Case No. 24-0433-EL-BNR

Part 1 of 2

Construction Notice for the South Coshocton – Wooster 138 kV Transmission Line Rebuild Project Phase 1

AEP OHIO TRANSMISSION COMPANY™

An AEP Company

BOUNDLESS ENERGY™

PUCO Case No. 24-0433-EL-BNR

Submitted to:
The Ohio Power Siting Board
Pursuant to Ohio Administrative Code
Section 4906-6-05

Submitted by:
AEP Ohio Transmission Company, Inc.

April 30, 2024

CONSTRUCTION NOTICE

AEP Ohio Transmission Company, Inc.

South Coshocton – Wooster 138 kV Transmission Line Rebuild Project Phase 1

4906-6-05 Accelerated Application Requirements

AEP Ohio Transmission Company, Inc. ("AEP Ohio Transco" or the "Company") provides the following information to the Ohio Power Siting Board (OPSB) in accordance with the accelerated application requirements of Ohio Administrative Code Section 4906-6-05.

4906-6-05(B) General Information

B(1) Project Description

The name of the project and applicant's reference number, names and reference number(s) of resulting circuits, a brief description of the project, and why the project meets the requirements for a Construction Notice.

The Company is proposing the South Coshocton - Wooster 138 kV Transmission Line Rebuild Project Phase 1 (the "Project"), located in Jackson and Tuscarawas townships, Coshocton County, Ohio. The Company proposes to rebuild a portion of the existing South Coshocton – Wooster 138 kV Transmission Line, from the South Coshocton Station to a point approximately 1.6 miles to the west. The existing South Coshocton-Wooster 138 kV Transmission Line is single circuit and supported on wood H-frame structures. The existing South Coshocton - Killbuck 34.5 kV transmission line runs generally parallel to this 1.6 mile section of the South Coshocton - Wooster 138 kV Transmission Line. The Project proposes to consolidate rights-of-way (ROW) and rebuild the South Coshocton-Wooster 138 kV and South Coshocton - Killbuck 34.5 kV transmission lines as a double circuit 138-kV/69-kV transmission line on steel monopole structures. The Project will be rebuilt almost entirely within existing ROW. Maps 1 and 2 show the location of the Project.

The Project meets the requirements for a Construction Notice (CN) as defined by Items 2(a) of Appendix A to Ohio Administrative Code Section 4906-1-01, *Application Requirement Matrix for Electric Power Transmission Lines*:

(1) Adding new circuits on existing structures designed for multiple circuit use, replacing conductors on existing structures with larger or bundled conductors, adding structures to an existing transmission line, or replacing structures with a different type of structure:

(b) Not greater than two miles in length.

The Project has been assigned Case No. 24-0433-EL-BNR.

B(2) Statement of Need

If the proposed Construction Notice project is an electric power transmission line or gas or natural gas transmission line, a statement explaining the need for the proposed facility.

The Project is part of a larger asset renewal effort to rebuild 23.4 miles of the South Coshocton – Wooster 138 kV Transmission Line, that was originally constructed in 1957 using wood H-frame structures. Over 25% of the structures on the line have at least one open condition including issues associated with split poles, rot top/heart, and woodpecker holes. Over the past 5 years the circuits made up by the line have experienced 9 sustained outages resulting in customers served from the line experiencing over 3.5 million customer minutes interruption (CMI).

In parallel, there is a non-jurisdictional project proposed in the Coshocton area to upgrade the existing South Coshocton - Killbuck 34.5 kV Transmission Line to 69 kV and address asset renewal and operational flexibility needs. The Project (1.6 mile rebuild) is proposed ahead of the larger 23.4 mile rebuild because the Company identified an opportunity to combine these two efforts and co-locate the 138 kV and 69 kV lines on double circuit structures. By combining the parallel lines into a single corridor, the Project uses less ROW and allows for the overall needs in the area to be addressed in a more cost-effective manner.

Failure to move forward with this Project will cause reliability concerns by continuing to operate a transmission line that has reached the end of its useful life.

The need and solution for this Project was presented to PJM on 11/12/2019 and 11/22/2019, and subsequently assigned a PJM identifier, s2149. This Project was included in the Company's 2023 Long-Term Forecast Report on page 222.

B(3) Project Location

The applicant shall provide the location of the project in relation to existing or proposed lines and substations shown on an area system map of sufficient scale and size to show existing and proposed transmission facilities in the Project area.

The location of the Project in relation to existing transmission lines and substations is shown on Map 1, in Appendix A. Map 2, in Appendix A, identifies the Project components on a 2021 aerial photograph.

B(4) Alternatives Considered

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

The proposed rebuilt double circuit transmission line and structure adjustment will be constructed almost entirely within existing ROW. The goal of selecting a suitable route for the Project was to minimize impacts on land use and natural and cultural resources while avoiding circuitous routes, significantly higher costs, and non-standard design requirements. Based on desktop and field examinations, the Company identified rebuilding 1.4 mile of existing transmission lines as a double circuit 138 kV / 69 kV transmission line within existing ROW the most reasonable route. The Project route is direct and impacts no new parcels or landowners; therefore, the Project reduces new viewshed impacts and would not limit future development in the area. Additionally, the design provides for proper clearances within the existing ROW and existing ROW easements permit rebuilding and upgrading the existing line.

Thus, major route alternatives were not considered for rebuilding the existing transmission line. Additionally, the ecological and cultural field surveys conducted within the existing easements determined that no streams, wetlands, or cultural features would be permanently impacted by the Project.

B(5) Public Information Program

The applicant shall describe its public information program to inform affected property owners and tenants of the nature of the project and the proposed timeframe for project construction and restoration activities.

The Company maintains a website (http://aeptransmission.com/ohio/) on which an electronic copy of this CN is available. An electronic copy of the CN will be served to the public library in each political subdivision affected by this Project. In addition, the Company retains ROW land agents that discuss Project timelines, construction and restoration activities and convey this information to affected owners and tenants.

B(6) Construction Schedule

The applicant shall provide an anticipated construction schedule and proposed in-service date of the project.

Construction of the Project is planned to begin in September 2024 with an anticipated in-service date of May 2027.

B(7) Area Map

The applicant shall provide a map of at least 1:24,000 scale clearly depicting the facility with clearly marked streets, roads, and highways, and an aerial image.

Map 1, in Appendix A, identifies the location of the Project area on Coshocton, Randle, and Wills Creek United States Geological Survey 1:24,000 quadrangle maps. Appendix A, Map 2 displays the Project on a 2021 aerial photograph.

To visit the Project from downtown Columbus, Ohio, take I-670 E to the US-62/I-270 interchange. Then, take exit 10B, following signs for OH-161/Easton Way and merge onto I-270 North. Continue north on I-270 for approximately 2 miles, then keep right to exit towards OH-161 E (Exit 30). Keep left to continue on Exit 30 toward New Albany/OH-161 E and merge onto OH-161 E, proceeding for approximately 20 miles. Then, continue proceeding eastward along OH-37 E for about 4 miles before proceeding eastward along OH-16 E for 6.4 miles to enter the city of Newark. At this point, keep left to stay on OH-16 E and proceed for approximately 22 miles before taking the OH-60 ramp for Dresden/Zanesville to merge onto OH-16 E. Continue east along OH-16 for 11 miles before turning right onto OH-83 south and proceed east for about 1 mile. Turn left onto Otsego Avenue and proceed north for an additional mile, then turn right onto Pleasant Valley Drive and proceed east for about 450 feet. The existing South Coshocton Station is located adjacent south at latitude 40.2507, longitude -81.8523.

B(8) Property Agreements

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

The Project will be constructed almost entirely within existing ROW and will not cross any new parcels or landowners not already impacted by an existing AEP transmission line. The table below provides a list of property parcel numbers with an indication as to whether the easement/option necessary to construct and operate the facility has been obtained.

Property Parcel Number	Agreement Type	Easement or Option Obtained (Yes/No)
0350000100000	AEP Owned	N/A
0430000608307	Existing Easement	Yes
0430000608300	Existing Easement	Yes
0370000002100	Supplemental Easement	Yes
0350000004900	Supplemental Easement	Yes
0350000005300	Supplemental Easement	Yes
0370000032200	Supplemental Easement	Yes

Property Parcel Number	Agreement Type	Easement or Option Obtained (Yes/No)
0370000030700	Supplemental Easement	Yes
0370000031100	Supplemental Easement	Yes
0370000031600	Supplemental Easement	Yes
0370000031400	Supplemental Easement	Yes
0350000005400	Supplemental Easement	Yes
0350000005000	Supplemental Easement	Yes
0440000066300	Supplemental Easement	Yes
0440000072700	Supplemental Easement	Yes
0430000581100	Supplemental Easement	No
0130000035100	Supplemental Easement	Yes
0130000090200	Existing Easement	Yes
0130000101900	Existing Easement	Yes

B(9) Technical Features

The applicant shall describe the following information regarding the technical features of the project:

B(9)(a) Operating characteristics, estimated number and types of structures required, and right-of-way and/or land requirements.

The proposed South Coshocton – Wooster 138 kV Transmission Line is estimated to include the following:

Voltage:	138 kV
Conductors:	(3) 795 KCM Drake ACSR (26/7) (3) 556.5 KCM Dove ACSR (26/7)
Static Wire:	(2) AFL OPGW 144 Ct Fiber (S1-36/101/646)
Insulators:	Polymer
ROW Width:	100 feet
Structure type:	three (3) single circuit custom steel monopole deadends on concrete piers, six (6) double circuit custom 2-pole deadends on concrete piers, one (1) double circuit custom monopole davit arm suspension on concrete pier, three (3) double circuit davit arm deadends on concrete piers and four (4) WPE davit arm suspensions.

B(9)(b) Electric and Magnetic Fields

For electric power transmission lines that are within one hundred feet of an occupied residence or institution, the production of electric and magnetic fields during the operation of the proposed electric power transmission line.

B(9)(b)(i) Calculated Electric and Magnetic Field Strength Levels

i) Calculated Electric and Magnetic Field Levels

Three loading conditions were examined: (1) Normal Maximum Loading, (2) Emergency Loading, and (3) Winter Normal Conductor Rating, consistent with the OPSB requirements. Normal Maximum Loading represents the peak flow expected with all system facilities in service; daily/hourly flows fluctuate below this level. Emergency loading is the maximum current flow during unusual (contingency) conditions, which exist only for short periods of time. Winter normal (WN) conductor rating represents the maximum current flow that a line, including its terminal equipment, can carry during winter conditions. It is not anticipated that this circuit of this line would operate at its WN rating in the foreseeable future.

EMF levels were computed one meter above ground under the line and at the ROW edges (50/50 feet, left/right, of centerline).

Our results, calculated using EPRI's EMF Workstation 2015 software, are summarized below.

South Coshocton – Killbuck 69/138 kV					
Condition	**Load (A)**	**Phasing Arrangements**	**Sag (feet)**	**Electric Field (kV/m)***	**Magnetic Field (mG)***
(1) Normal Max. Loading^	854.49/774.90	A-B-C / A-B-C	14.5 / 14.42	(0.28/0.63/0.22)	(35.09/52.09/35.65)
(2) Emergency Line Loading^^	1189.57/1005.27	A-B-C / A-B-C	17.44 /17.1	(0.28/0.68/0.22)	(49.38/75.52/50.9)
(3) Winter Conductor Rating^^^	1080.67/1034.59	A-B-C / A-B-C	14.5 / 14.42	(0.28/0.63/0.21)	(45.74/67.61/46.08)

*EMF levels (left ROW edge/maximum/right ROW edge) computed one meter above ground at the point of minimum ground clearance, assuming balanced phase currents and 1.0 P.U. Voltages. ROW width is 50 feet (left) and 50 feet (right) of centerline, respectively.

^Peak line flow expected with all system facilities in service.
^^Maximum flow during a critical system contingency
^^^Maximum continuous flow that the line, including its terminal equipment, can withstand during winter conditions.

For power-frequency EMF, IEEE Standard C95.6TM-2002 recommends the following limits:

	General Public	Controlled Environment
Electric Field Limit (kV/m)	5.0	20.0
Magnetic Field Limit (mG)	9040	27,100

The above EMF levels are well within the limits specified in IEEE Standard C95.6TM-2002. Those limits have been established to "prevent harmful effects in human beings exposed to electromagnetic fields in the frequency range of 0-3 kHz."

B(9)(b)(ii) Design Alternatives

A discussion of the applicant's consideration of design alternatives with respect to electric and magnetic fields and their strength levels, including alternate conductor configuration and phasing, tower height, corridor location, and right-of-way width.

Design alternatives were not considered due to EMF strength levels. Transmission lines, when energized, generate EMF. Laboratory studies have failed to establish a strong correlation between exposure to EMF and effects on human health. However, some people are concerned that EMF have impacts on human health. Due to these concerns, EMF associated with the new circuits was calculated and set forth in the table above. The EMF was computed in a manner to maximize the estimate, assuming the highest reasonable input values based on conditions along the proposed transmission line rebuild. Normal daily EMF levels would be less than these, which were calculated at maximum load conditions. Based on studies from the National Institutes of Health, the magnetic field (measured in milliGauss, or mG) associated with emergency loading at the highest EMF value for this transmission line is lower than those associated with normal household appliances like microwave ovens, electric shavers, and hair dryers. For additional information regarding EMF, the National Institutes of Health has posted information on their website:

http://www.niehs.nih.gov/health/topics/agents/emf/.

Additionally, information on electric and magnetic fields is available on the Company's website: https://www.aepohio.com/community/education/emf. The information found on the Company's website describes the basics of electromagnetic field theory, scientific research activities, and EMF exposures encountered in everyday life. Similar material will be made available for those affected by the construction activities for this Project.

B(9)(b)(ii)(c) Project Cost

The estimated capital cost of the project.

The costs estimate for the proposed Project, which is comprised of applicable tangible and capital costs, is approximately $ 8,166,555 using a Class 4 estimate. Pursuant to the PJM OATT, the costs for

this Project will be recovered in the AEP Ohio Transmission Company's FERC formula rate (Attachment H-20 to the PJM OATT) and allocated to the AEP Zone.

B(10) Social and Ecological Impacts

The applicant shall describe the social and ecological impacts of the project:

B(10)(a) Operating Characteristics

Provide a brief, general description of land use within the vicinity of the proposed project, including a list of municipalities, townships, and counties affected.

The Project is located within Jackson and Tuscarawas townships in Coshocton County, Ohio. The portion of the Project located east of the Muskingum River is located within the City of Coshocton.

The Project is situated in an area that predominantly consists of mixed-use industrial and commercial land use, with surrounding residential, recreational, and agricultural land uses. A long-term rehabilitation and nursing facility is located adjacent south of the Project and approximately 0.2 mile southwest of the existing South Coshocton Station. Additionally, outdoor sport facilities are located approximately 0.25 mile northwest of the existing South Coshocton Station.

No schools, parks, places of worship, cemeteries, wildlife management areas, or nature preserve lands were identified within 1,000 feet of the centerline of the Project. Rebuilding the existing transmission line within existing ROW minimizes effects on the existing viewshed and existing land use.

B(10)(b) Agricultural Land Information

Provide the acreage and a general description of all agricultural land, and separately all agricultural district land, existing at least sixty days prior to submission of the application within the potential disturbance area of the project.

The Project occupies approximately 20 acres, which is predominantly comprised of existing mixed-use industrial and commercial land uses. Minimal amounts of agricultural land are present in proximity to the Project area, which are primarily located along the Muskingum River.

Based on email correspondence with the Coshocton County Auditor's Office on November 13, 2023, one property registered as agricultural district land is crossed by the Project, totaling 0.3 acre, which is already crossed by the existing 100-foot-wide ROW. No new easements are required for the agricultural district parcel.

B(10)(c) Archaeological and Cultural Resources

Provide a description of the applicant's investigation concerning the presence or absence of significant archaeological or cultural resources that may be located within the potential disturbance area of the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.

The Company's consultant completed Phase I Archaeological and Phase I History/Architectural surveys, which involved a literature review, subsurface testing, and visual inspection for an area encompassing the Project. No previously identified archaeological sites are located within the Project area and no new archaeological sites were identified during survey. As a result, the Company recommended to the SHPO that the Project would have no adverse effect on historic properties and no further cultural resource work would be necessary. In their response, dated January 3, 2024, SHPO supported the consultant's recommendations. See Appendix C.

B(10)(d) Local, State, and Federal Agency Correspondence

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

A Notice of Intent ("NOI") will be filed with the Ohio Environmental Protection Agency for authorization of construction storm water discharges under General Permit OHC000006 and local stormwater permits will be obtained as required. The Company will implement and maintain best management practices as outlined in the Project-specific Stormwater Pollution Prevention Plan ("SWPPP") to minimize erosion sediment to Project surface waters during storm events.

The Project proposes rebuilding an existing line, which generally involves pole-for-pole structure replacements or installing new structures near existing structure locations. No wetlands were identified within the Project; therefore, no permanent wetland impacts are proposed. The Project proposes installing five new double circuit structures within FEMA-designated 100-year floodplain, all of which are located within the city of Coshocton and Coshocton County. Floodplain permitting may be required for the Project if a substantial change in Base Flood Elevation ("BFE") is anticipated from Project activities. Local floodplain permits will be obtained from Coshocton County and/or the city of Coshocton prior to the start of construction.

There are no other known local, state, or federal requirements that must be met prior to commencement of the Project.

B(10)(e) Threatened, Endangered, and Rare Species

Provide a description of the applicant's investigation concerning the presence or absence of federal and state designated species (including endangered species, listing, and species of special interest) that may be located within the potential disturbance area of the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.

The Company's consultant previously submitted coordination letters to the United States Fish and Wildlife Service ("USFWS") and the Ohio Department of Natural Resources ("ODNR") Ohio Natural Heritage Program ("ONHP") and Division of Wildlife ("DOW") for an area that encompasses the Project, seeking environmental reviews of potential impacts to threatened or endangered species for the Project. USFWS and ODNR provided responses on July 13, 2022 and August 3, 2022, respectively (see Appendix D).

The July 2022 USFWS coordination letters indicated that the entire Project is within the range of the Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*) in Ohio. Since the entire Project will be rebuilt within maintained ROW, minimal tree clearing is anticipated. The Company will adhere to seasonal tree clearing restrictions between October 1 and March 31, therefore, adverse impacts to these species are not anticipated.

The June 2022 USWFS responses also indicated that the Project is within the range of several federally listed and proposed freshwater mussel species: fanshell (*Cyprogenia stegaria*), rabbitsfoot (*Quadrula c. cylindrica*), sheepnose (*Plethobasus cyphyus*), snuffbox (*Epioblasma triquetra*), and round hickorynut (*Obovaria subrotunda*). These mussels are known from the Muskingum River in Coshocton County, Ohio. The USFWS recommends a mussel survey if the Project would directly or indirectly impact the Muskingum River. Although the Project spans the Muskingum River, no in-water work is proposed for the Project. Thus, adverse impacts to this species are not anticipated.

The ODNR DOW indicated that the Project is located within several protected bat species' ranges: the state endangered and federally endangered Indiana bat, the state endangered and federally threatened northern long-eared bat, the state endangered little brown bat (*Myotis lucifugus*), and the state endangered tricolored bat (*Perimyotis subflavus*). The DOW recommends seasonal tree cutting for trees ≥ 3 inches diameter at breast height (dbh) between October 1 and March 31 to avoid adverse impacts to these species. Since the Project proposes rebuilding existing portions of 138 kV and 69 kV transmission lines within existing, maintained ROW, minimal tree clearing is required for the Project. Additionally, the Company's consultant performed a desktop review for potential hibernacula within the vicinity of the Project, as recommended by the ODNR DOW. No potential hibernacula were identified within a 0.25 mile radius of the Project. The Company will adhere to seasonal tree clearing restrictions between October 1 and March 31; therefore, adverse impacts to these species are not anticipated.

The ODNR DOW indicated that the Project is within the range of several state and/or federal listed freshwater mussel species: fanshell, rabbitsfoot, sheepnose, snuffbox, purple cat's paw (*Epioblasma o. obliquata*), rayed bean (*Villosa fabalis*), pink mucket (*Lampsilis orbiculata*), long solid (*Fusconaia maculata maculata*), Ohio pigtoe (*Pleurobema cordatum*), pocketbook (*Lampsilis ovata*), and salamander mussel (*Simpsonaias ambigua*). Additionally, the ODNR DOW indicated that the Project is within the range of the eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*), a state endangered species and a federal species of concern. The ODNR DOW stated that the Project is not likely to impact these above-listed aquatic species based on its location and since no in-water work is proposed in a perennial stream.

The ODNR DOW indicated that the Project is within the range of the eastern spadefoot toad (*Scaphiopus holbrookii*). However, the ODNR DOW indicated that the Project is not likely to impact the species due to the location, the type of habitat within the Project area, and the type of work proposed.

The ODNR DOW indicated that the Project is located within the range of the American bittern (*Botaurus lentiginosus*), a state endangered bird. Nesting bitterns prefer large undisturbed wetlands that have small, scattered pools amongst dense vegetation. They also occasionally occupy bogs, large wet meadows, and dense shrubby swamps. The ODNR DOW recommended that if this type of habitat will be impacted, construction should be avoided during the species' nesting period (May 1 through July 31); however, impacts to the species is not likely, if no suitable habitat will be impacted by the Project. No potentially suitable habitat was identified during the Project's environmental survey in August 2022 and February 2023; therefore, no adverse impacts to the American bittern are anticipated.

The ODNR DOW indicated that the Project is located within the range of the northern harrier (*Circus hudsonis*), a state endangered bird. The northern harrier is a common migrant and winter species. Nesting northern harriers are much rarer, although they occasionally breed in large marshes and grasslands. The ground-nesting species will build nests out of sticks on the ground, often on top of a mound. Additionally, the bird hunts over grasslands. The ODNR DOW recommends that if these types of habitats will be impacted, construction should be avoided in the habitats during the species' nesting period (April 15 through July 31); however, impacts to the species is not likely if no suitable habitat will be impacted by the Project. No potentially suitable habitat was identified during the Project's environmental survey corridor in August 2022 and February 2023; therefore, no adverse impacts to the northern harrier are anticipated.

B(10)(f) Areas of Ecological Concern

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

In August 2022 and February 2023, the Company's consultant completed a wetland and stream delineation surveys for an approximately 35-acre environmental survey corridor (ESC), which encompasses the Project in addition to a larger area. The Project's environmental survey report is summarized below and presented in its entirety in Appendix E.

During the August 2022 and February 2023 field surveys, one perennial stream (Muskingum River), one freshwater pond (Pond SCM-8) and one waterbody (Basin SCM-1) were identified within the Project's ROW. The Muskingum River and Basin SCM-1 will be spanned by the proposed centerline. Pond SCM-8 is within the ROW but will not be spanned. No wetlands were identified within the ESC. Since the entire Project is located almost entirely within existing ROW and in a predominantly industrial setting, minimal tree clearing is anticipated.

FEMA Flood Insurance Rate Maps ("FIRMs") were reviewed to identify floodplains/flood hazard areas within the Project area (specifically, FIRM panels 39031C0195C, 39031C0215C, 39031C0355C, and 39119C0100G). Based on this mapping, one FEMA 100-year floodplain area, associated with the Muskingum River, is crossed by the Project. Impacts to mapped FEMA floodplains are minimized by rebuilding the transmission line within existing ROW with proposed structures located in close proximity to existing structure locations.

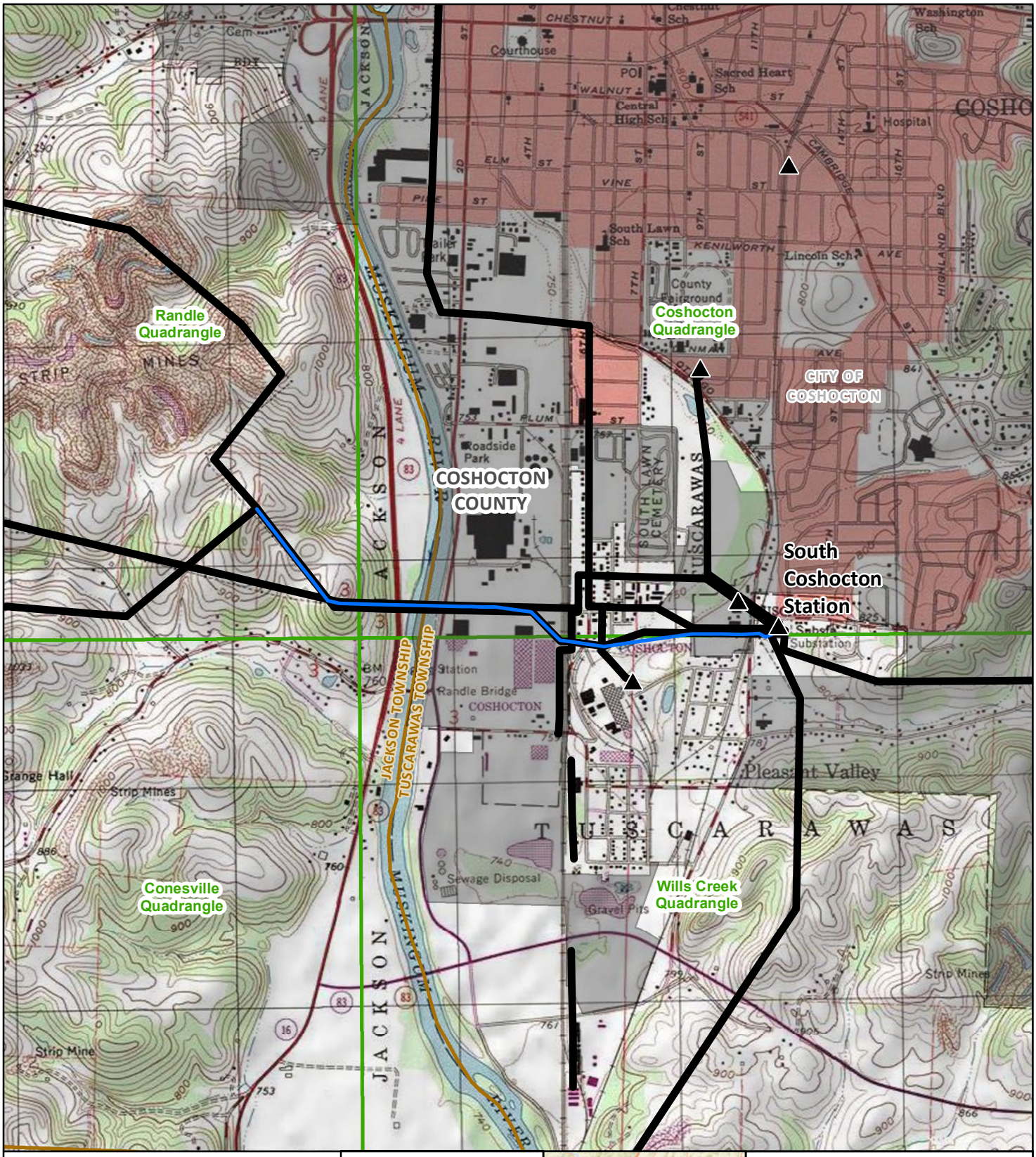
No other areas of ecological concern were identified within the Project area. Based on a review of the Protected Areas Database of the United States as well as the National Conservation Easement Database, there are no state or national parks, forests, wildlife areas or mapped conservation easements in the vicinity of the Project.

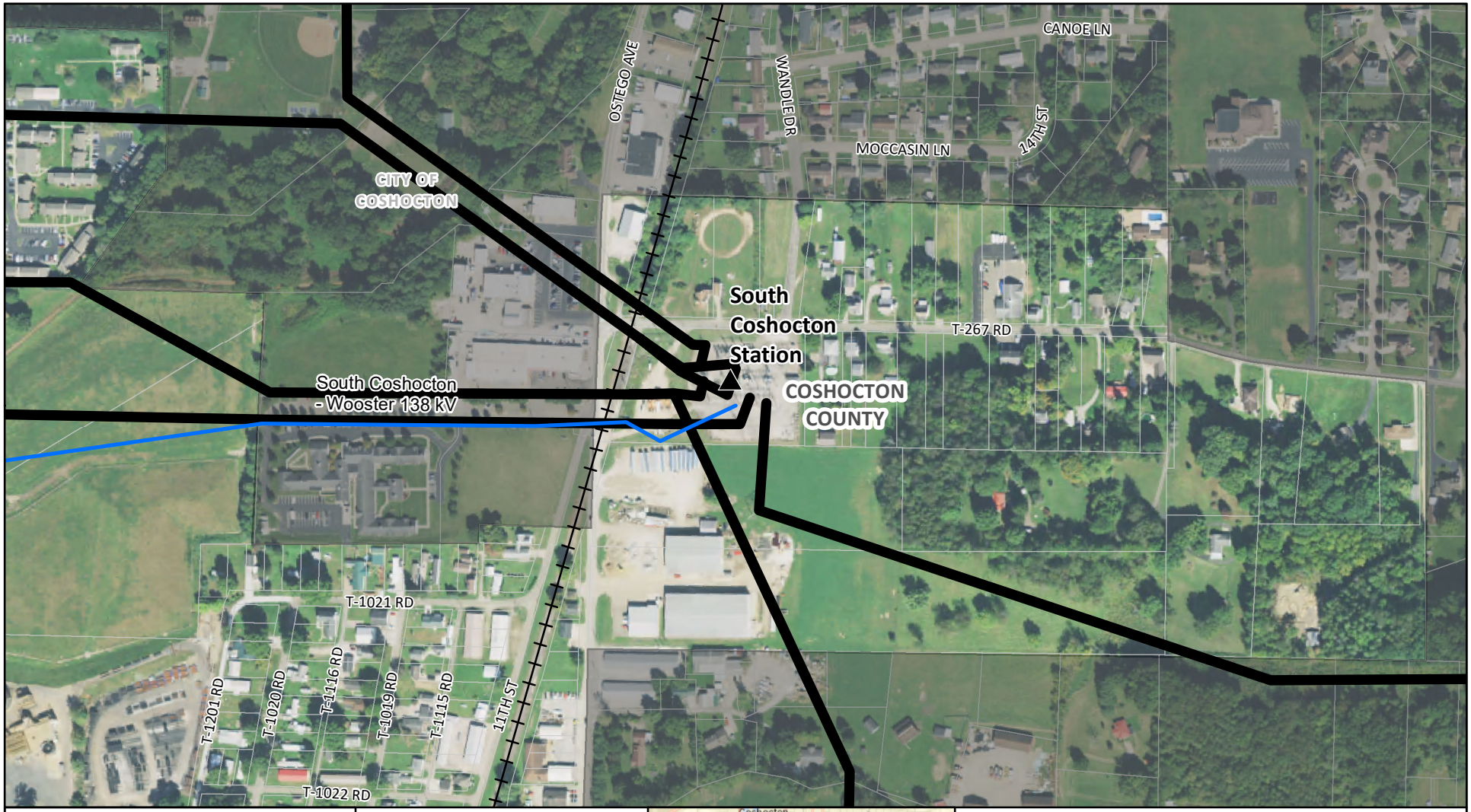
B(10)(g) Unusual Conditions

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

To the best of the Company's knowledge, no unusual conditions exist that would result in significant environmental, social, health, or safety impacts.

Appendix A Project Maps


Randle Quadrangle
Coshocton Quadrangle
Conesville Quadrangle
Wills Creek Quadrangle
COSHOCTON COUNTY
CITY OF COSHOCTON
South Coshocton Station
JACKSON TOWNSHIP
TUSCARAWAS TOWNSHIP
Existing Station
Proposed Rebuild Centerline
Existing Transmission Line
Incorporated Area
Township Boundary
USGS 7.5' Topographic Quad Boundary
Sources: USGS (2021)
State Plane Ohio North NAD 83
April 26, 2024
Map 1
Project Area
South Coshocton - Wooster 138 kV Transmission Line Rebuild Project Phase 1
0 1,000 2,000 3,000
Feet

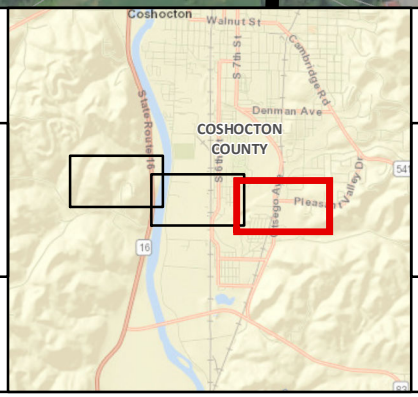


- Existing Station
- Proposed Rebuild Centerline
- Existing Transmission Line
- Agricultural District Property
- Parcel Boundary
- Incorporated Area
- Township Boundary

Sources:
NAIP Imagery (USDA 2021)
Transportation (ODOT 2021)

Coordinate System:
Ohio State Plane South
NAD 1983

April 26, 2024



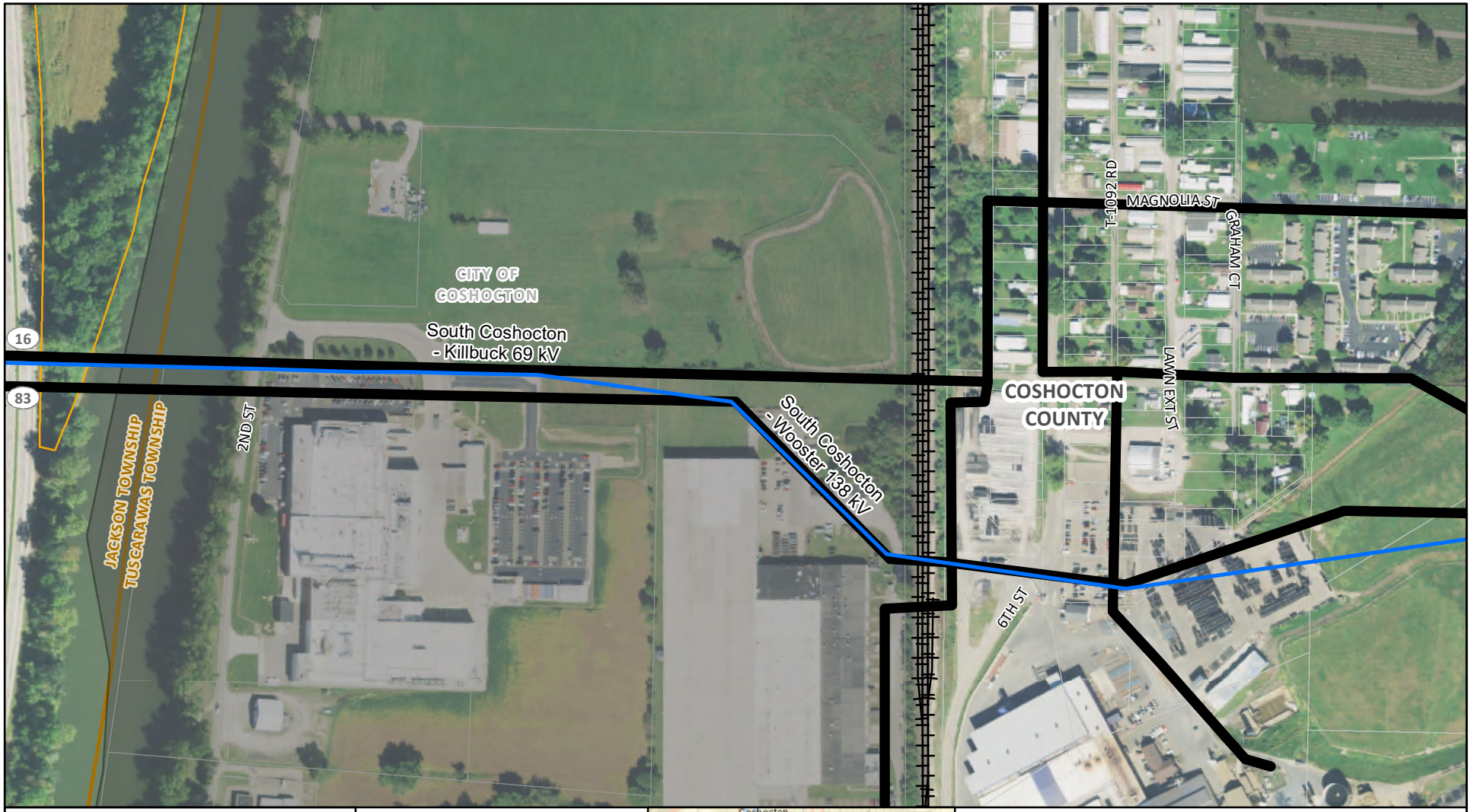
Map 2
Aerial Map

South Coshocton - Wooster
138 kV Transmission Line
Rebuild Project Phase 1

N

0 200 400 600 800

Feet

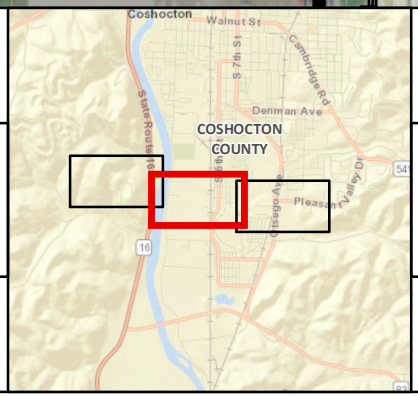


- Existing Station
- Proposed Rebuild Centerline
- Existing Transmission Line
- Agricultural District Property
- Parcel Boundary
- Incorporated Area
- Township Boundary

Sources:
NAIP Imagery (USDA 2021)
Transportation (ODOT 2021)

Coordinate System:
Ohio State Plane South
NAD 1983

April 26, 2024

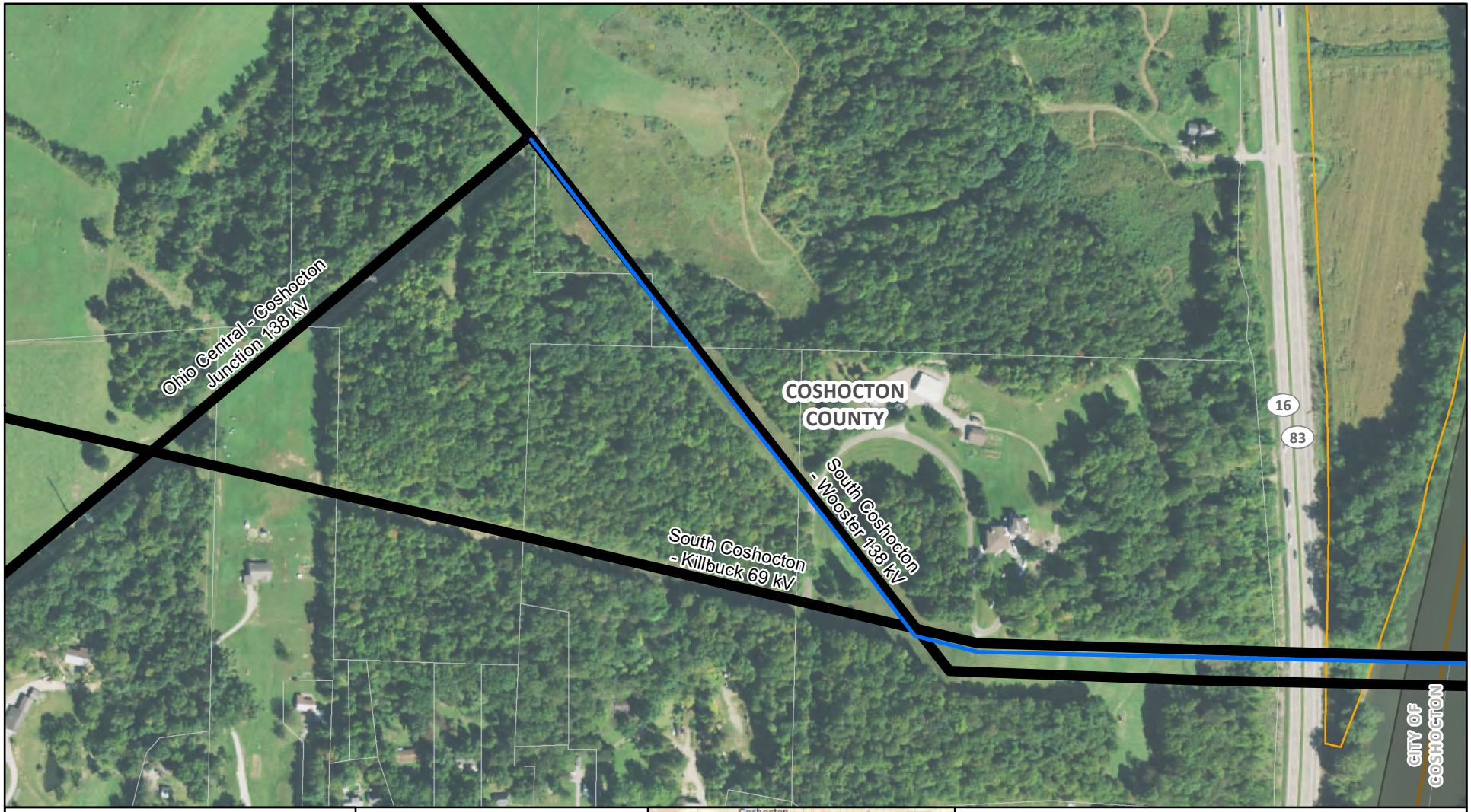


Map 2
Aerial Map

South Coshocton - Wooster
138 kV Transmission Line
Rebuild Project Phase 1

N

0 200 400 600 800
Feet



- Existing Station
- Proposed Rebuild Centerline
- Existing Transmission Line
- Agricultural District Property
- Parcel Boundary
- Incorporated Area
- Township Boundary

Sources:
NAIP Imagery (USDA 2021)
Transportation (ODOT 2021)

Coordinate System:
Ohio State Plane South
NAD 1983

April 26, 2024

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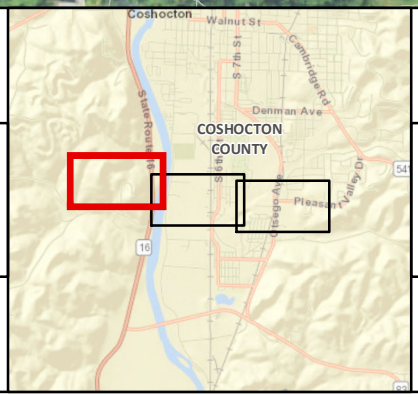


Map 2
Aerial Map

South Coshocton - Wooster
138 kV Transmission Line
Rebuild Project Phase 1

N

0 200 400 600 800

Feet

Appendix B Long Term Forecast Report and PJM Solutions

AEP Transmission Zone M-3 Process
Coshocton, Ohio

Need Number: AEP-2018-OH006

Process Stage: Solutions Meeting 11/22/2019

Previously Presented: Needs Meeting 10/28/18

Supplemental Project Driver: Equipment Condition/Performance/Risk and Customer Service.

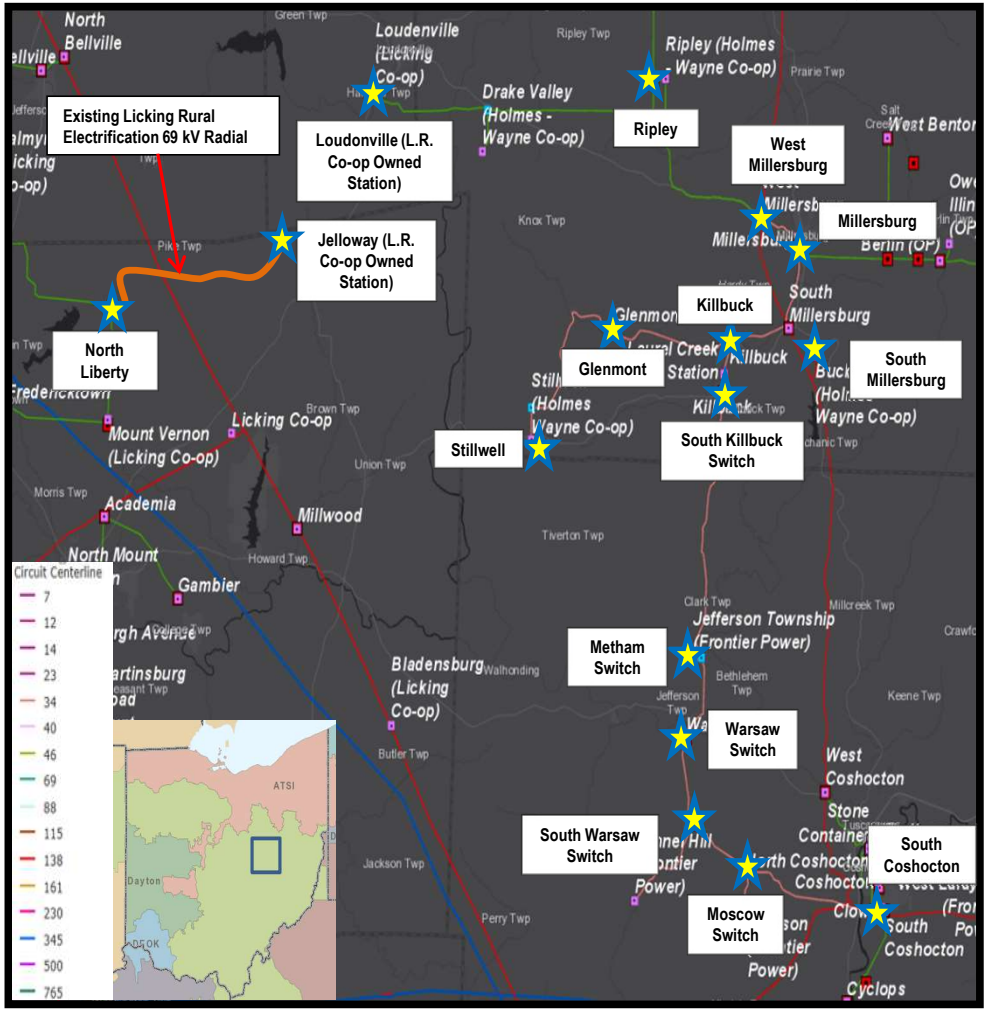
Specific Assumptions Reference: AEP Connection Requirements for the AEP Transmission System (AEP Assumptions Slide 7)

Problem Statement:

Customer Service:

- Customer #2: Holmes-Wayne Co-op (at Stillwell) and AEP Ohio (at Glenmont) are currently served via a radial 34.5 kV (12.58 mi) line. This radial line has consistently been one of the worst performing line over the last 10 years. The Stillwell delivery point has accumulated 1.7 million CMI over the past five years. Over the last 10 years (2008-2017), Stillwell delivery point has averaged nearly 875,000 CMI/ year.
- Customer #3: L.R. and Holmes-Wayne members are currently served via a radial 69 kV (24.1 mi) line. The North Liberty to Jelloway radial line is 9.50 miles and the Ripley to Loudonville radial line is 14.16 miles. Their total load is 8.73 MVA and they have experienced 1.13 million CMI over the last three years.

Problem Statement Continued on Next Slide…



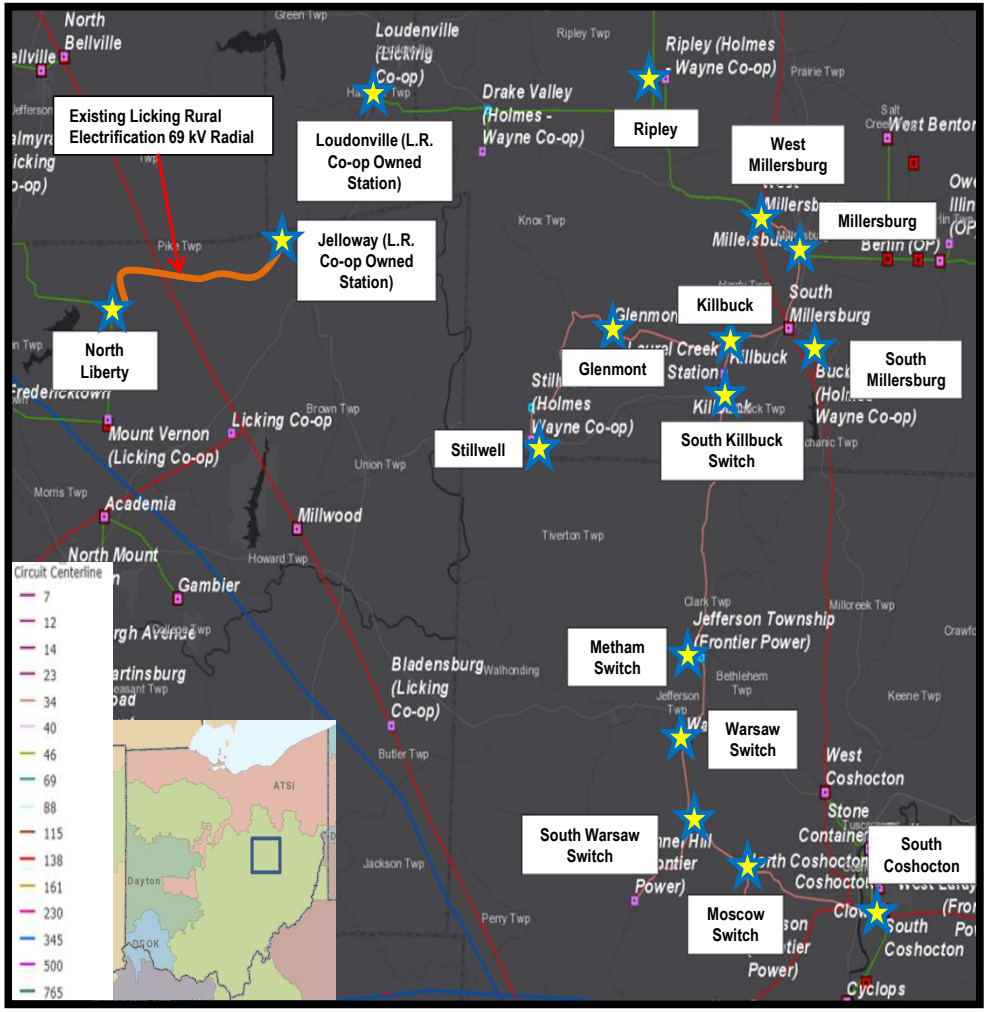
AEP Transmission Zone M-3 Process
Coshocton, Ohio

Problem Statement Continued:

Equipment Material/Condition/Performance/Risk:

- The Killbuck – South Coshocton 34 kV line (30.18 mi) was constructed in 1926 using wood pole structures and conductor ranging from 3/0 Copper (23 MVA rating) to 336.4 ACSR (37 MVA rating). There are 144 open A conditions on this line, including rotten cross-arms, burnt/broken insulators, and loose/broken conductor hardware. The Killbuck – South Coshocton 34 kV line has experienced over 1 million CMI over the past three years.
- The Killbuck – South Millersburg 34 kV (2.59 mi) line was constructed in the 1920'susing wood pole structures with 336.4 ACSR (36 MVA rating). There are 53 open A conditions on this line, including rotten cross-arms, burnt/broken insulators, and loose/broken conductor hardware. The Killbuck – South Millersburg 34 kV line has experienced over 1 million CMI over the past three years.
- At South Coshocton 69 kV circuit breaker 'K' (fault ops 18), 34.5 kV circuit breakers 'A' (fault ops 3), 'B' (fault ops 7), 'C' (fault ops 72), 'D' (fault ops 0), 'E' (fault ops 0), and 'G' (fault ops 2) are 'FK' oil-filled breaker (vintage 1946 -1973). These oil type breakers have extensive maintenance and oil handling requirements. There is a potential for oil spills during fault operations and maintenance. The FK model is no longer supported by the manufacturer making spare part availability scarce.
- The South Coshocton 138 kV circuit breaker 'H' has had 11 malfunctions, 3 of which are confirmed to be related to low gas. This HS145-3000 model is prone to low gas malfunctions. The South Coshocton 138/34.5 kV transformer's dielectric strength has declined for the past seven years. Concentrations of CO2 are elevated as well. These conditions indicate that the insulating paper is deteriorating.
- The South Millersburg 34.5 kV circuit breakers 'A' (fault ops 3) and 'B' (fault ops 21) are 'FK' oil-filled breakers (vintage 1951 and 1953 respectively). These oil type breakers extensive maintenance and oil handling requirements. The FK model is no longer supported by the manufacturer making spare part availability scarce.
- The South Millersburg 138/34.5 kV transformer has elevated moisture levels for at least seven years with a recent sharp increase. The dielectric strength has corresponding decreased since 2016. Concentrations of CO2 are also elevated.

Model: N/A



Appendix C Agency Coordination

In reply, refer to
2023-COS-59969

January 3, 2024

Ryan Weller
Weller & Associates, Inc.
1395 W. Fifth Ave.
Columbus, OH 43212
rweller@wellercrm.com

RE: Black Diamond-South Coshocton Transmission Line Rebuild Project, Tuscarawas and Jackson Townships, Coshocton County, Ohio

Dear Mr. Weller:

This letter is in response to the correspondence received December 20, 2023 regarding the proposed Black Diamond-South Coshocton Transmission Line Rebuild Project, Tuscarawas and Jackson Townships, Coshocton County, Ohio. We appreciate the opportunity to comment on this project. The comments of the Ohio State Historic Preservation Office (SHPO) are made pursuant to Section 149.53 of the Ohio Revised Code and the Ohio Power Siting Board rules for siting this project (OAC 4906-4 & 4906-5). The comments of the Ohio SHPO are also submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 306108 [36 CFR 800]).

The following comments pertain to the *Phase I Archaeological Investigations for the 4.09 km (2.54 mi) Black Diamond-South Coshocton Transmission Line Rebuild Project in Tuscarawas and Jackson Townships, Coshocton County, Ohio* by Ryan J. Weller (Weller & Associates, Inc. 2023).

A literature review, visual inspection, and shovel test unit excavation was completed as part of the investigations. No previously identified archaeological sites are located within the project area and no new archaeological sites were identified during survey. Our office agrees no additional archaeological survey is needed.

The following comments pertain to the *History/Architecture Investigations for the 4.09 km (2.54 mi) Black Diamond-South Coshocton Transmission Line Rebuild Project in Tuscarawas and Jackson Townships, Coshocton County, Ohio* by Scott McIntosh (Weller & Associates, Inc. 2023).

A literature review and field survey were conducted as part of the investigations. A total of twenty-nine (29) extant resources, including one National Register-listed historic district, were identified in the Area of Potential Effects (APE). Based on the information provided, the project as proposed will have no direct effect on the historic district. None of the other resources are recommended eligible. Our office agrees with Weller's recommendations of eligibility.

Based on the information provided, we agree the project as proposed will have no adverse effect on historic properties. No further coordination with this office is necessary, unless the project changes or unless new or additional historic properties are discovered during implementation of this project. In such a situation, this office should be contacted. Please be advised, this is a Section 106 decision and this review decision may not extend to other SHPO programs. If you have any questions, please contact me at (614) 298-2022, or by e-mail at khorrocks@ohiohistory.org or Joy Williams at jwilliams@ohiohistory.org. Thank you for your cooperation.

Sincerely,

Krista Horrocks, Project Reviews Manager
Resource Protection and Review

RPR Serial No: 1101097-1101098

Office of Real Estate
John Kessler, Chief
2045 Morse Road – Bldg. E-2
Columbus, OH 43229
Phone: (614) 265-6621
Fax: (614) 267-4764

August 3, 2022

Philip Renner
WSP USA
312 Elm Street, Suite 2500
Cincinnati, OH 45202

Re: 22-0692; South Coshocton-Moscow Switch

Project: The proposed project involves the rebuilding of the South Coshocton - Moscow Switch 69 kV Transmission Line.

Location: The proposed project is located in Jackson and Tuscarawas Townships, Coshocton 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: A review of the Ohio Natural Heritage Database indicates there are no records of state or federally listed plants or animals within one mile of the specified project centerline. Records searched date from 1980.

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.

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

The project route crosses Woodbury Wildlife Area, owned, and managed by the Ohio Division of Wildlife. Please contact Andy Hershner, Area Manager, at 740-824-3211 to notify of when the proposed work on the wildlife area will occur.

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 records for the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally threatened species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. Because presence of state endangered bat species has been established in the area, summer tree cutting is not recommended, and additional summer surveys would not constitute presence/absence in the area. However, limited summer tree cutting inside this buffer may be acceptable after further consultation with DOW (contact Eileen Wyza at Eileen.Wyza@dnr.ohio.gov).

In addition, the entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally threatened species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. During the spring and summer (April 1 through September 30), these bat species predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in the leaves. However, these species are also dependent on the forest structure surrounding roost trees. The DOW recommends tree cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH ≥ 20 if possible.

The DOW also recommends that a desktop habitat assessment is conducted, followed by a field assessment if needed, to determine if a potential hibernaculum is present within the project area. Direction on how to conduct habitat assessments can be found in the current USFWS "*RANGE-WIDE INDIANA BAT & NORTHERN LONG-EARED BAT SURVEY GUIDELINES*." If a habitat assessment finds that a potential hibernaculum is present within 0.25 miles of the project area, please send this information to Eileen Wyza for project recommendations. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance, however, limited summer or winter tree cutting may be acceptable after consultation with the DOW. If no tree cutting or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.

The project is within the range of the following listed mussel species.

Federally Endangered
clubshell (*Pleurobema clava*)
purple cat's paw (*Epioblasma o. obliquata*)
rayed bean (*Villosa fabalis*)
sheepnose (*Plethobasus cyphyus*)
fanshell (*Cyprogenia stegaria*)
pink mucket (*Lampsilis orbiculata*)
snuffbox (*Epioblasma triquetra*)

Federally Threatened
rabbitsfoot (*Quadrula cylindrica cylindrica*)

State Endangered
long solid (*Fusconaia maculata maculata*)
Ohio pigtoe (*Pleurobema cordatum*)
pocketbook (*Lampsilis ovata*)

State Threatened
Salamander Mussel (*Simpsonaias ambigua*)

Due to the location, and that there is no in-water work proposed in a perennial stream, this project is not likely to impact these species.

The project is within the range of the following listed fish species.

State Endangered	State Threatened
spotted darter (*Etheostoma maculatum*)	American eel (*Anguilla rostrata*)
northern madtom (*Noturus stigmosus*)	mountain madtom (*Noturus eleutherus*)

Due to the location, and that there is no in-water work proposed in a perennial stream, this project is not likely to impact these species.

The project is within the range of the eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*), a state endangered species and a federal species of concern. This long-lived, entirely aquatic salamander inhabits perennial streams with large flat rocks. In-water work in hellbender streams can reduce availability of large cover rocks and can destroy hellbender nests and/or kill adults and juveniles. The contribution of additional sediment to hellbender streams can smother large cover rocks and gravel/cobble substrate (used by juveniles), making them unsuitable for refuge and nesting. Projects that contribute to altered flow regimes (e.g., by increasing areas of impervious surfaces or modifying the floodplain) can also adversely affect hellbender habitat. Due to the location, and that there is no in-water work proposed in a perennial stream, this project is not likely to impact these species.

The project is within the range of the eastern spadefoot toad (*Scaphiopus holbrookii*), a state endangered species. This species is found in areas of sandy soils that are associated with river valleys. Breeding habitats may include flooded agricultural fields or other water holding depressions. Due to the location, the type of habitat within 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 American bittern (*Botaurus lentiginosus*), a state endangered bird. Nesting bitterns prefer large undisturbed wetlands that have scattered small pools amongst dense vegetation. They occasionally occupy bogs, large wet meadows, and dense shrubby swamps. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, the project is not likely to impact this species.

The project is within the range of the northern harrier (*Circus hudsonis*), a state endangered bird. This is a common migrant and winter species. Nesters are much rarer, although they occasionally breed in large marshes and grasslands. Harriers often nest in loose colonies. The female builds a nest out of sticks on the ground, often on top of a mound. Harriers hunt over grasslands. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 through July 31. If this habitat will not be impacted, this 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 US 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.

ODNR appreciates the opportunity to provide these comments. Please contact Mike Pettegrew at mike.pettegrew@dnr.ohio.gov if you have questions about these comments or need additional information.

Mike Pettegrew
Environmental Services Administrator

Renner, Philip

From: Ohio, FW3 <ohio@fws.gov>
Sent: Wednesday, July 13, 2022 2:46 PM
To: Renner, Philip
Cc: nathan.reardon@dnr.state.oh.us; Wyza, Eileen; Thomayer, Matthew; ajtoohey@aep.com
Subject: AEP South Coshocton - Moscow Switch 69 kV Transmission Line Rebuild, Coshocton County, Ohio
Attachments: 2022 USFWS Mussel Permitees - Ohio.pdf

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

Project Code: 2022-0049216

Dear Mr. Renner,

The U.S Fish and Wildlife Service (Service) has received your recent correspondence requesting information about the subject proposal. We offer the following comments and recommendations to assist you in minimizing and avoiding adverse impacts to threatened and endangered species pursuant to the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq), as amended (ESA).

Federally Threatened and Endangered Species: The endangered Indiana bat (*Myotis sodalis*) and threatened northern long-eared bat (*Myotis septentrionalis*) occur throughout the State of Ohio. The Indiana bat and northern long-eared bat may be found 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 breed that may also include adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, woodlots, fallow fields, and pastures. Roost trees for both species include live and standing dead trees ≥3 inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities. These roost trees may be located in forested habitats as well as linear features such as fencerows, riparian forests, and other wooded corridors. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet 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, rock crevices and abandoned mines.

Seasonal Tree Clearing for Federally Listed Bat Species: Should the proposed project site contain trees ≥3 inches dbh, we recommend avoiding tree removal 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 removal of any trees ≥3 inches dbh only occur between October 1 and March 31. Seasonal clearing is 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 https://ecos.fws.gov/ecp/species/9045), 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, a summer presence/absence survey may be conducted for Indiana bats. If Indiana bats are not detected during the survey, then tree clearing may occur at any time of the year. Surveys must be conducted by an approved surveyor and be designed and conducted in coordination with the Ohio Field Office. Surveyors must have a valid federal permit. Please note that in Ohio summer mist net surveys may only be conducted between June 1 and August 15.

Federally Threatened and Endangered Mussel Species: The proposed project is in the range of several federally listed and proposed freshwater mussels including **fanshell** (*Cyprogenia stegaria*), **rabbitsfoot** (*Quadrula c. cylindrica*), **sheepnose** (*Plethobasus cyphyus*), **snuffbox** (*Epioblasma triquetra*), and **round hickorynut** (*Obovaria subrotunda*). These mussels are known from the Muskingum River in Coshocton County, Ohio. Should the proposed project directly or indirectly impact the Muskingum River, we recommend that a survey be conducted to determine the presence or probable absence of these mussels in the vicinity of the proposed site. Any survey should be designed and conducted in coordination with the Ohio Field Office. Surveyors must have valid Federal and State permits to survey for federally listed mussels in Ohio.

Section 7 Coordination: If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), then 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 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. This letter provides technical assistance only and does not serve as a completed section 7 consultation document.

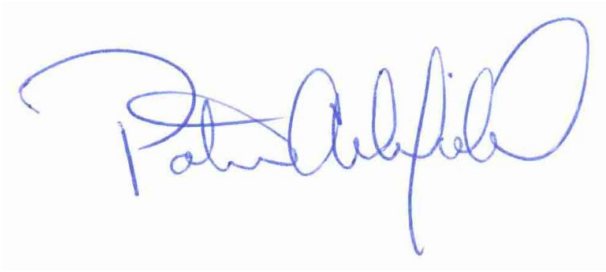
Stream and Wetland Avoidance: Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus is it important to conserve the functions and values of the remaining wetlands in Ohio (https://epa.ohio.gov/portals/47/facts/ohio_wetlands.pdf). We recommend avoiding and minimizing project impacts to all wetland habitats (e.g., forests, streams, vernal pools) to the maximum extent possible in order to benefit water quality and fish and wildlife habitat. Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the U.S. Army 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. Disturbed areas should be mulched and revegetated with native plant species. In addition, prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

Due to the project type, size, and location, we do not anticipate adverse effects to any other federally endangered, threatened, or proposed species, or proposed or designated critical habitat. Should the project design change, or 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, coordination with the Service should be initiated to assess any potential impacts.

Thank you for your efforts to conserve listed species and sensitive habitats in Ohio. We recommend coordinating with the Ohio Department of Natural Resources due to the potential for the proposed project to affect state listed species and/or state lands. Contact Mike Pettegrew, Acting Environmental Services Administrator, at (614) 265-6387 or at mike.pettegrew@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,



Patrice Ashfield
Field Office Supervisor

cc: Nathan Reardon, ODNR-DOW
Eileen Wyza, ODNR-DOW

Appendix D Wetland Delineation Report

BLACK DIAMOND - SOUTH COSHOCTON 138 KV TRANSMISSION LINE PROJECT

ENVIRONMENTAL SURVEY REPORT

PROJECT NO.: 31300107.034
DATE: MARCH 2024

AEP Transmission
8500 Smith's Mill Road
New Albany, OH 43054

WSP USA
312 ELM STREET, SUITE 2500
CINCINNATI, OH 45202

WSP.COM

TABLE OF CONTENTS

TABLES

FIGURES

APPENDICES

1 INTRODUCTION

On behalf of American Electric Power (AEP) Ohio Transmission Company, Inc. (AEP Ohio Transco), WSP USA (WSP) conducted environmental surveys for the proposed rebuild of the approximately 1.6-mile-long Black Diamond – South Coshocton 138 kV Transmission Line Project ("Project"), located in Jackson Township and Tuscarawas Township, Coshocton County, Ohio. The environmental survey included a wetland and water resource delineation and characterization of potential habitat for state and federally listed species. These environmental surveys incorporate information gathered in support of the South Coshocton – Moscow Switch 69 kV Transmission Line Project (South Coshocton – Moscow Switch), including field surveys and agency coordination generally completed in 2022 and 2023. The current Project runs parallel to the larger South Coshocton – Moscow Switch and is encompassed entirely within the area covered by the previous agency requests.

The wetland delineation was performed to determine whether wetlands and streams are present within the vicinity of the Project that would meet the definition of Waters of the United States (WoUS) or be subject to regulations implemented by the Ohio Environmental Protection Agency (OEPA), and to document their extents and current conditions if present. The wetland delineation was performed by individuals trained in the three-parameter methodology (hydrophytic vegetation, wetland hydrology, and hydric soils) adopted by the U.S. Army Corps of Engineers (USACE) as outlined in the USACE *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont, (Version 2.0)* (USACE, 2010) and in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory, 1987).

The report presents the results of the ecological considerations and review of the site's existing and reasonably foreseeable site conditions at the time of the environmental surveys. The results cannot apply to site changes occurring after the survey which WSP has not had the opportunity to review. During the course of any survey, site conditions may change over time due to human and/or natural causes; as such, the results presented in this report may be invalidated, either wholly or in part, by changes beyond the control of WSP.

2 BACKGROUND INFORMATION

2.1 PROJECT AREA

The Project is located within Jackson Township and Tuscarawas Township, Coshocton County, Ohio. The 100-foot-wide, approximately 34.8-acre Environmental Survey Corridor (ESC) encompasses the existing right-of-way (ROW) which originates at the existing South Coshocton Station (40.2504°, -81.8527°), and extends generally west approximately 1.6 miles to the Project's northwestern endpoint near approximate coordinate (40.2553°, -81.8804°), as shown in Figure 1 (Appendix A). The ESC is within the Randle, Ohio and Coshocton, Ohio U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangle boundaries. Table 2-1 provides an overview of the project location.

TABLE 2-1: GENERAL PROJECT INFORMATION

COUNTY:	Coshocton
TOWNSHIP:	Jackson, Tuscarawas
END POINT COORDINATES:	South Coshocton Station: 40.2504°, -81.8527° Northwestern Endpoint: 40.2553°, -81.8804. °
USGS QUADRANGLE:	Randle, Ohio and Coshocton, Ohio
ENVIRONMENTAL SURVEY CORRIDOR LENGTH (mi.):	1.6
ENVIRONMENTAL SURVEY CORRIDOR WIDTH (ft.):	100
ENVIRONMENTAL SURVEY CORRIDOR SIZE (ac.):	34.8
ELEVATION RANGE (ft. above sea level):	740 – 980
8-DIGIT HYDROLOGIC UNIT CODE:	05040004
12-DIGIT HYDROLOGIC UNIT CODE(S):	05040004-03-01
DATE(S) OF SURVEY :	August 2-3, 2022 and February 20, 2023

2.1.1 DRAINAGE BASINS

All streams in the vicinity of the ESC drain to the Muskingum River, a traditionally navigable waterway (TNW). The ESC is located within the Muskingum drainage basin (HUC 05040004). The ESC lies within one 12-digit sub-watershed, as outlined in Table 2-2 (USDA, 2019).

The OEPA *401 Water Quality Certification for the Nationwide Permits Web Mapping Application* indicates that field-assessed streams within the ESC occur within watersheds that have been designated as either “possibly eligible” or “ineligible”. Stream impacts within watersheds denoted as “ineligible” will require either an individual Section 401 water quality certification (WQC) or director’s authorization from the OEPA. Stream impacts in watersheds denoted as “possibly eligible” may be require an individual WQC depending on stream assessment metrics (OEPA, 2020).

TABLE 2-2: 12-DIGIT HUC'S CROSSED BY THE PROJECT

8-DIGIT HUC CODE[1]	8-DIGIT HUC CODE NAME[1]	12-DIGIT HUC CODE[1]	12-DIGIT HUC NAME[1]	OHIO EPA SECTION 401 ELIGIBILITY[2]
050400004	Muskingum	05040004-03-01	Robinson Run-Muskingum River	Ineligible
		05040004-03-01	Robinson Run-Muskingum River	Possibly Eligible

[1]Source: USDA, 2019
[2]Source: OEPA, 2020

3 METHODOLOGY

On August 2-3, 2022 and February 20, 2023, WSP ecologists traversed the ESC to conduct a wetland and waters delineation. The physical boundaries of aquatic resources were recorded using a Trimble Global Positioning System (GPS) unit rated for sub-decimeter accuracy. The GPS data was then geo-corrected using Trimble GPS Pathfinder Office software (version 5.60) and reviewed for quality control.

Prior to conducting field surveys, WSP ecologists completed a desktop review by analyzing several federal and state documents for the presence of wetland and streams. This review included Natural Resources Conservation Service (NRCS) soil survey data, U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) maps of Ohio, USGS 7.5-minute topographic maps, and USGS National Hydrography Dataset (NHD) stream and river data as an exercise to identify the occurrence and location of potential wetlands and streams.

3.1 WETLAND AND STREAM DELINEATION

3.1.1 WETLAND DELINEATION

The USACE and the U.S. Environmental Protection Agency (USEPA) define wetlands as areas inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (33 CFR, Part 328.3).

Wetlands were delineated according to Section 404 of the Clean Water Act, Technical Report Y-87-1 *Corps of Engineers Wetlands Delineation Manual (‘87 Manual)* (Environmental Laboratory, 1987), and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont, (Version 2.0)* (*Regional Supplement*) (USACE, 2010). Representative data points were collected for wetlands and corresponding, adjacent upland areas. Wetland data was recorded on the USACE *Regional Supplement* Wetland Determination Data Forms.

Wetland vegetation communities were classified according to the *Classification of Wetlands and Deepwater Habitats of the United States*, commonly referred to as the Cowardin Classification System (Cowardin et al., 1979). Wetlands within the ESC were assessed using the OEPA *Ohio Rapid Assessment Method for Wetlands v. 5.0* (ORAM) to determine the ecological quality and level of disturbance (Mack, 2001).

3.1.2 STREAM DELINEATION AND ASSESSMENT

Streams were identified by the presence of a defined bed and bank, and evidence of an ordinary high water mark (OHWM). The OHWM is defined in the USACE *Regulatory Guidance Letter No. 05*-05 (USACE, 2005). Generally, the OHWM is identified by a clearly defined, natural line along the stream bank created by fluctuations and flow of water; this may include changes in contours, substrate, vegetation, and debris (USACE, 2005).

Stream assessments were conducted using the methods described in the OEPA’s Methods for Assessing Habitat in Flowing Waters: Using OEPA’s *Qualitative Habitat Evaluation Index* (Rankin, 2006) and *Field Evaluation Manual for Ohio’s Primary Headwater Habitat Streams, Version 3* (Davic, 2012).

4 RESULTS

WSP ecologists surveyed the ESC on August 2-3, 2022 and February 20, 2023 by walking the approximately 1.6-mile-long ESC and evaluating for wetlands and other WoUS. The WSP ecologists identified two streams and two ponds within the ESC. No wetlands were identified within the ESC. The identified water resources are depicted on the Delineated Features Map (Figure 3, Appendix A).

4.1 DESKTOP REVIEW

4.1.1 SOILS EVALUATION

According to the NRCS Soil Data for Coshocton County, Ohio, there are 15 soil map units shown within the ESC, as presented in Table 4-1. The soils observed by the WSP ecologists during the reconnaissance of the ESC were consistent with the NRCS soil survey mapping.

TABLE 4-1: SOIL UNITS MAPPED WITHIN THE ESC

SOIL UNIT SYMBOL	SOIL UNIT NAME	PERCENT HYDRIC	HYDRIC RATING[1]	AREA WITHIN ESC (ac.)
Bhs4D	Bethesda channery silt loam, 8 to 25 percent slopes, unreclaimed	1	Predominantly Non-Hydric	1.1
CgB	Chili-Urban land complex, 2 to 6 percent slopes	0	Non-Hydric	11.4
CoD	Coshocton silt loam, 15 to 25 percent slopes	0	Non-Hydric	2.4
GhC	Gilpin silt loam, 8 to 15 percent slopes	0	Non-Hydric	0.4
HeF	Hazleton channery sandy loam, 25 to 70 percent slopes, very boulder	0	Non-Hydric	0.6
KeC	Keene silt loam, 6 to 15 percent slopes	3	Predominantly Non-Hydric	0.3
MnB	Mentor silt loam, 2 to 6 percent slopes	0	Non-Hydric	0.6
Nn	Nolin silt loam, rarely flooded	0	Non-Hydric	1.0
Th	Tioga fine sandy loam, rarely flooded	0	Non-Hydric	1.6
To	Tioga-Urban land complex, rarely flooded	0	Non-Hydric	12.8
W	Water	0	Non-Hydric	0.9
WhD	Westmoreland silt loam, 15 to 25 percent slopes	0	Non-Hydric	0.6
WhE	Westmoreland silt loam, 25 to 35 percent slopes	0	Non-Hydric	1.1
			Total Area of Non-Hydric Soils	33.4
			Total Area of Predominantly Non-Hydric Soils	1.4

[1]Non-Hydric = 0% hydric soil component; Predominantly Non-Hydric = 1-32%; Partially Hydric =33-65%; Predominantly Hydric = 66-99%; and All Hydric = 100%.
Source: Soil Survey Staff, NRCS. Web Soil Survey.

4.1.2 NATIONAL WETLAND INVENTORY REVIEW

According to the NWI maps of the Randle, Ohio and Coshocton, Ohio quadrangles, there are two mapped NWI features within the approximately 34.8-acre ESC. The documented NWI features within the ESC and associated identified resources are presented in Table 4-2. The location of mapped NWI features in the vicinity of the ESC is shown on Figure 2 (Appendix A).

TABLE 4-2: NWI FEATURES MAPPED WITHIN THE ESC

NWI CODE	NWI DESCRIPTION	MAP PAGE	ASSOCIATED DELINEATED RESOURCE
PUBGx	Palustrine, unconsolidated bottom, intermittently exposed, excavated	Page 2 of 4	Pond SCM-8
R2UBH	Riverine, lower perennial, unconsolidated bottom, permanently flooded	Page 2 of 4	Stream SCM-1 (Perennial)

Source: USFWS National Wetlands Inventory Map.

4.1.3 FEMA FLOODPLAIN REVIEW

According to Federal Emergency Management Agency (FEMA) National Flood Hazard Layer, approximately 6.1-acres of mapped 100-year floodplains occur within the ESC, associated with the Muskingum River, as shown on pages 2 and 3 of Figure 2 (Appendix A). No regulated floodways occur within the ESC.

4.2 DELINEATED WETLANDS

No wetlands were identified within the 34.8-acre ESC, as shown on the attached Figure 3 (Appendix A). Representative photographs of the ESC are provided in Appendix B.

4.3 STREAMS AND RIVERS

During the environmental survey, the WSP ecologists identified two streams totaling 202 linear feet within the ESC. One stream (Stream SCM-18, 98 lf) was identified as ephemeral, and one was identified as perennial (Stream SCM-1, 104 lf). Stream SCM-18 was assessed using the HHEI methodology. Stream SCM-1 (Muskingum River) was not assessed using either the QHEI or HHEI, as it had an existing OEPA Aquatic Life Use Designation of Warmwater Habitat, as detailed in Table 4-3. Stream SCM-18 was a tributary to the Muskingum River, a traditionally navigable waterway. Both delineated streams should therefore be considered jurisdictional. It should be noted that the USACE will make the final determination of jurisdictional status.

Locations of the identified streams within the ESC are shown in Figure 3 (Appendix A). Table 4-3 provides waterbody name, flow regime, stream length within the ESC, field evaluation data, and Ohio EPA Section 401 eligibility. Completed OEPA HHEI forms are provided in Appendix C. Representative photographs were taken of each stream during the field survey and are provided in Appendix B.

TABLE 4-3: STREAMS MAPPED WITHIN THE ESC

STREAM ID	LOCATION		STREAM NAME	STREAM TYPE	DELINEATED LENGTH (FEET)	BANKFULL WIDTH (FEET)	OHWM WIDTH (FEET)	FIELD EVALUATION			OHIO EPA 401 ELIGIBILITY
	LAT	LONG						METHOD	SCORE	CLASS	
Stream SCM-1	40.2514	-81.8715	Muskingum River	Perennial	104	470	395	N/A	N/A	Warmwater Habitat	Ineligible
Stream SCM-18	40.2517	-81.8555	UNT to Muskingum River	Ephemeral	98	12	4	HHEI	33	Modified, Small-Drainage, Warmwater System	Ineligible
				Sum of Ephemeral Stream Lengths	98						
				Sum of Perennial Stream Lengths	104						
				Total Stream Length	**202**						

Notes: UNT = unnamed tributary
Lengths are approximate based on GPS data and are rounded to the nearest foot.

4.4 PONDS AND OPEN WATER

Two freshwater ponds or retention basins totaling 0.12 acres were identified within the approximately 34.8-acre ESC. Basin SCM-1 was a man-made retention basin and should not be considered as jurisdictional. Pond SCM-8 was likely an impoundment of an existing stream, and should therefore be considered jurisdictional by the USACE. Locations of delineated ponds and open water habitat are shown in Figure 3, Appendix A.

TABLE 4-4: OPEN WATER FEATURES DELINEATED WITHIN THE ESC

BASIN ID	LOCATION		DELINEATED AREA[1] (acres)	JURISDICTIONAL?
	LAT.	LON.		
Basin SCM-1	40.2500	-81.8600	0.06	No
Pond SCM-8	40.2524	-81.8774	0.06	Yes
		Total Open Water Acreage	**0.12**	

[1]Acreages reflect the area delineated within the ESC and are approximate based on GPS data and are rounded to the nearest 0.01-acre.

4.5 VEGETATIVE COMMUNITIES

The WSP ecologists conducted a general habitat survey in conjunction with the stream and wetland field surveys. A variety of woody and herbaceous habitats, as described below in Table 4-5, are present within the ESC. A breakdown of vegetated land cover is provided, overlain on aerial photography in Figure 4 (Appendix A).

TABLE 4-5: VEGETATIVE COMMUNITIES WITHIN THE ESC

VEGETATIVE COMMUNITY	DESCRIPTION	ACREAGE WITHIN THE ESC	PERCENTAGE OF ESC
Developed, High Intensity	These areas consist of developed residential, industrial, and commercial land uses, including roads, buildings, and parking lots. These areas are generally devoid of significant vegetation.	14.2	40.8%
Developed, Open Space	Developed areas, including residential and commercial properties and maintained roadsides, generally consisting of landscaped areas and frequently mowed or maintained lawns.	13.9	39.9%
Old Field	The successional stage between Developed, Open Space and Scrub/Shrub habitat. Oftentimes these areas are previously developed areas that have been left fallow, which area maintained (mowed) once or twice a year.	2.8	8.0%
Scrub/Shrub	The successional stage between old field and second growth forest, dominated by woody species generally between 3- and 15-feet in height and less than 3-inches diameter-at-breast-height (dbh).	2.1	6.0%
Successional Hardwood Woodland	Areas dominated by woody tree species generally greater than 15-feet in height and 3-inches dbh. Dominant woody species within these areas include red maple (*Acer rubrum*) and American beech (*Fagus grandifolia*).	0.7	2.0%
Delineated Resources	Wetlands, streams, and ponds delineated within the ESC boundaries.	1.1	3.3%
	Total	**34.8**	**100%**

4.6 THREATENED AND ENDANGERED SPECIES COORDINATION

Coordination with USFWS and ODNR occurred in June and July 2022 in support of South Coshocton – Moscow Switch. The current ESC generally runs parallel to the larger South Coshocton – Moscow Switch and is encompassed entirely within the larger area covered by the previous agency requests. Therefore, the agency responses received for South Coshocton – Moscow Switch are applicable to the current Project. The information below addresses all species discussed in the previous responses received for South Coshocton – Moscow Switch with impact assessments specific to the current Project's ESC.

4.6.1 USFWS COORDINATION

A request for review was submitted to the USFWS for South Coshocton – Moscow Switch, which overlaps the current Project, on June 30, 2022. In an email dated July 13, 2022 the USFWS provided comments on the Project with regard to federally-listed threatened and endangered species within the Project vicinity. The USFWS indicated that there are no federal wildlife refuges, wilderness areas, or critical habitat within the vicinity of the Project. Comments from USFWS regarding protected species are provided in Table 4-6. The USFWS review comments have been included in Appendix D.

USFWS comments indicate that the ESC lies within the range of the Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*). The USFWS recommended seasonal tree clearing dates of October 1st – March 31st in order to avoid impacts to these species.

USFWS comments indicated that the ESC lies within the range of five federally-protected freshwater mussel species, including fanshell (*Cyprogenia s*tegaria), rabbitsfoot (*Quadrula cylindrica cylindrica*), snuffbox (*Epioblasma triquetra*), sheepnose (*Plethobasus cyphyus*), and round hickorynut (*Obovaria subrotunda*), which are known to occur in the Muskingum River in Coshocton County.

The USFWS indicated that "due to the project type, size, and location, we do not anticipate adverse effects to any other federally endangered, threatened, or proposed species, or proposed or designated critical habitat."

4.6.2 ODNR COORDINATION

A request for Environmental Review for the South Coshocton – Moscow Switch, which overlaps the current Project, was submitted to ODNR on July 1, 2022. The ODNR Environmental Review response dated August 3, 2022 included comments from the Ohio Natural Heritage Database Program, Division of Wildlife (DOW), and Division of Water Resources. A review of Natural Heritage Database identified no records of state- and/or federally-listed species or high-quality natural communities within the vicinity of the Project. Using this as guidance, WSP has provided observations of threatened and endangered species habitat within the vicinity of the ESC in Table 4-6. The ODNR Environmental Review has been included in Appendix D.

ODNR comments indicated that the ESC lies within the vicinity of records of the Indiana bat, northern long-eared bat, little brown bat (*Myotis lucifugus*), and tricolored bat (*Perimyotis subflavus*) and in the vicinity of known locations of state-listed bat species. ODNR recommended seasonal tree clearing dates of October 1st – March 31st in order to avoid impacts to these species. In addition, ODNR recommended that a desktop habitat assessment be conducted to identify potential hibernaculum within a 0.25-mile radius of the ESC.

- Based on the protocols identified in the *Range-Wide Indiana Bat & Northern Long-Eared Bat Survey Guidelines* (USFWS 2022) and the *Ohio Division of Wildlife and U.S. Fish and Wildlife Service (OH-Field Office) Joint Guidance for Bat Surveys and Tree Clearing* (ODNR/USFWS 2022) WSP performed a desktop review for potential hibernacula within the vicinity of the Project. Topographic maps did not depict caves, cliffs/ledges, or karst topography within a 0.25-mile radius of the ESC. A review of aerial imagery also did

not provide evidence of these habitat types. No potential hibernacula were identified within the ESC during the environmental survey. Suitable summer habitat was identified within the ESC, provided by approximately 0.7 acres of successional hardwood woodland habitat. However, any tree trimming/clearing will occur within the recommended clearing window (October 1st – March 31st) to avoid any unforeseen impacts to these species or their habitat. Therefore, no presence/absence surveys are required and no impacts to state- and/or federally-listed bat species are anticipated. If any tree clearing will occur outside the recommended clearing window appropriate coordination with USFWS and ODNR will occur to seek permission for out of season tree clearing. Additional information pertaining to the state- and federally-listed bat species is provided in Table 4-6.

The ODNR Environmental Review indicated that the project is in the range of the eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*). The description provided by ODNR indicated that suitable habitat is typically provided by "perennial streams with large flat rocks". ODNR indicated that "due to the location, and that there is no in-water work proposed in a perennial stream, this project is not likely to impact these species."

The ODNR Environmental Review indicated that the project is in the range of the eastern spadefoot toad (*Scaphiopus holbrookii*). The habitat description provided by ODNR includes flooded areas, including cultivated land, in floodplains with sandy soil. ODNR indicated that "due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species."

The ODNR Environmental Review indicated that the project is in the range of the American bittern (*Botaurus lentigiosus*). The description provided by ODNR indicated that suitable nesting habitat is typically provided by "large undisturbed wetlands" with stands of open water and dense emergent or shrub vegetation.

- Large, undisturbed wetlands featuring dense vegetation and open water habitat were not identified within the ESC during the environmental surveys conducted by WSP. Based on the habitat description provided by ODNR and field observations by WSP, potentially suitable nesting habitat for American bittern is not present within the ESC.

The ODNR Environmental Review indicated that the project is in the range of the northern harrier (*Circus hudsonis*). The description provided by ODNR indicated that suitable nesting habitat is typically provided "large marshes and grasslands".

- The ODNR *Northern Harrier Survey Protocol* recommends that grassland habitat larger than two acres in area be avoided during the species' nesting period (ODNR, undated). Large grassland areas or marshes dominated by grasses were not observed within the ESC during the environmental surveys. Based on the description provided by ODNR and the results of the environmental surveys, potentially suitable nesting habitat for northern harrier is not present within the ESC.

TABLE 4-6: LISTED SPECIES COMMENTED ON BY ODNR AND USFWS

COMMON NAME (SCIENTIFIC NAME)	STATE STATUS	FEDERAL STATUS	HABITAT DESCRIPTION	POTENTIAL HABITAT OBSERVED IN ESC	AGENCY COMMENT	WSP IMPACT ASSESSMENT
Mammals						
Indiana bat (*Myotis sodalis*)	Endangered	Endangered	Winter hibernacula are provided by caves and mines. Summer roost habitat typically includes live or dead trees with exfoliating bark, crevices, or cavities that can be used for roosting. Open sub-canopy areas and flight corridors are important to allow maneuvering during foraging. Proximity to water sources provides a greater density of insect prey.	Yes	USFWS and ODNR comments recommended seasonal tree clearing dates (October 1 through March 31) to avoid impacts protected bat species. ODNR indicated the ESC is in the vicinity of records of state-listed bat species. ODNR recommended a desktop habitat assessment for potential hibernacula within a 0.25-mile radius of the ESC.	Suitable summer habitat was identified within the ESC. However, tree clearing is expected to occur during the October 1 to March 31 clearing window. No potential hibernacula were identified within 0.25-miles of the ESC. Therefore, no impacts to these species or their habitat is anticipated to occur.
northern long-eared bat (*Myotis septentrionalis*)	Threatened	Threatened				
little brown bat (*Myotis lucifugus*)	Endangered	Not Listed				
tri-colored bat (*Perimyotis subflavus*)	Endangered	Not Listed				

TABLE 4-6: LISTED SPECIES COMMENTED ON BY ODNR AND USFWS

COMMON NAME (SCIENTIFIC NAME)	STATE STATUS	FEDERAL STATUS	HABITAT DESCRIPTION	POTENTIAL HABITAT OBSERVED IN ESC	AGENCY COMMENT	WSP IMPACT ASSESSMENT
Amphibians						
eastern spadefoot toad (*Scaphiopus holbrookii*)	Endangered	Not Listed	This species is found in areas of sandy soils that are associated with river valleys. Breeding habitats may include flooded agricultural fields or other water holding depressions.	No	ODNR indicated that due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact these species.	On site assessment confirmed ODNR's determination that no habitat is present.
eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*)	Endangered	Species of Concern	Found in perennial streams, with large flat rocks, which provide cover for this species.	No		
Mussels						
fanshell (*Cyprogenia stegaria*)	Endangered	Endangered	This mussel is typically found in medium to large rivers. It buries itself in sand or gravel in deep water of moderate current.	Yes	USFWS indicated that these species are known to occur in the Muskingum River in Coshocton County. ODNR indicated that due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact these species.	In-water work is not anticipated; therefore, project is not likely to impact this or other aquatic species.
round hickorynut (*Obovaria subrotunda*)	Threatened	Threatened	Typically found in large rivers in sand and gravel substrates with moderate flow.	Yes		
sheepnose (*Plethobasus cyphyus*)	Endangered	Endangered	Lives in shallow areas with moderate to swift currents in larger rivers and streams.	Yes		
snuffbox (*Epioblasma triquetra*)	Endangered	Endangered	Typically found in small to medium-sized creeks and some larger rivers, in areas with a swift current.	Yes		
rabbitsfoot (*Quadrula cylindrica cylindrica*)	Threatened	Endangered	Slow-moving waters with sand and gravel substrates.	Yes		

TABLE 4-6: LISTED SPECIES COMMENTED ON BY ODNR AND USFWS

COMMON NAME (SCIENTIFIC NAME)	STATE STATUS	FEDERAL STATUS	HABITAT DESCRIPTION	POTENTIAL HABITAT OBSERVED IN ESC	AGENCY COMMENT	WSP IMPACT ASSESSMENT
rayed bean (*Villosa fabalis*)	Endangered	Endangered	Habitat is typically provided in small rivers and streams with aquatic vegetation and sand/gravel substrates.	Yes	ODNR indicated that due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact these species.	In-water work is not anticipated; therefore, project is not likely to impact these or other aquatic species.
clubshell (*Pleurobema clava*)	Endangered	Endangered	Habitat is typically provided by streams and small rivers with well-oxygenated riffles and sand and gravel substrates.	Yes		
pink mucket (*Lampsilis orbiculata*)	Endangered	Endangered	This mussel is found in mud and sand and in shallow riffles and shoals swept free of silt in major rivers and tributaries.	Yes		
purple cat's paw (*Epioblasma obliquata obliquata*)	Endangered	Endangered	Medium to large rivers with swift currents. Typically found in shallow areas.	Yes		
long-solid (*Fusconaia maculata maculata*)	Not Listed	Endangered	Typically, found in small to large rivers in gravel with a strong current.	Yes		
Ohio pigtoe (*Pleurobema cordatum*)	Not Listed	Endangered	Commonly found in strong currents on substrates of sand and gravel.	Yes		
pocketbook (*Lampsilis ovata)*	Not Listed	Endangered	Large rivers with sand and gravel substrates.	Yes		
Salamander Mussel (*Simpsonaias ambigua*)	Not Listed	Threatened	Medium to large rivers with silt/sand substrates and flat rocks.	Yes		

TABLE 4-6: LISTED SPECIES COMMENTED ON BY ODNR AND USFWS

COMMON NAME (SCIENTIFIC NAME)	STATE STATUS	FEDERAL STATUS	HABITAT DESCRIPTION	POTENTIAL HABITAT OBSERVED IN ESC	AGENCY COMMENT	WSP IMPACT ASSESSMENT
Fish						
spotted darter (*Etheostoma maculatum*)	Endangered	Not Listed	Occur in freshwater rivers marked with the presence of boulders and other rocks.	Yes	Due to the location, and that there is no in-water work proposed in a perennial stream, this project is not likely to impact these species	In-water work is not anticipated; therefore, project is not likely to impact these or other aquatic species.
northern madtom (*Noturus stigmosus*)	Endangered	Not Listed	Large rivers featuring swift currents and sand/gravel substrates.	Yes		
American eel (*Anguilla rostrata*)	Threatened	Not Listed	Moderate to large rivers with muddy/gravel bottoms.	Yes		
mountain madtom (*Noturus eleutherus*)	Threatened	Not Listed	Clean, swift-flowing streams with large gravel and sand substrates.	No		
Birds						
American bittern (*Botaurus lentiginosus*)	Endangered	Not Listed	This species nests in large undisturbed wetlands that have scattered small pools amongst dense vegetation. They occasionally occupy bogs, large wet meadows, and dense shrubby swamps.	No	ODNR indicated that if large undisturbed wetlands will be impacted, they recommend avoiding construction between May 1 and July 31. If this habitat will not be impacted, this project is not likely to impact this species.	On site habitat surveys confirmed that no suitable habitat for the identified species was observed, on site, therefore no construction timing windows are necessary and no impacts to this species or its habitat is anticipated to occur from Project activities.

TABLE 4-6: LISTED SPECIES COMMENTED ON BY ODNR AND USFWS

COMMON NAME (SCIENTIFIC NAME)	STATE STATUS	FEDERAL STATUS	HABITAT DESCRIPTION	POTENTIAL HABITAT OBSERVED IN ESC	AGENCY COMMENT	WSP IMPACT ASSESSMENT
northern harrier (*Circus hudsonis*)	Endangered	Not Listed	This species occasionally breed in large marshes and hunt over grasslands.	No	ODNR indicated that if grasslands or large marshes will be impacted, the recommend avoiding construction between April 15 and July 31. If this habitat will not be impacted, this project is not likely to impact this species.	On site habitat surveys confirmed that no suitable habitat for the identified species was observed, on site, therefore no construction timing windows are necessary and no impacts to this species or its habitat is anticipated to occur from Project activities.

5 SUMMARY

WSP conducted environmental surveys of the proposed approximately 1.6-mile-long Black Diamond – South Coshocton 138 kV Transmission Line Project on August 2-3, 2022 and February 20, 2023. Two streams and two ponds were delineated by the WSP ecologists within the 34.8-acre ESC. No wetlands were identified within the ESC.

During the environmental surveys, WSP ecologists identified two streams totaling 202 linear feet within the ESC. One stream, measuring 98 lf within the ESC was, identified as ephemeral and one was identified as perennial (totaling 104 lf). One stream (Stream SCM-1, Muskingum River) had an existing OEPA Aquatic Life Use Designation of Warmwater Habitat.

Two freshwater ponds or retention basins totaling 0.12 acres were identified within the ESC. Basin SCM-1 was a man-made retention basin and should not be considered as jurisdictional. Pond SCM-8 was identified as a potential impoundment of a previously existing stream, and should therefore be considered jurisdictional by the USACE.

WSP performed a desktop review for potential hibernacula within the vicinity of the Project as a result of comments from ODNR relating to state- and federally-listed bat species. No potential hibernacula were identified within 0.25-miles of the ESC and no potential hibernacula were identified within the ESC during the field survey. All tree clearing will occur within the recommended clearing window (October 1st – March 31st), to avoid any impacts to these species or their habitat. If any tree clearing will occur outside the recommended clearing window appropriate coordination with USFWS and ODNR will occur to seek permission for out of season tree clearing.

It is anticipated that in-stream work is not necessary, therefore no mussel surveys are necessary related to protected mussel species. Additionally, no construction timing windows are required to protect any state- and/or federally-listed fish species.

Potentially suitable habitat for the eastern hellbender and eastern spadefoot toad was not identified within the ESC. Based on the response from ODNR-DOW, due to the location, the type of habitat within the Project area, and the type of work proposed, this Project is not likely to impact these species, or their habitat.

Potentially suitable habitat for American bittern was not identified within the ESC, as large, undisturbed wetlands featuring open water areas were not identified within the ESC. Potentially suitable habitat for northern harrier was also not observed within the ESC.

6 REFERENCES

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

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

ODNR. (Undated). *Northern Harrier Survey Protocol*.

OEPA. 2012. *Field Evaluation Manual for Ohio's Primary Headwater Habitat Streams, Version 3.0*. Ohio EPA Division of Surface Water, Columbus, Ohio.

OEPA. 2020. *401 Water Quality Certification for Nationwide Permits*. Available online: 401 Water Quality Certification for Nationwide Permit Eligibility (arcgis.com) Accessed 5/7/2021.

Rankin. 2006. *Methods for Assessing Habitat in Flowing Waters: Using the Qualitative Habitat Evaluation Index (QHEI)*. Ohio EPA Technical Bulletin EAS/2006-06-1.

USACE. 2005. *Regulatory Guidance Letter No. 05-05.*

USACE. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont 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.

USDA, NRCS. 2019. *Geospatial Data Gateway - Watershed Boundary Dataset*. Available online: https://datagateway.nrcs.usda.gov/. Accessed 5/7/2021.

USDA, NRCS. 2017. *Field Indicators of Hydric Soils in the United States, Version 8.1*. L.M. Vasilas, G.W. Hurt, and J.F. Berkowitz (eds.). USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils.

USDA, NRCS. 2015b. *National Hydric Soils List (December 2015).* Available online: https://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/, Accessed 10/21/2021.

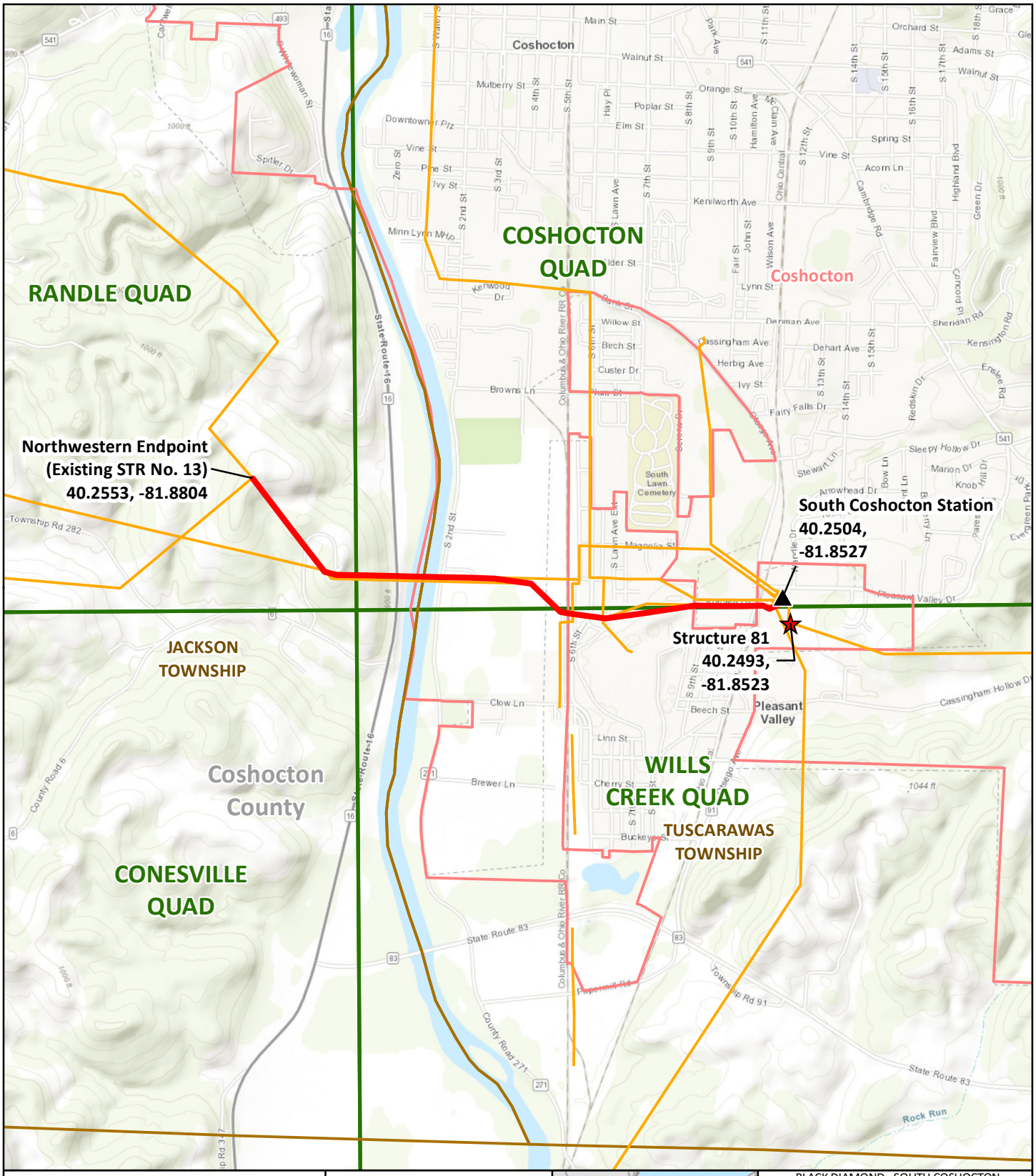
USDA, NRCS. Soil Survey Staff. Web Soil Survey. Available online at: http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx.

USFWS. 2019. *National Wetlands Inventory Map – Randle, Ohio quadrangle*. Available online at: https://www.fws.gov/wetlands/data/mapper.html.

USGS. 2007. National Hydrography Dataset. Available at: http://nhd.usgs.gov/data.html.

APPENDIX

A FIGURES



- Existing Station
- Newcomerstown - South Coshocton Structure Adjustment
- Black Diamond - South Coshocton 138 kV
- Existing Transmission Line
- Municipal Boundary
- Township Boundary
- County Boundary
- USGS 24k Topo Quad Boundary

Sources:
Census Boundaries (ESRI 2021)
Topo Quads (USGS 2019)

Coordinate System:
State Plane Ohio North
NAD 1983

November 28, 2023

BLACK DIAMOND - SOUTH COSHOCTON
138 KV TRANSMISSION LINE PROJECT
AND NEWCOMERSTOWN - SOUTH COSHOCTON
138 KV STRUCTURE ADJUSTMENT PROJECT

Figure 1. Project Location Map

AEP OHIO
An AEP Company

wsp

0 1,000 2,000 Feet

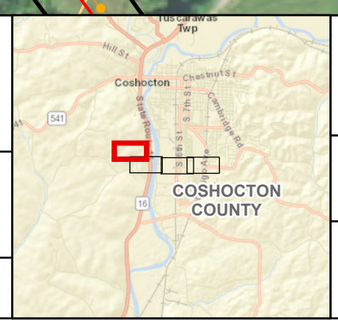
N

- Existing Station
- Newcomerstown - South Coshocton Stucture Adjustment
- Black Diamond - South Coshocton 138 kV
- Existing Transmission Line
- Railroad
- NHD Stream
- Environmental Survey Corridor
- NWI Wetlands
- NHD Waterbody
- Soil Map Unit
- FEMA 100-Yr Floodplain
- FEMA Floodway
- Municipal Boundary
- Township Boundary
- County Boundary

Sources:
Floodplains (FEMA 2020)
Hydrography (USGS 2020)
NAIP Imagery (USDA 2021)
NRCS Soil Units (USDA 2020)
Transportation (ODOT 2022)
Wetlands (USFWS 2020)

Coordinate System:
Ohio State Plane North
NAD 1983

November 28, 2023



BLACK DIAMOND - SOUTH COSHOCTON 138 KV TRANSMISSION LINE PROJECT AND NEWCOMERSTOWN - SOUTH COSHOCTON 138 KV STRUCTURE ADJUSTMENT PROJECT

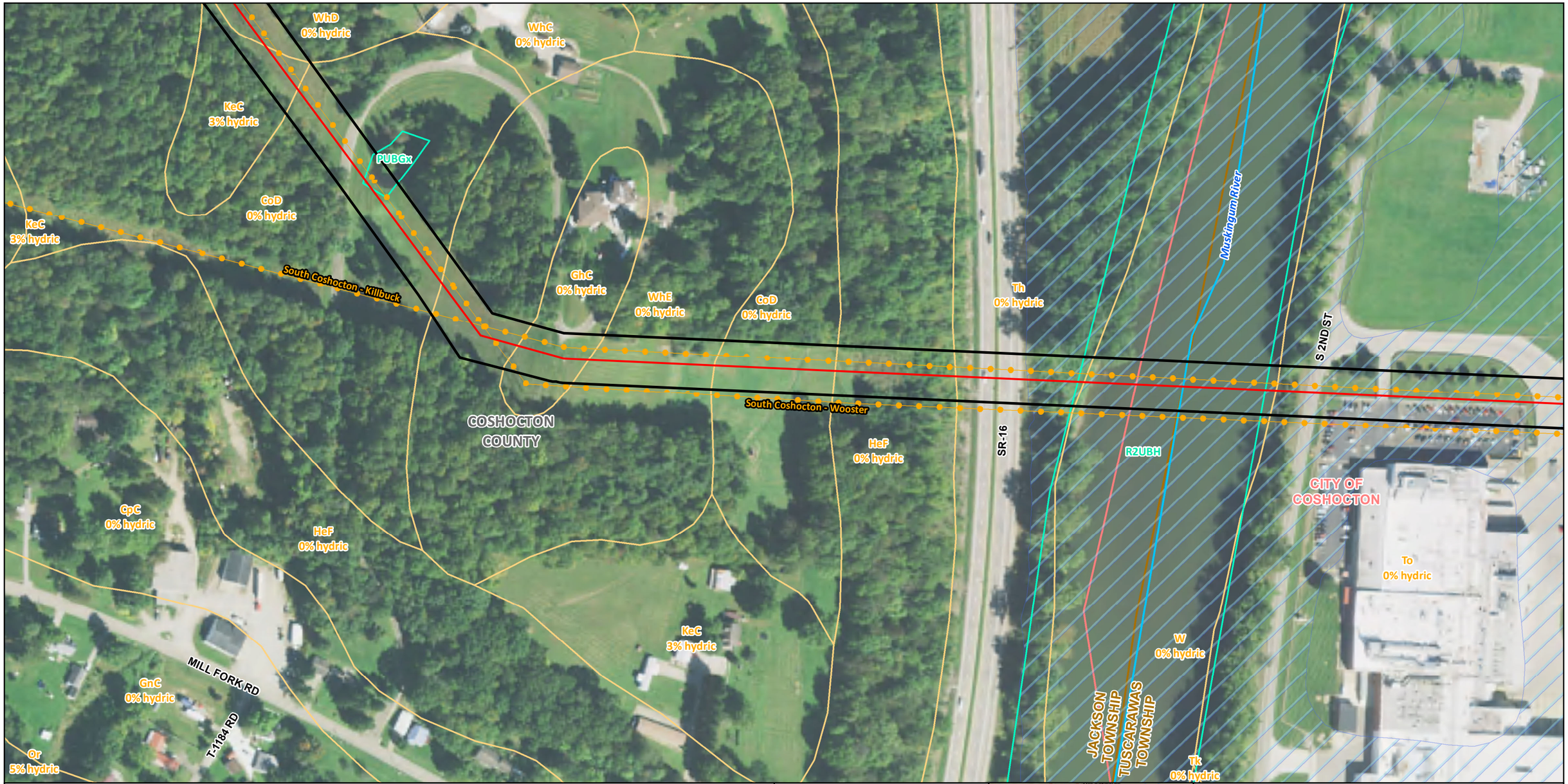
Figure 2. Environmental Basemap

AEP OHIO

WSP

N

0 200 400 Feet

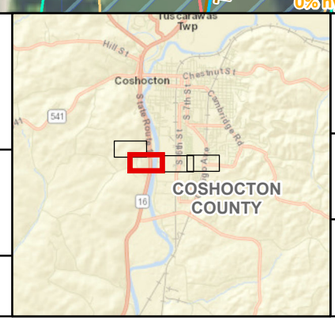


- Existing Station
- Newcomerstown - South Coshocton Stucture Adjustment
- Black Diamond - South Coshocton 138 kV
- Existing Transmission Line
- Railroad
- NHD Stream
- Environmental Survey Corridor
- NWI Wetlands
- NHD Waterbody
- Soil Map Unit
- FEMA 100-Yr Floodplain
- FEMA Floodway
- Municipal Boundary
- Township Boundary
- County Boundary

Sources:
Floodplains (FEMA 2020)
Hydrography (USGS 2020)
NAIP Imagery (USDA 2021)
NRCS Soil Units (USDA 2020)
Transportation (ODOT 2022)
Wetlands (USFWS 2020)

Coordinate System:
Ohio State Plane North
NAD 1983

November 28, 2023



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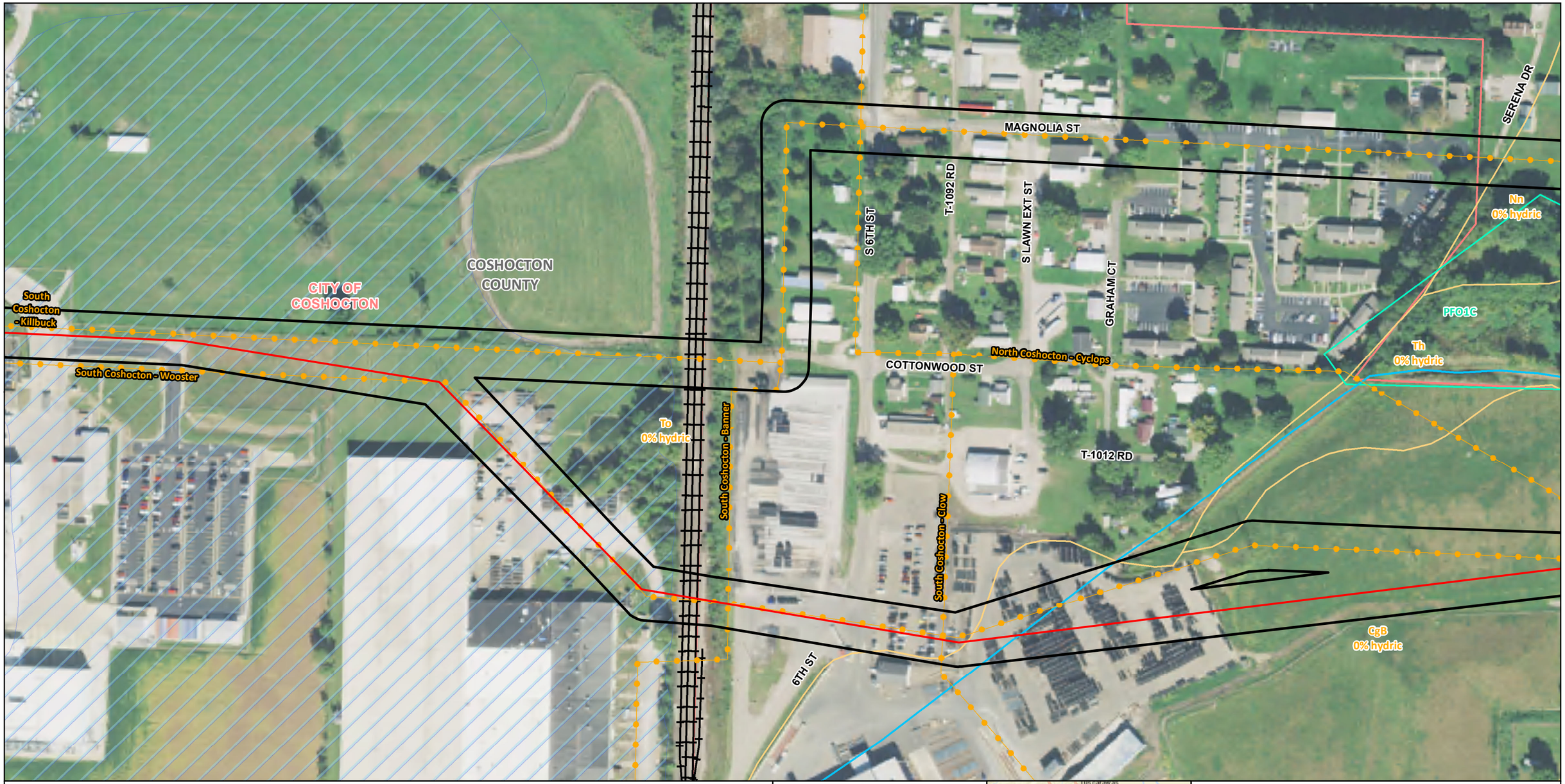

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November 28, 2023

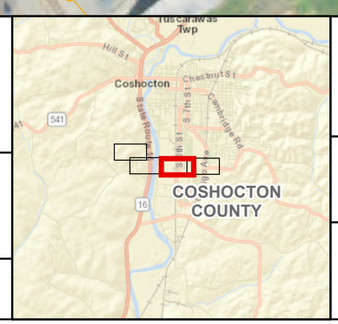

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Figure 2. Environmental Basemap

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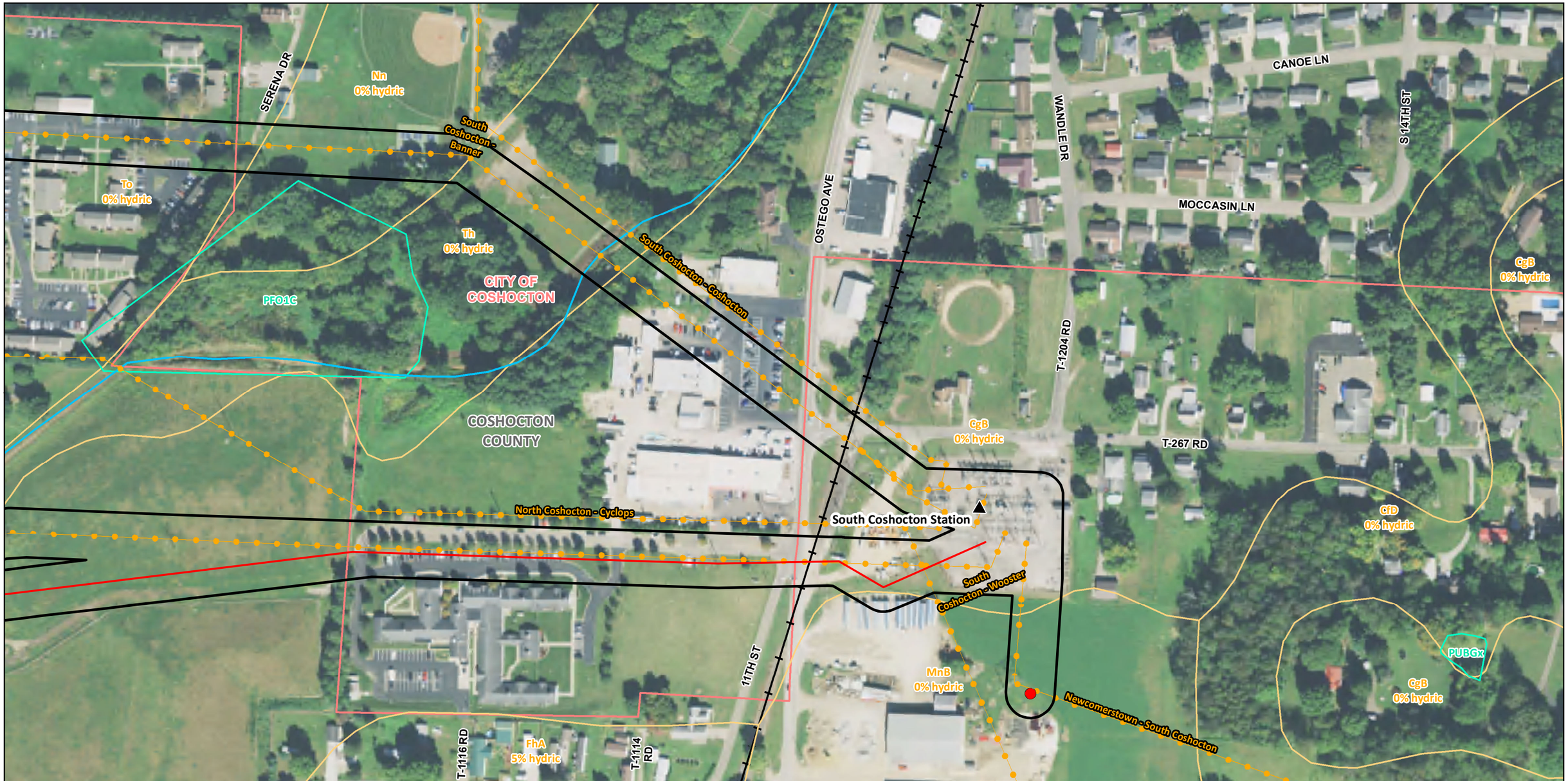

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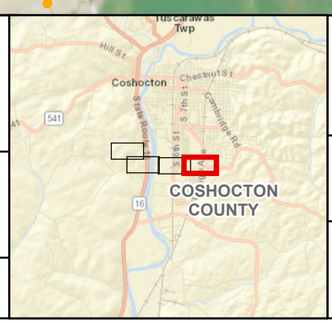

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Figure 2. Environmental Basemap

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0 200 400 Feet

Summary: Notice Construction Notice, South Coshocton-Wooster Line Rebuild Project. Part 1 electronically filed by Hector Garcia-Santana on behalf of AEP Ohio Transmission Company, Inc..