

**AMERICAN TRANSMISSION SYSTEMS,
INCORPORATED
A FIRSTENERGY COMPANY**

CONSTRUCTION NOTICE

**LONDON-TANGY 138 kV TRANSMISSION LINE
RELOCATION AND TANGY SUBSTATION EXPANSION
PROJECT**

OPSB CASE NO.: 17-1288-EL-BNR

May 31, 2017

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

**CONSTRUCTION NOTICE
LONDON-TANGY 138 kV TRANSMISSION LINE RELOCATION AND
TANGY SUBSTATION EXPANSION PROJECT**

The following information is being provided in accordance with the procedures in the Ohio Administrative Code (OAC) Chapter 4906-6 for the application and review of Accelerated Certificate Applications. Based upon the requirements found in Appendix A to OAC Rule 4906-1-01, this Project qualifies for submittal to the Ohio Power Siting Board (“Board”) as a Construction Notice application.

4906-6-05: ACCELERATED APPLICATION REQUIREMENTS

4906-6-05: Name and Reference Number

Name of Project: London-Tangy 138 kV Transmission Line Relocation and Tangy Substation Expansion Project (“Project”).

2017 LTFR Reference: This Project is not included in the FirstEnergy Corp. 2017 Long Term Forecast Report submitted to the Public Utility Commission of Ohio (“PUCO”) in Case Number 17-0913-EL-FOR.

4906-6-05 (B)(1): Brief Description of the Project

In this Project, American Transmission Systems, Incorporated (“ATSI”), a FirstEnergy company, is proposing to relocate approximately 175 feet (0.03 miles) of the London-Tangy 138 kV Transmission Line and expand Tangy Substation’s fenced area by approximately 6.3% (13,910 square feet) for the addition of a 69 kV 5-breaker ringbus.

The relocation of the London-Tangy 138 kV Transmission Line will remove two (2) existing 2-pole double circuit wood structures and approximately 440 feet (0.08 miles) of existing 605 kcmil 24/7 ACSR conductor. One (1) new double circuit 2-pole wood deadend structure and one (1) new single pole steel structure will be installed approximately 135 feet (0.03 miles) to the south of the existing structures that will be removed. Approximately 175 feet (0.03 miles) of new 605 kcmil 24/7 ACSR conductor

will be installed. One (1) of the two new structures will be located inside the fence line of Tangy substation.

Approximately 350 feet (0.07 miles) of new fence line is needed for the expansion of Tangy Substation. The existing fenced area of Tangy substation is approximately 221,978 square feet. The proposed expansion will add approximately 13,910 square feet of fenced area to Tangy Substation. This represents an expansion of approximately 6.3% of the existing fenced area. The additional area will be used to install a new 69 kV 5 breaker ringbus and new entrances and exits for the existing 69 kV transmission lines. The location of the other existing 138 kV and 345 kV Transmission Lines entering and exiting the Tangy Substation are not impacted by the proposed Project

The general location of the Project is shown in Exhibit 1, a partial copy of the United States Geologic Survey, Delaware County, OH Quad Map. Exhibit 2 is a partial copy of Bing aerial imagery. The Project is located at approximately 0.5 miles northwest of the intersection of Bunty Station Rd and Liberty Rd. The general layout is shown in Exhibit 3. The Project will be located in Delaware Township, Delaware County, Ohio.

4906-6-05 (B)(1): Letter of Notification Requirement

The Project meets the requirements for a Construction Notice because the Project is within the types of projects defined by Item (1)(a) and Item (4)(a) of the Application Requirement Matrix for Electric Power Transmission Lines, Appendix A of OAC Rule 4906-1-01. These items state:

(1) New construction, extension, or relocation of single or multiple circuit electric power transmission line(s), or upgrading existing transmission or distribution line(s) for operating at a higher transmission voltage, as follows:

(a) Line(s) not greater than 0.2 miles in length.

(4) Constructing additions to existing electric power transmission stations or converting distribution stations to transmission stations where:

(a) There is a twenty percent or less expansion of the fenced area.

The proposed Project is within the requirements of Item (1)(a) as it involves the relocation of approximately 175 feet (0.03 miles) of the London-Tangy 138 kV Transmission Line. The proposed Project is also within the requirements of Item (4)(a) as it involves a 6.3% expansion of the fenced area for Tangy Substation.

4906-6-05 (B)(2): Need For the Project

The Project is needed to improve reliability on the Cardington-Tangy 69 kV Transmission Line as there have been several sustained outages impacting approximately 8,436 customers over that last 5 years. The recommended solution is to reduce the overall line exposure by reconfiguring the 69 kV bus and breakers at Tangy substation into a 5 breaker ring bus. Reconfiguring the 69 kV bus and breakers at Tangy substation will create a new 69kV line exit and a new 69kV line by networking in the radial Kirby 69 kV line with the Tangy 69 kV substation by closing in the normally opened switch (A-1) at Radnor substation. The ring bus will provide new line exits for the creation of the Kirby-Tangy 69 kV line and the reconfiguration of the Cardington-Tangy 69 kV Transmission Line. This will reduce the overall transmission line exposure by approximately 40% and reduce the number of future outages. Furthermore, the final Tangy substation ring bus configuration will provide increased reliability and operational flexibility for the overall operation and maintenance of the Tangy substation and lines.

4906-6-05 (B)(3): Location of the Project Relative to Existing or Proposed Lines

The location of the Project relative to existing or proposed lines is shown in the ATSI Transmission Network Map, included as part of the confidential portion of the FirstEnergy Corp. 2017 Long-Term Forecast Report. This map was submitted to the PUCO in Case No. 17-0913-EL-FOR under Rule 4901:5-5:04 (C)(2)(b) of the Ohio Administrative Code. The map is incorporated by reference only. This map shows

ATSI's 345 kV and 138 kV transmission lines and transmission substations including the London-Tangy 138 kV Transmission Line and Tangy Substation. The Project area is located approximately 4 ⁵/₈ inches (11" x 17" printed version) from the left edge of the map and 7 ⁵/₈ inches (11" x 17" printed version) from the top of the map. The general location and layout of the Project area is shown in Exhibit 1 and 2.

4906-6-05 (B)(4): Alternatives Considered

The general area of the Project was carefully considered to identify potential routes and sites for the Project that are constructible, minimize potential impacts to the extent practical, and meet the needs of the Project. One alternative design for the substation was considered. This design would expand the substation fence line on the north side of the existing substation fence for room to place the new 69 kV ringbus. However, while this alternative is equally constructible as the proposed Project, it would impact a delineated wetland located to the north of Tangy Substation requiring a partial fill. This would result in a greater environmental impact than the proposed Project. For this reason, this alternative was not selected for the Project.

4906-6-05 (B)(5): Public Information Program

ATSI's manager of External Affairs will advise local officials of features and the status of the proposed Project as necessary. ATSI will maintain a copy of this Construction Notice application on FirstEnergy's website. Letters will be sent to affect property owners at least 7 days before construction begins on the Project informing them of the Project's start and a proposed timeframe of construction and restoration activities.

4906-6-05 (B)(6): Construction Schedule

Construction for this Project is expected to begin as early as September 4, 2017 and be completed by December 31, 2018.

4906-6-05 (B)(7): Area Map

Exhibit 1 depicts the general location of the Project. This Exhibit provides a partial copy of the United States Geological Survey, Delaware County OH. Exhibit 2 provides a partial copy of Bing aerial imagery.

4906-6-05 (B)(8): Property Owner List

The Project is located on existing right-of-way and no new right-of-way is required for the Project. Table 1 contains a list of property owners affected by the project.

Table 1: Property Owner List

Parcel Number	Property Owner	Property Address	Easement Status
41924001043000	Ohio Edison Company	1484 Bunty Station Rd	Owned In Fee
41924001032000	Ohio Edison Company	1484 Bunty Station Rd	Owned In Fee

4906-6-05 (B)(9): TECHNICAL FEATURES OF THE PROJECT

4906-6-05 (B)(9)(a): Operating Characteristics

The transmission line construction will have the following characteristics:

- Voltage: 138 kV
- Conductors: 605 kcmil 24/7 ACSR
- Static Wire: 7#8 Alumoweld
- Insulators: Polymer
- ROW Width: 60 feet
- Structure Types: Exhibit 4: Double Circuit 2-Pole Wood Deadend Structure. One (1) structure is needed.
Exhibit 5: Single Circuit Single Pole, Steel Deadend Structure with concrete foundation. One (1) structure is needed.

The substation expansion construction will have the following characteristics:

Voltage: 69 kV

Bus Conductor: 336.4 MCM AL
795-954 MCM Al

Insulators: Polymer

Breakers: Five (5) 72 kV 3000 A 40 kA Siemens SPS2 Breaker.

Switches: Three (3) 72.5 kV 2000 A Manual V-Type Switches.
One (1) 72 kV 2000 A Motor Operated Switches.
Thirty (30) 69 kV 2000 A Hook Stick Switches

CVT's: Fifteen (15) 72.5 kV Single Phase Capacitor Voltage Transformers.

Arresters: Three (3) 48 kV Arresters

Structures: Eight (8) 69 kV Bus Support Structures
One (1) 69 kV Take-off Structure
One (1) 138 kV Take-off Structure

Fence: Approximately 350 feet (0.07 miles) of new fence

4906-6-05 (B)(9)(b): Electric and Magnetic Fields

The closest occupied residence or institution is approximately 1,200 feet from the proposed substation expansion, the closest portion of the project to an occupied resident or institution. Therefore, no Electric and Magnetic Field (“EMF”) calculations are required by this code provision.

4906-6-05 (B)(9)(c): Estimated Cost

The estimated capital cost for the London-Tangy 138 kV Transmission Line Relocation Portion is approximately \$419,492. The estimated capital cost for the Tangy Substation Expansion is approximately \$3,791,146. The total estimated capital cost for the proposed Project is approximately \$4,210,638.

4906-6-05 (B)(10): SOCIAL AND ECOLOGICAL IMPACTS

4906-6-05 (B)(10)(a): Land Uses

The Project is located in Delaware Township, Delaware County Ohio. The land around the Project area is zoned as agricultural land. The main land use around Tangy Substation is agriculture, along with a utility and railroad corridor.

4906-6-05 (B)(10)(b): Agricultural Land

Agricultural land exists within the Project’s anticipated area of disturbance. None of the parcels are registered as agricultural districts. Only the London-Tangy 138 kV Transmission Line Relocation of the project will affect any agricultural land. The impacts to the agricultural land are expected to be minimal. A list of all agricultural land and the approximate farmed acreage is given in Table 2.

Table 2: Agricultural Lands within the Project’s Disturbance Area

Parcel Number	Property Owner	Acreage	Agricultural District	Agricultural District Expiration
41924001043000	Ohio Edison Company	39.78	N/A	N/A
41924001032000	Ohio Edison Company	11.26	N/A	N/A

4906-6-05 (B)(10)(c): Archaeological or Cultural Resources

As part of the investigation, a search of Ohio Historic Preservation Office (“OHPO”) online database was conducted to identify the existence of any significant archeological or cultural resource sites within 0.5 miles of the Project Area. The results of the search are shown in Exhibit 6. The specific location of any archeological resources are excluded from the map and are instead listed in Table 3.

The OHPO database includes all Ohio listings on the National Register of Historic Places (“NRHP”), including districts, sites, building, structures, and objects that are significant

in American history, architecture, archeology, engineering, and culture. The results of the search indicate that no listed NRHP sites and no NRHP eligible sites were identified within 0.5 miles of the Project’s potential disturbance area.

The OHPO database also includes listing of the Ohio Archaeological Inventory (“OAI”), the Ohio Historic Inventory (“OHI”), previous cultural resource surveys, and the Ohio Genealogical Society (“OGS”) cemetery inventory. Fourteen (14) OAI listed archeological resources has been previously inventoried within 0.5 miles of the Project area and are identified in Table 3. No listed structural resource is located within 0.5 miles of the Project area. Seven (7) previous cultural resource surveys were conducted within 0.5 miles of the Project area and are listed in Table 4. No OSG cemeteries are located within 0.5 miles of the Project area.

Table 3. List of OAI Listed Archeological Resources

OAI Number	Affiliation	Description	County	Quad Name
DL0921	Prehistoric	Unknown Prehistoric	Delaware	Delaware
DL0922	Historic	Non-Aboriginal	Delaware	Delaware
DL0923	Historic	Non-Aboriginal	Delaware	Delaware
DL0924	Prehistoric	Unknown Late Archaic	Delaware	Delaware
DL1921	Prehistoric	Unknown Prehistoric	Delaware	Delaware
DL1922	Prehistoric	Unknown Prehistoric	Delaware	Delaware
DL1923	Prehistoric	Unknown Prehistoric	Delaware	Delaware
DL2171	Prehistoric	Unknown Prehistoric	Delaware	Delaware
DL2172	Prehistoric	Unknown Prehistoric	Delaware	Delaware
DL2173	Prehistoric	Unknown Prehistoric	Delaware	Delaware
DL2174	Prehistoric	Unknown Prehistoric	Delaware	Delaware
DL2175	Prehistoric	Unknown Prehistoric	Delaware	Delaware
DL2176	Prehistoric	Unknown Prehistoric	Delaware	Delaware
DL2170	Prehistoric	Unknown Prehistoric	Delaware	Delaware

Table 4. List of Previous Cultural & Historic Resource Surveys

Year	Name	County	Municipality
2006	Report of Phase I Cultural Resources Survey for the Proposed Sawmill Parkway Extension in Liberty and Delaware Townships, Delaware County, Ohio	Delaware	Delaware Township, Liberty Township, & City of Delaware
1996	Phase I Archeological Survey For Ohio Edison Company's Proposed Kirby-Tangy 138 kV Transmission Line In Union And Delaware Counties, Ohio	Delaware	Delaware Township
1996	Phase I Cultural Resource Survey For The Proposed 14 Acre Delaware Township Park In Delaware Township, Delaware County, Ohio	Delaware	Delaware Township
2006	Cultural Resource Survey Report for the Costello RL Site # A6C0230C Proposed Cellular Tower, 3190 Liberty Road, Delaware, Delaware County, Ohio	Delaware	Delaware Township
2007	Phase I Cultural Resources Survey of the SW Delaware County Supply Line in Delaware and Liberty Townships, Delaware County, Ohio	Delaware	Delaware Township, Liberty Township, & City of Delaware
1986	A Phase I and Phase II Archaeological Survey of a 345 KV Ohio Edison Double Circuit Transmission Line (Hyatt-Tangy/Marysville-Tangy) in Delaware and Liberty Townships, Delaware County, Ohio	Delaware	Delaware Township, Liberty Township
2014	Addendum 3: Phase I Archaeological Survey for the London-Tangy Electric Transmission Line Project, Union and Delaware Counties, Ohio	Delaware	Delaware Township

Based upon the results of the OHPO online database, the closest OAI items to the Project area were identified from the Phase I Cultural Resources Survey for the Proposed Sawmill Parkway Extension and located approximately 0.2 miles to the west of the proposed project area.

Based upon the results of the OHPO online database, portions of the Project area were previously surveyed for cultural resources in 1996 for the Kirby-Tangy 138 kV Transmission Line built as part of the Crissinger-Tangy 138 kV Electric Transmission Line Project (OPSB Case No. 91-1229-EL-BTX) and in 2014 for the London-Tangy 138 kV Transmission Line built as part of the East Springfield-London-Tangy 138 kV Transmission Line Project and Amendment to the East Springfield-London-Tangy 138 kV Transmission Line Project (OPSB Case No. 11-4884-EL-BTX & 13-2112-EL-BTA).

The results of these Phase I cultural surveys show no archeological resources within the proposed Project area. Based on these search results no cultural and archeological impacts are expected for the proposed Project.

4906-6-05 (B)(10)(d): Local, State, and Federal Requirements

There are no known government agency requirements and the filing status at the time of filing.

4906-6-05 (B)(10)(e): Endangered, Threatened, and Rare Species Investigation

ATSI submitted a request to the Ohio Department of Natural Resources (“ODNR”) Office of Real Estate to conduct an Environmental Review on December 29, 2016. As part of the Environmental Review, the ODNR Office of Real Estate conducted a search of the ODNR Division of Wildlife’s Natural Heritage Database to research the presence of any endangered, threatened, or rare species within one (1) mile of the Project area. The ODNR’s Office of Real Estate’s response on February 16, 2017 indicated that the Project Area is within the range of three (3) state and federally endangered species, one (1) state endangered and federal candidate species, and two (2) state threatened species. A copy of ODNR’s Office of Real Estate’s response is included as Exhibit 7.

ATSI also submitted a request to the US Fish and Wildlife Service (“USFWS”) for an Ecological Review on December 29, 2016, to research the presence of any endangered, threatened, or rare species within one (1) mile of the Project area. A copy of USFWS’s Ecological Review response is included as Exhibit 8. The USFWS’s response on January

5, 2017 indicated that the Project is within the range of one (1) federally endangered and one (1) federally threatened species. A list of all endangered, threatened, and rare species, as identified by ODNR and USFWS, is provided in Table 5.

Table 5. List of Endangered, Threatened, and Rare Species.

Table 5: List of Endangered, Threatened, and Rare Species				
Common Name	Scientific Name	Federal Listed Status	State Listed Status	Affected Habitat
Indiana Bat	<i>Myotis sodalis</i>	Endangered	Endangered	Trees & Forest
Northern Long-Ear Bat	<i>Myotis septentrionalis</i>	Threatened	Threatened	Trees & Forest
Rayed Bean	<i>Villosa fabalis</i>	Endangered	Endangered	Perennial Streams
Snuffbox	<i>Epioblasma triquetra</i>	Endangered	Endangered	Perennial Streams
Rabbitfoot	<i>Quadrula cylindrica cylindrica</i>	Candidate	Endangered	Perennial Streams
Black Sandshell	<i>Ligumia recta</i>	N/A	Threatened	Perennial Streams
Pondhorn	<i>Uniomerus tetralasmus</i>	N/A	Threatened	Perennial Streams

The response from ODNR and USFWS indicated the Project is within the range of the federal and state endangered Indiana Bat (*Myotis sodalis*) and the federal and state threatened Northern Long-Eared Bat (*Myotis septentrionalis*). No impacts to these species are expected due to the Project area location in cleared right-of-way and agricultural land and no tree clearing is required.

The response from ODNR indicated that the Project Area is within the range of the federally and state endangered Rayed Bean (*Villosa fabalis*), and Snuffbox (*Epioblasma triquetra*); the federal candidate and state endangered Rabbitfoot (*Quadrula cylindrica cylindrica*); and the state threatened Black Sandshell (*Ligumia recta*), and Pondhorn

(*Uniomerus tetralasmus*). No impacts to these species are expected due to the Project's location and the fact that no work is proposed in perennial streams.

4906-6-05 (B)(10)(f): Areas of Ecological Concern

ATSI submitted a request to the Ohio Department of Natural Resources ("ODNR") Office of Real Estate to conduct an Environmental Review on December 29, 2016. The ODNR Office of Real Estate researched the presence of any unique ecological sites, geological features, animal assemblages, scenic rivers, state wildlife areas, nature preserves, parks or forest, national wildlife refuges, or other protected natural areas within one (1) mile of the project area. The ODNR's Office of Real Estate's response on February 16, 2017 indicated that they have two (2) records of such areas within one (1) mile of the identified Project area.

The first wildlife area is Stratford Woods State Nature Preserve which is located approximately 0.30 miles away from the Project. Due to the distance away from the Project area there are no anticipated impacts to the Stratford Woods State Nature Preserve. The second wildlife area is Havener Park in Liberty Township which is located approximately 1.0 mile away from the Project. Due to the distance away from the Project area there are no anticipated impacts to the Stratford Woods State Nature Preserve.

ATSI conducted a wetland and waters assessment of the Project area. The investigation focused on an approximately 6-acre study area around the proposed Project centerline, substation expansion, and additional workspace areas. During the study, ATSI identified two wetland areas. One wetland was identified approximately 260 feet west of the existing substation in a forested area and the other emergent wetland was identified approximately 50 feet north of the existing substation. A copy of ATSI's wetland and waters assessment is provided as Exhibit 9.

The Project work limits do not encroach on any regulated flood plains based on a review of online FEMA Flood Insurance Rate Mapping.

4906-6-05(B)(10)(g): Other Information

Construction and operation of the proposed Project will be in accordance with the requirements specified in the latest revision of the National Electric Safety Code as adopted by the PUCO and will meet all applicable safety standards established by the Occupational Safety and Health Administration.

No other or unusual conditions are expected that will result in significant environmental, social, health or safety impacts.

4906-6-07: Documentation of Letter of Notification Transmittal and Availability for Public Review

This Letter of Notification is being provided concurrently with its docketing with the Board to the following officials in Delaware Township, Delaware County, Ohio.

Delaware County

Commissioner Barb Lewis,
President
Delaware County Commissioners
101 N. Sandusky Street
Delaware, OH 43015

Commissioner Jeff Benton,
Vice President
Delaware County Commissioners
101 N. Sandusky Street
Delaware, OH 43015

Commissioner Gary Merrell,
Delaware County Commissioners
101 N. Sandusky Street
Delaware, OH 43015

Mr. Chris Bauserman, P.E., P.S.
Delaware County Engineer
50 Channing Street
Delaware, Ohio 43015

Mr. Scott Sanders, Director
Delaware Regional Planning
Commission
109 N Sandusky Street
Delaware, OH 43015

Mr. Larry Ufferman, Director
Delaware Soil & Water
Conservation District
557-A Sunbury Rd.
Delaware, OH 43015

Delaware Township

Mr. Roger M. VanSickle, Chairman
Delaware Township Trustees
2590 Liberty Road
Delaware, OH 43015

Mr. Kevin Hennessy, Vice Chairman
Delaware Township Trustees
2590 Liberty Road
Delaware, OH 43015

Mr. Steven J. Jefferis,
Executive Member
Delaware Township Trustees
2590 Liberty Road
Delaware, OH 43015

Ms. Barbara Thomas
Delaware Township Fiscal Officer
2590 Liberty Road
Delaware, OH 43015

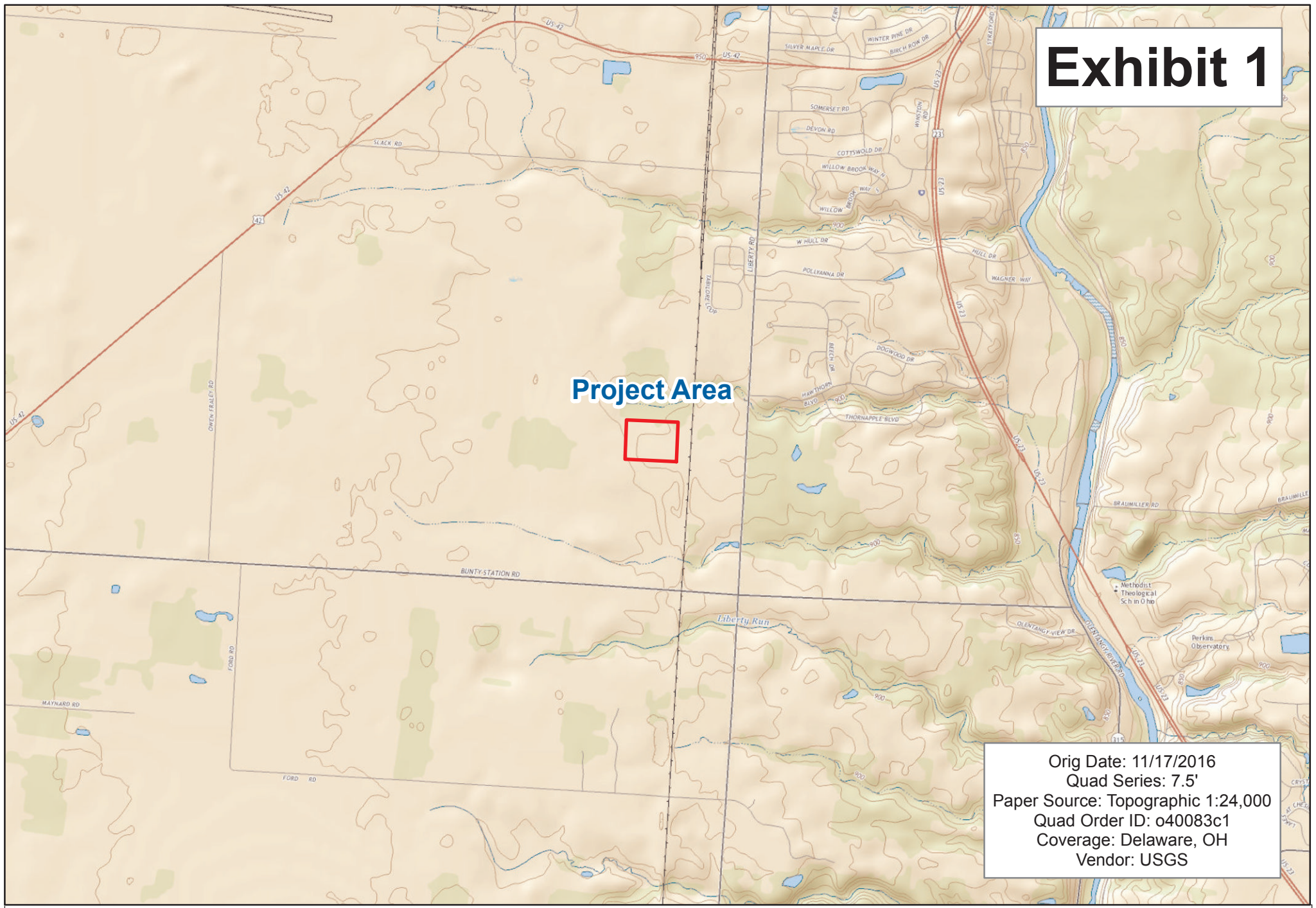
Library

Mr. George Needham, Director
Delaware District Library
84 E. Winter Street
Delaware, OH 43015

Copies of the transmittal letters to these officials have been included with the transmittal letter submitting this Construction Notice to the Board, and are being provided to meet the requirement of OAC Rule 4906-6-07 (B) to provide the Board with proof of compliance with the notice requirement to local officials in OAC Rule 4906-6-07 (A)(1) and to libraries in OAC Rule 4906-6-07 (A)(2).

Information is posted on www.firstenergycorp.com/about/transmission_project/ohio.html on how to request an electronic or paper copy of this Construction Notice application. The link to the website is being provided to meet the requirement of OAC Rule 4906-6-07 (B) and to provide the Board with proof of compliance with the notice requirements in OAC Rule 4906-6-07 (A)(3).

Exhibit 1



Project Area

Orig Date: 11/17/2016
Quad Series: 7.5'
Paper Source: Topographic 1:24,000
Quad Order ID: o40083c1
Coverage: Delaware, OH
Vendor: USGS



Legend
— Project Area

London-Tangy 138kV Transmission Line Relocation and Tangy Substation Expansion Project



1:24,000

Map created on: 5/24/2017

Exhibit 2



Project Area

Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



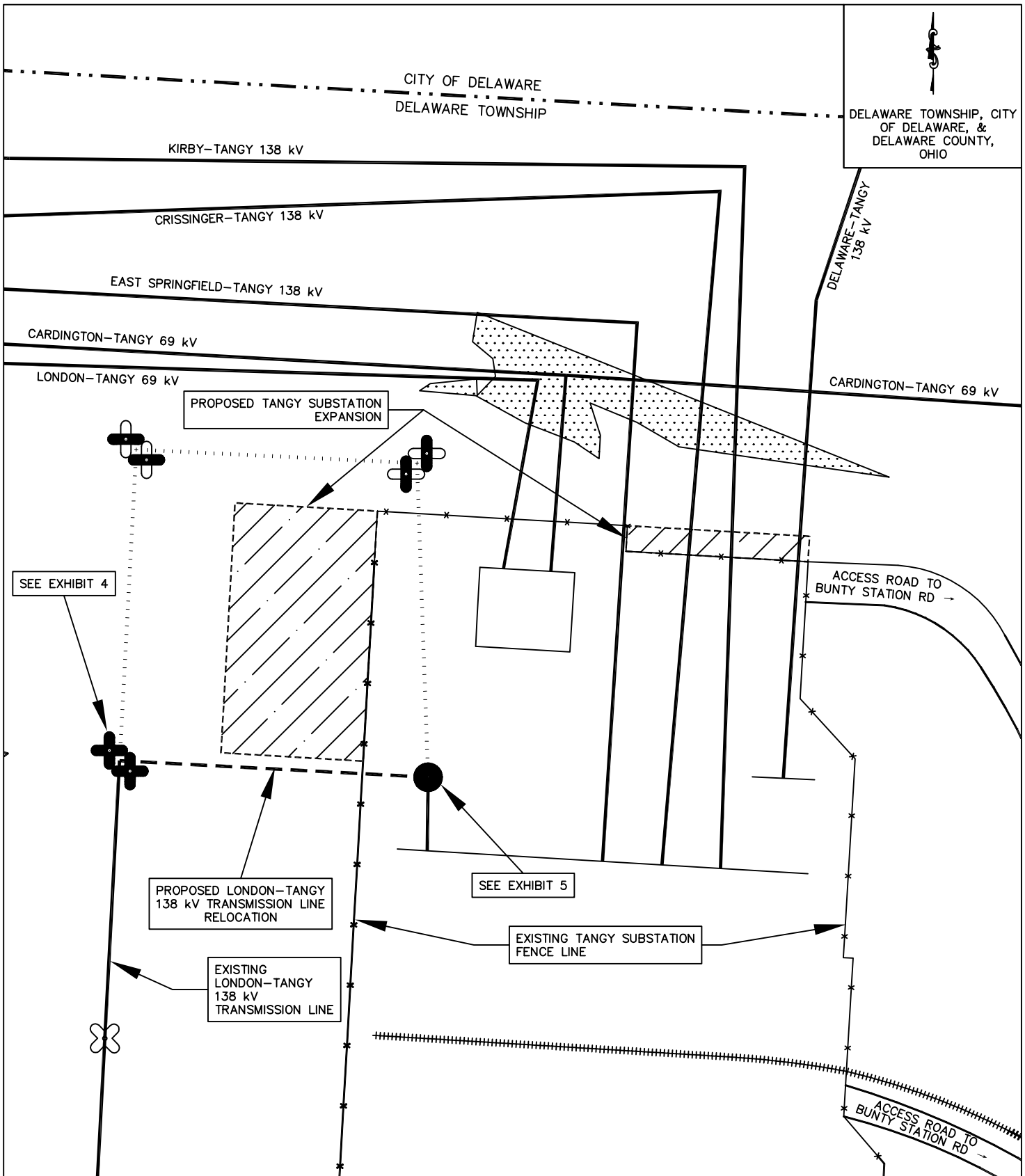
Legend
— Project Area

London-Tangy 138kV Transmission Line Relocation and Tangy Substation Expansion Project

0 1,000 2,000 4,000
Feet

1:24,000

Map created on: 5/24/2017



DELAWARE TOWNSHIP, CITY OF DELAWARE, & DELAWARE COUNTY, OHIO

CITY OF DELAWARE
DELAWARE TOWNSHIP

SEE EXHIBIT 4

PROPOSED TANGY SUBSTATION EXPANSION

PROPOSED LONDON-TANGY 138 kV TRANSMISSION LINE RELOCATION

EXISTING LONDON-TANGY 138 kV TRANSMISSION LINE

SEE EXHIBIT 5

EXISTING TANGY SUBSTATION FENCE LINE

ACCESS ROAD TO BUNTY STATION RD →

ACCESS ROAD TO BUNTY STATION RD →

LEGEND

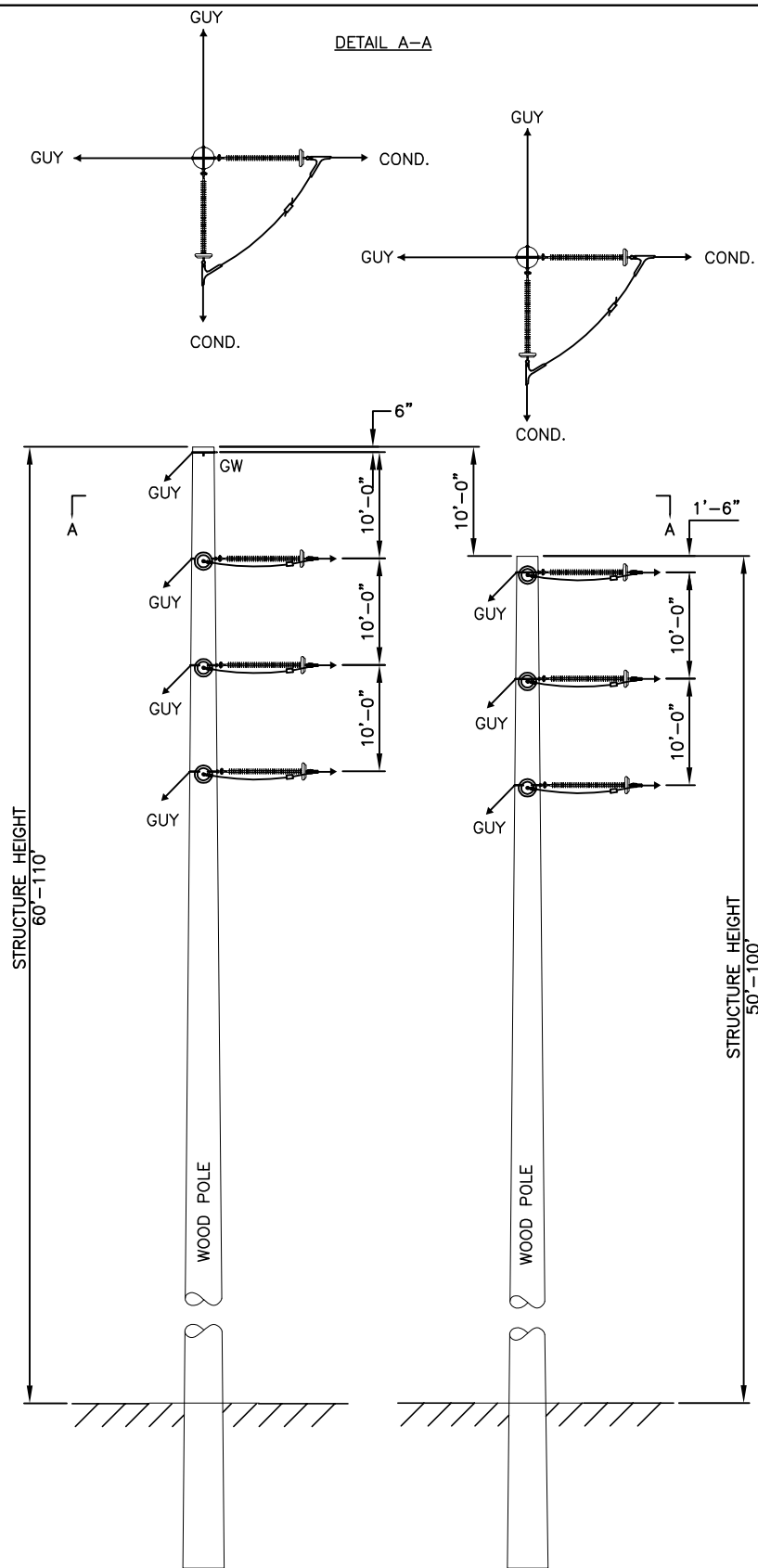
- EXISTING CONDUCTOR
- - - PROPOSED CONDUCTOR
- CONDUCTOR TO BE REMOVED
- +++++ EXISTING RAILROAD
- . - . MUNICIPAL BOUNDARY
- * - EXISTING SUBSTATION FENCE LINE
- /// PROPOSED SUBSTATION FENCE LINE
- ⊗ EXISTING 1-POLE WOOD STRUCTURE
- ⊕ EXISTING 2-POLE WOOD STRUCTURE TO BE REMOVED
- ⊗⊗⊗ PROPOSED 2-POLE WOOD STRUCTURE
- PROPOSED STEEL POLE STRUCTURE
- ▨ DELINEATED WETLAND



GENERAL LAYOUT

LONDON-TANGY 138 kV TRANSMISSION LINE RELOCATION AND TANGY SUBSTATION EXPANSION PROJECT

EXHIBIT 3



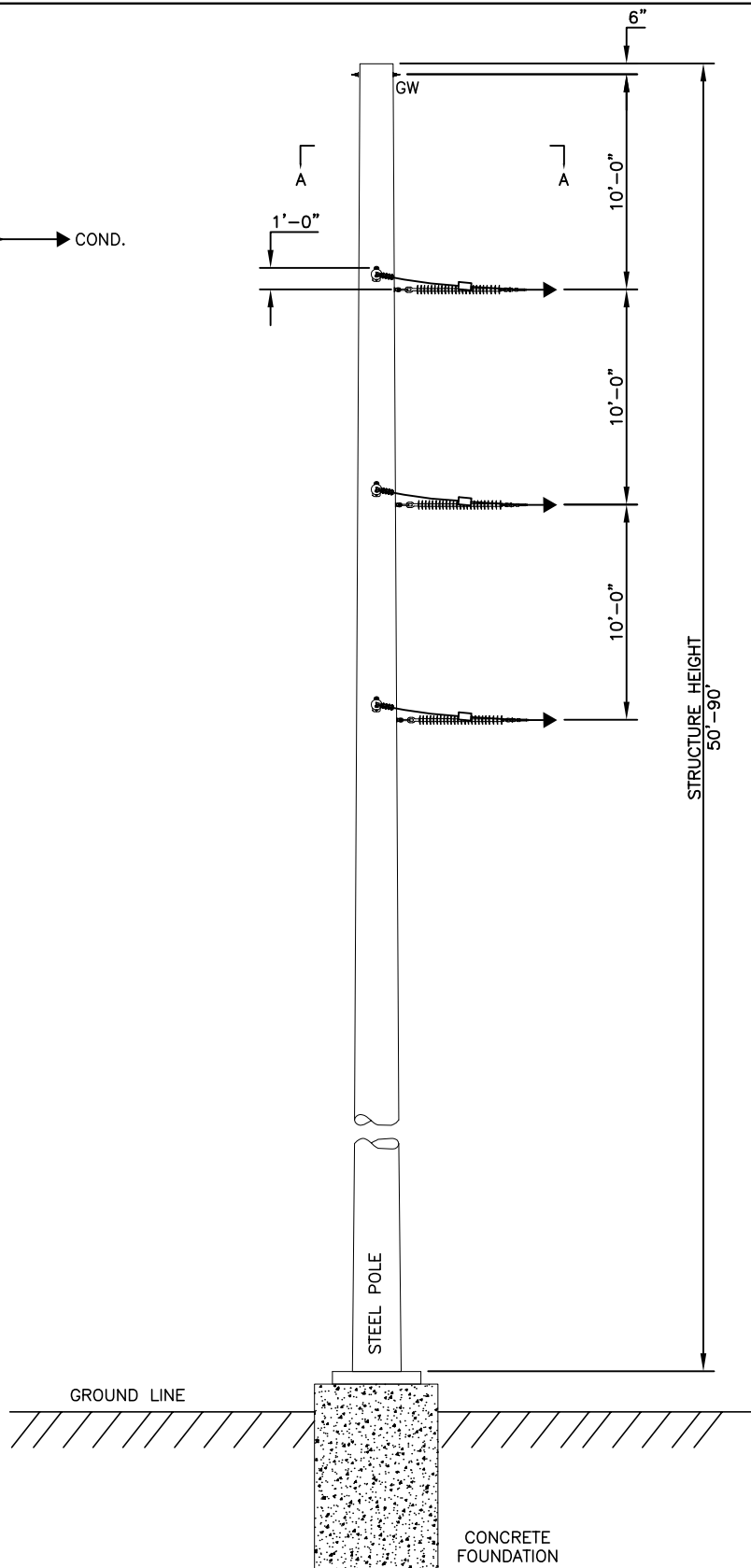
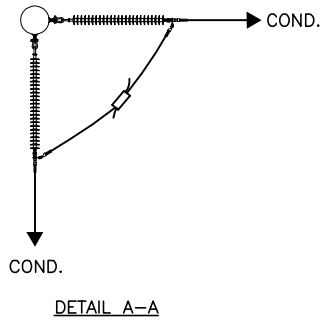
**NOT TO SCALE



LONDON-TANGY 138kV
 TRANSMISSION LINE RELOCATION AND
 TANGY SUBSTATION EXPANSION PROJECT

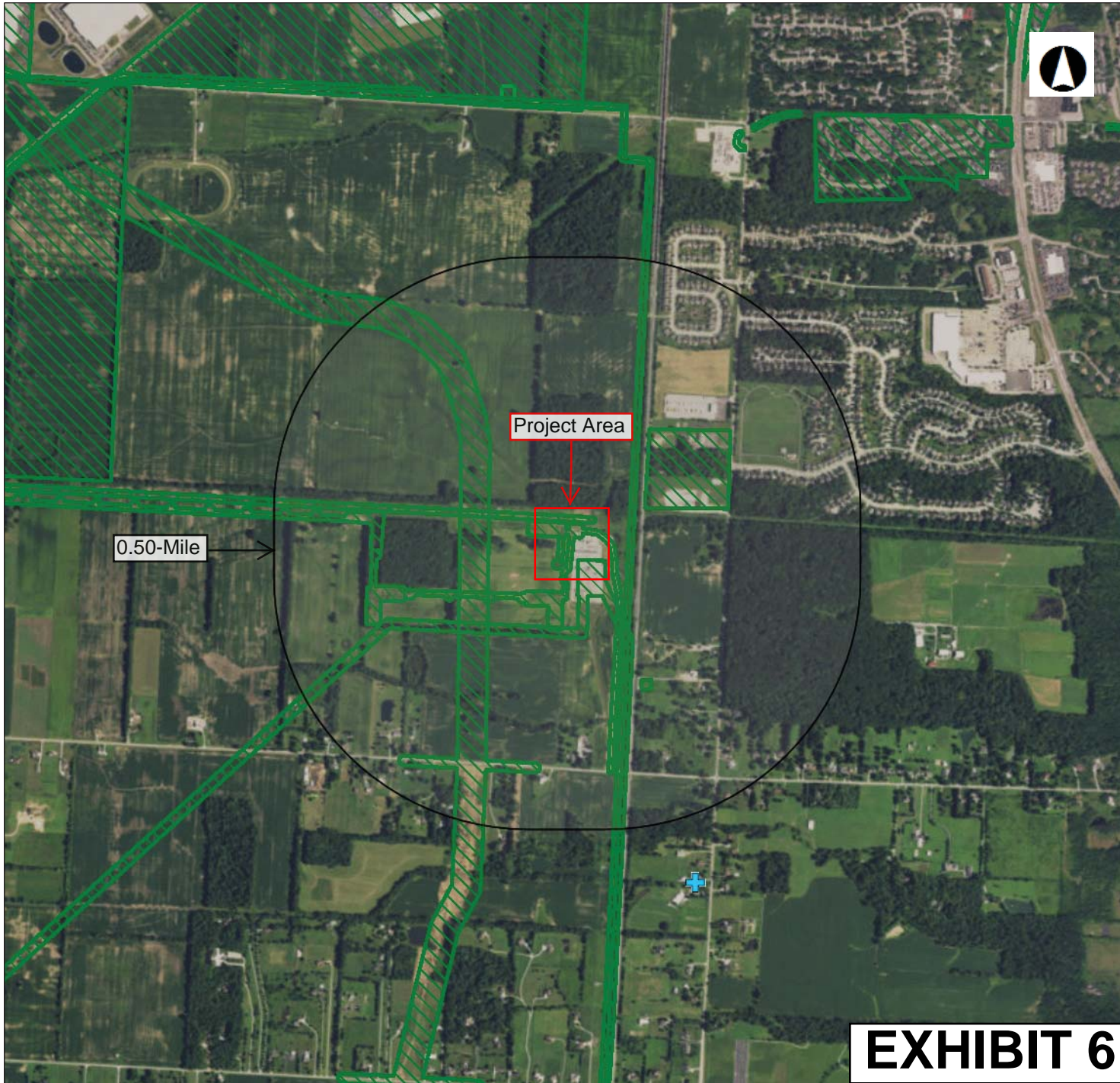
DOUBLE CIRCUIT 2-POLE WOOD
 DEADEND STRUCTURE

EXHIBIT 4



**NOT TO SCALE

<p>ATSI[®] American Transmission Systems, Inc. <small>a subsidiary of FirstEnergy Corp.</small></p>	<p>LONDON-TANGY 138kV TRANSMISSION LINE RELOCATION AND TANGY SUBSTATION EXPANSION PROJECT</p>
<p>SINGLE CIRCUIT SINGLE POLE STEEL DEADEND STRUCTURE</p>	
<p>EXHIBIT 5</p>	



Legend

- NR Listings
 - Listed
 - National Historic Landmark
 - ✕ Delisted
- ◆ NR Determinations of Eligibi
- Historic Structures
- Historic Bridges
- Historic Tax Credit Projects
- + OGS Cemeteries
- Dams
- UTM Zone Split
- NR Boundaries
- Phase1
- Phase2
- Phase3
- Historic Previously Surveyec
- Highways
- Counties

0 0.30 0.61 Miles



1: 24,000

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This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

Datum: [Datum]
 Projection: WGS_1984_Web_Mercator_Auxiliary_Sphere



EXHIBIT 6



Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR

JAMES ZEHRINGER, DIRECTOR

Office of Real Estate
Paul R. Baldrige, Chief
2045 Morse Road – Bldg. E-2
Columbus, OH 43229
Phone: (614) 265-6649
Fax: (614) 267-4764

May 3, 2017

William Beutler
FirstEnergy
76 South Main Street
Akron, Ohio 44308

Re: 17-248; Emily-Fox 138 kV Transmission Line Relocation for the OH-82/ Royalton Road Expansion Project

Project: The proposed project involves the relocation of two (2) transmission line poles and three (3) stub poles of the Emily-Fox 138 kV Transmission Line to the south of its current location for the expansion of OH-82/Royalton Road.

Location: The proposed project is located in the City of North Royalton, Cuyahoga County, Ohio.

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

Natural Heritage Database: The Natural Heritage Database has the following record at or within a one-mile radius of the project area:

Brecksville Reservation – Cleveland Metroparks
Mill Stream Run Reservation – Cleveland Metroparks

The review was performed on the project area you specified in your request as well as an additional one-mile radius. Records searched date from 1980. This information is provided to inform you of features present within your project area and vicinity.

Please note that Ohio has not been completely surveyed and we rely on receiving information from many sources. 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 all types of plant communities have been surveyed, we only maintain records on the highest quality areas.

EXHIBIT 7

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

The DOW recommends that impacts to streams, wetlands and other water resources be avoided and minimized to the fullest extent possible, and that best management practices be utilized to minimize erosion and sedimentation.

The project is within the vicinity of one or more records for the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species. Presence of the Indiana bat has been established in the area, and therefore additional summer surveys would not constitute presence/absence in the area. The following species of trees have relatively high value as potential Indiana bat roost trees to include: shagbark hickory (*Carya ovata*), shellbark hickory (*Carya laciniosa*), bitternut hickory (*Carya cordiformis*), black ash (*Fraxinus nigra*), green ash (*Fraxinus pennsylvanica*), white ash (*Fraxinus americana*), shingle oak (*Quercus imbricaria*), northern red oak (*Quercus rubra*), slippery elm (*Ulmus rubra*), American elm (*Ulmus americana*), eastern cottonwood (*Populus deltoides*), silver maple (*Acer saccharinum*), sassafras (*Sassafras albidum*), post oak (*Quercus stellata*), and white oak (*Quercus alba*). Indiana bat roost trees consists of trees that include dead and dying trees with exfoliating bark, crevices, or cavities in upland areas or riparian corridors and living trees with exfoliating bark, cavities, or hollow areas formed from broken branches or tops. However, Indiana bats are also dependent on the forest structure surrounding roost trees. If suitable habitat occurs within the project area, the DOW recommends trees be conserved. If suitable habitat occurs within the project area and trees must be cut, the DOW recommends cutting occur between October 1 and March 31. If no tree removal is proposed, this project is not likely to impact this species.

The project is within the range of the channel darter (*Percina copelandi*), a state threatened fish, and the bigmouth shiner (*Notropis dorsalis*), a state threatened fish. The DOW recommends no in-water work from April 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact these or other aquatic species.

The project is within the range of the Blanding's turtle (*Emydoidea blandingii*), a state threatened species. This species inhabits marshes, ponds, lakes, streams, wet meadows, and swampy forests. Although essentially aquatic, the Blanding's turtle will travel over land as it moves from one wetland to the next. Due to the location, the type of habitat present at the project site, and within the vicinity of the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the spotted turtle (*Clemmys guttata*), a state threatened species. This species prefers fens, bogs and marshes, but also is known to inhabit wet prairies, meadows, pond edges, wet woods, and the shallow sluggish waters of small streams and ditches. Due to the location, the habitat at the project site and within the vicinity of the project area, and the type of work proposed, this project is not likely to impact this species.

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

The project is within the range of the king rail (*Rallus elegans*), a state endangered bird. Nests for this species are deep bowls constructed out of grass and usually hidden very well in marsh

EXHIBIT 7

vegetation. Due to the location, the habitat at the project site and within the vicinity of the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the upland sandpiper (*Bartramia longicauda*), a state endangered bird. Nesting upland sandpipers utilize dry grasslands including native grasslands, seeded grasslands, grazed and ungrazed pasture, hayfields, and grasslands established through the Conservation Reserve Program (CRP). Due to the location, the habitat at the project site and within the vicinity of the project area, and the type of work proposed, this project is not likely to impact this species.

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

Due to the potential of impacts to federally listed species, as well as to state listed species, we recommend that this project be coordinated with the U.S. Fish & Wildlife Service.

Water Resources: The Division of Water Resources has the following comment.

The local floodplain administrator should be contacted concerning the possible need for any floodplain permits or approvals for this project. Your local floodplain administrator contact information can be found at the website below.

http://water.ohiodnr.gov/portals/soilwater/pdf/floodplain/Floodplain%20Manager%20Community%20Contact%20List_8_16.pdf

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

John Kessler
ODNR Office of Real Estate
2045 Morse Road, Building E-2
Columbus, Ohio 43229-6693
John.Kessler@dnr.state.oh.us

Beutler, William R

From: susan_zimmermann@fws.gov on behalf of Ohio, FW3 <ohio@fws.gov>
Sent: Thursday, January 05, 2017 1:02 PM
To: Beutler, William R
Cc: nathan.reardon@dnr.state.oh.us; kate.parsons@dnr.state.oh.us
Subject: *EXTERNAL* London-Tangy 138 kV Line Relocation & Tangy Substation, Delaware Co. OH



UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. Fish and Wildlife Service
Ecological Services Office
4625 Morse Road, Suite 104
Columbus, Ohio 43230
(614) 416-8993 / Fax (614) 416-8994



TAILS# 03E15000-2017-TA-0489

Dear Mr. Beutler,

We have received your recent correspondence requesting information about the subject proposal. There are no federal wilderness areas, wildlife refuges or designated critical habitat within the vicinity of the project area. The following comments and recommendations will assist you in fulfilling the requirements for consultation under section 7 of the Endangered Species Act of 1973, as amended (ESA).

The U.S. Fish and Wildlife Service (Service) recommends that proposed developments avoid and minimize water quality impacts and impacts to high quality fish and wildlife habitat (e.g., forests, streams, wetlands). Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize erosion, especially on slopes. All disturbed areas should be mulched and revegetated with native plant species. Prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

FEDERALLY LISTED SPECIES COMMENTS: All projects in the State of Ohio lie within the range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (*Myotis septentrionalis*). In Ohio, presence of the Indiana bat and northern long-eared bat is assumed wherever suitable habitat occurs unless a presence/absence survey has been performed to document absence. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥ 3 inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat. In the winter, Indiana bats and northern long-eared bats hibernate in caves and abandoned mines.

Should the proposed site contain trees ≥ 3 inches dbh, we recommend that trees be saved wherever possible. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring portal surveys are warranted. If no caves or abandoned mines are present and trees ≥ 3 inches dbh cannot be avoided, we recommend that removal of any trees ≥ 3 inches dbh only occur between October 1 and March 31. Seasonal clearing is being recommended to avoid adverse effects to Indiana bats and northern long-eared bats. While incidental take of northern long-eared bats from most tree clearing is exempted by a 4(d) rule (see <http://www.fws.gov/midwest/endangered/mammals/nleb/index.html>), incidental take of Indiana bats is still prohibited without a project-specific exemption. Thus, seasonal clearing is recommended where Indiana bats are assumed present.

If implementation of this seasonal tree cutting recommendation is not possible, summer surveys may be conducted to document the presence or probable absence of Indiana bats within the project area during the summer. If a summer survey documents probable absence of Indiana bats, the 4(d) rule for the northern long-eared bat could be applied. Surveys must be conducted by

an approved surveyor and be designed and conducted in coordination with the Endangered Species Coordinator for this office. Surveyors must have a valid federal permit. Please note that summer surveys may only be conducted between June 1 and August 15.

If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), no tree clearing should occur on any portion of the project area 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 and northern long-eared bat, for our review and concurrence.

Due to the project type, size, and location, we do not anticipate adverse effects to any other federally endangered, threatened, proposed, or candidate species. Should the project design change, or during the term of this action, additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, consultation with the Service should be initiated to assess any potential impacts.

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 ESA, and are consistent with the intent of the National Environmental Policy Act of 1969 and the Service's Mitigation Policy. This letter provides technical assistance only and does not serve as a completed section 7 consultation document. We recommend that the project be coordinated with the Ohio Department of Natural Resources due to the potential for the project to affect state listed species and/or state lands. Contact John Kessler, Environmental Services Administrator, at (614) 265-6621 or at john.kessler@dnr.state.oh.us.

If you have questions, or if we can be of further assistance in this matter, please contact our office at (614) 416-8993 or ohio@fws.gov.

Sincerely,



Dan Everson
Field Office Sup

ervisor

cc: Nathan Reardon, ODNR-DOW

Kate Parson, ODNR-DOW

**London-Tangy 138 kV Transmission Line Relocation And Tangy Substation
Expansion Project
Case Number 17-1288-EL-BNR**

Date: May 31, 2017

**Exhibit 9
Wetland & Waters Assessment**

Date: April 6, 2017

TO: William R. Beutler – Engineer III
Energy Delivery Transmission and Substation Design
FROM: Auggie Ruggiero – Staff Scientist
Environmental Energy Delivery Support

SUBJECT:
**Wetland and Waters Determination
London-Tangy 138 kV Relocation &
Tangy Substation Expansion Project**

INTRODUCTION

On January 12, 2017, an area of approximately 6 acres located within the vicinity of the Tangy substation at 1484 Bunty Station Road, in Delaware, Ohio was investigated for the presence of wetland characteristics and/or evidence of other areas deemed “waters of the U.S.” Areas that exhibit hydric soils, wetland hydrology, and a dominance of hydrophytic vegetation were considered to be a wetland. Areas that display these three characteristics are subject to regulations pursuant to Section 404 of the Clean Water Act or Ohio’s isolated wetland laws. Other areas deemed “waters of the U.S.” potentially include streams or bodies of open water which may also be subject to Section 404 regulations.

METHODS

Wetlands within the project area were identified and their boundaries estimated using the procedures outlined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region Version 2.0 (Regional Supplement)* (U.S. Army Corps of Engineers, 2010).

The project area was also screened for the presence of areas that meet the criteria for “other waters of the U.S.” These areas consist of ephemeral, intermittent, and perennial streams, as well as open water habitats such as ponds. Site drainage was determined by secondary source information and in the field using current regulatory guidance. Drainage channels that exhibited “bed and bank” and an ordinary high water mark in the channel were identified and delineated as

jurisdictional streams. Drainage channels that did not exhibit an ordinary high water mark were regarded as drainageways.

FIELD INVESTIGATION/RESULTS

Vegetation within the project area consisted predominantly of herbaceous vegetation. One isolated forested area was identified approximately 230 feet west of the existing substation. One emergent wetland was identified approximately 50 feet north of the existing substation and a forested wetland associated with the aforementioned forested area is located approximately 260 feet west of the substation. Although outside of the project area, a drainage feature that may be jurisdictional was identified to the south of the substation. This feature drains to an unnamed tributary of the Olentangy River.

Any proposed construction activity within the wetland areas is subject to regulations pursuant to Section 404 of the Clean Water Act and any activity within the drainage feature may be subject to Section 404 regulations. If any proposed construction activity is to encroach upon this drainage feature, further investigation of this feature is warranted.

REFERENCES

Lichvar, R.W. and Kartesz, J.T. 2009. North American Digital Flora: National Wetland Plant List, version 2.4.0 (https://wetland_plants.usace.army.mil). U.S. Army Corps of Engineers, Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, Hanover, NH, and BONAP, Chapel Hill, NC. (June, 2012).

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.

United States Department of Agriculture, Natural Resources Conservation Service. 2010. Field Indicators of Hydric Soils in the United States, Version 7.0. L.M. Vasilas, G.W. Hurt, and C.V. Noble (eds.). USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils.

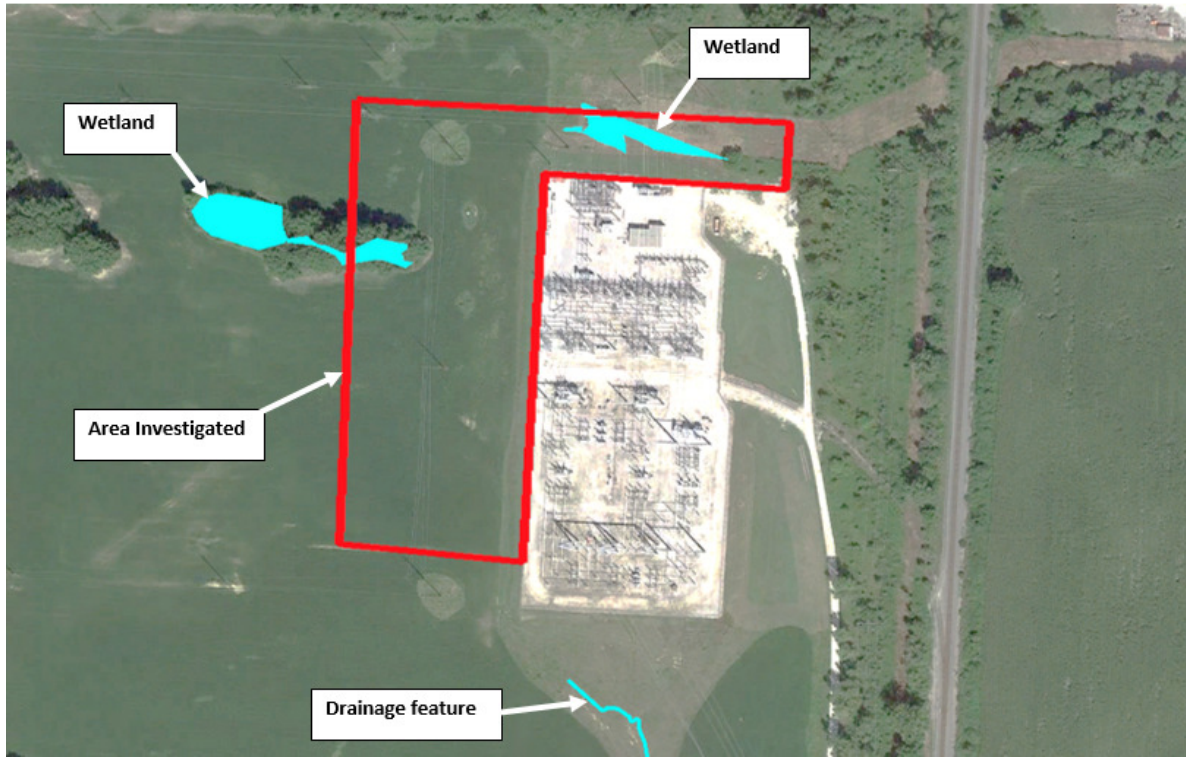


Figure 1
Aerial of the Project Area showing water resources.



Photo 1

View facing west showing forested wetland located to the west of the Tangy substation.



Photo 2

View facing north showing the emergent wetland located north of the Tangy substation.



Photo 3

View facing north showing the potentially jurisdictional drainage feature located south of the Tangy substation.