheduling this as soon as possible to accommodate the project schedule.

Tony reiterated that this project is on an aggressive schedule to use the allotted 2020 project funding. He asked all involved to process documents and requests with urgency to help keep this project on schedule.

Warrner, Thomas

From: Warrner, Thomas
Sent: Wednesday, September 17, 2014 11:03 AM
To: 'Snyder, Deborah D LRL'
Cc: Miller, Daniel J; Herber, Lisa
Subject: RE: I-69 Hamilton/Madison Counties Conference Call Minutes (UNCLASSIFIED)

Thanks Deb. Dan and I were in the process of generating a response to confirm that very same thing.

T.J.

-----Original Message-----
From: Snyder, Deborah D LRL [mailto:Deborah.D.Snyder@usace.army.mil]
Sent: Wednesday, September 17, 2014 10:39 AM
To: Warrner, Thomas
Cc: Miller, Daniel J; Herber, Lisa
Subject: RE: I-69 Hamilton/Madison Counties Conference Call Minutes (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

T.J. and Dan,

I talked to Lisa about this e-mail, and there is one more clarification:

Any roadside ditch that has perennial or relatively permanent flow is considered jurisdictional, no matter what mapped soil type the ditch was cut into.

I think that our discussion assumed this without anybody stating it, but I thought I would reiterate this point.

Thanks,
Deb
317-517-2659

-----Original Message-----
From: Warrner, Thomas [mailto:Thomas.Warrner@parsons.com]
Sent: Wednesday, September 17, 2014 9:55 AM
To: Snyder, Deborah D LRL
Cc: Miller, Daniel J
Subject: [EXTERNAL] I-69 Hamilton/Madison Counties Conference Call Minutes
Importance: High

Hi Deb,

Thank-you for the time this morning to discuss various features that Parsons has field delineated throughout the I-69 Interstate Expansion Corridor.

Since our earlier office meeting and field review, there have been a few changes to the guidance you provided on USACE jurisdiction over potential waters of the U.S. During the phone call you clarified the following:

* Roadside ditches with an OHWM:

o If mapped entirely in hydric (100%) and/or predominantly hydric (66-99%), consider these features jurisdictional.

o If mapped entirely in not hydric (0%), predominantly non-hydric (1-32%), and/or partially hydric (33-65%) consider these features non-jurisdictional. This would be considered cut in upland.

o If the feature is split between the first and second bullet point, only consider those portions that lie within the first bullet point jurisdictional.

Note: Soil classifications are based on revised NRCS hydric classifications that are available for both Hamilton and Madison Counties. These may not be available for all counties in Indiana.

The drainage features that drain into Thorpe Creek were specifically discussed in regards to this revised guidance. These features were evaluated during the field review meeting, and you confirmed over the call that these features lacked an OHWM. Because of this, these will remain non-jurisdictional. This contrasts to Cheeny Creek's tributaries which were also discussed. These have distinct OHWMs and will remain jurisdictional.

* Roadside ditches with wetlands but no OHWM:

o If located entirely within the existing ditchline, the feature will not be considered a wetland. The mapped soil unit does not affect jurisdiction.

o If the feature extends beyond the existing ditchline, the feature will be considered jurisdictional. The mapped soil unit does not affect jurisdiction.

Take care,

T.J.

Thomas J. Warrner

Environmental Planner
Parsons_Blue_300ppi 2
101 West Ohio Street, Suite 2121

Indianapolis, Indiana 46204

Phone: (317) 616-4671

E-mail: thomas.warrner@parsons.com

Web: www.parsons.com <http://www.parsons.com/>

Classification: UNCLASSIFIED
Caveats: NONE

EXHIBIT 10

PRELIMINARY JD FORM

ATTACHMENT

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD): September 30, 2014

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD: Parsons; 101 West Ohio Street Suite 2121; Indianapolis, Indiana 46204; Thomas J. Warrner; (317) 616-4671; thomas.warrner@parsons.com

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION: Project 1
The Indiana Department of Transportation (INDOT) is planning an I-69 Interstate Expansion from 106th Street in Fishers to Exit 226 (S.R. 9 and S.R. 109 in Anderson) in Hamilton and Madison Counties. This expansion has been broken into multiple projects with independent utility and logical termini. This report pertains to Projects 1, 2, and 3.

Project 1 (Des. 1383332) extends on I-69 from 106th Street to 0.5 mile north of the Campus Parkway in Hamilton County. This project would construct additional lanes from Exit 205 (116th Street and S.R. 37 in Fishers) to Exit 210 (Campus Parkway) in the form of median travel lanes. An outside auxiliary lane would be added on southbound I-69 from 106th Street to 116th Street. Existing pavement would be resurfaced. The cross section would have a 10-foot paved inside shoulder and a 10-foot paved outside shoulder. Double-sided guardrail would be installed. All mainline bridges would be widened in the median. There would be work on the overhead structure at Cumberland Road. The structure at Brooks School Road over I-69 would have the bridge deck replaced. The overhead structure at 126th Street would require no additional work. The interchange at Exit 210 would be modified as part of a separate project (Project 2). All small structures would be evaluated to determine if rehabilitation or replacement is necessary. Detention would likely be required at all legal drains. All detention basins would be constructed within existing right-of-way. No new right-of-way would be required for this project.

Project 3 (Des. 1383336) extends on I-69 from 0.5 mile north of Campus Parkway to 0.5 mile east of S.R. 13 in Hamilton and Madison Counties. The project would construct additional lanes from Exit 210 (Campus Parkway) to S.R. 13 in the form of median travel lanes. Existing pavement would be resurfaced. The cross section would have a 10-foot paved inside shoulder and a 10-foot paved outside shoulder. Double-sided guardrail would be installed in most areas, though not in wide median areas. All mainline bridges would be widened in the median. The overhead structures at Olio Road and Cyntheanne Road would require no additional work. The pavement on S.R. 13 under I-69 would be lowered to provide adequate bridge clearance. All small structures will be evaluated to determine if rehabilitation or replacement is necessary. Detention would likely be required at all legal drains within Hamilton County. Detention is not expected to be required in Madison County. All detention basins would be constructed within existing right-of-way. No new right-of-way would be required for this project.

Project 2 (Des. 1383489) is a proposed interchange modification at Exit 210 (Campus Parkway) to improve the level of service (LOS). Improvements to the existing interchange, such as added auxiliary lanes, will be considered. Transportation System Management (TSM) improvements, such as ramp metering and signal coordination, will also be considered. In addition, modification to the interchange type will be considered. While all interchange types will be considered as possible improvements, the limited right-of-way in the vicinity of the interchange will make the following interchange types most likely to be selected: partial-cloverleaf interchange, tight diamond with roundabouts at the ramp termini, single point urban interchange,

and double-crossover diamond interchange. The primary factors in determining the modifications selected will be construction costs, LOS rating, traffic safety, land acquisition costs, environmental impacts, and cultural resources impacts. New permanent and/or temporary right-of-way may be required for this project depending upon the type of improvements selected for this undertaking.

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

State: Indiana County/parish/borough: Hamilton/Madison City: Fishers
Center coordinates of site (lat/long in degree decimal format): Lat. 39.582807° N, Long. -85.574496° **W**.
Universal Transverse Mercator: Northing: 496104.1087982189 Easting: 505020.7991331144 Zone: 37
Name of nearest waterbody: various (see attached) that all drain to the West Fork White River

Identify (estimate) amount of waters in the review area:
Non-wetland waters: 17,605 linear feet: various width (ft) and/or 2.6 acres.
Cowardin Class: various (see attached table)
Stream Flow: various (see attached table)
Wetlands: 5.6 acres
Cowardin Class: various (see attached table)

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

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):

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:Parsons.

☒ 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.

☒ U.S. Geological Survey map(s). Cite scale & quad name:USGS 7.5 Minute Topographic Map; Fishers, McCordsville, and Ingalls Quadrangles.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation:Soil Survey Geographic (SSURGO) Hamilton and Madison Counties.
☒ National wetlands inventory map(s). Cite name:USFWS GIS database (see NWI Map).

☐ State/Local wetland inventory map(s): .

☒ FEMA/FIRM maps:as noted on the NWI Map.

☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)

☒ Photographs: ☒ Aerial (Name & Date):Orthos 2012, Orthos 2008, Othos 2005.

or ☒ Other (Name & Date):May-July Fieldwork (see report for specific dates).

☐ 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.

_____	10/2/2014
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	Longitude	Cowardin Class	Estimated amount of aquatic resource in review area	Class of aquatic resource
Cheeney Creek	39.947832 N	-86.014879 W	Riverine-Perennial	400 linear feet	non-section 10 – non-wetland
UNT1 to Cheeney Creek	39.953972 N	-86.010587 W	Riverine-Intermittent	5,865 linear feet	non-section 10 – non-wetland
UNT2 to Cheeney Creek	39.946620 N	-86.014934 W	Riverine-Ephemeral	960 linear feet	non-section 10 – non-wetland
UNT3 to Cheeney Creek	39.949073 N	-86.013086 W	Riverine-Ephemeral	1,000 linear feet	non-section 10 – non-wetland
UNT4 to Cheeney Creek	39.948231 N	-86.013557 W	Riverine-Perennial	425 linear feet	non-section 10 – non-wetland
UNT5 to Cheeney Creek	39.941494 N	-86.019577 W	Riverine-Ephemeral	55 linear feet	non-section 10 – non-wetland
Sand Creek	39.969304 N	-85.975870 W	Riverine-Perennial	340 linear feet	non-section 10 – non-wetland
UNT1 to Sand Creek	39.968671 N	-85.979058 W	Riverine-Ephemeral	1,930 linear feet	non-section 10 – non-wetland
UNT2 to Sand Creek	39.969631 N	-85.976066 W	Riverine-Ephemeral	135 linear feet	non-section 10 – non-wetland
UNT3 to Sand Creek	39.969063 N	-85.975866 W	Riverine-Ephemeral	100 linear feet	non-section 10 – non-wetland
UNT4 to Sand Creek	39.970221 N	-85.972345 W	Riverine-Perennial	325 linear feet	non-section 10 – non-wetland
UNT5 to Sand Creek	39.986532 N	-85.937797 W	Riverine-Intermittent	260 linear feet	non-section 10 – non-wetland
Mud Creek	39.991031 N	-85.902347 W	Riverine-Perennial	430 linear feet	non-section 10 – non-wetland
UNT1 to Mud Creek	39.990680 N	-85.903144 W	Riverine-Ephemeral	2,920 linear feet	non-section 10 – non-wetland
UNT2 to Mud Creek	39.990579 N	-85.902138 W	Riverine-Ephemeral	200 linear feet	non-section 10 – non-wetland
UNT3 to Mud Creek	39.990580 N	-85.902244 W	Riverine-Ephemeral	185 linear feet	non-section 10 – non-wetland
Thorpe Creek	39.993419 N	-85.848462 W	Riverine-Perennial	370 linear feet	non-section 10 – non-wetland
UNT1 to Thorpe Creek	39.991478 N	-85.871661 W	Riverine-Perennial	275 linear feet	non-section 10 – non-wetland
UNT2 to Thorpe Creek	39.991175 N	-85.871161 W	Riverine-Ephemeral	1,430 linear feet	non-section 10 – non-wetland
Wetland 01	39.941511 N	-86.019662 W	Palustrine Emergent	0.0438 acre	non-section 10 – wetland
Wetland 02	39.942207 N	-86.019095 W	Palustrine Emergent	0.0495 acre	non-section 10 – wetland
Wetland 03	39.942749 N	-86.017783 W	Palustrine Emergent	0.1479 acre	non-section 10 – wetland
Wetland 04	39.942755 N	-86.018625 W	Palustrine Emergent	0.0344 acre	non-section 10 – wetland
Wetland 05	39.963123 N	-86.004264 W	Palustrine Emergent	0.0290 acre	non-section 10 – wetland
Wetland 06	39.965024 N	-86.001207 W	Palustrine Emergent	0.4531 acre	non-section 10 – wetland
Wetland 07	39.965956 N	-86.000959 W	Palustrine Emergent	0.2222 acre	non-section 10 – wetland
Wetland 08	39.967467 N	-85.994772 W	Palustrine Emergent	0.7879 acre	non-section 10 – wetland

Wetland 09	39.967663 N	-85.993443 W	Palustrine Forested	0.0845 acre	non-section 10 – wetland
Wetland 10	39.967081 N	-85.993381 W	Palustrine Emergent	0.1198 acre	non-section 10 – wetland
Wetland 11	39.967321 N	-85.990890 W	Palustrine Emergent	0.0556 acre	non-section 10 – wetland
Wetland 12	39.970826 N	-85.970673 W	Palustrine Emergent	0.0216 acre	non-section 10 – wetland
Wetland 13	39.972154 N	-85.967835 W	Palustrine Emergent	0.1800 acre	non-section 10 – wetland
Wetland 14	39.972774 N	-85.966487 W	Palustrine Emergent	0.0084 acre	non-section 10 – wetland
Wetland 15	39.975844 N	-85.960098 W	Palustrine Emergent	0.0037 acre	non-section 10 – wetland
Wetland 16	39.976626 N	-85.958684 W	Palustrine Emergent	0.1970 acre	non-section 10 – wetland
Wetland 17	39.977147 N	-85.957434 W	Palustrine Emergent	0.0350 acre	non-section 10 – wetland
Wetland 18	39.977592 N	-85.956632 W	Palustrine Forested	0.0549 acre	non-section 10 – wetland
Wetland 19	39.979228 N	-85.953082 W	Palustrine Emergent	0.2472 acre	non-section 10 – wetland
Wetland 20	39.980530 N	-85.950366 W	Palustrine Emergent	0.01946 acre	non-section 10 – wetland
Wetland 21	39.983607 N	-85.943890 W	Palustrine Emergent	0.0090 acre	non-section 10 – wetland
Wetland 22	39.984029 N	-85.943140 W	Palustrine Emergent	0.0659 acre	non-section 10 – wetland
Wetland 23	39.984469 N	-85.942132 W	Palustrine Emergent	0.0225 acre	non-section 10 – wetland
Wetland 24	39.986690 N	-85.937636 W	Palustrine Shrub-Scrub and Palustrine Emergent	0.2720 acre	non-section 10 – wetland
Wetland 25	39.986188 N	-85.937119 W	Palustrine Emergent	0.0072 acre	non-section 10 – wetland
Wetland 26	39.987122 N	-85.935137 W	Palustrine Emergent	0.1881 acre	non-section 10 – wetland
Wetland 27	39.989670 N	-85.927868 W	Palustrine Emergent	0.0592 acre	non-section 10 – wetland
Wetland 28	39.991350 N	-85.927043 W	Palustrine Forested and Palustrine Emergent	0.8000 acre	non-section 10 – wetland
Wetland 29	39.992603 N	-85.924896 W	Palustrine Emergent	0.6763 acre	non-section 10 – wetland
Wetland 30	39.991734 N	-85.923098 W	Palustrine Emergent	0.0110 acre	non-section 10 – wetland
Wetland 31	39.991403 N	-85.916568 W	Palustrine Emergent	0.0709 acre	non-section 10 – wetland
Wetland 32	39.990578 N	-85.901911 W	Palustrine Forested	0.0947 acre	non-section 10 – wetland
Wetland 33	39.991914 N	-85.861960 W	Palustrine Emergent	0.0490 acre	non-section 10 – wetland
Wetland 34	39.993123 N	-85.848439 W	Palustrine Emergent	0.0708 acre	non-section 10 – wetland
Wetland 35	39.993134 N	-85.848327 W	Palustrine Emergent	0.0434 acre	non-section 10 – wetland
Wetland 36	39.993155 N	-85.848169 W	Palustrine Emergent	0.0061 acre	non-section 10 – wetland
Wetland 37	39.993760 N	-85.848281 W	Palustrine Emergent	0.0046 acre	non-section 10 – wetland
Wetland 38	39.994123 N	-85.844783 W	Palustrine Emergent	0.0214 acre	non-section 10 – wetland
Wetland 39	39.993470 N	-85.844670 W	Palustrine Emergent	0.0232 acre	non-section 10 – wetland

Wetland 40	39.993376 N	-85.841504 W	Palustrine Emergent	0.0321 acre	non-section 10 – wetland
Wetland 41	39.994010 N	-85.841344 W	Palustrine Emergent	0.0385 acre	non-section 10 – wetland
Wetland 42	39.992773 N	-85.837616 W	Palustrine Emergent	0.0843 acre	non-section 10 – wetland

Miller, Daniel J

From: Herber, Lisa [LHerber@indot.IN.gov]
Sent: Monday, October 20, 2014 10:21 AM
To: Warrner, Thomas; Jones, Tony W; Allen, Kathleen
Cc: Miller, Daniel J; Carnahan, Ben
Subject: RE: I-69 Des 1383332/138336/1383489 Marion and Hamilton Counties, Waters of the U.S. Report Revisions

Follow Up Flag: Follow up
Flag Status: Flagged

TJ,

I have reviewed the waters revisions and everything looks great! 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 EWPO to discuss how adequate compensatory mitigation will be provided.

The project manager should notify the EWPO 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 fieldwork.* If the report expires prior to waterway permit application submittal, additional fieldwork and a revised waters report will be required. The waters report 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.

A couple of things: submittal of the waters report ahead of permits to the USACE for their approval may be preferable if there are concerns with mitigation needs for some of these features. I also saw the status report for milestones/completion dates for the project and did not see a Rule 5 listed as a milestone. Please verify.

Lisa Herber
Ecology & Waterway Permits Team Lead
100 North Senate Avenue, Rm N642
Indianapolis, Indiana 46204
Office: (317) 232-5135
Email: Lherber@indot.in.gov

From: Warrner, Thomas [mailto:Thomas.Warrner@parsons.com]
Sent: Thursday, October 16, 2014 1:41 PM
To: Herber, Lisa
Cc: Miller, Daniel J; Carnahan, Ben; Jones, Tony W
Subject: RE: I-69 Des 1383332/138336/1383489 Marion and Hamilton Counties, Waters of the U.S. Report Revisions

Hi Lisa,

Thank-you for your quick review and comments. The revised waters report I dropped off this afternoon incorporates each comment (below) per our morning phone conversation. Please let me know if you have any additional questions or comments on this report.

Take care,

T.J.
317-616-1033

From: Herber, Lisa [mailto:LHerber@indot.IN.gov]
Sent: Wednesday, October 15, 2014 2:57 PM
To: Warrner, Thomas
Cc: Jones, Tony W; Carnahan, Ben; Miller, Daniel J
Subject: RE: I-69 Des 1383332/138336/1383489 Marion and Hamilton Counties, Waters of the U.S. Report

TJ, I have reviewed the waters report and have a few comments:

1. Table 2, Stream Summary: Habitat Quality for Cheeney Creek is listed as Poor but the report states Average.
Table 2 has been revised as requested.
2. Maps: Waterways are not labeled on Exhibits 2 & 3. Wetland type is not consistently named on the maps.
We discussed over the phone on 10/16/14 that waterways would typically be included on the NWI and soils mapping. However, to keep the report length down (this revision would add approximately 100 pages), we will leave these two exhibits as originally submitted. These layers can be readily combined should the USACE or IDEM request this during their review. Also, as discussed, wetland labels for emergent wetlands will be left as is. An additional label has been added for the three forested wetlands (Wetland 09, Wetland 18, and Wetland 32). The only shrub scrub wetland was labeled previously since it was split between emergent and shrub-scrub wetland types.
3. QHEI & HHEI: Check substrate scores for QHEIs; HHEIs do not have the % substrate filled in on all. Area drawing for both forms should have north arrow and the stream named/labeled.
QHEI substrate scores for Sand Creek and Mud Creek were calculated correctly. The error on the Thorpe Creek QHEI score has been corrected, and all references to this score have been updated in the report. HHEI forms where % substrate was missing have also been updated. A north arrow and stream label has been added to all drawings on both the QHEI and HHEI forms.
4. Pre-JD: Uncheck Box E; typically for USACE use.
This has been revised as requested.

Everything else looks great! Let me know if you have any questions.

Lisa Herber
Ecology & Waterway Permits Team Lead
100 North Senate Avenue, Rm N642
Indianapolis, Indiana 46204
Office: (317) 232-5135
Email: Lherber@indot.in.gov

From: Warrner, Thomas [mailto:Thomas.Warrner@parsons.com]
Sent: Monday, October 06, 2014 3:07 PM
To: Herber, Lisa
Cc: Jones, Tony W; Carnahan, Ben; Miller, Daniel J
Subject: I-69 Des 1383332/138336/1383489 Marion and Hamilton Counties, Waters of the U.S. Report

Hi Lisa,

Thank-you for meeting with me this afternoon so I could deliver the I-69 Interstate Expansion Waters of the U.S. Report for your review. As discussed, we incorporated the feedback from three early coordination meetings with INDOT, IDEM, and the USACE into the document. Attached is a copy of the cover letter that accompanied our submittal.

Please let me know if you have any questions or comments on the report.

Take care,

T.J.
Thomas J. Warrner
Environmental Planner
PARSONS
101 West Ohio Street, Suite 2121
Indianapolis, Indiana 46204
Phone: (317) 616-4671
E-mail: thomas.warrner@parsons.com
Web: www.parsons.com

Appendix H: Red Flag Investigation

	Page(s)
Summary……	1-6
Graphics	
Project Location……..	7-8
Infrastructure……...	9
Water Resources…….	10
Mining/Mineral Exploration……...	11
Hazardous Materials……	12
Hamilton County List of Endangered, Threatened and Rare Species……...	13-14

INDIANA DEPARTMENT OF TRANSPORTATION

Driving Indiana's Economic Growth

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204-2216 (317) 232-5348 FAX: (317) 233-4929

Michael R. Pence, Governor
Karl B. Browning, Commissioner

Date: August 14, 2014

To: Hazardous Materials Unit
Environmental Services
Indiana Department of Transportation
100 N Senate Avenue, Room N642
Indianapolis, IN 46204

From: Daniel J Miller
Senior Environmental Planner
Parsons
101 W. Ohio St., Suite 2121
Indianapolis, IN 46204
Daniel.J.Miller@parsons.com

Re: RED FLAG INVESTIGATION
Des. No. 1383489
I-69 Interstate Expansion
Project 2: Interchange Modification at Exit 210 (Campus Parkway)
Hamilton County, Indiana

NARRATIVE

The Indiana Department of Transportation is planning an I-69 Interstate Expansion from 106th Street in Fishers to Exit 226 (State Routes (SRs) 9 & 109 in Anderson), in Hamilton and Madison Counties. This expansion has been broken into multiple projects with independent utility and logical termini. This report is being conducted for Project 2 (Des. No. 1383489), an interchange modification project at Exit 210 (Campus Parkway).

Purpose and Need: The need for this project stems from traffic congestion issues that currently exist at this interchange. The interchange is experiencing an insufficient Level of Service (LOS) during peak traffic hours. LOS is a rating for traffic congestion, with LOS A indicating little to no delay and LOS F indicating serious congestion and delay. An INDOT study conducted in the fall of 2012 noted, "Southbound [SB] I-69 experiences congestion and reduction of travel speed during the AM peak hours, especially as traffic approaches Exit 205. Northbound [NB] I-69 also experiences congestion and long queues at Exit 210's NB exit during the PM peak hours, especially during events at the Klipsch Music Center (though traffic data collected does not take into account such events)."

Traffic Data was recently analyzed using Highway Capacity Manual methodology in Highway Capacity Software (HCS). The northbound ramp is currently operating at an LOS D, while the southbound ramp is operating at an LOS C. Both ramp termini and are predicted to operate at an LOS F in the design year, 2035. The results show unacceptable LOS for both existing and future traffic for the interchange.

The purpose of this project is to improve overall traffic operation by reducing congestion at this interchange.

Existing Conditions: Improvements have recently been completed on Campus Parkway/Southeastern Parkway on both sides of the interchange. Prior to that work, the cross road was a simple, rural 2-lane road and was referred to as SR 238 (Greenfield Ave locally) where it connected Noblesville and Fortville. Now the SR 238 designation has been relinquished. The City of Noblesville refers to the road as Campus Parkway while the Town of Fishers refers to it as Southeastern Parkway.

The current interchange type is a diamond interchange with signalized ramp terminals. The bridge has one through-lane and one left-turn lane going eastbound, and two through-lanes and one left-turn lane going westbound.

Proposed Project: An interchange modification project is proposed for the interchange to improve the LOS. Improvements to the existing interchange such as added auxiliary lanes will be considered. Transportation System Management (TSM) improvements such as ramp metering and signal coordination will also be considered. In addition, modification to the interchange type will be considered. While all interchange types will be considered as possible improvements, the limited right-of-way in the vicinity of the interchange will make the following interchange types most likely to be selected: partial-cloverleaf interchange, tight diamond with roundabouts at the ramp termini, single point urban interchange, and double-crossover diamond interchange. The primary factors in determining the modifications selected will be construction costs, LOS rating, traffic safety, land acquisition costs, environmental impacts and cultural resources impacts.

Right-of-Way (ROW): New permanent and/or temporary ROW may be required for this project depending upon the type of improvements selected for this undertaking. This survey has utilized extents that take into account the maximum amount of ROW that may be required.

SUMMARY

Infrastructure Indicate the number of items of concern found within ½ mile, including an explanation why each item within the ½ mile radius will/will not impact the project. If there are no items, please indicate N/A:			
Religious Facilities	**1**	Recreational Facilities	**N/A**
Airports	**N/A**	Pipelines	**2**
Cemeteries	**N/A**	Railroads	**N/A**
Hospitals	**2***	Trails	**8 (segments)**
Schools	**N/A**	Managed Lands	**N/A**

Explanation: (Please provide a separate paragraph for each item.)

- *Religious Facilities:* One religious facility (Bethlehem Church) lies within a half-mile radius of the project area, approximately 0.03 mile south of the southern edge of the project area. Therefore, it will not be altered by construction activities. Minor inconveniences may occur from the maintenance of traffic (MOT). Local roads would offer a very minimal detour around the project area. Coordination with the religious facility will take place for proper MOT throughout construction. This project is a Type I project, and therefore Noise Analysis will be conducted to determine traffic noise levels, potential noise impacts, and the feasibility of traffic noise mitigation. If this facility is determined to have traffic noise impacts, noise abatement measures will be considered and appropriate measures constructed to mitigate for these impacts.

- *Pipelines:* Two pipelines (Vectren Energy and Marathon Pipeline Company (shown on GIS as Indiana Gas Co. and Buckeye Pipeline Company)) lie within a half mile radius of the project area. The Marathon Pipeline Company pipeline lies outside of the project area and will not be impacted by the proposed project. The Vectren Energy pipeline is approximately 0.03 mile east of the intersection of Campus Pkwy and Harrell Pkwy. Coordination will occur with INDOT Utilities during project development and any impacts will be appropriately mitigated for.

- *Hospitals:* *The GIS review did not locate any hospitals within a half-mile radius of the project area. However, IU Health Saxony Hospital is now located off of the southwest quadrant of the Campus Parkway exit, and St. Vincent Health is now located off of the southeast quadrant of the Campus Parkway exit (the locations of the hospitals have been noted on the attached maps). The hospitals lie outside of the project limits. Therefore, they will not be altered by construction activities. Minor inconveniences may occur from the MOT. Local roads should offer a very minimal detour around the project area. Coordination with the hospitals will take place for proper MOT throughout construction. As previously stated, this project is a Type I project, and therefore Noise Analysis will be conducted to determine traffic noise levels, potential noise impacts, and the feasibility of traffic noise mitigation. If the hospitals are determined to have traffic noise impacts, noise abatement measures will be considered and appropriate measures constructed to mitigate for these impacts.

- *Trails:* Eight segments of trail (5 open and 3 planned) lie within a half-mile radius of the project area. Three open trails (Various Fisher Subdivisions, Mud Creek trail existing, a segment of Olio Road - SR 238 south to Bee Camp Creek) and one planned trail (Pennington Road/136th Street to County Line) lie outside of the project limits and would not be impacted by the proposed project. Two open segments (146th St from Pointe Blvd to I-69 and Cumberland Rd to Hamilton Towne Center) and two planned segments (I-69 South to Mud Creek and a segment of Olio Road - SR 238 south to Bee Camp Creek) lie within the project area and may be impacted by the proposed project. As these trails are likely to be considered Section 4(f) resources, if impacts to the resources occur, the project will be evaluated to determine the appropriate level of involvement and documentation that must occur. The officials with jurisdiction will be coordinated with throughout the project development.

Water Resources
Indicate the number of items of concern found within ½ mile, including an explanation why each item within the ½ mile radius will/will not impact the project. If there are no items, please indicate N/A:

NWI - Points	**N/A**	NWI - Wetlands	**10**
Karst Springs	**N/A**	IDEM 303d Listed Lakes	**N/A**
Canal Structures – Historic	**N/A**	Lakes	**14**
NWI - Lines	**1**	Floodplain - DFIRM	**2 (8 segments)**
IDEM 303d Listed Rivers and Streams (Impaired)	**N/A**	Cave Entrance Density	**N/A**
Rivers and Streams	**2 (5 segments)**	Sinkhole Areas	**N/A**
Canal Routes - Historic	**N/A**	Sinking-Stream Basins	**N/A**

Explanation: (Please provide a separate paragraph for each item.)

- *NWI Wetlands:* Ten NWI-wetlands lie within a half-mile radius of the project area. Two lie within the project area, and eight lie outside of the project limits. Due to the scope of this project, a waters/wetland determination will be performed and any possible wetlands delineated. A Waters Report will then be written to summarize the findings and coordination with INDOT Ecology and Permits will occur. All applicable permits will be applied for and acquired before construction can begin. Applicable agencies will be coordinated with, and any comments received will be incorporated into the environmental document.

- *Lakes:* Fourteen lakes lie within a half-mile radius of the project limits. Three lakes lie within the project area, and the remaining eleven lie outside of the project limits. Currently, no lakes are expected to be impacted by the proposed project. As previously stated, a waters determination will be performed to verify jurisdictional waters within and/or adjacent to the project area and coordination with INDOT Ecology and Permits will occur.

- *NWI Lines:* One NWI line lies within a half-mile radius of the project area, but outside of the project limits. It is approximately 0.49 mile southeast of the project area. Therefore, it will not be impacted by the proposed project.

- *Floodplain – DFIRM*: Two floodplains (8 segments) lie within a half-mile radius of the project area, the nearest being approximately 0.40 mile southeast of the project area. Therefore, they will not be impacted by the proposed project.

- *Rivers and Streams:* Two Streams (UNT to Sand Creek (4 segments) and Mud Creek (1 segment)) lie within a half-mile radius of the project area. The nearest segment is approximately 0.06 mile north of the project area. These streams will not be impacted by the proposed project.

Mining/Mineral Exploration
Indicate the number of items of concern found within ½ mile, including an explanation why each item within the ½ mile radius will/will not impact the project. If there are no items, please indicate N/A:

Petroleum Wells	**21**	Petroleum Fields	**1**
Mines – Surface	**N/A**	Mines – Underground	**N/A**

Explanation: (Please provide a separate paragraph for each item.)

- *Petroleum Wells:* Twenty-one petroleum wells lie within a half-mile radius of the project area. Two inactive wells are noted within the project area. No wells were identified within or adjacent to the project area at a field check on December 4, 2013. Therefore, no petroleum wells will be impacted by the proposed project.

- *Petroleum Fields:* The project area lies entirely within the Trenton Petroleum Field, which is no longer active. When this field was active, the defunct wells were often abandoned in place and those that were plugged were usually done so using ineffective methods. Oil and brine from these wells and from the field occasionally migrates and surfaces. It is possible for contaminates from the oil field to pollute streams and rivers; however, the average depth of the oil field is 900 feet below surface and this project is unlikely to impact the oil field. Again, no petroleum wells were identified within or adjacent to the project area at a field check on December 4, 2013. The proposed project is not expected to impact this petroleum field.

Hazmat Concerns
Indicate the number of items of concern found within ½ mile, including an explanation why each item within the ½ mile radius will/will not impact the project. If there are no items, please indicate N/A:

Brownfield Sites	**N/A**	Restricted Waste Sites	**N/A**
Corrective Action Sites (RCRA)	**N/A**	Septage Waste Sites	**N/A**
Confined Feeding Operations	**N/A**	Solid Waste Landfills	**N/A**
Construction Demolition Waste	**N/A**	State Cleanup Sites	**N/A**
Industrial Waste Sites (RCRA Generators)	**N/A**	Tire Waste Sites	**N/A**
Infectious/Medical Waste Sites	**N/A**	Waste Transfer Stations	**N/A**
Lagoon/Surface Impoundments	**N/A**	RCRA Waste Treatment, Storage, and Disposal Sites (TSDs)	**N/A**
Leaking Underground Storage Tanks (LUSTs)	**N/A**	Underground Storage Tanks	**N/A**
Manufactured Gas Plant Sites	**N/A**	Voluntary Remediation Program	**N/A**

NPDES Facilities	**N/A**	Superfund	**N/A**
NPDES Pipe Locations	**1**	Institutional Control Sites	**N/A**
Open Dump Sites	**N/A**		

Explanation: (Please provide a separate paragraph for each item.)

- *NPDES Pipe Location:* One NPDES Pipe Location (IH Sewer Corporation) is located within a half-mile radius of the project area. The pipe is located within the project limits. Coordination with INDOT Utilities will occur to determine where exactly the pipe is located, and that it will not be disturbed by the proposed project.

Ecological Information

The Hamilton County listing of the Indiana Natural Heritage Data Center information on endangered, threatened, or rare (ETR) species and high quality natural communities is attached with ETR species highlighted.

Early coordination will be initiated with applicable resource agencies and any comments received will be incorporated into the environmental document.

Cultural Resources

The Section 106 process has been initiated by Weintraut & Associates, Inc. All commitments received from the Section 106 process will be incorporated in the final environmental document for this project.

RECOMMENDATIONS

INFRASTRUCTURE: Religious Facility: Noise Analysis will be conducted to determine traffic noise levels, potential noise impacts, and the feasibility of traffic noise mitigation. If the identified religious facility is determined to have traffic noise impacts, noise abatement measures will be considered and appropriate measures constructed to mitigate for these impacts. Due to the local roads offering a very minimal detour around the project area, coordination with the religious facility will take place for proper MOT throughout construction.

Pipelines: One Indiana Gas Co. pipeline crosses the project area approximately 0.03 mile east of the intersection of Campus Pkwy and Harrell Pkwy. Coordination will occur with INDOT Utilities during project development and any impacts will be appropriately mitigated for.

Trails: Two open trail segments (146th St from Pointe Blvd to I-69 and Cumberland Rd to Hamilton Towne Center) and two planned segments (I-69 South to Mud Creek described as planned and Olio Road - SR 238 south to Bee Camp Creek) lie within the project area and may be impacted by the proposed project. As these trails are likely to be considered Section 4(f) resources, if impacts to the resources occur, the project will be evaluated to determine the appropriate level of involvement and documentation that must occur. The officials with jurisdiction will be coordinated with throughout the project development.

Hospitals: Noise Analysis will be conducted to determine traffic noise levels, potential noise impacts, and the feasibility of traffic noise mitigation. If the identified hospitals are determined to have traffic noise impacts, noise abatement measures will be considered and appropriate measures constructed to mitigate for these impacts. Minor inconveniences may occur from the MOT. Due to the local roads offering a very minimal detour around the project area, coordination with the hospitals will take place for proper MOT throughout construction.

WATER RESOURCES: NWI – Wetlands: Due to the scope of this project, a waters/wetland determination will be performed and any possible wetlands delineated. A Waters Report will then be written to summarize the findings and coordination with INDOT Ecology and Permits will occur. All applicable permits will be applied for and acquired before construction can begin. Applicable agencies will be coordinated with, and any comments received will be incorporated into the environmental document. It is expected that a Section 401/404 permit will be required. If mitigation is required for this project, construction will take place concurrently with or before the construction of this project.

Lakes: A waters determination will be performed and coordination with INDOT Ecology and Permits will occur to verify jurisdictional waters within and/or adjacent to the project area. All applicable permits will be applied for and acquired before construction can begin. Applicable agencies will be coordinated with, and any comments received will be incorporated into the environmental document.

MINING/MINERAL EXPLORATION: N/A. No impacts to mining/mineral exploration resources are expected to occur from the proposed project.

HAZMAT CONCERNS: One NPDES Pipe Location (IH Sewer Corporation) is located within a half-mile radius of the project area. The pipe is located within the project limits. Coordination with INDOT Utilities will occur to determine where exactly the pipe is located, and that it will not be disturbed by the proposed project.

ECOLOGICAL INFORMATION: Early coordination will be initiated with applicable resource agencies and any comments received will be incorporated into the environmental document. Impacts to endangered species are not expected to occur from the proposed project.

CULTURAL RESOURCES: The Section 106 process has been initiated by Weintraut & Associates, Inc. All commitments received from the Section 106 process will be incorporated in the final environmental document for this project.

INDOT Environmental Services concurrence: Anthony Johnson Digitally signed by Anthony Johnson DN: cn=Anthony Johnson, o=Hazardous Materials, ou=Environmental Services, email=awjohnson@indot.in.gov, c=US Date: 2014.08.18 14:41:28 -04'00' _____(Signature)

Prepared by:

Daniel J. Miller
Senior Environmental Planner
Parsons

Graphics:

A map for each report section with a ½ mile radius buffer around all project area(s) showing all items identified as possible items of concern is attached. If there is not a section map included, please change the YES to N/A:

GENERAL SITE MAP SHOWING PROJECT AREA: YES

INFRASTRUCTURE: YES

WATER RESOURCES: YES

MINING/MINERAL EXPLORATION: YES

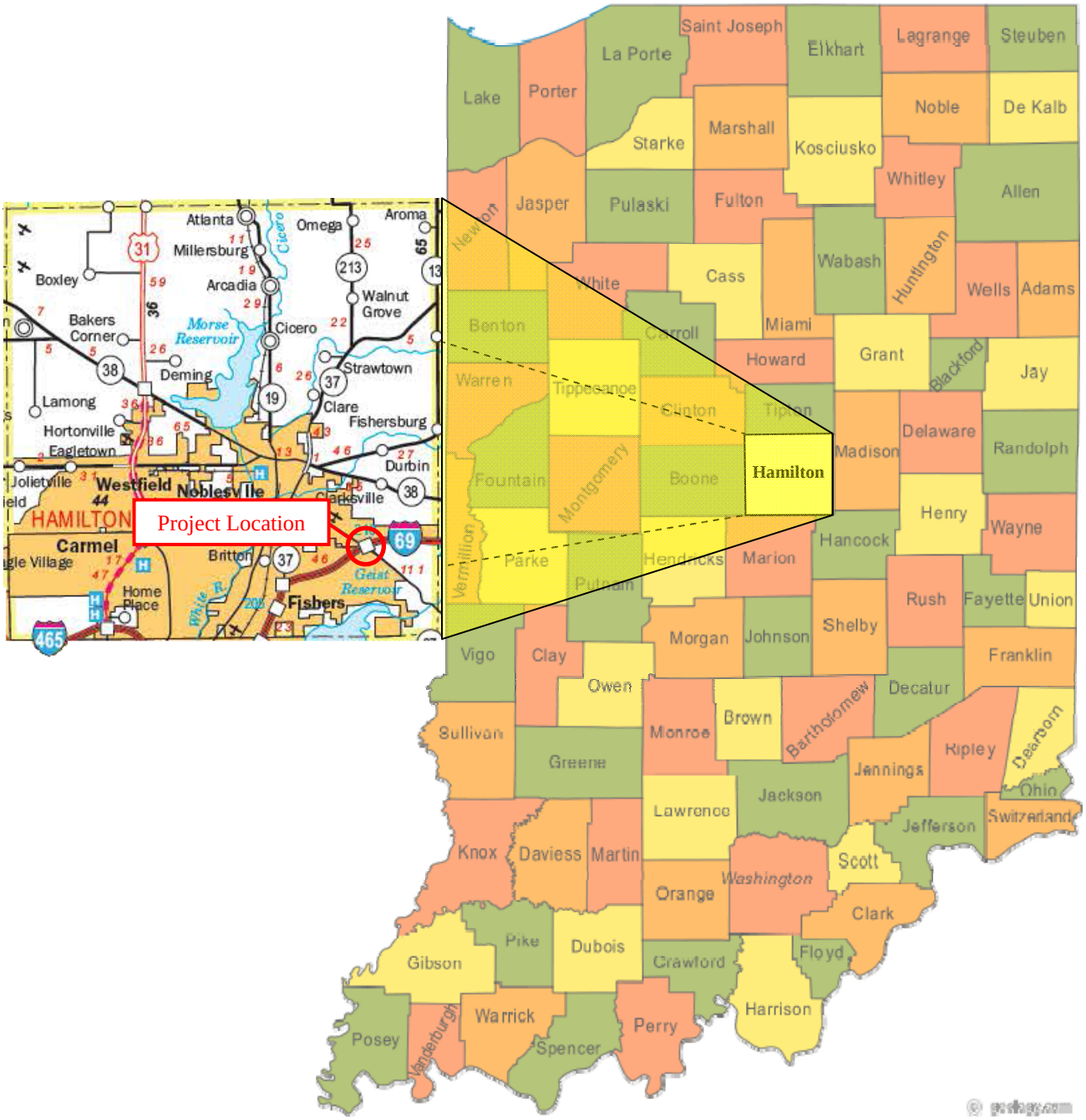
HAZMAT CONCERNS: YES

Des. No. 1383489

I-69 Interstate Expansion

Project 2: Interchange Modification at Exit 210 (Campus Parkway)

Hamilton County; Project Location Map #1



Des. No. 1383489

I-69 Interstate Expansion
Project 2: Interchange Modification at Exit 210 (Campus Parkway); Hamilton County

Project Location Map #2

- Project Area
- Half Mile Radius
- Streams (IDNR*)
- Incorporated Areas
- County Boundary
- Interstate
- State
- US
- Local

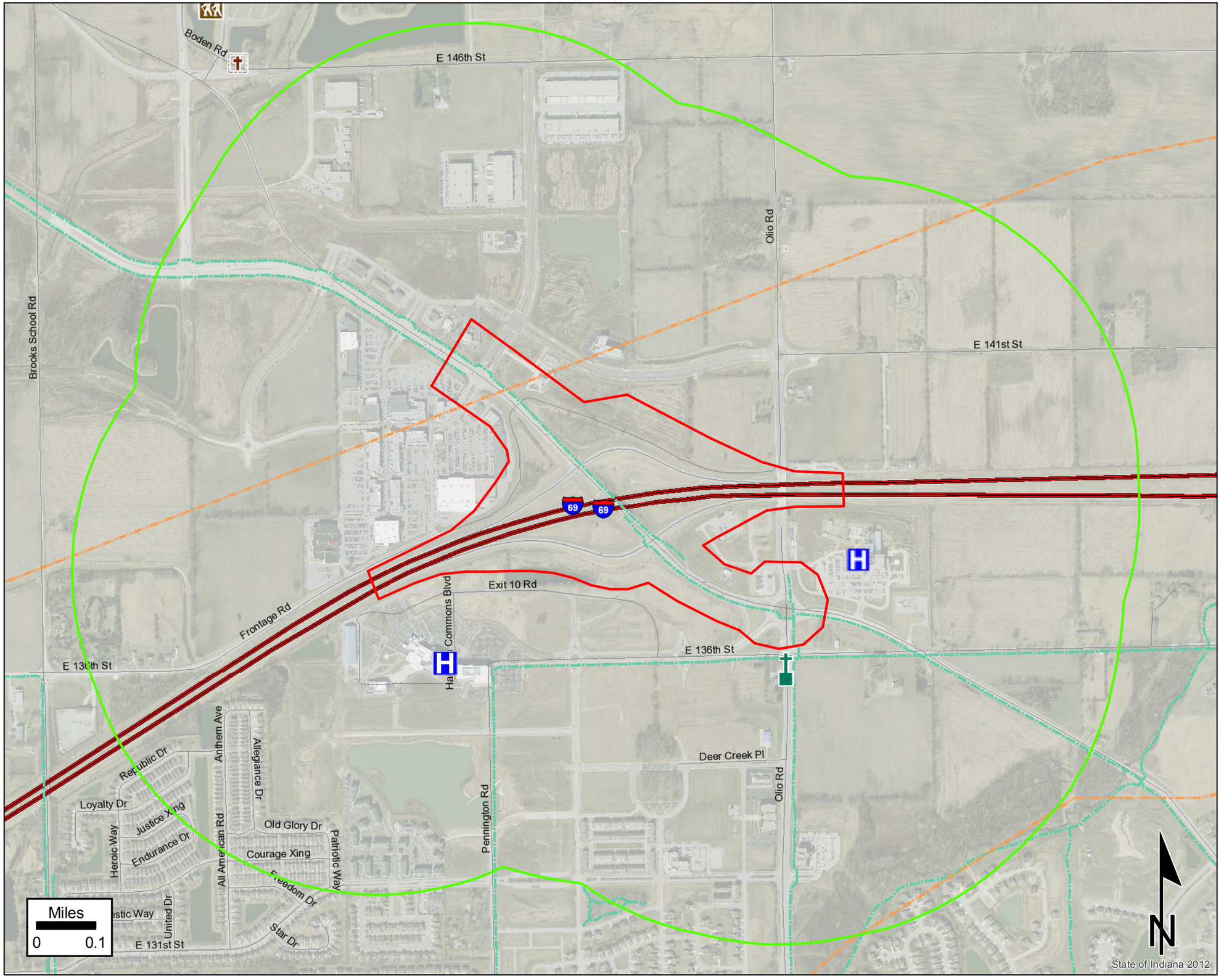
Miles
0 0.5

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

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

Des. No. 1383489

I-69 Interstate Expansion
Project 2: Interchange Modification at Exit 210
(Campus Parkway); Hamilton County



Infrastructure

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

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Des. No. 1383489

I-69 Interstate Expansion
Project 2: Interchange Modification at Exit 210 (Campus Parkway); Hamilton County

Water Resources

- Project Area
- Half Mile Radius
- Canal Route - Historic
- Canal Structure - Historic
- NWI Wetland Lines
- NWI Wetland Point
- NWI Wetland Polygons
- Floodplain - DFIRM
- IDEM 303d Listed Rivers and Streams
- Rivers and Streams
- NPS NRI listed
- IDEM 303d Listed Lakes
- Lake
- Cave Entrance Density
- Sinkhole Area
- Sinking-Stream Basin
- Karst Spring
- County Boundary
- Interstate
- State
- US
- Local

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Des. No. 1383489

I-69 Interstate Expansion
Project 2: Interchange Modification at Exit 210 (Campus Parkway); Hamilton County

Mining/Mineral Exploration

- Project Area
- Half Mile Radius
- Petroleum Wells
- Petroleum Field
- Mine - Surface
- Mine - Underground
- County Boundary
- Interstate
- State
- US
- Local

Boden Rd
E 146th St
Brooks School Rd
Olio Rd
E 141st St
69
Exit 10 Rd
Frontage Rd
Hamilton Commons Blvd
E 136th St
Deer Creek Pl
Republic Dr
Anthem Ave
Allegiance Dr
Loyalty Dr
Justice Xing
Heroic Way
Endurance Dr
All American Rd
Old Glory Dr
Courage Xing
Patriotic Way
Freedom Dr
Pennington Rd
United Dr
E 131st St
Star Dr
Miles
0 0.1
N
State of Indiana 2012

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Des. No. 1383489

I-69 Interstate Expansion
Project 2: Interchange Modification at Exit 210
(Campus Parkway); Hamilton County

Hazardous Materials

- Project Area
- Half Mile Radius
- Institutional Controls
- Industrial Waste Site
- Brownfield
- Corrective Action Site (RCRA)
- State Cleanup Site
- Superfund Site
- Voluntary Remediation Program
- Manufactured Gas Plant Site
- Underground Storage Tank
- Leaking Underground Storage Tank
- Confined Feeding Operation
- Septage Waste Site
- Construction/Demolition Waste
- Infectious/Medical Waste Sites
- Lagoon/Surface Impoundment
- Open Dump Site
- Restricted Waste Site
- Solid Waste Landfill
- Tire Waste Site
- Waste Transfer Station
- Waste Treatment, Storage, and Disposal
- NPDES Facilites
- NPDES Pipe Locations
- County Boundary
- Interstate
- State
- US
- Local

Miles
0 0.1

N

State of Indiana 2012

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

Sources:
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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

Indiana County Endangered, Threatened and Rare Species List

County: Hamilton

Species Name	Common Name	FED	STATE	GRANK	SRANK
Mollusk: Bivalvia (Mussels)					
Epioblasma torulosa rangiana	Northern Riffleshell	LE	SE	G2T2	SX
Epioblasma triquetra	Snuffbox	LE	SE	G3	S1
Lampsilis fasciola	Wavyrayed Lampmussel		SSC	G5	S3
Ligumia recta	Black Sandshell			G5	S2
Obovaria subrotunda	Round Hickorynut		SSC	G4	S1
Plethobasus cyphyus	Sheepnose	LE	SE	G3	S1
Pleurobema clava	Clubshell	LE	SE	G2	S1
Ptychobranchus fasciolaris	Kidneyshell		SSC	G4G5	S2
Quadrula cylindrica cylindrica	Rabbitsfoot	C	SE	G3G4T3	S1
Toxolasma lividus	Purple Lilliput		SSC	G3	S2
Villosa fabalis	Rayed Bean	LE	SSC	G2	S1
Villosa lienosa	Little Spectaclecase		SSC	G5	S3
Insect: Odonata (Dragonflies & Damselflies)					
Enallagma divagans	Turquoise Bluet		SR	G5	S3
Amphibian					
Acris crepitans blanchardi	Northern Cricket Frog		SSC	G5	S4
Necturus maculosus	Common mudpuppy		SSC	G5	S2
Rana pipiens	Northern Leopard Frog		SSC	G5	S2
Reptile					
Clemmys guttata	Spotted Turtle		SE	G5	S2
Sistrurus catenatus catenatus	Eastern Massasauga	C	SE	G3G4T3T4Q	S2
Bird					
Bartramia longicauda	Upland Sandpiper		SE	G5	S3B
Buteo lineatus	Red-shouldered Hawk		SSC	G5	S3
Certhia americana	Brown Creeper			G5	S2B
Dendroica cerulea	Cerulean Warbler		SE	G4	S3B
Haliaeetus leucocephalus	Bald Eagle	LT,PDL	SSC	G5	S2
Ixobrychus exilis	Least Bittern		SE	G5	S3B
Lanius ludovicianus	Loggerhead Shrike	No Status	SE	G4	S3B
Nycticorax nycticorax	Black-crowned Night-heron		SE	G5	S1B
Thryomanes bewickii	Bewick's Wren			G5	S1B
Mammal					
Taxidea taxus	American Badger		SSC	G5	S2
Vascular Plant					
Armoracia aquatica	Lake Cress		SE	G4?	S1
Chelone obliqua var. speciosa	Rose Turtlehead		WL	G4T3	S3
Drosera intermedia	Spoon-leaved Sundew		SR	G5	S2
Platanthera leucophaea	Prairie White-fringed Orchid	LT	SE	G2G3	S1

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

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

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

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

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

Indiana County Endangered, Threatened and Rare Species List

County: Hamilton

Species Name	Common Name	FED	STATE	GRANK	SRANK
High Quality Natural Community					
Forest - floodplain wet-mesic	Wet-mesic Floodplain Forest		SG	G3?	S3
Forest - upland mesic	Mesic Upland Forest		SG	G3?	S3

Indiana Natural Heritage Data Center
Division of Nature Preserves
Indiana Department of Natural Resources
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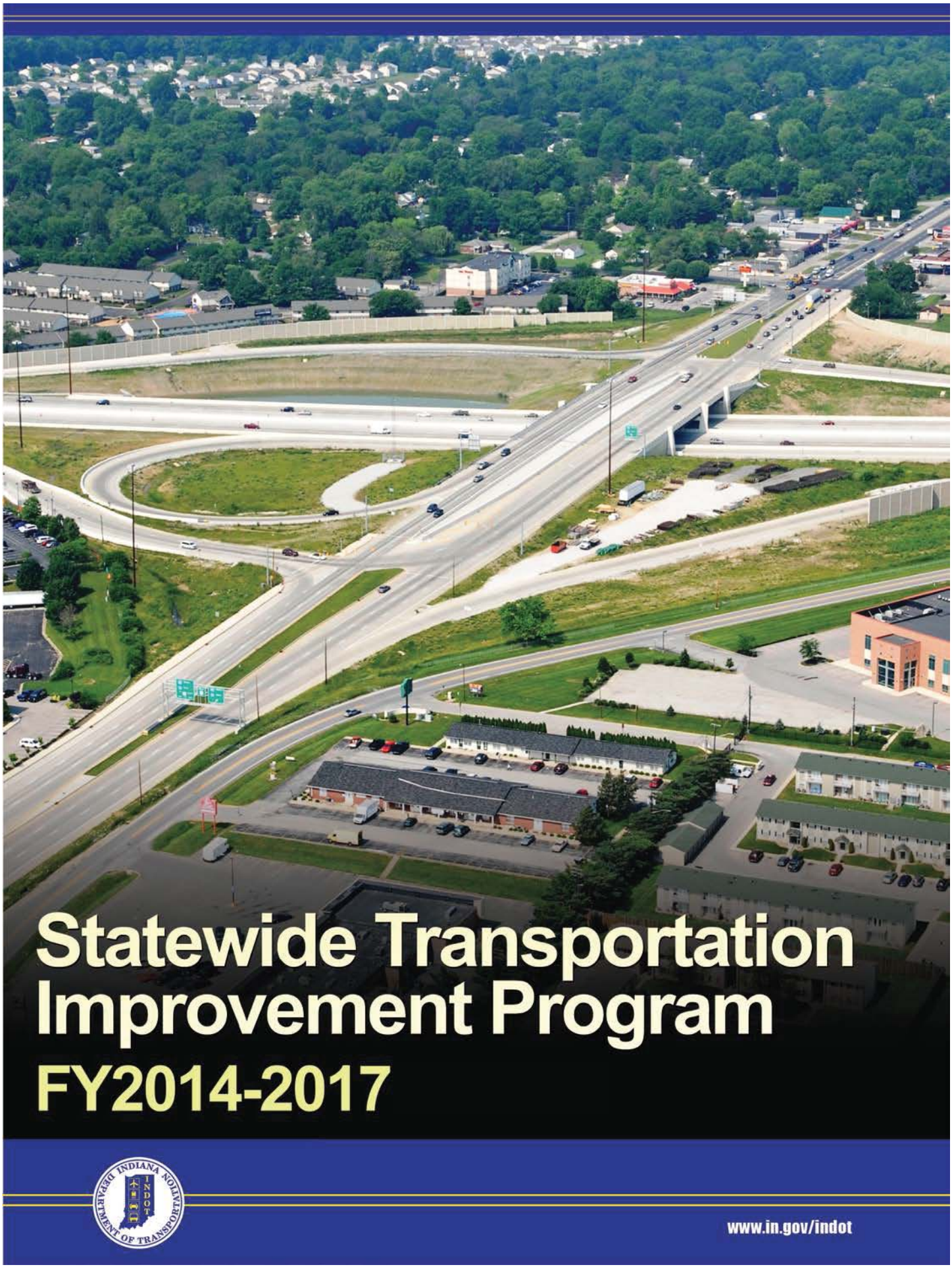
Appendix I: Air Quality

	Page(s)
INDOT FY 2014-2017 Statewide Transportation Improvement Program……...	1-2
IMPO FY 2014-2017 Indianapolis Regional Transportation Improvement Program……..	3-5
IMPO 2035 Long-Range Transportation Plan……	6-9
INDOT E-mail on Hot Spot Analysis Determination (September 23, 2014)……	10
INDOT $PM_{2.5}$ Project-Level Consultation (PLC) Handouts (September 18, 2013)……..	11-23
INDOT $PM_{2.5}$ PLC Interagency Consultation Group Conference Call (September 18, 2013)…….	24-25
INDOT MSAT Coordination (November 5 & 6, 2014)…….	26-31



Statewide Transportation Improvement Program

FY2014-2017

www.in.gov/indot

Indiana Department of Transportation (INDOT)

State Preservation and Local Initiated Projects FY 2014 - 2017

SPONSOR	DES	STIP NAME	ROUTE	WORK TYPE	LOCATION	DISTRICT	MILES	FEDERAL CATEGORY	Estimated Cost left to Complete Project*	PROGRAM	PHASE	FEDERAL	MATCH	2014	2015	2016	2017
Indiana Department of Transportation	1383332	A 19	I 69	Added Travel Lanes	At SR 37 (N jct.) to 5.24 miles N of SR 37 (N jct.) (0.50 mile N of old SR 238)	Greenfield	5.242	Interstate		2020 Trust Fund Program - Construction	CN	$0.00	$41,500,000.00		$41,500,000.00		
Comments: PE in FY 14 and CN in FY 15 amended into 14-17 IRTIP via Reso 14-IMPO-002 on 3.5.14. This is a 2020 project																	
Indiana Department of Transportation	1383485	A 24	I 69	Repair Or Replace Joints	I69 at Cumberland Rd	Greenfield	0	Interstate		Major New - Construction	CN	$18,000.00	$2,000.00		$20,000.00		
Comments: Project added for CN in FY 2015 of the FY 2014-2017 Indianapolis Regional TIP with the second quarter CY 2014 amendments via Resolution # 14-IMPO-005 approved on May 28, 2014. FHWA issued a conformity letter on June 2, 2014 for USDOT.																	
Indiana Department of Transportation	1383486	A 24	I 69	Bridge Widening	I69 NB at Sand Creek	Greenfield	0	Interstate		Major New - Construction	CN	$1,350,000.00	$150,000.00		$1,500,000.00		
Comments: Project added for FY 2015 CN to the FY 2014-2017 Indianapolis Regional TIP with the second quarter CY 2014 amendments via Resoluton # 14-IMPO-005 approved on May 28, 2014. FHWA issued a conformity letter on June 2, 2014 for USDOT.																	
Indiana Department of Transportation	1383487	A 24	I 69	Bridge Widening	I69 SB at Sand Creek	Greenfield	0	Interstate		Major New - Construction	CN	$1,350,000.00	$150,000.00		$1,500,000.00		
Comments: Project added for CN in FY 2015 to the FY 2014-2017 Indianapolis Regional TIP with the second quarter CY 2014 amendments via Resoluiton # 14-IMPO-005 approved on May 28, 2014. FHWA issued a conformity letter on June 2, 2014 for USDOT.																	
Indiana Department of Transportation	1383488	A 24	I 69	Bridge Deck Replacement	Brook School Rd over I69	Greenfield	0	Interstate		Major New - Construction	CN	$2,025,000.00	$225,000.00		$2,250,000.00		
Comments: Project added for CN in FY 2015 to the FY 2014-2017 Indianapolis Regional TIP with the second quarter CY 2014 amendments via Resolution # 14-IMPO-005 approved on May 28, 2014. FHWA issued a conformity letter on June 2, 2014 for USDOT.																	
Indiana Department of Transportation	1383489	A 24	I 69	Interchange Modification	I69 at Old SR238 (Exit 210)	Greenfield	0	Interstate		Major New - Construction	CN	$11,700,000.00	$1,300,000.00		$13,000,000.00		
										Road Consulting	PE	$1,137,294.00	$126,366.00	$1,163,770.00	$99,890.00		
Comments: Project added for PE in FY 2015 and CN in FY 2015 to the FY 2014-2017 Indianapolis Regional TIP with second quarter CY 2014 amendments via Resolution # 14-IMPO-005 approved on May 28, 2014. FHWA issued a conformity letter on June 2, 2014 for USDOT.																	
Indiana Department of Transportation	1383490	A 24	I 69	Bridge Widening	Old SR238 over I69	Greenfield	0	Interstate		Major New - Construction	CN	$1,800,000.00	$200,000.00		$2,000,000.00		
Comments: Project added for CN in FY 2015 to the FY 2014-2017 Indianapolis Regional TIP with the second quarter CY 2014 amendments via Resolution # 14-IMPO-005 approved on May 28, 2014. FHWA issued a conformity letter on June 2, 2014 for USDOT.																	
Indiana Department of Transportation	1383509	A 24	I 69	Bridge Widening	I69 NB at Mud Creek	Greenfield	0	Interstate		Major New - Construction	CN	$1,350,000.00	$150,000.00		$1,500,000.00		
Comments: Project added for CN in FY 2015 to the FY 2014-2017 Indianapolis Regional TIP with the second quarter CY 2014 amendments via Resolution # 14-IMPO-005 approved on May 28, 2014. FHWA issued a comformity letter on June 2, 2014 for USDOT.																	
Indiana Department of Transportation	1383510	A 24	I 69	Bridge Widening	I69 SB at Mud Creek	Greenfield	0	Interstate		Major New - Construction	CN	$1,350,000.00	$150,000.00		$1,500,000.00		
Comments: Project added for CN in FY 2015 to the FY 2014-2017 Indianapolis Regional TIP with the second quarter CY 2014 amendments via Resolution # 14-IMPO-005 approved on May 28, 2014. FHWA issued a conformity letter on June 2, 2014 for USDOT.																	
Indiana Department of Transportation	1383511	A 24	I 69	Bridge Replacement, Concrete	Cyntheanne Rd over I69	Greenfield	0	Interstate		Major New - Construction	CN	$2,259,000.00	$251,000.00		$2,510,000.00		
Comments: Project added for CN in FY 2015 to the FY 2014-2017 Indianapolis Regional TIP with the second quarter CY 2014 amendments via Resolution # 14-IMPO-005 approved on May 28, 2014. FHWA issued a conformity letter on June 2, 2014 for USDOT.																	

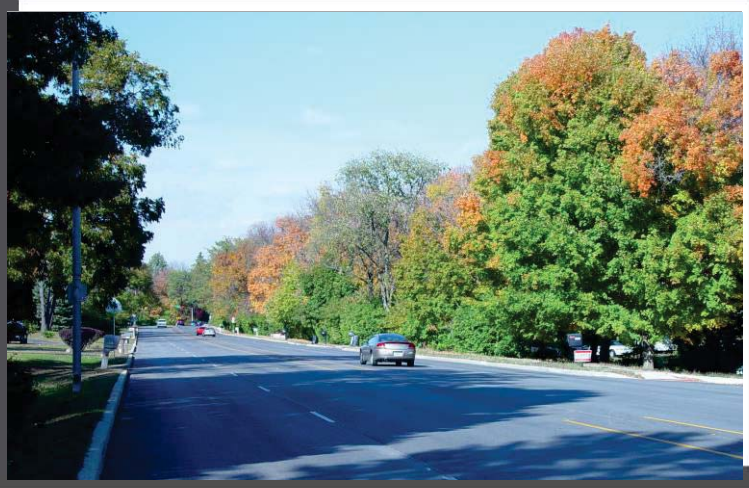
*Estimated Costs left to Complete Project column is for costs that may extend beyond the four years of a STIP. This column is not fiscally constrained and is for information purposes.

Last Amended: December 12, 2013

2014-2017 INDIANAPOLIS REGIONAL TRANSPORTATION IMPROVEMENT PROGRAM

Prepared by the Indianapolis Metropolitan Planning Organization

www.indympo.org.



INDIANAPOLIS METROPOLITAN PLANNING ORGANIZATION

INDIANAPOLIS REGIONAL TRANSPORTATION COUNCIL
POLICY COMMITTEE

Resolution Number 14-IMPO-005

A RESOLUTION amending the 2014-2017 Indianapolis Regional Transportation Improvement Program.

WHEREAS, the 2014-2017 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, section 176(c) of the Clean Air Act, amended in 1990, required that the Transportation Conformity Rule establish criteria and procedures by which the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), and metropolitan planning organizations (MPOs) determine the conformity of federally funded or approved highway and transit plans, programs, and projects to state implementation plans (SIPs) prepared for criteria pollutants; and

WHEREAS, the MPO consulted with the Interagency Consultation Group and the agencies did not take exception to the MPO finding that (1) each project in the TIP as amended is consistent with the design concept and scope of the project that was modeled in the most recent conformity demonstration, (2) the open-to-traffic date of each project in the TIP as amended is consistent with the open-to-traffic dates in the most recent conformity demonstration, (3) that the previous emissions analysis meets the requirements of 40 CFR 93.118 and demonstrate conformity of the TIP as amended; 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 2014-2017 Indianapolis Regional Transportation Improvement Program as shown on the attached Exhibit A.

The above and foregoing resolution was adopted this 28 day of May 2014 by the IRTC Policy Committee.

DATE: 5/28/14

Anna M. Gremling

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	1400014	I- 65	Bridge subproject on CR 500 N (Whiteland Road) over I-65 within the limits of added travel lanes (DES # 1383341) from 0.85 mile S of SR 44 to 0.50 mile N of Whiteland Road	Bridge Deck Overlay	Exempt	$905,000	$905,000	CN	SFY 2015		$905,000	$-	0%	$905,000	100%	NEW PROJECT	Add CN to SFY 2015
NEW	INDOT	1383485	I- 69	Bridge subproject (Cumberland Road) to I-69 Added Travel Lanes from SR 37 to 0.50 mile N of Old SR 238 (DES # 1383332) that was amended to the LRP and TIP in first quarter CY 2014	Repair Or Replace Joints	Exempt	$20,000	$20,000	CN	SFY 2015		$20,000	$-	0%	$20,000	100%	NEW PROJECT	Add CN to SFY 2015
NEW	INDOT	1383486	I- 69	Bridge subproject (over Sand Creek - NB lanes) on I-69 added travel lanes project (DES # 1383332) that was amended to the long range plan and TIP in the first quarter of CY 2014	Bridge Widening	Exempt	$1,500,000	$1,500,000	CN	SFY 2015		$1,500,000	$-	0%	$1,500,000	100%	NEW PROJECT	Add CN to SFY 2015
NEW	INDOT	1383487	I- 69	Bridge subproject over Sand Creek SB lanes on I69 inluded in added travel lanes project (DES # 1383332) that was amended to the long range plan and TIP in the first quarter of CY 2014	Bridge Widening	Exempt	$1,500,000	$1,500,000	CN	SFY 2015		$1,500,000	$-	0%	$1,500,000	100%	NEW PROJECT	Add CN to SFY 2015
NEW	INDOT	1383488	I- 69	Bridge subproject on Brooks School Road over I-69 within the limits of added travel lanes project (DES # 1383332) that was amended to the long range plan and TIP in the first quarter of CY 2014	Bridge Replacement, Concrete	Exempt	$2,250,000	$2,250,000	CN	SFY 2015		$2,250,000	$-	0%	$2,250,000	100%	NEW PROJECT	Add CN to SFY 2015
NEW	INDOT	1383489	I- 69	Interchange subproject at I-69 and Old SR 238 within the limits of project DES # 1383332 for added lanes from SR 37 to 0.50 mile N of Old SR 238 added to the LRP and TIP in first quarter CY 2014	Interchange Modification	Exempt	$14,263,660	$14,263,660	PE/PL	SFY 2015		$1,263,660	$-	0%	$1,263,660	100%	NEW PROJECT	Add CN to SFY 2015
NEW									CN	SFY 2015		$13,000,000	$-	0%	$13,000,000	100%		
NEW	INDOT	1383490	I- 69	Bridge subproject Old SR 238 at I-69 as part of added travel lanes project (DES # 1383332) from SR 37 to 0.50 mile N of Old SR 238 that was amended to the LRP and TIP in the first quarter of CY 2014	Bridge Widening	Exempt	$2,000,000	$2,000,000	CN	SFY 2015		$2,000,000	$-	0%	$2,000,000	100%	NEW PROJECT	Add CN to SFY 2015

Indianapolis Metropolitan Planning Area

Air Quality Conformity Determination Report

2035 Long-Range Transportation Plan: 2014 Update & 2014-2017 Indianapolis Regional Transportation Improvement Program

March 5, 2014

Indianapolis Metropolitan Planning Organization
Indiana Department of Transportation

Prepared by:
Indianapolis Metropolitan Planning Organization
200 East Washington Street, Suite 1922
Indianapolis, Indiana 46204
317-327-7599
Stephanie.belch@indy.gov

Introduction

The Indianapolis Metropolitan Planning Organization is updating its 2035 Long Range Transportation Plan (LRTP) to amend several INDOT interstate widening projects being funded through the 2020 Trust Fund as approved by the Indiana General Assembly in 2013. Many of these interstate widening projects are not new to the LRTP as they have been in both the MPO's and INDOT's long range plan in the recent past.

Another action being taken with this update is the reaffirmation of the goals and objectives as developed and approved in the 2010/2011 LRTP Major Update. Those goals and objectives are shown in the table below:

Goals and Objectives of the 2035 Long Range Transportation Plan	
Goal 1: Preserve, make safe, and improve utilization of the existing transportation system.	***Objective 1:*** Maintain the existing network in a state-of-good repair. ***Objective 2:*** Use cost-effective transportation system management, transportation demand management, intelligent transportation system, and operational improvements and techniques to increase the efficiency and safety of the existing transportation system.
Goal 2: Enhance regional transportation mobility and accessibility.	***Objective 1:*** Provide cost-effective transportation improvements to address identified mobility problems and reduce the growth in traffic congestion. ***Objective 2:*** Provide appropriate travel options and choice for all users, including auto, transit, paratransit, bicycle, and pedestrian. ***Objective 3:*** Improve accessibility to regional employment and activity centers. ***Objective 4:*** Enhance connections between modes. ***Objective 5:*** Support commercial goods movement within and through the region.
Goal 3: Coordinate transportation system improvements to be consistent with regional values.	***Objective 1:*** Partner with state and local jurisdictions to ensure transportation and land use are complementary. ***Objective 2:*** Enhance transportation system sustainability and minimize impacts of the transportation system to the built and natural environment. ***Objective 3:*** Support regional economic development. ***Objective 4:*** Support transportation security.

Current Air Quality Status

Under the standards set forth in the Clean Air Act Amendments in 1990, the 9-county region of Hancock, Hamilton, Hendricks, Johnson, Morgan, Madison, Marion, Boone, and Shelby Counties is currently in

attainment of the annual National Ambient Air Quality Standard (NAAQS) for the current eight-hour ozone standard.

The counties of Hamilton, Hendricks, Johnson, Marion, and Morgan counties are currently a Maintenance area for Particulate Matter of 2.5 microns or less in size (PM2.5).

Planning Assumptions

The only change in the planning assumptions for the 2035 Long Range Transportation Plan is the type of travel demand model (TDM) being used by the Indianapolis MPO. The MPO has moved from a gravity travel demand model to a destination-choice model in order to better reflect transit ridership. Successful checks to the new TDM have been made throughout the transition to make sure air quality conformity is maintained.

Interagency Consultation Group (ICG) Process

As prescribed in the Interagency Consultation Group, Conformity Consultation Guidance document, this consultation process is intended to guide Metropolitan Planning Organizations (MPOs) and other interagency consultation group parties through the Transportation Conformity Process. On January 17, 2014, the MPO held the conference call with members of the ICG and discussed the projects proposed for change in the LRTP, and the travel demand modeling and air quality modeling process to represent those changes. The meeting summary can be found in Appendix A.

Public Involvement Process

The 2014 LRTP Update was offered for public review beginning February 14 through February 28, 2014.

LRTP Project List Changes

See complete table in Appendix B.

INDOT 2020 Trust Fund Projects (added travel lanes to be constructed by 2020):

- I-65 from 0.7 m S of SR 44 to 0.5 m N of Whiteland Rd. in Johnson County
- I-65 from 0.5 m N of Whiteland Rd. to 0.5 N of Main St. (Greenwood) in Johnson County
- I-65 from 0.5 m N of Main St. (Greenwood) to 0.5 m N of County Line Rd. in Johnson County
- I-65 from 0.5 m N of County Line Rd. to Southport Road in Marion County
- I-70 from 0.7 m W of SR 39 to 0.5 m E of SR 267 in Hendricks County
- I-69 from SR 37 (N jct.) to 0.5 miles N of old SR 238 in Hamilton County
- I-69 from Exit 210 (SR 238) in Hamilton County to SR 13 in Madison County
- I-69 from SR 13 to SR 38 in Madison County

IndyGo New Service (locally funded in 2013)

- New Crosstown fixed-route: 86th St. between Traders Point and Community Hospital North

Appendix B: Table of 2014 Project Changes

LRTP #	Roadway/ Route	Project Limits	Project Type	LRTP Period	Sponsor	Funding Source	Comments
5005	I-65	0.7 m S of SR 44 to 0.5 m N of Whiteland Rd.	Added Travel Lanes	2016-2025	INDOT	INDOT 2020 Trust Fund	Requires State legislative approval.
5006	I-65	0.5 m N of Whiteland Rd. to 0.5 N of Main St. (Grnwd)	Added Travel Lanes	2016-2025	INDOT	INDOT 2020 Trust Fund	Requires State legislative approval.
5007	I-65	0.5 m N of Main St. (Grnwd) to 0.5 m N of County Line Rd.	Added Travel Lanes	2016-2025	INDOT	INDOT 2020 Trust Fund	Requires State legislative approval.
6035	I-65	0.5 m N of County Line Rd. to Southport Road	Added Travel Lanes	2016-2025	INDOT	INDOT 2020 Trust Fund	Requires State legislative approval.
4001	I-70	0.7 m W of SR 39 to 0.5 m E of SR 267	Added Travel Lanes	2016-2025	INDOT	INDOT 2020 Trust Fund	Requires State legislative approval.
2014	I-69	SR 37 (N jct.) to 0.5 miles N of old SR 238	Added Travel Lanes	2016-2025	INDOT	INDOT 2020 Trust Fund	Requires State legislative approval.
2015	I-69	from Exit 210 (SR 238) to SR 13 in Madison Co.	Added Travel Lanes	2016-2025	INDOT	2020 Trust Fund	Requires State legislative approval.
2016	I-69	from SR 13 to SR 38 in Madison Co.	Added Travel Lanes	2016-2025	INDOT	2020 Trust Fund	Requires State legislative approval.
9001	86th St.	between Trader's Point (northwest side) and Community Hospital North (northeast side)	New fixed-route service (crosstown)	2011-2015	IndyGo	Local	implemented in 2013 with local money.
9002	Various	extending routes to serve more destinations, improving connections and frequency, offering more direct service	Service Improvements	2011-2015	IndyGo	Local	implemented in 2013 with local money.
1204	Bennett Parkway	from 106th Street to 0.5 miles south (new alignment)	new roadway	2011-2015	Zionsville	Local	Project #1204 being split in two projects. The northern half moves to 1st LRTP Period (2011-2015); the southern half is #1208, and remains in 2nd Period (2016-2025).
1208	Bennett Parkway	from 0.5 miles south of 106th Street to 96th Street	new roadway	2016-2025	Zionsville	Local	Project #1204 being split in two projects. The northern half moves to 1st LRTP Period; the southern half is #1208, and remains in 2nd Period.
2104	96th St.	from just east of Lantern Road to just west of Cumberland Road	Added Travel Lanes (2 to 4)	2026-2035	Fishers	STP (illustrative in '18)	This project is programmed in the TIP as illustrative in 2018 (STP); should be moved to 2nd Period (2016-2025)
5108	CRs 700N and 750N	from CR 325 E to CR 400E in Clark Township	new roadway	2011-2015	Johnson County	STP Group IV	This project is programmed in the TIP, CN in 2015; should be moved to 2nd Period (2016-2025)
6002	I-465	at SR 37 (Indianapolis' south side)	Interchange Modification	2011-2015	INDOT	INDOT	This project has been completed; was included in the LRTP but not considered regionally significant during previous consultation. Remove from the Plan (model changes already made)
2002	SR 32	from SR 37 to E Junction w/ SR 38	Widen 2 to 5 lanes	2011-2015	INDOT	INDOT	This project is not moving forward and should be moved to illustrative list.
6004	I-465	from 0.5 W of Allisonville to Fall Creek	Added Travel Lanes (Widen from 6 to 10 lanes)	2016-2025	INDOT	INDOT	This project is not moving forward and should be moved to illustrative list.
6005	I-69	I-465 to 96th Street interchange + 2 interchanges at I-465 and 82nd Street	Added Travel Lanes (Widen to 8 lanes divided with 6 collector/distributor lanes - up to 14 lanes total)	2016-2025	INDOT	INDOT	This project is not moving forward and should be moved to illustrative list.
5003	SR 135 (Meridian St.)	CR 500 N (Whiteland Rd.) to CR 700 N (Stones Crossing Rd.)	Widen 2 to 5 lanes	2016-2025	INDOT	INDOT	This project is not moving forward and should be moved to illustrative list.
7001	SR 39	SR 37 to SR 67	New Alignment; remains 2 lanes	2016-2025	INDOT	INDOT	This project is not moving forward and should be moved to illustrative list.

Miller, Daniel J

From: Jones, Tony W [TWJones@indot.IN.gov]
Sent: Tuesday, September 23, 2014 5:15 PM
To: Miller, Daniel J
Cc: Carnahan, Ben
Subject: Hot Spot Analysis
Attachments: INDOT PM25 Project-Level Consultation Handouts 9-18-14.pdf; Project Level ICG_20140918 _FINAL Meeting Minutes.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Dan,
I received email below from Mary Jo Hammons. Our I-69 project is in the list, so FYI.

All,

*INDOT & FHWA hosted an Interagency Consultation Group Meeting to discuss whether any of the projects listed below would qualify as "projects of air quality concern" for PM2.5 pollutants on Thursday, Sept. 18, 2014. It was determined that **none** of the listed projects were to be considered with that distinction. As such, no hotspot analysis is required for PM2.5 pollutants for any of the projects listed below. As noted in the INDOT CE Manual, the preparer of each environmental document should summarize the findings, including coordination with other agencies in the CE.*

*I've attached the Final Meeting Minutes and the Handouts used at the meeting to this email. **Please route these to your respective consultants for use as an appendix to their environmental documents.***

Either Ron Bales or I are available if there are any questions.

Kind Regards, Mary Jo

Tony Jones, PE
INDOT, Project Manager
100 North Senate Ave, Rm 601
Indianapolis, IN 46204

twjones@indot.in.gov
317-233-5282 Office
317-503-5026 Cell

INDOT $PM_{2.5}$ Project Level Interagency Consultation

Conference Call Handouts
September 18, 2014

Goals and Methods for Evaluation

Goal:

- Identify INDOT projects "of air quality concern" (if any) that will require a $PM_{2.5}$ quantitative hot-spot analysis
- Include consultation decisions in NEPA documents to indicate projects are <u>not</u> of air quality concern

Evaluation Methods:

- Compare current and forecast traffic volumes from the Indiana Statewide Travel Demand Model (ISTDM) vs. project examples identified in the current guidance
- Determine if ISTDM project Build vs. No-Build volume changes are "significant"
- Assess nearby monitor readings
- Compare project to other projects found to be of air quality concern

EPA Guidance (Appendix B) Examples

Some examples of projects of local air quality concern that would be covered by 40 CFR 93.123(b)(1)(i) and (ii) are:

- A project on a new highway or expressway that serves a significant volume of diesel truck traffic, such as facilities with greater than 125,000 annual average daily traffic (AADT) and 8% or more of such AADT is diesel truck traffic;
- New exit ramps and other highway facility improvements to connect a highway or expressway to a major freight, bus, or intermodal terminal;
- Expansion of an existing highway or other facility that affects a congested intersection (operated at Level-of-Service D, E, or F) that has a significant increase in the number of diesel trucks; and,
- Similar highway projects that involve a significant increase in the number of diesel transit busses and/or diesel trucks.

Reference Link:
http://www.epa.gov/oms/stateresources/transconf/policy/420b13053-appx.pdf

Previous INDOT Project-Level Analyses (Indianapolis)

Item	I-69 Section 5 (Bloomington to Martinsville) DES# 0300381	I-65 (SR44 to Southport Road) DES# 1383343/1383354/1383342/1383341
Highest AADT	2035 Build AADT = **61,588**	2035 Build AADT = **125,695**
Highest Truck Volume	2035 Build Trucks = **12,785**	2035 Build Trucks = **22,442**
Build vs. No-Build %	2035 AADT = **+ 38%** 2035 Trucks = **+ 16%**	2035 Trucks = < **10%**
Background Concentration	**10.43** µg/m³	**11.27** µg/m³
Estimated Analysis Year Design Values	2018 = **11.4** µg/m³ 2035 = **11.1** µg/m³	2017 = **12.0** µg/m³

Compared against 15 µg/m³ Annual NAAQS

** Designations under 12 µg/m³ NAAQS expected in December 2014*

INDOT Initial Project Screening

- Evaluated INDOT project lists to identify projects that clearly do not require a quantitative hot-spot analysis
  - ❑ Not in a nonattainment/maintenance area
  - ❑ Intersection projects
  - ❑ Low traffic volumes (< 75,000 forecast AADT and 10,000 Trucks)
  - ❑ No significant capacity increase resulting from project
- Identify projects for further review

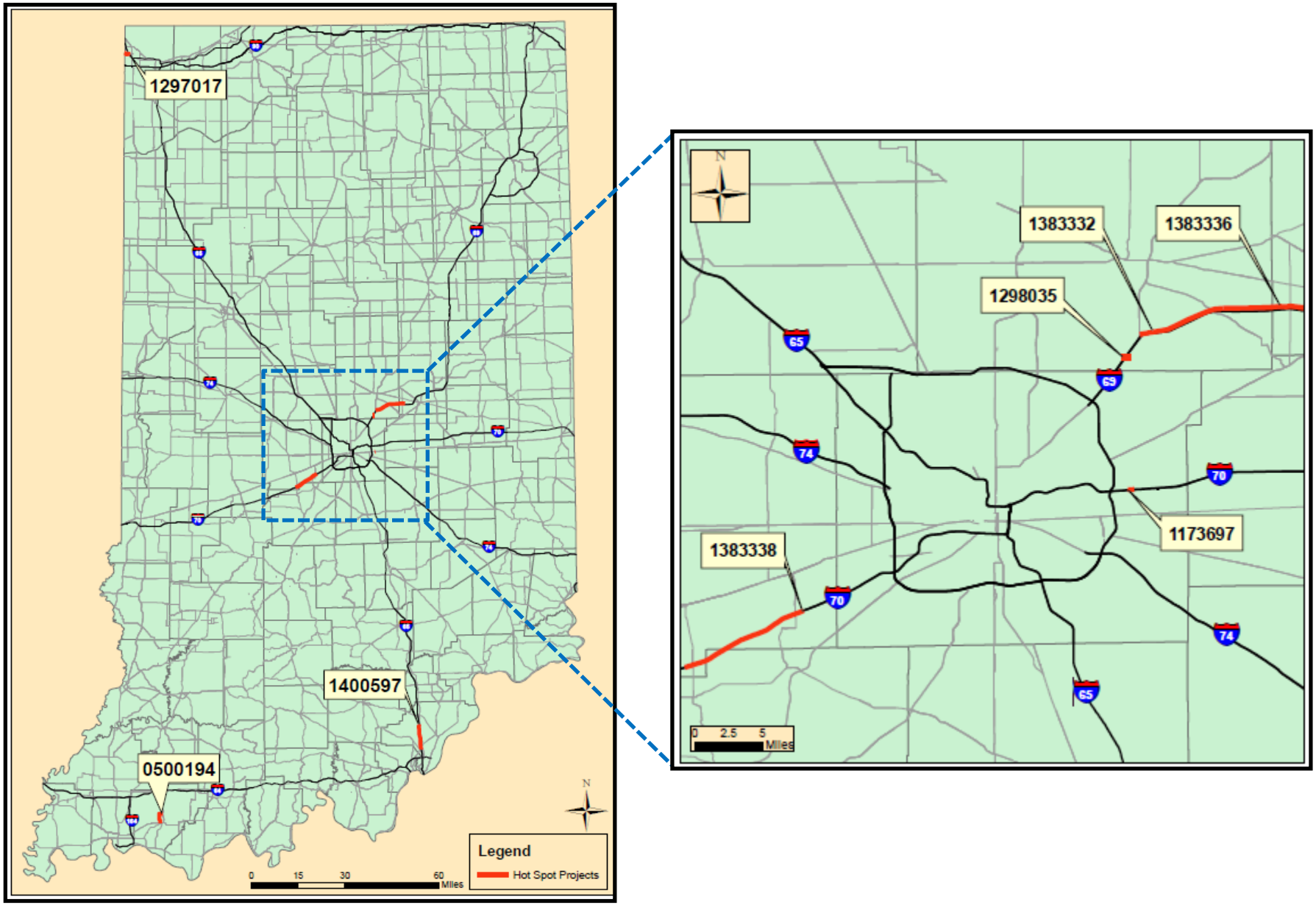
Corr#	LRP#	Old LRP	KIN#	LD	DES	Contract Prefix	Contract Number	Contract#	District	CO#	County	Route	Location	Work Category Name	Section	Notes	ELIMINATE DUE
002			4454	Y	0400283	IR	30153	IR-30153	Greenfield	49	Marion	I465	From 0.5 mile W of I-69 interchange to 75th street	Added Travel Lanes Project	I-69 to 75th St		Active
016				N	1172943	IR	33066	IR-33066	Greenfield	49	Marion	I65	Ramp (I-465 to I-65 SB) over I-65 and I-465	Interchange Modification Project			Active
022				Y	1006581	IR	34001	IR-34001	Greenfield	29	Hamilton	I69	I-69 improvements from I-465 to 116th and SR 37 interchan	Added Travel Lanes Project		SR-37 interchange	Under Construction
022				Y	1173161	IR	34166	IR-34166	Greenfield	49	Marion	I69	I-69 improvements from I-465 to 116th and SR 37 interchan	Added Travel Lanes Project		116th St interchange	Under Construction
																96th St interchange	Under Construction
																82nd St interchange	Under Construction
266			5592	Y	1005696	IR	33274	IR-33274	Greenfield	49	Marion	US52	German Church Road	Intersection Improvement Project		German Church Rd intersection	Project Type
266				N	1005697	IR	33305	IR-33305	Greenfield	49	Marion	US52	Bade Davis	Intersection Improvement Pr	No data for Bade	Bade Rd intersection	Project Type
																Davis Rd intersection	Project Type
266			2645		9700320	PLC	37344	PLC-37344	Greenfield	49	Marion	US52	Marion/Hancock County Line to CR 500W (PE & RW Trackin	Added Travel Lanes Project	C/L to CR500W	Mt. Comfort Rd intersection	Project Type
402				Y	1297199	IR	35187	IR-35187	Seymour	41	Johnson	I65	@ Worthsville Road, 7.7 miles North of SR 44	New Interchange Project			PM2.5 Review COMPLETED as
405				Y	1383332	R	37053	R-37053	Greenfield	29	Hamilton	I69	At SR 37 (N jct.) to 5.24 miles N of SR 37 (N jct.) (0.50 mile N	Added Travel Lanes Project	SR-37 to SR-238		Active
405				N	1383489	R	37053	R-37053	Greenfield	29	Hamilton	I69	I69 at Old SR238 (Exit 210)	Added Travel Lanes Project		SR-238 interchange	Active
405				Y	1383336	R	37055	R-37055	Greenfield	29	Hamilton	I69	5.24 mi N of SR 37 (N jct.) (0.50 mi N of old SR 238) to 0.85 n	Added Travel Lanes Project	SR-238 to SR-13	SR-13 interchange	Hold - reassessment of MM20
406				Y	1383338	R	37133	R-37133	Crawfordsville	32	Hendricks	I70	0.85 mile W of SR 39 to 0.50 mile E of SR 267	Added Travel Lanes Project	SR-39 to SR-267		Hold - reassessment of MM20
406				N	1400176	R	37133	R-37133	Crawfordsville	32	Hendricks	I70	SR39 at I70, 2.39 mi N of SR42	Added Travel Lanes Project		SR-39 interchange	Hold - reassessment of MM20
407				Y	1383343	R	37075	R-37075	Greenfield	41	Johnson	I65	4.72 miles S of I-465 South Leg to 2.88 miles S of I-465 Sout	Added Travel Lanes Project	County Line Rd to Southport Rd	Southport Rd Interchange	PM2.5 Study COMPLETED as
407				Y	1383354	R	37094	R-37094	Seymour	41	Johnson	I65	6.18 miles S of I-465 South Leg (0.50 mile N of Main St Greer	Added Travel Lanes Project	Main St to County Line Rd	County Line Rd Interchange	PM2.5 Study COMPLETED as
407				Y	1383342	R	37095	R-37095	Seymour	41	Johnson	I65	5.41 miles N of SR 44 to 6.18 miles S of I-465 South Leg (Just	Added Travel Lanes Project	Whiteland Rd to Main St	Main St-Greenwood Interchange	PM2.5 Study COMPLETED as
407				Y	1383341	R	37096	R-37096	Seymour	41	Johnson	I65	0.85 mile S of SR 44 to 5.41 miles N of SR 44 (0.50 mile N of	Added Travel Lanes Project	SR-44 to Whiteland Rd	Whiteland Rd Interchange	PM2.5 Study COMPLETED as
																SR-44 Interchange	PM2.5 Study COMPLETED as
					0400962	R	30395	R-30395	Greenfield	49	Marion	SR135	1.52 miles S of US 31 (Edgewood Avenue)	Intersection Improvement Project		Edgewood Ave intersection	Project Type
					1006121	R	34861	R-34861	Greenfield	29	Hamilton	SR38	At 226th Street/6 Points Road	District Intersection Improvement Project		226th St intersection	Project Type
				Y	1173698	R	35048	R-35048	Greenfield	49	Marion	I465	exit ramp from EB I-465 to US 421(Michigan Road)	Interchange Modification	Interchange Modification	I465 at US-421/Michigan Rd interchange	Active
				N	1173700	R	35048	R-35048	Greenfield	49	Marion	I465	Entrance ramp from US 421 (Michigan Road) to EB I-465	Added Travel Lanes Project			Active
				N	1173701	R	35048	R-35048	Greenfield	49	Marion	I465	Entrance Ramp from US 421 (Michigan Road) to WB I-465	Added Travel Lanes Project			Active
				N	1173704	R	35048	R-35048	Greenfield	49	Marion	I465	Exit ramp from WB I-465 to US 421 (Michigan Road)	Added Travel Lanes Project			Active
					1173697	R	35459	R-35459	Greenfield	49	Marion	I70	Exit ramp from EB I-70 to Post Road RP 90+71	Interchange Modification		Post Rd interchange	Active
					1298035	IR	35629	IR-35629	Greenfield	29	Hamilton	I69	I-69 at 106 Street	Intersection Improvement Project		106th St interchange	Active
					1296847	R	35680	R-35680	Greenfield	29	Hamilton	SR37	SR 37; at Strawtown Ave (6.34 mile north SR 32 / SR 38 Conn	District Intersection Improvement Project		Strawtown Ave intersection	Project Type

Projects Identified for Consultation Review (List)

Project DES # *	Route	Project Type	Length (mi)	County / Nonattainment Area
1383332 1383489	I-69	Added Travel Lanes	5.17	Hamilton Indianapolis
1383336		Added Travel Lanes	4.64	
1298035		New Interchange	0.47	
1383338 1400176	I-70	Added Travel Lanes	7.99	Hendricks Indianapolis
1173697		Interchange Modification	0.20	Marion Indianapolis
1400597	I-65	Added Travel Lanes	8.11	Clark Louisville KY-IN
0500194 1005804 (bridge)	SR 61	New Road (Minor Arterial) Construction	4.17	Warrick Evansville
1297017	Chicago Street Corridor	Added Travel Lanes	------	Lake Chicago-Gary-Lake Cty

** Project DES numbers in bold are shown on MAP (next page)*

Projects Identified for Consultation Review (Map)



I-69 Projects

- DES # 1383332
- DES # 1383489
- DES # 1383336
- DES # 1298035

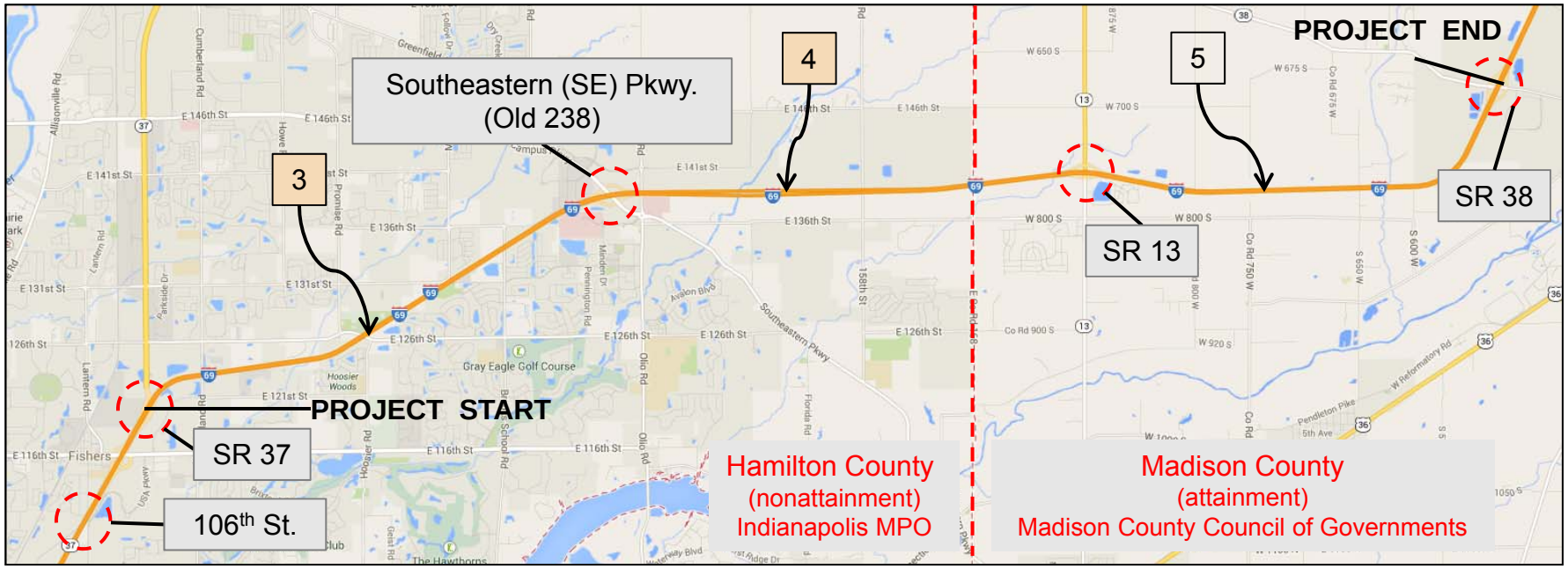
Project Description

I-69 PROJECTS

- **Add a third travel lane in each direction on I-69 from SR 37 to SR 38**
- **Interchange modification at Exit 210**
- **New interchange @ 106th Street**
- **Completion Year of 2016**
- **Eastern portion of project located in the Indianapolis PM2.5 nonattainment area**

Project Location & Traffic Volumes

I-69 PROJECTS



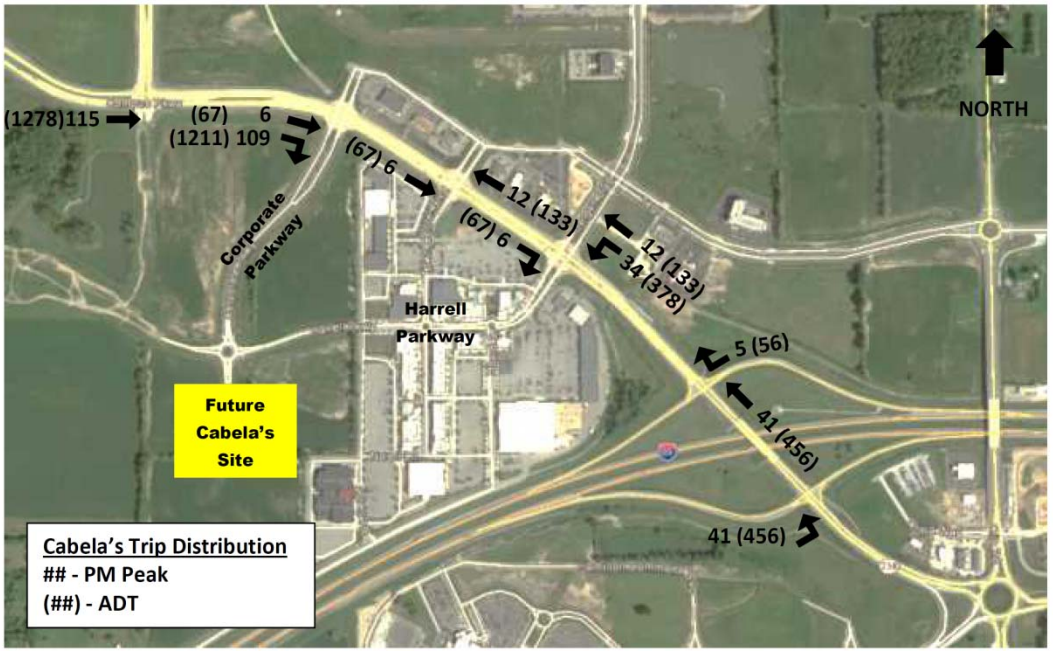
		2010		2020 (closest to completion year)				2035			
ID	I-69 Section	AADT	Truck	AADT	AADT Build vs NoBuild	Truck	Truck Build vs NoBuild	AADT	AADT Build vs NoBuild	Truck	Truck Build vs NoBuild
3	SR 37 to SE Pkwy	62,161	10,485	**72,403**	**+ 4%**	**12,131**	**+ 1%**	91,016	+ 11%	15,097	+ 11%
4	SE Pkwy to SR 13	57,734	11,749	**64,784**	**+ 4%**	**13,090**	**+ 1%**	77,006	+ 3%	15,394	+ 3%

August 21, 2014 INDOT Summary of ISTDM Base and Forecast Volumes including Build vs. No-Build

Campus Parkway Study

I-69 PROJECTS

- **April 2014 AECOM "Traffic Volume Forecast" for I-69 at Campus Parkway (Exit 210) and SR 13 (Exit 214)**
- **Exit 210 (Campus Parkway) interchange in nonattainment area**
- **Average traffic growth rates determined from the Indianapolis MPO model**
- **Impact of new Cabela's added to forecasts**

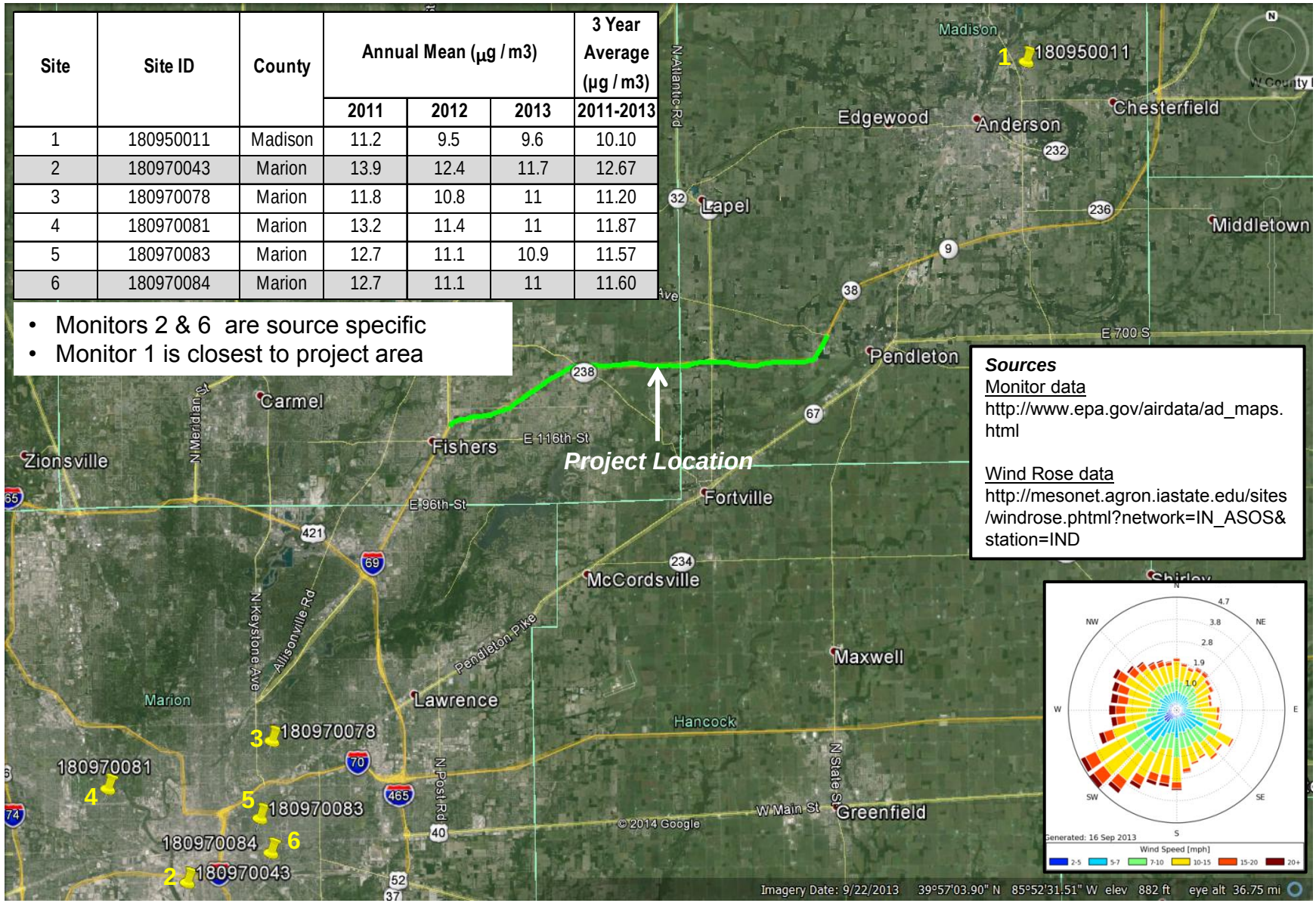


Background Concentration Monitor Locations and Readings

I-69 PROJECTS

Site	Site ID	County	Annual Mean (µg / m3)			3 Year Average (µg / m3)
			2011	2012	2013	2011-2013
1	180950011	Madison	11.2	9.5	9.6	10.10
2	180970043	Marion	13.9	12.4	11.7	12.67
3	180970078	Marion	11.8	10.8	11	11.20
4	180970081	Marion	13.2	11.4	11	11.87
5	180970083	Marion	12.7	11.1	10.9	11.57
6	180970084	Marion	12.7	11.1	11	11.60

- Monitors 2 & 6 are source specific
- Monitor 1 is closest to project area



Evaluating Need for Hot-spot Analysis

Highest Section: SR 37 to SE Pkwy

I-69 PROJECTS

Item	Comparison to EPA Guidance Examples	Comparison To Previous I-69 Hot-Spot Analyses	Comparison To Previous I-65 Hot-Spot Analyses
Highest AADT	**< 125,000 AADT**	**Higher**	**Lower** (38% less AADT in 2035)
Highest Truck Volume	**>10,000 Trucks**	**Higher**	**Lower** (32% less Trucks in 2035)
Build vs. No-Build %	**Only 1% Change in 2020 Diesel Traffic**	**Lower**	**Lower**
Background Concentration	-----	Higher	Similar

INDOT PM2.5 Project-Level Consultation Interagency Consultation Group Conference Call

Thursday, September 18, 2014, 2014, 10:00 am

1. *Meeting Attendees*

Name	Organization	Email	Phone
Larry Heil	FHWA – Indiana Division	LHEIL@dot.gov	317-226-748
Michelle Allen	FHWA – Indiana Division	Michelle.Allen@dot.gov	317-226-7344
Tony Maietta	US EPA – Region 5	maietta.anthony@epa.gov	312-353-8777
Laura Hilden	INDOT – Environmental Services	lhilden@indot.in.gov	317-233-5018
Ken McMullen	INDOT – Environmental Policy Manager	KMCMULLEN@indot.IN.gov	317-233-1164
Ron Bales	INDOT – NEPA Specialist	rbales@indot.IN.gov	317-234-4916
Frank Baukert	INDOT – Long Range Planning	FBAUKERT@indot.IN.gov	317-232-1486
Shawn Seals	IDEM – Office of Air Quality	SSEALS@idem.IN.gov	317-233-0425
Dan Szekeres	Michael Baker Jr., Inc. (Baker)	dszekeres@mbakerintl.com	717-221-2019
Rob Dabadie	Baker	RDabadie@mbakerintl.com	410-689-3452
Mary Jo Hamman	Baker	mhamman@mbakerintl.com	317-663-8190
Dean Munn	Corradino Group	dmunn@corradino.com	317-488-2363

Materials: Attached Handouts (INDOT PM25 Project-Level Consultation Handouts 9-18-14.pdf)

2. *Overview*

- Larry Heil (FHWA) provided background on the purpose of the conference call.
- In Indiana, project-level air quality analyses have been completed for three projects (I-69, I-65, Iliana). For each analysis, the project portion of the total concentration was about 1 µg/m³ and forecasted peak year concentrations were below the current 15 µg/m³ annual PM2.5 National Ambient Air Quality Standard (NAAQS).
- All projects except for Chicago St and the 106th St. interchange are being advanced as Categorical Exclusions. These other projects are expected to be Environmental Assessments.

3. *Project Review*

- Dan Szekeres (Baker) led discussions through each of the handout pages including an overview of the key data and resources to assist the consultation group in determining whether projects are of "air quality concern" requiring a quantitative analysis.
- The evaluation methods included an assessment of existing and forecast traffic volumes, the impact of the project on volume (build vs. no-build), nearby monitor readings, and comparisons of volumes to EPA guidance examples. All forecasted traffic volumes were developed from the Indiana Statewide

Travel Demand Model (ISTDM) and produced by INDOT.

- Handout page 4 provides roadway traffic and monitor data for the completed quantitative hotspot analyses for I-69 (Section 5) and I-65 (SR 44 to Southport Road) under the current NAAQS. Both IDEM and EPA noted that they do not expect the Indianapolis area to be nonattainment under the upcoming 2012 PM2.5 NAAQS designations.
- IDEM commented that there may be other factors and considerations when evaluating projects for quantitative analysis beyond the current numbers provided in the handouts. However, no specific concerns or issues were identified for the projects under consideration at this time.
- For the I-65 project in Clark County, IDEM noted that this area is the most sensitive PM area in the state. However, it was agreed that the project impact on diesel traffic for this project is expected to be minimal.
- All participants on the consultation call agreed that quantitative analyses were not required for each of the projects.
- Minor enhancements to the handout materials will be provided including:
    - Remove the reference to "15 μg/m³" in the footnote on Slide 4
    - Modify the graphic on Slide 10 to show the 106th St. Interchange
    - Remove decision references for each grouping of projects on Slides 13, 18, 23, 28, 33
    - Include traffic count information for SR 61 on Slide 26

4. Conclusions

- The interagency consultation group concurred that each of the projects provided in the handouts (see handout page 6) is not a project of air quality concern and does not require a quantitative hotspot analysis. This includes the following project DES #s:
    - DES # 1383332
    - DES # 1383489
    - DES # 1383336
    - DES # 1298035
    - DES # 1383338
    - DES # 1400176
    - DES # 1173697
    - DES #1400597
    - DES # 0500194
    - DES # 1005804
    - DES # 1297017
- Each of the environmental documents should contain the conference call meeting minutes and the associated handouts. The conformity determination will include references to indicate that the associated projects were determined not to be of air quality concern.
- INDOT and FHWA will continue to track other new major transportation investment projects to determine future consultation.

Meeting concluded at 10:55 am ET.

Miller, Daniel J

From: Bales, Ronald [rbales@indot.IN.gov]
Sent: Thursday, November 06, 2014 2:35 PM
To: Miller, Daniel J
Subject: RE: INDOT Des #s 1383332 & 1383336; I-69 Interstate Expansion Projects 1 & 3; Hamilton & Madison Counties; MSAT Analysis

Follow Up Flag: Follow up
Flag Status: Flagged

Dan,

Please use the following language.

> The purpose of this project is to (insert major deficiency that the project is meant to address) by constructing (insert major elements of the project). This project has been determined to generate minimal air quality impacts for CAAA criteria pollutants and has not been linked with any special MSAT concerns. As such, this project will not result in changes in traffic volumes, vehicle mix, basic project location, or any other factor that would cause an increase in MSAT impacts of the project from that of the no-build alternative.
>
> Moreover, EPA regulations for vehicle engines and fuels will cause overall MSAT emissions to decline significantly over the next several decades. Based on regulations now in effect, an analysis of national trends with EPA's MOVES model forecasts a combined reduction of over 80 percent in the total annual emission rate for the priority MSAT from 2010 to 2050 while vehicle-miles of travel are projected to increase by over 100 percent. This will both reduce the background level of MSAT as well as the possibility of even minor MSAT emissions from this project.

As far as selecting the MSAT Level Analysis Check box, please check Level 1b analysis.

Ron

From: Miller, Daniel J [mailto:Daniel.J.Miller@parsons.com]
Sent: Thursday, November 06, 2014 11:47 AM
To: Bales, Ronald
Subject: RE: INDOT Des #s 1383332 & 1383336; I-69 Interstate Expansion Projects 1 & 3; Hamilton & Madison Counties; MSAT Analysis

Outstanding! Thanks for your help!

Daniel J. Miller
Principal Environmental Planner
PARSONS
101 West Ohio Street, Suite 2121
Indianapolis, IN 46204
Phone: (317)616-4663
E-mail: Daniel.J.Miller@Parsons.com
Web: www.parsons.com


Please consider the environment before printing this email

From: Bales, Ronald [mailto:rbales@indot.IN.gov]
Sent: Thursday, November 06, 2014 11:39 AM
To: Miller, Daniel J
Subject: RE: INDOT Des #s 1383332 & 1383336; I-69 Interstate Expansion Projects 1 & 3; Hamilton & Madison Counties; MSAT Analysis

An emission analysis will not be needed. I will get back with you later today. Should be able to provide the standard language in the CE Manual for projects with no meaningful impact. I still need to confer with FHWA. Thank you.

Ron

From: Miller, Daniel J [mailto:Daniel.J.Miller@parsons.com]
Sent: Wednesday, November 05, 2014 3:30 PM
To: Bales, Ronald
Subject: FW: INDOT Des #s 1383332 & 1383336; I-69 Interstate Expansion Projects 1 & 3; Hamilton & Madison Counties; MSAT Analysis
Importance: High

Ron,
I just got a message delivery error for your e-mail saying that the message could not be delivered. Please let me know if you receive this.

Thanks,
Daniel J. Miller
Principal Environmental Planner
PARSONS
101 West Ohio Street, Suite 2121
Indianapolis, IN 46204
Phone: (317)616-4663
E-mail: Daniel.J.Miller@Parsons.com
Web: www.parsons.com


Please consider the environment before printing this email

From: Miller, Daniel J
Sent: Wednesday, November 05, 2014 3:27 PM
To: Bales, Ronald (rbales@indot.IN.gov)
Cc: Carnahan, Ben; 'Jones, Tony W'
Subject: INDOT Des #s 1383332 & 1383336; I-69 Interstate Expansion Projects 1 & 3; Hamilton & Madison Counties; MSAT Analysis
Importance: High

Ron,
As we discussed, in finishing up the CE write-up for the I-69 Added Travel Lanes projects, I noticed that the AADTs provided only covered the sections where the added travel lanes will be included (from Exit 205 (116th Street and SR 37 in Fishers) to Exit 210 (Campus Parkway) and from Exit 210 to SR 13). I discussed this with our designer, and asked him to provide the AADT & other required information for the 106th St to 116th ST section, where an auxiliary lane will be added from 106th St to 116th St. The design year AADT for this section is 163,300.

Previously, we were told that a quantitative analysis would not be required for the ATL projects because the design year AADT would be below 140,000. This is true for the remaining sections of the ATL projects (see below).

ROADWAY CHARACTER:

t 1: I-69 from 106th Street to 116th Street

Functional Classification:	Principal Arterial				
Current ADT:	118,560	VPD (2015)	Design Year ADT:	163,300	VPD (2035)
Design Hour Volume (DHV):	13,064	Truck Percentage (%)	8		
Designed Speed (mph):	70	Legal Speed (mph):	65		

	Existing	**Proposed**
Number of Lanes:	5 SB *	6 SB*
Type of Lanes:	Through	Through
Pavement Width:	60ft	72ft
Shoulder Width: Inside	4ft	4ft
Outside	10ft	10ft
Median Width:	12ft	12ft
Sidewalk Width:	N/A	N/A

Setting: ☑ Urban ☐ Suburban ☐ Rural
Topography: ☑ Level ☐ Rolling ☐ Hilly

ork will occur on the NB lanes in this section. Therefore, the information only includes the SB lanes.

t 1: 116th Street Southbound Ramp

Functional Classification:	Principal Arterial				
Current ADT:	12,350	VPD (2015)	Design Year ADT:	15,670	VPD (2035)
Design Hour Volume (DHV):	1,411	Truck Percentage (%)	5		
Designed Speed (mph):	35/60	Legal Speed (mph):	45		

	Existing	**Proposed**
Number of Lanes:	1	1
Type of Lanes:	Ramp	Ramp
Pavement Width:	16ft	16ft
Shoulder Width: Inside	4ft	4ft
	6ft	8ft

Outside		
Median Width:	N/A	N/A
Sidewalk Width:	N/A	N/A

Setting: ☑ Urban ☐ Suburban ☐ Rural
Topography: ☑ Level ☐ Rolling ☐ Hilly

proposed action has multiple roadways, this section should be filled out for each roadway.

t 1: I-69 from SR 37 to Campus Parkway

Functional Classification: Principal Arterial

Current ADT: 63,440 VPD (2015) Design Year ADT: 83,850 VPD (2035)

Design Hour Volume (DHV): 5,870 Truck Percentage (%): 20

Designed Speed (mph): 70 Legal Speed (mph): 70

	Existing	**Proposed**
Number of Lanes:	4 (2 NB, 2 SB)	6 (3 NB, 3 SB)
Type of Lanes:	Through	Through
Pavement Width:	48ft	72ft
Shoulder Width: Inside	4ft	10ft
Outside	10ft	10ft
Median Width:	60ft	36ft
Sidewalk Width:	N/A	N/A

Setting: ☑ Urban ☑ Suburban ☑ Rural
Topography: ☑ Level ☐ Rolling ☐ Hilly

t 3: I-69 from Campus Parkway to SR 13

Functional Classification: Principal Arterial

Current ADT: 56,140 VPD (2015) Design Year ADT: 66,190 VPD (2035)

Design Hour Volume (DHV): 5,296 Truck Percentage (%): 10

Designed Speed (mph): 70 Legal Speed (mph): 70

	Existing	**Proposed**
Number of Lanes:	4 (2 NB, 2 SB)	6 (3 NB, 3 SB)

Type of Lanes:	Through	Through
Pavement Width:	46ft	72ft
Shoulder Width: Inside Outside	4ft 10ft	10ft 10ft
Median Width:	60ft	36ft
Sidewalk Width:	N/A	N/A

Setting: ☐ Urban ☐ Suburban ☑ Rural
Topography: ☑ Level ☐ Rolling ☐ Hilly

t 3: SR 13

Functional Classification: State Collector

Current ADT: 12,472 VPD (2015) Design Year ADT: 18,213 VPD (2035)

Design Hour Volume (DHV): 1,989 Truck Percentage (%): 12

Designed Speed (mph): 55 Legal Speed (mph): 55

Existing **Proposed**

Number of Lanes:	2	2
Type of Lanes:	Through	Through
Pavement Width:	24ft	24ft
Shoulder Width: Inside Outside	6ft 10ft	6ft 10ft
Median Width:	N/A	N/A
Sidewalk Width:	N/A	N/A

Setting: ☐ Urban ☐ Suburban ☑ Rural
Topography: ☑ Level ☐ Rolling ☐ Hilly

As you can see, the portions of the projects where added travel lanes will be added have design year ADTs of 83,850 (Project 1: I-69 from SR 37 to Campus Parkway) and 66,190 (Project 3: I-69 from Campus Parkway to SR 13), and the 116th St SB ramp & SR 13 are well below the 40,000 limit.

I called Mary Jo Hamman from Baker to ask her if she had performed a quantitative analysis for this section of I-69. She stated that Baker was only contracted to do the $PM_{2.5}$ analysis for the I-69 projects. In reviewing their handout that was provided, they did not consider this section of I-69 in their analysis (see attached, pg 10).

Currently we have included the qualitative analysis, but have not conducted the quantitative emission analysis. Again, the section with the high AADT (163,300) is where an auxiliary lane is being built between 106th St. and

116th St. The remaining sections, where the added travel lanes are being built, have design year AADTs below 140,000. Do we need to conduct a quantitative emission analysis for this section? Please advise.

Please let me know if you need any additional information.

Thanks,
Daniel J. Miller
Principal Environmental Planner
PARSONS
101 West Ohio Street, Suite 2121
Indianapolis, IN 46204
Phone: (317)616-4663
E-mail: Daniel.J.Miller@Parsons.com
Web: www.parsons.com

Please consider the environment before printing this email

From: Jones, Tony W [mailto:TWJones@indot.IN.gov]
Sent: Tuesday, September 23, 2014 5:15 PM
To: Miller, Daniel J
Cc: Carnahan, Ben
Subject: Hot Spot Analysis

Dan,
I received email below from Mary Jo Hammons. Our I-69 project is in the list, so FYI.

All,

*INDOT & FHWA hosted an Interagency Consultation Group Meeting to discuss whether any of the projects listed below would qualify as "projects of air quality concern" for PM2.5 pollutants on Thursday, Sept. 18, 2014. It was determined that **none** of the listed projects were to be considered with that distinction. As such, no hotspot analysis is required for PM2.5 pollutants for any of the projects listed below. As noted in the INDOT CE Manual, the preparer of each environmental document should summarize the findings, including coordination with other agencies in the CE.*

*I've attached the Final Meeting Minutes and the Handouts used at the meeting to this email. **Please route these to your respective consultants for use as an appendix to their environmental documents.***

Either Ron Bales or I are available if there are any questions.

Kind Regards, Mary Jo

Tony Jones, PE
INDOT, Project Manager
100 North Senate Ave, Rm 601
Indianapolis, IN 46204

twjones@indot.in.gov
317-233-5282 Office
317-503-5026 Cell

Appendix J: Noise

	Page(s)
Draft Noise Impact Analysis…….....	1-52
INDOT Approval ……...	53

Hamilton County, Indiana – Des. No. 1383489

INTERCHANGE MODIFICATION AT EXIT 210 (CAMPUS PARKWAY) DRAFT TRAFFIC NOISE IMPACT ANALYSIS

January 2015

PREPARED BY

PARSONS

101 W. Ohio Street, Suite 2121
Indianapolis, IN 46204

PREPARED FOR

INDIANA DEPARTMENT OF TRANSPORTATION

100 N. Senate Avenue, Room N642
Indianapolis, IN 46204

Executive Summary

This Draft Traffic Noise Impact Analysis was conducted for the Exit 210 (Campus Parkway) Interchange Modification (Des. 1383489). The Exit 210 Interchange Modification is one of three projects being constructed as part of the overall I-69 Expansion Design Build Projects in Hamilton and Madison Counties, Indiana, which would all be let under a single construction contract. The remaining two projects are the I-69 Added Travel Lanes from 106th Street to 0.5 mile north of Campus Parkway (Des. 1383332) and the I-69 Added Travel Lanes in the median from 0.5 mile north of Campus Parkway to 0.5 mile east of SR 13 (Des. 1383336). A separate Traffic Noise Impact Analysis was conducted that includes those two projects in one study. All three are design-build projects that would be let under a single construction contract.

The Federal Highway Administration (FHWA) Traffic Noise Model (TNM) Version 2.5 was used to model existing and proposed noise levels. Because design year noise levels have been predicted to approach or exceed the FHWA Noise Abatement Criteria (NAC) for Category C (hospital) and Category E (commercial) land uses, the project has been found to have traffic noise impacts at three receptor locations. Based on the Indiana Department of Transportation (INDOT) *Traffic Noise Analysis Procedure*, 2011, a barrier would not be feasible for two of the impacted receptors, as it would not meet INDOT's engineering requirement that a barrier must have long, uninterrupted segments without access points or driveways. The barrier evaluated for the third impacted receptor was feasible but not reasonable, as it did not meet INDOT's cost-effectiveness criterion.

TABLE OF CONTENTS

SECTION 1.0 PROJECT HISTORY AND BACKGROUND INFORMATION 4
1.1 Purpose of the Draft Traffic Noise Impact Analysis 4
1.2 Project Purpose and Need 4
1.3 Project Description 4
SECTION 2.0 EXISTING NOISE ENVIRONMENT 6
2.1 Existing Land Uses 6
2.2 Noise Study Area (NSA) Descriptions 6
2.3 Noise Sensitive Receptors and Existing Noise Conditions 6
2.4 Measurement Procedures, Equipment and Results 6
SECTION 3.0 METHODOLOGY 8
3.1 Fundamentals of Traffic Noise 8
3.2 Methods for Identifying Land Uses and Selecting Noise Measurement and Modeling Locations .. 8
3.3 Traffic Noise Level Prediction Methods 9
3.4 Methods for Identifying Traffic Noise Impacts and Consideration of Abatement 10
SECTION 4.0 FUTURE NOISE ENVIRONMENT, IMPACTS AND ABATEMENT 11
4.1 Future Noise Environment and Impacts 11
4.2 Noise Abatement Analysis 11
SECTION 5.0 CONSTRUCTION NOISE 14
SECTION 6.0 PUBLIC INVOLVEMENT 15
SECTION 7.0 STATEMENT OF LIKELIHOOD 16
SECTION 8.0 CONCLUSIONS AND RECOMMENDATIONS 17
SECTION 9.0 REFERENCES 18

LIST OF TABLES

Table		Page
1	Summary of Short-Term Measurements	7
2	Comparison of Measured to Predicted Sound Levels in the TNM Model	7
3	Noise Abatement Criteria in 23 CFR 772	9
4	Analyzed Noise Barrier	13
5	Construction Equipment Noise	14

APPENDICES

APPENDIX A Noise Measurement and Model Location Figures

APPENDIX B Identification of Receptors

Table B - Identification of Receptors

APPENDIX C Predicted Noise Levels

Table C - Predicted Noise Levels - NSA 10

APPENDIX D Noise Barrier Reasonableness Analysis Worksheet

Table D - Noise Barrier Reasonableness Analysis Worksheet

APPENDIX E Traffic Data

Table E - Traffic Data for Existing, No-Build, and Build Conditions

APPENDIX F TNM Data Tables

Appendix F1 - Existing TNM Data Tables

Appendix F2 - No-Build TNM Data Tables

Appendix F3 - Proposed TNM Data Tables

Appendix F4 - TNM Barrier Descriptions

APPENDIX G Sound Level Meter Calibration Records

APPENDIX H Field Survey Forms and Photo Log

1.0 PROJECT HISTORY AND BACKGROUND INFORMATION

1.1 Purpose of the Traffic Noise Impact Analysis

The purpose of this Draft Traffic Noise Impact Analysis is to evaluate noise impacts and abatement under the requirements of Title 23, Part 772 of the Code of Federal Regulations (23 CFR 772) "Procedures for Abatement of Highway Traffic Noise" for the Exit 210 Interchange Modification, as one of the three projects included under the I-69 Expansion Design Build Projects. 23 CFR 772 provides procedures for preparing operational and construction noise studies and evaluating noise abatement considered for federal and federal-aid highway projects. According to 23 CFR 772.3, all highway projects that are developed in conformance with this regulation are deemed to be in conformance with FHWA noise standards.

The INDOT *Traffic Noise Analysis Procedure* establishes INDOT policy for implementing 23 CFR 772 in Indiana. The INDOT *Traffic Noise Analysis Procedure* outlines the requirements for analyzing highway traffic noise. Noise impacts associated with this project will be included in the project's Categorical Exclusion Level 4 (CE-4), in compliance with the National Environmental Policy Act (NEPA).

1.2 Project Purpose and Need

The purpose of the I-69 Expansion Design Build Projects is to improve overall traffic operation by reducing congestion on the segment of I-69 from 106th Street to 0.5 mile north of SR 13. The need for the I-69 Expansion Design Build Projects stems from traffic congestion issues that currently exist on this segment of I-69. Traffic data for the I-69 Expansion Design Build Projects was analyzed using Highway Capacity Manual methodology in Highway Capacity Software (HCS). The data was collected by INDOT in 2011, and a 1.5% per year growth rate was applied to forecast the traffic for 2015 ("current year") and 2035 ("design year"). The adjusted and balanced data was then used to calculate results in Level of Service (LOS). LOS is a rating for traffic congestion, with LOS A indicating little to no delay and LOS F indicating serious congestion and delay. I-69 between Exit 205 and SR 38 is currently operating at LOS E, which is characterized as "unstable flow." In 2035, I-69 from Exit 205 to SR 13 is predicted to experience "forced flow" (LOS F).

The purpose of Exit 210 Interchange Modification included in this Draft Traffic Noise Impact Analysis is to improve overall traffic operation by reducing congestion at this interchange. The need for this project stems from traffic congestion issues that currently exist during peak traffic hours. An INDOT study conducted in the fall of 2012 noted, "Southbound [SB] I-69 experiences congestion and reduction of travel speed during the AM peak hours, especially as traffic approaches Exit 205. Northbound [NB] I-69 also experiences congestion and long queues at Exit 210's NB exit during the PM peak hours, especially during events at the Klipsch Music Center (though traffic data collected does not take into account such events)."

The northbound ramp is currently operating at an LOS D, while the southbound ramp is operating at an LOS C. Both ramps are predicted to operate at an LOS F in the design year, 2035. The results show unacceptable LOS for both existing and future traffic for the interchange.

1.3 Project Description

Project 1 (Des. 1383332) would construct added travel lanes in the median from 106th Street to 0.5 mile north of Campus Parkway. An auxiliary lane would be added on southbound I-69 between 106th Street and 116th Street. Project 2 (Des. 1383489) is an interchange modification at Exit 210. Project 3 (Des. 1383336) would construct added travel lanes in the median from 0.5 mile north of Campus Parkway to 0.5 mile east of S.R. 13. All three are design-build projects that would be let under a single construction contract. A project location map is provided in Appendix A for reference.

The proposed Exit 210 Interchange Modification would modify the existing interchange into a double-crossover diamond (DCD) interchange. A DCD interchange, also referred to as a diverging diamond interchange (DDI), "twists" or shifts crossroad traffic in the core of the interchange to eliminate conflicts with traffic approaching from the opposite direction at the signalized intersections. Therefore, left-turn and through movements would be relocated to the opposite side of the road on the bridge structure. The interchange would require two traffic signals, but they only control opposing through movements and are therefore two-phase signals (since no left-turn phases are needed).

2.0 EXISTING NOISE ENVIRONMENT

2.1 Existing Land Uses

Field investigations were conducted on November 10, 2014 to identify land uses that could be subject to traffic and construction noise impacts from the proposed project. Shopping centers (Activity Category E), hospitals (Activity Category C), and recreational trails (Activity Category C) were identified.

Although all developed land uses are evaluated in this analysis, noise abatement is only considered for areas of frequent human use that would benefit from a lowered noise level. Accordingly, this impact analysis focuses on locations with defined outdoor activity areas, such as residential backyards and common use areas at other facilities.

2.2 Noise Study Area (NSA) Descriptions

Noise Study Areas (NSAs) were identified for the entire I-69 Expansion Design Build Project corridor. Land uses in the project area were grouped into a series of numbered NSAs for the I-69 Added Travel Lanes Project. One NSA, NSA 10, encompasses the area surrounding Exit 210.

- Land uses in NSA 10 include Indiana University Saxony Hospital, Hamilton Town Center Shopping complex, fast food restaurants with outdoor seating, and recreational trails. Within Hamilton Town Center, several areas of frequent human use have been identified. These areas include outdoor seating areas associated with restaurants and benches (Activity Category E). Areas of frequent human use on the hospital grounds include a wellness path and seating area (Activity Category C). There is also a Starbucks and a Dairy Queen on Olivia Way, each with outdoor seating (Activity Category E), as well as two paved trails east and west of Southeastern Parkway (Activity Category C).

2.3 Noise-Sensitive Receptors and Existing Noise Conditions

Noise-sensitive receptors are those locations where activities that could be affected by increased traffic noise levels occur (e.g., residences, motels, churches, schools, parks and libraries). Existing noise levels are determined for the most commonly used outdoor living areas at sensitive receptors. For residences, this is typically the backyard or front porch, and for commercial areas it could be a picnic table or bench. Noise-sensitive receptors are located within the project area (see Appendix A). A total of 11 sensitive receptors representing 11 equivalent dwelling units or areas of frequent outdoor use were identified in the project area for analysis as part of the noise study. These receptors include all Category C and E land uses located within approximately 500 feet of the alignment.

2.4 Measurement Procedures, Equipment, and Results

Measurement locations were selected to represent major developed areas within the project area.

Short term measurements were conducted using a Larson-Davis Model LXT-1 sound level. Measurements were taken at two locations, each for a 20-minute period. Calibration of the meter was checked before and after field work using a Larson-Davis Model Cal 200 calibrator. Noise meter calibration data is included in Appendix G.

When the measurements were taken on November 10, 2014, the temperature averaged around 60 degrees Fahrenheit. Winds were moderate, between 9 – 10 mph, but had little effect on sound propagation over moderate distances. Temperature, humidity, and wind speeds were within the manufacturer's recommended guidelines for operation of the sound level meter. Site conditions for each measurement are included on the field survey forms in Appendix H.

Table 1 summarizes the results of the existing noise measurements taken.

Table 1

Summary of Short-Term Measurements

Position	Address	Land Use	Start Time	Duration (minutes)	Measured $L_{eq(h)}$
ST01	13157 Norell Lane	Commercial	2:54 p.m.	20	73.6
ST02	13000 E 136th Street (IU Saxony)	Hospital	3:47 p.m.	20	66.1

Traffic-generated $L_{eq}(h)$ noise levels were predicted for the design year (2035) using FHWA TNM 2.5, a computer simulation model. The model takes into account anticipated traffic volumes, vehicle types, vehicle speeds, roadway geometry, and sensitive receptor locations to calculate future traffic-generated noise levels. As shown in Table 2, comparing the modeled and measured noise levels using observed traffic counts confirms the applicability of the model to the study area. Predicted traffic noise levels using the traffic counts observed during the measurements are within +/- 3 dBA of the measured levels, indicating reasonable correlation. Therefore, this model is validated per 23 CFR 722.11 (d)(2), and no modifications to the model were needed.

Table 2

Comparison of Measured to Predicted Sound Levels in the TNM Model

Measurement Position	Measured Sound Level (dBA)	Predicted Sound Level (dBA)	Measured minus Predicted (dBA)
ST01	73.6	71.3	2.3
ST02	66.1	68.6	-2.5

3.0 METHODOLOGY

3.1 Fundamentals of Traffic Noise

The human ear perceives noise as a form of vibration that causes pressure variations. The ear is sensitive to this 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 commonly measured in decibels (dB). The decibel scale that is audible to the human ear spans about 140 decibels. A dB level of zero is barely audible to the human ear while 140 dB is an unrecognizable sound which is painful to the listener. The decibel scale is a logarithmic representation of the actual sound pressure variation. This means that a 26 percent change in energy level only changes the sound level 1 dB. It would be possible for the human ear to detect this difference only in a laboratory. Increasing the energy level 100 percent would result in a 3 dB increase, which would be barely perceptible outdoors. A tripling in sound energy level would result in a clearly noticeable change of 5 dB in the sound level. An increase of ten times the energy level would result in a 10 dB increase in the sound level, which would be perceived as a doubling of the sound level.

The human ear has a non-linear sensitivity to noise. To account for this in noise measurement, electronic weighting scales are used to define the relative loudness of different frequencies. The "A" weighting scale, expressed as dBA, is widely used in environmental work because it most nearly matches the non-linear nature of human hearing.

The measurement that is most commonly used to express dBA levels for traffic noise is the Hourly Equivalent Sound Level [$L_{eq}(h)$]. The $L_{eq}(h)$ describes a noise-sensitive receptor's cumulative exposure from all noise-producing events over a 1-hour period.

Traffic noise studies for road projects in Indiana are performed in accordance with 23 CFR 772 and INDOT's *Traffic Noise Analysis Procedure.* There are five main steps comprising traffic noise studies:

1. Identify noise sensitive receptors,
2. Determine existing ambient peak noise levels,
3. Predict future peak noise levels,
4. Identify traffic noise impacts, and
5. Evaluate mitigation measures for sensitive receptors where traffic noise impacts occur.

Noise levels were predicted for the outdoor living areas at each sensitive receptor using the worst traffic conditions likely to occur on a regular basis during the design year. Future noise levels predicted for the project area are included on Table C in Appendix C.

According to the INDOT *Traffic Noise Analysis Procedure*, a traffic noise impact occurs when either of the following conditions results at a sensitive receptor:

- The future predicted $L_{eq}(h)$ noise level either approaches (is within 1 dBA) or exceeds the Noise Abatement Criteria (NAC) shown in Table 3.
- The future predicted $L_{eq}(h)$ noise level substantially exceeds (by 15 or more dBA) the existing $L_{eq}(h)$ noise level. Traffic-generated noise level increases of 15 dBA or more are typically associated with roadway improvements on a new alignment.

3.2 Methods for Identifying Land Uses and Selecting Noise Measurement and Modeling Locations

A field investigation was conducted to identify land uses that could be subject to traffic and construction noise impacts from the proposed project. Land uses in the project area were categorized by land use type, Activity Category as defined in Table 3, and the extent of frequent human use. Although all developed land uses are evaluated in this analysis, the focus is on locations of frequent human use that would benefit

from a lowered noise level. Accordingly, this impact analysis focuses on locations with defined outdoor activity areas, such as residential backyards and common use areas at recreational facilities.

Table 3

Noise Abatement Criteria in 23 CFR 772

Activity Category	L_{Aeq}(h)	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, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structure, radio stations, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structure, 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	–––	–––	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	–––	–––	Undeveloped lands that are not permitted.

Source: 23 CFR 772

3.3 Traffic Noise Level Prediction Methods

Traffic noise levels were predicted using FHWA TNM 2.5. Traffic noise was evaluated under design year conditions for both the Build and No-Build alternatives. The loudest hour traffic volumes, vehicle classification percentages, and traffic speeds under design-year (2035) conditions were developed for input into the traffic noise model. The loudest hour is generally characterized by free-flowing traffic at the highway design speed (i.e., Level of Service [LOS] C or better). Peak traffic volumes for the new roadway alternatives are not predicted to exceed LOS C, therefore design hour traffic volumes were used in this analysis. Hourly traffic volumes used in this study were taken from the *Traffic Volume Forecast for Interstate 69 at Campus Parkway (Exit210) and State Route 13 (Exit 214)* prepared by AECOM (April 2014).

3.4 Methods for Identifying Traffic Noise Impacts and Consideration of Abatement

Traffic noise impacts are considered to occur at receptor locations where predicted design-year noise levels are at least 15 dBA greater than existing noise levels, or where predicted design year noise levels approach or exceed the NAC for the applicable activity category. Where traffic noise impacts are identified, noise abatement must be considered for reasonableness and feasibility as required by 23 CFR 772 and the INDOT *Traffic Noise Analysis Procedure.*

According to the INDOT *Traffic Noise Analysis Procedure,* abatement measures are considered acoustically feasible if a minimum noise reduction of 5 dBA at a majority of impacted receptors is predicted with implementation of the abatement measures. Other factors that affect feasibility include topography, access requirements for driveways and ramps, presence of local cross streets, utility conflicts, other noise sources in the area, and safety considerations. The overall reasonableness of noise abatement is determined by considering factors such as:

- cost;
- absolute predicted noise levels;
- predicted future increase in noise levels;
- expected noise abatement benefits;
- achieve a 7dBA reduction for benefited first row receptors in the design year;
- build date of surrounding residential development along the highway;
- environmental impacts of abatement construction;
- opinions of affected residents;
- input from the public and local agencies; and
- social, legal, and technological factors.

Details of this evaluation are provided in Section 4.2.

4.0 FUTURE NOISE ENVIRONMENT, IMPACTS AND ABATEMENT

4.1 Future Noise Environment and Impacts

Table C in Appendix C summarizes the traffic noise modeling results for existing, No-Build and design-year conditions with and without noise barriers. As described in Section 3.3, these predictions utilize forecasted design hour traffic conditions to ensure a conservative estimate of noise levels for the loudest noise hour. The comparison to existing conditions is included in the analysis to identify traffic noise impacts under 23 CFR 772.

The results shown in Appendix C indicate that predicted traffic noise levels for the design-year conditions approach or exceed the NAC of 67 dBA $L_{eq}(h)$ for Category C land uses at three receptor locations. Therefore, traffic noise impacts are predicted to occur at activity Category C land uses within the project area. Abatement considered in this report includes a barrier evaluated where there is an impact for receptor at the wellness path and seating area near IU Saxony Hospital.

There are two additional receptors with noise impacts, which are paved trails along each side of Southeastern Parkway. However, these trails currently have a very narrow planted area (approximately 3 feet wide with a slight downslope) between them and the existing roadway, as well as access points for road crossing at the intersections. The scope of work for the project includes realigning these trails directly to the curb face of the proposed roadway with access points at the intersections. INDOT's *Traffic Noise Analysis Procedure* states that 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. Noise barriers also require long, uninterrupted segments of barrier to be feasible. If there are existing access points and/or driveways, it is not feasible to construct effective noise barriers for the roadway. Since these locations do not meet INDOT's requirements for engineering feasibility, no barriers were evaluated for the two trail receptors along Southeastern Parkway.

As shown in Appendix A, undeveloped areas adjacent to the corridor are predicted to approach or exceed the NAC for potential future Activity Category B land uses based on the 66 dBA contour line.

4.2 Noise Abatement Analysis

In accordance with 23 CFR 772, noise abatement is considered where noise impacts are predicted in areas of frequent human use that would benefit from a lowered noise level. Potential noise abatement measures include the following:

- avoiding the impact by using design alternatives, such as altering the horizontal and vertical alignment of the project;
- construction of noise barriers;
- acquiring property to serve as a buffer zone;
- using traffic management measures to regulate types of vehicles and speeds; and
- acoustically insulating public-use or nonprofit institutional structures.

Alteration of the roadway geometry would not be feasible. The preferred alternative has been developed to best meet the transportation need of the corridor while minimizing impacts to the immediate area and meeting the purpose of the project. Horizontal geometry changes significant enough to effect noise levels at receiver locations would require numerous relocations and is not a practical alternative. Thus any changes to these alignments would be limited, and have only minimal effects on sound levels.

Noise barriers placed along roadways on state-owned right-of way can effectively shield locations from traffic-related noise. A barrier's feasibility is based on its acoustic effectiveness, which depends on the area's geometry, the barrier's configuration, and the effects of other (unblocked) noise sources. Noise barriers were evaluated, and the results are described below.

Vacant or undeveloped property may be acquired to provide a buffer zone from noise generating facilities. However, there is no vacant land in the study area that, if acquired, would provide effective abatement as a buffer zone.

Traffic management measures would not be effective for this project. Traffic management measures that could reduce sound levels include "traffic calming" actions, such as reducing volumes, especially truck volumes, or travel speeds. Such measures are not consistent with the transportation needs in the area or purpose of the project.

Insulation of public structures and nonprofit institutions is not relevant, since there are no public-use or nonprofit institutional structures impacted by the project. Interior noise levels at public-use or nonprofit institutional structures are not anticipated to be above interior NAC levels.

All of these abatement options have been considered. However, because of the configuration and location of the project, noise barriers are the only abatement suited for this project.

Feasibility of Abatement

Feasibility analysis deals with engineering considerations to determine if a particular form of abatement can actually have an effect on the traffic noise levels at a receiver. It also takes into account such considerations as topography, drainage, safety, and access/maintenance needs (which may include right-of-way considerations). To be feasible, an abatement measure must meet or exceed a 5 dBA 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.

Reasonableness of Abatement

Reasonable means that INDOT believes abatement of traffic noise impacts is prudent based on consideration of the following factors:

1. Consideration and Obtaining Views of Residents and Property Owners
   Consideration of noise barriers can cause conflicts in mixed-use developments, as barriers to protect residences may block line of sight to adjacent businesses. If a barrier is proposed directly adjacent to the property line of a business, the business will be solicited for input to determine whether they have any concerns about line of sight. If a mutually satisfactory compromise cannot be reached between business(es) and residences, barriers may be terminated at the property line dividing the two areas. These conflicts can be minimized by noise-compatible planning.

2. Cost-effectiveness
   To determine cost-effectiveness, the estimated cost of constructing a noise barrier (including installation and additional necessary construction such as foundations or guardrail) will be divided among the number of benefited receptors (those who would receive a reduction of at least 5 dBA). A cost of $25,000 or less per benefited receptor is considered to be "cost-effective". Development in which a majority (more than 50%) of the receptors was in place prior to initial construction of the roadway in its current state (functional classification) will receive additional consideration for noise abatement. The cost-effectiveness criteria to be used for these cases will be 20% greater (currently $30,000 per benefited receptor). INDOT is currently evaluating other methods of addressing complaints about traffic noise beyond traditional noise barriers. If this study identifies viable alternatives to barriers, the policy will be amended to provide additional flexibility accordingly.

   Placing noise barriers on structures creates additional challenges, since reinforcement of the structure may be necessary to support the increased load. In these situations, other options should be assessed to determine whether cost-effective abatement can be provided without requiring complicated and expensive structural modifications. These could include lighter-weight barriers,

shorter barriers, or other considerations. Any variations will be worked out in coordination between the FHWA division office and INDOT's Offices of Structural Services, Environmental Services and Construction Management.

3. INDOT Design Goal For Noise Abatement
   INDOT's goal for substantial noise reduction is to provide at least a 7 dBA 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 INDOT is 7 dBA for a majority (greater than 50%) of the impacted first row receptors.

One noise barrier was analyzed for feasibility based on achievable noise reduction and engineering considerations. The noise barrier was found to be acoustically feasible, since the impacted receptor received a 5 dBA noise reduction. It also met the INDOT design goal of a 7 dBA reduction. However, the cost of the barrier for one benefited receptor exceeds the cost-effectiveness criterion of $25,000. Table 4 summarizes the barrier analyzed.

Table 4

Analyzed Noise Barrier

Barrier ID	Min. Height (ft)	Max Height (ft)	Total Length (ft)	Estimated Total Cost	Benefited Receptors	Estimated Cost per Benefited Receptor	Cost-Effectiveness Criterion per Benefited Receptor
1	14	20	800	$413,896	1	$413,896	$25,000

5.0 CONSTRUCTION NOISE

During construction of the project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction.

Table 5 summarizes noise levels produced by construction equipment that is commonly used on roadway construction projects. Construction equipment is expected to generate noise levels ranging from 70 to 90 dBA at a distance of 50 feet, and noise produced by construction equipment would be reduced over distance at a rate of approximately 6 dBA per doubling of distance.

Table 5

Construction Equipment Noise

Equipment	Maximum Noise Level (dBA at 50 feet)
Scrapers	89
Bulldozers	85
Heavy Trucks	88
Backhoe	80
Pneumatic Tools	85
Concrete Pump	82

Source: U.S. Environmental Protection Agency 1971.

No adverse noise impacts from construction are anticipated because construction noise would be short-term and intermittent. Measures to minimize the temporary impacts will include requiring equipment to have sound-control devices that are no less effective than those provided on the original equipment and requiring all equipment to be muffled.

6.0 PUBLIC INVOLVEMENT

Since the barrier evaluated for this study is not cost-effective, no benefited properties will be sought and no further public involvement regarding noise impacts will be required for this project.

7.0 STATEMENT OF LIKELIHOOD

Based on the studies thus far accomplished, the State of Indiana has not identified any locations where noise abatement is likely. Noise abatement at these locations is based upon preliminary design costs and design criteria. Noise abatement has not been found to be reasonable based on the cost-effectiveness criteria. A reevaluation of the noise analysis will occur during final design. If during final design it is 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 will be made upon the completion of the project's final design.

8.0 CONCLUSIONS AND RECOMMENDATIONS

Based on this evaluation, no barriers were identified for this project that were reasonable based upon the cost-effectiveness criterion.

9.0 REFERENCES

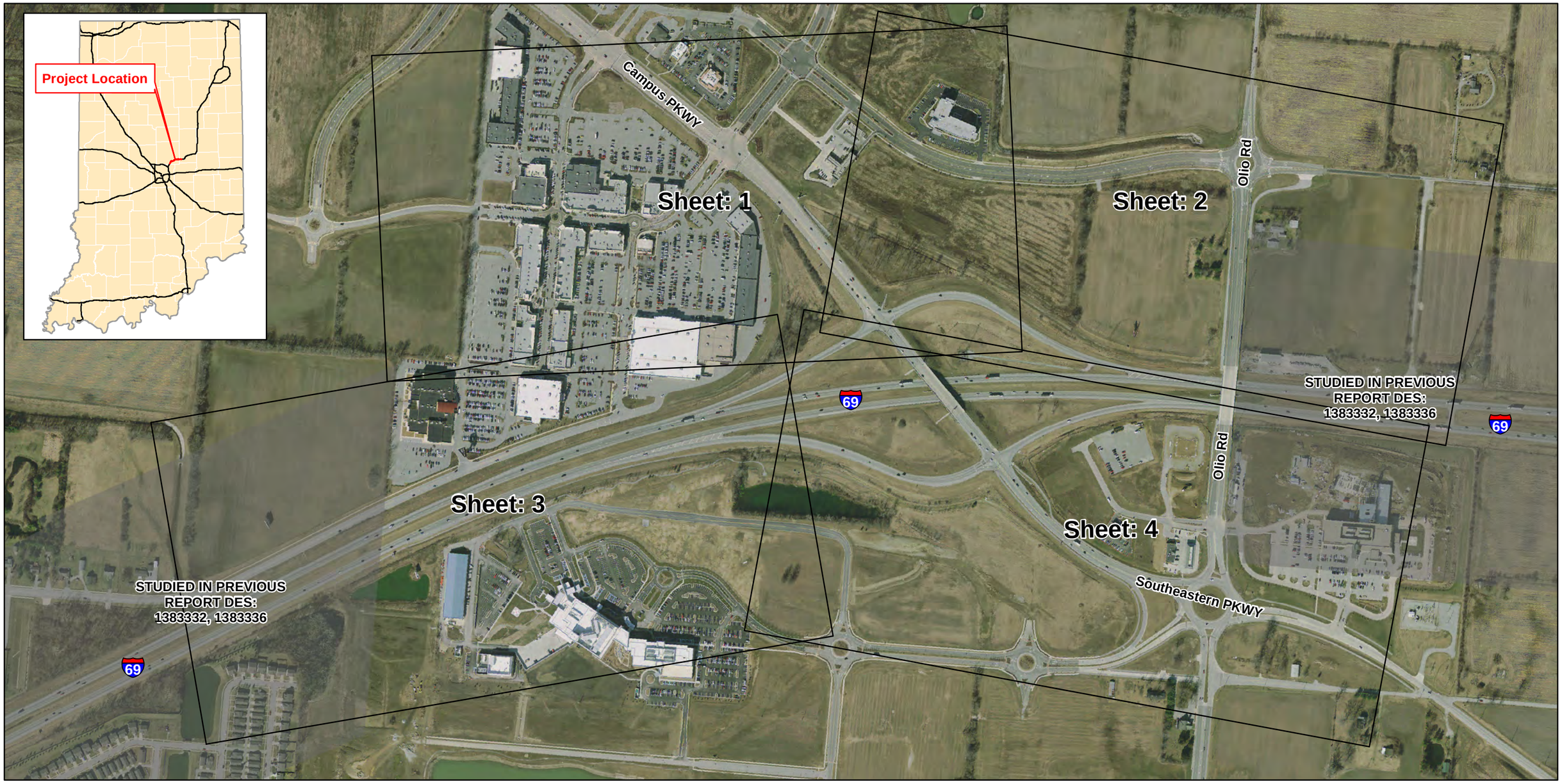
23 CFR 772 (2011). "Procedures for Abatement of Highway Traffic Noise and Construction Noise." Accessed August 4, 2014.

INDOT 2011. "*Indiana Department of Transportation Traffic Noise Analysis Procedure" Office of Environmental Services.*

AECOM April 2014. "*Traffic Volume Forecast: Interstate 69 at Campus Parkway (Exit 210) and State Route 13 (Exit 214)*"

U.S. Environmental Protection Agency, "Noise from Construction Equipment and Operations, Building Equipment and Home Appliances," NTID300.1, December 31, 1971.

Appendix A
Noise Measurement and Model Location Figures



ESRI Map Projection: NAD 1983 StatePlane Indiana East FIPS 1301 Feet Datum: NAD 1983

N

1 inch = 500 feet

Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

Appendix A: Index
Measurment and Modeling Locations

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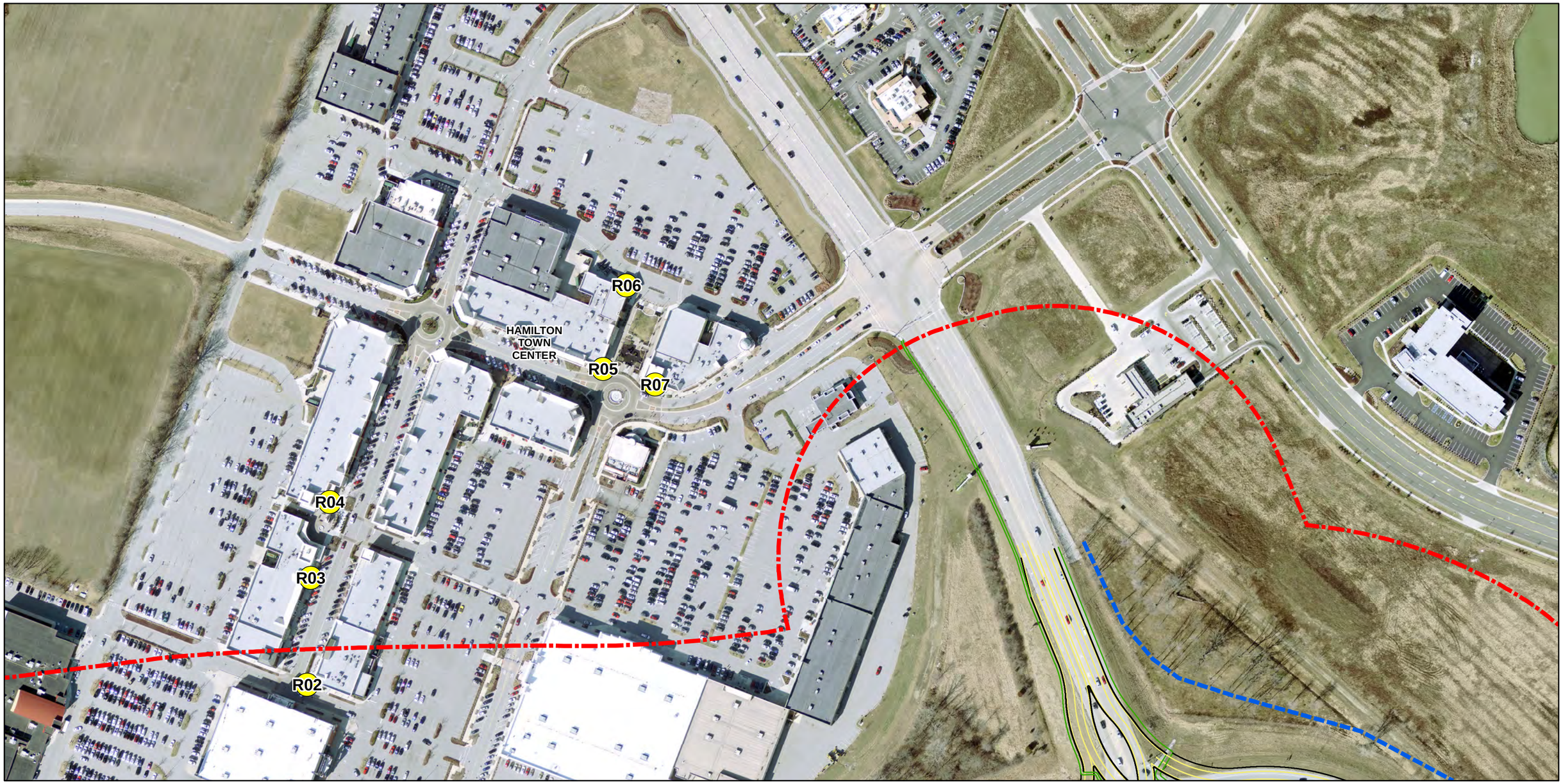

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Legend

- Noise Measurement Locations
- Receptors
- Proposed Trail
- 66 dBA Contour
- 500' Study Corridor

N

1 inch = 200 feet

Sources:

Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library

Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

Appendix A
Measurment and Modeling Locations
Page 1 of 4

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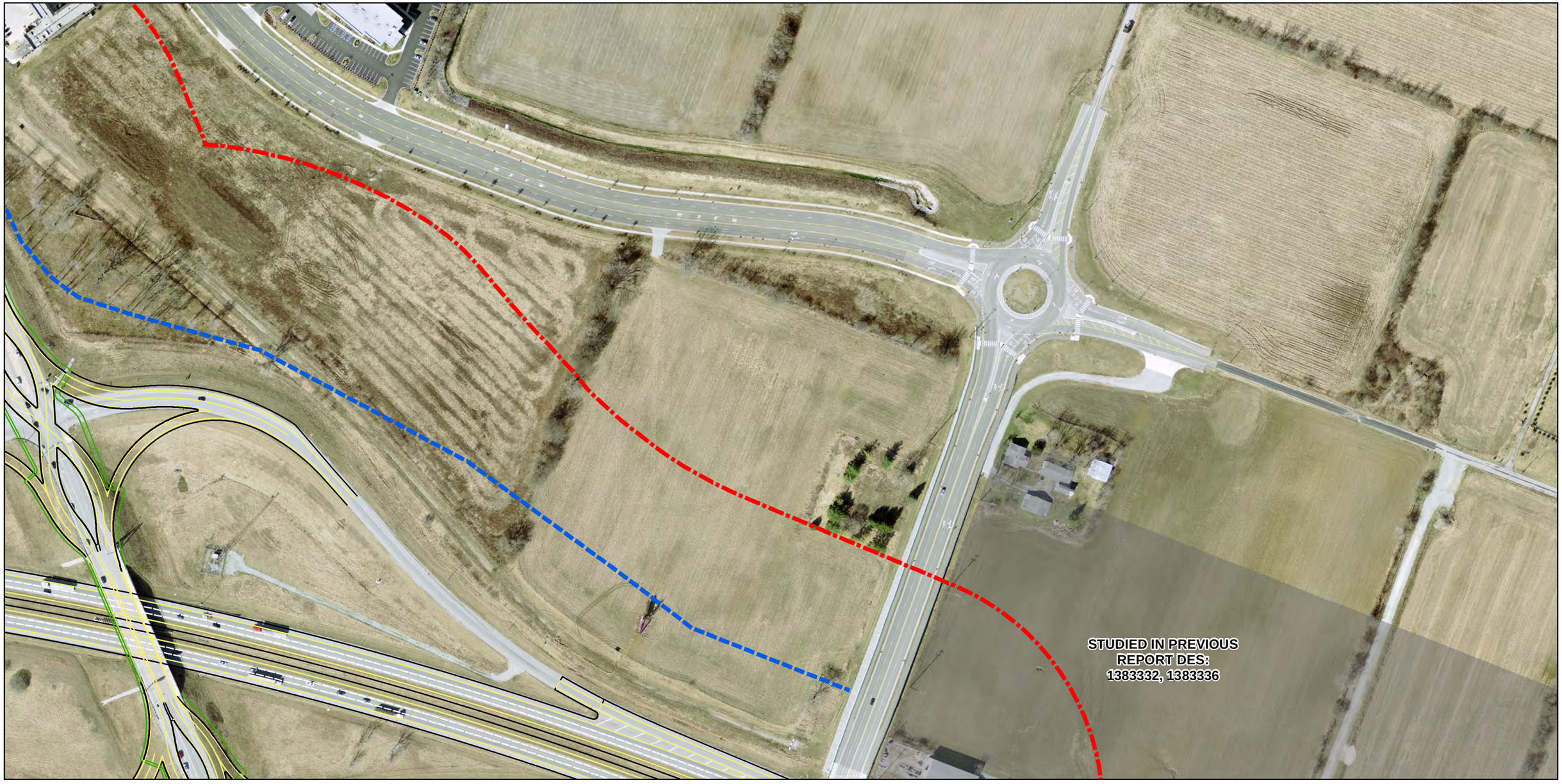

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- Noise Measurement Locations
- Receptors
- Proposed Trail
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1 inch = 200 feet

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Appendix A
Measurment and Modeling Locations
Page 2 of 4

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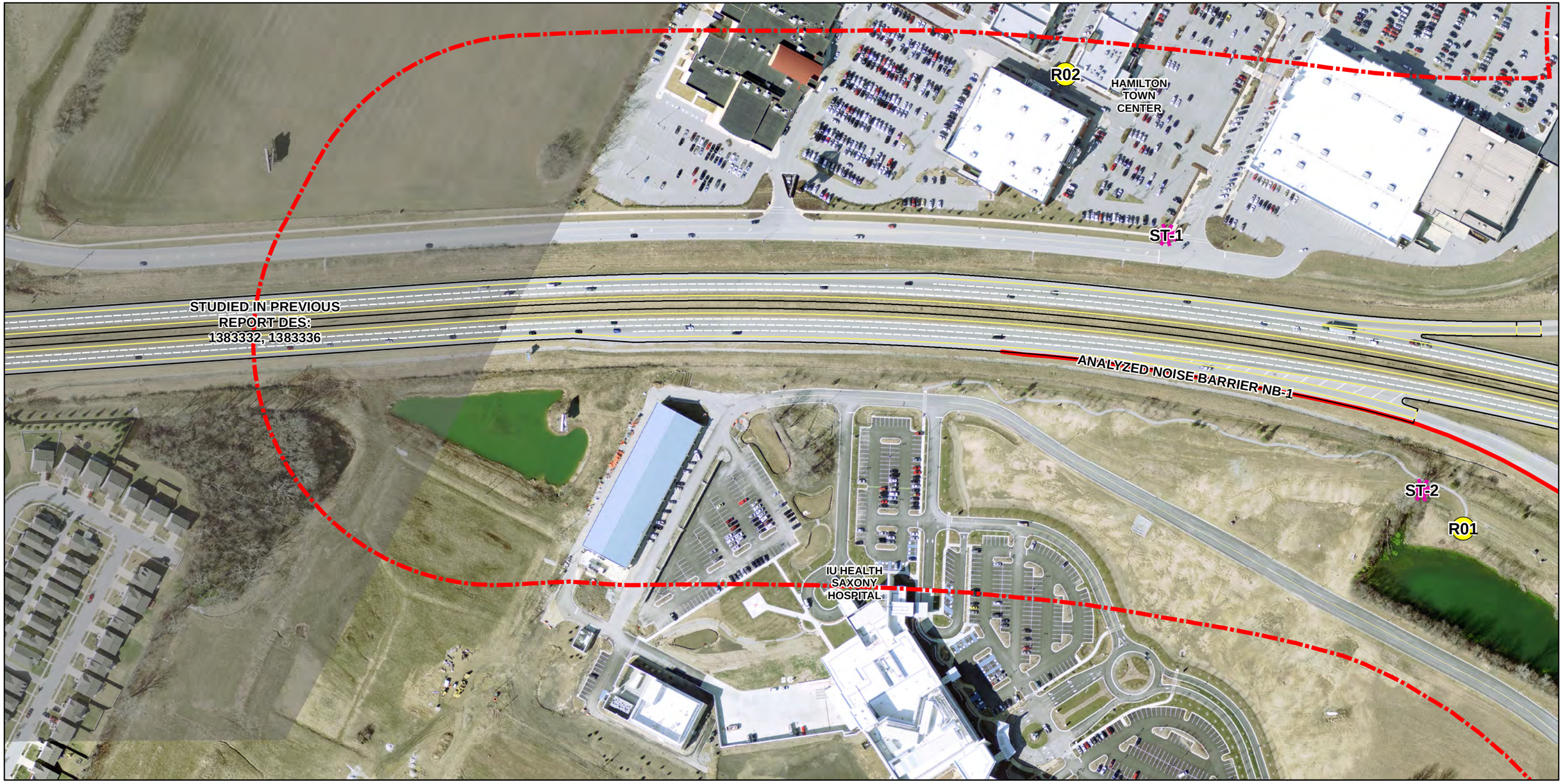

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- Noise Measurement Locations
- Receptors
- Proposed Trail
- 66 dBA Contour
- 500' Study Corridor

1 inch = 200 feet

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Appendix A
Measurment and Modeling Locations
Page 3 of 4

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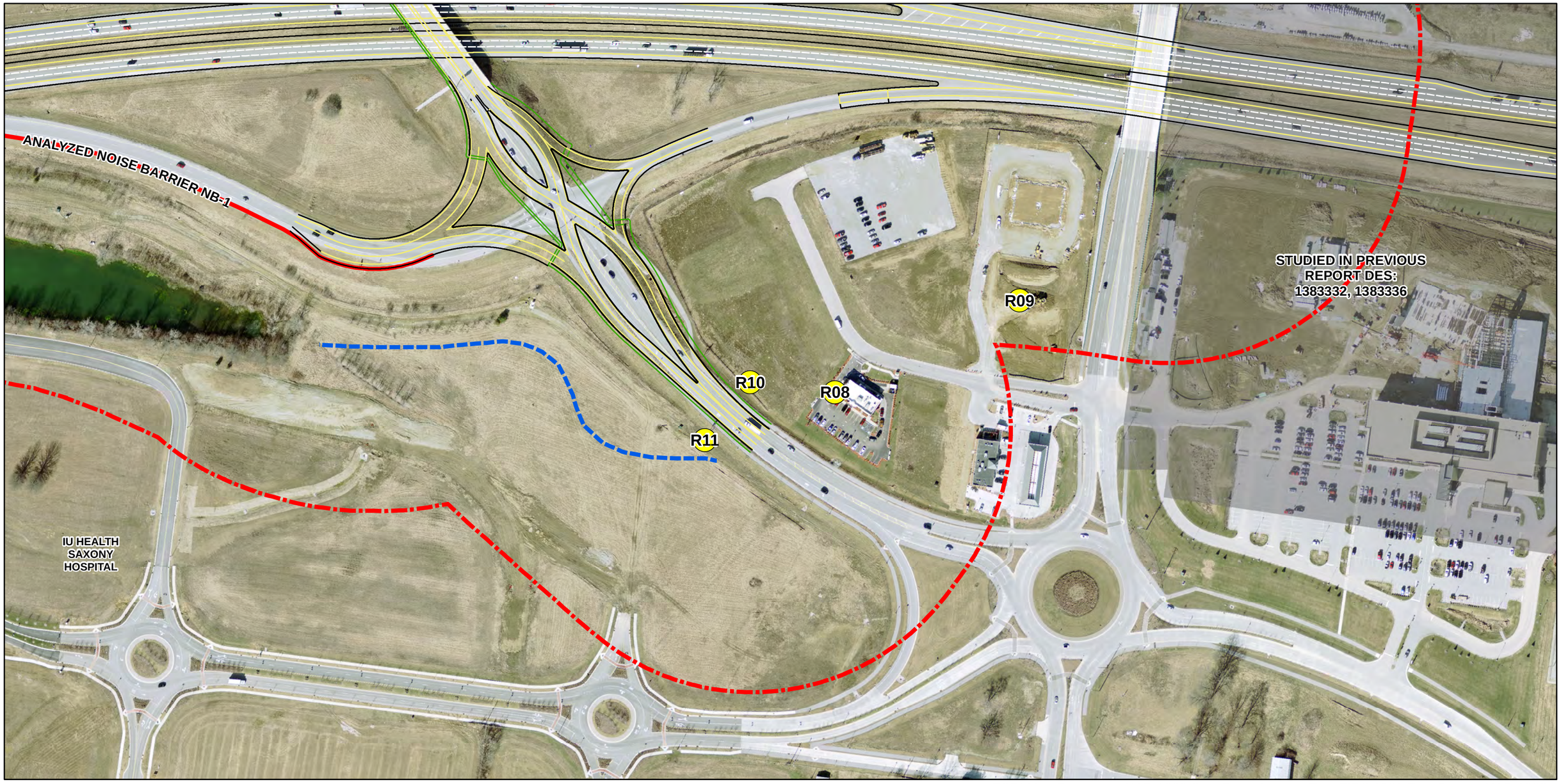
INDIANA DEPARTMENT OF TRANSPORTATION INDOT



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Legend

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Appendix A
Measurment and Modeling Locations
Page 4 of 4

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INDIANA DEPARTMENT OF TRANSPORTATION

Appendix B
Identification of Receptors

Table B - Identification of Receptors

Receptor ID	Address	City	Zip Code	Land Use	Activity Category	NAC level	Number of Dwelling Units
R01	13000 East 136th Street	Fishers	46037	Hospital	C	67	1
R02	13904 Town Center Blvd	Noblesville	46060	Commercial	E	72	1
R03	13901 Town Center Boulevard	Noblesville	46060	Commercial	E	72	1
R04	13971 Town Center Boulevard	Noblesville	46060	Commercial	E	72	1
R05	13170 Harrell Parkway	Noblesville	46060	Commercial	E	72	1
R06	13230 Harrell Parkway	Noblesville	46060	Commercial	E	72	1
R07	13193 Levinson Lane	Noblesville	46060	Commercial	E	72	1
R08	13844 Olivia Way	Fishers	46037	Commercial	E	72	1
R09	13647 Olivia Way	Fishers	46037	Commercial	E	72	1
R10	Trail along eastbound Southeastern Parkway	Fishers	46037	Recreational	C	67	1
R11	Trail along westbound Southeastern Parkway	Fishers	46037	Recreational	C	67	1

Appendix C
Predicted Noise Levels

Table C - Predicted Noise Levels - NSA 10

Receptor ID	Noise Abatement Criteria	Representative Dwelling Units	Existing Noise Level	No-Build Noise Level	Build Alternative Level w/o Barrier	Barrier ID	Build Alternative Level with Barrier	Noise Barrier Reduction	First Row Receptor (Y/N)	Benefited Receptor (Y/N)	Impact Type A/E=Approaching or Exceeding
R01	67	1	67	68	68	NB 1	61	7	Y	Y	A/E
R02	72	1	62	64	64	N/A	-	-	N	N	None
R03	72	1	59	60	61	N/A	-	-	N	N	None
R04	72	1	57	58	59	N/A	-	-	N	N	None
R05	72	1	55	56	56	N/A	-	-	N	N	None
R06	72	1	54	55	55	N/A	-	-	N	N	None
R07	72	1	55	56	57	N/A	-	-	N	N	None
R08	72	1	64	64	62	N/A	-	-	N	N	None
R09	72	1	65	65	65	N/A	-	-	N	N	None
R10	67	1	74	74	70	N/A	-	-	N	N	A/E
R11	67	1	77	77	75	N/A	-	-	N	N	A/E

Appendix D
Noise Barrier Reasonableness Analysis Worksheet

Table D - Noise Barrier Reasonableness Analysis Worksheet

Barrier #	Percentage of First Row Receptors which Receive 7dBA or Greater Noise Reduction (%)	Percentage of Impacted Receptors which Receive 5dBA or Greater Noise Reduction (%)	Existing Noise Levels Leq(H) dBA	Range of Future Noise Levels		Barrier Characteristics						# of D/Us Attenuated (Min 5dBA)	Cost/Unit	Noise Barrier Effectiveness			Feasible and Reasonable
				W/O Barriers Leq(dBA)	Barrier Leq(dBA)	Noise Reduction (dBA)	Length (ft)	Height (range)	Height (ft Average)	Total Barrier Area(sw ft)	Cost[1]			Design Goal Achieved[2]	Acoustic Feasibility Achieved [3]	Cost -Effectiveness Criterion Achieved [4]	
1	100	100	67.0	67.9	60.9	7.0	800	14-20	17.25	13,797	$413,896	1	$413,896	Y	Y	N	N

Notes:

[1] Estimated cost of the barriers is based on the surface area cost of $30 per square foot of barrier wall.

[2] The INDOT design goal is a 7 dBA noise reduction for a majority (greater than 50%) of benefitted first row receptors.

[3] Acoustic effectiveness of a barrier was judged by providing a noise reduction of 5 dBA or greater at 50 percent or more of the impacted receptors.

[4] Cost-effectiveness criterion was based on INDOT unit cost of $25,000 per benefiting receptor.

Appendix E
Traffic Data

Table E - Traffic Data for Existing, No-Build, and Build Conditions

Segment	Number of Lanes	Loudest Hour Volume (DHV)	Auto (per lane)		Heavy Trucks (per lane)		Speed* (AT/HT)
			%	Volume	%	Volume	
Existing							
I-69, South of SR 238/Campus Parkway	4	4,369	86	939	14	153	68/59
I-69, North of SR 238/Campus Parkway	4	4,451	95	1,057	5	56	73/60
I-69 Northbound to Campus Parkway	1	1,167	98	1,039	2	32	55/50
I-69 Southbound to Campus Parkway	1	601	98	589	2	12	55/50
Campus Parkway to I-69 Northbound	1	589	98	524	2	16	55/50
Campus Parkway to I-69 Southbound	1	1,071	98	1,050	2	21	55/50
No-Build							
I-69, South of SR 238/Campus Parkway	4	5,870	86	1,262	14	205	68/59
I-69, North of SR 238/Campus Parkway	4	5,295	95	1,258	5	66	73/60
I-69 Northbound to Campus Parkway	1	1,650	98	1,634	2	17	55/50
I-69 Southbound to Campus Parkway	1	800	98	784	2	16	55/50
Campus Parkway to I-69 Northbound	1	800	98	784	2	16	55/50
Campus Parkway to I-69 Southbound	1	1,430	98	1,401	2	29	55/50
Build							
I-69, South of SR 238/Campus Parkway	6	5,870	86	841	14	137	68/59
I-69, North of SR 238/Campus Parkway	6	5,295	95	838	5	44	73/60
I-69 Northbound to Campus Parkway	1	1,650	98	1,634	2	17	55/50
I-69 Southbound to Campus Parkway	1	800	98	784	2	16	55/50
Campus Parkway to I-69 Northbound	1	800	98	784	2	16	55/50
Campus Parkway to I-69 Southbound	1	1,430	98	1,401	2	29	55/50

*Speeds used were observed based on an average of three drive through of the corridor while maintaining the average speed of the flow of traffic.

Appendix F1
Existing TNM Data Tables

PTG 7 January 2015
RJC TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I69_Hamilton_County
RUN: NSA_10 Existing
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
R01	2	1	0.0	67.0	66	67.0	10	Snd Lvl	67.0	0.0	8	-8.0
R02	3	1	0.0	62.4	66	62.4	10	----	62.4	0.0	8	-8.0
R03	4	1	0.0	59.0	66	59.0	10	----	59.0	0.0	8	-8.0
R04	5	1	0.0	56.9	66	56.9	10	----	56.9	0.0	8	-8.0
R05	6	1	0.0	54.6	66	54.6	10	----	54.6	0.0	8	-8.0
R06	7	1	0.0	54.0	66	54.0	10	----	54.0	0.0	8	-8.0
R07	8	1	0.0	55.2	66	55.2	10	----	55.2	0.0	8	-8.0
R08	9	1	0.0	64.1	66	64.1	10	----	64.1	0.0	8	-8.0
R09	10	1	0.0	64.5	66	64.5	10	----	64.5	0.0	8	-8.0
R10	12	1	0.0	74.4	66	74.4	10	Snd Lvl	74.4	0.0	8	-8.0
R11	14	1	0.0	77.1	66	77.1	10	Snd Lvl	77.1	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	11	0.0	0.0	0.0
All Impacted	3	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Appendix F2
No-Build TNM Data Tables

PTG 7 January 2015
RJC TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I69_Hamilton_County
RUN: NSA 10_Nobuild
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
R01	2	1	0.0	68.2	66	68.2	10	Snd Lvl	68.2	0.0	8	-8.0
R02	3	1	0.0	63.6	66	63.6	10	----	63.6	0.0	8	-8.0
R03	4	1	0.0	60.2	66	60.2	10	----	60.2	0.0	8	-8.0
R04	5	1	0.0	58.1	66	58.1	10	----	58.1	0.0	8	-8.0
R05	6	1	0.0	55.9	66	55.9	10	----	55.9	0.0	8	-8.0
R06	7	1	0.0	54.9	66	54.9	10	----	54.9	0.0	8	-8.0
R07	8	1	0.0	56.4	66	56.4	10	----	56.4	0.0	8	-8.0
R08	9	1	0.0	64.4	66	64.4	10	----	64.4	0.0	8	-8.0
R09	10	1	0.0	65.3	66	65.3	10	----	65.3	0.0	8	-8.0
R10	11	1	0.0	74.4	66	74.4	10	Snd Lvl	74.4	0.0	8	-8.0
R11	12	1	0.0	77.1	66	77.1	10	Snd Lvl	77.1	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	11	0.0	0.0	0.0
All Impacted	3	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Appendix F3
Proposed TNM Data Tables

PTG 7 January 2015
RJC TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I69_Hamilton_County
RUN: Proposed NSA_10_with barrier
BARRIER DESIGN: NB_01_rev
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	With Barrier Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Noise Reduction Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
R06	7	1	0.0	55.3	66	55.3	10	----	55.3	0.0	5	-5.0
R07	8	1	0.0	56.6	66	56.6	10	----	56.6	0.0	5	-5.0
R05	6	1	0.0	56.4	66	56.4	10	----	56.4	0.0	5	-5.0
R04	5	1	0.0	58.8	66	58.8	10	----	58.8	0.0	5	-5.0
R03	4	1	0.0	60.8	66	60.8	10	----	60.8	0.0	5	-5.0
R02	3	1	0.0	63.9	66	63.9	10	----	63.9	0.0	5	-5.0
R01	2	1	0.0	67.9	66	67.9	10	Snd Lvl	60.9	7.0	5	2.0
R11	12	1	0.0	75.2	66	75.2	10	Snd Lvl	75.2	0.0	5	-5.0
R10	11	1	0.0	70.1	66	70.1	10	Snd Lvl	70.1	0.0	5	-5.0
R08	9	1	0.0	62.3	66	62.3	10	----	62.3	0.0	5	-5.0
R09	10	1	0.0	65.4	66	65.4	10	----	65.4	0.0	5	-5.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	11	0.0	0.6	7.0
All Impacted	3	0.0	2.3	7.0
All that meet NR Goal	1	7.0	7.0	7.0

Appendix F4
TNM Barrier Descriptions

PTG				**7 January 2015**						
RJC				**TNM 2.5**						
RESULTS: BARRIER DESCRIPTIONS										
PROJECT/CONTRACT:	**I69_Hamilton_County**									
RUN:	**Proposed NSA_10_with barrier**									
BARRIER DESIGN:	**NB_01_rev**									
Barriers										
Name	**Type**	**Heights along Barrier**			**Length**	**If Wall**	**If Berm**			**Cost**
		Min	**Avg**	**Max**		**Area**	**Volume**	**Top Width**	**Run:Rise**	
		ft	ft	ft	ft	sq ft	cu yd	ft	ft:ft	$
Barrier1	W	14.00	17.25	20.00	800	13797				413896
									Total Cost:	413896

Appendix G
Sound Level Meter Calibration Records

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:	70.7	°F
Model Number:	LxT1		21.5	°C
Serial Number:	3277	Rel. Humidity:	31	%
Customer:	TMS Rental	Pressure:	999	mbars
Description:	Sound Level Meter		999	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: 4-Feb-14 Calibration Due:

Calibration Standards Used:

Manufacturer	Model	Serial Number	Cal Due	Traceability No.
Larson Davis	LDSigGen/2239	0760/0109	4/12/2014	2013-172614

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.

This calibration complies with ISO 17025 and ANSI Z540. The collective uncertainty of the Measurement Standard used does not exceed 25% of the applicable tolerance for each characteristic calibrated unless otherwise 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: Wayne Underwood Signature:

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

~ Calibration Report ~

Microphone Model: 377B02 Serial Number: 142333 Description: 1/2" Free-Field Microphone

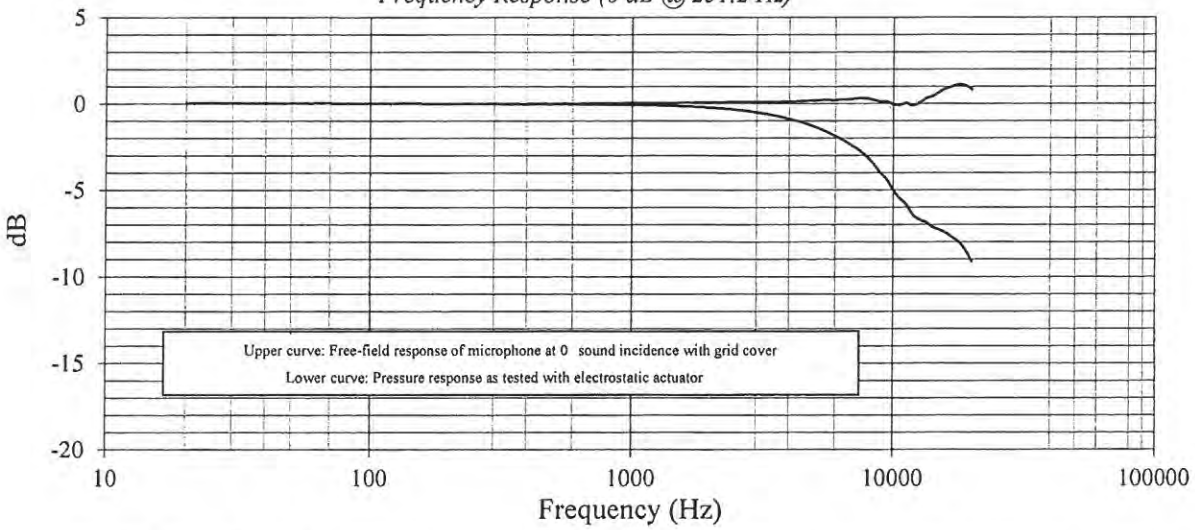
Calibration Data

Open Circuit Sensitivity @ 251.2 Hz: 47.15 mV/Pa
-26.53 dB re 1V/Pa

Polarization Voltage, External: 0 V
Capacitance: 11.5 pF

Temperature: 69 °F (21°C) Ambient Pressure: 983 mbar Relative Humidity: 26 %

Frequency Response (0 dB @ 251.2 Hz)



Freq (Hz)	Lower (dB)	Upper (dB)	Freq (Hz)	Lower (dB)	Upper (dB)	Freq (Hz)	Lower (dB)	Upper (dB)	Freq (Hz)	Lower (dB)	Upper (dB)
20.0	0.04	0.04	1584.9	-0.16	0.05	6683.4	-2.27	0.25	-	-	-
25.1	0.03	0.03	1678.8	-0.17	0.06	7079.5	-2.50	0.28	-	-	-
31.6	0.03	0.03	1778.3	-0.18	0.07	7498.9	-2.75	0.32	-	-	-
39.8	0.03	0.03	1883.7	-0.21	0.07	7943.3	-3.09	0.30	-	-	-
50.1	0.03	0.03	1995.3	-0.23	0.08	8414.0	-3.51	0.22	-	-	-
63.1	0.03	0.03	2113.5	-0.26	0.08	8912.5	-3.99	0.12	-	-	-
79.4	0.02	0.02	2238.7	-0.29	0.08	9440.6	-4.39	0.13	-	-	-
100.0	0.02	0.02	2371.4	-0.32	0.09	10000.0	-5.00	-0.05	-	-	-
125.9	0.02	0.02	2511.9	-0.36	0.10	10592.5	-5.47	-0.07	-	-	-
158.5	0.01	0.01	2660.7	-0.40	0.11	11220.2	-5.82	0.04	-	-	-
199.5	0.01	0.01	2818.4	-0.44	0.12	11885.0	-6.42	-0.10	-	-	-
251.2	0.00	0.00	2985.4	-0.50	0.12	12589.3	-6.70	0.07	-	-	-
316.2	-0.01	0.00	3162.3	-0.56	0.12	13335.2	-6.86	0.33	-	-	-
398.1	-0.01	-0.01	3349.7	-0.63	0.11	14125.4	-7.14	0.45	-	-	-
501.2	-0.02	0.02	3548.1	-0.70	0.12	14962.4	-7.28	0.69	-	-	-
631.0	-0.03	0.01	3758.4	-0.78	0.12	15848.9	-7.46	0.89	-	-	-
794.3	-0.05	0.04	3981.1	-0.87	0.13	16788.0	-7.71	1.01	-	-	-
1000.0	-0.07	0.05	4217.0	-0.97	0.14	17782.8	-7.99	1.12	-	-	-
1059.3	-0.08	0.05	4466.8	-1.08	0.15	18836.5	-8.44	1.07	-	-	-
1122.0	-0.09	0.05	4731.5	-1.20	0.17	19952.6	-9.10	0.83	-	-	-
1188.5	-0.09	0.06	5011.9	-1.34	0.19	-	-	-	-	-	-
1258.9	-0.10	0.06	5308.8	-1.49	0.21	-	-	-	-	-	-
1333.5	-0.12	0.06	5623.4	-1.66	0.22	-	-	-	-	-	-
1412.5	-0.13	0.06	5956.6	-1.86	0.21	-	-	-	-	-	-
1496.2	-0.14	0.06	6309.6	-2.05	0.24	-	-	-	-	-	-

Technician: Milton Munger MM 3646 Date: January 20, 2014

ilac-MRA A2LA ACCREDITED
CALIBRATION CERT #1882.01

PCB PIEZOTRONICS
VIBRATION DIVISION

3425 Walden Avenue, Depew, New York, 14043
TEL: 888-684-0013 FAX: 716-685-3886 www.pcb.com

ID:CAL60-347310236Z.233

~ *Certificate of Calibration and Compliance* ~

Microphone Model: 377B02 Serial Number: 142333 Manufacturer: PCB

Calibration Environmental Conditions

Environmental test conditions as printed on microphone calibration chart.

Reference Equipment

Manufacturer	Model #	Serial #	PCB Control #	Cal Date	Due Date
Hewlett Packard	34401A	MY41045214	LD-001	3/6/13	3/6/14
Bruel & Kjaer	4192	2657834	CA1270	11/26/13	11/26/14
Newport	BTH-W/N	8410668	CA1187	not required	not required
Larson Davis	PRM915	122	CA-865	9/17/13	9/17/14
Larson Davis	PRM902	4701	CA1450	10/21/13	10/21/14
Larson Davis	2559LF	3216	CA-883	not required	not required
Larson Davis	ADP005	1	LD-017	not required	not required
Larson Davis	PRM916	127	CA924	4/15/13	4/15/14
Larson Davis	CAL250	5025	CA1277	7/25/13	7/25/14
Larson Davis	2201	140	CA-1409	3/22/13	3/21/14
Larson Davis	2900	1079	CA-521A	6/4/13	6/4/14
Larson Davis	PRA951-4	234	CA1154	9/17/13	9/17/14
0	0	0	0	not required	not required
0	0	0	0	not required	not required

Frequency sweep performed with B&K UA0033 electrostatic actuator.

Condition of Unit

As Found: N/A

As Left: New unit in tolerance

Notes

1. Calibration of reference microphone is traceable through PTB.
2. This certificate shall not be reproduced, except in full, without written approval from PCB Piezotronics, Inc.
3. Calibration is performed in compliance with ISO 9001, ISO 10012-1, ANSI/NCSL Z540.3 and ISO 17025.
4. See Manufacturer's Specification Sheet for a detailed listing of performance specifications.
5. Open circuit sensitivity is measured using the insertion voltage method following procedure AT603-5.
6. Measurement uncertainty (95% confidence level with coverage factor of 2) for sensitivity is +/-0.20 dB.
7. Unit calibrated per ACS-20.

Technician: Milton Munger MM 3646 Date: January 20, 2014

ilac-MRA A2LA ACCREDITED CALIBRATION CERT #1562.01

PCB PIEZOTRONICS VIBRATION DIVISION
3425 Walden Avenue, Depew, New York, 14043
TEL: 888-684-0013 FAX: 716-685-3886 www.pcb.com

ID:CAL60-347310236233

THE MODAL SHOP INC.
A PCB GROUP CO.

~Calibration Certificate~

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

Manufacturer:	Larson Davis	Asset ID:	39309
Model:	CAL200	Calibration Date:	Sep 10, 2014 14:55:59
Serial Number:	6792	Due Date:	
Description:	Acoustic Calibrator	Technician:	Wayne Underwood
Customer:	TMS Rental	Approval:	

Calibration Results:

Measured SPL : 93.82 dB re. 20µPa	Humidity:	52.40%
Measured Frequency : 1,000.00 Hz	Pressure:	990.6 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: 0.3 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 upon its return to the customer.

This calibration is traceable through : 683/281794-12

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	77606	9/16/2013	9/16/2014

THE MODAL SHOP INC
A PCB GROUP CO.

~Calibration Certificate~

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

Manufacturer:	Larson Davis	Asset ID:	39309
Model:	CAL200	Calibration Date:	Sep 10, 2014 14:58:40
Serial Number:	6792	Due Date:	
Description:	Acoustic Calibrator	Technician:	Wayne Underwood
Customer:	TMS Rental	Approval:	

Calibration Results:

Measured SPL : 113.85 dB re. 20µPa	Temperature:	22 °C (72 °F)
Measured Frequency : 1,000.00 Hz	Humidity:	52.40%
	Pressure:	990.6 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: 0.3 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 upon its return to the customer.

This calibration is traceable through : 683/281794-12

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	77606	9/16/2013	9/16/2014

Appendix H
Field Survey Forms and Photo Log

FIELD SURVEY FORM

PROJECT: Exit 210 Interchange Mod		ENGINEER: R. Connelly W. Kimmon	DATE: 11/10/14
MEASUREMENT ADDRESS: Dicks 13157 Norvell Ln	CITY: Noblesville IN	☐ Single-Family ☐ Multi-Family ☐ Recreational ☒ Commercial	SITE NO.: ST-01

SOUND LEVEL METER:	MICROPHONE:	PRE AMP:	NOTES:
☐ LD-870 ☐ LD-820	☐ NON-POLAR ☐ POLARIZED	☐ LD-900	SYSTEM PWR: ☐ BAT ☐ AC
☐ LD-824 ☐ LD-812	☒ 1/2-INCH ☒ FREEFIELD	☐ LD-828	(observations at start of measurement)
☐ B&K-2250 ☒ LxT1	☐ 1-INCH ☐ RANDOM	☒ PRMLxT1	TEMP: 60.5 °F R.H.: 42 %
SERIAL #: 3277	SERIAL #: 142333	SERIAL #: 25010	WIND SPEED: 8.9 MPH

CALIBRATOR:	Freq, Hz.	CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time	
☐ LD CA250	☐ 250	Before	94.0 / 94.0 / /
☐ B&K 4231	☐ 1000	After	94.0 / 93.9 / /
S/N 6792	☒ CAL200		

TOWARD (DIR): N

SKIES: Clear

CAMERA

PHOTO NOs.

METER SETTINGS:
☐ A-WTD ☐ LINEAR ☐ SLOW ☐ 1/1 OCT ☐ INTERVALS _____- MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES: 43 AT on Hoard drive

Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar

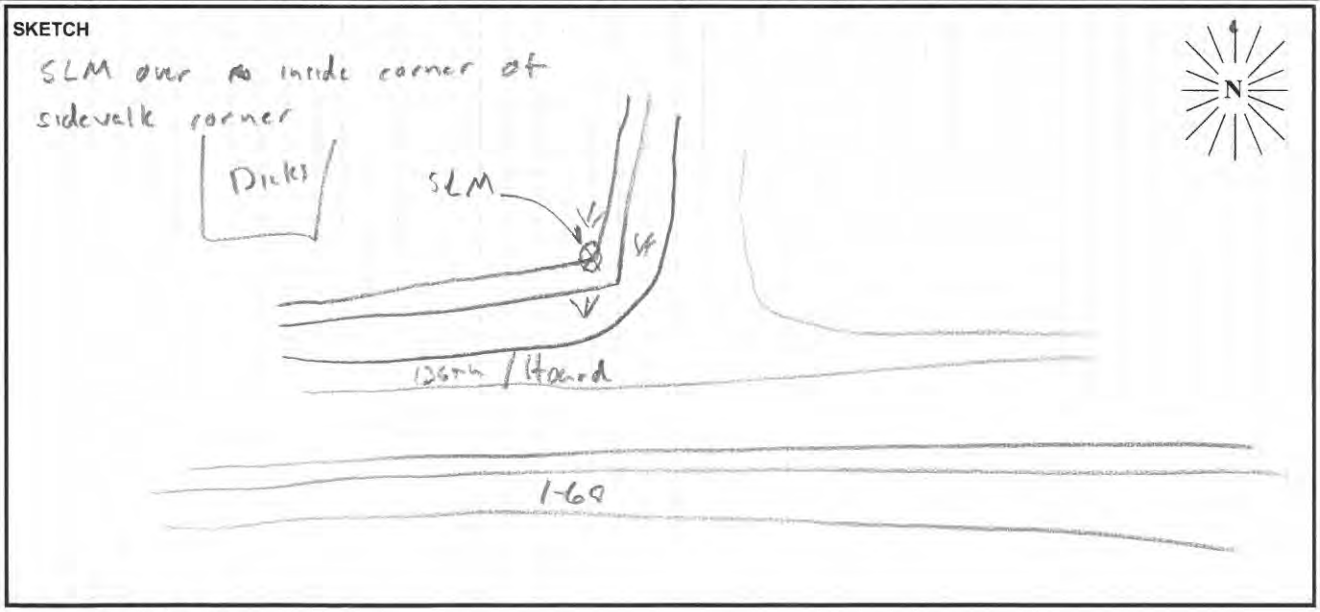
Counts

	AT	MT	HT
NB	479	6	147
SB	603	13	93

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
11/10/14	14:54	15:14									73.6	

SKETCH



PARSONS

Photo 1: Dicks Sporting Goods, 13157 Norell Ln, Site No. ST-01, Facing North

Photo 2: Dicks Sporting Goods, 13157 Norell Ln, Site No. ST-01, Facing East

Photo 3: Dicks Sporting Goods, 13157 Norell Ln, Site No. ST-01, Facing West

Photo 4: Dicks Sporting Goods, 13157 Norell Ln, Site No. ST-01, Facing South

FIELD SURVEY FORM

PROJECT: Exit 210 Interchange Mod		ENGINEER: R Connell, L. Kimmon	DATE: 11/10/14
MEASUREMENT ADDRESS: Wellness Path 13000 E 136th Street (IU Saxony)	CITY: Fishers	☐ Single-Family ☐ Multi-Family ☐ Recreational ☑ Commercial	SITE NO.: ST-02

SOUND LEVEL METER:	MICROPHONE:	PRE AMP:	NOTES:
☐ LD-870 ☐ LD-820	☐ WIND SCREEN	☐ LD-900	SYSTEM PWR: ☑ BAT ☐ AC
☐ LD-824 ☐ LD-812	☐ NON-POLAR ☐ POLARIZED	☐ LD-828	(observations at start of measurement)
☐ B&K-2250 ☑ Lxt 1	☑ 1/2-INCH ☑ FREEFIELD	☑ PRMLxt1	TEMP: 61.0 °F R.H.: 43 %
SERIAL #: 3277	☐ 1-INCH ☐ RANDOM	SERIAL #: 25010	WIND SPEED: 9.7 MPH
	SERIAL #: 142333		TOWARD (DIR): N

CALIBRATOR:		CALIBRATION RECORD:	SKIES: Clear
	Freq, Hz.	Input, dB / Reading, dB / Offset, dB / Time	
☐ LD CA250	☐ 250	Before 94.0 / 94.0 / ____ / 15:45	CAMERA ____
☐ B&K 4231	☐ 1000		
S/N 6792	☑ CAL2000	After 94.0 / 93.8 / ____ / 16:09	PHOTO NOs. ____

METER SETTINGS:
☐ A-WTD ☐ LINEAR ☑ SLOW ☐ 1/1 OCT ☐ INTERVALS ____ - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES: Measurement taken near Wellness path

Dist. to Center of Nearest Lane ____ ☐ Video ☐ Radar

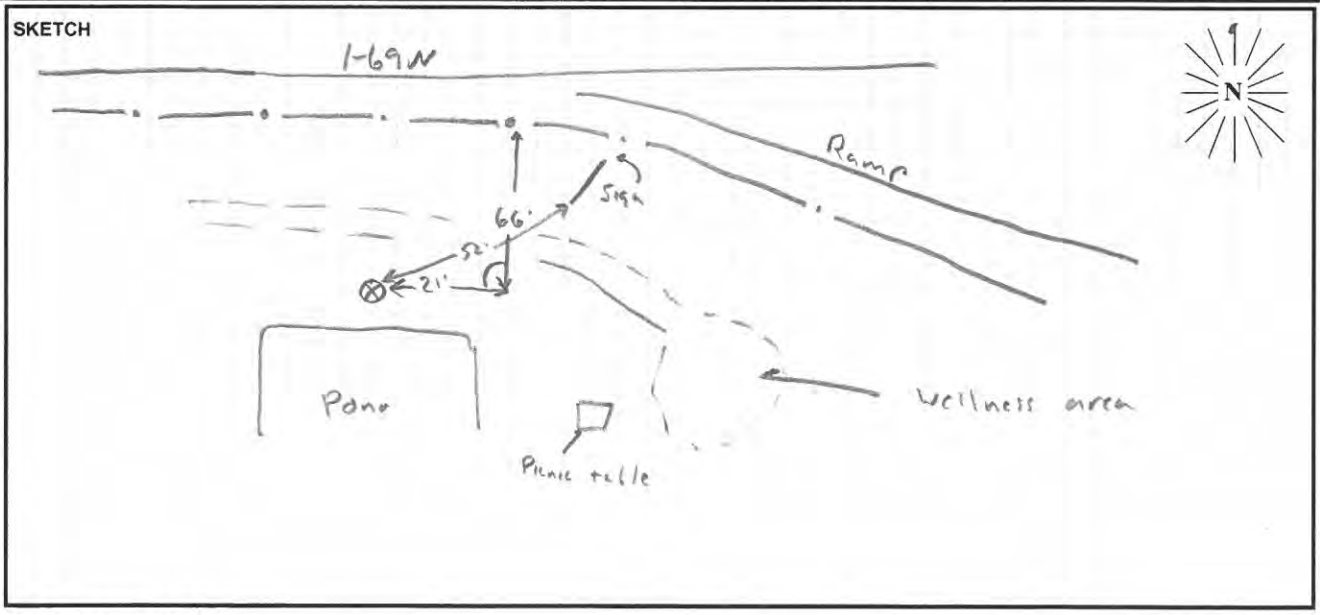
Counts

	AT	MT	HT
NB	448	2	102
SB	808	13	99

MEAS. TYPE: ☐ Long Term ☑ Short Term 20 min

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
11/10/14	15:47	16:07									66.1	

SKETCH



PARSONS

Photo 5: Wellness Path IU Saxony Hospital, 13000 E 136th St, Site No. ST-02, Facing North

Photo 6: Wellness Path IU Saxony Hospital, 13000 E 136th St, Site No. ST-02, Facing East

Photo 7: Wellness Path IU Saxony Hospital, 13000 E 136th St, Site No. ST-02, Facing West

Photo 8: Wellness Path IU Saxony Hospital, 13000 E 136th St, Site No. ST-02, Facing South

Miller, Daniel J

From: Bales, Ronald [rbales@indot.IN.gov]
Sent: Thursday, January 15, 2015 9:18 AM
To: Jones, Tony W
Cc: Giffin, Toni; Carnahan, Ben; Miller, Daniel J; Stamatis, Stephany
Subject: Des. No. 1383489, Exit 210 (Campus Parkway) Interchange Modification Project in Hamilton County (Traffic Noise Impact Analysis)

A Traffic Noise Analysis report was completed by Parsons on January 14, 2015 for the Exit 210 (Campus Parkway) Interchange Modification Project (Des. 1383489) in Hamilton County. The traffic noise analysis evaluated noise impacts and potential mitigation measures for this project.

The traffic noise analysis identified three impacted receptors in the design year (2035). A barrier would not be feasible for two of the impacted receptors, as it would not meet INDOT's engineering requirement that a barrier must have long, uninterrupted segments without access points or driveways. The barrier evaluated for the third impacted receptor was feasible but not reasonable, as it did not meet INDOT's cost-effectiveness criterion.

Therefore we are not recommending noise barriers be included in this project. A reevaluation of the noise analysis will occur during final design. If during final 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 measures will be made upon the completion of the project's final design and the public involvement processes.

This e-mail serves as approval of the traffic noise analysis report.

Please let us know if you would like to view the full report or discuss further. Thank you.

Ron Bales
Senior Environmental Manager
100 North Senate Ave., Room 642
Indianapolis, IN 46204
Office: (317) 234-4916
Email: rbales@indot.in.gov

Appendix K: Public Involvement

Page(s)
Sample Notice of Entry Letter…… 1-3

PARSONS

101 West Ohio Street, Suite 2121 • Indianapolis, Indiana 46204 • (317) 616-1000 • Fax: (317) 616-1033 • www.parsons.com

«Owner_name»
«Address»
«City», «State» «Zip»

RE: Des. Nos. 1383332, 1383336, & 1383489
I-69 Interstate Expansion
Added Travel Lanes from 106th St to 0.5 mi East of SR 13, and Interchange Modification at Exit 210 (Campus Parkway); Hamilton & Madison Counties, Indiana

Notice of Entry for Survey or Investigations

March 14, 2014

Dear Property Owner,

Our information indicates that you own property near the above proposed transportation project. Representatives of the Indiana Department of Transportation will be conducting engineering and/or environmental surveys of the project area in the near future. It may be necessary for the INDOT Representatives to enter onto your property to complete this work. This is permitted by Indiana Code § 8-23-7-26. Anyone performing this type of work has been instructed to identify him or herself to you, if you are available, before they enter your property. If you no longer own this property or it is currently occupied by someone else (i.e. rental, sharecrop), please let us know the name of the new owner or occupant so that we can contact them about the survey.

Please read the attached notice to inform you of what the "Notice of Entry for Survey or Investigation" means. The design and environmental surveys are needed for the proper planning and design of this highway project. Engineering survey work would include mapping the location of features such as trees, buildings, fences, drives, ground elevations, etc. Environmental survey work may include the identification and mapping of wetlands, architectural surveys, archaeological investigations (which may involve the survey, testing, or excavation of identified archaeological sites), and various other environmental studies. It is our sincere desire to cause you as little inconvenience as possible during this survey.

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

If any problems occur, please contact the field crew or one of the following:

Ben Carnahan, PE
Project Manager (Parsons)
101 West Ohio Street, Suite 2121
Indianapolis, IN 46204
(317) 616-1016
ben.carnahan@parsons.com

Daniel J. Miller
Sr. Environmental Planner (Parsons)
101 West Ohio Street, Suite 2121
Indianapolis, IN 46204
(317) 616-4663
daniel.j.miller@parsons.com

Linda Weintraut, Ph.D.
Weintraut & Associates, Inc.
P.O. Box 5034
Zionsville, IN 46077
(317) 733-9770
linda@weintrautinc.com

Please be aware that IC 8-23-7-27 and 28 provides that you may seek compensation from INDOT for damages occurring to your property (land or water) that result from INDOT's entry for the purposes mentioned above in IC 8-23-7-26. In this case, a basic procedure that may be followed is for you and/or an INDOT employee or representative to present an account of the damages to one of the above named INDOT staff. They will check

the information and forward it to the appropriate person at INDOT who will contact you to discuss the situation and compensation.

In the event that property damage occurs as a result of work performed during survey, the Greenfield District Real Estate Manager can provide you with a form to request compensation for damages. You may contact:

Ronald Raney
Greenfield District Real Estate Manager
32 South Broadway
Greenfield, IN 46160
(317) 467-3499
rraney@indot.in.gov

After filling out the form, you can return it to the District Real Estate Manager for consideration. Please contact the District Real Estate Manager if you have questions regarding the matter, rights, and procedures.

If you are not satisfied with the compensation that INDOT determines is owed to you, Indiana Code 8-23-7-8 provides the following:

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

Thank you in advance for your cooperation in this matter.

Sincerely,

Daniel J. Miller
Parsons, Senior Environmental Planner
101 W. Ohio St., Suite 2121
Indianapolis, IN 46204
daniel.j.miller@parsons.com

Attachment

INDIANA DEPARTMENT OF TRANSPORTATION
Driving Indiana's Economic Growth

100 North Senate Avenue
Room N642
Indianapolis, IN 46204

Michael R. Pence, Governor
Karl B. Browning, Commissioner

Indiana Department of Transportation
Notice of Entry for Survey or Investigation
Indiana Department of Transportation

If you have received a "Notice of Entry for Survey or Investigation" from INDOT or an INDOT representative, you may be wondering what it means. In the early stages of a project's development, INDOT must collect as much information as possible to ensure that sound decisions are made in designing the proposed project. Before entering onto private property to collect that data, INDOT is required to notify landowners that personnel will be in the area and may need to enter onto their property. Indiana Code, Title 8, Article 23, Chapter 7, Section 26 deals with the department's authority to enter onto any property within Indiana.

Receipt of a Notice of Entry for Survey or Investigation does not necessarily mean that INDOT will be buying property from you. It doesn't even necessarily mean that the project will involve your property at all. Since the Notice of Entry for Survey or Investigation is sent out in the very early stages and since we want to collect data within AND surrounding the project's limits more landowners are contacted than will actually fall within the eventual project limits. It may also be that your property falls within the project limits but we will not need to purchase property from you to make improvements to the roadway. Another thing to keep in mind is that when you receive a Notice of Entry for Survey or Investigation, very few specifics have been worked out and actual construction of the project may be several years in the future.

Before INDOT begins a project that requires them to purchase property from landowners, they must first offer the opportunity for a public hearing. If you were on the list of people who received a Notice of Entry for Survey or Investigation, you should also receive a notice informing you of your opportunity to request a public hearing. These notices will also be published in your local newspaper so interested individuals who are not adjacent to the project will also have the opportunity to request a public hearing. If a public hearing is to be held, INDOT will publicize the date, location, and time. INDOT will present detailed project information at the public hearing, comments will be taken from the public in spoken and written form, and question and answer sessions will be offered. Based on the feedback INDOT receives from the public, a project can be modified and improved to better serve the public.

So, if you have received a "Notice of Entry for Survey or Investigation", remember:

1. You do not need to take any action at this time. It is merely letting you know that people in orange/lime vests are going to be in your neighborhood.
2. The project is still in its very early planning stages.
3. You will be notified of your opportunity to comment on the project at a later date.