AMERICAN TRANSMISSION SYSTEMS, INCORPORATED
A FIRSTENERGY COMPANY

CONSTRUCTION NOTICE

DOWLING-OPTIMUS 138 kV NO. 1 AND NO. 2 TRANSMISSION LINES PROJECT

OPSB CASE NO.: 25-0040-EL-BNR

February 27, 2025

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

CONSTRUCTION NOTICE
DOWLING-OPTIMUS 138 kV No. 1 AND N.2 TRANSMISSION LINES PROJECT

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

4906-6-05: ACCELERATED APLLICATION REQUIREMENTS

4906-6-05: Name and Reference Number

Name:	Dowling-Optimus 138 kV No. 1 and No.2 Transmission Lines Project ("Project")
Reference Number:	3365 and 3366

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

American Transmission Systems, Incorporated ("ATSI") and The Toledo Edison Company, FirstEnergy companies, propose to construct (2) new 138 kV transmission lines, approximately 0.7 mile each, from the existing Dowling Substation to a new customer substation, which will be named Optimus Substation. The Project will require installation of total twenty-three (23) steel structures on concrete foundations, 12 structures for the Dowling-Optimus 138 kV No 1 Transmission Line and 11 structures for the Dowling-Optimus 138 kV No. 2 Transmission Line. The average structure height will be approximately 75 feet above ground.

The Project is in Middleton Township, Wood County, Ohio. The general location of the proposed Project is shown in Exhibit 1, a partial copy of a United States Geologic Survey Wood County, Ohio Quad Map. Exhibit 2 provides a partial copy of ESRI aerial imagery of the Project Area. The general layout is shown in Exhibit 3.

4906-6-05 (B)(1): Construction Notice Requirement

The Project meets the requirements for a Construction Notice application because the Project is within the types of projects defined by Item (1)(d)(i) of the Application Requirement Matrix for Electric Power Transmission Lines, Appendix A of Adm.Code 4906-1-01. This item states:

> *(1) New construction, extension, or relocation of single or multiple circuit electric power transmission line(s), or upgrading existing transmission or distribution line(s) for operation at a higher transmission voltage, as follows:*
>
> *(d) Line(s) primarily needed to attract or meet the requirements of a specific customer or customers, as follows:*
>
> *(i) The line is completely on property owned by the specific customer or the applicant.*

The proposed Project involves construction of two (2) approximately 0.7-mile taps consisting of twenty-three (23) new structures. The new structures will be located only on property owned by ATSI or the customer.

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

The Project is needed to provide four new 138 kV retail delivery points to Liames, LLC ("Customer"). The Customer requested the proposed delivery points for electric service to two new data centers. The proposed load addition is approximately 220 MVA. The Project is not part of a larger project/initiative but is needed to provide the requested new 138 kV retail delivery points.

The proposed Project will consist of two new 0.7-mile 138 kV lines to be constructed from Dowling Substation that will split into four feeds towards the two new Customer substations. There will be two 138 kV feeds leading to two 138 kV – 34.5 kV transformers for each Customer substation. A 138 kV revenue meter will be installed on each feed to the Customer (four total). All work mentioned above is referred to collectively as the "direct connection facilities." The Project will be designed in accordance with the FirstEnergy

("FE") "Requirements for Transmission Connected Facilities" document[1] Figure 1B. In addition to the two 138 kV feeds, ATSI will be installing additional buswork and breakers inside Dowling Substation, but this work does not necessitate any fence line expansion and thus is not subject to OPSB jurisdiction.

The need for the proposed Project was presented at the November 17, 2023, Subregional Regional Transmission Expansion Plan ("RTEP") Committee – Western meeting. The solution for the proposed Project was presented at the February 15, 2024, Subregional RTEP Committee – Western meeting. The PJM SRRTEP-Western presentation slides are included as Exhibit 4.

ATSI and PJM Transmission Planning evaluated the proposed load addition and did not identify any ATSI or PJM Planning Criteria violations attributable to the load addition. Therefore, no transmission system upgrades are required as a result of the proposed load addition, other than the required direct connection facilities necessary to provide electric service to the Customer. PJM assigned the Project supplemental upgrade identification number s3361.1.

4609-6-05 (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. 2024 Long-Term Forecast Report. This map was submitted to the PUCO in Case No. 24-0504-EL-FOR under Rule 4901:5-5:04 (C)(2)(b) of the Ohio Administrative Code. The map is incorporated by reference only. The Project is included on page 66 ATSI's LTFR filed in 2024. The general location and layout of the Project area is shown in Exhibits 1 and 2.

[1] https://firstenergycorp.com/content/dam/feconnect/files/wholesale/Requirements-for-Transmission-Connected-Facilities.pdf

4609-6-05 (B)(4): Alternatives Considered

Due to the nature of the Project and the specific customer need, there are no reasonable or practical alternatives to the proposed Project.

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

ATSI's manager of External Affairs will advise local officials of features and the status of the proposed Project as necessary. ATSI will maintain a Project website and will continue to work with interested stakeholders concerning the proposed Project. The website address is below:
https://www.firstenergycorp.com/about/transmission_projects/ohio.html .

During all phases of this Project, ATSI will maintain the transmission projects hotline at 1-888-311-4737 or via email at: transmissionprojects@firstenergycorp.com where the public may ask questions or leave comments on the Project for ATSI.

4609-6-05 (B)(6): Construction Schedule

The construction for this Project is expected to begin as early as June 3, 2025, and be completed by November 25, 2025.

4609-6-05 (B)(7): Area Map

Exhibit 1 depicts the general location of the Project. This Exhibit provides a partial copy of the United States Geologic Survey, Wood 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 on new right-of-way ("ROW") within property (Parcel No. J37-611-180000001000) owned by ATSI and property (Parcel Nos. J36-611-190000005000 and J36-611-190000002500) owned by Liames LLC, the Customer. Liames, LLC will grant ATSI an easement for the transmission facilities across its property.

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

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

The transmission line construction will have the following characteristics:

Voltage:	138 kV
Conductors:	795 kcmil 26/7 ACSR
Static Wire:	7#8 Alumoweld and AFL DNO-7122 OPGW
Insulators:	138 kV Porcelain and Polymer Insulators
ROW Width:	Ranging from 170 feet to 420 feet
Structure Type:	Exhibit 5-138 kV Single Steel Pole Switch Structure (Qty. 4) Exhibit 6-138 kV 3-Pole Steel Deadend Structure (Qty. 1) Exhibit 7-138 kV 3-Pole Steel Tap Structure (Qty. 1) Exhibit 8-138 kV Single Steel Pole Deadend Structure (Qty. 8) Exhibit 9-138 kV Single Pole Steel Tangent Structure (Qty. 8) Exhibit 10-138 kV Single Steel Pole Tap Structure (Qty. 1)

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

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 total cost for the proposed Project is $23,166,000. These costs will be allocated between ATSI, The Toledo Edison Company, and the Customer.

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

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

The Project is located in Middleton Township, Wood County, Ohio. The main land use around the Project area is agricultural. No significant changes or impacts to the current or future land use are anticipated as a result of this Project.

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

Agricultural land (primarily cultivated cropland) exists within the Project's Area of Potential Effect ("APE"), though the parcel is not designated as an Agricultural District.

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

As part of the investigation for this Construction Notice application, TRC Companies, Inc. ('TRC') submitted a request to the Ohio Historic Preservation Office ("SHPO") on behalf of ATSI to review and provide comments on November 6, 2024, for the Project Study Area (Area of Potential Effects or APE) with a one (1)-mile search radius. On December 6, 2024, SHPO replied to the request and the response is attached as Exhibit 11. SHPO concurred that the Project, as proposed, will not affect any historic properties or cultural resources. No further coordination is required unless the scope of work changes or new/additional archaeological deposits are discovered during construction.

The OHPO database includes a catalog of all historic properties listed in or eligible for listing in the National Register of Historic Places (NRHP), including districts, sites, building, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture. The file review revealed that there are no NRHP-listed above-ground historic resources, or Ohio Genealogical Society (OGS) cemeteries mapped within one (1)-mile of the Proposed Study Area. There have been two (2) official archaeological surveys conducted within one (1)-mile of the proposed Project. Of these, both surveys directly overlap portions of the Project Study Area, including the existing substation area. One (1) archaeological site, a historic residential site that dates from the late nineteenth through twentieth centuries, was recorded by one (1) of the surveys 0.25-mile to the northeast.

The Limits of Disturbance (LOD) will be completely within the Study Area. All new infrastructure will be at or below the height of the tallest existing surrounding structures. All stream and wetland crossings will be done via timber matting, and all work will be contained within existing ROW.

No cultural resource studies are warranted for the project. 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.

The Project will not impact the viewshed of any potential historic properties. Additionally, due to prior anthropogenic disturbances, the Project has a low potential to encounter intact,

significant archaeological resources. The Project will have no adverse effect upon any cultural or archaeological resources.

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

Table 1 shows the list of governmental agency requirements for the Project.

Table 1. List of Government Agency Requirements

Ohio Environmental Protection Agency (OEPA)	General NPDES Construction Storm Water Permit OHC000006
Middleton Township	Right of Way Permit (Coordination)
Wood County Soil and Water Conservation District (SWCD)	SWPPP Review
Middletown Township and Wood County	Special Hauling Permit and Road Use Maintenance Agreement (RUMA) (Coordination)

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

As part of the investigation, ATSI retained TRC to conduct the necessary environmental surveys. TRC submitted a request to the Ohio Department of Natural Resources (ODNR) Office of Real Estate to conduct an Environmental Review. As part of the Environmental Review, the ODNR Office of Real Estate conducted a search of the ODNR Division of Wildlife's (DOW) Natural Heritage Database to research the presence of any endangered, threatened, or rare species within one (1) mile of the Project area. The ODNR's Office of Real Estate's response on November 27, 2024, indicated that there are no records of state and/or federally listed plants, animals, and communities located within a one-mile radius of the Project area. However, the Project is within the range of 10 state and/or federally listed animal species. A copy of ODNR's Office of Real Estate's response is included as Exhibit 12. A list of all endangered, threatened, and rare species, as identified by ODNR, within the range of the Project is provided in Table 2.

As part of the investigation, TRC also 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 November 8, 2024, is included as Exhibit 13.

The response indicated that due to the Project type, size, location, and the proposed implementation of seasonal tree cutting to avoid impacts to the Indiana bat (*Myotis sodalis*) and the northern long-eared bat (*Myotis septentrionalis*), no adverse effects are anticipated to any other federally endangered, threatened, or proposed species, or proposed or designated critical habitat.

Table 2. List of Endangered and Threatened Species within range of Project Area

Common Name	Scientific Name	Federal Listed Status	State Listed Status	Affected Habitat
Mammals				
Indiana Bat	*Myotis sodalis*	Endangered	Endangered	Trees, forests, caves, and caverns.
Little Brown Bat	*Myotis lucifugus*	N/A	Endangered	Trees, forests, caves, and caverns.
Northern Long-eared Bat	*Myotis septentrionalis*	Endangered	Endangered	Trees, forests, caves, and caverns.
Tricolored Bat	*Perimyotis subflavus*	N/A	Endangered	Trees, forests, caves, and caverns.
Mussel				
Pondhorn	*Uniomerus tetralasmus*	N/A	Threatened	Perennial streams.
Reptiles				
Kirtland's Snake	*Clonophis kirtlandii*	N/A	Threatened	Wet meadows and other wetlands.
Spotted Turtle	*Clemmys guttata*	N/A	Threatened	Fens, bogs and marshes, wet prairies, meadows, and pond edges.
Fish				
Western Banded Killifish	*Fundulus diaphananus menona*	N/A	Endangered	Perennial streams.
Greater Redhorse	*Moxostoma valenciennesi*	N/A	Threatened	Perennial streams.
Birds				
Northern Harrier	*Circus hudsonius*	N/A	Endangered	Large marshes and grasslands.

The response from ODNR, DOW indicated the Project is within the range of the federally and state endangered Indiana bat (*Myotis sodalis*and northern long-eared bat (*Myotis septentrionalis*), the state endangered little brown bat (*Myotis lucifugus*) and tricolored bat (*Perimyotis subflavus*). These bat species predominantly roost in trees behind loose, exfoliating bark, in crevices, and cavities, or in the leaves. These species are dependent on

the forest structure surrounding the roost trees. The DOW recommended a desktop bat hibernaculum assessment be completed for the Project, which TRC completed for FirstEnergy and submitted to ODNR for concurrence on December 13, 2024. ODNR responded on December 16, 2024, 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. Their concurrence can be found in Exhibit 12A.

The response from ODNR, DOW indicated that the Project is within the range of the pondhorn (*Uniomerus tetralasmus*) mussel, western banded killifish (*Fundulus diaphananus menona*) and the greater redhorse (*Moxostoma valenciennesi*). Since no in-water work is proposed in a perennial stream, this Project will not impact these species.

The response from ODNR, DOW also indicated that the Project is within the range of the Kirtland's snake (*Clonophis kirtlandii*) and the spotted turtle (*Clemmys guttata*). Due to the location, the type of habitat within the Project area, and the type of work proposed, this project is not likely to impact these species.

The Project is also within the range of the northern harrier (*Circus hudsonius*), a state endangered bird. Northern harriers often nest in loose colonies and hunt over grasslands. Due to the extensive surrounding agricultural land use and a lack of suitable habitat within the Project area, this species is not likely present, and impacts are not anticipated.

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

TRC conducted a wetland and stream delineation for the Project on December 5, 2024, as shown in Exhibit 14. The Project Study Area consists mainly of an existing substation and agricultural land use. Surface water delineation investigations were completed by TRC and Barge Design Solutions (Barge) on the parcels making up the Project Study Area. TRC conducted a surface water delineation on of the 26.05-acre northern parcel (J37-611-180000001000) and identified one (1) wetland (W-EKG-1). Barge identified one (1) wetland (WTL-4) within the southern portion of the Project Study Area, which is included in their Approved Jurisdictional Determination Request Package. No other regulated water resources were identified. During this investigation, TRC did not observe the presence of

any ODNR listed species due to the highly maintained nature of the utility right-of-way and surrounding agricultural land use.

The LOD will be completely within the Project Study Area. Access to install new structures will utilize timber matting and span bridges to avoid impacts to any potentially jurisdictional features. Nationwide Permit (NWP) 57 - Electric Utility Line and Telecommunications Activities (effective March 15, 2021, valid through March 14, 2026), authorizes the construction of access roads for the construction and maintenance of electric utility lines or telecommunication lines, including overhead lines and substations, in nontidal waters of the United States, provided the activity does not cause the loss of greater than 0.5-acre of waters of the United States. Nationwide Permit Regional General Conditions were reviewed regarding this Project.

If the scope of the Project changes to impact potentially jurisdictional features, it is TRC's understanding that this Project would fall under NWP 57. This Project is located within the USACE Buffalo Regulatory District, in Middleton Township, Wood County, Ohio. 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 (PCN). A PCN may be required if NWP 57 conditions are not met and/or thresholds are exceeded. Additionally, the Project is located within "Eligible" areas according to Ohio EPA's Stream Eligibility for the Nationwide Permit Program; however, Ohio EPA's 401 Water Quality Certification for NWP 57 is currently waived. No additional screening procedures are required for the Project regarding compliance with Ohio EPA's 401 Water Quality Certification. TRC's delineation technical memo and photographic record are included in Exhibit 14, and the Approved Jurisdictional Determination Request Package submitted to USACE by Barge (August 2023) is also included in Exhibit 14. In addition, a review of the National Conservation Easement Database (www.conservationeasement.us) revealed no conservation easements within the Project Study Area.

The Project work limits do not include any in-stream activities or encroach on any regulated flood plains based on a review of online FEMA Flood Insurance Rate Mapping.

4906-6-05 (B)(10)(g): Additional 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 Public Utilities Commission of Ohio (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 application is being provided concurrently to the following officials in Middleton Township and Wood County, Ohio.

Wood County %

Mr. Craig LaHote, President
Board of County Commissioners
One Courthouse Square, 5th Floor
Bowling Green, OH 43402
Commissioners@woodcountyohio.gov

Dr. Theodore Bowlus,
Vice President
Board of County Commissioners
One Courthouse Square, 5th Floor
Bowling Green, OH 43402
Commissioners@woodcountyohio.gov

Doris I. Herringshaw, Ed.D.,
Board of County Commissioners
One Courthouse Square, 5th Floor
Bowling Green, OH 43402
Commissioners@woodcountyohio.gov

John M. Musteric, P.E., P.S.
Wood County Engineer's Office
One Courthouse Square, 5th Floor
Bowling Green, OH 43402
engineer@woodcountyohio.gov

Mr. Dave Steiner, Director
Wood County Planning Commission
One Courthouse Square, 5th Floor
Bowling Green, OH 43402
wsteiner@co.wood.oh.us

Mr. Jim Carter, District Admin.
Wood County Soil & Water District
1616 E. Wooster Street, Suite 32
Bowling Green, OH 43402
jimcarter@woodswcd.com

Middleton Township

Mr. Mike Moulton, Trustee
Middleton Township
21745 N Dixie Highway
Bowling Green, OH 43402
mmoulton@middletontownship.com

Mr. Fred Vetter, Trustee
Middleton Township
21745 N Dixie Highway
Bowling Green, OH 43402
trustees@middletontownship.com

Mr. Donald Cromley, Trustee
Middleton Township
21745 N Dixie Highway
Bowling Green, OH 43402
dcromley@middletontownship.com

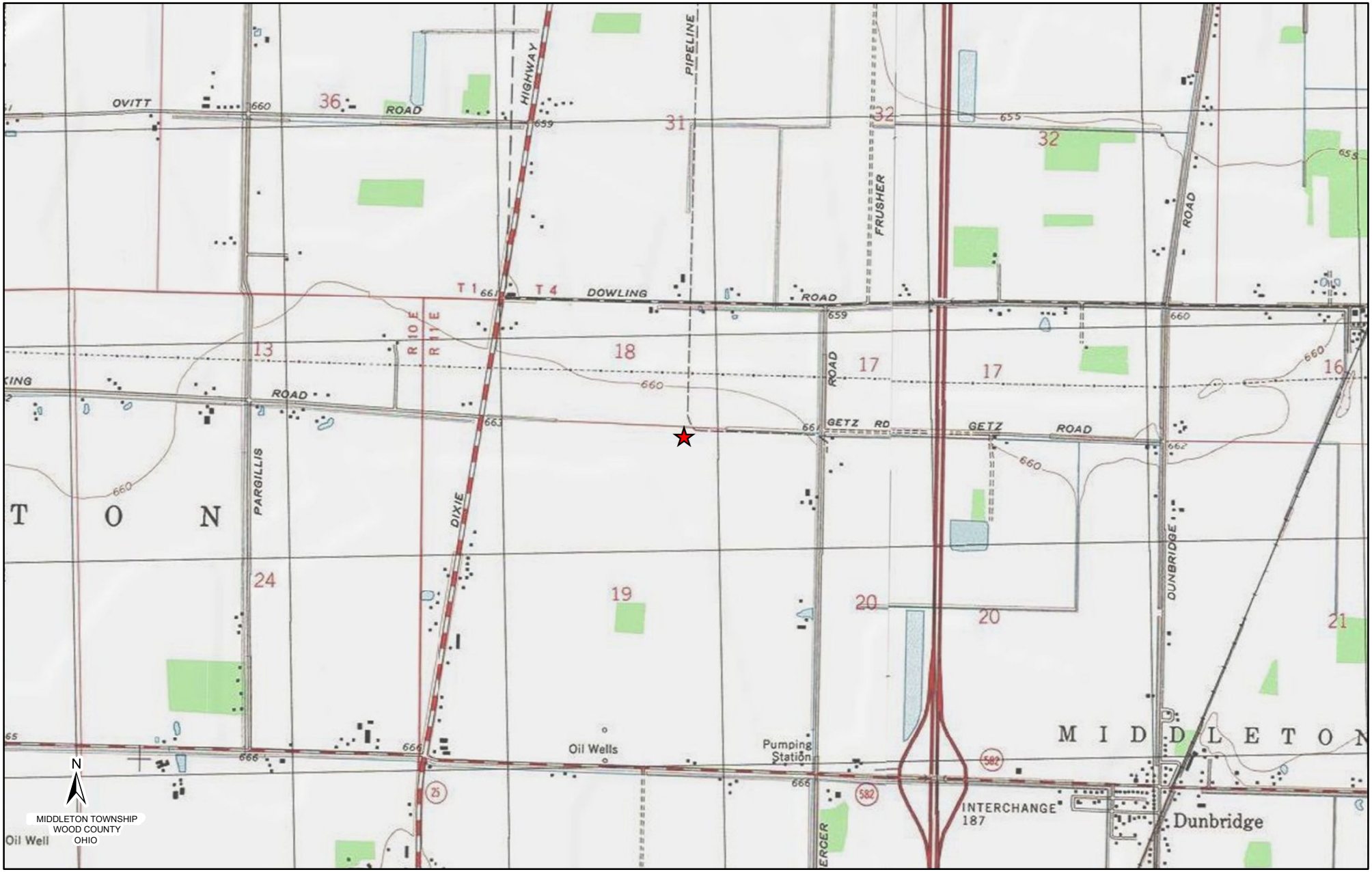
Ms. Laurie Limes, Fiscal Officer
Middleton Township
21745 N Dixie Highway
Bowling Green, OH 43402
fiscalofficer@middletontownship.com

Library

Mr. Michael Penrod, Director
Wood County District Library,
251 N. Main Street
Bowling Green, OH 43402
michaelpenrod@wcdpl.org

Per Adm.Code 4906-6-07(B), exemplar copies of the notice letters sent to local government officials and to the library have been included with this application as proof of compliance with requirements of Adm.Code 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 Adm.Code 4906-6-07(B), which requires ATSI to provide the OPSB with proof of compliance with Adm.Code 4906-6-07(A)(3).



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
Projection: Lambert Conformal Conic; Units: Foot US

EXHIBIT 1

ATSI®
American Transmission Systems, Inc.
a subsidiary of FirstEnergy Corp.

Dowling-Optimus138 kV No. 1 and No. 2 Transmission Lines Project

LEGEND:

Project Location

0 1,000 2,000 4,000

Feet

Reference:

USGS Topographical Overlay

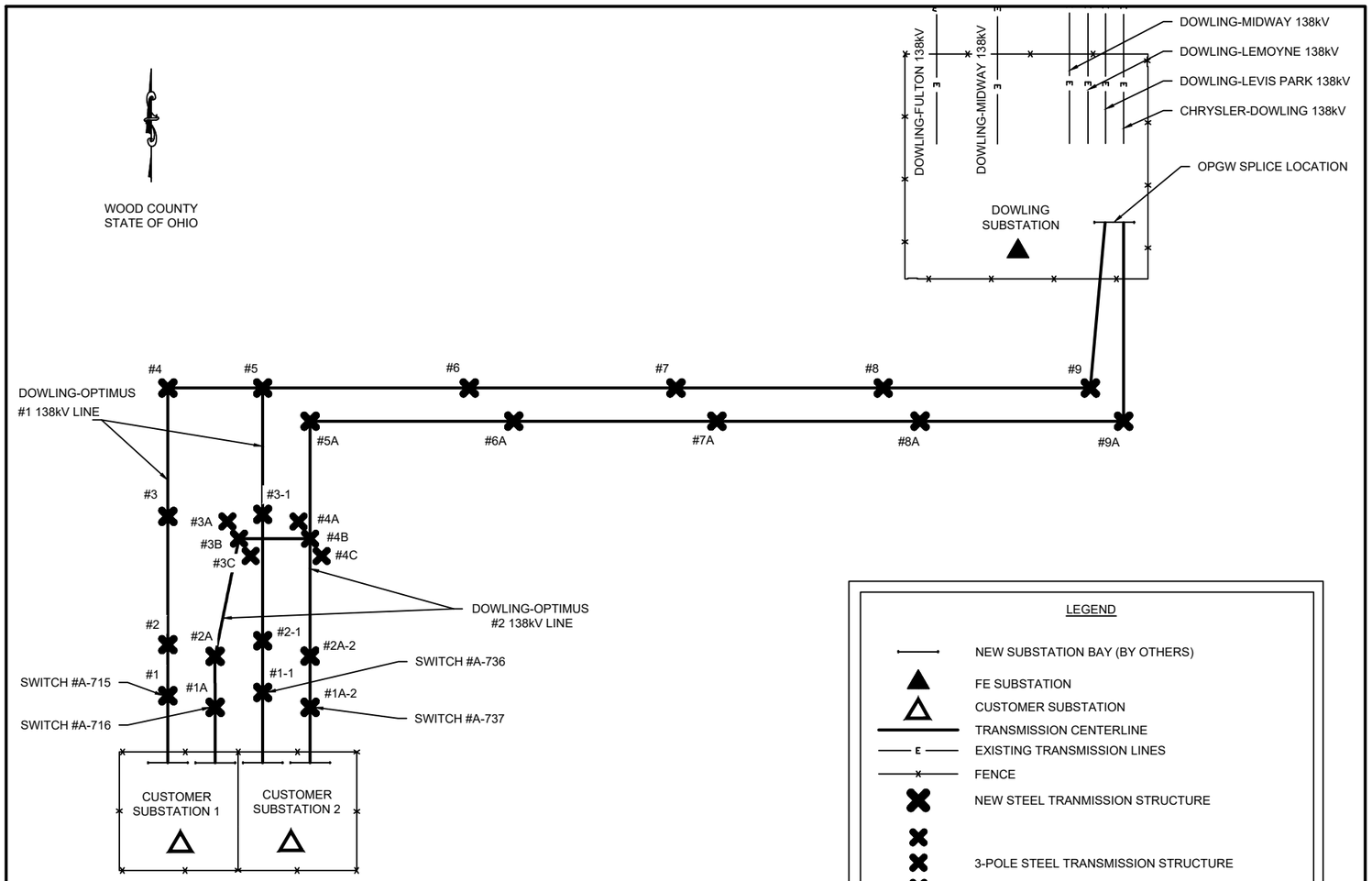
Coordinate System:

NAD 1983 StatePlane Ohio North FIPS 3401 Feet
Projection: Lambert Conformal Conic; Units: Foot US

EXHIBIT 2

ATSI®
American Transmission Systems, Inc.
a subsidiary of FirstEnergy Corp.

Dowling-Optimus138 kV No. 1 and No. 2 Transmission Lines Project



**PRELIMINARY -
NOT FOR CONSTRUCTION**

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

DOWLING-OPTIMUS 138 kV No. 1AND No. 2
TRANSMISSION LINES PROJECT

GENERAL LAYOUT

EXHIBIT 3

PAPER SIZE: 17X11

ATSI Transmission Zone M-3 Process
Dowling New Customer Connection

Need Number: ATSI-2023-023

Process Stage: Need Meeting – 11/17/2023

Project Driver(s):

Customer Service

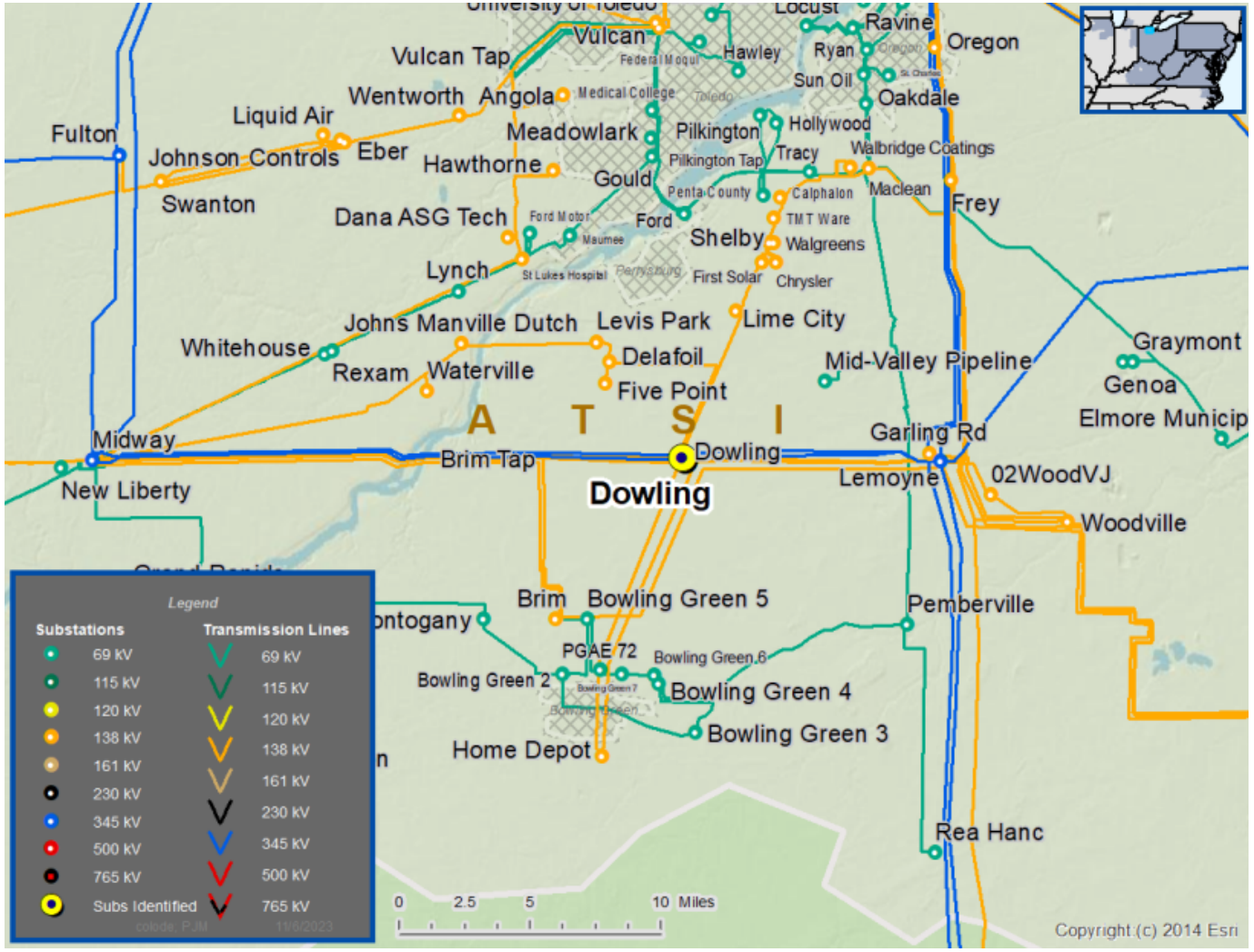
Specific Assumption Reference(s)

New customer connection request will be evaluated per FirstEnergy's "Requirements for Transmission Connected Facilities" document and "Transmission Planning Criteria" document.

Problem Statement

New Customer Connection - has requested a new 138 kV delivery point from the Dowling Substation. The anticipated load of the new customer connection is 220 MW.

Requested in-service date is 11/30/2025.



ATSI Transmission Zone M-3 Process
Dowling 138 kV Customer Connection

Need Number: ATSI-2023-044

Process Stage: Solution Meeting – 2/16/2024

Previously Presented: Need Meeting – 11/17/2023

Project Driver(s):

Customer Service

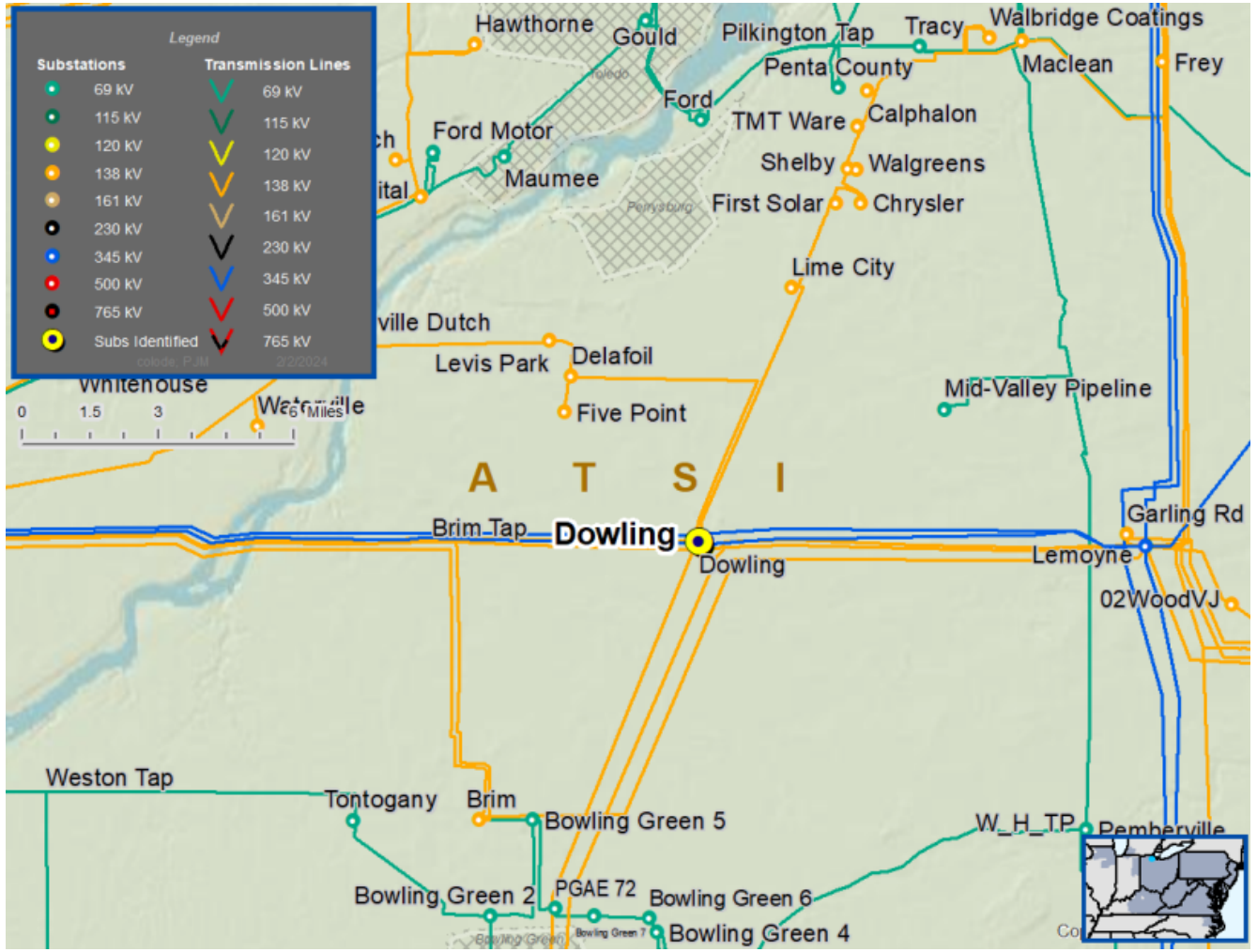
Specific Assumption Reference(s):

New customer connection request will be evaluated per FirstEnergy's "Requirements for Transmission Connected Facilities" document and "Transmission Planning Criteria" document.

Problem Statement:

New Customer Connection – A customer has requested a new 138 kV delivery point from the Dowling 138 kV Substation. The anticipated load of the new customer connection is 220 MW.

Requested in-service date is 11/30/2025.



ATSI Transmission Zone M-3 Process
Dowling 138 kV Customer Connection

Need Number: ATSI-2023-044

Process Stage: Solution Meeting – 2/16/2024

Previously Presented: Need Meeting – 11/17/2023

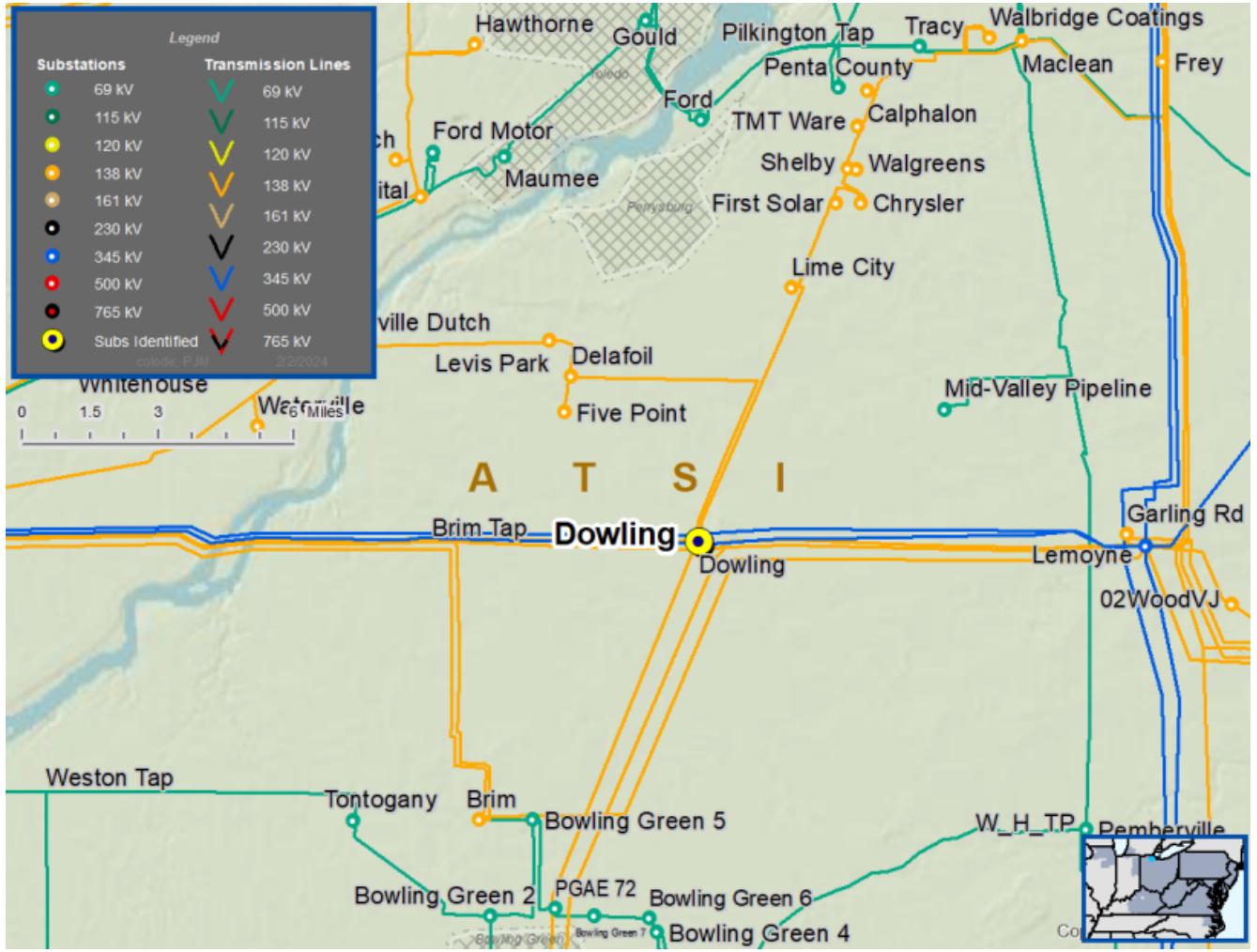
Proposed Solution:

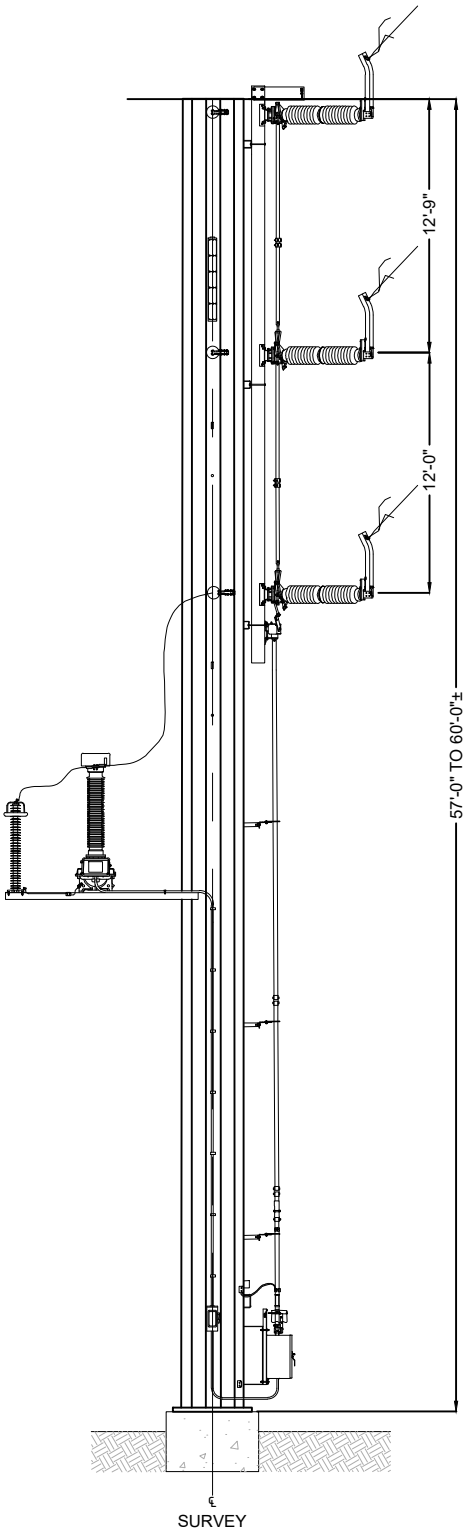
- Expand the existing Dowling Substation to a 12-breaker, breaker-and-a-half substation.
- Build two 138 kV lines, approximately 0.5 miles, from Dowling Substation to the customer substation.

Alternatives Considered:

- No other feasible alternatives due to customer's proximity to Dowling Substation and the magnitude of the load to be served.

Estimated Project Costs:	$10.3M
Project In-Service Date:	11/30/2025
Status:	Engineering
Model:	2023 RTEP model for 2028 Summer (50/50)





PRELIMINARY - NOT FOR CONSTRUCTION

ATSI®
American Transmission Systems, Inc.
a subsidiary of FirstEnergy Corp.

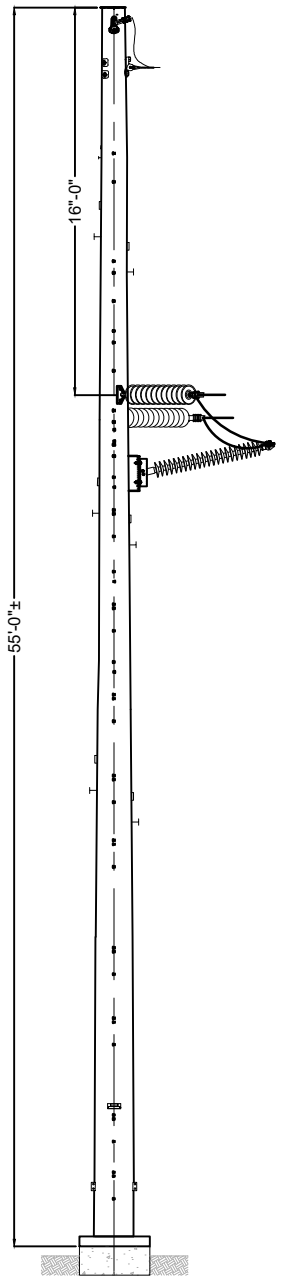
DOWLING-OPTIMUS 138 kV No. 1 AND No. 2
TRANSMISSION LINES PROJECT

SINGLE CIRCUIT STEEL SWITCH STRUCTURE

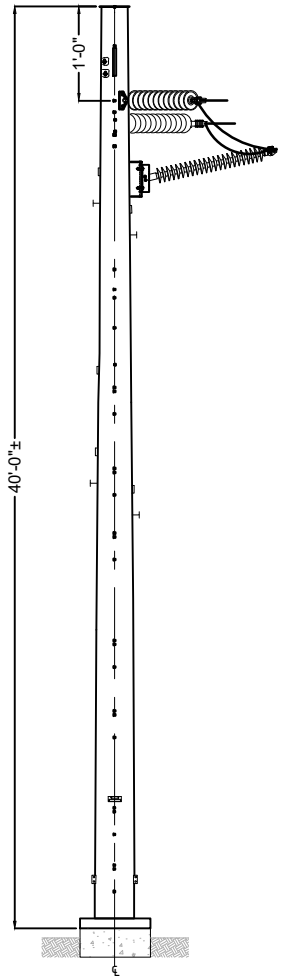
EXHIBIT 5

PAPER SIZE: 8.5X11

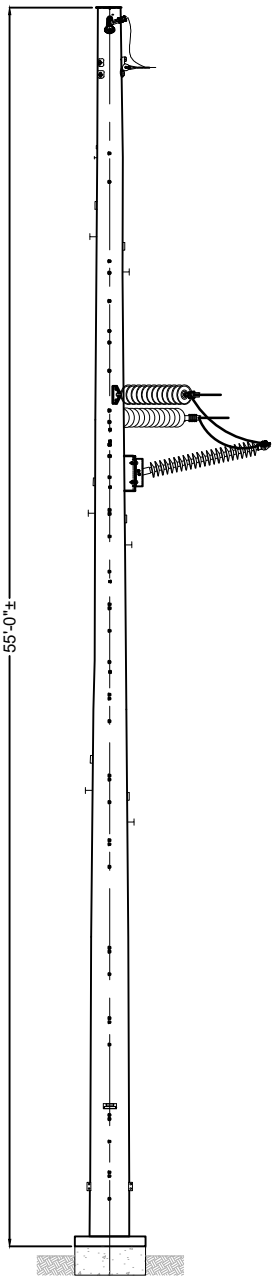
SCALE: NTS



STR
#3A



SURVEY
STR
#3B



STR
#3C

PRELIMINARY - NOT FOR CONSTRUCTION

ATSI®
American Transmission Systems, Inc.
a subsidiary of FirstEnergy Corp.

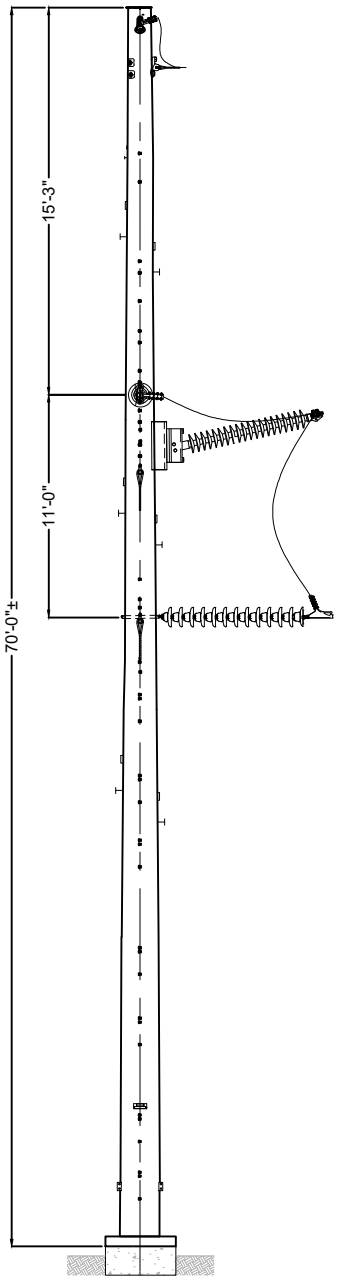
DOWLING-OPTIMUS 138 kV No. 1 AND No. 2
TRANSMISSION LINES PROJECT

SINGLE CIRCUIT STEEL
3 POLE DEADEND STRUCTURE

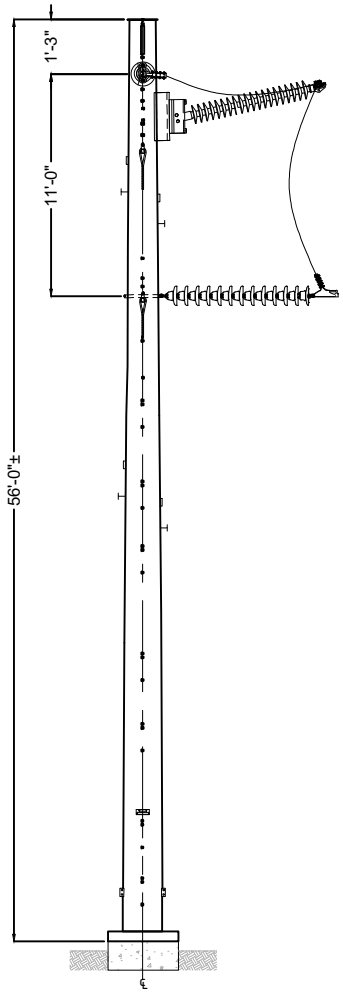
EXHIBIT 6

PAPER SIZE: 8.5X11

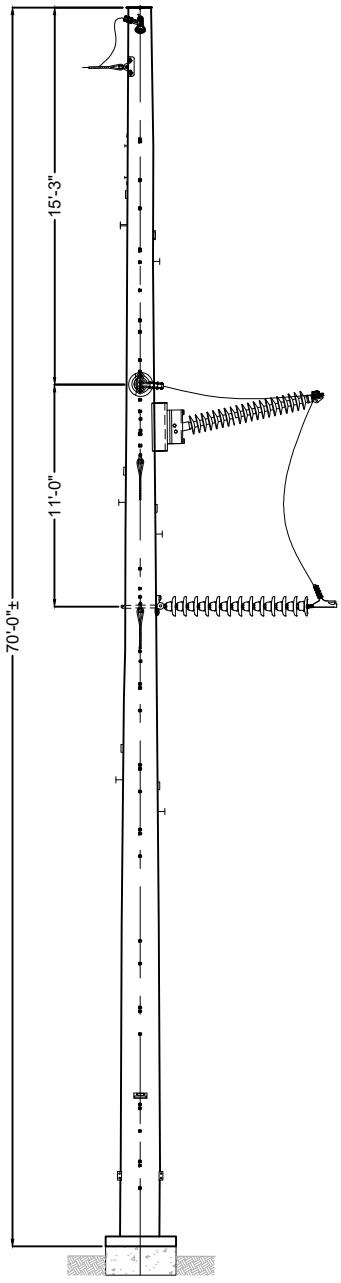
SCALE: NTS



STR
#4A



SURVEY
STR
#4B



STR
#4C

PRELIMINARY - NOT FOR CONSTRUCTION

ATSI®
American Transmission Systems, Inc.
a subsidiary of FirstEnergy Corp.

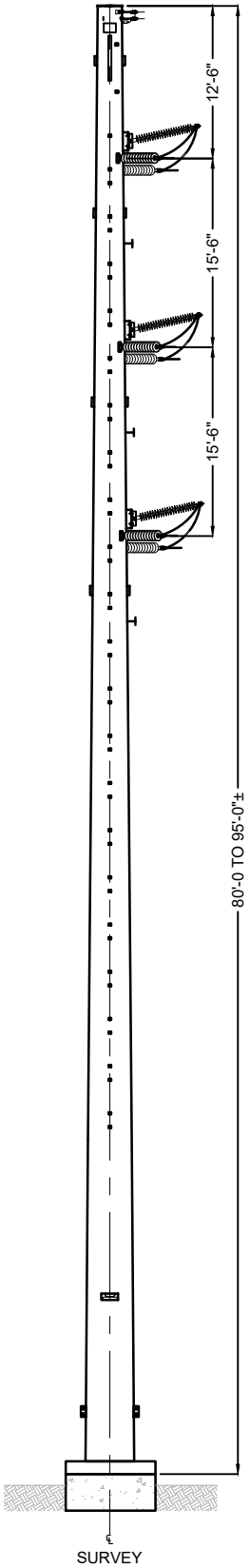
DOWLING-OPTIMUS 138 kV No. 1 AND No. 2
TRANSMISSION LINES PROJECT

SINGLE CIRCUIT STEEL
3 POLE TAP STRUCTURE

EXHIBIT 7

PAPER SIZE: 8.5X11

SCALE: NTS



PRELIMINARY - NOT FOR CONSTRUCTION

ATSI®
American Transmission Systems, Inc.
a subsidiary of FirstEnergy Corp.

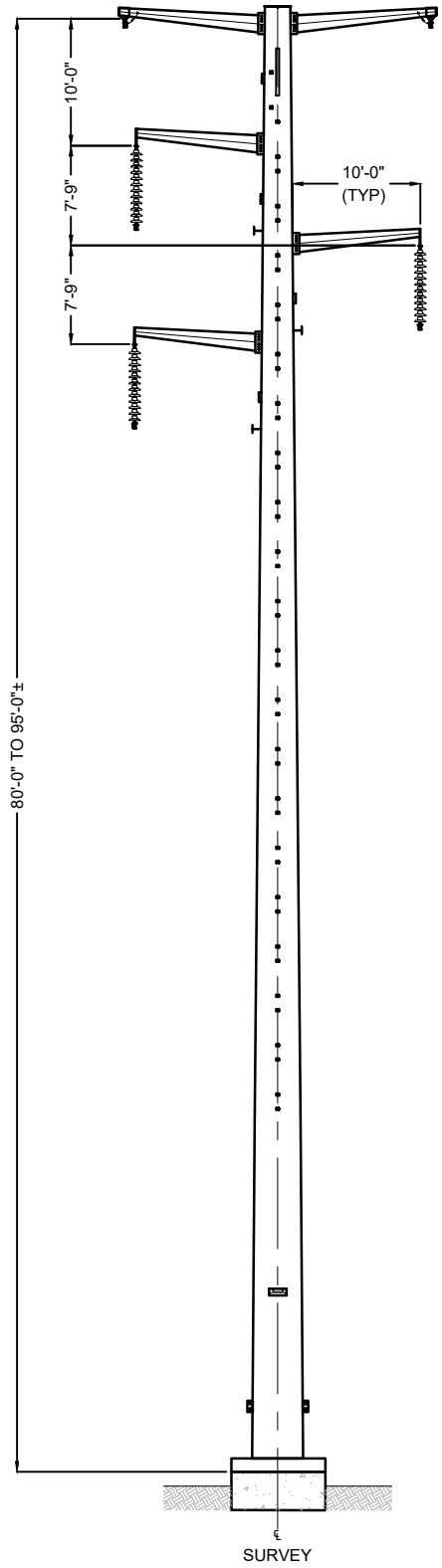
DOWLING-OPTIMUS 138 kV No. 1 AND No. 2
TRANSMISSION LINES PROJECT

SINGLE CIRCUIT STEEL DEADEND STRUCTURE

EXHIBIT 8

PAPER SIZE: 8.5X11

SCALE: NTS



PRELIMINARY - NOT FOR CONSTRUCTION

ATSI®
American Transmission Systems, Inc.
a subsidiary of FirstEnergy Corp.

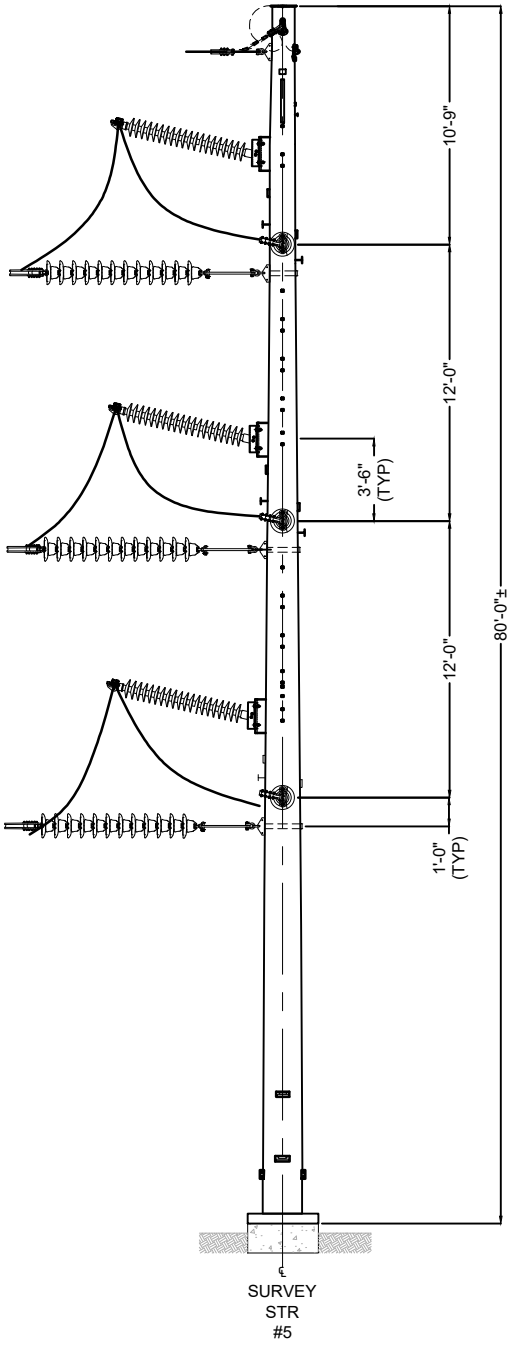
DOWLING-OPTIMUS 138 kV No. 1 AND No. 2
TRANSMISSION LINES PROJECT

SINGLE CIRCUIT STEEL
DELTA TANGENT STRUCTURE

EXHIBIT 9

PAPER SIZE: 8.5X11

SCALE: NTS



PRELIMINARY - NOT FOR CONSTRUCTION

ATSI®
American Transmission Systems, Inc.
a subsidiary of FirstEnergy Corp.

DOWLING-OPTIMUS 138 kV No. 1 AND No. 2
TRANSMISSION LINES PROJECT

SINGLE CIRCUIT STEEL TAP STRUCTURE

EXHIBIT 10

PAPER SIZE: 8.5X11

SCALE: NTS

EXHIBIT 11

In reply refer to:
2024-WOO-62941

December 6, 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: Accordion-Dowling 138kV Interconnect Project, Middleton Township, Wood County, Ohio

Dear Mr. McKissick:

This letter is in response to the correspondence received on July 26, 2024, regarding the above reference project in Wood 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 proposed project involves the expansion of the existing Dowling 138kV substation within a 64.5-acre parcel. Based on information submitted by you, which included a Project Summary Form, no historic properties, districts, or archaeological sites are located within the direct Area of Potential Effect (APE), as defined by you. However, our records indicate that the northern portion of the APE has been previously surveyed for cultural resources. Based on this and the presence of very poorly drained soils, it is our opinion that the un-surveyed portion of the APE has a very low potential for significant archaeological deposits. Therefore, it is our opinion that there will be no effect on historic resources as a result of the project. No cultural resource studies are warranted for the project. 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 either myself via email at sbiehl@ohiohistory.org or Ms. Joy Williams at jwilliams@ohiohistory.org. Thank you for your cooperation.

Sincerely,

Stephen M. Biehl

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

RPR Serial No. 1105678

OHIO HISTORIC PRESERVATION OFFICE:
RESOURCE PROTECTION AND REVIEW

Section 106 Review - Project Summary Form

For projects requiring a license from the Federal Communications Commission, please use FCC Forms 620 or 621. DO NOT USE THIS FORM.

SECTION 1: GENERAL PROJECT INFORMATION

All contact information provided must include the name, address and phone number of the person listed. Email addresses should also be included, if available. Please refer to the Instructions or contact an OHPO reviewer (mailto:Section106@ohiohistory.org) if you need help completing this Form. Unless otherwise requested, we will contact the person submitting this Form with questions or comments about this project.

Date: 11/06/2024

Name/Affiliation of person submitting form: Justin McKissick, MA, RPA

Mailing Address: 317 E. Carson Street, Suite 113, Pittsburgh, PA 15219

Phone/Fax/Email: 412.660.7937/jmckissick@trccompanies.com

A. Project Info:

1. This Form provides information about:
   New Project Submittal:
   YES

   Additional information relating to previously submitted project:
   NO

   OHPO/RPR Serial Number from previous submission:

2. Project Name (if applicable): **Accordion-Dowling 138kV Interconnect Project**

3. Internal tracking or reference number used by Federal Agency, consultant, and/or applicant to identify this project (if applicable): **429847.0084.0000**

B. Project Address or vicinity: **The Project Study Area measures approximately 64.5 acres (ac) and is located in the Middleton Township, Wood County, Ohio. The northeastern extent of the Study Area is situated 0.24 miles (mi) south from the intersection of Dowling Road and Mercer Road and extends west to a point 0.46 mi east-southeast of the intersection of King Road and N. Dixie Highway (Approximate centroid at 41.472602, -83.632882) (Figure 1).**

C. City/Township: **Middleton Township**

D. County: **Wood County**

E. Federal Agency and Agency Contact. *If you do not know the federal agency involved in your project, please contact the party asking you to apply for Section 106 Review, not OHPO, for this information*. *HUD Entitlement Communities acting under delegated environmental review authority should list their own contact information.* **N/A**

F. Type of Federal Assistance. *List all known federal sources of federal funding, approvals, and permits to avoid repeated reviews.* ***N/A***

G. State Agency and Contact Person (if applicable): **Ohio Power Siting Board (OPSB)**

H. Type of State Assistance: **N/A**

I. Is this project being submitted at the direction of a state agency **solely** under Ohio Revised Code 149.53 or at the direction of a State Agency? *Answering yes to this question means that you are sure that no federal funding, permits or approvals will be used for any part of your project, and that you are seeking comments only under ORC 149.53.*

NO

J. Public Involvement- Describe how the public has been/will be informed about this project and its potential to affect historic properties. Please summarize how they will have an opportunity to provide comments about any effects to historic properties. (This step is required for all projects under 36 CFR §800.2):

K. Please list other consulting parties that you have contacted/will contact about this project, such as Indian Tribes, Certified Local Governments, local officials, property owners, or preservation groups. (See 36 CFR §800.2 for more information about involving other consulting parties). Please summarize how they will have an opportunity to provide comments:

SECTION 2: PROJECT DESCRIPTION AND AREA OF POTENTIAL EFFECTS (APE)

Provide a description of your project, its site, and geographical information. You will also describe your project's Area of Potential Effects (APE). Please refer to the Instructions or contact an OHPO reviewer if you need help with developing the APE or completing this form.

For challenging projects, provide as much information as possible in all sections, and then check the box in Section 5.A. to ask OHPO to offer preliminary comments or make recommendations about how to proceed with your project consultation. This is recommended if your project involves effects to significant historic properties or if there may be challenging procedural issues related to your project. Please note that providing information to complete all Sections will still be required and that asking OHPO for preliminary comments may tend to

delay completion of the review process for some projects.

A. Does this project involve any Ground-Disturbing activity: **YES**

(If **Yes**, you must complete all of Section 2.A. If **No**, proceed directly to Section 2. B.)

1. General description of width, length and depth of proposed ground disturbing activity:

The Limits of Disturbance (LOD), which correspond to the Area of Potential Effects (APE) for direct effects, will be completely within the Study Area, which measures approximately 64.5 ac in size (Figure 2). The Study Area has a maximum width (North to South) of approximate 1,280 feet (ft) and a maximum length approximately 3,000 ft (East to West). Ground disturbance will be associated with the expansion of the existing Dowling 138KV Substation and placement of new utility poles to accommodate four (4) 138/345 kV customer transformers and a figures second 345/138kV transformer. All new infrastructure will be at or below the height of the existing surrounding structures.

2. Narrative description of previous land use and past ground disturbances, if known:

Historically, the landscape was likely agricultural fields or wooded landscapes with development occurring predominately throughout the twentieth and into the twenty-first centuries. Buildings were constructed in the Study Area as early as 1886.

3. Narrative description of current land use and conditions:

The modern aerial imagery shows the Study Area including an existing substation surrounded by agricultural fields. An existing overhead utility corridor borders the Study Area to the north and Mercer Road borders it to the east. The regional landscape is predominantly residential with widely spaced buildings surrounded by agricultural fields. Overview photographs are provided as Attachment 1.

4. Does the landowner know of any archaeological resources found on the property?
YES NO If yes, please describe: **Unknown**

B. Submit the exact project site location on a USGS 7.5-minute topographic quadrangle map for all projects. Map sections, photocopies of map sections, and online versions of USGS maps are acceptable as long as the location is clearly marked. Show the project's Area of Potential Effects (APE). It should be clearly distinguished from other features shown on the map:

1. USGS Quad Map Name: **Bowling Green North, OH**

2. Township/City/Village Name: **Middleton Township, Wood County**

C. Provide a street-level map indicating the location of the project site; road names must be identified and legible. Your map must show the exact location of the boundaries for the project site. Show the project's Area of Potential Effects (APE). It should be clearly distinguished from other features shown on the map: **See Figure 2**

D. Provide a verbal description of the APE, including a discussion of how the APE will include areas with the potential for direct and indirect effects from the project. Explain the steps taken to identify the project's APE, and your justification for the specific boundaries chosen:

The APE will include all areas in which construction activities associated with the proposed Project will take place. The APE will also include a viewshed that will be based on LIDAR data, vegetation, topography, and buildings, which will reduce the APE to areas with positive visibility of the Project infrastructure within 0.25 mi of the undertaking. There are buildings in the area that are over 50 years of age and new

infrastructure is anticipated to have heights ranging between 57 ft and 95 ft.

E. Provide a detailed description of the project. This is a critical part of your submission. Your description should be prepared for a cold reader who may not be an expert in this type of project. The information provided must help support your analysis of effects to historic properties, not other types of project impacts. Do not simply include copies of environmental documents or other types of specialized project reports. If there are multiple project alternatives, you should include information about all alternatives that are still under active consideration:

The proposed Project will involve the expansion of the existing Dowling 138kV Substation in order to accommodate two (2) additional overhead utility lines leading to four (4) 138/345kV customer transformers, as well as a future second 345/138kV transformer. The proposed Project Study Area is 64.50 ac. The new infrastructure is anticipated to have heights ranging from 47 ft to 95 ft.

SECTION 3: IDENTIFICATION OF HISTORIC PROPERTIES

Describe whether there are historic properties located within your project APE. To make that determination, use information generated from your own Background Research and Field Survey. Then choose one of the following options to report your findings. Please refer to the Instructions and/or contact an OHPO reviewer if you are unsure about how to identify historic properties for your project.

The results of the provided data files indicate that there are no historic properties, above-ground historic resources, or Ohio Genealogical Society (OGS) cemeteries mapped within one (1)-mi of the proposed Study Area (Figure 3).

There have been two (2) prior archaeological surveys conducted within one (1) mi of the proposed Study Area. Both surveys overlap northern portions of the Study Area, including the existing substation area. One (1) archaeological site, a historic residential site that dates from the late nineteenth through twentieth centuries, was recorded by one (1) of the surveys 0.25 mi to the northeast.

A review of available historic maps was conducted to determine the presence of historic structures (50 years of age or older) and other possible historic features within or adjacent to Study Area that may be impacted by the proposed Project.

By 1886, the region had been settled with residential buildings denoted along the established transportation routes in the region (Attachment 2, Image 1). The Study Area was mapped on parcels attributed to *Jno Hood* and *George Carter*. Only the Hood parcel contained a structure, mapped to the north along Dowling Road.

Through the turn of the century, the region remained relatively the same, rural with widely spaced buildings along the roadways (Attachment 2, Image 2). In 1901, several new buildings were constructed along Mercer Road to the east, none were mapped in the Study Area itself.

Between 1901 and 1958, the overall regional landscape changed little, as it remained rural with widely spaced buildings along roadways (Attachment 2, Image 3). The overhead utility line north of the Study Area is first mapped. No buildings were documented within the Study Area.

Throughout the mid-twentieth and into the twenty-first century, the region has remained rural, predominately agricultural fields and residential properties. The existing substation was constructed in 2014 based on a review of modern aerial photographs. The staging area adjacent to Mercer Road was constructed in 2015.

If you read the Instructions and you're still confused as to which reporting option best fits your project, or you are not sure if your project needs a survey, you may choose to skip this section, but provide as much supporting documentation as possible in all other Sections, then check the box in Section 5.A. to request preliminary comments from OHPO. After reviewing the information provided, OHPO will then offer comments as to which reporting option is best suited to document historic properties for your project. Please note that providing information to complete this Section will still be required and that asking OHPO for preliminary comments may tend to delay completion of the review process for some projects.

Recording the Results of Background Research and Field Survey:

A. **Summary of discussions and/or consultation with OHPO** about this project that demonstrates how the Agency Official and OHPO have agreed that no Field Survey was necessary for this project (typically due to extreme ground disturbance or other special circumstances). Please **attach copies** of emails/correspondence that document this agreement. You must explain how the project's potential to affect both archaeological and historic resources were considered. **N/A**

B. **A table that includes the minimum information** listed in the OHPO Section 106 Documentation Table (which is generally equivalent to the information found on an inventory form). This information must be printed and mailed with the Project Summary Form. To provide sufficient information to complete this Section, you must also include summary observations from your field survey, background research and eligibility determinations for each property that was evaluated in the project APE. **N/A**

C. **OHI (Ohio Historic Inventory) or OAI (Ohio Archaeological Inventory) forms**- New or updated inventory forms may be prepared using the OHI pdf form with data population capabilities, the Internet IForm, or typed on archival quality inventory forms. To provide sufficient information to complete this Section, you must include summary observations from your field survey and background research. You must also include eligibility determinations for each property that was evaluated in the project APE. **N/A**

D. **A historic or archaeological survey report** prepared by a qualified consultant that meets professional standards. The survey report should meet the Secretary of the Interior's Standards and Guidelines for Identification and OHPO Archaeological Guidelines. You may also include new inventory forms with your survey or update previous inventory forms. To complete this section, your survey report must include summary observations from your field survey, background research and eligibility determinations for each property that was evaluated within the APE. **N/A**

E. **Project Findings**. Based on the conclusions you reached in completing Section 3, please choose one finding for your project. There are (mark one):

Historic Properties Present in the APE:

No Historic Properties Present in the APE: X

SECTION 4: SUPPORTING DOCUMENTATION

This information must be provided for all projects.

A. Photographs must be keyed to a street-level map and should be included as attachments to this application. Please label all forms, tables and CDs with the date of your submission and project name, as identified in Section 1. You must present enough documentation to clearly show existing conditions at your project site and convey details about the buildings, structures or sites that are described in your submission. Faxed or photocopied photographs are not acceptable. See Instructions for more info about photo submissions or 36 CFR § 800.11 for federal

documentation standards.

1. Provide photos of the entire project site and take photos to/from historic properties from/towards your project site to support your determination of effect in Section 5. **See Attachment 1 - Photographs**

2. Provide current photos of all buildings/structures/sites described.

B. Project plan, specifications, site drawings and any other media presentation that conveys detailed information about your project and its potential to affect historic properties.
C. Copies or summaries of any comments provided by consulting parties or the public.

SECTION 5: DETERMINATION OF EFFECT

A. **Request Preliminary Comments.** For challenging projects, provide as much information as possible in previous sections and ask OHPO to offer preliminary comments or make recommendations about how to proceed with your project consultation. This is recommended if your project involves effects to significant historic properties, if the public has concerns about your project's potential to affect historic properties, or if there may be challenging procedural issues related to your project. Please be aware that providing information in all Sections will still be required and that asking OHPO for preliminary comments may tend to delay completion of the review process for some projects.

1. We request preliminary comments from OHPO about this project:
   YES

2. Please specify as clearly as possible the particular issues that you would like OHPO to examine for your project (for example- help with developing an APE, addressing the concerns of consulting parties, survey methodology, etc.):

Please review the provided information and respond with your determination relative to the potential effects to cultural resources, if any.

B. **Determination of Effect.** If you believe that you have gathered enough information to conclude the Section 106 process, you may be ready to make a determination of effect and ask OHPO for concurrence, while considering public comments. Please select and mark one of the following determinations, then explain the basis for your decision on an attached sheet of paper:

No historic properties will be affected based on 36 CFR § 800.4(d) (1). Please explain how you made this determination:

No Adverse Effect [36 CFR § 800.5(b)] on historic properties. This finding cannot be used if there are no historic properties present in your project APE. Please explain why the Criteria of Adverse Effect, [36 CFR Part 800.5(a) (1)], were found not to be applicable for your project:

Adverse Effect [36 CFR § 800.5(d) (2)] on historic properties. Please explain why the criteria of adverse effect, [36 CFR Part 800.5(a) (1)], were found to be applicable to your project. You may also include an explanation of how these adverse effects might be avoided, reduced or mitigated:

Please send completed form and supporting documentation to our office through the

section106@ohiohistory.org e-mail address. Note that file size is limited to 30 MB. The Ohio SHPO has a federally mandated review time of 30 calendar day. To check your submission was received and logged in for our review, please visit https://www.ohiohistory.org/preserve/state-historic-preservation-office/hpreviews/section-106-project-status.

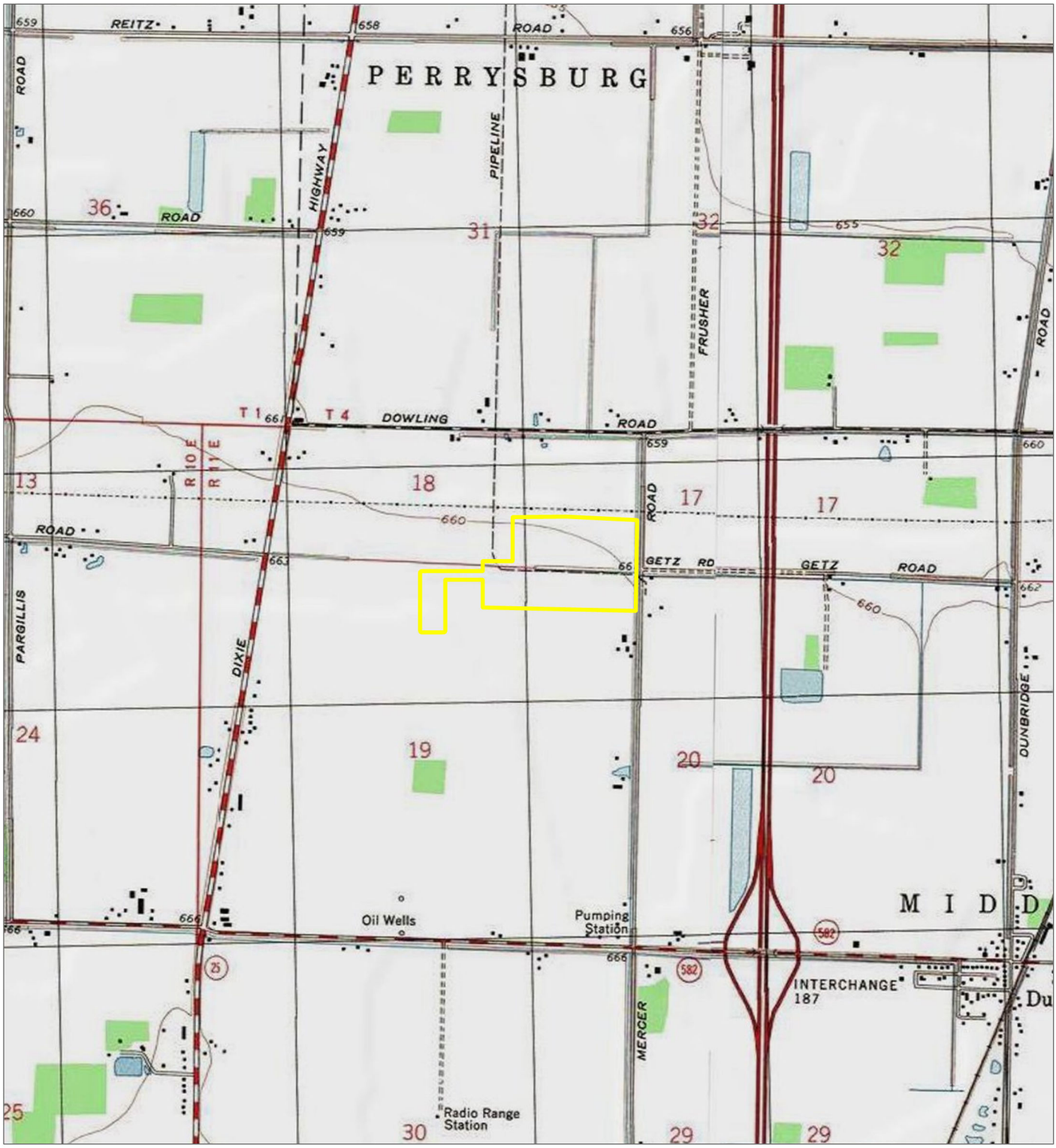
REFERENCES

Griffing, B.N.
1886 "Wood County" in *An Atlas of Wood County, Ohio.* Published by Griffing, Gordon & Co., Philadelphia, Pennsylvania. Electronic document, https://historicmapworks.com/Atlas/US/11118/Wood+County+1886/, accessed October 23, 2024.

United States Geographical Survey
1901 Bowling Green, OH 15-minute series topographic series. Electronic document, https://ngmdb.usgs.gov/topoview/viewer/#14/41.4743/-83.6378, accessed October 23, 2024.

1958a Bowling Green North, OH 7.5-minute series topographic series. Electronic document, https://ngmdb.usgs.gov/topoview/viewer/#14/41.4743/-83.6378, accessed October 23, 2024.

1958b Dunbridge, OH 7.5-minute series topographic series. Electronic document, https://ngmdb.usgs.gov/topoview/viewer/#14/41.4743/-83.6378, accessed October 23, 2024.



PROJECT STUDY AREA

BASE MAP: USA TOPO MAPS MAP SERVICE, BOWLING GREEN NORTH QUAD

N

0 1,000 2,000

FEET

1:24,000 1" = 2,000'

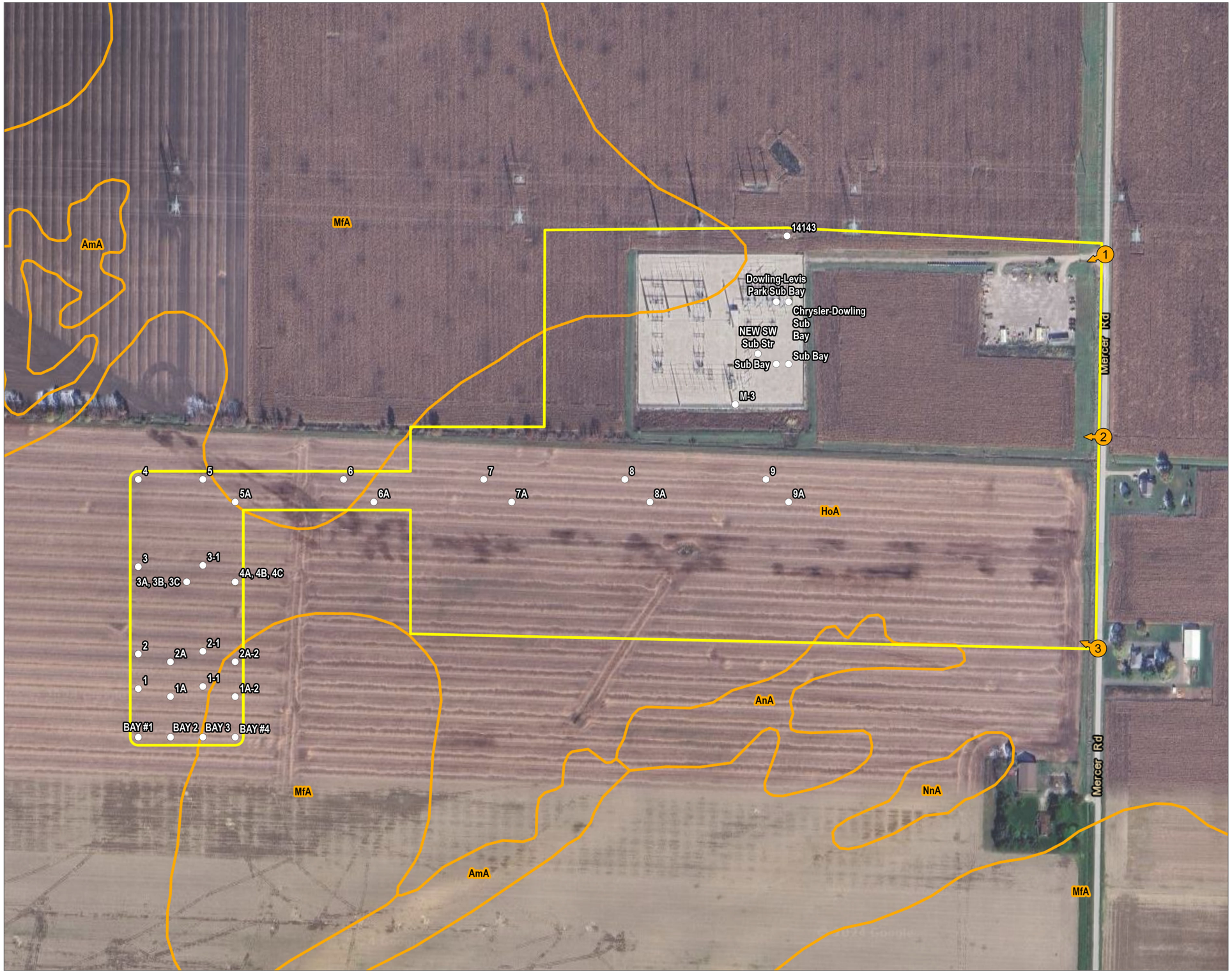
PROJECT: **FIRSTENERGY - ACCORDION-DOWLING 138KV INTERCONNECT PROJECT WOOD COUNTY, OH**

TITLE: **PROJECT LOCATION MAP**

DRAWN BY:	M. OPEL	PROJ. NO.:	429847.0084
CHECKED BY:	J. MCKISSICK		
APPROVED BY:	B. FALKINBURG		**FIGURE 1**
DATE:	NOVEMBER 2024		

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

FILE: 106FORM



PROJECT STUDY AREA

EXISTING STRUCTURE

MAPPED SOIL UNITS

PHOTO LOCATION

BASE MAP: GOOGLE MAPS.

1:3,600

1" = 300'

0 300 600 FEET

PROJECT: **FIRSTENERGY - ACCORDION-DOWLING 138KV INTERCONNECT PROJECT WOOD COUNTY, OH**

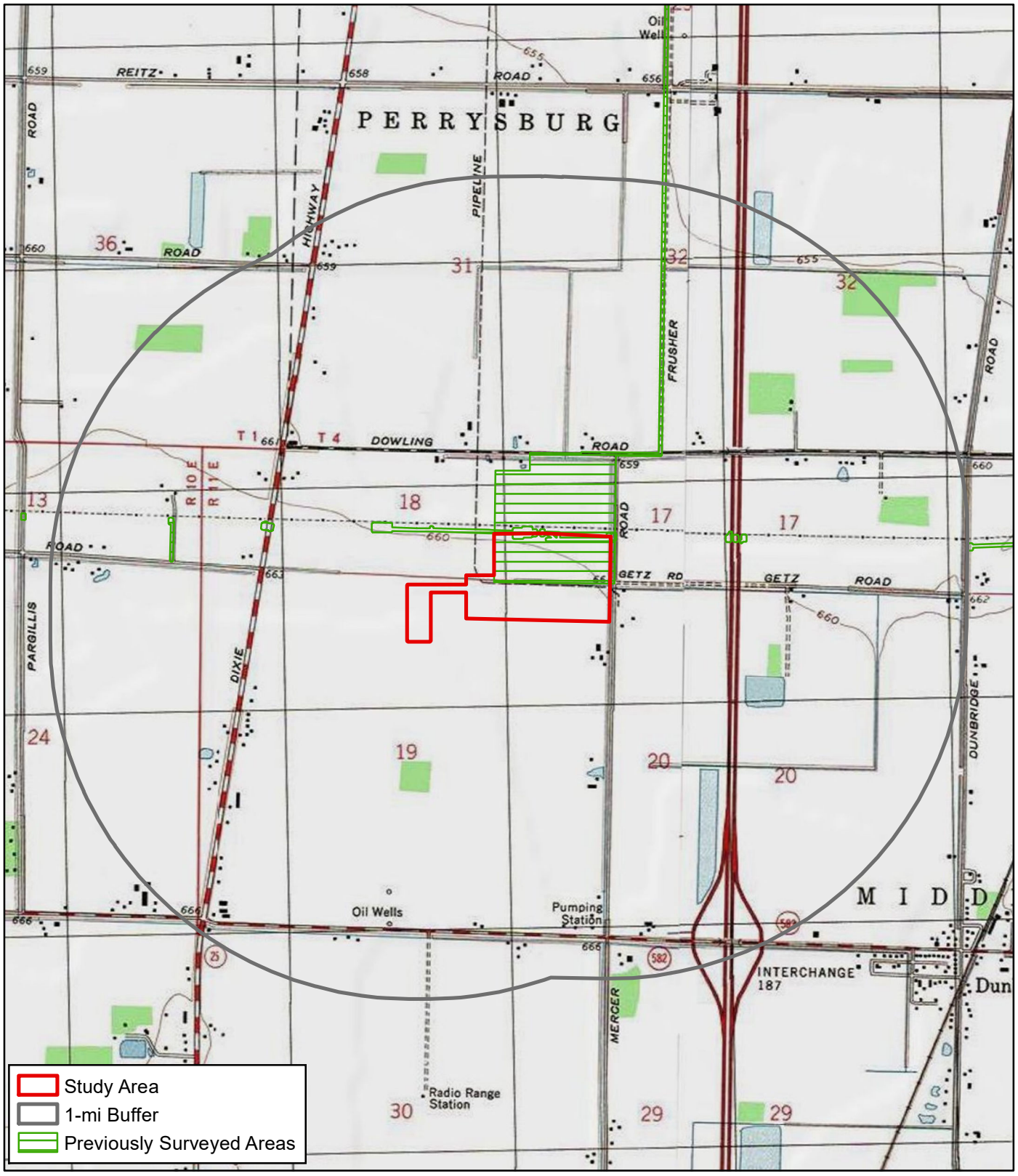
TITLE: **AERIAL BASEMAP WITH PHOTO LOCATIONS**

DRAWN BY:	M. OPEL	PROJ. NO.:	429847.0084
CHECKED BY:	J. MCKISSICK		**FIGURE 2**
APPROVED BY:	B. FALKINBURG		
DATE:	NOVEMBER 2024		

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

FILE: 106Form.aprx

Coordinate System: NAD 1983 StatePlane Ohio North FIPS 3401 Feet; Map Rotation: 0
Saved By MOPEL on 11/7/2024 - 1:53:19 PM; File Path: T:\PROJECTS\First_Energy\429847_0084_AccordionDowling\2-APRX\106Form.aprx; Layout Name: Fig02_Aerial



BASEMAP FROM 7.5-MINUTE SERIES TOPOGRAPHIC QUADRANGLE

N

1 " = 2,065 '

1:24,774

0 0.24

Miles

TRC

317 E. Carson Street
Suite 113
Pittsburgh, PA 15219

TRC - GIS

PROJECT:

Accordion-Dowling 138kV Interconnect Project

TITLE:

OHC Database Search Results

DRAWN BY:	JUSTIN MCKISSICK
CHECKED BY:	CURTIS BIONDICH
APPROVED BY:	CURTIS BIONDICH
DATE:	OCTOBER 2024
PROJ. NO.:	429847.0084.0000
FILE:	Accordion.mxd

Figure 3

C:\Users\jmckissick\OneDrive - TRC\Documents\Projects\Various\Shapefiles\Accordion\Accordion.mxd -- Saved By: JMCKISSICK on 10/23/2024, 08:53:10 AM

ATTACHMENT 1

Photographs

PHOTOGRAPHIC RECORD
Accordion-Dowling 138kV Interconnect Project

Client Name:	Site Location:	Project No.
FirstEnergy Corporation	Middleton Township, Wood County, Ohio	429847.0084.0000

Photo No. 1.	
Date: 05/2024 (Google Earth)	
Description: Facing west-southwest, viewing the northern portion of the Study Area. Note the existing staging area and substation.	

Photo No. 2.	
Date: 05/2024 (Google Earth)	
Description: Facing west, viewing the northern portion of the Study Area. Note the existing substation.	

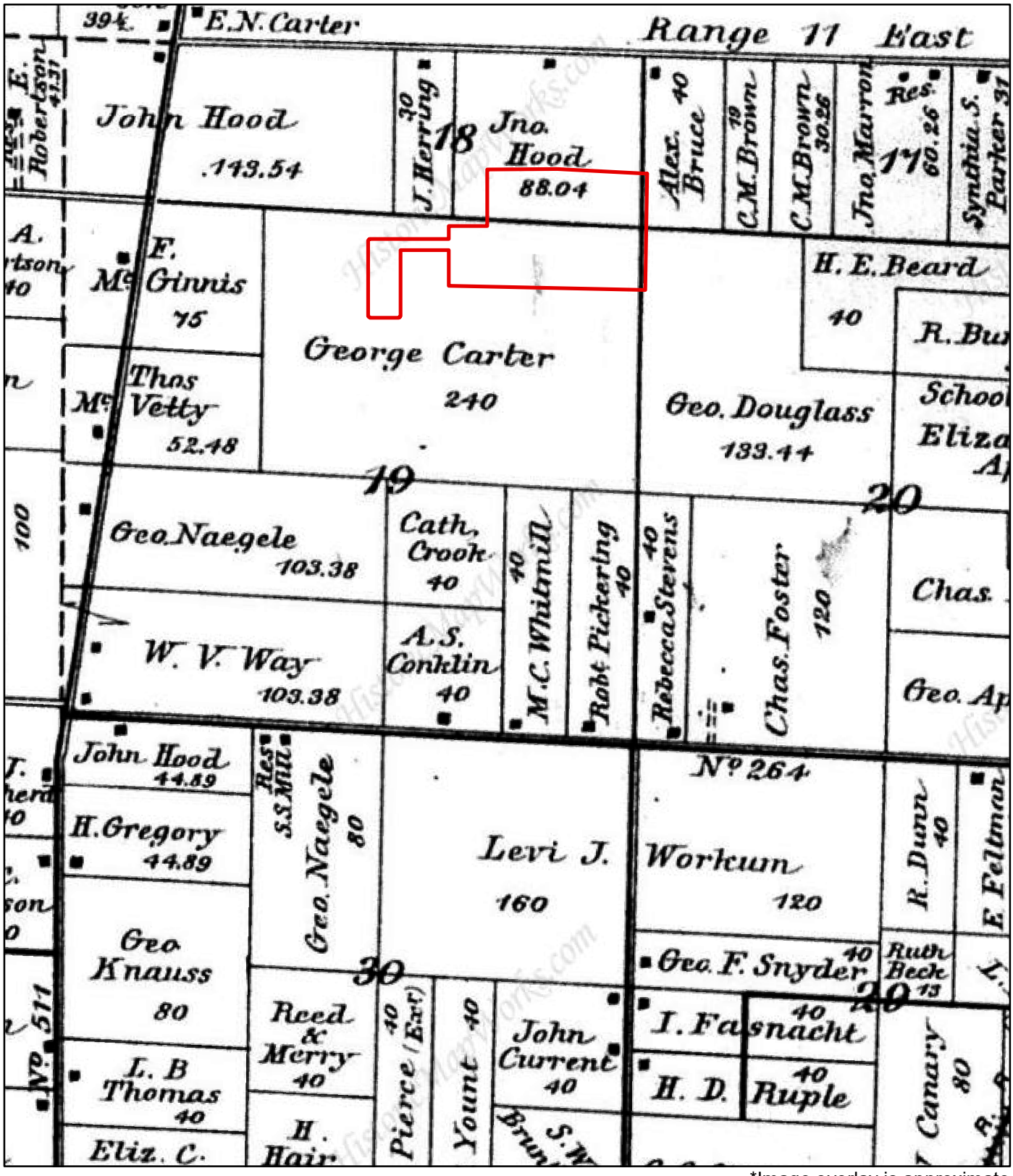
PHOTOGRAPHIC RECORD
Accordion-Dowling 138kV Interconnect Project

Client Name:	Site Location:	Project No.
FirstEnergy Corporation	Middleton Township, Wood County, Ohio	429847.0084.0000

Photo No. 3.	
Date: 05/2024 (Google Earth)	
Description: Facing west-northwest, viewing the southern portion of the Study Area.	

ATTACHMENT 2

Historic Map Images



BASEMAP FROM AN ATLAS of WOOD COUNTY, OHIO

*Image overlay is approximate

N

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

0 0.18
Miles

TRC

317 E. Carson Street
Suite 113
Pittsburgh, PA 15219

TRC - GIS

PROJECT:

Accordion-Dowling 138kV Interconnect Project

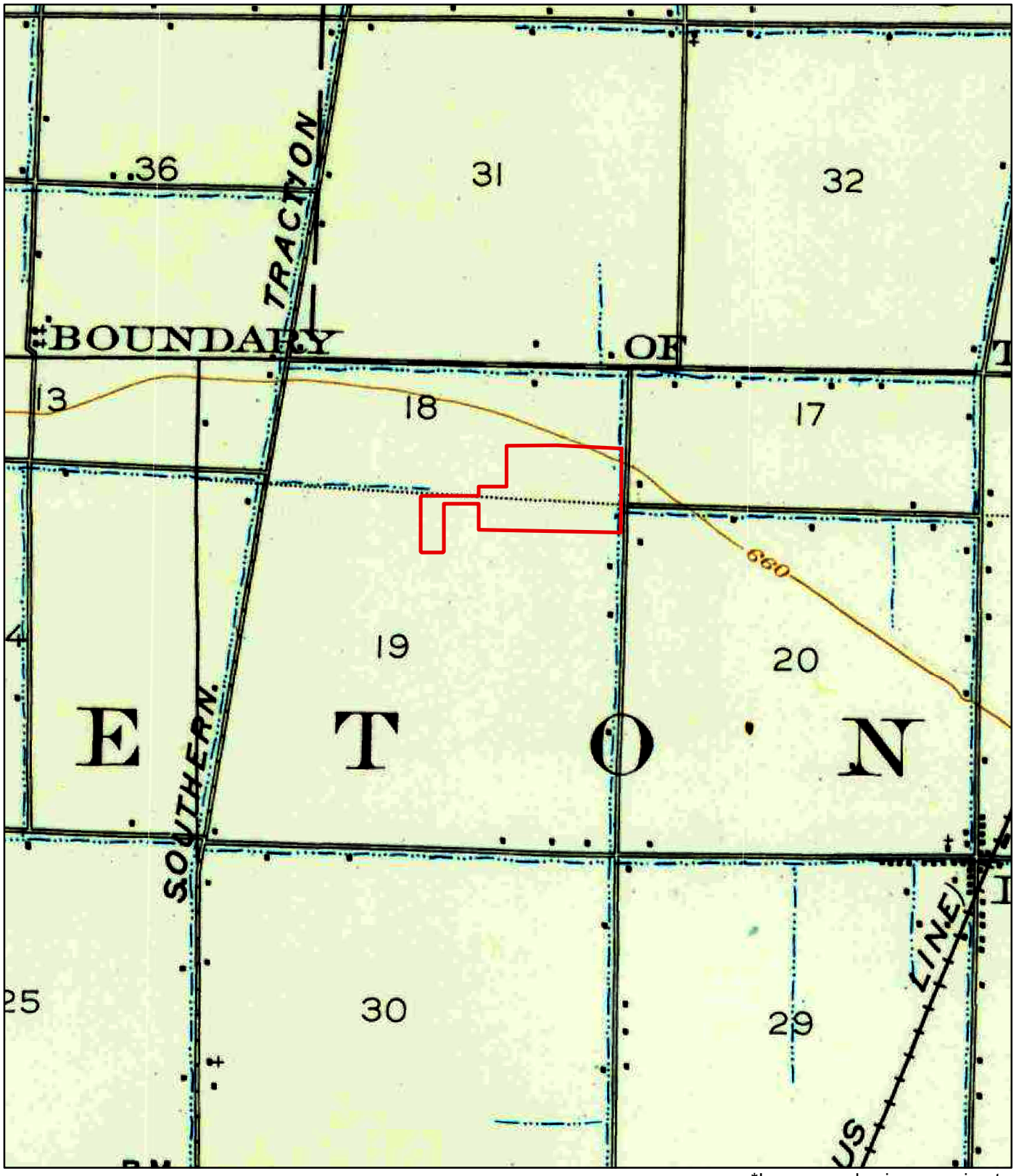
TITLE:

Study Area circa 1886 (Griffing)

DRAWN BY:	JUSTIN MCKISSICK
CHECKED BY:	CURTIS BIONDICH
APPROVED BY:	CURTIS BIONDICH
DATE:	OCTOBER 2024
PROJ. NO.:	429847.0084.0000
FILE:	Accordion.mxd

Attachment 2 - Image 1

C:\Users\jmckissick\OneDrive - TRC\Documents\Projects\Various\Shapefiles\Accordion\Accordion.mxd -- Saved By: JMCKISSICK on 10/23/2024, 08:53:10 AM



BASEMAP FROM USGS 15-MINUTE SERIES TOPOGRAPHIC QUADRANGLE

*Image overlay is approximate

N

1 " = 2,083 '
1:25,000

0 0.24
Miles

TRC

317 E. Carson Street
Suite 113
Pittsburgh, PA 15219

TRC - GIS

PROJECT:

Accordion-Dowling 138kV Interconnect Project

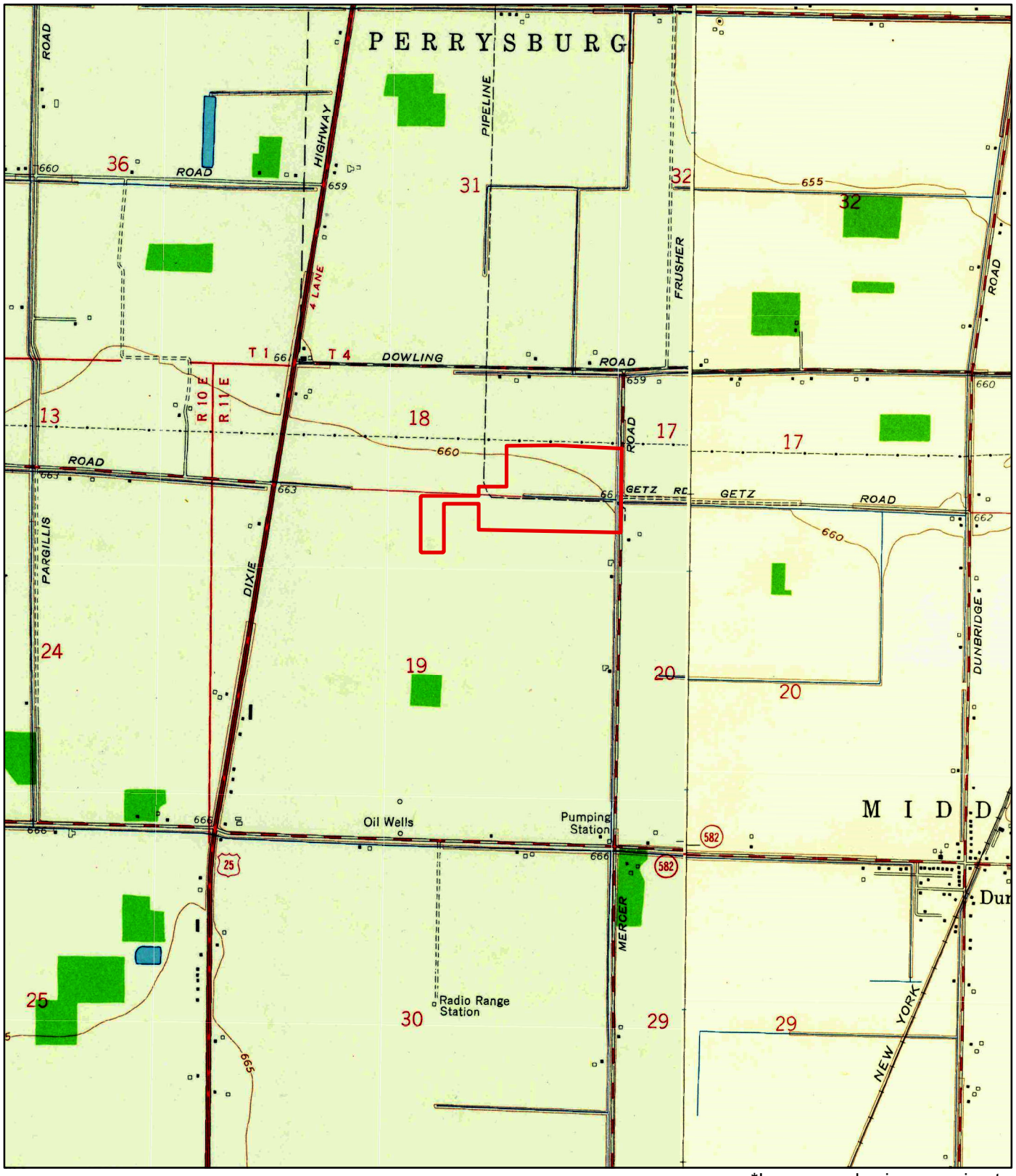
TITLE:

Study Area circa 1901 (USGS)

DRAWN BY:	JUSTIN MCKISSICK
CHECKED BY:	CURTIS BIONDICH
APPROVED BY:	CURTIS BIONDICH
DATE:	OCTOBER 2024
PROJ. NO.:	429847.0084.0000
FILE:	Accordion.mxd

Attachment 2 - Image 2

C:\Users\jmckissick\OneDrive - TRC\Documents\Projects\Various\Shapefiles\Accordion\Accordion.mxd -- Saved By: JMCKISSICK on 10/23/2024, 08:53:10 AM



BASEMAP FROM USGS 7.5-MINUTE SERIES TOPOGRAPHIC QUADRANGLE

*Image overlay is approximate

N

1 " = 2,083 '
1:25,000

0 0.24
Miles

TRC

317 E. Carson Street
Suite 113
Pittsburgh, PA 15219

TRC - GIS

PROJECT:

Accordion-Dowling 138kV Interconnect Project

TITLE:

Study Area circa 1958 (USGS)

DRAWN BY:	JUSTIN MCKISSICK
CHECKED BY:	CURTIS BIONDICH
APPROVED BY:	CURTIS BIONDICH
DATE:	OCTOBER 2024
PROJ. NO.:	429847.0084.0000
FILE:	Accordion.mxd

Attachment 2 - Image 3

C:\Users\jmckissick\OneDrive - TRC\Documents\Projects\Various\Shapefiles\Accordion\Accordion.mxd -- Saved By: JMCKISSICK on 10/23/2024, 08:53:10 AM

Department of Natural Resources
ohiodnr.gov

Mike DeWine, *Governor*
Jon Husted, *Lt. Governor*
Mary Mertz, *Director*

Office of Real Estate & Land Management
Tara Paciorek - Chief
2045 Morse Road – E-2
Columbus, Ohio 43229-6693

November 27, 2024

Jenna Slabe
TRC Companies, Inc.
1382 West 9th Street, Suite 400
Cleveland, Ohio 44113

Re: 24-1672 - Accordion-Dowling 138kV Interconnect

Project: The proposed project involves the expansion of the Dowling 138kV Substation to accommodate two additional lines leading to four 138/345kV customer transformers, as well as a future 138/345kV transformer.

Location: The proposed project is located in Middleton Township, Wood 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 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 species of bats 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. If trees are present within the project area, and trees must be cut, the DOW recommends cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH ≥ 20 if possible. If trees are present within the project area, and trees must be cut during the summer months, the DOW recommends a mist net survey or acoustic survey be conducted from June 1 through August 15, prior to any cutting. Mist net and acoustic surveys should be conducted in accordance with the most recent version of the "*OHIO DIVISION OF WILDLIFE GUIDANCE FOR BAT SURVEYS AND TREE CLEARING*". If state listed bats are documented, DOW recommends cutting only occur from October 1 through March 31. However, limited summer tree cutting may be acceptable after consultation with the DOW (contact Eileen Wyza at Eileen.Wyza@dnr.ohio.gov).

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 pondhorn (*Uniomerus tetralasmus*), a state threatened mussel. Due to the location, and that there is no in-water work proposed in a perennial stream, this project is not likely to impact this species.

The project is within the range of the western banded killifish (*Fundulus diaphananus menona*), a state endangered fish, and the greater redhorse (*Moxostoma valenciennesi*), a state threatened fish. The DOW recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. Due to the location, and that there is no in-water work proposed in a perennial stream, this project is not likely to impact this species.

The project is within the range of the Kirtland's snake (*Clonophis kirtlandii*), a state threatened species. This secretive species prefers wet meadows and other wetlands. 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 (Environmental Services Administrator) at mike.pettegrew@dnr.ohio.gov if you have questions about these comments or need additional information.

Expiration: *ODNR Environmental Reviews are typically valid for 2 years from the issuance date. If the scope of work, project area, construction limits, and/or anticipated impacts to natural resources have changed significantly from the original project submittal, then a new Environmental Review request should be submitted.*

From: Molnar, Maggie <MMolnar@trccompanies.com>
Sent: Monday, December 2, 2024 4:46 PM
To: Bagato, Steven <sbagato@burnsmcd.com>
Cc: Falkinburg, Brad <BFalkinburg@trccompanies.com>
Subject: RE: [EXTERNAL] TE-24-220927-083304; Accordion-Dowling 138kV project; Boring and Environmental Real Estate Coordination | Pivot 1 & 2 138kV Line |

Steve,

Please see the attached ODNR response for Accordion-Dowling 138kV Interconnect Project and associated below summary.

The Natural Heritage Database found no records of state or federally listed plants or animals within one mile of the specified project area.

The Project is within the range of the Indiana bat, northern long-eared bat, little brown bat, and tricolored bat. If tree cutting is required for this Project, the DOW recommends winter tree clearing (October 1st through March 31st). ODNR-DOW did request a desktop habitat assessment for potential bat hibernaculum. ***Would you like us to move ahead with drafting this for your review?***

The Project is within the range of the following **mussel species:** pondhorn (*Uniomerus tetralasmus*), a state threatened mussel. Due to the location, and that there is no in-water work proposed in a perennial stream, this project is not likely to impact this species.

The Project is within the range of the following **fish species:** western banded killifish (*Fundulus diaphanus menona*) and greater redhorse (*Moxostoma valenciennesi*). Due to the location, and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact these species.

The Project is within the range of the following **reptile species**: Kirtland's snake (*Clonophis kirtlandii)* and spotted turtle (Clemmys guttata). 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 also within the range of the following **avian species**: northern harrier (*Circus hudsonius*). Nesters are much rarer, although they occasionally breed in large marshes and grasslands. 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. Based on aerial review, TRC does not believe this habitat will not be impacted; therefore, the project is not likely to impact this species. We will confirm during our Thursday site visit.

Let us know if you have any questions on the attached ODNR response or provided summary.

Thank you,

Maggie Molnar, PWS
Ecologist

781 Science Boulevard, Suite 200, Gahanna, Ohio 43230
D 614.423.6342| **C** 614.949.2437
LinkedIn | Twitter | Blog | TRCcompanies.com

Please note that our address has changed.

From: Bagato, Steven <sbagato@burnsmcd.com>
Sent: Monday, November 11, 2024 4:04 PM
To: Molnar, Maggie <MMolnar@trccompanies.com>
Cc: Falkinburg, Brad <BFalkinburg@trccompanies.com>
Subject: RE: [EXTERNAL] TE-24-220927-083304; Accordion-Dowling 138kV project; Boring and Environmental Real Estate Coordination | Pivot 1 & 2 138kV Line |

EXHIBIT 12A

From: Eileen.Wyza@dnr.ohio.gov <Eileen.Wyza@dnr.ohio.gov>
Sent: Monday, December 16, 2024 2:16 PM
To: Molnar, Maggie <MMolnar@trccompanies.com>
Cc: Falkinburg, Brad <BFalkinburg@trccompanies.com>
Subject: [EXTERNAL] RE: 24-1672_TRC - Accordion-Dowling 138kV Interconnect Project - ODNR Comments: Desktop Hibernacula Assessment

Hello Maggie,

Per review of the desktop survey provided for the Accordion-Dowling 138kV Interconnect 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.
(she/her/hers)
Wildlife Biologist
Ohio Division of Wildlife
Phone: 614-265-6764
Email: Eileen.Wyza@dnr.ohio.gov

From: Molnar, Maggie <MMolnar@trccompanies.com>
Sent: Friday, December 13, 2024 12:22 PM
To: Wyza, Eileen <Eileen.Wyza@dnr.ohio.gov>
Cc: Falkinburg, Brad <BFalkinburg@trccompanies.com>
Subject: 24-1672_TRC - Accordion-Dowling 138kV Interconnect Project - ODNR Comments: Desktop Hibernacula Assessment

Eileen,

In response to ODNR's DOW recommendations (attached), TRC completed a desktop habitat assessment to determine if potential hibernaculum is present within FirstEnergy's proposed Accordion-Dowling 138kV Interconnect Project located in Middleton Township, Wood County, Ohio.

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

Thank you,

Maggie Molnar, PWS
Ecologist

781 Science Boulevard, Suite 200, Gahanna, Ohio 43230
D 614.423.6342| **C** 614.949.2437
LinkedIn | Twitter | Blog | TRCcompanies.com

Please note that our address has changed.

EXHIBIT 13

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

November 8, 2024

Project Code: 2025-0008214

Dear 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, endangered, and proposed 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.

Federally Proposed Species: On September 14, 2022, the Service proposed to list the tricolored bat (*Perimyotis subflavus*) as endangered under the ESA. The bat faces extinction due to the impacts of white-nose syndrome, a deadly disease affecting cave-dwelling bats across the continent. During spring, summer, and fall, this species roosts primarily among leaf clusters of live or recently dead trees, emerging at dusk to hunt for insects over waterways and forest edges. While white-nose syndrome is by far the most serious threat to the tricolored bat, other threats now have an increased significance due to the dramatic decline in the species' population. These threats include disturbance to bats in roosting, foraging, commuting, and over-wintering habitats. Mortality due to collision with wind turbines, especially during migration, has also been documented across their range. Conservation measures for the Indiana bat and northern long-eared bat will also help to conserve the tricolored bat.

Seasonal Tree Clearing for Federally Listed Bat Species: Should the proposed project site contain trees ≥3 inches dbh, we recommend avoiding tree removal wherever possible. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring portal surveys are warranted. If no caves or abandoned mines are present and trees ≥3 inches dbh cannot be avoided, we recommend removal of any trees ≥3 inches dbh only occur between October 1 and March 31. Seasonal clearing is recommended to avoid adverse effects to Indiana bats and northern long-eared bats.

If implementation of this seasonal tree cutting recommendation is not possible, a summer presence/absence survey may be conducted for Indiana bats and northern long-eared bats. If Indiana bats and northern long-eared bats are not detected during the survey, then tree clearing may occur at any time of the year. Surveys must be conducted by an approved surveyor and be designed and conducted in coordination with the Ohio Field Office. Surveyors must have a valid federal permit. Please note that in Ohio summer mist net surveys may only be conducted between June 1 and August 15.

Section 7 Coordination: If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), then no tree clearing should occur on any portion of the project area until consultation under section 7 of the ESA, between the Service and the federal action agency, is completed. We recommend the federal action agency submit a determination of effects to this office, relative to the Indiana bat and northern long-eared bat, for our review and concurrence. This letter provides technical assistance only and does not serve as a completed section 7 consultation document.

Stream and Wetland Avoidance: Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus is it important to conserve the functions and values of the remaining wetlands in Ohio (https://epa.ohio.gov/portals/47/facts/ohio_wetlands.pdf). We recommend avoiding and minimizing project impacts to all wetland habitats (e.g., forests, streams, vernal pools) to the maximum extent possible in order to benefit water quality and fish and wildlife habitat. Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the U.S. Army Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize erosion, especially on slopes. Disturbed areas should be mulched and revegetated with native plant species. In addition, prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

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

Thank you for your efforts to conserve listed species and sensitive habitats in Ohio. We recommend coordinating with the Ohio Department of Natural Resources due to the potential for the proposed project to affect state listed species and/or state lands. Contact Mike Pettegrew, 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,

Erin Knoll
Field Office Supervisor

cc: Matthew.Stooksbury@dnr.ohio.gov
Eileen.Wyza@dnr.ohio.gov

From: Molnar, Maggie <MMolnar@trccompanies.com>
Sent: Monday, November 11, 2024 3:46 PM
To: Bagato, Steven <sbagato@burnsmcd.com>
Cc: Falkinburg, Brad <BFalkinburg@trccompanies.com>
Subject: RE: [EXTERNAL] TE-24-220927-083304; Accordion-Dowling 138kV project; Boring and Environmental Real Estate Coordination | Pivot 1 & 2 138kV Line |

Steve,

Please see the attached USFWS response for FirstEnergy's Accordion-Dowling 138kV Interconnect Project.

USFWS recommends avoiding tree removal wherever possible. If any caves or abandoned mines may be disturbed, further coordination with their 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, USFWS recommends the removal of any trees ≥3 inches dbh only occur between October 1 and March 31 to avoid adverse effects to Indiana bats and northern long-eared bats.

"Due to the Project type, size, and location, USFWS does not anticipate adverse effects to any other federally endangered, threatened, or proposed species, or proposed or designated critical habitat."

Please let us know if you have any questions on the above or attached.

FYI, still awaiting a response from ODNR 😊.

Thank you,

Maggie Molnar, PWS
Ecologist

TRC
781 Science Boulevard, Suite 200, Gahanna, Ohio 43230
D 614.423.6342| **C** 614.949.2437
LinkedIn | Twitter | Blog | TRCcompanies.com

Please note that our address has changed.

From: Bagato, Steven <sbagato@burnsmcd.com>
Sent: Monday, October 28, 2024 5:29 PM
To: Molnar, Maggie <MMolnar@trccompanies.com>
Cc: Falkinburg, Brad <BFalkinburg@trccompanies.com>
Subject: RE: [EXTERNAL] TE-24-220927-083304; Accordion-Dowling 138kV project; Boring and Environmental Real Estate Coordination | Pivot 1 & 2 138kV Line |

ALWAYS hover over the link to preview the actual URL/site and confirm its legitimacy.

Hi Maggie,

Both approved.

Thank you,

Steve Bagato Jr | Burns & McDonnell
Senior Environmental Scientist / Permitting Coordinator
Environmental Services
M 760-799-3166 | **O** 234-888-0067
sbagato@burnsmcd.com \ burnsmcd.com
544 White Pond Dr Suite 300 | Akron, OH 44320

Proud to be one of *FORTUNE*'s 100 Best Companies to Work For
Please consider the environment before printing this email.

From: Molnar, Maggie <MMolnar@trccompanies.com>
Sent: Monday, October 28, 2024 11:32 AM
To: Bagato, Steven <sbagato@burnsmcd.com>
Cc: Falkinburg, Brad <BFalkinburg@trccompanies.com>
Subject: RE: [EXTERNAL] TE-24-220927-083304; Accordion-Dowling 138kV project; Boring and Environmental Real Estate Coordination | Pivot 1 & 2 138kV Line |

Steve,

Please see the attached draft ODNR and USACE agency coordination letters for your review and approval.

If approved, we will get these submitted ASAP.

Thank you,

Maggie Molnar, PWS
Ecologist

781 Science Boulevard, Suite 200, Gahanna, Ohio 43230
D 614.423.6342| **C** 614.949.2437
LinkedIn | Twitter | Blog | TRCcompanies.com

EXHIBIT 14

1382 West Ninth St.
Suite 400
Cleveland, OH 44113

T 216.344.3072
TRCcompanies.com

December 17, 2024

Mr. Steve Bagato
FirstEnergy Corporation
341 White Pond Drive
Akron, OH 44320

Reference: Technical Memorandum for the Surface Water Delineation of the Accordion-Dowling 138kV Interconnect Project located in the Middleton Township, Wood County, Ohio.
(TRC Project No. 429847.0084.0000)

Dear Mr. Bagato:

On behalf of FirstEnergy Corporation, TRC Environmental Corporation (TRC) conducted a surface water delineation for the northern parcel (J37-611-180000001000) of Accordion-Dowling 138kV Interconnect Project (Project). The northern parcel of the Project is located in Middleton Township, Wood County, Ohio and is 26.05 acres in size (Project Study Area) (**Attachment A, Figures 1 and 2**). The Project Study Area is located at the following centroid coordinates: 41.473547, -83.632077. The proposed Project involves the expansion of the Dowling 138kV Substation to accommodate two additional lines leading to four 138/345kV customer transformers, as well as a future 138/345kV transformer.

The delineation was conducted by qualified wetland scientists on December 5th, 2024, 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. Prior to the site visit, TRC reviewed available secondary source information such as the National Wetlands Inventory (NWI), National Hydrography Dataset (NHD), United States Geological Survey (USGS) topographic maps, County Soil Survey maps, and aerial imagery of the Project Study Area to use in addition to field investigations.

The Project Study Area is shown on the attached map (**Attachment A, Figure 1**), which was derived from the USGS Bowling Green North, Ohio 7.5-minute quadrangle topographic map. Soil mapped within the Project Study Area includes hydric soils and non-hydric soils (**Attachment A, Figure 3**). The proposed Project Study Area includes no mapped NWI features and no mapped NHD features (**Attachment A, Figure 4**). According to Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map panel, 39173C0135D (eff. 9/2/2011), the proposed Project is not located within a FEMA mapped 100-Year Flood Zone. During the field investigation, land use within the Project Study Area was observed to be existing, maintained utility right-of-way and substation within agricultural land use. See the attached mapping in **Attachment A** and the Photographic Record in **Attachment B** for further details of the Project Study Area.

During the field investigation, one (1) wetland (W-EKG-1) was identified and delineated within the Project Study Area. No other ecological resources were observed within the Project Study Area. See **Table 1** below for a summary of the observed resource. The delineated wetland boundaries and sample points are shown on **Figure 5** in **Attachment A**. Wetland data was collected and recorded on the USACE Wetland Determination Data Forms – Northcentral and Northeast Region. A wetland functional assessment was completed using the Ohio Environmental Protection Agency (OEPA) Ohio Rapid Assessment Method (ORAM) data form. All wetland data is provided in **Attachment C.**

Table 1. Wetland

Wetland ID	Cowardin Classification[1]	Connection[2]	ORAM Score and Category	Delineated Area within Project Study Area (acre)
W-EKG-1	PEM	Adjacent	19 (Cat. 1)	0.824

Note: See Delineated Resources Map and Photographic Record for more details.
[1]Cowardin Wetland Classification (based upon field identification and delineation) (Cowardin, et al., 1979): PEM – Palustrine Emergent
[2]Wetland connection is pending an update from OEPA and USACE based on the USA vs. Sackett case.

This Technical Memorandum represents the conditions within the Project Study Area identified herein, as of the inspection dates. Should you require any additional information or have any questions concerning this letter, please feel free to contact me at (440) 666-2890 or by email at BFalkinburg@TRCCompanies.com.

Kind Regards,

TRC

Brad M. Falkinburg, PWS
Ecological Office Practice Leader

cc: Maggie Molnar, PWS – TRC

Attachments
Attachment A: Figures
Attachment B: Photographic Record
Attachment C: Data Sheets

ATTACHMENT A – Figures

PROJECT STUDY AREA

BASE MAP: USA TOPO MAPS MAP SERVICE, BOWLING GREEN NORTH QUAD

N

0 1,000 2,000

FEET

1:24,000 1" = 2,000'

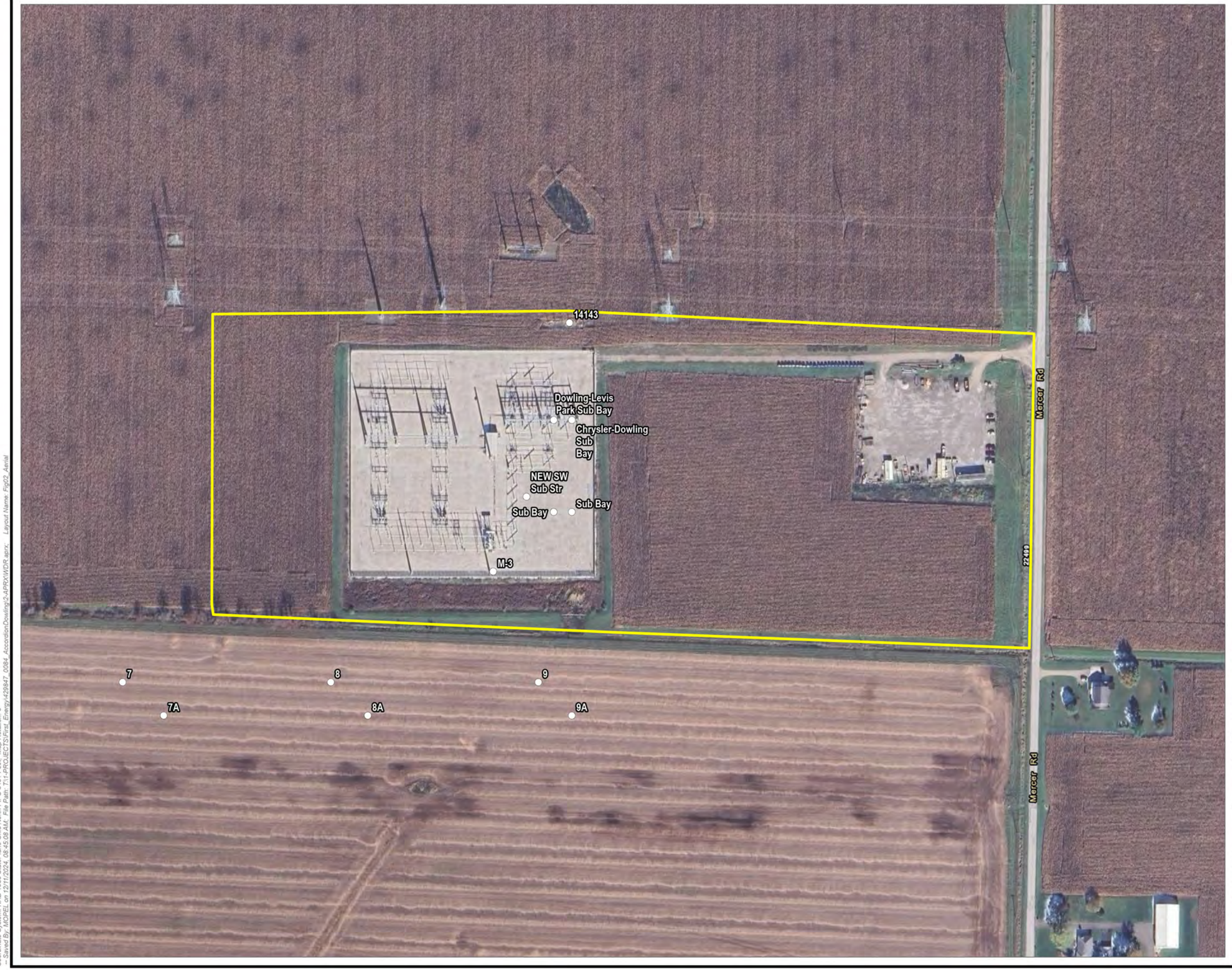
PROJECT: FIRSTENERGY - ACCORDION-DOWLING 138KV INTERCONNECT PROJECT WOOD COUNTY, OH

TITLE: SITE LOCATION MAP

DRAWN BY:	M. OPEL	PROJ. NO.:	429847.0084
CHECKED BY:	M. MOLNAR		
APPROVED BY:	B. FALKINBURG		FIGURE 1
DATE:	DECEMBER 2024		

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

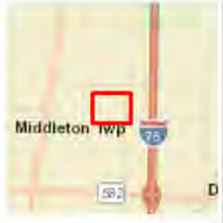
FILE: WDR



PROJECT STUDY AREA

EXISTING STRUCTURE

BASE MAP: GOOGLE MAPS.



1:2,400
1" = 200'

0 200 400 FEET

PROJECT: FIRSTENERGY - ACCORDION-DOWLING
138KV INTERCONNECT PROJECT
WOOD COUNTY, OH

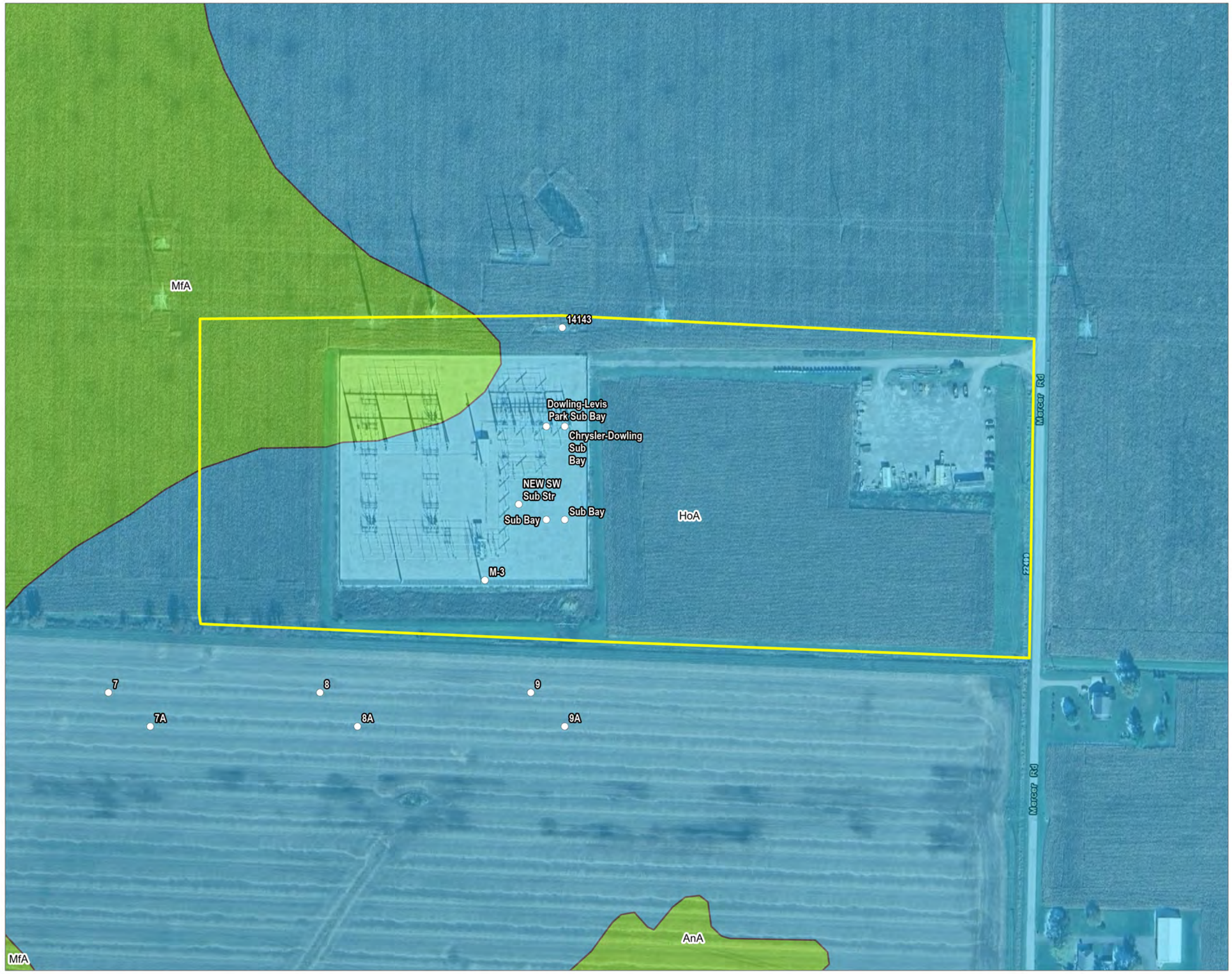
TITLE: AERIAL MAP

DRAWN BY:	M. OPEL	PROJ. NO.:	429847.0084
CHECKED BY:	M. MOLNAR		FIGURE 2
APPROVED BY:	B. FALKINBURG		
DATE:	DECEMBER 2024		

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

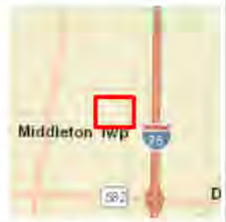
FILE: WDR.aprx

Coordinate System: NAD 1983 StatePlane Ohio North FIPS 3401 Feet; Map Rotation: 0
Saved By: MOPEL on 12/11/2024 @ 8:45:08 AM; File Path: T:\...PROJECTS\Acc_Energy\429847.0084_AccordionDowling\3-APRX\WDR.aprx; Layout Name: Fig02_Aerial



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.



1:2,400
1" = 200'

0 200 400 FEET

PROJECT: FIRSTENERGY - ACCORDION-DOWLING
138KV INTERCONNECT PROJECT
WOOD COUNTY, OH

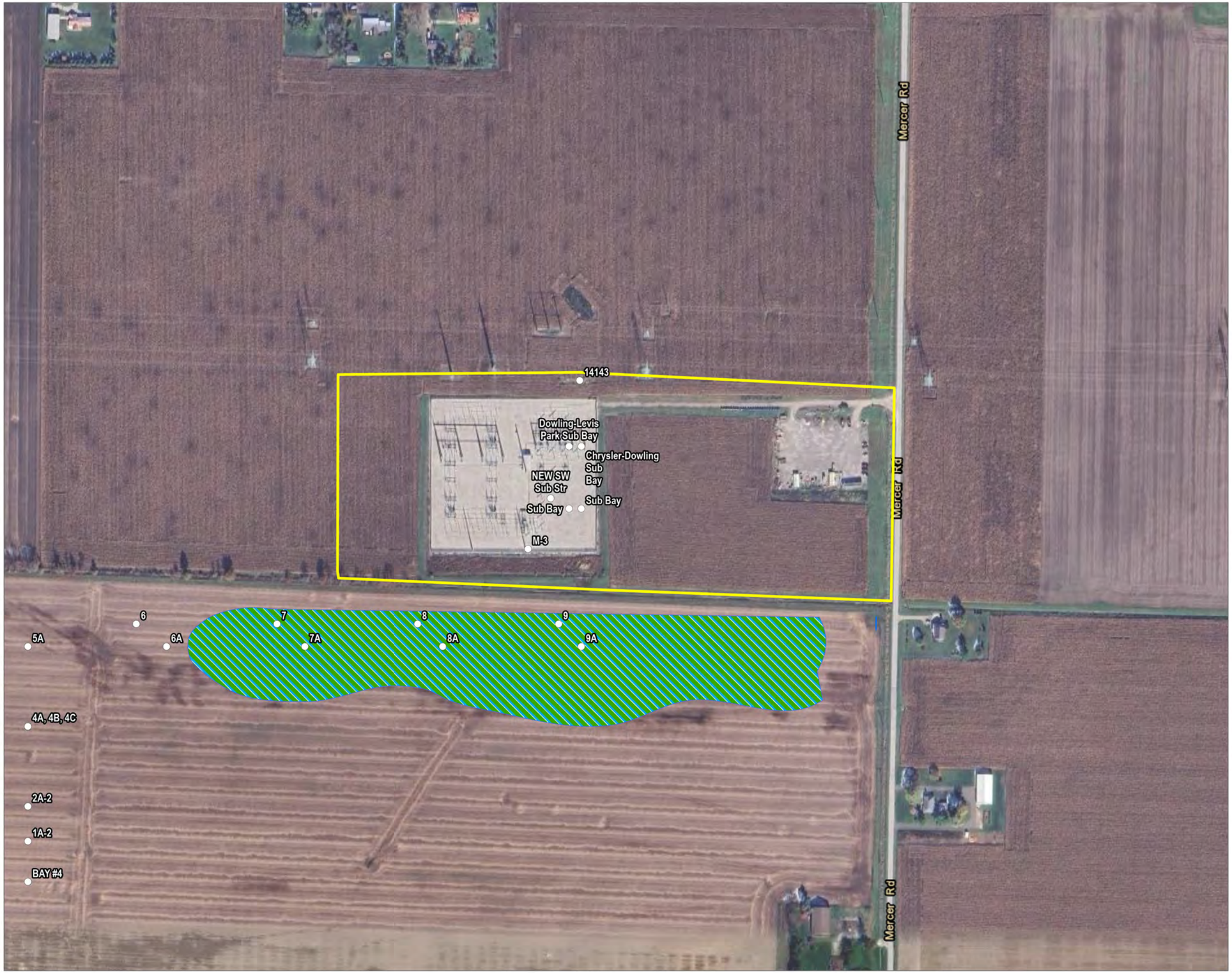
TITLE: SOILS MAP

DRAWN BY:	M. OPEL	PROJ. NO.:	429847.0084
CHECKED BY:	M. MOLNAR		FIGURE 3
APPROVED BY:	B. FALKINBURG		
DATE:	DECEMBER 2024		

TRC
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
Saved By MOPEL on 12/12/2024 11:04:19 AM; File Path: T:\PROJECTS\Fed_Energy\429847.0084_AccordionDowling\2-APRX\WDR.aprx; Layout Name: Fig03_Soils



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).

1:3,600
1" = 300'
0 300 600 FEET

PROJECT: FIRSTENERGY - ACCORDION-DOWLING 138KV INTERCONNECT PROJECT WOOD COUNTY, OH

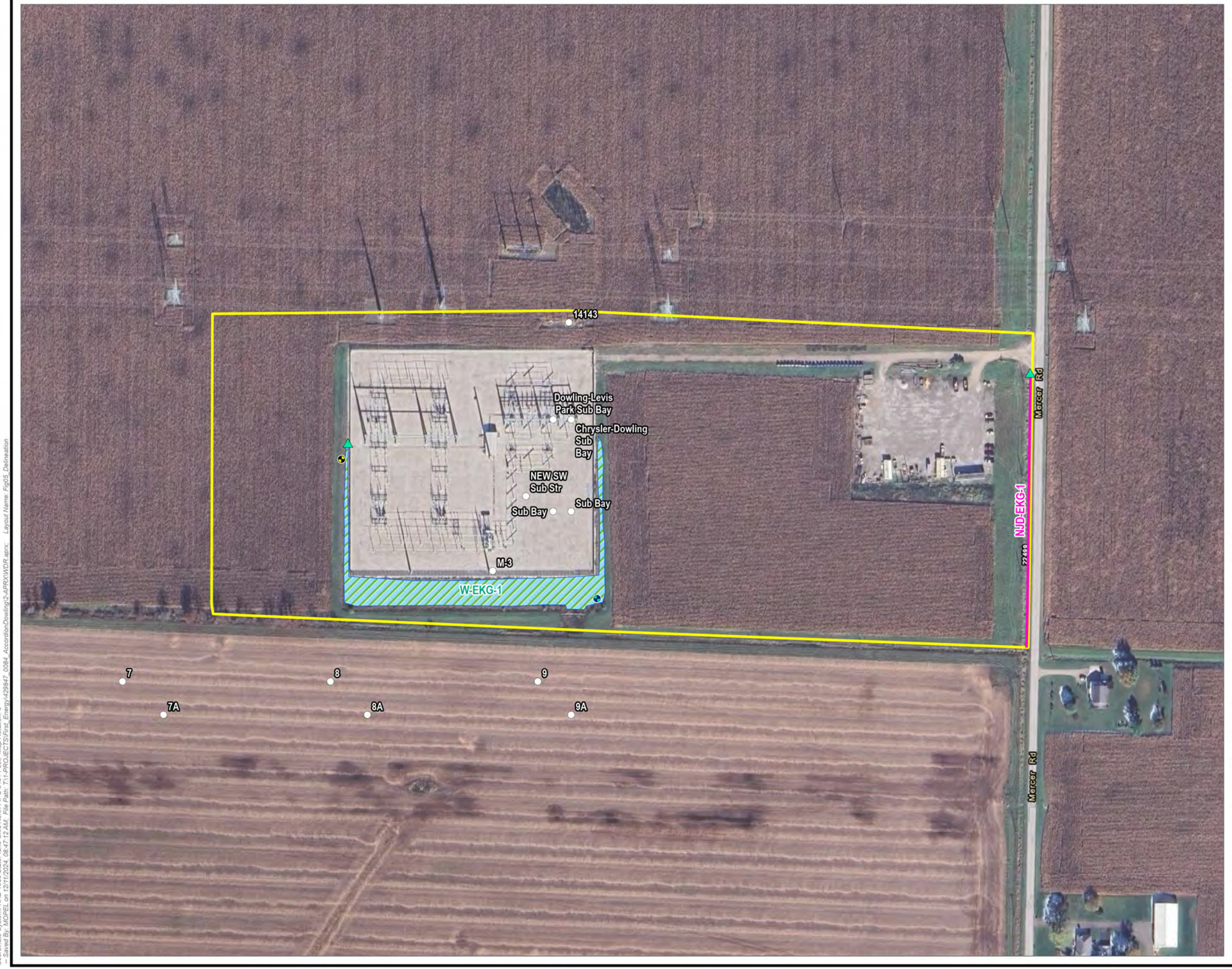
TITLE: NHD, NWI AND FEMA FLOODPLAIN MAP

DRAWN BY:	M. OPEL	PROJ. NO.:	429847.0084
CHECKED BY:	M. MOLNAR		FIGURE 4
APPROVED BY:	B. FALKINBURG		
DATE:	DECEMBER 2024		

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

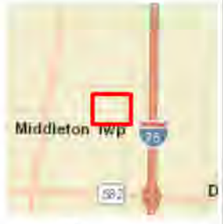
FILE: WDR.aprx

Coordinate System: NAD 1983 StatePlane Ohio North FIPS 3401 Feet; Map Rotation: 0
Saved By: MOPEL on 12/2/2024 11:04:19 AM; File Path: T:\PROJECTS\Task Energy\429847_0084_AccordionDowling3-4\REVMXD\R.aprx; Layout Name: Fig04_Hydro



PROJECT STUDY AREA
EXISTING STRUCTURE
CULVERT
NON-JURISDICTIONAL DITCH
PEM WETLAND
WETLAND DATA POINT
UPLAND DATA POINT

BASE MAP: GOOGLE MAPS.
DATA SOURCES: TRC WETLAND DELINEATION COMPLETED DECEMBER 5, 2024.



1:2,400
1" = 200'

0 200 400 FEET

PROJECT: FIRSTENERGY - ACCORDION-DOWLING
138KV INTERCONNECT PROJECT
WOOD COUNTY, OH

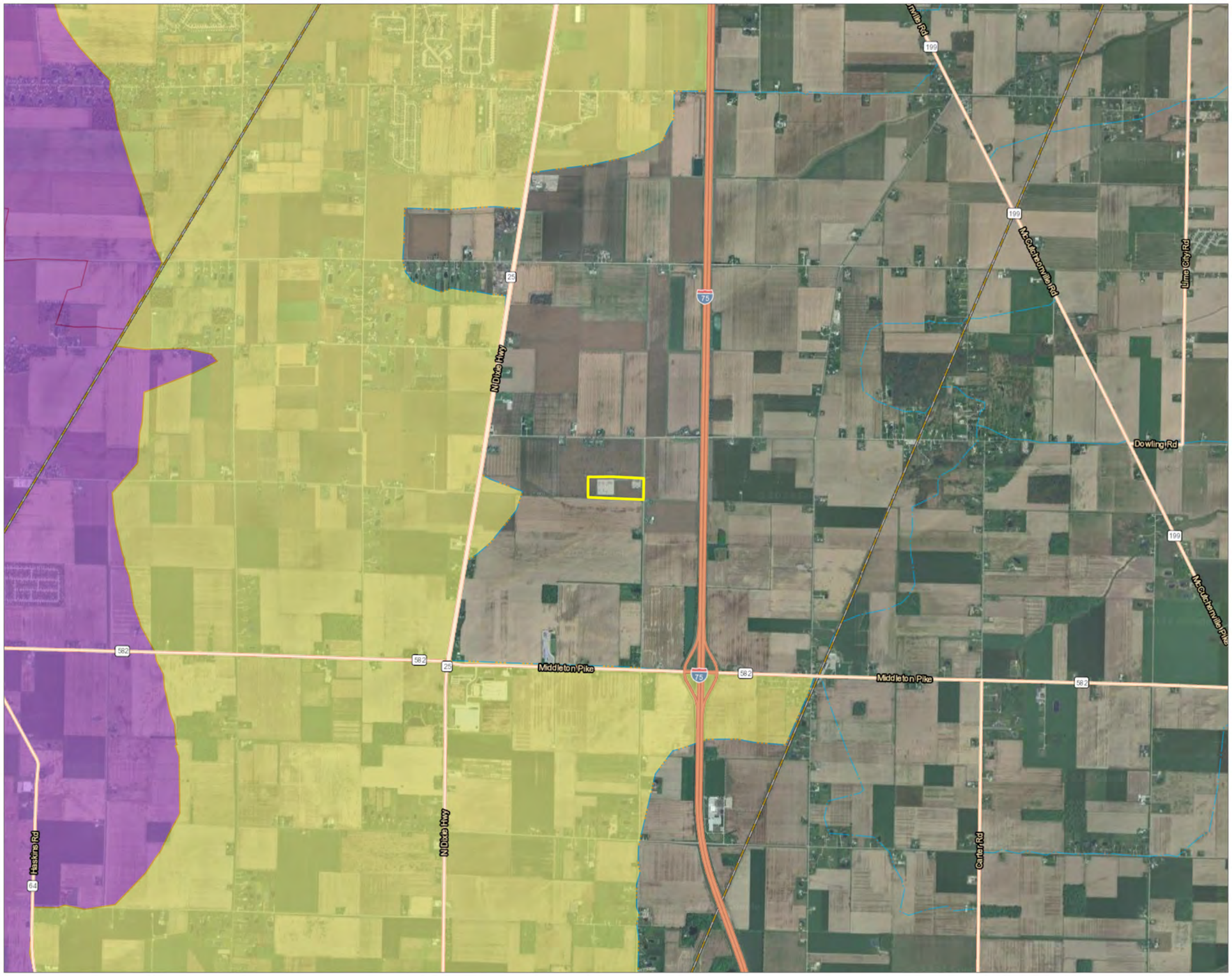
TITLE:
DELINEATED RESOURCES MAP

DRAWN BY:	M. OPEL	PROJ. NO.:	429847.0084
CHECKED BY:	M. MOLNAR		
APPROVED BY:	B. FALKINBURG		**FIGURE 5**
DATE:	DECEMBER 2024		

TRC
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
Saved By: MOPEL on 12/11/2024 at 8:47:12 AM; File Path: T:\PROJECTS\Ext_Energy\429847.0084_AccordionDowling\3-APRV\WDR.aprx; Layout Name: Fig05_Delineation



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.

1:36,000
1" = 3,000'
0 3,000 6,000 FEET

PROJECT: FIRSTENERGY - ACCORDION-DOWLING 138KV INTERCONNECT PROJECT WOOD COUNTY, OH

TITLE: NATIONWIDE PERMITS STREAM ELIGIBILITY MAP

DRAWN BY:	M. OPEL	PROJ. NO.:	429847.0084
CHECKED BY:	M. MOLNAR		
APPROVED BY:	B. FALKINBURG		FIGURE 6
DATE:	DECEMBER 2024		

TRC
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
Saved By: MOPEL on 12/12/2024 11:04:19 AM; File Path: T:\1 PROJECTS\First Energy\429847.0084_AccordionDowling\2-ARR\MXD\WDR.aprx; Layout Name: Fig06_NWP

ATTACHMENT B – Photographic Record

PHOTOGRAPHIC RECORD

Accordion-Dowling 138kV Interconnect Project

Client Name:	Site Location:	Project No.
FirstEnergy	Middleton Township, Wood County, Ohio	429847.0084.0000

Photo No. 1.	
Photo Date: 12/05/2024	
Description: Wetland W-EKG-1 facing north.	

Photo No. 2.	
Photo Date: 12/05/2024	
Description: Wetland W-EKG-1 facing east.	

Client Name:	Site Location:	Project No.
FirstEnergy	Middleton Township, Wood County, Ohio	429847.0084.0000

Photo No. 3. **Photo Date:** 12/05/2024 **Description:** Wetland W-EKG-1 facing south.	

Photo No. 4. **Photo Date:** 12/05/2024 **Description:** Wetland W-EKG-1 facing west.	

Client Name:	Site Location:	Project No.
FirstEnergy	Middleton Township, Wood County, Ohio	429847.0084.0000

Photo No. 5.	
Photo Date: 12/05/2024	
Description: Representative photo from the northeastern extent of the Project Study Area, facing north.	

Photo No. 6.	
Photo Date: 12/05/2024	
Description: Representative photo from the northeastern extent of the Project Study Area, showing NJD-EKG-1, facing east.	

Client Name:	Site Location:	Project No.
FirstEnergy	Middleton Township, Wood County, Ohio	429847.0084.0000

Photo No. 7. **Photo Date:** 12/05/2024 **Description:** Representative photo from the eastern extent of the Project Study Area, facing east.	

Photo No. 8. **Photo Date:** 12/05/2024 **Description:** Representative photo from the western extent of the Project Study Area, facing west.	

Client Name:	Site Location:	Project No.
FirstEnergy	Middleton Township, Wood County, Ohio	429847.0084.0000

Photo No. 9.	
Photo Date: 12/05/2024	
Description: Representative photo from the northwestern extent of the Project Study Area, facing north.	

Photo No. 10.	
Photo Date: 12/05/2024	
Description: Representative photo from the Project Study Area, facing east.	

ATTACHMENT C – Data Sheets

USACE Wetland Determination Data Forms – Northcentral and Northeast Region

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Accordion-Dowling 138kV Interconnect Project City/County: Middleton Township, Wood County Sampling Date: 2024-12-5
Applicant/Owner: FirstEnergy State: OH Sampling Point: W-EKG-01_PEM-1
Investigator(s): Emma Given, Talon Cline Section, Township, Range: 18 6N 11E
Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): Concave Slope (%): 1 to 3
Subregion (LRR or MLRA): MLRA 99 of LRR L Lat: 41.47282105 Long: -83.6321990167 Datum: WGS84
Soil Map Unit Name: Hoytville clay loam, 0 to 1 percent slopes NWI Classification:
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 ✘ No _____
Hydric Soil Present? Yes ✘ No _____
Wetland Hydrology Present? Yes ✘ No _____

Is the Sampled Area within a Wetland? Yes ✘ No _____

If yes, optional Wetland Site ID: W-EKG-01

Remarks: (Explain alternative procedures here or in a separate report.)
Covertype is PEM. Based on the presence of all three parameters, this area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)
- ✘ Surface Water (A1)
- _ High Water Table (A2)
- _ Saturation (A3)
- _ Water Marks (B1)
- _ Sediment Deposits (B2)
- _ Drift Deposits (B3)
- _ Algal Mat or Crust (B4)
- _ Iron Deposits (B5)
- _ Inundation Visible on Aerial Imagery (B7)
- _ Sparsely Vegetated Concave Surface (B8)
- _ Water-Stained Leaves (B9)
- _ Aquatic Fauna (B13)
- _ Marl Deposits (B15)
- _ Hydrogen Sulfide Odor (C1)
- ✘ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- _ Recent Iron Reduction in Tilled Soils (C6)
- _ Thin Muck Surface (C7)
- _ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)
- _ Surface Soil Cracks (B6)
- _ Drainage Patterns (B10)
- _ Moss Trim Lines (B16)
- _ Dry-Season Water Table (C2)
- _ Crayfish Burrows (C8)
- ✘ Saturation Visible on Aerial Imagery (C9)
- _ Stunted or Stressed Plants (D1)
- ✘ Geomorphic Position (D2)
- _ Shallow Aquitard (D3)
- _ Microtopographic Relief (D4)
- ✘ FAC-Neutral Test (D5)

Field Observations:
Surface Water Present? Yes ✘ No _____ Depth (inches): 12
Water Table Present? Yes _____ No ✘ Depth (inches): _____
Saturation Present? (includes capillary fringe) Yes _____ No ✘ Depth (inches): _____

Wetland Hydrology Present? Yes ✘ No _____

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-EKG-01_PEM-1

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Typha angustifolia*	85	Yes	OBL
2. *Phalaris arundinacea*	10	No	FACW
3. *Carex comosa*	5	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	90	x 1 =	90
FACW species	10	x 2 =	20
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		110 (B)

Prevalence Index = B/A = 1.1

Hydrophytic Vegetation Indicators:

✘ 1 - Rapid Test for Hydrophytic Vegetation

✘ 2 - Dominance Test is >50%

__ 3 - Prevalence Index is ≤3.0[1]

__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ✘ No _____

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 Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 to 4	10YR 3/1	60	10YR 6/4	40	C	M/PL	Silty Clay Loam	
4 to 14	N 6/	60	10YR 6/6	40	C	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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)
- ___ Iron Monosulfide (A18)
- ___ 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 Soils[3]:

- ___ 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)

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

Restrictive Layer (if present):

Type: Not present

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: Accordion-Dowling 138kV Interconnect Project City/County: Middleton Township, Wood County Sampling Date: 2024-12-5
Applicant/Owner: FirstEnergy State: OH Sampling Point: W-EKG-01_UPL-1
Investigator(s): Emma Given, Talon Cline Section, Township, Range: 18 6N 11E
Landform (hillslope, terrace, etc): Flat Local relief (concave, convex, none): Concave Slope (%): None
Subregion (LRR or MLRA): MLRA 99 of LRR L Lat: 41.4736329667 Long: -83.63423225 Datum: WGS84
Soil Map Unit Name: Hoytville clay loam, 0 to 1 percent slopes NWI Classification: _____
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 _____ No ✘
Hydric Soil Present? Yes _____ No ✘
Wetland Hydrology Present? Yes _____ No ✘

Is the Sampled Area within a Wetland? Yes _____ No ✘

If yes, optional Wetland Site ID: W-EKG-01

Remarks: (Explain alternative procedures here or in a separate report.)
Covertype is UPL. Based on the absence of all three parameters, this area is an upland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)
- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9)
- __ Aquatic Fauna (B13)
- __ Marl Deposits (B15)
- __ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- __ Presence of Reduced Iron (C4)
- __ Recent Iron Reduction in Tilled Soils (C6)
- __ Thin Muck Surface (C7)
- __ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)
- __ Surface Soil Cracks (B6)
- __ Drainage Patterns (B10)
- __ Moss Trim Lines (B16)
- __ Dry-Season Water Table (C2)
- __ Crayfish Burrows (C8)
- __ Saturation Visible on Aerial Imagery (C9)
- __ Stunted or Stressed Plants (D1)
- __ Geomorphic Position (D2)
- __ Shallow Aquitard (D3)
- __ Microtopographic Relief (D4)
- __ FAC-Neutral Test (D5)

Field Observations:
Surface Water Present? Yes _____ No ✘ Depth (inches): _____
Water Table Present? Yes _____ No ✘ Depth (inches): _____
Saturation Present? (includes capillary fringe) Yes _____ No ✘ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✘

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-EKG-01_UPL-1

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Festuca altaica*	80	Yes	FACU
2. *Setaria faberi*	15	No	FACU
3. *Festuca rubra*	5	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	100	x 4 =	400
UPL species	0	x 5 =	0
Column Totals:	100 (A)		400 (B)

Prevalence Index = B/A = 4

Hydrophytic Vegetation Indicators:

__ 1 - Rapid Test for Hydrophytic Vegetation

__ 2 - Dominance Test is >50%

__ 3 - Prevalence Index is ≤3.0[1]

__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree — Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub — Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb — All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines — All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No ✘

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 Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 to 10	10YR 3/2	100					Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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)
- __ Iron Monosulfide (A18)
- __ 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 Soils[3]:

- __ 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)

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

Restrictive Layer (if present):
Type: Gravel
Depth (inches): 10

Hydric Soil Present? Yes ____ **No** ✘

Remarks:
The criterion for hydric soil is not met.

OEPA ORAM Data Form

Background Information

Name: Emma Given
Date: 12/05/2024
Affiliation: TRC Companies, Inc.
Address: 1382 West Ninth Street, Suite 400
Phone Number: 330-446-0265
e-mail address: EGiven@TRCcompanies.com
Name of Wetland: W-EKG-1
Vegetation Communit(ies): PEM
HGM Class(es): Depressional
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. See Report

Lat/Long or UTM Coordinate	41.473547, -83.632077
USGS Quad Name	Bowling Green North
County	Wood
Township	Middleton
Section and Subsection	N/A
Hydrologic Unit Code	041000100703
Site Visit	12/05/2024
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-EKG-1	
Wetland Size (acres, hectares):	0.824-ac (0.33 ha)

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.

See Report

Comments, Narrative Discussion, Justification of Category Changes:

Final score : 19	**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	(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	(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	(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	(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 *Phalaris arundinacea, Lythrum salicaria,* or *Phragmites australis*, 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	(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 *Sphagnum* 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	(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	(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	(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	0ak Opening species	wet prairie species
Lythrum salicaria	*Zygadenus elegans var. glaucus*	*Calla palustris*	*Carex cryptolepis*	*Calamagrostis canadensis*
Myriophyllum spicatum	*Cacalia plantaginea*	*Carex atlantica var. capillacea*	*Carex lasiocarpa*	*Calamogrostis stricta*
Najas minor	*Carex flava*	*Carex echinata*	*Carex stricta*	*Carex atherodes*
Phalaris arundinacea	*Carex sterilis*	*Carex oligosperma*	*Cladium mariscoides*	*Carex buxbaumii*
Phragmites australis	*Carex stricta*	*Carex trisperma*	*Calamagrostis stricta*	*Carex pellita*
Potamogeton crispus	*Deschampsia caespitosa*	*Chamaedaphne calyculata*	*Calamagrostis canadensis*	*Carex sartwellii*
Ranunculus ficaria	*Eleocharis rostellata*	*Decodon verticillatus*	*Quercus palustris*	*Gentiana andrewsii*
Rhamnus frangula	*Eriophorum viridicarinatum*	*Eriophorum virginicum*		*Helianthus grosseserratus*
Typha angustifolia	*Gentianopsis spp.*	*Larix laricina*		*Liatris spicata*
Typha xglauca	*Lobelia kalmii*	*Nemopanthus mucronatus*		*Lysimachia quadriflora*
	Parnassia glauca	*Schechzeria palustris*		*Lythrum alatum*
	Potentilla fruticosa	*Sphagnum spp.*		*Pycnanthemum virginianum*
	Rhamnus alnifolia	*Vaccinium macrocarpon*		*Silphium terebinthinaceum*
	Rhynchospora capillacea	*Vaccinium corymbosum*		*Sorghastrum nutans*
	Salix candida	*Vaccinium oxycoccos*		*Spartina pectinata*
	Salix myricoides	*Woodwardia virginica*		*Solidago riddellii*
	Salix serissima	*Xyris difformis*		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

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

Site: FirstEnergy, Accordion-Dowling 138kV Interconnect Project **Rater(s):** Emma Given, Talon Cline **Date:** 2024-12-05

Metric 1. Wetland Area (size).

2 (max 6 pts.) | 2 (subtotal)

Select one size class and assign score.

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

Metric 2. Upland buffers and surrounding land use.

1 (max 14 pts.) | 3 (subtotal)

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

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

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

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

Metric 3. Hydrology.

11 (max 30 pts.) | 14 (subtotal)

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

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

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

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

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

7 (max 20 pts.) | 21 (subtotal)

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

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

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

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

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

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

Check all disturbances observed

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

21 subtotal this page

TRC Environmental Corp.
1200 Wall Street West
Lyndhurst, NJ 07071

Site: FirstEnergy, Accordion-Dowling 138kV Interconnect Project	Rater(s): Emma Given, Talon Cline	Date: 2024-12-05

21
subtotal first page

0 (max 10 pts.) | 21 (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)

-2 (max 20 pts.) | 19 (subtotal)

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

- [ ] Aquatic Bed
- [1] Emergent
- [ ] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other _____

6b. horizontal (plan view) Interspersion.
Select only one.

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

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

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

6d. Microtopography.
Score all present using 0 to 3 scale.

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

19

CATEGORY 1

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES (NO)	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES (NO)	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES (NO)	If yes, Category 3.
	Question 4. Significant bird habitat	YES (NO)	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES (NO)	If yes, Category 1.
	Question 6. Bogs	YES (NO)	If yes, Category 3.
	Question 7. Fens	YES (NO)	If yes, Category 3.
	Question 8a. Old Growth Forest	YES (NO)	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES (NO)	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES (NO)	If yes, Category 3
	Question 11. Relict Wet Prairies	YES (NO)	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	1	
	Metric 3. Hydrology	11	
	Metric 4. Habitat	7	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	-2	
	TOTAL SCORE	19	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	(NO)	Is quantitative rating score *less* than the Category 2 scoring threshold (*excluding* 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	(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	(NO)	Is quantitative rating score *greater* than the Category 2 scoring threshold *(including* 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?	(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	(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 *moderate OR superior* hydrologic OR habitat, OR recreational functions AND the wetland was *not* 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	(NO) Wetland is assigned to category as determined by the ORAM.	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	(Category 1)	Category 2	Category 3

End of Ohio Rapid Assessment Method for Wetlands.