

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

LETTER OF NOTIFICATION

**TUSC 138KV SUBSTATION SIX-BREAKER RING BUS
EXPANSION PROJECT**

Case No.: 26-0267-EL-BLN

July 30, 2026

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

**LETTER OF NOTIFICATION
TUSC 138 KV SUBSTATION SIX-BREAKER RING BUS EXPANSION PROJECT
OPSB CASE NO. 26-0267-EL-BLN**

The following information is being provided in accordance with the procedures in the Ohio Administrative Code (Adm.Code) Chapter 4906-6 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 Letter of Notification application. Because the expected construction date is less than 90 days from the filing date, ATSI respectfully requests ____-day expedited treatment of this Application pursuant to Adm.Code 4906-6-04.

4906-6-05(B): LETTER OF NOTIFICATION REQUIREMENTS

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

Name of Project: Tusc 138 kV Substation Six-Breaker Ring Bus Expansion Project (“Project”)

Reference Number: 1005

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

American Transmission Systems, Incorporated, (“ATSI”), a FirstEnergy company, is proposing to expand the existing Tusc 138 kV Substation to accommodate the expansion of the four-breaker ring bus into a six-breaker ring bus. To facilitate this, the substation will expand from its existing square footage of approximately 55,541 square feet to approximately 99,686 square feet. This will result in an approximate 80 percent increase in square footage.

In addition to the substation expansion, the adjacent Pine–Wadsworth Muni 138 kV Transmission Line will be looped into the Tusc Substation. The new transmission line loop will create two new transmission lines, the Pine–Tusc 138 kV and Tusc–Wadsworth Muni 138 kV transmission lines. Due to the proximity of the parallel Barberton–West Akron 138 kV Transmission Line, a new mid-span steel monopole

structure on a concrete foundation is required to be installed on the Barberton West Akron 138 kV Transmission Line to control conductor movement and ensure adequate clearances between all circuits, operating equipment, and structures in the area.

To accomplish the connection of the existing Star-Tusc and Tusc-Urban 138 kV transmission lines to the Tusc Substation, the existing wood pole structures (4998 and #4999) will be replaced with single steel monopole structures on concrete foundations. To accomplish the connection of the existing Pine-Wadsworth 138 kV Transmission Line to the Tusc Substation, the conductors of the transmission line will extend from existing steel lattice structures #7584 and #7585.

The Project is in the city of Norton in Summit County, Ohio. The general location of the Project is shown in **Exhibit 1**, a partial copy of the United States Geologic Survey, Summit County, OH, Quad Map. **Exhibit 2** is a copy of ESRI aerial imagery of the Project area. The general layouts for the transmission portion of the Project and substation portion of the Project are shown in **Exhibit 3** and **Exhibit 4**, respectively.

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

The Project meets the requirements for a Letter of Notification application because the Project is within the types of projects defined by Items (2)(a) and (4)(b) of the Application Requirement Matrix for Electric Power Transmission Lines. Appendix A of Adm.Code 4906-1-01. This item states:

- (2) *Adding new circuits on existing structures designed for multiple circuit use, replacing conductors on existing structures with larger or bundled conductors, adding structures to an existing transmission line, or replacing structures with a different type of structure, for a distance of:*
 - (a) *Two miles or less.*

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

(b) There is a greater than twenty percent expansion of the fenced area.

The proposed Project is within the requirements of Item (2)(a) as it involves the replacement of two structures with a different type of structure, in this case, directly embedded wood monopole to steel monopole on a concrete foundation and the addition of one new steel monopole on a concrete foundation. The Project is also within the requirements of Item (4)(b) as it involves the expansion of the Tusc Substation by an amount greater than 20 percent of the existing fenced area.

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

Tusc Substation is a 138 - 12.47 kV substation located in Summit County, Ohio, and serves as a transmission sectionalizing station and distribution substation for the surrounding area. The proposed Tusc Substation 138 kV Six-Breaker Ring Bus Expansion Project (“Project”) involves expanding the existing 138 kV four-breaker ring bus configuration (**Figure 1**) into a six-breaker ring bus configuration (**Figure 2**) and looping the Pine – Wadsworth Muni 138 kV Line in and out of the Tusc Substation. This will split the Pine – Wadsworth Muni 138 kV Transmission Line into two lines after the project is completed, the Pine - Tusc 138 kV Transmission Line and the Tusc - Wadsworth 138 kV Transmission Line. The Project is needed to: (i) reduce the risk of area-wide power disruptions to residential and commercial customers due to transmission bus outages, (ii) improve the reliability of the transmission and the local distribution network by upgrading the substation with a redundant breaker and protection scheme, (iii) decrease the occurrence of simultaneous outages of multiple transmission facilities in the area.

With the expansion and reconfiguration of the Tusc Substation, ATSI’s installation of the three (3) single steel monopole structures meets the statutory definition of “advanced transmission technology” because they are “hardware technologies that increase the *** reliability or safety of an existing *** transmission system.” R.C. 4906.01(M) (as amended by House Bill 15), particularly in terms of the addition to

the Barberton-West Akron 138 kV Transmission Line to prevent conductor-to-conductor strikes.

The Project is a Supplemental project that has been through the PJM Open Access Transmission Tariff (“OATT”) Attachment M-3 process for Supplemental projects. As required by the Attachment M-3 process, the need for the proposed substation upgrade project was presented at the PJM Subregional RTEP-Western Committee meeting on June 16, 2023, and the proposed solution was presented at the Subregional RTEP-Western Committee meeting on September 19, 2025 (**Exhibit 5**). Upon completion of the Attachment M-3 process, PJM assigned the Project supplemental upgrade identification number s3779.1.

FirstEnergy’s System Performance Excellence methodology is intended to: (i) proactively upgrade or replace transmission lines and substation components that present an increasing risk to reliability; (ii) modernize the transmission infrastructure by implementing technological advances to enhance reliability and promote increased efficiencies; (iii) increase or restore load serving capability; (iv) improve the resiliency of the existing transmission system to better withstand and recover from storms and unusual weather events such as extreme heat and cold; (v) address heightened concerns with cyber and physical security; (vi) improve customer reliability by installing new equipment with real-time monitoring capabilities to optimize maintenance intervals and reduce the likelihood of equipment failure; and (vii) better address our customers’ needs by reducing the duration and frequency of unscheduled outages. Reliability enhancement projects, like this Project, are driven by increased reliability needs of customers. Consistent with PJM’s General Transmission Owner Guidelines the standards are intended to:

- Minimize the magnitude and duration of system outages in the event of a component failure,
- Minimize widespread system effects on equipment loading, voltage, dynamic stability, etc., that occur because of an unplanned event,

- Facilitate the isolation of failed component(s) while maximizing the amount of transmission system equipment that can remain in service, and
- Include plans for expeditious restoration of failed facilities/components (dedicated spare equipment, etc.).

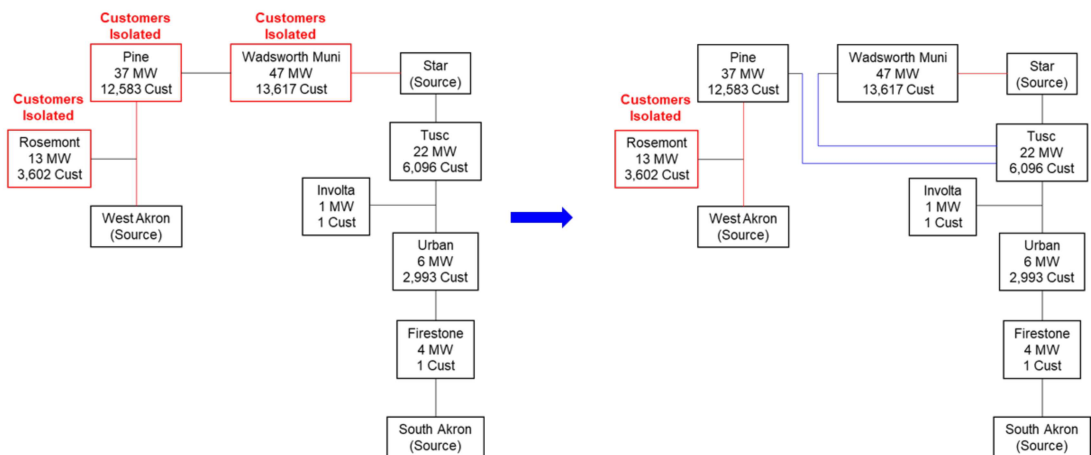
The following seven lines make up a majority of the transmission network and serve the customers in the Project area:

- West Akron - Pine 138 kV Transmission Line: approximately 5.5 miles
- Pine - Wadsworth Muni 138 kV Transmission Line: approximately 15 miles
- Wadsworth Muni - Star 138 kV Transmission Line: approximately 1.2 miles
- Star - Tusc 138 kV Transmission Line: approximately 7 miles
- Tusc - Urban 138 kV Transmission Line: approximately 9.8 miles
- Urban - Firestone 138 kV Transmission Line: approximately 2.9 miles
- Firestone - South Akron 138 kV Transmission Line: approximately 2.9 miles

Two different N-1-1 contingency scenarios result in a total consequential loss of approximately 130 MW of load and put 38,900 customers at risk.

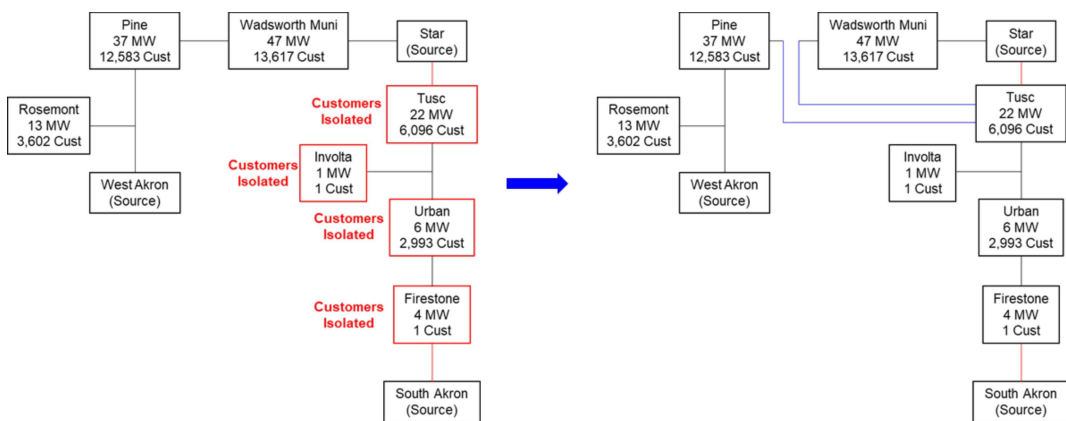
In the first scenario, an interruption of the Pine - West Akron 138 kV Transmission Line followed by an interruption of the Star – Wadsworth Muni 138 kV Transmission Line will result in the interruption of approximately 29,800 customers and 96 MW of load loss. With no other source connected to the area (see **Figure 1**), the N-1-1 contingencies on the Pine - West Akron 138 kV Transmission Line and the Star - Wadsworth Muni 138 kV Transmission Line will result in load loss at the Wadsworth Muni, Pine, and Rosemont substations.

Figure 1: General Representation of Wadsworth Muni/Pine Outage Addressed by Project (Before and After)



Similarly, in the second scenario, an outage of the Star-Tusc 138 kV Transmission Line followed by the loss of the South Akron – Firestone 138 kV Transmission Line will result in the interruption of approximately 9,100 customers and 33 MW of load loss (see **Figure 2**). An outage of both 138 kV transmission lines results in load loss at Tusc, Urban, Involta, and Firestone substations in the Project area. In addition, the loss of the two 138 kV lines will cause a backfeed condition from the Akron 23 kV system.

Figure 2: General Representation of Tusc/Urban/Firestone Outage Addressed by Project (Before and After)



By expanding the existing Tusc Substation 138 kV four-breaker ring bus into a six-breaker ring bus and looping the Pine - Wadsworth Muni 138 kV Transmission Line in and out of Tusc Substation as proposed in this Project, a more reliable 138 kV service will be provided to both the Wadsworth Muni/Pine substations and the Tusc Substation. With the reconfiguration of the 138 kV transmission line, the Project will reduce the consequential loss of load from 96 MW to 13 MW in the first scenario and from 33 MW to zero in the second scenario significantly increasing the reliability, resiliency, and operational flexibility in the entire Project Area.

Additionally, in the existing Tusc Substation, the 138 kV portion of the substation is a four-breaker ring bus arranged as line / line / load / load configuration. Tusc Substation directly serves approximately 22 MW of peak load and approximately 6,100 Ohio Edison distribution customers. A single breaker fault of the load / load breaker or the line / line breaker would result in an outage of both distribution transformers at Tusc Substation or trip both the Star - Tusc 138 kV Transmission Line and the Tusc - Urban 138 kV Transmission Line at the same time. Either of these would result in approximately 22 MW and 6,100 customers being interrupted.

The proposed Project to expand the existing four-breaker ring bus configuration, **Figure 3**, to a six-breaker ring bus configuration and arrange the terminations in the ring bus as line / load / line / load at Tusc Substation, as shown in **Figure 4**, will significantly reduce the amount of exposed potential local load loss during contingency conditions and the likelihood of a simultaneous outage of multiple facilities due to a breaker fault condition. The Project will also increase the reliability and operational flexibility of the transmission system. The proposed ring bus arrangement ensures that no more than two elements would trip due to a faulted breaker condition.

FE's transmission planning is based on deterministic criteria, and not probabilistic criteria. In other words, ATSI's transmission planning assessments result in recommendations to reinforce the transmission system based on an adverse planning

event occurring and not based on the probability of the event occurring. ATSI cannot know or predict when a failure or fault will occur.

In the last five years, there has been one unscheduled outage on the Star - Wadsworth Muni 138 kV Transmission Line, one unscheduled outage on the Tusc - Urban 138 kV Transmission Line, two unscheduled outages on the Firestone - South Akron 138 kV Transmission Line, two unscheduled outages on the Firestone - Urban 138 kV Transmission Line, one unscheduled outage on the Pine - Wadsworth Muni 138 kV Transmission Line, and two unscheduled outages on the Star - Tusc 138 kV Transmission Line in the Project area. **Table 1** identifies the details of these outages.

Table 1. Reliability outage history for related Transmission Lines.

Equipment	Actual Out	Actual In	Duration (minutes)	Type	Cause	Number of Customers Impacted
South Akron - Firestone 138 kV Line	02/23/2026 12:29:05 PM	02/23/2026 12:35:45 PM	7	Human Error	Sustained	1
Pine - Wadsworth 138 kV Line	10/27/2025 2:54:10 PM	10/28/2025 1:10:30 AM	616	Failed AC Circuit Equipment	Sustained	13,617
South Akron - Firestone 138 kV Line	10/16/2024 7:46:14 AM	10/16/2024 10:29:26 AM	163	Foreign Interference	Sustained	1
Tusc - Urban 138 kV Line	10/11/2024 1:52:30 PM	10/11/2024 2:15:04 PM	23	Foreign Interference	Sustained	1
Star - Tusc 138 kV Line & TR #3 at Star Sub	09/30/2024 1:07:38 PM	10/09/2024 1:24:22 PM	12,977	Failed AC Substation Equipment	Sustained	0
Star - Tusc 138 kV Line & TR #3 at Star Sub	09/16/2024 5:16:10 AM	09/16/2024 9:03:30 AM	227	Failed AC Substation Equipment	Sustained	0
Firestone - Urban 138 kV Line	10/31/2022 7:58:33 AM	10/31/2022 7:58:33 AM	0	Foreign Interference	Momentary	1
Firestone - Urban 138 kV Line	03/14/2022 10:32:04 AM	03/14/2022 10:32:04 AM	0	Vegetation	Momentary	1
Star - Wadsworth 138 kV Line	04/23/2021 12:34:00 PM	04/23/2021 3:29:40 PM	176	Human Error	Sustained	13,617

The proposed Project will expand the Tusc Substation to a six-breaker ring bus and loop the Pine - Wadsworth Muni 138 kV Transmission Line in and out of the Tusc Substation 138 kV ring bus to meet the current minimum FE design standard for substations and eliminate the contingency scenarios discussed above. Upgrading the substation to a six-breaker ring-bus configuration will enable provision of redundant service to the distribution transformers, improve operational flexibility, and increase efficiency during outage, maintenance, and restoration efforts. Note that the proposed substation project is not needed to address a NERC, PJM, or FE Planning Criteria violation and is not part of a larger project. The Project is a supplemental project driven by the FE System Performance Excellence methodology based on the existing substation configuration and its impact on the reliability of electric service to the residents and businesses in the area.

The Project will make the power system in the area more resilient and reliable. The new ring bus configuration of the Tusc Substation and the additional transmission line to be looped in/out of the station will greatly reduce the potential for widespread outages in the area.

Figure 3
Existing Tusc 138 kV Ring Bus Configuration

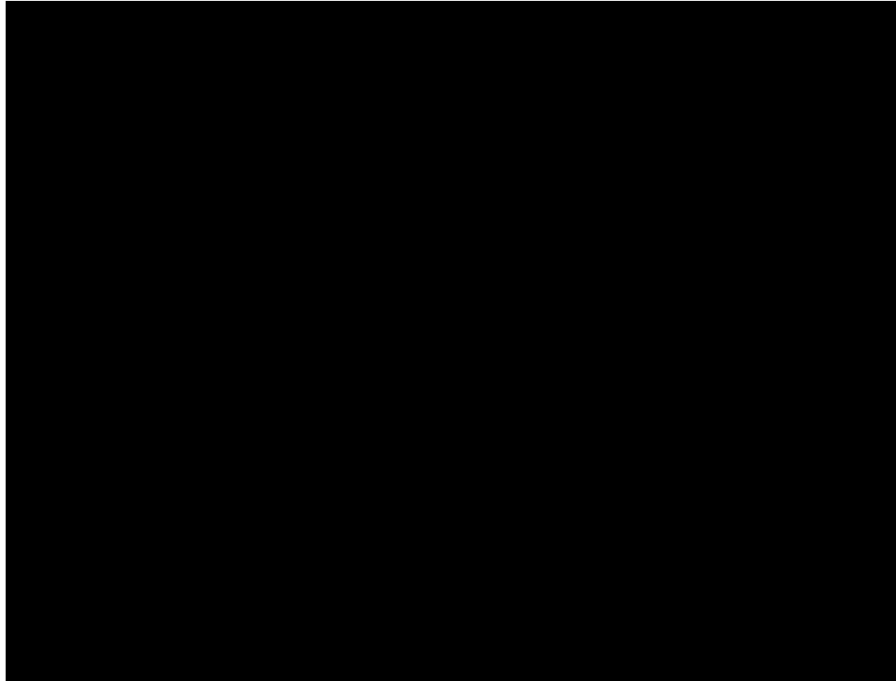
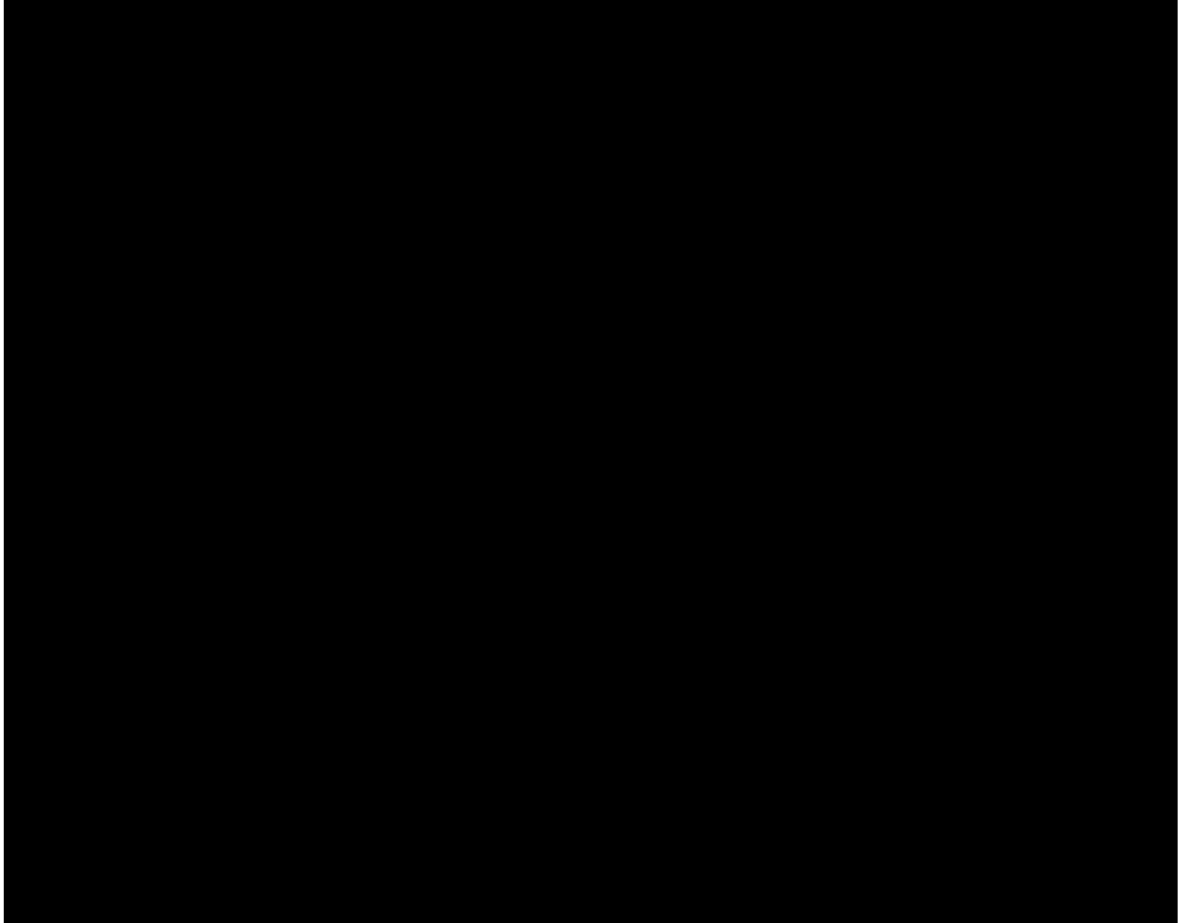


Figure 4

Proposed Tusc 138 kV Ring Bus Configuration



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

The alternative to the proposed upgrade is to continue operating the system with the existing configuration and the risks as described above.

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

ATSI's manager of External Affairs will advise local officials of features and the status of the proposed Project, as necessary. ATSI will maintain a copy of this Letter of Notification, along with other Project information, on FirstEnergy's website:

https://www.firstenergycorp.com/about/transmission_projects/ohio.html.

ATSI will publish notice of the Project in the *The Barberton Gazette & Norton News* within 7 days of filing this Letter of Notification application. The notice will comply with Adm.Code 4906-6-08(A)(1)-(6).

During all phases of this Project, the public may contact ATSI through the transmission projects hotline at 1-888-311-4737 or via email at:

transmissionprojects@firstenergycorp.com.

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

Construction on the Project is expected to begin as early as September 2, 2026, and be completed/in-service by December 31, 2027.

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

The general location of the Project is shown in **Exhibit 1**, a partial copy of the United States Geologic Survey, Summit County, OH, Quad Map. **Exhibit 2** is a copy of ESRI aerial imagery of the Project area. The general layout of the Project is shown in **Exhibit 3**.

4906-6-05(B)(8): Properties List

This Project is located entirely on Ohio Edison owned property. No new easements will be required.

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

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

The equipment and facilities described below are associated with the transmission line component of the proposed Project:

Voltage:	138 kV
Conductors:	795 kcmil 26/7 ACSR
Static Wire:	7#8 Alumoweld for Star-Tusc & Tusc-Wadsworth Muni into Tusc substation
	OPGW 96 fiber count
Insulators:	Porcelain
ROW Width:	170 feet
Land Requirements:	Existing
Structure Types:	Exhibit 6: 138 kV Steel Monopole on Concrete Foundation (Qty. 3)

The equipment and facilities described below are associated with the substation component of the proposed Project:

Voltage:	138 kV
Breakers:	138KV, 3000A, Circuit Breakers (Qty. 4) CTs (2 sets per side) – RF = 2 (Qty. 12 (4 sets of 3))
Transformers:	138KV, 100KVA SSVT, single phase 120/240V Secondary (Qty. 1)
Switches:	138 kV, 2000A, Breaker Disconnect Switches (Qty. 13) Four (4) 138 kV, 2000A, V-type air break switch with motor operator
CVT's:	Thirteen (13) 138 kV CCVTs
Structures:	Two (2) A-Frame Dead-end One (1) Dual A-Frame Dead-end Two (2) Lightning Masts One (1) Lot of Steel Stands for Equipment and Bus Support One (1) 44' x 28' Packaged Control Enclosure

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

There are no occupied residences or institutions within 100 feet of the Project and therefore no Electric and Magnetic Field ("EMF") calculations are required by this code provision.

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

The estimated cost for the proposed Project is \$18,643,500. Although not statutorily required for approval, at the request of OPSB Staff, ATSI confirms that ATSI's costs will be captured and allocated via FERC formula rates for the ATSI Transmission Zone, Attachment H-21 in the PJM OATT.

4906-6-05(B)(10): Social and Ecological Impacts

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

The Project is in the city of Norton in Summit County, Ohio. The land uses in the vicinity of the Project area include commercial, light industrial and residential.

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

Agriculture land use does not exist within the Project area.

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

As part of the investigation for this Letter of Notification, TRC Companies, Inc. ('TRC') submitted a request to the Ohio Historic Preservation Office ("SHPO") on behalf of ATSI to review the Project Study Area (Area of Potential Effects or "APE") within a one (1)-mile search radius. On December 9, 2025, SHPO replied to the request and the response is attached as **Exhibit 7**.

The SHPO database includes the locations of previously recorded historic properties that are 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 SHPO database review revealed that there are no historic properties within the Project Study Area or within one (1)-mi of the Project Study Area.

The SHPO database also includes listings on the Ohio Historic Inventory (OHI), the Ohio Archaeological Inventory (OAI), previous cultural resource surveys, and the

Ohio Genealogical Society (OGS) cemetery inventory. There are no archaeological surveys or above-ground historic resources recorded within one (1)-mi of the Project Study Area. There are two (2) Ohio Genealogical Society (OGS) cemeteries recorded 0.71 mi west and 0.73 mi east of the proposed Project.

There are six (6) previously recorded pre-contact archaeological sites and one (1) recently recorded archaeological site (still under review) recorded within one (1) mi. The six (6) pre-contact sites include one (1) mound that dates to the Middle to Late Archaic and Middle Woodland Periods; one (1) isolated find of unknown temporal affiliation, and four (4) open sites that date to the Paleo-Indian, Archaic, Woodland, and Late Prehistoric Periods. The nearest of the sites is situated 0.47 mi to the west.

SHPO recommended a Phase I cultural resource survey for the entire APE. The request was initialized on April 14, 2026, a Phase I Archaeological survey of the APE was performed and SHPO's subsequent response on May 12, 2026, is attached as **Exhibit 7A**. In their response, SHPO agrees that the Project, as proposed, will, in its opinion, have no effect on historic properties.

The Project Study Area consists of an existing, maintained substation, access roads, and overhead utility corridors with manicured lawns to the west and south of the substation. Currently, as proposed, no new tree clearing is anticipated within or outside the Project Study Area. The proposed Project is not expected to have any adverse effects on known historic properties.

4906-6-05 (B)(10)(d): Construction Filings with Local, State and Federal Governmental Agencies

No right-of-way (ROW) permits will be necessary for the proposed Project. The Project Study Area will be accessed via an existing, maintained gravel road on the subject property, which is currently owned by FirstEnergy. If more than one (1) acre of earth disturbance is proposed in the Project scope, then a submittal of a Notice of Intent (NOI) application to the Ohio EPA will be required for coverage under the

general construction stormwater permit (OHC000006), and the Storm Water Pollution Prevention Plan (SWP3) submitted to the City of Norton Engineer. Although a minor portion of the southwest corner of the Study Area is within a special flood hazard area, the Project scope does not propose work within this area; therefore, as proposed, the Project will not require a Floodplain Development Permit. If the scope of the Project changes and construction activity is within, partially within, or in contact with the special flood hazard area, then the submittal of a Floodplain Development Permit to the City of Norton Floodplain Administrator will be required. All permitting and/or coordination necessary to comply with local, state, and federal agencies with jurisdiction regarding this Project will be completed prior to the commencement of construction. A list of potential government agency requirements is provided in **Table 2** below.

Table 2. List of Government Agency Requirements

Agency	Requirement
Ohio EPA	General NPDES Construction Storm Water Permit OHC000006
City of Norton Engineer	SWP3 Review
City of Norton Floodplain Administrator	Floodplain Development Permit

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

As part of the investigation, ATSI retained TRC to conduct necessary 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 Natural Heritage Database to research the presence of any endangered, threatened, or rare species within one (1) mile of the Project Study Area. The ODNR’s Office of Real Estate’s response on December 3, 2025, indicated that there are 10 records of state and/or federally listed plants, animals, and/or communities located within a one-mile radius of the Project Study Area. However, the response noted that

the species listed above are not recorded within the specific boundaries of the Project Study Area. Additionally, the Project is within the range of 12 state and/or federally listed animal species. A copy of ODNr's Office of Real Estate's response is included as **Exhibit 8**. A list of all endangered, threatened, and rare species, as identified by ODNr, within a one-mile radius of the Project is provided in **Table 3** and a list of all endangered, threatened, and rare species, as identified by ODNr, within the range of the Project is provided in **Table 4**.

Table 3. List of Endangered, Threatened, and Rare Species within a One-mile Radius of the Project Area

Common Name	Scientific Name	Federal Listed Status	State Listed Status	Affected Habitat
Bird				
Virginia Rail	<i>Rallus limicolous</i>	N/A	Species of concern	Densely vegetated marshes; occasionally buttonbush swamps and other wetlands.
Plants and Plant Community				
Bog willow	<i>Salix pedicellaris</i>	N/A	Endangered	Neutral bogs, sedge meadows, and willow thickets at the edge of wet meadows.
Buckbean	<i>Menyanthes trifoliata</i>	N/A	Threatened	Acidic or calcareous waters such as bogs, quarries, shallow water, and pond margins. Often confined to the outer edge of the floating sphagnum mat.
Howe's sedge	<i>Carex atlantica ssp. capillacea</i>	N/A	Potentially threatened	Open, moist situations in acidic substrates; sphagnum bogs, shrub borders, clearings in wet woods, thickets; not in calcareous situations.
Leather-leaf	<i>Chamaedaphne calyculata</i>	N/A	Threatened	Peat bogs and lakeshores.
Marsh five-finger	<i>Comarum palustre</i>	N/A	Threatened	Wet meadows and marshy stream banks.
Shore-growing peat moss	<i>Sphagnum riparium</i>	N/A	Presumed extirpated in Ohio	Wet minerotrophic sites such as open bog mats (often near the water's edge), occasionally in roadside ditches.
Sphagnum peat bog plant community	N/A	N/A	N/A	N/A

Common Name	Scientific Name	Federal Listed Status	State Listed Status	Affected Habitat
Swamp birch	<i>Betula pumila</i>	N/A	Threatened	Wet, neutral to calcareous soils in the shrubby margins of bogs and wooded swamps.
Tamarack	<i>Larix laricina</i>	N/A	Potentially threatened	Bogs, fens, borders of glacial lakes.

Table 4. List of Endangered and Threatened Species within Range of the Project Study Area

Common Name	Scientific Name	Federal Listed Status	State Listed Status	Affected Habitat
Bird				
Sandhill crane	<i>Antigone canadensis</i>	N/A	Threatened	Grassland, prairie, or large tracts of wetland habitat.
Fish				
Iowa darter	<i>Etheostoma exile</i>	N/A	Endangered	Perennial streams.
Lake chubsucker	<i>Erimyzon sucetta</i>	N/A	Threatened	Perennial streams.
Paddlefish	<i>Polyodon spathula</i>	N/A	Threatened	Perennial streams.
Pugnose minnow	<i>Opsopoeodus emiliae</i>	N/A	Endangered	Perennial streams.
Western banded killifish	<i>Fundulus diaphanus menona</i>	N/A	Endangered	Perennial streams.
Mammals				
Indiana bat	<i>Myotis sodalis</i>	Endangered	Endangered	Trees, forests, caves, and caverns.
Little brown bat	<i>Myotis lucifugus</i>	N/A	Endangered	Trees, forests, caves, and caverns.
Northern long-eared bat	<i>Myotis septentrionalis</i>	Endangered	Endangered	Trees, forests, caves, and caverns.
Tricolored bat	<i>Perimyotis subflavus</i>	Proposed Endangered	Endangered	Trees, forests, caves, and caverns.

Common Name	Scientific Name	Federal Listed Status	State Listed Status	Affected Habitat
Reptiles				
Smooth greensnake	<i>Opheodrys vernalis</i>	N/A	Endangered	Prairies, marshy meadows, and roadside ditches.
Spotted turtle	<i>Clemmys guttata</i>	N/A	Threatened	Fens, bogs and marshes, wet prairies, meadows, pond edges, wet woods, and the shallow sluggish waters of small streams and ditches.

Based on the information received from correspondence with ODNR, the Project is within the ranges of the Indiana bat, the northern long-eared bat, the little brown bat, and the tricolored bat. These bat species 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 18, 2025. ODNR responded on January 6, 2026, concurring that no caves, cliffs, or mine openings occur in the Project Study Area, this response is included as **Exhibit 8A**. Therefore, the Project is not likely to impact hibernating bats. In assessing compliance with NWP General Condition 18, TRC determined that tree clearing is not anticipated within the Project Study Area. If minor tree clearing is needed as a result of this Project, it will take place within the US Fish and Wildlife Service (USFWS) recommended tree clearing dates (October 1 – March 31); therefore, no impacts to bat species are anticipated as a result of the construction of this Project.

The Project is within the range of the Iowa darter (*Etheostoma exile*), a state endangered fish, the pugnose minnow (*Opsopoeodus emiliae*), a state endangered fish, the western banded killifish (*Fundulus diaphanus menona*), a state endangered fish, the lake chubsucker (*Erimyzon sucetta*), a state threatened fish, and the paddlefish (*Polyodon spathula*) a state threatened fish. The DOW recommends no in-water work in perennial streams from March 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. Since no in-water work is proposed in a perennial stream, this Project will not impact these or other aquatic species.

The Project is within the range of the smooth greensnake (*Opheodrys vernalis*), a state endangered species. This species is primarily a prairie inhabitant but can also be found in marshy meadows and roadside ditches. Due to the location, the type of habitat within the Project Study 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 Study Area, and the type of work proposed, this Project is not likely to impact this species.

The Project is within the range of the sandhill crane (*Antigone canadensis*), a state threatened species. Sandhill cranes are primarily a wetland-dependent species. On their wintering grounds, they will utilize agricultural fields; however, they roost in shallow, standing water or moist bottomlands. On breeding grounds, they require a large tract of wet meadow, shallow marsh, or bog for nesting. Due to the existing substation facility and a lack of suitable habitat within the Project Study Area, this species is not likely to be impacted by the proposed activities.

As part of the investigation, TRC submitted a request to the USFWS on November 3, 2025, to research the presence of any endangered, threatened, rare, or designated species within the Project Study Area. A copy of the USFWS' response, dated December 3, 2025, is included as **Exhibit 9**. The USFWS response indicated that the proposed Project is in the vicinity of one or more recent confirmed records of Indiana bats. However, due to the Project, type, size, and location, USFWS does not anticipate any effect to federally endangered, threatened, or proposed species or proposed or designated critical habitat based on the commitment to cut all trees ≥ 3 inches diameter at breast height only between October 1 and March 31.

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

TRC performed field investigations to identify and delineate wetlands and waterbodies located within the 5.84-acre Project Study Area on November 5, 2025. One (1) palustrine scrub-shrub wetland (W-JMS-1) was identified and delineated within the Project Study Area. A Surface Water Delineation Report of the Project Study Area is included as **Exhibit 10**.

The Project Study Area is comprised of an existing, maintained utility ROW and developed (mowed) open space within a substation facility. The Project Study Area is accessed via an existing, maintained gravel road on the subject property, which is currently owned by FirstEnergy. TRC did not observe the presence of any of the ODNR or federally listed species during the field investigation due to the highly maintained nature of the utility ROW and substation facility. Therefore, no impacts are anticipated to any of the listed species detailed in the ODNR or USFWS correspondence.

The Limits of Disturbance (LOD) will be completely within the Project Study Area and will predominantly include using an existing access road and developed (mowed) open space within the substation facility for the proposed construction. NWP 57 (effective March 15, 2026, valid through March 15, 2031), 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. This Project is in City of Norton, Summit County, Ohio which is within the USACE Huntington Regulatory District. The Project location is not listed in Appendix 1 to Regional General Condition 5(a) (Endangered Species and Threatened Species). It is anticipated that due to the nature of the Project, jurisdictional resources will not be impacted by the proposed Project

activity. Therefore, NWP 57 conditions are met and there is no potential trigger for a Section 404 PCN to USACE.

A review of the USGS Protected Areas Database (www.usgs.gov/programs/gap-analysis-project/science/protected-areas) revealed no conservation easements within the Project Study Area. The National Conservation Easement Database is no longer in use due to the database no longer being actively updated and supported.

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

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

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

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

This Letter of Notification application is being provided concurrently with its docketing with the Board to the following officials.

Summit County

Ilene Shapiro
Summit County Executive
175 South Main Street, 8th Floor
Akron, Ohio 44308
executiveshapiro@summitoh.net

Erin Dickinson
Council President
175 S. Main Street, Suite #700
Akron, OH 44308
edickinson@summitoh.net

Christine Wiedie Higham
Council Vice President/District 6
175 S. Main Street, Suite #700
Akron, OH 44308
chigham@summitoh.net

B. Alan Brubaker
Summit County Engineer
538 East South Street
Akron, OH 44311
abrubaker@summitengineer.net

Brian Prunty
SWCD Administrator
1180 S. Main Street, Suite #230
Akron, OH 44301
bprunty@summitoh.net

Gabe Durrant
Assistant Director, Planning Commission
175 S. Main Street, Suite #103
Akron, OH 44308
gdurrant@summitoh.net

City of Norton

Mike Zita
Mayor of Norton
4060 Columbia Woods Drive
Norton, OH 44203
mayorzita@cityofnorton.org

Doug DeHarpart, Vice President Norton
City Council
4060 Columbia Woods Drive
Norton, OH 44203
ddeharpart@cityofnorton.org

Don Harbert
President, Norton City Council
4060 Columbia Woods Drive
Norton, OH 44203
Dharbert@cityofnorton.org

Jamie Lukens
Ward 2 Council Representative
4060 Columbia Woods Drive
Norton, OH 44203
jlukens@cityofnorton.org

Brian Binsley, P.E.
City Engineer
4060 Columbia Woods Drive
Norton, OH 44203
bbinsley@gpdgroup.com

Bill Braman
Zoning Administrator
4060 Columbia Woods Drive
Norton, OH 44203
bbraman@cityofnorton.org

Library

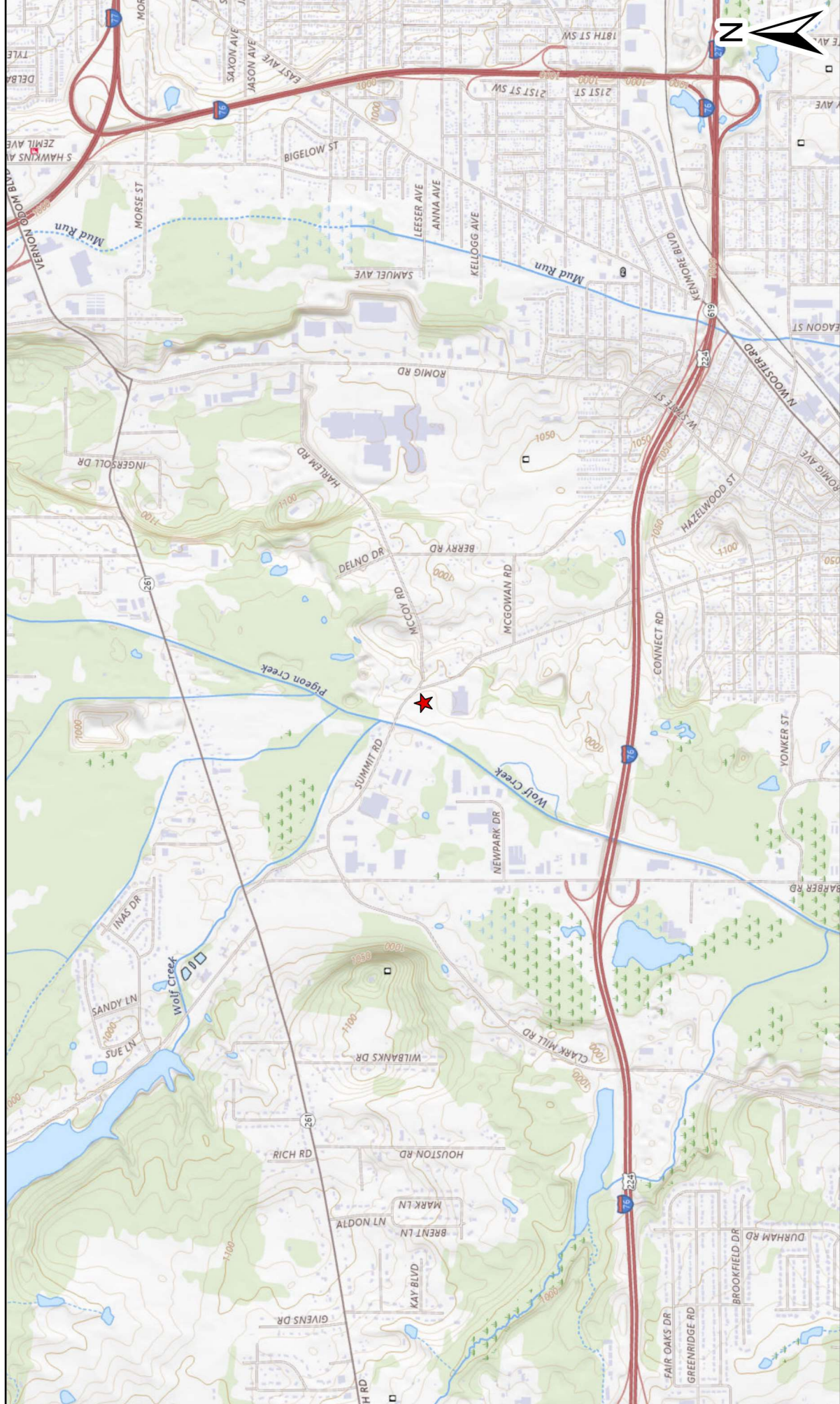
Tori Berger
Norton Branch Library
3930 South Cleveland-Massillon
Road
Norton, OH 44203
vberger@akronlibrary.org

Copies of the transmittal letters to these officials have been included with this application as proof of compliance under Adm.Code 4906-6-07 (B) to provide the

Board with proof of notice to local officials as required by Adm.Code 4906-6-07 (A)(1) and to libraries per Adm.Code 4906-6-07 (A)(2).

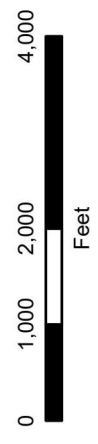
Information is posted at:

www.firstenergycorp.com/about/transmission_projects/ohio.html on how to request an electronic or paper copy of this Letter of Notification application. The link to this website is being provided to meet the requirements of Adm.Code 4906-6-07 (B) and to provide the Board with proof of compliance with the notice requirements in Adm.Code 4906-6-07 (A)(3).



Legend

★ Project Location



Reference Scale: 1:24,000

References:
ESRI Aerial Imagery, USGS National Map, ODOT

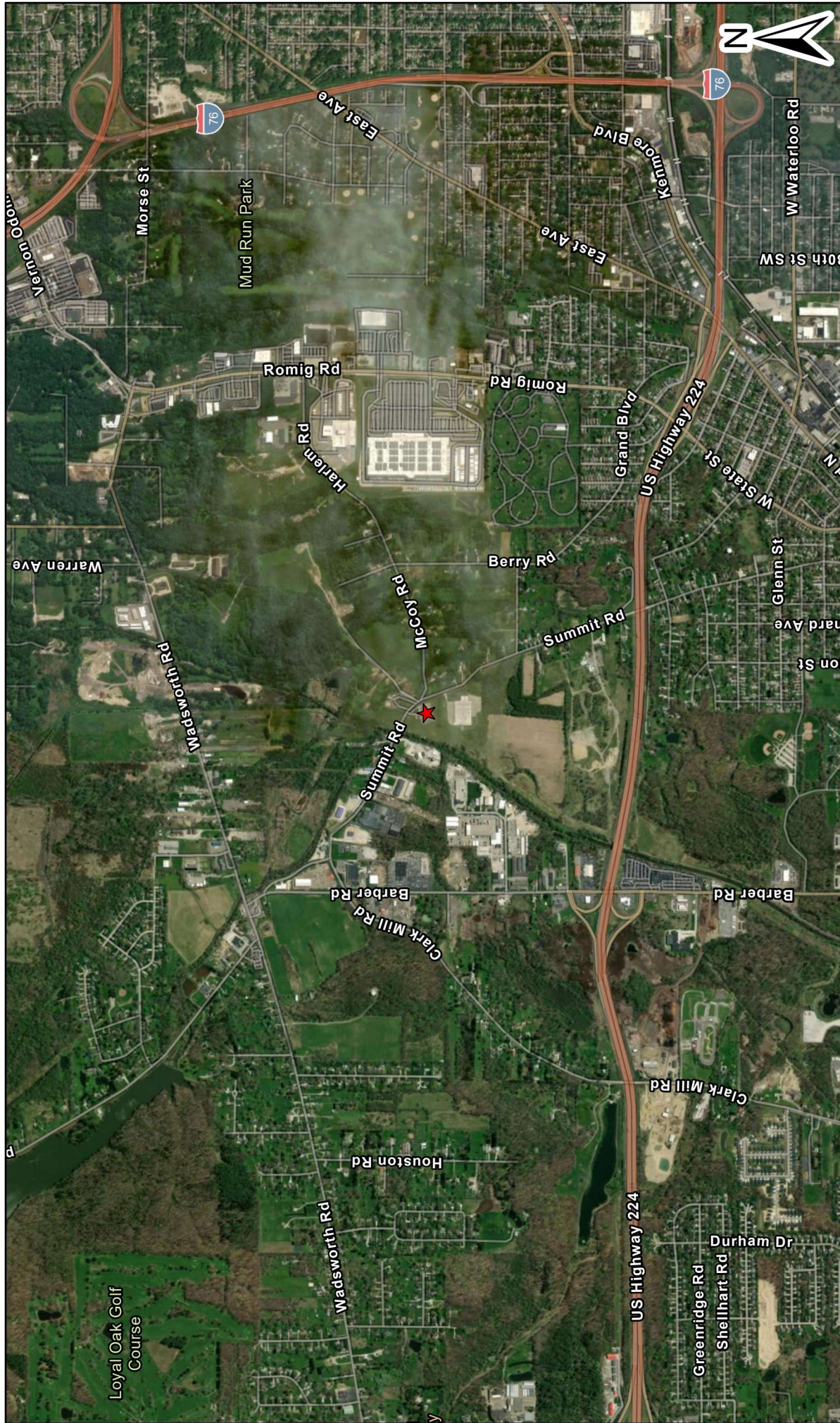
Coordinate System:
NAD 1983 2011 StatePlane Ohio North FIPS 3401 Ft US



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

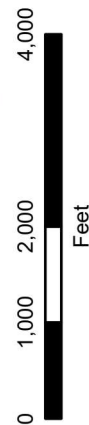
TUSC 138KV SIX BREAKER
RING BUS EXPANSION
PROJECT

EXHIBIT 1



Legend

- ★ Project Location



Reference Scale: 1:24,000

References:

ESRI Aerial Imagery, USGS National Map, ODOT

Coordinate System:

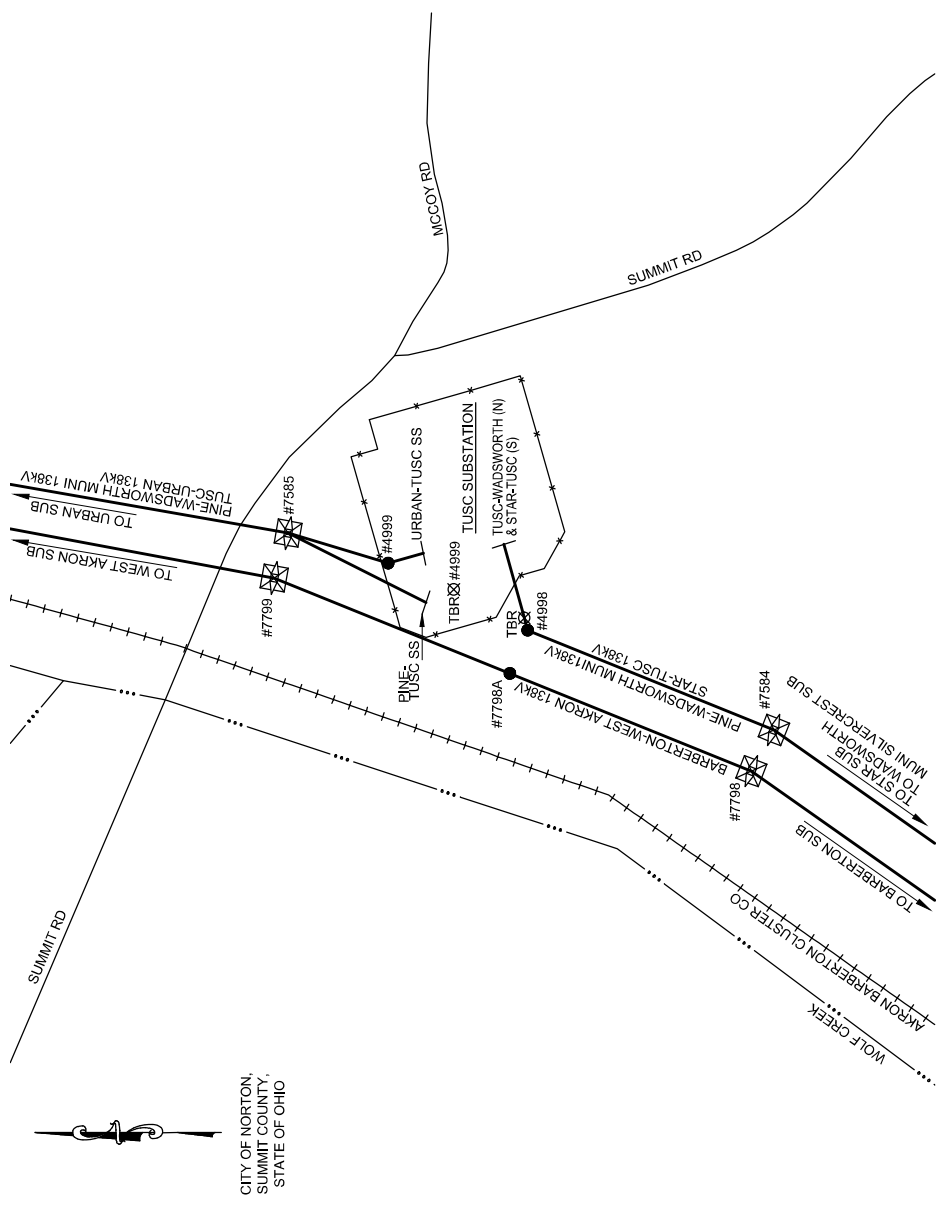
NAD 1983 2011 StatePlane Ohio North FIPS 3401 Ft US



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

TUSC 138KV SIX BREAKER
RING BUS EXPANSION
PROJECT

EXHIBIT 2



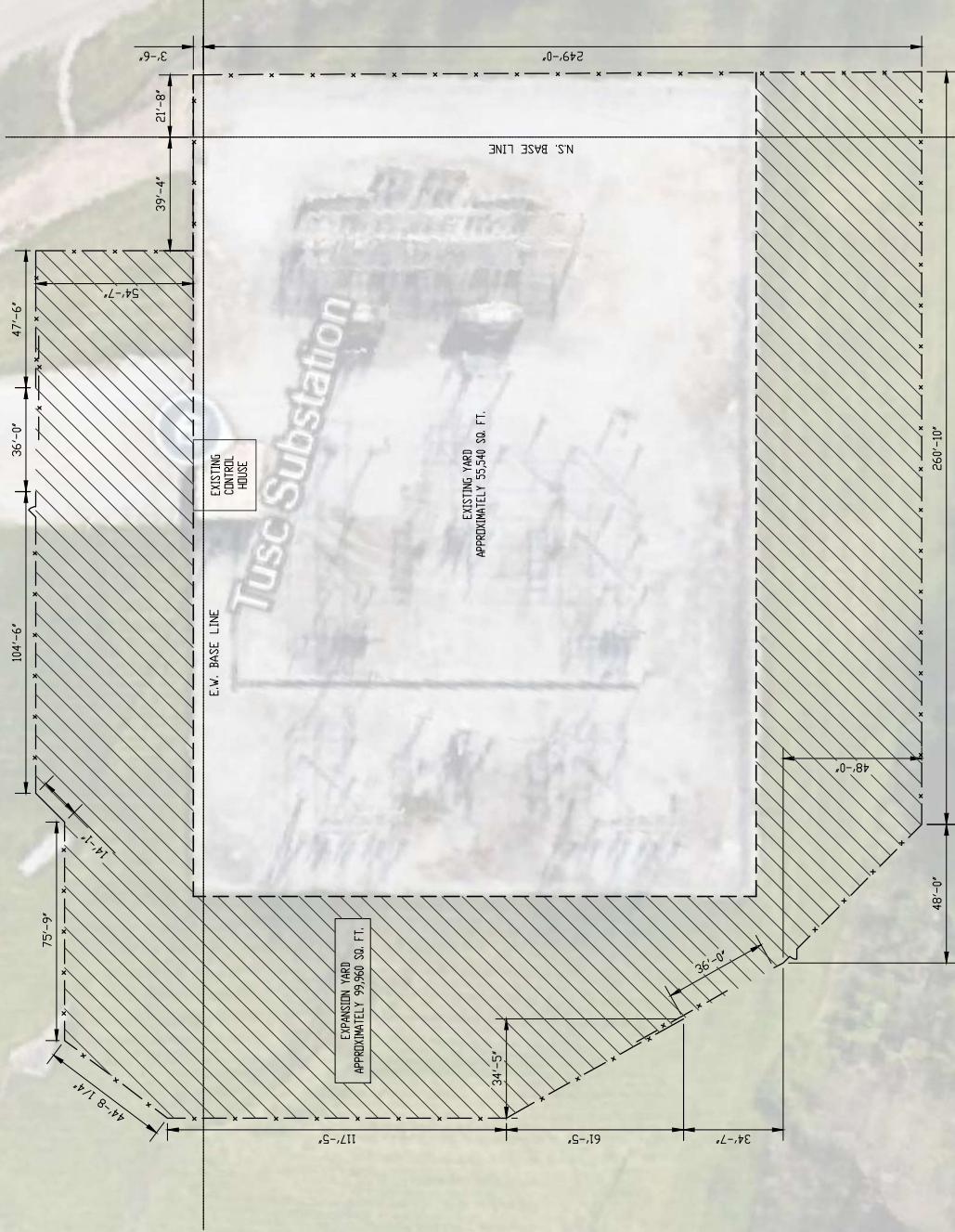
GENERAL LAYOUT

LEGEND

- 138kV TRANSMISSION LINE
- SUBSTATION TERMINI
- PAVED ROAD
- PROPOSED SUBSTATION FENCE
- RAILROAD
- EDGE OF WATER
- NEW OR REPLACED STRUCTURE
- STRUCTURE TO BE REMOVED
- EXISTING TOWER

TBR

TUSC RING BUS PROJECT (ALL 138kV CIRCUITS):
BARBERTON-WEST AKRON, TUSC-URBAN, STAR-TUSC,
PINE-TUSC, & PINE-WADSWORTH MUNI
GENERAL LAYOUT



LEGEND:
--- PROPOSED FENCE
--- EXISTING FENCE
/// PROPOSED EXPANSION

BY: RT/NEX APP: -- DATE: 6/15/2026 ISSUE: -- NEW DRAWING.		FirstEnergy Energy Delivery Technical Services		JUST CODE: SCALE: -- SIZE: 11x17	OPERATING COMPANY OHIO EDISON (OE)	FACILITY TUSC	REGION OH-CE	AREA AKRON
SUBSTATION EXPANSION GENERAL LAYOUT SKETCH					SAP NO. 17496971		EXHIBIT 4 SB-SK-02	
REVISION BY NEXUS ENGINEERING GROUP					Revision 04/24		DOC. ID	
							REV. --	

ISSUED FOR
REFERENCE

06/15/26

NEXUS
ENGINEERING GROUP



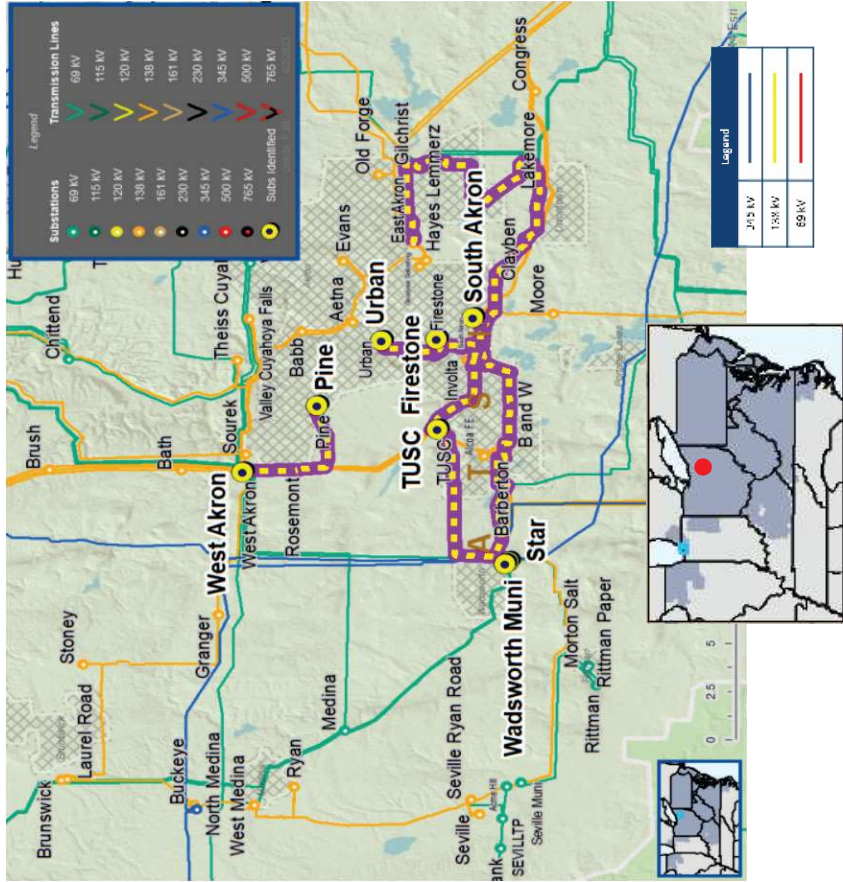
Need Number: ATSI-2023-011
Process Stage: Solutions Meeting – 09/19/2025
Previously Presented: Need Meeting – 6/16/2023

Supplemental Project Driver(s):
Operational Flexibility and Efficiency
Equipment Material Condition, Performance and Risk
Infrastructure Resilience

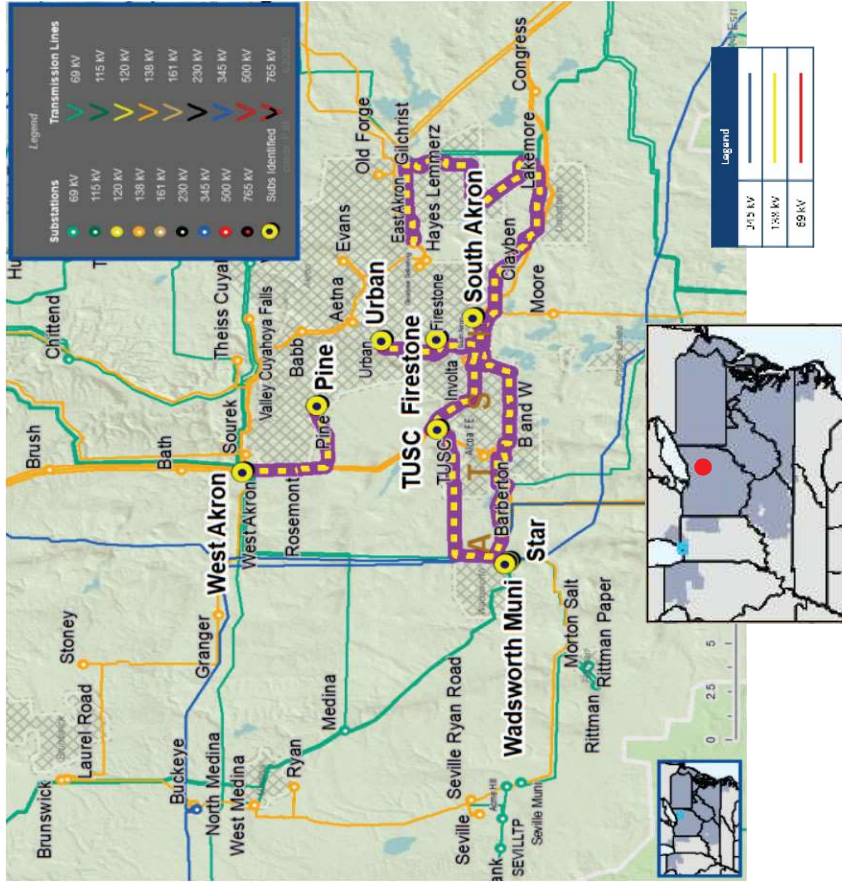
- Specific Assumption Reference(s):**
Global Considerations
- System reliability and performance
 - Load at risk in planning and operational scenarios
- Add/Expand Bus Configuration
- Loss of substation bus adversely impacts transmission system performance
 - Eliminate simultaneous outages to multiple networked elements under N-1 analysis
 - Accommodate future transmission facilities
 - Capability to perform system maintenance

Continued on next slide...

ATSI Transmission Zone M-3 Process
Tusc Substation



- Need Number:** ATSI-2023-011
- Process Stage:** Solutions Meeting – 09/19/2025
- Previously Presented:** Need Meeting – 6/16/2023
- Problem Statement:**
- An N-1-1 outage will result in approximately 29,100 customers at risk and cause a consequential load loss of approximately 119 MW.
 - An N-1-1 outage will result in approximately 9,360 customers at risk and cause a consequential load loss of approximately 38 MW and cause a backfeed condition from the Akron 23 kV system.
 - Since 2014, the following lines have a combined total of seven momentary outages and six sustained outages:
 - Star – Urban 138 kV Line experienced three outages: 1 momentary. 2 sustained
 - Star – Wadsworth 138 kV Line experienced two outages: 1 momentary. 1 sustained
 - Pine – West Akron 138 kV Line experienced one outage: 0 momentary. 1 sustained
 - Star – Tusc 138 kV Line experienced no outages
 - Firestone - South Akron 138 kV Line experienced one outage: 0 momentary, 1 sustained
 - Firestone - Urban 138 kV Line experienced six outages: 5 momentary, 1 sustained





Need Number: ATSI-2023-011

Process Stage: Solutions Meeting – 09/19/2025

Proposed Solution:

- Expand the existing 138 kV bus at Tusc Substation from a four-breaker ring bus into a six-breaker ring bus.
- Loop the Pine-Wadsworth 138 kV Line in/out of the Tusc Substation ring bus
- The project will split the Pine-Wadsworth 138 kV Line to create the following two lines:
 - Tusc - Wadsworth 138 kV Line (~8 miles)
 - Pine - Tusc 138 kV Line (~7 miles)
- Adjust relays at the terminal ends.

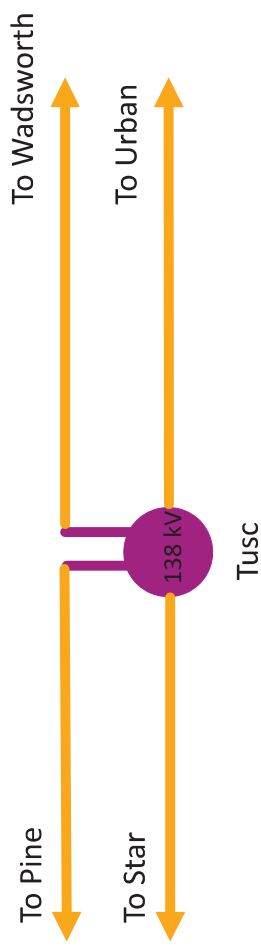
Alternatives Considered:

- Maintain existing condition with risk of consequential load loss under contingency scenarios.

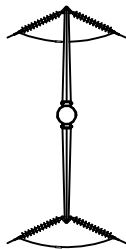
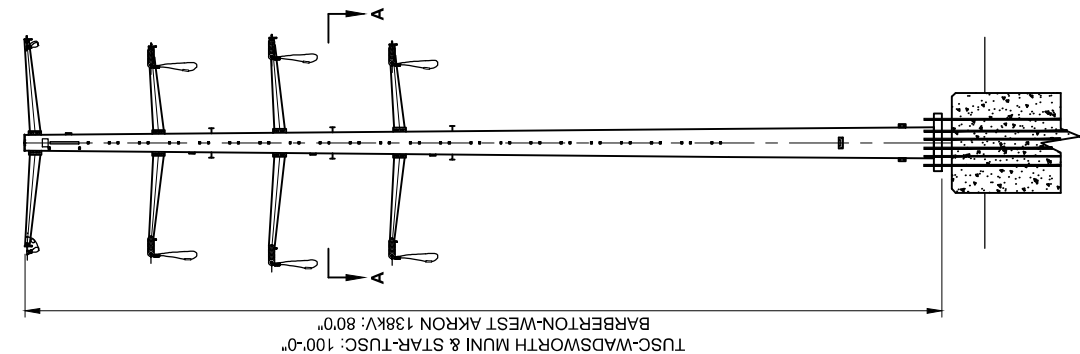
Estimated Project Cost: \$16.72M

Projected IS Date: 12/31/2027

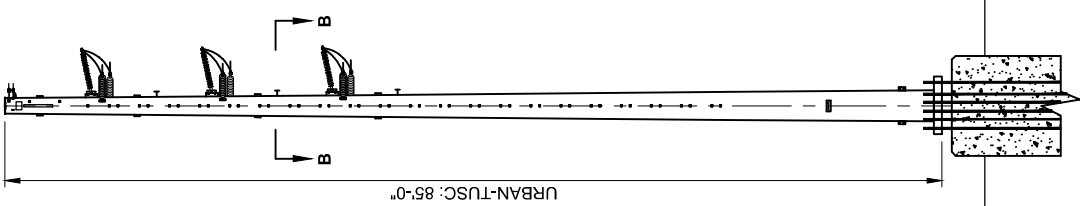
Status: Conceptual



Legend	
500 kV	
345 kV	
138 kV	
69 kV	
34.5 kV	
23 kV	
New	



TYPICAL VIEW
SECTION A-A



TYPICAL VIEW
SECTION B-B

GENERIC STEEL MONOPOLE ON CONCRETE FOUNDATION:
DOUBLE CIRCUIT & SIX-WIRED CIRCUIT USE

GENERIC STEEL MONOPOLE ON CONCRETE FOUNDATION:
SINGLE CIRCUIT

TUSC RING BUS PROJECT (ALL 138V CIRCUITS): BARBERTON-WEST AKRON - TUSC-URBAN, STAR-TUSC, PINE-TUSC, & PINE-WADSWORTH MUNI STEEL MONOPOLE ON CONCRETE FOUNDATION ARRANGEMENTS			ASSET/OP. CO.	ATSI/OE	SITING EXHIBIT # 6
FastEnergy Transmission Design					



In reply refer to:
2025-SUM-66920

December 9, 2025

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

RE: Section 106 Review: Tusc 138kV Six Breaker Ring Bus Expansion Project, Norton, Summit County, Ohio

Dear Mr. McKissick:

This letter is in response to the correspondence received on November 11, 2025, regarding the above-referenced project in Summit County, Ohio. We appreciate the opportunity to comment on this project. The comments of the Ohio State Historic Preservation Office (SHPO) are made pursuant to Section 149.53 of the Ohio Revised Code requesting cooperation among state agencies in the preservation of historic properties, Ohio Administrative Code Chapters 4906-4, as administered by the Ohio Power Siting Board (OPSB). 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 OPSB is the lead agency for the undertaking.

The proposed undertaking involves the expansion of the existing Tusc 138 kV Six Breaker Ring Bus substation. This expansion area totals approximately 5.84-acres and is considered the direct Area of Potential Effect (APE). According to our records, there are no historic properties, districts, above-ground resources, previously recorded archaeological sites, or cultural resource surveys within or immediately adjacent to the APE. However, there are numerous cultural resources documented in the immediate vicinity. Based on the location of archaeological sites on similar topographic setting as the APE, and the fact that it has not been professionally surveyed for cultural resources, the SHPO recommends a Phase I cultural resource survey for the entire APE. The results of the survey will allow for a more informed decision regarding the impact of the project on cultural resources, if present, that may be eligible for listing on the National Register of Historic Places. We look forward to further coordination regarding this project. If you have any questions concerning this review, please contact me by email at sbiehl@ohiohistory.org. Thank you for your cooperation.

Sincerely,

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

Stephen M. Biehl, Project Reviews Manager-Archaeology
Resource Protection and Review
State Historic Preservation Office

RPR Serial No. 1111668



In reply refer to:
2025-SUM-66920

May 12, 2026

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

RE: Section 106 Review: Tusc 138kV Six Breaker Ring Bus Expansion Project, City of Norton, Summit County, Ohio

Dear Mr. McKissick:

This letter is in response to the receipt on April 14, 2026, of *Phase I Archaeological Survey Short Report Tusc 138kV Six Breaker Ring Bus Expansion Project, City of Norton, Summit County, Ohio* (TRC Environmental Corporation, 2026). 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 requesting cooperation among state agencies in the preservation of historic properties, Ohio Administrative Code Chapters 4906-4, as administered by the Ohio Power Siting Board (OPSB). 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 OPSB is the lead agency for the undertaking.

The proposed undertaking involves the expansion of the existing Tusc 138kV Six Breaker Ring Bus substation. This expansion area originally totaled approximately 5.84-acres. However, the finalized project plans have reduced the Area of Potential Effect (APE) to approximately 4.73-acres. The above-referenced survey involved a literature review, visual inspection, and subsurface shovel test unit excavations within the defined APE. The literature review determined that no historic properties, districts, above-ground resources, or previously recorded archaeological sites are within or immediately adjacent to the APE. The results of the field investigations did not identify any below ground or above-ground resources within the APE. Therefore, the SHPO agrees that as proposed, no additional cultural resource investigations are warranted. Furthermore, it is the SHPO's opinion that the project, as proposed, will have no effect on historic properties. No further coordination is required unless the scope of the project changes, or archaeological deposits are encountered during project construction. In such a situation, this office should be contacted as required under 36 CFR § 800.13. If you have any questions concerning this review, please contact me by email at sbiehl@ohiohistory.org. Thank you for your cooperation.

Sincerely,

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

Stephen M. Biehl, Project Reviews Manager-Archaeology
Resource Protection and Review
State Historic Preservation Office

RPR Serial No. 1113660



**Department of
Natural Resources**
ohiodnr.gov

Mike DeWine, *Governor*
Jim Tressel, *Lt. Governor*
Mary Mertz, *Director*

Office of Real Estate & Land Management

Tara Paciorek - Chief
2045 Morse Road – E-2
Columbus, Ohio 43229-6693

December 3, 2025

Erin Van Nort
TRC Companies, Inc.
1382 West 9th Street, Suite 400
Cleveland, Ohio 44113

Re: 25-1685_Six Breaker Ring Bus Expansion

Project: The proposed project involves the expansion of the existing Tusc 138kV Six Breaker Ring Bus substation.

Location: The proposed project is located in Norton Township, Summit County, Ohio.

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

Natural Heritage Database: The Natural Heritage Database has the following data within one mile of the project area:

Swamp Birch (*Betula pumila*), T
Howe's Sedge (*Carex atlantica* ssp. *capillacea*), P
Leather-leaf (*Chamaedaphne calyculata*), T
Marsh Five-finger (*Comarum palustre*), T
Tamarack (*Larix laricina*), P
Buckbean (*Menyanthes trifoliata*), T
Bog Willow (*Salix pedicellaris*), E
Shore-growing Peat Moss (*Sphagnum riparium*), X
Virginia Rail (*Rallus limicola*), SC
Sphagnum peat bog plant community

Conservation status abbreviations are as follows: E = state endangered; T = state threatened; P = state potentially threatened; SC = state species of concern; SI = state special interest; U = state status under review; X = presumed extirpated in Ohio; FE = federally endangered, and FT = federally threatened.

Records for high quality plant communities indicate the presence of sites that are in our inventory of the best remaining examples of Ohio's pre-settlement ecosystems.

The review was performed on the specified project area as well as an additional one-mile radius. Records searched date from 1980. Features searched include locations of rare and endangered plants and animals determined to be of value to the conservation of their species, high quality plant communities, animal breeding assemblages, and outstanding geological features.

The species and features listed above are not recorded within the boundaries of the specified project area. However, please note that Ohio has not been completely surveyed and we rely on receiving information from many sources. Therefore, a lack of records for an 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 clusters of dead leaves on tree limbs. 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 cleared, the DOW recommends tree and/or tree limb clearing 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 a Diameter Breast Height (DBH) $\geq 20''$ if possible. If trees are present within the project area, and trees and/or tree limbs must be cleared 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 clearing. Mist net and acoustic surveys should be conducted in accordance with the most recent version of the [OHIO DIVISION OF WILDLIFE AND U.S. FISH AND WILDLIFE SERVICE \(OH-FIELD OFFICE\) JOINT GUIDANCE FOR BAT SURVEYS](#). If state-listed bats are documented, DOW recommends tree clearing only occur from October 1 through March 31. However, limited summer tree clearing may be acceptable after consultation with the DOW (contact Eileen Wyza at Eileen.Wyza@dnr.ohio.gov).

For every project, the DOW also recommends that a winter bat habitat assessment is conducted to determine if potential hibernacula are present within the project area. This is to limit possible disturbances that seasonal tree clearing and/or subsurface work (e.g., trenching, blasting, etc.) may cause to hibernating bats. Potential hibernacula include rocky outcroppings, caves, and underground mines. Direction on how to conduct winter habitat assessments can be found in the joint guidance linked above. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile permanent tree clearing buffer around the hibernaculum entrance. Limited summer or winter tree clearing may be acceptable after consultation with the DOW. If a habitat assessment for projects involving subsurface disturbance finds that a potential hibernaculum is present within 5 miles of the

project area, please consult with Eileen Wyza for project recommendations. If no tree clearing or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.

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

The project is within the range of the smooth greensnake (*Opheodrys vernalis*), a state endangered species. This species is primarily a prairie inhabitant but can also be found in marshy meadows and roadside ditches. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

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

The project is within the range of the sandhill crane (*Antigone canadensis*), a state threatened species. Sandhill cranes are primarily a wetland-dependent species. On their wintering grounds, they will utilize agricultural fields; however, they roost in shallow, standing water or moist bottomlands. On breeding grounds, they require a rather large tract of wet meadow, shallow marsh, or bog for nesting. If grassland, prairie, or wetland habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 1 through August 31. If this habitat will not be impacted, this project is not likely to have an impact on this species.

Due to the potential for 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 not conducted a project specific review and/or comments, however, the guidance provided below should be reviewed by the Environmental Review applicant for applicability on this project and subsequent compliance.

If the subject project is in a floodplain regulated by the Federal Emergency Management Agency (FEMA), the [local floodplain administrator](#) should be contacted concerning the possible need for any floodplain permits or approvals. The FEMA National Flood Hazard Layer (NHFL) Viewer [website](#) can be utilized to see if the project is in a FEMA regulated floodplain. If the project is not in a FEMA regulated floodplain, then no further action is required.

Ohio Revised Code (ORC) Section 1521.16 mandates that any owner of a property or a facility that has the capacity of withdrawing 100,000 gallons per day (gpd) of water from groundwater, surface water, or both must register with the Division of Water Resources' [Water Withdrawal Facilities Registration \(WWFR\) Program](#) and report their withdrawals annually.

Additional coordination may be required depending on the location of the withdrawal and consumptive use. Restrictions or permitting may be required for:

- New or increased consumptive use of water averaging 2 million gallons per day (mgd) within 30 days within the Ohio River basin.
- New or increased withdrawal and consumptive water use in the Lake Erie watershed averaging 1 million gallons per day (mgd) or more in 90 days.
- New or increased water withdrawal directly from Lake Erie averaging 2.5 million gallons per day (mgd) or more in 90 days.
- Diversion or movement of water across the Ohio River and Lake Erie basin divide.

If the project does not involve activities that are subject to water withdrawal regulatory requirements as described above, then no further action is required. For more information, visit the [Water Inventory & Planning website](#).

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: Eileen.Wyza@dnr.ohio.gov
To: [Slabe, Jenna](#)
Cc: [Falkinburg, Brad M \(Ruszczyk, Amy M\)](#); [Molnar, Maggie](#); [Adolph, Kayla A](#)
Subject: RE: Desktop Hibernacula Assessment: FirstEnergy's Tusc 138kV Six Breaker Ring Bus Expansion Project
Date: Tuesday, January 6, 2026 8:33:19 AM
Attachments: [image002.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)
[image007.png](#)
[image008.png](#)
[image001.png](#)

Hello Jenna,

Per review of the desktop survey provided for FirstEnergy's Tusc 138kV Six Breaker Ring Bus Expansion Project, the Ohio Division of Wildlife concurs with your assessment that no caves, cliffs, or mine openings occur in the project area. Additionally, because the project does not involve blasting or impacting the bedrock, the project is not likely to impact hibernating bats that may be present in the nearby underground mines.

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

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From: Slabe, Jenna <JSlabe@trccompanies.com>
Sent: Thursday, December 18, 2025 8:30 AM
To: Wyza, Eileen <Eileen.Wyza@dnr.ohio.gov>
Cc: Falkinburg, Brad <BFalkinburg@trccompanies.com>; Molnar, Maggie <MMolnar@trccompanies.com>; Adolph, Kayla A <kaadolph@burnsmcd.com>
Subject: Desktop Hibernacula Assessment: FirstEnergy's Tusc 138kV Six Breaker Ring Bus Expansion Project

Eileen,

In response to ODNR's DOW recommendations (25-1685; Attached), TRC completed a desktop hibernacula assessment to determine if potential hibernaculum is present within FirstEnergy's proposed Tusc 138kV Six Breaker Ring Bus Expansion Project located in the city of Norton, Summit County, Ohio.

Please let us know if you have any questions on the provided desktop assessment or require any additional information, thank you!

Jenna Slabe, PWS
Ecologist



1382 W 9th St, Suite 400, Cleveland, OH 44113
C 330.998.0481 | JSlabe@trccompanies.com
TRCcompanies.com

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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



December 3, 2025

Project Code: 2026-0009513

Dear Ms. Van Nort:

The U.S. Fish and Wildlife Service (Service) 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 effects to threatened and endangered species pursuant to the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq), as amended (ESA).

Federally Threatened and Endangered Species: The proposed project is in the vicinity of one or more recent confirmed records of Indiana bats (*Myotis sodalis*). Due to the project, type, size, and location, we do not anticipate any effect to federally endangered, threatened, or proposed species or proposed or designated critical habitat. This is based on the commitment to cut all trees ≥ 3 inches diameter at breast height only between October 1 and March 31 in order to avoid adverse effects to the federally endangered Indiana bat. If there are any project modifications during the term of this action, or additional information for listed or proposed species or their critical habitat becomes available, or if new information reveals effects of the action that were not previously considered, then please contact us for additional project review.

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

Surface Water Delineation Report

**Tusc 138kV Six Breaker Ring Bus
Expansion Project**

December 2025

City of Norton, Summit County, Ohio

Prepared For:



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

Prepared By:
TRC Environmental Corporation
1382 West Ninth Street, Suite 400
Cleveland, Ohio 44113

Project Manager: Maggie Molnar, PWS
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TRC Project Number: 664674 Phase 23



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Acronyms and Definitions

1987 Manual	United States Army Corps of Engineers 1987 Wetland Delineation Manual
APT	Antecedent Precipitation Tool
CFR	Code of Federal Regulations
EPA	Environmental Protection Agency
FAC	Facultative
FACU	Facultative Upland
FACW	Facultative Wetland
FirstEnergy	FirstEnergy Corporation
GPS	Global Positioning System
HHEI	Headwater Habitat Evaluation Index
HUC	Hydrologic Unit Code
NHD	National Hydrography Dataset
NWI	National Wetlands Inventory
NWP	Nationwide Permit
OAC	Ohio Administrative Code
OBL	Obligate Wetland
OEPA	Ohio Environmental Protection Agency
OHWM	Ordinary High-Water Mark
ORAM	Ohio Rapid Assessment Method
PCN	Pre-Construction Notification
Project	Tusc 138kV Six Breaker Ring Bus Expansion Project
Project Study Area	5.84 acres, located in the City of Norton, Summit County, Ohio.
PSS	Palustrine Scrub-Shrub
QHEI	Qualitative Habitat Evaluation Index
Redox	Redoximorphic
Regional Supplement	Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)
Report	Surface Water Delineation Report
TRC	TRC Environmental Corporation
UPL	Obligate Upland
USACE	United States Army Corps of Engineers
USDA-NRCS	United States Department of Agriculture – Natural Resources Conservation Service
USFWS	United States Fish and Wildlife Service

1.0 Introduction

On behalf of FirstEnergy Corporation (FirstEnergy), TRC Environmental Corporation (TRC) performed a surface water delineation for the Tusc 138kV Six Breaker Ring Bus Expansion Project (Project). The proposed Project Study Area is 5.84 acres, in the City of Norton, Summit County, Ohio. The proposed Project involves the expansion of the existing Tusc Substation. On behalf of FirstEnergy, TRC has prepared this Surface Water Delineation Report (Report) for the Project. A site location map of the Project Study Area can be found in **Appendix A, Figure 1**.

TRC personnel performed a field investigation to evaluate and delineate surface water resources (i.e., wetlands and streams) located within the Project Study Area on November 5th, 2025. The delineations were conducted by qualified wetland scientists in accordance with the United States Army Corps of Engineers (USACE) parameters. The objective was to evaluate and delineate potential surface water resources within the Project Study Area, such that the resources could be considered during each phase of the Project. This Report describes the surface water delineation methodology implemented and the existing surface water resources identified within the Project Study Area during field investigations.

The Project Study Area is located at the following approximate centroid coordinates (latitude, longitude): 41.047718, -81.599294. The Project Study Area is located in the City of Norton, Summit County, Ohio. The Project Study Area is comprised of an existing, maintained utility right-of-way and substation facility. The Project Study Area is accessed via an existing, maintained gravel road on the subject property, which is currently owned by FirstEnergy. **Appendix A, Figure 1** and **Figure 2**, provides further information on the location of the proposed Project Study Area.

2.0 Methodology

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

2.1 Wetland Parameters

Delineations were completed following the USACE 1987 *Wetland Delineation Manual (1987 Manual)* (USACE, 1987) Level 2 Routine Approach (*Part IV, Section D., Subsection 2 - Onsite Inspection Necessary*) for areas equal to or less than 5 acres in size and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (USACE, 2012) (*Regional Supplement*).

Furthermore, the March 6, 1992 guidance memorandum (Williams, 1992) emphasize a three-parameter approach to wetland boundary determination in the field. This approach involves the following:

- i. Evidence of wetland hydrology;
- ii. Presence of hydric soils; and

- iii. Predominance of hydrophytic vegetation as defined by the *2022 National Wetland Plant List* (USACE, 2023).

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

2.1.1 Hydrology

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

2.1.2 Hydric Soils

Hydric soils are defined as soils “that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part of the soil” (Federal Register, 1994). Hydric soil indicators described in the United States Department of Agriculture – Natural Resources Conservation Service’s (USDA-NRCS) *Field Indicators of Hydric Soils in the United States: A Guide for Identifying and Delineating Hydric Soils Version 8.2* (USDA, NRCS, 2024) were used to identify and document hydric soils per the *Regional Supplement*.

2.1.3 Hydrophytic Vegetation

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

Plants are placed into indicator status categories depending on their probability of occurring in a wetland in accordance with the USACE’s *The National Wetland Plant List: 2022 wetland ratings* (USACE, 2023). There are five indicator status categories for plants:

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

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

2.2 USACE Wetland Delineation

Qualified wetland scientists from TRC conducted a surface water field investigation on November 5th, 2025. The surface water field investigations were conducted within the predetermined Project Study Area (**Appendix A, Figure 1**) that was developed in accordance with the Project location information provided by FirstEnergy. Surface water delineations were conducted using the Level 2 Federal Routine Determination Method presented in the *1987 Manual* and *Regional Supplement*, including clarifications and interpretations provided in the March 6, 1992 guidance memorandum (Williams, 1992), and the USACE and Environmental Protection Agency (EPA) guidance on jurisdictional forms (USACE, 2008). USACE Wetland Determination Data Forms – Northcentral and Northeast Region are provided within **Appendix D**.

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

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

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

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

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

2.3 Ohio Environmental Protection Agency’s Ohio Rapid Assessment Method

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

The OEPA has developed the Ohio Rapid Assessment Method (ORAM), which can be utilized to evaluate wetland habitat quality based on the apparent functions and values of the wetland resource. The two primary components of the ORAM are the Narrative Rating and the Quantitative Rating. TRC completed ORAM (Version 5.0) Quantitative Rating forms for all the wetland resources identified within the Project Study Area. Each delineated wetland resource received a provisional category designation based on the results of the ORAM Narrative and Quantitative Ratings and review of narrative criteria in the Ohio Administrative Code (OAC) 3745-1-54(C) (Mack, 2000). OEPA ORAM Rating and Categorization Forms are provided within **Appendix D**.

2.4 USACE Waterbody Identification

During field investigations, other waterbody features including streams, ponds, lakes, etc. were investigated. Streams within the Project Study Area were identified by the presence of an ordinary high-water mark (OHWM) and scoured channel or defined bed and banks. The OHWM was identified using the definition as outlined in the Regulatory Guidance Letter No. 05-05, along with the National Ordinary High Water Mark Field Delineation Manual for Rivers and Streams. All streams identified in the Project Study Area that were wider than five feet were demarcated via GPS from bank-to-bank. Streams that were less than five feet wide had the centerline demarcated.

2.5 OEPA Waterbody Quality Quantification

Streams identified during the course of the investigation were classified as perennial, intermittent, or ephemeral waterways in accordance with the rationale defined by the USACE Huntington District. In addition, streams were evaluated utilizing OEPA approved methods for stream habitat assessment which include the Qualitative Habitat Evaluation Index (QHEI) (OEPA, 2006) (Rankin, 1989) and/or the Headwater Habitat Evaluation Index (HHEI) (OEPA, 2020) assessment method. These approved assessment methods provide an empirical, quantified evaluation of streams as required by the State of Ohio for permitting and mitigation purposes. These methods assess

stream habitat to provide a qualitative index (or score) to determine the level of compensatory mitigation that may be needed for impacts to waters of the United States (i.e., streams).

Use of the QHEI or HHEI assessment method is determined based on the size of the stream's drainage area and/or the stream's pool depths. Where coverage was available, the drainage area was calculated using automated basin characteristics from StreamStats v 4.29.3 (USGS, 2019).

2.5.1 Qualitative Habitat Evaluation Index

Following OEPA guidance, streams with a drainage area of greater than 1.0 square mile (2.6 square kilometers) or which have pools with maximum depths over 15.8 inches (40.0 centimeters), as determined by measuring pool depth within the stream, were evaluated using the QHEI. Data on these streams were collected on the QHEI form provided by the OEPA. The QHEI is composed of six principal metrics: substrate, instream cover, channel morphology, riparian zone and bank erosion, pool/glide and riffle-run quality, and map gradient. Each metric is scored separately and summed to obtain the total QHEI score. Using the scoring methods associated with these forms, the stream is placed into the following general narrative ranges, dependent upon stream size; for smaller streams (≤ 20 sq. mi): Excellent >70 , Good 55-69, Fair 43-54, Poor 30-42, and Very Poor <30 ; for larger streams (>20 sq. mi): Excellent >75 , Good 60-74, Fair 45-59, Poor 30-44, and Very Poor <30 .

2.5.2 Headwater Habitat Evaluation Index

The HHEI was utilized to score streams with a drainage area of <1.0 square mile (2.6 square kilometers). Data on these streams was collected on the HHEI forms, provided by the OEPA (OEPA, 2020). Observational data regarding the physical nature of the stream corridor including stream flow, riparian zone land use and buffer width, and channel modification was recorded. Measurements included bankfull width, maximum pool depth, and substrate composition.

2.6 Open Waters

The Project Study Area was also investigated for areas that were considered "open water" by the USACE. These open waters were also delineated based on the OHWM as defined in 33 CFR Part 328.3 and 33 CFR 329.4 (as applicable) and in accordance with Regulatory Guidance Letter 05-05 (USACE, 2005). The National OHWM Field Delineation for Rivers and Streams was also used to assist in this determination (USACE, 2025b).

According to USACE, open water is any area that, in a year with normal patterns of precipitation, has water flowing or standing above ground to the extent that an OHWM can be determined. Aquatic vegetation within the area of flowing or standing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of "open waters" may include rivers, lakes, and ponds. Artificial "open water" features may include stormwater retention basins, fish hatchery ponds, drainage tile pump stations, etc.

3.0 Results

3.1 Site Description

The Project Study Area is 5.84 acres, located in the City of Norton, Summit County, Ohio. The Project Study Area is located within the Wolf Creek watershed (12-Digit Hydrologic Unit Code [HUC]: 050400010104) (USGS, 2022).

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

There are no United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) features mapped within the Project Study Area (**Appendix A, Figure 4**) (USFWS, 2023).

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

According to Federal Emergency Management Agency Flood Insurance Rate Map Panel, 39153C0186F (eff. 4/19/2016), a minor portion of the southwestern corner of the Project is located within a mapped 100-year floodplain (**Appendix A, Figure 4**) (FEMA, 2024).

The USACE Antecedent Precipitation Tool (APT) Version 3.0 (USACE, 2025) was used to collect 90-day antecedent precipitation data. The following nearby (~8 miles or less) weather stations were used for collecting this data: AKRON FULTON INTL AP, AKRON 3.6 ESE, AKRON 2.9 S, AKRON 2.6 E, AKRON, AKRON 7.0 S, STOW 4 SE, and AKRON CANTON AP. Compared to historical data, antecedent hydrologic conditions were considered to be normal during the time of the field investigation. Data was not available for the drought index as indicated in APT results (USACE, 2025) located in **Appendix B**.

Data from the nearest stream or tidal gages within the Project Study Area watershed was also reviewed. The Wolf Creek Outlet O&E Canal OH (USGS-410014081362600) gaging station is located approximately 3 miles south and downstream of the Project Study Area (USGS, 2025). Over the seven (7) days prior to the field investigation, the stream gage height ranged from 1.33 to 1.53 ft. Mean five-year gage height for this station is 2.58 ft, therefore, gage heights prior to the field delineation were lower than the five-year average. This suggests that hydrologic conditions within the Project Study Area during the time of investigation may have been drier than average.

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

Table 1. Soils Type Summary

Map Unit Symbol	Map Unit Name	Hydric Status	Acres Within Project Study Area	Percent Cover in Project Study Area
CnB	Chili loam, 2 to 6 percent slopes	Non-Hydric	5.80	99.4%
Sb	Sebring silt loam, 0 to 2 percent slopes	Hydric	0.03	0.6%
Total			5.84	100.00%
Notes: Accessed online November 2025 at: http://websoilsurvey.sc.egov.usda.gov .				

3.2 Surface Water Resource Field Delineations

TRC performed field investigations on November 5th, 2025. During the 72 hours prior to the field investigation, the surrounding area averaged 0 inches of rainfall per day, and the average temperature was 47 degrees Fahrenheit. Native and non-native herbaceous vegetation was observed within the Project Study Area. During the field investigation, overall on-site observations of hydrology revealed typical conditions for the time of year. The results of the APT, as discussed in Section 3.1 above, can be found in **Appendix B**. The USACE maintains the final authority that determines jurisdiction; therefore, statements about jurisdiction within this Report are preliminary and subject to final determination by the USACE and OEPA.

3.2.1 Wetlands

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

Table 2. Delineated Wetland Feature Summary

Wetland ID ¹	Latitude, Longitude	Delineation Date	Extends Outside Project Study Area (Y/N)?	Cowardin Classification ²	Water Regime Modifier ³	Connection ⁴	Apparent downstream Connectivity	Provisional Jurisdictional Status ⁵	ORAM Score	ORAM Category ⁶	Approximate Delineated Area within Project Study Area ⁷ (acres)
W-JMS-1	41.048484, -81.599819	11/05/2025	Y	PSS	Seasonally Saturated	Adjacent	Wetland W- JMS-1 -> Wolf Creek	USACE Jurisdictional Wetland	19	Cat. 1	0.102
Total:										0.102	

¹ TRC resource identification.

² Cowardin Wetland Classification within Project Study Area (approximation based upon field identification and delineation) (Cowardin, Carter, Golet, & LaRoe, 1979); PSS – Palustrine Scrub-Shrub

³ National Wetland Inventory Wetlands and Deepwater Map Code Diagram – Modifiers for non-tidal waters (USFWS, 2019)

⁴ Connection to a jurisdictional waterway: Isolated or Adjacent as determined by TRC; subject to USACE verification. Wetland connection is pending an update from OEPA and USACE based on the EPA vs. Sackett case.

⁵ Jurisdiction status is based upon field observations and mapping review of apparent connectivity or adjacency of the resource to Waters of the United States and the assumption that a preliminary jurisdictional determination process will be utilized for the project.

⁶ ORAM Category assigned based on scoring breakpoints from Table 2 of the ORAM v. 5.0 Quantitative Score Calibration.

⁷ Area is rounded to nearest 0.001-acre, based upon GPS data.

3.2.2 Streams and Waterbodies

During the field investigations, no streams or waterbody resources were delineated within the Project Study Area. Representative photographs of the Project Study Area and site conditions can be found in **Appendix C**.

4.0 Permitting Considerations

It is anticipated that due to the nature of the Project, jurisdictional resources may be impacted by the proposed Project activities. It is TRC's understanding that this Project would fall under Nationwide Permit (NWP) 57 - Electric Utility Line and Telecommunications Activities (USACE, 2022). This Project is located in the City of Norton, Summit County, Ohio. The Project is located within the USACE Huntington Regulatory District. The Project Study Area location is not listed in Appendix 1 to Regional General Condition 5(a) (Endangered Species and Threatened Species), therefore, Regional General Condition 5(a) does not trigger the need for Section 404 Pre-Construction Notification (PCN), assuming the NWP 57 thresholds are met and not exceeded (USACE, 2021).

Additionally, the Project is located within an "Eligible" area according to OEPA's Stream Eligibility for the Nationwide Permit Program (OEPA, 2017) (**Appendix A, Figure 6**); however, OEPA's 401 Water Quality Certification for NWP 57 is currently waived under the February 2022 reissuance of NWP's for the State of Ohio and no streams were delineated within the Project Study Area. No additional screening procedures are required for the Project regarding compliance with OEPA's 401 Water Quality Certification (USACE, 2022).

4.1 USACE Verification

The USACE has the authority to determine and/or verify the geographical boundaries of Waters of the United States in accordance with 33 Code of Federal Regulations (CFR) 328 and 33 CFR 329; therefore, the results of this Report are termed "preliminary" until verified and accepted by the USACE. This verification is part of the Jurisdictional Determination process, which is required for approval under Section 404 Clean Water Act, Section 401 Water Quality Certification, and/or isolated wetland permitting process through OEPA. It is the responsibility of any party that intends to discharge dredge or fill material into Waters of the United States to comply with all applicable regulations.

5.0 Limitations

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

Should the Project change from the scope described herein, TRC should be immediately notified such that additional investigations may be conducted to amend the content of the Report herein.

Human-induced and/or natural changes within the Project Study Area may occur after the date of this investigation and may result in changes to the presence, extent, and classification of the surface water resources identified within this Report.

6.0 References

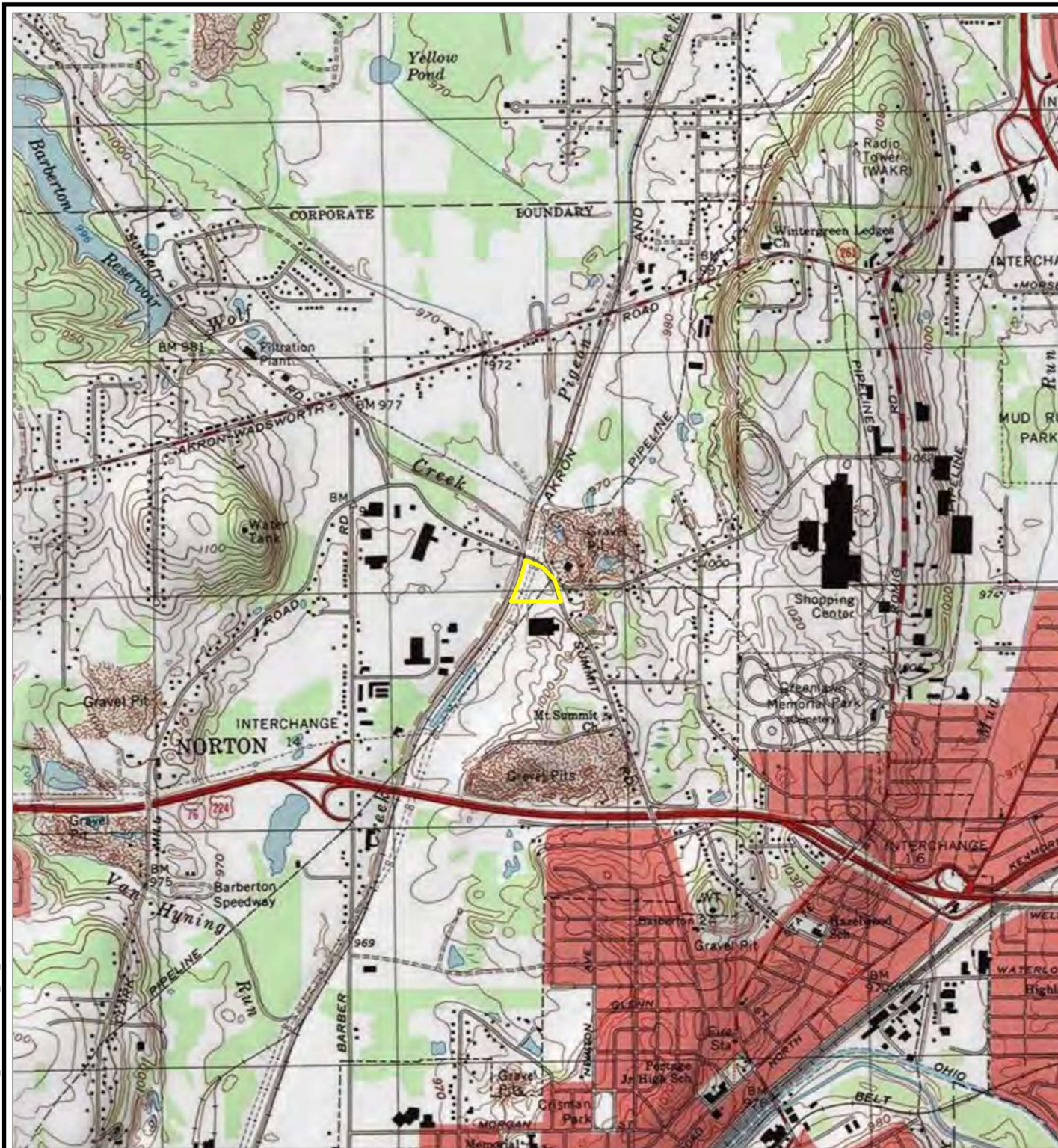
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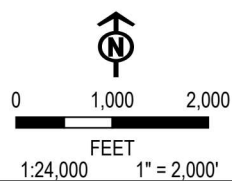
Appendix A

Figures

COORDINATE SYSTEM: NAD 1983 STATEPLANE OHIO NORTH FIPS 3401 FEET; MAP ROTATION: 0
-- SAVED BY: MOPEL ON 11/6/2025, 09:33:55 AM; FILE PATH: T:\PROJECTS\FIRST ENERGY\664674_023_TUSCSIXBREAKEREXPANSION\2-APR1WDR.APRX; LAYOUT NAME: FIG01_SLM



 PROJECT STUDY AREA



BASE MAP: USA TOPO MAPS MAP SERVICE, AKRON WEST QUAD

PROJECT: **FIRSTENERGY - TUSC 138KV SIX
BREAKER RING BUS EXPANSION PROJECT
SUMMIT COUNTY, OH**

TITLE: **SITE LOCATION MAP**

DRAWN BY: M. OPEL PROJ. NO.: 664674 P23

CHECKED BY: M. MOLNAR

APPROVED BY: B. FALKINBURG

DATE: NOVEMBER 2025

FIGURE 1



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

FILE: WDR



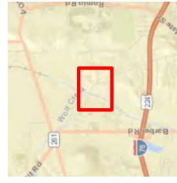
PROJECT STUDY AREA

BASE MAP: GOOGLE MAPS



12,400
1" = 200'

0 200 400 FEET



PROJECT: FIRSTENERGY - TUSC 138KV SIX
BREAKER RING BUS EXPANSION PROJECT
SUMMIT COUNTY, OH

TITLE: AERIAL MAP

DRAWN BY:	M. OPEL	PROJ. NO.:	664674 923
CHECKED BY:	M. MOLNAR		
APPROVED BY:	B. FALKINBURG		
DATE:	NOVEMBER 2025		

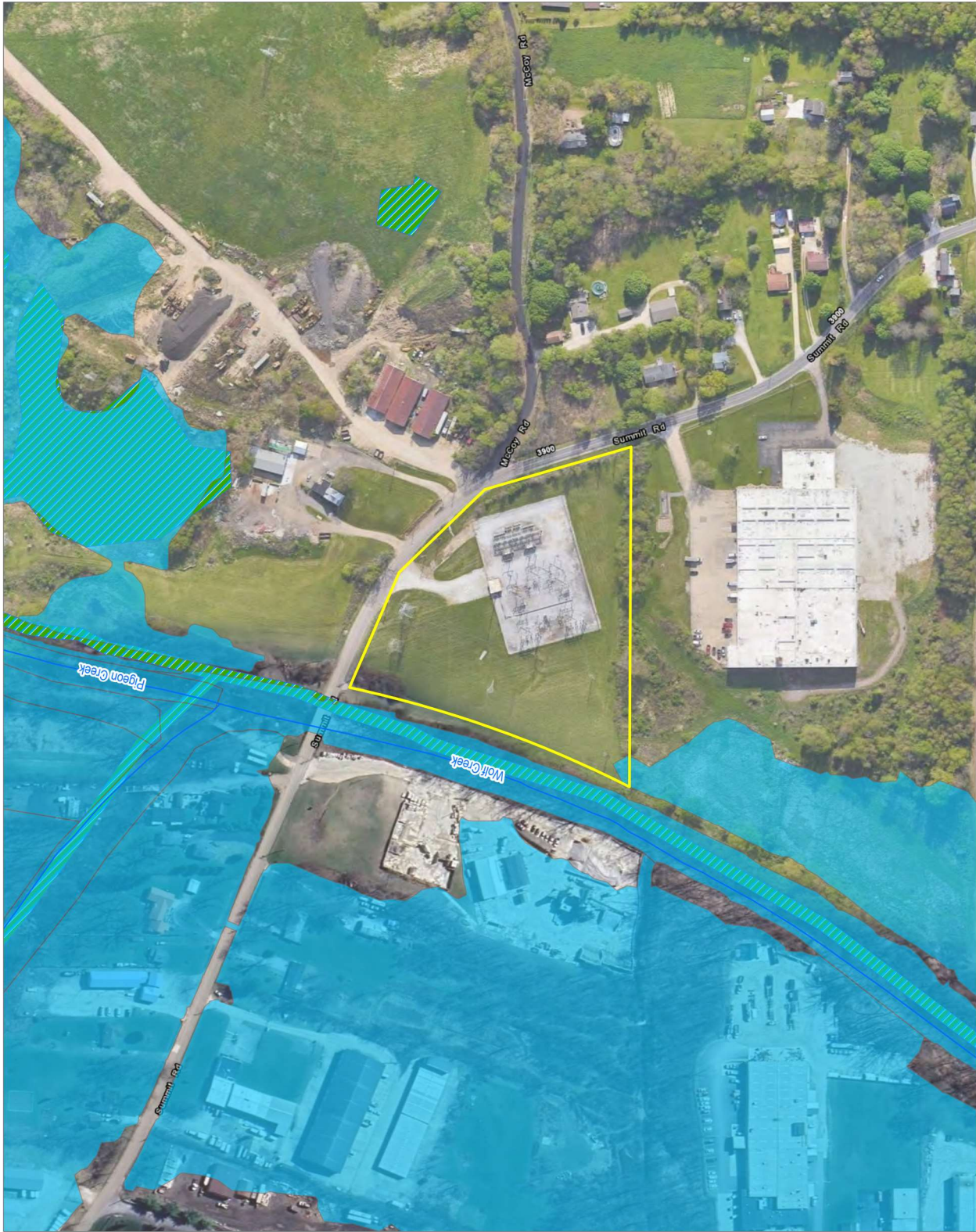
FIGURE 2

1382 WEST NINTH STREET
CLEVELAND, OH 44113
PHONE 216-347-5972



FILE

WDR.spt



- PROJECT STUDY AREA
- 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).



12,400
1" = 200'

0 200 400 FEET

PROJECT: FIRSTENERGY - TUSC 138KV SIX BREAKER RING BUS EXPANSION PROJECT
SUMMIT COUNTY, OH

TITLE: NHD, NWI AND FEMA FLOODPLAIN MAP

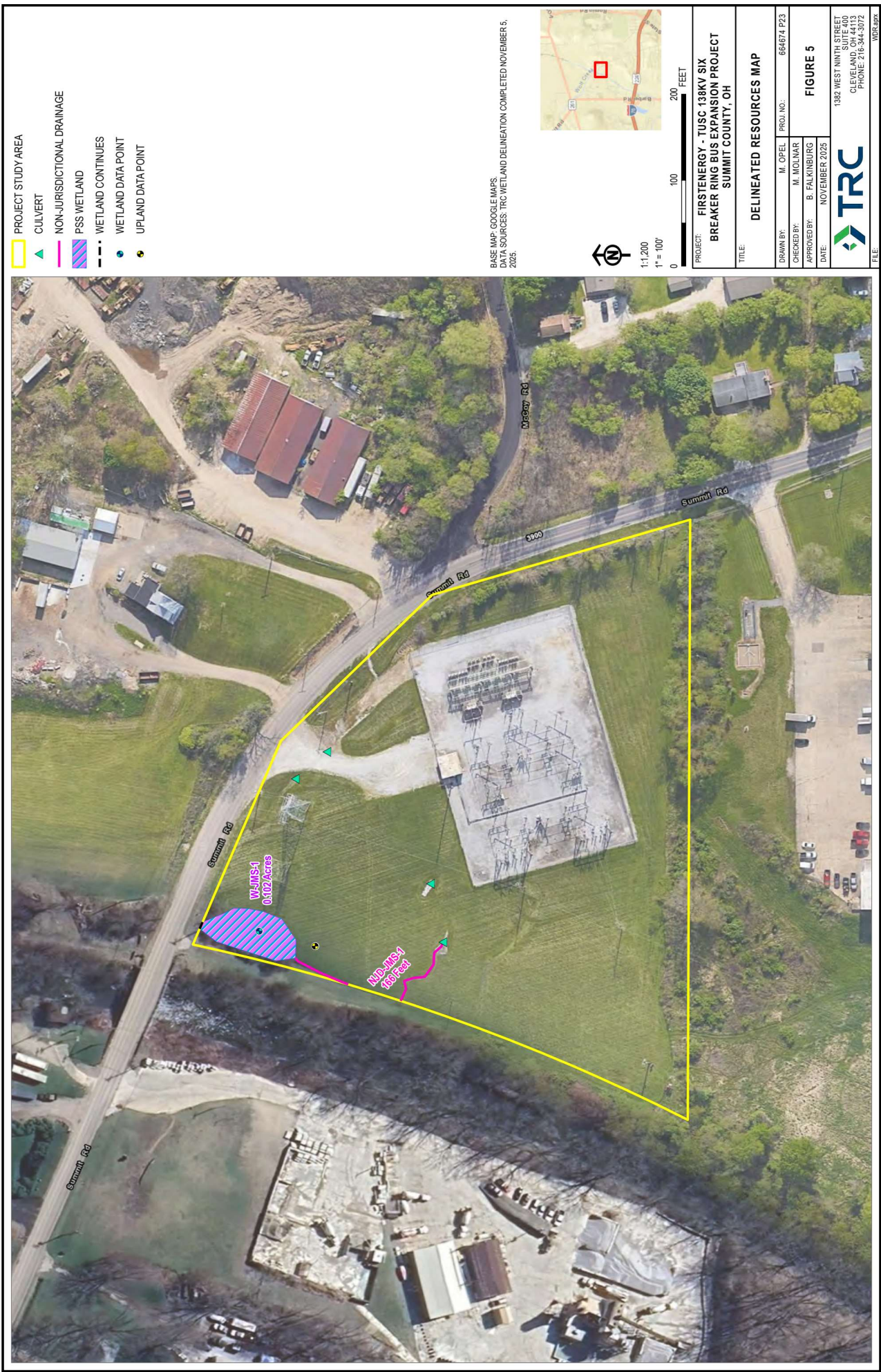
DRAWN BY: M. OPEL PROJ. NO.: 664674 923
CHECKED BY: M. MOLNAR
APPROVED BY: B. FALKENBURG
DATE: NOVEMBER 2025

FIGURE 4

TRC
1382 WEST NINTH STREET
CLEVELAND, OH 44113
PHONE 216-344-5072

FILE

WDR-971



BASE MAP: GOOGLE MAPS
DATA SOURCES: TRC WETLAND DELINEATION COMPLETED NOVEMBER 5, 2025.



1:1,200
1" = 100'

PROJECT: FIRSTENERGY - TUSC 138KV SIX
BREAKER RING BUS EXPANSION PROJECT
SUMMIT COUNTY, OH

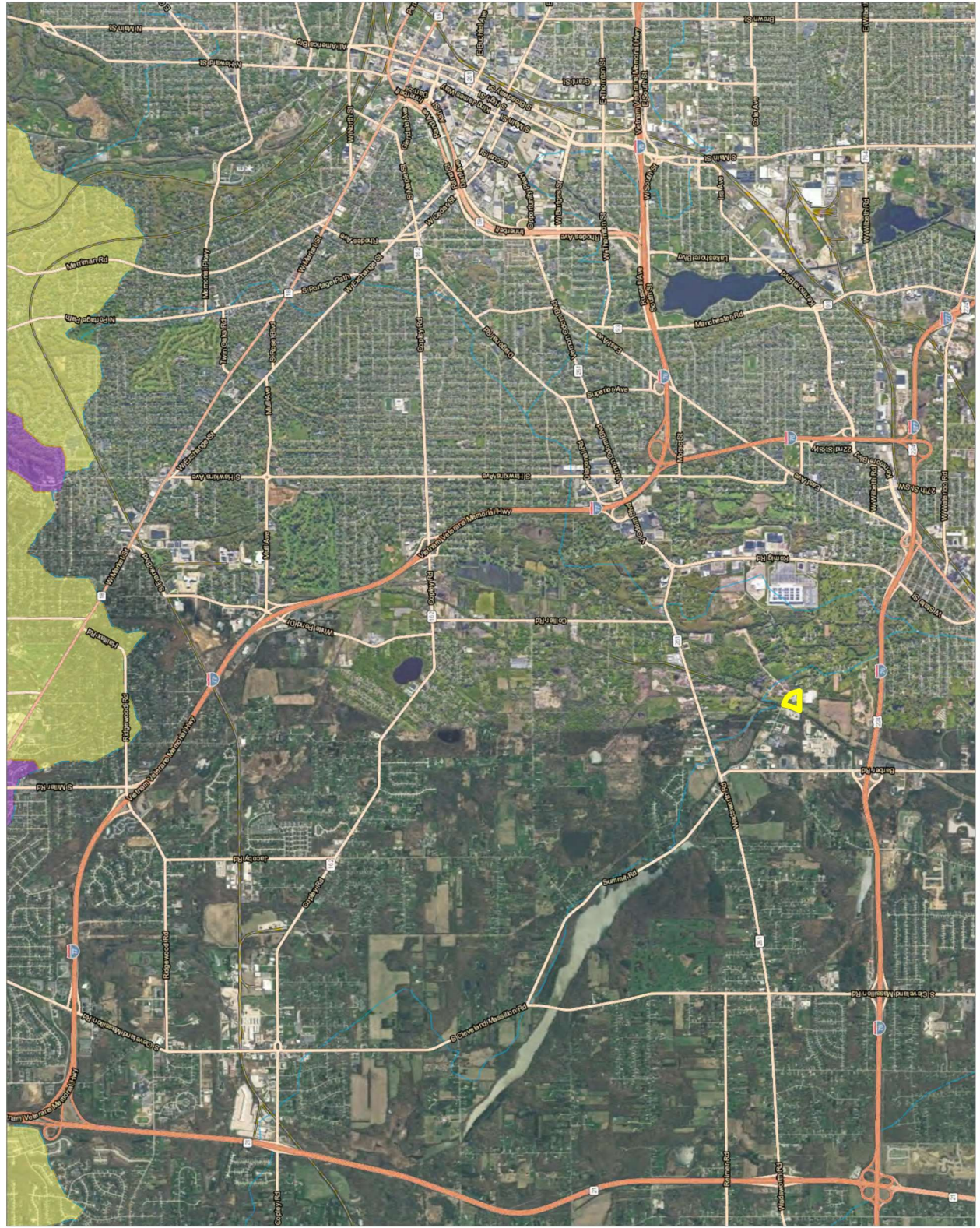
TITLE: DELINEATED RESOURCES MAP

DRAWN BY: M. OPEL	PROJ. NO.: 664674.923
CHECKED BY: M. MOLNAR	
APPROVED BY: B. FALKINBURG	FIGURE 5
DATE: NOVEMBER 2025	

1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-544-5972



FILE



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.



1:42,000
1" = 3,500'

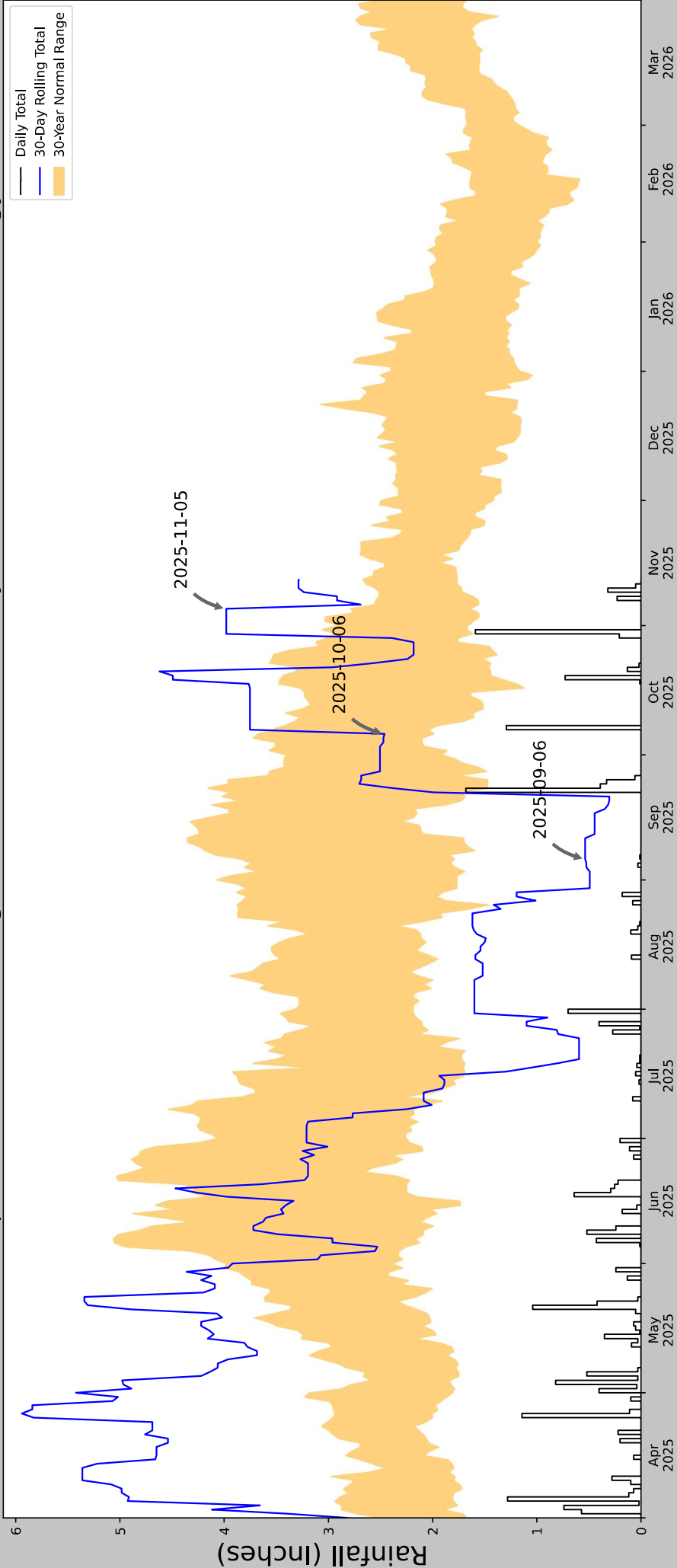
0 3,500 7,000 FEET

PROJECT: FIRSTENERGY - TUSC 138KV SIX BREAKER RING BUS EXPANSION PROJECT SUMMIT COUNTY, OH	
TITLE: NATIONWIDE PERMITS STREAM ELIGIBILITY MAP	
DRAWN BY: M. OPEL	PROJ. NO.: 664674 P23
CHECKED BY: M. MOLNAR	
APPROVED BY: B. FALKINBURG	
DATE: NOVEMBER 2025	
FIGURE 6	
1382 WEST NINTH STREET CLEVELAND, OH 44113 PHONE: 216-347-5072	
TRC	
FILE	

Appendix B

Antecedent Precipitation Table

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	41.04772, -81.59929
Observation Date	2025-11-05
Elevation (ft)	977.439
Drought Index (PDSI)	Not available (2025-10)
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2025-11-05	1.648032	2.785433	3.980315	Wet	3	3	9
2025-10-06	1.990158	3.672441	2.46063	Normal	2	2	4
2025-09-06	1.794882	3.83937	0.535433	Dry	1	1	1
Result							Normal Conditions - 14

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
AKRON FULTON INTL AP	41.0372, -81.4633	1043.963	7.124	66.524	3.68	9555	90
AKRON 3.6 ESE	41.0652, -81.4557	1113.845	1.975	69.882	1.027	3	0
AKRON 2.9 S	41.0388, -81.5248	1020.013	3.207	23.95	1.52	3	0
AKRON 2.6 E	41.0798, -81.471	1105.971	2.971	62.008	1.521	4	0
AKRON	41.0803, -81.5169	1080.053	4.082	36.09	1.984	1672	0
AKRON 7.0 S	40.9812, -81.5407	1007.874	5.591	36.089	2.718	1	0
STOW 4 SE	41.1314, -81.4492	1060.039	6.55	16.076	3.053	12	0
AKRON CANTON AP	40.9181, -81.4433	1209.974	8.295	166.011	5.11	103	0



Figures and tables made by the
Antecedent Precipitation Tool
Version 3.0

Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and
Development Center

Appendix C

Photographic Record

Client Name: FirstEnergy	Site Location: City of Norton, Summit County, Ohio	Project No. 000664674 Phase 23
------------------------------------	--	--

Photo No. 1.	
Photo Date: 11/5/2025	
Description: Representative photo of wetland W-JMS-1, facing north.	

Photo No. 2.	
Photo Date: 11/5/2025	
Description: Representative photo of wetland W-JMS-1, facing east.	

Client Name: FirstEnergy	Site Location: City of Norton, Summit County, Ohio	Project No. 000664674 Phase 23
------------------------------------	--	--

Photo No. 3.	
Photo Date: 11/5/2025	
Description: Representative photo of wetland W-JMS-1, facing south.	

Photo No. 4.	
Photo Date: 11/5/2025	
Description: Representative photo of wetland W-JMS-1, facing west.	

Client Name: FirstEnergy	Site Location: City of Norton, Summit County, Ohio	Project No. 000664674 Phase 23
------------------------------------	--	--

Photo No. 5.	
Photo Date: 11/5/2025	
Description: Representative photo of the new field community surrounding the substation, facing south.	

Photo No. 6.	
Photo Date: 11/5/2025	
Description: Representative photo of non-jurisdiction ditch NJD-JMS-1, facing west.	

Client Name: FirstEnergy	Site Location: City of Norton, Summit County, Ohio	Project No. 000664674 Phase 23
------------------------------------	--	--

Photo No. 7.	
Photo Date: 11/5/2025	
Description: Representative photo of NJD-JMS-1, facing south	

Photo No. 8.	
Photo Date: 11/5/2025	
Description: Representative photo of the Project Study Area, facing east.	

Client Name: FirstEnergy	Site Location: City of Norton, Summit County, Ohio	Project No. 000664674 Phase 23
------------------------------------	--	--

Photo No. 9.	
Photo Date: 11/5/2025	
Description: Representative photo of the access road north of the substation, facing north.	

Photo No. 10.	
Photo Date: 11/5/2025	
Description: Representative photo of the Project Study Area north of the substation, facing west.	

Client Name: FirstEnergy	Site Location: City of Norton, Summit County, Ohio	Project No. 000664674 Phase 23
------------------------------------	--	--

Photo No. 11.	
Photo Date: 11/5/2025	
Description: Representative photo of the Project Study Area from the southern extent, facing west.	

Photo No. 12.	
Photo Date: 11/5/2025	
Description: Representative photo of the Project Study Area from the eastern extent, facing north.	

Appendix D

Data Forms

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

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region See ERDC/EL TR-12-1; the proponent agency is CECW-COR		OMB Control #: 0710-0024, Exp: 09/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
Project/Site: Tusc 138kV Six Breaker Ring Bus Expansion City/County: Norton, Summit Sampling Date: 2025-11-5		
Applicant/Owner: FirstEnergy State: OH Sampling Point: W-JMS-01 PSS-1		
Investigator(s): Jenna Slabe, Will Haas Section, Township, Range: NA		
Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): Concave Slope (%): 0 to 1		
Subregion (LRR or MLRA): MLRA 139 of LRR R Lat: 41.0484729149 Long: -81.5998420793 Datum: WGS84		
Soil Map Unit Name: Chili loam, 2 to 6 percent slopes NWI Classification: None		
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)		
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No		Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: W-JMS-01
Remarks: (Explain alternative procedures here or in a separate report.) Covertypes is PSS. 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 on Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)		

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus palustris	15	Yes	FACW
2. Fraxinus pennsylvanica	5	Yes	FACW
3.			
4.			
5.			
6.			
7.			
	20	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Viburnum dentatum	40	Yes	FAC
2. Cornus amomum	25	Yes	FACW
3. Cornus racemosa	15	No	FAC
4. Rosa multiflora	5	No	FACU
5. Frangula alnus	5	No	FAC
6.			
7.			
	90	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. Symphyotrichum lateriflorum	5	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	5	= 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: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

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

Prevalence Index worksheet:

Total % Cover of:

Multiply by:

OBL species 0 x 1 = 0

FACW species 45 x 2 = 90

FAC species 65 x 3 = 195

FACU species 5 x 4 = 20

UPL species 0 x 5 = 0

Column Totals: 115 (A) 305 (B)

Prevalence Index = B/A = 2.7

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☒ 3 - Prevalence Index is ≤3.0¹

4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators 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.

ENG FORM 6116-8, SEP 2024
8a455872-706a-452b-a988-ae7effa2a34d
11/25/2025, 8:47:57 PM UTC

Northcentral and Northeast — Version 2.0 (Adapted by TRC)
W-JMS-01_PSS-1
Page 2 of 3

ENG FORM 6116-8, SEP 2024
8a455872-706a-452b-a988-ae7effa2a34d
11/25/2025, 8:47:57 PM UTC

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region See ERDC/EL TR-12-1; the proponent agency is CECW-COR		OMB Control #: 0710-0024, Exp: 09/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
Project/Site: <u>Tusc 138kV Six Breaker Ring Bus Expansion</u> City/County: <u>Norton, Summit County</u> Sampling Date: <u>2025-11-5</u>		
Applicant/Owner: <u>FirstEnergy</u> State: <u>OH</u> Sampling Point: <u>W-JMS-01 UPL-1</u>		
Investigator(s): <u>Jenna Slabe, Will Haas</u> Section, Township, Range: <u>NA</u>		
Landform (hillslope, terrace, etc): <u>Flat</u> Local relief (concave, convex, none): <u>None</u> Slope (%): <u>0 to 1</u>		
Subregion (LRR or MLRA): <u>MLRA 139 of LRR R</u> Lat: <u>41.0483183414</u> Long: <u>-81.5998741739</u> Datum: <u>WGS84</u>		
Soil Map Unit Name: <u>Chili loam, 2 to 6 percent slopes</u> NWI Classification: <u>None</u>		
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: <u>W-JMS-01</u>
Remarks: (Explain alternative procedures here or in a separate report.) Covertypes 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 on Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)		

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.	<i>Poa annua</i>	45	Yes	FACU
2.	<i>Trifolium repens</i>	25	Yes	FACU
3.	<i>Plantago lanceolata</i>	20	Yes	FACU
4.	<i>Taraxacum officinale</i>	10	No	FACU
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: 3 (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 ≤3.0¹

4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators 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 X

Remarks: (Include photo numbers here or on a separate sheet.)
The criterion for hydrophytic vegetation is not met.

SOIL

Sampling Point: W-JMS-01 UPL-1

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

Depth (inches)	<u>Matrix</u>		<u>Redox Features</u>					
	<u>Color (moist)</u>	%	<u>Color (moist)</u>	%	Type ¹	Loc ²	<u>Texture</u>	<u>Remarks</u>
	0 to 12	10YR 3/3	98	10YR 6/8	2	C	M	Sandy Clay Loam
	12 to 20	10YR 4/3	70	10YR 6/2	20	D	M	Sandy Clay Loam
	12 to 20			10YR 6/8	10	C	M	Sandy Clay Loam

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Iron Monosulfide (A18)
- ___ Mesic Spodic (A17)
- ___ **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- High Chroma Sands (S11) (**LRR K, L**)
- 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)
- Marl (F10) (**LRR K, L**)
- Red Parent Material (F21) (**MLRA 145**)

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ 5 cm Muck Peat or Peat (S3) (**LRR K, L, R**)
☐ 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**)
☐ Red Parent Material (F21) (**outside MLRA 145**)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No **X**

Remarks:

The criterion for hydric soil is not met.

OEPA ORAM Field Form

Background Information

Name: Jenna Slabe	
Date: 11/05/2025	
Affiliation: TRC Environmental Corporation	
Address: 1382 West Ninth Street, Suite 400, Cleveland, OH 44113	
Phone Number: 330-998-0481	
e-mail address: JSlabe@trccompanies.com	
Name of Wetland: W-JMS-1	
Vegetation Communit(ies): PSS	
HGM Class(es): Depression	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. See Figure 5: Delineated Resources Map and Surface Water Delineation Report for further details.	
Lat/Long or UTM Coordinate	41.048484, -81.59981 
USGS Quad Name	Akron West, OH
County	Summit
Township	T1N R12W
Section and Subsection	N/A
Hydrologic Unit Code	050400010104
Site Visit	11/05/2025
National Wetland Inventory Map	None
Ohio Wetland Inventory Map	N/A
Soil Survey	CnB
Delineation report/map	See Report

Name of Wetland: W-JMS-1	
Wetland Size (acres, hectares):	~0.11 acre (0.04 hectare)
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See Figure 5: Delineated Resources Map and Surface Water Delineation Report for further details.	
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 <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	☒ NO Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 wetland Go to Question 7	☒ 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	Oak Opening species	wet prairie species
<i>Lythrum salicaria</i>	<i>Zygadenus elegans</i> var. <i>glaucus</i>	<i>Calla palustris</i>	<i>Carex cryptolepis</i>	<i>Calamagrostis canadensis</i>
<i>Myriophyllum spicatum</i>	<i>Cacalia plantaginea</i>	<i>Carex atlantica</i> var. <i>capillacea</i>	<i>Carex lasiocarpa</i>	<i>Calamagrostis stricta</i>
<i>Najas minor</i>	<i>Carex flava</i>	<i>Carex echinata</i>	<i>Carex stricta</i>	<i>Carex atherodes</i>
<i>Phalaris arundinacea</i>	<i>Carex sterilis</i>	<i>Carex oligosperma</i>	<i>Cladium mariscoides</i>	<i>Carex buxbaumii</i>
<i>Phragmites australis</i>	<i>Carex stricta</i>	<i>Carex trisperma</i>	<i>Calamagrostis stricta</i>	<i>Carex pellita</i>
<i>Potamogeton crispus</i>	<i>Deschampsia caespitosa</i>	<i>Chamaedaphne calyculata</i>	<i>Calamagrostis canadensis</i>	<i>Carex sartwellii</i>
<i>Ranunculus ficaria</i>	<i>Eleocharis rostellata</i>	<i>Decodon verticillatus</i>	<i>Quercus palustris</i>	<i>Gentiana andrewsii</i>
<i>Rhamnus frangula</i>	<i>Eriophorum viridicarinarum</i>	<i>Eriophorum virginicum</i>		<i>Helianthus grosseserratus</i>
<i>Typha angustifolia</i>	<i>Gentianopsis</i> spp.	<i>Larix laricina</i>		<i>Liatris spicata</i>
<i>Typha xglauca</i>	<i>Lobelia kalmii</i>	<i>Nemopanthus mucronatus</i>		<i>Lysimachia quadriflora</i>
	<i>Parnassia glauca</i>	<i>Scheuchzeria palustris</i>		<i>Lythrum alatum</i>
	<i>Potentilla fruticosa</i>	<i>Sphagnum</i> spp.		<i>Pycnanthemum virginianum</i>
	<i>Rhamnus alnifolia</i>	<i>Vaccinium macrocarpon</i>		<i>Silphium terebinthinaceum</i>
	<i>Rhynchospora capillacea</i>	<i>Vaccinium corymbosum</i>		<i>Sorghastrum nutans</i>
	<i>Salix candida</i>	<i>Vaccinium oxycoccos</i>		<i>Spartina pectinata</i>
	<i>Salix myricoides</i>	<i>Woodwardia virginica</i>		<i>Solidago riddellii</i>
	<i>Salix serissima</i>	<i>Xyris difformis</i>		
	<i>Solidago ohioensis</i>			
	<i>Tofieldia glutinosa</i>			
	<i>Triglochin maritimum</i>			
	<i>Triglochin palustre</i>			

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

Site: FirstEnergy , Tusc 138kV Six Breaker Ring Bus Expansion **Rater(s):** Jenna Slabe, Will Haas **Date:** 2025-11-05

1	1
max 6 pts.	subtotal

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

2	3
max 14 pts.	subtotal

Metric 2. Upland buffers and surrounding land use.

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

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

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

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

7	10
max 30 pts.	subtotal

Metric 3. Hydrology.

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

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

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

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

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

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

3b. Connectivity. Score all that apply.

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

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

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

Check all disturbances observed

- | | |
|--|---|
| ☒ ditch | ☐ point source (nonstormwater) |
| ☐ tile | ☐ filling/grading |
| ☐ dike | ☒ road bed/RR track |
| ☐ weir | ☐ dredging |
| ☒ stormwater input | ☐ other |

7	17
max 20 pts.	subtotal

Metric 4. Habitat Alteration and Development.

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

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

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

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

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

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

Check all disturbances observed

- | | |
|---|---|
| ☒ mowing | ☐ shrub/sapling removal |
| ☐ grazing | ☐ herbaceous/aquatic bed removal |
| ☐ clearcutting | ☒ sedimentation |
| ☐ selective cutting | ☐ dredging |
| ☐ woody debris removal | ☐ farming |
| ☐ toxic pollutants | ☐ nutrient enrichment |

17
subtotal this page

Site: FirstEnergy , Tusc 138kV Six Breaker Ring Bus Expansion **Rater(s):** Jenna Slabe, Will Haas **Date:** 2025-11-05

17

subtotal first page

0

17

max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

2

19

max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- ☐ Aquatic Bed
☐ 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)
☒ Low (1)
☐ None (0)

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

- ☐ Vegetated hummocks/tussucks
☐ Coarse woody debris >15cm (6in)
☐ Standing dead >25cm (10in) dbh
☐ 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

Invasive Species

Present:

European
buckthorn

19

CATEGORY 1**End of Quantitative Rating. Complete Categorization Worksheets.**

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 <i>less</i> than the Category 2 scoring threshold (<i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	☒ 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 <i>greater</i> than the Category 2 scoring threshold (<i>including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	☒ 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 <i>moderate</i> OR <i>superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	☒ 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
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End of Ohio Rapid Assessment Method for Wetlands.