

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

CONSTRUCTION NOTICE

**CHAMBERLAIN-WEST AKRON 138 KV TRANSMISSION
LINE SWITCH REPLACEMENT PROJECT**

OPSB Case No. 24-0079-EL-BNR

March 11, 2024

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

CONSTRUCTION NOTICE
Chamberlain-West Akron 138 kV Transmission Line
Switch Replacement Project

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

4906-6-05: ACCELERATED APPLICATION REQUIREMENTS

4906-6-05 (B)(1): Name and Reference Number

Name of Project: Chamberlain-West Akron 138 kV Transmission Line
Switch Replacement Project (“Project”)

Reference Number: 2043

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

American Transmission Systems, Incorporated (“ATSI”), a FirstEnergy company, is proposing to replace two (2) existing switches on the Chamberlain-West Akron 138 kV Transmission Line, immediately adjacent to the Nordonia Substation. The Project is located in Macedonia, Summit County, Ohio. The general location of the Project is shown in Exhibit 1, a partial copy of the United States Geologic Survey Topographic Map, Summit County OH, Quad Map. Exhibit 2 is a partial copy of ESRI aerial imagery showing the Project area. As shown on the general layout (Exhibit 3), Switches A-257 and A-261 are currently located on the same existing structure #12357. The existing switches and structure will be removed, resulting in the elimination of approximately 450 feet of existing conductor. The new switches will be SCADA controlled to facilitate operation and reduce restoration times when sectionalizing.

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

The location of the Project relative to existing or proposed lines is shown in the ATSI Transmission Network Map, included as part of the confidential portion of the FirstEnergy Corp. 2023 Long-Term Forecast Report. This map was submitted to the Public Utilities Commission of Ohio (“PUCO”) in Case No. 23-0504-EL-FOR under Rule 4901:5-5:04 (C)(2)(b) of the Ohio Administrative Code. This map is incorporated by reference only. This Project is not included in the 2023 Long-Term forecast Report because the Project does not entail any topology or rating change. The general location of the Project area is shown in Exhibits 1 and 2. The general layout of the Project is shown in Exhibit 3.

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

Some alternatives that were considered for the Project were to continue attempting repairs. This solution was not recommended due to the risk of future operational failures. Another alternative that was considered was to remove the existing switches from line without replacing them. This solution was also not recommended because it would create an unacceptable sectionalizing scheme.

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

ATSI’s manager of External Affairs will advise local officials of the features and the status of the proposed Project, as necessary. ATSI has also established a Project website, through which a copy of this Construction Notice application can be accessed: https://www.firstenergycorp.com/about/transmission_projects/ohio.html. During all phases of this Project, the public may ask questions, submit comments or contact ATSI through the transmission projects hotline at 1-888-311-4737 or via email at: transmissionprojects@firstenergycorp.com.

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

Construction for this Project is expected to begin as early as June 10, 2024 and to be completed by January 2025.

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

Exhibit 1 and 2 depict the general location of the Project. Exhibit 1 provides a partial copy of the United States Geologic Survey, Summit County, OH, Quad Map. Exhibit 2 is a copy of ESRI aerial imagery of the Project area.

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

The Project is located wholly within property of Ohio Edison Company (parcel number 3312239) or existing right-of-way on an adjacent parcel, parcel number 3311021. No new easements will be required for the completion of this Project.

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

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

The transmission line construction will have the following characteristics:

Voltage:	138 kV
Conductors:	477 kcmil 26/7 ACSR
Static Wire:	3#6 Alumoweld
Insulators:	Porcelain and Glass
ROW Width:	65 ft
Structure Types:	Exhibit 4: 138 kV Single Circuit Wood Deadend Vertical Single Pole Structure (Str. 12357) Exhibit 5: 138 kV Single Circuit Wood Vertical Single Pole Tap Structure (Str. 12356) Exhibit 6: 138 kV Single Circuit Steel Unitized 200A Switch Structure (Str. 12355 and 12356A)

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

There are no occupied residences or institutions within 100 feet from the proposed transmission line centerline and therefore no Electric and Magnetic Field (“EMF”) calculations are required by this subsection.

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

The estimated cost for the proposed Project is \$927,000. Although not statutorily required for approval, at the request of OPSB Staff, ATSI confirms that ATSI's costs will be captured and allocated via FERC formula rates for the ATSI Transmission Zone, Attachment H-21 in the PJM OATT.

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

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

The Project is located in the City of Macedonia, Summit County, Ohio at the property of the Nordonia Substation. The Project area is zoned for commercial land use. No significant changes or impacts to the current or future land use are anticipated.

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

Agricultural land is not present within the Project's disturbance area.

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

As part of the investigation for this Construction Notice, TRC submitted a request to the Ohio State Historic Preservation Office to review and provide comments on the Project area on January 17, 2024. On January 23, 2024, the Ohio State Historic Preservation Office (SHPO) replied to the request, attached as exhibit 7. SHPO concluded that no historic properties, districts, or archaeological sites are located within or adjacent to the affected project area (APE). Therefore, based on this information, it is the SHPO's opinion that no cultural resource studies are warranted for the Project. Furthermore, as proposed, the Project will have no effect to historic properties. No further coordination is required for this Project unless the scope of work changes or archaeological remains are discovered during the course of the Project. A map of the surveyed APE is also attached as part of Exhibit 7.

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

No additional government agency authorizations are expected to be needed for this Project.

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

TRC submitted a request to the Ohio Department of Natural Resources (“ODNR”) to conduct an Environmental Review of the Project area on July 21, 2023. As part of the Environmental Review, the ODNR conducted a search of the ODNR Division of Wildlife’s Natural Heritage Database to research the presence of any endangered, threatened, or rare species within one (1) mile of the Project area. The ODNR’s response on August 28, 2023, stated that the Natural Heritage Database indicates there are no records of state or federally listed plants or animals within 1 mile of the Project area. Furthermore, the ODNR’s Division of Wildlife (DOW) commented that the Project is within range of twelve species (two [2] federally endangered species, seven [7] state endangered species, and three [3] state threatened species). A copy of ODNR’s response is included as Exhibit 8. In addition, TRC submitted a request to the US Fish and Wildlife Service (USFWS) for an Ecological Review to research the presence of any endangered, threatened, rare, or designated species within one (1) mile of the Project Area. A copy of USFWS’s Ecological Review response, dated January 25, 2024, is included as Exhibit 9. Based on the information received from correspondence with USFWS for the Project Study Area, the Project is within the range of the Indiana bat, a state endangered and federally endangered species; the northern long-eared bat, a state endangered and federally endangered species; and the tricolored bat, a state endangered species. The response indicated that due to the Project type, size, location, the USFWS does not anticipate adverse effects to federally endangered, threatened, or proposed species or proposed or designated critical habitat.

A list of all endangered, threatened, and rare species, as identified by ODNR DOW and USFWS, is provided in Table 1.

Table 1. List of Endangered, Threatened, and Rare Species

Common Name	Scientific Name	Federal and State Listing Status	Affected Habitat
Indiana bat	<i>Myotis sodalis</i>	Endangered	Trees and forests
Northern long-eared bat	<i>Myotis septentrionalis</i>	Endangered	Trees and forests
Little Brown Bat	<i>Myotis lucifugus</i>	State Endangered	Trees and forests
Tricolored Bat	<i>Perimyotis subflavus</i>	State Endangered	Trees and forests
Iowa Darter	<i>Etheostoma exile</i>	State endangered	Perennial streams
Western Banded Killfish	<i>Fundulus diaphanous menona</i>	State endangered	Perennial streams
Pugnose Minnow	<i>Opsopoeodus emiliae</i>	State endangered	Perennial streams
Lake Chubsucker	<i>Erimyzon sucetta</i>	State threatened	Perennial streams
Paddlefish	<i>Polyodon spathula</i>	State threatened	Perennial streams
Smooth Greensnake	<i>Opheodrys vernalis</i>	State Endangered	Prairie
Spotted Turtle	<i>Clemmys guttata</i>	State threatened	Marshy shorelines
Northern Harrier	<i>Circus hudsonius</i>	State endangered	Marshes/ grasslands

In their response, the DOW recommended that a desktop bat hibernaculum assessment be completed for the Project, which TRC completed for FirstEnergy and submitted to ODNR for concurrence on September 1, 2023. ODNR responded on September 7, 2023, attached as Exhibit 10, concurring that no caves, cliffs, or mine openings occur in the Project Area; therefore, the Project is not likely to impact hibernating bats. No tree cutting or subsurface impacts to a hibernaculum are proposed, therefore this Project is not likely to impact these species.

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

The ODNR and USFWS comments did not identify any areas of ecological concern. On July 21, 2023, TRC biologists conducted a wetland and waterways delineation for the Chamberlin-West Akron 138kV Switch Replacement Project. The Project Study Area is approximately 0.43-acre, located in the City of Macedonia, Summit County, Ohio. One (1) palustrine emergent wetland feature (Wetland W-MAW-1), totaling 0.07-acre in size, was identified and delineated within the Project Study Area. Wetland W-MAW-1 was evaluated utilizing OEPA's Ohio Rapid Assessment Method and scored as a Category 1 wetland with a score of 21. Wetland W-MAW-1 is of very low quality and was found to be dominated by non-native/invasive species (*Phragmites australis*).

The Limits of Disturbance (LOD) for this Project is located within the Study Area and will predominately include an 81-ft by 55-ft stone pad that will be constructed over the wetland to allow for work activities. As currently proposed, it is TRC's understanding that this Project would fall under Nationwide Permit (NWP) 57 – Electric Utility Line and Telecommunications Activities. Current regulations allow temporary impacts to jurisdictional resources under a Nationwide Permit 57. Nationwide Permit Regional General Conditions were reviewed regarding this Project. This Project is located in the City of Macedonia, Summit County, Ohio, which is within the USACE Buffalo Regulatory District. The Project location is not listed in Appendix 1 to Regional General Condition 5(a) (Endangered Species and Threatened Species); and therefore, would not trigger the need for a Section 404 Pre-Construction Notification.

The Project Study Area consists mainly of an existing, maintained utility right-of-way (ROW) within industrial and commercial land uses. TRC did not observe the presence of any of the ODNR-listed species during the field investigation due to the highly maintained nature of the utility ROW and existing facility. Therefore, no impacts are anticipated to any of the listed species detailed in the ODNR correspondence.

A review of the National Conservation Easement Database (www.conservationeasement.us) revealed no conservation easements in the Project Study Area

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

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

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

4906-6-07: Documentation of Construction Notice Transmittal and Availability for Public Review

This Construction Notice is being sent concurrently with docketing to the following officials in Macedonia, Summit County, Ohio. A copy will also be provided to the Nordonia Hills Library Library for public review/reference.

Summit County

Ms. Ilene Shapiro
Summit County Executive
175 S Main St 7th floor
Akron, OH 44308

Mr. Alan Brubaker
Summit County Engineer
538 E South St
Akron, OH 44311

Ms. Rita Darrow
Summit County Council VP
175 S Main St 7th floor
Akron, OH 44308

Ms. Kristen Scalise
Summit County Fiscal Officer
538 E South St
Akron, OH 44311

Summit Soil and Water
Conservation District
1180 South Main Street #230
Akron, OH 44301

Macedonia

Mr. Nicholas Molnar
Macedonia Mayor
9691 Valley View rd.
Macedonia, OH 44056

Ms. Jessica Brandt
Macedonia City Council
9691 Valley View rd.
Macedonia, OH 44056

Mr. David Finley
Macedonia City Council
9691 Valley View rd.
Macedonia, OH 44056

Ms. Janet Tulley
Macedonia City Council
9691 Valley View rd.
Macedonia, OH 44056

Mr. Jeff Garvas
Macedonia City Council
9691 Valley View rd.
Macedonia, OH 44056

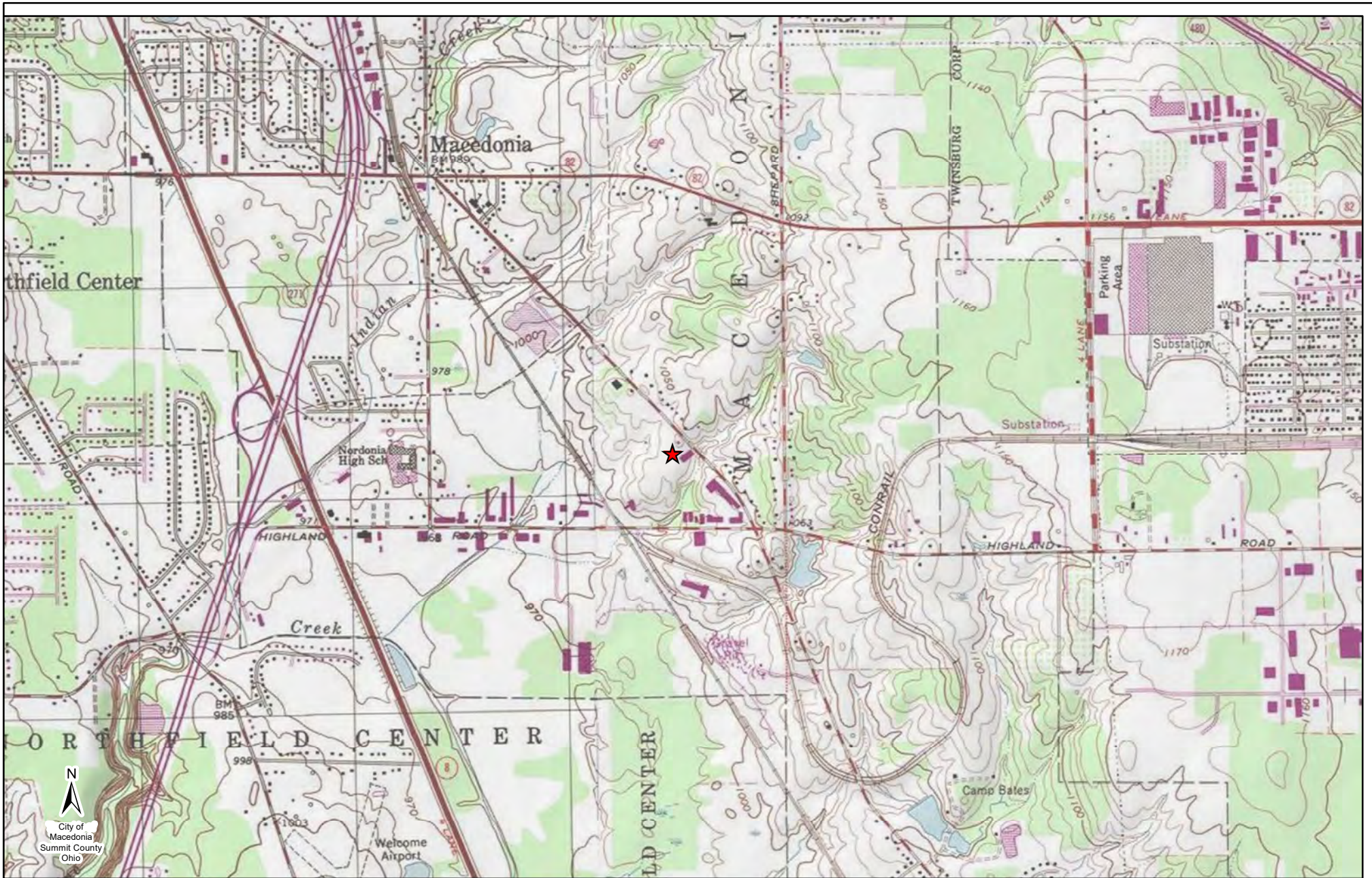
Mr. Vincent Ventura Sr.
Macedonia City Council
9691 Valley View rd.
Macedonia, OH 44056

Library

Ms. Sarah Rosenberger
Branch Manager
Nordia Hills Library
9458 Olde Eight Road
Northfield, OH 44067

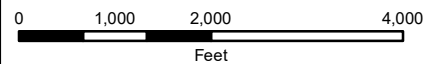
Per OAC Rule 4906-6-07(B), an exemplar copy of notice letters sent to local government officials and to the library have been included with this application as proof of compliance with requirements of OAC Rules 4906-6-07(A)(1) and 4906-6-07(A)(2).

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



LEGEND:

★ Project Location



Reference:
USGS Topographical Overlay

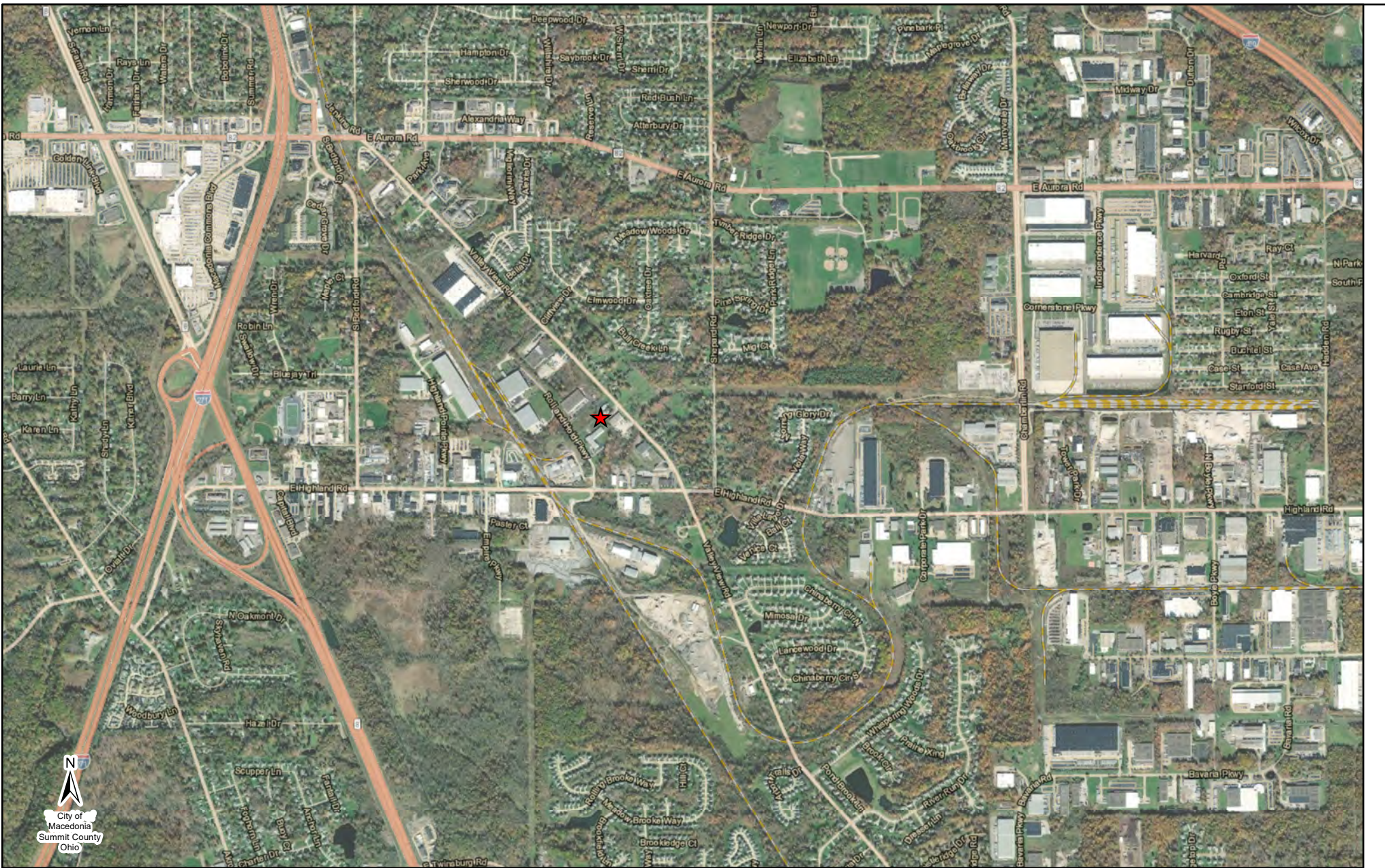
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WKID: 3734 Authority: EPSG



EXHIBIT 1



**Chamberlain-West Akron 138 kV
Transmission Line
Switch Replacement Project**



LEGEND:

★ Project Location

0 1,000 2,000 4,000
Feet

Reference:
USGS Topographical Overlay

Coordinate System:
NAD_1983_StatePlane_Ohio_North_FIPS_3401_Feet
WKID: 3734 Authority: EPSG

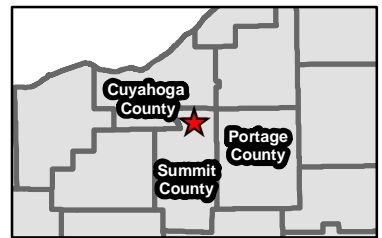


EXHIBIT 2

ATSI
American Transmission Systems, Inc.
A subsidiary of FirstEnergy Corp.

**Chamberlain-West Akron 138 kV
Transmission Line
Switch Replacement Project**

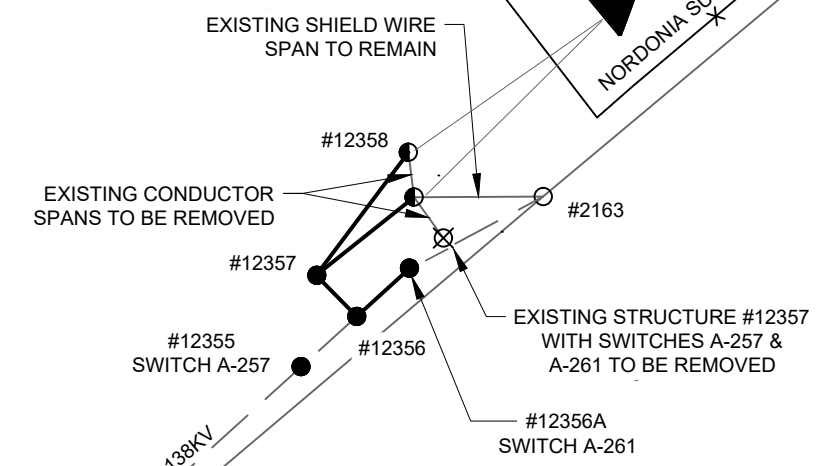


CITY OF MACEDONIA
SUMMIT COUNTY
STATE OF OHIO

VALLEY VIEW ROAD

LEGEND

- | | | | |
|---|--|-------|--|
| ● | - PROPOSED TRANSMISSION STRUCTURE | — | - PROPOSED TRANSMISSION LINE |
| ○ | - EXISTING TRANSMISSION STRUCTURE TO REMAIN | — | - EXISTING TRANSMISSION LINE |
| ⊗ | - EXISTING TRANSMISSION STRUCTURE TO BE REMOVED | - - - | - EXISTING TRANSMISSION LINE TO BE TRANSFERRED |
| ◐ | - EXISTING TRANSMISSION STRUCTURE TO BE MODIFIED | — X — | - FENCE |
| ▲ | - SUBSTATION | | |

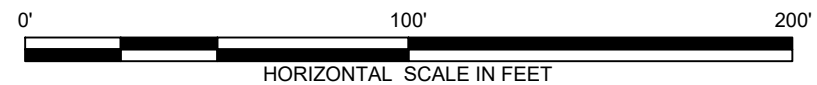


#11690

WEST AKRON SUB

CHAMBERLIN-WEST AKRON 138KV
CHAMBERLAIN THEISS 138KV

CHAMBERLAIN SUB

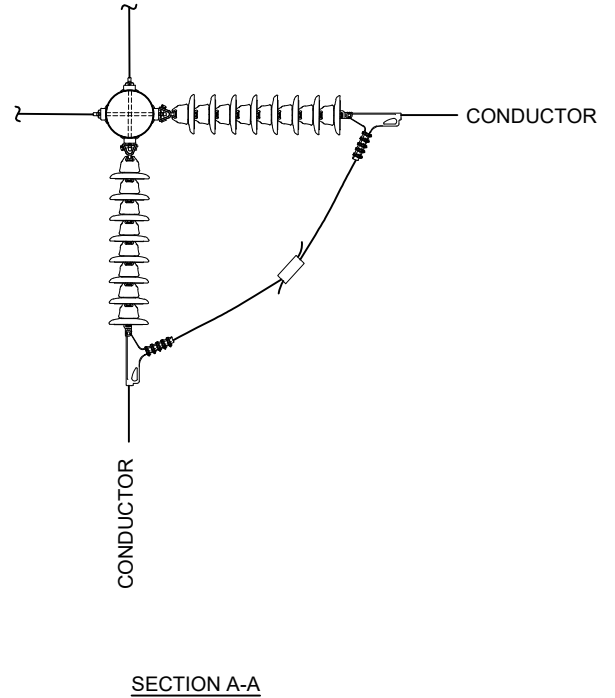
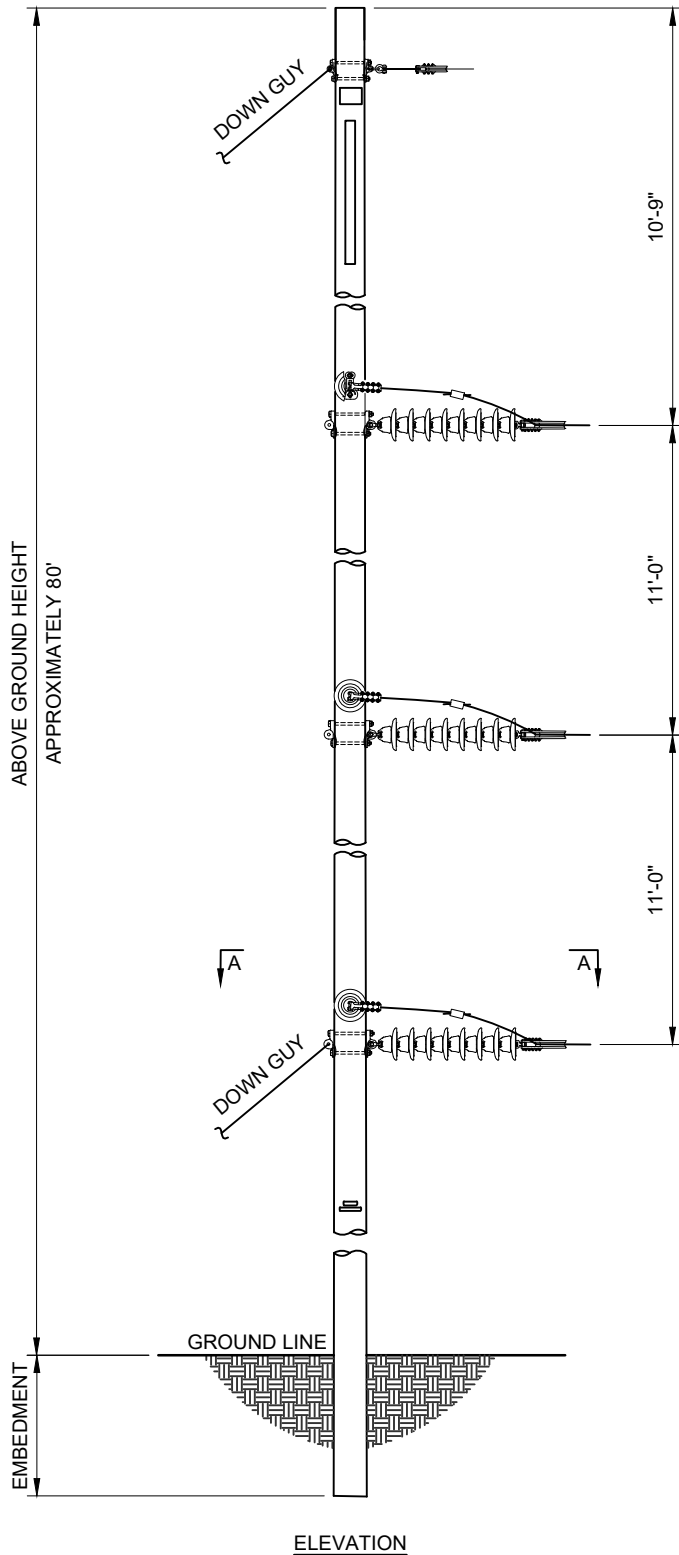


CHAMBERLIN-WEST AKRON 138KV
TRANSMISSION LINE SWITCH
REPLACEMENT PROJECT

GENERAL PROJECT LAYOUT

EXHIBIT 3

CHAMBERLIN-WEST AKRON 138KV, 138KV-REPLACE-LINE-SWITCHES A-261 AND A-257, EX. 3



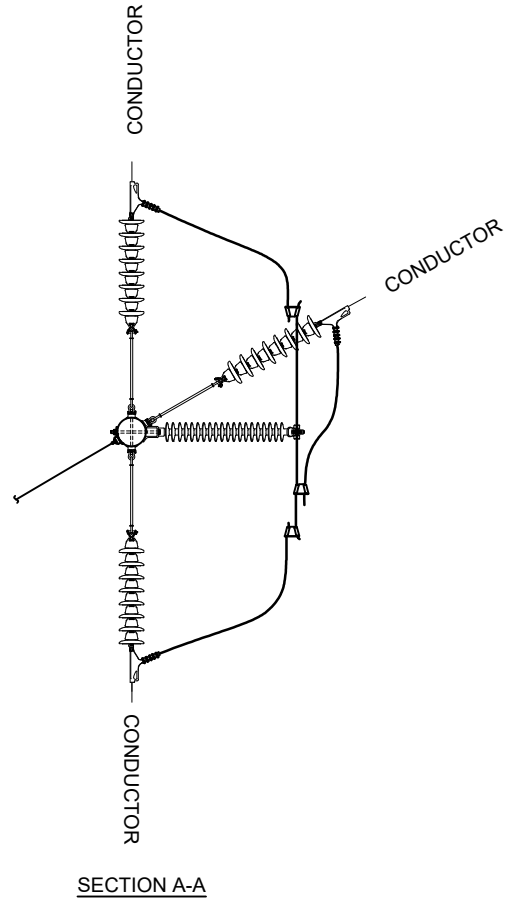
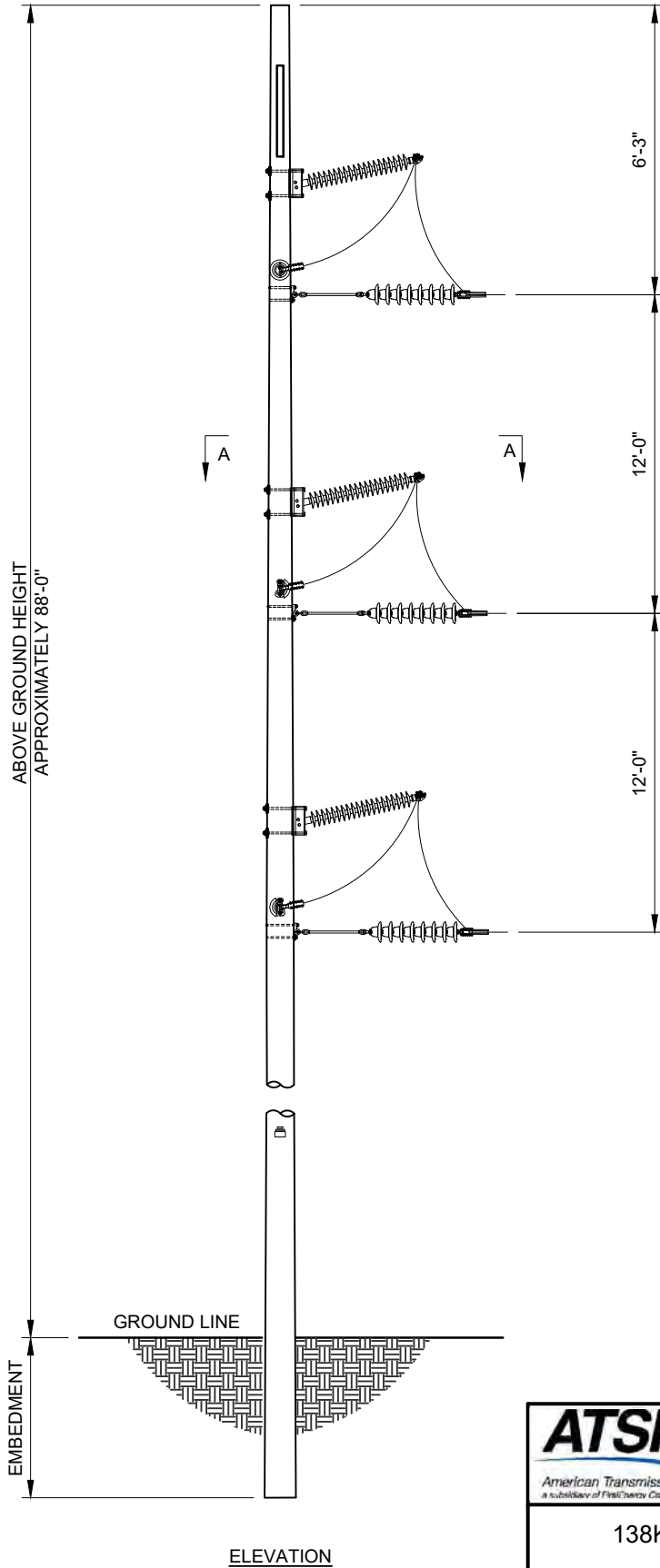
SCALE: N.T.S



CHAMBERLIN-WEST AKRON 138KV
TRANSMISSION LINE SWITCH
REPLACEMENT PROJECT

138 KV SINGLE CIRCUIT WOOD POLE STRUCTURE DEADEND
VERTICAL SINGLE POLE ANGLES 60° TO 120°
STRUCTURE 12357

EXHIBIT 4

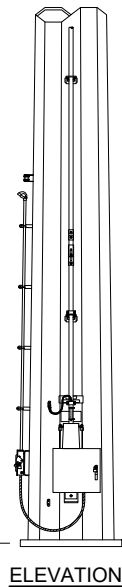
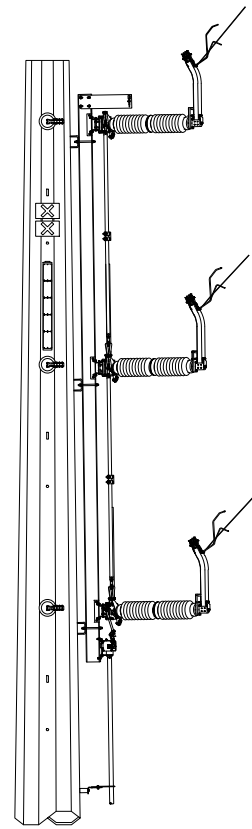
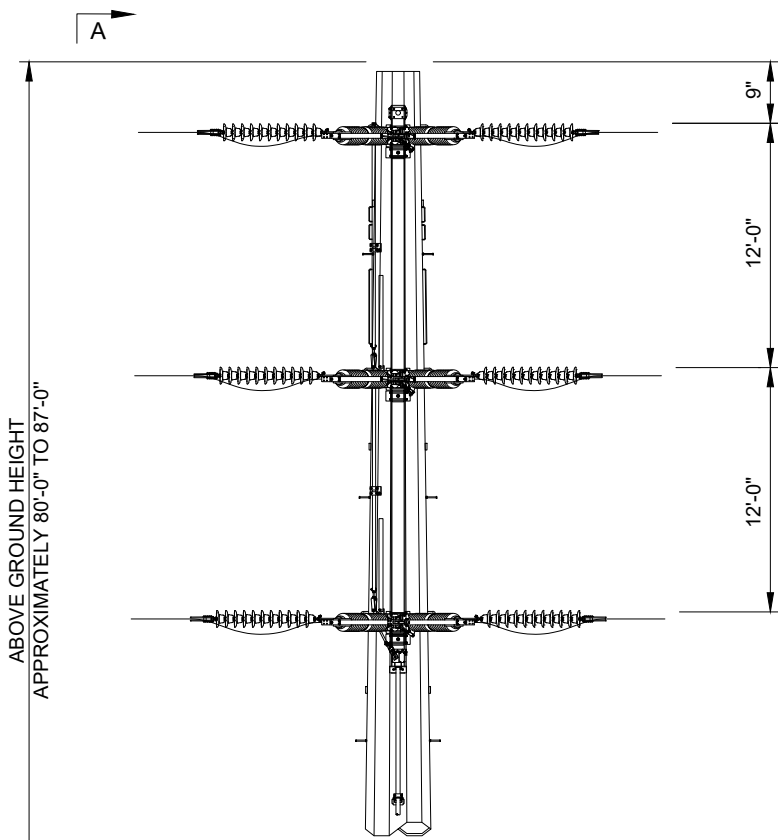


CHAMBERLIN-WEST AKRON 138KV
TRANSMISSION LINE SWITCH
REPLACEMENT PROJECT

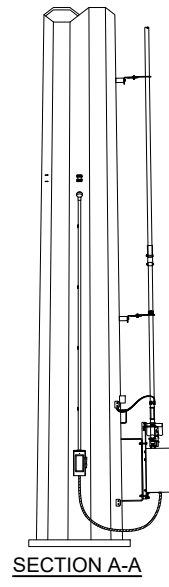
138KV SINGLE CIRCUIT WOOD TAP STRUCTURE
VERTICAL SINGLE POLE
STRUCTURE 12356

EXHIBIT 5

CHAMBERLIN-WEST AKRON 138KV, 138KV-REPLACE-LINE-SWITCHES A-261 AND A-257, EX.4



ELEVATION



SECTION A-A

A

SCALE N.T.S



CHAMBERLIN-WEST AKRON 138KV
TRANSMISSION LINE SWITCH
REPLACEMENT PROJECT

138KV SINGLE CIRCUIT-STEEL-UNITIZED
2000A SWITCH STRUCTURE WITH QUICK BREAK WHIPS OR VACUUM
BOTTLES AND MOAB
STRUCTURES 12355 AND 12356A

EXHIBIT 6



In reply refer to:
2024-SUM-60188

January 23, 2024

Justin McKissick, MA, RPA
Project Archaeologist/Field Director
TRC Environmental Corporation
317 E Carson Street, Suite 113
Pittsburgh, PA 15219
Email: jmckissick@trccompanies.com

RE: Section 106 Review: Chamberlin-West Akron 138 kV Switch Replacement Project, Macedonia,
Summit County, Ohio

Dear Mr. McKissick:

This letter is in response to correspondence received on January 17, 2024 regarding the above referenced project in Summit 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 (O.R.C.) and the Ohio Power Siting Board rules for siting this project. 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]).

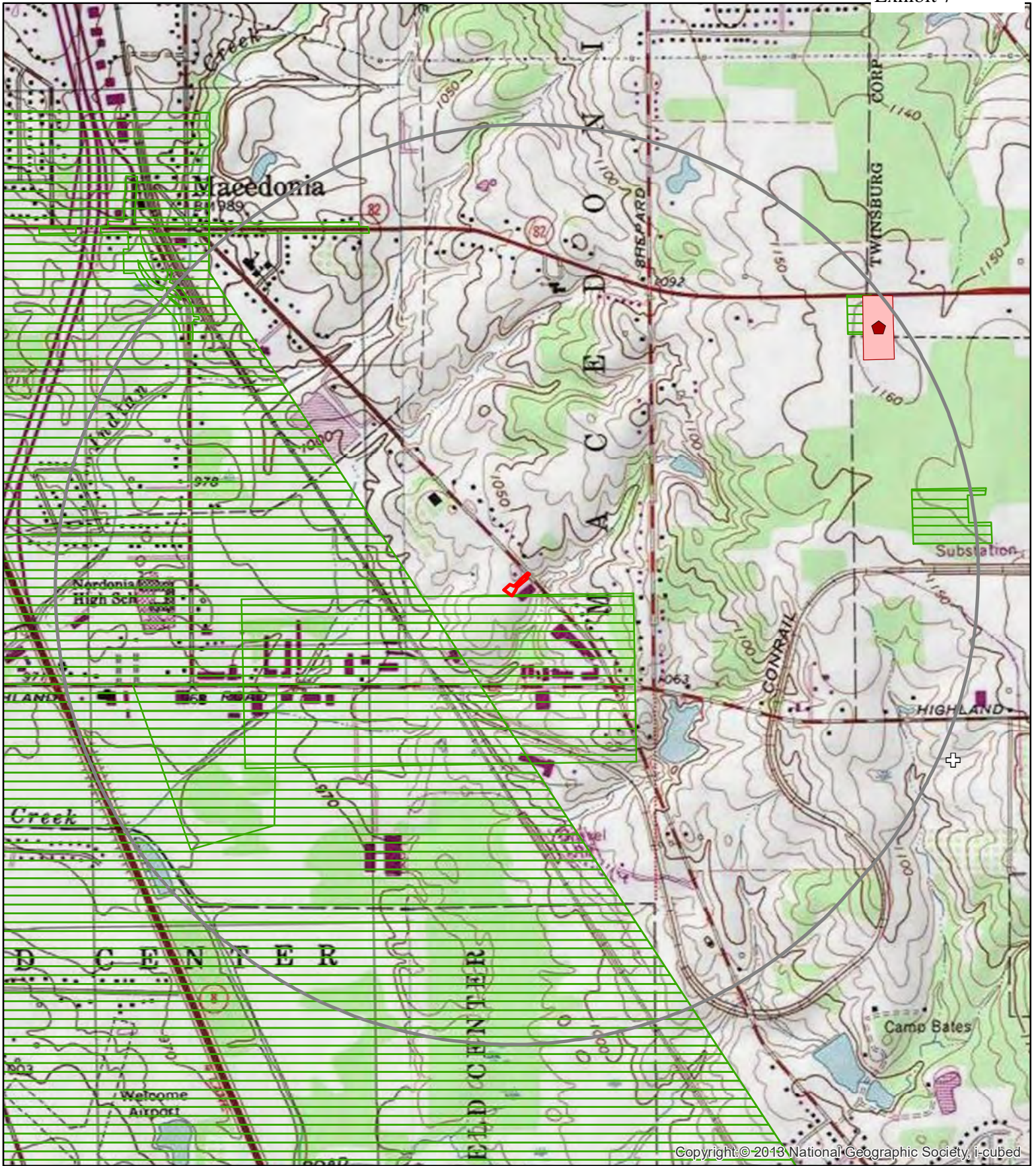
The project will involve the installation of a 55-ft by 81-ft gravel pad adjacent to the Nordonia Substation. The direct Area of Potential Effect (APE), which totals approximately 0.43-acres, will utilize the existing substation for access while the gravel pad will be placed within a low, wet area. Based on information submitted by you, which included a Project Summary Form, no historic properties, districts, or archaeological sites are located within or adjacent to the APE. Therefore, based on this information, it is the SHPO's opinion that no cultural resource studies are warranted for the project. Furthermore, as proposed, the project will have no effect to historic properties. No further coordination is required for this project unless the scope of work changes or archaeological remains are discovered during the course of the project. In such a situation, this office should be contacted. If you have any questions concerning this review, please contact me via email at sbiehl@ohiohistory.org. Thank you for your cooperation.

Sincerely,

A handwritten signature in blue ink that reads "Stephen M. Biehl".






Stephen M. Biehl, Project Reviews Coordinator (archaeology)
Resource Protection and Review
State Historic Preservation Office

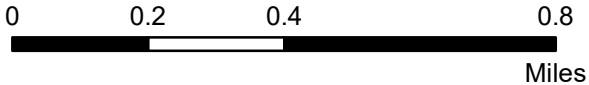
RPR Serial No. 1101446



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Figure 3: OHPO Database Search Results

-  Study Area
-  National Register Listings
-  NR Boundaries
-  OGS Cemeteries
-  Previously Surveyed Areas





Ohio Department of Natural Resources

MIKE DEWINE, GOVERNOR

MARY MERTZ, DIRECTOR

Office of Real Estate
Tara Paciorek, Chief
 2045 Morse Road – Bldg. E-2
 Columbus, OH 43229
Phone: (614) 265-6661
Fax: (614) 267-4764

August 28, 2023

Jenna Slabe
 TRC Companies, Inc.
 1382 W 9th St, Suite 400
 Cleveland, Ohio 44113

Re: 23-0874; FirstEnergy's Chamberlin-West Akron 138 kV Switch Replacement Project

Project: The proposed project involves switch replacements (A-261 and A-257) on the existing Chamberlin-West Akron 138 kV transmission line, utilizing the existing Nordonia Substation for access.

Location: The proposed project is located in Twinsburg Township, Summit 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 area. 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 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 endangered species, and the little brown bat (*Myotis lucifugus*), 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 endangered 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 \geq 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 Iowa darter (*Etheostoma exile*), a state endangered fish, the pugnose minnow (*Opsopoeodus emiliae*), a state endangered fish, the western banded killifish (*Fundulus diaphanus menona*), a state endangered fish, the lake chubsucker (*Erimyzon sucetta*), a state threatened fish, and the paddlefish (*Polyodon spathula*) a state threatened fish. The DOW recommends no in-water work in perennial streams from March 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact these or other aquatic species.

The project is within the range of the smooth greensnake (*Opheodrys vernalis*), a state endangered species. This species is primarily a prairie inhabitant, but also found in marshy meadows and roadside ditches. 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 spotted turtle (*Clemmys guttata*), a state threatened species. This species prefers fens, bogs and marshes, but also is known to inhabit wet prairies, meadows, pond edges, wet woods, and the shallow sluggish waters of small streams and ditches. Due to the location, the 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 northern harrier (*Circus hudsonius*), 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.

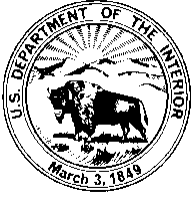
Water Resources: The Division of Water Resources has the following comment.

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

United States Department of the Interior



FISH AND WILDLIFE SERVICE

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



January 25, 2024

Project Code: 2023-0107267

Dear Ms. Jenna Slabe:

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 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: The proposed project is in the vicinity of one or more confirmed records of Indiana bats and/or northern long-eared bats. 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 November 15 and March 15. Seasonal clearing is recommended to avoid adverse effects to Indiana bats and northern long-eared bats. Please note that, because Indiana bat and/or northern long-eared bat presence has already been confirmed in the project vicinity, any additional summer surveys would not constitute presence/absence surveys for these species.

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.

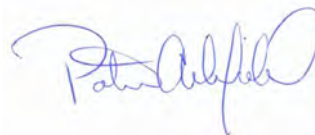
Stream and Wetland Avoidance: Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus it is important to conserve the functions and values of the remaining wetlands in Ohio (https://epa.ohio.gov/portals/47/facts/ohio_wetlands.pdf). We recommend avoiding and minimizing 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, Environmental Services Administrator, at (614) 265-6387 or at mike.pettegrew@dnr.ohio.gov.

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

From: Eileen.Wyza@dnr.ohio.gov
Sent: Thursday, September 7, 2023 10:31 AM
To: Slabe, Jenna
Cc: Molnar, Magda (Habershaw, Amanda B); Falkinburg, Brad M (Habershaw, Amanda B); Stolarski, Adrianna
Subject: [EXTERNAL] RE: Desktop Hibernacula Assessment: Chamberlin-West Akron 138 kV Switch Replacement Project

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Hi Jenna,

Per review of the desktop survey provided for the Chamberlin-West Akron 138 kV Switch Replacement Project, the Ohio Division of Wildlife concurs with your assessment that no caves, cliffs, or mine openings occur in the project area. Therefore, the project is not likely to impact hibernating bats.

Should any reported conditions change before or during construction, please contact me for additional guidance.

Thank you,



Eileen Wyza, Ph.D.

Wildlife Biologist
Ohio Division of Wildlife
Phone: 614-265-6764
Email: Eileen.Wyza@dnr.ohio.gov

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Please consider the environment before printing this email.

From: Slabe, Jenna <JSlabe@trcccompanies.com>
Sent: Friday, September 1, 2023 11:37 AM
To: Wyza, Eileen <Eileen.Wyza@dnr.ohio.gov>
Cc: Molnar, Maggie <MMolnar@trcccompanies.com>; Falkinburg, Brad <BFalkinburg@trcccompanies.com>; astolarski@firstenergycorp.com
Subject: Desktop Hibernacula Assessment: Chamberlin-West Akron 138 kV Switch Replacement Project

Eileen,

In response to ODNR's DOW recommendations (attached), TRC Companies, Inc. completed a desktop habitat assessment, on behalf of the FirstEnergy Corporation, to determine if potential hibernaculum is present within the proposed Chamberlin-West Akron 138 kV Switch Replacement Project (Project) Study Area. The proposed Project is located in the City of Macedonia, Summit County, Ohio.

Please let us know if you have any questions on the provided desktop assessment.

Thank you,

Jenna Slabe

Ecologist

Planning, Permitting, and Licensing



1382 W 9th St, Suite 400, Cleveland, OH 44113

C 330.998.0481

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Surface Water Delineation Report

**Chamberlin-West Akron 138kV
Switch Replacement Project**

December 13, 2023

**City of Macedonia, Summit County,
Ohio**

Prepared For:



FirstEnergy Corporation
341 White Pond Drive, Building B3
Akron, Ohio 44320

Prepared By:
TRC Companies, Inc.
1382 West Ninth Street, Suite 400
Cleveland, Ohio 44113

TRC Project Number: 429847.0022.0036



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APPENDICES

- Appendix A Figures
- Appendix B Photographic Record
- Appendix C Data Forms

ACRONYMS AND DEFINITIONS

1987 Manual	United States Army Corps of Engineers 1987 Wetland Delineation Manual
CFR	Code of Federal Regulations
EPA	Environmental Protection Agency
FAC	Facultative
FACU	Facultative Upland
FACW	Facultative Wetland
FirstEnergy	FirstEnergy Corporation
GIS	Geographic Information Systems
GPS	Global Positioning System
HHEI	Headwater Habitat Evaluation Index
HUC	Hydrologic Unit Code
NHD	National Hydrography Dataset
NWI	National Wetlands Inventory
NWP	Nationwide Permit
OAC	Ohio Administrative Code
OBL	Obligate Wetland
OEPA	Ohio Environmental Protection Agency
OHWM	Ordinary High Water Mark
ORAM	Ohio Rapid Assessment Method
Project	Chamberlin-West Akron 138kV Switch Replacement Project
Project Study Area	0.43-acres, located in the City Macedonia, Summit County, Ohio
QHEI	Qualitative Habitat Evaluation Index
Redox	Redoximorphic Concentrations
Regional Supplement	Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)
Report	Surface Water Delineation Report
TNM	The National Map
TRC	TRC Companies, Inc.
UPL	Obligate Upland
USACE	United States Army Corps of Engineers
USDA-NRCS	United States Department of Agriculture – Natural Resources Conservation Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WQC	Water Quality Certification

1.0 Introduction

On behalf of FirstEnergy Corporation (FirstEnergy), TRC Companies, Inc. (TRC) performed a surface water delineation for the Chamberlin-West Akron 138kV Switch Replacement Project (Project). The proposed Project Study Area is approximately 0.43-acres, located in the City of Macedonia, Summit County, Ohio. The proposed Project involves two switch replacements (A-261 and A-257) on the existing Chamberlin-West Akron 138 kV transmission line, utilizing the existing Nordonia Substation for access. On behalf of FirstEnergy, TRC has prepared this Surface Water Delineation Report (Report) for the Project. A site location map of the Project Study Area can be found in **Appendix A, Figure 1**.

On July 21st, 2023, TRC personnel performed field investigations to evaluate and delineate surface water resources (i.e., wetlands and streams) located within the Project Study Area. The delineations were conducted by qualified wetland scientists in accordance with the United States Army Corps of Engineers (USACE) parameters. The objective was to evaluate and delineate potential surface water resources within the Project Study Area, such that the resources could be considered during each phase of the Project. This Report describes the surface water delineation methodology implemented and the existing surface water resources identified within the Project Study Area during field investigations.

The Project Study Area northeast terminus: 41.302455, -81.49456 and southwest terminus: 41.301958, -81.495660 located in the City of Macedonia, Summit County, Ohio. The Project Study Area occurs within maintained utility right-of-way, surrounded by commercial land use and forested landcover. **Appendix A, Figure 1** and **Figure 2**, provides further information on the location of the proposed Project Study Area.

2.0 Methodology

To complete the surface water delineation and evaluation of the Project Study Area, TRC followed the guidelines and methods outlined by the USACE and Ohio Environmental Protection Agency (OEPA), as described within this section.

2.1 Wetland Parameters

The *USACE 1987 Wetland Delineation Manual (1987 Manual)* (USACE, 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0) (Regional Supplement)* (USACE, 2012), and the March 6, 1992 guidance memorandum (Williams, 1992) emphasize a three parameter approach to wetland boundary determination in the field. This approach involves the following:

- i. Evidence of wetland hydrology;
- ii. Presence of hydric soils; and
- iii. Predominance of hydrophytic vegetation as defined by *The National Wetland Plant List: 2020 Wetland Ratings* (USACE, 2020).

Positive indicators of all three parameters are normally present in wetlands and serve to distinguish between both dry land and transitional plant communities.

2.1.1 Hydrology

The *1987 Manual and Regional Supplement* provides guidelines for determining the presence of wetland hydrology. Criteria for wetland hydrology are met if the area is inundated or saturated at the soil surface during the growing season for a time sufficient to develop hydric soils and to support hydrophytic vegetation.

2.1.2 Hydric Soils

Hydric soils are defined as soils “that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part of the soil” (Federal Register, 1994). Hydric soil indicators described in the *Field Indicators of Hydric Soils in the United States: A Guide for Identifying and Delineating Hydric Soils Version 8.2* (USDA, NRCS, 2018) were used to identify and document hydric soils as described in the *Regional Supplement*.

2.1.3 Hydrophytic Vegetation

To determine the presence of hydrophytic vegetation, the dominant and non-dominant species in each major vegetative stratum (e.g., tree, shrub/sapling, herbaceous, and woody vine) were identified and recorded.

Plants are placed into indicator status categories depending on their probability of occurring in a wetland in accordance with the USACE’s *The National Wetland Plant List: 2020 wetland ratings* (USACE, 2020). There are five indicator status categories for plants:

1. Obligate wetland plants (OBL): plants that occur almost always (>99%) in wetlands in natural conditions, but which may also occur rarely (<1%) in non-wetlands;
2. Facultative wetland plants (FACW): plants that occur usually (>67-99%) in wetlands but also occur (1-33%) in non-wetlands;
3. Facultative plants (FAC): plants with a similar likelihood (33-67%) of occurring in both wetlands and non-wetlands;
4. Facultative upland plants (FACU): plants that occur sometimes (1-<33%) in wetlands, but occur more often (>67-99%) in non-wetlands; and
5. Obligate upland plants (UPL): plants that occur rarely (<1%) in wetlands but occur almost always (>99%) in non-wetlands under natural conditions.

A prevalence of dominant species that are FAC, FACW, and/or OBL indicates the presence of hydrophytic vegetation.

2.2 USACE Wetland Delineation

Qualified wetland scientists from TRC conducted surface water field investigations on July 21st, 2023. The surface water field investigations were conducted within the predetermined Project Study Area that was developed in accordance with the Project location information provided by FirstEnergy (**Appendix A, Figure 2**). Surface water delineations were conducted using the Federal Routine Determination Method presented in the *1987 Manual* and *Regional Supplement*, including clarifications and interpretations provided in the March 6, 1992 guidance memorandum, and the USACE and Environmental Protection Agency (EPA) guidance on jurisdictional forms (USEPA, USACE, 2007).

Hydrology was determined based on a number of indicators that are divided into two categories, primary and secondary. The *1987 Manual* defines hydrology as present when at least one (1) primary indicator (i.e., surface water, saturation, etc.) or two (2) secondary indicators (i.e., geomorphic position, stunted or stressed plants, etc.) are identified. One (1) primary indicator is sufficient to determine if hydrology is present; however, if these are absent then two (2) or more of the secondary indicators are required to determine hydrology. If other probable hydrologic evidence was found, then this was subsequently documented on the data form.

Soils were examined in the field by using a tile spade, generally to a depth of at least 22 inches below the soil surface, until refusal, or positive hydric soil indicators were met below 22 inches, whichever was shallower. Soil coloration was identified using a *Munsell Soil Color Chart* (Munsell Color Company, 2009). Other characteristics, such as the presence of redoximorphic (Redox) concentrations and depletions and soil texture were also recorded. Redox concentrations and depletions are created when the soil is saturated and has anaerobic conditions (without oxygen gas) which leads to changes in the chemical processes in the soil that produce visible color changes in the soil. Hydric characteristics such as organic soil layers, depleted matrix, gleying, and hydrogen sulfide odor, were noted when observed. Soils at both wetland (if present) and dry land data plot locations were characterized and recorded on the data form.

The presence of hydrophytic vegetation was determined using the procedures described in the *Regional Supplement* and recorded on the data form. Vegetation in both dry land and wetland communities was characterized using a real dominance method, with a radius of 30-feet around the soil sample location for trees and woody vines, 15-foot radius for saplings and shrubs, and a 5-foot radius for herbaceous plants. Plant communities meeting the “50/20” Rule or meeting one of the other indicators set forth in the *1987 Manual*, *Regional Supplement*, and guidance memorandums are considered hydrophytic for the purposes of the wetland classification criteria. In areas where the vegetation was disturbed or not identifiable due to seasonal conditions, soil and hydrology characteristics, and professional judgment/experience were utilized in assessing the primary determining factors for classification as wetlands.

If the soils, hydrology, and vegetation characteristics at a survey point indicated that it was within a wetland, the boundary of the wetland was determined, and the approximate boundary was flagged using wetland flagging and recorded using a handheld Juniper Systems Geode with sub-meter accuracy. Areas observed to have problematic or difficult situations were delineated

utilizing the procedures identified in the *Regional Supplement*, Section 5 – “Difficult Wetland Situations in the Northcentral and Northeast Region.” Data from the Global Positioning System (GPS) survey was downloaded and integrated into a Geographic Information System (GIS) database for the proposed work areas and used to make the accompanying figures. Identified wetlands were classified according to Cowardin et al. (Cowardin, Carter, Golet, & LaRoe, 1979). Photographs are included in **Appendix B**.

2.3 Ohio Environmental Protection Agency’s Ohio Rapid Assessment Method

According to the Ohio Wetland Water Quality Standards, a wetland quality category (Category 1, Category 2, or Category 3) must be assigned for each wetland if a project will require discharge of dredged or fill material into jurisdictional wetlands. In general, Category 1 wetlands are considered to be of “low quality”, Category 2 wetlands are considered to be of “moderate quality” and Category 3 wetlands are considered to be of “high quality.”

The OEPA has developed the Ohio Rapid Assessment Method (ORAM), which can be utilized to evaluate wetland habitat quality based on the apparent functions and values of the wetland resource. The two primary components of the ORAM are the Narrative Rating and the Quantitative Rating. Each delineated wetland resource received a provisional category designation based on the results of the ORAM Narrative and Quantitative Ratings and review of narrative criteria in the Ohio Administrative Code (OAC) 3745-1-54(C) (Mack, 2000).

2.4 USACE Waterbody Identification

During field investigations, other waterbody features including streams, ponds, lakes, etc. were investigated. Streams within the Project Study Area were identified by the presence of an ordinary high water mark (OHWM) and scoured channel or defined bed and banks. All streams identified in the Project Study Area that were wider than five feet were demarcated via GPS from bank-to-bank. Streams that were less than five feet wide had the centerline demarcated.

Identified streams were evaluated utilizing OEPA approved methods for stream habitat assessment which include the Qualitative Habitat Evaluation Index (QHEI) (Ohio EPA, 2006) and/or the Headwater Habitat Evaluation Index (HHEI) (Ohio EPA, 2020) assessment method. These approved assessment methods provide an empirical, quantified evaluation of streams as required by the State of Ohio for permitting and mitigation purposes. These methods assess stream habitat to provide a qualitative index (or score) to determine the level of compensatory mitigation that may be needed for impacts to waters of the U.S. (i.e., streams).

Use of the QHEI or HHEI assessment method is determined based on the size of the stream’s drainage area and/or the stream’s pool depths. Where coverage was available, the drainage area was calculated using automated basin characteristics from StreamStats v 4.19.1: Ohio (USGS, 2021).

Following OEPA guidance, streams with a drainage area of greater than 1.0 square mile (2.6 square kilometers) or which have pools with maximum depths over 15.8 inches (40.0 centimeters), as determined by measuring pool depth within the stream, were evaluated using

the QHEI. Data on these streams were collected on the QHEI form provided by the OEPA. The QHEI is composed of six (6) principal metrics: substrate, instream cover, channel morphology, riparian zone and bank erosion, pool/glide and riffle-run quality, and map gradient. Each metric is scored separately and summed to obtain the total QHEI score. Using the scoring methods associated with these forms, the stream is placed into the following general narrative ranges, dependent on stream size; for smaller streams (≤ 20 sq. mi): Excellent >70 , Good 55-69, Fair 43-54, Poor 30-42, and Very Poor <30 ; for larger streams (>20 sq. mi): Excellent >75 , Good 60-74, Fair 45-59, Poor 30-44, and Very Poor <30 .

The HHEI was utilized to score streams with a drainage area of <1.0 square mile (2.6 square kilometers). Data on these streams were collected on the HHEI forms, provided by the OEPA. Observational data regarding the physical nature of the stream corridor including stream flow, riparian zone land use and buffer width, and channel modification were recorded. Measurements included bankfull width, maximum pool depth and substrate composition.

Streams identified during the course of the investigation were classified as perennial, intermittent, or ephemeral waterways in accordance with the rationale defined by the USACE Buffalo District.

The Project Study Area was also investigated for areas that were considered “open water” by the USACE. According to the USACE an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high-water mark can be determined. Aquatic vegetation within the area of flowing or standing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of “open waters” may include rivers, lakes, and ponds. Artificial “open water” features may include stormwater retention basins, fish hatchery ponds, drainage tile pump stations, etc.

3.0 Results

3.1 Site Description

The Project Study Area is approximately 0.43-acres located in the City of Macedonia, Summit County, Ohio; within the Brandywine Creek watershed (12-Digit Hydrologic Unit Code [HUC]: 041100020404) (USGS, 2022).

The Project Study Area is shown on the Twinsburg, Ohio (USGS, 2023) United States Geological Survey (USGS) 7.5-minute series topographic quadrangle (**Appendix A, Figure 1**).

The United States Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS) Web Soil Survey (USDA-NRCS, 2016) was used to identify the soil types contained within the Project Study Area (**Appendix A, Figure 3**). **Table 1** provides a summary of the soils identified within proposed Project Study Area.

Table 1. Soils Type Summary

Map Unit Symbol	Map Unit Name	Hydric Status	Acres Within Study Area	Percent Cover in Study Area
WaB	Wadsworth silt loam, 2 to 6 percent slopes	Non-Hydric W/ Hydric Inclusions	0.43	100%
TOTAL			0.43	100%
<p>Notes: Accessed online December 2023 at: http://websoilsurvey.sc.egov.usda.gov.</p>				

There are no United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) features mapped within the Project Study Area (**Appendix A, Figure 4**) (USFWS, 2022).

The USGS National Hydrography Dataset (NHD) (USGS, 2018) Downloadable Data Collection from The National Map (TNM) is a comprehensive set of digital spatial data that encodes information about naturally occurring and constructed bodies of surface water (e.g., lakes, ponds, and reservoirs), paths through which water flows (e.g., canals, ditches, streams, and rivers) and related entities such as point features (e.g., springs, wells, stream gages, and dams). There are no NHD streams mapped within the Project Study Area (**Appendix A, Figure 4**).

According to Federal Emergency Management Agency Flood Insurance Rate Map (39153C0061E (eff. 7/20/2009), the proposed Project is not located within a regulated 100-year floodplain (**Appendix A, Figure 4**) (FEMA, 2021).

3.2 Surface Water Resource Field Delineations

TRC performed the field investigation on July 21st, 2023. Weather conditions were normal for the season, with temperatures ranging between 65 degrees to 76 degrees Fahrenheit, and partly cloudy skies. Native and non-native herbaceous vegetation was observed within the Project Study Area. The USACE maintains the final authority that determines jurisdiction; therefore, statements about jurisdiction within this Report are preliminary and subject to final determination by the USACE and OEPA.

3.2.1 Wetlands

During the field investigation, one (1) wetland was identified and delineated within the Project Study Area. The delineated wetland boundaries and sample points are shown on **Figure 5** in **Appendix A**. Representative photographs of sample points and other areas of interest are provided in **Appendix B**. Data was collected and recorded on the USACE Wetland Determination Data Forms – Northcentral and Northeast and wetland functional assessments were completed for each delineated wetland using the ORAM (**Appendix C**). Delineated wetlands within the Project Study Area are summarized in **Table 2**.

Table 2: Delineated Wetland Features Summary Table

Resource ID ¹	Cowardin Classification ²	Connection ³	Provisional Jurisdictional Status ⁴	ORAM Score	ORAM Category ⁵	Approximate Delineated Area within Project Study Area ⁶ (acres)
W-MAW-1	PEM	Adjacent	USACE Jurisdictional Wetland	21	Cat. 1	0.07
					Total	0.07
¹ TRC resource identification. ² Cowardin Wetland Classification (approximation based upon field identification and delineation) (Cowardin, Carter, Golet, & LaRoe, 1979): PEM – Palustrine Emergent. ³ Connection to a jurisdictional waterway: Isolated, Abutting, or Adjacent as determined by TRC; subject to USACE verification. Wetland connection is pending an update from OEPA and USACE based on the EPA vs. Sackett case. ⁴ Jurisdiction status is based upon field observations and mapping review of apparent connectivity or adjacency of the resource to Waters of the United States and the assumption that a preliminary jurisdictional determination process will be utilized for the project. ⁵ ORAM Category based on scoring breakpoints from Table 2 of the ORAM v. 5.0 Quantitative Score Calibration; scores falling within a “gray zone” or “modified” category were rounded up. ⁶ Area is rounded to nearest 0.01-acre, based upon GPS data.						

3.2.2 Waterbodies

During the field investigations, no waterbodies were delineated within the Project Study Area. Representative photographs of the Project Study Area are provided in **Appendix B**.

4.0 Permitting Considerations

It is anticipated that due to the nature of the Project, jurisdictional resources may be impacted by the proposed Project activities. As currently proposed, it is TRC’s understanding that this Project would fall under Nationwide Permit (NWP) 57 – Electric Utility Line and Telecommunications Activities. Current regulations allow temporary impacts to jurisdictional resources under a Nationwide Permit 57. Nationwide Permit Regional General Conditions were reviewed regarding this Project. This Project is located in the City of Macedonia, Summit County, Ohio, which is within the USACE Buffalo Regulatory District. The Project location is not listed in Appendix 1 to Regional General Condition 5(a) (Endangered Species and Threatened Species), which would trigger the need for a Section 404 Pre-Construction Notification.

Additionally, the Project is located within an “Eligible” area according to Ohio EPA’s Stream Eligibility for Nationwide Permit Program (OEPA, 2017) and therefore is eligible for coverage under the OEPA 401 Water Quality Certification (WQC) for Nationwide Permits (**Appendix A, Figure 6**).

4.1 USACE Verification

The USACE has the authority to determine and/or verify the geographical boundaries of Waters of the United States in accordance with 33 Code of Federal Regulations (CFR) 328 and 33 CFR

329; therefore, the results of this Report are termed “preliminary” until verified and accepted by the USACE. This verification is part of the Jurisdictional Determination process, which is required for approval under Section 404 Clean Water Act, Section 401 WQC, and/or isolated wetland permitting process through OEPA. It is the responsibility of any party that intends to discharge dredge or fill material into Waters of the United States to comply with all applicable regulations.

5.0 Limitations

This Report is limited in scope to the specific terms of the Agreement previously entered into between TRC and FirstEnergy. This Report represents the conditions within the Project Study Area identified herein, as of the inspection dates.

Should the Project change from the scope described herein, TRC should be immediately notified such that additional investigations may be conducted to amend the content of the Report herein. Human-induced and/or natural changes within the Project Study Area may occur after the date of this investigation and may result in changes to the presence, extent, and classification of the surface water resources identified within this Report.

6.0 References

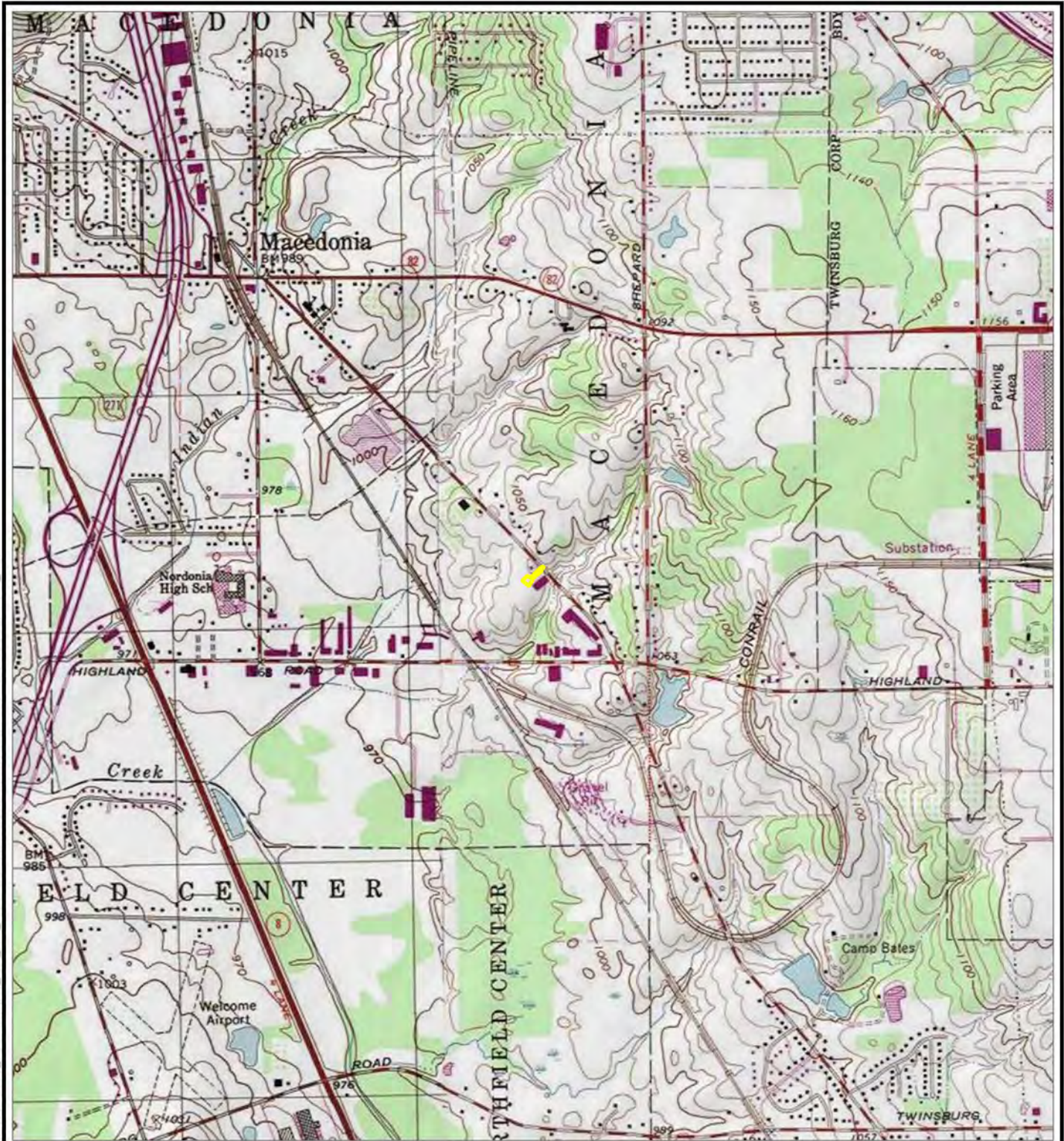
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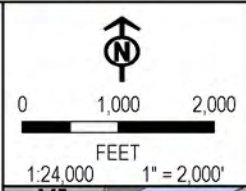
Appendix A

Figures

COORDINATE SYSTEM: NAD 1983 STATEPLANE OHIO NORTH FIPS 3401 FEET, MAP ROTATION: 0
 - SAVED BY: MOPEL ON 7/20/2023 14:56:42 PM, FILE PATH: T:\PROJECTS\FIRST ENERGY\429847_0022_0036 CHAMBERLINWESTAKRON2-APPROXWDR.APPX, LAYOUT NAME: FIG01_SLM



 PROJECT STUDY AREA



BASE MAP: USA TOPO MAPS MAP SERVICE, TWINSBURG QUAD

PROJECT:
**FIRSTENERGY - CHAMBERLIN-WEST AKRON-138 KV
 SWITCH REPLACEMENT PROJECT
 SUMMIT COUNTY, OH**

TITLE:
SITE LOCATION MAP

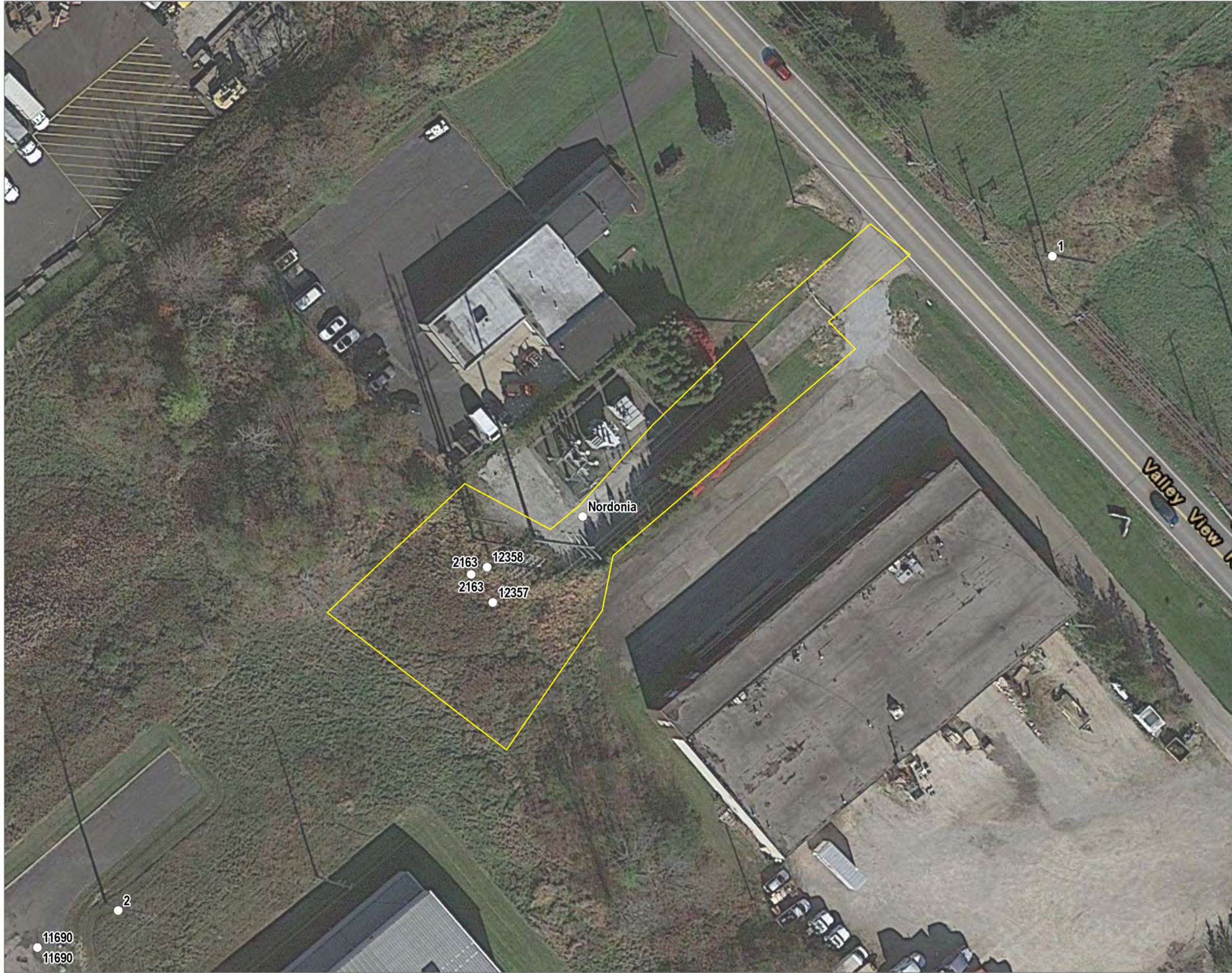
DRAWN BY: M. OPEL	PROJ. NO.: 429847.0022.0036
CHECKED BY: J. SLABE	FIGURE 1
APPROVED BY: B. FALKINBURG	
DATE: JULY 2023	



1382 WEST NINTH STREET
 SUITE 400
 CLEVELAND, OH 44113
 PHONE: 216-344-3072

FILE: WDR

Coordinate System: NAD 1983 StatePlane Ohio North FIPS 3401 Feet; Map Rotation: 0
 Drawn By: MOPEL on 7/20/2023, 14:56:42 PM; File Path: T:\PROJECTS\Front_Energy\429847_0022_0036_ChamberlinWestAkron138KV\DR.aprx; Layout Name: Fig02_Aerial

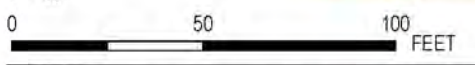


- PROJECT STUDY AREA
- EXISTING STRUCTURE

BASE MAP: GOOGLE MAPS.

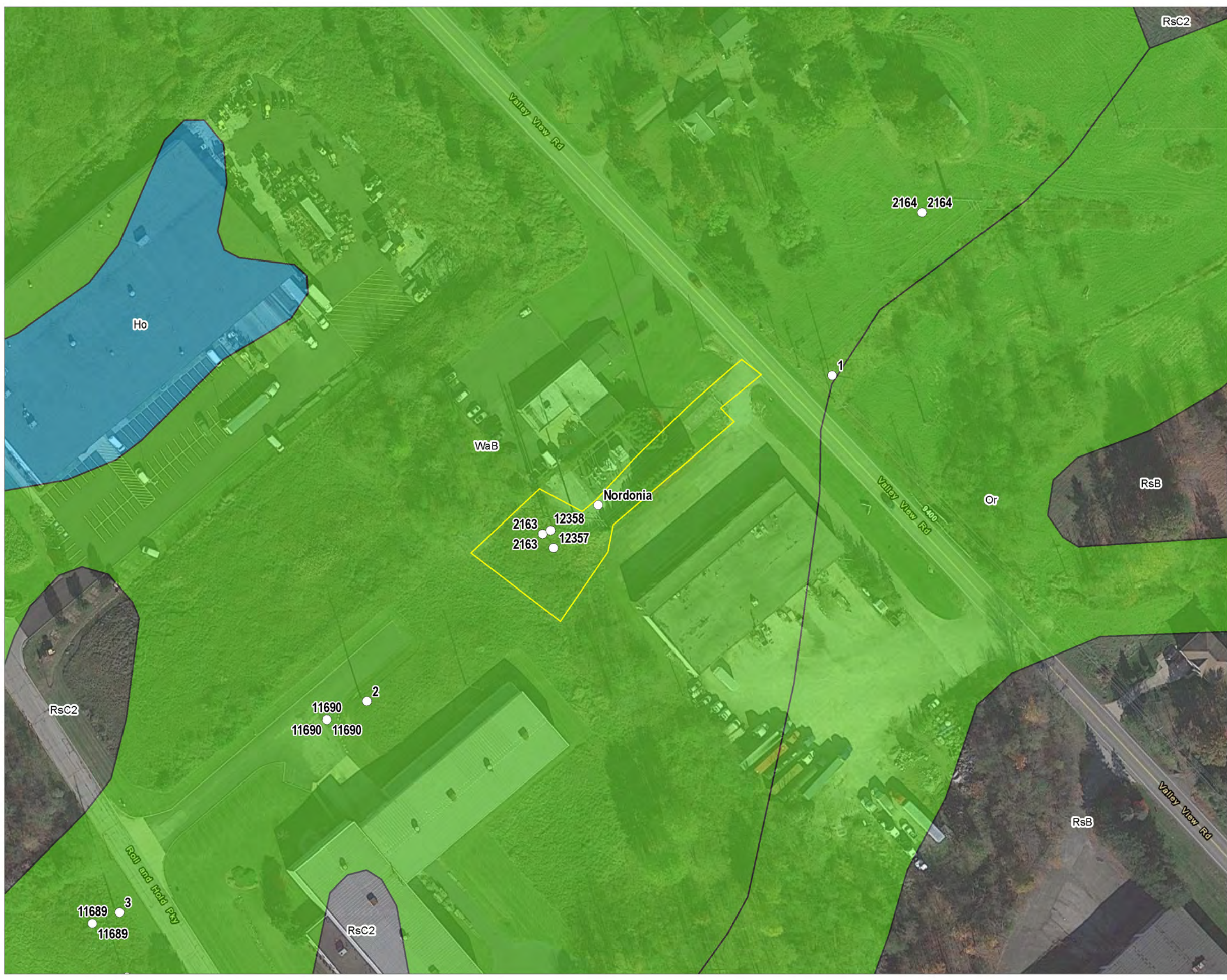


1:600
 1" = 50'



PROJECT FIRSTENERGY - CHAMBERLIN-WEST AKRON-138 KV SWITCH REPLACEMENT PROJECT SUMMIT COUNTY, OH	
TITLE: AERIAL MAP	
DRAWN BY: M. OPEL	PROJ. NO.: 429847.0022.0036
CHECKED BY: J. SLABE	FIGURE 2
APPROVED BY: B. FALKINBURG	
DATE: JULY 2023	
1382 WEST NINTH STREET SUITE 400 CLEVELAND, OH 44113 PHONE: 216-344-3072	
FILE:	WDR.aprx

Coordinate System: NAD 1983 StatePlane Ohio North FIPS 3401 Feet; Map Rotation: 0
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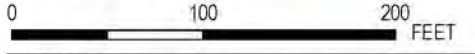


- PROJECT STUDY AREA
- EXISTING STRUCTURE
- HYDRIC SOIL
- NON-HYDRIC W/ HYDRIC INCLUSIONS SOIL
- NON-HYDRIC SOIL

BASE MAP: GOOGLE MAPS
 DATA SOURCES: SOILS DATA ACQUIRED FROM USDA/NRCS SSURGO DATABASE

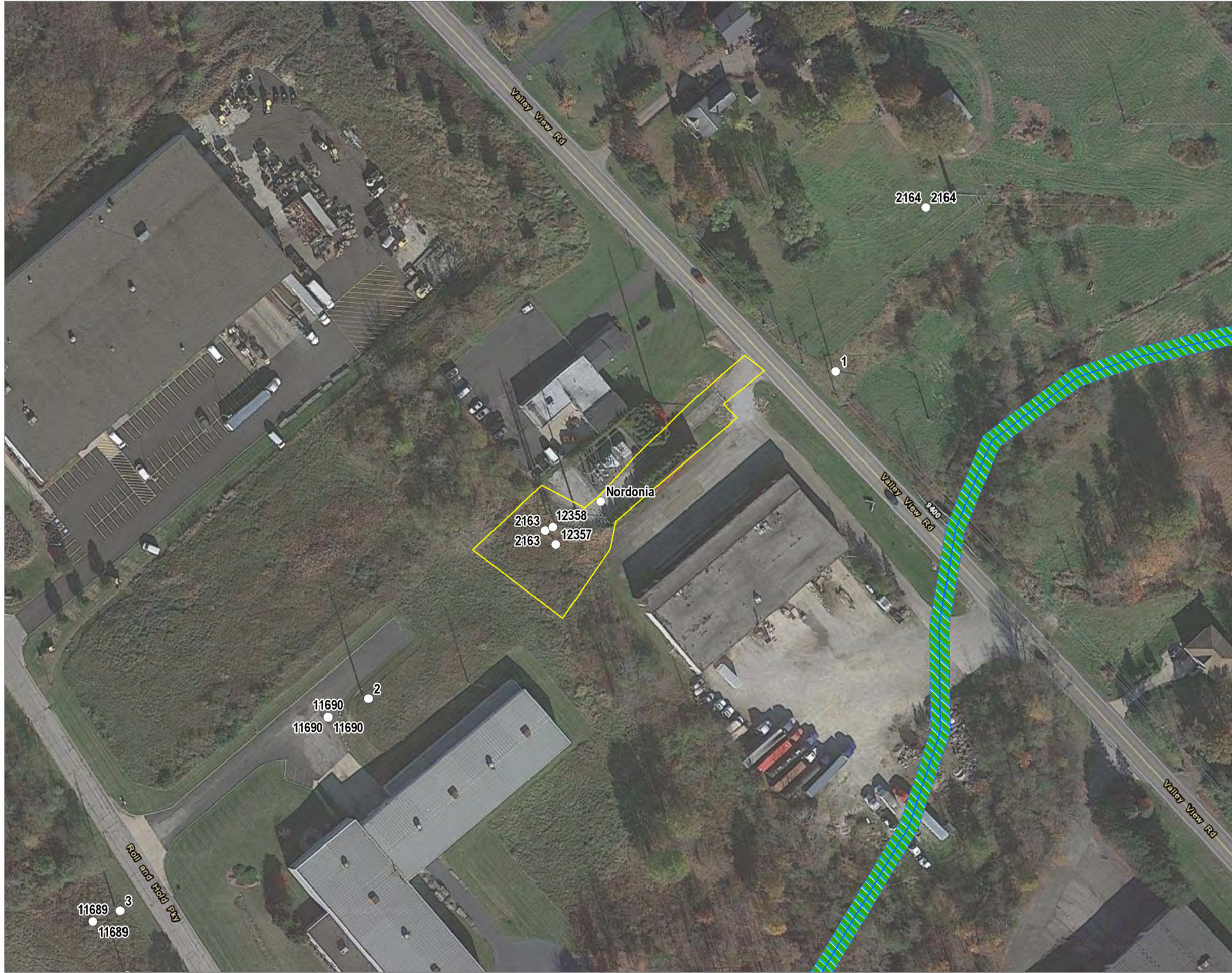


1:1,200
 1" = 100'



PROJECT FIRSTENERGY - CHAMBERLIN-WEST AKRON-138 KV SWITCH REPLACEMENT PROJECT SUMMIT COUNTY, OH	
TITLE: SOILS MAP	
DRAWN BY: M. OPEL	PROJ. NO.: 429847.0022.0036
CHECKED BY: M. WHITACRE	FIGURE 3
APPROVED BY: B. FALKINBURG	
DATE: NOVEMBER 2023	
1382 WEST NINTH STREET SUITE 400 CLEVELAND, OH 44113 PHONE: 216-344-3072	
FILE:	WDR.aprx

Coordinate System: NAD 1983 StatePlane Ohio North FIPS 3401 Feet; Map Rotation: 0
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- PROJECT STUDY AREA
- EXISTING STRUCTURE
- NATIONAL HYDROGRAPHY DATASET (NHD) STREAM
- NATIONAL WETLANDS INVENTORY (NWI) FEATURE
- 100-YEAR FLOOD ZONE

BASE MAP: GOOGLE MAPS.
 DATA SOURCES: WETLAND DATA ACQUIRED FROM U.S. FISH & WILDLIFE SERVICE, NATIONAL WETLANDS INVENTORY (NWI); STREAM DATA ACQUIRED FROM USGS, NATIONAL HYDROGRAPHY DATASET (NHD); FLOOD DATA ACQUIRED FROM FEMA, NATIONAL FLOOD HAZARD LAYER (NFHL).



1:1,200
 1" = 100'



PROJECT: **FIRSTENERGY - CHAMBERLIN-WEST AKRON-138 KV SWITCH REPLACEMENT PROJECT**
 SUMMIT COUNTY, OH

TITLE: **NHD, NWI AND FEMA FLOODPLAIN MAP**

DRAWN BY: M. OPEL	PROJ. NO.: 429847 0022 0036
CHECKED BY: M. WHITACRE	FIGURE 4
APPROVED BY: B. FALKINBURG	
DATE: NOVEMBER 2023	

1382 WEST NINTH STREET
 SUITE 400
 CLEVELAND, OH 44113
 PHONE: 216-344-3072

FILE: WDR.aprx

Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet; Map Rotation: 0
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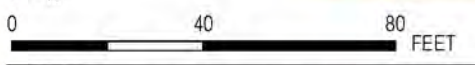


- PROJECT STUDY AREA
- EXISTING STRUCTURE
- PEM WETLAND
- WETLAND CONTINUES
- WETLAND DATA POINT
- UPLAND DATA POINT

BASE MAP: GOOGLE MAPS.
 DATA SOURCES: TRC WETLAND DELINEATION COMPLETED JULY 21, 2023.

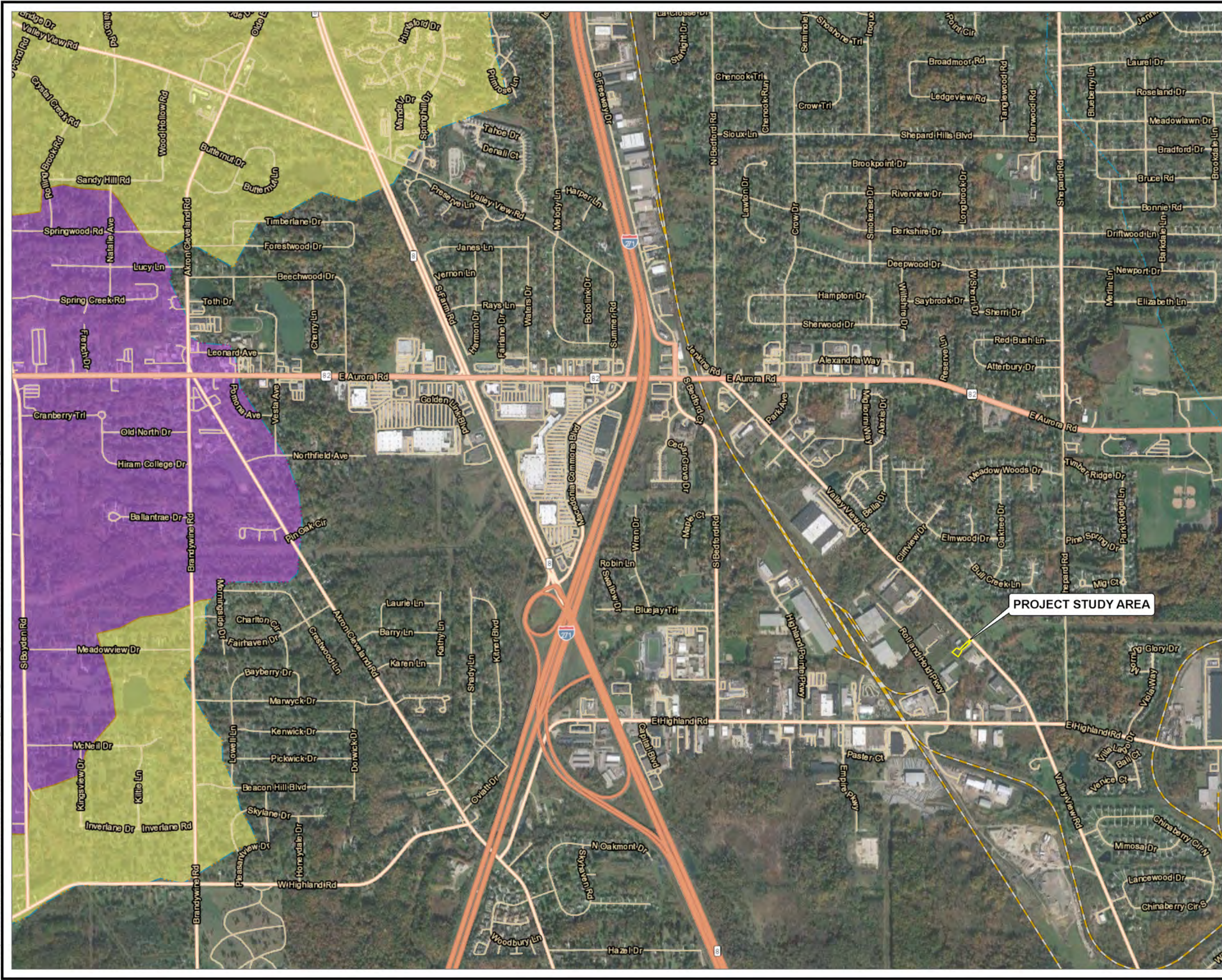


1:480
 1" = 40'



PROJECT FIRSTENERGY - CHAMBERLIN-WEST AKRON-138 KV SWITCH REPLACEMENT PROJECT SUMMIT COUNTY, OH	
TITLE: DELINEATED RESOURCES MAP	
DRAWN BY: M. OPEL	PROJ. NO.: 429847 0022 0036
CHECKED BY: M. WHITACRE	FIGURE 5
APPROVED BY: B. FALKINBURG	
DATE: JULY 2023	
1382 WEST NINTH STREET SUITE 400 CLEVELAND, OH 44113 PHONE: 216-344-3072	
FILE:	WDR.aprx

Coordinate System: NAD 1983 StatePlane Ohio North FIPS 3401 Feet; Map Rotation: 0
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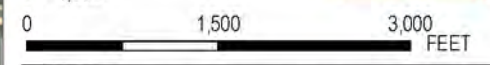
- PROJECT STUDY AREA
- OHIO EPA 401 WATER QUALITY CERTIFICATION FOR NATIONWIDE PERMIT ELIGIBILITY
- INELIGIBLE
- POSSIBLY ELIGIBLE
- ELIGIBLE

BASE MAP: GOOGLE MAPS.
 DATA SOURCES: NATIONWIDE PERMITS STREAM DATA ACQUIRED FROM THE OHIO EPA.

PROJECT STUDY AREA



1:18,000
 1" = 1,500'



PROJECT FIRSTENERGY - CHAMBERLIN-WEST AKRON-138 KV SWITCH REPLACEMENT PROJECT SUMMIT COUNTY, OH	
TITLE: NATIONWIDE PERMITS STREAM ELIGIBILITY MAP	
DRAWN BY: M. OPEL	PROJ. NO.: 429847.0022.0036
CHECKED BY: M. WHITACRE	FIGURE 6
APPROVED BY: B. FALKINBURG	
DATE: NOVEMBER 2023	
1382 WEST NINTH STREET SUITE 400 CLEVELAND, OH 44113 PHONE: 216-344-3072	
FILE:	WDR.aprx

Appendix B

Photographic Record

Client Name: FirstEnergy	Site Location: City of Macedonia, Summit County, Ohio	Project No.: 429847.0022.0036
------------------------------------	---	---

Photo No. 1.

Photo Date:
7/21/2023

Description:
Wetland W-MAW-1,
facing north.



Photo No. 2.

Photo Date:
7/21/2023

Description:
Wetland W-MAW-1,
facing east.



Client Name: FirstEnergy	Site Location: City of Macedonia, Summit County, Ohio	Project No.: 429847.0022.0036
------------------------------------	---	---

Photo No. 3.

Photo Date:
7/21/2023

Description:
Wetland W-MAW-1,
facing south.



Photo No. 4.

Photo Date:
7/21/2023

Description:
Wetland W-MAW-1,
facing west.



Client Name: FirstEnergy	Site Location: City of Macedonia, Summit County, Ohio	Project No.: 429847.0022.0036
------------------------------------	---	---

Photo No. 5.

Photo Date:
7/21/2023

Description:
Representative photo facing east toward Wetland W-MAW-1.



Photo No. 6.

Photo Date:
7/21/2023

Description:
Representative photo facing west toward Wetland W-MAW-1.



Client Name: FirstEnergy	Site Location: City of Macedonia, Summit County, Ohio	Project No.: 429847.0022.0036
------------------------------------	---	---

Photo No. 7.

Photo Date:
7/21/2023

Description:

Representative photo of upland habitat within Project Study Area, facing west.



Photo No. 8.

Photo Date:
7/21/2023

Description:

Representative photo of upland habitat within Project Study Area, facing south.



Client Name: FirstEnergy	Site Location: City of Macedonia, Summit County, Ohio	Project No.: 429847.0022.0036
------------------------------------	---	---

Photo No. 9.

Photo Date:
7/21/2023

Description:
Large rock fill located within Wetland W-MAW-1.



Photo No. 10.

Photo Date:
7/21/2023

Description:
Asphalt fill located within the southern extent of Wetland W-MAW-1.



Appendix C

Data Forms



**USACE Wetland Determination Data Forms – Northcentral and
Northeast Region**

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Chamberlin-West Akron City/County: Macedonia, Summit County Sampling Date: 2023-7-21
 Applicant/Owner: FirstEnergy State: OH Sampling Point: W-MAW-01_PEM-1
 Investigator(s): Michael Whitacre Section, Township, Range: NA
 Landform (hillslope, terrace, etc): Flat Local relief (concave, convex, none): Concave Slope (%): 0 to 1
 Subregion (LRR or MLRA): MLRA 139 of LRR R Lat: 41.302064 Long: -81.495448 Datum: WGS84
 Soil Map Unit Name: Wadsworth silt loam, 2 to 6 percent slopes NWI Classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>W-MAW-01</u>
Remarks: (Explain alternative procedures here or in a separate report.) Coverture is PEM. Based on the presence of all three parameters, this area is a wetland.	

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators (minimum of one is required; check all that apply)</p> <table style="width:100%;"> <tr> <td><input type="checkbox"/> Surface Water (A1)</td> <td><input checked="" type="checkbox"/> Water-Stained Leaves (B9)</td> </tr> <tr> <td><input type="checkbox"/> High Water Table (A2)</td> <td><input type="checkbox"/> Aquatic Fauna (B13)</td> </tr> <tr> <td><input type="checkbox"/> Saturation (A3)</td> <td><input type="checkbox"/> Marl Deposits (B15)</td> </tr> <tr> <td><input type="checkbox"/> Water Marks (B1)</td> <td><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td><input type="checkbox"/> Sediment Deposits (B2)</td> <td><input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)</td> </tr> <tr> <td><input type="checkbox"/> Drift Deposits (B3)</td> <td><input type="checkbox"/> Presence of Reduced Iron (C4)</td> </tr> <tr> <td><input type="checkbox"/> Algal Mat or Crust (B4)</td> <td><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td><input checked="" type="checkbox"/> Iron Deposits (B5)</td> <td><input type="checkbox"/> Thin Muck Surface (C7)</td> </tr> <tr> <td><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</td> <td><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> <tr> <td><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</td> <td></td> </tr> </table>	<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<p>Secondary Indicators (minimum of two required)</p> <table style="width:100%;"> <tr><td><input type="checkbox"/> Surface Soil Cracks (B6)</td></tr> <tr><td><input type="checkbox"/> Drainage Patterns (B10)</td></tr> <tr><td><input type="checkbox"/> Moss Trim Lines (B16)</td></tr> <tr><td><input type="checkbox"/> Dry-Season Water Table (C2)</td></tr> <tr><td><input type="checkbox"/> Crayfish Burrows (C8)</td></tr> <tr><td><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</td></tr> <tr><td><input type="checkbox"/> Stunted or Stressed Plants (D1)</td></tr> <tr><td><input type="checkbox"/> Geomorphic Position (D2)</td></tr> <tr><td><input type="checkbox"/> Shallow Aquitard (D3)</td></tr> <tr><td><input type="checkbox"/> Microtopographic Relief (D4)</td></tr> <tr><td><input checked="" type="checkbox"/> FAC-Neutral Test (D5)</td></tr> </table>	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard (D3)	<input type="checkbox"/> Microtopographic Relief (D4)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)																															
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)																															
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)																															
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)																															
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)																															
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)																															
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)																															
<input checked="" type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)																															
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)																															
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)																																
<input type="checkbox"/> Surface Soil Cracks (B6)																																
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<input type="checkbox"/> Moss Trim Lines (B16)																																
<input type="checkbox"/> Dry-Season Water Table (C2)																																
<input type="checkbox"/> Crayfish Burrows (C8)																																
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)																																
<input type="checkbox"/> Stunted or Stressed Plants (D1)																																
<input type="checkbox"/> Geomorphic Position (D2)																																
<input type="checkbox"/> Shallow Aquitard (D3)																																
<input type="checkbox"/> Microtopographic Relief (D4)																																
<input checked="" type="checkbox"/> FAC-Neutral Test (D5)																																
<p>Field Observations:</p> <table style="width:100%;"> <tr> <td>Surface Water Present?</td> <td>Yes <input type="checkbox"/></td> <td>No <input checked="" type="checkbox"/></td> <td>Depth (inches): <input type="text"/></td> </tr> <tr> <td>Water Table Present?</td> <td>Yes <input type="checkbox"/></td> <td>No <input checked="" type="checkbox"/></td> <td>Depth (inches): <input type="text"/></td> </tr> <tr> <td>Saturation Present? (includes capillary fringe)</td> <td>Yes <input type="checkbox"/></td> <td>No <input checked="" type="checkbox"/></td> <td>Depth (inches): <input type="text"/></td> </tr> </table>	Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>	Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>	Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>	<p>Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>																			
Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>																													
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>																													
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>																													
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:																																
Remarks: The criterion for wetland hydrology is met.																																

VEGETATION – Use scientific names of plants.

Sampling Point: W-MAW-01_PEM-1

	Absolute % Cover	Dominant Species?	Indicator Status															
Tree Stratum (Plot size: <u>30 ft radius</u>)																		
1.																		
2.																		
3.																		
4.																		
5.																		
6.																		
7.																		
	0	= Total Cover																
Sapling/Shrub Stratum (Plot size: <u>15 ft radius</u>)																		
1.																		
2.																		
3.																		
4.																		
5.																		
6.																		
7.																		
	0	= Total Cover																
Herb Stratum (Plot size: <u>5 ft radius</u>)																		
1.	80	Yes	FACW															
2.	15	No	FACW															
3.	5	No	FACW															
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Remarks: (Include photo numbers here or on a separate sheet.) The criterion for hydrophytic vegetation is met.																		

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 to 5	10YR 5/2	98	10YR 5/8	2	C	PL	Silty Clay	
5 to 20	2.5Y 6/2	70	10YR 5/8	30	C	M	Sandy Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) **(LRR R, MLRA 149B)**

- Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- Loamy Mucky Mineral (F1) **(LRR K, L)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- Coast Prairie Redox (A16) **(LRR K, L, R)**
- 5 cm Muck Peat or Peat (S3) **(LRR K, L, R)**
- Dark Surface (S7) **(LRR K, L)**
- Polyvalue Below Surface (S8) **(LRR K, L)**
- Thin Dark Surface (S9) **(LRR K, L)**
- Iron-Manganese Masses (F12) **(LRR K, L, R)**
- Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

The criterion for hydric soil is met.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Chamberlin-West Akron City/County: Macedonia, Summit County Sampling Date: 2023-7-21
 Applicant/Owner: FirstEnergy State: OH Sampling Point: W-MAW-01_UPL-2
 Investigator(s): Michael Whitacre Section, Township, Range: NA
 Landform (hillslope, terrace, etc): Knob Local relief (concave, convex, none): Convex Slope (%): 1 to 10
 Subregion (LRR or MLRA): MLRA 139 of LRR R Lat: 41.301877 Long: -81.495348 Datum: WGS84
 Soil Map Unit Name: Wadsworth silt loam, 2 to 6 percent slopes NWI Classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Covertypes is UPL.	

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <table style="width:100%; border: none;"> <tr> <td><input type="checkbox"/> Surface Water (A1)</td> <td><input type="checkbox"/> Water-Stained Leaves (B9)</td> </tr> <tr> <td><input type="checkbox"/> High Water Table (A2)</td> <td><input type="checkbox"/> Aquatic Fauna (B13)</td> </tr> <tr> <td><input type="checkbox"/> Saturation (A3)</td> <td><input type="checkbox"/> Marl Deposits (B15)</td> </tr> <tr> <td><input type="checkbox"/> Water Marks (B1)</td> <td><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td><input type="checkbox"/> Sediment Deposits (B2)</td> <td><input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)</td> </tr> <tr> <td><input type="checkbox"/> Drift Deposits (B3)</td> <td><input type="checkbox"/> Presence of Reduced Iron (C4)</td> </tr> <tr> <td><input type="checkbox"/> Algal Mat or Crust (B4)</td> <td><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td><input type="checkbox"/> Iron Deposits (B5)</td> <td><input type="checkbox"/> Thin Muck Surface (C7)</td> </tr> <tr> <td><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</td> <td><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> <tr> <td><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</td> <td></td> </tr> </table>	<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<p><u>Secondary Indicators (minimum of two required)</u></p> <table style="width:100%; border: none;"> <tr><td><input type="checkbox"/> Surface Soil Cracks (B6)</td></tr> <tr><td><input type="checkbox"/> Drainage Patterns (B10)</td></tr> <tr><td><input type="checkbox"/> Moss Trim Lines (B16)</td></tr> <tr><td><input type="checkbox"/> Dry-Season Water Table (C2)</td></tr> <tr><td><input type="checkbox"/> Crayfish Burrows (C8)</td></tr> <tr><td><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</td></tr> <tr><td><input type="checkbox"/> Stunted or Stressed Plants (D1)</td></tr> <tr><td><input type="checkbox"/> Geomorphic Position (D2)</td></tr> <tr><td><input type="checkbox"/> Shallow Aquitard (D3)</td></tr> <tr><td><input type="checkbox"/> Microtopographic Relief (D4)</td></tr> <tr><td><input type="checkbox"/> FAC-Neutral Test (D5)</td></tr> </table>	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard (D3)	<input type="checkbox"/> Microtopographic Relief (D4)	<input type="checkbox"/> FAC-Neutral Test (D5)
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:																																
Remarks: The criterion for wetland hydrology is not met.																																

VEGETATION – Use scientific names of plants.

Sampling Point: W-MAW-01_UPL-2

	Absolute % Cover	Dominant Species?	Indicator Status																																																																																																									
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Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u>																																																																																																												
Remarks: (Include photo numbers here or on a separate sheet.) The criterion for hydrophytic vegetation is not met.																																																																																																												

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 to 16	10YR 4/4	100					Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

- | | | |
|---|---|---|
| <p>Hydric Soil Indicators:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | <ul style="list-style-type: none"> <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) | <p>Indicators for Problematic Hydric Soils³:</p> <ul style="list-style-type: none"> <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) <input type="checkbox"/> 5 cm Muck Peat or Peat (S3) (LRR K, L, R) <input type="checkbox"/> Dark Surface (S7) (LRR K, L) <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) <input type="checkbox"/> Red Parent Material (F21) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks) |
|---|---|---|

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if present): Type: <u>Gravel</u> Depth (inches): <u>16</u></p>	<p>Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/></p>
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Remarks:
 The criterion for hydric soil is not met.

OEPA ORAM Field Forms

Background Information

Name: Michael Whitacre	
Date: 7/21/2023	
Affiliation: TRC Companies, Inc.	
Address: 1382 West Ninth Street, Suite 400	
Phone Number: 216-903-8527	
e-mail address: MWhitacre@TRCcompanies.com	
Name of Wetland: W-MAW-1	
Vegetation Communit(ies): PEM	
HGM Class(es): Depression (I)	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. See Report	
Lat/Long or UTM Coordinate	41.302064, -81.495448
USGS Quad Name	Twinsburg
County	Summit
Township	N/A
Section and Subsection	N/A
Hydrologic Unit Code	041100020404
Site Visit	7/21/2023
National Wetland Inventory Map	See Report
Ohio Wetland Inventory Map	See Report
Soil Survey	See Report
Delineation report/map	See Report

Name of Wetland: W-MAW-1	
Wetland Size (acres, hectares):	~0.40-acre
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See Report	
Comments, Narrative Discussion, Justification of Category Changes:	
Final score : 21	Category: 1

Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the “scoring boundaries” of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the “jurisdictional boundaries.” For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland’s jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. *Areas with a high degree of hydrologic interaction should be scored as a single wetland.* In determining a wetland’s scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	X	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human-induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	X	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	X	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	X	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		X
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	X	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <http://www.dnr.state.oh.us/dnap>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	<input checked="" type="radio"/> NO Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	<input checked="" type="radio"/> NO Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	<input checked="" type="radio"/> NO Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 wetland Go to Question 5	<input checked="" type="radio"/> NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	<input checked="" type="radio"/> NO Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 wetland Go to Question 7	<input checked="" type="radio"/> NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	<input checked="" type="radio"/> NO Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	<input checked="" type="radio"/> NO Go to Question 8b

8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a	NO Go to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	NO Go to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	NO Go to Question 10
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	NO Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	NO Complete Quantitative Rating

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	Oak Opening species	wet prairie species
<i>Lythrum salicaria</i>	<i>Zygadenus elegans</i> var. <i>glaucus</i>	<i>Calla palustris</i>	<i>Carex cryptolepis</i>	<i>Calamagrostis canadensis</i>
<i>Myriophyllum spicatum</i>	<i>Cacalia plantaginea</i>	<i>Carex atlantica</i> var. <i>capillacea</i>	<i>Carex lasiocarpa</i>	<i>Calamagrostis stricta</i>
<i>Najas minor</i>	<i>Carex flava</i>	<i>Carex echinata</i>	<i>Carex stricta</i>	<i>Carex atherodes</i>
<i>Phalaris arundinacea</i>	<i>Carex sterilis</i>	<i>Carex oligosperma</i>	<i>Cladium mariscoides</i>	<i>Carex buxbaumii</i>
<i>Phragmites australis</i>	<i>Carex stricta</i>	<i>Carex trisperma</i>	<i>Calamagrostis stricta</i>	<i>Carex pellita</i>
<i>Potamogeton crispus</i>	<i>Deschampsia caespitosa</i>	<i>Chamaedaphne calyculata</i>	<i>Calamagrostis canadensis</i>	<i>Carex sartwellii</i>
<i>Ranunculus ficaria</i>	<i>Eleocharis rostellata</i>	<i>Decodon verticillatus</i>	<i>Quercus palustris</i>	<i>Gentiana andrewsii</i>
<i>Rhamnus frangula</i>	<i>Eriophorum viridicarinarum</i>	<i>Eriophorum virginicum</i>		<i>Helianthus grosseserratus</i>
<i>Typha angustifolia</i>	<i>Gentianopsis</i> spp.	<i>Larix laricina</i>		<i>Liatris spicata</i>
<i>Typha xglauca</i>	<i>Lobelia kalmii</i>	<i>Nemopanthus mucronatus</i>		<i>Lysimachia quadriflora</i>
	<i>Parnassia glauca</i>	<i>Scheuchzeria palustris</i>		<i>Lythrum alatum</i>
	<i>Potentilla fruticosa</i>	<i>Sphagnum</i> spp.		<i>Pycnanthemum virginianum</i>
	<i>Rhamnus alnifolia</i>	<i>Vaccinium macrocarpon</i>		<i>Silphium terebinthinaceum</i>
	<i>Rhynchospora capillacea</i>	<i>Vaccinium corymbosum</i>		<i>Sorghastrum nutans</i>
	<i>Salix candida</i>	<i>Vaccinium oxycoccos</i>		<i>Spartina pectinata</i>
	<i>Salix myricoides</i>	<i>Woodwardia virginica</i>		<i>Solidago riddellii</i>
	<i>Salix serissima</i>	<i>Xyris difformis</i>		
	<i>Solidago ohioensis</i>			
	<i>Tofieldia glutinosa</i>			
	<i>Triglochin maritimum</i>			
	<i>Triglochin palustre</i>			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: First Energy, Chamberlin-West Akron **Rater(s):** Michael Whitacre **Date:** 2023-07-21

2	2
max 6 pts.	subtotal

Metric 1. Wetland Area (size).

RESOURCE ID: W-MAW-01
TYPE: PEM
Continues Offsite? yes

Select one size class and assign score.

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

4	6
max 14 pts.	subtotal

Metric 2. Upland buffers and surrounding land use.

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

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

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

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

6	12
max 30 pts.	subtotal

Metric 3. Hydrology.

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

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

3b. Connectivity. Score all that apply.

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

3c. Maximum water depth. Select only one and assign score.

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

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

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

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

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

Check all disturbances observed	
<input type="checkbox"/> ditch	<input type="checkbox"/> point source (nonstormwater)
<input checked="" type="checkbox"/> tile	<input checked="" type="checkbox"/> filling/grading
<input type="checkbox"/> dike	<input type="checkbox"/> road bed/RR track
<input type="checkbox"/> weir	<input type="checkbox"/> dredging
<input type="checkbox"/> stormwater input	<input type="checkbox"/> other: _____

6	18
max 20 pts.	subtotal

Metric 4. Habitat Alteration and Development.

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

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

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

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

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

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

Check all disturbances observed	
<input checked="" type="checkbox"/> mowing	<input checked="" type="checkbox"/> shrub/sapling removal
<input type="checkbox"/> grazing	<input type="checkbox"/> herbaceous/aquatic bed removal
<input type="checkbox"/> clearcutting	<input type="checkbox"/> sedimentation
<input type="checkbox"/> selective cutting	<input type="checkbox"/> dredging
<input type="checkbox"/> woody debris removal	<input type="checkbox"/> farming
<input type="checkbox"/> toxic pollutants	<input type="checkbox"/> nutrient enrichment

18
subtotal this page

Site: First Energy, Chamberlin-West Akron **Rater(s):** Michael Whitacre **Date:** 2023-07-21

18

subtotal first page

0 **18**

max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

3 **21**

max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- 0 Aquatic bed
- 1 Emergent
- 0 Shrub
- 1 Forest
- 0 Mudflats
- 0 Open water
- Other: _____

6b. Horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

Invasives present:
narrow-leaved cattail, phragmites

21 **Category 1**

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1. Critical Habitat	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 4. Significant bird habitat	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 1.
	Question 6. Bogs	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 7. Fens	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 8a. Old Growth Forest	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES <input type="radio"/> NO <input type="radio"/>	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES <input type="radio"/> NO <input type="radio"/>	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3
Question 11. Relict Wet Prairies	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, evaluate for Category 3; may also be 1 or 2.	
Quantitative Rating	Metric 1. Size	2	
	Metric 2. Buffers and surrounding land use	4	
	Metric 3. Hydrology	6	
	Metric 4. Habitat	6	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersions, microtopography	3	
	TOTAL SCORE	21	Category based on score breakpoints 1

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	<input checked="" type="radio"/> NO	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold (<i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	<input checked="" type="radio"/> NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	<input checked="" type="radio"/> NO	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold (<i>including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	<input checked="" type="radio"/> YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	<input checked="" type="radio"/> NO	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	<input checked="" type="radio"/> NO	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category

Choose one	<input checked="" type="radio"/> Category 1	<input type="radio"/> Category 2	<input type="radio"/> Category 3
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End of Ohio Rapid Assessment Method for Wetlands.