Legal Department

American Electric Power
1 Riverside Plaza
Columbus, OH 43215-2373
AEP.com

Chairman Thomas W. Johnson
The Public Utilities Commission of Ohio
Ohio Power Siting Board
180 East Broad Street
Columbus, Ohio 43215

June 18, 2014

Yazen Alami, Esq.
Regulatory Services
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RE: Letter of Notification for the Ross-Delano 138 Kv Transmission Line Rebuild Project
Case No. 14-1075-EL-BLN

Dear Chairman Johnson:

In accordance with rules 4906-5-02(A) and 4906-11-01, Ohio Administrative Code ("OAC"), AEP Ohio Transmission Company ("AEP Ohio Transco") submits this letter of notification for expedited approval. The expedited processing fee will be submitted under separate cover. Construction of the project is scheduled to begin in July 2014 and the project is scheduled to be placed in-service in June 2017.

As required by rule 4906-11-01(D), O.A.C., AEP Ohio Transco has submitted a copy of the enclosed letter of notification to the chief executive officer of each municipal corporation and county and the head of each public agency charged with protecting the environment or of planning land use in the area in which the proposed project will be located. Attached to the letter of notification are copies of the letters that have been submitted.

Should you have any questions, please do not hesitate to contact me.

Respectfully submitted,

/s/ Yazen Alami
Yazen Alami

Attachments

LETTER OF NOTIFICATION FOR THE

ROSS-DELANO 138 KV TRANSMISSION LINE REBUILD PROJECT

PUCO Case No. 14-1075-EL-BLN

Submitted pursuant to OAC 4906-11-01

AEP Ohio Transmission Company
(AEP Ohio Transco)

JUNE 2014

LETTER OF NOTIFICATION
Ross-Delano 138 kV Transmission Line Rebuild Project

American Electric Power Ohio Transmission Company (AEP Ohio Transco) is providing the following information in accordance with the procedures delineated in Ohio Administrative Code Section 4906-11-01: Letter of Notification Requirements of the Rules and Regulations of the Ohio Power Siting Board (OPSB).

4906-11-01(B) GENERAL INFORMATION

1. The name of the project and applicant's reference number, if any, names and reference numbers(s) of resulting circuits and a brief description of the project, and why the project meets the requirements of a letter of notification.

The proposed Ross-Delano 138 kV Transmission Line Rebuild Project (Project) is identified as part of PJM Reference Number B2256 regarding rebuild of approximately 20 miles of 138 kV transmission line between Ross Station and Harrison Station.

The Project consists of rebuilding the majority of the existing 138 kV single-circuit transmission line to double-circuit primarily within an existing right-of-way between Ross Station and Delano Station in Ross County, Ohio. The southern 0.4-mile portion of the existing line will be relocated approximately 350 feet to the west of the existing alignment. Figure 1 shows the location of the 4.8-mile long project in relation to the surrounding vicinity.

The Project includes rebuilding the northern approximately 4.4 miles and relocation of the southern 0.4 mile of the existing Ross-Delano 138 kV transmission line. The Project meets the requirements for a Letter of Notification because it is within the types of projects defined by Items (1)(d) and (4)(a) of Attachment A of the interim process defined in the OPSB's September 4, 2012 Finding and Order in Docket 12-1981-GE-BRO. These items state:

> *(1) Rerouting or extension of new construction of single or multiple circuit electric power transmission line(s) as follows:*
>
> *(d) Line(s) one hundred twenty-five kV and above, but less than three hundred kV, and greater than 0.2 miles in length but not greater than two miles in length.*

(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 required.

2. If the proposed letter of notification project is an electric power transmission line or gas or natural gas transmission line, a statement explaining the need for the proposed facility.

As part of the 2017 RTE process, PJM identified several N-1-1 contingency violations requiring upgrades to remediate. These violations include:

- Loading above 100% of emergency capability on Delano-Scioto Trail 138 kV branch and Scioto Trail-Scippo 138 kV branch
- Voltages below 92% at Circleville Station, Delano Station, East Scippo Switch Station, Ross Station, Scioto Trail Station, Scippo Station, Clayburne Switch Station, Biers Run Station, Hopetown Station, and Seaman Station.
- Voltage drops exceeding 8% at Adams Station, Circleville Station, Delano Station, East Scippo Station, Ross Station, Scioto Trail Station, Scippo Station, Clayburne Switch Station, Biers Run Station, and Seaman Station.

To correct these violations, AEP proposed a new project to upgrade the entire 138 kV through path from Harrison Station in southern Columbus to Ross Station in Chillicothe including the rebuild of all existing 138 kV lines along this circuit path. PJM confirmed this project corrects the cited violations, decided to make this a baseline (mandatory) project, and assigned AEP to make the required changes.

3. The location of the project in relation to existing or proposed lines and stations shown on maps and overlays provided to the Public Utilities Commission of Ohio in the applicant's most recent long term forecast report.

The location of this Project in relation to existing transmission lines is shown on Figure 1. The project directly impacts the following existing facilities:

- Harrison, Circleville, Scippo, East Scippo Switch, Scioto Trail, Delano, Clayburne Switch, and Ross Stations

- Circleville-Harrison (CSP) 138 kV transmission line, Circleville-Scippo 138 kV transmission line, Scioto Trail-Scippo 138 kV transmission line, Delano-Scioto Trail 138 kV transmission line, Delano-Kenworth-Ross 138 kV transmission line.

4. **The alternatives considered and reasons why the proposed location or route is best suited for the proposed facility. The discussion shall include, but not be limited to impacts associated with socioeconomic, natural environment, construction, or engineering aspects of the project.**

   The majority of the proposed Project is along an existing transmission line right-of-way. No other alternatives to rebuilding the existing line were considered.

5. **The anticipated construction schedule and proposed in-service date of project.**

   Construction of the rebuild will begin in July 2014. The in-service date for the Project is June 2017.

6. **An area map of not less than 1:24,000-scale clearly depicting the facility's centerline with clearly marked streets, roads, and highways, and clearly written instructions for locating and viewing the facility.**

   Figure 1 provides the proposed Project centerline on the United States Geologic Service (USGS) 7.5-minute topographic maps of the Chillicothe East, Ohio and Kingston, Ohio quadrangles. To access the Project location from public roads, take Interstate 71 South from Columbus for approximately 5 miles to Exit 101, Interstate 270 East. Follow I-270 E to Exit 52 taking US-23 South toward Circleville. Continue on US-23 South for 32 miles and take the OH-207 exit. Turn left off the ramp until OH-207 dead-ends and turn right onto Hospital Rd. After 0.7 mile, take the first left onto Delano Road and follow for 0.8 mi. Then take a left onto OH-159. The substation is on your left. The approximate address of Delano Station is 5242 OH-159, Chillicothe, OH 45601.

7. **A list of properties for which the applicant has obtained easements, options, and/or land use agreements necessary to construct and operate the facility and a list of the additional properties for which such agreements have not been obtained.**

   The majority of new structures will be located within existing transmission line right-of-way. No additional properties, easements, options, or land use agreements are necessary within the existing right-of-way. These property owners will be notified of the Project prior to

commencement of construction activities. The southern 0.4-mile portion of the Project will be relocated to the west. On the northern side of the Scioto River, the relocated transmission line will be on the same property owned by 4C Ventures, LLC (Parcel 241604002000). On the southern side of the Scioto River, the Project will cross approximately 450 feet of a property owned by Colomet Inc. (305430001000).

(C) TECHNICAL FEATURES OF THE PROJECT

1. Operating characteristics, estimated number and types of structures required, and right-of-way and/or land requirements.

The Ross-Delano single-circuit line is operated at 138 kV. The line will be rebuilt for double-circuit operation. The proposed 138 kV double-circuit transmission line will consist of two (2) 556 kcm ACSR 26/7 conductors per phase. One (1) 7#8 Alumoweld overhead groundwire and one (1) 0.646" optical ground wire will be used as shield wires. The insulator assemblies will consist of polymer insulators. The 138 kV transmission line relocation structures to be installed will include three self-supporting dead end structures.

A sketch of the proposed structure type is included as Figure 2.

2. For electric power transmission lines, the production of electric and magnetic fields during the operation of the proposed electric power transmission line.

(a) Calculated Electric and Magnetic Field Levels

Three loading conditions were examined: (1) normal maximum loading, (2) emergency line loading, and (3) winter normal conductor rating. Normal maximum loading represents the peak flow expected with all system facilities in service; daily/hourly flows fluctuate below this level. Emergency loading is the maximum current flow during unusual (contingency) conditions, which exist only for short periods of time. Winter normal (WN) conductor rating represents the maximum current flow that a line, including its terminal equipment, can carry during winter conditions. It is not anticipated that this line would operate at its WN rating in the foreseeable future. Loading levels used in the EMF calculations are presented below. These levels are based on the 2014 projected system conditions. The corresponding designs, including phase configurations, are shown in Figure 3.

PROJECTED LOADING LEVELS			
Line	**Line Loading (A)**		
	Normal	Emergency	Winter Normal Rating
Delano-Ross 138 kV Line – Circuit 1	110	357	2,159
Delano-Ross 138 kV Line – Circuit 2	107	354	2,159

The calculated electric and magnetic fields are summarized below. Typical cross section profiles at normal maximum loading conditions are shown in Figure 4. The calculated electric and magnetic fields are summarized below. Typical cross section profiles at emergency loading conditions are shown in Figure 5. Typical cross section profiles for winter normal rating are shown in Figure 6.

EMF CALCULATIONS		
Condition	**Electric Field (kV/m)***	**Magnetic Field (mG)***
Normal Maximum Loading	0.3/0.84/0.3	2.8/7.5/2.5
Emergency Line Loading	0.3/0.84/0.3	9.1/24.5/8.3
Winter Normal Rating	0.3/1.2/0.3	64.2/220.4/61.9

* EMF levels (left ROW edge/maximum/right ROW edge) calculated one meter above ground assuming balanced currents and nominal voltages. Electric fields reflect normal and emergency operation; lower electric fields are expected during emergency conditions when one mutually coupled line is out of service.

(b) Discussion of the Company's Design Alternatives Regarding EMF Levels

Line construction associated with the Project is proposed in locations that would not place them in close proximity to existing residential areas and, therefore, will not significantly increase EMF exposure of the public.

3. The estimated cost of the project by Federal Energy Regulatory Commission account, unless the applicant is not an electric light company, a gas company or a natural gas company as defined in Chapter 4905., of the Revised Code (in which case, the applicant shall file the capital costs classified in the accounting format ordinarily used by the applicant in its normal course of business).

The 2014 capital cost estimates for the proposed project have been tabulated by the Federal Energy Regulatory Commission (FERC) Electric Plant Transmission Accounts:

ESTIMATES OF APPLICABLE INTANGIBLE AND CAPITAL COSTS		
FERC Account Number	**Description**	**Cost**
350	Land and Land Rights	Not Applicable
352	Structures & Improvement	Not Applicable
353	Substation Equipment	Not Applicable
354	Towers & Fixtures	Not Applicable
355	Poles & Fixtures	$2,261,080
356	Overhead Conductors & Devices	$990,073
357	Underground Conductors & Devices	Not Applicable
358	Underground-to-overhead Conversion Equipment	Not Applicable
359	Right-of-way Clearing, Roads, Trails or Other Access	Not Applicable
	TOTAL	**$3,251,153**

(D) SOCIOECONOMIC DATA

1. **A brief description of land use within the vicinity of the proposed project, including: (a) a list of municipalities, townships and counties affected; and (b) estimates of population density adjacent to rights of way within the study corridor (the U.S. census information may be used to meet this requirement.)**

   On behalf of AEP Ohio Transco, URS prepared a Socioeconomic, Land Use, and Agricultural District Review Report. This report is included as Appendix A.

2. **The location and general description of all agricultural land (including agricultural district land) existing at least sixty days prior to submission of the letter of notification within the proposed electric power transmission line right-of-way, or within the proposed electric power transmission substation fenced-in area, or within the construction site boundary of a proposed compressor station.**

   The majority of agricultural land crossed by the Project is within existing right-of-way. The re-routed portion of the existing line north of the Scioto River also crosses an agricultural field. Impacts to agricultural land are expected to be temporary and limited to construction access and the small footprint of each structure. Additional details regarding agricultural land impacted by the construction of the Project are provided in Appendix A.

3. **A description of the applicant's investigation (concerning the presence or absence of significant archaeological or cultural resources that may be located within the area likely to be disturbed by the project), a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.**

   An archaeological investigation by Weller & Associates, Inc. will be competed for this project. A copy of the resulting report will be provided to the Ohio Power Siting Board under separate cover.

4. **Documentation that the chief executive officer of each municipal corporation and county, and the head of each public agency charged with planning land use in the area in which any portion of the facility is to be located have been notified of the project and have been provided with a copy of the letter of notification. The applicant shall describe the company's public information program used in the siting of the proposed facility. The information submitted shall include either a copy of the material distributed to the public or a copy of the agenda and summary of the meeting(s) held by the applicant.**

   Copies of this Letter of Notification have been sent to the Ross County Commissioners, Ross County Engineer, the Mayor of Chillicothe, City of Chillicothe City Council, Chillicothe Planning Department, Scioto Township Trustees, Springfield Township Trustees, Green Township Trustees, and the Chillicothe and Ross County Public Library. Copies of the cover letters to these officials and the local library are attached in Appendix B. AEP Ohio Transco will advise local officials of features and the status of the proposed Project.

5. **A brief description of any current or pending litigation involving the project known to the applicant at the time of the letter of notification.**

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

6. **A listing of local, state, and federal governmental agencies known to have requirements which must be met in connection with the construction of the project, and list of documents that have been or are being filed with those agencies in connection with siting and constructing the project.**

   A Notice of Intent will be filed with the Ohio Environmental Protection Agency for authorization of construction stormwater discharges under General Permit OHC000003. Coverage under a U.S. Army Corps of Engineers Section 10 permit for crossing a navigable

waterway (Scioto River) is also anticipated to be required. There are no other known local, state, or federal requirements that must be met prior to commencement of the proposed Project.

(E) ENVIRONMENTAL DATA

1. **A description of the applicant's investigation concerning the presence or absence of federal or state endangered species (including endangered species, threatened species, rare species, species proposed for listing, species under review for listing, and species of special interest) that may be located within the area likely to be disturbed by the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.**

   On behalf of AEP Ohio Transco, URS prepared a Threatened and Endangered Species Report. URS coordinated with the USFWS and ODNR regarding special status species in the vicinity of the Project. No impacts to threatened or endangered species are expected. The full Threatened and Endangered Species Report for the Project is included as Appendix C.

2. **A description of the applicant's investigation concerning the presence or absence of areas of ecological concern (including national and state forests and parks, floodplains, wetlands, designated or proposed wilderness areas, national and state wild and scenic rivers, wildlife areas, wildlife refuges, wildlife management areas, and wildlife sanctuaries) that may be located within the areas likely to be disturbed by the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.**

   On behalf of AEP Ohio Transco, URS prepared an Areas of Ecological Concern, Wetland Delineation, and Stream Assessment Report. No impacts to wetlands or streams are anticipated. The full Areas of Ecological Concern, Wetland Delineation, and Stream Assessment Report for the Project is included as Appendix D.

3. **Any known additional information that will describe any unusual conditions resulting in significant environmental, social, health or safety impacts.**

   To the best of AEP Ohio Transco's knowledge, no unusual conditions exist that would result in environmental, social, health, or safety impacts. Construction and operation of the proposed Project will meet all applicable safety standards established by the Occupational

Safety and Health Administration, and will be in accordance with the requirements specified in the latest revision of the National Electrical Safety Code as adopted by the Public Utilities Commission of Ohio. The Stormwater Pollution Prevention Plan (SWPPP), which will include the Access Plan, will be provided to the OPSB under separate cover, after submission of this Letter of Notification.

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LEGEND:

Ross-Delano 138 kV Line

0 2,000 4,000

Scale in Feet

N

Ross County

AEP OHIO TRANSMISSION COMPANY

Ross-Delano
138 kV Rebuild

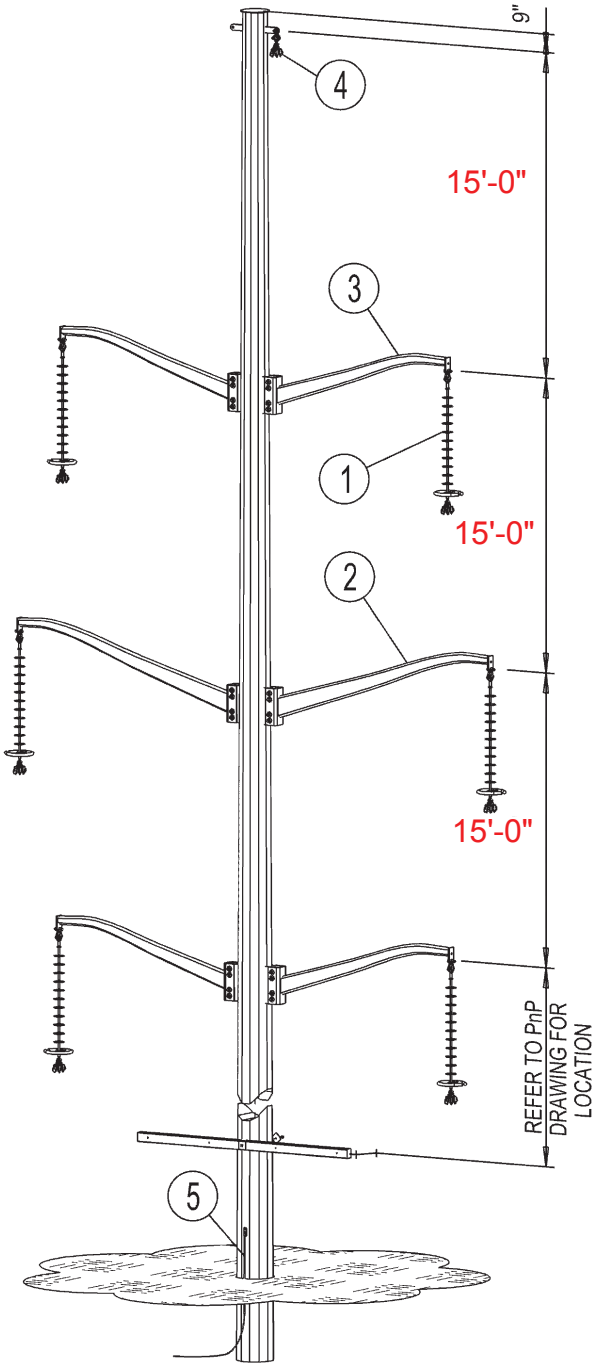
FIGURE 1
PROJECT OVERVIEW

JOB NO. 14951445

URS

REF. DRAWINGS

ITEM	QTY.	ASSEMBLY	DESCRIPTION	
1	6	11B6-2722	138KV SUSPENSION INSULATOR, POLYMER, 25K, W/CORONA RING	
2	2	62D0-1244	DAVIT, SINGLE, 16 FT 0 IN, FIXED VANG, THRU VANG CONNECTION, 50KSI	
3	4	62C0-1242	DAVIT, SINGLE 10 FT 0 IN, FIXED VANG, THRU VANG CONNECTION, 50KSI	
4	1	30T0-1102	OHGW, SUSPENSION, CONCRETE, STEEL OR WOOD POLE	
5	1	21SE-1456	GROUND ROD FOR DIRECT EMBEDDED STEEL POLE	



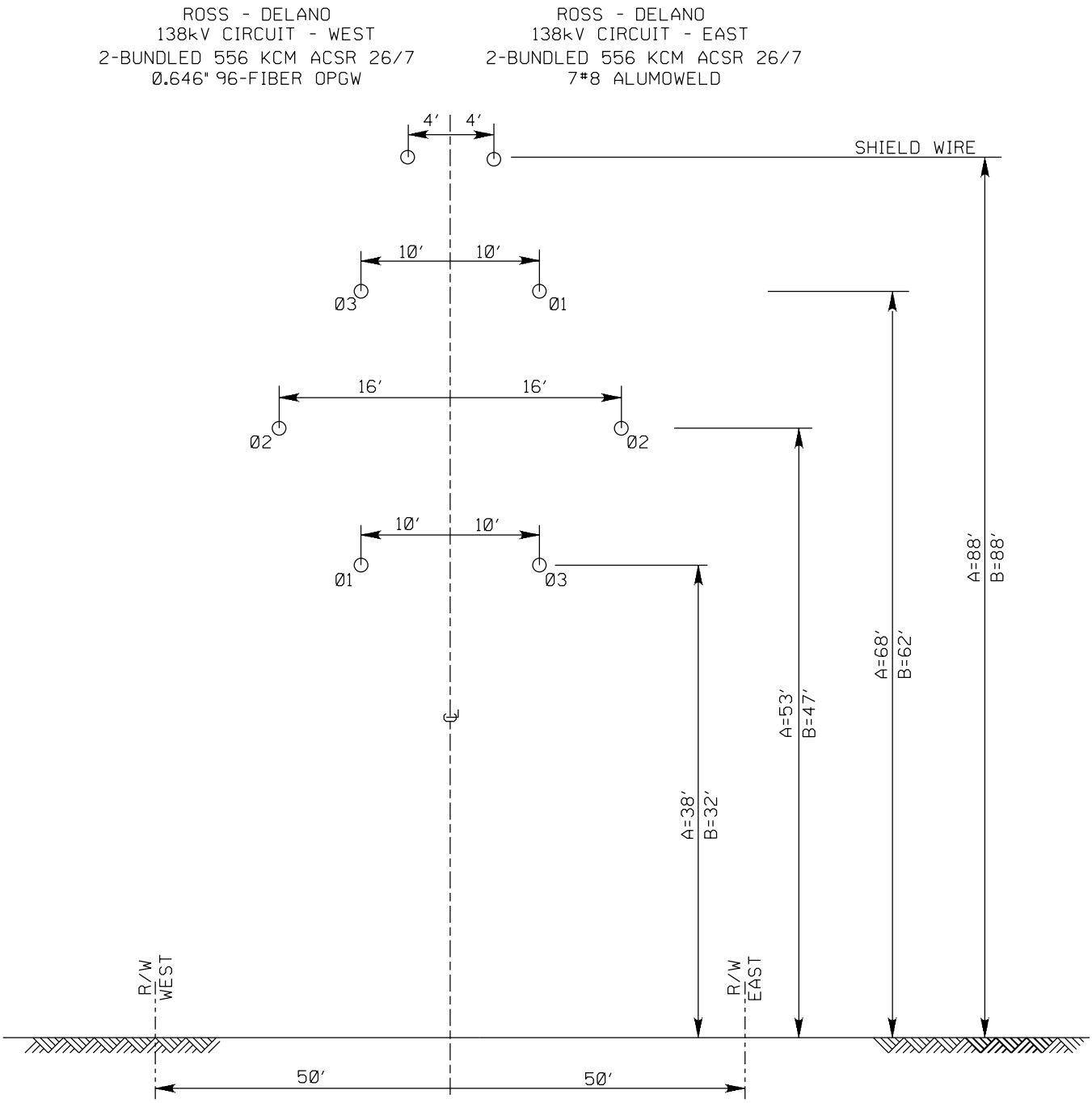
REV	DESCRIPTION	BY	DATE
1	REVISED ARM CALL-OUTS	McP	03/19/13

AEP AMERICAN ELECTRIC POWER

TRANSMISSION LINE STANDARDS

POLYMER - 138KV DOUBLE CIRCUIT, VERTICAL, DAVIT ARM, SUSPENSION W/CORONA RING, STEEL, W/ THRU VANGS

ENGR:	DRAWN: SAS	CHECKED: McP	APPROVED: JCN	DATE: 10/26/12	SHEET No. 1	REV. No. 1



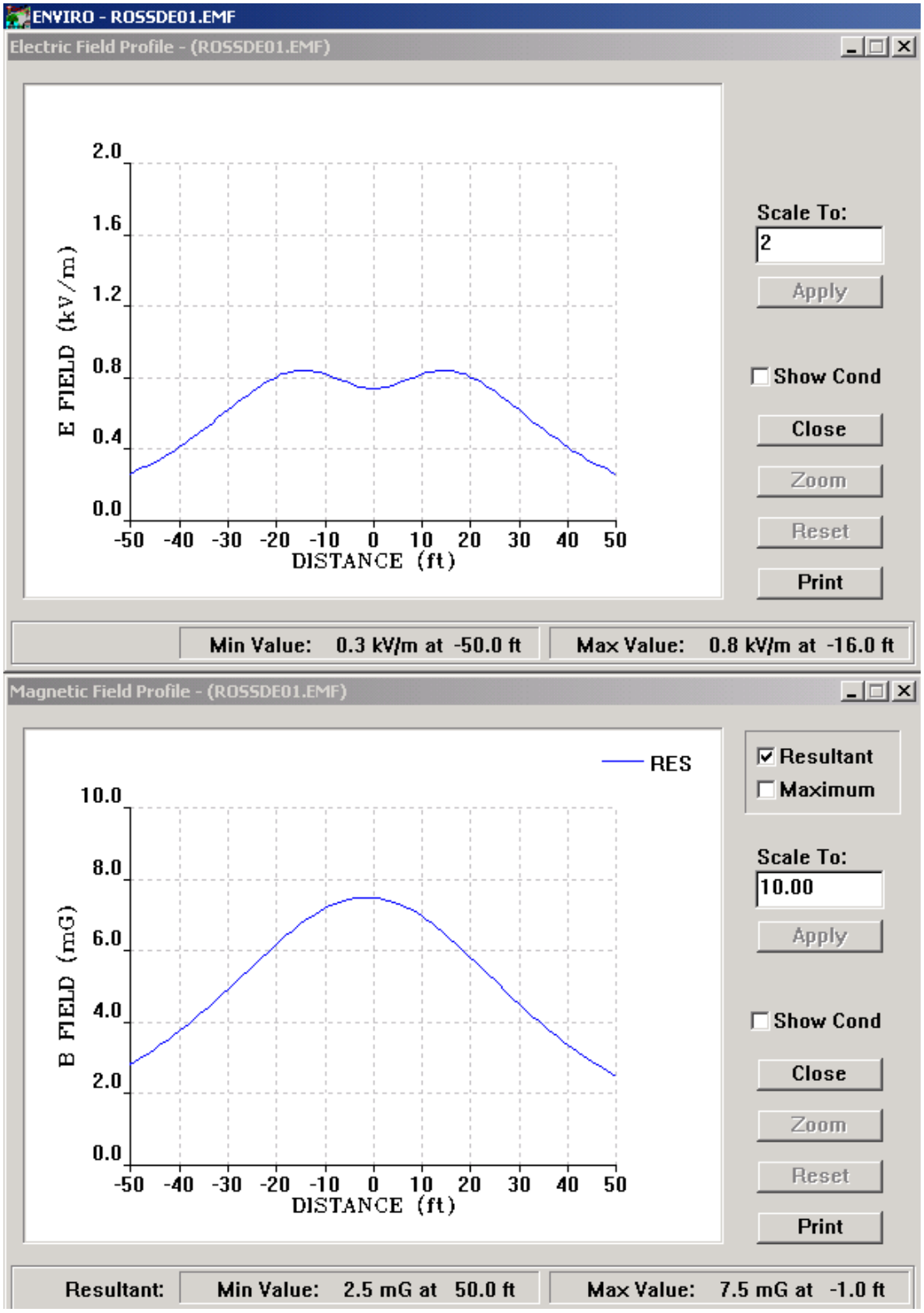
DIMENSION "A" - DOUBLE CIRCUIT VERT. CONFIGURATION (STEEL POLE)
(UNDER EMERGENCY & NORMAL MAX. LINE LOADING)

DIMENSION "B" - DOUBLE CIRCUIT VERT. CONFIGURATION (STEEL POLE)
(UNDER WINTER NORMAL CONDUCTOR RATING LOADING)

AEP AMERICAN ELECTRIC POWER

DOUBLE CIRCUIT
DAVIT ARM TANGENT STRUCTURE
ROSS - DELANO 138kV LINE

NOT TO SCALE



AEP OHIO TRANSMISSION COMPANY

Ross-Delano
138 kV Rebuild

FIGURE 4
EMF PROFILES
NORMAL MAXIMUM LOADING

JOB NO.14951445

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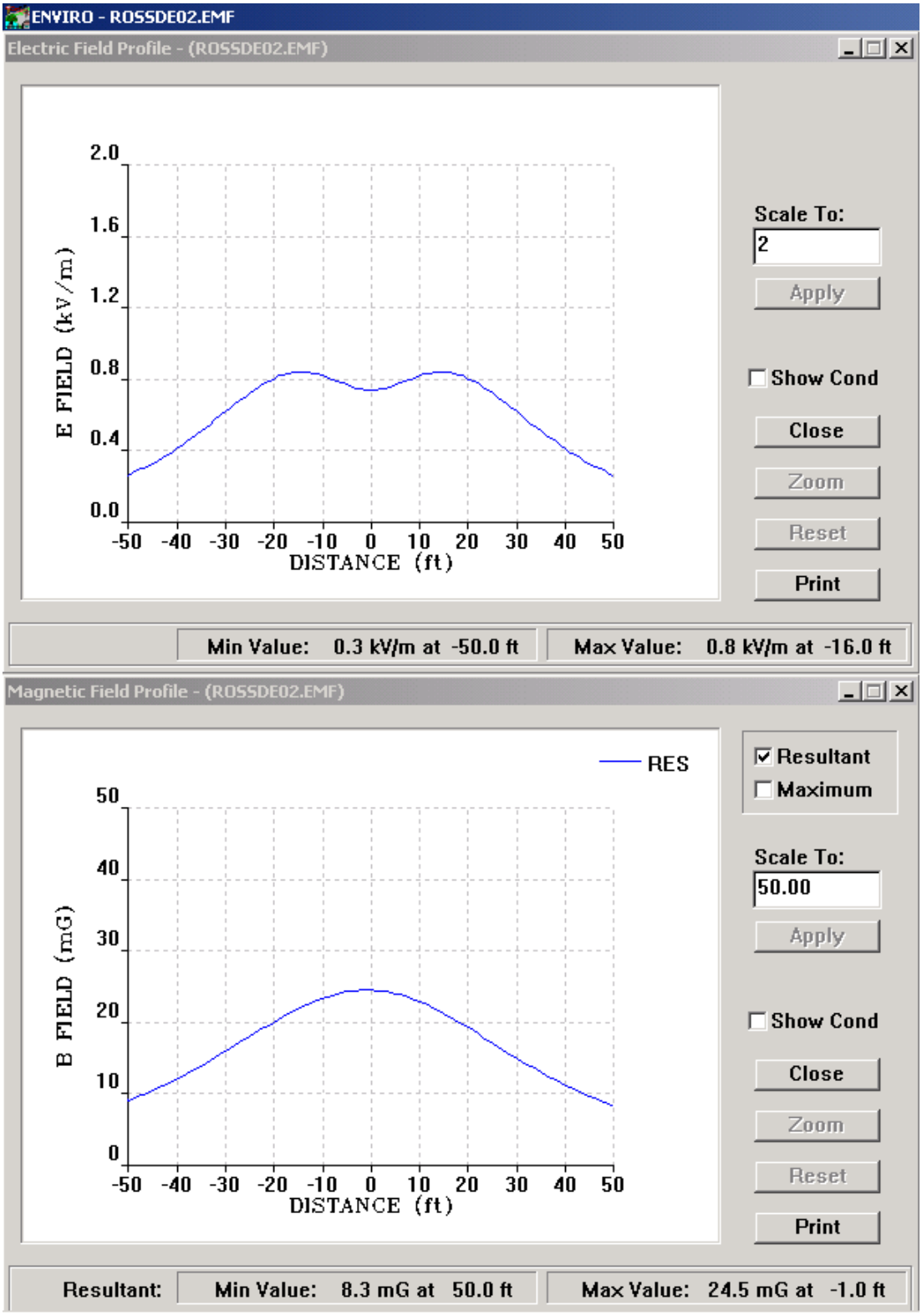

AEP OHIO TRANSMISSION COMPANY

Ross-Delano
138 kV Rebuild

FIGURE 5
EMF PROFILES
EMERGENCY LOADING

JOB NO.14951445

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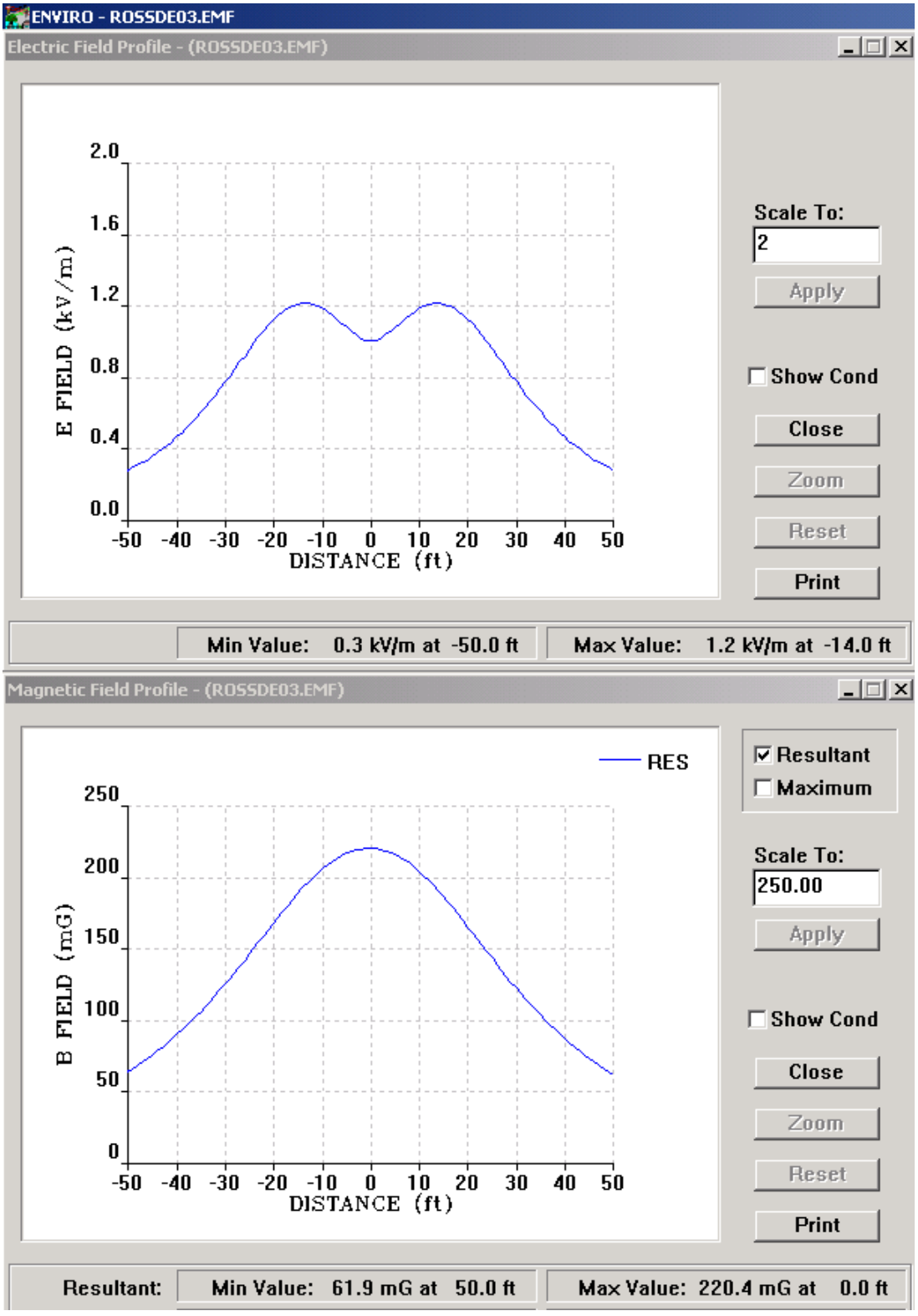

AEP OHIO TRANSMISSION COMPANY

Ross-Delano
138 kV Rebuild

FIGURE 6
EMF PROFILES
WINTER NORMAL RATING

JOB NO.14951445

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APPENDIX A

SOCIOECONOMIC, LAND USE, AND AGRICULTURAL DISTRICT REVIEW REPORT

ROSS-DELANO 138 KV TRANSMISSION LINE REBUILD PROJECT, ROSS COUNTY, OHIO

SOCIOECONOMIC, LAND USE, AND AGRICULTURAL DISTRICT REVIEW REPORT

Prepared for:

American Electric Power Ohio Transmission Company
700 Morrison Road
Gahanna, Ohio 45230

Prepared by:

URS
525 Vine Street, Suite 1800
Cincinnati, Ohio 45202

Project #: 14951445

June 2014

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Number

FIGURES
(follow text)

Number

1.0 PROJECT DESCRIPTION

This document presents the socioeconomic, land use, and agricultural district review conducted by URS Corporation (URS) for American Electric Power Ohio Transmission Copmpany's (AEP Ohio Transco) proposed Ross-Delano 138 kV Transmission Line Rebuild Project (Project). AEP Ohio Transco is proposing to rebuild approximately 4.7 miles of the existing Ross-Delano 138 kV transmission line in Ross County, Ohio and convert it from single circuit to double circuit.

As part of the Ohio Power Siting Board (OPSB) Letter of Notification (LON) requirements, AEP Ohio Transco is required to assess and report the socioeconomic, land use, and agricultural district characteristics potentially affected by the Project, as stated in Ohio Administrative Code (OAC) Rule 4906-11-01(D)(1) and (2). These rules state:

> ***(D) Socioeconomic data. Describe the social and ecological impacts of the project. This description shall contain the following information:***
>
> ***(1) A brief, general description of land use within the vicinity of the proposed project, including: (a) a list of municipalities, townships, and counties affected; and (b) estimates of population density adjacent to rights-of-way within the study corridor (the U.S. census information may be used to meet this requirement).***
>
> ***(2) The location and general description of all agricultural land (including agricultural district land) existing at least sixty days prior to submission of the letter of notification within the proposed electric power transmission line right-of-way, or within the proposed electric power transmission substation fenced-in area, or within the construction site boundary of a proposed compressor station.***

AEP Ohio Transco retained URS to conduct a desktop review of socioeconomic, land use, and agricultural district land characteristics. A study corridor was established within 1,000 feet of each side of the line to be rebuilt, resulting in a 2,000-foot wide study corridor. In conjunction with ecological field surveys for the Project, URS noted land uses crossed by the Project. This report will be used to assist AEP Ohio Transco's efforts to avoid or minimize impacts to socioeconomic characteristics and land uses potentially present in the study area during construction activities.

2.0 GENERAL LAND USE DESCRIPTION

Land use within the study area is shown on Figure 1. Current land use characteristics were obtained through review of aerial photography taken in 2013; the United States Geological Survey (USGS) 7.5-minute topographic maps of the Chillicothe East, Ohio (1985) and Kingston, Ohio (1975) quadrangles; parcel GIS files of the Project area; and a field reconnaissance conducted in May 2014.

The primary land uses within the 2,000-foot wide study corridor include industrial and commercial facilities, agricultural fields, wooded parcels, and residences. Two government-owned parcels are located approximately 600 feet east of the Project, and appear to be used for training purposes. Stream,

transportation, and utility corridors are also present. No recreational land uses were identified within the 2,000-foot study corridor.

The 2,000-foot wide study corridor crosses portions of the City of Chillicothe, Scioto Township, Springfield Township, and Green Township in Ross County. General land use trends in Ross County indicate that there is an ongoing conversion of farmland to residential and commercial districts as the City of Chillicothe expands. While some additional development is expected in the vicinity of the Project, the limited undeveloped parcels suggest only minimal to moderate growth. Based on a review of the Ross County, Green Township, and City of Chillicothe websites, no comprehensive plans indicating future land use for the Project area were identified.

According to Devon Shoemaker, a staff planner for Ross County, there are also no applicable zoning ordinances within the townships crossed by the Project. Within the City of Chillicothe, the southern end of the project overlays two zoning districts: Special Use & General Industrial. The Special Use district allows for a variety of permitted uses including: public facilities, educational, health care, senior housing, public assembly, correctional facilities, infrastructure, communication, and cemeteries. The General Industrial district also permits a variety of uses including: public facilities, manufacturing, warehousing, industrial product sales/service, automobile repair, and business offices incidental to one of the aforementioned permitted uses.

3.0 POPULATION DENSITY ESTIMATE

Population density estimates for land within the 2,000-foot wide study corridor were calculated by direct estimation based on study corridor size, number of residences identified in the corridor, and the average number of persons per household in Ross County. Approximately 165 homes were identified along the 4.7-mile Ross-Delano 138kV line within the 1,206-acre study corridor, which is entirely within Ross County. According to the 2010 U.S. Census, the average household in Ross County has 2.88 persons, for a total estimated population along the route of approximately 475. This equates to a population density of 0.39 person per acre. This is approximately twice the persons per acre average for all of Ross County, but is expected based on proximity of the Project to the City of Chillicothe. Table 1 outlines population statistics for the Project study corridor.

TABLE 1
STUDY AREA CENSUS POPULATION ESTIMATES

Government Unit	Percent of 2,000-foot Corridor	2000 Census	2010 Census
Ross County	100	73,345	78,064
City of Chillicothe	7.9	21,796	21,901
Scioto Township	10.6	27,735	27,721
Springfield Township	56.6	2,277	2,657
Green Township	24.9	4,492	4,918

Source: U.S. Census Bureau, Census 2000 Summary File 1; U.S. Census Bureau, 2010 Census.

4.0 AGRICULTURAL DISTRICT LAND

Agricultural fields are visible on aerial photography within the 2,000-foot study corridor, as shown on Figure 1, and were observed during the field reconnaissance. URS contacted the Ross County Auditor's office on June 6, 2014 regarding parcels registered in the agricultural district land program. There are reportedly no agricultural district land parcels in the 2,000-foot study corridor.

5.0 CONCLUSION

The Project is not expected to significantly impact current socioeconomic characteristics, land use, or agricultural district land in the vicinity. The Project is not expected to negatively impact any future land use plans for the area.

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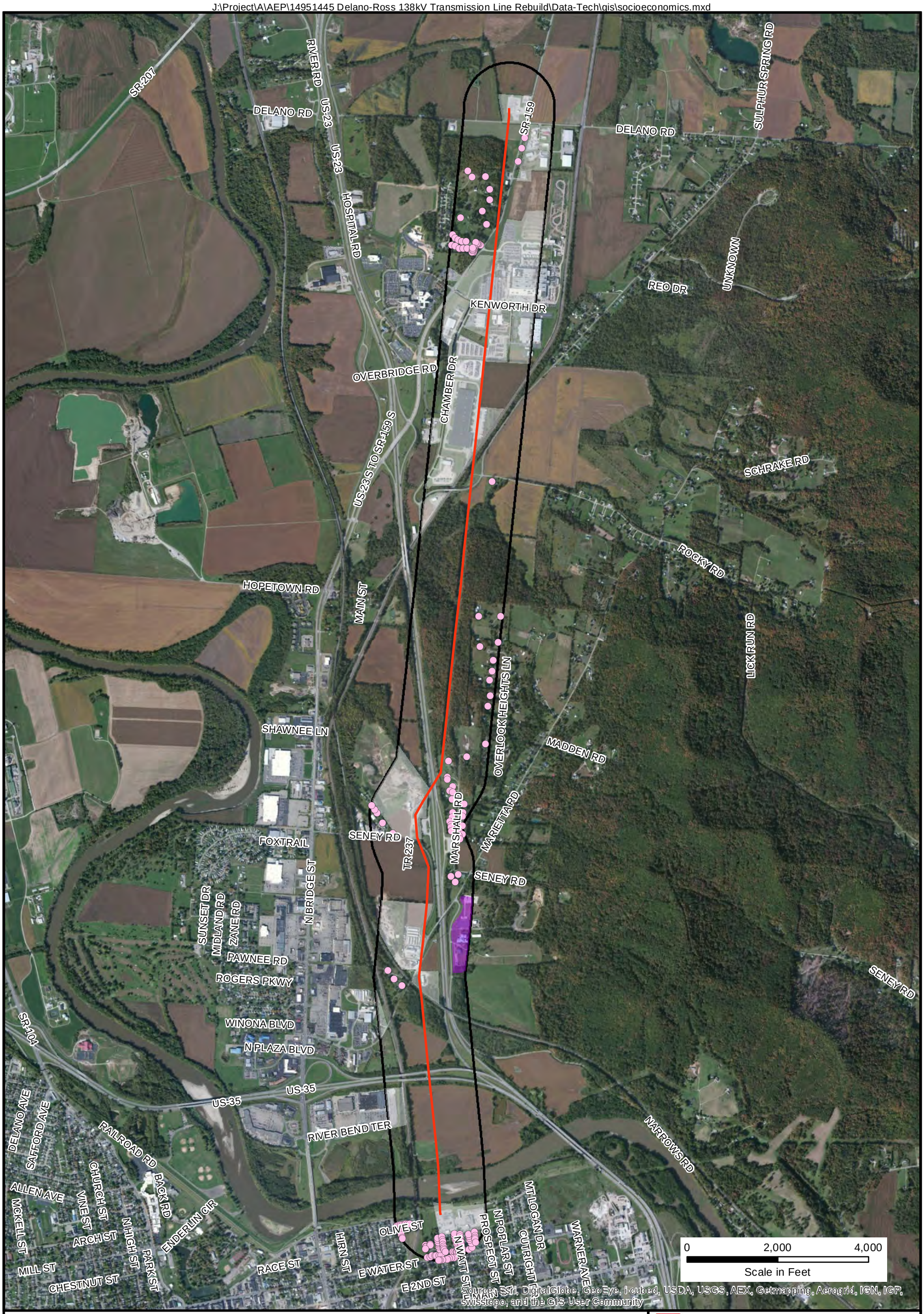
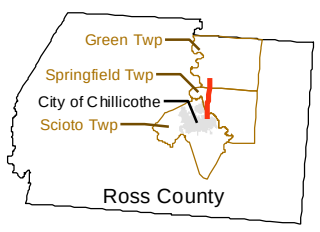


LEGEND:

- Ross-Delano 138 kV Line
- Residence
- Government-owned Parcel
- Commercial/Industrial Land use

N



AEP OHIO TRANSMISSION COMPANY

Ross-Delano 138 kV Rebuild

FIGURE 1
LAND USE MAP

JOB NO. 14951328

URS

APPENDIX B

PUBLIC OFFICIALS LETTERS SERVING COPY OF LETTER OF NOTIFICATION

American Electric Power
700 Morrison Road
Gahanna, OH 43230

June 16, 2014

Scioto Township Trustee
Ms. Melissa Jo Butt
9 Timberlane Drive
Chillicothe, Ohio 45601

RE: Letter of Notification
Ross-Delano 138-kV Transmission Line Rebuild Project
Case Number: 14-1075-EL-BLN

Dear Ms. Butt:

In accordance with Rules 4906 of the Ohio Administrative Code (OAC), AEP Ohio Transmission Company (AEP Ohio Transco) is required to submit a Letter of Notification to the State of Ohio Power Siting Board (OPSB) whenever certain changes are made to our transmission facilities.

The proposed Ross-Delano 138-kV Transmission Line Rebuild Project, Public Utilities Commission of Ohio (PUCO) Case Number 14-1075-EL-BLN, consists of rebuilding the majority of an existing 138-kV transmission line within existing right of way. The total length of the Ross-Delano transmission line is approximately five miles long. The southern half-mile portion of the existing line will be relocated approximately 350 feet to the west of the existing centerline. AEP Ohio Transco will upgrade the line by using primarily standard single pole 138-kV structures. The project will traverse Scioto, Springfield, and Green townships in Ross County.

In compliance with Rule 4906-11-01 of the OPSB Rules and Regulations, we have prepared and filed the attached Letter of Notification. This Notice contains details on the line location, project description and construction schedule, and is submitted for your information.

Please feel free to contact me at 614-552-1929 and I would be happy to answer any questions concerning this project.

Sincerely,

Brett E. Schmied, J.D.
Project Outreach Specialist
American Electric Power

cc: Curtis Perry, Project Manager

American Electric Power
700 Morrison Road
Gahanna, OH 43230

June 16, 2014

Scioto Township Trustee
Mr. Paul E. Corcoran
8 Ridge Drive
Chillicothe, Ohio 45601

RE: Letter of Notification
Ross-Delano 138-kV Transmission Line Rebuild Project
Case Number: 14-1075-EL-BLN

Dear Mr. Corcoran:

In accordance with Rules 4906 of the Ohio Administrative Code (OAC), AEP Ohio Transmission Company (AEP Ohio Transco) is required to submit a Letter of Notification to the State of Ohio Power Siting Board (OPSB) whenever certain changes are made to our transmission facilities.

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Sincerely,

Brett E. Schmied, J.D.
Project Outreach Specialist
American Electric Power

cc: Curtis Perry, Project Manager

American Electric Power
700 Morrison Road
Gahanna, OH 43230

June 16, 2014

Mayor Jack A. Everson
City of Chillicothe
35 South Paint Street
Chillicothe, Ohio 45601

RE: Letter of Notification
Ross-Delano 138-kV Transmission Line Rebuild Project
Case Number: 14-1075-EL-BLN

Dear Mayor Everson:

In accordance with Rules 4906 of the Ohio Administrative Code (OAC), AEP Ohio Transmission Company (AEP Ohio Transco) is required to submit a Letter of Notification to the State of Ohio Power Siting Board (OPSB) whenever certain changes are made to our transmission facilities.

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Sincerely,

Brett E. Schmied, J.D.
Project Outreach Specialist
American Electric Power

cc: Curtis Perry, Project Manager

American Electric Power
700 Morrison Road
Gahanna, OH 43230

June 16, 2014

Springfield Township Trustee
Ms. Carmi V. Jones, IV
2286 Charleston Pike
Chillicothe, Ohio 45601

RE: Letter of Notification
Ross-Delano 138-kV Transmission Line Rebuild Project
Case Number: 14-1075-EL-BLN

Dear Ms. Jones:

In accordance with Rules 4906 of the Ohio Administrative Code (OAC), AEP Ohio Transmission Company (AEP Ohio Transco) is required to submit a Letter of Notification to the State of Ohio Power Siting Board (OPSB) whenever certain changes are made to our transmission facilities.

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Sincerely,

Brett E. Schmied, J.D.
Project Outreach Specialist
American Electric Power

cc: Curtis Perry, Project Manager

American Electric Power
700 Morrison Road
Gahanna, OH 43230

June 16, 2014

Green Township Fiscal Officer
Mr. D. Brad McCorkle
3867 Sulphur Spring Road
Kingston, Ohio 46544

RE: Letter of Notification
Ross-Delano 138-kV Transmission Line Rebuild Project
Case Number: 14-1075-EL-BLN

Dear Mr. McCorkle:

In accordance with Rules 4906 of the Ohio Administrative Code (OAC), AEP Ohio Transmission Company (AEP Ohio Transco) is required to submit a Letter of Notification to the State of Ohio Power Siting Board (OPSB) whenever certain changes are made to our transmission facilities.

The proposed Ross-Delano 138-kV Transmission Line Rebuild Project, Public Utilities Commission of Ohio (PUCO) Case Number 14-1075-EL-BLN, consists of rebuilding the majority of an existing 138-kV transmission line within existing right of way. The total length of the Ross-Delano transmission line is approximately five miles long. The southern half-mile portion of the existing line will be relocated approximately 350 feet to the west of the existing centerline. AEP Ohio Transco will upgrade the line by using primarily standard single pole 138-kV structures. The project will traverse Scioto, Springfield, and Green townships in Ross County.

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Sincerely,

Brett E. Schmied, J.D.
Project Outreach Specialist
American Electric Power

cc: Curtis Perry, Project Manager

American Electric Power
700 Morrison Road
Gahanna, OH 43230

June 16, 2014

Springfield Township Trustee
Mr. Dennis M. Miller
148 Schrake Road
Chillicothe, Ohio 45601

RE: Letter of Notification
Ross-Delano 138-kV Transmission Line Rebuild Project
Case Number: 14-1075-EL-BLN

Dear Mr. Miller:

In accordance with Rules 4906 of the Ohio Administrative Code (OAC), AEP Ohio Transmission Company (AEP Ohio Transco) is required to submit a Letter of Notification to the State of Ohio Power Siting Board (OPSB) whenever certain changes are made to our transmission facilities.

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Sincerely,

Brett E. Schmied, J.D.
Project Outreach Specialist
American Electric Power

cc: Curtis Perry, Project Manager

American Electric Power
700 Morrison Road
Gahanna, OH 43230

June 16, 2014

Green Township Trustee
Mr. Dale A. Naas
9200 Dry Run Road
Kingston, Ohio 45644

RE: Letter of Notification
Ross-Delano 138-kV Transmission Line Rebuild Project
Case Number: 14-1075-EL-BLN

Dear Mr. Naas:

In accordance with Rules 4906 of the Ohio Administrative Code (OAC), AEP Ohio Transmission Company (AEP Ohio Transco) is required to submit a Letter of Notification to the State of Ohio Power Siting Board (OPSB) whenever certain changes are made to our transmission facilities.

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Sincerely,

Brett E. Schmied, J.D.
Project Outreach Specialist
American Electric Power

cc: Curtis Perry, Project Manager

American Electric Power
700 Morrison Road
Gahanna, OH 43230

June 16, 2014

Ross County Engineer
Mr. Charles R. Ortman
755 Fairgrounds Road
Chillicothe, Ohio 45601

RE: Letter of Notification
Ross-Delano 138-kV Transmission Line Rebuild Project
Case Number: 14-1075-EL-BLN

Dear Mr. Ortman:

In accordance with Rules 4906 of the Ohio Administrative Code (OAC), AEP Ohio Transmission Company (AEP Ohio Transco) is required to submit a Letter of Notification to the State of Ohio Power Siting Board (OPSB) whenever certain changes are made to our transmission facilities.

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Sincerely,

Brett E. Schmied, J.D.
Project Outreach Specialist
American Electric Power

cc: Curtis Perry, Project Manager

American Electric Power
700 Morrison Road
Gahanna, OH 43230

June 16, 2014

Ross County Planning Department
Mr. Keith Putnam, Administrator
15 North Paint Street, Suite 200
Chillicothe, Ohio 45601

RE: Letter of Notification
Ross-Delano 138-kV Transmission Line Rebuild Project
Case Number: 14-1075-EL-BLN

Dear Mr. Putnam:

In accordance with Rules 4906 of the Ohio Administrative Code (OAC), AEP Ohio Transmission Company (AEP Ohio Transco) is required to submit a Letter of Notification to the State of Ohio Power Siting Board (OPSB) whenever certain changes are made to our transmission facilities.

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Sincerely,

Brett E. Schmied, J.D.
Project Outreach Specialist
American Electric Power

cc: Curtis Perry, Project Manager

American Electric Power
700 Morrison Road
Gahanna, OH 43230

June 16, 2014

Chillicothe City Council
Mr. Eric Rinehart, President
35 South Paint Street
Chillicothe, Ohio 45601

RE: Letter of Notification
Ross-Delano 138-kV Transmission Line Rebuild Project
Case Number: 14-1075-EL-BLN

Dear Mr. Rinehart:

In accordance with Rules 4906 of the Ohio Administrative Code (OAC), AEP Ohio Transmission Company (AEP Ohio Transco) is required to submit a Letter of Notification to the State of Ohio Power Siting Board (OPSB) whenever certain changes are made to our transmission facilities.

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Sincerely,

Brett E. Schmied, J.D.
Project Outreach Specialist
American Electric Power

cc: Curtis Perry, Project Manager

American Electric Power
700 Morrison Road
Gahanna, OH 43230

June 16, 2014

Ross County Board of Commissioners
Mr. James M. Caldwell, President
Mr. Doug Corcoran
Mr. Stephen A. Neal
2 North Paint Street, Suite H
Chillicothe, Ohio 45601

RE: Letter of Notification
Ross-Delano 138-kV Transmission Line Rebuild Project
Case Number: 14-1075-EL-BLN

Dear Commissioners:

In accordance with Rules 4906 of the Ohio Administrative Code (OAC), AEP Ohio Transmission Company (AEP Ohio Transco) is required to submit a Letter of Notification to the State of Ohio Power Siting Board (OPSB) whenever certain changes are made to our transmission facilities.

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Sincerely,

Brett E. Schmied, J.D.
Project Outreach Specialist
American Electric Power

cc: Curtis Perry, Project Manager

American Electric Power
700 Morrison Road
Gahanna, OH 43230

June 16, 2014

Springfield Township Fiscal Officer
Ms. Carol L. Schrader
2749 Rocky Road
Chillicothe, Ohio 45601

RE: Letter of Notification
Ross-Delano 138-kV Transmission Line Rebuild Project
Case Number: 14-1075-EL-BLN

Dear Ms. Schrader:

In accordance with Rules 4906 of the Ohio Administrative Code (OAC), AEP Ohio Transmission Company (AEP Ohio Transco) is required to submit a Letter of Notification to the State of Ohio Power Siting Board (OPSB) whenever certain changes are made to our transmission facilities.

The proposed Ross-Delano 138-kV Transmission Line Rebuild Project, Public Utilities Commission of Ohio (PUCO) Case Number 14-1075-EL-BLN, consists of rebuilding the majority of an existing 138-kV transmission line within existing right of way. The total length of the Ross-Delano transmission line is approximately five miles long. The southern half-mile portion of the existing line will be relocated approximately 350 feet to the west of the existing centerline. AEP Ohio Transco will upgrade the line by using primarily standard single pole 138-kV structures. The project will traverse Scioto, Springfield, and Green townships in Ross County.

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Sincerely,

Brett E. Schmied, J.D.
Project Outreach Specialist
American Electric Power

cc: Curtis Perry, Project Manager

American Electric Power
700 Morrison Road
Gahanna, OH 43230

June 16, 2014

Springfield Township Trustee
Mr. Chuck Schrader, III
2749 Rocky Road
Chillicothe, Ohio 45601

RE: Letter of Notification
Ross-Delano 138-kV Transmission Line Rebuild Project
Case Number: 14-1075-EL-BLN

Dear Mr. Schrader:

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Brett E. Schmied, J.D.
Project Outreach Specialist
American Electric Power

cc: Curtis Perry, Project Manager

American Electric Power
700 Morrison Road
Gahanna, OH 43230

June 16, 2014

Scioto Township Fiscal Officer
Mr. Willard J. Taylor, III
9 Shawnee Drive
Chillicothe, Ohio 45601

RE: Letter of Notification
Ross-Delano 138-kV Transmission Line Rebuild Project
Case Number: 14-1075-EL-BLN

Dear Mr. Taylor:

In accordance with Rules 4906 of the Ohio Administrative Code (OAC), AEP Ohio Transmission Company (AEP Ohio Transco) is required to submit a Letter of Notification to the State of Ohio Power Siting Board (OPSB) whenever certain changes are made to our transmission facilities.

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Sincerely,

Brett E. Schmied, J.D.
Project Outreach Specialist
American Electric Power

cc: Curtis Perry, Project Manager

American Electric Power
700 Morrison Road
Gahanna, OH 43230

June 16, 2014

Chillicothe and Ross County Public Library
Mr. C. Nicholas Tepe, Director
140 South Paint Street
Chillicothe, Ohio 45601

RE: Letter of Notification
Ross-Delano 138-kV Transmission Line Rebuild Project
Case Number: 14-1075-EL-BLN

Dear Mr. Tepe:

In accordance with Rules 4906 of the Ohio Administrative Code (OAC), AEP Ohio Transmission Company (AEP Ohio Transco) is required to submit a Letter of Notification to the State of Ohio Power Siting Board (OPSB) whenever certain changes are made to our transmission facilities.

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We ask that you make this Letter of Notification available to the public.

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Sincerely,

Brett E. Schmied, J.D.
Project Outreach Specialist
American Electric Power

cc: Curtis Perry, Project Manager

American Electric Power
700 Morrison Road
Gahanna, OH 43230

June 16, 2014

Green Township Trustee
Mr. Robert A. Wakefield
6828 Dry Run Road
Kingston, Ohio 45644

RE: Letter of Notification
Ross-Delano 138-kV Transmission Line Rebuild Project
Case Number: 14-1075-EL-BLN

Dear Mr. Wakefield:

In accordance with Rules 4906 of the Ohio Administrative Code (OAC), AEP Ohio Transmission Company (AEP Ohio Transco) is required to submit a Letter of Notification to the State of Ohio Power Siting Board (OPSB) whenever certain changes are made to our transmission facilities.

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Sincerely,

Brett E. Schmied, J.D.
Project Outreach Specialist
American Electric Power

cc: Curtis Perry, Project Manager

American Electric Power
700 Morrison Road
Gahanna, OH 43230

June 16, 2014

Scioto Township Trustee
Mr. John K. Wetzel
6821 U.S. Route 23
Chillicothe, Ohio 45601

RE: Letter of Notification
Ross-Delano 138-kV Transmission Line Rebuild Project
Case Number: 14-1075-EL-BLN

Dear Mr. Wetzel:

In accordance with Rules 4906 of the Ohio Administrative Code (OAC), AEP Ohio Transmission Company (AEP Ohio Transco) is required to submit a Letter of Notification to the State of Ohio Power Siting Board (OPSB) whenever certain changes are made to our transmission facilities.

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Sincerely,

Brett E. Schmied, J.D.
Project Outreach Specialist
American Electric Power

cc: Curtis Perry, Project Manager

American Electric Power
700 Morrison Road
Gahanna, OH 43230

June 16, 2014

Green Township Trustee
Ms. Marcella J. Wolfe
156 Clayburne Boulevard
Chillicothe, Ohio 45601

RE: Letter of Notification
Ross-Delano 138-kV Transmission Line Rebuild Project
Case Number: 14-1075-EL-BLN

Dear Ms. Wolfe:

In accordance with Rules 4906 of the Ohio Administrative Code (OAC), AEP Ohio Transmission Company (AEP Ohio Transco) is required to submit a Letter of Notification to the State of Ohio Power Siting Board (OPSB) whenever certain changes are made to our transmission facilities.

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Sincerely,

Brett E. Schmied, J.D.
Project Outreach Specialist
American Electric Power

cc: Curtis Perry, Project Manager

APPENDIX C

THREATENED AND ENDANGERED SPECIES SURVEY REPORT

ROSS-DELANO 138 KV TRANSMISSION LINE REBUILD PROJECT, ROSS COUNTY, OHIO

RARE, THREATENED, AND ENDANGERED SPECIES SURVEY REPORT

Prepared for:

American Electric Power Ohio Transmission Company
700 Morrison Road
Gahanna, Ohio 43230

Prepared by:

URS
525 Vine Street, Suite 1800
Cincinnati, Ohio 45202

Project #: 14951445

June 2014

TABLE OF CONTENTS

TABLES

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ATTACHMENT

Number

1.0 PROJECT DESCRIPTION

This document presents the results of the rare, threatened, and endangered species assessment conducted by URS Corporation (URS) for American Electric Power Ohio Transmission Company's (AEP Ohio Transco) proposed Ross-Delano 138 kV Transmission Line Rebuild Project (Project). AEP Ohio Transco is proposing to rebuild approximately 4.7 miles of the existing Ross-Delano 138 kV transmission line in Ross County, Ohio and convert it from single circuit to double circuit.

As part of the Ohio Power Siting Board (OPSB) Letter of Notification (LON) requirements, AEP Ohio Transco is required to assess and report the socioeconomic, land use, and agricultural district characteristics potentially affected by the Project, as stated in Ohio Administrative Code (OAC) Rule 4906-11-01(E)(1). This rule states:

> ***(E) Environmental data. Describe the environmental impacts of the proposed project. This description shall include the following information:***
>
> ***(1) A description of the applicant's investigation concerning the presence or absence of federal and state designated species (including endangered species, threatened species, rare species, species proposed for listing, species under review for listing, and species of special interest) that may be located within the area likely to be disturbed by the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.***

AEP retained URS to conduct rare, threatened, and endangered species review and field surveys within areas crossed by the proposed Project. This report will be used to assist AEP Ohio Transco's efforts to avoid impacts to threatened and endangered species potentially present in the study area during construction activities.

2.0 METHODS

The first phase of the survey involved a review of online lists of federal and state species of concern. In addition to the review of available literature, URS submitted a request to Ohio Department of Natural Resources (ODNR) Biodiversity Database for GIS records of species of concern that were reported within close proximity to the Project. These GIS records were overlain on the Project GIS maps to identify designated species and other sensitive areas as reported by ODNR in relation to the Project. A copy of the letter provided with the Biodiversity Database GIS records is included in Attachment A. URS also submitted a coordination letter to the U.S. Fish and Wildlife Service (USFWS) and ODNR soliciting comments on the Project. Copies of the response letters provided by ODNR and USFWS are included as Appendix A. Agency-identified species and available species-specific information was reviewed to determine the various habitat types that listed species are known to frequent. This information was used during the field survey to assess the potential for these species of concern in, or near the Project study corridor.

3.0 RESULTS

URS field ecologists conducted a designated species habitat survey in conjunction with the stream and wetland field surveys on May 21 and May 22, 2014. The survey corridor was observed to be an existing electric transmission right-of-way and associated preliminary access roads.

3.1 State Species of Concern

ODNR provided Biodiversity Database GIS records and a corresponding letter response dated May 7, 2014. The data included the Project area plus an approximate 0.25 mile buffer. The only record crossed by the proposed Project right-of-way was an occurrence of the cobblestone tiger beetle (***Cincindela marginipennis***), a state threatened species, observed at the Scioto River in 1981. Four other records of aquatic vertebrate or invertebrate special status species were identified within stretches of the Scioto River not proposed to be crossed by the Project. Two plant species were also identified approximately 1,200 feet west of the Project centerline just north of the Scioto River. The initial Biodiversity Database response from ODNR also indicated that a record of an Indiana bat (***Myotis sodalis***) capture location is within five miles of the project site. However, due to the sensitivity of the species, ODNR did not provide the precise location of the observation. A copy of the ODNR response is included in Attachment A.

After receiving the ODNR Biodiversity Database response, URS sent a second letter to ODNR soliciting specific comments regarding the Project on May 13, 2014. As of June 17, 2014, no response has been received. URS has coordinated with ODNR for another electric transmission project in Ross County that includes Delano Station within the last year. Given the proximity of the two projects, URS assumes ODNR would have similar comments regarding the same species. Table 1 lists the species identified by ODNR in Ross County in July 2013.

TABLE 1
STATE LISTED SPECIES THAT COULD INHABIT
ROSS COUNTY, OHIO

Common Name	Scientific Name	State Status
Mammals		
Indiana bat	***Myotis sodalis***	Endangered
Black bear	***Ursus americanus***	Endangered
Fish		
Shortnose gar	***Lepisosteus platostomus***	Endangered
Blacknose shiner	***Notropis heterolepis***	Endangered
Insects		
Uhler's sundragon	***Helocordulia uhleri***	Endangered

In the July 2013 response for a nearby and similar project, ODNR requested that suitable Indiana bat habitat should be conserved or cut between October 1 and March 31. A net survey must be conducted

between June 15 and July 31 prior to cutting, if clearing is necessary during summer months. The shortnose gar and blacknose shiner are fish that may inhabit perennial streams of Ross County. ODNR stated that if no in-water work is proposed, impacts to this species are not expected. The range of Uhler's sundragon, a state endangered dragonfly, includes Ross County. ODRN stated that wetland impacts must be avoided in order to avoid potential impacts to this species. The range of the black bear is potentially within the vicinity of the Project. ODNR stated that due to the mobility of this species, no impacts are likely.

No state species of concern or signs of these species, and no unique habitats were observed during the field survey. Based on the lack of tree clearing within the existing right-of-way, no proposed in-water work, and no permanent wetland impacts, no state species of concern are expected to be impacted by the proposed Project.

3.2 Federal Species of Concern

To address the Project's potential to impact federally protected species, URS conducted a web based literature review of USFWS Ohio County Distribution of ***Federally Listed Threatened, Endangered, Proposed, and Candidate Species, Revised April 2014***, to identify what species potentially occur in Ross County, Ohio. Table 2 lists the seven species identified during the USFWS literature review. URS also submitted a coordination letter to USFWS. A copy of the USFWS response is included in Attachment A.

TABLE 2
FEDERALLY LISTED SPECIES THAT COULD INHABIT
ROSS COUNTY, OHIO

Common Name	Scientific Name	Federal Status
Mammals		
Indiana bat	***Myotis sodalis***	Endangered
Northern long-eared bat	***Myotis septentrionalis***	Proposed Endangered
Mussels		
Clubshell	***Pleurobema clava***	Endangered
Northern riffleshell	***Epioblasma torulosa rangiana***	Endangered
Rayed bean	***Villosa fabalis***	Endangered
Snuffbox	***Epioblasma triquetra***	Endangered
Plants		
Running buffalo clover	***Trifolium stoloniferum***	Endangered

Ohio County Distribution of Federally-Listed Threatened, Endangered, Proposed, and Candidate Species, Revised April 2014.
Accessed May 6, 2014: http://www.fws.gov/midwest/endangered//lists/pdf/OhioCtyList2014.pdf

Indiana Bat: The federal government lists this species as endangered in Ohio. Winter Indiana bat hibernacula include caves and mines, while summer habitat typically includes tree species exhibiting exfoliating bark or cavities that can be used for roosting. The 8- to 10-inch diameter size classes of several species of hickory (***Carya*** spp.), oak (***Quercus*** spp.), ash (***Fraxinus*** spp.), birch (***Betula*** spp.), and elm (***Ulmus*** spp.) have been found to be utilized by the Indiana bat. These tree species and many others may be used when dead, if there are adequately sized patches of loosely-adhering bark or open cavities. The structural configuration of forest stands favored for roosting includes a mixture of loose-barked trees with 60 to 80 percent canopy closure and a low density sub-canopy (less than 30 percent between about 6 feet high and the base canopy). The suitability of roosting habitat for foraging or the proximity to suitable foraging habitat is critical to the evaluation of a particular tree stand. An open subcanopy zone, under a moderately dense canopy, is important to allow maneuvering while catching insect prey. Proximity to water is critical, because insect prey density is greater over or near open water. The Project corridor is an existing electric transmission line right-of-way and associated preliminary construction access roads. The potential to impact this species appears very low.

Northern Long-Eared Bat: The federal government lists this species as proposed endangered in Ohio. As with the Indiana bat, winter northern long-eared bat hibernacula include caves and mines, while summer habitat typically includes tree species exhibiting exfoliating bark or cavities that can be used for roosting. Northern long-eared bat has also been found, albeit rarely, roosting in structures like barns and sheds. Similar to the Indiana bat, characteristics within the Project corridor suggest it is not likely to inhabit the proposed work areas.

Running Buffalo Clover: The proposed Project lies within the range of running buffalo clover, a federally-listed endangered species. This plant can be found in partially shaded woodlots, mowed areas (lawns, parks, cemeteries, and along streams and trails. Running buffalo clover requires periodic disturbance and a somewhat open habitat to successfully flourish, but cannot tolerate full-sun, full-shade, or severe disturbance. URS conducted the field surveys during the flowering period for this species. No running buffalo clover was observed. Further, the project corridor is an existing electric transmission line and associated access roads. The right-of-way appears to be cleared of tall-growing woody species, but was not mowed at the time of the field survey. Pesticide use to control vegetation may have been historically used. The potential for running buffalo clover to be present appears to be low.

In correspondence dated May 22, 2014, USFWS stated that no adverse effects to the Indiana bat and northern long-eared bat are anticipated due to AEP Ohio Transco's proposed implementation of seasonal tree cutting (only clearing between October 1 and March 31), if necessary. USFWS commented that if suitable running buffalo clover habitat is present, surveys for this species be conducted by a trained botanist in May or June when the plant is in flower. USFWS requested that the survey be coordinated in advance. The lack of habitat observed during the field survey suggests further surveys are not warranted.

Clubshell, northern riffleshell, rayed bean, and snuffbox mussels: These four mussel species are listed as endangered, with Ross County within the species' ranges. No in-water work is planned as part of the Project. No impacts to mussel species are anticipated.

4.0 SUMMARY

AEP retained URS to conduct a rare, threatened, and endangered species review for areas located within 1,000 feet of the proposed Project and a field survey within the proposed Project right-of-way. This report will be used to assist AEP's efforts to avoid impacts to rare, threatened, and endangered species potentially present in the study area during construction activities. The field survey was conducted by URS field biologists on May 21 and May 22, 2014. No species of concern or signs of these species, and no unique habitats were observed. No species of concern are expected to be impacted by the proposed Project.

5.0 CONCLUSION

Based upon the nature of the Project, review of available current literature, review of federal and state records of species of concern and the field survey conducted on May 21 and May 22, 2014, it is not anticipated that federal or state species of concern will be impacted by the Project as currently planned. However, contact with the USFWS, indicates that seasonal tree clearing restrictions, or additional summer surveys, are required to limit potential impacts to the Indiana and northern long-eared bats. At this time, URS understands that no tree clearing or in-water work is necessary for the Project as proposed.

ATTACHMENT A

AGENCY RESPONSES

Ohio Department of Natural Resources
JOHN R. KASICH, GOVERNOR
JAMES ZEHRINGER, DIRECTOR

Ohio Division of Wildlife
Scott Zody, Chief
2045 Morse Rd., Bldg. G
Columbus, OH 43229-6693

May 7, 2014

Aaron Geckle
URS
525 Vine Street, Suite 1800
Cincinnati, OH 45202

Dear Mr. Geckle

I have reviewed the Natural Heritage Database for the Ross-Delano 138 kV Rebuild Project including an additional half mile buffer based on the provided shape file. We have records for rare species and managed areas in your project area. I am attaching a shape file for the 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 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, FE = federal endangered, FT = federal threatened, FPE = federal potentially endangered, FC = federal candidate and FSC = federal species of concern, F = federal listing only. This data may not be published or distributed beyond the scope of the project description on the data request form without prior written permission of the Natural Heritage Program. I have also attached a shape file for managed areas that include state wildlife areas, nature preserves, parks and forests, national wildlife refuges, county metro parks, as well as sites owned by non-profit groups. Please be aware that the managed areas layer may not be complete. We do have a record for an Indiana Bat (*Myotis sodalis*) capture location within a five mile radius of the project site. Due to the sensitivity of this species, we do not provide the precise location of the observation.

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. Although we inventory all types of plant communities, we only maintain records on the highest quality areas.

This letter only represents a review of rare species and natural features data within the Ohio Natural Heritage Database. It does not fulfill coordination under the National Environmental Policy Act (NEPA) or the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S. C. 661 et seq.) and does 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.

Please contact me at 614-265-6452 if I can be of further assistance.

Sincerely,

Greg Schneider

Greg Schneider, Administrator
Ohio Natural Heritage Program

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
4625 Morse Road, Suite 104
Columbus, Ohio 43230
(614) 416-8993 / FAX (614) 416-8994

May 22, 2014

Aaron Geckle
URS Corporation
525 Vine Street, Suite 1800
Cincinnati, Ohio 45202

Re: Ross-Delano 138 kV Transmission Line Rebuild Project, Ross County, Ohio

Dear Mr. Geckle,

TAILS# 03E15000-2014-TA-1153

We have received your recent correspondence regarding potential impacts to federally listed species in the vicinity of the above referenced project. There are no federal wilderness areas, wildlife refuges or designated critical habitat within the vicinity of the project area.

LISTED SPECIES COMMENTS: The proposed project lies within the range of the **Indiana bat** (*Myotis sodalis*), a federally listed endangered species. Due to your proposed implementation of seasonal tree cutting (only clearing between October 1 and March 31), we do not anticipate adverse effects to Indiana bats.

If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), no tree clearing on any portion of the parcel should occur until consultation under section 7 of the ESA, between the Service and the federal action agency, is completed. We recommend that the federal action agency submit a determination of effects to this office, relative to the Indiana bat, for our review and concurrence.

The proposed project lies within the range of **running buffalo clover** (*Trifolium stoloniferum*), a federally listed endangered species. This plant can be found in partially shaded woodlots, mowed areas (lawns, parks, cemeteries), and along streams and trails. Running buffalo clover requires periodic disturbance and a somewhat open habitat to successfully flourish, but cannot tolerate full-sun, full-shade, or severe disturbance. If suitable habitat is present, we recommend that surveys for this species be conducted by a trained botanist in May or June when the plant is in flower. The survey must be coordinated with this office in advance. The list of qualified running buffalo clover surveyors is attached.

PROPOSED SPECIES COMMENTS: The proposed project lies within the range of the **northern long-eared bat** (*Myotis septentrionalis*), a species that is currently proposed for listing as federally endangered under the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16

U.S.C. 1531 *et seq.*). The final listing decision for the northern long-eared bat is expected as early as October 2014. No critical habitat has been proposed at this time. Due to your proposed implementation of seasonal tree cutting (only clearing between October 1 and March 31), we do not anticipate adverse effects to northern long-eared bats.

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 Endangered Species Act of 1973 (ESA), as amended, and are consistent with the intent of the National Environmental Policy Act of 1969 and the U. S. Fish and Wildlife Service's Mitigation Policy. This letter provides technical assistance only and does not serve as a completed ESA section 7 consultation document. We recommend that the project be coordinated with the Ohio Division of Wildlife due to the potential for the project to affect state listed species. Contact Nathan Reardon, Environmental Review Coordinator with the Division of Wildlife, at (614) 265- 6741 or at Nathan.Reardon@dnr.state.oh.us.

If you have questions, or if we may be of further assistance in this matter, please contact Angela Boyer at extension 22 in this office.

Sincerely,

Mary Knapp

Mary Knapp, Ph.D.
Field Supervisor

Attachment

cc: Nathen Reardon, ODNR, Division of Wildlife

APPENDIX D

AREAS OF ECOLOGICAL CONCERN, WETLAND DETERMINATION, AND STREAM ASSESSMENT REPORT

ROSS-DELANO 138 KV TRANSMISSION LINE REBUILD PROJECT, ROSS COUNTY, OHIO

AREAS OF ECOLOGICAL CONCERN, WETLAND DETERMINATION, AND STREAM ASSESSMENT REPORT

Prepared for:

American Electric Power Ohio Transmission Company
700 Morrison Road
Gahanna, Ohio 45230

Prepared by:

URS
525 Vine Street, Suite 1800
Cincinnati, Ohio 45202

Project #: 14951445

June 2014

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1.0 PROJECT DESCRIPTION

This document presents the results of the identification of waters of the U.S. conducted by URS Corporation (URS) for American Electric Power Ohio Transco's (AEP Ohio Transco) proposed Ross-Delano 138 kV Transmission Line Rebuild Project (Project). AEP Ohio Transco is proposing to rebuild approximately 4.7 miles of the existing Ross-Delano 138 kV transmission line in Ross County, Ohio and convert it from single circuit to double circuit.

As part of the Ohio Power Siting Board (OPSB) Letter of Notification (LON) requirements, AEP Ohio Transco is required to describe the investigation concerning the presence or absence of areas of ecological concern as stated in Ohio Administrative Code (OAC) Rule 4906-15-11-01(E)(2). This rule states:

> ***(E) Environmental data. Describe the environmental impacts of the proposed project. This description shall include the following information:***
>
> ***(2) A description of the applicant's investigation concerning the presence or absence of areas of ecological concern (including national and state forests and parks, floodplains, wetlands, designated or proposed wilderness areas, national and state wild and scenic rivers, wildlife areas, wildlife refuges, wildlife management areas, and wildlife sanctuaries) that may be located within the areas likely to be disturbed by the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.***

AEP Ohio Transco retained URS to review areas of ecological concern, as defined above, within the proposed Project vicinity and conduct a field survey of waters of the U.S. within the limits of the existing and proposed transmission line right-of-way and associated proposed construction access roads. This report will be used to assist AEP Ohio Transco's efforts to avoid impacts to areas of ecological concern present in the study area during construction.

2.0 METHODS

2.1 Special Status Ecological Areas

URS reviewed maps and GIS data in order to identify national and state forests and parks, designated or proposed wilderness areas, national and state wild and scenic rivers, wildlife areas, wildlife refuges, wildlife management areas, and wildlife sanctuaries in the Project vicinity. GIS data sources included the ODNR Biodiversity Database and federal land and parks layers available from Environmental Systems Research Institute (ESRI). Property ownership within 1,000 feet of the Project was reviewed to identify parcels that may have special status. URS also noted land use during the field reconnaissance conducted on May 21 and May 22, 2014.

Floodplains were evaluated based on the Federal Emergency Management Agency's (FEMA) Flood Map Viewer (https://hazards.fema.gov/wps/portal/mapviewer).

2.2 Wetland Assessment

National Wetland Inventory (NWI) wetlands are areas of potential wetland that have been identified from U.S. Fish and Wildlife Service (USFWS) aerial photo-interpretation and which have typically not been field verified. Forested and heavy scrub/shrub wetlands are often not shown on NWI maps, as foliage effectively hides the visual signature that indicates the presence of standing water and moist soils from an aerial view. In addition, many NWI-mapped wetlands are not found during field surveys. As a result, NWI maps do not show all the wetlands found in a particular area nor do they necessarily provide accurate wetland boundaries. NWI maps are useful for providing indications of potential wetland areas, which are often supported by soil mapping and hydrologic predictions, based upon topographical analysis using USGS topographic maps.

As requested by AEP, URS restricted the wetland assessments to: 1) identifying wetlands to their appropriate Cowardin classification (Cowardin, et al., 1979) and identification of boundaries, and 2) wetland evaluations using the Ohio Rapid Assessment Method (ORAM) protocol. The Project area was reviewed for the presence of wetlands using the procedures outlined in the United States Army Corps of Engineers (USACE) Wetlands Delineation Manual (1987 Manual) (Environmental Laboratory, 1987) in conjunction with the procedures outlined in the USACE Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Regional Supplement) (2010). Since the Project survey only included a wetland determination, URS did not conduct detailed examinations of the three wetland parameters that are documented in USACE Regional Supplement data sheets. However, enough information was gathered to make the onsite determination whether a wetland was present or not based on a three-factor approach involving indicators of hydrophytic vegetation, hydric soil, and wetland hydrology and to identify the approximate boundaries.

URS biologists identified wetlands through a pedestrian site reconnaissance of the study corridor, including identifying the vegetation communities, soils identification where necessary, conducting a geomorphologic assessment of hydrology, and notation of disturbance. Determined wetland boundaries were noted where one or more of these criteria gave way to upland characteristics. The determined wetland boundaries were recorded with a handheld Trimble GeoXH GPS unit where the proposed Project enters and exits a wetland.

The field survey results presented herein apply to the existing and reasonably foreseeable site conditions at the time of our assessment. They cannot apply to site changes of which URS is unaware and has not had the opportunity to review. Changes in the condition of a property may occur with time due to natural processes or human impacts at the project site or on adjacent properties. Changes in applicable standards may also occur as a result of legislation or the expansion of knowledge over time. Accordingly, the findings of this report may become invalidated, wholly or in part, by changes beyond the control of URS.

Wetland Classifications: Wetlands were classified based on the naming convention found in ***Classification of Wetlands and Deepwater Habitats of the United States (***Cowardin et al, 1979).

Ohio Rapid Assessment Method v. 5.0: The Ohio Environmental Protection Agency's (Ohio EPA) Ohio Rapid Assessment Method (ORAM) for Wetlands Version 5.0 was developed to determine the relative ecological quality and level of disturbance of a particular wetland in order to meet requirements under Section 401 of the Clean Water Act. Wetlands are scored on the basis of hydrology, upland buffer, habitat alteration, special wetland communities, and vegetation communities. Each of these subject areas is further divided into subcategories resulting in a score that describes the wetland using a range from 0 (low quality and high disturbance) to 100 (high quality and low disturbance). Wetlands scored from 0 to 29.9 are grouped into "Category 1," 30 to 59.9 are "Category 2," and 60 to 100 are "Category 3." Transitional zones exist between "Categories 1 and 2" from 30 to 34.9 and between "Categories 2 and 3" from 60 to 64.9. However, according to the Ohio EPA, if the wetland score falls into the transitional range, it must be given the higher Category unless scientific data can prove it should be in a lower Category (Mack, 2001). The ORAM score for the wetland that was delineated is discussed in Section 3.2 of this report.

2.3 Stream and River Crossings

Regulatory activities under the Clean Water Act (CWA) provide authority for states to issue water quality standards and "designated uses" to all "Waters of the U.S." upstream to the highest reaches of the tributary streams. In addition, the CWA of 1972 and its 1977 and 1987 amendments require knowledge of the potential fish or biological communities that can be supported in a stream or river, including upstream headwaters. Streams were identified by the presence of a defined bed and bank, and evidence of an ordinary high water mark (OHWM). Similar to the wetland assessments, URS stream assessments were limited to GPS recording of channels and basic classification based on flow regime (perennial, intermittent, or ephemeral).

3.0 RESULTS

3.1 Special Status Ecological Areas

URS conducted a review of published resources and agency consultations to identify national or state forests and parks designated or proposed wilderness areas, national and state wild and scenic rivers, wildlife areas, wildlife refuges, wildlife management areas, wildlife sanctuaries and floodplains crossed by and in the immediate vicinity of the Project. No national forests or parks designated or proposed wilderness areas, national wild and scenic rivers, wildlife areas, wildlife refuges, wildlife management areas, or wildlife sanctuaries were identified within 1,000 feet of the proposed Project.

According to the Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL) (GIS shapefile), the southern portion of the Project is located within a 100-year flood zone. Approximately three poles are expected to be placed within the 100-year flood zone. The remaining portions of the Project are located within Flood Zone X, an area with minimal flood hazard. No changes in flood elevations are anticipated as a result of the Project.

3.2 Wetland Assessment

Ten wetlands, totaling 2.36 acres, were identified within the study corridor and are summarized in Table 1. ORAM scores for these wetlands ranged from 11 to 51.

Category 1 Wetlands – Six Category 1 wetlands were identified in the study corridor. These wetlands are within existing right-of-way or along access roads. Only emergent vegetation was observed.

Category 2 Wetlands – Four Category 2 wetlands were identified within the study corridor. These wetlands included three characterized as PEM within existing right-of-way and one characterized as POW adjacent to a planned access road. These wetlands generally exhibited low to medium quality plant communities, low to high intensity of surrounding land use (wooded, scrub shrub, second growth forest), and recovering modification to substrate and habitat. One existing pole and one proposed pole location are located within Wetland 8, a wetland identified as a Category 2 wetland with an ORAM score of 33. Impacts to this wetland are expected to be minimized through the use of timber matting for construction access.

Category 3 Wetlands – No Category 3 wetlands were identified in the study corridor.

The location and approximate extent of the wetlands identified within the study corridor are shown on Figures 1 through 7. The completed ORAM forms are provided in Attachment A. Color photographs taken of representative wetlands during the field survey are provided in Attachment B.

TABLE 1
WETLANDS IDENTIFIED WITHIN THE SURVEY CORRIDOR

Report Name	Cowardin Wetland Type	ORAM Score	ORAM Category	Acreage within Study Corridor	Linear Feet Crossed by Centerline	Linear Feet Crossed by Access Road
Wetland 1	PEM	11	Category 1	0.01	0	0
Wetland 2	POW	34	Category 2	<0.01	0	0
Wetland 3	PEM	17	Category 1	0.04	0	0
Wetland 4	PEM	21	Category 1	0.03	0	19
Wetland 5	PEM	22	Category 1	0.01	0	38
Wetland 6	PEM	29	Category 1	0.02	0	35
Wetland 7	PEM	29	Category 1	0.01	0	0
Wetland 8	PEM	33	Category 2	2.13	891	965
Wetland 9	PEM	48	Category 2	0.02	0	0
Wetland 10	PEM	48	Category 2	0.09	63	0
Total: 10 Wetlands				**2.36**	**954**	**1,057**

3.3 Stream and River Crossings

URS identified nine streams totaling 1,575 linear feet within the study corridor which are summarized in Table 2. Three of the streams, totaling 659 linear feet within the survey corridor, were classified as perennial streams and are crossed by the centerline. One stream, totaling 218 linear feet within the survey corridor, was identified as an intermittent stream and is crossed by the centerline. The remaining five streams, totaling 698 linear feet within the survey corridor, were classified as ephemeral. Three of these ephemeral streams (streams 1, 3, and 5) are crossed by the proposed centerline. The locations of the streams identified within the study corridor are shown on Figures 1 through 7. Color photographs were taken of representative streams during the field survey and are provided in Attachment B.

TABLE 2
STREAMS IDENTIFIED WITHIN THE SURVEY CORRIDOR

Report Name	Waterbody	Flow Regime	Length within Survey Corridor (feet)	Crossed by Centerline
Scioto River	Scioto River	Perennial	300	Yes
Stream 1	Unnamed tributary to Scioto River	Ephemeral	238	Yes
Stream 2	Unnamed tributary to Scioto River	Ephemeral	159	No
Stream 3	Unnamed tributary to Scioto River	Ephemeral	138	Yes
Stream 4	Unnamed tributary to Dry Run	Intermittent	218	Yes
Stream 5	Unnamed tributary to Dry Run	Ephemeral	97	Yes
Stream 6	Unnamed tributary to Dry Run	Ephemeral	66	No
Stream 7	Dry Run	Perennial	144	Yes
Stream 8	Unnamed tributary to Dry Run	Perennial	215	Yes
Total: 8			**1,575**	**7 Crossed**

URS has preliminarily determined that all identified streams within the study corridor appear to be jurisdictional (i.e., waters of the U.S.), as they all appear to be tributaries that flow into other i.e., waters of the U.S. Coverage under a U.S. Army Corps of Engineers Section 10 permit for crossing a navigable waterway (Scioto River) is anticipated to be required. The need for a Section 10 permit does require the submittal of a PreConstruction Notification under Nationwide Permit 12.

4.0 PONDS

One pond was identified within the Project survey area. The pond is located on the edge of a proposed access road, but it is not crossed by the access road (Figure 2). Approximately 0.01 acre was identified

within the survey corridor. A color photograph was taken of the pond during the field survey and is provided in Attachment B.

5.0 SUMMARY

No national forests or parks designated or proposed wilderness areas, National or State Wild and Scenic Rivers, wildlife areas, wildlife refuges, wildlife management areas, or wildlife sanctuaries were identified within 1,000 feet of the proposed Project.

The southern portion of the Project is located within a 100-year flood zone. Approximately three poles are expected to be placed within the 100-year flood zone. No changes in flood elevations are anticipated as a result of the Project.

During the field survey, there were a total of ten wetlands identified, totaling 2.36 acres, within the survey corridor. One existing pole and one proposed pole location are located within Wetland 8, a wetland identified as a Category 2 wetland with an ORAM score of 33. Impacts to this wetland are expected to be minimized through the use of timber matting for construction access. Nine streams were identified totaling 1,575 linear feet within the survey corridor. The aerial crossing of the Scioto River, a Section 10 navigable stream will require a Section 10 permit and the preparation and submittal of a PreConstruction Notification for authorization to construct this project under Nationwide Permit 12.

6.0 CONCLUSION

This report will be used to assist AEP Ohio Transco's efforts to avoid special status ecological areas, wetlands, and streams to the extent possible during construction of the Project, thereby minimizing impacts to these features identified within the Project area. Based on the preliminary Project footprint and identified features, no construction activity within streams or wetlands is anticipated; however, there is a planned aerial crossing of the Scioto River, a navigable waterbody. Erosion control methods including silt fencing are expected to be used where appropriate to minimize runoff-related impacts to stream channels. As a consequence, significant impacts to waters of the U.S. are not anticipated. Coverage under a U.S. Army Corps of Engineers Section 10 permit for crossing a navigable waterway (Scioto River) is anticipated to be required, as noted above.

7.0 REFERENCES

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

Environmental Laboratory. 1987. U.S. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station: Vicksburg, Mississippi.

Mack, John J. 2001. Ohio Rapid Assessment Method for Wetlands v. 5.0, User's Manual and Scoring Forms. Ohio EPA Technical Report WET/2001-1. Ohio Environmental Protection Agency, Division of Surface Water, 401/Wetland Ecology Unit, Columbus, Ohio.

U.S. Army Corps of Engineers. 2010. ***Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)***, ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-16. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

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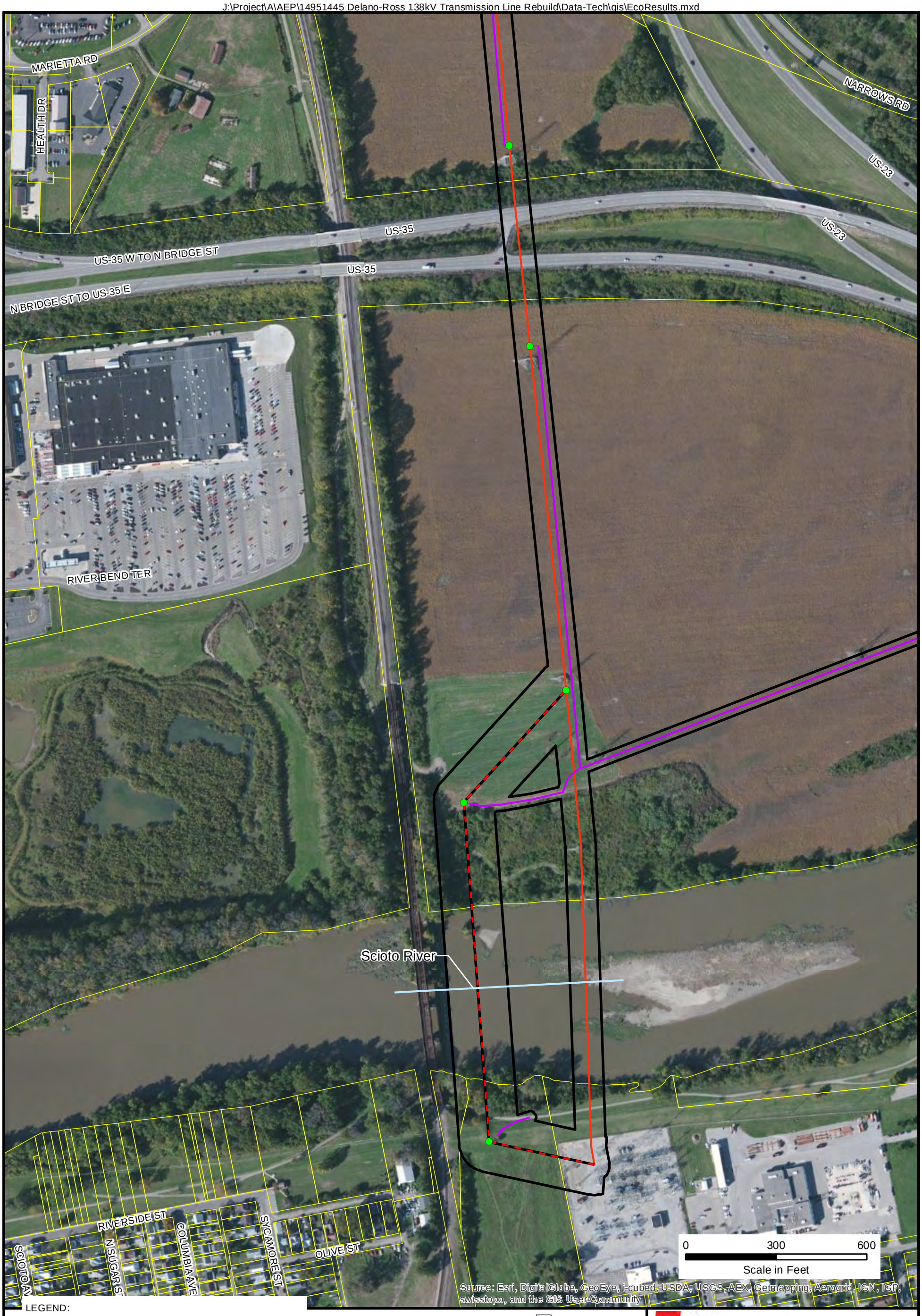

LEGEND:

- Ross-Delano 138 kV Line
- Approximate Replacement Structure Location
- Approximate Ross-Delano Re-route
- Approximate Access Road
- Stream
- Wetland
- Parcel

N

7 6 5 4 3 1 2

AEP OHIO TRANSMISSION COMPANY

Ross-Delano
138 kV Rebuild

FIGURE 1
ECOLOGICAL SURVEY RESULTS

JOB NO. 14951328

URS

J:\Project\A\AEP\14951445 Delano-Ross 138kV Transmission Line Rebuild\Data-Tech\gis\EcoResults.mxd

NARROWS RD
US-23
US-35
US-35
US-23
Wetland 2
Pond 1
Wetland 1
HARDIN DR
N POPLAR ST
HARDIN DR
TEATSWORTH DR
MT LOGAN DR
0 300 600
Scale in Feet
Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
EWAI, IGP

LEGEND:
- Ross-Delano 138 kV Line
- Approximate Replacement Structure Location
- Approximate Ross-Delano Re-route
- Approximate Access Road
- Stream
- Wetland
- Parcel

N

7 6 5 4 3 1 2

AEP OHIO TRANSMISSION COMPANY

Ross-Delano
138 kV Rebuild

FIGURE 2
ECOLOGICAL SURVEY RESULTS

JOB NO. 14951328

URS

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LEGEND:

- Ross-Delano 138 kV Line
- Approximate Replacement Structure Location
- Approximate Ross-Delano Re-route
- Approximate Access Road
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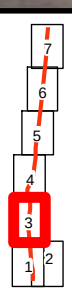
N



AEP OHIO TRANSMISSION COMPANY

Ross-Delano
138 kV Rebuild

FIGURE 3
ECOLOGICAL SURVEY RESULTS

JOB NO. 14951328

URS

J:\Project\A\AEP\14951445 Delano-Ross 138kV Transmission Line Rebuild\Data-Tech\gis\EcoResults.mxd

Wetland 8
Wetland 7
Wetland 6
Wetland 5
Stream 3
Wetland 4
Wetland 3
Stream 2
Stream 1
US-23
MARSHALL RD
SENEY RD
TR 237
MARIETTA RD

0 300 600
Scale in Feet

Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

LEGEND:
- Ross-Delano 138 kV Line
- Approximate Replacement Structure Location
- Approximate Ross-Delano Re-route
- Approximate Access Road
- Stream
- Wetland
- Parcel

N

7 6 5 4 3 1 2

AEP OHIO TRANSMISSION COMPANY

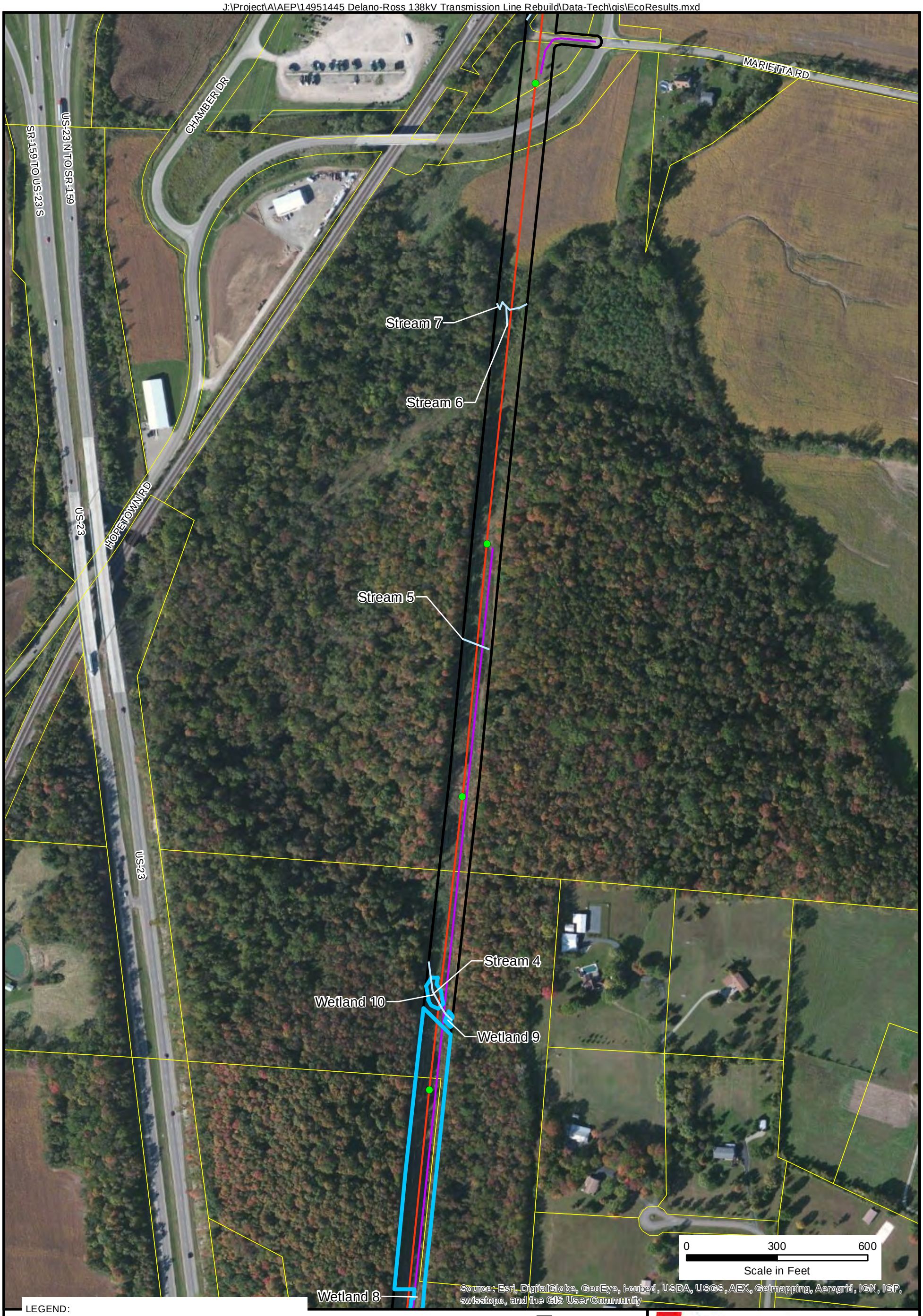
Ross-Delano
138 kV Rebuild

FIGURE 4
ECOLOGICAL SURVEY RESULTS

JOB NO. 14951328

URS

J:\Project\A\AEP\14951445 Delano-Ross 138kV Transmission Line Rebuild\Data-Tech\gis\EcoResults.mxd



LEGEND:

- Ross-Delano 138 kV Line
- Approximate Replacement Structure Location
- Approximate Ross-Delano Re-route
- Approximate Access Road
- Stream
- Wetland
- Parcel

N

7 6 5 4 3 1 2

AEP OHIO TRANSMISSION COMPANY

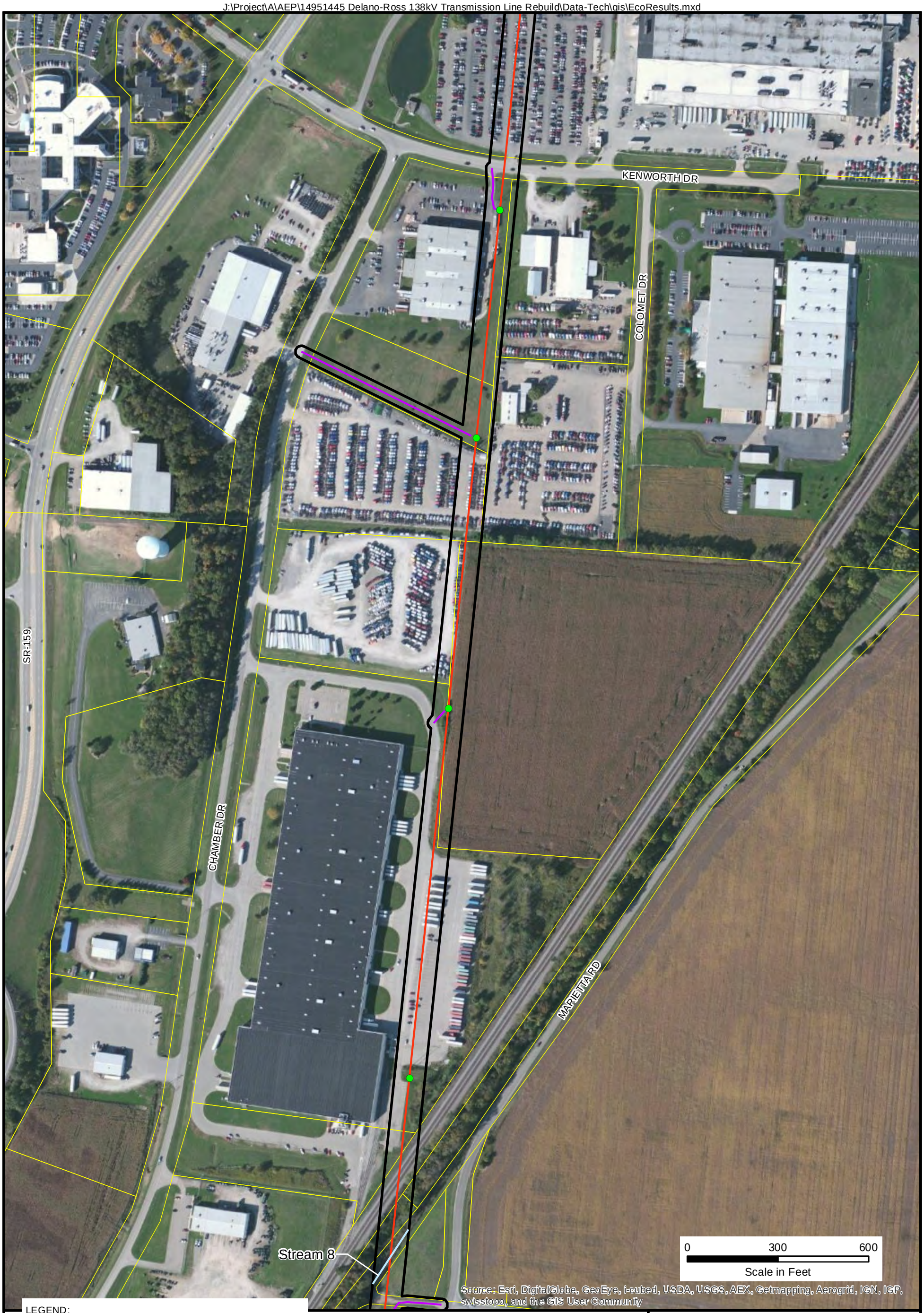
Ross-Delano
138 kV Rebuild

FIGURE 5
ECOLOGICAL SURVEY RESULTS

JOB NO. 14951328

URS

J:\Project\A\AEP\14951445 Delano-Ross 138kV Transmission Line Rebuild\Data-Tech\gis\EcoResults.mxd



LEGEND:

- Ross-Delano 138 kV Line
- Approximate Replacement Structure Location
- Approximate Ross-Delano Re-route
- Approximate Access Road
- Stream
- Wetland
- Parcel

N

7 6 5 4 3 1 2

AEP OHIO TRANSMISSION COMPANY

Ross-Delano
138 kV Rebuild

FIGURE 6
ECOLOGICAL SURVEY RESULTS

JOB NO. 14951328

URS

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DELANO RD

NORTH PARK DR

CLAYBURNE BLVD

CLAYBURNE CT

SR-159

0 300 600

Scale in Feet

Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

LEGEND:

- Ross-Delano 138 kV Line
- Approximate Replacement Structure Location
- Approximate Ross-Delano Re-route
- Approximate Access Road
- Stream
- Wetland
- Parcel

N

7
6
5
4
3
1 2

AEP OHIO TRANSMISSION COMPANY

Ross-Delano
138 kV Rebuild

FIGURE 7
ECOLOGICAL SURVEY RESULTS

JOB NO. 14951328

URS

ATTACHMENT A

WETLAND FORMS

Site: AEP Ross-Delano Rebuild	Rater(s): HAB	Date: 5/22/2014

Wetland 1

Metric 1. Wetland Area (size). w-bcr05/22/14-2

0 | 0 (max 6 pts | subtotal)

Select one size class and assign score.

	>50 acres (>20.2ha) (6 pts)
	25 to <50 acres (10.1 to <20.2ha) (5 pts)
	10 to <25 acres (4 to <10.1ha) (4 pts)
	3 to <10 acres (1.2 to <4ha) (3 pts)
	0.3 to <3 acres (0.12 to <1.2ha) (2pts)
	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
x	<0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

1 | 1 (max 14 pts. | subtotal)

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
x	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
X	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

6.0 | 7 (max 30 pts. | subtotal)

3a. Sources of Water. Score all that apply.

	High pH groundwater (5)
	Other groundwater (3)
x	Precipitation (1)
	Seasonal/Intermittent surface water (3)
	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

	100 year floodplain (1)
	Between stream/lake and other human use (1)
	Part of wetland/upland (e.g. forest), complex (1)
	Part of riparian or upland corridor (1)

3c. Maximum water depth. Select one.

	>0.7 (27.6in) (3)
	0.4 to 0.7m (15.7 to 27.6in) (2)
x	<0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.

	Semi- to permanently inundated/saturated (4)
	Regularly inundated/saturated (3)
	Seasonally inundated (2)
x	Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

	None or none apparent (12)
	Recovered (7)
x	Recovering (3)
	Recent or no recovery (1)

Check all disturbances observed

	ditch		point source (nonstormwater)
	tile	x	filling/grading
	dike	x	road bed/RR track
	weir		dredging
	stormwater input		Other:

Metric 4. Habitat Alteration and Development.

6 | 13 (max 20 pts. | subtotal)

4a. Substrate disturbance. Score one or double check and average.

	None or none apparent (4)
	Recovered (3)
x	Recovering (2)
	Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

	Excellent (7)
	Very good (6)
	Good (5)
	Moderately good (4)
	Fair (3)
	Poor to fair (2)
x	Poor (1)

4c. Habitat alteration. Score one or double check and average.

	None or none apparent (9)
	Recovered (6)
x	Recovering (3)
	Recent or no recovery (1)

Check all disturbances observed

x	mowing	x	shrub/sapling removal
	grazing		herbaceous/aquatic bed removal
x	clearcutting		sedimentation
x	selective cutting		dredging
	woody debris removal		farming
	toxic pollutants		nutrient enrichment

13 (subtotal this page)

ORAM v. 5.0 Field Form Quantitative Rating

Site: AEP Ross-Delano Rebuild	Rater(s): HAB	Date: 5/22/2014

Wetland 1

w-bcr05/22/14-2

	13

subtotal this page

0	**13**	**Metric 5. Special Wetlands.**
max 10 pts.	subtotal	Check all that apply and score as indicated.

	Bog (10)
	Fen (10)
	Old growth forest (10)
	Mature forested wetland (5)
	Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
	Lake Erie coastal/tributary wetland-restricted hydrology (5)
	Lake Plain Sand Prairies (Oak Openings) (10)
	Relict Wet Praires (10)
	Known occurrence state/federal threatened or endangered species (10)
	Significant migratory songbird/water fowl habitat or usage (10)
	Category 1 Wetland. See Question 5 Qualitative Rating (-10)

-2	**11**	**Metric 6. Plant communities, interspersion, microtopography.**
max 20pts.	subtotal	

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

1	Aquatic bed
	Emergent
	Shrub
	Forest
	Mudflats
	Open water
	Other_____

6b. horizontal (plan view) Interspersion.

Select only one.

	High (5)
	Moderately high(4)
	Moderate (3)
	Moderately low (2)
	Low (1)
x	None (0)

6c. Coverage of invasive plants. Refer Table 1 ORAM long form for list. Add or deduct points for coverage

	Extensive >75% cover (-5)
x	Moderate 25-75% cover (-3)
	Sparse 5-25% cover (-1)
	Nearly absent <5% cover (0)
	Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

	Vegetated hummucks/tussucks
	Coarse woody debris >15cm (6in)
	Standing dead >25cm (10in) dbh
	Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species
Native spp are dominant component of the vegetation, mod although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generallyw/o presence of rare threatened or endangered spp to
A predominance of native species, with nonnative spp high and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

11	**GRAND TOTAL(max 100 pts)**

Category 1

Site: AEP Ross-Delano Rebuild	Rater(s): HAB	Date: 5/22/2014

Wetland 2

Metric 1. Wetland Area (size). w-bcr05/22/14-4

2 | 2 (max 6 pts | subtotal)

Select one size class and assign score.

	>50 acres (>20.2ha) (6 pts)
	25 to <50 acres (10.1 to <20.2ha) (5 pts)
	10 to <25 acres (4 to <10.1ha) (4 pts)
	3 to <10 acres (1.2 to <4ha) (3 pts)
x	0.3 to <3 acres (0.12 to <1.2ha) (2pts)
	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
	<0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

1 | 3 (max 14 pts. | subtotal)

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
x	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
X	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

15.0 | 18 (max 30 pts. | subtotal)

3a. Sources of Water. Score all that apply.

	High pH groundwater (5)
	Other groundwater (3)
x	Precipitation (1)
x	Seasonal/Intermittent surface water (3)
	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

	100 year floodplain (1)
x	Between stream/lake and other human use (1)
	Part of wetland/upland (e.g. forest), complex (1)
x	Part of riparian or upland corridor (1)

3c. Maximum water depth. Select one.

	>0.7 (27.6in) (3)
x	0.4 to 0.7m (15.7 to 27.6in) (2)
	<0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.

x	Semi- to permanently inundated/saturated (4)
	Regularly inundated/saturated (3)
	Seasonally inundated (2)
	Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

	None or none apparent (12)
	Recovered (7)
x	Recovering (3)
	Recent or no recovery (1)

Check all disturbances observed

	ditch		point source (nonstormwater)
	tile		filling/grading
	dike	x	road bed/RR track
	weir		dredging
	stormwater input	x	Other: toe of highway slope

Metric 4. Habitat Alteration and Development.

11 | 29 (max 20 pts. | subtotal)

4a. Substrate disturbance. Score one or double check and average.

	None or none apparent (4)
	Recovered (3)
x	Recovering (2)
	Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

	Excellent (7)
x	Very good (6)
	Good (5)
	Moderately good (4)
	Fair (3)
	Poor to fair (2)
	Poor (1)

4c. Habitat alteration. Score one or double check and average.

	None or none apparent (9)
	Recovered (6)
x	Recovering (3)
	Recent or no recovery (1)

Check all disturbances observed

	mowing		shrub/sapling removal
	grazing		herbaceous/aquatic bed removal
	clearcutting	x	sedimentation
	selective cutting		dredging
	woody debris removal		farming
	toxic pollutants	x	nutrient enrichment

29 (subtotal this page)

ORAM v. 5.0 Field Form Quantitative Rating

Site: AEP Ross-Delano Rebuild	Rater(s): HAB	Date: 5/22/2014

Wetland 2

w-bcr05/22/14-4

29 subtotal this page

0 **29** **Metric 5. Special Wetlands.**

max 10 pts. subtotal

Check all that apply and score as indicated.

- [ ] Bog (10)
- [ ] Fen (10)
- [ ] Old growth forest (10)
- [ ] Mature forested wetland (5)
- [ ] Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- [ ] Lake Erie coastal/tributary wetland-restricted hydrology (5)
- [ ] Lake Plain Sand Prairies (Oak Openings) (10)
- [ ] Relict Wet Praires (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 5 Qualitative Rating (-10)

5 **34** **Metric 6. Plant communities, interspersion, microtopography.**

max 20pts. subtotal

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- [ ] Aquatic bed
- [1] Emergent
- [2] Shrub
- [ ] Forest
- [1] Mudflats
- [ ] Open water
- [ ] Other_____

6b. horizontal (plan view) Interspersion.

Select only one.

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [x] Moderately low (2)
- [ ] Low (1)
- [ ] None (0)

6c. Coverage of invasive plants. Refer Table 1 ORAM long form for list. Add or deduct points for coverage

- [ ] Extensive >75% cover (-5)
- [x] Moderate 25-75% cover (-3)
- [ ] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [ ] Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- [ ] Vegetated hummucks/tussucks
- [ ] Coarse woody debris >15cm (6in)
- [ ] Standing dead >25cm (10in) dbh
- [2] Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species
Native spp are dominant component of the vegetation, mod although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generallyw/o presence of rare threatened or endangered spp to
A predominance of native species, with nonnative spp high and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

34 **GRAND TOTAL(max 100 pts)**

CATEGORY 2

Site: AEP Ross-Delano Rebuild	Rater(s): HAB	Date: 5/22/2014

Wetland 3

Metric 1. Wetland Area (size). w-bcr05/22/14-3

0 | 0 (max 6 pts | subtotal)

Select one size class and assign score.

	>50 acres (>20.2ha) (6 pts)
	25 to <50 acres (10.1 to <20.2ha) (5 pts)
	10 to <25 acres (4 to <10.1ha) (4 pts)
	3 to <10 acres (1.2 to <4ha) (3 pts)
	0.3 to <3 acres (0.12 to <1.2ha) (2pts)
	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
	<0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

3 | 3 (max 14 pts. | subtotal)

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
x	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
X	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
X	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

8.0 | 11 (max 30 pts. | subtotal)

3a. Sources of Water. Score all that apply.

	High pH groundwater (5)
	Other groundwater (3)
x	Precipitation (1)
	Seasonal/Intermittent surface water (3)
	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

	100 year floodplain (1)
x	Between stream/lake and other human use (1)
	Part of wetland/upland (e.g. forest), complex (1)
	Part of riparian or upland corridor (1)

3c. Maximum water depth. Select one.

	>0.7 (27.6in) (3)
	0.4 to 0.7m (15.7 to 27.6in) (2)
x	<0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.

	Semi- to permanently inundated/saturated (4)
	Regularly inundated/saturated (3)
x	Seasonally inundated (2)
	Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

	None or none apparent (12)
	Recovered (7)
x	Recovering (3)
	Recent or no recovery (1)

Check all disturbances observed

	ditch		point source (nonstormwater)
	tile	x	filling/grading
	dike	x	road bed/RR track
	weir		dredging
	stormwater input	x	Other: mining

Metric 4. Habitat Alteration and Development.

6 | 17 (max 20 pts. | subtotal)

4a. Substrate disturbance. Score one or double check and average.

	None or none apparent (4)
	Recovered (3)
x	Recovering (2)
	Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

	Excellent (7)
	Very good (6)
	Good (5)
	Moderately good (4)
	Fair (3)
	Poor to fair (2)
x	Poor (1)

4c. Habitat alteration. Score one or double check and average.

	None or none apparent (9)
	Recovered (6)
x	Recovering (3)
	Recent or no recovery (1)

Check all disturbances observed

	mowing		shrub/sapling removal
	grazing		herbaceous/aquatic bed removal
	clearcutting		sedimentation
	selective cutting		dredging
	woody debris removal		farming
	toxic pollutants		nutrient enrichment

17 (subtotal this page)

ORAM v. 5.0 Field Form Quantitative Rating

Site: AEP Ross-Delano Rebuild	Rater(s): HAB	Date: 5/22/2014

Wetland 3

w-bcr05/22/14-3

17 subtotal this page

0 **17** **Metric 5. Special Wetlands.**

max 10 pts. subtotal

Check all that apply and score as indicated.

- [ ] Bog (10)
- [ ] Fen (10)
- [ ] Old growth forest (10)
- [ ] Mature forested wetland (5)
- [ ] Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- [ ] Lake Erie coastal/tributary wetland-restricted hydrology (5)
- [ ] Lake Plain Sand Prairies (Oak Openings) (10)
- [ ] Relict Wet Praires (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 5 Qualitative Rating (-10)

0 **17** **Metric 6. Plant communities, interspersion, microtopography.**

max 20pts. subtotal

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- [1] Aquatic bed
- [ ] Emergent
- [1] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

6b. horizontal (plan view) Interspersion.

Select only one.

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [x] Low (1)
- [ ] None (0)

6c. Coverage of invasive plants. Refer Table 1 ORAM long form for list. Add or deduct points for coverage

- [ ] Extensive >75% cover (-5)
- [x] Moderate 25-75% cover (-3)
- [ ] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [ ] Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- [ ] Vegetated hummucks/tussucks
- [ ] Coarse woody debris >15cm (6in)
- [ ] Standing dead >25cm (10in) dbh
- [ ] Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species
Native spp are dominant component of the vegetation, mod although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generallyw/o presence of rare threatened or endangered spp to
A predominance of native species, with nonnative spp high and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

17 **GRAND TOTAL(max 100 pts)**

Category 1

Site: AEP Ross-Delano Rebuild	Rater(s): HAB	Date: 5/21/2014

Wetland 4

Metric 1. Wetland Area (size). w-bcr05/21/14-1

1 | 1 (max 6 pts | subtotal)

Select one size class and assign score.

	>50 acres (>20.2ha) (6 pts)
	25 to <50 acres (10.1 to <20.2ha) (5 pts)
	10 to <25 acres (4 to <10.1ha) (4 pts)
	3 to <10 acres (1.2 to <4ha) (3 pts)
	0.3 to <3 acres (0.12 to <1.2ha) (2pts)
x	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
	<0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

5 | 6 (max 14 pts. | subtotal)

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
x	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
X	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

9.0 | 15 (max 30 pts. | subtotal)

3a. Sources of Water. Score all that apply.

	High pH groundwater (5)
	Other groundwater (3)
x	Precipitation (1)
	Seasonal/Intermittent surface water (3)
	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

	100 year floodplain (1)
	Between stream/lake and other human use (1)
	Part of wetland/upland (e.g. forest), complex (1)
	Part of riparian or upland corridor (1)

3c. Maximum water depth. Select one.

	>0.7 (27.6in) (3)
	0.4 to 0.7m (15.7 to 27.6in) (2)
x	<0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.

x	Semi- to permanently inundated/saturated (4)
	Regularly inundated/saturated (3)
	Seasonally inundated (2)
	Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

	None or none apparent (12)
	Recovered (7)
x	Recovering (3)
	Recent or no recovery (1)

Check all disturbances observed

	ditch		point source (nonstormwater)
	tile	x	filling/grading
	dike	x	road bed/RR track
	weir	x	dredging
	stormwater input	x	Other: mining

Metric 4. Habitat Alteration and Development.

8 | 23 (max 20 pts. | subtotal)

4a. Substrate disturbance. Score one or double check and average.

	None or none apparent (4)
	Recovered (3)
x	Recovering (2)
	Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

	Excellent (7)
	Very good (6)
	Good (5)
	Moderately good (4)
x	Fair (3)
	Poor to fair (2)
	Poor (1)

4c. Habitat alteration. Score one or double check and average.

	None or none apparent (9)
	Recovered (6)
x	Recovering (3)
	Recent or no recovery (1)

Check all disturbances observed

x	mowing	x	shrub/sapling removal
	grazing		herbaceous/aquatic bed removal
x	clearcutting		sedimentation
x	selective cutting		dredging
	woody debris removal		farming
	toxic pollutants		nutrient enrichment

23 (subtotal this page)

ORAM v. 5.0 Field Form Quantitative Rating

Site: AEP Ross-Delano Rebuild	Rater(s): HAB	Date: 5/21/2014

Wetland 4

w-bcr05/21/14-1

	23

subtotal this page

0	**23**	**Metric 5. Special Wetlands.**
max 10 pts.	subtotal	Check all that apply and score as indicated.

	Bog (10)
	Fen (10)
	Old growth forest (10)
	Mature forested wetland (5)
	Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
	Lake Erie coastal/tributary wetland-restricted hydrology (5)
	Lake Plain Sand Prairies (Oak Openings) (10)
	Relict Wet Praires (10)
	Known occurrence state/federal threatened or endangered species (10)
	Significant migratory songbird/water fowl habitat or usage (10)
	Category 1 Wetland. See Question 5 Qualitative Rating (-10)

-2	**21**	**Metric 6. Plant communities, interspersion, microtopography.**
max 20pts.	subtotal	

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

1	Aquatic bed
	Emergent
	Shrub
	Forest
	Mudflats
	Open water
	Other_____

6b. horizontal (plan view) Interspersion.

Select only one.

	High (5)
	Moderately high(4)
	Moderate (3)
	Moderately low (2)
	Low (1)
x	None (0)

6c. Coverage of invasive plants. Refer Table 1 ORAM long form for list. Add or deduct points for coverage

x	Extensive >75% cover (-5)
	Moderate 25-75% cover (-3)
	Sparse 5-25% cover (-1)
	Nearly absent <5% cover (0)
	Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

	Vegetated hummucks/tussucks
	Coarse woody debris >15cm (6in)
	Standing dead >25cm (10in) dbh
2	Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species
Native spp are dominant component of the vegetation, mod although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generallyw/o presence of rare threatened or endangered spp to
A predominance of native species, with nonnative spp high and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

21	**GRAND TOTAL(max 100 pts)**

Category 1

Site: AEP Ross-Delano Rebuild	Rater(s): HAB	Date: 5/22/2014

Wetland 5

Metric 1. Wetland Area (size). w-hab-05/22/14-1

0 | 0 (max 6 pts | subtotal)

Select one size class and assign score.

	>50 acres (>20.2ha) (6 pts)
	25 to <50 acres (10.1 to <20.2ha) (5 pts)
	10 to <25 acres (4 to <10.1ha) (4 pts)
	3 to <10 acres (1.2 to <4ha) (3 pts)
	0.3 to <3 acres (0.12 to <1.2ha) (2pts)
	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
x	<0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

3 | 3 (max 14 pts. | subtotal)

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
x	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
X	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

9.0 | 12 (max 30 pts. | subtotal)

3a. Sources of Water. Score all that apply.

	High pH groundwater (5)
x	Other groundwater (3)
x	Precipitation (1)
	Seasonal/Intermittent surface water (3)
	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

	100 year floodplain (1)
	Between stream/lake and other human use (1)
	Part of wetland/upland (e.g. forest), complex (1)
	Part of riparian or upland corridor (1)

3c. Maximum water depth. Select one.

	>0.7 (27.6in) (3)
	0.4 to 0.7m (15.7 to 27.6in) (2)
x	<0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.

	Semi- to permanently inundated/saturated (4)
	Regularly inundated/saturated (3)
	Seasonally inundated (2)
x	Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

	None or none apparent (12)
	Recovered (7)
x	Recovering (3)
	Recent or no recovery (1)

Check all disturbances observed

	ditch		point source (nonstormwater)
	tile	x	filling/grading
	dike		road bed/RR track
	weir		dredging
	stormwater input		Other:

Metric 4. Habitat Alteration and Development.

7 | 19 (max 20 pts. | subtotal)

4a. Substrate disturbance. Score one or double check and average.

	None or none apparent (4)
	Recovered (3)
x	Recovering (2)
	Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

	Excellent (7)
	Very good (6)
	Good (5)
	Moderately good (4)
	Fair (3)
x	Poor to fair (2)
	Poor (1)

4c. Habitat alteration. Score one or double check and average.

	None or none apparent (9)
	Recovered (6)
x	Recovering (3)
	Recent or no recovery (1)

Check all disturbances observed

x	mowing		shrub/sapling removal
	grazing		herbaceous/aquatic bed removal
	clearcutting		sedimentation
	selective cutting		dredging
	woody debris removal		farming
	toxic pollutants		nutrient enrichment

19 (subtotal this page)

ORAM v. 5.0 Field Form Quantitative Rating

Site: AEP Ross-Delano Rebuild	Rater(s): HAB	Date: 5/22/2014

Wetland 5

w-hab-05/22/14-1

	19

subtotal this page

0	**19**	**Metric 5. Special Wetlands.**
max 10 pts.	subtotal	Check all that apply and score as indicated.

- [ ] Bog (10)
- [ ] Fen (10)
- [ ] Old growth forest (10)
- [ ] Mature forested wetland (5)
- [ ] Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- [ ] Lake Erie coastal/tributary wetland-restricted hydrology (5)
- [ ] Lake Plain Sand Prairies (Oak Openings) (10)
- [ ] Relict Wet Praires (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 5 Qualitative Rating (-10)

3	**22**	**Metric 6. Plant communities, interspersion, microtopography.**
max 20pts.	subtotal	

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- [ ] Aquatic bed
- [1] Emergent
- [ ] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

6b. horizontal (plan view) Interspersion.

Select only one.

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [x] Low (1)
- [ ] None (0)

6c. Coverage of invasive plants. Refer Table 1 ORAM long form for list. Add or deduct points for coverage

- [ ] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [ ] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [x] Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- [ ] Vegetated hummucks/tussucks
- [ ] Coarse woody debris >15cm (6in)
- [ ] Standing dead >25cm (10in) dbh
- [ ] Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species
Native spp are dominant component of the vegetation, mod although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generallyw/o presence of rare threatened or endangered spp to
A predominance of native species, with nonnative spp high and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

22	**GRAND TOTAL(max 100 pts)**

Category 1

Site: AEP Ross-Delano Rebuild	Rater(s): HAB	Date: 5/22/2014

Wetlands 6 & 7

Metric 1. Wetland Area (size). w-hab-05/22/14-2 & 3

0 (max 6 pts) | 0 (subtotal)

Select one size class and assign score.

- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [x] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

13 (max 14 pts.) | 13 (subtotal)

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- [x] WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- [ ] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [ ] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [ ] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- [X] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [X] LOW. Old field (>10 years), shrubland, young second growth forest. (5)
- [ ] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [ ] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

8.0 (max 30 pts.) | 21 (subtotal)

3a. Sources of Water. Score all that apply.

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [x] Precipitation (1)
- [ ] Seasonal/Intermittent surface water (3)
- [ ] Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

- [ ] 100 year floodplain (1)
- [ ] Between stream/lake and other human use (1)
- [x] Part of wetland/upland (e.g. forest), complex (1)
- [x] Part of riparian or upland corridor (1)

3c. Maximum water depth. Select one.

- [ ] >0.7 (27.6in) (3)
- [ ] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [x] <0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.

- [ ] Semi- to permanently inundated/saturated (4)
- [ ] Regularly inundated/saturated (3)
- [ ] Seasonally inundated (2)
- [x] Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- [ ] None or none apparent (12)
- [ ] Recovered (7)
- [x] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [ ] ditch
- [ ] tile
- [ ] dike
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [ ] filling/grading
- [ ] road bed/RR track
- [ ] dredging
- [x] Other: Maintenance access compaction

Metric 4. Habitat Alteration and Development.

5 (max 20 pts.) | 26 (subtotal)

4a. Substrate disturbance. Score one or double check and average.

- [ ] None or none apparent (4)
- [ ] Recovered (3)
- [x] Recovering (2)
- [ ] Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [x] Poor to fair (2)
- [ ] Poor (1)

4c. Habitat alteration. Score one or double check and average.

- [ ] None or none apparent (9)
- [ ] Recovered (6)
- [ ] Recovering (3)
- [x] Recent or no recovery (1)

Check all disturbances observed

- [x] mowing
- [ ] grazing
- [x] clearcutting
- [ ] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [ ] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [ ] sedimentation
- [ ] dredging
- [ ] farming
- [ ] nutrient enrichment

26 (subtotal this page)

ORAM v. 5.0 Field Form Quantitative Rating

Site: AEP Ross-Delano Rebuild	Rater(s): HAB	Date: 5/22/2014

Wetlands 6 & 7

w-hab-05/22/14-2 & 3

26 subtotal this page

0 **26** max 10 pts. / subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- [ ] Bog (10)
- [ ] Fen (10)
- [ ] Old growth forest (10)
- [ ] Mature forested wetland (5)
- [ ] Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- [ ] Lake Erie coastal/tributary wetland-restricted hydrology (5)
- [ ] Lake Plain Sand Prairies (Oak Openings) (10)
- [ ] Relict Wet Praires (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 5 Qualitative Rating (-10)

3 **29** max 20pts. / subtotal

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- [ ] Aquatic bed
- [1] Emergent
- [ ] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

6b. horizontal (plan view) Interspersion.

Select only one.

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [x] Low (1)
- [ ] None (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

- [ ] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [ ] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [x] Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- [ ] Vegetated hummucks/tussucks
- [ ] Coarse woody debris >15cm (6in)
- [ ] Standing dead >25cm (10in) dbh
- [ ] Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
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A predominance of native species, with nonnative spp high and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

29 **GRAND TOTAL(max 100 pts)**

Category 1

Site: AEP Ross-Delano Rebuild	Rater(s): HAB	Date: 5/22/2014

Wetland 8

Metric 1. Wetland Area (size). w-hab-05/22/14-4

4 | 4 (max 6 pts | subtotal)

Select one size class and assign score.

- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [x] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [ ] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

10 | 14 (max 14 pts. | subtotal)

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- [x] WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- [ ] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [ ] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [ ] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [ ] LOW. Old field (>10 years), shrubland, young second growth forest. (5)
- [X] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [ ] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

6.0 | 20 (max 30 pts. | subtotal)

3a. Sources of Water. Score all that apply.

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [x] Precipitation (1)
- [ ] Seasonal/Intermittent surface water (3)
- [ ] Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

- [ ] 100 year floodplain (1)
- [ ] Between stream/lake and other human use (1)
- [ ] Part of wetland/upland (e.g. forest), complex (1)
- [ ] Part of riparian or upland corridor (1)

3c. Maximum water depth. Select one.

- [ ] >0.7 (27.6in) (3)
- [ ] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [x] <0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.

- [ ] Semi- to permanently inundated/saturated (4)
- [ ] Regularly inundated/saturated (3)
- [ ] Seasonally inundated (2)
- [x] Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- [ ] None or none apparent (12)
- [ ] Recovered (7)
- [x] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [ ] ditch
- [ ] tile
- [ ] dike
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [x] filling/grading
- [ ] road bed/RR track
- [ ] dredging
- [ ] Other:

Metric 4. Habitat Alteration and Development.

8 | 28 (max 20 pts. | subtotal)

4a. Substrate disturbance. Score one or double check and average.

- [ ] None or none apparent (4)
- [ ] Recovered (3)
- [x] Recovering (2)
- [ ] Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [x] Fair (3)
- [ ] Poor to fair (2)
- [ ] Poor (1)

4c. Habitat alteration. Score one or double check and average.

- [ ] None or none apparent (9)
- [ ] Recovered (6)
- [x] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [x] mowing
- [ ] grazing
- [ ] clearcutting
- [ ] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [ ] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [ ] sedimentation
- [ ] dredging
- [ ] farming
- [ ] nutrient enrichment

28 (subtotal this page)

ORAM v. 5.0 Field Form Quantitative Rating

Site: AEP Ross-Delano Rebuild	Rater(s): HAB	Date: 5/22/2014

Wetland 8

w-hab-05/22/14-4

28 subtotal this page

0 **28** max 10 pts. / subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- [ ] Bog (10)
- [ ] Fen (10)
- [ ] Old growth forest (10)
- [ ] Mature forested wetland (5)
- [ ] Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- [ ] Lake Erie coastal/tributary wetland-restricted hydrology (5)
- [ ] Lake Plain Sand Prairies (Oak Openings) (10)
- [ ] Relict Wet Praires (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 5 Qualitative Rating (-10)

5 **33** max 20pts. / subtotal

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- [ ] Aquatic bed
- [2] Emergent
- [ ] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

6b. horizontal (plan view) Interspersion.

Select only one.

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [x] Moderately low (2)
- [ ] Low (1)
- [ ] None (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

- [ ] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [ ] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [x] Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- [ ] Vegetated hummucks/tussucks
- [ ] Coarse woody debris >15cm (6in)
- [ ] Standing dead >25cm (10in) dbh
- [ ] Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

	Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species
	Native spp are dominant component of the vegetation, mod although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generallyw/o presence of rare threatened or endangered spp to
	A predominance of native species, with nonnative spp high and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

33 **GRAND TOTAL(max 100 pts)**

Category 2

Site: AEP Ross-Delano Rebuild	Rater(s): HAB	Date: 5/22/2014

Wetlands 9 & 10

Metric 1. Wetland Area (size). w-hab-05/22/14-5 & 6

1 | 1 (max 6 pts | subtotal)

Select one size class and assign score.

- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [x] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [ ] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

12 | 13 (max 14 pts. | subtotal)

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- [x] WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- [ ] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [ ] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [ ] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [X] LOW. Old field (>10 years), shrubland, young second growth forest. (5)
- [ ] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [ ] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

14.0 | 27 (max 30 pts. | subtotal)

3a. Sources of Water. Score all that apply.

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [x] Precipitation (1)
- [x] Seasonal/Intermittent surface water (3)
- [ ] Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

- [ ] 100 year floodplain (1)
- [ ] Between stream/lake and other human use (1)
- [x] Part of wetland/upland (e.g. forest), complex (1)
- [x] Part of riparian or upland corridor (1)

3c. Maximum water depth. Select one.

- [ ] >0.7 (27.6in) (3)
- [ ] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [x] <0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.

- [x] Semi- to permanently inundated/saturated (4)
- [ ] Regularly inundated/saturated (3)
- [ ] Seasonally inundated (2)
- [ ] Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- [ ] None or none apparent (12)
- [ ] Recovered (7)
- [x] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [ ] ditch
- [ ] tile
- [ ] dike
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [ ] filling/grading
- [ ] road bed/RR track
- [x] dredging
- [ ] Other:

Metric 4. Habitat Alteration and Development.

12 | 39 (max 20 pts. | subtotal)

4a. Substrate disturbance. Score one or double check and average.

- [ ] None or none apparent (4)
- [ ] Recovered (3)
- [x] Recovering (2)
- [ ] Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [x] Moderately good (4)
- [ ] Fair (3)
- [ ] Poor to fair (2)
- [ ] Poor (1)

4c. Habitat alteration. Score one or double check and average.

- [ ] None or none apparent (9)
- [x] Recovered (6)
- [ ] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [ ] mowing
- [ ] grazing
- [ ] clearcutting
- [ ] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [ ] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [x] sedimentation
- [x] dredging
- [ ] farming
- [ ] nutrient enrichment

39 (subtotal this page)

ORAM v. 5.0 Field Form Quantitative Rating

Site: AEP Ross-Delano Rebuild	Rater(s): HAB	Date: 5/22/2014

Wetlands 9 & 10

w-hab-05/22/14-5 & 6

	39

subtotal this page

0	**39**	**Metric 5. Special Wetlands.**
max 10 pts.	subtotal	Check all that apply and score as indicated.

- [ ] Bog (10)
- [ ] Fen (10)
- [ ] Old growth forest (10)
- [ ] Mature forested wetland (5)
- [ ] Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- [ ] Lake Erie coastal/tributary wetland-restricted hydrology (5)
- [ ] Lake Plain Sand Prairies (Oak Openings) (10)
- [ ] Relict Wet Praires (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 5 Qualitative Rating (-10)

9	**48**	**Metric 6. Plant communities, interspersion, microtopography.**
max 20pts.	subtotal	

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- [ ] Aquatic bed
- [2] Emergent
- [ ] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

6b. horizontal (plan view) Interspersion.

Select only one.

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [x] Low (1)
- [ ] None (0)

6c. Coverage of invasive plants. Refer Table 1 ORAM long form for list. Add or deduct points for coverage

- [ ] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [ ] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [x] Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- [2] Vegetated hummucks/tussucks
- [1] Coarse woody debris >15cm (6in)
- [ ] Standing dead >25cm (10in) dbh
- [2] Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
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2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species
Native spp are dominant component of the vegetation, mod although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generallyw/o presence of rare threatened or endangered spp to
A predominance of native species, with nonnative spp high and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

48	**GRAND TOTAL(max 100 pts)**

Category 2

ATTACHMENT B

PHOTOGRAPHS

PHOTOGRAPHIC RECORD
Streams and Wetlands

Client Name:	Site Location:	Project No.
AEP Ohio Transco	Ross-Delano 138kV Transmission Line Rebuild	14951445

Photo No. 1 **Date:** May 21, 2014 **Description:** Stream 3 Facing downstream Typical Ephemeral Stream	

Photo No. 2 **Date:** May 22, 2014 **Description:** Stream 4 Facing downstream Typical Intermittent Stream	

PHOTOGRAPHIC RECORD
Streams and Wetlands

Client Name:	Site Location:	Project No.
AEP Ohio Transco	Ross-Delano 138kV Transmission Line Rebuild	14951445

Photo No. 3 **Date:** May 22, 2014 **Description:** Stream 7 Facing downstream Typical Perennial Stream	

Photo No. 4 **Date:** May 22, 2014 **Description:** Wetland 6 Typical ORAM Category 1 PEM wetland in right-of-way	

PHOTOGRAPHIC RECORD
Streams and Wetlands

Client Name:	Site Location:	Project No.
AEP Ohio Transco	Ross-Delano 138kV Transmission Line Rebuild	14951445

Photo No. 5

Date:

May 22, 2014

Description:

Wetland 10

Typical ORAM Category 2 PEM wetland in right-of-way

Photo No. 6

Date:

May 22, 2014

Description:

Wetland 2

POW Wetland along access road

Looking south

PHOTOGRAPHIC RECORD
Streams and Wetlands

Client Name:	Site Location:	Project No.
AEP Ohio Transco	Ross-Delano 138kV Transmission Line Rebuild	14951445

Photo No. 7

Date:

May 22, 2014

Description:

Pond 1

Pond along access road

Looking west

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

6/18/2014 11:00:25 AM

in

Case No(s). 14-1075-EL-BLN

Summary: Application Letter of Notification for the Ross-Delano 138 Kv Transmission Line Rebuild
Project electronically filed by Mr. Yazen Alami on behalf of AEP Ohio Transmission Company