AMERICAN TRANSMISSION SYSTEMS, INCORPORATED A Subsidiary of FirstEnergy Corp.

LETTER OF NOTIFICATION

DAVIS BESSE TO HAYES 345 kV TRANSMISSION LINE CONSTRUCTION PROJECT

OPSB CASE NO. 12- $\frac{3660}{9}$ -EL-BLN

October 3, 2012

American Transmission Systems, Incorporated 76 South Main Street Akron, Ohio 44308

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LETTER OF NOTIFICATION DAVIS BESSE TO HAYES 345 kV TRANSMISSION LINE CONSTRUCTION PROJECT

The following information is being provided in accordance with the procedures delineated in Ohio Administrative Code Section 4906-11-01: <u>Letter of Notification Requirements</u> of the Rules and Regulations of the Ohio Power Siting Board.

4906-11-01 (B): Letter of Notification Requirements

4906-11-01 (B) (1) a : Name and Reference Number

Name of Project:	Davis Besse To Hayes 345 kV Transmission Line
	Construction Project ("Project")
2012 LTFR Reference:	This Project is identified on Page 137 in FirstEnergy Corp.'s
	2012 Electric Long-Term Forecast Report ("LTFR")
	submitted to the Public Utility Commission of Ohio in Case
	Number 12-0504-EL-FOR.

4906-11-01 (B) (1) b : Brief Description of Project

In this Project, American Transmission Systems, Incorporated ("ATSI"), a FirstEnergy Corp. subsidiary, is proposing to install approximately 30 miles of 954 kcmil 48/7 ACSR conductor in an existing open arm position on steel lattice towers. The project starts at the Davis Besse Substation and extends east to towards the new Hayes Substation. ATSI has proposed installation of the Hayes Substation in an application submitted to the Board on July 31, 2012 in Docket No. 11-4711-EL-BSB. That application proposes a Preferred Site and an Alternate Site for the Hayes Substation.

The proposed Project is a component of ATSI's Beaver-Davis Besse #2 345 kV Transmission Line Project. The existing Beaver-Davis Besse 345 kV Transmission Line is approximately 59.8 miles long and was designed and installed as a double circuit transmission line with only one circuit initially installed. Approximately 30

miles of existing open arm position exists along the structures at the western end of the Beaver-Davis Besse 345 kV Transmission Line, which is planned to be utilized for the Project that is the basis for this Letter of Notification. Additionally, approximately 27 miles of the Beaver-Greenfield 138 kV Transmission Line have been installed on the structures of the central portion of the Beaver-Davis Besse 345 kV Transmission Line. These conductors of the Beaver-Greenfield 138 kV Transmission Line were designed and installed for future 345 kV operation. The open arm position and the existing 345 kV designed conductor can be used as part of the proposed Beaver-Davis Besse #2 345 kV Transmission Line Project and, when combined with the open arm installation, can be used for approximately 95 percent of the proposed Beaver-Davis Besse #2 345 kV Transmission-Line Project. Creating the Beaver-Davis Besse #2 345 kV Transmission Line in this manner - by using the existing facilities to the extent possible and installing a relatively small amount of new facilities – will result in significantly reduced impacts as compared to building an entirely new transmission line. Following this plan, the installation of the proposed Beaver-Davis Besse #2 345 kV Transmission Line Project would involve the following components, described east to west along the Project's route:

- Beginning at the Beaver Substation, installation of the Beaver to Brownhelm Junction 345 kV Transmission Line Construction Project, proposed in a separate application to the Board in Docket Number 11-4248-EL-BTX. This Beaver to Brownhelm Junction 345 kV Transmission Line Construction Project involves installation of approximately three miles of new 345 kV transmission line between Beaver Substation and Brownhelm Junction. A Preferred and an Alternate route for the Beaver to Brownhelm Junction 345 kV Transmission Line Construction Project is proposed. In order to avoid having one transmission line pass above another along the Preferred Route, a significant portion of the new construction will be utilized to reposition existing 345 kV transmission line circuits. The previously used conductor of the repositioned transmission line will be used for the Beaver-Davis Besse #2 345 kV Transmission Line.
- Beginning at Brownhelm Junction, located approximately three miles south of the Beaver Substation, and extending westerly for approximately 27 miles, the 345 kV

American Transmission Systems, Incorporated Davis Besse-Hayes 345 kV Transmission Line Installation Project

designed and installed conductors of the Beaver-Greenfield 138 kV Transmission Line will be used for the Beaver-Davis Besse #2 345 kV Transmission Line. As the Board previously approved the design and installation of these conductors for 345 kV operation in Docket No. 01-0207-EL-BTX, no additional submittal to the Board is anticipated for their use as part of the Beaver-Davis Besse #2 345 kV Transmission Line Project.

- The Hayes Substation is proposed in Docket No. 11-4711-EL-BSB. This Application proposes to install the new Hayes Substation a 345 kV to 138 kV transmission substation, near the point at which the existing Beaver-Greenfield 138 kV Transmission Line leaves the Beaver-Davis Besse 345 kV Transmission Line structures. In addition to providing a new transformation source in this area, the proposed Hayes Substation will replace the Beaver Substation connection of the Beaver-Greenfield 138 kV Transmission Line.
 - The necessary transmission line connections to the Hayes Substation will be submitted to the Board via three Letter of Notification ("LON") filings. One LON will propose looping the Beaver-Davis Besse #2 345 kV Transmission Line into the Hayes Substation, creating the Beaver-Hayes and Davis Besse-Hayes 345 kV Transmission Lines. The second LON will propose extending the remaining portion of the Beaver-Greenfield 138 kV Transmission Line to the Hayes Substation, creating a Greenfield-Hayes 138 kV Transmission Line. The third LON will propose looping the nearby Avery-Greenfield 138-kV Transmission Line into the Hayes Substation, creating Avery-Hayes and Hayes-Greenfield #2 138 kV Transmission Lines. From the general area of the Hayes Substation west to the Davis Besse Substation, the remaining portion of the Beaver-Davis Besse #2 345 kV Transmission Line will be created by installing new conductors on the existing open arm position of the Beaver-Davis Besse 345 kV Transmission Line structures. This will be submitted to the Board in a LON filing that will also propose the installation of two additional transmission line structures on the Davis Besse Generating Station property. The existing steel lattice towers with the open arm position are shared with the existing Beaver-Davis Besse 345 kV Transmission Line. The existing Beaver-Davis Besse 345 kV Transmission Line occupies the south side of the existing steel lattice

towers. The open arm position that the new conductor will be installed on is the north side of the steel lattice towers. In addition, one (1) new structure will be installed at the Davis Besse Substation. Exhibits 1A-1H show the General Location of the Davis Besse-Hayes 345 kV Transmission Line Installation Project.

The Project is located in Carroll and Salem Townships, Ottawa County; Rice, Riley and Townsend Townships, Sandusky County; Margaretta and Perkins Township, Erie County, Ohio. The existing Beaver–Davis Besse 345 kV Transmission Line and the proposed Davis Besse–Hayes 345 kV Transmission Line, along with the one (1) new structure will be owned and operated by ATSI.

<u>4906-11-01 (B) (1) c : Why the Project Meets the Requirements for a Letter of</u> <u>Notification</u>

The project meets the requirements for a Letter of Notification because the project is within the types of project defined by Items (2)(b) and (4)(a) of the Application Requirement Matrix for Electric Power Transmission Lines in Appendix A of 4906-1-01 of the Ohio Administrative Code. Appendix A provides:

(2) Adding additional circuits on existing structures designed for multiple circuit use:

(b) New permanent access roads or structure replacement or widened rightof-way;

And

(4) Replacing electric power transmission line structure(s) with a different type of structure(s) or adding structure(s) within an existing electric power transmission line and:

(a) Two miles or less of new right-of-way is required.

The proposed Project installs the Davis Besse–Hayes 345 kV Transmission Line on approximately 30 miles of existing transmission towers that has an available open arm position, along with one (1) new structure.

4906-11-01 (B) (2): Need for the Project

The installation of the Beaver-Davis Besse #2 345 kV Transmission Line Project and the associated Hayes Substation is necessary to mitigate thermal overloads that arise due to west-to-east transfers of electricity through the ATSI system, and is necessary to meet PJM Interconnection's ("PJM") Load Deliverability Requirements and Generation Deliverability Requirements. The purpose of PJM's Load Deliverability Procedure is to ensure that the transmission system can deliver capacity resources to the load under peak system conditions. The purpose of PJM's Generation Deliverability Procedure is to ensure that the output of all generators in a given area can be reliably transferred to the rest of the PJM system. As explained below, the Beaver-Davis Besse #2 345 kV Transmission Project is required for ATSI to mitigate load deliverability test violations identified in PJM's 2015 RTEP ("Regional Transmission Expansion Plan") analysis, as well as PJM's 2014 RTEP retool analysis. It is also required to mitigate thermal violations identified in the PJM Generation Deliverability Procedure for two proposed generation additions – MISO H037 (which is now referred to as U2-028A AT1 in the PJM generation interconnection queue) and MISO J106 (which is now referred to as V4-039A AT3 in the PJM generation interconnection queue).

4906-11-01 (B) (3): Location Relative to Existing or Proposed Lines

The location of the Project relative to existing or proposed transmission lines is shown in the FirstEnergy System Facilities map, included as the last page of Chapter 3 of the confidential portion of the FirstEnergy Corp. 2012 Long-Term Forecast Report. This map was submitted to the PUCO in case no. 12-0504-EL-FOR under Rule 4901:5-5:04 (C) of the Ohio Administrative Code. The map is incorporated by reference only. This map shows ATSI's 345 kV and 138 kV transmission lines and transmission substations, including the location of the new Davis Besse-Hayes 345 kV Transmission Line. The project area is located approximately 4 inches (11 by 17 inch printed version) from the left edge of the map box and 8 ½ inches (11 by 17 inch printed version) from the bottom of the map box. The general location and layout of the Project is shown in Exhibits 1A-1H.

4906-11-01 (B) (4): Alternatives Considered

Alternatives considered included building a new 138 kV line from West Fremont to Greenfield (approximately 30 miles) or increasing the thermal capacity of the Lakeview-Ottawa and Greenfield-Lakeview 138 kV Transmission Lines. Due to need in-service dates the construction of a new 138 kV line from West Fremont – Hayes line is not feasible and increasing thermal capacity would require a complete rebuild of existing facilities at a significantly increased cost while not addressing the identified voltage issues.

4906-11-01 (B) (5): Construction Schedule

Construction on the project is expected to begin as early as January 1, 2013 and be completed by June 1, 2014.

4906-11-01 (B) (6): Area Map

Exhibit No. 1 depicts the General Project Location. To locate and view the project site from the Columbus, Ohio area, travel north on 1-71 for approximately 9.9 miles. Take exit 119 to merge onto I-270 toward Dayton and go approximately 2.3 miles. Take exit 23 to merge onto US-23 N/N High St toward Delaware for approximately 57 miles. Take the OH-53 N/OH-67 exit toward Upper Sandusky/Tiffin. Turn right onto OH-53 N/OH-67 E and continue to follow OH-53 N for approximately 37.9 miles. Take exit 94 for OH-19 N toward Oak Harbor. Turn right onto OH-19 S/Oak Harbor Rd and go approximately 5.8 miles. Turn left onto OH-19 N/Oak Harbor Rd and go approximately 11.1 miles. Turn right onto OH-2 E and go approximately 3 miles. The Davis Besse Substation is located on the east side of the Davis Besse Nuclear Plant property. The Project then trends south and east, following the existing transmission towers for approximately 30 miles to approximately where the existing transmission line crosses State Route 4 in Perkins Township, Erie County, Ohio.

4906-11-01 (B) (7): Property Owner List

The Project will be constructed within existing easements in an existing transmission corridor. All right of way easements are in place.

American Transmission Systems, Incorporated Davis Besse-Hayes 345 kV Transmission Line Installation Project

4906-11-01 (C): Technical Features of the Project

4906-11-01 (C) (1): Operating Characteristics

The proposed Davis Besse-Hayes 345 kV Transmission Line will have the following characteristics:

Voltage:	345 kV
Conductors:	
New-	954 kcmil 48/7 ACSR Bundled
	Conductor
Static wire:	7#8 Alumoweld
Insulators:	345 kV porcelain insulators
New Structures:	Exhibit 2 – Dead End Angle Steel structure with concrete foundation

The proposed Project will be located on the existing transmission line right-of-way with no new right-of-way to be acquired.

4906-11-01 (C) (2) a: Calculated Electric and Magnetic Fields

The following table itemizes the line loadings of the new Davis Besse-Hayes and Beaver-Davis Besse 345 kV Transmission Lines. The normal line loading represents FirstEnergy's peak system load for the transmission lines. The emergency line loading represent the maximum line loading under contingency operation. The winter rating is based on the continuous maximum conductor ratings (MCR) of the circuits and an ambient temperature of zero degrees centigrade (32 deg. F), wind speed of 1.3 miles per hour, and a circuit design operating temperature of 100 degrees centigrade (212 deg. F).

Line Name	Normal Loading Amps	Emergency Loading Amps	Winter Rating Amps
Davis Besse-Hayes 345 kV Transmission Line	537	742	2922
Beaver-Davis Besse 345 kV Transmission Line	234	625	2922

The following calculations provide an approximation of the magnetic and electric fields strengths of the proposed Davis Besse–Hayes 345 kV Transmission Line. The calculations provide an approximation of the electric and magnetic field levels based on specific assumption utilizing the EPRI EMF Workstation 2009 program software. The model utilizes the normal, emergency, and winter rating of the transmission line loop.

EMF CALCULATIONS		Electric Field kV/meter	Magnet Field mGauss	
Normal	Under Lowest Conductors	3.52	55.63	
Loading	At Right-of-Way Edges	0.83	3.80	
Emergency	Under Lowest Conductors	3.52	67.91	
Loading	At Right-of-Way Edges	0.83	4.26	
Winter	Under Lowest Conductors	3.52	77.43	
Rating	At Right-of-Way Edges	0.83	365.92	

<u>4906-11-01 (C) (2) b: EMF Discussion</u>

Background Information

Electric and magnetic fields (EMFs) are naturally occurring in the environment and can be found in the Earth's interior and in the human body. EMFs are generated essentially anywhere where there is a flow of electricity, including electrical appliances and power equipment. Electric fields are associated with the voltage of the source; magnetic fields are associated with the flow of current in a wire. The strength of these fields decreases rapidly with distance from the source. EMFs associated with electricity use are not disruptive to cells like x-rays or ultraviolet rays from the sun. EMF fields are thought to be too weak to break molecules or chemical bonds in cells. Scientists have conducted extensive research over the past two decades to determine whether EMFs are associated with adverse health effects, and although the research and debate of this issue continues, at this time there is no firm basis to conclude that EMFs cause adverse health effects nor has it been shown that levels in everyday life are harmful.

Developments

As a part of the National Energy Policy Act of 1992, the Electric and Magnetic Fields Research and Public Information Dissemination (EMF RAPID) program was initiated within the five-year effort under the National EMF Research Program. The culmination of this five-year effort resulted in a final RAPID Working Group report, which was released for public review in August 1998. The Director of the National Institute of Environmental Health Sciences (NIEHS) then prepared a final report to Congress after receiving public comments. The NIEHS' Director's final report, released to Congress on May 4, 1999, concluded that extremely low frequency electric and magnetic fields (ELF-EMF) exposure cannot be recognized at this time as entirely safe because of weak scientific evidence that exposure may pose a leukemia hazard. The Director further stated that the conclusion of this report is insufficient to warrant aggressive regulatory concern.

Sources for Additional Information

The following websites sponsored by federal agencies or other organizations provide additional information on EMF:

- Centers for Disease Control/National Institute for Occupational Safety and Health: <u>http://www.cdc.gov/niosh/topics/emf/</u>
- National Institute of Environmental Health Sciences (NIEHS) EMF Rapid Program: <u>http://www.niehs.nih.gov/health/topics/agents/emf/</u>

4906-11-01 (C) (3): Estimated Costs

The following are the estimated capital costs by FERC Accounts for the proposed project:

Acco	ount	C	ost
350	Land Rights, Engineering, Construction, etc.	\$	0
355	Poles and Fixtures	\$	500,000
356	Overhead Conductors & Devices	\$	6,900,000
	Removal	\$	0
	Total	\$	7,400,000

4906-11-01 D: Socioeconomic Data

4906-11-01 (D) (1): Land Use

The Project is located in Carroll and Salem Townships, Ottawa County; Rice, Riley and Townsend Townships, Sandusky County; Margaretta and Perkins Township, Eric County, Ohio. There are various land uses along the route of the existing transmission line. Land uses in the area of the project mostly include agricultural and use with some residential and industrial uses. As the proposed Project involves primarily installing conductors in an open arm position on an existing transmission line structure, no significant changes or impacts to the current land use is anticipated.

4906-11-01 (D) (2): Agricultural Land

Agricultural land use exists along the area of the project. Because overhead electric transmission lines largely pass above agricultural land use, they are generally compatible with agricultural land use. The installation of the new conductors on the open arm position and the one new transmission line structure will be located in an existing transmission line corridor in close proximity to existing transmission line structures. Given the nature of the project, and its close proximity to existing similar construction, agricultural land would be minimally impacted by the limited nature of installing the new conductors and two new transmission structures.

4906-11-01 (D) (3): Archaeological or Cultural Resources

The proposed transmission line is located in an existing transmission line corridor. The one new transmission line structure will also be located in the existing transmission line corridor. Given the nature of the project, it is unlikely that any archaeological or cultural resources would be disturbed by the limited nature of installing the new Davis Besse–Hayes 345 kV Transmission Line and installing new structures at the Davis Besse substation.

As part of ATSI's investigation of the project site, a search of the Ohio Historic Preservation Office (OHPO) National Register of Historic Places on-line database was conducted and did not identify the existence of any historic sites within the project area. The OHPO database includes all Ohio listings on the National Register of Historic Places, including districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture.

4906-11-01 (D) (4) a: Documentation of Letter of Notification Transmittal

This Letter of Notification is being provided concurrently to the following officials of the Carroll and Salem Townships, Ottawa County; Rice, Riley and Townsend Townships, Sandusky County; Margaretta and Perkins Township, Erie County, Ohio.

Ottawa County

The Honorable James. M. Sass Ottawa County Commissioner 315 Madison Street Room 103 Port Clinton, OH 43452

The Honorable Steven M. Arndt Ottawa County Commissioner 315 Madison Street Room 103 Port Clinton, OH 43452

Ottawa County Regional Planning Commission 315 Madison Street Room 107 Port Clinton, OH 43452

Carroll Township

Mr. Donald L. St. Clair, Chair Carroll Township Trustees 11080 W. Toussant East Road Oak Harbor, OH 43449

Mr. John S. Verb Carroll Township Trustee 11080 W. Toussant East Road Oak Harbor, OH 43449 The Honorable Mark Stahl Ottawa County Commissioner 315 Madison Street Room 103 Port Clinton, OH 43452

Mr. David A. Brunkhorst P.E., P.S. Ottawa County Engineer 315 Madison Street Room 106 Port Clinton, OH 43452

Mr. Richard J. Keiser Carroll Township Trustee 11080 W. Toussant East Road Oak Harbor, OH 43449

Ms. Jessica E. Brough Carroll Township Fiscal Officer 11080 W. Toussant East Road Oak Harbor, OH 43449

Salem Township

Mr. Richard C. Lenke, Chair Salem Township Trustees 11650 W. Portage River South Road Oak Harbor, OH 43449

Mr. Victor A. Harder Salem Township Trustee 11650 W. Portage River South Road Oak Harbor, OH 43449

Sandusky County

The Honorable Terry L.Thatcher, President Sandusky County Commissioners 622 Croghan Street Fremont, OH 43420

The Honorable Danny L. Polter Sandusky County Commissioner 622 Croghan Street Fremont, OH 43420

The Honorable Matt Damschroder Sandusky County Commissioner 622 Croghan Street Fremont, OH 43420

<u>Rice Township</u>

Mr. William C. Lamalie, Chair Rice Township Trustees 110 County Road 119 Fremont, OH 43420

Mr. Donald E. Atkinson Rice Township Trustee 110 County Road 119 Fremont, OH 43420 Mr. Charles E. Shultz Salem Township Trustee 11650 W. Portage River South Road Oak Harbor, OH 43449

Ms. Susan L. Perrin Salem Township Fiscal Officer 11650 W. Portage River South Road Oak Harbor, OH 43449

Mr. James R. Moyer P.E., P.S. Sandusky County Engineer 622 Croghan Street Fremont, OH 43420

Mr. John Wiley Sandusky County Regional Planning Director 108 South Park Avenue Fremont, OH 43420

Mr. Timothy J. King Rice Township Trustee 110 County Road 119 Fremont, OH 43420

Ms. Kathleen M. Roosen Rice Township Fiscal Officer 110 County Road 119 Fremont, OH 43420

Riley Township

Mr. David W. Sachs, Chair Riley Township Trustees 3093 State Route 142 Fremont, OH 43420

Mr. John W. Antesberger Riley Township Trustee 3093 State Route 142 Fremont, OH 43420

Townsend Township

Ms. Jean F. Leber, Chair Townsend Township Trustee 1560 County Road 310 Clyde, OH 43410

Mr. Bruce L. Meggit Townsend Township Trustee 5625 State Route 412 Vickery, OH 43464

Erie County

The Honorable William J. Monaghan President, Erie County Commissioners 2900 Columbus Avenue P.O. Box 1180 Sandusky, OH 44871

The Honorable Pat Shenigo Erie County Commissioners 2900 Columbus Avenue P.O. Box 1180 Sandusky, OH 44871

Mr. Steve Poggiali, Director Erie County Regional Planning Commission 2900 Columbus Avenue Sandusky, OH 44870 Mr. Gary L. Overmyer Riley Township Trustee 3093 State Route 142 Fremont, OH 43420

Mr. Joseph A. Halbeisen Riley Township Fiscal Officer 3093 State Route 142 Fremont, OH 43420

Mr. Jeffrey M. Miller Townsend Township Trustee 1737 N. County Road 268 Vickery, OH 43464

Ms. Cathy A. Bales Townsend Township Fiscal Officer 2739 County Road 306 Vickery, OH 43464

The Honorable Thomas M. Ferrell, Jr. Erie County Commissioners 2900 Columbus Avenue P.O. Box 1180 Sandusky, OH 44871

Mr. John D. Farschman, P.E., P.S. Erie County Engineer 2700 Columbus Avenue Sandusky, OH 44870

Margaretta Township

Mr. Gary P. Pooch, Chair Margaretta Township Trustees 114 N. Main Street P.O. Box278 Castalia, OH 44824

Mr. Timothy E. Reisterer Margaretta Township Trustee 114 N. Main Street P.O. Box278 Castalia, OH 44824

Perkins Township

Mr. Jeffrey L. Ferrell, Chair Perkins Township Trustees 5420 Milan Road Sandusky, OH 44870

Mr. Timothy D. Coleman Perkins Township Trustee 5420 Milan Road Sandusky, OH 44870 Mr. A. Joe Bias, Jr. Margaretta Township Trustee 114 N. Main Street P.O. Box278 Castalia, OH 44824

Ms. Mary Ann Lindsley Margaretta Township Fiscal Officer 114 N. Main Street P.O. Box278 Castalia, OH 44824

Mr. Michael J. Printy Perkins Township Trustee 5420 Milan Road Sandusky, OH 44870

Ms. Jane Gildenmeister Perkins Township Fiscal Officer 5420 Milan Road Sandusky, OH 44870

Copies of the transmittal letters to these officials have been included with the transmittal letter submitting this Letter of Notification to the Ohio Power Siting Board.

4906-11-01 (D) (4) b: Public Information Program

Manager's of External Affairs from Ohio Edison and Toledo Edison, FirstEnergy Corp. subsidiaries, will advise local officials of features and the status of the proposed Transmission Line Project as necessary.

4906-11-01 (D) 5: Current or Pending Litigation

There is no known current or pending litigation involving this project.

4906-11-01 (D) 6: Local, State, and Federal Requirements

There are no other known local, state, or federal requirements that must be met prior to commencement of construction on the proposed transmission line project.

<u>4906-11-01 (E): Environmental Data</u>

4906-11-01 (E) (1): Endangered, Threatened, and Rare Species Investigation

As part of our investigation, a request was submitted to the Ohio Department of Natural Resources (ODNR) on August 13, 2012 to research the presence of any endangered, threatened, or rare species within the project area. The ODNR's response is attached as Exhibit 3.

4906-11-01 (E) (2): Areas of Ecological Concern

The new transmission line structures are located in an existing transmission line corridor in close proximity to existing transmission line structures. A total of 79 wetlands, 47 streams, and nine ponds were identified within the 150-foot study corridor during the field surveys. These wetlands and other water features are discussed in detail in the following sections.

Wetlands -

The delineation identified 79 wetlands, totaling 49.99 acres, within the 150-foot survey corridor. These wetlands are of seven different wetland habitat types: 42 are PEM wetlands, 15 are PEM/PSS wetlands, three are PEM/POW wetlands, one is a POW/PEM wetland, six are PSS wetlands, 11 are PSS/PEM wetlands, and one is a PSS/POW wetland. Within the Project 150-foot survey corridor, 43 of the 79 wetlands are Category 1 wetlands, and the remaining 36 wetlands are Category 2 wetlands. No Category 3 wetlands were delineated during this Project.

Streams -

Within the 150-foot survey corridor, 47 streams were assessed, including three ephemeral, 10 intermittent, and 34 perennial waterbodies. Twenty of the 47 streams were assessed using the HHEI methodology (drainage area less than 1 mi²). The remaining 27 streams were assessed using the QHEI methodology (drainage area greater than 1 mi²).

Field surveys along the proposed Project 150-foot survey corridor identified 20 primary headwater streams: three Modified Class I streams, and 17 Modified Class II streams.

The 27 QHEI assessed stream crossings within the 150-foot survey corridor had the following narrative ratings: nine very poor warmwater habitat streams, seven poor warmwater habitat streams, four fair warmwater habitat streams, and one good coldwater habitat stream.

Five of the larger QHEI streams; Toussaint River, Portage River, Little Portage River, Sandusky River, and two crossings of Muddy Creek, were not evaluated using the QHEI methodology due to their large size.

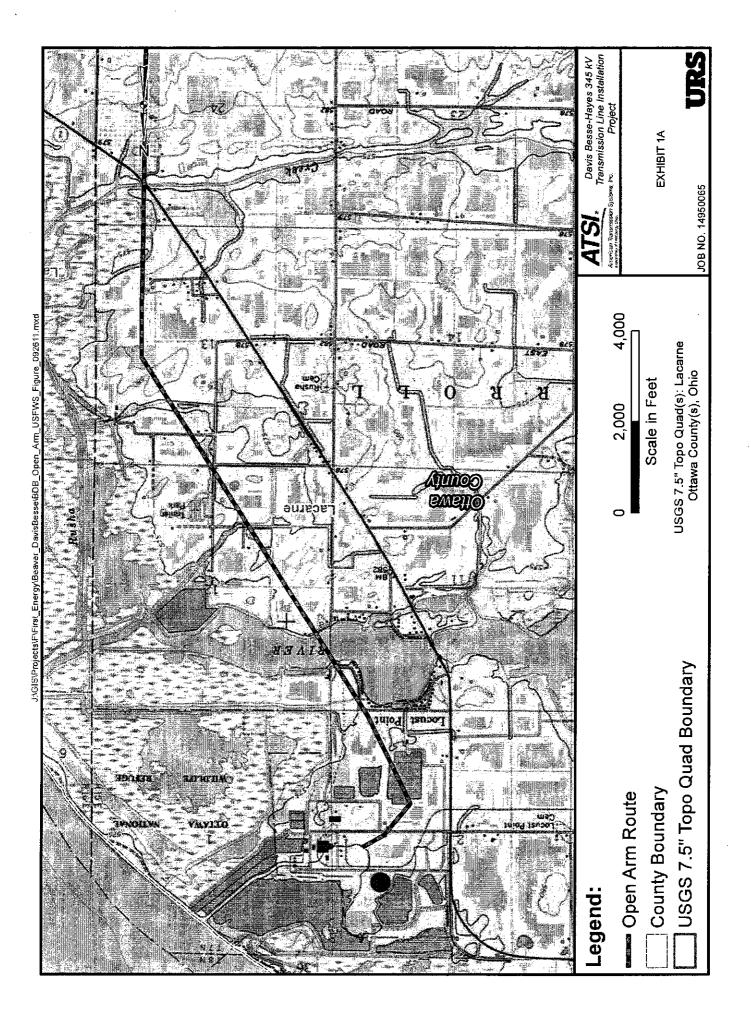
Ponds -

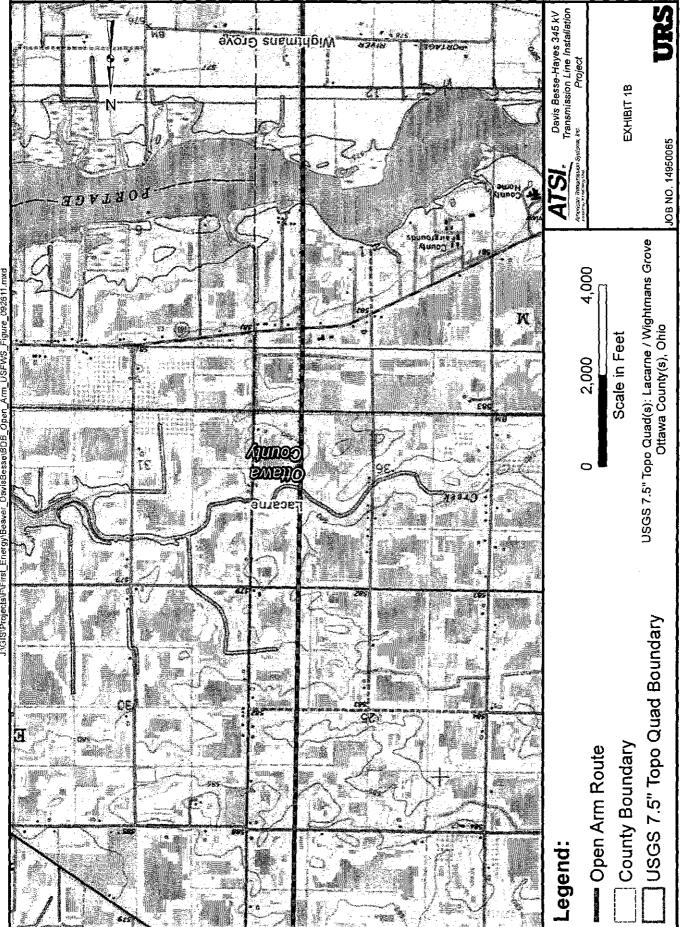
A total of nine ponds totaling 5.97 acres were delineated along the 150-foot Project study corridor; however some ponds extended outside the survey corridor. All nine ponds appear to be man-made for recreational or wildlife use.

A copy of the wetland delineation report will be provided separately to the Board's staff.

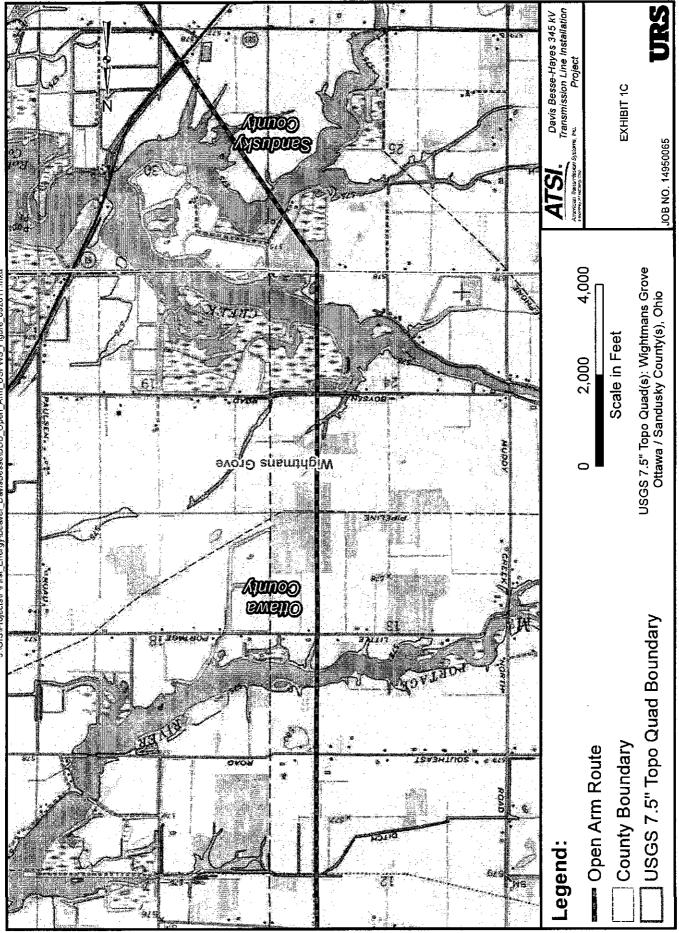
4906-11-01 (E) (3): Additional Information

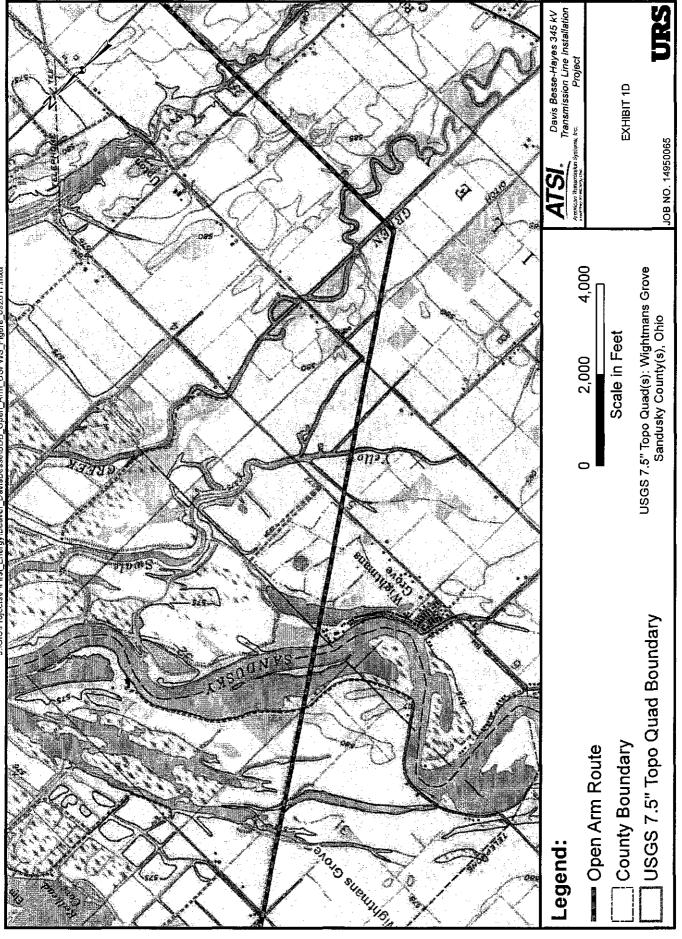
Construction and operation of the proposed Project will be in accordance with the requirements specified in the latest revision of the NESC as adopted by the PUCO and all applicable safety standards established by OSHA.



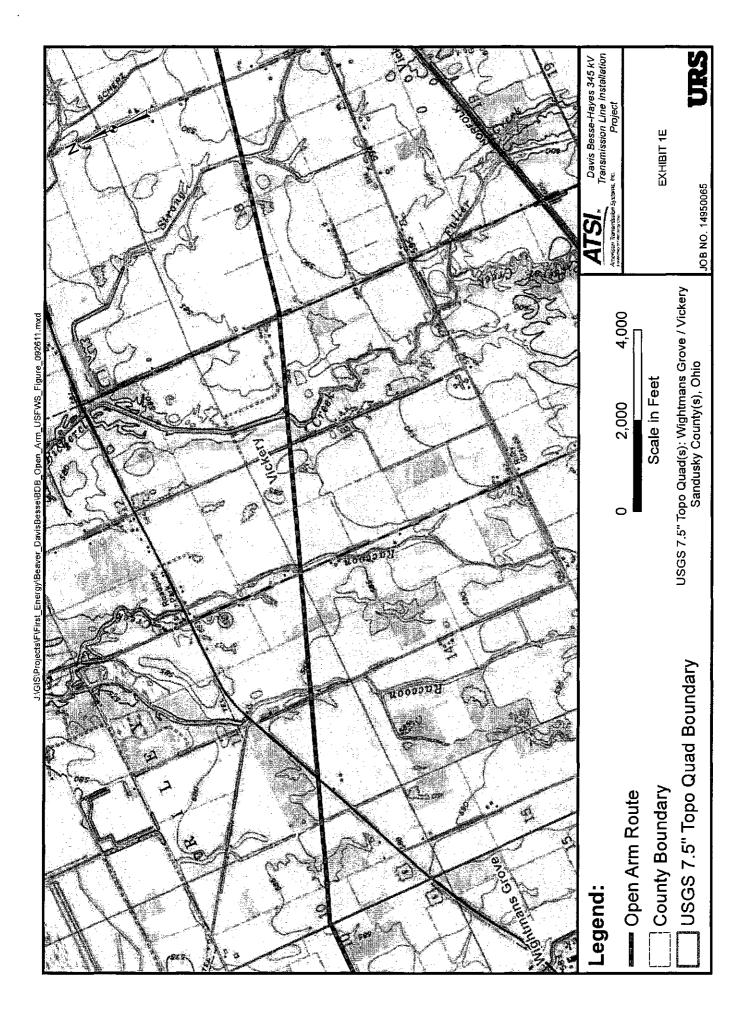


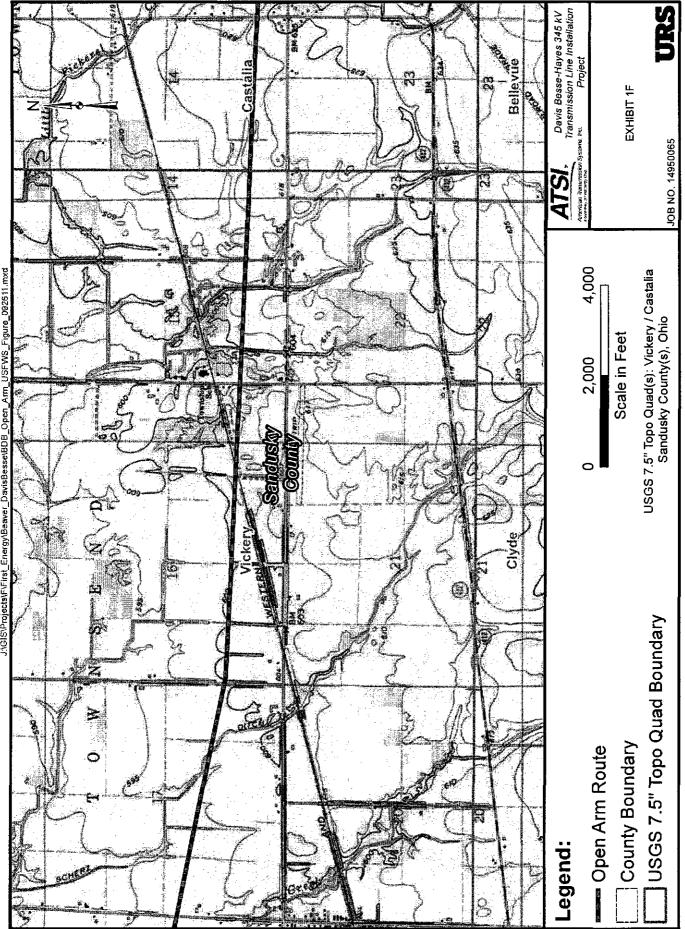
Arm USEWS Figure 092611,mxp DavisBesse/806 Open J.)GIS/Projects/F/First Enerov/Beaver



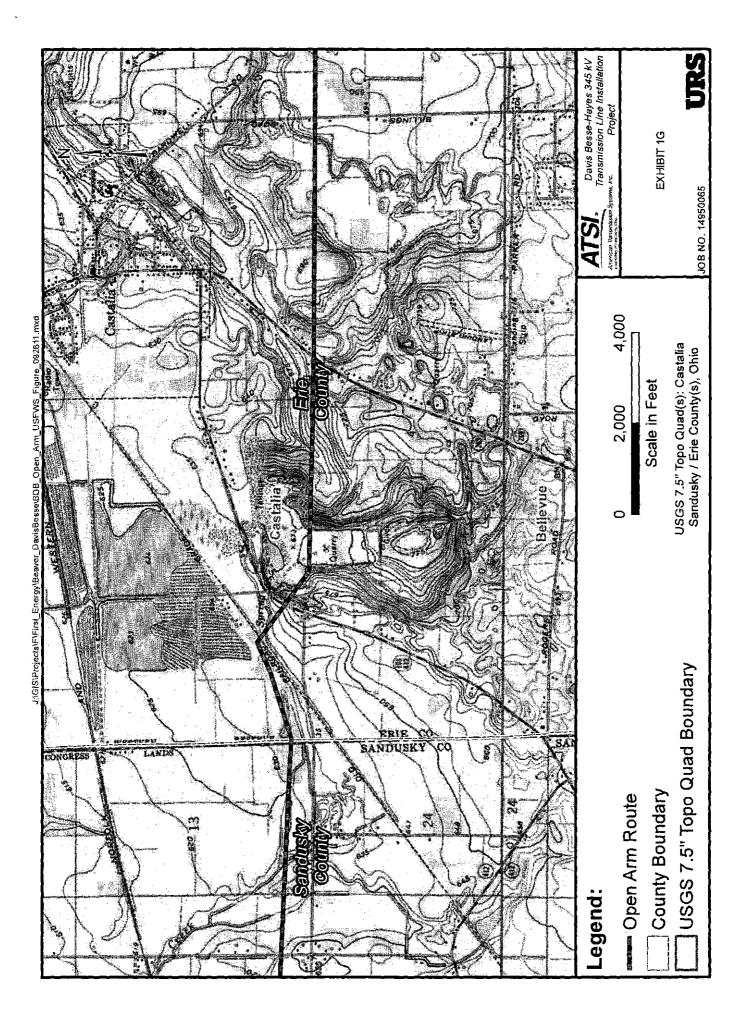


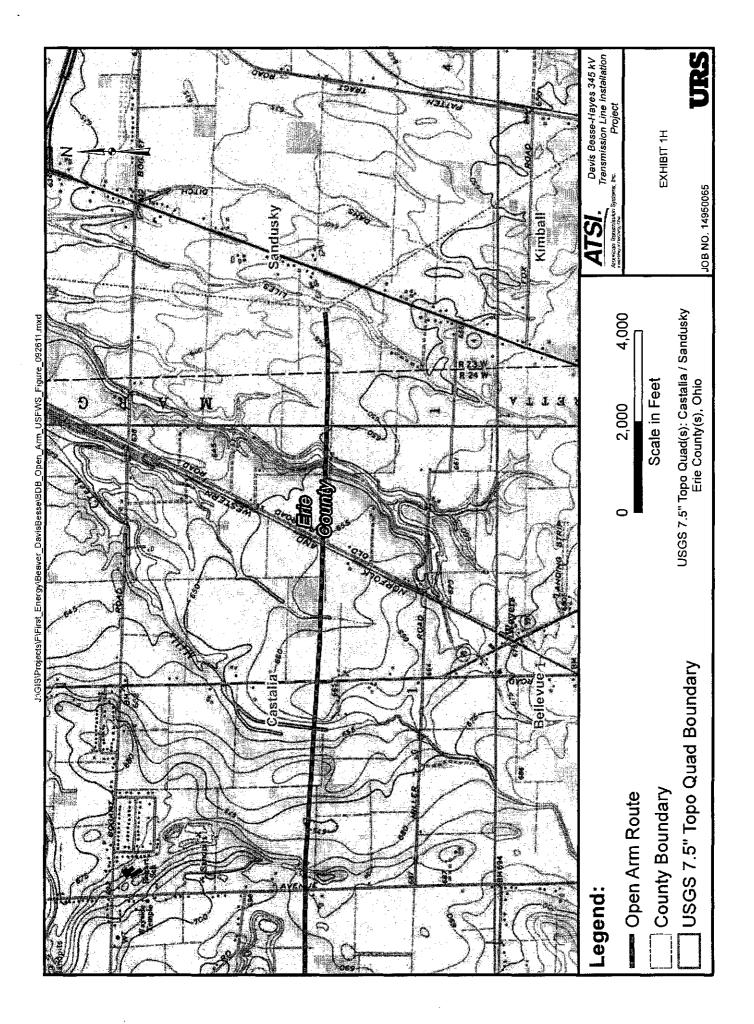
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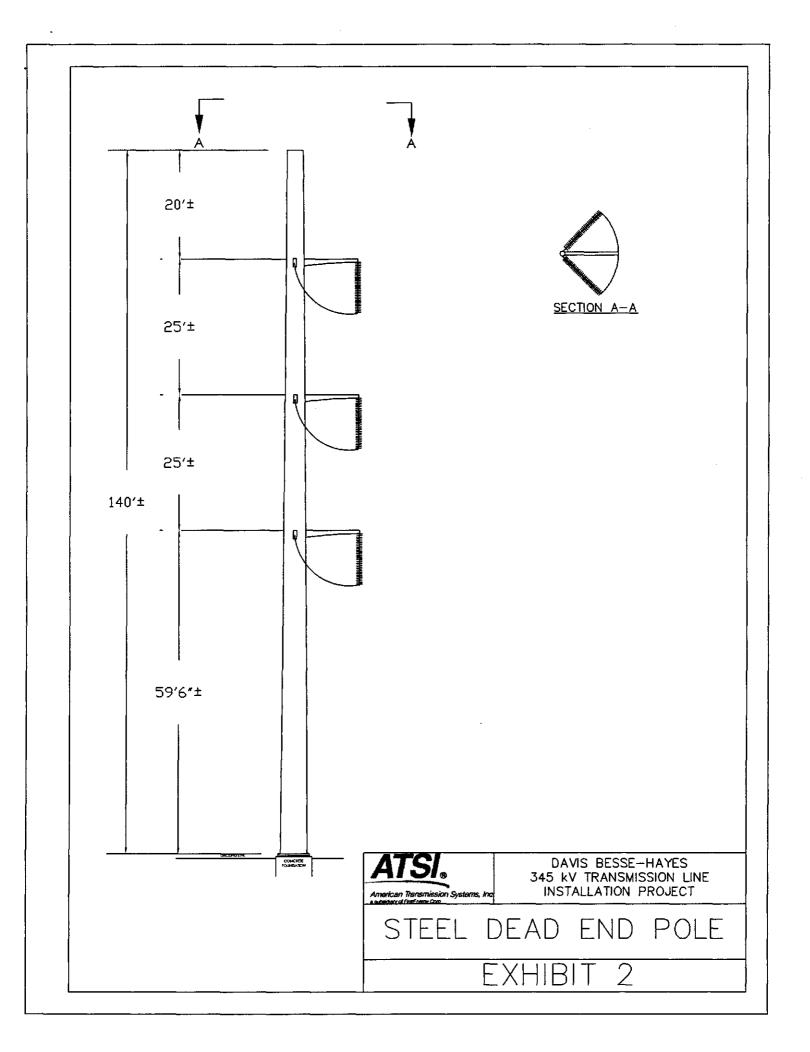




J/GIS/Projects/FVFirst_Energy/Beaver_DavisBessetBDB_Open_Arm_USFWS_Figure_092611.mxd







Thomayer, Matt

From:	Kessler, John <john.kessler@dnr.state.oh.us></john.kessler@dnr.state.oh.us>
Sent:	Friday, August 31, 2012 2:49 PM
То:	Thomayer, Matt
Subject:	FW: 12-524 comments Beaver-Davis-Besse URS 345 Tx Line
Attachments:	data.dbf; data.dbf; data.prj; data.sbn; data.sbx; data.shp; data.shx; eagles.dbf; eagles.prj; eagles.sbn; eagles.sbx; eagles.shp; eagles.shx; ma.dbf; ma.prj; ma.sbn; ma.sbx; ma.shp; ma.shx



ODNR COMMENTS TO: Matthew Thomayer, American Transmission Systemss, Inc; matt.thomayer@urs.com

Project: Beaver-Davis-Besse URS 345kV Transmission Line

Location: Erie and Ottawa counties

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

Fish and Wildlife: The Division of Wildlife (DOW) has the following comments.

The portion of your project located in Ottawa County is within the range of the following species:

The project is within the range of the Indiana bat (*Myotis sodalis*), a state and federally endangered species. The following species of trees have relatively high value as potential Indiana bat roost trees: Shagbark hickory (*Carya ovata*), Shellbark hickory (*Carya laciniosa*), Bitternut hickory (*Carya cordiformis*), Black ash (*Fraxinus nigra*), Green ash (*Fraxinus pennsylvanica*), White ash (*Fraxinus americana*), Shingle oak (*Quercus imbricaria*), Northern red oak (*Quercus rubra*), Slippery elm (*Ulmus rubra*), American elm (*Ulmus americana*), Eastern cottonwood (Populus deltoides), Silver maple (*Acer saccharinum*), Sassafras (*Sassafras albidum*), Post oak (*Quercus stellata*), and White oak (*Quercus alba*). Indiana bat habitat consists of suitable trees that include dead and dying trees of the species listed above with exfoliating bark, crevices, or cavities in upland areas or riparian corridors and living trees of the species listed above with exfoliating bark, crevices, or cavities in upland areas or riparian corridors and living trees of the species listed above with exfoliating bark, crevices, or cavities in upland areas or riparian corridors and living trees of the species listed above with exfoliating bark, crevices, or cavities in upland areas or riparian corridors and living trees of the species listed above with exfoliating bark, crevices, or cavities in upland areas or riparian corridors and living trees occur within the project area, these trees must be conserved. If suitable habitat occurs on the project area and trees must be conducted in May or June prior to cutting. Net surveys shall incorporate either two net sites per square kilometer of project area with each net site containing a minimum of two nets used for two consecutive nights. If no tree removal is proposed, the project is not likely to impact this species.

The project is within the range of the piping plover (*Charadrius melodus*), a state and federally endangered bird species, and the Kirtland's warbler (*Setophaga kirtlandii*), a state and federally endangered species. These species do not nest in the state but only utilize stopover habitat as they migrate through the region. Therefore, the project is not likely to have an impact on these species.

The project is within the range of the Eastern massasauga (*Sistrurus catenatus*), a state endangered and a federal candidate snake species. Due to the lack of records in the project area for this species and the land use of the project area, the project is not likely to impact this species.

The project is within the range of the rayed bean (Villosa fabalis), a state endangered and federal endangered mussel species, and the eastern pondmussel (Ligumia nasuta), a state endangered mussel.

If there is a history of mussels near the proposed project area, it may be necessary for a professional malacologist approved by the DOW to conduct a mussel survey in the project area. Surveys are to be done within six months before in-water work. If mussels that cannot be avoided are found in a project area, as a last resort, the DOW may recommend a professional malacologist collect and relocate the mussels to suitable and similar habitat upstream of the proposed project. The mussel survey must be conducted using standard mussel survey methodologies to include hand grabbing, snorkeling, and the use of SCUBA equipment if depths preclude efficient sampling by other methods. The survey should include excavation of two to three, one-quarter meter quadrants to a depth of at least 10 cm to search for juvenile mussels, and any located must be relocated along with the adult specimens. Individual adult mussel specimens must be marked when relocated. Juveniles are not to be marked and will not be part of future monitoring efforts. If mussels are relocated, it is recommended the recipient site be monitored in two years to determine survivorship. Monitoring must follow the same survey protocol used during the relocation effort, and all marked individuals must be tallied. If no in-water work is proposed, the project is not likely to impact these species.

The project is within the range of the spotted gar (Lepisosteus oculatus), a state endangered fish, and the blacknose shiner (Notropis heterolepis), a state endangered fish. The DOW recommends no in-water work in from April 15 to June 30 to reduce impacts to aquatic species and their habitat. If no in-water work is proposed, the project is not likely to impact these species.

The project is within the range of the American bittern (*Botaurus lentiginosus*), a state endangered bird. A statewide survey has not been completed for this species. A lack of records does not indicate the species is absent from the area. Nesting bitterns prefer large undisturbed wetlands that have scattered small pools amongst dense vegetation. They occasionally occupy bogs, large wet meadows, and dense shrubby swamps. If this type of habitat will be impacted, construction must be avoided in this habitat during the species' nesting period of May 1 to July 31. If this type of habitat will not be impacted, the project is not likely to impact this species.

The project is within the range of the cattle egret (*Bubulcus ibis*), a state endangered bird. A statewide survey has not been completed for this species. A lack of records does not indicate the species is absent from the area. Cattle egrets are not strictly wetland birds. They often forage in dry pastures and fields. Egrets nest in colonies and will build a nest out of sticks and other materials wherever it can be supported. Therefore, if this type of habitat will be impacted, construction must be avoided in this habitat during the species' nesting period of May 15 to August 15. If no wetland habitat will be impacted, the project is not likely to impact this species.

The project is within the range of the black tern (*Chlidonias niger*), a state endangered bird. A statewide survey has not been completed for this species. A lack of records does not indicate the species is absent from the area. The black tern prefers large, undisturbed inland marshes with fairly dense vegetation and pockets of open water. They nest in various kinds of marsh vegetation but cattail marshes are generally favored. Nests are built on top of muskrat houses or on top of floating vegetation. Therefore, if this type of habitat will be impacted, construction must be avoided in this habitat from April 1 to June 30 to reduce impacts to this species. If no wetland habitat will be impacted, the project is not likely to impact this species.

The project is within the range of the common tern (*Sterna hirundo*), a state endangered bird. A statewide survey has not been completed for this species. A lack of records does not indicate the species is absent from the area. The preferred nesting sites of common terns are natural or man-made islands that are free of mammalian predators and human disturbance. They will also utilize mainland beaches and dredge disposal areas but only when islands are unavailable. The common tern nests in colonies. Their eggs are laid in a grass-lined depression in the sand. Therefore, if this type of habitat will be impacted, construction must be avoided in this habitat during the species' nesting period of May 1 to August 1. If no wetland habitat will be impacted, the project is not likely to impact this species.

The project is within the range of the king rail (*Rallus elegans*), a state endangered bird. A statewide survey has not been completed for this species. A lack of records does not indicate the species is absent from the area. Nests for this species are deep bowls constructed out of grass and usually hidden very well in marsh vegetation. Therefore, if this type of habitat will be impacted, construction must be avoided in this habitat during the species' nesting period of May 1 to August 1. If no wetland habitat will be impacted, the project is not likely to impact this species.

The project is within the range of the loggerhead shrike (*Lanius ludovicianus*), a state endangered bird. A statewide survey has not been completed for this species. A lack of records does not indicate the species is absent from the area. Therefore, if grassland or prairie habitat will be impacted, construction must not occur in this habitat during the species' nesting period of April 1 to August 1. If this habitat will not be impacted, the project is not likely to impact this species.

The project is within the range of the Northern harrier (*Circus cyaneus*), a state endangered bird. This is a common migrant and winter species. Nesters are much rarer, although they occasionally breed in large marshes and grasslands. Harriers often nest in loose colonies. The female builds a nest out of sticks on the ground, often on top of a mound. Harriers hunt over grasslands. A statewide survey has not been completed for this species. A lack of records does not indicate the species is absent from the area. Therefore, if this type of habitat will be impacted, construction must not occur in this habitat during the species' nesting period of May 15 to August 1. If this habitat will not be impacted, the project is not likely to impact this species.

The project is within the range of the *Trichoclea artesta*, a state endangered moth. Due to the location of the project, the project is not likely to impact this species.

The portion of the project located within <u>Sandusky County</u> is within the range of the following species:

The project is within the range of the Indiana bat (*Myotis sodalis*), a state and federally endangered species. The following species of trees have relatively high value as potential Indiana bat roost trees: Shagbark hickory (*Carya ovata*), Shellbark hickory (*Carya laciniosa*), Bitternut hickory (*Carya cordiformis*), Black ash (*Fraxinus nigra*), Green ash (*Fraxinus pennsylvanica*), White ash (*Fraxinus americana*), Shingle oak (*Quercus imbricaria*), Northern red oak (*Quercus rubra*), Slippery elm (*Ulmus rubra*), American elm (*Ulmus americana*), Eastern cottonwood (Populus deltoides), Silver maple (*Acer saccharinum*), Sassafras (*Sassafras albidum*), Post oak (*Quercus stellata*), and White oak (*Quercus alba*). Indiana bat habitat consists of suitable trees that include dead and dying trees of the species listed above with exfoliating bark, crevices, or cavities in upland areas or riparian corridors and living trees of the species listed above with exfoliating bark, crevices, or cavities in upland areas or tops. If suitable trees occur within the project area, these trees must be conserved. If suitable habitat occurs on the project area and trees must be conducted in May or June prior to cutting. Net surveys shall incorporate either two net sites per square kilometer of project area with each net site containing a minimum of two nets used for two consecutive nights. If no tree removal is proposed, the project is not likely to impact this species.

The project is within the range of the piping plover (*Charadrius melodus*), a state and federally endangered bird species, and the Kirtland's warbler (*Setophaga kirtlandii*), a state and federally endangered species. These species do not nest in the state but only utilize stopover habitat as they migrate through the region. Therefore, the project is not likely to have an impact on these species.

The project is within the range of the rayed bean (Villosa fabalis), a state endangered and federal endangered mussel species.

If there is a history of mussels near the proposed project area, it may be necessary for a professional malacologist approved by the DOW to conduct a mussel survey in the project area. Surveys are to be done within six months before in-water work. If mussels that cannot be avoided are found in a project area, as a last resort, the DOW may recommend a professional malacologist collect and relocate the mussels to suitable and similar habitat upstream of the proposed project. The mussel survey must be conducted using standard mussel survey methodologies to include hand grabbing, snorkeling, and the use of SCUBA equipment if depths preclude efficient sampling by other methods. The survey should include excavation of two to three, one-quarter meter quadrants to a depth of at least 10 cm to search for juvenile mussels, and any located must be relocated along with the adult specimens. Individual adult mussel specimens must be marked when relocated. Juveniles are not to be marked and will not be part of future monitoring efforts. If mussels are relocated, it is recommended the recipient site be monitored in two years to determine survivorship. Monitoring must follow the same survey protocol used during the relocation effort, and all marked individuals must be tallied. If no in-water work is proposed, the project is not likely to impact these species.

The project is within a county where current records exist for the Eastern massasauga (*Sistrurus catenatus*), a state endangered and a Federal candidate snake species. Due to the project's proximity to current records, if wetlands are within the vicinity of the project, a habitat survey is required on the proposed site. The survey must be done by a professional herpetologist approved by the DOW. Unless the herpetologist determines that the presence of the eastern massasauga is highly unlikely, a presence/absence survey will be required. If no wetland habitat is present in the vicinity of the project area, the project is not likely to have a negative impact to the species.

The project is within the range of the Western banded killifish (Fundulus diaphanous menona), a state endangered species. The DOW recommends no in-water work from April 15 to June 30 to reduce impacts to aquatic species and their habitat. If no in-water work is proposed, the project is not likely to impact this species.

The project is within the range of the bobcat (Lynx rufus), a state endangered species. Due to the mobility of this species, the project is not likely to have an impact on this species.

The project is within the range of the American bittern (*Botaurus lentiginosus*), a state endangered bird. A statewide survey has not been completed for this species. A lack of records does not indicate the species is absent from the area. Nesting bitterns prefer large undisturbed wetlands that have scattered small pools amongst dense vegetation. They occasionally occupy bogs, large wet meadows, and dense shrubby swamps. If this type of habitat will be impacted, construction must be avoided in this habitat during the species' nesting period of May 1 to July 31. If this type of habitat will not be impacted, the project is not likely to impact this species.

The project is within the range of the king rail (*Rallus elegans*), a state endangered bird. A statewide survey has not been completed for this species. A lack of records does not indicate the species is absent from the area. Therefore, if wetland habitat is located near the project area, construction must be avoided during the species' nesting period of May 1 to August 1. If no wetland habitat is in the vicinity of the project area, the project is not likely to impact this species. Unlike other rails, this species is often rather bold, venturing beyond the dense confines of cattails and other marsh vegetation where they can be readily observed.

The project is within the range of the Northern harrier (*Circus cyaneus*), a state endangered bird. This is a common migrant and winter species. Nesters are much rarer, although they occasionally breed in large marshes and grasslands. Harriers often nest in loose colonies. The female builds a nest out of sticks on the ground, often on top of a mound. Harriers hunt over grasslands. A statewide survey has not been completed for this species. A lack of records does not indicate the species is absent from the area. Therefore, if this type of habitat will be impacted, construction must not occur in this habitat during the species' nesting period of May 15 to August 1. If this habitat will not be impacted, the project is not likely to impact this species.

The portion of the project located Erie County is within the range of the following species:

The project is within the range of the Indiana bat (Myotis sodalis), a state and federally endangered species. The following species of trees have relatively high value as potential Indiana bat roost trees: Shagbark hickory (Carya ovata), Shellbark hickory (Carya laciniosa), Bitternut hickory (Carya cordiformis), Black ash (Fraxinus nigra), Green ash (Fraxinus pennsylvanica), White ash (Fraxinus americana), Shingle oak (Quercus imbricaria), Northern red oak (Quercus rubra), Slippery elm (Ulmus rubra), American elm (Ulmus americana), Eastern cottonwood (Populus deltoides), Silver maple (Acer saccharinum), Sassafras (Sassafras albidum), Post oak (Quercus stellata), and White oak (Quercus alba). Indiana bat habitat consists of suitable trees that include dead and dying trees of the species listed above with exfoliating bark, crevices, or cavities in upland areas or riparian corridors and living trees of the species listed above with exfoliating bark, cavities, or hollow areas formed from broken branches or tops. If suitable trees occur within the project area, these trees must be conserved. If suitable habitat occurs on the project area and trees must be cut, cutting must occur between September 30 and April 1. If suitable trees must be cut during the summer months, a net survey must be conducted in May or June prior to cutting. If no tree removal is proposed, the project is not likely to impact this species.

The project is within the range of the piping plover (*Charadrius melodus*), a state and federally endangered bird species, and the Kirtland's warbler (*Setophaga kirtlandii*), a state and federally endangered species. These species do not nest in the state but only utilize stopover habitat as they migrate through the region. Therefore, the project is not likely to have an impact on these species.

The project is within a county where current records exist for the Eastern massasauga (*Sistrurus catenatus*), a state endangered and a Federal candidate snake species. Due to the project's proximity to current records, if wetlands are within the vicinity of the project, a habitat survey is required on the proposed site. The survey must be done by a professional herpetologist approved by the DOW. Unless the herpetologist determines that the presence of the eastern massasauga is highly unlikely, a presence/absence survey will be required. If no wetland habitat is present in the vicinity of the project area, the project is not likely to have a negative impact to the species.

The project is within the range of the lake sturgeon (Acipenser fulvescens), a state endangered fish, and the spotted gar (Lepisosteus oculatus), a state endangered fish. The DOW recommends no in-water work from April 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed, the project is not likely to impact these species.

The project is within the range of the black bear (Ursus americanus), a state endangered species. Due to the mobility of this species, the project is not likely to have an impact on this species.

The project is within the range of the American bittern (*Botaurus lentiginosus*), a state endangered bird. A statewide survey has not been completed for this species. A lack of records does not indicate the species is absent from the area. Nesting bitterns prefer large undisturbed wetlands that have scattered small pools amongst dense vegetation. They occasionally occupy bogs, large wet meadows, and dense shrubby swamps. If this type of habitat will be impacted, construction must be avoided in this habitat during the species' nesting period of May 1 to July 31. If this type of habitat will not be impacted, the project is not likely to impact this species.

The project is within the range of the common tern (*Sterna hirundo*), a state endangered bird. A statewide survey has not been completed for this species. A lack of records does not indicate the species is absent from the area. The preferred nesting sites of common terns are natural or man-made islands that are free of mammalian predators and human disturbance. They will also utilize mainland beaches and dredge disposal areas but only when islands are unavailable. The common tern nests in colonies. Their eggs are

laid in a grass-lined depression in the sand. Therefore, if this type of habitat will be impacted, construction must be avoided in this habitat during the species' nesting period of May 1 to August 1. If no wetland habitat will be impacted, the project is not likely to impact this species.

The project is within the range of the king rail (*Rallus elegans*), a state endangered bird. A statewide survey has not been completed for this species. A lack of records does not indicate the species is absent from the area. Nests for this species are deep bowls constructed out of grass and usually hidden very well in marsh vegetation. Therefore, if this type of habitat will be impacted, construction must be avoided in this habitat during the species' nesting period of May 1 to August 1. If no wetland habitat will be impacted, the project is not likely to impact this species.

The project is within the range of the Hypocoena enervata, a state endangered moth, the Papaipema silphii, a state endangered moth, the Papaipema beeriana, a state endangered moth, the Tricholita notata, a state endangered moth, and the Spartiniphaga inops, a state endangered moth. Due to the habitat used by these species and the type of work proposed, the project is not likely to impact these species.

Attached is a set of ArcView shape files with the Ohio Natural Heritage Program records for the project. The files are projected in NAD83 Ohio State Plane South. The units are feet. Records included in the "data" layer may be for rare and endangered plants and animals, geologic features, high quality plant communities and animal assemblages. Fields included are scientific and common names, state and federal statuses, as well as managed area and date of the most recent observation. State and federal statuses are defined as: E = endangered, T = threatened, P = potentially threatened, SC = species of concern, SI = special interest, A = recently added to inventory, status not yet determined, FE = federal endangered, FT = federal threatened, FPE = federal potentially endangered, FC = federal candidate and FSC = federal species of concern.

In addition to the species given in the shapefile, there is a record for the Blanding's Turtle (*Emydoidea blandingii*), a state threatened species, within your project study area. Please be aware that we do not give out specific location data for this sensitive species so it is not included in the shapefile. Ohio's Blanding's Turtles are limited primarily to the northern counties along Lake Erie where they inhabit marshy shorelines, inland streams and ditches, and wet meadows. Although essentially aquatic, this turtle often wanders about on land but seldom far from water. We request that you consult a professional herpetologist (approved by the Division of Wildlife) to determine whether a survey for this species needs to be performed. If the herpetologist determines that the presence of the Blanding's Turtle is highly unlikely, the project is not likely to have a negative impact to the species.

There is a separate layer with additional records for the Bald Eagle (*Haliaeetus leucocephalus*). Not all nest records are included in the Natural Heritage Database, but this separate layer captures additional, more recent records. (Some older records are also included in the "data" layer so there may be duplicates.) For guidance on reducing impacts to these nests, the DOW recommends URS refer to the guidelines found at:

http://www.fws.gov/migratorybirds/CurrentBirdIssues/Management/BaldEagle/NationalBaldEagleManagementGuidelines.pdf

Or,

http://www.fws.gov/midwest/eagle/guidelines/index.html

Also included is a layer for managed areas ('ma') which includes state wildlife areas, nature preserves, parks and forests, national wildlife refuges, county metro parks, as well as sites owned by non-profit groups (such as The Nature Conservancy), museums (such as the Cleveland Museum of Natural History), and others. Please be aware that the managed areas layer may not be complete. We are continually updating this layer as additional information becomes available to us.

The proposed project alignment crosses a portion of Pickerel Creek State Wildlife Area. Please contact John Sambuco, DOW Lands Coordinator, at (614) 265-6613 or by e-mail at <u>john.sambuco@dnr.state.oh.us</u> to coordinate any allowable access.

Our inventory program has not completely surveyed Ohio and relies on information supplied by many individuals and organizations. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Please note that although we inventory all types of plant communities, we only maintain records on the highest quality areas.

ODNR appreciates the opportunity to provide these comments. Please contact John Kessler at (614) 265-6621 if you have questions about these comments or need additional information.

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