



Vorys, Sater, Seymour and Pease LLP
Legal Counsel

52 East Gay Street
P.O. Box 1008
Columbus, Ohio 43216-1008

614.464.6400 | www.vorys.com

Founded 1909

Michael J. Settineri
Direct Dial (614) 464-5462
Direct Fax (614) 719-5146
Email mjsettineri@vorys.com

September 6, 2019

Ms. Tanowa Troupe, Secretary
Public Utilities Commission of Ohio
180 E. Broad St., 11th Floor
Columbus, OH 43215-3793

Re: OPSB Case No. 19-1740-EL-BTA
Application for a First Amendment to the
Scioto Ridge Transmission Line

Dear Ms. McNeal:

Accompanying this letter are hard and electronic copies of an application by Hardin Wind LLC for a First Amendment to its Certificate of Environmental Compatibility and Public Need for the Scioto Ridge Transmission Line, issued in Case No. 13-1768-EL-BTX. This application seeks to relocate the preferred route on the parcels where the line is currently located. The original Application was electronically filed.

In accordance with Rule 4906-2-04 of the Ohio Administrative Code, we make the following declarations:

Name of the applicant:

Hardin Wind LLC
1251 Waterfront Place, 3rd Floor
Pittsburgh, PA 15222

Names and location of the facility:

Scioto Ridge Transmission Line
McDonald Township, Hardin County, Ohio

September 6, 2019
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Name of authorized representative:

Michael J. Settineri
Vorys, Sater, Seymour and Pease LLP
52 E. Gay Street
Columbus, OH 43215
614-464-5462
mjsettineri@vorys.com

Notarized Statement:

See attached Affidavit of Andrew Young

Very truly yours,

/s/Michael J. Settineri

Vorys, Sater, Seymour and Pease LLP
Attorneys for Hardin Wind LLC

MJS
Enclosure

BEFORE THE OHIO POWER SITING BOARD

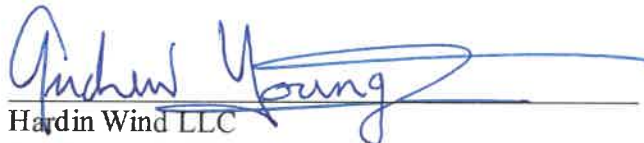
In the Matter of the Application of)
Hardin Wind LLC for a First)
Amendment to its Transmission Line) Case No. 19-1740-EL-BTA
Certificate Issued in)
Case No. 13-1768-EL-BTX)

OFFICER'S AFFIDAVIT

STATE OF PENNSYLVANIA)
) SS:
COUNTY OF ALLEGHENY)

Now comes Andrew Young, an officer of Hardin Wind LLC, having been first duly sworn, declares and states as follows:

1. He is the highest ranking executive officer in charge of the Scioto Ridge Transmission Line project in McDonald Township in Hardin County, Ohio.
2. He has reviewed the Application for a First Amendment to the Transmission Line Certificate issued in Case No. 13-1768-EL-BTX.
3. To the best of his knowledge, the information and statements contained in the Application are true and correct and the Application is complete.

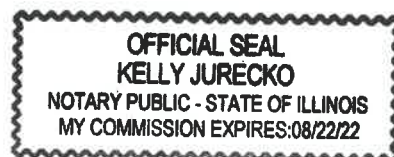


Hardin Wind LLC
By: Andrew Young, Authorized Representative
CEO, Innogy Renewables US LLC

Sworn to before me and signed in my presence this 5 day of September 2019.



Notary Public
My Commission Expires 08/22/22



APPLICATION
TO THE
OHIO POWER SITING BOARD
FOR AMENDMENT TO
CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY & PUBLIC NEED
FOR THE
SCIOTO RIDGE TRANSMISSION LINE
CASE NO. 19-1740-EL-BTA

McDonald Township
Hardin County, Ohio

September 2019

Applicant: Hardin Wind LLC,
1251 Waterfront Place, 3rd Floor
Pittsburgh, PA 15222
Contact: Ashley Beal
1.412.430.8052

Prepared By: Tetra Tech, Inc.
3 Lan Drive, Suite 100
Westford, MA 01886
Contact: Lynn Gresock
978-303-8527

BEFORE THE OHIO POWER SITING BOARD
First Amendment Application of Hardin Wind LLC
Scioto Ridge Transmission Line

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No changes to figures, with the exception of:

Section 4906-15-01

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No Figures

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Revised Figure 03-1	Route Study Area
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Section 4906-15-04

Revised Figure 04-1	Topography and Slopes
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Section 4906-15-07

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No changes to appendices, with the exception of:

Supplemental Appendix B	Supplemental Ecological Assessment
Supplemental Appendix C	Supplemental AM/FM Radio and Television Analysis
Supplemental Appendix D	Supplemental Cultural Resource Report
Supplemental Appendix E	Supplemental Noise Impact Assessment
Appendix F	Typical Structure Drawings

ACRONYMS/ABBREVIATIONS

%	percent
AEP	American Electric Power
the Applicant	Hardin Wind LLC
the Application	Application submitted for Case No. 13-1768-EL-BTX
Cardno	Cardno ENTRIX
the Collection Substation	a collection substation that serves as the starting point of the Facility
the Facility	Scioto Ridge Transmission Line
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
kV	kilovolt
NRCS	National Resources Conservation Service
NRHP	National Register of Historic Places
OHI	Ohio Historic Inventory
OPSB	Ohio Power Siting Board
POI	point of interconnection
the POI Substation	a point of interconnection substation that serves as the ending point of the Facility
ROW	right-of-way
the Study Area	a 1,000-foot area around the Facility's 120-foot temporary ROW; used as the basis for most desktop analyses
Tetra Tech	Tetra Tech, Inc.
USDA	United States Department of Agriculture
Wetland Survey Corridor	a 200-foot survey corridor on either side of the Facility's centerline

4906-15-01 Project Summary

As discussed in prior filings with the Ohio Power Siting Board (OPSB), Hardin Wind LLC (the Applicant) plans to construct, own and operate the Scioto Ridge Transmission Line (the Facility). A Certificate of Environmental Compatibility and Public Need (Certificate) was issued under Case No. 13-1768-EL-BTX on March 17, 2014 for the 4.8-mile Facility that extended between a collector line substation (Collection Substation) and a point-of-interconnection substation (POI Substation). The Facility's Preferred Route has been adjusted and has been reduced in length to 2.9 miles, as shown on Figure 01-1. A total of 28 structures will support the 345 kilovolt (kV) wires within a temporary construction 120-foot right-of-way (ROW), as originally approved in the Certificate; however, the Facility's permanent ROW will only be 50 feet on either side of the centerline (resulting in a 100-foot permanent ROW).

All structures will utilize a steel single-pole design, with heights ranging from 70 feet to 125 feet above the ground. Seven of the structures will have concrete foundations, while the remaining 21 structures will have a direct embedded foundation underground.

The revised Facility route is approximately 2.9 miles in length, stretching from the Collection Substation, located approximately 0.33 miles west of County Route 75, to the POI Substation, adjacent to and northeast of the existing American Electric Power (AEP) East Lima-Marysville 345-kV Transmission Line. The Facility leaves the Collection Substation at a right angle, traveling north approximately 0.05 miles (Pole 1) before turning north-northeast for approximately 1.6 miles (Poles 2 through 15) and then turning northeast for approximately 0.42 miles (Poles 16 through 19). The revised Facility route then turns north-northeast again for approximately 0.31 miles (Poles 20 through 22) before turning east-northeast for 0.36 miles (Poles 23 through 26). The revised Facility route then angles northeast for 0.11 miles, passing under the

existing AEP 345-kV transmission line, before turning 90 degrees to the southeast for 0.04 miles and entering the POI Substation.

As was previously the case, the Facility extends across open agricultural fields, with extremely minimal natural resource impacts. As was previously the case, no residences are located within 100 feet of the Facility; currently, the closest residence is approximately 190 feet away from the edge of the 120-foot temporary workspace.

(A) PROJECT SUMMARY AND FACILITY OVERVIEW

Hardin Wind LLC is now a wholly owned subsidiary of Innogy Renewables US LLC, a Germany-based company with wind power developments in eight states. It is expected that White Construction, LLC will have responsibility for construction of the Facility. No other material changes from prior filings.

(1) General Purpose of the Facility

No material changes from prior filings.

(2) Description of the Facility

The Facility is an overhead 345-kV electric transmission line that covers approximately 2.9 miles and includes 28 structures. All structures utilize a steel single-pole design, with heights ranging from 70 feet to 125 feet above the ground. Eight of the structures will have concrete foundations, while the remaining 20 structures will have a direct embedded foundation underground. A 100-foot permanent ROW is proposed, with up to 120 feet of temporary work spaced used for construction.

(3) Description of the Route/Site Selection Process

No material changes from prior filings; the same considerations were reflected in selecting routing between the two adjusted endpoints for the Facility.

(4) Environmental and Socioeconomic Considerations

No material changes from prior filings.

(5) Project Schedule

Facility construction is anticipated to begin in October 2019 and be completed within four months, at which point the Facility will be placed in service. Additional information about the Facility' schedule is provided in Section 4906-15-02(F)(1) of this Amendment.

(B) GENERAL OVERVIEW

No material changes from prior filings.

(C) ELECTRONIC COPY OF DATA

No material changes from prior filings. Similar to the Application, an electronic copy of all digital, geographically referenced data used in the preparation of this Amendment has been provided to the OPSB with the filing of this Amendment.

4906-15-02 Need for the Proposed Facility

(A) NEED FOR THE PROPOSED FACILITY

No material changes from prior filings.

(1) Purpose of the Facility

No material changes from prior filings.

(2) System Conditions and Local Requirements

No material changes from prior filings.

(3) Load Flow Studies and Contingency Analyses

No material changes from prior filings.

(4) System Performance Transcription Diagrams

No material changes from prior filings.

(5) Base Case Data for Natural Gas Transmission Line

No material changes from prior filings.

(B) EXPANSION PLANS

No material changes from prior filings.

(1) Long-Term Forecast and Regional Planning

No material changes from prior filings.

(a) Reference in Long-Term Forecast

No material changes from prior filings.

(b) Explanation if Not Reference

No material changes from prior filings.

(c) Effect on Regional Expansion Plans

No material changes from prior filings.

(2) Gas Transmission Lines and Associated Facilities

No material changes from prior filings.

(C) SYSTEM ECONOMY AND RELIABILITY

No material changes from prior filings.

(D) OPTIONS TO ELIMINATE THE NEED FOR THE PROPOSED FACILITY

No material changes from prior filings.

(E) FACILITY SELECTION RATIONALE

No material changes from prior filings.

(F) FACILITY SCHEDULE

This section describes the anticipated revised schedule for Facility permitting and construction. Please note that the dates/timelines provided herein are target estimates.

(1) Schedule

(a) Construction of the Facility

Construction is anticipated to begin in October 2019.

(b) Clean-Up and Demobilization

Clean-up and demobilization are expected to begin in January 2020 and take approximately 1 month to complete.

(c) Placement of the Facility in Service

The Facility will be placed in service upon completion of construction, anticipated for the first quarter of 2020. As-built specifications will be provided to Staff within one year of the commencement of commercial operation.

(2) Impact of Critical Delays

Facility construction is scheduled to begin in October 2019, with the goal of having the transmission line in service by the first quarter of 2020. An expeditious review by OPSB is necessary to maintain this critical schedule. The Facility's engineering modifications reflect end points approved by the OPSB in prior filings and the Facility's impacts remain similar to those previously approved (although lesser in some instances due to the considerably shorter route now required). The revised Facility continues to comply with all conditions of the Certificate. By comporting with the prior design, improving upon it where appropriate, and maintaining the same commitments to actions prior to and throughout Facility construction, Hardin Wind LLC believes a facilitated review is appropriate and necessary to meet overall objectives and schedule.

4906-15-03 Site and Route Alternatives Analysis

(A) SITE AND ROUTE SELECTION STUDY

The Application provided an analysis of the Preferred and Alternate Transmission Routes, which resulted in the selection of the Preferred Transmission Route. This Amendment represents engineering and route refinements to the Preferred Transmission Route, illustrated on Revised Figure 03-1, given the adjusted end points previously approved by the OPSB; therefore, no additional alternatives analysis is provided. Similar considerations formed the selection of the revised route.

(1) Route/Site Selection Details

No material changes from prior filings.

(a) Description of Study Area and Rationale for Selection

No material changes from prior filings.

(b) Study Area and Evaluated Routes Map

No material changes from prior filings.

(c) Siting Criteria

No material changes from prior filings.

(d) Route Selection Process

No material changes from prior filings.

(e) Identified Routes, Evaluation, and Ranking

No material changes from prior filings.

(2) Constraint Map

Revised Figure 03-2 depicts constraints used in the route/site selection process.

(B) SUMMARY TABLE

A comparison is provided in Revised Table 03-2 between the previously approved Facility and the revised Facility.

REVISED TABLE 03-2. SUMMARY COMPARISON TABLE

Factor	Application Preferred Transmission Route	Revised Facility Route
Length of Corridor	4.84 miles	2.89 miles
Area of Corridor ¹	70.6 acres ²	42.5 acres
Number of Poles	35	28
Number of Turns	7	4
Number of Parcels ³	23	13
Amount of Woodland ³	121.0 linear feet	0 linear feet
Amount of Wetland ³	0 linear feet	0 linear feet
Stream Crossings	3	4
Road Crossings	5	2
Residences within 1,000 feet	17	8
Residences within 500 feet	7	5
Residences within 100 feet	0	0
NRHP ⁴ -listed properties within 1,000 feet	0	0
OHI ⁴ -listed properties within 1,000 feet	4	3
Cemeteries within 1,000 feet	0	0
Agricultural District Land ³	2,527 linear feet	2,087 linear feet
¹ Based on the 120-foot ROW, which includes temporary work space		
² Values in original Application included substation		
³ Crossed by Facility centerline		
⁴ NRHP = National Register of Historic Places; OHI = Ohio Historic Inventory		

As shown in Revised Table 03-2, there are no material changes from prior filings.

(C) SITE AND ROUTE SELECTION STUDY

No material changes from prior filings.

4906-15-04 Technical Data

(A) SITE AND ALTERNATIVE ROUTES DATA

No material changes from prior filings, other than adjustments in pole locations extending from the Collection Substation to the POI Substation.

(1) Geography and Topography Map(s)

Revised Figure 04-1 depicts the geology and topography at a 1:24,000 scale, and includes all areas in the vicinity of the 1,000-foot study area for the revised Facility route. As shown, geology and topography of the revised Facility ROW and Study Area remain similar to that as presented in prior filings.

(a) Proposed Transmission Line Alignment

No material changes from prior filings.

(b) Proposed Substation or Compressor Station Sites

No material changes from prior filings.

(c) Major Highway and Railroad Routes

No material changes from prior filings.

(d) Air Transportation Facilities

No material changes from prior filings.

(e) Utility Corridors

No material changes from prior filings.

(f) Proposed Permanent Access Roads

No material changes from prior filings.

(g) Lakes, Ponds, Reservoirs, Streams, Canals, Rivers, and Swamps

No material changes from prior filings.

(h) Topographic Contours

No material changes from prior filings.

(i) Soil Associations or Series

No material changes from prior filings.

(1) Slope and Soil Mechanics

No material changes from prior filings.

(a) Soil Descriptions

Terrain in the vicinity of the revised Facility is generally level to gently sloping. Slopes exceed 6 percent (%) for approximately 823 feet (approximately 5%) of the 2.9-mile revised Facility route. Slopes do not exceed 12% within the 120-foot ROW. Furthermore, slopes do not exceed 12% within the 1,000-foot Study Area (USDA, 2019a; USDA SCS, 1994). See Revised Table 07-5 for an updated detailed breakdown of the slopes and soil series found within the revised Facility's ROW.

(b) Soil Suitability

No material changes from prior filings. Most soil series found within the revised Facility ROW are identified by the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) as having a low risk of corrosion to concrete and a high risk of corrosion to uncoated steel. Most soil series are somewhat to very poorly drained and have a high potential for frost action (also referred to as shrink/swell potential) (USDA, 2019a). However, no slope or soil mechanics conditions were found that would prevent construction of the Facility, and final engineering designs account for any potential limitations of the soils. As

discussed in 4906-15-04(A)(2)(a), the Facility is not expected to impact, or be impacted by, steep slopes.

(B) LAYOUT AND CONSTRUCTION

(1) Site Activities

No material changes from prior filings.

(2) Layout of Associated Facilities

No material changes from prior filings.

(C) TRANSMISSION EQUIPMENT

(1) Electric Transmission Line Data

No material changes from prior filings.

(a) Design Voltage

No material changes from prior filings.

(b) Pole, Conductor, and Insulator Design

Since the prior filings, engineering refinements have modified several of the structure types proposed for the now-shorter Facility. The revised structure types are illustrated in Appendix F and described below:

- For tangent configurations (Poles 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, 20, 21, 23, 24, and 25), the tower design will be a single, mono-pole design with direct embedment and a delta configuration. Above ground heights will range from 97.5 to 115.5 feet. A conceptual drawing of the proposed tangent structures is included in Appendix F (SRW-TRN-400).

- For the small angle braced configuration (Pole 7), the tower design will be a single, mono-pole self-supporting design with insulators stacked on the angle side of the pole and a concrete foundation. The above ground height will be 125 feet. A conceptual drawing of the running angle structure is included in Appendix F (SRW-TRN-401).
- For medium angle dead-end configurations (Poles 15, 19, and 22), the tower design will be a single, mono-pole self-supporting design with concrete foundation. The above ground height will be 110 feet. A conceptual drawing of the proposed dead-end structures is included in Appendix F (SRW-TRN-402).
- For angle dead-end configurations (Poles 1 and 28), the tower design will be a single, mono-pole self-supporting design with concrete foundation. The above ground height will be 110 feet. A conceptual drawing of the proposed dead-end structures is included in Appendix F (SRW-TRN-403).
- For horizontal dead-end configurations (Poles 26 and 27, crossing under 345-kV transmission line), the tower design will be a single, mono-pole self-supporting design with concrete foundation. The above ground height will be 70 feet. A conceptual drawing of the proposed dead-end structures is included in Appendix F (SRW-TRN-404).

The Facility will be installed within a temporary ROW of up to 120-feet wide, which will extend up to 60 feet from the centerline of the transmission line

along each side. This ROW will be used during construction and installation of the Facility; no additional workspace is anticipated to be required. Upon completion of construction, the permanent ROW will be maintained at 100 feet wide, with 50 feet on either side of the transmission line's centerline. As with the Preferred Transmission Route presented in the Application, the revised Facility route has been located entirely within open agricultural land to minimize ecological impacts. A total of 28 structures are proposed along the 2.9-mile route.

(c) Base and Foundation Design

As outlined in the Application, tangent mono-pole structures will be self-supporting, directly embedded in the soil, utilizing appropriate backfill materials as required by the engineering design. However, the dead-end mono-pole structures and tangent mono-pole structures will be self-supporting with a concrete foundation; the guyed support previously reflected for the dead-end structures has been eliminated due to engineering refinements.

No other material changes from prior filings.

(d) Underground Cable Design

No material changes from prior filings.

(e) Other Major Equipment or Special Structures

No material changes from prior filings.

(2) Electric Transmission Substation Data

No material changes from prior filings.

(3) Gas Transmission Line Data

No material changes from prior filings.

(4) Gas Transmission Line Facilities

No material changes from prior filings.

(D) ENVIRONMENTAL AND AVIATION COMPLIANCE INFORMATION

No material changes from prior filings.

(1) Permits

No material changes from prior filings.

(2) Debris

No material changes from prior filings.

(3) Stormwater and Erosion Control Plans

No material changes from prior filings.

(4) Disposition of Contaminated Soil and Hazardous Materials

No material changes from prior filings.

(5) Height of Tallest Structure

Above ground heights for all Facility structure will range from 70 to 125 feet.

Based on these heights and the proposed location of the Facility, the Federal Aviation Administration's (FAA's) Notice Criteria Tool indicates that no notification to the FAA is required for the Facility.

(6) Plans for Construction during Dusty or Muddy Soil Conditions

No material changes from prior filings.

(a) Dust Control

No material changes from prior filings.

(b) Excessively Muddy Conditions

No material changes from prior filings.

4906-15-05 Financial Data

(A) OWNERSHIP

Lease agreements for all parcels along the Facility's route have been signed and will not change the ownership status of these private lands. As shown in Figure 05-1, all parcels within the Facility's route are participating. Limited portions of the Facility will span public transportation ROWs; however, the Facility will not change the ownership status of such ROWs.

(B) ELECTRIC CAPITAL COST

No material changes from prior filings.

(C) GAS CAPITAL COST

No material changes from prior filings.

4906-15-06 Socioeconomic and Land Use Impact Analysis

(A) SOCIOECONOMIC LITERATURE REVIEW

A literature search and map review study were conducted for the area within 1,000 feet on either side of the revised Facility's centerline (the Study Area). The purpose of this review was to identify specific land use areas as required by 4906-15-06(B)(3). The entire revised Facility is located within McDonald Township and Hardin County. Revised Table 06-1 summarizes the most recent population statistics available within the Study Area.

REVISED TABLE 06-1. STUDY AREA POPULATION DATA

Municipality	2010^a	2018	Percent Change 2010 - 2018
McDonald Township	862	685 ^b	-20.5%
Hardin County	32,058	31,480 ^c	-1.8%
State of Ohio	11,536,504	11,689,442 ^c	1.3%
^a Source: US Census, 2010. ^b Source: TownCharts, 2016. ^c Source: US Census, 2018			

According to the U.S. Census Bureau, 23% of the population of Hardin County is comprised of persons less than 18 years of age, while 16% is comprised of persons 65 years and over. Among persons 25 years or older, approximately 89% are high school graduates and 16% have a bachelor's degree or higher. The homeownership rate is 70%, with a median value of \$95,400 for owner-occupied housing units. The median household income is \$46,404 per year, and approximately 16% of persons live below the poverty level (U.S. Census Bureau, 2018). None of these updated values are materially different than from prior filings.

(B) ROUTE ALIGNMENT AND LAND USE MAP(S)

Revised Figure 06-1 illustrates the area 1,000 feet to all sides of the revised Facility route at a 1:14,000 scale.

(1) Approximate Centerline for Transmission Routes

No material changes from prior filings.

(2) Proposed POI Substation Locations

No material changes from prior filings.

(3) General Land Use

No material changes from prior filings.

(4) Transportation Corridors

No material changes from prior filings.

(5) Existing Utility Corridors

No material changes from prior filings.

(6) Noise-Sensitive Areas

No material changes from prior filings.

(7) Agricultural and Agricultural District Land

No material changes from prior filings.

(C) LAND USE IMPACTS

Potential land use impacts were assessed for the revised Facility based on desktop review and on-site field surveys; results are summarized in Revised Table 06-2.

REVISED TABLE 06-2. LAND USE WITHIN THE STUDY AREA

Land Use Category	Application Preferred Study Area		Revised Study Area	
	Acres	% of Study Area	Acres	% of Study Area
Agricultural (Cultivated)	1,0004.97	86	775.62	94
Agricultural (Pasture/Hay)	84.65	7	3.29	< 1
Developed (Open Space)	49.90	4	19.73	2
Forested	27.29	2	23.76	3
Grassland/Herbaceous	1.34	< 2	0.22	< 1

Land Use Category	Application Preferred Study Area		Revised Study Area	
	Acres	% of Study Area	Acres	% of Study Area
Developed (Mixed)	0.72	< 2	0.88	< 1
Total	1,168.87	100	823.50	100
Source: NLCD 2016				

Based on review of databases and aerial photography, the current land use within 1,000 feet of the Facility consists primarily of agricultural production (approximately 94% of the revised Study Area).

(1) Number of Residential Structures

As shown on Revised Figure 06-1, there are eight residential structures within 1,000 feet of the revised Facility route, including two participating landowners and six non-participating landowners. There are no residential structures within 100 feet of the revised Facility route.

(2) Construction Impacts

No material changes from prior filings.

(3) Operation and Maintenance Impacts

As in the prior filings, only very minor changes in land use are anticipated within the ROW for the Facility as a result of Facility operation and maintenance and no changes are anticipated outside the permanent 100-foot ROW.

(4) Mitigation Procedures

No material changes from prior filings.

(D) PUBLIC INTERACTION INFORMATION

No material changes from prior filings.

(1) Counties, Townships, Villages, and Cities

No material changes from prior filings.

(2) Public Officials Contacted

No material changes from prior filings.

(3) Public Information Programs

No material changes from prior filings.

(4) Liability Compensation

No material changes from prior filings.

(5) Public Interest, Convenience, and Necessity

No material changes from prior filings.

(6) Tax Revenue

No material changes from prior filings.

(7) Impact on Regional Development

No material changes from prior filings.

(E) HEALTH, SAFETY, AND AESTHETIC INFORMATION

No material changes from prior filings.

(1) Compliance with Safety Regulations

No material changes from prior filings.

(2) Electric and Magnetic Fields

No material changes from prior filings. Evaluation of electric and magnetic fields is not required, as no occupied residences are located within 100 feet of the revised Facility.

(3) Aesthetic Impacts

No material changes from prior filings.

(a) Views of the Proposed Facility

No material changes from prior filings.

(b) Structure Design Features

The revised Facility design includes a total of 28 steel structures – 20 tangent structures and 8 dead-end and running angle structures – along the length of the Revised Facility Route. Tangent structures will utilize single, tapered mono-poles with a delta configuration of insulators and direct-embedment (see Appendix F). Running angle and dead-end structures will be single, self-supported mono-poles with concrete foundations (see Appendix F). Pole height will range from 70 to 125 feet above ground level.

Although the Facility has undergone a route revision and several engineering refinements, no material changes are anticipated to this section from prior filings. The proposed use of single mono-poles for all structures will maintain the Facility's simple, clean appearance. In addition, the use of guy wires has been eliminated further reducing potential visual effects from the Facility.

(c) Facility Effect of the Site and Surrounding Area

No material changes from prior filings.

(d) Visual Impact Minimization

No material changes from prior filings.

(4) Estimate of Radio and Television Interference

There are no material changes from prior filings. A revised AM/FM Radio and Television Analysis is provided as Supplemental Exhibit C to this Amendment. Comsearch concluded that, if the Facility is properly maintained, no interference is anticipated for AM and FM radio and cable and direct broadcast satellite service will be unaffected by the Facility.

(F) IMPACT ON CULTURAL RESOURCES

Cultural Resources Analysis, Inc. (CRA) conducted additional Phase I archaeological surveys for the Facility from July 10 through July 18, 2019. Preliminary survey results identified 18 new archaeological sites and 12 new prehistoric isolated finds; in addition, revised boundaries were defined for two previously identified sites (33 HR 331 and 33 HR 357). Additional details are provided in the Supplemental Cultural Resource Report, provided as Supplemental Exhibit D to this Amendment.

(1) Cultural Resources Studies and Agency Correspondence

No material changes from prior filings.

(2) Construction Impacts

No material changes from prior filings.

(3) Operation and Maintenance Impacts

No material changes from prior filings.

(4) Mitigation Procedures

No material changes from prior filings.

(G) NOISE EMISSIONS

Resource System Group, Inc. (RSG) was retained by the Applicant to evaluate potential noise impacts from the revised Facility (see Supplemental Appendix E). As outlined in the Supplemental Noise Impact Assessment, there are no material changes from prior filings; the revised Facility will be compliant with the identified noise goals.

(1) Construction

No material changes from prior filings.

(a) Dynamiting or Blasting Activities

No material changes from prior filing.

(b) Operation of Earth Moving and Excavating Equipment

No material changes from prior filing.

(c) Driving of Piles

No material changes from prior filing.

(d) Erection of Structures

No material changes from prior filing.

(e) Truck Traffic

No material changes from prior filing.

(f) Installation of Equipment

No material changes from prior filing.

(2) Operation and Maintenance

No material changes from prior filings.

(3) Mitigation Procedures

No material changes from prior filings.

(H) OTHER SIGNIFICANT ISSUES

No material changes from prior filings.

4906-15-07 Ecological Impact Analysis

(A) SUMMARY OF NATURAL ENVIRONMENTAL STUDIES

Cardno ENTRIX (Cardno) prepared a Supplemental Wetlands and Waterbody Delineation Report (attached hereto as Supplemental Exhibit B) for the revised Facility. Supplemental Appendix B summarizes the results of a desktop assessment and on-site field studies of ecological resources within a 200-foot wide corridor along the revised Facility centerline (Wetland Survey Corridor).

The Wetland and Waterbody Delineation Report indicates that no wetlands occur within Wetland Survey Corridor. Two streams were delineated within the Wetland Survey Corridor, totaling approximately 4,160 linear feet. Cardno categorized both waterbodies as perennial ditches.

(B) ECOLOGICAL FEATURES MAP

Revised Figure 07-1 illustrates the area within 1,000 feet of the revised Facility route at a 1:14,000 scale.

(1) Proposed Transmission Line Alignments

No material changes from prior filings.

(2) Proposed Substation or Compressor Station Locations

No material changes from prior filings.

(3) All Areas Currently Not Developed for Agricultural, Residential, Commercial, Industrial, Institutional or Cultural Purposes

No material changes from prior filings.

(a) Streams and Drainage Channels

No material changes from prior filings.

(b) *Lakes, Ponds, and Reservoirs*

No such water features were identified within the Wetland Survey Corridor.

(c) *Marshes, Swamps, and Other Wetlands*

No material changes from prior filings.

(d) *Woody and Herbaceous Vegetation Land*

No material changes from prior filings.

(e) *Locations of Threatened and Endangered Species*

No material changes from prior filings. Habitats assessed within the Wetland Survey Corridor lacked significant or obvious evidence of rare, threatened or endangered species. The modification of the majority of available habitat associated with agricultural activities has degraded the quality and limited its potential to support federally or state-listed species. Minimal wildlife use was observed during the field effort, and no federally listed species were observed. Additional details are provided in the Wetland and Waterbody Delineation Report, provided as Supplemental Exhibit B to this Amendment.

(4) *Soil Associations*

No material changes from prior filings.

(C) *IMPACT OF ROUTE AND ALTERNATIVES ON WATERBODIES*

As reflected in the Wetland and Waterbody Delineation Report for the revised Facility, provided as Supplemental Appendix B to this Amendment, no wetlands and only two streams, as reflected in Revised Table 07.1

REVISED TABLE 07-1. DELINEATED STREAMS WITHIN THE WETLAND SURVEY CORRIDOR

Stream ID	HHEI Score¹	QHEI Score¹	PHWH Class	Bank Full Width (feet)	Linear Feet within Survey Corridor²	Potential Mussel Habitat³
SOH-018	37	NA	Modified Class II	≤ 3.3	440.16	No
SOH-034	36	NA	Modified Class II	≤ 3.3	31,007.35	No

¹ Subject to verification by Ohio EPA.

² Stream length within the Survey Corridor may continue off-site.

³ No freshwater mussels were observed during the field delineation. Habitat assessment is based on observations only (no water quality samples were collected or analyzed).

No in-work will be performed in the streams. Appropriate Best Management Practices will be used to control erosion and sedimentation throughout the construction effort. Therefore, no impact to the streams is anticipated to result from the Facility.

A review of the Federal Emergency Management Agency's (FEMA's) Flood Insurance Rate Map (FIRM) for this area indicated that the entire Facility ROW located in Zone X, indicated a low potential for flooding.

(1) Construction Impacts

There are two streams delineated within the Wetland Survey Corridor. As stated in the Application, Facility construction activities do not require any in-water work; therefore, Facility construction is not anticipated to cause any direct impacts to waterbodies. Construction crews will utilize existing farm roads and crop areas; no vehicle crossings will be installed during construction. Best Management Practices will be used throughout construction in accordance with an approved Stormwater Pollution Prevention Plan and as authorized under Ohio's Construction General Permit (OHC000005).

(2) Operation and Maintenance Impacts

Although wires will extend above them, the two streams delineated within the Wetland Survey Corridor will not be affected during operation of the Facility. No intrusion into the streams will occur during Facility O&M and the lack of woody vegetation within the ROW will limit the potential need for active maintenance.

(3) Mitigation Procedures

No material changes from prior filings.

(D) IMPACT OF ROUTE AND ALTERNATIVES ON WETLANDS

As reflected in the Wetland and Waterbody Delineation Report provided as Supplemental Appendix B of this Amendment, no wetlands were delineated within the Facility ROW. Therefore, no impacts to wetlands will result from the Facility.

(1) Construction Impacts

No material changes from prior filings.

(2) Operation and Maintenance Impacts

No material changes from prior filings.

(3) Mitigation Procedures

No material changes from prior filings.

(E) IMPACT OF ROUTE AND ALTERNATIVES ON VEGETATION

As outlined in Revised Table 07-3, the habitat and vegetation type breakdown for the revised Facility ROW is comparable but shorter than the Preferred ROW outlined in the original Application.

REVISED TABLE 07-3. HABITAT/VEGETATION TYPES IN THE REVISED ROW

Habitat	Application Preferred ROW		Revised ROW	
	Acres	Percent	Acres	Percent
Agriculture (cultivated fields)	63.44	94%	40.94	96.3%
Agriculture (pasture/hay)	2.04	3%	0.46	1.1%
Forested (woodlots)	--	--		
Developed/Open Space	2.04	3%	1.12	2.6%
Grassland/Herbaceous	--	--		
Total	67.49	100%	42.52	100%

(1) Construction Impacts

No material changes from prior filings.

(2) Operation and Maintenance Impacts

No material changes from prior filings.

(3) Mitigation Procedures

No material changes from prior filings.

(F) IMPACT OF ROUTE AND ALTERNATIVES ON MAJOR SPECIES

No material changes from prior filings.

(1) Construction Impacts

No material changes from prior filings.

(2) Operation and Maintenance Impacts

No material changes from prior filings.

(3) Mitigation Procedures

No material changes from prior filings.

(G) SLOPES AND ERODIBLE SOILS

Based on topography, and as shown on Revised Figure 04-1, along the 2.9-mile Facility route, slopes exceed 6% for approximately 294 linear feet (approximately 1.9%) of the Facility's

centerline, and no slope within the Facility's 120-foot ROW exceeds 12%. Revised Table 07-5 summarizes the slopes found along the proposed Facility route.

REVISED TABLE 07-5. SLOPES AT THE PROPOSED FACILITY

Slope	Facility Route	
	Linear Feet	Percent
0-3%	12,405	80.8
3-6%	2,648	17.3
6-9%	294	1.9
9-12%	--	--
> 12%	--	--
Total	15,347	100%
Source: USDA, 2019b.		

Figure 04-2 illustrates soils within the Facility's ROW and 1,000-foot Study Area. A breakdown of soils is provided in Table 07-6.

TABLE 07-6. SOILS WITHIN THE FACILITY ROW AND STUDY AREA

Soil Unit	Soil Name	Within Facility's 120-foot ROW		Within Facility's 1,000-foot Study Area	
		Acres	Percent	Acres	Percent
Ble1A1	Blount silt loam, end moraine, 0 to 2 percent slopes	0.01	< 0.1	8.14	1.0
Ble1B1	Blount silt loam, end moraine, 2 to 4 percent slopes	6.20	14.7	194.75	23.6
Blg1A1	Blount silt loam, ground moraine, 0 to 2 percent slopes	4.16	9.8	91.90	11.2
Blg1B1	Blount silt loam, ground moraine, 2 to 4 percent slopes	6.39	15.0	90.74	11.0
DeA	Del Rey silt loam, 0 to 3 percent slopes	4.36	10.2	61.40	7.5
Gwd5C2	Glynwood clay loam, 6 to 12 percent slopes, eroded	2.17	5.1	26.60	3.2
Gwe1B1	Glynwood silt loam, end moraine, 2 to 6 percent slopes	--	--	1.40	0.2
Gwe5B2	Glynwood clay loam, end moraine, 2 to 6 percent slopes, eroded	1.09	2.6	8.45	1.0
Gwg1B1	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	--	--	2.31	0.3

Soil Unit	Soil Name	Within Facility's 120-foot ROW		Within Facility's 1,000-foot Study Area	
		Acres	Percent	Acres	Percent
Gwg5B2	Glynwood clay loam, ground moraine, 2 to 6 percent slopes, eroded	--	--	10.19	1.2
Gwg5C2	Glynwood clay loam, ground moraine, 6 to 12 percent slopes, eroded	0.23	0.5	6.79	0.8
KaB	Kendallville silt loam, 2 to 6 percent slopes	0.05	0.1	4.60	0.6
Mf	Milford silty clay loam, 0 to 2 percent slopes	3.83	9.0	47.16	5.7
PkA	Pewamo silty clay loam, 0 to 1 percent slopes	14.03	33.0	269.07	32.7
Total		42.52	100.0	823.50	100.0
Source: USDA, 2019a.					

As shown, approximately 2.4 acres (5.6%) of the Facility's 120-foot ROW is composed of eroded soils (greater than 6% slopes).

(1) Construction Impacts

No material changes from prior filings.

(2) Operation and Maintenance Impacts

No material changes from prior filings.

(3) Mitigation Procedures

No material changes from prior filings.

(H) OTHER SIGNIFICANT ISSUES

No material changes from prior filings.

References

- FEMA, 2015. Flood Hazard Boundary Map H-01-32 for Hardin County, Ohio. Dated January 3, 1975. Converted by Letter to Flood Insurance Rate Map (FIRM), Effective September 1, 2015.
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- USDA, 2019a. Web Soil Survey – Geographic Database for Hardin County, Ohio. United States Department of Agriculture, Natural Resource Conservation Service. Available at <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>. Accessed August 19, 2019.
- USDA, 2019b. National Elevation Dataset (NED) 10-meter elevation data. United States Department of Agriculture, Natural Resource Conservation Service. March 2019.
- USDA SCS, 1994. Soil Survey of Hardin County, Ohio. United States Department of Agriculture Soil Conservation Service. June 1994.

List of Figures

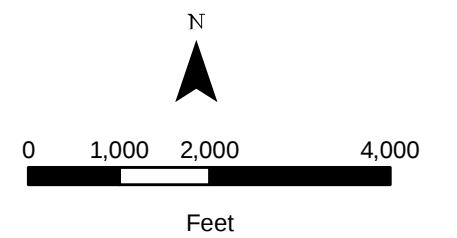
- **Figure 01-1: Facility Route Revision**
- **Revised Figure 03-1: Route Study Area**
- **Revised Figure 03-2: Constraints Map**
- **Revised Figure 04-1: Topography and Slopes**
- **Figure 04-2: Soils**
- **Figure 05-1: Landowner Status**
- **Revised Figure 06-1: Land Use**
- **Revised Figure 07-1: Ecological Features**

Scioto Ridge Transmission Line

Figure 01-1 Facility Route Revision

Hardin County, Ohio

- Pole Location
- Revised Transmission Line Route
- 120-foot Revised ROW
- Preferred Transmission Route
- 120-foot Preferred ROW
- 1,000-foot Preferred Route Study Area
- POI Substation
- Collection Substation
- AEP East Lima-Marysville 345-kV Line
- Delineated Wetland/Stream

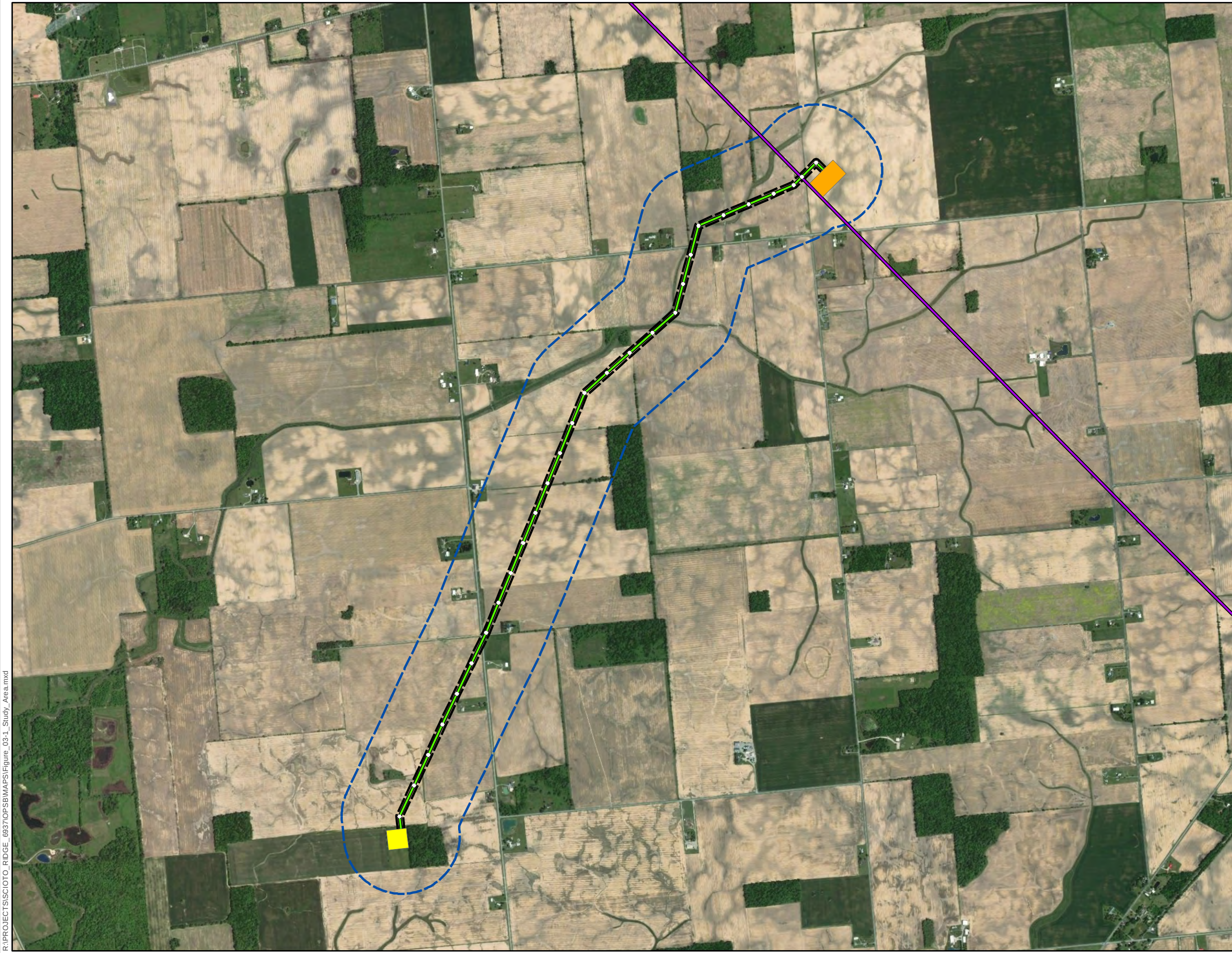


Imagery Source: Digital Globe 2018



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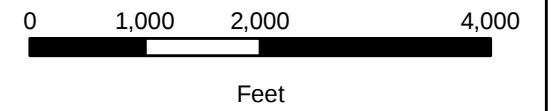


Scioto Ridge Transmission Line

Revised Figure 03-1 Route Study Area

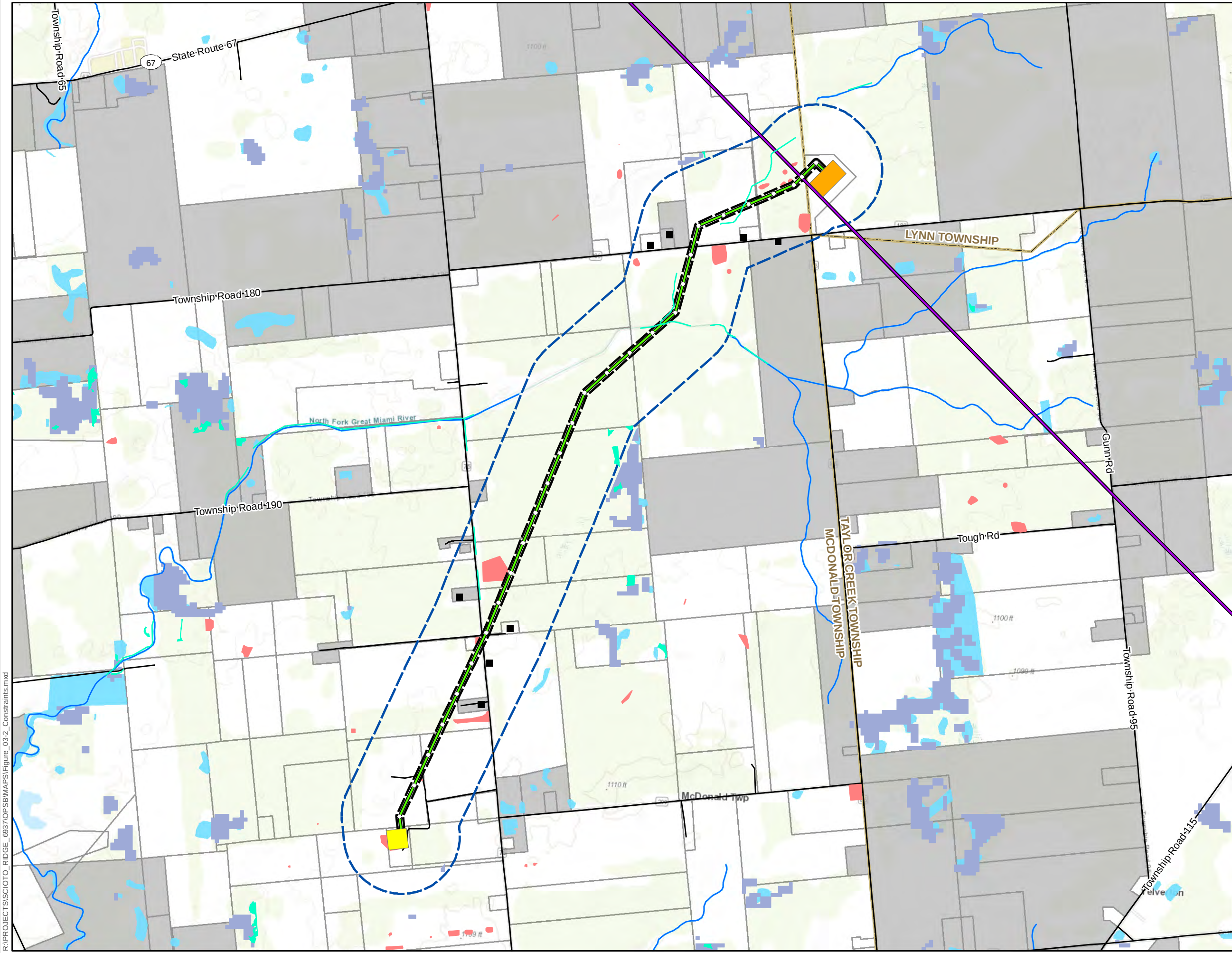
Hardin County, Ohio

-  Pole Location
-  Revised Transmission Line Route
-  120-foot Revised ROW
-  1,000-foot Study Area
-  POI Substation
-  Collection Substation
-  AEP East Lima-Marysville 345-kV Line



Imagery Source: Digital Globe 2018





Scioto Ridge Transmission Line

Revised Figure 03-2 Constraints

Hardin County, Ohio

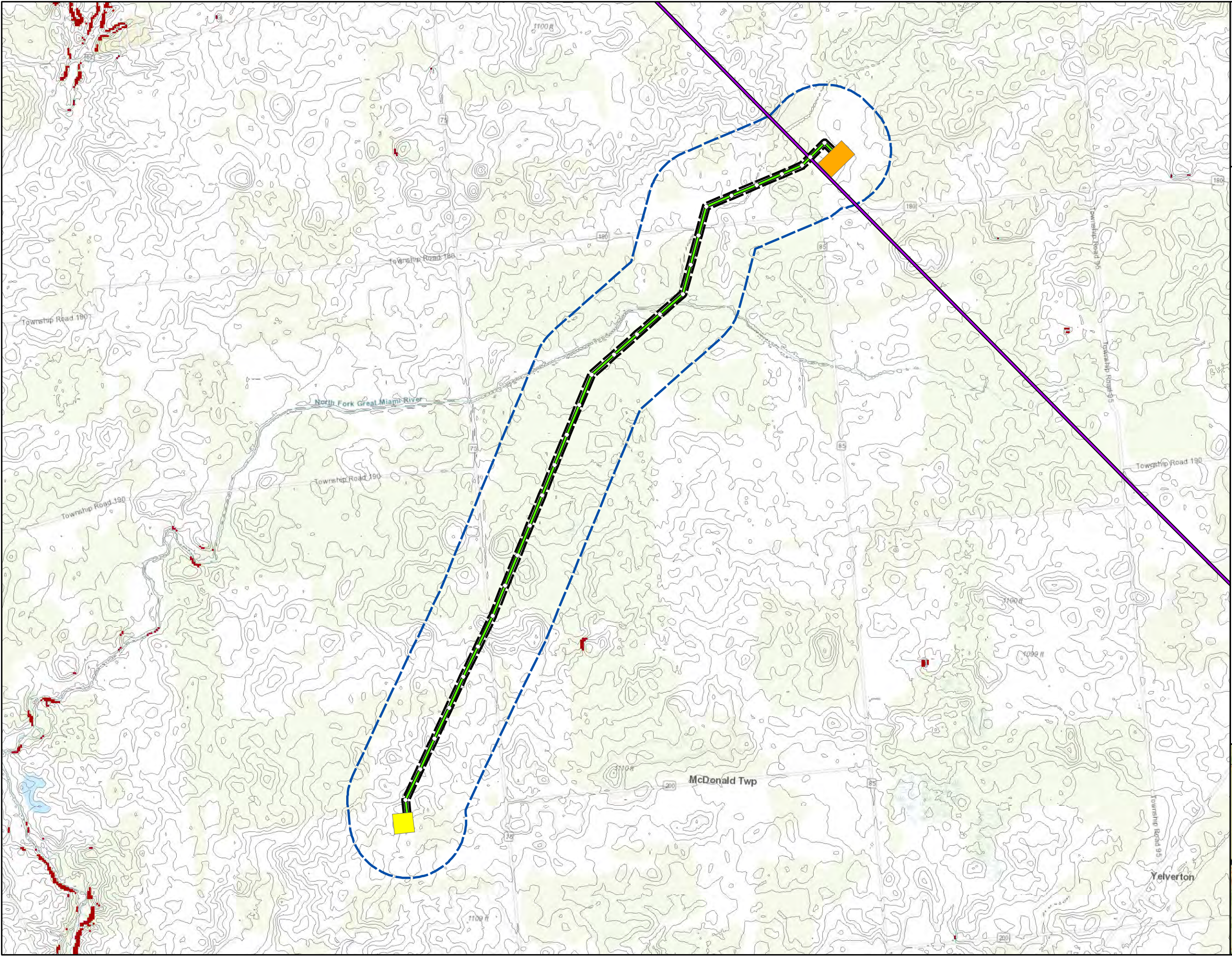
- Pole Location
- Revised Transmission Line Route
- 120-foot Revised ROW
- 1,000-foot Study Area
- POI Substation
- Collection Substation
- AEP East Lima-Marysville 345-kV Line
- Residence within 1,000 feet
- Delineated Wetland/Stream
- Cultural Resource
- Parcel Boundary
- Non-Participating Parcel
- Township Boundary
- NHD Stream
- OWI Wetland
- NWI Wetland

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0 1,000 2,000 4,000

Feet

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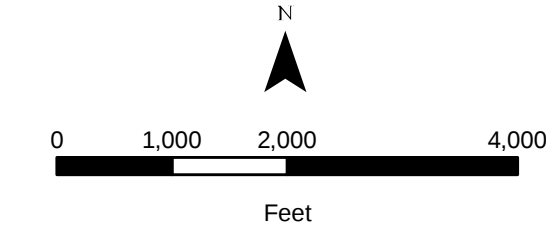


Scioto Ridge Transmission Line

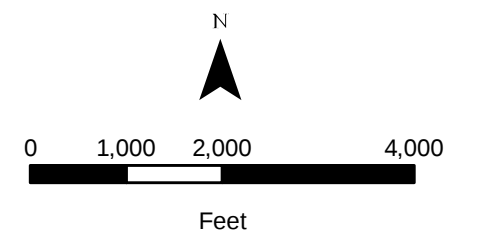
Revised Figure 04-1 Topography and Slopes

Hardin County, Ohio

- Pole Location
- Revised Transmission Line Route
- 120-foot Temporary ROW
- 1,000-foot Study Area
- POI Substation
- Collection Substation
- AEP East Lima-Marysville 345-kV Line
- Slope >12%
- Topographic Contours



Hardin County, Ohio



Soil Unit: Soil Name			
		Gwe1B1: Glynwood silt loam, end moraine, 2 to 6 percent slopes	Mny3A: Minster silty clay loam, gravelly substratum, 0 to 1 percent slopes
Ble1A1: Blount silt loam, end moraine, 0 to 2 percent slopes		Gwe5B2: Glynwood clay loam, end moraine, 2 to 6 percent slopes, eroded	MrD2: Morley clay loam, 12 to 18 percent slopes, eroded
Ble1B1: Blount silt loam, end moraine, 2 to 4 percent slopes		Gwg1B1: Glynwood silt loam, ground moraine, 2 to 6 percent slopes	MsC2: Morley-Belmore complex, 6 to 15 percent slopes, eroded
Blg1A1: Blount silt loam, ground moraine, 0 to 2 percent slopes		Gwg5B2: Glynwood clay loam, ground moraine, 2 to 6 percent slopes, eroded	Ot: Olentangy silt loam
Blg1B1: Blount silt loam, ground moraine, 2 to 4 percent slopes		Gwg5C2: Glynwood clay loam, ground moraine, 6 to 12 percent slopes, eroded	PkA: Pewamo silty clay loam, 0 to 1 percent slopes
DeA: Del Rey silt loam, 0 to 3 percent slopes		HkA: Haskins silt loam, 0 to 2 percent slopes	Sa: Saranac silty clay loam, occasionally flooded
Ee: Eel silt loam, occasionally flooded		HkB: Haskins silt loam, 2 to 6 percent slopes	SkA: Sleeth silt loam, 0 to 3 percent slopes
FoB: Fox silt loam, till plain, 2 to 6 percent slopes		KaB: Kendallville silt loam, 2 to 6 percent slopes	W: Water
FpC2: Fox clay loam, 6 to 12 percent slopes, eroded		Mf: Milford silty clay loam, 0 to 2 percent slopes	Wa: Wallkill silt loam, frequently flooded
Gwd5C2: Glynwood clay loam, 6 to 12 percent slopes, eroded		Mnl3A: Minster silty clay loam, till substratum, 0 to 1 percent slopes	We: Westland clay loam

Scioto Ridge
Transmission Line

Figure 05-1
Landowner Status

Hardin County, Ohio

- Pole Location
- Revised Transmission Line Route
- 120-foot Revised ROW
- 1,000-foot Study Area
- POI Substation
- Collection Substation
- AEP East Lima-Marysville 345-kV Line
- Participating - Lease
- Participating - Easement
- Non-Participating

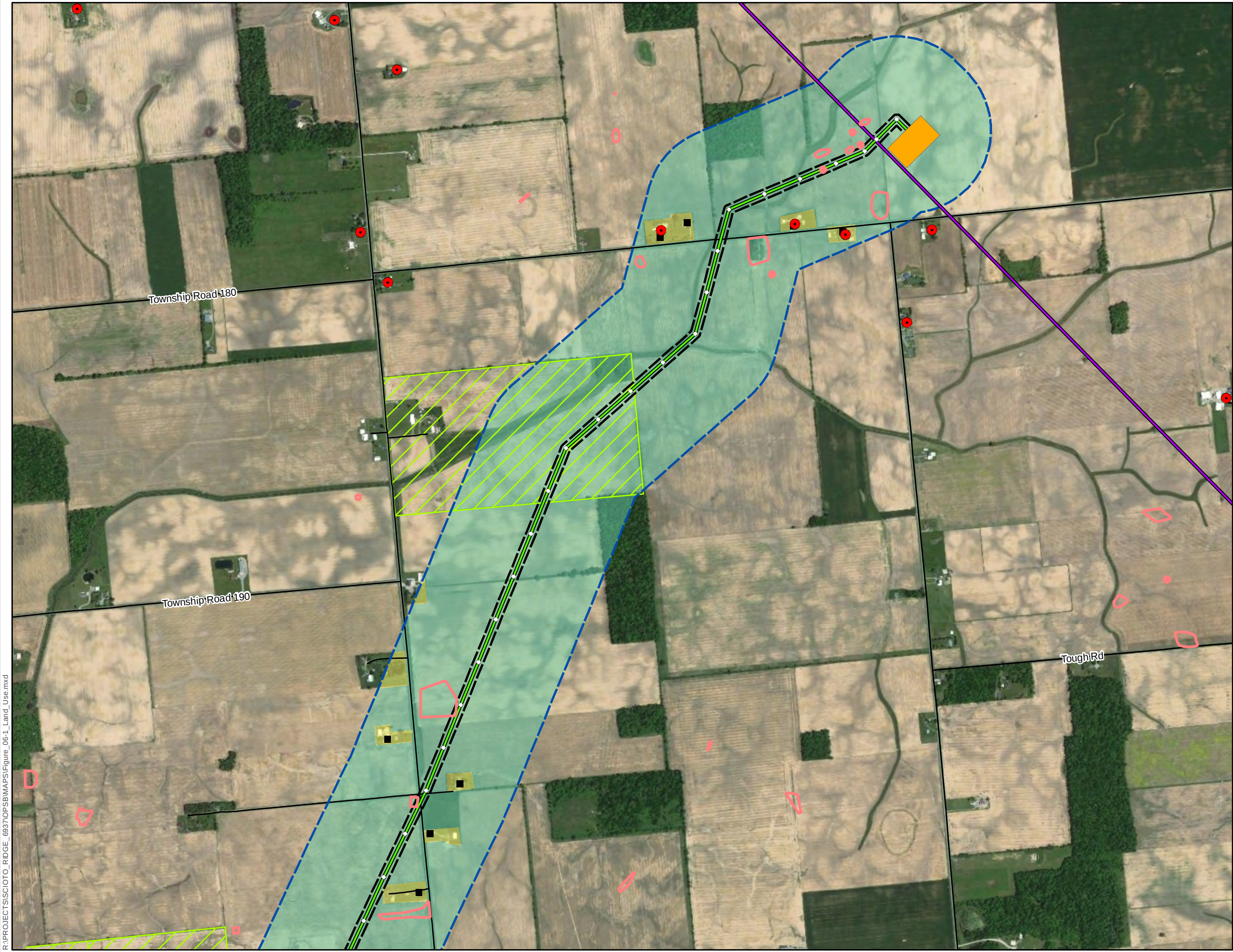


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Feet

Imagery Source: Digital Globe 2018



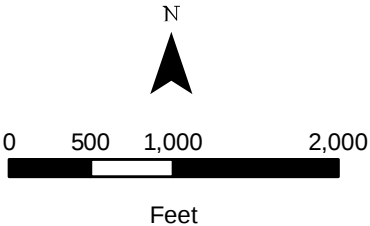


Scioto Ridge Transmission Line

Revised Figure 06-1 Land Use

Hardin County, Ohio

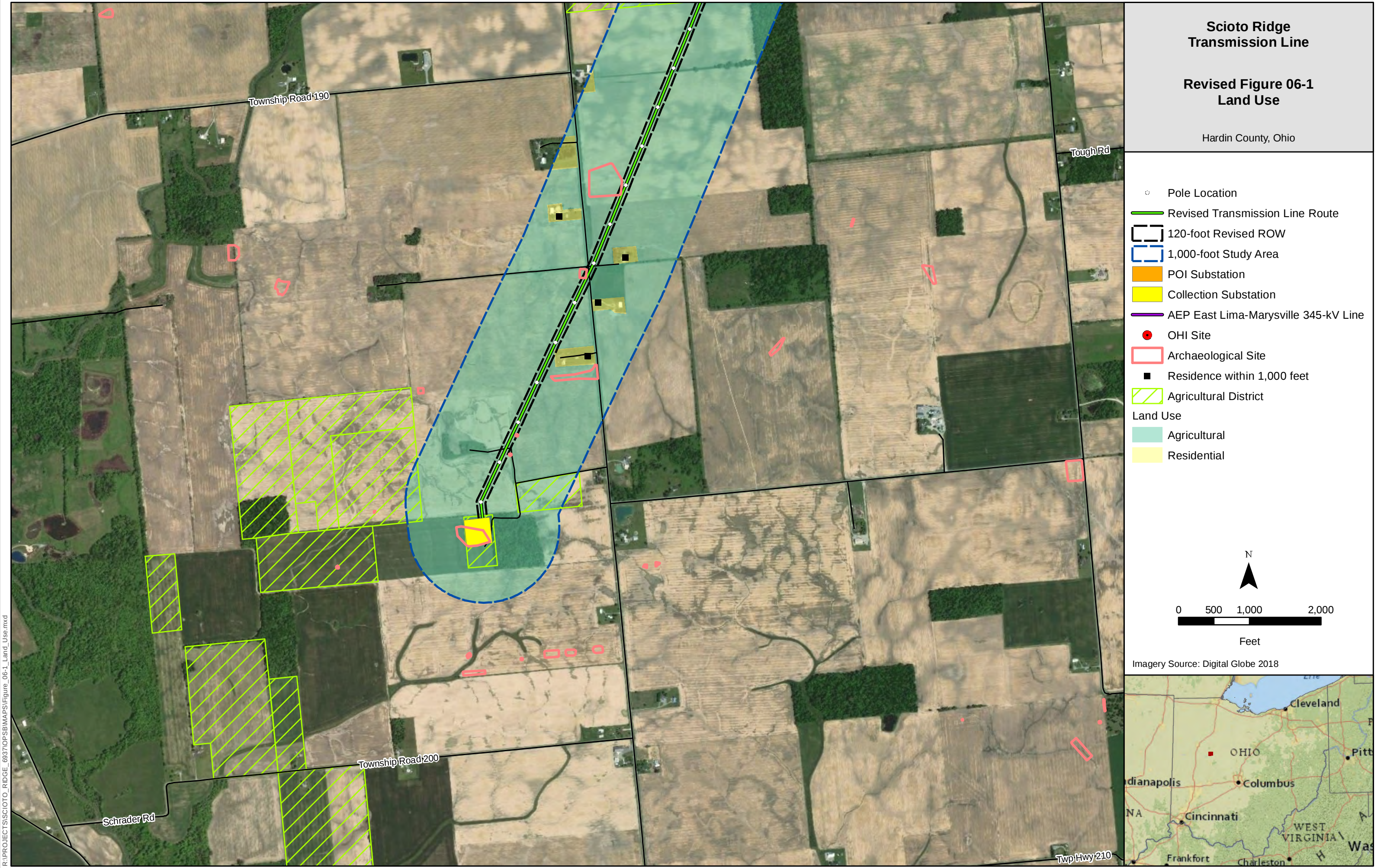
- Pole Location
- Revised Transmission Line Route
- 120-foot Revised ROW
- 1,000-foot Study Area
- POI Substation
- Collection Substation
- AEP East Lima-Marysville 345-kV Line
- OHI Site
- Archaeological Site
- Residence within 1,000 feet
- Agricultural District
- Land Use
 - Agricultural
 - Residential

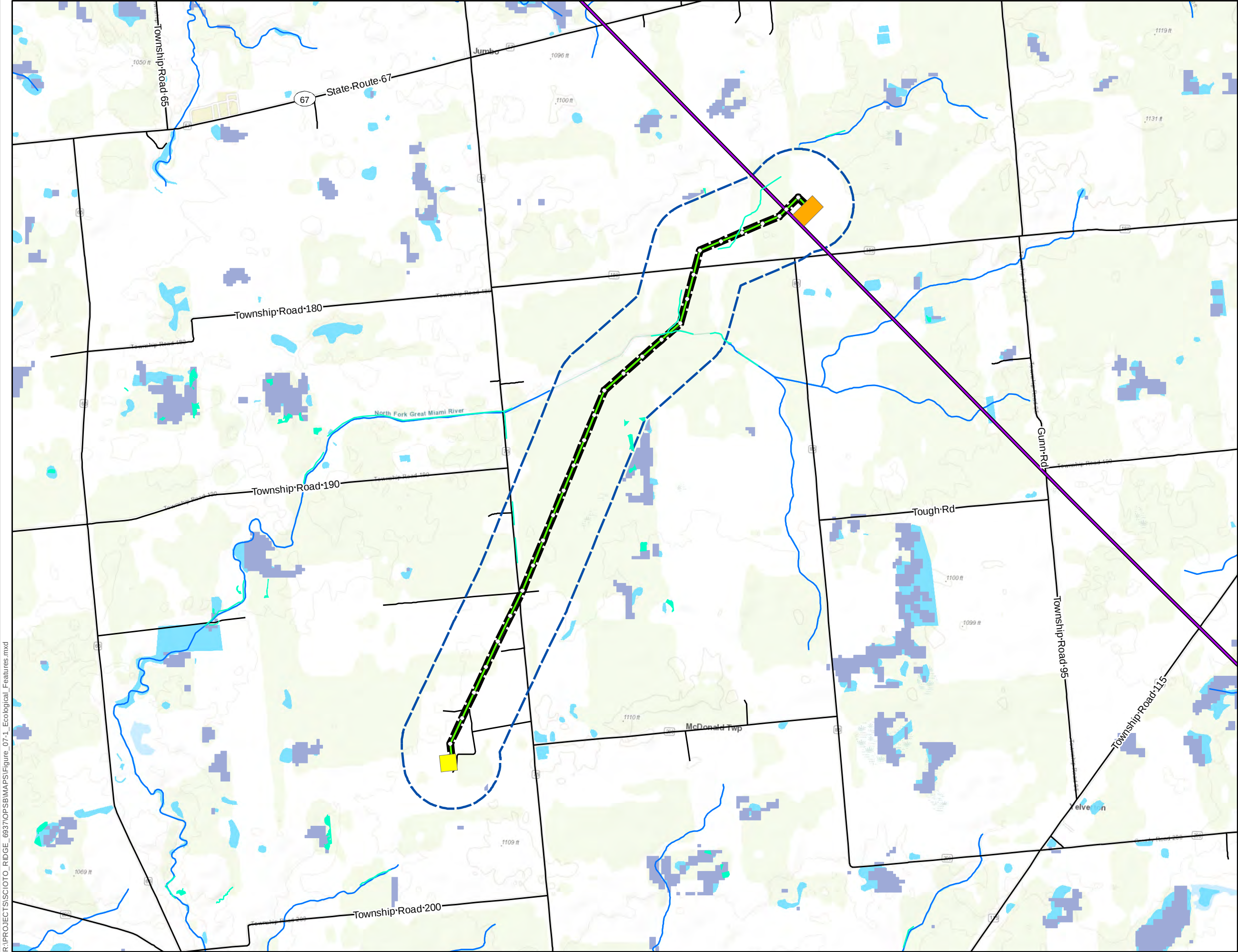


Imagery Source: Digital Globe 2018



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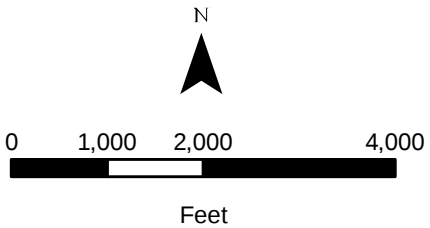


**Scioto Ridge
Transmission Line**

**Revised Figure 07-1
Ecological Features**

Hardin County, Ohio

- Pole Location
- Revised Transmission Line Route
- 120-foot Revised ROW
- 1,000-foot Study Area
- POI Substation
- Collection Substation
- AEP East Lima-Marysville 345-kV Line
- Delineated Wetland/Stream
- NHD Stream
- OWI Wetland
- NWI Wetland



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Case No(s). 19-1740-EL-BTA

Summary: Application For Amendment to Certificate electronically filed by Mr. Michael J. Settineri on behalf of Hardin Wind LLC